

GUHRING

DRILLING TOOLS



FEATURING

RT 100 X^F

NEW. EXTREME. POWERFUL.



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President



Oliver Gühring
Sales and Marketing
Director

7000

Employees
world-wide



3500

Employees
Germany



Internal training and further
education program



International knowledge transfer thanks
to world-wide exchange program for
employees



Dietmar Pfränger

R&D, Logistics, Technical and
Production Director

Bernd Schatz

Financial and Commercial
Director

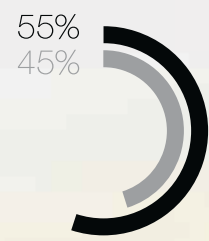


90000

Standard tools

4000

Tool types



■ Standard tools
■ Special tools



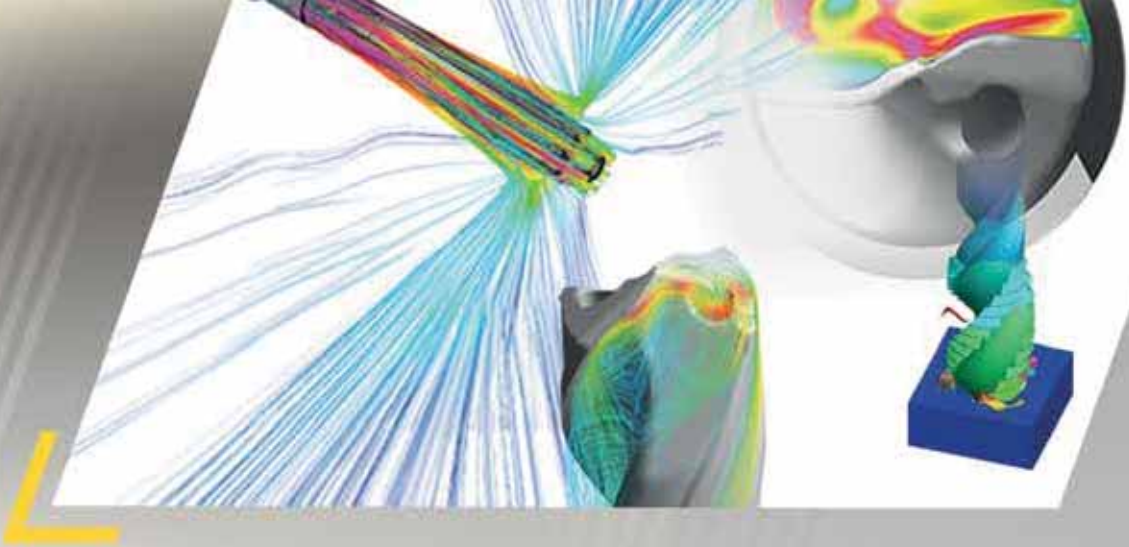
TOOL MATERIALS
Internal carbide production

Optimal co-ordination of
all tool parameters thanks
to own R&D sectors



MACHINE & EQUIPMENT DIVISION
Internal machine tool and equipment divisions





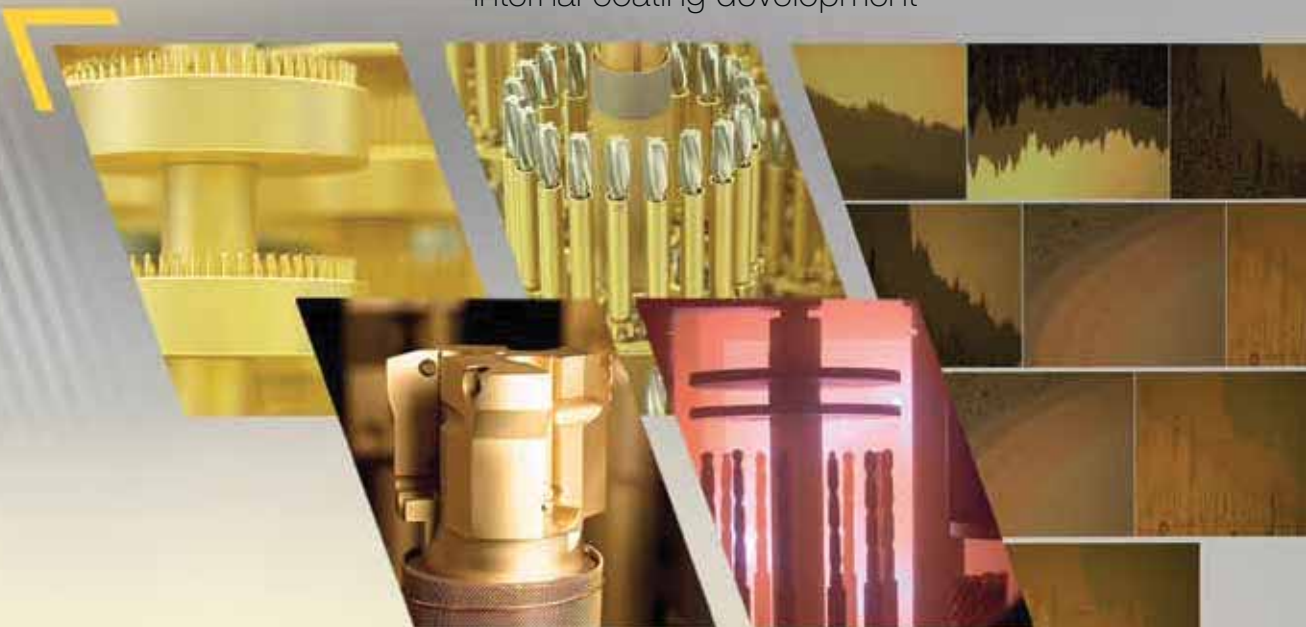
GEOMETRIES

Internal R&D for tool development



COATINGS

Internal coating systems and
internal coating development



Everything from one supplier – comprehensive and global

With a global network of manufacturing sites Guhring develops and produces precision tools for every major market. Customers from various industries rely on our innovative cutting tools, manufactured to the highest level of uniform quality standards across the globe.

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SERVICE CENTERS



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With innovative technologies Guhring meets specific customer requirements from process proposal to production application of precision tools – flexibly, promptly, globally. To aide in this experience, field experts across the world are available to offer on-site support at customer locations. Production, service and contact persons are available from one supplier world-wide.

Internal carbide production

Internal machine construction

Internal coating plants

Highest quality standards world-wide



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Everything from ONE SUPPLIER

Our variety of drills ranges from micro-precision drills down to \varnothing 0.05 mm to special solutions up to \varnothing 180 mm, including both HSS and solid carbide. 50,000 products to cover every application.



SOLID CARBIDE RATIO DRILLS

from page 277



INTERCHANGEABLE INSERT DRILLING SYSTEM HT 800

from page 381



HSS/HSCO TWIST DRILLS

- ▄▄▄ straight shank
- ▄▄▄ Morse taper shank

from page 85



DEEP HOLE DRILLS

- ▬ single-fluted and two-fluted gun drills
- ▬ spiral deep hole drills

from page 359

1:1



MICRO-PRECISION DRILLS

CARBIDE + HSS-E-PM

from page 85 & 251

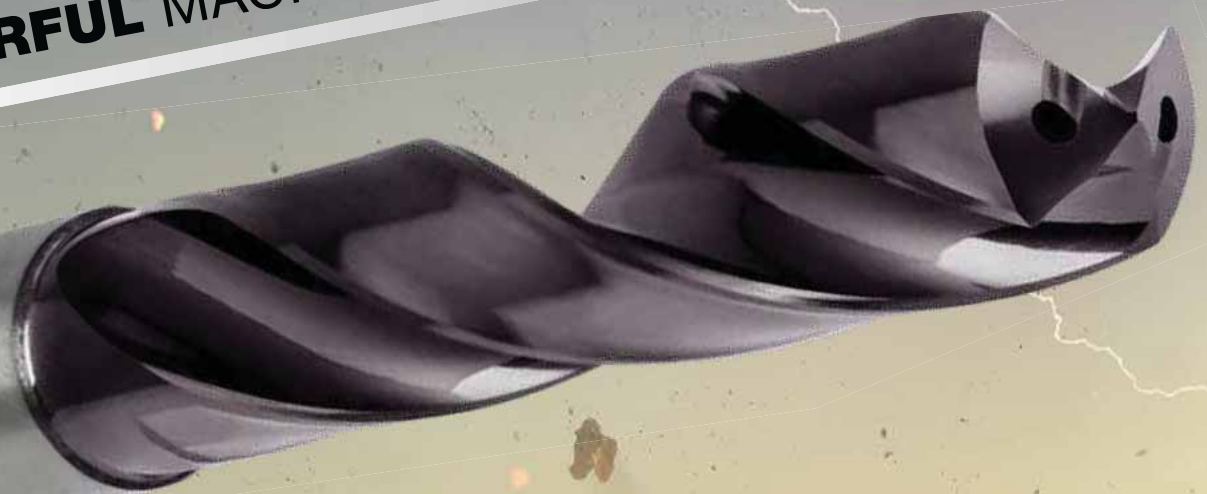
NC SPOTTING DRILLS & CENTER DRILLS

from page 35

Innovations

Guhring sets the standard with every innovation as an industry leader in research & development and tool manufacturing.

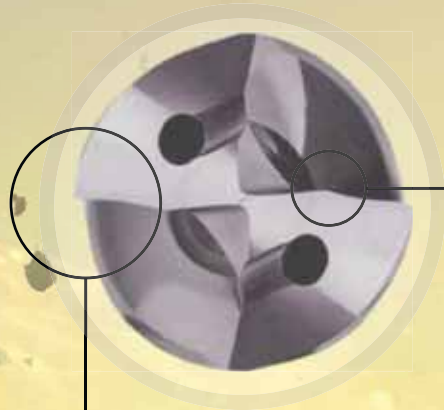
- ▶ **EXCEPTIONAL METAL REMOVAL RATE**
- ▶ **POWERFUL MACHINING**



RT100 **XF**

NEW. **EXTREME. POWERFUL.**

- // Optimized operating parameters deliver **exceptional feed rates** and **metal removal rates**
- // Internally developed exclusive finishing processes **maximize performance**
- // **Reduced cycle times** for difficult-to-machine materials and special applications in high production



The corner protection, achieved with a negative chamfer along the side of the cutting edge, creates an extremely tough and durable cutting edge for exceptional performance.

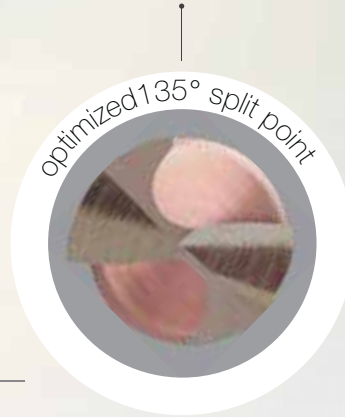
The **micro-geometry honing process** ensures a uniform hone resulting in a stable and efficient cutting edge. Our manufacturing expertise allows us to consistently produce this specialized cutting edge to the nearest micron, and the precision-ground quality of the original cutting edge can be restored through our reconditioning department.

NEW

AeroX

- // HSCO8 twist drills for assembly work in general or high-alloyed materials, titanium and aluminum materials
- // Quick drill advance thanks to optimized 135° NAS 907 split point

OPTIMIZED DRILL CORE
Heavily reduced tapered core for additional tool stability while simultaneously minimizing forces

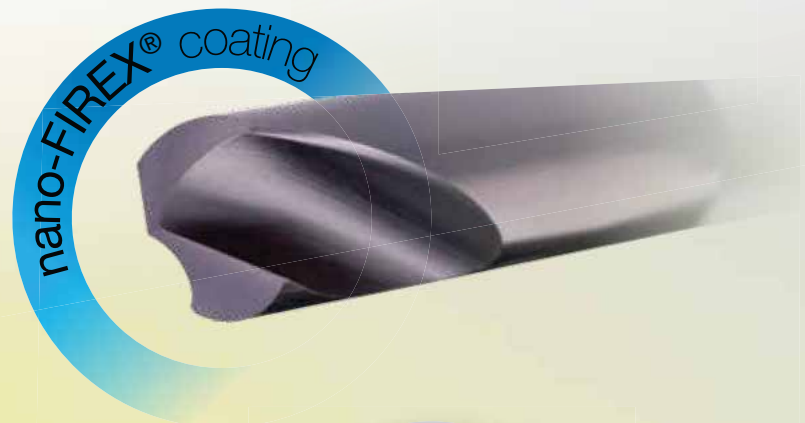


NEW

nano-FIREX[®] coating
for maximum wear and heat resistance

HSCO NC spotting drills with nano-FIREX[®] coating

- // Accurate spotting with higher cutting parameters and tool life
- // Maximum performance thanks to nano-FIREX[®] coating



Innovations

State-of-the-art materials require progressive machining processes. Guhring secures the technology leadership with trend-setting research and innovative concepts for rotary cutting tools.

SpyroTec

THE INNOVATIVE, HELICAL HSS
AND HSCO COUNTERSINK



CONVEX CUTTING EDGES

// Three different convex cutting edges in combination with three unequal helix angles enable extremely stable and low-vibration cutting processes without any chatter marks.



TiAlN COATING

// The titanium aluminum nitride coating provides high hardness and excellent thermal protection.

CUTTING MATERIAL

// The high-speed steel cobalt substrate holds up well in high temperature applications, providing long tool life in a wide variety of materials.

NEW

MORE ECONOMICALLY EFFICIENT DRILLING of aluminum materials

//RATIO//

RT 100 AL



- // Entire material range of soft and tough aluminum found in both wrought and cast alloys.
- // Special drills for Ø 3 mm to 20 mm and depths up to 12xD
- // Wet machining and MQL possible



Open point geometry
and **concave cutting edge form**
for optimal chip formation.

Sharp, micro-treated cutting edges
for ideal cutting behavior,
even in heat-treated AlSi-alloys.

Thanks to **the highly polished surface finish of the web thinning, front rake face and clearance areas** the process temperatures are significantly reduced, preventing formation of built-up edges.

The tools are designed with a **bright finish**.

The **polished flute geometry** of the RT 100 Al minimizes friction, and guarantees reliable chip evacuation and prevents material adhesion.

Specially manufactured carbide grades for the machining of non-ferrous metals.

HA shank to DIN 6535.



R&D FIBER COMPOSITE PLASTICS

tooling solutions for highly abrasive materials

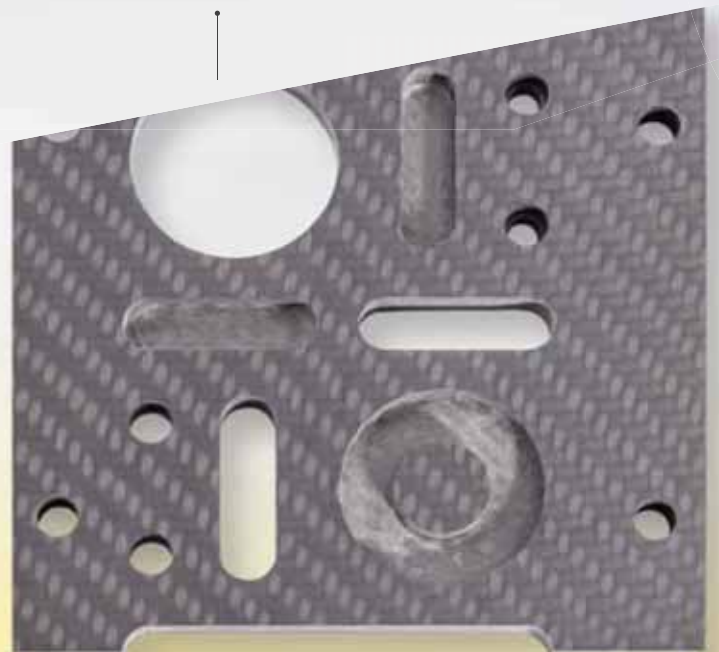
MACHINING OF FCP

Optimized tools for the machining of glass fibre reinforced plastics (GFRP) and carbon fiber reinforced plastics (CFRP) as well as stack materials

- // Components without fiber projections
- // Delamination-free component surface
- // No damage to component through “peel-up” or “push out”
- // Prevention of fiber splitting “pull-out” on component
- // Minimizing burr development
- // Prevention of thermal damage

FCP DRILLING OPERATION

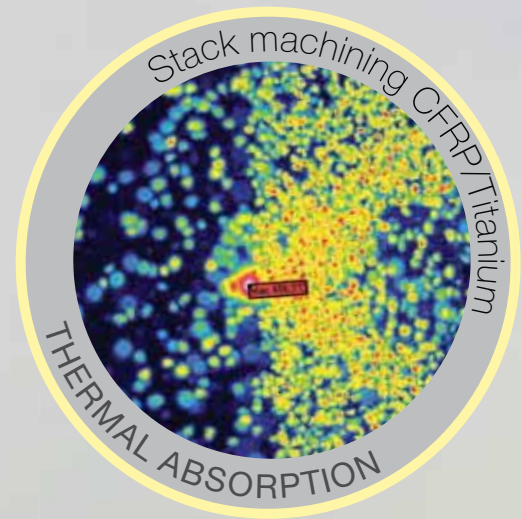
with optimal machining quality



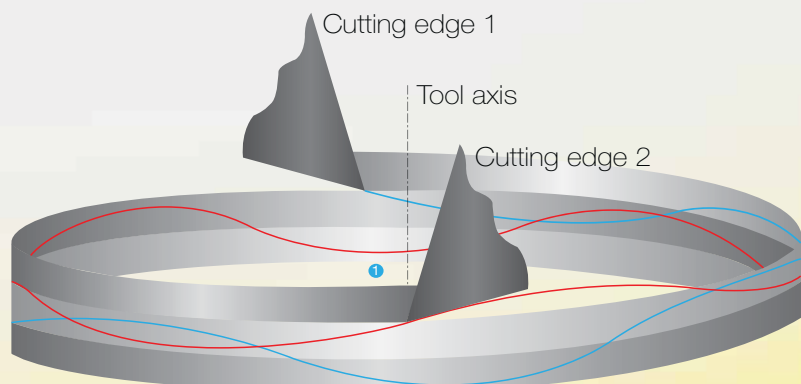
NEW

VIBRATION SUPPORTED MACHINING

process optimization thanks to overlaid movement



- // More favorable chip development/improved chip fracture
- // Improved chip evacuation
- // Production of nominal fracture points in chip
- // Reduced built-up edge
- // Lower machining forces and temperatures



RE-GRINDING, COATING, TOOL MODIFICATIONS,
SMALL BATCH PRODUCTION

FOR YOU ON-SITE



Grinding and
coating service



Special tools made to customer requirements – Guhring's recipe for success

We respond to customer requirements with **excellence in machining**. Guhring provides support through ingenuity, innovative technologies, and expertise in process improvement and precision custom tool design in order to meet customer-specific requirements.



GM300

TOOL HOLDERS

Tool holders
and clamping
devices for every
application



ISO code

| | |
|----------|---|
| P | Steel, high-alloyed steel |
| M | Stainless steel |
| K | Grey cast iron, spher, graphite/mall. cast iron |
| N | Aluminum and other non-ferrous metals |
| S | Special, super and titanium alloys |
| H | Hardened steel and chilled cast iron |

On the following tool selection pages you will find recommendations regarding application suitability based on material groups for every tool.

★ = 1st choice

● = Optimal suitability

○ = Limited suitability

Pictograms

| | | | | | | | | |
|-------------------|--|--|--|--|--|-----------------------------------|-----------------------------|------------------------------|
| Tool material | HSS | M35 Cobalt | M42 Cobalt | HSS-E-PM | Carbide | | | |
| Cutting depth | 1xD Cutting depth | 1.5xD Cutting depth | 3xD Cutting depth | 4xD Cutting depth | 5xD Cutting depth | 7xD Cutting depth | 8xD Cutting depth | 10xD Cutting depth |
| Tolerance on Ø | m7 Tolerance on Ø | h5 Tolerance on Ø | h6 Tolerance on Ø | h7 Tolerance on Ø | h8 Tolerance on Ø | 0/-0.004 Tolerance on Ø | | |
| Shank form | HA Shank form straight | HB Shank form weldon flat | HE Shank form whistle notch | Cyl Shank form straight cylindrical | MT Shank form Morse taper | | | |
| Cutting direction | R Cutting direction right | | L Cutting direction left | | N Cutting direction neutral | | | |
| Internal coolant | Internal coolant | | Without internal coolant | | | | | |
| Form | A Form | B Form | R Form | | | | | |
| Point angle | 90° Point angle | 118° Point angle | 120° Point angle | 130° Point angle | 135° Point angle | 140° Point angle | 150° Point angle | 160° Point angle |
| Web thinning | Web Thinning | | | | | | | |
| Type | EB 100 Type | GT 100 Type | HT 800 WP Type | H Type | N Type | RT 100 T Type | RT 100 U Type | W Type |

Coatings

○ bright

● steam oxide

● nitrided

● nitrided lands

S TiN

A TiAlN

A SuperA™

a nano-A™

F FIREX/nano-FIREX

C TiCN

Y nano-Si™

Ni nickel-plated

Material classifications

| | Material group | Examples |
|----------|--|--|
| P | Common structural steels | A283, A516, Gr50, 30, 35, 42, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 100, 110, 135, 140, 145, 150, 160 |
| | Free-cutting steels | 1151, 1215, L10, 10L10, 10L15, 10L17, 10L20, 10L23, 10L25, 10L30, 10L35, 10L40, 10L42, 10L45, 10L49, 10L50, 10L55, 11L15, 11L16, 11L17, 11L37, 11L38, 11L39, 11L41, 11L44, 11L46, 12L11, 12L12, 12L13, 12L14, 12L15, 41L25, 41L30, 41L35, 41L40, 41L42, 41L47, 41L50, 51L15, 51L17, 51L20, 86L20, 86L40 |
| | Unalloyed heat-treatable steels | 1005, 1006, 1008, 1009, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1025, 1026, 1029, 1030, 1033, 1035, 1037, 1038, 1039, 1040, 1042, 1043, 1044, 1045, 1046, 1049, 1050, 1053, 1055, 1059, 1060, 1064, 1065, 1069, 1070, 1071, 1074, 1075, 1078, 1080, 1084, 1085, 1086, 1090, 1095 |
| | Alloyed heat-treatable steels | 1330, 1335, 1340, 1345, 2340, 3140, 3145, 3150, 3230, 3240, 3335, 3340, 3435, 3450, 4032, 4037, 4063, 4130, 4135, 4137, 4140, 4142, 4145, 4147, 4150, 4161, 4337, 4340, 4640, 5045, 5046, 5060, 5130, 5132, 5135, 5140, 5145, 5157, 5150, 5155, 5160, 6130, 6135, 6140, 6145, 6150, 7140, 6145, 6150, 7140, 8630, 8632, 8635, 8637, 8640, 8642, 8645, 8650, 8650, 8660, 8735, 8740, 8742, 9250, 9254, 9255, 9260, 9262, 9840, 9850 |
| | Unalloyed case hardened steels | 1005, 1006, 1008, 1009, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1025, 1026, 1029, 1030, 1033, 1035, 1037, 1038, 1039, 1040, 1042, 1043, 1044, 1045, 1046, 1049, 1050, 1053, 1055, 1059, 1060, 1064, 1065, 1069, 1070, 1071, 1074, 1075, 1078, 1080, 1084, 1085, 1086, 1090, 1095 |
| | Alloyed case hardened steels | 2317, 2512, 2515, 2517, 3115, 3120, 3215, 3220, 3312, 3316, 3325, 4012, 4023, 4024, 4027, 4028, 4118, 4119, 4125, 4317, 4320, 4419, 4422, 4427, 4608, 4615, 4617, 4620, 4621, 4626, 4718, 4720, 4815, 4817, 4820, 5015, 5115, 5117, 5120, 6115, 6118, 6120, 6125, 8115, 8615, 8617, 8620, 8622, 8625, 8627, 8720, 8822, 9310, 9315, 9317 |
| | Nitriding steels | 1132, 1137, 1138, 1139, 1140, 1141, 1144, 1145, 1146, 1151 |
| | Tool steels | A2, A3, A4, A5, A6, A8, A9, A10, O1, O2, O6, O7, A7, D2, D3, D4, D5, D7, H10, H11, H12, H13, H14, H19, H20, H21, H22, H23, H24, H25, H26, H41, H42, H43, L1, L3, W1, W2, W5 |
| | High speed steels | M1, M2, M3-1, M3-2, M4, M6, M7, M10, M30, M33, M34, M36, M41, M42, M43, M44, M46, M47, T1, T2, T4, T5, T6, T8, T15 |
| | Spring steels | 5150, 5155, 6145, 6150, 9255 |
| H | Hardened steels >48-60 Rc | Heat Treated Steels |
| M | Stainless steels, sulphured | 203 Ez, 303 Se, 303 Ma, 303 Pb, 303 PlusX, 430F Se, 416 Se, 416 PlusX, 420F, 420F Se, 440F, 440F Se |
| | austenitic | 201, 202, 301, 302B, 303, 304, 304L, 305, 308, 309, 309S, 310, 310S, 314, 316, 316L, 317, 321, 330, 347, 348, 384, 385, Nitronic 32, Nitronic 33, Nitronic 40, Nitronic 50, Nitronic 60, 17-7PH |
| | martensitic | 403, 405, 410, 414, 416, 420, 422, 430, 431, 440A, 440B, 440C, 446, 501, 502, 630, Greek Ascoloy |
| K | Cast iron | A48-20 B, A48-30 B, A48-40 B, A48-50B, A159G1800, A159G2500, A159G3000, A159G3500, A159G4000 |
| | Spheroidal graphite iron and malleable cast iron | 60-10-18, 60-40-18, 65-45-12, 80-55-06, 100-70-03, 120-90-02, 32510, 35018, 40010, 50005, 60004, 70003, 80002, 90001, A220-70003, A220-8002, A536 |
| | Chilled cast iron | |
| S | Special alloys | Inconel, Hastelloy, Monel, Nimonic, MAR-M246, DS-Ni, Waspalloy, Rene41 |
| | Ti and Ti-alloys | Ti6AL4V, 5390A, TiCu2 |
| N | Aluminium and Al-alloys | EC 1060, 1100, 1145, 1175, 1235, 2011, 2014, 2017, 2018, 2021, 2024, 2025, 2117, 2218, 2219, 2618, 3003, 3004, 3005, 4032, 4032-T6, 5005, 5050, 5052, 5056, 5083, 5086, 5154, 5252, 5254, 5454, 5456, 5457, 5652, 5657, 6053, 6061, 6061-T6, 6063, 6066, 6070, 6101, 6151, 6253, 6262, 6463, 6951, 7001, 7004, 7005, 7039, 7049, 7050, 7075, 7075-T6, 7079, 7175, 7178 |
| | Al wrought alloys | 1100-0, 3003-H18, 5056-0, 2024-T4, 4043-H18 |
| | Al cast alloys | 295-T6, 319-F, 356-T6, 380-F, 384-F, 390-F, 443-F, 413-F, 518-F, 713-TS, 850-TS |
| | Magnesium alloys | AZ31B, AZ63A, AZ80A, AZ91C, EZ33A, HK31A, QE22A, ZK60A |
| | Copper, low-alloyed | C10100, C27000, C71500, C52400, C77000, C17200, C71500, C95500, C86500 |
| | Brass, short-chipping | CUZn10, CUZn20 |

Center Drills, NC Spot Drills, & C-Sinks

| P | M | K | N | S | H | Tool illustration | Shank form | Standard | Form | Cutting direction | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|------------|---------------|------|-------------------|---------------|---------|----------------|------------|-------------------|------|
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | A | R | HSS | ○ | 0.500 - 12.500 | 581 | 524 | 36 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | A | R | HSS | Ⓢ | 0.500 - 8.000 | 613 | 531 | 37 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | A | L | HSS | ○ | 0.500 - 12.500 | 582 | 524 | 38 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | A | R | HSS | ○ | 1.000 - 12.500 | 590 | 528 | 39 |
| • | • | • | • | ○ | | | Cyl | DIN 333 | A | R | M35 Cobalt | ○ | 1.000 - 4.000 | 381 | 512 | 40 |
| • | ○ | • | • | ○ | | | Cyl | ASME B94.11 M | A | R | HSS | ○ | #1 - #8 | 594 | 529 | 41 |
| • | ○ | • | • | ○ | | | Cyl | BS 328 | A | R | HSS | ○ | #1 - #7 | 292 | 507 | 42 |
| • | ○ | • | • | ○ | | | Cyl | BS 328 | A | L | HSS | ○ | #1 - #7 | 294 | 508 | 43 |
| • | ○ | • | • | ○ | | | Cyl | WN | A | R | HSS | ○ | 0.500 - 10.000 | 281 | 503 | 44 |
| • | ○ | • | • | ○ | | | Cyl | WN | A | L | HSS | ○ | 0.800 - 5.000 | 282 | 504 | 45 |
| ○ | ○ | ○ | ○ | ○ | ○ | | Cyl | WN | A | R | Carbide | ○ | 0.500 - 6.300 | 736 | 544 | 46 |
| • | ○ | • | • | ○ | | | Cyl | WN | A | R | HSS | ○ | 1.000 - 3.150 | 280 | 503 | 47 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | R | R | HSS | ○ | 0.500 - 12.500 | 583 | 525 | 48 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | R | R | HSS | Ⓢ | 0.800 - 8.000 | 614 | 532 | 49 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | R | L | HSS | ○ | 0.800 - 5.000 | 584 | 525 | 50 |
| • | ○ | • | • | ○ | | | Cyl | WN | R | R | HSS | ○ | 0.500 - 10.000 | 283 | 504 | 51 |
| • | ○ | • | • | ○ | | | Cyl | WN | R | L | HSS | ○ | 1.600 - 4.000 | 284 | 505 | 52 |
| • | ○ | • | • | ○ | | | Flat | DIN 333 | A | R | HSS | ○ | 1.600 - 10.000 | 587 | 527 | 53 |
| • | ○ | • | • | ○ | | | Flat | DIN 333 | A | R | HSS | ○ | 1.600 - 10.000 | 287 | 506 | 54 |
| • | ○ | • | • | ○ | | | Flat | DIN 333 | R | R | HSS | ○ | 1.000 - 10.000 | 588 | 527 | 55 |
| • | ○ | • | • | ○ | | | Flat | DIN 333 | R | R | HSS | ○ | 2.000 - 8.000 | 288 | 506 | 56 |

Center drills, 60°/120° double angle

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|--|-----|---------|---|---|-----|---|----------------|-----|-----|----|
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | B | R | HSS | ○ | 1.000 - 10.000 | 585 | 526 | 57 |
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | B | L | HSS | ○ | 1.000 - 10.000 | 586 | 526 | 58 |

Center Drills, NC Spot Drills, & C-Sinks

| P | M | K | N | S | H | Tool illustration | Shank form | Coolant | Form | Cutting direction | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|------------|---------|------|-------------------|---------------|---------|---------------|------------|-------------------|------|
|---|---|---|---|---|---|-------------------|------------|---------|------|-------------------|---------------|---------|---------------|------------|-------------------|------|

Center drills, 60°/120° double angle

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|--|------|---------------|---|---|-----|---|---------------|-----|-----|----|
| • | ○ | • | • | ○ | | | Cyl | DIN 333 | B | R | HSS | ○ | 1.000 - 6.300 | 591 | 529 | 59 |
| • | ○ | • | • | ○ | | | Cyl | WN | B | R | HSS | ○ | 1.000 - 6.300 | 285 | 505 | 60 |
| • | ○ | • | • | ○ | | | Cyl | ASME B94.11 M | B | R | HSS | ○ | #11 - #18 | 595 | 530 | 61 |
| • | ○ | • | • | ○ | | | Flat | DIN 333 | B | R | HSS | ○ | 1.600 - 8.000 | 589 | 528 | 62 |
| • | ○ | • | • | ○ | | | Flat | WN | B | R | HSS | ○ | 1.600 - 5.000 | 289 | 507 | 63 |

90° NC-spot drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|---------------|--|---|------------|---|----------------|------|-----|----|
| • | ○ | • | • | ○ | | | Cyl | WN | | R | HSS | ○ | 3.000 - 25.400 | 557 | 522 | 64 |
| • | ○ | • | • | ○ | | | Cyl | WN | | R | HSS | S | 3.000 - 25.400 | 568 | 523 | 65 |
| • | ○ | • | • | ○ | | | Cyl | WN | | R | HSS | ○ | 6.350 - 25.400 | 559 | 522 | 66 |
| • | • | • | • | ○ | | | B | WN | | R | M35 Cobalt | ○ | 3.000 - 20.000 | 1136 | 550 | 67 |
| • | • | • | • | ○ | | | B | WN | | R | M35 Cobalt | F | 3.000 - 20.000 | 1133 | 549 | 68 |
| ○ | ○ | ○ | ○ | ○ | ○ | | Cyl | WN | | R | Carbide | ○ | 4.000 - 20.000 | 723 | 542 | 69 |

120° NC-spot drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|---------------|--|---|------------|---|----------------|------|-----|----|
| • | ○ | • | • | ○ | | | Cyl | WN | | R | HSS | ○ | 3.000 - 25.400 | 556 | 521 | 70 |
| • | ○ | • | • | ○ | | | Cyl | WN | | R | HSS | S | 3.000 - 25.400 | 567 | 523 | 71 |
| • | • | • | • | ○ | | | B | WN | | R | M35 Cobalt | ○ | 3.000 - 20.000 | 1134 | 549 | 72 |
| • | • | • | • | ○ | | | B | WN | | R | M35 Cobalt | F | 3.000 - 20.000 | 1135 | 550 | 73 |
| ○ | ○ | ○ | ○ | ○ | ○ | | HA | WN | | R | Carbide | ○ | 5.000 - 20.000 | 724 | 542 | 74 |

142° NC-spot drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|----|---------------|--|---|---------|---|----------------|-----|-----|----|
| ○ | ○ | ○ | ○ | ○ | ○ | | HB | WN | | R | Carbide | ○ | 4.000 - 20.000 | 546 | 518 | 75 |
|---|---|---|---|---|---|--|----|---------------|--|---|---------|---|----------------|-----|-----|----|

90° Countersinks, SpyroTec

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|--|----------|---------------|--|---|------------|---|----------------|------|-----|----|
| • | • | • | ○ | ○ | | | Cyl | WN | | R | M35 Cobalt | A | 6.300 - 31.000 | 5500 | 569 | 76 |
| • | • | • | ○ | ○ | | | Tri-Flat | WN | | R | M35 Cobalt | A | 6.300 - 31.000 | 5501 | 569 | 77 |
| • | ○ | • | ○ | ○ | | | Cyl | WN | | R | HSS | A | 6.300 - 31.000 | 5503 | 569 | 78 |

HSS, HSCO, HSS-E-PM Drills

| P | M | K | N | S | H | Tool illustration | Shank form | Coolant | Type | Cutting direction | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---------------------------------------|---|---|---|---|---|-------------------|------------|---------|----------|-------------------|---------------|---------|-----------------------------|------------|-------------------|------|
| 90° Countersink sets, SpyroTec | | | | | | | | | | | | | | | | |
| • | • | • | • | • | • | | Cyl | | | R | HSS | A | 6,3/8,3/10,4/12,4/16,5/20,5 | 5538 | 569 | 79 |
| • | • | • | • | • | • | | Tri-Flat | | | R | HSS | A | 6,3/8,3/10,4/12,4/16,5/20,5 | 5539 | 569 | 80 |
| 60° Countersinks, SpyroTec | | | | | | | | | | | | | | | | |
| • | • | • | • | • | • | | Cyl | | | R | HSS | A | 6.300 - 25.000 | 5670 | 580 | 81 |
| • | • | • | • | • | • | | Tri-Flat | | | R | HSS | A | 6.300 - 31.000 | 5671 | 580 | 82 |
| HSCO micro-precision drills | | | | | | | | | | | | | | | | |
| • | • | • | • | • | • | | Cyl | | N | R | HSS-E-PM | | 0.050 - 1.920 | 301 | 508 | 86 |
| • | • | • | • | • | • | | Cyl | | N | L | HSS-E-PM | | 0.130 - 1.850 | 303 | 509 | 88 |
| • | • | • | • | • | • | | Cyl | | N | R | HSS-E-PM | S | 0.160 - 1.900 | 660 | 538 | 90 |
| Stub drills | | | | | | | | | | | | | | | | |
| • | • | • | • | • | • | | Cyl | | N | R | HSS | | 0.350 - 44.000 | 223 | 499 | 94 |
| • | • | • | • | • | • | | Cyl | | N | L | HSS | | 0.320 - 50.000 | 226 | 500 | 98 |
| • | • | • | • | • | • | | Cyl | | N | R | HSS | S | 0.500 - 30.160 | 653 | 535 | 101 |
| • | • | • | • | • | • | | Cyl | | H | R | HSS | | 0.690 - 21.000 | 224 | 499 | 104 |
| • | • | • | • | • | • | | Cyl | | W | R | HSS | | 1.000 - 20.000 | 225 | 500 | 106 |
| • | • | • | • | • | • | | Cyl | | GT 80 | R | HSS | | 1.000 - 20.000 | 552 | 520 | 108 |
| • | • | • | • | • | • | | Cyl | | GT 80 | L | HSS | | 1.000 - 19.840 | 553 | 521 | 111 |
| • | • | • | • | • | • | | Cyl | | GV 120 | R | M35 Cobalt | | 0.400 - 25.400 | 329 | 511 | 113 |
| • | • | • | • | • | • | | Cyl | | GV 120 | R | M35 Cobalt | S | 0.500 - 15.500 | 659 | 537 | 116 |
| • | • | • | • | • | • | | Cyl | | GU500 DZ | R | M35 Cobalt | | 1.000 - 14.290 | 5524 | 576 | 118 |
| • | • | • | • | • | • | | Cyl | | GU500 DZ | R | M35 Cobalt | S | 1.000 - 14.290 | 5520 | 574 | 120 |
| • | • | • | • | • | • | | Cyl | | GT500 DZ | R | HSS-E-PM | S | 1.000 - 14.000 | 5521 | 574 | 122 |
| • | • | • | • | • | • | | Cyl | | GT500 DZ | R | HSS-E-PM | F | 1.000 - 14.290 | 515 | 515 | 124 |

HSS, HSCO, HSS-E-PM Drills

| P | M | K | N | S | H | Tool illustration | Shank form | Coolant | Type | Cutting direction | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|------------|---------|----------|-------------------|---------------|---------|----------------|------------|-------------------|------|
| • | • | • | • | | | | Cyl | | N | R | HSS | | 0.200 - 20.000 | 205 | 496 | 128 |
| • | • | • | • | | | | Cyl | | N | L | HSS | | 0.200 - 20.000 | 208 | 497 | 134 |
| • | • | • | • | | | | Cyl | | N | R | HSS | | 0.200 - 19.000 | 651 | 534 | 137 |
| • | • | • | • | | | | Cyl | | N | L | HSS | | 0.250 - 14.250 | 664 | 538 | 141 |
| | | | | • | | | Cyl | | H | R | HSS | | 0.200 - 20.000 | 206 | 496 | 143 |
| | | | | • | | | Cyl | | W | R | HSS | | 0.200 - 20.000 | 207 | 497 | 146 |
| • | • | • | • | | | | Cyl | | GT 100 | R | HSS | | 0.600 - 16.000 | 549 | 519 | 149 |
| • | • | • | • | | | | Cyl | | GT 100 | L | HSS | | 1.000 - 15.500 | 550 | 519 | 152 |
| • | • | • | • | | | | Cyl | | GT 100 | R | HSS | | 1.000 - 15.000 | 652 | 535 | 154 |
| • | • | • | • | | | | Cyl | | N | R | M35 Cobalt | | 0.200 - 20.000 | 305 | 509 | 157 |
| • | • | • | • | | | | Cyl | | N | L | M35 Cobalt | | 0.360 - 18.500 | 308 | 510 | 161 |
| • | • | • | • | | | | Cyl | | Ti | R | M35 Cobalt | | 0.200 - 19.000 | 605 | 530 | 163 |
| • | • | • | • | | | | Cyl | | Ti | R | M35 Cobalt | | 0.500 - 14.500 | 657 | 536 | 166 |
| • | • | • | • | | | | Cyl | | Ti | R | M35 Cobalt | | 0.400 - 15.000 | 2458 | 555 | 168 |
| • | • | • | • | • | • | | HE | | GT80 IC | R | M35 Cobalt | | 5.000 - 20.000 | 1131 | 548 | 170 |
| • | • | • | • | • | • | | HE | | GT80 IC | R | M35 Cobalt | | 5.000 - 20.000 | 1132 | 548 | 171 |
| • | • | • | • | | | | Cyl | | GT 100 | R | M35 Cobalt | | 1.000 - 16.000 | 622 | 534 | 172 |
| • | • | • | • | | | | Cyl | | GT 100 | R | M35 Cobalt | | 1.000 - 15.000 | 658 | 537 | 175 |
| • | • | • | • | | | | Cyl | | GT 100 | R | M35 Cobalt | | 3.000 - 11.910 | 1221 | 552 | 177 |
| • | • | • | • | | | | Cyl | | GT 100 | R | M35 Cobalt | | 3.000 - 12.000 | 1223 | 552 | 178 |
| • | • | • | • | | | | Cyl | | GU500 DZ | R | M35 Cobalt | | 1.000 - 14.290 | 5523 | 575 | 180 |
| • | • | • | • | | | | Cyl | | GU500 DZ | R | M35 Cobalt | | 1.000 - 14.290 | 5519 | 573 | 182 |
| • | • | • | • | • | • | | Cyl | | AeroX | R | M42 Cobalt | | 1.000 - 13.000 | 1018 | 546 | 184 |
| • | • | • | • | • | • | | Cyl | | GT500 DZ | R | HSS-E-PM | | 1.000 - 14.000 | 5522 | 575 | 186 |
| • | • | • | • | • | • | | Cyl | | GT500 DZ | R | HSS-E-PM | | 1.000 - 14.290 | 530 | 517 | 188 |

HSS, HSCO, HSS-E-PM Drills

| P | M | K | N | S | H | Tool illustration | Shank form | Coolant | Type | Cutting direction | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|------------|---------|------|-------------------|---------------|---------|---------------|------------|-------------------|------|
|---|---|---|---|---|---|-------------------|------------|---------|------|-------------------|---------------|---------|---------------|------------|-------------------|------|

Bushing length drills

| | | | | | | | | | | | | | | | | |
|---|---|---|--|--|--|--|-----|--|---|--|-----|--|----------------|-----|-----|-----|
| • | • | • | | | | | Cyl | | N | | HSS | | 1.000 - 13.000 | 666 | 539 | 192 |
|---|---|---|--|--|--|--|-----|--|---|--|-----|--|----------------|-----|-----|-----|

Taper length drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|--|-----------|--|------------|--|----------------|------|-----|-----|
| • | • | • | • | | | | Cyl | | N | | HSS | | 0.400 - 36.510 | 217 | 498 | 193 |
| • | • | • | • | | | | Cyl | | N | | HSS | | 0.500 - 22.220 | 667 | 539 | 196 |
| | | | • | | | | Cyl | | W | | HSS | | 0.500 - 20.640 | 219 | 498 | 198 |
| • | | | • | | | | Cyl | | GT 50 | | HSS | | 1.000 - 32.600 | 501 | 513 | 200 |
| • | • | • | • | | | | Cyl | | GT 100 | | HSS | | 1.000 - 14.000 | 535 | 518 | 203 |
| • | • | • | • | | | | Cyl | | GT 100 | | HSS | | 1.000 - 14.000 | 668 | 540 | 206 |
| • | • | • | • | • | | | Cyl | | GT 100 IC | | HSS | | 3.000 - 13.000 | 390 | 513 | 208 |
| • | • | • | • | • | | | Cyl | | N | | M35 Cobalt | | 0.500 - 22.000 | 317 | 510 | 209 |
| • | • | • | • | • | | | Cyl | | Ti | | M35 Cobalt | | 1.000 - 15.000 | 617 | 532 | 211 |
| • | • | • | • | • | | | Cyl | | Ti | | M35 Cobalt | | 1.000 - 10.200 | 669 | 540 | 213 |
| • | • | • | • | • | • | | Cyl | | GT 100 | | M35 Cobalt | | 1.000 - 16.000 | 336 | 511 | 214 |
| • | • | • | • | • | | | Cyl | | GU500 DZ | | M35 Cobalt | | 1.000 - 14.290 | 5536 | 577 | 216 |
| • | • | • | • | • | | | Cyl | | GU500 DZ | | M35 Cobalt | | 1.000 - 14.290 | 5537 | 577 | 218 |

Extra length drills, series 1

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|--|--------|--|------------|--|----------------|-----|-----|-----|
| • | • | • | • | | | | Cyl | | N | | HSS | | 1.600 - 13.000 | 235 | 501 | 222 |
| • | | | • | | | | Cyl | | GT 50 | | HSS | | 2.000 - 12.700 | 524 | 516 | 224 |
| • | • | • | • | | | | Cyl | | GT 100 | | HSS | | 1.950 - 13.000 | 502 | 514 | 225 |
| • | • | • | • | • | | | Cyl | | GT 100 | | HSS | | 2.000 - 12.700 | 670 | 541 | 227 |
| • | • | • | • | • | • | | Cyl | | GT 100 | | M35 Cobalt | | 2.700 - 10.000 | 618 | 533 | 228 |

HSS, HSCO, HSS-E-PM Drills

| P | M | K | N | S | H | Tool illustration | Shank form | Coolant | Type | Cutting direction | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|------------|---------|--------|-------------------|---------------|---------|----------------|------------|-------------------|------|
| Extra length drills, series 2 | | | | | | | | | | | | | | | | |
| • | • | • | | | | | Cyl | | GT 100 | | HSS | | 2.000 - 13.000 | 503 | 514 | 229 |
| • | • | • | ○ | | | | Cyl | | GT 100 | | HSS | | 2.700 - 8.500 | 671 | 541 | 230 |
| • | • | • | • | ○ | | | Cyl | | GT 100 | | M35 Cobalt | | 3.000 - 10.000 | 619 | 533 | 231 |
| Extra length drills, series 3 | | | | | | | | | | | | | | | | |
| • | • | • | | | | | Cyl | | GT 100 | | HSS | | 2.500 - 13.000 | 504 | 515 | 232 |
| Morse taper shank drills, jobber length | | | | | | | | | | | | | | | | |
| • | • | ○ | | | | | MT | | N | | HSS | | 2.380 - 79.370 | 245 | 501 | 236 |
| • | • | ○ | | | | | MT | | N | | HSS | | 3.000 - 30.500 | 654 | 536 | 239 |
| • | ○ | ○ | | | | | MT | | N | | M35 Cobalt | | 3.000 - 25.400 | 345 | 512 | 241 |
| Morse taper shank drills, bushing length | | | | | | | | | | | | | | | | |
| • | • | ○ | | | | | MT | | N | | HSS | | 4.000 - 29.370 | 257 | 502 | 243 |
| • | • | • | | | | | MT | | GT 100 | | HSS | | 6.000 - 31.500 | 551 | 520 | 245 |
| Morse taper shank drills, extra length series 1 | | | | | | | | | | | | | | | | |
| • | • | ○ | | | | | MT | | N | | HSS | | 8.000 - 50.000 | 266 | 502 | 246 |
| • | • | • | | | | | MT | | GT 100 | | HSS | | 8.000 - 30.000 | 526 | 516 | 247 |
| Morse taper shank drills, extra length series 2 | | | | | | | | | | | | | | | | |
| • | • | • | | | | | MT | | GT 100 | | HSS | | 8.000 - 30.000 | 527 | 517 | 248 |











Carbide Drills

| P | M | K | N | S | H | Tool illustration | Cutting Depth | Coolant | Type | Shank form | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|---------------|---------|------|------------|---------------|---------|---------------|------------|-------------------|------|
|---|---|---|---|---|---|-------------------|---------------|---------|------|------------|---------------|---------|---------------|------------|-------------------|------|





General purpose carbide micro-precision drills

| | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|---|-----|---|---|----|---------|---|---------------|------|-----|-----|
| • | • | | | | |  | 5xD |  | N | HA | Carbide | A | 0.100 - 3.000 | 3899 | 561 | 252 |
|---|---|--|--|--|--|---|-----|---|---|----|---------|---|---------------|------|-----|-----|









ExclusiveLine™ high-performance carbide micro-precision drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|---|------|---|---|----|---------|---|---------------|------|-----|-----|
| • | • | • | ○ | ○ | |  | 4xD |  | N | HA | Carbide | A | 0.500 - 3.000 | 6400 | 585 | 254 |
| • | • | • | ○ | ○ | |  | 5xD |  | N | HA | Carbide | A | 1.400 - 3.000 | 6405 | 586 | 255 |
| • | • | • | ○ | ○ | |  | 7xD |  | N | HA | Carbide | A | 0.500 - 3.000 | 6401 | 585 | 256 |
| • | • | • | ○ | ○ | |  | 8xD |  | N | HA | Carbide | A | 1.400 - 3.000 | 6408 | 586 | 257 |
| • | • | • | ○ | ○ | |  | 15xD |  | N | HA | Carbide | A | 1.400 - 3.000 | 6412 | 587 | 258 |











Stub carbide drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|---|------|---|---|-----|---------|---|----------------|------|-----|-----|
| ○ | ○ | ○ | • | ○ | |  | ~3xD |  | N | Cyl | Carbide | ○ | 0.500 - 16.000 | 730 | 543 | 262 |
| ○ | ○ | ○ | • | ○ | |  | ~3xD |  | N | Cyl | Carbide | F | 1.000 - 16.000 | 2463 | 556 | 264 |

Jobber length carbide drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|---|------|---|--------|-----|---------|---|----------------|------|-----|-----|
| ○ | ○ | ○ | • | ○ | |  | ~5xD |  | N | Cyl | Carbide | ○ | 1.000 - 12.700 | 732 | 543 | 268 |
| ○ | ○ | ○ | • | ○ | |  | ~5xD |  | N | Cyl | Carbide | F | 1.000 - 12.700 | 2464 | 556 | 270 |
| • | • | • | | | |  | ~8xD |  | GT 100 | Cyl | Carbide | ○ | 3.170 - 12.700 | 2601 | 558 | 272 |
| • | • | • | | | |  | ~8xD |  | GT 100 | Cyl | Carbide | S | 3.170 - 12.700 | 2602 | 559 | 274 |

3xD carbide drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|---|-----|---|-----------|-----|---------|---|----------------|------|-----|-----|
| ○ | • | ○ | ○ | ○ | |  | 3xD |  | RT 100 F | Cyl | Carbide | S | 3.000 - 15.000 | 1702 | 555 | 278 |
| • | ○ | • | ○ | ○ | |  | 3xD |  | RT 100 U | Cyl | Carbide | S | 3.000 - 16.000 | 1242 | 553 | 280 |
| • | ○ | • | ○ | ○ | |  | 3xD |  | RT 100 U | HE | Carbide | S | 3.000 - 20.000 | 1184 | 551 | 282 |
| • | ○ | • | ○ | ○ | |  | 3xD |  | RT 100 U | HA | Carbide | F | 3.000 - 20.000 | 5514 | 572 | 284 |
| • | | | • | ○ | |  | 3xD |  | RT 100 US | HA | Carbide | a | 3.000 - 12.700 | 5741 | 581 | 286 |

(continued on next page)

Carbide Drills

| P | M | K | N | S | H | Tool illustration | Cutting Depth | Coolant | Type | Shank form | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|---------------|---------|------|------------|---------------|---------|---------------|------------|-------------------|------|
|---|---|---|---|---|---|-------------------|---------------|---------|------|------------|---------------|---------|---------------|------------|-------------------|------|

3xD carbide drills, continued

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|--|-----------|----|---------|---|----------------|------|-----|-----|
| • | | | | | | | 3xD | | RT 100 HF | HA | Carbide | Y | 3.000 - 20.000 | 8524 | 593 | 288 |
| ★ | ○ | ○ | ○ | ○ | ○ | | 3xD | | RT 100 U | HA | Carbide | F | 3.000 - 20.000 | 5510 | 570 | 290 |
| • | ○ | ○ | ○ | ○ | ○ | | 3xD | | RT 100 U | HE | Carbide | F | 3.000 - 20.000 | 5610 | 578 | 292 |
| | ★ | | | • | | | 3xD | | RT 100 VA | HA | Carbide | a | 3.000 - 20.000 | 8510 | 591 | 294 |
| • | | | | ★ | ○ | | 3xD | | RT 100 HF | HA | Carbide | F | 3.000 - 20.000 | 8520 | 592 | 296 |

5xD carbide drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|-----|--|-----------|-----|---------|---|----------------|------|-----|-----|
| • | ○ | ○ | ○ | ○ | ○ | | 5xD | | RT 100 U | Cyl | Carbide | S | 3.000 - 16.000 | 1243 | 553 | 300 |
| • | ○ | ○ | ○ | ○ | ○ | | 5xD | | RT 100 U | HA | Carbide | F | 3.000 - 20.000 | 5515 | 572 | 302 |
| ○ | ○ | ○ | ○ | • | ○ | | 5xD | | RT 100 F | HA | Carbide | S | 3.000 - 20.000 | 1662 | 554 | 304 |
| • | ○ | ○ | ○ | ○ | ○ | | 5xD | | RT 100 U | HE | Carbide | S | 3.000 - 20.000 | 1183 | 551 | 306 |
| • | ○ | ○ | ○ | ○ | ○ | | 5xD | | RT 100 U | HA | Carbide | F | 3.000 - 20.000 | 5511 | 570 | 308 |
| • | ○ | ○ | ○ | ○ | ○ | | 5xD | | RT 100 U | HE | Carbide | F | 3.000 - 20.000 | 5611 | 578 | 310 |
| • | ○ | ○ | ○ | ○ | ○ | | 5xD | | RT 100 XF | HA | Carbide | F | 3.000 - 20.000 | 5498 | 568 | 312 |
| | | | | ★ | | | 5xD | | RT 100 Al | HA | Carbide | ○ | 3.000 - 20.000 | 5768 | 583 | 314 |
| • | | | | ○ | | | 5xD | | RT 100 US | HA | Carbide | a | 3.000 - 20.000 | 5744 | 582 | 316 |
| | ★ | | | • | | | 5xD | | RT 100 VA | HA | Carbide | a | 3.000 - 20.000 | 8511 | 591 | 318 |
| • | | | | ★ | ○ | | 5xD | | RT 100 HF | HA | Carbide | Y | 3.000 - 20.000 | 8521 | 592 | 320 |
| | ★ | | | | | | 5xD | | RT 100 R | HA | Carbide | F | 3.000 - 20.000 | 6501 | 587 | 322 |

3-flute 5xD carbide drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|--|--|-----|--|----------|-----|---------|---|----------------|------|-----|-----|
| ○ | ○ | ○ | | | | | 5xD | | GS 200 U | Cyl | Carbide | ○ | 3.000 - 20.000 | 1452 | 554 | 324 |
| ○ | ○ | ○ | | | | | 5xD | | GS 200 U | Cyl | Carbide | S | 3.000 - 20.000 | 609 | 531 | 326 |
| | | | • | • | | | 5xD | | FT 200 G | HA | Carbide | ○ | 3.000 - 20.000 | 5518 | 573 | 328 |

Carbide Drills

| P | M | K | N | S | H | Tool illustration | Cutting Depth | Coolant | Type | Shank form | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|-------------------|---------------|---------|-----------|------------|---------------|---------|----------------|------------|-------------------|------|
| • | ○ | • | ○ | ○ | ○ | | 7xD | | RT 100 U | HA | Carbide | F | 3.000 - 20.000 | 5512 | 571 | 332 |
| • | ○ | • | ○ | ○ | ○ | | 7xD | | RT 100 U | HE | Carbide | F | 3.000 - 20.000 | 5612 | 579 | 334 |
| ★ | ○ | ○ | ○ | ○ | ○ | | 7xD | | RT 100 US | HA | Carbide | a | 3.000 - 12.700 | 5746 | 582 | 336 |
| • | ○ | ○ | ○ | ★ | ○ | | 7xD | | RT 100 HF | HA | Carbide | Y | 3.000 - 16.000 | 8522 | 593 | 338 |
| ○ | ○ | ○ | ○ | ○ | ○ | | 7xD | | RT 100 R | HA | Carbide | F | 4.000 - 20.000 | 6502 | 588 | 339 |
| • | ○ | ○ | ○ | ○ | ○ | | 7xD | | RT 100 XF | HA | Carbide | F | 3.000 - 20.000 | 5499 | 568 | 341 |

12xD carbide drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|------|--|----------|----|---------|---|----------------|------|-----|-----|
| • | ○ | • | ○ | ○ | ○ | | 12xD | | RT 100 U | HA | Carbide | F | 3.000 - 20.000 | 5525 | 576 | 343 |
|---|---|---|---|---|---|--|------|--|----------|----|---------|---|----------------|------|-----|-----|

































RT 150 GG/GN straight flute drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|------|--|-----------|----|---------|---|----------------|------|-----|-----|
| ○ | • | ○ | ○ | ○ | ○ | | 4xD | | RT 150 GG | HA | Carbide | ○ | 3.000 - 20.000 | 768 | 544 | 348 |
| • | ○ | ○ | ○ | ○ | ○ | | 4xD | | RT 150 GG | HA | Carbide | ○ | 3.000 - 20.000 | 6068 | 583 | 350 |
| ○ | • | ○ | ○ | ○ | ○ | | 7xD | | RT 150 GG | HA | Carbide | ○ | 3.000 - 20.000 | 769 | 545 | 352 |
| • | ○ | ○ | ○ | ○ | ○ | | 7xD | | RT 150 GG | HA | Carbide | ○ | 3.000 - 20.000 | 6069 | 584 | 353 |
| ○ | • | ○ | ○ | ○ | ○ | | 10xD | | RT 150 GG | HA | Carbide | ○ | 3.000 - 16.000 | 5513 | 571 | 354 |
| • | ○ | ○ | ○ | ○ | ○ | | 10xD | | RT 150 GG | HA | Carbide | ○ | 3.000 - 20.000 | 6070 | 584 | 355 |
| • | • | ○ | ○ | ○ | ○ | | 15xD | | RT 150 GN | HA | Carbide | ○ | 5.000 - 14.000 | 773 | 545 | 356 |



















RT 100 T coolant fed deep hole twist drills

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|--|------|--|----------|----|---------|---|----------------|------|-----|-----|
| • | • | • | ○ | ○ | ○ | | 15xD | | RT 100 T | HA | Carbide | A | 3.000 - 16.000 | 6509 | 588 | 360 |
| • | • | • | ○ | ○ | ○ | | 20xD | | RT 100 T | HA | Carbide | A | 3.000 - 16.000 | 6511 | 589 | 361 |
| • | • | • | ○ | ○ | ○ | | 25xD | | RT 100 T | HA | Carbide | A | 3.000 - 16.000 | 6512 | 589 | 362 |
| • | • | • | ○ | ○ | ○ | | 30xD | | RT 100 T | HA | Carbide | A | 3.000 - 14.000 | 6513 | 590 | 363 |
| • | • | • | ○ | ○ | ○ | | 40xD | | RT 100 T | HA | Carbide | A | 3.000 - 8.000 | 6514 | 590 | 364 |







Gun Drills

| P | M | K | N | S | H | Tool illustration | Cutting Depth | Coolant | Type | Shank form | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|---|---------------|---|--------|---|---------------|---|----------------|------------|-------------------|------|
| • | • | ○ | ○ | ○ | ○ |  | 25xD |  | EB 100 |  | Carbide |  | 2.380 - 12.000 | 5646 | 567 | 368 |
| • | • | ○ | ○ | ○ | ○ |  | 50xD |  | EB 100 |  | Carbide |  | 2.380 - 8.000 | 5647 | 567 | 369 |
| • | • | ○ | ○ | ○ | ○ |  | 75xD |  | EB 100 |  | Carbide |  | 2.380 - 6.000 | 5648 | 567 | 370 |
| ○ | ○ | ○ | • | • | ○ |  | 45,00 |  | EB 100 |  | Carbide | ○ | 1.200 - 3.200 | 5024 | 567 | 371 |
| ○ | ○ | ○ | • | • | ○ |  | 80,00 |  | EB 100 |  | Carbide | ○ | 1.200 - 5.000 | 5020 | 567 | 372 |
| ○ | ○ | ○ | • | • | ○ |  | 120,00 |  | EB 100 |  | Carbide | ○ | 1.500 - 5.000 | 5026 | 567 | 373 |
| ○ | ○ | ○ | • | • | ○ |  | 160,00 |  | EB 100 |  | Carbide | ○ | 1.500 - 8.000 | 5021 | 567 | 374 |
| ○ | • | ○ | ○ | • | ○ |  | 40xD |  | EB 80 |  | Carbide |  | 3.970 - 12.700 | 5641 | 579 | 375 |
| ○ | • | ○ | ○ | • | ○ |  | 80xD |  | EB 80 |  | Carbide |  | 4.950 - 12.650 | 5642 | 580 | 376 |


Replaceable Tip Drills

| P | M | K | N | S | H | Tool illustration | Cutting Depth | Coolant | Type | Shank form | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|---|---------------|---|-----------|---|---------------|---------|-----------------|------------|-------------------|------|
| | | | | | |  | 1xD |  | HT 800 WP |  | Carbide | Ni | 11.000 - 40.000 | 4105 | | 384 |
| | | | | | |  | 1.5xD |  | HT 800 WP |  | Carbide | Ni | 11.000 - 40.000 | 4106 | | 385 |
| | | | | | |  | 3xD |  | HT 800 WP |  | Carbide | Ni | 11.000 - 40.000 | 4107 | | 387 |
| | | | | | |  | 5xD |  | HT 800 WP |  | Carbide | Ni | 11.000 - 40.000 | 4108 | | 389 |
| | | | | | |  | 7xD |  | HT 800 WP |  | Carbide | Ni | 11.000 - 31.990 | 4109 | | 391 |
| | | | | | |  | 10xD |  | HT 800 WP |  | Carbide | Ni | 11.000 - 31.990 | 4110 | | 393 |



HT 800 drill inserts

| | | | | | | | | | | |
|-------------|---|-----------------|--|-----------|---------|---|-----------------|------|-----|-----|
| ○ ○ ○ ○ ○ ○ |  | Pilot Drilling | | HT 800 WP | Carbide | a | 11.000 - 40.000 | 4111 | 561 | 395 |
| ○ ● ○ ○ ○ ○ |  | Cast Iron | | HT 800 WP | Carbide | F | 11.000 - 40.000 | 4113 | 563 | 398 |
| ○ ○ ○ ● ○ ○ |  | Aluminum | | HT 800 WP | Carbide | ○ | 11.000 - 40.000 | 4114 | 564 | 401 |
| ● ○ ○ ○ ○ ○ |  | Steel | | HT 800 WP | Carbide | F | 11.000 - 40.000 | 4112 | 562 | 404 |
| ○ ● ○ ○ ○ ○ |  | Stainless Steel | | HT 800 WP | Carbide | a | 11.000 - 40.000 | 4115 | 565 | 407 |
| ● ○ ○ ○ ○ ○ |  | Steel Beams | | HT 800 WP | Carbide | F | 11.000 - 40.000 | 4229 | 566 | 410 |

















HT 800 countersink inserts

| | | | | | | | | | | |
|-------------|---|-----------|--|--|---------|---|--|------|--|-----|
| ○ ○ ○ ● ○ ○ |  | Aluminum | | | Carbide | ○ | | 7635 | | 411 |
| ● ○ ○ ○ ○ ○ |  | Steel | | | Carbide | S | | 7645 | | 412 |
| ○ ● ○ ○ ○ ○ |  | Cast Iron | | | Carbide | A | | 7632 | | 413 |

HT 800 clamping screws

| | | | | | | | | | | |
|---|--|--|--|--|--|--|--|------|--|-----|
|  | | | | | | | | 6128 | | 414 |
|  | | | | | | | | 4071 | | 415 |

Replaceable Tip Drills

| P | M | K | N | S | H | Tool illustration | Cutting Depth | Coolant | Type | Shank form | Tool material | Coating | Diameter (mm) | Series no. | Cutting data page | Page |
|---|---|---|---|---|---|---|---------------|---|-----------|---|---------------|---------|-----------------|------------|-------------------|------|
| | | | | | |  | 3xD |  | RT 800 WP |  | | Ni | | 5242 | | 416 |
| | | | | | |  | 5xD |  | RT 800 WP |  | | Ni | | 5243 | | 417 |
| | | | | | |  | 7xD |  | RT 800 WP |  | | Ni | | 5248 | | 418 |
| • | ○ | • | ○ | | |  | | | RT 800 WP | | Carbide | S | 16.000 - 40.500 | 1047 | 547 | 419 |
| • | ○ | • | ○ | | |  | | | RT 800 WP | | Carbide | F | 16.000 - 40.500 | 2485 | 557 | 421 |
| | | ○ | • | | |  | | | RT 800 WP | | Carbide | ○ | 16.000 - 40.000 | 2747 | 559 | 423 |
| | | | | | |  | | | | | | | | 1071 | | 425 |
| | | | | | |  | | | | | | | | 4915 | | 426 |
| | | | | | |  | | | | | | | | 4917 | | 427 |
| | | | | | |  | | | | | | | | 1612 | | 428 |

Re-production – even in part – is not permitted.

Possible misprints or any type of intermediate changes do not entitle to any claims.
All DIN marked products can be supplied deviating from the catalogue dimensions as long as they correspond to the specified DIN standard.

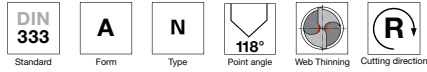


NC SPOT DRILLS AND CENTER DRILLS



Center drills, 60° angle

Series no. **581**



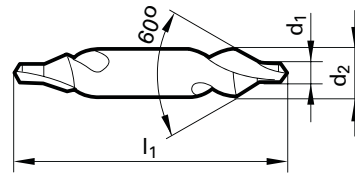
Tool material **HSS**

Surface

Center Drills

| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • without protective countersink • for center holes to DIN 332, part 1, form A • $d1 \leq 0.8$ mm: not double ended |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ● | |

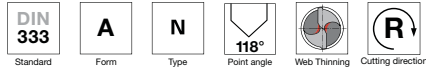
●=Optimal
○=Limited



Speeds and feeds information on pg. 524

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9005810005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9005810008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9005810010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9005810012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9005810016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9005810020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9005810025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9005810031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9005810040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9005810050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9005810063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 9005810080000 |
| 0.3937 | 10.00 | 25.00 | 100.00 | 9005810100000 |



Tool material

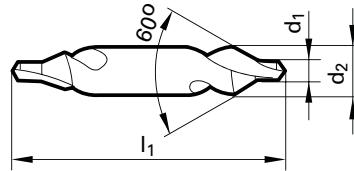
HSS

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • without protective countersink • for center holes to DIN 332, part 1, form A • $d1 \leq 0.8$ mm: not double ended • increased wear resistance |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

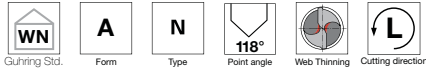
●=Optimal
○=Limited



Speeds and feeds information on pg. 531

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9006130005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9006130008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9006130010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9006130012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9006130016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9006130020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9006130025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9006130031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9006130040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9006130050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9006130063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 9006130080000 |
| | | | | |
| | | | | |



Tool material

HSS

Surface

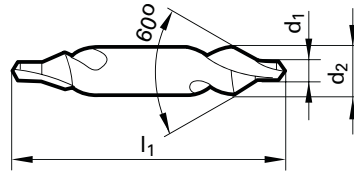


Center Drills

P Steel ● web thinning $\geq \varnothing 2.000$ • relieved cone • without protective countersink
 • for center holes to DIN 332, part 1, form A • $d1 \leq 0.8$ mm: not double ended

| | | |
|----------|-----------------|---|
| M | Stainless steel | ○ |
| K | Cast iron | ● |
| N | Aluminum | ● |
| S | Titanium alloys | ○ |
| H | Hardened steel | |

●=Optimal
 ○=Limited



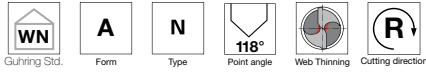
Speeds and feeds information on pg. 524

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9005820005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9005820008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9005820010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9005820012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9005820016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9005820020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9005820025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9005820031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9005820040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9005820050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9005820063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 9005820080000 |
| | | | | |
| | | | | |

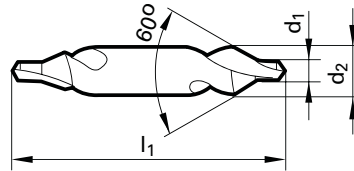
Center drills, 60° angle

Series no. **590**



Tool material **HSS**
Surface

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • with reinforced neck to provide high fracture resistance • without protective countersink • recess between countersink and hole for additional lubricant space • for center holes to DIN 332, part 1, form A |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited

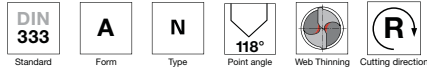


Speeds and feeds information on pg. 528

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9005900010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9005900012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9005900016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9005900020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9005900025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9005900031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9005900040000 |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9005900050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9005900063000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.3150 | 8.00 | 20.00 | 80.00 | 9005900080000 |
| 0.3937 | 10.00 | 25.00 | 100.00 | 9005900100000 |
| | | | | |
| | | | | |

Center Drills

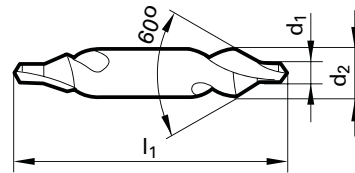


Tool material **HSCO**

Surface

Center Drills

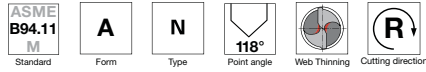
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ● | relieved cone |
| K | Cast iron | ● | without protective countersink |
| N | Aluminum | ● | increased wear resistance |
| S | Titanium alloys | ○ | for center holes to DIN 332, part 1, form A |
| H | Hardened steel | | materials over 800 N/mm ² • stainless/acid-/heat-resistant CrNi steels |
- =Optimal
○=Limited



Speeds and feeds information on pg. 512

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9003810010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9003810012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9003810016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9003810020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9003810025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9003810031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9003810040000 |

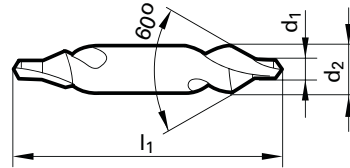
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|----|----------|----------|-------|
| inch | mm | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



Tool material **HSS**
Surface

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 1.980$ • relieved cone • for center holes form A to US standards |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited

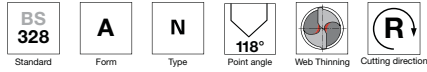


Speeds and feeds information on pg. 529

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|------|------|-------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0469 | 1.19 | 1 | 3.18 | 32.00 | 9005940011900 |
| 0.0780 | 1.98 | 2 | 4.76 | 48.00 | 9005940019800 |
| 0.1094 | 2.78 | 3 | 6.35 | 51.00 | 9005940027800 |
| 0.1248 | 3.17 | 4 | 7.94 | 54.00 | 9005940031700 |
| 0.1874 | 4.76 | 5 | 11.11 | 70.00 | 9005940047600 |
| 0.2189 | 5.56 | 6 | 12.70 | 76.00 | 9005940055600 |
| 0.2500 | 6.35 | 7 | 15.88 | 83.00 | 9005940063500 |
| 0.3126 | 7.94 | 8 | 19.05 | 89.00 | 9005940079400 |

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|----|------|-------|-------|-------|
| inch | mm | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Center Drills

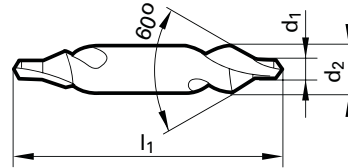


Tool material **HSS**
Surface

Center Drills

| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 1.190$ • relieved cone • for center holes form A to British standards |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 507

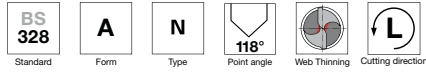
| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|------|------|-------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0469 | 1.19 | 1 | 3.17 | 38.00 | 9002920011900 |
| 0.0626 | 1.59 | 2 | 4.76 | 44.00 | 9002920015900 |
| 0.0937 | 2.38 | 3 | 6.35 | 51.00 | 9002920023800 |
| 0.1248 | 3.17 | 4 | 7.94 | 57.00 | 9002920031700 |
| 0.1874 | 4.76 | 5 | 11.11 | 63.00 | 9002920047600 |
| 0.2500 | 6.35 | 6 | 15.87 | 76.00 | 9002920063500 |
| 0.3126 | 7.94 | 7 | 19.05 | 89.00 | 9002920079400 |

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|----|------|-------|-------|-------|
| inch | mm | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Center drills, 60° angle

Series no.

294



Tool material

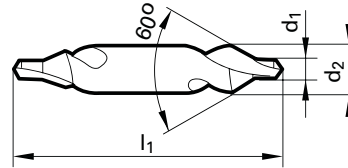
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 1.190$ • relieved cone • for center holes form A to British standards |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited

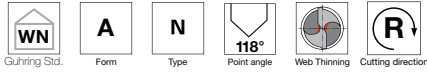


Speeds and feeds information on pg. 508

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|------|------|-------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0469 | 1.19 | 1 | 3.17 | 38.00 | 9002940011900 |
| 0.0626 | 1.59 | 2 | 4.76 | 44.00 | 9002940015900 |
| 0.0937 | 2.38 | 3 | 6.35 | 51.00 | 9002940023800 |
| 0.1248 | 3.17 | 4 | 7.94 | 57.00 | 9002940031700 |
| 0.1874 | 4.76 | 5 | 11.11 | 63.00 | 9002940047600 |
| 0.2500 | 6.35 | 6 | 15.87 | 76.00 | 9002940063500 |
| 0.3126 | 7.94 | 7 | 19.05 | 89.00 | 9002940079400 |

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|----|------|-------|-------|-------|
| inch | mm | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Center Drills

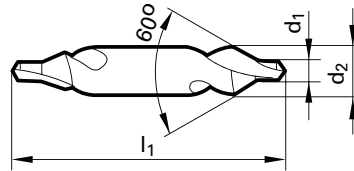


Tool material **HSS**

Surface

Center Drills

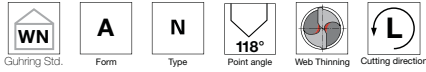
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | without protective countersink |
| N | Aluminum | ● | for center holes acc. to DIN 332 sheet 1 (issue 09.1960x retracted), Form A |
| S | Titanium alloys | ○ | $d1 \leq 0.8$ mm: not double ended |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 503

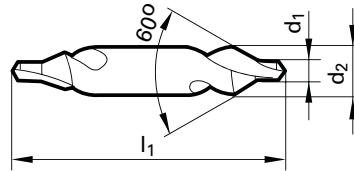
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9002810005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9002810008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9002810010000 |
| 0.0492 | 1.25 | 4.00 | 35.50 | 9002810012500 |
| 0.0630 | 1.60 | 5.00 | 40.00 | 9002810016000 |
| 0.0787 | 2.00 | 6.30 | 45.00 | 9002810020000 |
| 0.0984 | 2.50 | 8.00 | 50.00 | 9002810025000 |
| 0.1240 | 3.15 | 10.00 | 56.00 | 9002810031500 |
| 0.1575 | 4.00 | 12.50 | 63.00 | 9002810040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 16.00 | 71.00 | 9002810050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 9002810063000 |
| 0.3150 | 8.00 | 25.00 | 100.00 | 9002810080000 |
| 0.3937 | 10.00 | 31.50 | 125.00 | 9002810100000 |



Tool material **HSS**
Surface

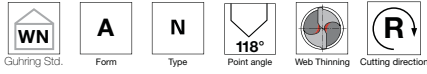
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • without protective countersink • for center holes acc. to DIN 332 sheet 1 (issue 09.1960x retracted), Form A • $d1 \leq 0.8$ mm: not double ended |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ● | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 504

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9002820008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9002820010000 |
| 0.0492 | 1.25 | 4.00 | 35.50 | 9002820012500 |
| 0.0630 | 1.60 | 5.00 | 40.00 | 9002820016000 |
| 0.0787 | 2.00 | 6.30 | 45.00 | 9002820020000 |
| 0.0984 | 2.50 | 8.00 | 50.00 | 9002820025000 |
| 0.1240 | 3.15 | 10.00 | 56.00 | 9002820031500 |
| 0.1575 | 4.00 | 12.50 | 63.00 | 9002820040000 |
| 0.1969 | 5.00 | 16.00 | 71.00 | 9002820050000 |

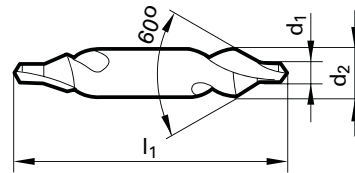
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|----|----------|----------|-------|
| inch | mm | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



Tool material **Carbide**
Surface

Center Drills

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | web thinning $\geq \varnothing 2.000$ • relieved cone |
| M | Stainless steel | ○ | • without protective countersink |
| K | Cast iron | ○ | • for center holes to DIN 332, part 1, form A • $d1 \leq 0.8$ mm: not double ended |
| N | Aluminum | ○ | universal material suitability |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



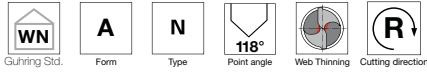
Speeds and feeds information on pg. 544

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9007360005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9007360008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9007360010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9007360012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9007360016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9007360020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9007360025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9007360031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9007360040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9007360050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9007360063000 |
| | | | | |
| | | | | |

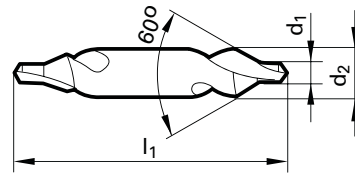
Center drills, 60° angle

Series no. **280**



Tool material **HSS**
Surface

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | extra length center drills |
| N | Aluminum | ● | without protective countersink |
| S | Titanium alloys | ○ | for center holes acc. to DIN 332, sheet 1, form A |
| H | Hardened steel | ● | for deep centering positions |
- =Optimal
○=Limited

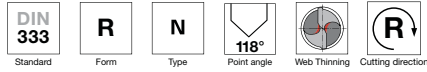


Center Drills

Speeds and feeds information on pg. 503

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 4.00 | 120.00 | 9002800010000 |
| 0.0630 | 1.60 | 5.00 | 120.00 | 9002800016000 |
| 0.0787 | 2.00 | 6.30 | 120.00 | 9002800020000 |
| 0.0984 | 2.50 | 8.00 | 120.00 | 9002800025000 |
| 0.1240 | 3.15 | 10.00 | 120.00 | 9002800031500 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|----|----------|----------|-------|
| inch | mm | | | |
| | | | | |
| | | | | |
| | | | | |



Tool material

HSS

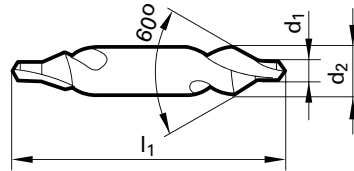
Surface



Center Drills

| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | correct positioning between lathe centers |
| N | Aluminum | ● | for center holes acc. to DIN 332 part 1, form R • $d_1 \leq 0.8 \text{ mm}$: not double ended |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

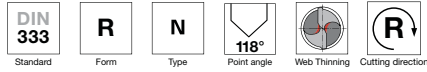
●=Optimal
○=Limited



Speeds and feeds information on pg. 525

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9005830005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9005830008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9005830010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9005830012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9005830016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9005830020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9005830025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9005830031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9005830040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9005830050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9005830063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 9005830080000 |
| | | | | |
| | | | | |



Tool material

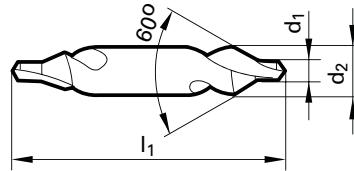
HSS

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | • relieved cone |
| K | Cast iron | ● | • increased wear resistance |
| N | Aluminum | ● | • correct positioning between lathe centers |
| S | Titanium alloys | ○ | • for center holes acc. to DIN 332 part 1, form R |
| H | Hardened steel | | • $d1 \leq 0.8$ mm: not double ended |

●=Optimal
○=Limited



Speeds and feeds information on pg. 532

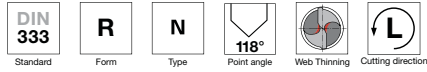
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9006140005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9006140008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9006140010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9006140012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9006140016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9006140020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9006140025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9006140031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9006140040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9006140050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 9006140063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 9006140080000 |
| 0.3937 | 10.00 | 25.00 | 100.00 | 9005810100000 |

Center drills, 60° angle

Series no.

584



Tool material

HSS

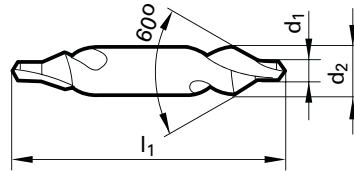
Surface



Center Drills

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | correct positioning between lathe centers |
| N | Aluminum | ● | for center holes acc. to DIN 332 part 1, form R |
| S | Titanium alloys | ○ | $d_1 \leq 0.8 \text{ mm}$: not double ended |
| H | Hardened steel | | |

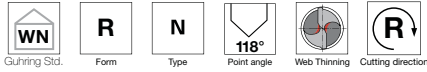
●=Optimal
○=Limited



Speeds and feeds information on pg. 505

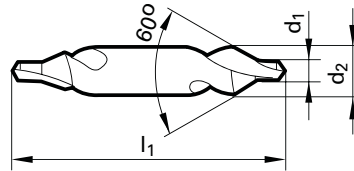
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9005840008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9005840010000 |
| 0.0492 | 1.25 | 3.15 | 31.50 | 9005840012500 |
| 0.0630 | 1.60 | 4.00 | 35.50 | 9005840016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 9005840020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 9005840025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 9005840031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 9005840040000 |
| 0.1969 | 5.00 | 12.50 | 63.00 | 9005840050000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|----|----------|----------|-------|
| inch | mm | | | |
| | | | | |
| | | | | |
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Tool material **HSS**
Surface

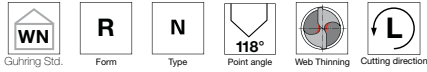
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | correct positioning between lathe centers |
| N | Aluminum | ● | for center holes to DIN 332, sheet 1 (issue 09.1960x withdrawn), form R |
| S | Titanium alloys | ○ | $d1 \leq 0.8$ mm: not double ended |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 484

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|-------|-------|-------------------------------|
| inch | mm | | | |
| 0.0197* | 0.50* | 3.15 | 25.00 | 9002830005000 |
| 0.0315* | 0.80* | 3.15 | 25.00 | 9002830008000 |
| 0.0394 | 1.00 | 3.15 | 31.50 | 9002830010000 |
| 0.0492 | 1.25 | 4.00 | 35.50 | 9002830012500 |
| 0.0630 | 1.60 | 5.00 | 40.00 | 9002830016000 |
| 0.0787 | 2.00 | 6.30 | 45.00 | 9002830020000 |
| 0.0984 | 2.50 | 8.00 | 50.00 | 9002830025000 |
| 0.1240 | 3.15 | 10.00 | 56.00 | 9002830031500 |
| 0.1575 | 4.00 | 12.50 | 63.00 | 9002830040000 |

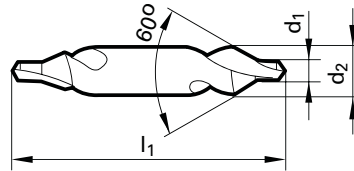
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|-------|--------|-------------------------------|
| inch | mm | | | |
| 0.1969 | 5.00 | 16.00 | 71.00 | 9002830050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 9002830063000 |
| 0.3150 | 8.00 | 25.00 | 100.00 | 9002830080000 |



Tool material **HSS**
Surface

Center Drills

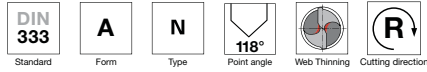
- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • correct positioning between lathe centers • for center holes to DIN 332, sheet 1 (issue 09.1960x withdrawn), form R |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ● | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 505

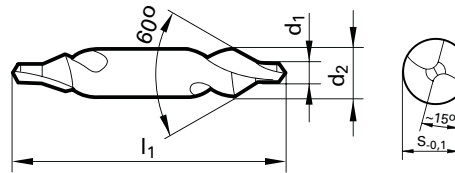
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0492 | 1.25 | 4.00 | 35.50 | 9002840012500 |
| 0.0630 | 1.60 | 5.00 | 40.00 | 9002840016000 |
| 0.0787 | 2.00 | 6.30 | 45.00 | 9002840020000 |
| 0.0984 | 2.50 | 8.00 | 50.00 | 9002840025000 |
| 0.1240 | 3.15 | 10.00 | 56.00 | 9002840031500 |
| 0.1575 | 4.00 | 12.50 | 63.00 | 9002840040000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|----|----------|----------|-------|
| inch | mm | | | |
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Tool material **HSS**
Surface

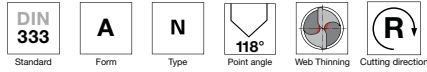
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | for center holes to DIN 332, part 1, form A |
| N | Aluminum | ● | without protective countersink |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 527

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|-------|----------|----------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0630 | 1.60 | 4.00 | 35.50 | 3.25 | 9005870016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 4.20 | 9005870020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 5.35 | 9005870025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 6.95 | 9005870031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 8.40 | 9005870040000 |
| 0.1969 | 5.00 | 12.50 | 63.00 | 10.95 | 9005870050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 14.00 | 9005870063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 17.90 | 9005870080000 |
| 0.3937 | 10.00 | 25.00 | 100.00 | 22.50 | 9005870100000 |

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|----|----------|----------|---|-------|
| inch | mm | | | | |
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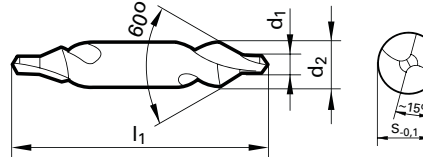


Tool material **HSS**

Surface

Center Drills

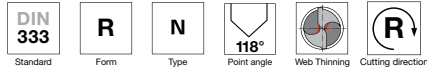
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • without protective countersink • for center holes acc. to DIN 332 sheet 1 (issue 09.1960x retracted), Form A |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ● | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 506

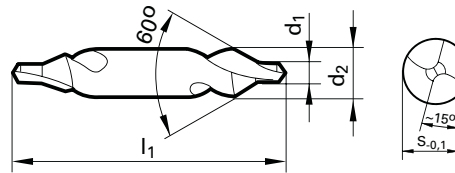
| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|-------|----------|----------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0984 | 2.50 | 8.00 | 50.00 | 4.20 | 9002870025000 |
| 0.1240 | 3.15 | 10.00 | 56.00 | 5.35 | 9002870031500 |
| 0.1575 | 4.00 | 12.50 | 63.00 | 6.85 | 9002870040000 |
| 0.1969 | 5.00 | 16.00 | 71.00 | 8.40 | 9002870050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 10.65 | 9002870063000 |
| 0.3150 | 8.00 | 25.00 | 100.00 | 13.65 | 9002870080000 |
| 0.3937 | 10.00 | 31.50 | 125.00 | 17.40 | 9002870100000 |
| 0.0630 | 1.60 | 5.00 | 40.00 | 25.00 | 9002870016000 |
| 0.0787 | 2.00 | 6.30 | 45.00 | 31.50 | 9002870020000 |

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|----|----------|----------|---|-------|
| inch | mm | | | | |
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Tool material **HSS**
Surface

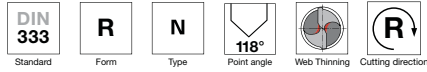
- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • correct positioning between lathe centers • for center holes acc. to DIN 332 part 1, form R |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ● | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 527

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|------|----------|----------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0630 | 1.60 | 4.00 | 35.50 | 3.25 | 9005880016000 |
| 0.0787 | 2.00 | 5.00 | 40.00 | 4.20 | 9005880020000 |
| 0.0984 | 2.50 | 6.30 | 45.00 | 5.35 | 9005880025000 |
| 0.1240 | 3.15 | 8.00 | 50.00 | 6.95 | 9005880031500 |
| 0.1575 | 4.00 | 10.00 | 56.00 | 8.40 | 9005880040000 |
| 0.1969 | 5.00 | 12.50 | 63.00 | 10.95 | 9005880050000 |
| 0.2480 | 6.30 | 16.00 | 71.00 | 14.00 | 9005880063000 |
| 0.3150 | 8.00 | 20.00 | 80.00 | 17.90 | 9005880080000 |

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|----|----------|----------|---|-------|
| inch | mm | | | | |
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Tool material

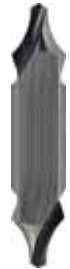
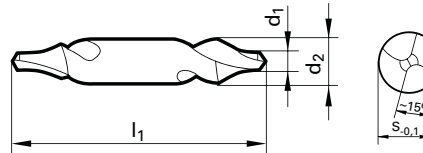
HSS

Surface



Center Drills

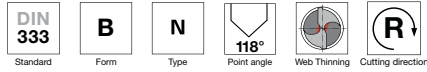
- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • correct positioning between lathe centers • for center holes to DIN 332, sheet 1 (issue 09.1960x withdrawn), form R |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ● | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 506

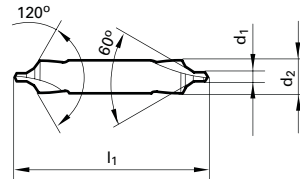
| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|-------|----------|----------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0984 | 2.50 | 8.00 | 50.00 | 4.20 | 9002880016000 |
| 0.1240 | 3.15 | 10.00 | 56.00 | 5.35 | 9002880020000 |
| 0.1575 | 4.00 | 12.50 | 63.00 | 6.85 | 9002880025000 |
| 0.1969 | 5.00 | 16.00 | 71.00 | 8.40 | 9002880031500 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 10.65 | 9002880040000 |
| 0.3150 | 8.00 | 25.00 | 100.00 | 13.65 | 9002880050000 |
| 0.3937 | 10.00 | 31.50 | 125.00 | 17.40 | 9002880063000 |
| 0.0630 | 1.60 | 5.00 | 40.00 | 25.00 | 9002880080000 |

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|----|----------|----------|---|-------|
| inch | mm | | | | |
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Tool material **HSS**
Surface

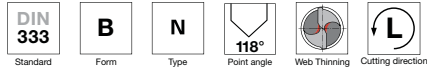
- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • for center holes acc. to DIN 332, sheet 1, form B • with protective 120° countersink |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 526

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 4.00 | 35.50 | 9005850010000 |
| 0.0492 | 1.25 | 5.00 | 40.00 | 9005850012500 |
| 0.0630 | 1.60 | 6.30 | 45.00 | 9005850016000 |
| 0.0787 | 2.00 | 8.00 | 50.00 | 9005850020000 |
| 0.0984 | 2.50 | 10.00 | 56.00 | 9005850025000 |
| 0.1240 | 3.15 | 11.20 | 60.00 | 9005850031500 |
| 0.1575 | 4.00 | 14.00 | 67.00 | 9005850040000 |
| 0.1969 | 5.00 | 18.00 | 75.00 | 9005850050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 9005850063000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.3150 | 8.00 | 25.00 | 100.00 | 9005850080000 |
| 0.3937 | 10.00 | 31.50 | 125.00 | 9005850100000 |
| | | | | |
| | | | | |

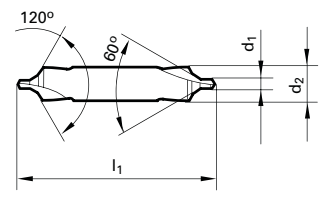


Tool material **HSS**
Surface

Center Drills

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • for center holes acc. to DIN 332, sheet 1, form B • with protective 120° countersink |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

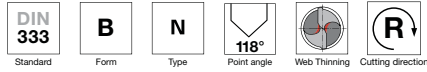
●=Optimal
○=Limited



Speeds and feeds information on pg. 526

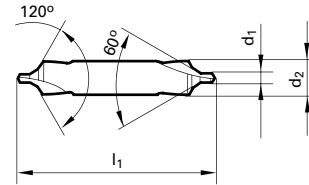
| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 4.00 | 35.50 | 9005860010000 |
| 0.0492 | 1.25 | 5.00 | 40.00 | 9005860012500 |
| 0.0630 | 1.60 | 6.30 | 45.00 | 9005860016000 |
| 0.0787 | 2.00 | 8.00 | 50.00 | 9005860020000 |
| 0.0984 | 2.50 | 10.00 | 56.00 | 9005860025000 |
| 0.1240 | 3.15 | 11.20 | 60.00 | 9005860031500 |
| 0.1575 | 4.00 | 14.00 | 67.00 | 9005860040000 |
| 0.1969 | 5.00 | 18.00 | 75.00 | 9005860050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 9005860063000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.3150 | 8.00 | 25.00 | 100.00 | 9005860080000 |
| 0.3937 | 10.00 | 31.50 | 125.00 | 9005860100000 |
| | | | | |
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Tool material **HSS**
Surface

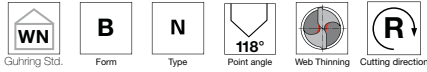
- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | with reinforced neck to provide high fracture resistance |
| N | Aluminum | ● | recess between countersink and hole for additional lubricant space |
| S | Titanium alloys | ○ | for center holes acc. to DIN 332, sheet 1, form B |
| H | Hardened steel | ○ | with protective 120° countersink |
- =Optimal
○=Limited



Speeds and feeds information on pg. 529

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 4.00 | 35.50 | 9005910010000 |
| 0.0492 | 1.25 | 5.00 | 40.00 | 9005910012500 |
| 0.0630 | 1.60 | 6.30 | 45.00 | 9005910016000 |
| 0.0787 | 2.00 | 8.00 | 50.00 | 9005910020000 |
| 0.0984 | 2.50 | 10.00 | 56.00 | 9005910025000 |
| 0.1240 | 3.15 | 11.20 | 60.00 | 9005910031500 |
| 0.1575 | 4.00 | 14.00 | 67.00 | 9005910040000 |
| 0.1969 | 5.00 | 18.00 | 75.00 | 9005910050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 9005910063000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|-------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.3150 | 8.00 | 25.00 | 100.00 | 9005910080000 |
| 0.3937 | 10.00 | 31.50 | 125.00 | 9005910100000 |

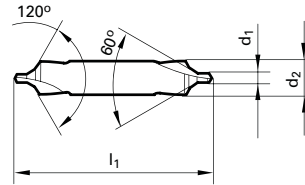


Tool material **HSS**
Surface

Center Drills

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ • relieved cone • for center holes acc. to DIN 332 sheet 1 (issue 09.1960x retracted), Form B • with protective 120° countersink |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



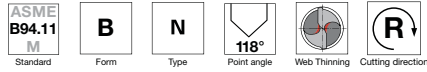
Speeds and feeds information on pg. 505

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|------|----------|----------|-------------------------------|
| inch | mm | | | |
| 0.0394 | 1.00 | 6.30 | 40.00 | 9002850010000 |
| 0.0630 | 1.60 | 8.00 | 50.00 | 9002850016000 |
| 0.0787 | 2.00 | 10.00 | 56.00 | 9002850020000 |
| 0.0984 | 2.50 | 11.20 | 63.00 | 9002850025000 |
| 0.1240 | 3.15 | 14.00 | 71.00 | 9002850031500 |
| 0.1575 | 4.00 | 16.00 | 80.00 | 9002850040000 |
| 0.1969 | 5.00 | 20.00 | 90.00 | 9002850050000 |
| 0.2480 | 6.30 | 25.00 | 100.00 | 9002850063000 |

| Diameter (d1) | | d2 mm | l1 mm | EDP # |
|---------------|----|----------|----------|-------|
| inch | mm | | | |
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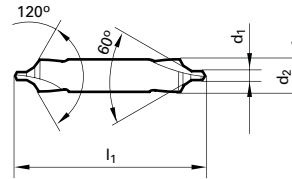
Center drills, double angle 60°/120°

Series no. **595**



Tool material **HSS**
Surface

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.380$ • relieved cone • for center holes form B to US standards |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited

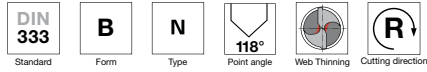


Speeds and feeds information on pg. 530

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|------|------|-------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0469 | 1.19 | 11 | 3.18 | 32.00 | 9005950011900 |
| 0.0626 | 1.59 | 12 | 4.76 | 48.00 | 9005950015900 |
| 0.0937 | 2.38 | 13 | 6.35 | 51.00 | 9005950023800 |
| 0.1094 | 2.78 | 14 | 7.94 | 54.00 | 9005950027800 |
| 0.1563 | 3.97 | 15 | 11.11 | 70.00 | 9005950039700 |
| 0.1874 | 4.76 | 16 | 12.70 | 76.00 | 9005950047600 |
| 0.2189 | 5.56 | 17 | 15.88 | 83.00 | 9005950055600 |
| 0.2500 | 6.35 | 18 | 19.05 | 89.00 | 9005950063500 |

| Diameter (d1) | | Size | d2 mm | l1 mm | EDP # |
|---------------|----|------|-------|-------|-------|
| inch | mm | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Center Drills

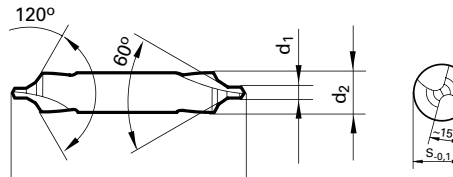


Tool material **HSS**
Surface

Center Drills

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | for center holes acc. to DIN 332, sheet 1, form B |
| N | Aluminum | ● | with protective 120° countersink |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



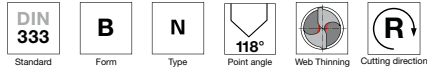
Speeds and feeds information on pg. 528

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|------|----------|----------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0630 | 1.60 | 6.30 | 45.00 | 5.35 | 9005890016000 |
| 0.0787 | 2.00 | 8.00 | 50.00 | 6.95 | 9005890020000 |
| 0.0984 | 2.50 | 10.00 | 56.00 | 8.40 | 9005890025000 |
| 0.1240 | 3.15 | 11.20 | 60.00 | 10.00 | 9005890031500 |
| 0.1575 | 4.00 | 14.00 | 67.00 | 12.65 | 9005890040000 |
| 0.1969 | 5.00 | 18.00 | 75.00 | 16.40 | 9005890050000 |
| 0.2480 | 6.30 | 20.00 | 80.00 | 17.90 | 9005890063000 |
| 0.3150 | 8.00 | 25.00 | 100.00 | 22.50 | 9005890080000 |

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|----|----------|----------|---|-------|
| inch | mm | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

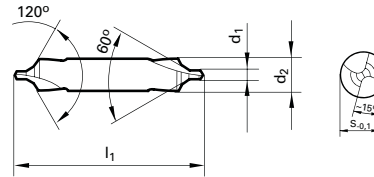
Center drills, double angle 60°/120°

Series no. **289**



Tool material **HSS**
Surface

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 2.000$ |
| M | Stainless steel | ○ | relieved cone |
| K | Cast iron | ● | for center holes acc. to DIN 332 sheet 1 (issue 09.1960x retracted), Form B |
| N | Aluminum | ● | with protective 120° countersink |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited

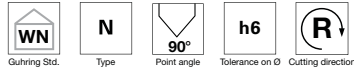


Speeds and feeds information on pg. 507

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|------|----------|----------|-------|-------------------------------|
| inch | mm | | | | |
| 0.0630 | 1.60 | 8.00 | 50.00 | 6.50 | 9002890016000 |
| 0.0787 | 2.00 | 10.00 | 56.00 | 7.95 | 9002890020000 |
| 0.0984 | 2.50 | 11.20 | 63.00 | 9.50 | 9002890025000 |
| 0.1240 | 3.15 | 14.00 | 71.00 | 12.00 | 9002890031500 |
| 0.1575 | 4.00 | 16.00 | 80.00 | 14.40 | 9002890040000 |
| 0.1969 | 5.00 | 20.00 | 90.00 | 18.40 | 9002890050000 |

| Diameter (d1) | | d2 mm | l1 mm | S | EDP # |
|---------------|----|----------|----------|---|-------|
| inch | mm | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

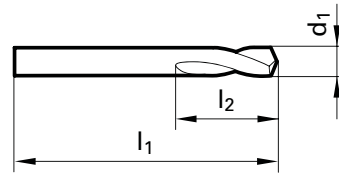
Center Drills



Tool material **HSS**
Coating

| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | relieved cone • only suitable for spotting |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited

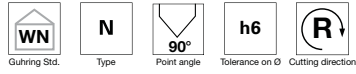


Speeds and feeds information on pg. 522

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.1181 | | 3.00 | 46.00 | 12.00 | 9005570030000 |
| 0.1575 | | 4.00 | 55.00 | 12.00 | 9005570040000 |
| 0.1969 | | 5.00 | 62.00 | 14.00 | 9005570050000 |
| 0.2362 | | 6.00 | 66.00 | 16.00 | 9005570060000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 17.00 | 9005570063500 |
| 0.3150 | | 8.00 | 79.00 | 21.00 | 9005570080000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 25.00 | 9005570095200 |
| 0.3937 | | 10.00 | 89.00 | 25.00 | 9005570100000 |
| 0.4724 | | 12.00 | 102.00 | 30.00 | 9005570120000 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.5000 | 1/2 | 12.70 | 102.00 | 30.00 | 9005570127000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 38.00 | 9005570158700 |
| 0.6299 | | 16.00 | 115.00 | 38.00 | 9005570160000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 45.00 | 9005570190500 |
| 0.7874 | | 20.00 | 131.00 | 45.00 | 9005570200000 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 53.00 | 9005570250000 |
| 1.00 | 1 | 25.40 | 156.00 | 53.00 | 9005570254000 |

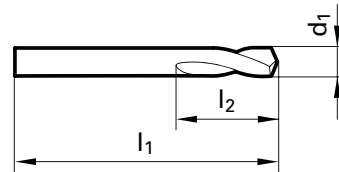


Tool material **HSS**

Coating **S**

| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | relieved cone • only suitable for spotting |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited

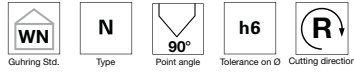


Speeds and feeds information on pg. 523

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.1181 | | 3.00 | 46.00 | 12.00 | 9005680030000 |
| 0.1575 | | 4.00 | 55.00 | 12.00 | 9005680040000 |
| 0.1969 | | 5.00 | 62.00 | 14.00 | 9005680050000 |
| 0.2362 | | 6.00 | 66.00 | 16.00 | 9005680060000 |
| 0.2500 | 1/4 | E | 6.35 | 70.00 | 9005680063500 |
| 0.3150 | | 8.00 | 79.00 | 21.00 | 9005680080000 |
| 0.3748 | 3/8 | | 9.52 | 89.00 | 9005680095200 |
| 0.3937 | | 10.00 | 89.00 | 25.00 | 9005680100000 |
| 0.4724 | | 12.00 | 102.00 | 30.00 | 9005680120000 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.5000 | 1/2 | 12.70 | 102.00 | 30.00 | 9005680127000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 38.00 | 9005680158700 |
| 0.6299 | | 16.00 | 115.00 | 38.00 | 9005680160000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 45.00 | 9005680190500 |
| 0.7874 | | 20.00 | 131.00 | 45.00 | 9005680200000 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 53.00 | 9005680250000 |
| 1.000 | 1 | 25.40 | 156.00 | 53.00 | 9005680254000 |



Tool material

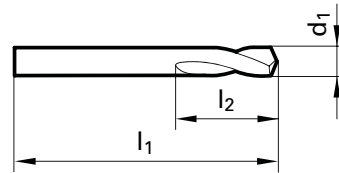
HSS

Coating



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | relieved cone • only suitable for spotting |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited

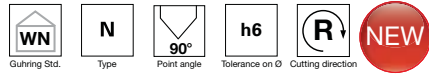


Speeds and feeds information on pg. 522

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | l2 mm | EDP # | |
|---------------|----------|----|----------|----------|-------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2500 | 1/4 | E | 6.35 | 105.00 | 17.00 | 9005590063500 |
| 0.3150 | | | 8.00 | 118.00 | 21.00 | 9005590080000 |
| 0.3748 | 3/8 | | 9.52 | 132.00 | 25.00 | 9005590095200 |
| 0.5000 | 1/2 | | 12.70 | 159.00 | 30.00 | 9005590127000 |
| 0.6248 | 5/8 | | 15.87 | 186.00 | 38.00 | 9005590158700 |
| 0.7500 | 3/4 | | 19.05 | 213.00 | 45.00 | 9005590190500 |
| 1.000 | 1 | | 25.40 | 216.00 | 53.00 | 9005590254000 |

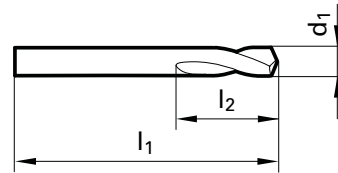
| Diameter (d1) | | | l1 mm | l2 mm | EDP # | |
|---------------|----------|----|----------|----------|-------|--|
| inch | wire/ltr | mm | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



Tool material **HSCO**

Coating

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | relieved cone • only suitable for spotting • ≥ Ø 6.0 mm with driving face to DIN 1835-B • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



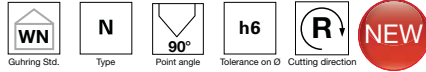
Speeds and feeds information on pg. 550

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|--------|---------------|
| inch | wire/ltr | | | |
| 0.1181 | | 3.00 | 46.00 | 9011360030000 |
| 0.1575 | | 4.00 | 55.00 | 9011360040000 |
| 0.1969 | | 5.00 | 62.00 | 9011360050000 |
| 0.2362 | | 6.00 | 66.00 | 9011360060000 |
| 0.3150 | | 8.00 | 79.00 | 9011360080000 |
| 0.3937 | | 10.00 | 89.00 | 9011360100000 |
| 0.4724 | | 12.00 | 102.00 | 9011360120000 |
| 0.6299 | | 16.00 | 115.00 | 9011360160000 |
| 0.7874 | | 20.00 | 131.00 | 9011360200000 |

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|-------|-------|
| inch | wire/ltr | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

* Weldon flat on drills ≥ 6mm diameter

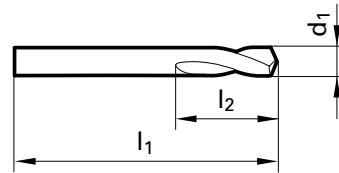


Tool material **HSCO**

Coating **F**

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | relieved cone • only suitable for spotting • ≥ Ø 6.0 mm with driving face to DIN 1835-B • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



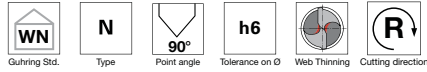
Speeds and feeds information on pg. 549

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----------|----------|-------------------------------|
| inch | wire/ltr mm | | | |
| 0.1181 | 3.00 | 46.00 | 12.00 | 9011330030000 |
| 0.1575 | 4.00 | 55.00 | 12.00 | 9011330040000 |
| 0.1969 | 5.00 | 62.00 | 14.00 | 9011330050000 |
| 0.2362 | 6.00 | 66.00 | 16.00 | 9011330060000 |
| 0.3150 | 8.00 | 79.00 | 21.00 | 9011330080000 |
| 0.3937 | 10.00 | 89.00 | 25.00 | 9011330100000 |
| 0.4724 | 12.00 | 102.00 | 30.00 | 9011330120000 |
| 0.6299 | 16.00 | 115.00 | 37.50 | 9011330160000 |
| 0.7874 | 20.00 | 131.00 | 45.00 | 9011330200000 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----|----------|----------|-------|
| inch | wire/ltr mm | mm | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

* Weldon flat on drills ≥ 6mm diameter

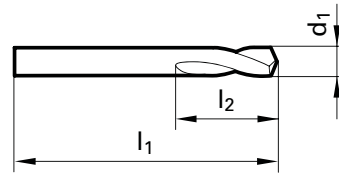


Tool material **Carbide**

Coating

| | | | |
|----------|-----------------|-----------------------|--|
| P | Steel | <input type="radio"/> | web thinning $\geq \varnothing 6.00$ • facet point grinding • only suitable for spotting |
| M | Stainless steel | <input type="radio"/> | |
| K | Cast iron | <input type="radio"/> | universal material suitability |
| N | Aluminum | <input type="radio"/> | |
| S | Titanium alloys | <input type="radio"/> | |
| H | Hardened steel | <input type="radio"/> | |
| | | <input type="radio"/> | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 542

Shank diameter = cut diameter

| Diameter (d1) | | mm | l1 mm | l2 mm | EDP # | |
|---------------|----------|-------|--------|--------|-------------------------------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.1575 | | 4.00 | 55.00 | 12.00 | 9007230040000 | |
| 0.1969 | | 5.00 | 62.00 | 14.00 | 9007230050000 | |
| 0.2362 | | 6.00 | 66.00 | 16.00 | 9007230060000 | |
| 0.2500 | 1/4 | E | 6.35 | 70.00 | 17.00 | 9007230063500 |
| 0.3150 | | 8.00 | 79.00 | 21.00 | 9007230080000 | |
| 0.3748 | 3/8 | | 9.52 | 89.00 | 25.00 | 9007230095200 |
| 0.3937 | | 10.00 | 89.00 | 25.00 | 9007230100000 | |
| 0.4724 | | 12.00 | 102.00 | 30.00 | 9007230120000 | |
| 0.5000 | 1/2 | | 12.70 | 102.00 | 30.00 | 9007230127000 |

| Diameter (d1) | | mm | l1 mm | l2 mm | EDP # | |
|---------------|----------|-------|--------|--------|-------------------------------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.6248 | 5/8 | 15.87 | 115.00 | 38.00 | 9007230158700 | |
| 0.6299 | | 16.00 | 115.00 | 38.00 | 9007230160000 | |
| 0.7500 | 3/4 | | 19.05 | 131.00 | 45.00 | 9007230190500 |
| 0.7874 | | 20.00 | 131.00 | 45.00 | 9007230200000 | |



Tool material

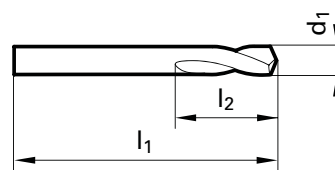
HSS

Coating



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | relieved cone • only suitable for spotting |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 521

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.1181 | | 3.00 | 46.00 | 12.00 | 9005560030000 |
| 0.1575 | | 4.00 | 55.00 | 12.00 | 9005560040000 |
| 0.1969 | | 5.00 | 62.00 | 14.00 | 9005560050000 |
| 0.2362 | | 6.00 | 66.00 | 16.00 | 9005560060000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 17.00 | 9005560063500 |
| 0.2559 | | 6.50 | 70.00 | 17.00 | 9005560065000 |
| 0.3150 | | 8.00 | 79.00 | 21.00 | 9005560080000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 25.00 | 9005560095200 |
| 0.3937 | | 10.00 | 89.00 | 25.00 | 9005560100000 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.4724 | | 12.00 | 102.00 | 30.00 | 9005560120000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 30.00 | 9005560127000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 38.00 | 9005560158700 |
| 0.6299 | | 16.00 | 115.00 | 38.00 | 9005560160000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 45.00 | 9005560190500 |
| 0.7874 | | 20.00 | 131.00 | 45.00 | 9005560200000 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 53.00 | 9005560250000 |
| 1.000 | 1 | 25.40 | 156.00 | 53.00 | 9005560254000 |



Tool material

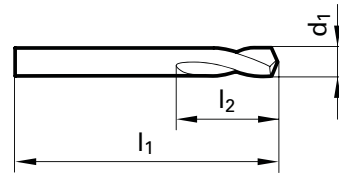
HSS

Coating



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | relieved cone • only suitable for spotting |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited

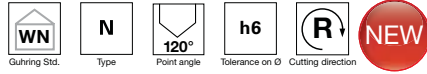


Speeds and feeds information on pg. 523

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.1181 | | 3.00 | 46.00 | 12.00 | 9005670030000 |
| 0.1575 | | 4.00 | 55.00 | 12.00 | 9005670040000 |
| 0.1969 | | 5.00 | 62.00 | 14.00 | 9005670050000 |
| 0.2362 | | 6.00 | 66.00 | 16.00 | 9005670060000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 17.00 | 9005670063500 |
| 0.3150 | | 8.00 | 79.00 | 21.00 | 9005670080000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 25.00 | 9005670095200 |
| 0.3937 | | 10.00 | 89.00 | 25.00 | 9005670100000 |
| 0.4724 | | 12.00 | 102.00 | 30.00 | 9005670120000 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.5000 | 1/2 | 12.70 | 102.00 | 30.00 | 9005670127000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 38.00 | 9005670158700 |
| 0.6299 | | 16.00 | 115.00 | 38.00 | 9005670160000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 45.00 | 9005670190500 |
| 0.7874 | | 20.00 | 131.00 | 45.00 | 9005670200000 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 53.00 | 9005670250000 |
| 1.00 | 1 | 25.40 | 156.00 | 53.00 | 9005670254000 |

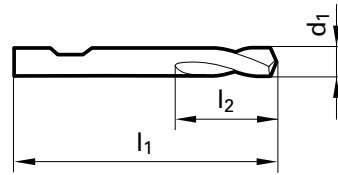


Tool material **HSCO**

Coating

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | relieved cone • only suitable for spotting • ≥ Ø 6.0 mm with driving face to DIN 1835-B • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



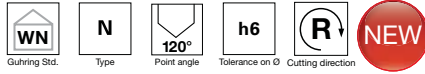
Speeds and feeds information on pg. 549

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----------|----------|-------------------------------|
| inch | wire/ltr mm | | | |
| 0.1181 | 3.00 | 46.00 | 12.00 | 9011340030000 |
| 0.1575 | 4.00 | 55.00 | 12.00 | 9011340040000 |
| 0.1969 | 5.00 | 62.00 | 14.00 | 9011340050000 |
| 0.2362 | 6.00 | 66.00 | 16.00 | 9011340060000 |
| 0.3150 | 8.00 | 79.00 | 21.00 | 9011340080000 |
| 0.3937 | 10.00 | 89.00 | 25.00 | 9011340100000 |
| 0.4724 | 12.00 | 102.00 | 30.00 | 9011340120000 |
| 0.6299 | 16.00 | 115.00 | 37.50 | 9011340160000 |
| 0.7874 | 20.00 | 131.00 | 45.00 | 9011340200000 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----|----------|----------|-------|
| inch | wire/ltr mm | mm | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

* Weldon flat on drills ≥ 6mm diameter

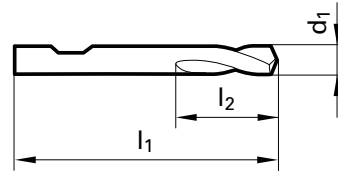


Tool material HSCO

Coating F

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | relieved cone • only suitable for spotting • ≥ Ø 6.0 mm with driving face to DIN 1835-B • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 550

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----------|----------|-------------------------------|
| inch | wire/ltr mm | | | |
| 0.1181 | 3.00 | 46.00 | 12.00 | 9011350030000 |
| 0.1575 | 4.00 | 55.00 | 12.00 | 9011350040000 |
| 0.1969 | 5.00 | 62.00 | 14.00 | 9011350050000 |
| 0.2362 | 6.00 | 66.00 | 16.00 | 9011350060000 |
| 0.3150 | 8.00 | 79.00 | 21.00 | 9011350080000 |
| 0.3937 | 10.00 | 89.00 | 25.00 | 9011350100000 |
| 0.4724 | 12.00 | 102.00 | 30.00 | 9011350120000 |
| 0.6299 | 16.00 | 115.00 | 37.50 | 9011350160000 |
| 0.7874 | 20.00 | 131.00 | 45.00 | 9011350200000 |

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----------|----------|-------|
| inch | wire/ltr mm | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

* Weldon flat on drills ≥ 6mm diameter

120° NC-spot drills

Series no.

724

Spot Drills



Tool material

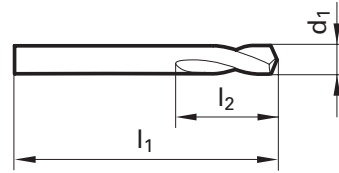
Carbide

Coating



| | | | |
|----------|-----------------|-----------------------|--|
| P | Steel | <input type="radio"/> | web thinning $\geq \varnothing 13.500$ • facet point grinding • only suitable for spotting |
| M | Stainless steel | <input type="radio"/> | |
| K | Cast iron | <input type="radio"/> | universal material suitability |
| N | Aluminum | <input type="radio"/> | |
| S | Titanium alloys | <input type="radio"/> | |
| H | Hardened steel | <input type="radio"/> | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 523

Shank diameter = cut diameter

| Diameter (d1) | | mm | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|--------|-------|-------------------------------|
| inch | wire/ltr | | | | |
| 0.1969 | | 5.00 | 62.00 | 14.00 | 9007240050000 |
| 0.2362 | | 6.00 | 66.00 | 16.00 | 9007240060000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 17.00 | 9007240063500 |
| 0.3150 | | 8.00 | 79.00 | 21.00 | 9007240080000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 25.00 | 9007240095200 |
| 0.3937 | | 10.00 | 89.00 | 25.00 | 9007240100000 |
| 0.4724 | | 12.00 | 102.00 | 30.00 | 9007240120000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 30.00 | 9007240127000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 37.50 | 9007240158700 |

| Diameter (d1) | | | l1 mm | l2 mm | EDP # |
|---------------|----------|-------|--------|-------|-------------------------------|
| inch | wire/ltr | mm | | | |
| 0.6299 | | 16.00 | 115.00 | 37.50 | 9007240160000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 45.00 | 9007240190500 |
| 0.7874 | | 20.00 | 131.00 | 45.00 | 9007240200000 |

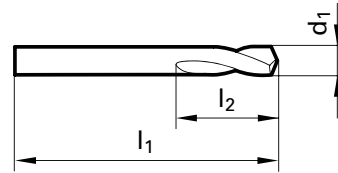


Tool material **Carbide**

Coating

| | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | facet point grinding • only suitable for spotting • $\geq \varnothing 6.0$ mm with clamping surface shank form HB |
| M | Stainless steel | ○ | |
| K | Cast iron | ○ | universal material suitability |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
| | | ○ | |

●=Optimal
○=Limited



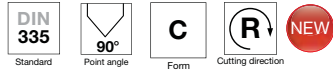
Speeds and feeds information on pg. 518

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----------|----------|-------------------------------|
| inch | wire/ltr mm | | | |
| 0.1575 | 4.00 | 55.00 | 12.00 | 9005460040000 |
| 0.1969 | 5.00 | 62.00 | 14.00 | 9005460050000 |
| 0.2362 | 6.00 | 66.00 | 16.00 | 9005460060000 |
| 0.3150 | 8.00 | 79.00 | 21.00 | 9005460080000 |
| 0.3937 | 10.00 | 89.00 | 25.00 | 9005460100000 |
| 0.4724 | 12.00 | 102.00 | 30.00 | 9005460120000 |
| 0.6299 | 16.00 | 115.00 | 37.50 | 9005460160000 |
| 0.7874 | 20.00 | 131.00 | 45.00 | 9005460200000 |

| Diameter (d1) | | l1 mm | l2 mm | EDP # |
|---------------|----------------|----------|----------|-------|
| inch | wire/ltr mm | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

* Weldon flat on drills ≥ 6 mm diameter



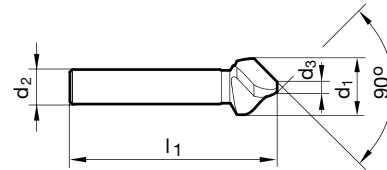
Tool material **HSCO**

Coating **A**

Shank form cyl.

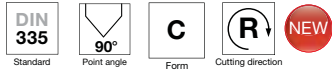
| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | • 3 different convex cutting edges • low-vibration cutting processes |
| M | Stainless steel | ● | • for round and chatter-free countersinking • considerably lower feed force required |
| K | Cast iron | ● | • for universal application |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 569

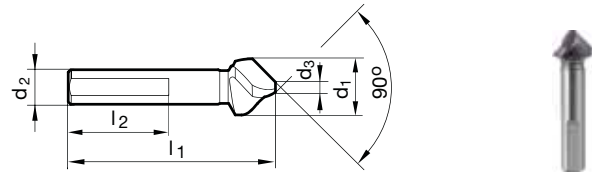
| d1 mm | d2 mm | d3 mm | l1 mm | No. of flutes | EDP # |
|----------|----------|----------|----------|---------------|-------------------------------|
| 6.30 | 5.00 | 1.50 | 45.00 | 3 | 9055000063000 |
| 8.00 | 6.00 | 2.00 | 50.00 | 3 | 9055000080000 |
| 8.30 | 6.00 | 2.00 | 50.00 | 3 | 9055000083000 |
| 10.00 | 6.00 | 2.50 | 50.00 | 3 | 9055000100000 |
| 10.40 | 6.00 | 2.50 | 50.00 | 3 | 9055000140000 |
| 11.50 | 8.00 | 2.80 | 56.00 | 3 | 9055000115000 |
| 12.40 | 8.00 | 2.80 | 56.00 | 3 | 9055000124000 |
| 15.00 | 10.00 | 3.20 | 60.00 | 3 | 9055000150000 |
| 16.50 | 10.00 | 3.20 | 60.00 | 3 | 9055000165000 |
| 19.00 | 10.00 | 3.50 | 63.00 | 3 | 9055000190000 |
| 20.50 | 10.00 | 3.50 | 63.00 | 3 | 9055000205000 |
| 23.00 | 10.00 | 3.80 | 67.00 | 3 | 9055000230000 |
| 25.00 | 10.00 | 3.80 | 67.00 | 3 | 9055000250000 |
| 31.00 | 12.00 | 4.20 | 71.00 | 3 | 9055000310000 |



| | |
|---------------|-------------|
| Tool material | HSCO |
| Coating | A |
| Shank form | Tri-flat |

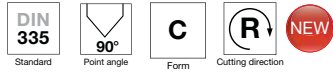
| | | |
|--------------------------|---|---|
| P Steel | ● | • 3 different convex cutting edges |
| M Stainless steel | ● | • tri-flat shank prevents slipping in the chuck |
| K Cast iron | ● | • perfect for hand drills |
| N Aluminum | ○ | • low-vibration cutting processes |
| S Titanium alloys | ○ | • for round and chatter-free countersinking |
| H Hardened steel | | • considerably lower feed force required |
| | | • for universal application |

●=Optimal
○=Limited



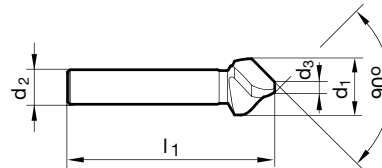
Speeds and feeds information on pg. 569

| d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | No. of flutes | EDP # |
|----------|----------|----------|----------|----------|---------------|-------------------------------|
| 6.30 | 5.00 | 1.50 | 45.00 | 30.00 | 3 | 9055010063000 |
| 8.00 | 6.00 | 2.00 | 50.00 | 30.00 | 3 | 9055010080000 |
| 8.30 | 6.00 | 2.00 | 50.00 | 30.00 | 3 | 9055010083000 |
| 10.00 | 6.00 | 2.50 | 50.00 | 30.00 | 3 | 9055010100000 |
| 10.40 | 6.00 | 2.50 | 50.00 | 30.00 | 3 | 9055010140000 |
| 11.50 | 8.00 | 2.80 | 56.00 | 30.00 | 3 | 9055010115000 |
| 12.40 | 8.00 | 2.80 | 56.00 | 30.00 | 3 | 9055010124000 |
| 15.00 | 10.00 | 3.20 | 60.00 | 30.00 | 3 | 9055010150000 |
| 16.50 | 10.00 | 3.20 | 60.00 | 30.00 | 3 | 9055010165000 |
| 19.00 | 10.00 | 3.50 | 63.00 | 30.00 | 3 | 9055010190000 |
| 20.50 | 10.00 | 3.50 | 63.00 | 30.00 | 3 | 9055010205000 |
| 23.00 | 10.00 | 3.80 | 67.00 | 30.00 | 3 | 9055010230000 |
| 25.00 | 10.00 | 3.80 | 67.00 | 30.00 | 3 | 9055010250000 |
| 31.00 | 12.00 | 4.20 | 71.00 | 30.00 | 3 | 9055010310000 |



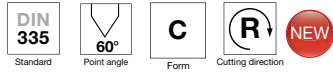
Tool material **HSCO**
 Coating **A**
 Shank form cyl.

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | <ul style="list-style-type: none"> • long version for recessed machining points • 3 different convex cutting edges • low-vibration cutting processes • for round and chatter-free countersinking • considerably lower feed force required • for universal application |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 569

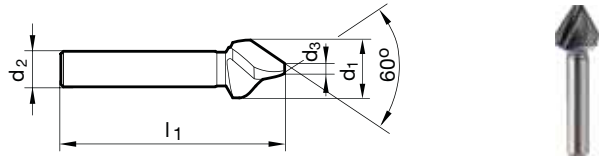
| d1 mm | d2 mm | d3 mm | l1 mm | No. of flutes | EDP # |
|----------|----------|----------|----------|---------------|---------------|
| 6.300 | 5.00 | 1.50 | 104.00 | 3 | 9055030006300 |
| 8.300 | 6.00 | 2.00 | 105.00 | 3 | 9055030008300 |
| 10.40 | 6.00 | 2.50 | 107.00 | 3 | 9055030010400 |
| 12.40 | 8.00 | 2.80 | 108.00 | 3 | 9055030012400 |
| 16.50 | 10.00 | 3.20 | 111.00 | 3 | 9055030016500 |
| 20.50 | 10.00 | 3.50 | 114.00 | 3 | 9055030020500 |
| 25.00 | 10.00 | 3.80 | 118.00 | 3 | 9055030025000 |
| 31.00 | 12.00 | 4.20 | 140.00 | 3 | 9055030031000 |



| | |
|---------------|------------|
| Tool material | HSS |
| Coating | A |
| Shank form | cyl. |

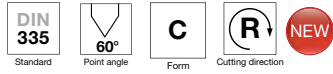
| | |
|----------------------------|---|
| P Steel ● | <ul style="list-style-type: none"> • 3 different convex cutting edges • low-vibration cutting processes • for round and chatter-free countersinking • considerably lower feed force required • for universal application |
| M Stainless steel ● | |
| K Cast iron ● | |
| N Aluminum ○ | |
| S Titanium alloys ○ | |
| H Hardened steel | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 580

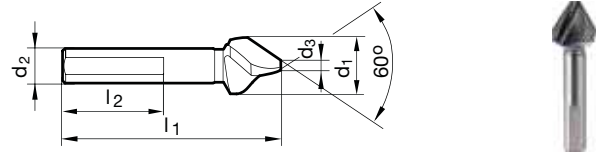
| d1 mm | d2 mm | d3 mm | l1 mm | No. of flutes | EDP # |
|----------|----------|----------|----------|---------------|---------------|
| 6.30 | 5.00 | 1.60 | 45.00 | 3 | 9056700006300 |
| 8.00 | 6.00 | 2.00 | 50.00 | 3 | 9056700008000 |
| 10.00 | 6.00 | 3.20 | 56.00 | 3 | 9056700010000 |
| 12.50 | 8.00 | 3.20 | 56.00 | 3 | 9056700012500 |
| 16.00 | 10.00 | 4.00 | 63.00 | 3 | 9056700016000 |
| 20.00 | 10.00 | 5.00 | 67.00 | 3 | 9056700020000 |
| 25.00 | 10.00 | 6.30 | 71.00 | 3 | 9056700025000 |



| | |
|---------------|------------|
| Tool material | HSS |
| Coating | A |
| Shank form | Tri-flat |

| | |
|----------------------------|---|
| P Steel ● | <ul style="list-style-type: none"> • 3 different convex cutting edges • tri-flat shank prevents slipping in the chuck • perfect for hand drills • low-vibration cutting processes • for round and chatter-free countersinking • considerably lower feed force required • for universal application |
| M Stainless steel ● | |
| K Cast iron ● | |
| N Aluminum ○ | |
| S Titanium alloys ○ | |
| H Hardened steel | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 580

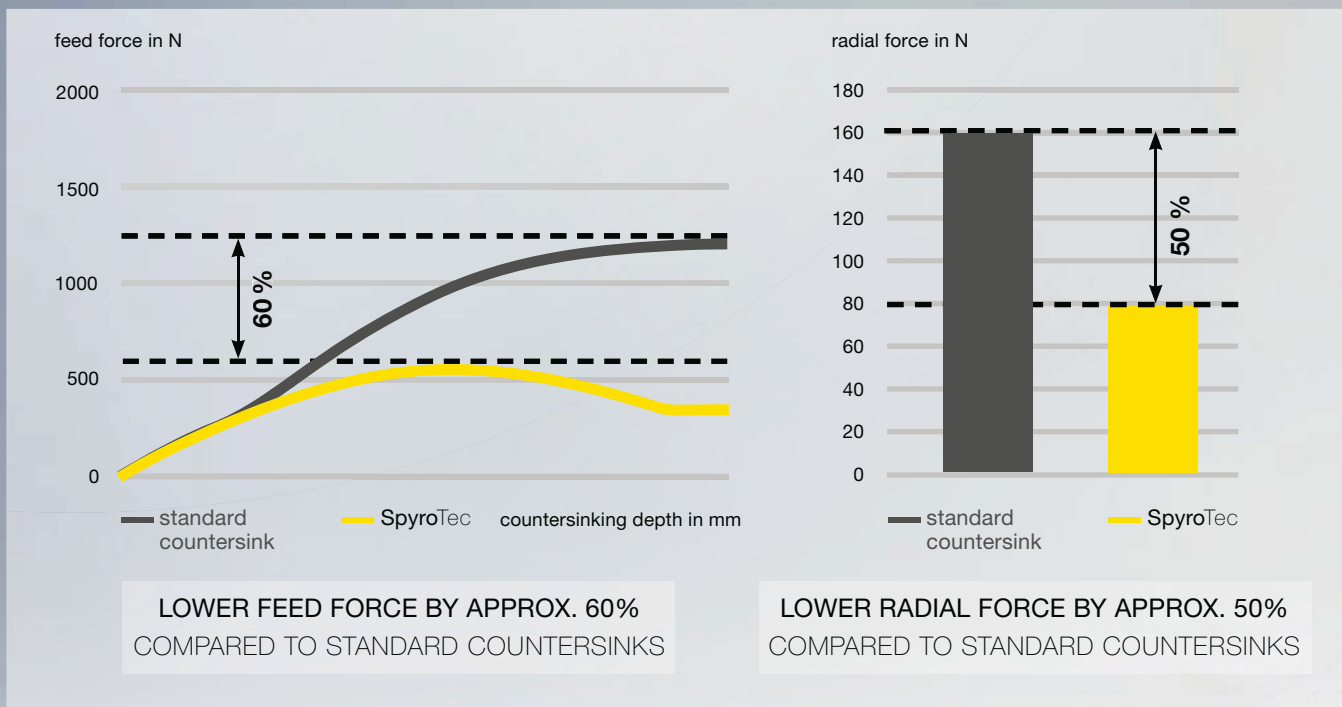
| d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | No. of flutes | EDP # |
|-------|-------|-------|-------|-------|---------------|---------------|
| 6.30 | 5.00 | 1.60 | 45.00 | 30.00 | 3 | 9056710006300 |
| 8.00 | 6.00 | 2.00 | 50.00 | 30.00 | 3 | 9056710008000 |
| 10.00 | 6.00 | 3.20 | 56.00 | 30.00 | 3 | 9056710010000 |
| 12.50 | 8.00 | 3.20 | 56.00 | 30.00 | 3 | 9056710012500 |
| 16.00 | 10.00 | 4.00 | 63.00 | 30.00 | 3 | 9056710016000 |
| 20.00 | 10.00 | 5.00 | 67.00 | 30.00 | 3 | 9056710020000 |
| 25.00 | 10.00 | 6.30 | 71.00 | 30.00 | 3 | 9056710025000 |
| | | | | | | |
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SpyroTec

THE INNOVATIVE, HELICAL HSS AND HSCO COUNTERSINK

The axial and radial forces that occur during countersinking operations are significantly reduced due to the unique geometry of the SpyroTec cutting edges. The convex form and variable pitch of the helical cutting edges results in a stable countersinking process with minimal vibration, even when

using a hand drill. Round, precise, chatter-free countersinking is guaranteed. The TiAlN coating ensures higher wear resistance and thermal protection, which guarantees longer tool life in many different materials and applications.



- standard program
- 14 dimensions Ø6.3–31.0mm
- 90° countersink according to DIN 335 form C
- round shank version
- tri-flat shank version
- long length round shank version



Countersinking with standard countersink

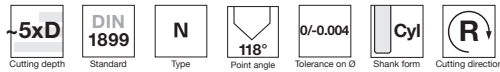


SpyroTec



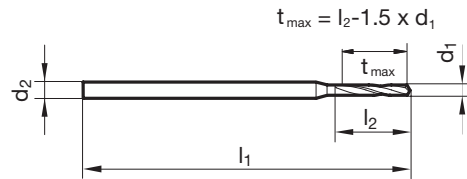
MICRO-PRECISION DRILLS





Tool material **HSS-E-PM**
Surface

- P** Steel ● facet point grinding • with reinforced shank • < Ø 0.15 mm Co-alloyed high speed steel
 - M** Stainless steel ●
 - K** Cast iron ● high-alloyed steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel
- =Optimal
○=Limited

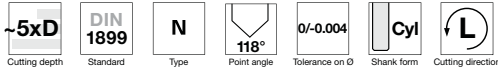


Speeds and feeds information on pg. 508

Micro Drills

| Diameter (d ₁) | | | d ₂ h7 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|-------|-------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0020 | | 0.050 | 1.00 | 25.00 | 0.33 | 0.40 | 9003010000500 |
| 0.0024 | | 0.060 | 1.00 | 25.00 | 0.31 | 0.40 | 9003010000600 |
| 0.0028 | | 0.070 | 1.00 | 25.00 | 0.40 | 0.50 | 9003010000700 |
| 0.0030 | | 0.075 | 1.00 | 25.00 | 0.39 | 0.50 | 9003010000750 |
| 0.0031 | | 0.080 | 1.00 | 25.00 | 0.38 | 0.50 | 9003010000800 |
| 0.0035 | | 0.090 | 1.00 | 25.00 | 0.37 | 0.50 | 9003010000900 |
| 0.0039 | | 0.100 | 1.00 | 25.00 | 0.35 | 0.50 | 9003010001000 |
| 0.0041 | | 0.105 | 1.00 | 25.00 | 0.34 | 0.50 | 9003010001050 |
| 0.0043 | | 0.110 | 1.00 | 25.00 | 0.34 | 0.50 | 9003010001100 |
| 0.0045 | | 0.115 | 1.00 | 25.00 | 0.33 | 0.50 | 9003010001150 |
| 0.0047 | | 0.120 | 1.00 | 25.00 | 0.32 | 0.50 | 9003010001200 |
| 0.0049 | | 0.125 | 1.00 | 25.00 | 0.61 | 0.80 | 9003010001250 |
| 0.0050 | | 0.128 | 1.00 | 25.00 | 0.61 | 0.80 | 9003010001280 |
| 0.0051 | | 0.130 | 1.00 | 25.00 | 0.61 | 0.80 | 9003010001300 |
| 0.0055 | | 0.140 | 1.00 | 25.00 | 0.59 | 0.80 | 9003010001400 |
| 0.0056 | | 0.143 | 1.00 | 25.00 | 0.59 | 0.80 | 9003010001430 |
| 0.0057 | | 0.145 | 1.00 | 25.00 | 0.58 | 0.80 | 9003010001450 |
| 0.0058 | | 0.147 | 1.00 | 25.00 | 0.58 | 0.80 | 9003010001470 |
| 0.0059 | #97 | 0.150 | 1.00 | 25.00 | 0.58 | 0.80 | 9003010001500 |
| 0.0061 | | 0.155 | 1.00 | 25.00 | 0.87 | 1.10 | 9003010001550 |
| 0.0063 | #96 | 0.160 | 1.00 | 25.00 | 0.86 | 1.10 | 9003010001600 |
| 0.0067 | #95 | 0.170 | 1.00 | 25.00 | 0.85 | 1.10 | 9003010001700 |
| 0.0069 | | 0.175 | 1.00 | 25.00 | 0.84 | 1.10 | 9003010001750 |
| 0.0071 | #94 | 0.180 | 1.00 | 25.00 | 0.83 | 1.10 | 9003010001800 |
| 0.0075 | #93 | 0.190 | 1.00 | 25.00 | 0.82 | 1.10 | 9003010001900 |
| 0.0077 | | 0.195 | 1.00 | 25.00 | 1.21 | 1.50 | 9003010001950 |
| 0.0079 | #92 | 0.200 | 1.00 | 25.00 | 1.20 | 1.50 | 9003010002000 |
| 0.0081 | | 0.205 | 1.00 | 25.00 | 1.19 | 1.50 | 9003010002050 |
| 0.0083 | #91 | 0.210 | 1.00 | 25.00 | 1.19 | 1.50 | 9003010002100 |
| 0.0087 | #90 | 0.220 | 1.00 | 25.00 | 1.17 | 1.50 | 9003010002200 |
| 0.0089 | | 0.225 | 1.00 | 25.00 | 1.16 | 1.50 | 9003010002250 |
| 0.0091 | #89 | 0.230 | 1.00 | 25.00 | 1.16 | 1.50 | 9003010002300 |
| 0.0093 | | 0.235 | 1.00 | 25.00 | 1.15 | 1.50 | 9003010002350 |
| 0.0094 | #88 | 0.240 | 1.00 | 25.00 | 1.14 | 1.50 | 9003010002400 |
| 0.0096 | | 0.245 | 1.00 | 25.00 | 1.53 | 1.90 | 9003010002450 |
| 0.0098 | #87 | 0.250 | 1.00 | 25.00 | 1.53 | 1.90 | 9003010002500 |
| 0.0100 | | 0.255 | 1.00 | 25.00 | 1.52 | 1.90 | 9003010002550 |
| 0.0102 | | 0.260 | 1.00 | 25.00 | 1.51 | 1.90 | 9003010002600 |
| 0.0104 | | 0.265 | 1.00 | 25.00 | 1.50 | 1.90 | 9003010002650 |
| 0.0106 | #86 | 0.270 | 1.00 | 25.00 | 1.50 | 1.90 | 9003010002700 |
| 0.0108 | | 0.275 | 1.00 | 25.00 | 1.49 | 1.90 | 9003010002750 |
| 0.0110 | #85 | 0.280 | 1.00 | 25.00 | 1.48 | 1.90 | 9003010002800 |
| 0.0114 | #84 | 0.290 | 1.00 | 25.00 | 1.47 | 1.90 | 9003010002900 |
| 0.0116 | | 0.295 | 1.00 | 25.00 | 1.46 | 1.90 | 9003010002950 |
| 0.0118 | | 0.300 | 1.00 | 25.00 | 1.45 | 1.90 | 9003010003000 |

| Diameter (d ₁) | | | d ₂ h7 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|-------|-------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0120 | | 0.305 | 1.00 | 25.00 | 1.94 | 2.40 | 9003010003050 |
| 0.0122 | #83 | 0.310 | 1.00 | 25.00 | 1.94 | 2.40 | 9003010003100 |
| 0.0124 | | 0.315 | 1.00 | 25.00 | 1.93 | 2.40 | 9003010003150 |
| 0.0126 | #82 | 0.320 | 1.00 | 25.00 | 1.92 | 2.40 | 9003010003200 |
| 0.0128 | | 0.325 | 1.00 | 25.00 | 1.91 | 2.40 | 9003010003250 |
| 0.0130 | #81 | 0.330 | 1.00 | 25.00 | 1.91 | 2.40 | 9003010003300 |
| 0.0134 | #80 | 0.340 | 1.00 | 25.00 | 1.89 | 2.40 | 9003010003400 |
| 0.0136 | | 0.345 | 1.00 | 25.00 | 1.88 | 2.40 | 9003010003450 |
| 0.0138 | | 0.350 | 1.00 | 25.00 | 1.88 | 2.40 | 9003010003500 |
| 0.0140 | | 0.355 | 1.00 | 25.00 | 1.87 | 2.40 | 9003010003550 |
| 0.0142 | | 0.360 | 1.00 | 25.00 | 1.86 | 2.40 | 9003010003600 |
| 0.0144 | | 0.365 | 1.00 | 25.00 | 1.85 | 2.40 | 9003010003650 |
| 0.0146 | #79 | 0.370 | 1.00 | 25.00 | 1.85 | 2.40 | 9003010003700 |
| 0.0148 | | 0.375 | 1.00 | 25.00 | 1.84 | 2.40 | 9003010003750 |
| 0.0150 | | 0.380 | 1.00 | 25.00 | 1.83 | 2.40 | 9003010003800 |
| 0.0152 | | 0.385 | 1.00 | 25.00 | 2.42 | 3.00 | 9003010003850 |
| 0.0154 | | 0.390 | 1.00 | 25.00 | 2.42 | 3.00 | 9003010003900 |
| 0.0157 | 1/64 | 0.400 | 1.00 | 25.00 | 2.40 | 3.00 | 9003010004000 |
| 0.0159 | | 0.405 | 1.00 | 25.00 | 2.39 | 3.00 | 9003010004050 |
| 0.0161 | #78 | 0.410 | 1.00 | 25.00 | 2.39 | 3.00 | 9003010004100 |
| 0.0163 | | 0.415 | 1.00 | 25.00 | 2.38 | 3.00 | 9003010004150 |
| 0.0165 | | 0.420 | 1.00 | 25.00 | 2.37 | 3.00 | 9003010004200 |
| 0.0167 | | 0.425 | 1.00 | 25.00 | 2.36 | 3.00 | 9003010004250 |
| 0.0169 | | 0.430 | 1.00 | 25.00 | 2.36 | 3.00 | 9003010004300 |
| 0.0170 | | 0.432 | 1.00 | 25.00 | 2.35 | 3.00 | 9003010004320 |
| 0.0173 | | 0.440 | 1.00 | 25.00 | 2.34 | 3.00 | 9003010004400 |
| 0.0175 | | 0.445 | 1.00 | 25.00 | 2.33 | 3.00 | 9003010004450 |
| 0.0177 | | 0.450 | 1.00 | 25.00 | 2.33 | 3.00 | 9003010004500 |
| 0.0181 | #77 | 0.460 | 1.00 | 25.00 | 2.31 | 3.00 | 9003010004600 |
| 0.0185 | | 0.470 | 1.00 | 25.00 | 2.30 | 3.00 | 9003010004700 |
| 0.0187 | | 0.475 | 1.00 | 25.00 | 2.29 | 3.00 | 9003010004750 |
| 0.0189 | | 0.480 | 1.00 | 25.00 | 2.28 | 3.00 | 9003010004800 |
| 0.0191 | | 0.485 | 1.00 | 25.00 | 2.67 | 3.40 | 9003010004850 |
| 0.0193 | | 0.490 | 1.00 | 25.00 | 2.67 | 3.40 | 9003010004900 |
| 0.0195 | | 0.495 | 1.00 | 25.00 | 2.66 | 3.40 | 9003010004950 |
| 0.0197 | | 0.500 | 1.00 | 25.00 | 2.65 | 3.40 | 9003010005000 |
| 0.0199 | | 0.505 | 1.00 | 25.00 | 2.64 | 3.40 | 9003010005050 |
| 0.0201 | #76 | 0.510 | 1.00 | 25.00 | 2.64 | 3.40 | 9003010005100 |
| 0.0203 | | 0.515 | 1.00 | 25.00 | 2.63 | 3.40 | 9003010005150 |
| 0.0205 | | 0.520 | 1.00 | 25.00 | 2.62 | 3.40 | 9003010005200 |
| 0.0207 | | 0.525 | 1.00 | 25.00 | 2.61 | 3.40 | 9003010005250 |
| 0.0209 | #75 | 0.530 | 1.00 | 25.00 | 2.61 | 3.40 | 9003010005300 |
| 0.0211 | | 0.535 | 1.00 | 25.00 | 3.10 | 3.90 | 9003010005350 |
| 0.0213 | | 0.540 | 1.00 | 25.00 | 3.09 | 3.90 | 9003010005400 |
| 0.0215 | | 0.545 | 1.00 | 25.00 | 3.08 | 3.90 | 9003010005450 |

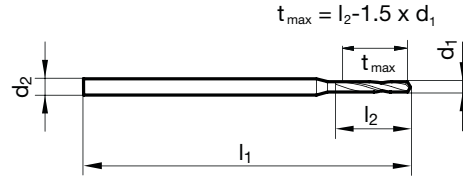


Tool material **HSS-E-PM**

Surface

- P** Steel ● facet point grinding • with reinforced shank • $\varnothing 0.15\text{ mm}$ Co-alloyed high speed steel
- M** Stainless steel ●
- K** Cast iron ● high-alloyed steels
- N** Aluminum ●
- S** Titanium alloys ○
- H** Hardened steel

●=Optimal
○=Limited



Speeds and feeds information on pg. 509

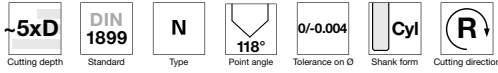
Micro Drills

| Diameter (d ₁) | | d2 h7 | l ₁ | t _{max} | l ₂ | EDP # | |
|----------------------------|----------|--------|----------------|------------------|----------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | | |
| 0.0051 | | 0.0051 | 1.00 | 25.00 | 0.61 | 0.80 | 9003030001300 |
| 0.0055 | | 0.0055 | 1.00 | 25.00 | 0.59 | 0.80 | 9003030001400 |
| 0.0059 | #97 | 0.0059 | 1.00 | 25.00 | 0.58 | 0.80 | 9003030001500 |
| 0.0063 | #96 | 0.0063 | 1.00 | 25.00 | 0.86 | 1.10 | 9003030001600 |
| 0.0067 | #95 | 0.0067 | 1.00 | 25.00 | 0.85 | 1.10 | 9003030001700 |
| 0.0071 | #94 | 0.0071 | 1.00 | 25.00 | 0.83 | 1.10 | 9003030001850 |
| 0.0073 | | 0.0073 | 1.00 | 25.00 | 0.82 | 1.10 | 9003030001850 |
| 0.0075 | #93 | 0.0075 | 1.00 | 25.00 | 0.82 | 1.10 | 9003030001900 |
| 0.0077 | | 0.0077 | 1.00 | 25.00 | 1.21 | 1.50 | 9003030001950 |
| 0.0079 | #92 | 0.0079 | 1.00 | 25.00 | 1.20 | 1.50 | 9003030002000 |
| 0.0083 | #91 | 0.0083 | 1.00 | 25.00 | 1.19 | 1.50 | 9003030002100 |
| 0.0085 | | 0.0085 | 1.00 | 25.00 | 1.18 | 1.50 | 9003030002150 |
| 0.0087 | #90 | 0.0087 | 1.00 | 25.00 | 1.17 | 1.50 | 9003030002200 |
| 0.0089 | | 0.0089 | 1.00 | 25.00 | 1.16 | 1.50 | 9003030002250 |
| 0.0091 | #89 | 0.0091 | 1.00 | 25.00 | 1.16 | 1.50 | 9003030002300 |
| 0.0094 | #88 | 0.0094 | 1.00 | 25.00 | 1.14 | 1.50 | 9003030002400 |
| 0.0096 | | 0.0096 | 1.00 | 25.00 | 1.53 | 1.90 | 9003030002450 |
| 0.0098 | #87 | 0.0098 | 1.00 | 25.00 | 1.53 | 1.90 | 9003030002500 |
| 0.0100 | | 0.0100 | 1.00 | 25.00 | 1.52 | 1.90 | 9003030002550 |
| 0.0102 | | 0.0102 | 1.00 | 25.00 | 1.51 | 1.90 | 9003030002600 |
| 0.0104 | | 0.0104 | 1.00 | 25.00 | 1.50 | 1.90 | 9003030002650 |
| 0.0106 | #86 | 0.0106 | 1.00 | 25.00 | 1.50 | 1.90 | 9003030002700 |
| 0.0110 | #85 | 0.0110 | 1.00 | 25.00 | 1.48 | 1.90 | 9003030002800 |
| 0.0114 | #84 | 0.0114 | 1.00 | 25.00 | 1.47 | 1.90 | 9003030002900 |
| 0.0116 | | 0.0116 | 1.00 | 25.00 | 1.46 | 1.90 | 9003030002950 |
| 0.0118 | | 0.0118 | 1.00 | 25.00 | 1.45 | 1.90 | 9003030003000 |
| 0.0122 | #83 | 0.0122 | 1.00 | 25.00 | 1.94 | 2.40 | 9003030003100 |
| 0.0126 | #82 | 0.0126 | 1.00 | 25.00 | 1.92 | 2.40 | 9003030003200 |
| 0.0130 | #81 | 0.0130 | 1.00 | 25.00 | 1.91 | 2.40 | 9003030003300 |
| 0.0134 | #80 | 0.0134 | 1.00 | 25.00 | 1.89 | 2.40 | 9003030003400 |
| 0.0138 | | 0.0138 | 1.00 | 25.00 | 1.88 | 2.40 | 9003030003500 |
| 0.0142 | | 0.0142 | 1.00 | 25.00 | 1.86 | 2.40 | 9003030003600 |
| 0.0146 | #79 | 0.0146 | 1.00 | 25.00 | 1.85 | 2.40 | 9003030003700 |
| 0.0150 | | 0.0150 | 1.00 | 25.00 | 1.83 | 2.40 | 9003030003800 |
| 0.0154 | | 0.0154 | 1.00 | 25.00 | 2.42 | 3.00 | 9003030003900 |
| 0.0157 | 1/64 | 0.0157 | 1.00 | 25.00 | 2.40 | 3.00 | 9003030004000 |
| 0.0161 | #78 | 0.0161 | 1.00 | 25.00 | 2.39 | 3.00 | 9003030004100 |
| 0.0165 | | 0.0165 | 1.00 | 25.00 | 2.37 | 3.00 | 9003030004200 |
| 0.0169 | | 0.0169 | 1.00 | 25.00 | 2.36 | 3.00 | 9003030004300 |
| 0.0173 | | 0.0173 | 1.00 | 25.00 | 2.34 | 3.00 | 9003030004400 |
| 0.0177 | | 0.0177 | 1.00 | 25.00 | 2.33 | 3.00 | 9003030004500 |
| 0.0181 | #77 | 0.0181 | 1.00 | 25.00 | 2.31 | 3.00 | 9003030004600 |

| Diameter (d ₁) | | | d2 h7 | l ₁ | t _{max} | l ₂ | EDP # | |
|----------------------------|----------|--------|--------|----------------|------------------|----------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.0185 | | 0.0185 | 1.00 | 25.00 | 2.30 | 3.00 | 9003030004700 | |
| 0.0189 | | 0.0189 | 1.00 | 25.00 | 2.28 | 3.00 | 9003030004800 | |
| 0.0193 | | 0.0193 | 1.00 | 25.00 | 2.67 | 3.40 | 9003030004900 | |
| 0.0197 | | 0.0197 | 1.00 | 25.00 | 2.65 | 3.40 | 9003030005000 | |
| 0.0201 | #76 | 0.0201 | 1.00 | 25.00 | 2.64 | 3.40 | 9003030005100 | |
| 0.0205 | | 0.0205 | 1.00 | 25.00 | 2.62 | 3.40 | 9003030005200 | |
| 0.0207 | | 0.0207 | 1.00 | 25.00 | 2.61 | 3.40 | 9003030005250 | |
| 0.0209 | #75 | 0.0209 | 1.00 | 25.00 | 2.61 | 3.40 | 9003030005300 | |
| 0.0211 | | 0.0211 | 1.00 | 25.00 | 3.10 | 3.90 | 9003030005350 | |
| 0.0213 | | 0.0213 | 1.00 | 25.00 | 3.09 | 3.90 | 9003030005400 | |
| 0.0215 | | 0.0215 | 1.00 | 25.00 | 3.08 | 3.90 | 9003030005450 | |
| 0.0217 | | 0.0217 | 1.00 | 25.00 | 3.08 | 3.90 | 9003030005500 | |
| 0.0219 | | 0.0219 | 1.00 | 25.00 | 3.07 | 3.90 | 9003030005550 | |
| 0.0220 | | 0.0220 | 1.00 | 25.00 | 3.06 | 3.90 | 9003030005600 | |
| 0.0222 | | 0.0222 | 1.00 | 25.00 | 3.05 | 3.90 | 9003030005650 | |
| 0.0224 | #74 | 0.0224 | 1.00 | 25.00 | 3.05 | 3.90 | 9003030005700 | |
| 0.0228 | | 0.0228 | 1.00 | 25.00 | 3.03 | 3.90 | 9003030005800 | |
| 0.0232 | | 0.0232 | 1.00 | 25.00 | 3.02 | 3.90 | 9003030005900 | |
| 0.0236 | | 0.0236 | 1.00 | 25.00 | 3.00 | 3.90 | 9003030006000 | |
| 0.0240 | #73 | 0.0240 | 1.00 | 25.00 | 3.29 | 4.20 | 9003030006100 | |
| 0.0244 | | 0.0244 | 1.00 | 25.00 | 3.27 | 4.20 | 9003030006200 | |
| 0.0248 | | 0.0248 | 1.00 | 25.00 | 3.26 | 4.20 | 9003030006300 | |
| 0.0252 | #72 | 0.0252 | 1.00 | 25.00 | 3.24 | 4.20 | 9003030006400 | |
| 0.0256 | | 0.0256 | 1.00 | 25.00 | 3.23 | 4.20 | 9003030006500 | |
| 0.0260 | #71 | 0.0260 | 1.00 | 25.00 | 3.21 | 4.20 | 9003030006600 | |
| 0.0264 | | 0.0264 | 1.00 | 25.00 | 3.20 | 4.20 | 9003030006700 | |
| 0.0266 | | 0.0266 | 1.00 | 25.00 | 3.79 | 4.80 | 9003030006750 | |
| 0.0268 | | 0.0268 | 1.00 | 25.00 | 3.78 | 4.80 | 9003030006800 | |
| 0.0272 | | 0.0272 | 1.00 | 25.00 | 3.77 | 4.80 | 9003030006900 | |
| 0.0276 | | 0.0276 | 1.00 | 25.00 | 3.75 | 4.80 | 9003030007000 | |
| 0.0280 | #70 | 0.0280 | 1.00 | 25.00 | 3.74 | 4.80 | 9003030007100 | |
| 0.0283 | | 0.0283 | 1.00 | 25.00 | 3.72 | 4.80 | 9003030007200 | |
| 0.0287 | | 0.0287 | 1.00 | 25.00 | 3.71 | 4.80 | 9003030007300 | |
| 0.0291 | #69 | 0.0291 | 1.00 | 25.00 | 3.69 | 4.80 | 9003030007400 | |
| 0.0295 | | 0.0295 | 1.00 | 25.00 | 3.68 | 4.80 | 9003030007500 | |
| 0.0299 | | 0.0299 | 1.00 | 25.00 | 4.16 | 5.30 | 9003030007600 | |
| 0.0303 | | 0.0303 | 1.00 | 25.00 | 4.15 | 5.30 | 9003030007700 | |
| 0.0307 | | 0.0307 | 1.00 | 25.00 | 4.13 | 5.30 | 9003030007800 | |
| 0.0311 | 1/32 | #68 | 0.0311 | 1.00 | 25.00 | 4.12 | 5.30 | 9003030007900 |
| 0.0315 | | 0.0315 | 1.50 | 25.00 | 4.10 | 5.30 | 9003030008000 | |
| 0.0319 | #67 | 0.0319 | 1.50 | 25.00 | 4.09 | 5.30 | 9003030008100 | |
| 0.0323 | | 0.0323 | 1.50 | 25.00 | 4.07 | 5.30 | 9003030008200 | |

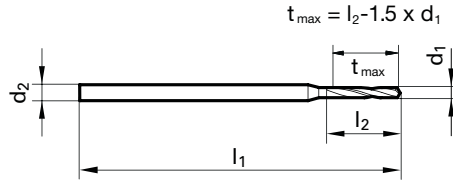
| Diameter (d ₁) | | | d2 h7 mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|-------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0327 | | 0.0327 | 1.50 | 25.00 | 4.06 | 5.30 | 9003030008300 |
| 0.0331 | #66 | 0.0331 | 1.50 | 25.00 | 4.04 | 5.30 | 9003030008400 |
| 0.0335 | | 0.0335 | 1.50 | 25.00 | 4.03 | 5.30 | 9003030008500 |
| 0.0339 | | 0.0339 | 1.50 | 25.00 | 4.71 | 6.00 | 9003030008600 |
| 0.0343 | | 0.0343 | 1.50 | 25.00 | 4.70 | 6.00 | 9003030008700 |
| 0.0346 | | 0.0346 | 1.50 | 25.00 | 4.68 | 6.00 | 9003030008800 |
| 0.0350 | #65 | 0.0350 | 1.50 | 25.00 | 4.67 | 6.00 | 9003030008900 |
| 0.0354 | | 0.0354 | 1.50 | 25.00 | 4.65 | 6.00 | 9003030009000 |
| 0.0358 | #64 | 0.0358 | 1.50 | 25.00 | 4.64 | 6.00 | 9003030009100 |
| 0.0360 | | 0.0360 | 1.50 | 25.00 | 4.63 | 6.00 | 9003030009150 |
| 0.0362 | | 0.0362 | 1.50 | 25.00 | 4.62 | 6.00 | 9003030009200 |
| 0.0366 | | 0.0366 | 1.50 | 25.00 | 4.61 | 6.00 | 9003030009300 |
| 0.0368 | | 0.0368 | 1.50 | 25.00 | 4.60 | 6.00 | 9003030009350 |
| 0.0370 | #63 | 0.0370 | 1.50 | 25.00 | 4.59 | 6.00 | 9003030009400 |
| 0.0374 | | 0.0374 | 1.50 | 25.00 | 4.58 | 6.00 | 9003030009500 |
| 0.0378 | | 0.0378 | 1.50 | 25.00 | 5.36 | 6.80 | 9003030009600 |
| 0.0382 | #62 | 0.0382 | 1.50 | 25.00 | 5.35 | 6.80 | 9003030009700 |
| 0.0386 | | 0.0386 | 1.50 | 25.00 | 5.33 | 6.80 | 9003030009800 |
| 0.0390 | #61 | 0.0390 | 1.50 | 25.00 | 5.32 | 6.80 | 9003030009900 |
| 0.0394 | | 0.0394 | 1.50 | 25.00 | 5.30 | 6.80 | 9003030010000 |
| 0.0396 | | 0.0396 | 1.50 | 25.00 | 5.29 | 6.80 | 9003030010050 |
| 0.0398 | | 0.0398 | 1.50 | 25.00 | 5.29 | 6.80 | 9003030010100 |
| 0.0402 | #60 | 0.0402 | 1.50 | 25.00 | 5.27 | 6.80 | 9003030010200 |
| 0.0406 | | 0.0406 | 1.50 | 25.00 | 5.26 | 6.80 | 9003030010300 |
| 0.0409 | #59 | 0.0409 | 1.50 | 25.00 | 5.24 | 6.80 | 9003030010400 |

| Diameter (d ₁) | | | d2 h7 mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|-------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0413 | | 0.0413 | 1.50 | 25.00 | 5.23 | 6.80 | 9003030010500 |
| 0.0417 | | 0.0417 | 1.50 | 25.00 | 5.21 | 6.80 | 9003030010600 |
| 0.0421 | #58 | 0.0421 | 1.50 | 25.00 | 6.00 | 7.60 | 9003030010700 |
| 0.0425 | | 0.0425 | 1.50 | 25.00 | 5.98 | 7.60 | 9003030010800 |
| 0.0429 | #57 | 0.0429 | 1.50 | 25.00 | 5.97 | 7.60 | 9003030010900 |
| 0.0433 | | 0.0433 | 1.50 | 25.00 | 5.95 | 7.60 | 9003030011000 |
| 0.0437 | | 0.0437 | 1.50 | 25.00 | 5.94 | 7.60 | 9003030011100 |
| 0.0441 | | 0.0441 | 1.50 | 25.00 | 5.92 | 7.60 | 9003030011200 |
| 0.0453 | | 0.0453 | 1.50 | 25.00 | 5.88 | 7.60 | 9003030011500 |
| 0.0461 | | 0.0461 | 1.50 | 25.00 | 5.85 | 7.60 | 9003030011700 |
| 0.0465 | #56 | 0.0465 | 1.50 | 25.00 | 5.83 | 7.60 | 9003030011800 |
| 0.0469 | 3/64 | 0.0469 | 1.50 | 25.00 | 6.72 | 8.50 | 9003030011900 |
| 0.0472 | | 0.0472 | 1.50 | 25.00 | 6.70 | 8.50 | 9003030012000 |
| 0.0480 | | 0.0480 | 1.50 | 25.00 | 6.67 | 8.50 | 9003030012200 |
| 0.0492 | | 0.0492 | 1.50 | 25.00 | 6.63 | 8.50 | 9003030012500 |
| 0.0500 | | 0.0500 | 1.50 | 25.00 | 6.60 | 8.50 | 9003030012700 |
| 0.0508 | | 0.0508 | 1.50 | 25.00 | 6.57 | 8.50 | 9003030012900 |
| 0.0512 | | 0.0512 | 1.50 | 25.00 | 6.55 | 8.50 | 9003030013000 |
| 0.0520 | #55 | 0.0520 | 1.50 | 25.00 | 6.52 | 8.50 | 9003030013200 |
| 0.0524 | | 0.0524 | 1.50 | 25.00 | 7.51 | 9.50 | 9003030013300 |
| 0.0531 | | 0.0531 | 1.50 | 25.00 | 7.48 | 9.50 | 9003030013500 |
| 0.0535 | | 0.0535 | 1.50 | 25.00 | 7.46 | 9.50 | 9003030013600 |
| 0.0551 | #54 | 0.0551 | 1.50 | 25.00 | 7.40 | 9.50 | 9003030014000 |
| 0.0728 | #49 | 0.0728 | 2.00 | 30.00 | 9.03 | 11.80 | 9003030018500 |



Tool material **HSS-E-PM**
Surface **S**

- P** Steel ● facet point grinding • with reinforced shank • increased wear resistance
 - M** Stainless steel ●
 - K** Cast iron ● high-alloyed steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 538

Micro Drills

| Diameter (d ₁) | | | d ₂ h ₇ | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|-------|-------------------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0050 | | 0.128 | 1.00 | 25.00 | 0.61 | 0.80 | 9006600001280 |
| 0.0063 | #96 | 0.160 | 1.00 | 25.00 | 0.86 | 1.10 | 9006600001600 |
| 0.0067 | #95 | 0.170 | 1.00 | 25.00 | 0.85 | 1.10 | 9006600001700 |
| 0.0071 | #94 | 0.180 | 1.00 | 25.00 | 0.83 | 1.10 | 9006600001800 |
| 0.0075 | #93 | 0.190 | 1.00 | 25.00 | 0.82 | 1.10 | 9006600001900 |
| 0.0079 | #92 | 0.200 | 1.00 | 25.00 | 1.20 | 1.50 | 9006600002000 |
| 0.0083 | #91 | 0.210 | 1.00 | 25.00 | 1.19 | 1.50 | 9006600002100 |
| 0.0087 | #90 | 0.220 | 1.00 | 25.00 | 1.17 | 1.50 | 9006600002200 |
| 0.0091 | #89 | 0.230 | 1.00 | 25.00 | 1.16 | 1.50 | 9006600002300 |
| 0.0093 | | 0.235 | 1.00 | 25.00 | 1.15 | 1.50 | 9006600002350 |
| 0.0094 | #88 | 0.240 | 1.00 | 25.00 | 1.14 | 1.50 | 9006600002400 |
| 0.0096 | | 0.245 | 1.00 | 25.00 | 1.53 | 1.90 | 9006600002450 |
| 0.0098 | #87 | 0.250 | 1.00 | 25.00 | 1.53 | 1.90 | 9006600002500 |
| 0.0100 | | 0.255 | 1.00 | 25.00 | 1.52 | 1.90 | 9006600002550 |
| 0.0102 | | 0.260 | 1.00 | 25.00 | 1.51 | 1.90 | 9006600002600 |
| 0.0104 | | 0.265 | 1.00 | 25.00 | 1.50 | 1.90 | 9006600002650 |
| 0.0106 | #86 | 0.270 | 1.00 | 25.00 | 1.50 | 1.90 | 9006600002700 |
| 0.0110 | #85 | 0.280 | 1.00 | 25.00 | 1.48 | 1.90 | 9006600002800 |
| 0.0114 | #84 | 0.290 | 1.00 | 25.00 | 1.47 | 1.90 | 9006600002900 |
| 0.0118 | | 0.300 | 1.00 | 25.00 | 1.45 | 1.90 | 9006600003000 |
| 0.0120 | | 0.305 | 1.00 | 25.00 | 1.94 | 2.40 | 9006600003050 |
| 0.0122 | #83 | 0.310 | 1.00 | 25.00 | 1.94 | 2.40 | 9006600003100 |
| 0.0126 | #82 | 0.320 | 1.00 | 25.00 | 1.92 | 2.40 | 9006600003200 |
| 0.0130 | #81 | 0.330 | 1.00 | 25.00 | 1.91 | 2.40 | 9006600003300 |
| 0.0134 | #80 | 0.340 | 1.00 | 25.00 | 1.89 | 2.40 | 9006600003400 |
| 0.0138 | | 0.350 | 1.00 | 25.00 | 1.88 | 2.40 | 9006600003500 |
| 0.0142 | | 0.360 | 1.00 | 25.00 | 1.86 | 2.40 | 9006600003600 |
| 0.0146 | #79 | 0.370 | 1.00 | 25.00 | 1.85 | 2.40 | 9006600003700 |
| 0.0150 | | 0.380 | 1.00 | 25.00 | 1.83 | 2.40 | 9006600003800 |
| 0.0154 | | 0.390 | 1.00 | 25.00 | 2.42 | 3.00 | 9006600003900 |
| 0.0157 | 1/64 | 0.400 | 1.00 | 25.00 | 2.40 | 3.00 | 9006600004000 |
| 0.0161 | #78 | 0.410 | 1.00 | 25.00 | 2.39 | 3.00 | 9006600004100 |
| 0.0165 | | 0.420 | 1.00 | 25.00 | 2.37 | 3.00 | 9006600004200 |
| 0.0169 | | 0.430 | 1.00 | 25.00 | 2.36 | 3.00 | 9006600004300 |
| 0.0173 | | 0.440 | 1.00 | 25.00 | 2.34 | 3.00 | 9006600004400 |
| 0.0177 | | 0.450 | 1.00 | 25.00 | 2.33 | 3.00 | 9006600004500 |
| 0.0181 | #77 | 0.460 | 1.00 | 25.00 | 2.31 | 3.00 | 9006600004600 |
| 0.0185 | | 0.470 | 1.00 | 25.00 | 2.30 | 3.00 | 9006600004700 |
| 0.0189 | | 0.480 | 1.00 | 25.00 | 2.28 | 3.00 | 9006600004800 |
| 0.0193 | | 0.490 | 1.00 | 25.00 | 2.67 | 3.40 | 9006600004900 |
| 0.0197 | | 0.500 | 1.00 | 25.00 | 2.65 | 3.40 | 9006600005000 |

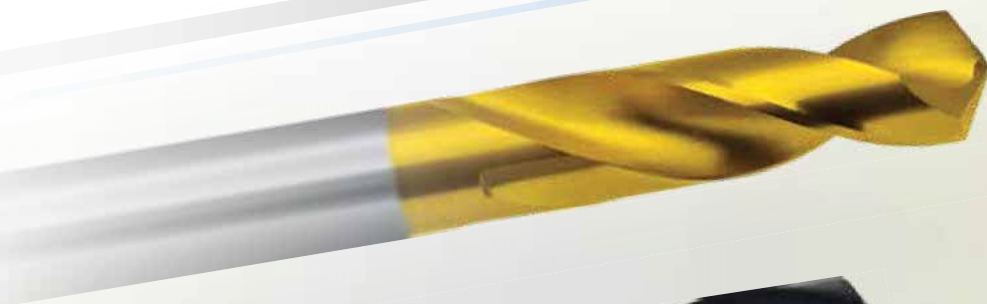
| Diameter (d ₁) | | | d ₂ h ₇ | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|-------|-------------------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0201 | #76 | 0.510 | 1.00 | 25.00 | 2.64 | 3.40 | 9006600005100 |
| 0.0205 | | 0.520 | 1.00 | 25.00 | 2.62 | 3.40 | 9006600005200 |
| 0.0209 | #75 | 0.530 | 1.00 | 25.00 | 2.61 | 3.40 | 9006600005300 |
| 0.0213 | | 0.540 | 1.00 | 25.00 | 3.09 | 3.90 | 9006600005400 |
| 0.0217 | | 0.550 | 1.00 | 25.00 | 3.08 | 3.90 | 9006600005500 |
| 0.0220 | | 0.560 | 1.00 | 25.00 | 3.06 | 3.90 | 9006600005600 |
| 0.0224 | #74 | 0.570 | 1.00 | 25.00 | 3.05 | 3.90 | 9006600005700 |
| 0.0228 | | 0.580 | 1.00 | 25.00 | 3.03 | 3.90 | 9006600005800 |
| 0.0232 | | 0.590 | 1.00 | 25.00 | 3.02 | 3.90 | 9006600005900 |
| 0.0236 | | 0.600 | 1.00 | 25.00 | 3.00 | 3.90 | 9006600006000 |
| 0.0240 | #73 | 0.610 | 1.00 | 25.00 | 3.29 | 4.20 | 9006600006100 |
| 0.0244 | | 0.620 | 1.00 | 25.00 | 3.27 | 4.20 | 9006600006200 |
| 0.0248 | | 0.630 | 1.00 | 25.00 | 3.26 | 4.20 | 9006600006300 |
| 0.0252 | #72 | 0.640 | 1.00 | 25.00 | 3.24 | 4.20 | 9006600006400 |
| 0.0256 | | 0.650 | 1.00 | 25.00 | 3.23 | 4.20 | 9006600006500 |
| 0.0260 | #71 | 0.660 | 1.00 | 25.00 | 3.21 | 4.20 | 9006600006600 |
| 0.0264 | | 0.670 | 1.00 | 25.00 | 3.20 | 4.20 | 9006600006700 |
| 0.0268 | | 0.680 | 1.00 | 25.00 | 3.78 | 4.80 | 9006600006800 |
| 0.0272 | | 0.690 | 1.00 | 25.00 | 3.77 | 4.80 | 9006600006900 |
| 0.0276 | | 0.700 | 1.00 | 25.00 | 3.75 | 4.80 | 9006600007000 |
| 0.0280 | #70 | 0.710 | 1.00 | 25.00 | 3.74 | 4.80 | 9006600007100 |
| 0.0283 | | 0.720 | 1.00 | 25.00 | 3.72 | 4.80 | 9006600007200 |
| 0.0287 | | 0.730 | 1.00 | 25.00 | 3.71 | 4.80 | 9006600007300 |
| 0.0291 | #69 | 0.740 | 1.00 | 25.00 | 3.69 | 4.80 | 9006600007400 |
| 0.0295 | | 0.750 | 1.00 | 25.00 | 3.68 | 4.80 | 9006600007500 |
| 0.0299 | | 0.760 | 1.00 | 25.00 | 4.16 | 5.30 | 9006600007600 |
| 0.0303 | | 0.770 | 1.00 | 25.00 | 4.15 | 5.30 | 9006600007700 |
| 0.0307 | | 0.780 | 1.00 | 25.00 | 4.13 | 5.30 | 9006600007800 |
| 0.0311 | 1/32 | #68 | 1.00 | 25.00 | 4.12 | 5.30 | 9006600007900 |
| 0.0315 | | 0.800 | 1.50 | 25.00 | 4.10 | 5.30 | 9006600008000 |
| 0.0319 | #67 | 0.810 | 1.50 | 25.00 | 4.09 | 5.30 | 9006600008100 |
| 0.0323 | | 0.820 | 1.50 | 25.00 | 4.07 | 5.30 | 9006600008200 |
| 0.0327 | | 0.830 | 1.50 | 25.00 | 4.06 | 5.30 | 9006600008300 |
| 0.0331 | #66 | 0.840 | 1.50 | 25.00 | 4.04 | 5.30 | 9006600008400 |
| 0.0335 | | 0.850 | 1.50 | 25.00 | 4.03 | 5.30 | 9006600008500 |
| 0.0339 | | 0.860 | 1.50 | 25.00 | 4.71 | 6.00 | 9006600008600 |
| 0.0343 | | 0.870 | 1.50 | 25.00 | 4.70 | 6.00 | 9006600008700 |
| 0.0346 | | 0.880 | 1.50 | 25.00 | 4.68 | 6.00 | 9006600008800 |
| 0.0354 | | 0.900 | 1.50 | 25.00 | 4.65 | 6.00 | 9006600009000 |
| 0.0358 | #64 | 0.910 | 1.50 | 25.00 | 4.64 | 6.00 | 9006600009100 |
| 0.0370 | #63 | 0.940 | 1.50 | 25.00 | 4.59 | 6.00 | 9006600009400 |

| Diameter (d ₁) | | | d2 h7 mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|-------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0374 | | 0.950 | 1.50 | 25.00 | 4.58 | 6.00 | 9006600009500 |
| 0.0382 | #62 | 0.970 | 1.50 | 25.00 | 5.35 | 6.80 | 9006600009700 |
| 0.0386 | | 0.980 | 1.50 | 25.00 | 5.33 | 6.80 | 9006600009800 |
| 0.0394 | | 1.000 | 1.50 | 25.00 | 5.30 | 6.80 | 9006600010000 |
| 0.0402 | #60 | 1.020 | 1.50 | 25.00 | 5.27 | 6.80 | 9006600010200 |
| 0.0409 | #59 | 1.040 | 1.50 | 25.00 | 5.24 | 6.80 | 9006600010400 |
| 0.0413 | | 1.050 | 1.50 | 25.00 | 5.23 | 6.80 | 9006600010500 |
| 0.0421 | #58 | 1.070 | 1.50 | 25.00 | 6.00 | 7.60 | 9006600010700 |
| 0.0425 | | 1.080 | 1.50 | 25.00 | 5.98 | 7.60 | 9006600010800 |
| 0.0433 | | 1.100 | 1.50 | 25.00 | 5.95 | 7.60 | 9006600011000 |
| 0.0453 | | 1.150 | 1.50 | 25.00 | 5.88 | 7.60 | 9006600011500 |
| 0.0465 | #56 | 1.180 | 1.50 | 25.00 | 5.83 | 7.60 | 9006600011800 |

| Diameter (d ₁) | | | d2 h7 mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|-------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0469 | 3/64 | 1.190 | 1.50 | 25.00 | 6.72 | 8.50 | 9006600011900 |
| 0.0472 | | 1.200 | 1.50 | 25.00 | 6.70 | 8.50 | 9006600012000 |
| 0.0492 | | 1.250 | 1.50 | 25.00 | 6.63 | 8.50 | 9006600012500 |
| 0.0512 | | 1.300 | 1.50 | 25.00 | 6.55 | 8.50 | 9006600013000 |
| 0.0531 | | 1.350 | 1.50 | 25.00 | 7.48 | 9.50 | 9006600013500 |
| 0.0547 | | 1.390 | 1.50 | 25.00 | 7.42 | 9.50 | 9006600013900 |
| 0.0551 | #54 | 1.400 | 1.50 | 25.00 | 7.40 | 9.50 | 9006600014000 |
| 0.0559 | | 1.420 | 1.50 | 25.00 | 7.37 | 9.50 | 9006600014200 |
| 0.0571 | | 1.450 | 1.50 | 25.00 | 7.33 | 9.50 | 9006600014500 |
| 0.0591 | | 1.500 | 2.00 | 30.00 | 7.25 | 9.50 | 9006600015000 |
| 0.0709 | | 1.800 | 2.00 | 30.00 | 9.10 | 11.80 | 9006600018000 |



STUB LENGTH HSS, HSCO,
HSS-E-PM DRILLS





Tool material

HSS

Surface



P Steel ● web thinning $\geq \varnothing 1.000$ • relieved cone • for use in automatic/capstan lathes • also for hand drilling machines

M Stainless steel

K Cast iron ● thin materials

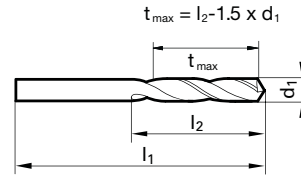
N Aluminum ○

S Titanium alloys

H Hardened steel

●=Optimal

○=Limited



Speeds and feeds information on pg. 499

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0157 | 1/64 | 0.40 | 19.00 | 1.90 | 2.50 | 9002230004000 |
| 0.0197 | | 0.50 | 20.00 | 2.25 | 3.00 | 9002230005000 |
| 0.0217 | | 0.55 | 21.00 | 2.68 | 3.50 | 9002230005500 |
| 0.0236 | | 0.60 | 21.00 | 2.60 | 3.50 | 9002230006000 |
| 0.0256 | | 0.65 | 22.00 | 3.03 | 4.00 | 9002230006500 |
| 0.0260 | #71 | 0.66 | 22.00 | 3.01 | 4.00 | 9002230006600 |
| 0.0276 | | 0.70 | 23.00 | 3.45 | 4.50 | 9002230007000 |
| 0.0283 | | 0.72 | 23.00 | 3.42 | 4.50 | 9002230007200 |
| 0.0295 | | 0.75 | 23.00 | 3.38 | 4.50 | 9002230007500 |
| 0.0311 | 1/32 #68 | 0.79 | 24.00 | 3.82 | 5.00 | 9002230007900 |
| 0.0315 | | 0.80 | 24.00 | 3.80 | 5.00 | 9002230008000 |
| 0.0323 | | 0.82 | 24.00 | 3.77 | 5.00 | 9002230008200 |
| 0.0350 | #65 | 0.89 | 25.00 | 4.17 | 5.50 | 9002230008900 |
| 0.0354 | | 0.90 | 25.00 | 4.15 | 5.50 | 9002230009000 |
| 0.0374 | | 0.95 | 25.00 | 4.08 | 5.50 | 9002230009500 |
| 0.0386 | | 0.98 | 26.00 | 4.53 | 6.00 | 9002230009800 |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9002230010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9002230010200 |
| 0.0409 | #59 | 1.04 | 26.00 | 4.44 | 6.00 | 9002230010400 |
| 0.0413 | | 1.05 | 26.00 | 4.43 | 6.00 | 9002230010500 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9002230010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9002230010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9002230011000 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9002230011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9002230011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9002230011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9002230012000 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9002230012500 |
| 0.0496 | | 1.26 | 30.00 | 6.11 | 8.00 | 9002230012600 |
| 0.0504 | | 1.28 | 30.00 | 6.08 | 8.00 | 9002230012800 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9002230013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9002230013200 |
| 0.0531 | | 1.35 | 32.00 | 6.98 | 9.00 | 9002230013500 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9002230014000 |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9002230014500 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9002230015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9002230015100 |
| 0.0598 | | 1.52 | 34.00 | 7.72 | 10.00 | 9002230015200 |
| 0.0610 | | 1.55 | 34.00 | 7.68 | 10.00 | 9002230015500 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9002230015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9002230016000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9002230016100 |
| 0.0650 | | 1.65 | 34.00 | 7.53 | 10.00 | 9002230016500 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9002230017000 |
| 0.0677 | | 1.72 | 36.00 | 8.42 | 11.00 | 9002230017200 |
| 0.0685 | | 1.74 | 36.00 | 8.39 | 11.00 | 9002230017400 |
| 0.0689 | | 1.75 | 36.00 | 8.38 | 11.00 | 9002230017500 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9002230017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9002230018000 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9002230018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9002230019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9002230019300 |
| 0.0768 | | 1.95 | 38.00 | 9.08 | 12.00 | 9002230019500 |
| 0.0776 | | 1.97 | 38.00 | 9.05 | 12.00 | 9002230019700 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9002230019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9002230019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9002230020000 |
| 0.0807 | | 2.05 | 38.00 | 8.93 | 12.00 | 9002230020500 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9002230020600 |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9002230020800 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9002230021000 |
| 0.0835 | | 2.12 | 38.00 | 8.82 | 12.00 | 9002230021200 |
| 0.0846 | | 2.15 | 40.00 | 9.78 | 13.00 | 9002230021500 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9002230021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9002230022000 |
| 0.0874 | | 2.22 | 40.00 | 9.67 | 13.00 | 9002230022200 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9002230022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9002230022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9002230023000 |
| 0.0925 | | 2.35 | 40.00 | 9.48 | 13.00 | 9002230023500 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9002230023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9002230023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9002230024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9002230024400 |
| 0.0965 | | 2.45 | 43.00 | 10.33 | 14.00 | 9002230024500 |
| 0.0976 | | 2.48 | 43.00 | 10.28 | 14.00 | 9002230024800 |
| 0.0980 | #40 | 2.49 | 43.00 | 10.27 | 14.00 | 9002230024900 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9002230025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9002230025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9002230025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9002230025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9002230026000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9002230026400 | |
| 0.1043 | | 2.65 | 43.00 | 10.03 | 14.00 | 9002230026500 | |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9002230027000 | |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9002230027100 | |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9002230027500 | |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9002230027800 | |
| 0.1098 | #35 | 2.79 | 46.00 | 11.82 | 16.00 | 9002230027900 | |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9002230028000 | |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9002230028200 | |
| 0.1122 | | 2.85 | 46.00 | 11.73 | 16.00 | 9002230028500 | |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9002230028700 | |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9002230029000 | |
| 0.1150 | | 2.92 | 46.00 | 11.62 | 16.00 | 9002230029200 | |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9002230029500 | |
| 0.1169 | | 2.97 | 46.00 | 11.55 | 16.00 | 9002230029700 | |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9002230030000 | |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9002230030500 | |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9002230031000 | |
| 0.1240 | | 3.15 | 49.00 | 13.28 | 18.00 | 9002230031500 | |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9002230031700 | |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9002230032000 | |
| 0.1280 | | 3.25 | 49.00 | 13.13 | 18.00 | 9002230032500 | |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9002230032600 | |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9002230033000 | |
| 0.1319 | | 3.35 | 49.00 | 12.98 | 18.00 | 9002230033500 | |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9002230034000 | |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9002230034500 | |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9002230035000 | |
| 0.1398 | | 3.55 | 52.00 | 14.68 | 20.00 | 9002230035500 | |
| 0.1406 | 9/64 | #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9002230035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9002230036000 | |
| 0.1437 | | 3.65 | 52.00 | 14.53 | 20.00 | 9002230036500 | |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9002230036600 | |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9002230037000 | |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9002230037300 | |
| 0.1476 | | 3.75 | 52.00 | 14.38 | 20.00 | 9002230037500 | |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9002230038000 | |
| 0.1516 | | 3.85 | 55.00 | 16.23 | 22.00 | 9002230038500 | |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9002230038600 | |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9002230039000 | |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9002230039100 | |
| 0.1555 | | 3.95 | 55.00 | 16.08 | 22.00 | 9002230039500 | |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9002230039700 | |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9002230039900 | |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9002230040000 | |
| 0.1583 | | 4.02 | 55.00 | 15.97 | 22.00 | 9002230040200 | |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9002230040400 | |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9002230040900 | |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9002230041000 | |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9002230041500 | |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9002230042000 | |
| 0.1661 | #19 | 4.22 | 55.00 | 15.67 | 22.00 | 9002230042200 | |
| 0.1673 | | 4.25 | 55.00 | 15.63 | 22.00 | 9002230042500 | |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9002230043000 | |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9002230043700 | |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9002230043900 | |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9002230044000 | |
| 0.1752 | | 4.45 | 58.00 | 17.33 | 24.00 | 9002230044500 | |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9002230045000 | |
| 0.1791 | | 4.55 | 58.00 | 17.18 | 24.00 | 9002230045500 | |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9002230045700 | |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9002230046000 | |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9002230046200 | |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9002230047000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1870 | | 4.75 | 58.00 | 16.88 | 24.00 | 9002230047500 | |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9002230047600 | |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9002230048000 | |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9002230048500 | |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9002230049000 | |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9002230049200 | |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9002230049800 | |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9002230050000 | |
| 0.1988 | | 5.05 | 62.00 | 18.43 | 26.00 | 9002230050500 | |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9002230050600 | |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9002230051000 | |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9002230051100 | |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9002230051600 | |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9002230051800 | |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9002230052000 | |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9002230052200 | |
| 0.2067 | | 5.25 | 62.00 | 18.13 | 26.00 | 9002230052500 | |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9002230053000 | |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9002230053100 | |
| 0.2106 | | 5.35 | 66.00 | 19.98 | 28.00 | 9002230053500 | |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9002230054000 | |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9002230054100 | |
| 0.2146 | | 5.45 | 66.00 | 19.83 | 28.00 | 9002230054500 | |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9002230055000 | |
| 5.5500 | | 5.55 | 66.00 | 19.68 | 28.00 | 9002230055500 | |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9002230055600 | |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9002230056000 | |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9002230056100 | |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9002230057000 | |
| 0.2264 | | 5.75 | 66.00 | 19.38 | 28.00 | 9002230057500 | |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9002230057900 | |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9002230058000 | |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9002230059000 | |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9002230059400 | |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9002230059500 | |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9002230060000 | |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9002230060400 | |
| 0.2382 | | 6.05 | 70.00 | 21.93 | 31.00 | 9002230060500 | |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9002230061000 | |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9002230061500 | |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9002230062000 | |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9002230062500 | |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9002230063000 | |
| 0.2500 | 1/4 | E | 6.35 | 70.00 | 21.48 | 31.00 | 9002230063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9002230064000 | |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9002230065000 | |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9002230065300 | |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9002230066000 | |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9002230066300 | |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9002230067000 | |
| 0.2657 | 17/64 | H | 6.75 | 74.00 | 23.88 | 34.00 | 9002230067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9002230068000 | |
| 0.2697 | | 6.85 | 74.00 | 23.73 | 34.00 | 9002230068500 | |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9002230069000 | |
| 0.2736 | | 6.95 | 74.00 | 23.58 | 34.00 | 9002230069500 | |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9002230070000 | |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9002230070300 | |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9002230071000 | |
| 0.2811 | 9/32 | K | 7.14 | 74.00 | 23.29 | 34.00 | 9002230071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9002230072000 | |
| 0.2854 | | 7.25 | 74.00 | 23.13 | 34.00 | 9002230072500 | |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9002230073000 | |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9002230073700 | |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9002230074000 | |

Stub Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2933 | | 7.45 | 74.00 | 22.83 | 34.00 | 9002230074500 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9002230074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9002230075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9002230075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9002230076000 |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9002230076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9002230077000 |
| 0.3051 | | 7.75 | 79.00 | 25.38 | 37.00 | 9002230077500 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9002230078000 |
| 0.3091 | | 7.85 | 79.00 | 25.23 | 37.00 | 9002230078500 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9002230079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9002230079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9002230080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9002230080300 |
| 0.3169 | | 8.05 | 79.00 | 24.93 | 37.00 | 9002230080500 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9002230081000 |
| 0.3209 | | 8.15 | 79.00 | 24.78 | 37.00 | 9002230081500 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9002230082000 |
| 0.3248 | | 8.25 | 79.00 | 24.63 | 37.00 | 9002230082500 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9002230083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9002230083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9002230084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9002230084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9002230085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9002230086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9002230086100 |
| 0.3406 | | 8.65 | 84.00 | 27.03 | 40.00 | 9002230086500 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9002230087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9002230087300 |
| 0.3445 | | 8.75 | 84.00 | 26.88 | 40.00 | 9002230087500 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9002230088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9002230088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9002230089000 |
| 0.3524 | | 8.95 | 84.00 | 26.58 | 40.00 | 9002230089500 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9002230090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9002230090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9002230091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9002230091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9002230092000 |
| 0.3642 | | 9.25 | 84.00 | 26.13 | 40.00 | 9002230092500 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9002230093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9002230093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9002230094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9002230095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9002230095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9002230095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9002230096000 |
| 0.3799 | | 9.65 | 89.00 | 28.53 | 43.00 | 9002230096500 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9002230097000 |
| 0.3839 | | 9.75 | 89.00 | 28.38 | 43.00 | 9002230097500 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9002230098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9002230099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9002230099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9002230100000 |
| 0.3957 | | 10.05 | 89.00 | 27.93 | 43.00 | 9002230100500 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9002230100800 |
| 0.3976 | | 10.10 | 89.00 | 27.85 | 43.00 | 9002230101000 |
| 0.3996 | | 10.15 | 89.00 | 27.78 | 43.00 | 9002230101500 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9002230102000 |
| 0.4035 | | 10.25 | 89.00 | 27.63 | 43.00 | 9002230102500 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9002230102600 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9002230103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9002230103200 |
| 0.4094 | | 10.40 | 89.00 | 27.40 | 43.00 | 9002230104000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9002230104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9002230105000 |
| 0.4173 | | 10.60 | 89.00 | 27.10 | 43.00 | 9002230106000 |
| 0.4213 | | 10.70 | 95.00 | 30.95 | 47.00 | 9002230107000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9002230107200 |
| 0.4232 | | 10.75 | 95.00 | 30.88 | 47.00 | 9002230107500 |
| 0.4252 | | 10.80 | 95.00 | 30.80 | 47.00 | 9002230108000 |
| 0.4291 | | 10.90 | 95.00 | 30.65 | 47.00 | 9002230109000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9002230110000 |
| 0.4370 | | 11.10 | 95.00 | 30.35 | 47.00 | 9002230111000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9002230111100 |
| 0.4409 | | 11.20 | 95.00 | 30.20 | 47.00 | 9002230112000 |
| 0.4429 | | 11.25 | 95.00 | 30.13 | 47.00 | 9002230112500 |
| 0.4449 | | 11.30 | 95.00 | 30.05 | 47.00 | 9002230113000 |
| 0.4488 | | 11.40 | 95.00 | 29.90 | 47.00 | 9002230114000 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9002230115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9002230115100 |
| 0.4567 | | 11.60 | 95.00 | 29.60 | 47.00 | 9002230116000 |
| 0.4606 | | 11.70 | 95.00 | 29.45 | 47.00 | 9002230117000 |
| 0.4626 | | 11.75 | 95.00 | 29.38 | 47.00 | 9002230117500 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9002230118000 |
| 0.4685 | | 11.90 | 102.00 | 33.15 | 51.00 | 9002230119000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9002230119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9002230120000 |
| 0.4764 | | 12.10 | 102.00 | 32.85 | 51.00 | 9002230121000 |
| 0.4783 | | 12.15 | 102.00 | 32.78 | 51.00 | 9002230121500 |
| 0.4803 | | 12.20 | 102.00 | 32.70 | 51.00 | 9002230122000 |
| 0.4823 | | 12.25 | 102.00 | 32.63 | 51.00 | 9002230122500 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9002230123000 |
| 0.4882 | | 12.40 | 102.00 | 32.40 | 51.00 | 9002230124000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9002230125000 |
| 0.4961 | | 12.60 | 102.00 | 32.10 | 51.00 | 9002230126000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9002230127000 |
| 0.5020 | | 12.75 | 102.00 | 31.88 | 51.00 | 9002230127500 |
| 0.5039 | | 12.80 | 102.00 | 31.80 | 51.00 | 9002230128000 |
| 0.5079 | | 12.90 | 102.00 | 31.65 | 51.00 | 9002230129000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9002230130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9002230131000 |
| 0.5197 | | 13.20 | 102.00 | 31.20 | 51.00 | 9002230132000 |
| 0.5217 | | 13.25 | 107.00 | 34.13 | 54.00 | 9002230132500 |
| 0.5236 | | 13.30 | 107.00 | 34.05 | 54.00 | 9002230133000 |
| 0.5276 | | 13.40 | 107.00 | 33.90 | 54.00 | 9002230134000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9002230134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9002230135000 |
| 0.5354 | | 13.60 | 107.00 | 33.60 | 54.00 | 9002230136000 |
| 0.5394 | | 13.70 | 107.00 | 33.45 | 54.00 | 9002230137000 |
| 0.5413 | | 13.75 | 107.00 | 33.38 | 54.00 | 9002230137500 |
| 0.5433 | | 13.80 | 107.00 | 33.30 | 54.00 | 9002230138000 |
| 0.5469 | 35/64 | 13.89 | 107.00 | 33.17 | 54.00 | 9002230138900 |
| 0.5472 | | 13.90 | 107.00 | 33.15 | 54.00 | 9002230139000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9002230140000 |
| 0.5551 | | 14.10 | 111.00 | 34.85 | 56.00 | 9002230141000 |
| 0.5591 | | 14.20 | 111.00 | 34.70 | 56.00 | 9002230142000 |
| 0.5610 | | 14.25 | 111.00 | 34.63 | 56.00 | 9002230142500 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9002230142900 |
| 0.5669 | | 14.40 | 111.00 | 34.40 | 56.00 | 9002230144000 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9002230145000 |
| 0.5748 | | 14.60 | 111.00 | 34.10 | 56.00 | 9002230146000 |
| 0.5780 | 37/64 | 14.68 | 111.00 | 33.98 | 56.00 | 9002230146800 |
| 0.5807 | | 14.75 | 111.00 | 33.88 | 56.00 | 9002230147500 |
| 0.5827 | | 14.80 | 111.00 | 33.80 | 56.00 | 9002230148000 |
| 0.5866 | | 14.90 | 111.00 | 33.65 | 56.00 | 9002230149000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9002230150000 |
| 0.5937 | 19/32 | 15.08 | 115.00 | 35.38 | 58.00 | 9002230150800 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.5945 | | 15.10 | 115.00 | 35.35 | 58.00 | 9002230151000 |
| 0.5984 | | 15.20 | 115.00 | 35.20 | 58.00 | 9002230152000 |
| 0.6004 | | 15.25 | 115.00 | 35.13 | 58.00 | 9002230152500 |
| 0.6063 | | 15.40 | 115.00 | 34.90 | 58.00 | 9002230154000 |
| 0.6094 | 39/64 | 15.48 | 115.00 | 34.78 | 58.00 | 9002230154800 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9002230155000 |
| 0.6142 | | 15.60 | 115.00 | 34.60 | 58.00 | 9002230156000 |
| 0.6181 | | 15.70 | 115.00 | 34.45 | 58.00 | 9002230157000 |
| 0.6201 | | 15.75 | 115.00 | 34.38 | 58.00 | 9002230157500 |
| 0.6220 | | 15.80 | 115.00 | 34.30 | 58.00 | 9002230158000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 34.20 | 58.00 | 9002230158700 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9002230160000 |
| 0.6339 | | 16.10 | 119.00 | 35.85 | 60.00 | 9002230161000 |
| 0.6358 | | 16.15 | 119.00 | 35.78 | 60.00 | 9002230161500 |
| 0.6398 | | 16.25 | 119.00 | 35.63 | 60.00 | 9002230162500 |
| 0.6406 | 41/64 | 16.27 | 119.00 | 35.60 | 60.00 | 9002230162700 |
| 0.6417 | | 16.30 | 119.00 | 35.55 | 60.00 | 9002230163000 |
| 0.6496 | | 16.50 | 119.00 | 35.25 | 60.00 | 9002230165000 |
| 0.6563 | 21/32 | 16.67 | 119.00 | 35.00 | 60.00 | 9002230166700 |
| 0.6594 | | 16.75 | 119.00 | 34.88 | 60.00 | 9002230167500 |
| 0.6693 | | 17.00 | 119.00 | 34.50 | 60.00 | 9002230170000 |
| 0.6720 | 43/64 | 17.07 | 123.00 | 36.40 | 62.00 | 9002230170700 |
| 0.6732 | | 17.10 | 123.00 | 36.35 | 62.00 | 9002230171000 |
| 0.6791 | | 17.25 | 123.00 | 36.13 | 62.00 | 9002230172500 |
| 0.6811 | | 17.30 | 123.00 | 36.05 | 62.00 | 9002230173000 |
| 0.6874 | 11/16 | 17.46 | 123.00 | 35.81 | 62.00 | 9002230174600 |
| 0.6890 | | 17.50 | 123.00 | 35.75 | 62.00 | 9002230175000 |
| 0.6929 | | 17.60 | 123.00 | 35.60 | 62.00 | 9002230176000 |
| 0.6988 | | 17.75 | 123.00 | 35.38 | 62.00 | 9002230177500 |
| 0.7031 | 45/64 | 17.86 | 123.00 | 35.21 | 62.00 | 9002230178600 |
| 0.7087 | | 18.00 | 123.00 | 35.00 | 62.00 | 9002230180000 |
| 0.7126 | | 18.10 | 127.00 | 36.85 | 64.00 | 9002230181000 |
| 0.7165 | | 18.20 | 127.00 | 36.70 | 64.00 | 9002230182000 |
| 0.7185 | | 18.25 | 127.00 | 36.63 | 64.00 | 9002230182500 |
| 0.7189 | 23/32 | 18.26 | 127.00 | 36.61 | 64.00 | 9002230182600 |
| 0.7283 | | 18.50 | 127.00 | 36.25 | 64.00 | 9002230185000 |
| 0.7343 | 47/64 | 18.65 | 127.00 | 36.03 | 64.00 | 9002230186500 |
| 0.7382 | | 18.75 | 127.00 | 35.88 | 64.00 | 9002230187500 |
| 0.7480 | | 19.00 | 127.00 | 35.50 | 64.00 | 9002230190000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 37.43 | 66.00 | 9002230190500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.7520 | | 19.10 | 131.00 | 37.35 | 66.00 | 9002230191000 |
| 0.7579 | | 19.25 | 131.00 | 37.13 | 66.00 | 9002230192500 |
| 0.7657 | 49/64 | 19.45 | 131.00 | 36.83 | 66.00 | 9002230194500 |
| 0.7677 | | 19.50 | 131.00 | 36.75 | 66.00 | 9002230195000 |
| 0.7776 | | 19.75 | 131.00 | 36.38 | 66.00 | 9002230197500 |
| 0.7811 | 25/32 | 19.84 | 131.00 | 36.24 | 66.00 | 9002230198400 |
| 0.7874 | | 20.00 | 131.00 | 36.00 | 66.00 | 9002230200000 |
| 0.7913 | | 20.10 | 136.00 | 37.85 | 68.00 | 9002230201000 |
| 0.7969 | 51/64 | 20.24 | 136.00 | 37.64 | 68.00 | 9002230202400 |
| 0.8071 | | 20.50 | 136.00 | 37.25 | 68.00 | 9002230205000 |
| 0.8126 | 13/16 | 20.64 | 136.00 | 37.04 | 68.00 | 9002230206400 |
| 0.8169 | | 20.75 | 136.00 | 36.88 | 68.00 | 9002230207500 |
| 0.8189 | | 20.80 | 136.00 | 36.80 | 68.00 | 9002230208000 |
| 0.8268 | | 21.00 | 136.00 | 36.50 | 68.00 | 9002230210000 |
| 0.8280 | 53/64 | 21.03 | 136.00 | 36.46 | 68.00 | 9002230210300 |
| 0.8366 | | 21.25 | 141.00 | 38.13 | 70.00 | 9002230212500 |
| 0.8437 | 27/32 | 21.43 | 141.00 | 37.86 | 70.00 | 9002230214300 |
| 0.8465 | | 21.50 | 141.00 | 37.75 | 70.00 | 9002230215000 |
| 0.8661 | | 22.00 | 141.00 | 37.00 | 70.00 | 9002230220000 |
| 0.8748 | 7/8 | 22.22 | 141.00 | 36.67 | 70.00 | 9002230222200 |
| 0.8858 | | 22.50 | 146.00 | 38.25 | 72.00 | 9002230225000 |
| 0.8906 | 57/64 | 22.62 | 146.00 | 38.07 | 72.00 | 9002230226200 |
| 0.9055 | | 23.00 | 146.00 | 37.50 | 72.00 | 9002230230000 |
| 0.9063 | 29/32 | 23.02 | 146.00 | 37.47 | 72.00 | 9002230230200 |
| 0.9220 | 59/64 | 23.42 | 146.00 | 36.87 | 72.00 | 9002230234200 |
| 0.9252 | | 23.50 | 146.00 | 36.75 | 72.00 | 9002230235000 |
| 0.9374 | 15/16 | 23.81 | 151.00 | 39.29 | 75.00 | 9002230238100 |
| 0.9449 | | 24.00 | 151.00 | 39.00 | 75.00 | 9002230240000 |
| 0.9532 | 61/64 | 24.21 | 151.00 | 38.69 | 75.00 | 9002230242100 |
| 0.9646 | | 24.50 | 151.00 | 38.25 | 75.00 | 9002230245000 |
| 0.9689 | 31/32 | 24.61 | 151.00 | 38.09 | 75.00 | 9002230246100 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 37.50 | 75.00 | 9002230250000 |
| 1.0000 | 1.0000 | 25.40 | 156.00 | 39.90 | 78.00 | 9002230254000 |
| 1.0311 | 1 1/32 | 26.19 | 156.00 | 38.72 | 78.00 | 9002230261900 |
| 1.0433 | | 26.50 | 156.00 | 38.25 | 78.00 | 9002230265000 |
| 1.1024 | | 28.00 | 162.00 | 39.00 | 81.00 | 9002230280000 |
| 1.1248 | 1 1/8 | 28.57 | 168.00 | 41.15 | 84.00 | 9002230285700 |
| 1.1563 | 1 5/32 | 29.37 | 168.00 | 39.95 | 84.00 | 9002230293700 |
| 1.1811 | | 30.00 | 168.00 | 39.00 | 84.00 | 9002230300000 |
| 1.2500 | 1 1/4 | 31.75 | 180.00 | 42.38 | 90.00 | 9002230317500 |

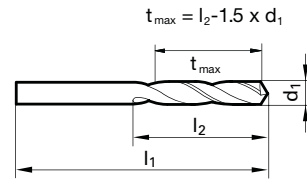


Tool material **HSS**

Surface

Stub Length

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 14.050 • relieved cone • for use in automatic/capstan lathes |
| M | Stainless steel | | |
| K | Cast iron | ● | thin materials |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 500

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0197 | | 0.50 | 20.00 | 2.25 | 3.00 | 9002260005000 |
| 0.0217 | | 0.55 | 21.00 | 2.68 | 3.50 | 9002260005500 |
| 0.0236 | | 0.60 | 21.00 | 2.60 | 3.50 | 9002260006000 |
| 0.0256 | | 0.65 | 22.00 | 3.03 | 4.00 | 9002260006500 |
| 0.0276 | | 0.70 | 23.00 | 3.45 | 4.50 | 9002260007000 |
| 0.0295 | | 0.75 | 23.00 | 3.38 | 4.50 | 9002260007500 |
| 0.0315 | | 0.80 | 24.00 | 3.80 | 5.00 | 9002260008000 |
| 0.0335 | | 0.85 | 24.00 | 3.73 | 5.00 | 9002260008500 |
| 0.0354 | | 0.90 | 25.00 | 4.15 | 5.50 | 9002260009000 |
| 0.0374 | | 0.95 | 25.00 | 4.08 | 5.50 | 9002260009500 |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9002260010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9002260010200 |
| 0.0413 | | 1.05 | 26.00 | 4.43 | 6.00 | 9002260010500 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9002260010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9002260010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9002260011000 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9002260011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9002260011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9002260011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9002260012000 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9002260012500 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9002260013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9002260013200 |
| 0.0524 | | 1.33 | 32.00 | 7.01 | 9.00 | 9002260013300 |
| 0.0531 | | 1.35 | 32.00 | 6.98 | 9.00 | 9002260013500 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9002260014000 |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9002260014500 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9002260015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9002260015100 |
| 0.0610 | | 1.55 | 34.00 | 7.68 | 10.00 | 9002260015500 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9002260015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9002260016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9002260016100 |
| 0.0650 | | 1.65 | 34.00 | 7.53 | 10.00 | 9002260016500 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9002260017000 |
| 0.0689 | | 1.75 | 36.00 | 8.38 | 11.00 | 9002260017500 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9002260017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9002260018000 |
| 0.0713 | | 1.81 | 36.00 | 8.29 | 11.00 | 9002260018100 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9002260018500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9002260019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9002260019300 |
| 0.0768 | | 1.95 | 38.00 | 9.08 | 12.00 | 9002260019500 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9002260019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9002260020000 |
| 0.0807 | | 2.05 | 38.00 | 8.93 | 12.00 | 9002260020500 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9002260020600 |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9002260020800 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9002260021000 |
| 0.0846 | | 2.15 | 40.00 | 9.78 | 13.00 | 9002260021500 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9002260021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9002260022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9002260022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9002260022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9002260023000 |
| 0.0925 | | 2.35 | 40.00 | 9.48 | 13.00 | 9002260023500 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9002260023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9002260023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9002260024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9002260024400 |
| 0.0965 | | 2.45 | 43.00 | 10.33 | 14.00 | 9002260024500 |
| 0.0980 | #40 | 2.49 | 43.00 | 10.27 | 14.00 | 9002260024900 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9002260025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9002260025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9002260025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9002260025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9002260026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9002260026400 |
| 0.1043 | | 2.65 | 43.00 | 10.03 | 14.00 | 9002260026500 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9002260027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9002260027100 |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9002260027500 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9002260027800 |
| 0.1098 | #35 | 2.79 | 46.00 | 11.82 | 16.00 | 9002260027900 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9002260028000 |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9002260028200 |
| 0.1122 | | 2.85 | 46.00 | 11.73 | 16.00 | 9002260028500 |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9002260028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9002260029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9002260029500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9002260030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9002260030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9002260031000 |
| 0.1240 | | 3.15 | 49.00 | 13.28 | 18.00 | 9002260031500 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9002260031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9002260032000 |
| 0.1272 | | 3.23 | 49.00 | 13.16 | 18.00 | 9002260032300 |
| 0.1280 | | 3.25 | 49.00 | 13.13 | 18.00 | 9002260032500 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9002260032600 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9002260033000 |
| 0.1319 | | 3.35 | 49.00 | 12.98 | 18.00 | 9002260033500 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9002260034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9002260034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9002260035000 |
| 0.1398 | | 3.55 | 52.00 | 14.68 | 20.00 | 9002260035500 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9002260036000 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9002260037000 |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9002260037300 |
| 0.1476 | | 3.75 | 52.00 | 14.38 | 20.00 | 9002260037500 |
| 0.1484 | | 3.77 | 55.00 | 16.35 | 22.00 | 9002260037700 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9002260038000 |
| 0.1512 | | 3.84 | 55.00 | 16.24 | 22.00 | 9002260038400 |
| 0.1516 | | 3.85 | 55.00 | 16.23 | 22.00 | 9002260038500 |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9002260038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9002260039000 |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9002260039100 |
| 0.1555 | | 3.95 | 55.00 | 16.08 | 22.00 | 9002260039500 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9002260039700 |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9002260039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9002260040000 |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9002260040400 |
| 0.1594 | | 4.05 | 55.00 | 15.93 | 22.00 | 9002260040500 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9002260041000 |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9002260041500 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9002260042000 |
| 0.1661 | #19 | 4.22 | 55.00 | 15.67 | 22.00 | 9002260042200 |
| 0.1673 | | 4.25 | 55.00 | 15.63 | 22.00 | 9002260042500 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9002260043000 |
| 0.1713 | | 4.35 | 58.00 | 17.48 | 24.00 | 9002260043500 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9002260043700 |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9002260043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9002260044000 |
| 0.1752 | | 4.45 | 58.00 | 17.33 | 24.00 | 9002260044500 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9002260045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9002260045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9002260046000 |
| 0.1810 | | 4.62 | 58.00 | 17.07 | 24.00 | 9002260046200 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9002260047000 |
| 0.1870 | | 4.75 | 58.00 | 16.88 | 24.00 | 9002260047500 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9002260047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9002260048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9002260048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9002260049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9002260049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9002260049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9002260050000 |
| 0.1988 | | 5.05 | 62.00 | 18.43 | 26.00 | 9002260050500 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9002260051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9002260051100 |
| 0.2028 | | 5.15 | 62.00 | 18.28 | 26.00 | 9002260051500 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9002260051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9002260051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9002260052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9002260052200 |
| 0.2067 | | 5.25 | 62.00 | 18.13 | 26.00 | 9002260052500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9002260053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9002260053100 |
| 0.2106 | | 5.35 | 66.00 | 19.98 | 28.00 | 9002260053500 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9002260054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9002260054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9002260055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9002260055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9002260056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9002260056100 |
| 0.2224 | | 5.65 | 66.00 | 19.53 | 28.00 | 9002260056500 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9002260057000 |
| 0.2264 | | 5.75 | 66.00 | 19.38 | 28.00 | 9002260057500 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9002260057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9002260058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9002260059000 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9002260059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9002260060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9002260060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9002260061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9002260061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9002260062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9002260062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9002260063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9002260063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9002260064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9002260065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9002260065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9002260066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9002260066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9002260067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9002260067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9002260068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9002260069000 |
| 0.2736 | | 6.95 | 74.00 | 23.58 | 34.00 | 9002260069500 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9002260070000 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9002260071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9002260071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9002260072000 |
| 0.2854 | | 7.25 | 74.00 | 23.13 | 34.00 | 9002260072500 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9002260073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9002260073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9002260074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9002260074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9002260075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9002260075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9002260076000 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9002260077000 |
| 0.3051 | | 7.75 | 79.00 | 25.38 | 37.00 | 9002260077500 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9002260078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9002260079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9002260079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9002260080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9002260080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9002260081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9002260082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9002260083000 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9002260084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9002260084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9002260085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9002260086000 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9002260087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9002260087300 |
| 0.3445 | | 8.75 | 84.00 | 26.88 | 40.00 | 9002260087500 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9002260088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9002260088400 |

Stub Length

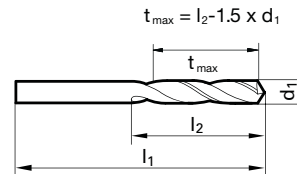
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9002260089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9002260090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9002260090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9002260091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9002260091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9002260092000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9002260093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9002260094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9002260095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9002260095200 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9002260096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9002260097000 |
| 0.3839 | | 9.75 | 89.00 | 28.38 | 43.00 | 9002260097500 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9002260098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9002260099000 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9002260100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9002260100800 |
| 0.3976 | | 10.10 | 89.00 | 27.85 | 43.00 | 9002260101000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9002260102000 |
| 0.4035 | | 10.25 | 89.00 | 27.63 | 43.00 | 9002260102500 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9002260103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9002260103200 |
| 0.4094 | | 10.40 | 89.00 | 27.40 | 43.00 | 9002260104000 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9002260104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9002260105000 |
| 0.4173 | | 10.60 | 89.00 | 27.10 | 43.00 | 9002260106000 |
| 0.4252 | | 10.80 | 95.00 | 30.80 | 47.00 | 9002260108000 |
| 0.4291 | | 10.90 | 95.00 | 30.65 | 47.00 | 9002260109000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9002260110000 |
| 0.4370 | | 11.10 | 95.00 | 30.35 | 47.00 | 9002260111000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9002260111100 |
| 0.4409 | | 11.20 | 95.00 | 30.20 | 47.00 | 9002260112000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4429 | | 11.25 | 95.00 | 30.13 | 47.00 | 9002260112500 |
| 0.4449 | | 11.30 | 95.00 | 30.05 | 47.00 | 9002260113000 |
| 0.4488 | | 11.40 | 95.00 | 29.90 | 47.00 | 9002260114000 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9002260115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9002260115100 |
| 0.4606 | | 11.70 | 95.00 | 29.45 | 47.00 | 9002260117000 |
| 0.4626 | | 11.75 | 95.00 | 29.38 | 47.00 | 9002260117500 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9002260118000 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9002260120000 |
| 0.4764 | | 12.10 | 102.00 | 32.85 | 51.00 | 9002260121000 |
| 0.4803 | | 12.20 | 102.00 | 32.70 | 51.00 | 9002260122000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9002260123000 |
| 0.4882 | | 12.40 | 102.00 | 32.40 | 51.00 | 9002260124000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9002260125000 |
| 0.4961 | | 12.60 | 102.00 | 32.10 | 51.00 | 9002260126000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9002260127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9002260130000 |
| 0.5354 | | 13.60 | 107.00 | 33.60 | 54.00 | 9002260136000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9002260150000 |
| 0.5984 | | 15.20 | 115.00 | 35.20 | 58.00 | 9002260152000 |
| 0.6181 | | 15.70 | 115.00 | 34.45 | 58.00 | 9002260157000 |
| 0.6201 | | 15.75 | 115.00 | 34.38 | 58.00 | 9002260157500 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 34.20 | 58.00 | 9002260158700 |
| 0.6496 | | 16.50 | 119.00 | 35.25 | 60.00 | 9002260165000 |
| 0.6693 | | 17.00 | 119.00 | 34.50 | 60.00 | 9002260170000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 37.43 | 66.00 | 9002260190500 |
| 0.7811 | 25/32 | 19.84 | 131.00 | 36.24 | 66.00 | 9002260198400 |
| 1.0000 | 1.0000 | 25.40 | 156.00 | 39.90 | 78.00 | 9002260254000 |
| 1.0039 | | 25.50 | 156.00 | 39.75 | 78.00 | 9002260255000 |
| 1.2008 | | 30.50 | 174.00 | 41.25 | 87.00 | 9002260305000 |
| 1.7500 | 1 3/4 | 44.45 | 214.00 | 41.33 | 108.00 | 9002260444500 |



Tool material **HSS**
Surface **S**

- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 1.000$ • relieved cone • also for hand drilling machines • for use in automatic/capstan lathes |
| M | Stainless steel | | |
| K | Cast iron | ● | thin materials |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Stub Length

Speeds and feeds information on pg. 535

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0197 | | 0.50 | 20.00 | 2.25 | 3.00 | 9006530005000 |
| 0.0236 | | 0.60 | 21.00 | 2.60 | 3.50 | 9006530006000 |
| 0.0276 | | 0.70 | 23.00 | 3.45 | 4.50 | 9006530007000 |
| 0.0295 | | 0.75 | 23.00 | 3.38 | 4.50 | 9006530007500 |
| 0.0315 | | 0.80 | 24.00 | 3.80 | 5.00 | 9006530008000 |
| 0.0354 | | 0.90 | 25.00 | 4.15 | 5.50 | 9006530009000 |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9006530010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9006530010200 |
| 0.0413 | | 1.05 | 26.00 | 4.43 | 6.00 | 9006530010500 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9006530010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9006530010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9006530011000 |
| 0.0437 | | 1.11 | 28.00 | 5.34 | 7.00 | 9006530011100 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9006530011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9006530011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9006530011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9006530012000 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9006530012500 |
| 0.0504 | | 1.28 | 30.00 | 6.08 | 8.00 | 9006530012800 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9006530013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9006530013200 |
| 0.0531 | | 1.35 | 32.00 | 6.98 | 9.00 | 9006530013500 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9006530014000 |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9006530014500 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9006530015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9006530015100 |
| 0.0610 | | 1.55 | 34.00 | 7.68 | 10.00 | 9006530015500 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9006530015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9006530016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9006530016100 |
| 0.0650 | | 1.65 | 34.00 | 7.53 | 10.00 | 9006530016500 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9006530017000 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9006530017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9006530018000 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9006530018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9006530019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9006530019300 |
| 0.0768 | | 1.95 | 38.00 | 9.08 | 12.00 | 9006530019500 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9006530019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9006530019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9006530020000 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9006530020600 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9006530020800 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9006530021000 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9006530021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9006530022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9006530022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9006530022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9006530023000 |
| 0.0925 | | 2.35 | 40.00 | 9.48 | 13.00 | 9006530023500 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9006530023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9006530023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9006530024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9006530024400 |
| 0.0965 | | 2.45 | 43.00 | 10.33 | 14.00 | 9006530024500 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9006530025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9006530025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9006530025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9006530025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9006530026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9006530026400 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9006530027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9006530027100 |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9006530027500 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9006530027800 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9006530028000 |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9006530028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9006530029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9006530029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9006530030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9006530030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9006530031000 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9006530031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9006530032000 |
| 0.1280 | | 3.25 | 49.00 | 13.13 | 18.00 | 9006530032500 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9006530032600 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9006530033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9006530034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9006530034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9006530035000 |
| 0.1406 | 9/64 | 3.57 | 52.00 | 14.65 | 20.00 | 9006530035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9006530036000 |
| 0.1437 | | 3.65 | 52.00 | 14.53 | 20.00 | 9006530036500 |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9006530036600 |

Stub Length

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|---------------|
| inch | wire/ltr | mm | | | | |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9006530037000 |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9006530037300 |
| 0.1476 | | 3.75 | 52.00 | 14.38 | 20.00 | 9006530037500 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9006530038000 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9006530039000 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9006530039700 |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9006530039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9006530040000 |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9006530040400 |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9006530040900 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9006530041000 |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9006530041500 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9006530042000 |
| 0.1673 | | 4.25 | 55.00 | 15.63 | 22.00 | 9006530042500 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9006530043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9006530043700 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9006530044000 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9006530045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9006530045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9006530046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9006530046200 |
| 0.1831 | | 4.65 | 58.00 | 17.03 | 24.00 | 9006530046500 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9006530047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9006530047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9006530048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9006530048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9006530049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9006530049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9006530049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9006530050000 |
| 0.1988 | | 5.05 | 62.00 | 18.43 | 26.00 | 9006530050500 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9006530050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9006530051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9006530051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9006530051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9006530051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9006530052000 |
| 0.2067 | | 5.25 | 62.00 | 18.13 | 26.00 | 9006530052500 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9006530053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9006530053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9006530054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9006530054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9006530055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9006530055600 |
| 0.2197 | | 5.58 | 66.00 | 19.63 | 28.00 | 9006530055800 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9006530056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9006530056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9006530057000 |
| 0.2264 | | 5.75 | 66.00 | 19.38 | 28.00 | 9006530057500 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9006530058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9006530059000 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9006530059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9006530060000 |
| 0.2382 | | 6.05 | 70.00 | 21.93 | 31.00 | 9006530060500 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9006530061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9006530061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9006530062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9006530062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9006530063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9006530063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9006530064000 |
| 0.2539 | | 6.45 | 70.00 | 21.33 | 31.00 | 9006530064500 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9006530065000 |
| 0.2571 | F | 6.53 | 70.00 | 21.21 | 31.00 | 9006530065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9006530066000 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9006530067000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|----|----------|------------------------|----------|-------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.2657 | 17/64 | H | 6.75 | 74.00 | 23.88 | 34.00 | 9006530067500 |
| 0.2677 | | | 6.80 | 74.00 | 23.80 | 34.00 | 9006530068000 |
| 0.2717 | | I | 6.90 | 74.00 | 23.65 | 34.00 | 9006530069000 |
| 0.2756 | | | 7.00 | 74.00 | 23.50 | 34.00 | 9006530070000 |
| 0.2795 | | | 7.10 | 74.00 | 23.35 | 34.00 | 9006530071000 |
| 0.2811 | 9/32 | K | 7.14 | 74.00 | 23.29 | 34.00 | 9006530071400 |
| 0.2835 | | | 7.20 | 74.00 | 23.20 | 34.00 | 9006530072000 |
| 0.2854 | | | 7.25 | 74.00 | 23.13 | 34.00 | 9006530072500 |
| 0.2874 | | | 7.30 | 74.00 | 23.05 | 34.00 | 9006530073000 |
| 0.2902 | | L | 7.37 | 74.00 | 22.95 | 34.00 | 9006530073700 |
| 0.2913 | | | 7.40 | 74.00 | 22.90 | 34.00 | 9006530074000 |
| 0.2953 | | | 7.50 | 74.00 | 22.75 | 34.00 | 9006530075000 |
| 0.2969 | 19/64 | | 7.54 | 79.00 | 25.69 | 37.00 | 9006530075400 |
| 0.2992 | | | 7.60 | 79.00 | 25.60 | 37.00 | 9006530076000 |
| 0.3020 | | N | 7.67 | 79.00 | 25.50 | 37.00 | 9006530076700 |
| 0.3031 | | | 7.70 | 79.00 | 25.45 | 37.00 | 9006530077000 |
| 0.3071 | | | 7.80 | 79.00 | 25.30 | 37.00 | 9006530078000 |
| 0.3110 | | | 7.90 | 79.00 | 25.15 | 37.00 | 9006530079000 |
| 0.3126 | 5/16 | | 7.94 | 79.00 | 25.09 | 37.00 | 9006530079400 |
| 0.3150 | | | 8.00 | 79.00 | 25.00 | 37.00 | 9006530080000 |
| 0.3161 | | O | 8.03 | 79.00 | 24.96 | 37.00 | 9006530080300 |
| 0.3189 | | | 8.10 | 79.00 | 24.85 | 37.00 | 9006530081000 |
| 0.3228 | | P | 8.20 | 79.00 | 24.70 | 37.00 | 9006530082000 |
| 0.3248 | | | 8.25 | 79.00 | 24.63 | 37.00 | 9006530082500 |
| 0.3268 | | | 8.30 | 79.00 | 24.55 | 37.00 | 9006530083000 |
| 0.3280 | 21/64 | | 8.33 | 79.00 | 24.51 | 37.00 | 9006530083300 |
| 0.3307 | | | 8.40 | 79.00 | 24.40 | 37.00 | 9006530084000 |
| 0.3319 | | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9006530084300 |
| 0.3346 | | | 8.50 | 79.00 | 24.25 | 37.00 | 9006530085000 |
| 0.3366 | | | 8.55 | 84.00 | 27.18 | 40.00 | 9006530085500 |
| 0.3386 | | | 8.60 | 84.00 | 27.10 | 40.00 | 9006530086000 |
| 0.3390 | | R | 8.61 | 84.00 | 27.09 | 40.00 | 9006530086100 |
| 0.3425 | | | 8.70 | 84.00 | 26.95 | 40.00 | 9006530087000 |
| 0.3437 | 11/32 | | 8.73 | 84.00 | 26.91 | 40.00 | 9006530087300 |
| 0.3445 | | | 8.75 | 84.00 | 26.88 | 40.00 | 9006530087500 |
| 0.3465 | | | 8.80 | 84.00 | 26.80 | 40.00 | 9006530088000 |
| 0.3504 | | | 8.90 | 84.00 | 26.65 | 40.00 | 9006530089000 |
| 0.3543 | | | 9.00 | 84.00 | 26.50 | 40.00 | 9006530090000 |
| 0.3579 | | T | 9.09 | 84.00 | 26.37 | 40.00 | 9006530090900 |
| 0.3594 | 23/64 | | 9.13 | 84.00 | 26.31 | 40.00 | 9006530091300 |
| 0.3622 | | | 9.20 | 84.00 | 26.20 | 40.00 | 9006530092000 |
| 0.3642 | | | 9.25 | 84.00 | 26.13 | 40.00 | 9006530092500 |
| 0.3661 | | | 9.30 | 84.00 | 26.05 | 40.00 | 9006530093000 |
| 0.3701 | | | 9.40 | 84.00 | 25.90 | 40.00 | 9006530094000 |
| 0.3740 | | | 9.50 | 84.00 | 25.75 | 40.00 | 9006530095000 |
| 0.3748 | 3/8 | | 9.52 | 89.00 | 28.72 | 43.00 | 9006530095200 |
| 0.3772 | | V | 9.58 | 89.00 | 28.63 | 43.00 | 9006530095800 |
| 0.3819 | | | 9.70 | 89.00 | 28.45 | 43.00 | 9006530097000 |
| 0.3858 | | W | 9.80 | 89.00 | 28.30 | 43.00 | 9006530098000 |
| 0.3898 | | | 9.90 | 89.00 | 28.15 | 43.00 | 9006530099000 |
| 0.3906 | 25/64 | | 9.92 | 89.00 | 28.12 | 43.00 | 9006530099200 |
| 0.3937 | | | 10.00 | 89.00 | 28.00 | 43.00 | 9006530100000 |
| 0.3976 | | | 10.10 | 89.00 | 27.85 | 43.00 | 9006530101000 |
| 0.4016 | | | 10.20 | 89.00 | 27.70 | 43.00 | 9006530102000 |
| 0.4055 | | | 10.30 | 89.00 | 27.55 | 43.00 | 9006530103000 |
| 0.4063 | 13/32 | | 10.32 | 89.00 | 27.52 | 43.00 | 9006530103200 |
| 0.4130 | | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9006530104900 |
| 0.4134 | | | 10.50 | 89.00 | 27.25 | 43.00 | 9006530105000 |
| 0.4173 | | | 10.60 | 89.00 | 27.10 | 43.00 | 9006530106000 |
| 0.4220 | 27/64 | | 10.72 | 95.00 | 30.92 | 47.00 | 9006530107200 |
| 0.4232 | | | 10.75 | 95.00 | 30.88 | 47.00 | 9006530107500 |
| 0.4252 | | | 10.80 | 95.00 | 30.80 | 47.00 | 9006530108000 |
| 0.4331 | | | 11.00 | 95.00 | 30.50 | 47.00 | 9006530110000 |
| 0.4374 | 7/16 | | 11.11 | 95.00 | 30.34 | 47.00 | 9006530111100 |
| 0.4409 | | | 11.20 | 95.00 | 30.20 | 47.00 | 9006530112000 |
| 0.4449 | | | 11.30 | 95.00 | 30.05 | 47.00 | 9006530113000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4488 | | 11.40 | 95.00 | 29.90 | 47.00 | 9006530114000 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9006530115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9006530115100 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9006530118000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9006530119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9006530120000 |
| 0.4764 | | 12.10 | 102.00 | 32.85 | 51.00 | 9006530121000 |
| 0.4803 | | 12.20 | 102.00 | 32.70 | 51.00 | 9006530122000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9006530123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9006530125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9006530127000 |
| 0.5039 | | 12.80 | 102.00 | 31.80 | 51.00 | 9006530128000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9006530130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9006530131000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9006530134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9006530135000 |
| 0.5433 | | 13.80 | 107.00 | 33.30 | 54.00 | 9006530138000 |
| 0.5469 | 35/64 | 13.89 | 107.00 | 33.17 | 54.00 | 9006530138900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9006530140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9006530142900 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9006530145000 |
| 0.5827 | | 14.80 | 111.00 | 33.80 | 56.00 | 9006530148000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9006530150000 |
| 0.5937 | 19/32 | 15.08 | 115.00 | 35.38 | 58.00 | 9006530150800 |
| 0.6024 | | 15.30 | 115.00 | 35.05 | 58.00 | 9006530153000 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9006530155000 |
| 0.6220 | | 15.80 | 115.00 | 34.30 | 58.00 | 9006530158000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 34.20 | 58.00 | 9006530158700 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9006530160000 |
| 0.6406 | 41/64 | 16.27 | 119.00 | 35.60 | 60.00 | 9006530162700 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.6496 | | 16.50 | 119.00 | 35.25 | 60.00 | 9006530165000 |
| 0.6563 | 21/32 | 16.67 | 119.00 | 35.00 | 60.00 | 9006530166700 |
| 0.6693 | | 17.00 | 119.00 | 34.50 | 60.00 | 9006530170000 |
| 0.6874 | 11/16 | 17.46 | 123.00 | 35.81 | 62.00 | 9006530174600 |
| 0.6890 | | 17.50 | 123.00 | 35.75 | 62.00 | 9006530175000 |
| 0.7031 | 45/64 | 17.86 | 123.00 | 35.21 | 62.00 | 9006530178600 |
| 0.7087 | | 18.00 | 123.00 | 35.00 | 62.00 | 9006530180000 |
| 0.7185 | | 18.25 | 127.00 | 36.63 | 64.00 | 9006530182500 |
| 0.7189 | 23/32 | 18.26 | 127.00 | 36.61 | 64.00 | 9006530182600 |
| 0.7283 | | 18.50 | 127.00 | 36.25 | 64.00 | 9006530185000 |
| 0.7343 | 47/64 | 18.65 | 127.00 | 36.03 | 64.00 | 9006530186500 |
| 0.7480 | | 19.00 | 127.00 | 35.50 | 64.00 | 9006530190000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 37.43 | 66.00 | 9006530190500 |
| 0.7677 | | 19.50 | 131.00 | 36.75 | 66.00 | 9006530195000 |
| 0.7874 | | 20.00 | 131.00 | 36.00 | 66.00 | 9006530200000 |
| 0.8071 | | 20.50 | 136.00 | 37.25 | 68.00 | 9006530205000 |
| 0.8126 | 13/16 | 20.64 | 136.00 | 37.04 | 68.00 | 9006530206400 |
| 0.8268 | | 21.00 | 136.00 | 36.50 | 68.00 | 9006530210000 |
| 0.8465 | | 21.50 | 141.00 | 37.75 | 70.00 | 9006530215000 |
| 0.8661 | | 22.00 | 141.00 | 37.00 | 70.00 | 9006530220000 |
| 0.8858 | | 22.50 | 146.00 | 38.25 | 72.00 | 9006530225000 |
| 0.8906 | 57/64 | 22.62 | 146.00 | 38.07 | 72.00 | 9006530226200 |
| 0.9055 | | 23.00 | 146.00 | 37.50 | 72.00 | 9006530230000 |
| 0.9220 | 59/64 | 23.42 | 146.00 | 36.87 | 72.00 | 9006530234200 |
| 0.9449 | | 24.00 | 151.00 | 39.00 | 75.00 | 9006530240000 |
| 0.9646 | | 24.50 | 151.00 | 38.25 | 75.00 | 9006530245000 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 37.50 | 75.00 | 9006530250000 |
| 1.0000 | 1.0000 | 25.40 | 156.00 | 39.90 | 78.00 | 9006530254000 |
| 1.1220 | | 28.50 | 168.00 | 41.25 | 84.00 | 9006530285000 |

Stub Length

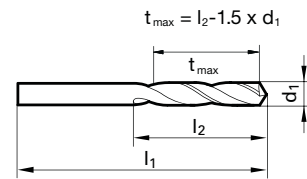


Tool material **HSS**
Surface

Stub Length

| | | |
|----------|-----------------|--|
| P | Steel | web thinning ≥ Ø 14.500 • relieved cone |
| M | Stainless steel | |
| K | Cast iron | hard and crumbly materials • brass, magnesium alloys • bronze, phosphor bronze • slate, mica, pertinax |
| N | Aluminum ● | |
| S | Titanium alloys | |
| H | Hardened steel | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 499

Shank diameter = cut diameter

| Diameter (d ₁) | | | d ₂ h ₆ | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------------------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0354 | | 0.90 | 0.90 | 25.00 | 4.15 | 5.50 | 900224009000 |
| 0.0394 | | 1.00 | 1.00 | 26.00 | 4.50 | 6.00 | 9002240010000 |
| 0.0433 | | 1.10 | 1.10 | 28.00 | 5.35 | 7.00 | 9002240011000 |
| 0.0472 | | 1.20 | 1.20 | 30.00 | 6.20 | 8.00 | 9002240012000 |
| 0.0512 | | 1.30 | 1.30 | 30.00 | 6.05 | 8.00 | 9002240013000 |
| 0.0551 | #54 | 1.40 | 1.40 | 32.00 | 6.90 | 9.00 | 9002240014000 |
| 0.0591 | | 1.50 | 1.50 | 32.00 | 6.75 | 9.00 | 9002240015000 |
| 0.0610 | | 1.55 | 1.55 | 34.00 | 7.68 | 10.00 | 9002240015500 |
| 0.0626 | 1/16 | 1.59 | 1.59 | 34.00 | 7.62 | 10.00 | 9002240015900 |
| 0.0630 | | 1.60 | 1.60 | 34.00 | 7.60 | 10.00 | 9002240016000 |
| 0.0669 | #51 | 1.70 | 1.70 | 34.00 | 7.45 | 10.00 | 9002240017000 |
| 0.0701 | #50 | 1.78 | 1.78 | 36.00 | 8.33 | 11.00 | 9002240017800 |
| 0.0709 | | 1.80 | 1.80 | 36.00 | 8.30 | 11.00 | 9002240018000 |
| 0.0748 | | 1.90 | 1.90 | 36.00 | 8.15 | 11.00 | 9002240019000 |
| 0.0780 | 5/64 | 1.98 | 1.98 | 38.00 | 9.03 | 12.00 | 9002240019800 |
| 0.0787 | | 2.00 | 2.00 | 38.00 | 9.00 | 12.00 | 9002240020000 |
| 0.0827 | | 2.10 | 2.10 | 38.00 | 8.85 | 12.00 | 9002240021000 |
| 0.0866 | | 2.20 | 2.20 | 40.00 | 9.70 | 13.00 | 9002240022000 |
| 0.0906 | | 2.30 | 2.30 | 40.00 | 9.55 | 13.00 | 9002240023000 |
| 0.0937 | 3/32 | 2.38 | 2.38 | 43.00 | 10.43 | 14.00 | 9002240023800 |
| 0.0945 | | 2.40 | 2.40 | 43.00 | 10.40 | 14.00 | 9002240024000 |
| 0.0965 | | 2.45 | 2.45 | 43.00 | 10.33 | 14.00 | 9002240024500 |
| 0.0984 | | 2.50 | 2.50 | 43.00 | 10.25 | 14.00 | 9002240025000 |
| 0.1004 | | 2.55 | 2.55 | 43.00 | 10.18 | 14.00 | 9002240025500 |
| 0.1024 | | 2.60 | 2.60 | 43.00 | 10.10 | 14.00 | 9002240026000 |
| 0.1043 | | 2.65 | 2.65 | 43.00 | 10.03 | 14.00 | 9002240026500 |
| 0.1063 | | 2.70 | 2.70 | 46.00 | 11.95 | 16.00 | 9002240027000 |
| 0.1094 | 7/64 | 2.78 | 2.78 | 46.00 | 11.83 | 16.00 | 9002240027800 |
| 0.1102 | | 2.80 | 2.80 | 46.00 | 11.80 | 16.00 | 9002240028000 |
| 0.1142 | | 2.90 | 2.90 | 46.00 | 11.65 | 16.00 | 9002240029000 |
| 0.1161 | #32 | 2.95 | 2.95 | 46.00 | 11.58 | 16.00 | 9002240029500 |
| 0.1181 | | 3.00 | 3.00 | 46.00 | 11.50 | 16.00 | 9002240030000 |
| 0.1220 | | 3.10 | 3.10 | 49.00 | 13.35 | 18.00 | 9002240031000 |
| 0.1248 | 1/8 | 3.17 | 3.17 | 49.00 | 13.25 | 18.00 | 9002240031700 |
| 0.1260 | | 3.20 | 3.20 | 49.00 | 13.20 | 18.00 | 9002240032000 |
| 0.1299 | | 3.30 | 3.30 | 49.00 | 13.05 | 18.00 | 9002240033000 |
| 0.1319 | | 3.35 | 3.35 | 49.00 | 12.98 | 18.00 | 9002240033500 |
| 0.1339 | | 3.40 | 3.40 | 52.00 | 14.90 | 20.00 | 9002240034000 |
| 0.1378 | | 3.50 | 3.50 | 52.00 | 14.75 | 20.00 | 9002240035000 |
| 0.1406 | 9/64 #28 | 3.57 | 3.57 | 52.00 | 14.65 | 20.00 | 9002240035700 |

| Diameter (d ₁) | | | d ₂ h ₆ | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------------------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1417 | | 3.60 | 3.60 | 52.00 | 14.60 | 20.00 | 9002240036000 |
| 0.1457 | | 3.70 | 3.70 | 52.00 | 14.45 | 20.00 | 9002240037000 |
| 0.1496 | #25 | 3.80 | 3.80 | 55.00 | 16.30 | 22.00 | 9002240038000 |
| 0.1516 | | 3.85 | 3.85 | 55.00 | 16.23 | 22.00 | 9002240038500 |
| 0.1535 | | 3.90 | 3.90 | 55.00 | 16.15 | 22.00 | 9002240039000 |
| 0.1563 | 5/32 | 3.97 | 3.97 | 55.00 | 16.05 | 22.00 | 9002240039700 |
| 0.1575 | | 4.00 | 4.00 | 55.00 | 16.00 | 22.00 | 9002240040000 |
| 0.1614 | | 4.10 | 4.10 | 55.00 | 15.85 | 22.00 | 9002240041000 |
| 0.1654 | | 4.20 | 4.20 | 55.00 | 15.70 | 22.00 | 9002240042000 |
| 0.1693 | #18 | 4.30 | 4.30 | 58.00 | 17.55 | 24.00 | 9002240043000 |
| 0.1720 | 11/64 | 4.37 | 4.37 | 58.00 | 17.45 | 24.00 | 9002240043700 |
| 0.1732 | | 4.40 | 4.40 | 58.00 | 17.40 | 24.00 | 9002240044000 |
| 0.1772 | #16 | 4.50 | 4.50 | 58.00 | 17.25 | 24.00 | 9002240045000 |
| 0.1811 | | 4.60 | 4.60 | 58.00 | 17.10 | 24.00 | 9002240046000 |
| 0.1850 | #13 | 4.70 | 4.70 | 58.00 | 16.95 | 24.00 | 9002240047000 |
| 0.1874 | 3/16 | 4.76 | 4.76 | 62.00 | 18.86 | 26.00 | 9002240047600 |
| 0.1890 | #12 | 4.80 | 4.80 | 62.00 | 18.80 | 26.00 | 9002240048000 |
| 0.1929 | | 4.90 | 4.90 | 62.00 | 18.65 | 26.00 | 9002240049000 |
| 0.1969 | | 5.00 | 5.00 | 62.00 | 18.50 | 26.00 | 9002240050000 |
| 0.2008 | | 5.10 | 5.10 | 62.00 | 18.35 | 26.00 | 9002240051000 |
| 0.2031 | 13/64 | 5.16 | 5.16 | 62.00 | 18.26 | 26.00 | 9002240051600 |
| 0.2047 | | 5.20 | 5.20 | 62.00 | 18.20 | 26.00 | 9002240052000 |
| 0.2087 | | 5.30 | 5.30 | 62.00 | 18.05 | 26.00 | 9002240053000 |
| 0.2126 | | 5.40 | 5.40 | 66.00 | 19.90 | 28.00 | 9002240054000 |
| 0.2165 | | 5.50 | 5.50 | 66.00 | 19.75 | 28.00 | 9002240055000 |
| 0.2189 | 7/32 | 5.56 | 5.56 | 66.00 | 19.66 | 28.00 | 9002240055600 |
| 0.2205 | | 5.60 | 5.60 | 66.00 | 19.60 | 28.00 | 9002240056000 |
| 0.2244 | | 5.70 | 5.70 | 66.00 | 19.45 | 28.00 | 9002240057000 |
| 0.2283 | | 5.80 | 5.80 | 66.00 | 19.30 | 28.00 | 9002240058000 |
| 0.2323 | | 5.90 | 5.90 | 66.00 | 19.15 | 28.00 | 9002240059000 |
| 0.2343 | 15/64 | 5.95 | 5.95 | 66.00 | 19.08 | 28.00 | 9002240059500 |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9002240060000 |
| 0.2441 | | 6.20 | 6.20 | 70.00 | 21.70 | 31.00 | 9002240062000 |
| 0.2480 | | 6.30 | 6.30 | 70.00 | 21.55 | 31.00 | 9002240063000 |
| 0.2500 | 1/4 E | 6.35 | 6.35 | 70.00 | 21.48 | 31.00 | 9002240063500 |
| 0.2520 | | 6.40 | 6.40 | 70.00 | 21.40 | 31.00 | 9002240064000 |
| 0.2559 | | 6.50 | 6.50 | 70.00 | 21.25 | 31.00 | 9002240065000 |
| 0.2598 | | 6.60 | 6.60 | 70.00 | 21.10 | 31.00 | 9002240066000 |
| 0.2657 | 17/64 H | 6.75 | 6.75 | 74.00 | 23.88 | 34.00 | 9002240067500 |
| 0.2677 | | 6.80 | 6.80 | 74.00 | 23.80 | 34.00 | 9002240068000 |

| Diameter (d ₁) | | | d ₂ h ₆ | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|--------|-------------------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2756 | | 7.00 | 7.00 | 74.00 | 23.50 | 34.00 | 9002240070000 |
| 0.2811 | 9/32 | K 7.14 | 7.14 | 74.00 | 23.29 | 34.00 | 9002240071400 |
| 0.2854 | | 7.25 | 7.25 | 74.00 | 23.13 | 34.00 | 9002240072500 |
| 0.2953 | | 7.50 | 7.50 | 74.00 | 22.75 | 34.00 | 9002240075000 |
| 0.3126 | 5/16 | 7.94 | 7.94 | 79.00 | 25.09 | 37.00 | 9002240079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 25.00 | 37.00 | 9002240080000 |
| 0.3161 | | 0 8.03 | 8.03 | 79.00 | 24.96 | 37.00 | 9002240080300 |
| 0.3189 | | 8.10 | 8.10 | 79.00 | 24.85 | 37.00 | 9002240081000 |
| 0.3280 | 21/64 | 8.33 | 8.33 | 79.00 | 24.51 | 37.00 | 9002240083300 |
| 0.3346 | | 8.50 | 8.50 | 79.00 | 24.25 | 37.00 | 9002240085000 |
| 0.3543 | | 9.00 | 9.00 | 84.00 | 26.50 | 40.00 | 9002240090000 |
| 0.3740 | | 9.50 | 9.50 | 84.00 | 25.75 | 40.00 | 9002240095000 |
| 0.3748 | 3/8 | 9.52 | 9.52 | 89.00 | 28.72 | 43.00 | 9002240095200 |
| 0.3858 | | W 9.80 | 9.80 | 89.00 | 28.30 | 43.00 | 9002240098000 |
| 0.3906 | 25/64 | 9.92 | 9.92 | 89.00 | 28.12 | 43.00 | 9002240099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 28.00 | 43.00 | 9002240100000 |
| 0.4016 | | 10.20 | 10.20 | 89.00 | 27.70 | 43.00 | 9002240102000 |
| 0.4063 | 13/32 | 10.32 | 10.32 | 89.00 | 27.52 | 43.00 | 9002240103200 |
| 0.4134 | | 10.50 | 10.50 | 89.00 | 27.25 | 43.00 | 9002240105000 |
| 0.4220 | 27/64 | 10.72 | 10.72 | 95.00 | 30.92 | 47.00 | 9002240107200 |

| Diameter (d ₁) | | | d ₂ h ₆ | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|-------|-------------------------------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.4331 | | 11.00 | 11.00 | 95.00 | 30.50 | 47.00 | 9002240110000 |
| 0.4374 | 7/16 | 11.11 | 11.11 | 95.00 | 30.34 | 47.00 | 9002240111100 |
| 0.4528 | | 11.50 | 11.50 | 95.00 | 29.75 | 47.00 | 9002240115000 |
| 0.4689 | 15/32 | 11.91 | 11.91 | 102.00 | 33.14 | 51.00 | 9002240119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 33.00 | 51.00 | 9002240120000 |
| 0.4843 | 31/64 | 12.30 | 12.30 | 102.00 | 32.55 | 51.00 | 9002240123000 |
| 0.4921 | | 12.50 | 12.50 | 102.00 | 32.25 | 51.00 | 9002240125000 |
| 0.5000 | 1/2 | 12.70 | 12.70 | 102.00 | 31.95 | 51.00 | 9002240127000 |
| 0.5118 | | 13.00 | 13.00 | 102.00 | 31.50 | 51.00 | 9002240130000 |
| 0.5315 | | 13.50 | 13.50 | 107.00 | 33.75 | 54.00 | 9002240135000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 33.00 | 54.00 | 9002240140000 |
| 0.5906 | | 15.00 | 15.00 | 111.00 | 33.50 | 56.00 | 9002240150000 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 34.00 | 58.00 | 9002240160000 |
| 0.6693 | | 17.00 | 17.00 | 119.00 | 34.50 | 60.00 | 9002240170000 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 35.00 | 62.00 | 9002240180000 |
| 0.7480 | | 19.00 | 19.00 | 127.00 | 35.50 | 64.00 | 9002240190000 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 36.00 | 66.00 | 9002240200000 |
| 0.8268 | | 21.00 | 21.00 | 136.00 | 36.50 | 68.00 | 9002240210000 |
| 0.8661 | | 22.00 | 22.00 | 141.00 | 37.00 | 70.00 | 9002240220000 |

Stub Length



Tool material

HSS

Surface



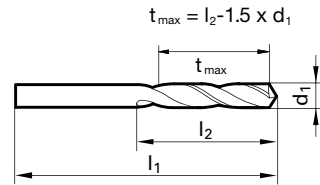
Stub Length

| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum ● |
| S | Titanium alloys |
| H | Hardened steel |

web thinning ≥ Ø 2.380 • relieved cone

soft, long chipping materials • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • soft synthetic materials, wood

- =Optimal
- =Limited



Speeds and feeds information on pg. 500

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9002250010000 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9002250011000 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9002250011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9002250012000 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9002250013000 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9002250014000 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9002250015000 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9002250015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9002250016000 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9002250017000 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9002250018000 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9002250019000 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9002250019800 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9002250020000 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9002250021000 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9002250022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9002250022500 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9002250023000 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9002250023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9002250024000 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9002250025000 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9002250026000 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9002250027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9002250027100 |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9002250027500 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9002250027800 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9002250028000 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9002250029000 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9002250030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9002250030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9002250031000 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9002250031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9002250032000 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9002250033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9002250034000 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9002250035000 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9002250036000 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9002250037000 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9002250038000 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9002250039000 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9002250039700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9002250040000 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9002250041000 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9002250042000 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9002250043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9002250043700 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9002250044000 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9002250045000 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9002250046000 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9002250047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9002250047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9002250048000 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9002250049000 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9002250050000 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9002250051000 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9002250051600 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9002250052000 |
| 0.2067 | | 5.25 | 62.00 | 18.13 | 26.00 | 9002250052500 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9002250053000 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9002250054000 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9002250055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9002250055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9002250056000 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9002250057000 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9002250058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9002250059000 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9002250059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9002250060000 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9002250061000 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9002250062000 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9002250063000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 21.48 | 31.00 | 9002250063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9002250064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9002250065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9002250065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9002250066000 |
| 0.2657 | 17/64 H | 6.75 | 74.00 | 23.88 | 34.00 | 9002250067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9002250068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9002250069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9002250070000 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9002250071000 |
| 0.2811 | 9/32 K | 7.14 | 74.00 | 23.29 | 34.00 | 9002250071400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9002250073000 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9002250075000 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9002250076000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9002250078000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9002250079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9002250080000 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9002250081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9002250082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9002250083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9002250083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9002250084000 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9002250085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9002250086000 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9002250087000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9002250090000 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9002250094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9002250095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9002250095200 |
| 0.3858 | | 9.80 | 89.00 | 28.30 | 43.00 | 9002250098000 |
| 0.3937 | W | 10.00 | 89.00 | 28.00 | 43.00 | 9002250100000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9002250102000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9002250105000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9002250110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9002250111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9002250115000 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9002250118000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9002250119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9002250120000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9002250125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9002250127000 |
| 0.5039 | | 12.80 | 102.00 | 31.80 | 51.00 | 9002250128000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9002250130000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9002250140000 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9002250145000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9002250150000 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9002250160000 |
| 0.6693 | | 17.00 | 119.00 | 34.50 | 60.00 | 9002250170000 |
| 0.6890 | | 17.50 | 123.00 | 35.75 | 62.00 | 9002250175000 |
| 0.7087 | | 18.00 | 123.00 | 35.00 | 62.00 | 9002250180000 |
| 0.7480 | | 19.00 | 127.00 | 35.50 | 64.00 | 9002250190000 |
| 0.7874 | | 20.00 | 131.00 | 36.00 | 66.00 | 9002250200000 |

Stub Length



Tool material

HSS

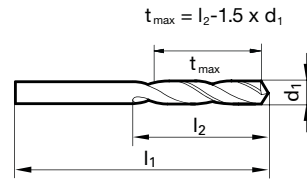
Surface



Stub Length

| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone • for higher tensile steels • bright < 2.36 mm |
| M | Stainless steel | ○ | |
| K | Cast iron | ○ | free-cutting steels • acid resist./stainless steels • case hardening/heat treatable steels up to 800 N/mm ² • short/medium chip length Al/Cu-alloys |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 520

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9005520010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9005520010200 |
| 0.0409 | #59 | 1.04 | 26.00 | 4.44 | 6.00 | 9005520010400 |
| 0.0413 | | 1.05 | 26.00 | 4.43 | 6.00 | 9005520010500 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9005520010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9005520010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9005520011000 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9005520011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9005520011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9005520011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9005520012000 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9005520012500 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9005520013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9005520013200 |
| 0.0531 | | 1.35 | 32.00 | 6.98 | 9.00 | 9005520013500 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9005520014000 |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9005520014500 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9005520015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9005520015100 |
| 0.0602 | | 1.53 | 34.00 | 7.71 | 10.00 | 9005520015300 |
| 0.0610 | | 1.55 | 34.00 | 7.68 | 10.00 | 9005520015500 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9005520015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9005520016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9005520016100 |
| 0.0650 | | 1.65 | 34.00 | 7.53 | 10.00 | 9005520016500 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9005520017000 |
| 0.0681 | | 1.73 | 36.00 | 8.41 | 11.00 | 9005520017300 |
| 0.0689 | | 1.75 | 36.00 | 8.38 | 11.00 | 9005520017500 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9005520017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9005520018000 |
| 0.0717 | | 1.82 | 36.00 | 8.27 | 11.00 | 9005520018200 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9005520018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9005520019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9005520019300 |
| 0.0768 | | 1.95 | 38.00 | 9.08 | 12.00 | 9005520019500 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9005520019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9005520019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9005520020000 |
| 0.0807 | | 2.05 | 38.00 | 8.93 | 12.00 | 9005520020500 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9005520020600 |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9005520020800 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9005520021000 |
| 0.0839 | | 2.13 | 40.00 | 9.81 | 13.00 | 9005520021300 |
| 0.0846 | | 2.15 | 40.00 | 9.78 | 13.00 | 9005520021500 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9005520021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9005520022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9005520022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9005520022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9005520023000 |
| 0.0913 | | 2.32 | 40.00 | 9.52 | 13.00 | 9005520023200 |
| 0.0925 | | 2.35 | 40.00 | 9.48 | 13.00 | 9005520023500 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9005520023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9005520023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9005520024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9005520024400 |
| 0.0965 | | 2.45 | 43.00 | 10.33 | 14.00 | 9005520024500 |
| 0.0980 | #40 | 2.49 | 43.00 | 10.27 | 14.00 | 9005520024900 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9005520025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9005520025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9005520025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9005520025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9005520026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9005520026400 |
| 0.1043 | | 2.65 | 43.00 | 10.03 | 14.00 | 9005520026500 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9005520027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9005520027100 |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9005520027500 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9005520027800 |
| 0.1098 | #35 | 2.79 | 46.00 | 11.82 | 16.00 | 9005520027900 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9005520028000 |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9005520028200 |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9005520028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9005520029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9005520029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9005520030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9005520030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9005520031000 |
| 0.1240 | | 3.15 | 49.00 | 13.28 | 18.00 | 9005520031500 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9005520031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9005520032000 |
| 0.1280 | | 3.25 | 49.00 | 13.13 | 18.00 | 9005520032500 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9005520032600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9005520033000 |
| 0.1319 | | 3.35 | 49.00 | 12.98 | 18.00 | 9005520033500 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9005520034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9005520034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9005520035000 |
| 0.1398 | | 3.55 | 52.00 | 14.68 | 20.00 | 9005520035500 |
| 0.1406 | 9/64 #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9005520035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9005520036000 |
| 0.1437 | | 3.65 | 52.00 | 14.53 | 20.00 | 9005520036500 |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9005520036600 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9005520037000 |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9005520037300 |
| 0.1476 | | 3.75 | 52.00 | 14.38 | 20.00 | 9005520037500 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9005520038000 |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9005520038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9005520039000 |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9005520039100 |
| 0.1555 | | 3.95 | 55.00 | 16.08 | 22.00 | 9005520039500 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9005520039700 |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9005520039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9005520040000 |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9005520040400 |
| 0.1594 | | 4.05 | 55.00 | 15.93 | 22.00 | 9005520040500 |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9005520040900 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9005520041000 |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9005520041500 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9005520042000 |
| 0.1661 | #19 | 4.22 | 55.00 | 15.67 | 22.00 | 9005520042200 |
| 0.1673 | | 4.25 | 55.00 | 15.63 | 22.00 | 9005520042500 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9005520043000 |
| 0.1713 | | 4.35 | 58.00 | 17.48 | 24.00 | 9005520043500 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9005520043700 |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9005520043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9005520044000 |
| 0.1752 | | 4.45 | 58.00 | 17.33 | 24.00 | 9005520044500 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9005520045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9005520045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9005520046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9005520046200 |
| 0.1831 | | 4.65 | 58.00 | 17.03 | 24.00 | 9005520046500 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9005520047000 |
| 0.1870 | | 4.75 | 58.00 | 16.88 | 24.00 | 9005520047500 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9005520047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9005520048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9005520048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9005520049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9005520049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9005520049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9005520050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9005520050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9005520051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9005520051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9005520051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9005520051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9005520052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9005520052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9005520053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9005520053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9005520054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9005520054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9005520055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9005520055600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9005520056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9005520056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9005520057000 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9005520057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9005520058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9005520059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9005520059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9005520059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9005520060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9005520060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9005520061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9005520061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9005520062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9005520062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9005520063000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 21.48 | 31.00 | 9005520063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9005520064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9005520065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9005520065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9005520066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9005520066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9005520067000 |
| 0.2657 | 17/64 H | 6.75 | 74.00 | 23.88 | 34.00 | 9005520067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9005520068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9005520069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9005520070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9005520070300 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9005520071000 |
| 0.2811 | 9/32 K | 7.14 | 74.00 | 23.29 | 34.00 | 9005520071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9005520072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9005520073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9005520073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9005520074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9005520074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9005520075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9005520075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9005520076000 |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9005520076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9005520077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9005520078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9005520079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9005520079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9005520080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9005520080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9005520081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9005520082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9005520083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9005520083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9005520084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9005520084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9005520085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9005520086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9005520086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9005520087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9005520087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9005520088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9005520088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9005520089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9005520090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9005520090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9005520091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9005520091300 |

Stub Length

Stub Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9005520092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9005520093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9005520093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9005520094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9005520095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9005520095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9005520095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9005520096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9005520097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9005520098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9005520099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9005520099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9005520100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9005520100800 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9005520102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9005520102600 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9005520103200 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9005520104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9005520105000 |
| 0.4173 | | 10.60 | 89.00 | 27.10 | 43.00 | 9005520106000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9005520107200 |
| 0.4252 | | 10.80 | 95.00 | 30.80 | 47.00 | 9005520108000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9005520110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9005520111100 |
| 0.4409 | | 11.20 | 95.00 | 30.20 | 47.00 | 9005520112000 |
| 0.4449 | | 11.30 | 95.00 | 30.05 | 47.00 | 9005520113000 |
| 0.4488 | | 11.40 | 95.00 | 29.90 | 47.00 | 9005520114000 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9005520115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9005520115100 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9005520118000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9005520119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9005520120000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9005520123000 |
| 0.4882 | | 12.40 | 102.00 | 32.40 | 51.00 | 9005520124000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9005520125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9005520127000 |
| 0.5079 | | 12.90 | 102.00 | 31.65 | 51.00 | 9005520129000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9005520130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9005520131000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9005520134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9005520135000 |
| 0.5469 | 35/64 | 13.89 | 107.00 | 33.17 | 54.00 | 9005520138900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9005520140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9005520142900 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9005520145000 |
| 0.5780 | 37/64 | 14.68 | 111.00 | 33.98 | 56.00 | 9005520146800 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9005520150000 |
| 0.5937 | 19/32 | 15.08 | 115.00 | 35.38 | 58.00 | 9005520150800 |
| 0.6094 | 39/64 | 15.48 | 115.00 | 34.78 | 58.00 | 9005520154800 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9005520155000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 34.20 | 58.00 | 9005520158700 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9005520160000 |
| 0.6406 | 41/64 | 16.27 | 119.00 | 35.60 | 60.00 | 9005520162700 |
| 0.6496 | | 16.50 | 119.00 | 35.25 | 60.00 | 9005520165000 |
| 0.6693 | | 17.00 | 119.00 | 34.50 | 60.00 | 9005520170000 |
| 0.6720 | 43/64 | 17.07 | 123.00 | 36.40 | 62.00 | 9005520170700 |
| 0.6874 | 11/16 | 17.46 | 123.00 | 35.81 | 62.00 | 9005520174600 |
| 0.7031 | 45/64 | 17.86 | 123.00 | 35.21 | 62.00 | 9005520178600 |
| 0.7087 | | 18.00 | 123.00 | 35.00 | 62.00 | 9005520180000 |
| 0.7189 | 23/32 | 18.26 | 127.00 | 36.61 | 64.00 | 9005520182600 |
| 0.7480 | | 19.00 | 127.00 | 35.50 | 64.00 | 9005520190000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 37.43 | 66.00 | 9005520190500 |
| 0.7811 | 25/32 | 19.84 | 131.00 | 36.24 | 66.00 | 9005520198400 |
| 0.7874 | | 20.00 | 131.00 | 36.00 | 66.00 | 9005520200000 |



Tool material

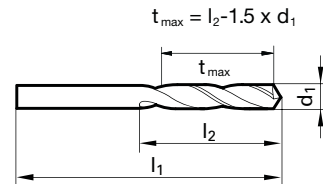
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone • for higher tensile steels • bright < 2.36 mm |
| M | Stainless steel | ○ | |
| K | Cast iron | ○ | free-cutting steels • acid resist./stainless steels • case hardening/heat treatable steels up to 800 N/mm ² • short/medium chip length Al/Cu-alloys |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



Stub Length

Speeds and feeds information on pg. 521

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9005530010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9005530010200 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9005530010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9005530010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9005530011000 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9005530011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9005530011800 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9005530012000 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9005530012500 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9005530013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9005530013200 |
| 0.0531 | | 1.35 | 32.00 | 6.98 | 9.00 | 9005530013500 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9005530014000 |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9005530014500 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9005530015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9005530015100 |
| 0.0610 | | 1.55 | 34.00 | 7.68 | 10.00 | 9005530015500 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9005530015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9005530016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9005530016100 |
| 0.0650 | | 1.65 | 34.00 | 7.53 | 10.00 | 9005530016500 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9005530017000 |
| 0.0689 | | 1.75 | 36.00 | 8.38 | 11.00 | 9005530017500 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9005530017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9005530018000 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9005530018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9005530019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9005530019300 |
| 0.0768 | | 1.95 | 38.00 | 9.08 | 12.00 | 9005530019500 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9005530019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9005530019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9005530020000 |
| 0.0807 | | 2.05 | 38.00 | 8.93 | 12.00 | 9005530020500 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9005530020600 |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9005530020800 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9005530021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9005530022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9005530022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9005530022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9005530023000 |
| 0.0925 | | 2.35 | 40.00 | 9.48 | 13.00 | 9005530023500 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9005530023800 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9005530024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9005530024400 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9005530025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9005530025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9005530025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9005530025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9005530026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9005530026400 |
| 0.1043 | | 2.65 | 43.00 | 10.03 | 14.00 | 9005530026500 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9005530027100 |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9005530027500 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9005530027800 |
| 0.1098 | #35 | 2.79 | 46.00 | 11.82 | 16.00 | 9005530027900 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9005530028000 |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9005530028200 |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9005530028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9005530029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9005530029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9005530030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9005530030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9005530031000 |
| 0.1240 | | 3.15 | 49.00 | 13.28 | 18.00 | 9005530031500 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9005530031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9005530032000 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9005530032600 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9005530034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9005530034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9005530035000 |
| 0.1406 | 9/64 | 3.57 | 52.00 | 14.65 | 20.00 | 9005530035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9005530036000 |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9005530036600 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9005530037000 |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9005530037300 |
| 0.1476 | | 3.75 | 52.00 | 14.38 | 20.00 | 9005530037500 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9005530038000 |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9005530038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9005530039000 |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9005530039100 |
| 0.1555 | | 3.95 | 55.00 | 16.08 | 22.00 | 9005530039500 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9005530039700 |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9005530039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9005530040000 |

Stub Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9005530040400 |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9005530040900 |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9005530041500 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9005530042000 |
| 0.1661 | #19 | 4.22 | 55.00 | 15.67 | 22.00 | 9005530042200 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9005530043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9005530043700 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9005530044000 |
| 0.1752 | | 4.45 | 58.00 | 17.33 | 24.00 | 9005530044500 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9005530045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9005530045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9005530046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9005530046200 |
| 0.1831 | | 4.65 | 58.00 | 17.03 | 24.00 | 9005530046500 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9005530047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9005530047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9005530048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9005530048500 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9005530049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9005530049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9005530050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9005530050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9005530051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9005530051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9005530051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9005530051800 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9005530052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9005530053000 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9005530055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9005530055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9005530056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9005530056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9005530057000 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9005530057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9005530058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9005530059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9005530059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9005530059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9005530060000 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9005530061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9005530061500 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9005530062500 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9005530063500 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9005530065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9005530065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9005530066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9005530066300 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9005530067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9005530068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9005530069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9005530070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9005530070300 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9005530071400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9005530072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9005530073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9005530073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9005530074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9005530074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9005530075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9005530075400 |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9005530076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9005530077000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9005530079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9005530080000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9005530082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9005530083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9005530083300 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9005530084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9005530085000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9005530086100 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9005530087300 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9005530088400 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9005530090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9005530090900 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9005530091300 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9005530093400 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9005530095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9005530095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9005530095800 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9005530098000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9005530099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9005530100000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9005530102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9005530102600 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9005530103200 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9005530104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9005530105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9005530107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9005530110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9005530111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9005530115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9005530115100 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9005530119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9005530120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9005530123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9005530125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9005530127000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9005530131000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9005530134900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9005530140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9005530142900 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9005530155000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 34.20 | 58.00 | 9005530158700 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 37.43 | 66.00 | 9005530190500 |
| 0.7874 | | 20.00 | 131.00 | 36.00 | 66.00 | 9005530200000 |



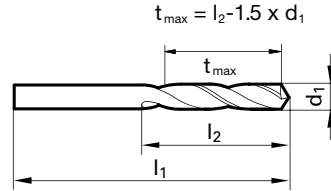
Tool material

HSCO

Surface



- P** Steel ● web thinning ≥ Ø 1.000 • relieved cone • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ●
 - K** Cast iron ● acid resist./stainless steels • spring steels • austenitic stainless steels • Hastelloy, Inconel, Nimonic
 - N** Aluminum ○
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
○=Limited



Stub Length

Speeds and feeds information on pg. 511

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0157 | 1/64 | 0.40 | 19.00 | 1.90 | 2.50 | 9003290004000 |
| 0.0197 | | 0.50 | 20.00 | 2.25 | 3.00 | 9003290005000 |
| 0.0201 | #76 | 0.51 | 20.00 | 2.24 | 3.00 | 9003290005100 |
| 0.0217 | | 0.55 | 21.00 | 2.68 | 3.50 | 9003290005500 |
| 0.0224 | #74 | 0.57 | 21.00 | 2.65 | 3.50 | 9003290005700 |
| 0.0236 | | 0.60 | 21.00 | 2.60 | 3.50 | 9003290006000 |
| 0.0240 | #73 | 0.61 | 22.00 | 3.09 | 4.00 | 9003290006100 |
| 0.0252 | #72 | 0.64 | 22.00 | 3.04 | 4.00 | 9003290006400 |
| 0.0256 | | 0.65 | 22.00 | 3.03 | 4.00 | 9003290006500 |
| 0.0276 | | 0.70 | 23.00 | 3.45 | 4.50 | 9003290007000 |
| 0.0287 | | 0.73 | 23.00 | 3.41 | 4.50 | 9003290007300 |
| 0.0291 | #69 | 0.74 | 23.00 | 3.39 | 4.50 | 9003290007400 |
| 0.0295 | | 0.75 | 23.00 | 3.38 | 4.50 | 9003290007500 |
| 0.0311 | 1/32 #68 | 0.79 | 24.00 | 3.82 | 5.00 | 9003290007900 |
| 0.0315 | | 0.80 | 24.00 | 3.80 | 5.00 | 9003290008000 |
| 0.0319 | #67 | 0.81 | 24.00 | 3.79 | 5.00 | 9003290008100 |
| 0.0323 | | 0.82 | 24.00 | 3.77 | 5.00 | 9003290008200 |
| 0.0331 | #66 | 0.84 | 24.00 | 3.74 | 5.00 | 9003290008400 |
| 0.0335 | | 0.85 | 24.00 | 3.73 | 5.00 | 9003290008500 |
| 0.0343 | | 0.87 | 25.00 | 4.20 | 5.50 | 9003290008700 |
| 0.0354 | | 0.90 | 25.00 | 4.15 | 5.50 | 9003290009000 |
| 0.0358 | #64 | 0.91 | 25.00 | 4.14 | 5.50 | 9003290009100 |
| 0.0370 | #63 | 0.94 | 25.00 | 4.09 | 5.50 | 9003290009400 |
| 0.0374 | | 0.95 | 25.00 | 4.08 | 5.50 | 9003290009500 |
| 0.0382 | #62 | 0.97 | 26.00 | 4.55 | 6.00 | 9003290009700 |
| 0.0390 | #61 | 0.99 | 26.00 | 4.52 | 6.00 | 9003290009900 |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9003290010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9003290010200 |
| 0.0413 | | 1.05 | 26.00 | 4.43 | 6.00 | 9003290010500 |
| 0.0417 | | 1.06 | 26.00 | 4.41 | 6.00 | 9003290010600 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9003290010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9003290010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9003290011000 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9003290011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9003290011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9003290011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9003290012000 |
| 0.0484 | | 1.23 | 30.00 | 6.16 | 8.00 | 9003290012300 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9003290012500 |
| 0.0504 | | 1.28 | 30.00 | 6.08 | 8.00 | 9003290012800 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9003290013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9003290013200 |
| 0.0524 | | 1.33 | 32.00 | 7.01 | 9.00 | 9003290013300 |
| 0.0531 | | 1.35 | 32.00 | 6.98 | 9.00 | 9003290013500 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9003290014000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9003290014500 |
| 0.0579 | | 1.47 | 32.00 | 6.80 | 9.00 | 9003290014700 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9003290015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9003290015100 |
| 0.0610 | | 1.55 | 34.00 | 7.68 | 10.00 | 9003290015500 |
| 0.0618 | | 1.57 | 34.00 | 7.65 | 10.00 | 9003290015700 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9003290015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9003290016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9003290016100 |
| 0.0650 | | 1.65 | 34.00 | 7.53 | 10.00 | 9003290016500 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9003290017000 |
| 0.0681 | | 1.73 | 36.00 | 8.41 | 11.00 | 9003290017300 |
| 0.0689 | | 1.75 | 36.00 | 8.38 | 11.00 | 9003290017500 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9003290017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9003290018000 |
| 0.0717 | | 1.82 | 36.00 | 8.27 | 11.00 | 9003290018200 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9003290018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9003290019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9003290019300 |
| 0.0768 | | 1.95 | 38.00 | 9.08 | 12.00 | 9003290019500 |
| 0.0776 | | 1.97 | 38.00 | 9.05 | 12.00 | 9003290019700 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9003290019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9003290019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9003290020000 |
| 0.0799 | | 2.03 | 38.00 | 8.96 | 12.00 | 9003290020300 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9003290020600 |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9003290020800 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9003290021000 |
| 0.0846 | | 2.15 | 40.00 | 9.78 | 13.00 | 9003290021500 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9003290021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9003290022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9003290022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9003290022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9003290023000 |
| 0.0913 | | 2.32 | 40.00 | 9.52 | 13.00 | 9003290023200 |
| 0.0925 | | 2.35 | 40.00 | 9.48 | 13.00 | 9003290023500 |
| 0.0929 | | 2.36 | 40.00 | 9.46 | 13.00 | 9003290023600 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9003290023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9003290023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9003290024000 |
| 0.0953 | | 2.42 | 43.00 | 10.37 | 14.00 | 9003290024200 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9003290024400 |
| 0.0965 | | 2.45 | 43.00 | 10.33 | 14.00 | 9003290024500 |
| 0.0972 | | 2.47 | 43.00 | 10.30 | 14.00 | 9003290024700 |
| 0.0980 | #40 | 2.49 | 43.00 | 10.27 | 14.00 | 9003290024900 |

Stub Length

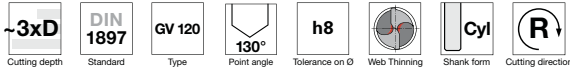
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ldr | mm | | | | |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9003290025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9003290025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9003290025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9003290025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9003290026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9003290026400 |
| 0.1043 | | 2.65 | 43.00 | 10.03 | 14.00 | 9003290026500 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9003290027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9003290027100 |
| 0.1083 | | 2.75 | 46.00 | 11.88 | 16.00 | 9003290027500 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9003290027800 |
| 0.1098 | #35 | 2.79 | 46.00 | 11.82 | 16.00 | 9003290027900 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9003290028000 |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9003290028200 |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9003290028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9003290029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9003290029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9003290030000 |
| 0.1189 | | 3.02 | 49.00 | 13.47 | 18.00 | 9003290030200 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9003290030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9003290031000 |
| 0.1240 | | 3.15 | 49.00 | 13.28 | 18.00 | 9003290031500 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9003290031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9003290032000 |
| 0.1280 | | 3.25 | 49.00 | 13.13 | 18.00 | 9003290032500 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9003290032600 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9003290033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9003290034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9003290034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9003290035000 |
| 0.1398 | | 3.55 | 52.00 | 14.68 | 20.00 | 9003290035500 |
| 0.1406 | 9/64 | 3.57 | 52.00 | 14.65 | 20.00 | 9003290035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9003290036000 |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9003290036600 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9003290037000 |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9003290037300 |
| 0.1476 | | 3.75 | 52.00 | 14.38 | 20.00 | 9003290037500 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9003290038000 |
| 0.1516 | | 3.85 | 55.00 | 16.23 | 22.00 | 9003290038500 |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9003290038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9003290039000 |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9003290039100 |
| 0.1543 | | 3.92 | 55.00 | 16.12 | 22.00 | 9003290039200 |
| 0.1555 | | 3.95 | 55.00 | 16.08 | 22.00 | 9003290039500 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9003290039700 |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9003290039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9003290040000 |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9003290040400 |
| 0.1594 | | 4.05 | 55.00 | 15.93 | 22.00 | 9003290040500 |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9003290040900 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9003290041000 |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9003290041500 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9003290042000 |
| 0.1661 | #19 | 4.22 | 55.00 | 15.67 | 22.00 | 9003290042200 |
| 0.1673 | | 4.25 | 55.00 | 15.63 | 22.00 | 9003290042500 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9003290043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9003290043700 |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9003290043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9003290044000 |
| 0.1752 | | 4.45 | 58.00 | 17.33 | 24.00 | 9003290044500 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9003290045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9003290045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9003290046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9003290046200 |
| 0.1831 | | 4.65 | 58.00 | 17.03 | 24.00 | 9003290046500 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9003290047000 |
| 0.1870 | | 4.75 | 58.00 | 16.88 | 24.00 | 9003290047500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ldr | mm | | | | |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9003290047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9003290048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9003290048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9003290049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9003290049200 |
| 0.1949 | | 4.95 | 62.00 | 18.58 | 26.00 | 9003290049500 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9003290049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9003290050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9003290050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9003290051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9003290051100 |
| 0.2028 | | 5.15 | 62.00 | 18.28 | 26.00 | 9003290051500 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9003290051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9003290051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9003290052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9003290052200 |
| 0.2067 | | 5.25 | 62.00 | 18.13 | 26.00 | 9003290052500 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9003290053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9003290053100 |
| 0.2106 | | 5.35 | 66.00 | 19.98 | 28.00 | 9003290053500 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9003290054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9003290054100 |
| 0.2146 | | 5.45 | 66.00 | 19.83 | 28.00 | 9003290054500 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9003290055000 |
| 0.2185 | | 5.55 | 66.00 | 19.68 | 28.00 | 9003290055500 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9003290055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9003290056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9003290056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9003290057000 |
| 0.2264 | | 5.75 | 66.00 | 19.38 | 28.00 | 9003290057500 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9003290057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9003290058000 |
| 0.2303 | | 5.85 | 66.00 | 19.23 | 28.00 | 9003290058500 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9003290059000 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9003290059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9003290060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9003290060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9003290061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9003290061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9003290062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9003290062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9003290063000 |
| 0.2488 | | 6.32 | 70.00 | 21.52 | 31.00 | 9003290063200 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9003290063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9003290064000 |
| 0.2539 | | 6.45 | 70.00 | 21.33 | 31.00 | 9003290064500 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9003290065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9003290065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9003290066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9003290066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9003290067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9003290067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9003290068000 |
| 0.2697 | | 6.85 | 74.00 | 23.73 | 34.00 | 9003290068500 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9003290069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9003290070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9003290070300 |
| 0.2776 | | 7.05 | 74.00 | 23.43 | 34.00 | 9003290070500 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9003290071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9003290071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9003290072000 |
| 0.2854 | | 7.25 | 74.00 | 23.13 | 34.00 | 9003290072500 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9003290073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9003290073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9003290074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9003290074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9003290075000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9003290075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9003290076000 |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9003290076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9003290077000 |
| 0.3051 | | 7.75 | 79.00 | 25.38 | 37.00 | 9003290077500 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9003290078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9003290079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9003290079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9003290080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9003290080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9003290081000 |
| 0.3209 | | 8.15 | 79.00 | 24.78 | 37.00 | 9003290081500 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9003290082000 |
| 0.3248 | | 8.25 | 79.00 | 24.63 | 37.00 | 9003290082500 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9003290083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9003290083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9003290084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9003290084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9003290085000 |
| 0.3366 | | 8.55 | 84.00 | 27.18 | 40.00 | 9003290085500 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9003290086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9003290086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9003290087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9003290087300 |
| 0.3445 | | 8.75 | 84.00 | 26.88 | 40.00 | 9003290087500 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9003290088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9003290088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9003290089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9003290090000 |
| 0.3563 | | 9.05 | 84.00 | 26.43 | 40.00 | 9003290090500 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9003290090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9003290091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9003290091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9003290092000 |
| 0.3642 | | 9.25 | 84.00 | 26.13 | 40.00 | 9003290092500 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9003290093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9003290093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9003290094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9003290095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9003290095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9003290095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9003290096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9003290097000 |
| 0.3839 | | 9.75 | 89.00 | 28.38 | 43.00 | 9003290097500 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9003290098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9003290099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9003290099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9003290100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9003290100800 |
| 0.3976 | | 10.10 | 89.00 | 27.85 | 43.00 | 9003290101000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9003290102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9003290102600 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9003290103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9003290103200 |
| 0.4094 | | 10.40 | 89.00 | 27.40 | 43.00 | 9003290104000 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9003290104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9003290105000 |
| 0.4173 | | 10.60 | 89.00 | 27.10 | 43.00 | 9003290106000 |
| 0.4193 | | 10.65 | 95.00 | 31.03 | 47.00 | 9003290106500 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9003290107200 |
| 0.4252 | | 10.80 | 95.00 | 30.80 | 47.00 | 9003290108000 |
| 0.4291 | | 10.90 | 95.00 | 30.65 | 47.00 | 9003290109000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9003290110000 |
| 0.4370 | | 11.10 | 95.00 | 30.35 | 47.00 | 9003290111000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9003290111100 |
| 0.4409 | | 11.20 | 95.00 | 30.20 | 47.00 | 9003290112000 |
| 0.4429 | | 11.25 | 95.00 | 30.13 | 47.00 | 9003290112500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4449 | | 11.30 | 95.00 | 30.05 | 47.00 | 9003290113000 |
| 0.4488 | | 11.40 | 95.00 | 29.90 | 47.00 | 9003290114000 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9003290115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9003290115100 |
| 0.4567 | | 11.60 | 95.00 | 29.60 | 47.00 | 9003290116000 |
| 0.4606 | | 11.70 | 95.00 | 29.45 | 47.00 | 9003290117000 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9003290118000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9003290119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9003290120000 |
| 0.4764 | | 12.10 | 102.00 | 32.85 | 51.00 | 9003290121000 |
| 0.4803 | | 12.20 | 102.00 | 32.70 | 51.00 | 9003290122000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9003290123000 |
| 0.4882 | | 12.40 | 102.00 | 32.40 | 51.00 | 9003290124000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9003290125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9003290127000 |
| 0.5039 | | 12.80 | 102.00 | 31.80 | 51.00 | 9003290128000 |
| 0.5079 | | 12.90 | 102.00 | 31.65 | 51.00 | 9003290129000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9003290130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9003290131000 |
| 0.5197 | | 13.20 | 102.00 | 31.20 | 51.00 | 9003290132000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9003290134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9003290135000 |
| 0.5413 | | 13.75 | 107.00 | 33.38 | 54.00 | 9003290137500 |
| 0.5469 | 35/64 | 13.89 | 107.00 | 33.17 | 54.00 | 9003290138900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9003290140000 |
| 0.5551 | | 14.10 | 111.00 | 34.85 | 56.00 | 9003290141000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9003290142900 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9003290145000 |
| 0.5780 | 37/64 | 14.68 | 111.00 | 33.98 | 56.00 | 9003290146800 |
| 0.5807 | | 14.75 | 111.00 | 33.88 | 56.00 | 9003290147500 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9003290150000 |
| 0.5937 | 19/32 | 15.08 | 115.00 | 35.38 | 58.00 | 9003290150800 |
| 0.6004 | | 15.25 | 115.00 | 35.13 | 58.00 | 9003290152500 |
| 0.6094 | 39/64 | 15.48 | 115.00 | 34.78 | 58.00 | 9003290154800 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9003290155000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 34.20 | 58.00 | 9003290158700 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9003290160000 |
| 0.6378 | | 16.20 | 119.00 | 35.70 | 60.00 | 9003290162000 |
| 0.6406 | 41/64 | 16.27 | 119.00 | 35.60 | 60.00 | 9003290162700 |
| 0.6496 | | 16.50 | 119.00 | 35.25 | 60.00 | 9003290165000 |
| 0.6563 | 21/32 | 16.67 | 119.00 | 35.00 | 60.00 | 9003290166700 |
| 0.6693 | | 17.00 | 119.00 | 34.50 | 60.00 | 9003290170000 |
| 0.6720 | 43/64 | 17.07 | 123.00 | 36.40 | 62.00 | 9003290170700 |
| 0.6874 | 11/16 | 17.46 | 123.00 | 35.81 | 62.00 | 9003290174600 |
| 0.6890 | | 17.50 | 123.00 | 35.75 | 62.00 | 9003290175000 |
| 0.7031 | 45/64 | 17.86 | 123.00 | 35.21 | 62.00 | 9003290178600 |
| 0.7087 | | 18.00 | 123.00 | 35.00 | 62.00 | 9003290180000 |
| 0.7283 | | 18.50 | 127.00 | 36.25 | 64.00 | 9003290185000 |
| 0.7343 | 47/64 | 18.65 | 127.00 | 36.03 | 64.00 | 9003290186500 |
| 0.7480 | | 19.00 | 127.00 | 35.50 | 64.00 | 9003290190000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 37.43 | 66.00 | 9003290190500 |
| 0.7657 | 49/64 | 19.45 | 131.00 | 36.83 | 66.00 | 9003290194500 |
| 0.7677 | | 19.50 | 131.00 | 36.75 | 66.00 | 9003290195000 |
| 0.7811 | 25/32 | 19.84 | 131.00 | 36.24 | 66.00 | 9003290198400 |
| 0.7874 | | 20.00 | 131.00 | 36.00 | 66.00 | 9003290200000 |
| 0.7972 | | 20.25 | 136.00 | 37.63 | 68.00 | 9003290202500 |
| 0.8071 | | 20.50 | 136.00 | 37.25 | 68.00 | 9003290205000 |
| 0.8126 | 13/16 | 20.64 | 136.00 | 37.04 | 68.00 | 9003290206400 |
| 0.8268 | | 21.00 | 136.00 | 36.50 | 68.00 | 9003290210000 |
| 0.8465 | | 21.50 | 141.00 | 37.75 | 70.00 | 9003290215000 |
| 0.8661 | | 22.00 | 141.00 | 37.00 | 70.00 | 9003290220000 |
| 0.8740 | | 22.20 | 141.00 | 36.70 | 70.00 | 9003290222000 |
| 0.9055 | | 23.00 | 146.00 | 37.50 | 72.00 | 9003290230000 |
| 0.9449 | | 24.00 | 151.00 | 39.00 | 75.00 | 9003290240000 |
| 0.9646 | | 24.50 | 151.00 | 38.25 | 75.00 | 9003290245000 |
| 0.9843 | 63/64 | 25.00 | 151.00 | 37.50 | 75.00 | 9003290250000 |
| 1.0000 | 1.0000 | 25.40 | 156.00 | 39.90 | 78.00 | 9003290254000 |

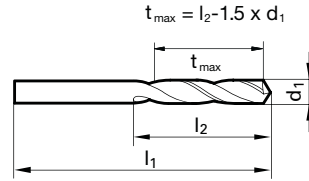
Stub Length



Tool material **HSCO**
Surface **S**

Stub Length

- P** Steel ● web thinning ≥ Ø 1.000 • relieved cone • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ●
 - K** Cast iron ● acid resist./stainless steels • spring steels • austenitic stainless steels
 - N** Aluminum ○ • Hastelloy, Inconel, Nimonic
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 537

Shank diameter = cut diameter

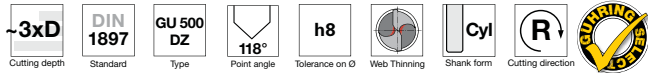
| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0197 | | 0.50 | 20.00 | 2.25 | 3.00 | 9006590005000 |
| 0.0236 | | 0.60 | 21.00 | 2.60 | 3.50 | 9006590006000 |
| 0.0256 | | 0.65 | 22.00 | 3.03 | 4.00 | 9006590006500 |
| 0.0276 | | 0.70 | 23.00 | 3.45 | 4.50 | 9006590007000 |
| 0.0291 | #69 | 0.74 | 23.00 | 3.39 | 4.50 | 9006590007400 |
| 0.0295 | | 0.75 | 23.00 | 3.38 | 4.50 | 9006590007500 |
| 0.0311 | 1/32 #68 | 0.79 | 24.00 | 3.82 | 5.00 | 9006590007900 |
| 0.0315 | | 0.80 | 24.00 | 3.80 | 5.00 | 9006590008000 |
| 0.0335 | | 0.85 | 24.00 | 3.73 | 5.00 | 9006590008500 |
| 0.0354 | | 0.90 | 25.00 | 4.15 | 5.50 | 9006590009000 |
| 0.0374 | | 0.95 | 25.00 | 4.08 | 5.50 | 9006590009500 |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9006590010000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9006590010200 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9006590010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9006590010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9006590011000 |
| 0.0453 | | 1.15 | 28.00 | 5.28 | 7.00 | 9006590011500 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9006590011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9006590011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9006590012000 |
| 0.0492 | | 1.25 | 30.00 | 6.13 | 8.00 | 9006590012500 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9006590013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9006590013200 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9006590014000 |
| 0.0571 | | 1.45 | 32.00 | 6.83 | 9.00 | 9006590014500 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9006590015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9006590015100 |
| 0.0602 | | 1.53 | 34.00 | 7.71 | 10.00 | 9006590015300 |
| 0.0618 | | 1.57 | 34.00 | 7.65 | 10.00 | 9006590015700 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9006590015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9006590016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9006590016100 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9006590017000 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9006590017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9006590018000 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9006590018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9006590019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9006590019300 |
| 0.0776 | | 1.97 | 38.00 | 9.05 | 12.00 | 9006590019700 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9006590019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9006590019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9006590020000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9006590020800 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9006590021000 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9006590021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9006590022000 |
| 0.0886 | | 2.25 | 40.00 | 9.63 | 13.00 | 9006590022500 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9006590022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9006590023000 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9006590023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9006590023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9006590024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9006590024400 |
| 0.0965 | | 2.45 | 43.00 | 10.33 | 14.00 | 9006590024500 |
| 0.0980 | #40 | 2.49 | 43.00 | 10.27 | 14.00 | 9006590024900 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9006590025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9006590025300 |
| 0.1004 | | 2.55 | 43.00 | 10.18 | 14.00 | 9006590025500 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9006590025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9006590026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9006590026400 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9006590027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9006590027100 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9006590027800 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9006590028000 |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9006590028200 |
| 0.1122 | | 2.85 | 46.00 | 11.73 | 16.00 | 9006590028500 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9006590029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9006590029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9006590030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9006590030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9006590031000 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9006590031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9006590032000 |
| 0.1280 | | 3.25 | 49.00 | 13.13 | 18.00 | 9006590032500 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9006590032600 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9006590033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9006590034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9006590034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9006590035000 |
| 0.1406 | 9/64 #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9006590035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9006590036000 |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9006590036600 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9006590037000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9006590037300 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9006590038000 |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9006590038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9006590039000 |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9006590039100 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9006590039700 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9006590040000 |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9006590040400 |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9006590040900 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9006590041000 |
| 0.1634 | | 4.15 | 55.00 | 15.78 | 22.00 | 9006590041500 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9006590042000 |
| 0.1673 | | 4.25 | 55.00 | 15.63 | 22.00 | 9006590042500 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9006590043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9006590043700 |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9006590043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9006590044000 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9006590045000 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9006590046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9006590046200 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9006590047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9006590047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9006590048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9006590048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9006590049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9006590049200 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9006590050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9006590050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9006590051000 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9006590051600 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9006590052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9006590052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9006590053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9006590053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9006590054000 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9006590055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9006590055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9006590056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9006590056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9006590057000 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9006590058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9006590059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9006590059400 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9006590060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9006590060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9006590061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9006590061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9006590062000 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9006590063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9006590063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9006590064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9006590065000 |
| 0.2571 | F | 6.53 | 70.00 | 21.21 | 31.00 | 9006590065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9006590066000 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9006590067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9006590067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9006590068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9006590069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9006590070000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|--------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9006590071000 |
| 0.2811 | 9/32 | K 7.14 | 74.00 | 23.29 | 34.00 | 9006590071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9006590072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9006590073000 |
| 0.2902 | | L 7.37 | 74.00 | 22.95 | 34.00 | 9006590073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9006590074000 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9006590075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9006590075400 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9006590077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9006590078000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9006590079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9006590080000 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9006590081000 |
| 0.3228 | | P 8.20 | 79.00 | 24.70 | 37.00 | 9006590082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9006590083000 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9006590084000 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9006590085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9006590086000 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9006590087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9006590087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9006590088000 |
| 0.3480 | | S 8.84 | 84.00 | 26.74 | 40.00 | 9006590088400 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9006590090000 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9006590091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9006590091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9006590092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9006590093000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9006590095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9006590095200 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9006590096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9006590097000 |
| 0.3858 | | W 9.80 | 89.00 | 28.30 | 43.00 | 9006590098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9006590099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9006590099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9006590100000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9006590102000 |
| 0.4035 | | 10.25 | 89.00 | 27.63 | 43.00 | 9006590102500 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9006590103200 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9006590105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9006590107200 |
| 0.4291 | | 10.90 | 95.00 | 30.65 | 47.00 | 9006590109000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9006590110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9006590111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9006590115000 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9006590120000 |
| 0.4764 | | 12.10 | 102.00 | 32.85 | 51.00 | 9006590121000 |
| 0.4803 | | 12.20 | 102.00 | 32.70 | 51.00 | 9006590122000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9006590123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9006590125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9006590127000 |
| 0.5039 | | 12.80 | 102.00 | 31.80 | 51.00 | 9006590128000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9006590130000 |
| 0.5236 | | 13.30 | 107.00 | 34.05 | 54.00 | 9006590133000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9006590134900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9006590140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9006590142900 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9006590145000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9006590150000 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9006590155000 |

Stub Length



Tool material

HSCO

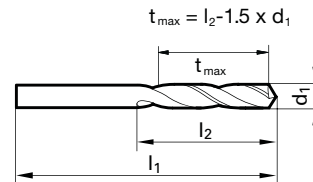
Surface



Stub Length

| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 1.000 • facet split point • Co-alloyed high speed steel • low feed force required • low torque required • for universal application |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | alloyed/unalloyed steels up to 800 N/mm ² • cold/hot work steels • antifriction bearing steels • non-ferrous metals • cast materials • stainless steels • plastics |

●=Optimal
○=Limited



Speeds and feeds information on pg. 576

Shank diameter = cut diameter

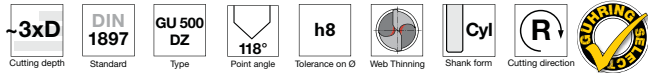
| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | 1.00 | 26.00 | 4.50 | 6.00 | 9055240010000 | |
| 0.0402 | 1.02 | 26.00 | 4.47 | 6.00 | 9055240010200 | |
| 0.0409 | 1.04 | 26.00 | 4.44 | 6.00 | 9055240010400 | |
| 0.0421 | 1.07 | 28.00 | 5.40 | 7.00 | 9055240010700 | |
| 0.0429 | 1.09 | 28.00 | 5.37 | 7.00 | 9055240010900 | |
| 0.0433 | 1.10 | 28.00 | 5.35 | 7.00 | 9055240011000 | |
| 0.0465 | 1.18 | 28.00 | 5.23 | 7.00 | 9055240011800 | |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9055240011900 |
| 0.0472 | 1.20 | 30.00 | 6.20 | 8.00 | 9055240012000 | |
| 0.0512 | 1.30 | 30.00 | 6.05 | 8.00 | 9055240013000 | |
| 0.0520 | 1.32 | 30.00 | 6.02 | 8.00 | 9055240013200 | |
| 0.0551 | 1.40 | 32.00 | 6.90 | 9.00 | 9055240014000 | |
| 0.0591 | 1.50 | 32.00 | 6.75 | 9.00 | 9055240015000 | |
| 0.0594 | 1.51 | 34.00 | 7.74 | 10.00 | 9055240015100 | |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9055240015900 |
| 0.0630 | 1.60 | 34.00 | 7.60 | 10.00 | 9055240016000 | |
| 0.0634 | 1.61 | 34.00 | 7.59 | 10.00 | 9055240016100 | |
| 0.0669 | 1.70 | 34.00 | 7.45 | 10.00 | 9055240017000 | |
| 0.0701 | 1.78 | 36.00 | 8.33 | 11.00 | 9055240017800 | |
| 0.0709 | 1.80 | 36.00 | 8.30 | 11.00 | 9055240018000 | |
| 0.0728 | 1.85 | 36.00 | 8.23 | 11.00 | 9055240018500 | |
| 0.0748 | 1.90 | 36.00 | 8.15 | 11.00 | 9055240019000 | |
| 0.0760 | 1.93 | 38.00 | 9.11 | 12.00 | 9055240019300 | |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9055240019800 |
| 0.0783 | 1.99 | 38.00 | 9.02 | 12.00 | 9055240019900 | |
| 0.0787 | 2.00 | 38.00 | 9.00 | 12.00 | 9055240020000 | |
| 0.0811 | 2.06 | 38.00 | 8.91 | 12.00 | 9055240020600 | |
| 0.0819 | 2.08 | 38.00 | 8.88 | 12.00 | 9055240020800 | |
| 0.0827 | 2.10 | 38.00 | 8.85 | 12.00 | 9055240021000 | |
| 0.0858 | 2.18 | 40.00 | 9.73 | 13.00 | 9055240021800 | |
| 0.0866 | 2.20 | 40.00 | 9.70 | 13.00 | 9055240022000 | |
| 0.0890 | 2.26 | 40.00 | 9.61 | 13.00 | 9055240022600 | |
| 0.0906 | 2.30 | 40.00 | 9.55 | 13.00 | 9055240023000 | |
| 0.0933 | 2.37 | 43.00 | 10.45 | 14.00 | 9055240023700 | |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9055240023800 |
| 0.0945 | 2.40 | 43.00 | 10.40 | 14.00 | 9055240024000 | |
| 0.0961 | 2.44 | 43.00 | 10.34 | 14.00 | 9055240024400 | |
| 0.0980 | 2.49 | 43.00 | 10.27 | 14.00 | 9055240024900 | |
| 0.0984 | 2.50 | 43.00 | 10.25 | 14.00 | 9055240025000 | |
| 0.0996 | 2.53 | 43.00 | 10.21 | 14.00 | 9055240025300 | |
| 0.1016 | 2.58 | 43.00 | 10.13 | 14.00 | 9055240025800 | |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.1024 | 2.60 | 43.00 | 10.10 | 14.00 | 9055240026000 | |
| 0.1039 | 2.64 | 43.00 | 10.04 | 14.00 | 9055240026400 | |
| 0.1063 | 2.70 | 46.00 | 11.95 | 16.00 | 9055240027000 | |
| 0.1067 | 2.71 | 46.00 | 11.94 | 16.00 | 9055240027100 | |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9055240027800 |
| 0.1098 | 2.79 | 46.00 | 11.82 | 16.00 | 9055240027900 | |
| 0.1102 | 2.80 | 46.00 | 11.80 | 16.00 | 9055240028000 | |
| 0.1110 | 2.82 | 46.00 | 11.77 | 16.00 | 9055240028200 | |
| 0.1130 | 2.87 | 46.00 | 11.70 | 16.00 | 9055240028700 | |
| 0.1142 | 2.90 | 46.00 | 11.65 | 16.00 | 9055240029000 | |
| 0.1161 | 2.95 | 46.00 | 11.58 | 16.00 | 9055240029500 | |
| 0.1181 | 3.00 | 46.00 | 11.50 | 16.00 | 9055240030000 | |
| 0.1201 | 3.05 | 49.00 | 13.43 | 18.00 | 9055240030500 | |
| 0.1220 | 3.10 | 49.00 | 13.35 | 18.00 | 9055240031000 | |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9055240031700 |
| 0.1260 | 3.20 | 49.00 | 13.20 | 18.00 | 9055240032000 | |
| 0.1283 | 3.26 | 49.00 | 13.11 | 18.00 | 9055240032600 | |
| 0.1299 | 3.30 | 49.00 | 13.05 | 18.00 | 9055240033000 | |
| 0.1339 | 3.40 | 52.00 | 14.90 | 20.00 | 9055240034000 | |
| 0.1358 | 3.45 | 52.00 | 14.83 | 20.00 | 9055240034500 | |
| 0.1378 | 3.50 | 52.00 | 14.75 | 20.00 | 9055240035000 | |
| 0.1406 | 9/64 #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9055240035700 |
| 0.1417 | 3.60 | 52.00 | 14.60 | 20.00 | 9055240036000 | |
| 0.1441 | 3.66 | 52.00 | 14.51 | 20.00 | 9055240036600 | |
| 0.1457 | 3.70 | 52.00 | 14.45 | 20.00 | 9055240037000 | |
| 0.1469 | 3.73 | 52.00 | 14.41 | 20.00 | 9055240037300 | |
| 0.1496 | 3.80 | 55.00 | 16.30 | 22.00 | 9055240038000 | |
| 0.1520 | 3.86 | 55.00 | 16.21 | 22.00 | 9055240038600 | |
| 0.1535 | 3.90 | 55.00 | 16.15 | 22.00 | 9055240039000 | |
| 0.1539 | 3.91 | 55.00 | 16.14 | 22.00 | 9055240039100 | |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9055240039700 |
| 0.1571 | 3.99 | 55.00 | 16.02 | 22.00 | 9055240039900 | |
| 0.1575 | 4.00 | 55.00 | 16.00 | 22.00 | 9055240040000 | |
| 0.1591 | 4.04 | 55.00 | 15.94 | 22.00 | 9055240040400 | |
| 0.1610 | 4.09 | 55.00 | 15.87 | 22.00 | 9055240040900 | |
| 0.1614 | 4.10 | 55.00 | 15.85 | 22.00 | 9055240041000 | |
| 0.1654 | 4.20 | 55.00 | 15.70 | 22.00 | 9055240042000 | |
| 0.1661 | 4.22 | 55.00 | 15.67 | 22.00 | 9055240042200 | |
| 0.1693 | 4.30 | 58.00 | 17.55 | 24.00 | 9055240043000 | |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9055240043700 |
| 0.1728 | 4.39 | 58.00 | 17.42 | 24.00 | 9055240043900 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9055240044000 |
| 0.1772 | | 4.50 | 58.00 | 17.25 | 24.00 | 9055240045000 |
| 0.1799 | | 4.57 | 58.00 | 17.15 | 24.00 | 9055240045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9055240046000 |
| 0.1819 | | 4.62 | 58.00 | 17.07 | 24.00 | 9055240046200 |
| 0.1850 | | 4.70 | 58.00 | 16.95 | 24.00 | 9055240047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9055240047600 |
| 0.1890 | | 4.80 | 62.00 | 18.80 | 26.00 | 9055240048000 |
| 0.1909 | | 4.85 | 62.00 | 18.73 | 26.00 | 9055240048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9055240049000 |
| 0.1937 | | 4.92 | 62.00 | 18.62 | 26.00 | 9055240049200 |
| 0.1961 | | 4.98 | 62.00 | 18.53 | 26.00 | 9055240049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9055240050000 |
| 0.1992 | | 5.06 | 62.00 | 18.41 | 26.00 | 9055240050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9055240051000 |
| 0.2012 | | 5.11 | 62.00 | 18.34 | 26.00 | 9055240051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9055240051600 |
| 0.2039 | | 5.18 | 62.00 | 18.23 | 26.00 | 9055240051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9055240052000 |
| 0.2055 | | 5.22 | 62.00 | 18.17 | 26.00 | 9055240052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9055240053000 |
| 0.2091 | | 5.31 | 66.00 | 20.04 | 28.00 | 9055240053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9055240054000 |
| 0.2130 | | 5.41 | 66.00 | 19.89 | 28.00 | 9055240054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9055240055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9055240055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9055240056000 |
| 0.2209 | | 5.61 | 66.00 | 19.59 | 28.00 | 9055240056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9055240057000 |
| 0.2280 | | 5.79 | 66.00 | 19.32 | 28.00 | 9055240057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9055240058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9055240059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9055240059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9055240059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9055240060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9055240060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9055240061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9055240061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9055240062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9055240062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9055240063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9055240063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9055240064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9055240065000 |
| 0.2571 | F | 6.53 | 70.00 | 21.21 | 31.00 | 9055240065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9055240066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9055240066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9055240067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9055240067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9055240068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9055240069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9055240070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9055240070300 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9055240071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9055240071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9055240072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9055240073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9055240073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9055240074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9055240074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9055240075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9055240075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9055240076000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9055240076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9055240077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9055240078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9055240079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9055240079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9055240080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9055240080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9055240081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9055240082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9055240083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9055240083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9055240084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9055240084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9055240085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9055240086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9055240086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9055240087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9055240087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9055240088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9055240088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9055240089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9055240090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9055240090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9055240091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9055240091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9055240092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9055240093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9055240093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9055240094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9055240095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9055240095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9055240095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9055240096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9055240097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9055240098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9055240099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9055240099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9055240100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9055240100800 |
| 0.3976 | | 10.10 | 89.00 | 27.85 | 43.00 | 9055240101000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9055240102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9055240102600 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9055240103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9055240103200 |
| 0.4094 | | 10.40 | 89.00 | 27.40 | 43.00 | 9055240104000 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9055240104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9055240105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9055240107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9055240110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9055240111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9055240115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9055240115100 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9055240119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9055240120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9055240123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9055240125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9055240127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9055240130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9055240131000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9055240134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9055240135000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9055240140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9055240142900 |

Stub Length



Tool material

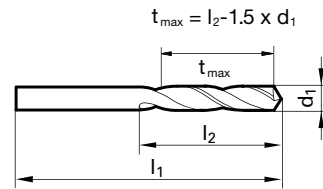
HSCO

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 1.000 • facet split point • Co-alloyed high speed steel • low feed force required • low torque required • for universal application |
| M | Stainless steel | ● | |
| K | Cast iron | ● | alloyed/unalloyed steels up to 800 N/mm ² • cold/hot work steels • antifriction bearing steels • non-ferrous metals • cast materials • stainless steels • plastics |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 574

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | 1.00 | 26.00 | 4.50 | 6.00 | 9055200010000 | |
| 0.0402 | 1.02 | 26.00 | 4.47 | 6.00 | 9055200010200 | |
| 0.0409 | 1.04 | 26.00 | 4.44 | 6.00 | 9055200010400 | |
| 0.0421 | 1.07 | 28.00 | 5.40 | 7.00 | 9055200010700 | |
| 0.0429 | 1.09 | 28.00 | 5.37 | 7.00 | 9055200010900 | |
| 0.0433 | 1.10 | 28.00 | 5.35 | 7.00 | 9055200011000 | |
| 0.0465 | 1.18 | 28.00 | 5.23 | 7.00 | 9055200011800 | |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9055200011900 |
| 0.0472 | 1.20 | 30.00 | 6.20 | 8.00 | 9055200012000 | |
| 0.0512 | 1.30 | 30.00 | 6.05 | 8.00 | 9055200013000 | |
| 0.0520 | 1.32 | 30.00 | 6.02 | 8.00 | 9055200013200 | |
| 0.0551 | 1.40 | 32.00 | 6.90 | 9.00 | 9055200014000 | |
| 0.0591 | 1.50 | 32.00 | 6.75 | 9.00 | 9055200015000 | |
| 0.0594 | 1.51 | 34.00 | 7.74 | 10.00 | 9055200015100 | |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9055200015900 |
| 0.0630 | 1.60 | 34.00 | 7.60 | 10.00 | 9055200016000 | |
| 0.0634 | 1.61 | 34.00 | 7.59 | 10.00 | 9055200016100 | |
| 0.0669 | 1.70 | 34.00 | 7.45 | 10.00 | 9055200017000 | |
| 0.0701 | 1.78 | 36.00 | 8.33 | 11.00 | 9055200017800 | |
| 0.0709 | 1.80 | 36.00 | 8.30 | 11.00 | 9055200018000 | |
| 0.0728 | 1.85 | 36.00 | 8.23 | 11.00 | 9055200018500 | |
| 0.0748 | 1.90 | 36.00 | 8.15 | 11.00 | 9055200019000 | |
| 0.0760 | 1.93 | 38.00 | 9.11 | 12.00 | 9055200019300 | |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9055200019800 |
| 0.0783 | 1.99 | 38.00 | 9.02 | 12.00 | 9055200019900 | |
| 0.0787 | 2.00 | 38.00 | 9.00 | 12.00 | 9055200020000 | |
| 0.0811 | 2.06 | 38.00 | 8.91 | 12.00 | 9055200020600 | |
| 0.0819 | 2.08 | 38.00 | 8.88 | 12.00 | 9055200020800 | |
| 0.0827 | 2.10 | 38.00 | 8.85 | 12.00 | 9055200021000 | |
| 0.0858 | 2.18 | 40.00 | 9.73 | 13.00 | 9055200021800 | |
| 0.0866 | 2.20 | 40.00 | 9.70 | 13.00 | 9055200022000 | |
| 0.0890 | 2.26 | 40.00 | 9.61 | 13.00 | 9055200022600 | |
| 0.0906 | 2.30 | 40.00 | 9.55 | 13.00 | 9055200023000 | |
| 0.0933 | 2.37 | 43.00 | 10.45 | 14.00 | 9055200023700 | |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9055200023800 |
| 0.0945 | 2.40 | 43.00 | 10.40 | 14.00 | 9055200024000 | |
| 0.0961 | 2.44 | 43.00 | 10.34 | 14.00 | 9055200024400 | |
| 0.0980 | 2.49 | 43.00 | 10.27 | 14.00 | 9055200024900 | |
| 0.0984 | 2.50 | 43.00 | 10.25 | 14.00 | 9055200025000 | |
| 0.0996 | 2.53 | 43.00 | 10.21 | 14.00 | 9055200025300 | |
| 0.1016 | 2.58 | 43.00 | 10.13 | 14.00 | 9055200025800 | |
| 0.1024 | 2.60 | 43.00 | 10.10 | 14.00 | 9055200026000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1039 | | 2.64 | 43.00 | 10.04 | 14.00 | 9055200026400 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9055200027000 |
| 0.1067 | | 2.71 | 46.00 | 11.94 | 16.00 | 9055200027100 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9055200027800 |
| 0.1098 | | 2.79 | 46.00 | 11.82 | 16.00 | 9055200027900 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9055200028000 |
| 0.1110 | | 2.82 | 46.00 | 11.77 | 16.00 | 9055200028200 |
| 0.1130 | | 2.87 | 46.00 | 11.70 | 16.00 | 9055200028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9055200029000 |
| 0.1161 | | 2.95 | 46.00 | 11.58 | 16.00 | 9055200029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9055200030000 |
| 0.1201 | | 3.05 | 49.00 | 13.43 | 18.00 | 9055200030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9055200031000 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9055200031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9055200032000 |
| 0.1283 | | 3.26 | 49.00 | 13.11 | 18.00 | 9055200032600 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9055200033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9055200034000 |
| 0.1358 | | 3.45 | 52.00 | 14.83 | 20.00 | 9055200034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9055200035000 |
| 0.1406 | 9/64 #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9055200035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9055200036000 |
| 0.1441 | | 3.66 | 52.00 | 14.51 | 20.00 | 9055200036600 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9055200037000 |
| 0.1469 | | 3.73 | 52.00 | 14.41 | 20.00 | 9055200037300 |
| 0.1496 | | 3.80 | 55.00 | 16.30 | 22.00 | 9055200038000 |
| 0.1520 | | 3.86 | 55.00 | 16.21 | 22.00 | 9055200038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9055200039000 |
| 0.1539 | | 3.91 | 55.00 | 16.14 | 22.00 | 9055200039100 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9055200039700 |
| 0.1571 | | 3.99 | 55.00 | 16.02 | 22.00 | 9055200039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9055200040000 |
| 0.1591 | | 4.04 | 55.00 | 15.94 | 22.00 | 9055200040400 |
| 0.1610 | | 4.09 | 55.00 | 15.87 | 22.00 | 9055200040900 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9055200041000 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9055200042000 |
| 0.1661 | | 4.22 | 55.00 | 15.67 | 22.00 | 9055200042200 |
| 0.1693 | | 4.30 | 58.00 | 17.55 | 24.00 | 9055200043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9055200043700 |
| 0.1728 | | 4.39 | 58.00 | 17.42 | 24.00 | 9055200043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9055200044000 |
| 0.1772 | | 4.50 | 58.00 | 17.25 | 24.00 | 9055200045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | | 4.57 | 58.00 | 17.15 | 24.00 | 9055200045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9055200046000 |
| 0.1819 | | 4.62 | 58.00 | 17.07 | 24.00 | 9055200046200 |
| 0.1850 | | 4.70 | 58.00 | 16.95 | 24.00 | 9055200047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9055200047600 |
| 0.1890 | | 4.80 | 62.00 | 18.80 | 26.00 | 9055200048000 |
| 0.1909 | | 4.85 | 62.00 | 18.73 | 26.00 | 9055200048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9055200049000 |
| 0.1937 | | 4.92 | 62.00 | 18.62 | 26.00 | 9055200049200 |
| 0.1961 | | 4.98 | 62.00 | 18.53 | 26.00 | 9055200049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9055200050000 |
| 0.1992 | | 5.06 | 62.00 | 18.41 | 26.00 | 9055200050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9055200051000 |
| 0.2012 | | 5.11 | 62.00 | 18.34 | 26.00 | 9055200051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9055200051600 |
| 0.2039 | | 5.18 | 62.00 | 18.23 | 26.00 | 9055200051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9055200052000 |
| 0.2055 | | 5.22 | 62.00 | 18.17 | 26.00 | 9055200052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9055200053000 |
| 0.2091 | | 5.31 | 66.00 | 20.04 | 28.00 | 9055200053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9055200054000 |
| 0.2130 | | 5.41 | 66.00 | 19.89 | 28.00 | 9055200054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9055200055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9055200055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9055200056000 |
| 0.2209 | | 5.61 | 66.00 | 19.59 | 28.00 | 9055200056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9055200057000 |
| 0.2280 | | 5.79 | 66.00 | 19.32 | 28.00 | 9055200057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9055200058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9055200059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9055200059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9055200059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9055200060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9055200060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9055200061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9055200061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9055200062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9055200062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9055200063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9055200063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9055200064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9055200065000 |
| 0.2571 | F | 6.53 | 70.00 | 21.21 | 31.00 | 9055200065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9055200066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9055200066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9055200067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9055200067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9055200068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9055200069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9055200070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9055200070300 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9055200071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9055200071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9055200072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9055200073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9055200073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9055200074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9055200074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9055200075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9055200075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9055200076000 |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9055200076700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9055200077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9055200078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9055200079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9055200079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9055200080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9055200080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9055200081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9055200082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9055200083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9055200083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9055200084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9055200084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9055200085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9055200086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9055200086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9055200087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9055200087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9055200088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9055200088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9055200089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9055200090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9055200090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9055200091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9055200091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9055200092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9055200093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9055200093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9055200094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9055200095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9055200095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9055200095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9055200096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9055200097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9055200098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9055200099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9055200099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9055200100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9055200100800 |
| 0.3976 | | 10.10 | 89.00 | 27.85 | 43.00 | 9055200101000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9055200102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9055200102600 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9055200103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9055200103200 |
| 0.4094 | | 10.40 | 89.00 | 27.40 | 43.00 | 9055200104000 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9055200104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9055200105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9055200107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9055200110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9055200111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9055200115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9055200115100 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9055200119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9055200120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9055200123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9055200125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9055200127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9055200130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9055200131000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9055200134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9055200135000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9055200140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9055200142900 |

Stub Length



Tool material

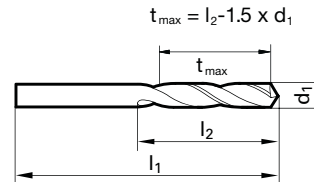
HSS-E-PM

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone • PM-Co-alloyed high speed steel • especially high rigidity • especially high wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ○ | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | high-alloyed steels • heat treatable and case hardened steels • cast iron, brass, bronze |

●=Optimal
○=Limited



Speeds and feeds information on pg. 574

Shank diameter = cut diameter

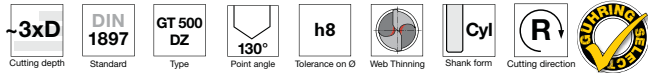
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 9055210010000 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9055210011000 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9055210012000 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9055210013000 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9055210014000 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9055210015000 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9055210015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9055210016000 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9055210017000 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9055210018000 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9055210019000 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9055210019800 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9055210020000 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9055210021000 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9055210022000 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9055210023000 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9055210023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9055210024000 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9055210025000 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9055210026000 |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9055210027000 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9055210027800 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9055210028000 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9055210029000 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9055210030000 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9055210031000 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9055210031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9055210032000 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9055210033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9055210034000 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9055210035000 |
| 0.1406 | 9/64 #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9055210035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9055210036000 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9055210037000 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9055210038000 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9055210039000 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9055210039700 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9055210040000 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9055210041000 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9055210042000 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9055210043000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9055210043700 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9055210044000 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9055210045000 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9055210046000 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9055210047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9055210047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9055210048000 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9055210049000 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9055210050000 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9055210051000 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9055210051600 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9055210052000 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9055210053000 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9055210054000 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9055210055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9055210055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9055210056000 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9055210057000 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9055210058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9055210059000 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9055210059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9055210060000 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9055210061000 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9055210062000 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9055210063000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 21.48 | 31.00 | 9055210063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9055210064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9055210065000 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9055210066000 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9055210067000 |
| 0.2657 | 17/64 H | 6.75 | 74.00 | 23.88 | 34.00 | 9055210067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9055210068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9055210069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9055210070000 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9055210071000 |
| 0.2811 | 9/32 K | 7.14 | 74.00 | 23.29 | 34.00 | 9055210071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9055210072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9055210073000 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9055210074000 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9055210075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9055210075400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9055210076000 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9055210077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9055210078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9055210079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9055210079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9055210080000 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9055210081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9055210082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9055210083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9055210083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9055210084000 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9055210085000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9055210087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9055210088000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9055210090000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9055210091300 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9055210093000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9055210095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9055210095200 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9055210098000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9055210099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9055210100000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9055210102000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9055210103200 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9055210105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9055210107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9055210110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9055210111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9055210115000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9055210119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9055210120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9055210123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9055210125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9055210127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9055210130000 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9055210135000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9055210140000 |

Stub Length



Tool material

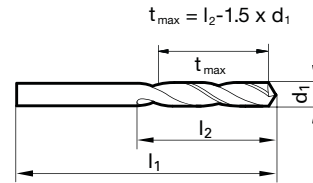
HSS-E-PM

Surface



- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \text{Ø } 1.000$ • relieved cone point geometry with special type B web thinning • PM-Co-alloyed high speed steel • especially high rigidity • especially high wear resistance |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | high-tensile materials, high-alloyed steels • heat treatable and case hardened steels • cast iron, brass, bronze |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited

Stub Length



Speeds and feeds information on pg. 515

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | | 1.00 | 26.00 | 4.50 | 6.00 | 900515001000 |
| 0.0402 | #60 | 1.02 | 26.00 | 4.47 | 6.00 | 9005150010200 |
| 0.0409 | #59 | 1.04 | 26.00 | 4.44 | 6.00 | 9005150010400 |
| 0.0421 | #58 | 1.07 | 28.00 | 5.40 | 7.00 | 9005150010700 |
| 0.0429 | #57 | 1.09 | 28.00 | 5.37 | 7.00 | 9005150010900 |
| 0.0433 | | 1.10 | 28.00 | 5.35 | 7.00 | 9005150011000 |
| 0.0465 | #56 | 1.18 | 28.00 | 5.23 | 7.00 | 9005150011800 |
| 0.0469 | 3/64 | 1.19 | 30.00 | 6.22 | 8.00 | 9005150011900 |
| 0.0472 | | 1.20 | 30.00 | 6.20 | 8.00 | 9005150012000 |
| 0.0512 | | 1.30 | 30.00 | 6.05 | 8.00 | 9005150013000 |
| 0.0520 | #55 | 1.32 | 30.00 | 6.02 | 8.00 | 9005150013200 |
| 0.0551 | #54 | 1.40 | 32.00 | 6.90 | 9.00 | 9005150014000 |
| 0.0591 | | 1.50 | 32.00 | 6.75 | 9.00 | 9005150015000 |
| 0.0594 | #53 | 1.51 | 34.00 | 7.74 | 10.00 | 9005150015100 |
| 0.0626 | 1/16 | 1.59 | 34.00 | 7.62 | 10.00 | 9005150015900 |
| 0.0630 | | 1.60 | 34.00 | 7.60 | 10.00 | 9005150016000 |
| 0.0634 | #52 | 1.61 | 34.00 | 7.59 | 10.00 | 9005150016100 |
| 0.0669 | #51 | 1.70 | 34.00 | 7.45 | 10.00 | 9005150017000 |
| 0.0701 | #50 | 1.78 | 36.00 | 8.33 | 11.00 | 9005150017800 |
| 0.0709 | | 1.80 | 36.00 | 8.30 | 11.00 | 9005150018000 |
| 0.0728 | #49 | 1.85 | 36.00 | 8.23 | 11.00 | 9005150018500 |
| 0.0748 | | 1.90 | 36.00 | 8.15 | 11.00 | 9005150019000 |
| 0.0760 | #48 | 1.93 | 38.00 | 9.11 | 12.00 | 9005150019300 |
| 0.0780 | 5/64 | 1.98 | 38.00 | 9.03 | 12.00 | 9005150019800 |
| 0.0783 | #47 | 1.99 | 38.00 | 9.02 | 12.00 | 9005150019900 |
| 0.0787 | | 2.00 | 38.00 | 9.00 | 12.00 | 9005150020000 |
| 0.0811 | #46 | 2.06 | 38.00 | 8.91 | 12.00 | 9005150020600 |
| 0.0819 | #45 | 2.08 | 38.00 | 8.88 | 12.00 | 9005150020800 |
| 0.0827 | | 2.10 | 38.00 | 8.85 | 12.00 | 9005150021000 |
| 0.0858 | #44 | 2.18 | 40.00 | 9.73 | 13.00 | 9005150021800 |
| 0.0866 | | 2.20 | 40.00 | 9.70 | 13.00 | 9005150022000 |
| 0.0890 | #43 | 2.26 | 40.00 | 9.61 | 13.00 | 9005150022600 |
| 0.0906 | | 2.30 | 40.00 | 9.55 | 13.00 | 9005150023000 |
| 0.0933 | #42 | 2.37 | 43.00 | 10.45 | 14.00 | 9005150023700 |
| 0.0937 | 3/32 | 2.38 | 43.00 | 10.43 | 14.00 | 9005150023800 |
| 0.0945 | | 2.40 | 43.00 | 10.40 | 14.00 | 9005150024000 |
| 0.0961 | #41 | 2.44 | 43.00 | 10.34 | 14.00 | 9005150024400 |
| 0.0980 | #40 | 2.49 | 43.00 | 10.27 | 14.00 | 9005150024900 |
| 0.0984 | | 2.50 | 43.00 | 10.25 | 14.00 | 9005150025000 |
| 0.0996 | #39 | 2.53 | 43.00 | 10.21 | 14.00 | 9005150025300 |
| 0.1016 | #38 | 2.58 | 43.00 | 10.13 | 14.00 | 9005150025800 |
| 0.1024 | | 2.60 | 43.00 | 10.10 | 14.00 | 9005150026000 |
| 0.1039 | #37 | 2.64 | 43.00 | 10.04 | 14.00 | 9005150026400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.1063 | | 2.70 | 46.00 | 11.95 | 16.00 | 9005150027000 |
| 0.1067 | #36 | 2.71 | 46.00 | 11.94 | 16.00 | 9005150027100 |
| 0.1094 | 7/64 | 2.78 | 46.00 | 11.83 | 16.00 | 9005150027800 |
| 0.1098 | #35 | 2.79 | 46.00 | 11.82 | 16.00 | 9005150027900 |
| 0.1102 | | 2.80 | 46.00 | 11.80 | 16.00 | 9005150028000 |
| 0.1110 | #34 | 2.82 | 46.00 | 11.77 | 16.00 | 9005150028200 |
| 0.1130 | #33 | 2.87 | 46.00 | 11.70 | 16.00 | 9005150028700 |
| 0.1142 | | 2.90 | 46.00 | 11.65 | 16.00 | 9005150029000 |
| 0.1161 | #32 | 2.95 | 46.00 | 11.58 | 16.00 | 9005150029500 |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9005150030000 |
| 0.1201 | #31 | 3.05 | 49.00 | 13.43 | 18.00 | 9005150030500 |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9005150031000 |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9005150031700 |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9005150032000 |
| 0.1283 | #30 | 3.26 | 49.00 | 13.11 | 18.00 | 9005150032600 |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9005150033000 |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9005150034000 |
| 0.1358 | #29 | 3.45 | 52.00 | 14.83 | 20.00 | 9005150034500 |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9005150035000 |
| 0.1406 | 9/64 | 3.57 | 52.00 | 14.65 | 20.00 | 9005150035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9005150036000 |
| 0.1441 | #27 | 3.66 | 52.00 | 14.51 | 20.00 | 9005150036600 |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9005150037000 |
| 0.1469 | #26 | 3.73 | 52.00 | 14.41 | 20.00 | 9005150037300 |
| 0.1496 | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9005150038000 |
| 0.1520 | #24 | 3.86 | 55.00 | 16.21 | 22.00 | 9005150038600 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9005150039000 |
| 0.1539 | #23 | 3.91 | 55.00 | 16.14 | 22.00 | 9005150039100 |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9005150039700 |
| 0.1571 | #22 | 3.99 | 55.00 | 16.02 | 22.00 | 9005150039900 |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9005150040000 |
| 0.1591 | #21 | 4.04 | 55.00 | 15.94 | 22.00 | 9005150040400 |
| 0.1610 | #20 | 4.09 | 55.00 | 15.87 | 22.00 | 9005150040900 |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9005150041000 |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9005150042000 |
| 0.1661 | #19 | 4.22 | 55.00 | 15.67 | 22.00 | 9005150042200 |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9005150043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9005150043700 |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9005150043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9005150044000 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9005150045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9005150045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9005150046000 |

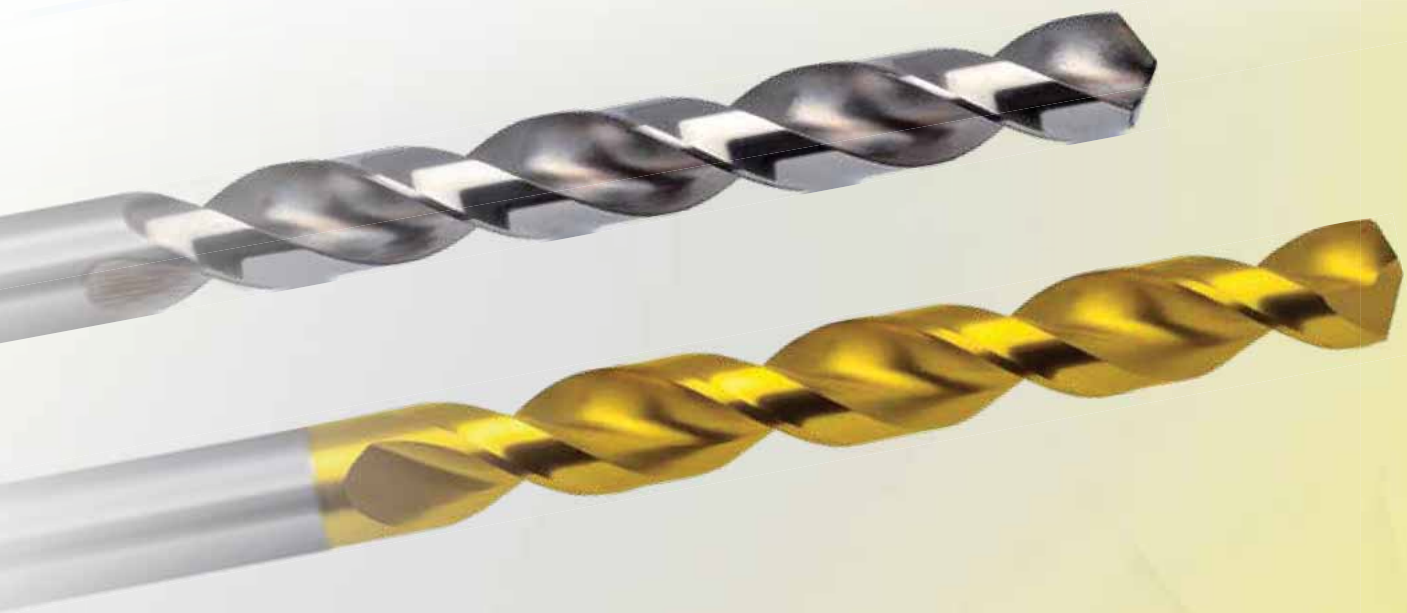
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9005150046200 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9005150047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9005150047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9005150048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9005150048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9005150049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9005150049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9005150049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9005150050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9005150050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9005150051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9005150051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9005150051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9005150051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9005150052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9005150052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9005150053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9005150053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9005150054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9005150054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9005150055000 |
| 0.2185 | | 5.55 | 66.00 | 19.68 | 28.00 | 9005150055500 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9005150055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9005150056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9005150056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9005150057000 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9005150057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9005150058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9005150059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9005150059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9005150059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9005150060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9005150060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9005150061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9005150061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9005150062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9005150062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9005150063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9005150063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9005150064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9005150065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9005150065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9005150066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9005150066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9005150067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9005150067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9005150068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9005150069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9005150070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9005150070300 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9005150071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9005150071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9005150072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9005150073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9005150073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9005150074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9005150074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9005150075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9005150075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9005150076000 |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9005150076700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9005150077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9005150078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9005150079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9005150079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9005150080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9005150080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9005150081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9005150082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9005150083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9005150083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9005150084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9005150084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9005150085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9005150086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9005150086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9005150087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9005150087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9005150088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9005150088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9005150089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9005150090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9005150090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9005150091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9005150091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9005150092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9005150093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9005150093400 |
| 0.3681 | | 9.35 | 84.00 | 25.98 | 40.00 | 9005150093500 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9005150094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9005150095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9005150095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9005150095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9005150096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9005150097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9005150098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9005150099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9005150099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9005150100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9005150100800 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9005150102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9005150102600 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9005150103200 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9005150104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9005150105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9005150107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9005150110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9005150111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9005150115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9005150115100 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9005150118000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9005150119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9005150120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9005150123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9005150125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9005150127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9005150130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 31.35 | 51.00 | 9005150131000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9005150134900 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9005150135000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9005150140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9005150142900 |

Stub Length



JOBBER LENGTH HSS,
HSCO, HSS-E-PM DRILLS





Tool material

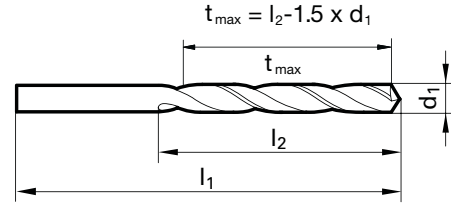
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 1.000$ • relieved cone |
| M | Stainless steel | | |
| K | Cast iron | ● | alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 496

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0079 | #92 | 0.200 | 19.00 | 2.20 | 2.50 | 9002050002000 |
| 0.0083 | #91 | 0.210 | 19.00 | 2.19 | 2.50 | 9002050002100 |
| 0.0087 | #90 | 0.220 | 19.00 | 2.17 | 2.50 | 9002050002200 |
| 0.0091 | #89 | 0.230 | 19.00 | 2.16 | 2.50 | 9002050002300 |
| 0.0094 | #88 | 0.240 | 19.00 | 2.14 | 2.50 | 9002050002400 |
| 0.0098 | #87 | 0.250 | 19.00 | 2.63 | 3.00 | 9002050002500 |
| 0.0102 | | 0.260 | 19.00 | 2.61 | 3.00 | 9002050002600 |
| 0.0106 | #86 | 0.270 | 19.00 | 2.60 | 3.00 | 9002050002700 |
| 0.0110 | #85 | 0.280 | 19.00 | 2.58 | 3.00 | 9002050002800 |
| 0.0114 | #84 | 0.290 | 19.00 | 2.57 | 3.00 | 9002050002900 |
| 0.0118 | | 0.300 | 19.00 | 2.55 | 3.00 | 9002050003000 |
| 0.0122 | #83 | 0.310 | 19.00 | 3.54 | 4.00 | 9002050003100 |
| 0.0126 | #82 | 0.320 | 19.00 | 3.52 | 4.00 | 9002050003200 |
| 0.0130 | #81 | 0.330 | 19.00 | 3.51 | 4.00 | 9002050003300 |
| 0.0134 | #80 | 0.340 | 19.00 | 3.49 | 4.00 | 9002050003400 |
| 0.0138 | | 0.350 | 19.00 | 3.48 | 4.00 | 9002050003500 |
| 0.0142 | | 0.360 | 19.00 | 3.46 | 4.00 | 9002050003600 |
| 0.0146 | #79 | 0.370 | 19.00 | 3.45 | 4.00 | 9002050003700 |
| 0.0150 | | 0.380 | 19.00 | 3.43 | 4.00 | 9002050003800 |
| 0.0154 | | 0.390 | 20.00 | 4.42 | 5.00 | 9002050003900 |
| 0.0157 | 1/64 | 0.400 | 20.00 | 4.40 | 5.00 | 9002050004000 |
| 0.0161 | #78 | 0.410 | 20.00 | 4.39 | 5.00 | 9002050004100 |
| 0.0165 | | 0.420 | 20.00 | 4.37 | 5.00 | 9002050004200 |
| 0.0169 | | 0.430 | 20.00 | 4.36 | 5.00 | 9002050004300 |
| 0.0173 | | 0.440 | 20.00 | 4.34 | 5.00 | 9002050004400 |
| 0.0177 | | 0.450 | 20.00 | 4.33 | 5.00 | 9002050004500 |
| 0.0181 | #77 | 0.460 | 20.00 | 4.31 | 5.00 | 9002050004600 |
| 0.0185 | | 0.470 | 20.00 | 4.30 | 5.00 | 9002050004700 |
| 0.0189 | | 0.480 | 20.00 | 4.28 | 5.00 | 9002050004800 |
| 0.0193 | | 0.490 | 22.00 | 5.27 | 6.00 | 9002050004900 |
| 0.0197 | | 0.500 | 22.00 | 5.25 | 6.00 | 9002050005000 |
| 0.0201 | #76 | 0.510 | 22.00 | 5.24 | 6.00 | 9002050005100 |
| 0.0205 | | 0.520 | 22.00 | 5.22 | 6.00 | 9002050005200 |
| 0.0209 | #75 | 0.530 | 22.00 | 5.21 | 6.00 | 9002050005300 |
| 0.0213 | | 0.540 | 24.00 | 6.19 | 7.00 | 9002050005400 |
| 0.0217 | | 0.550 | 24.00 | 6.18 | 7.00 | 9002050005500 |
| 0.0220 | | 0.560 | 24.00 | 6.16 | 7.00 | 9002050005600 |
| 0.0224 | #74 | 0.570 | 24.00 | 6.15 | 7.00 | 9002050005700 |
| 0.0228 | | 0.580 | 24.00 | 6.13 | 7.00 | 9002050005800 |
| 0.0232 | | 0.590 | 24.00 | 6.12 | 7.00 | 9002050005900 |
| 0.0236 | | 0.600 | 24.00 | 6.10 | 7.00 | 9002050006000 |
| 0.0240 | #73 | 0.610 | 26.00 | 7.09 | 8.00 | 9002050006100 |
| 0.0244 | | 0.620 | 26.00 | 7.07 | 8.00 | 9002050006200 |
| 0.0248 | | 0.630 | 26.00 | 7.06 | 8.00 | 9002050006300 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0252 | #72 | 0.640 | 26.00 | 7.04 | 8.00 | 9002050006400 |
| 0.0256 | | 0.650 | 26.00 | 7.03 | 8.00 | 9002050006500 |
| 0.0260 | #71 | 0.660 | 26.00 | 7.01 | 8.00 | 9002050006600 |
| 0.0264 | | 0.670 | 26.00 | 7.00 | 8.00 | 9002050006700 |
| 0.0268 | | 0.680 | 28.00 | 7.98 | 9.00 | 9002050006800 |
| 0.0272 | | 0.690 | 28.00 | 7.97 | 9.00 | 9002050006900 |
| 0.0276 | | 0.700 | 28.00 | 7.95 | 9.00 | 9002050007000 |
| 0.0280 | #70 | 0.710 | 28.00 | 7.94 | 9.00 | 9002050007100 |
| 0.0283 | | 0.720 | 28.00 | 7.92 | 9.00 | 9002050007200 |
| 0.0287 | | 0.730 | 28.00 | 7.91 | 9.00 | 9002050007300 |
| 0.0291 | #69 | 0.740 | 28.00 | 7.89 | 9.00 | 9002050007400 |
| 0.0295 | | 0.750 | 28.00 | 7.88 | 9.00 | 9002050007500 |
| 0.0299 | | 0.760 | 30.00 | 8.86 | 10.00 | 9002050007600 |
| 0.0303 | | 0.770 | 30.00 | 8.85 | 10.00 | 9002050007700 |
| 0.0307 | | 0.780 | 30.00 | 8.83 | 10.00 | 9002050007800 |
| 0.0311 | 1/32 #68 | 0.790 | 30.00 | 8.82 | 10.00 | 9002050007900 |
| 0.0315 | | 0.800 | 30.00 | 8.80 | 10.00 | 9002050008000 |
| 0.0319 | #67 | 0.810 | 30.00 | 8.79 | 10.00 | 9002050008100 |
| 0.0323 | | 0.820 | 30.00 | 8.77 | 10.00 | 9002050008200 |
| 0.0327 | | 0.830 | 30.00 | 8.76 | 10.00 | 9002050008300 |
| 0.0331 | #66 | 0.840 | 30.00 | 8.74 | 10.00 | 9002050008400 |
| 0.0335 | | 0.850 | 30.00 | 8.73 | 10.00 | 9002050008500 |
| 0.0339 | | 0.860 | 32.00 | 9.71 | 11.00 | 9002050008600 |
| 0.0343 | | 0.870 | 32.00 | 9.70 | 11.00 | 9002050008700 |
| 0.0346 | | 0.880 | 32.00 | 9.68 | 11.00 | 9002050008800 |
| 0.0350 | #65 | 0.890 | 32.00 | 9.67 | 11.00 | 9002050008900 |
| 0.0354 | | 0.900 | 32.00 | 9.65 | 11.00 | 9002050009000 |
| 0.0358 | #64 | 0.910 | 32.00 | 9.64 | 11.00 | 9002050009100 |
| 0.0362 | | 0.920 | 32.00 | 9.62 | 11.00 | 9002050009200 |
| 0.0366 | | 0.930 | 32.00 | 9.61 | 11.00 | 9002050009300 |
| 0.0370 | #63 | 0.940 | 32.00 | 9.59 | 11.00 | 9002050009400 |
| 0.0374 | | 0.950 | 32.00 | 9.58 | 11.00 | 9002050009500 |
| 0.0378 | | 0.960 | 34.00 | 10.56 | 12.00 | 9002050009600 |
| 0.0382 | #62 | 0.970 | 34.00 | 10.55 | 12.00 | 9002050009700 |
| 0.0386 | | 0.980 | 34.00 | 10.53 | 12.00 | 9002050009800 |
| 0.0390 | #61 | 0.990 | 34.00 | 10.52 | 12.00 | 9002050009900 |
| 0.0394 | | 1.000 | 34.00 | 10.50 | 12.00 | 9002050010000 |
| 0.0398 | | 1.010 | 34.00 | 10.49 | 12.00 | 9002050010100 |
| 0.0402 | #60 | 1.020 | 34.00 | 10.47 | 12.00 | 9002050010200 |
| 0.0406 | | 1.030 | 34.00 | 10.46 | 12.00 | 9002050010300 |
| 0.0409 | #59 | 1.040 | 34.00 | 10.44 | 12.00 | 9002050010400 |
| 0.0413 | | 1.050 | 34.00 | 10.43 | 12.00 | 9002050010500 |
| 0.0417 | | 1.060 | 34.00 | 10.41 | 12.00 | 9002050010600 |
| 0.0421 | #58 | 1.070 | 36.00 | 12.40 | 14.00 | 9002050010700 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0425 | | 1.080 | 36.00 | 12.38 | 14.00 | 9002050010800 |
| 0.0429 | #57 | 1.090 | 36.00 | 12.37 | 14.00 | 9002050010900 |
| 0.0433 | | 1.100 | 36.00 | 12.35 | 14.00 | 9002050011000 |
| 0.0437 | | 1.110 | 36.00 | 12.34 | 14.00 | 9002050011100 |
| 0.0441 | | 1.120 | 36.00 | 12.32 | 14.00 | 9002050011200 |
| 0.0445 | | 1.130 | 36.00 | 12.31 | 14.00 | 9002050011300 |
| 0.0449 | | 1.140 | 36.00 | 12.29 | 14.00 | 9002050011400 |
| 0.0453 | | 1.150 | 36.00 | 12.28 | 14.00 | 9002050011500 |
| 0.0457 | | 1.160 | 36.00 | 12.26 | 14.00 | 9002050011600 |
| 0.0461 | | 1.170 | 36.00 | 12.25 | 14.00 | 9002050011700 |
| 0.0465 | #56 | 1.180 | 36.00 | 12.23 | 14.00 | 9002050011800 |
| 0.0469 | 3/64 | 1.190 | 38.00 | 14.22 | 16.00 | 9002050011900 |
| 0.0472 | | 1.200 | 38.00 | 14.20 | 16.00 | 9002050012000 |
| 0.0476 | | 1.210 | 38.00 | 14.19 | 16.00 | 9002050012100 |
| 0.0480 | | 1.220 | 38.00 | 14.17 | 16.00 | 9002050012200 |
| 0.0484 | | 1.230 | 38.00 | 14.16 | 16.00 | 9002050012300 |
| 0.0488 | | 1.240 | 38.00 | 14.14 | 16.00 | 9002050012400 |
| 0.0492 | | 1.250 | 38.00 | 14.13 | 16.00 | 9002050012500 |
| 0.0496 | | 1.260 | 38.00 | 14.11 | 16.00 | 9002050012600 |
| 0.0500 | | 1.270 | 38.00 | 14.10 | 16.00 | 9002050012700 |
| 0.0504 | | 1.280 | 38.00 | 14.08 | 16.00 | 9002050012800 |
| 0.0508 | | 1.290 | 38.00 | 14.07 | 16.00 | 9002050012900 |
| 0.0512 | | 1.300 | 38.00 | 14.05 | 16.00 | 9002050013000 |
| 0.0516 | | 1.310 | 38.00 | 14.04 | 16.00 | 9002050013100 |
| 0.0520 | #55 | 1.320 | 38.00 | 14.02 | 16.00 | 9002050013200 |
| 0.0524 | | 1.330 | 40.00 | 16.01 | 18.00 | 9002050013300 |
| 0.0528 | | 1.340 | 40.00 | 15.99 | 18.00 | 9002050013400 |
| 0.0531 | | 1.350 | 40.00 | 15.98 | 18.00 | 9002050013500 |
| 0.0535 | | 1.360 | 40.00 | 15.96 | 18.00 | 9002050013600 |
| 0.0539 | | 1.370 | 40.00 | 15.95 | 18.00 | 9002050013700 |
| 0.0543 | | 1.380 | 40.00 | 15.93 | 18.00 | 9002050013800 |
| 0.0547 | | 1.390 | 40.00 | 15.92 | 18.00 | 9002050013900 |
| 0.0551 | #54 | 1.400 | 40.00 | 15.90 | 18.00 | 9002050014000 |
| 0.0555 | | 1.410 | 40.00 | 15.89 | 18.00 | 9002050014100 |
| 0.0559 | | 1.420 | 40.00 | 15.87 | 18.00 | 9002050014200 |
| 0.0563 | | 1.430 | 40.00 | 15.86 | 18.00 | 9002050014300 |
| 0.0567 | | 1.440 | 40.00 | 15.84 | 18.00 | 9002050014400 |
| 0.0571 | | 1.450 | 40.00 | 15.83 | 18.00 | 9002050014500 |
| 0.0575 | | 1.460 | 40.00 | 15.81 | 18.00 | 9002050014600 |
| 0.0579 | | 1.470 | 40.00 | 15.80 | 18.00 | 9002050014700 |
| 0.0583 | | 1.480 | 40.00 | 15.78 | 18.00 | 9002050014800 |
| 0.0587 | | 1.490 | 40.00 | 15.77 | 18.00 | 9002050014900 |
| 0.0591 | | 1.500 | 40.00 | 15.75 | 18.00 | 9002050015000 |
| 0.0594 | #53 | 1.510 | 43.00 | 17.74 | 20.00 | 9002050015100 |
| 0.0598 | | 1.520 | 43.00 | 17.72 | 20.00 | 9002050015200 |
| 0.0602 | | 1.530 | 43.00 | 17.71 | 20.00 | 9002050015300 |
| 0.0606 | | 1.540 | 43.00 | 17.69 | 20.00 | 9002050015400 |
| 0.0610 | | 1.550 | 43.00 | 17.68 | 20.00 | 9002050015500 |
| 0.0614 | | 1.560 | 43.00 | 17.66 | 20.00 | 9002050015600 |
| 0.0618 | | 1.570 | 43.00 | 17.65 | 20.00 | 9002050015700 |
| 0.0622 | | 1.580 | 43.00 | 17.63 | 20.00 | 9002050015800 |
| 0.0626 | 1/16 | 1.590 | 43.00 | 17.62 | 20.00 | 9002050015900 |
| 0.0630 | | 1.600 | 43.00 | 17.60 | 20.00 | 9002050016000 |
| 0.0634 | #52 | 1.610 | 43.00 | 17.59 | 20.00 | 9002050016100 |
| 0.0638 | | 1.620 | 43.00 | 17.57 | 20.00 | 9002050016200 |
| 0.0642 | | 1.630 | 43.00 | 17.56 | 20.00 | 9002050016300 |
| 0.0646 | | 1.640 | 43.00 | 17.54 | 20.00 | 9002050016400 |
| 0.0650 | | 1.650 | 43.00 | 17.53 | 20.00 | 9002050016500 |
| 0.0654 | | 1.660 | 43.00 | 17.51 | 20.00 | 9002050016600 |
| 0.0657 | | 1.670 | 43.00 | 17.50 | 20.00 | 9002050016700 |
| 0.0661 | | 1.680 | 43.00 | 17.48 | 20.00 | 9002050016800 |
| 0.0665 | | 1.690 | 43.00 | 17.47 | 20.00 | 9002050016900 |
| 0.0669 | #51 | 1.700 | 43.00 | 17.45 | 20.00 | 9002050017000 |
| 0.0673 | | 1.710 | 46.00 | 19.44 | 22.00 | 9002050017100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0677 | | 1.720 | 46.00 | 19.42 | 22.00 | 9002050017200 |
| 0.0681 | | 1.730 | 46.00 | 19.41 | 22.00 | 9002050017300 |
| 0.0685 | | 1.740 | 46.00 | 19.39 | 22.00 | 9002050017400 |
| 0.0689 | | 1.750 | 46.00 | 19.38 | 22.00 | 9002050017500 |
| 0.0693 | | 1.760 | 46.00 | 19.36 | 22.00 | 9002050017600 |
| 0.0697 | | 1.770 | 46.00 | 19.35 | 22.00 | 9002050017700 |
| 0.0701 | #50 | 1.780 | 46.00 | 19.33 | 22.00 | 9002050017800 |
| 0.0705 | | 1.790 | 46.00 | 19.32 | 22.00 | 9002050017900 |
| 0.0709 | | 1.800 | 46.00 | 19.30 | 22.00 | 9002050018000 |
| 0.0713 | | 1.810 | 46.00 | 19.29 | 22.00 | 9002050018100 |
| 0.0717 | | 1.820 | 46.00 | 19.27 | 22.00 | 9002050018200 |
| 0.0720 | | 1.830 | 46.00 | 19.26 | 22.00 | 9002050018300 |
| 0.0724 | | 1.840 | 46.00 | 19.24 | 22.00 | 9002050018400 |
| 0.0728 | #49 | 1.850 | 46.00 | 19.23 | 22.00 | 9002050018500 |
| 0.0732 | | 1.860 | 46.00 | 19.21 | 22.00 | 9002050018600 |
| 0.0736 | | 1.870 | 46.00 | 19.20 | 22.00 | 9002050018700 |
| 0.0740 | | 1.880 | 46.00 | 19.18 | 22.00 | 9002050018800 |
| 0.0744 | | 1.890 | 46.00 | 19.17 | 22.00 | 9002050018900 |
| 0.0748 | | 1.900 | 46.00 | 19.15 | 22.00 | 9002050019000 |
| 0.0752 | | 1.910 | 49.00 | 21.14 | 24.00 | 9002050019100 |
| 0.0756 | | 1.920 | 49.00 | 21.12 | 24.00 | 9002050019200 |
| 0.0760 | #48 | 1.930 | 49.00 | 21.11 | 24.00 | 9002050019300 |
| 0.0764 | | 1.940 | 49.00 | 21.09 | 24.00 | 9002050019400 |
| 0.0768 | | 1.950 | 49.00 | 21.08 | 24.00 | 9002050019500 |
| 0.0772 | | 1.960 | 49.00 | 21.06 | 24.00 | 9002050019600 |
| 0.0776 | | 1.970 | 49.00 | 21.05 | 24.00 | 9002050019700 |
| 0.0780 | 5/64 | 1.980 | 49.00 | 21.03 | 24.00 | 9002050019800 |
| 0.0783 | #47 | 1.990 | 49.00 | 21.02 | 24.00 | 9002050019900 |
| 0.0787 | | 2.000 | 49.00 | 21.00 | 24.00 | 9002050020000 |
| 0.0795 | | 2.020 | 49.00 | 20.97 | 24.00 | 9002050020200 |
| 0.0799 | | 2.030 | 49.00 | 20.96 | 24.00 | 9002050020300 |
| 0.0807 | | 2.050 | 49.00 | 20.93 | 24.00 | 9002050020500 |
| 0.0811 | #46 | 2.060 | 49.00 | 20.91 | 24.00 | 9002050020600 |
| 0.0815 | | 2.070 | 49.00 | 20.90 | 24.00 | 9002050020700 |
| 0.0819 | #45 | 2.080 | 49.00 | 20.88 | 24.00 | 9002050020800 |
| 0.0823 | | 2.090 | 49.00 | 20.87 | 24.00 | 9002050020900 |
| 0.0827 | | 2.100 | 49.00 | 20.85 | 24.00 | 9002050021000 |
| 0.0831 | | 2.110 | 49.00 | 20.84 | 24.00 | 9002050021100 |
| 0.0839 | | 2.130 | 53.00 | 23.81 | 27.00 | 9002050021300 |
| 0.0843 | | 2.140 | 53.00 | 23.79 | 27.00 | 9002050021400 |
| 0.0846 | | 2.150 | 53.00 | 23.78 | 27.00 | 9002050021500 |
| 0.0854 | | 2.170 | 53.00 | 23.75 | 27.00 | 9002050021700 |
| 0.0858 | #44 | 2.180 | 53.00 | 23.73 | 27.00 | 9002050021800 |
| 0.0866 | | 2.200 | 53.00 | 23.70 | 27.00 | 9002050022000 |
| 0.0882 | | 2.240 | 53.00 | 23.64 | 27.00 | 9002050022400 |
| 0.0886 | | 2.250 | 53.00 | 23.63 | 27.00 | 9002050022500 |
| 0.0890 | #43 | 2.260 | 53.00 | 23.61 | 27.00 | 9002050022600 |
| 0.0894 | | 2.270 | 53.00 | 23.60 | 27.00 | 9002050022700 |
| 0.0902 | | 2.290 | 53.00 | 23.57 | 27.00 | 9002050022900 |
| 0.0906 | | 2.300 | 53.00 | 23.55 | 27.00 | 9002050023000 |
| 0.0913 | | 2.320 | 53.00 | 23.52 | 27.00 | 9002050023200 |
| 0.0921 | | 2.340 | 53.00 | 23.49 | 27.00 | 9002050023400 |
| 0.0925 | | 2.350 | 53.00 | 23.48 | 27.00 | 9002050023500 |
| 0.0929 | | 2.360 | 53.00 | 23.46 | 27.00 | 9002050023600 |
| 0.0933 | #42 | 2.370 | 57.00 | 26.45 | 30.00 | 9002050023700 |
| 0.0937 | 3/32 | 2.380 | 57.00 | 26.43 | 30.00 | 9002050023800 |
| 0.0941 | | 2.390 | 57.00 | 26.42 | 30.00 | 9002050023900 |
| 0.0945 | | 2.400 | 57.00 | 26.40 | 30.00 | 9002050024000 |
| 0.0953 | | 2.420 | 57.00 | 26.37 | 30.00 | 9002050024200 |
| 0.0957 | | 2.430 | 57.00 | 26.36 | 30.00 | 9002050024300 |
| 0.0961 | #41 | 2.440 | 57.00 | 26.34 | 30.00 | 9002050024400 |
| 0.0965 | | 2.450 | 57.00 | 26.33 | 30.00 | 9002050024500 |
| 0.0969 | | 2.460 | 57.00 | 26.31 | 30.00 | 9002050024600 |
| 0.0972 | | 2.470 | 57.00 | 26.30 | 30.00 | 9002050024700 |

Jobber Length

Jobber Length

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0976 | | 2.480 | 57.00 | 26.28 | 30.00 | 9002050024800 |
| 0.0980 | #40 | 2.490 | 57.00 | 26.27 | 30.00 | 9002050024900 |
| 0.0984 | | 2.500 | 57.00 | 26.25 | 30.00 | 9002050025000 |
| 0.0988 | | 2.510 | 57.00 | 26.24 | 30.00 | 9002050025100 |
| 0.0992 | | 2.520 | 57.00 | 26.22 | 30.00 | 9002050025200 |
| 0.0996 | #39 | 2.530 | 57.00 | 26.21 | 30.00 | 9002050025300 |
| 0.1000 | | 2.540 | 57.00 | 26.19 | 30.00 | 9002050025400 |
| 0.1004 | | 2.550 | 57.00 | 26.18 | 30.00 | 9002050025500 |
| 0.1012 | | 2.570 | 57.00 | 26.15 | 30.00 | 9002050025700 |
| 0.1016 | #38 | 2.580 | 57.00 | 26.13 | 30.00 | 9002050025800 |
| 0.1024 | | 2.600 | 57.00 | 26.10 | 30.00 | 9002050026000 |
| 0.1031 | | 2.620 | 57.00 | 26.07 | 30.00 | 9002050026200 |
| 0.1039 | #37 | 2.640 | 57.00 | 26.04 | 30.00 | 9002050026400 |
| 0.1043 | | 2.650 | 57.00 | 26.03 | 30.00 | 9002050026500 |
| 0.1051 | | 2.670 | 61.00 | 29.00 | 33.00 | 9002050026700 |
| 0.1055 | | 2.680 | 61.00 | 28.98 | 33.00 | 9002050026800 |
| 0.1063 | | 2.700 | 61.00 | 28.95 | 33.00 | 9002050027000 |
| 0.1067 | #36 | 2.710 | 61.00 | 28.94 | 33.00 | 9002050027100 |
| 0.1071 | | 2.720 | 61.00 | 28.92 | 33.00 | 9002050027200 |
| 0.1075 | | 2.730 | 61.00 | 28.91 | 33.00 | 9002050027300 |
| 0.1083 | | 2.750 | 61.00 | 28.88 | 33.00 | 9002050027500 |
| 0.1087 | | 2.760 | 61.00 | 28.86 | 33.00 | 9002050027600 |
| 0.1094 | 7/64 | 2.780 | 61.00 | 28.83 | 33.00 | 9002050027800 |
| 0.1098 | #35 | 2.790 | 61.00 | 28.82 | 33.00 | 9002050027900 |
| 0.1102 | | 2.800 | 61.00 | 28.80 | 33.00 | 9002050028000 |
| 0.1110 | #34 | 2.820 | 61.00 | 28.77 | 33.00 | 9002050028200 |
| 0.1122 | | 2.850 | 61.00 | 28.73 | 33.00 | 9002050028500 |
| 0.1130 | #33 | 2.870 | 61.00 | 28.70 | 33.00 | 9002050028700 |
| 0.1134 | | 2.880 | 61.00 | 28.68 | 33.00 | 9002050028800 |
| 0.1142 | | 2.900 | 61.00 | 28.65 | 33.00 | 9002050029000 |
| 0.1146 | | 2.910 | 61.00 | 28.64 | 33.00 | 9002050029100 |
| 0.1154 | | 2.930 | 61.00 | 28.61 | 33.00 | 9002050029300 |
| 0.1161 | #32 | 2.950 | 61.00 | 28.58 | 33.00 | 9002050029500 |
| 0.1165 | | 2.960 | 61.00 | 28.56 | 33.00 | 9002050029600 |
| 0.1173 | | 2.980 | 61.00 | 28.53 | 33.00 | 9002050029800 |
| 0.1177 | | 2.990 | 61.00 | 28.52 | 33.00 | 9002050029900 |
| 0.1181 | | 3.000 | 61.00 | 28.50 | 33.00 | 9002050030000 |
| 0.1185 | | 3.010 | 65.00 | 31.49 | 36.00 | 9002050030100 |
| 0.1197 | | 3.040 | 65.00 | 31.44 | 36.00 | 9002050030400 |
| 0.1201 | #31 | 3.050 | 65.00 | 31.43 | 36.00 | 9002050030500 |
| 0.1209 | | 3.070 | 65.00 | 31.40 | 36.00 | 9002050030700 |
| 0.1213 | | 3.080 | 65.00 | 31.38 | 36.00 | 9002050030800 |
| 0.1220 | | 3.100 | 65.00 | 31.35 | 36.00 | 9002050031000 |
| 0.1228 | | 3.120 | 65.00 | 31.32 | 36.00 | 9002050031200 |
| 0.1232 | | 3.130 | 65.00 | 31.31 | 36.00 | 9002050031300 |
| 0.1240 | | 3.150 | 65.00 | 31.28 | 36.00 | 9002050031500 |
| 0.1244 | | 3.160 | 65.00 | 31.26 | 36.00 | 9002050031600 |
| 0.1248 | 1/8 | 3.170 | 65.00 | 31.25 | 36.00 | 9002050031700 |
| 0.1252 | | 3.180 | 65.00 | 31.23 | 36.00 | 9002050031800 |
| 0.1260 | | 3.200 | 65.00 | 31.20 | 36.00 | 9002050032000 |
| 0.1268 | | 3.220 | 65.00 | 31.17 | 36.00 | 9002050032200 |
| 0.1272 | | 3.230 | 65.00 | 31.16 | 36.00 | 9002050032300 |
| 0.1280 | | 3.250 | 65.00 | 31.13 | 36.00 | 9002050032500 |
| 0.1283 | #30 | 3.260 | 65.00 | 31.11 | 36.00 | 9002050032600 |
| 0.1299 | | 3.300 | 65.00 | 31.05 | 36.00 | 9002050033000 |
| 0.1307 | | 3.320 | 65.00 | 31.02 | 36.00 | 9002050033200 |
| 0.1319 | | 3.350 | 65.00 | 30.98 | 36.00 | 9002050033500 |
| 0.1339 | | 3.400 | 70.00 | 33.90 | 39.00 | 9002050034000 |
| 0.1346 | | 3.420 | 70.00 | 33.87 | 39.00 | 9002050034200 |
| 0.1358 | #29 | 3.450 | 70.00 | 33.83 | 39.00 | 9002050034500 |
| 0.1378 | | 3.500 | 70.00 | 33.75 | 39.00 | 9002050035000 |
| 0.1386 | | 3.520 | 70.00 | 33.72 | 39.00 | 9002050035200 |
| 0.1398 | | 3.550 | 70.00 | 33.68 | 39.00 | 9002050035500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-----|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1406 | 9/64 | #28 | 3.570 | 70.00 | 33.65 | 39.00 | 9002050035700 |
| 0.1417 | | | 3.600 | 70.00 | 33.60 | 39.00 | 9002050036000 |
| 0.1421 | | | 3.610 | 70.00 | 33.59 | 39.00 | 9002050036100 |
| 0.1425 | | | 3.620 | 70.00 | 33.57 | 39.00 | 9002050036200 |
| 0.1437 | | | 3.650 | 70.00 | 33.53 | 39.00 | 9002050036500 |
| 0.1441 | | #27 | 3.660 | 70.00 | 33.51 | 39.00 | 9002050036600 |
| 0.1449 | | | 3.680 | 70.00 | 33.48 | 39.00 | 9002050036800 |
| 0.1457 | | | 3.700 | 70.00 | 33.45 | 39.00 | 9002050037000 |
| 0.1469 | | #26 | 3.730 | 70.00 | 33.41 | 39.00 | 9002050037300 |
| 0.1476 | | | 3.750 | 70.00 | 33.38 | 39.00 | 9002050037500 |
| 0.1496 | | #25 | 3.800 | 75.00 | 37.30 | 43.00 | 9002050038000 |
| 0.1504 | | | 3.820 | 75.00 | 37.27 | 43.00 | 9002050038200 |
| 0.1516 | | | 3.850 | 75.00 | 37.23 | 43.00 | 9002050038500 |
| 0.1520 | | #24 | 3.860 | 75.00 | 37.21 | 43.00 | 9002050038600 |
| 0.1535 | | | 3.900 | 75.00 | 37.15 | 43.00 | 9002050039000 |
| 0.1539 | | #23 | 3.910 | 75.00 | 37.14 | 43.00 | 9002050039100 |
| 0.1547 | | | 3.930 | 75.00 | 37.11 | 43.00 | 9002050039300 |
| 0.1555 | | | 3.950 | 75.00 | 37.08 | 43.00 | 9002050039500 |
| 0.1563 | 5/32 | | 3.970 | 75.00 | 37.05 | 43.00 | 9002050039700 |
| 0.1571 | | #22 | 3.990 | 75.00 | 37.02 | 43.00 | 9002050039900 |
| 0.1575 | | | 4.000 | 75.00 | 37.00 | 43.00 | 9002050040000 |
| 0.1579 | | | 4.010 | 75.00 | 36.99 | 43.00 | 9002050040100 |
| 0.1591 | | #21 | 4.040 | 75.00 | 36.94 | 43.00 | 9002050040400 |
| 0.1594 | | | 4.050 | 75.00 | 36.93 | 43.00 | 9002050040500 |
| 0.1598 | | | 4.060 | 75.00 | 36.91 | 43.00 | 9002050040600 |
| 0.1610 | | #20 | 4.090 | 75.00 | 36.87 | 43.00 | 9002050040900 |
| 0.1614 | | | 4.100 | 75.00 | 36.85 | 43.00 | 9002050041000 |
| 0.1634 | | | 4.150 | 75.00 | 36.78 | 43.00 | 9002050041500 |
| 0.1654 | | | 4.200 | 75.00 | 36.70 | 43.00 | 9002050042000 |
| 0.1661 | | #19 | 4.220 | 75.00 | 36.67 | 43.00 | 9002050042200 |
| 0.1673 | | | 4.250 | 75.00 | 36.63 | 43.00 | 9002050042500 |
| 0.1681 | | | 4.270 | 80.00 | 40.60 | 47.00 | 9002050042700 |
| 0.1693 | | #18 | 4.300 | 80.00 | 40.55 | 47.00 | 9002050043000 |
| 0.1701 | | | 4.320 | 80.00 | 40.52 | 47.00 | 9002050043200 |
| 0.1713 | | | 4.350 | 80.00 | 40.48 | 47.00 | 9002050043500 |
| 0.1720 | 11/64 | | 4.370 | 80.00 | 40.45 | 47.00 | 9002050043700 |
| 0.1728 | | #17 | 4.390 | 80.00 | 40.42 | 47.00 | 9002050043900 |
| 0.1732 | | | 4.400 | 80.00 | 40.40 | 47.00 | 9002050044000 |
| 0.1740 | | | 4.420 | 80.00 | 40.37 | 47.00 | 9002050044200 |
| 0.1752 | | | 4.450 | 80.00 | 40.33 | 47.00 | 9002050044500 |
| 0.1772 | | #16 | 4.500 | 80.00 | 40.25 | 47.00 | 9002050045000 |
| 0.1780 | | | 4.520 | 80.00 | 40.22 | 47.00 | 9002050045200 |
| 0.1783 | | | 4.530 | 80.00 | 40.21 | 47.00 | 9002050045300 |
| 0.1791 | | | 4.550 | 80.00 | 40.18 | 47.00 | 9002050045500 |
| 0.1799 | | #15 | 4.570 | 80.00 | 40.15 | 47.00 | 9002050045700 |
| 0.1811 | | | 4.600 | 80.00 | 40.10 | 47.00 | 9002050046000 |
| 0.1819 | | #14 | 4.620 | 80.00 | 40.07 | 47.00 | 9002050046200 |
| 0.1831 | | | 4.650 | 80.00 | 40.03 | 47.00 | 9002050046500 |
| 0.1850 | | #13 | 4.700 | 80.00 | 39.95 | 47.00 | 9002050047000 |
| 0.1870 | | | 4.750 | 80.00 | 39.88 | 47.00 | 9002050047500 |
| 0.1874 | 3/16 | | 4.760 | 86.00 | 44.86 | 52.00 | 9002050047600 |
| 0.1890 | | #12 | 4.800 | 86.00 | 44.80 | 52.00 | 9002050048000 |
| 0.1902 | | | 4.830 | 86.00 | 44.76 | 52.00 | 9002050048300 |
| 0.1909 | | #11 | 4.850 | 86.00 | 44.73 | 52.00 | 9002050048500 |
| 0.1913 | | | 4.860 | 86.00 | 44.71 | 52.00 | 9002050048600 |
| 0.1929 | | | 4.900 | 86.00 | 44.65 | 52.00 | 9002050049000 |
| 0.1937 | | #10 | 4.920 | 86.00 | 44.62 | 52.00 | 9002050049200 |
| 0.1949 | | | 4.950 | 86.00 | 44.58 | 52.00 | 9002050049500 |
| 0.1961 | | #9 | 4.980 | 86.00 | 44.53 | 52.00 | 9002050049800 |
| 0.1969 | | | 5.000 | 86.00 | 44.50 | 52.00 | 9002050050000 |
| 0.1980 | | | 5.030 | 86.00 | 44.46 | 52.00 | 9002050050300 |
| 0.1988 | | | 5.050 | 86.00 | 44.43 | 52.00 | 9002050050500 |
| 0.1992 | | #8 | 5.060 | 86.00 | 44.41 | 52.00 | 9002050050600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2008 | | 5.100 | 86.00 | 44.35 | 52.00 | 9002050051000 |
| 0.2012 | #7 | 5.110 | 86.00 | 44.34 | 52.00 | 9002050051100 |
| 0.2028 | | 5.150 | 86.00 | 44.28 | 52.00 | 9002050051500 |
| 0.2031 | 13/64 | 5.160 | 86.00 | 44.26 | 52.00 | 9002050051600 |
| 0.2039 | #6 | 5.180 | 86.00 | 44.23 | 52.00 | 9002050051800 |
| 0.2047 | | 5.200 | 86.00 | 44.20 | 52.00 | 9002050052000 |
| 0.2055 | #5 | 5.220 | 86.00 | 44.17 | 52.00 | 9002050052200 |
| 0.2067 | | 5.250 | 86.00 | 44.13 | 52.00 | 9002050052500 |
| 0.2087 | | 5.300 | 86.00 | 44.05 | 52.00 | 9002050053000 |
| 0.2091 | #4 | 5.310 | 93.00 | 49.04 | 57.00 | 9002050053100 |
| 0.2106 | | 5.350 | 93.00 | 48.98 | 57.00 | 9002050053500 |
| 0.2126 | | 5.400 | 93.00 | 48.90 | 57.00 | 9002050054000 |
| 0.2130 | #3 | 5.410 | 93.00 | 48.89 | 57.00 | 9002050054100 |
| 0.2146 | | 5.450 | 93.00 | 48.83 | 57.00 | 9002050054500 |
| 0.2165 | | 5.500 | 93.00 | 48.75 | 57.00 | 9002050055000 |
| 0.2185 | | 5.550 | 93.00 | 48.68 | 57.00 | 9002050055500 |
| 0.2189 | 7/32 | 5.560 | 93.00 | 48.66 | 57.00 | 9002050055600 |
| 0.2205 | | 5.600 | 93.00 | 48.60 | 57.00 | 9002050056000 |
| 0.2209 | #2 | 5.610 | 93.00 | 48.59 | 57.00 | 9002050056100 |
| 0.2224 | | 5.650 | 93.00 | 48.53 | 57.00 | 9002050056500 |
| 0.2244 | | 5.700 | 93.00 | 48.45 | 57.00 | 9002050057000 |
| 0.2264 | | 5.750 | 93.00 | 48.38 | 57.00 | 9002050057500 |
| 0.2280 | #1 | 5.790 | 93.00 | 48.32 | 57.00 | 9002050057900 |
| 0.2283 | | 5.800 | 93.00 | 48.30 | 57.00 | 9002050058000 |
| 0.2303 | | 5.850 | 93.00 | 48.23 | 57.00 | 9002050058500 |
| 0.2323 | | 5.900 | 93.00 | 48.15 | 57.00 | 9002050059000 |
| 0.2339 | A | 5.940 | 93.00 | 48.09 | 57.00 | 9002050059400 |
| 0.2343 | 15/64 | 5.950 | 93.00 | 48.08 | 57.00 | 9002050059500 |
| 0.2350 | | 5.970 | 93.00 | 48.05 | 57.00 | 9002050059700 |
| 0.2354 | | 5.980 | 93.00 | 48.03 | 57.00 | 9002050059800 |
| 0.2362 | | 6.000 | 93.00 | 48.00 | 57.00 | 9002050060000 |
| 0.2374 | | 6.030 | 101.00 | 53.96 | 63.00 | 9002050060300 |
| 0.2378 | B | 6.040 | 101.00 | 53.94 | 63.00 | 9002050060400 |
| 0.2382 | | 6.050 | 101.00 | 53.93 | 63.00 | 9002050060500 |
| 0.2402 | | 6.100 | 101.00 | 53.85 | 63.00 | 9002050061000 |
| 0.2421 | C | 6.150 | 101.00 | 53.78 | 63.00 | 9002050061500 |
| 0.2441 | | 6.200 | 101.00 | 53.70 | 63.00 | 9002050062000 |
| 0.2449 | | 6.220 | 101.00 | 53.67 | 63.00 | 9002050062200 |
| 0.2461 | D | 6.250 | 101.00 | 53.63 | 63.00 | 9002050062500 |
| 0.2480 | | 6.300 | 101.00 | 53.55 | 63.00 | 9002050063000 |
| 0.2500 | 1/4 | 6.350 | 101.00 | 53.48 | 63.00 | 9002050063500 |
| 0.2520 | | 6.400 | 101.00 | 53.40 | 63.00 | 9002050064000 |
| 0.2539 | | 6.450 | 101.00 | 53.33 | 63.00 | 9002050064500 |
| 0.2559 | | 6.500 | 101.00 | 53.25 | 63.00 | 9002050065000 |
| 0.2571 | | 6.530 | 101.00 | 53.21 | 63.00 | 9002050065300 |
| 0.2579 | | 6.550 | 101.00 | 53.18 | 63.00 | 9002050065500 |
| 0.2598 | | 6.600 | 101.00 | 53.10 | 63.00 | 9002050066000 |
| 0.2610 | G | 6.630 | 101.00 | 53.06 | 63.00 | 9002050066300 |
| 0.2618 | | 6.650 | 101.00 | 53.03 | 63.00 | 9002050066500 |
| 0.2638 | | 6.700 | 101.00 | 52.95 | 63.00 | 9002050067000 |
| 0.2657 | 17/64 | 6.750 | 109.00 | 58.88 | 69.00 | 9002050067500 |
| 0.2661 | | 6.760 | 109.00 | 58.86 | 69.00 | 9002050067600 |
| 0.2677 | | 6.800 | 109.00 | 58.80 | 69.00 | 9002050068000 |
| 0.2697 | | 6.850 | 109.00 | 58.73 | 69.00 | 9002050068500 |
| 0.2717 | I | 6.900 | 109.00 | 58.65 | 69.00 | 9002050069000 |
| 0.2736 | | 6.950 | 109.00 | 58.58 | 69.00 | 9002050069500 |
| 0.2756 | | 7.000 | 109.00 | 58.50 | 69.00 | 9002050070000 |
| 0.2768 | J | 7.030 | 109.00 | 58.46 | 69.00 | 9002050070300 |
| 0.2776 | | 7.050 | 109.00 | 58.43 | 69.00 | 9002050070500 |
| 0.2795 | | 7.100 | 109.00 | 58.35 | 69.00 | 9002050071000 |
| 0.2811 | 9/32 | 7.140 | 109.00 | 58.29 | 69.00 | 9002050071400 |
| 0.2815 | | 7.150 | 109.00 | 58.28 | 69.00 | 9002050071500 |
| 0.2835 | | 7.200 | 109.00 | 58.20 | 69.00 | 9002050072000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2854 | | 7.250 | 109.00 | 58.13 | 69.00 | 9002050072500 |
| 0.2874 | | 7.300 | 109.00 | 58.05 | 69.00 | 9002050073000 |
| 0.2894 | | 7.350 | 109.00 | 57.98 | 69.00 | 9002050073500 |
| 0.2902 | L | 7.370 | 109.00 | 57.95 | 69.00 | 9002050073700 |
| 0.2913 | | 7.400 | 109.00 | 57.90 | 69.00 | 9002050074000 |
| 0.2933 | | 7.450 | 109.00 | 57.83 | 69.00 | 9002050074500 |
| 0.2949 | M | 7.490 | 109.00 | 57.77 | 69.00 | 9002050074900 |
| 0.2953 | | 7.500 | 109.00 | 57.75 | 69.00 | 9002050075000 |
| 0.2969 | 19/64 | 7.540 | 117.00 | 63.69 | 75.00 | 9002050075400 |
| 0.2972 | | 7.550 | 117.00 | 63.68 | 75.00 | 9002050075500 |
| 0.2992 | | 7.600 | 117.00 | 63.60 | 75.00 | 9002050076000 |
| 0.3012 | | 7.650 | 117.00 | 63.53 | 75.00 | 9002050076500 |
| 0.3020 | N | 7.670 | 117.00 | 63.50 | 75.00 | 9002050076700 |
| 0.3031 | | 7.700 | 117.00 | 63.45 | 75.00 | 9002050077000 |
| 0.3051 | | 7.750 | 117.00 | 63.38 | 75.00 | 9002050077500 |
| 0.3071 | | 7.800 | 117.00 | 63.30 | 75.00 | 9002050078000 |
| 0.3091 | | 7.850 | 117.00 | 63.23 | 75.00 | 9002050078500 |
| 0.3110 | | 7.900 | 117.00 | 63.15 | 75.00 | 9002050079000 |
| 0.3126 | 5/16 | 7.940 | 117.00 | 63.09 | 75.00 | 9002050079400 |
| 0.3130 | | 7.950 | 117.00 | 63.08 | 75.00 | 9002050079500 |
| 0.3142 | | 7.980 | 117.00 | 63.03 | 75.00 | 9002050079800 |
| 0.3150 | | 8.000 | 117.00 | 63.00 | 75.00 | 9002050080000 |
| 0.3161 | O | 8.030 | 117.00 | 62.96 | 75.00 | 9002050080300 |
| 0.3169 | | 8.050 | 117.00 | 62.93 | 75.00 | 9002050080500 |
| 0.3189 | | 8.100 | 117.00 | 62.85 | 75.00 | 9002050081000 |
| 0.3201 | | 8.130 | 117.00 | 62.81 | 75.00 | 9002050081300 |
| 0.3209 | | 8.150 | 117.00 | 62.78 | 75.00 | 9002050081500 |
| 0.3228 | P | 8.200 | 117.00 | 62.70 | 75.00 | 9002050082000 |
| 0.3248 | | 8.250 | 117.00 | 62.63 | 75.00 | 9002050082500 |
| 0.3268 | | 8.300 | 117.00 | 62.55 | 75.00 | 9002050083000 |
| 0.3280 | 21/64 | 8.330 | 117.00 | 62.51 | 75.00 | 9002050083300 |
| 0.3287 | | 8.350 | 117.00 | 62.48 | 75.00 | 9002050083500 |
| 0.3307 | | 8.400 | 117.00 | 62.40 | 75.00 | 9002050084000 |
| 0.3319 | Q | 8.430 | 117.00 | 62.36 | 75.00 | 9002050084300 |
| 0.3327 | | 8.450 | 117.00 | 62.33 | 75.00 | 9002050084500 |
| 0.3346 | | 8.500 | 117.00 | 62.25 | 75.00 | 9002050085000 |
| 0.3366 | | 8.550 | 125.00 | 68.18 | 81.00 | 9002050085500 |
| 0.3386 | | 8.600 | 125.00 | 68.10 | 81.00 | 9002050086000 |
| 0.3390 | R | 8.610 | 125.00 | 68.09 | 81.00 | 9002050086100 |
| 0.3406 | | 8.650 | 125.00 | 68.03 | 81.00 | 9002050086500 |
| 0.3425 | | 8.700 | 125.00 | 67.95 | 81.00 | 9002050087000 |
| 0.3437 | 11/32 | 8.730 | 125.00 | 67.91 | 81.00 | 9002050087300 |
| 0.3445 | | 8.750 | 125.00 | 67.88 | 81.00 | 9002050087500 |
| 0.3465 | | 8.800 | 125.00 | 67.80 | 81.00 | 9002050088000 |
| 0.3480 | S | 8.840 | 125.00 | 67.74 | 81.00 | 9002050088400 |
| 0.3484 | | 8.850 | 125.00 | 67.73 | 81.00 | 9002050088500 |
| 0.3504 | | 8.900 | 125.00 | 67.65 | 81.00 | 9002050089000 |
| 0.3524 | | 8.950 | 125.00 | 67.58 | 81.00 | 9002050089500 |
| 0.3543 | | 9.000 | 125.00 | 67.50 | 81.00 | 9002050090000 |
| 0.3563 | | 9.050 | 125.00 | 67.43 | 81.00 | 9002050090500 |
| 0.3579 | T | 9.090 | 125.00 | 67.37 | 81.00 | 9002050090900 |
| 0.3583 | | 9.100 | 125.00 | 67.35 | 81.00 | 9002050091000 |
| 0.3594 | 23/64 | 9.130 | 125.00 | 67.31 | 81.00 | 9002050091300 |
| 0.3602 | | 9.150 | 125.00 | 67.28 | 81.00 | 9002050091500 |
| 0.3622 | | 9.200 | 125.00 | 67.20 | 81.00 | 9002050092000 |
| 0.3642 | | 9.250 | 125.00 | 67.13 | 81.00 | 9002050092500 |
| 0.3661 | | 9.300 | 125.00 | 67.05 | 81.00 | 9002050093000 |
| 0.3677 | U | 9.340 | 125.00 | 66.99 | 81.00 | 9002050093400 |
| 0.3681 | | 9.350 | 125.00 | 66.98 | 81.00 | 9002050093500 |
| 0.3701 | | 9.400 | 125.00 | 66.90 | 81.00 | 9002050094000 |
| 0.3720 | | 9.450 | 125.00 | 66.83 | 81.00 | 9002050094500 |
| 0.3740 | | 9.500 | 125.00 | 66.75 | 81.00 | 9002050095000 |
| 0.3748 | 3/8 | 9.520 | 133.00 | 72.72 | 87.00 | 9002050095200 |

Jobber Length

Jobber Length

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|--------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.3760 | | 9.550 | 133.00 | 72.68 | 87.00 | 9002050095500 |
| 0.3772 | V | 9.580 | 133.00 | 72.63 | 87.00 | 9002050095800 |
| 0.3780 | | 9.600 | 133.00 | 72.60 | 87.00 | 9002050096000 |
| 0.3799 | | 9.650 | 133.00 | 72.53 | 87.00 | 9002050096500 |
| 0.3819 | | 9.700 | 133.00 | 72.45 | 87.00 | 9002050097000 |
| 0.3839 | | 9.750 | 133.00 | 72.38 | 87.00 | 9002050097500 |
| 0.3858 | W | 9.800 | 133.00 | 72.30 | 87.00 | 9002050098000 |
| 0.3878 | | 9.850 | 133.00 | 72.23 | 87.00 | 9002050098500 |
| 0.3898 | | 9.900 | 133.00 | 72.15 | 87.00 | 9002050099000 |
| 0.3906 | 25/64 | 9.920 | 133.00 | 72.12 | 87.00 | 9002050099200 |
| 0.3917 | | 9.950 | 133.00 | 72.08 | 87.00 | 9002050099500 |
| 0.3937 | | 10.000 | 133.00 | 72.00 | 87.00 | 9002050100000 |
| 0.3953 | | 10.040 | 133.00 | 71.94 | 87.00 | 9002050100400 |
| 0.3969 | X | 10.080 | 133.00 | 71.88 | 87.00 | 9002050100800 |
| 0.3976 | | 10.100 | 133.00 | 71.85 | 87.00 | 9002050101000 |
| 0.3996 | | 10.150 | 133.00 | 71.78 | 87.00 | 9002050101500 |
| 0.4016 | | 10.200 | 133.00 | 71.70 | 87.00 | 9002050102000 |
| 0.4035 | | 10.250 | 133.00 | 71.63 | 87.00 | 9002050102500 |
| 0.4039 | Y | 10.260 | 133.00 | 71.61 | 87.00 | 9002050102600 |
| 0.4055 | | 10.300 | 133.00 | 71.55 | 87.00 | 9002050103000 |
| 0.4063 | 13/32 | 10.320 | 133.00 | 71.52 | 87.00 | 9002050103200 |
| 0.4075 | | 10.350 | 133.00 | 71.48 | 87.00 | 9002050103500 |
| 0.4094 | | 10.400 | 133.00 | 71.40 | 87.00 | 9002050104000 |
| 0.4130 | Z | 10.490 | 133.00 | 71.27 | 87.00 | 9002050104900 |
| 0.4134 | | 10.500 | 133.00 | 71.25 | 87.00 | 9002050105000 |
| 0.4173 | | 10.600 | 133.00 | 71.10 | 87.00 | 9002050106000 |
| 0.4213 | | 10.700 | 142.00 | 77.95 | 94.00 | 9002050107000 |
| 0.4220 | 27/64 | 10.720 | 142.00 | 77.92 | 94.00 | 9002050107200 |
| 0.4232 | | 10.750 | 142.00 | 77.88 | 94.00 | 9002050107500 |
| 0.4252 | | 10.800 | 142.00 | 77.80 | 94.00 | 9002050108000 |
| 0.4291 | | 10.900 | 142.00 | 77.65 | 94.00 | 9002050109000 |
| 0.4331 | | 11.000 | 142.00 | 77.50 | 94.00 | 9002050110000 |
| 0.4350 | | 11.050 | 142.00 | 77.43 | 94.00 | 9002050110500 |
| 0.4370 | | 11.100 | 142.00 | 77.35 | 94.00 | 9002050111000 |
| 0.4374 | 7/16 | 11.110 | 142.00 | 77.34 | 94.00 | 9002050111100 |
| 0.4390 | | 11.150 | 142.00 | 77.28 | 94.00 | 9002050111500 |
| 0.4409 | | 11.200 | 142.00 | 77.20 | 94.00 | 9002050112000 |
| 0.4429 | | 11.250 | 142.00 | 77.13 | 94.00 | 9002050112500 |
| 0.4449 | | 11.300 | 142.00 | 77.05 | 94.00 | 9002050113000 |
| 0.4469 | | 11.350 | 142.00 | 76.98 | 94.00 | 9002050113500 |
| 0.4488 | | 11.400 | 142.00 | 76.90 | 94.00 | 9002050114000 |
| 0.4528 | | 11.500 | 142.00 | 76.75 | 94.00 | 9002050115000 |
| 0.4531 | 29/64 | 11.510 | 142.00 | 76.74 | 94.00 | 9002050115100 |
| 0.4567 | | 11.600 | 142.00 | 76.60 | 94.00 | 9002050116000 |
| 0.4606 | | 11.700 | 142.00 | 76.45 | 94.00 | 9002050117000 |
| 0.4626 | | 11.750 | 142.00 | 76.38 | 94.00 | 9002050117500 |
| 0.4646 | | 11.800 | 142.00 | 76.30 | 94.00 | 9002050118000 |
| 0.4685 | | 11.900 | 151.00 | 83.15 | 101.00 | 9002050119000 |
| 0.4689 | 15/32 | 11.910 | 151.00 | 83.14 | 101.00 | 9002050119100 |
| 0.4724 | | 12.000 | 151.00 | 83.00 | 101.00 | 9002050120000 |
| 0.4744 | | 12.050 | 151.00 | 82.93 | 101.00 | 9002050120500 |
| 0.4764 | | 12.100 | 151.00 | 82.85 | 101.00 | 9002050121000 |
| 0.4803 | | 12.200 | 151.00 | 82.70 | 101.00 | 9002050122000 |
| 0.4823 | | 12.250 | 151.00 | 82.63 | 101.00 | 9002050122500 |
| 0.4843 | 31/64 | 12.300 | 151.00 | 82.55 | 101.00 | 9002050123000 |
| 0.4882 | | 12.400 | 151.00 | 82.40 | 101.00 | 9002050124000 |
| 0.4921 | | 12.500 | 151.00 | 82.25 | 101.00 | 9002050125000 |
| 0.4961 | | 12.600 | 151.00 | 82.10 | 101.00 | 9002050126000 |
| 0.4980 | | 12.650 | 151.00 | 82.03 | 101.00 | 9002050126500 |
| 0.5000 | 1/2 | 12.700 | 151.00 | 81.95 | 101.00 | 9002050127000 |
| 0.5020 | | 12.750 | 151.00 | 81.88 | 101.00 | 9002050127500 |
| 0.5039 | | 12.800 | 151.00 | 81.80 | 101.00 | 9002050128000 |
| 0.5059 | | 12.850 | 151.00 | 81.73 | 101.00 | 9002050128500 |
| 0.5079 | | 12.900 | 151.00 | 81.65 | 101.00 | 9002050129000 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|--------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.5118 | | 13.000 | 151.00 | 81.50 | 101.00 | 9002050130000 |
| 0.5157 | 33/64 | 13.100 | 151.00 | 81.35 | 101.00 | 9002050131000 |
| 0.5197 | | 13.200 | 151.00 | 81.20 | 101.00 | 9002050132000 |
| 0.5217 | | 13.250 | 160.00 | 88.13 | 108.00 | 9002050132500 |
| 0.5236 | | 13.300 | 160.00 | 88.05 | 108.00 | 9002050133000 |
| 0.5276 | | 13.400 | 160.00 | 87.90 | 108.00 | 9002050134000 |
| 0.5311 | 17/32 | 13.490 | 160.00 | 87.77 | 108.00 | 9002050134900 |
| 0.5315 | | 13.500 | 160.00 | 87.75 | 108.00 | 9002050135000 |
| 0.5354 | | 13.600 | 160.00 | 87.60 | 108.00 | 9002050136000 |
| 0.5394 | | 13.700 | 160.00 | 87.45 | 108.00 | 9002050137000 |
| 0.5413 | | 13.750 | 160.00 | 87.38 | 108.00 | 9002050137500 |
| 0.5433 | | 13.800 | 160.00 | 87.30 | 108.00 | 9002050138000 |
| 0.5469 | 35/64 | 13.890 | 160.00 | 87.17 | 108.00 | 9002050138900 |
| 0.5472 | | 13.900 | 160.00 | 87.15 | 108.00 | 9002050139000 |
| 0.5512 | | 14.000 | 160.00 | 87.00 | 108.00 | 9002050140000 |
| 0.5551 | | 14.100 | 169.00 | 92.85 | 114.00 | 9002050141000 |
| 0.5591 | | 14.200 | 169.00 | 92.70 | 114.00 | 9002050142000 |
| 0.5610 | | 14.250 | 169.00 | 92.63 | 114.00 | 9002050142500 |
| 0.5626 | 9/16 | 14.290 | 169.00 | 92.57 | 114.00 | 9002050142900 |
| 0.5630 | | 14.300 | 169.00 | 92.55 | 114.00 | 9002050143000 |
| 0.5669 | | 14.400 | 169.00 | 92.40 | 114.00 | 9002050144000 |
| 0.5709 | | 14.500 | 169.00 | 92.25 | 114.00 | 9002050145000 |
| 0.5748 | | 14.600 | 169.00 | 92.10 | 114.00 | 9002050146000 |
| 0.5780 | 37/64 | 14.680 | 169.00 | 91.98 | 114.00 | 9002050146800 |
| 0.5787 | | 14.700 | 169.00 | 91.95 | 114.00 | 9002050147000 |
| 0.5807 | | 14.750 | 169.00 | 91.88 | 114.00 | 9002050147500 |
| 0.5827 | | 14.800 | 169.00 | 91.80 | 114.00 | 9002050148000 |
| 0.5846 | | 14.850 | 169.00 | 91.73 | 114.00 | 9002050148500 |
| 0.5866 | | 14.900 | 169.00 | 91.65 | 114.00 | 9002050149000 |
| 0.5906 | | 15.000 | 169.00 | 91.50 | 114.00 | 9002050150000 |
| 0.5937 | 19/32 | 15.080 | 178.00 | 97.38 | 120.00 | 9002050150800 |
| 0.5945 | | 15.100 | 178.00 | 97.35 | 120.00 | 9002050151000 |
| 0.5984 | | 15.200 | 178.00 | 97.20 | 120.00 | 9002050152000 |
| 0.6004 | | 15.250 | 178.00 | 97.13 | 120.00 | 9002050152500 |
| 0.6024 | | 15.300 | 178.00 | 97.05 | 120.00 | 9002050153000 |
| 0.6063 | | 15.400 | 178.00 | 96.90 | 120.00 | 9002050154000 |
| 0.6094 | 39/64 | 15.480 | 178.00 | 96.78 | 120.00 | 9002050154800 |
| 0.6102 | | 15.500 | 178.00 | 96.75 | 120.00 | 9002050155000 |
| 0.6142 | | 15.600 | 178.00 | 96.60 | 120.00 | 9002050156000 |
| 0.6181 | | 15.700 | 178.00 | 96.45 | 120.00 | 9002050157000 |
| 0.6201 | | 15.750 | 178.00 | 96.38 | 120.00 | 9002050157500 |
| 0.6220 | | 15.800 | 178.00 | 96.30 | 120.00 | 9002050158000 |
| 0.6248 | 5/8 | 15.870 | 178.00 | 96.20 | 120.00 | 9002050158700 |
| 0.6260 | | 15.900 | 178.00 | 96.15 | 120.00 | 9002050159000 |
| 0.6299 | | 16.000 | 178.00 | 96.00 | 120.00 | 9002050160000 |
| 0.6339 | | 16.100 | 184.00 | 100.85 | 125.00 | 9002050161000 |
| 0.6378 | | 16.200 | 184.00 | 100.70 | 125.00 | 9002050162000 |
| 0.6398 | | 16.250 | 184.00 | 100.63 | 125.00 | 9002050162500 |
| 0.6406 | 41/64 | 16.270 | 184.00 | 100.60 | 125.00 | 9002050162700 |
| 0.6417 | | 16.300 | 184.00 | 100.55 | 125.00 | 9002050163000 |
| 0.6457 | | 16.400 | 184.00 | 100.40 | 125.00 | 9002050164000 |
| 0.6496 | | 16.500 | 184.00 | 100.25 | 125.00 | 9002050165000 |
| 0.6535 | | 16.600 | 184.00 | 100.10 | 125.00 | 9002050166000 |
| 0.6563 | 21/32 | 16.670 | 184.00 | 100.00 | 125.00 | 9002050166700 |
| 0.6575 | | 16.700 | 184.00 | 99.95 | 125.00 | 9002050167000 |
| 0.6594 | | 16.750 | 184.00 | 99.88 | 125.00 | 9002050167500 |
| 0.6614 | | 16.800 | 184.00 | 99.80 | 125.00 | 9002050168000 |
| 0.6654 | | 16.900 | 184.00 | 99.65 | 125.00 | 9002050169000 |
| 0.6693 | | 17.000 | 184.00 | 99.50 | 125.00 | 9002050170000 |
| 0.6720 | 43/64 | 17.070 | 191.00 | 104.40 | 130.00 | 9002050170700 |
| 0.6772 | | 17.200 | 191.00 | 104.20 | 130.00 | 9002050172000 |
| 0.6791 | | 17.250 | 191.00 | 104.13 | 130.00 | 9002050172500 |
| 0.6811 | | 17.300 | 191.00 | 104.05 | 130.00 | 9002050173000 |
| 0.6850 | | 17.400 | 191.00 | 103.90 | 130.00 | 9002050174000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.6874 | 11/16 | 17.460 | 191.00 | 103.81 | 130.00 | 9002050174600 |
| 0.6890 | | 17.500 | 191.00 | 103.75 | 130.00 | 9002050175000 |
| 0.6929 | | 17.600 | 191.00 | 103.60 | 130.00 | 9002050176000 |
| 0.6969 | | 17.700 | 191.00 | 103.45 | 130.00 | 9002050177000 |
| 0.6988 | | 17.750 | 191.00 | 103.38 | 130.00 | 9002050177500 |
| 0.7008 | | 17.800 | 191.00 | 103.30 | 130.00 | 9002050178000 |
| 0.7031 | 45/64 | 17.860 | 191.00 | 103.21 | 130.00 | 9002050178600 |
| 0.7047 | | 17.900 | 191.00 | 103.15 | 130.00 | 9002050179000 |
| 0.7087 | | 18.000 | 191.00 | 103.00 | 130.00 | 9002050180000 |
| 0.7126 | | 18.100 | 198.00 | 107.85 | 135.00 | 9002050181000 |
| 0.7165 | | 18.200 | 198.00 | 107.70 | 135.00 | 9002050182000 |
| 0.7185 | | 18.250 | 198.00 | 107.63 | 135.00 | 9002050182500 |
| 0.7189 | 23/32 | 18.260 | 198.00 | 107.61 | 135.00 | 9002050182600 |
| 0.7205 | | 18.300 | 198.00 | 107.55 | 135.00 | 9002050183000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.7244 | | 18.400 | 198.00 | 107.40 | 135.00 | 9002050184000 |
| 0.7283 | | 18.500 | 198.00 | 107.25 | 135.00 | 9002050185000 |
| 0.7343 | 47/64 | 18.650 | 198.00 | 107.03 | 135.00 | 9002050186500 |
| 0.7382 | | 18.750 | 198.00 | 106.88 | 135.00 | 9002050187500 |
| 0.7402 | | 18.800 | 198.00 | 106.80 | 135.00 | 9002050188000 |
| 0.7480 | | 19.000 | 198.00 | 106.50 | 135.00 | 9002050190000 |
| 0.7500 | 3/4 | 19.050 | 205.00 | 111.43 | 140.00 | 9002050190500 |
| 0.7520 | | 19.100 | 205.00 | 111.35 | 140.00 | 9002050191000 |
| 0.7559 | | 19.200 | 205.00 | 111.20 | 140.00 | 9002050192000 |
| 0.7579 | | 19.250 | 205.00 | 111.13 | 140.00 | 9002050192500 |
| 0.7677 | | 19.500 | 205.00 | 110.75 | 140.00 | 9002050195000 |
| 0.7717 | | 19.600 | 205.00 | 110.60 | 140.00 | 9002050196000 |
| 0.7776 | | 19.750 | 205.00 | 110.38 | 140.00 | 9002050197500 |
| 0.7811 | 25/32 | 19.840 | 205.00 | 110.24 | 140.00 | 9002050198400 |



Tool material

HSS

Surface

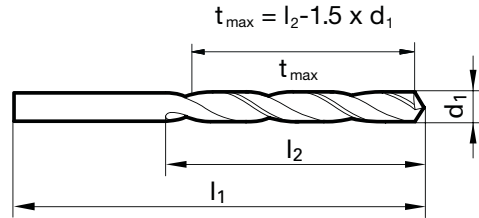


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | ● |
| N | Aluminum | ○ |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning ≥ Ø 14.700 • relieved cone

alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite

●=Optimal
○=Limited



Speeds and feeds information on pg. 497

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.0094 | #88 | 0.24 | 19.00 | 2.14 | 2.50 | 9002080002400 |
| 0.0114 | #84 | 0.29 | 19.00 | 2.57 | 3.00 | 9002080002900 |
| 0.0118 | | 0.30 | 19.00 | 2.55 | 3.00 | 9002080003000 |
| 0.0134 | #80 | 0.34 | 19.00 | 3.49 | 4.00 | 9002080003400 |
| 0.0138 | | 0.35 | 19.00 | 3.48 | 4.00 | 9002080003500 |
| 0.0142 | | 0.36 | 19.00 | 3.46 | 4.00 | 9002080003600 |
| 0.0146 | #79 | 0.37 | 19.00 | 3.45 | 4.00 | 9002080003700 |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 9002080004000 |
| 0.0161 | #78 | 0.41 | 20.00 | 4.39 | 5.00 | 9002080004100 |
| 0.0165 | | 0.42 | 20.00 | 4.37 | 5.00 | 9002080004200 |
| 0.0169 | | 0.43 | 20.00 | 4.36 | 5.00 | 9002080004300 |
| 0.0173 | | 0.44 | 20.00 | 4.34 | 5.00 | 9002080004400 |
| 0.0177 | | 0.45 | 20.00 | 4.33 | 5.00 | 9002080004500 |
| 0.0181 | #77 | 0.46 | 20.00 | 4.31 | 5.00 | 9002080004600 |
| 0.0185 | | 0.47 | 20.00 | 4.30 | 5.00 | 9002080004700 |
| 0.0189 | | 0.48 | 20.00 | 4.28 | 5.00 | 9002080004800 |
| 0.0197 | | 0.50 | 22.00 | 5.25 | 6.00 | 9002080005000 |
| 0.0201 | #76 | 0.51 | 22.00 | 5.24 | 6.00 | 9002080005100 |
| 0.0205 | | 0.52 | 22.00 | 5.22 | 6.00 | 9002080005200 |
| 0.0209 | #75 | 0.53 | 22.00 | 5.21 | 6.00 | 9002080005300 |
| 0.0213 | | 0.54 | 24.00 | 6.19 | 7.00 | 9002080005400 |
| 0.0217 | | 0.55 | 24.00 | 6.18 | 7.00 | 9002080005500 |
| 0.0220 | | 0.56 | 24.00 | 6.16 | 7.00 | 9002080005600 |
| 0.0224 | #74 | 0.57 | 24.00 | 6.15 | 7.00 | 9002080005700 |
| 0.0228 | | 0.58 | 24.00 | 6.13 | 7.00 | 9002080005800 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9002080006000 |
| 0.0240 | #73 | 0.61 | 26.00 | 7.09 | 8.00 | 9002080006100 |
| 0.0244 | | 0.62 | 26.00 | 7.07 | 8.00 | 9002080006200 |
| 0.0248 | | 0.63 | 26.00 | 7.06 | 8.00 | 9002080006300 |
| 0.0252 | #72 | 0.64 | 26.00 | 7.04 | 8.00 | 9002080006400 |
| 0.0256 | | 0.65 | 26.00 | 7.03 | 8.00 | 9002080006500 |
| 0.0260 | #71 | 0.66 | 26.00 | 7.01 | 8.00 | 9002080006600 |
| 0.0264 | | 0.67 | 26.00 | 7.00 | 8.00 | 9002080006700 |
| 0.0268 | | 0.68 | 28.00 | 7.98 | 9.00 | 9002080006800 |
| 0.0276 | | 0.70 | 28.00 | 7.95 | 9.00 | 9002080007000 |
| 0.0280 | #70 | 0.71 | 28.00 | 7.94 | 9.00 | 9002080007100 |
| 0.0283 | | 0.72 | 28.00 | 7.92 | 9.00 | 9002080007200 |
| 0.0287 | | 0.73 | 28.00 | 7.91 | 9.00 | 9002080007300 |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9002080007500 |
| 0.0303 | | 0.77 | 30.00 | 8.85 | 10.00 | 9002080007700 |
| 0.0307 | | 0.78 | 30.00 | 8.83 | 10.00 | 9002080007800 |
| 0.0311 | 1/32 #68 | 0.79 | 30.00 | 8.82 | 10.00 | 9002080007900 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9002080008000 |
| 0.0319 | #67 | 0.81 | 30.00 | 8.79 | 10.00 | 9002080008100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.0323 | | 0.82 | 30.00 | 8.77 | 10.00 | 9002080008200 |
| 0.0327 | | 0.83 | 30.00 | 8.76 | 10.00 | 9002080008300 |
| 0.0331 | #66 | 0.84 | 30.00 | 8.74 | 10.00 | 9002080008400 |
| 0.0335 | | 0.85 | 30.00 | 8.73 | 10.00 | 9002080008500 |
| 0.0339 | | 0.86 | 32.00 | 9.71 | 11.00 | 9002080008600 |
| 0.0343 | | 0.87 | 32.00 | 9.70 | 11.00 | 9002080008700 |
| 0.0346 | | 0.88 | 32.00 | 9.68 | 11.00 | 9002080008800 |
| 0.0350 | #65 | 0.89 | 32.00 | 9.67 | 11.00 | 9002080008900 |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9002080009000 |
| 0.0358 | #64 | 0.91 | 32.00 | 9.64 | 11.00 | 9002080009100 |
| 0.0362 | | 0.92 | 32.00 | 9.62 | 11.00 | 9002080009200 |
| 0.0366 | | 0.93 | 32.00 | 9.61 | 11.00 | 9002080009300 |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9002080009500 |
| 0.0378 | | 0.96 | 34.00 | 10.56 | 12.00 | 9002080009600 |
| 0.0382 | #62 | 0.97 | 34.00 | 10.55 | 12.00 | 9002080009700 |
| 0.0386 | | 0.98 | 34.00 | 10.53 | 12.00 | 9002080009800 |
| 0.0390 | #61 | 0.99 | 34.00 | 10.52 | 12.00 | 9002080009900 |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9002080010000 |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9002080010200 |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9002080010400 |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9002080010500 |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9002080010700 |
| 0.0425 | | 1.08 | 36.00 | 12.38 | 14.00 | 9002080010800 |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9002080010900 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9002080011000 |
| 0.0441 | | 1.12 | 36.00 | 12.32 | 14.00 | 9002080011200 |
| 0.0445 | | 1.13 | 36.00 | 12.31 | 14.00 | 9002080011300 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9002080011500 |
| 0.0461 | | 1.17 | 36.00 | 12.25 | 14.00 | 9002080011700 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9002080011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9002080011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9002080012000 |
| 0.0476 | | 1.21 | 38.00 | 14.19 | 16.00 | 9002080012100 |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9002080012200 |
| 0.0488 | | 1.24 | 38.00 | 14.14 | 16.00 | 9002080012400 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9002080012500 |
| 0.0500 | | 1.27 | 38.00 | 14.10 | 16.00 | 9002080012700 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9002080013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9002080013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9002080013500 |
| 0.0543 | | 1.38 | 40.00 | 15.93 | 18.00 | 9002080013800 |
| 0.0547 | | 1.39 | 40.00 | 15.92 | 18.00 | 9002080013900 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9002080014000 |
| 0.0559 | | 1.42 | 40.00 | 15.87 | 18.00 | 9002080014200 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|---------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/tr | | | | | mm |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9002080014500 |
| 0.0579 | | 1.47 | 40.00 | 15.80 | 18.00 | 9002080014700 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9002080015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9002080015100 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9002080015300 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9002080015500 |
| 0.0614 | | 1.56 | 43.00 | 17.66 | 20.00 | 9002080015600 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9002080015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9002080016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9002080016100 |
| 0.0638 | | 1.62 | 43.00 | 17.57 | 20.00 | 9002080016200 |
| 0.0642 | | 1.63 | 43.00 | 17.56 | 20.00 | 9002080016300 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9002080016500 |
| 0.0654 | | 1.66 | 43.00 | 17.51 | 20.00 | 9002080016600 |
| 0.0661 | | 1.68 | 43.00 | 17.48 | 20.00 | 9002080016800 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9002080017000 |
| 0.0677 | | 1.72 | 46.00 | 19.42 | 22.00 | 9002080017200 |
| 0.0681 | | 1.73 | 46.00 | 19.41 | 22.00 | 9002080017300 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9002080017500 |
| 0.0693 | | 1.76 | 46.00 | 19.36 | 22.00 | 9002080017600 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9002080018000 |
| 0.0717 | | 1.82 | 46.00 | 19.27 | 22.00 | 9002080018200 |
| 0.0720 | | 1.83 | 46.00 | 19.26 | 22.00 | 9002080018300 |
| 0.0724 | | 1.84 | 46.00 | 19.24 | 22.00 | 9002080018400 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9002080018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9002080019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9002080019300 |
| 0.0764 | | 1.94 | 49.00 | 21.09 | 24.00 | 9002080019400 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9002080019500 |
| 0.0776 | | 1.97 | 49.00 | 21.05 | 24.00 | 9002080019700 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9002080019800 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9002080020000 |
| 0.0803 | | 2.04 | 49.00 | 20.94 | 24.00 | 9002080020400 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9002080020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9002080020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9002080020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9002080021000 |
| 0.0835 | | 2.12 | 49.00 | 20.82 | 24.00 | 9002080021200 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9002080021500 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9002080021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9002080022000 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9002080022500 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9002080022600 |
| 0.0898 | | 2.28 | 53.00 | 23.58 | 27.00 | 9002080022800 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9002080023000 |
| 0.0913 | | 2.32 | 53.00 | 23.52 | 27.00 | 9002080023200 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9002080023500 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9002080023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9002080023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9002080024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9002080024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9002080024500 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9002080024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9002080025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9002080025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9002080025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9002080025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9002080026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9002080026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9002080026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9002080027000 |
| 0.1075 | | 2.73 | 61.00 | 28.91 | 33.00 | 9002080027300 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9002080027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9002080027800 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9002080028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9002080028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9002080028500 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9002080028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9002080029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9002080029500 |
| 0.1169 | | 2.97 | 61.00 | 28.55 | 33.00 | 9002080029700 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9002080030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9002080030500 |
| 0.1209 | | 3.07 | 65.00 | 31.40 | 36.00 | 9002080030700 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9002080031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9002080031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9002080031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9002080032000 |
| 0.1268 | | 3.22 | 65.00 | 31.17 | 36.00 | 9002080032200 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9002080032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9002080032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9002080033000 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9002080033500 |
| 0.1327 | | 3.37 | 70.00 | 33.95 | 39.00 | 9002080033700 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9002080034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9002080034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9002080035000 |
| 0.1398 | | 3.55 | 70.00 | 33.68 | 39.00 | 9002080035500 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9002080035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9002080036000 |
| 0.1437 | | 3.65 | 70.00 | 33.53 | 39.00 | 9002080036500 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9002080037000 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9002080037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9002080038000 |
| 0.1516 | | 3.85 | 75.00 | 37.23 | 43.00 | 9002080038500 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9002080039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9002080039100 |
| 0.1555 | | 3.95 | 75.00 | 37.08 | 43.00 | 9002080039500 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9002080039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9002080040000 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9002080040500 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9002080041000 |
| 0.1626 | | 4.13 | 75.00 | 36.81 | 43.00 | 9002080041300 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9002080041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9002080042000 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9002080042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9002080043000 |
| 0.1713 | | 4.35 | 80.00 | 40.48 | 47.00 | 9002080043500 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9002080043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9002080043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9002080044000 |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9002080044500 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9002080045000 |
| 0.1791 | | 4.55 | 80.00 | 40.18 | 47.00 | 9002080045500 |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9002080045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9002080046000 |
| 0.1831 | | 4.65 | 80.00 | 40.03 | 47.00 | 9002080046500 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9002080047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9002080047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9002080047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9002080048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9002080048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9002080049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9002080049200 |
| 0.1949 | | 4.95 | 86.00 | 44.58 | 52.00 | 9002080049500 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9002080049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9002080050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9002080050600 |

Jobber Length

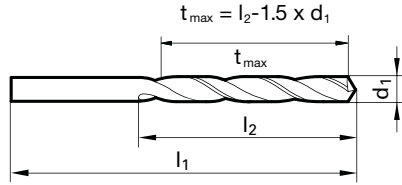
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9002080051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9002080051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9002080051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9002080051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9002080052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9002080052200 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9002080052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9002080053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9002080054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9002080055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9002080055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9002080056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9002080056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9002080057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9002080057500 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9002080058000 |
| 0.2303 | | 5.85 | 93.00 | 48.23 | 57.00 | 9002080058500 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9002080059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9002080059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9002080059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9002080060000 |
| 0.2382 | | 6.05 | 101.00 | 53.93 | 63.00 | 9002080060500 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9002080061000 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9002080062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9002080062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9002080063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9002080063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9002080064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9002080065000 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9002080066000 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9002080067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9002080067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9002080068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9002080069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9002080070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9002080070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9002080071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9002080071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9002080072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9002080073000 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9002080074000 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9002080075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9002080075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9002080076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9002080077000 |
| 0.3051 | | 7.75 | 117.00 | 63.38 | 75.00 | 9002080077500 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9002080078000 |
| 0.3091 | | 7.85 | 117.00 | 63.23 | 75.00 | 9002080078500 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9002080079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9002080079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9002080080000 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9002080081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9002080082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9002080083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9002080083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9002080084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9002080084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9002080085000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9002080086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9002080087000 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9002080088000 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9002080089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9002080090000 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9002080091000 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9002080092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9002080093000 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9002080094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9002080095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9002080095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9002080096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9002080097000 |
| 0.3839 | | 9.75 | 133.00 | 72.38 | 87.00 | 9002080097500 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9002080098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9002080099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9002080099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9002080100000 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9002080101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9002080102000 |
| 0.4035 | | 10.25 | 133.00 | 71.63 | 87.00 | 9002080102500 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9002080103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9002080103200 |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9002080104000 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9002080105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9002080106000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9002080107000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9002080107200 |
| 0.4232 | | 10.75 | 142.00 | 77.88 | 94.00 | 9002080107500 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9002080110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9002080111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9002080112000 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9002080113000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9002080115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9002080115100 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9002080118000 |
| 0.4685 | | 11.90 | 151.00 | 83.15 | 101.00 | 9002080119000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9002080119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9002080120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9002080121000 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9002080122000 |
| 0.4823 | | 12.25 | 151.00 | 82.63 | 101.00 | 9002080122500 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9002080123000 |
| 0.4882 | | 12.40 | 151.00 | 82.40 | 101.00 | 9002080124000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9002080125000 |
| 0.4961 | | 12.60 | 151.00 | 82.10 | 101.00 | 9002080126000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9002080127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9002080130000 |
| 0.5217 | | 13.25 | 160.00 | 88.13 | 108.00 | 9002080132500 |
| 0.5276 | | 13.40 | 160.00 | 87.90 | 108.00 | 9002080134000 |
| 0.5669 | | 14.40 | 169.00 | 92.40 | 114.00 | 9002080144000 |
| 0.5787 | | 14.70 | 169.00 | 91.95 | 114.00 | 9002080147000 |
| 0.5827 | | 14.80 | 169.00 | 91.80 | 114.00 | 9002080148000 |
| 0.6004 | | 15.25 | 178.00 | 97.13 | 120.00 | 9002080152500 |
| 0.6102 | | 15.50 | 178.00 | 96.75 | 120.00 | 9002080155000 |
| 0.6248 | 5/8 | 15.87 | 178.00 | 96.20 | 120.00 | 9002080158700 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9002080160000 |



Tool material **HSS**
Surface **S**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone |
| M | Stainless steel | | |
| K | Cast iron | ● | alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Jobber Length

Speeds and feeds information on pg. 534

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0079 | #92 | 0.20 | 19.00 | 2.20 | 2.50 | 9006510002000 |
| 0.0098 | #87 | 0.25 | 19.00 | 2.63 | 3.00 | 9006510002500 |
| 0.0110 | #85 | 0.28 | 19.00 | 2.58 | 3.00 | 9006510002800 |
| 0.0118 | | 0.30 | 19.00 | 2.55 | 3.00 | 9006510003000 |
| 0.0122 | #83 | 0.31 | 19.00 | 3.54 | 4.00 | 9006510003100 |
| 0.0130 | #81 | 0.33 | 19.00 | 3.51 | 4.00 | 9006510003300 |
| 0.0134 | #80 | 0.34 | 19.00 | 3.49 | 4.00 | 9006510003400 |
| 0.0142 | | 0.36 | 19.00 | 3.46 | 4.00 | 9006510003600 |
| 0.0146 | #79 | 0.37 | 19.00 | 3.45 | 4.00 | 9006510003700 |
| 0.0150 | | 0.38 | 19.00 | 3.43 | 4.00 | 9006510003800 |
| 0.0154 | | 0.39 | 20.00 | 4.42 | 5.00 | 9006510003900 |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 9006510004000 |
| 0.0161 | #78 | 0.41 | 20.00 | 4.39 | 5.00 | 9006510004100 |
| 0.0165 | | 0.42 | 20.00 | 4.37 | 5.00 | 9006510004200 |
| 0.0169 | | 0.43 | 20.00 | 4.36 | 5.00 | 9006510004300 |
| 0.0173 | | 0.44 | 20.00 | 4.34 | 5.00 | 9006510004400 |
| 0.0177 | | 0.45 | 20.00 | 4.33 | 5.00 | 9006510004500 |
| 0.0181 | #77 | 0.46 | 20.00 | 4.31 | 5.00 | 9006510004600 |
| 0.0185 | | 0.47 | 20.00 | 4.30 | 5.00 | 9006510004700 |
| 0.0189 | | 0.48 | 20.00 | 4.28 | 5.00 | 9006510004800 |
| 0.0193 | | 0.49 | 22.00 | 5.27 | 6.00 | 9006510004900 |
| 0.0197 | | 0.50 | 22.00 | 5.25 | 6.00 | 9006510005000 |
| 0.0201 | #76 | 0.51 | 22.00 | 5.24 | 6.00 | 9006510005100 |
| 0.0205 | | 0.52 | 22.00 | 5.22 | 6.00 | 9006510005200 |
| 0.0209 | #75 | 0.53 | 22.00 | 5.21 | 6.00 | 9006510005300 |
| 0.0213 | | 0.54 | 24.00 | 6.19 | 7.00 | 9006510005400 |
| 0.0217 | | 0.55 | 24.00 | 6.18 | 7.00 | 9006510005500 |
| 0.0224 | #74 | 0.57 | 24.00 | 6.15 | 7.00 | 9006510005700 |
| 0.0228 | | 0.58 | 24.00 | 6.13 | 7.00 | 9006510005800 |
| 0.0232 | | 0.59 | 24.00 | 6.12 | 7.00 | 9006510005900 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9006510006000 |
| 0.0240 | #73 | 0.61 | 26.00 | 7.09 | 8.00 | 9006510006100 |
| 0.0248 | | 0.63 | 26.00 | 7.06 | 8.00 | 9006510006300 |
| 0.0252 | #72 | 0.64 | 26.00 | 7.04 | 8.00 | 9006510006400 |
| 0.0256 | | 0.65 | 26.00 | 7.03 | 8.00 | 9006510006500 |
| 0.0260 | #71 | 0.66 | 26.00 | 7.01 | 8.00 | 9006510006600 |
| 0.0268 | | 0.68 | 28.00 | 7.98 | 9.00 | 9006510006800 |
| 0.0272 | | 0.69 | 28.00 | 7.97 | 9.00 | 9006510006900 |
| 0.0276 | | 0.70 | 28.00 | 7.95 | 9.00 | 9006510007000 |
| 0.0280 | #70 | 0.71 | 28.00 | 7.94 | 9.00 | 9006510007100 |
| 0.0283 | | 0.72 | 28.00 | 7.92 | 9.00 | 9006510007200 |
| 0.0291 | #69 | 0.74 | 28.00 | 7.89 | 9.00 | 9006510007400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9006510007500 | |
| 0.0303 | | 0.77 | 30.00 | 8.85 | 10.00 | 9006510007700 | |
| 0.0307 | | 0.78 | 30.00 | 8.83 | 10.00 | 9006510007800 | |
| 0.0311 | 1/32 | #68 | 0.79 | 30.00 | 8.82 | 10.00 | 9006510007900 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9006510008000 | |
| 0.0319 | #67 | 0.81 | 30.00 | 8.79 | 10.00 | 9006510008100 | |
| 0.0323 | | 0.82 | 30.00 | 8.77 | 10.00 | 9006510008200 | |
| 0.0327 | | 0.83 | 30.00 | 8.76 | 10.00 | 9006510008300 | |
| 0.0331 | #66 | 0.84 | 30.00 | 8.74 | 10.00 | 9006510008400 | |
| 0.0335 | | 0.85 | 30.00 | 8.73 | 10.00 | 9006510008500 | |
| 0.0339 | | 0.86 | 32.00 | 9.71 | 11.00 | 9006510008600 | |
| 0.0346 | | 0.88 | 32.00 | 9.68 | 11.00 | 9006510008800 | |
| 0.0350 | #65 | 0.89 | 32.00 | 9.67 | 11.00 | 9006510008900 | |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9006510009000 | |
| 0.0358 | #64 | 0.91 | 32.00 | 9.64 | 11.00 | 9006510009100 | |
| 0.0362 | | 0.92 | 32.00 | 9.62 | 11.00 | 9006510009200 | |
| 0.0366 | | 0.93 | 32.00 | 9.61 | 11.00 | 9006510009300 | |
| 0.0370 | #63 | 0.94 | 32.00 | 9.59 | 11.00 | 9006510009400 | |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9006510009500 | |
| 0.0378 | | 0.96 | 34.00 | 10.56 | 12.00 | 9006510009600 | |
| 0.0382 | #62 | 0.97 | 34.00 | 10.55 | 12.00 | 9006510009700 | |
| 0.0386 | | 0.98 | 34.00 | 10.53 | 12.00 | 9006510009800 | |
| 0.0390 | #61 | 0.99 | 34.00 | 10.52 | 12.00 | 9006510009900 | |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9006510010000 | |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9006510010200 | |
| 0.0406 | | 1.03 | 34.00 | 10.46 | 12.00 | 9006510010300 | |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9006510010400 | |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9006510010500 | |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9006510010700 | |
| 0.0425 | | 1.08 | 36.00 | 12.38 | 14.00 | 9006510010800 | |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9006510010900 | |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9006510011000 | |
| 0.0437 | | 1.11 | 36.00 | 12.34 | 14.00 | 9006510011100 | |
| 0.0441 | | 1.12 | 36.00 | 12.32 | 14.00 | 9006510011200 | |
| 0.0445 | | 1.13 | 36.00 | 12.31 | 14.00 | 9006510011300 | |
| 0.0449 | | 1.14 | 36.00 | 12.29 | 14.00 | 9006510011400 | |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9006510011500 | |
| 0.0457 | | 1.16 | 36.00 | 12.26 | 14.00 | 9006510011600 | |
| 0.0461 | | 1.17 | 36.00 | 12.25 | 14.00 | 9006510011700 | |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9006510011800 | |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9006510011900 | |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9006510012000 | |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | mm |
| 0.0476 | | 1.21 | 38.00 | 14.19 | 16.00 | 9006510012100 |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9006510012200 |
| 0.0488 | | 1.24 | 38.00 | 14.14 | 16.00 | 9006510012400 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9006510012500 |
| 0.0496 | | 1.26 | 38.00 | 14.11 | 16.00 | 9006510012600 |
| 0.0500 | | 1.27 | 38.00 | 14.10 | 16.00 | 9006510012700 |
| 0.0504 | | 1.28 | 38.00 | 14.08 | 16.00 | 9006510012800 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9006510013000 |
| 0.0516 | | 1.31 | 38.00 | 14.04 | 16.00 | 9006510013100 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9006510013200 |
| 0.0528 | | 1.34 | 40.00 | 15.99 | 18.00 | 9006510013400 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9006510013500 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9006510014000 |
| 0.0559 | | 1.42 | 40.00 | 15.87 | 18.00 | 9006510014200 |
| 0.0563 | | 1.43 | 40.00 | 15.86 | 18.00 | 9006510014300 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9006510014500 |
| 0.0575 | | 1.46 | 40.00 | 15.81 | 18.00 | 9006510014600 |
| 0.0579 | | 1.47 | 40.00 | 15.80 | 18.00 | 9006510014700 |
| 0.0583 | | 1.48 | 40.00 | 15.78 | 18.00 | 9006510014800 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9006510015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9006510015100 |
| 0.0598 | | 1.52 | 43.00 | 17.72 | 20.00 | 9006510015200 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9006510015300 |
| 0.0606 | | 1.54 | 43.00 | 17.69 | 20.00 | 9006510015400 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9006510015500 |
| 0.0618 | | 1.57 | 43.00 | 17.65 | 20.00 | 9006510015700 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9006510015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9006510016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9006510016100 |
| 0.0638 | | 1.62 | 43.00 | 17.57 | 20.00 | 9006510016200 |
| 0.0646 | | 1.64 | 43.00 | 17.54 | 20.00 | 9006510016400 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9006510016500 |
| 0.0661 | | 1.68 | 43.00 | 17.48 | 20.00 | 9006510016800 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9006510017000 |
| 0.0673 | | 1.71 | 46.00 | 19.44 | 22.00 | 9006510017100 |
| 0.0681 | | 1.73 | 46.00 | 19.41 | 22.00 | 9006510017300 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9006510017500 |
| 0.0697 | | 1.77 | 46.00 | 19.35 | 22.00 | 9006510017700 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9006510017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9006510018000 |
| 0.0717 | | 1.82 | 46.00 | 19.27 | 22.00 | 9006510018200 |
| 0.0720 | | 1.83 | 46.00 | 19.26 | 22.00 | 9006510018300 |
| 0.0724 | | 1.84 | 46.00 | 19.24 | 22.00 | 9006510018400 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9006510018500 |
| 0.0736 | | 1.87 | 46.00 | 19.20 | 22.00 | 9006510018700 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9006510019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9006510019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9006510019500 |
| 0.0772 | | 1.96 | 49.00 | 21.06 | 24.00 | 9006510019600 |
| 0.0776 | | 1.97 | 49.00 | 21.05 | 24.00 | 9006510019700 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9006510019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9006510019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9006510020000 |
| 0.0795 | | 2.02 | 49.00 | 20.97 | 24.00 | 9006510020200 |
| 0.0799 | | 2.03 | 49.00 | 20.96 | 24.00 | 9006510020300 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9006510020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9006510020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9006510020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9006510021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9006510021500 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9006510021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9006510022000 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9006510022500 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9006510022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9006510023000 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9006510023500 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | mm |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9006510023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006510023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006510024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9006510024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9006510024500 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9006510024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006510025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006510025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9006510025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9006510025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006510026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9006510026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9006510026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006510027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9006510027100 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9006510027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006510027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9006510027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006510028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9006510028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9006510028500 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9006510028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006510029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006510029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006510030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006510030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006510031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9006510031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006510031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006510032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9006510032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9006510032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006510033000 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9006510033500 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006510034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9006510034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006510035000 |
| 0.1398 | | 3.55 | 70.00 | 33.68 | 39.00 | 9006510035500 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9006510035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006510036000 |
| 0.1437 | | 3.65 | 70.00 | 33.53 | 39.00 | 9006510036500 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9006510036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006510037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9006510037300 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9006510037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006510038000 |
| 0.1516 | | 3.85 | 75.00 | 37.23 | 43.00 | 9006510038500 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9006510038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006510039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9006510039100 |
| 0.1555 | | 3.95 | 75.00 | 37.08 | 43.00 | 9006510039500 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006510039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9006510039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006510040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9006510040400 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9006510040500 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9006510040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006510041000 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9006510041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006510042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9006510042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9006510042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006510043000 |
| 0.1713 | | 4.35 | 80.00 | 40.48 | 47.00 | 9006510043500 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006510043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9006510043900 |

Jobber Length

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | mm |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006510044000 |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9006510044500 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006510045000 |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9006510045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006510046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9006510046200 |
| 0.1831 | | 4.65 | 80.00 | 40.03 | 47.00 | 9006510046500 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006510047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9006510047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006510047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006510048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9006510048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006510049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9006510049200 |
| 0.1949 | | 4.95 | 86.00 | 44.58 | 52.00 | 9006510049500 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9006510049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006510050000 |
| 0.1988 | | 5.05 | 86.00 | 44.43 | 52.00 | 9006510050500 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9006510050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006510051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9006510051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006510051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9006510051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006510052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9006510052200 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9006510052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006510053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9006510053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006510054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9006510054100 |
| 0.2146 | | 5.45 | 93.00 | 48.83 | 57.00 | 9006510054500 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006510055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006510055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9006510056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9006510056100 |
| 0.2224 | | 5.65 | 93.00 | 48.53 | 57.00 | 9006510056500 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006510057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9006510057500 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9006510057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006510058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006510059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9006510059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9006510059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006510060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9006510060400 |
| 0.2382 | | 6.05 | 101.00 | 53.93 | 63.00 | 9006510060500 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006510061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9006510061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006510062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9006510062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006510063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9006510063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9006510064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006510065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9006510065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9006510066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9006510066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9006510067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9006510067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9006510068000 |
| 0.2697 | | 6.85 | 109.00 | 58.73 | 69.00 | 9006510068500 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9006510069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9006510070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9006510070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9006510071000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9006510071400 |
| 0.2835 | | | 7.20 | 109.00 | 58.20 | 69.00 | 9006510072000 |
| 0.2854 | | | 7.25 | 109.00 | 58.13 | 69.00 | 9006510072500 |
| 0.2874 | | | 7.30 | 109.00 | 58.05 | 69.00 | 9006510073000 |
| 0.2902 | | L | 7.37 | 109.00 | 57.95 | 69.00 | 9006510073700 |
| 0.2913 | | | 7.40 | 109.00 | 57.90 | 69.00 | 9006510074000 |
| 0.2933 | | | 7.45 | 109.00 | 57.83 | 69.00 | 9006510074500 |
| 0.2949 | | M | 7.49 | 109.00 | 57.77 | 69.00 | 9006510074900 |
| 0.2953 | | | 7.50 | 109.00 | 57.75 | 69.00 | 9006510075000 |
| 0.2969 | 19/64 | | 7.54 | 117.00 | 63.69 | 75.00 | 9006510075400 |
| 0.2992 | | | 7.60 | 117.00 | 63.60 | 75.00 | 9006510076000 |
| 0.3020 | | N | 7.67 | 117.00 | 63.50 | 75.00 | 9006510076700 |
| 0.3031 | | | 7.70 | 117.00 | 63.45 | 75.00 | 9006510077000 |
| 0.3051 | | | 7.75 | 117.00 | 63.38 | 75.00 | 9006510077500 |
| 0.3071 | | | 7.80 | 117.00 | 63.30 | 75.00 | 9006510078000 |
| 0.3110 | | | 7.90 | 117.00 | 63.15 | 75.00 | 9006510079000 |
| 0.3126 | 5/16 | | 7.94 | 117.00 | 63.09 | 75.00 | 9006510079400 |
| 0.3150 | | | 8.00 | 117.00 | 63.00 | 75.00 | 9006510080000 |
| 0.3161 | | O | 8.03 | 117.00 | 62.96 | 75.00 | 9006510080300 |
| 0.3189 | | | 8.10 | 117.00 | 62.85 | 75.00 | 9006510081000 |
| 0.3228 | | P | 8.20 | 117.00 | 62.70 | 75.00 | 9006510082000 |
| 0.3248 | | | 8.25 | 117.00 | 62.63 | 75.00 | 9006510082500 |
| 0.3268 | | | 8.30 | 117.00 | 62.55 | 75.00 | 9006510083000 |
| 0.3280 | 21/64 | | 8.33 | 117.00 | 62.51 | 75.00 | 9006510083300 |
| 0.3307 | | | 8.40 | 117.00 | 62.40 | 75.00 | 9006510084000 |
| 0.3319 | | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9006510084300 |
| 0.3346 | | | 8.50 | 117.00 | 62.25 | 75.00 | 9006510085000 |
| 0.3386 | | | 8.60 | 125.00 | 68.10 | 81.00 | 9006510086000 |
| 0.3390 | | R | 8.61 | 125.00 | 68.09 | 81.00 | 9006510086100 |
| 0.3425 | | | 8.70 | 125.00 | 67.95 | 81.00 | 9006510087000 |
| 0.3437 | 11/32 | | 8.73 | 125.00 | 67.91 | 81.00 | 9006510087300 |
| 0.3445 | | | 8.75 | 125.00 | 67.88 | 81.00 | 9006510087500 |
| 0.3465 | | | 8.80 | 125.00 | 67.80 | 81.00 | 9006510088000 |
| 0.3480 | | S | 8.84 | 125.00 | 67.74 | 81.00 | 9006510088400 |
| 0.3484 | | | 8.85 | 125.00 | 67.73 | 81.00 | 9006510088500 |
| 0.3504 | | | 8.90 | 125.00 | 67.65 | 81.00 | 9006510089000 |
| 0.3543 | | | 9.00 | 125.00 | 67.50 | 81.00 | 9006510090000 |
| 0.3579 | | T | 9.09 | 125.00 | 67.37 | 81.00 | 9006510090900 |
| 0.3583 | | | 9.10 | 125.00 | 67.35 | 81.00 | 9006510091000 |
| 0.3594 | 23/64 | | 9.13 | 125.00 | 67.31 | 81.00 | 9006510091300 |
| 0.3622 | | | 9.20 | 125.00 | 67.20 | 81.00 | 9006510092000 |
| 0.3642 | | | 9.25 | 125.00 | 67.13 | 81.00 | 9006510092500 |
| 0.3661 | | | 9.30 | 125.00 | 67.05 | 81.00 | 9006510093000 |
| 0.3677 | | U | 9.34 | 125.00 | 66.99 | 81.00 | 9006510093400 |
| 0.3701 | | | 9.40 | 125.00 | 66.90 | 81.00 | 9006510094000 |
| 0.3740 | | | 9.50 | 125.00 | 66.75 | 81.00 | 9006510095000 |
| 0.3748 | 3/8 | | 9.52 | 133.00 | 72.72 | 87.00 | 9006510095200 |
| 0.3760 | | | 9.55 | 133.00 | 72.68 | 87.00 | 9006510095500 |
| 0.3772 | | V | 9.58 | 133.00 | 72.63 | 87.00 | 9006510095800 |
| 0.3780 | | | 9.60 | 133.00 | 72.60 | 87.00 | 9006510096000 |
| 0.3819 | | | 9.70 | 133.00 | 72.45 | 87.00 | 9006510097000 |
| 0.3839 | | | 9.75 | 133.00 | 72.38 | 87.00 | 9006510097500 |
| 0.3858 | | W | 9.80 | 133.00 | 72.30 | 87.00 | 9006510098000 |
| 0.3898 | | | 9.90 | 133.00 | 72.15 | 87.00 | 9006510099000 |
| 0.3906 | 25/64 | | 9.92 | 133.00 | 72.12 | 87.00 | 9006510099200 |
| 0.3937 | | | 10.00 | 133.00 | 72.00 | 87.00 | 9006510100000 |
| 0.3961 | | | 10.06 | 133.00 | 71.91 | 87.00 | 9006510100600 |
| 0.3969 | | X | 10.08 | 133.00 | 71.88 | 87.00 | 9006510100800 |
| 0.3976 | | | 10.10 | 133.00 | 71.85 | 87.00 | 9006510101000 |
| 0.4016 | | | 10.20 | 133.00 | 71.70 | 87.00 | 9006510102000 |
| 0.4035 | | | 10.25 | 133.00 | 71.63 | 87.00 | 9006510102500 |
| 0.4039 | | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9006510102600 |
| 0.4055 | | | 10.30 | 133.00 | 71.55 | 87.00 | 9006510103000 |
| 0.4063 | 13/32 | | 10.32 | 133.00 | 71.52 | 87.00 | 9006510103200 |
| 0.4094 | | | 10.40 | 133.00 | 71.40 | 87.00 | 9006510104000 |

Jobber Length

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|--------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9006510104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9006510105000 |
| 0.4154 | | 10.55 | 133.00 | 71.18 | 87.00 | 9006510105500 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9006510106000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9006510107000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9006510107200 |
| 0.4232 | | 10.75 | 142.00 | 77.88 | 94.00 | 9006510107500 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9006510108000 |
| 0.4291 | | 10.90 | 142.00 | 77.65 | 94.00 | 9006510109000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9006510110000 |
| 0.4370 | | 11.10 | 142.00 | 77.35 | 94.00 | 9006510111000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9006510111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9006510112000 |
| 0.4429 | | 11.25 | 142.00 | 77.13 | 94.00 | 9006510112500 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9006510113000 |
| 0.4488 | | 11.40 | 142.00 | 76.90 | 94.00 | 9006510114000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9006510115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9006510115100 |
| 0.4587 | | 11.65 | 142.00 | 76.53 | 94.00 | 9006510116500 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9006510117000 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9006510118000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9006510119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9006510120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9006510121000 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9006510122000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9006510123000 |
| 0.4882 | | 12.40 | 151.00 | 82.40 | 101.00 | 9006510124000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9006510125000 |
| 0.4961 | | 12.60 | 151.00 | 82.10 | 101.00 | 9006510126000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9006510127000 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9006510128000 |
| 0.5079 | | 12.90 | 151.00 | 81.65 | 101.00 | 9006510129000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9006510130000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9006510131000 |
| 0.5197 | | 13.20 | 151.00 | 81.20 | 101.00 | 9006510132000 |
| 0.5217 | | 13.25 | 160.00 | 88.13 | 108.00 | 9006510132500 |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9006510134900 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9006510135000 |
| 0.5394 | | 13.70 | 160.00 | 87.45 | 108.00 | 9006510137000 |
| 0.5433 | | 13.80 | 160.00 | 87.30 | 108.00 | 9006510138000 |
| 0.5469 | 35/64 | 13.89 | 160.00 | 87.17 | 108.00 | 9006510138900 |
| 0.5472 | | 13.90 | 160.00 | 87.15 | 108.00 | 9006510139000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9006510140000 |
| 0.5591 | | 14.20 | 169.00 | 92.70 | 114.00 | 9006510142000 |
| 0.5610 | | 14.25 | 169.00 | 92.63 | 114.00 | 9006510142500 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9006510142900 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9006510145000 |
| 0.5748 | | 14.60 | 169.00 | 92.10 | 114.00 | 9006510146000 |
| 0.5780 | 37/64 | 14.68 | 169.00 | 91.98 | 114.00 | 9006510146800 |
| 0.5807 | | 14.75 | 169.00 | 91.88 | 114.00 | 9006510147500 |
| 0.5827 | | 14.80 | 169.00 | 91.80 | 114.00 | 9006510148000 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9006510150000 |
| 0.5937 | 19/32 | 15.08 | 178.00 | 97.38 | 120.00 | 9006510150800 |
| 0.6004 | | 15.25 | 178.00 | 97.13 | 120.00 | 9006510152500 |
| 0.6094 | 39/64 | 15.48 | 178.00 | 96.78 | 120.00 | 9006510154800 |
| 0.6102 | | 15.50 | 178.00 | 96.75 | 120.00 | 9006510155000 |
| 0.6201 | | 15.75 | 178.00 | 96.38 | 120.00 | 9006510157500 |
| 0.6220 | | 15.80 | 178.00 | 96.30 | 120.00 | 9006510158000 |
| 0.6248 | 5/8 | 15.87 | 178.00 | 96.20 | 120.00 | 9006510158700 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9006510160000 |
| 0.6594 | | 16.75 | 184.00 | 99.88 | 125.00 | 9006510167500 |
| 0.6693 | | 17.00 | 184.00 | 99.50 | 125.00 | 9006510170000 |
| 0.6890 | | 17.50 | 191.00 | 103.75 | 130.00 | 9006510175000 |
| 0.7087 | | 18.00 | 191.00 | 103.00 | 130.00 | 9006510180000 |
| 0.7283 | | 18.50 | 198.00 | 107.25 | 135.00 | 9006510185000 |
| 0.7480 | | 19.00 | 198.00 | 106.50 | 135.00 | 9006510190000 |

Jobber Length



Tool material

HSS

Surface

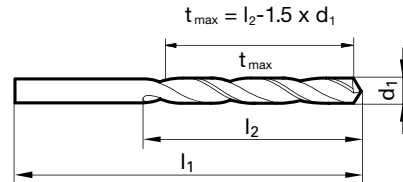


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | ● |
| N | Aluminum | ○ |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning ≥ Ø 2.380 • relieved cone

alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite

●=Optimal
○=Limited



Jobber Length

Speeds and feeds information on pg. 538

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 9006640004000 |
| 0.0165 | | 0.42 | 20.00 | 4.37 | 5.00 | 9006640004200 |
| 0.0169 | | 0.43 | 20.00 | 4.36 | 5.00 | 9006640004300 |
| 0.0177 | | 0.45 | 20.00 | 4.33 | 5.00 | 9006640004500 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9006640006000 |
| 0.0264 | | 0.67 | 26.00 | 7.00 | 8.00 | 9006640006700 |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9006640007500 |
| 0.0303 | | 0.77 | 30.00 | 8.85 | 10.00 | 9006640007700 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9006640008000 |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9006640009000 |
| 0.0366 | | 0.93 | 32.00 | 9.61 | 11.00 | 9006640009300 |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9006640009500 |
| 0.0382 | #62 | 0.97 | 34.00 | 10.55 | 12.00 | 9006640009700 |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9006640010000 |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9006640010500 |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9006640010700 |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9006640010900 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9006640011000 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9006640011500 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9006640011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9006640011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9006640012000 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9006640012500 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9006640013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9006640013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9006640013500 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9006640014000 |
| 0.0559 | | 1.42 | 40.00 | 15.87 | 18.00 | 9006640014200 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9006640014500 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9006640015000 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9006640015500 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9006640015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9006640016000 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9006640016500 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9006640017000 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9006640017500 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9006640018000 |
| 0.0717 | | 1.82 | 46.00 | 19.27 | 22.00 | 9006640018200 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9006640018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9006640019000 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9006640020000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9006640020500 | |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9006640021000 | |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9006640021500 | |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9006640022000 | |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9006640023000 | |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006640023800 | |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006640024000 | |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9006640024500 | |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006640025000 | |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006640025300 | |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9006640025800 | |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006640026000 | |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006640027000 | |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9006640027100 | |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9006640027500 | |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006640027800 | |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006640028000 | |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006640029000 | |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006640029500 | |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006640030000 | |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006640030500 | |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006640031000 | |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006640031700 | |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006640032000 | |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006640033000 | |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006640034000 | |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9006640034500 | |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006640035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9006640035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006640036000 | |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006640037000 | |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006640038000 | |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006640039000 | |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006640039700 | |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006640040000 | |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006640041000 | |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006640042000 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006640043000 | |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006640043700 | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006640044000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006640045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006640046000 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006640047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006640047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006640048000 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006640049000 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006640050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9006640050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006640051000 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006640051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006640052000 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006640053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006640054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006640055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006640055600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9006640056000 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006640057000 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006640058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006640059000 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006640060000 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006640061000 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006640062000 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006640063000 |
| 0.2500 | 1/4 E | 6.35 | 101.00 | 53.48 | 63.00 | 9006640063500 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006640065000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9006640075400 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9006640078000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9006640087300 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9006640091300 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9006640102000 |

Jobber Length



Tool material

HSS

Surface

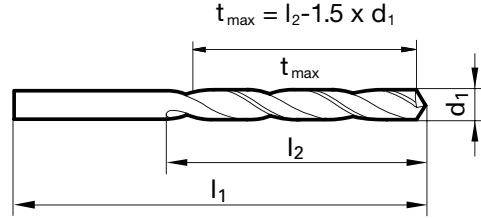


| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum ● |
| S | Titanium alloys |
| H | Hardened steel |

web thinning ≥ Ø 14.500 • relieved cone

hard and crumbly materials • brass, magnesium alloys • bronze, phosphor bronze • slate, mica, pertinax

- =Optimal
- =Limited



Speeds and feeds information on pg. 496

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0079 | #92 | 0.20 | 19.00 | 2.20 | 2.50 | 9002060002000 |
| 0.0094 | #88 | 0.24 | 19.00 | 2.14 | 2.50 | 9002060002400 |
| 0.0098 | #87 | 0.25 | 19.00 | 2.63 | 3.00 | 9002060002500 |
| 0.0118 | | 0.30 | 19.00 | 2.55 | 3.00 | 9002060003000 |
| 0.0134 | #80 | 0.34 | 19.00 | 3.49 | 4.00 | 9002060003400 |
| 0.0138 | | 0.35 | 19.00 | 3.48 | 4.00 | 9002060003500 |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 9002060004000 |
| 0.0161 | #78 | 0.41 | 20.00 | 4.39 | 5.00 | 9002060004100 |
| 0.0177 | | 0.45 | 20.00 | 4.33 | 5.00 | 9002060004500 |
| 0.0181 | #77 | 0.46 | 20.00 | 4.31 | 5.00 | 9002060004600 |
| 0.0197 | | 0.50 | 22.00 | 5.25 | 6.00 | 9002060005000 |
| 0.0201 | #76 | 0.51 | 22.00 | 5.24 | 6.00 | 9002060005100 |
| 0.0209 | #75 | 0.53 | 22.00 | 5.21 | 6.00 | 9002060005300 |
| 0.0217 | | 0.55 | 24.00 | 6.18 | 7.00 | 9002060005500 |
| 0.0224 | #74 | 0.57 | 24.00 | 6.15 | 7.00 | 9002060005700 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9002060006000 |
| 0.0244 | | 0.62 | 26.00 | 7.07 | 8.00 | 9002060006200 |
| 0.0256 | | 0.65 | 26.00 | 7.03 | 8.00 | 9002060006500 |
| 0.0260 | #71 | 0.66 | 26.00 | 7.01 | 8.00 | 9002060006600 |
| 0.0276 | | 0.70 | 28.00 | 7.95 | 9.00 | 9002060007000 |
| 0.0283 | | 0.72 | 28.00 | 7.92 | 9.00 | 9002060007200 |
| 0.0287 | | 0.73 | 28.00 | 7.91 | 9.00 | 9002060007300 |
| 0.0291 | #69 | 0.74 | 28.00 | 7.89 | 9.00 | 9002060007400 |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9002060007500 |
| 0.0299 | | 0.76 | 30.00 | 8.86 | 10.00 | 9002060007600 |
| 0.0303 | | 0.77 | 30.00 | 8.85 | 10.00 | 9002060007700 |
| 0.0311 | 1/32 #68 | 0.79 | 30.00 | 8.82 | 10.00 | 9002060007900 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9002060008000 |
| 0.0319 | #67 | 0.81 | 30.00 | 8.79 | 10.00 | 9002060008100 |
| 0.0327 | | 0.83 | 30.00 | 8.76 | 10.00 | 9002060008300 |
| 0.0331 | #66 | 0.84 | 30.00 | 8.74 | 10.00 | 9002060008400 |
| 0.0335 | | 0.85 | 30.00 | 8.73 | 10.00 | 9002060008500 |
| 0.0339 | | 0.86 | 32.00 | 9.71 | 11.00 | 9002060008600 |
| 0.0343 | | 0.87 | 32.00 | 9.70 | 11.00 | 9002060008700 |
| 0.0346 | | 0.88 | 32.00 | 9.68 | 11.00 | 9002060008800 |
| 0.0350 | #65 | 0.89 | 32.00 | 9.67 | 11.00 | 9002060008900 |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9002060009000 |
| 0.0358 | #64 | 0.91 | 32.00 | 9.64 | 11.00 | 9002060009100 |
| 0.0366 | | 0.93 | 32.00 | 9.61 | 11.00 | 9002060009300 |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9002060009500 |
| 0.0378 | | 0.96 | 34.00 | 10.56 | 12.00 | 9002060009600 |
| 0.0382 | #62 | 0.97 | 34.00 | 10.55 | 12.00 | 9002060009700 |
| 0.0390 | #61 | 0.99 | 34.00 | 10.52 | 12.00 | 9002060009900 |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9002060010000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9002060010200 |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9002060010400 |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9002060010500 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9002060011000 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9002060011500 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9002060011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9002060011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9002060012000 |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9002060012200 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9002060012500 |
| 0.0500 | | 1.27 | 38.00 | 14.10 | 16.00 | 9002060012700 |
| 0.0504 | | 1.28 | 38.00 | 14.08 | 16.00 | 9002060012800 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9002060013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9002060013200 |
| 0.0524 | | 1.33 | 40.00 | 16.01 | 18.00 | 9002060013300 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9002060013500 |
| 0.0539 | | 1.37 | 40.00 | 15.95 | 18.00 | 9002060013700 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9002060014000 |
| 0.0563 | | 1.43 | 40.00 | 15.86 | 18.00 | 9002060014300 |
| 0.0567 | | 1.44 | 40.00 | 15.84 | 18.00 | 9002060014400 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9002060014500 |
| 0.0579 | | 1.47 | 40.00 | 15.80 | 18.00 | 9002060014700 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9002060015000 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9002060015300 |
| 0.0606 | | 1.54 | 43.00 | 17.69 | 20.00 | 9002060015400 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9002060015500 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9002060015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9002060016000 |
| 0.0638 | | 1.62 | 43.00 | 17.57 | 20.00 | 9002060016200 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9002060016500 |
| 0.0657 | | 1.67 | 43.00 | 17.50 | 20.00 | 9002060016700 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9002060017000 |
| 0.0677 | | 1.72 | 46.00 | 19.42 | 22.00 | 9002060017200 |
| 0.0681 | | 1.73 | 46.00 | 19.41 | 22.00 | 9002060017300 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9002060017500 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9002060017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9002060018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9002060018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9002060019000 |
| 0.0756 | | 1.92 | 49.00 | 21.12 | 24.00 | 9002060019200 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9002060019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9002060019800 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9002060020000 |
| 0.0795 | | 2.02 | 49.00 | 20.97 | 24.00 | 9002060020200 |

Jobber Length

Jobber Length

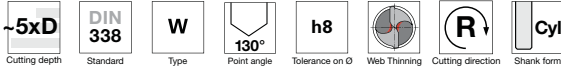
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|--|
| inch | wire/tr | mm | | | | |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9002060020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9002060020600 |
| 0.0815 | | 2.07 | 49.00 | 20.90 | 24.00 | 9002060020700 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9002060021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9002060021500 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9002060021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9002060022000 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9002060022500 |
| 0.0894 | | 2.27 | 53.00 | 23.60 | 27.00 | 9002060022700 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9002060023000 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9002060023500 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9002060023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9002060024000 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9002060024500 |
| 0.0972 | | 2.47 | 57.00 | 26.30 | 30.00 | 9002060024700 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9002060025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9002060025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9002060025500 |
| 0.1012 | | 2.57 | 57.00 | 26.15 | 30.00 | 9002060025700 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9002060026000 |
| 0.1035 | | 2.63 | 57.00 | 26.06 | 30.00 | 9002060026300 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9002060026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9002060026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9002060027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9002060027100 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9002060027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9002060027800 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9002060028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9002060028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9002060028500 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9002060029000 |
| 0.1150 | | 2.92 | 61.00 | 28.62 | 33.00 | 9002060029200 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9002060029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9002060030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9002060030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9002060031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9002060031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9002060031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9002060032000 |
| 0.1268 | | 3.22 | 65.00 | 31.17 | 36.00 | 9002060032200 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9002060032500 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9002060033000 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9002060033500 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9002060034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9002060034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9002060035000 |
| 0.1398 | | 3.55 | 70.00 | 33.68 | 39.00 | 9002060035500 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9002060035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9002060036000 |
| 0.1437 | | 3.65 | 70.00 | 33.53 | 39.00 | 9002060036500 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9002060037000 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9002060037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9002060038000 |
| 0.1508 | | 3.83 | 75.00 | 37.26 | 43.00 | 9002060038300 |
| 0.1516 | | 3.85 | 75.00 | 37.23 | 43.00 | 9002060038500 |
| 0.1524 | | 3.87 | 75.00 | 37.20 | 43.00 | 9002060038700 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9002060039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9002060039100 |
| 0.1555 | | 3.95 | 75.00 | 37.08 | 43.00 | 9002060039500 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9002060039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9002060040000 |
| 0.1583 | | 4.02 | 75.00 | 36.97 | 43.00 | 9002060040200 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9002060040400 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9002060040500 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9002060041000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9002060041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9002060042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9002060042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9002060042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9002060043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9002060043700 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9002060044000 |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9002060044500 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9002060045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9002060046000 |
| 0.1831 | | 4.65 | 80.00 | 40.03 | 47.00 | 9002060046500 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9002060047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9002060047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9002060047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9002060048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9002060048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9002060049000 |
| 0.1949 | | 4.95 | 86.00 | 44.58 | 52.00 | 9002060049500 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9002060050000 |
| 0.1988 | | 5.05 | 86.00 | 44.43 | 52.00 | 9002060050500 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9002060051000 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9002060051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9002060052000 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9002060052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9002060053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9002060053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9002060054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9002060055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9002060055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9002060056000 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9002060057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9002060057500 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9002060058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9002060059000 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9002060059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9002060060000 |
| 0.2382 | | 6.05 | 101.00 | 53.93 | 63.00 | 9002060060500 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9002060061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9002060061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9002060062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9002060062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9002060063000 |
| 0.2500 | 1/4 E | 6.35 | 101.00 | 53.48 | 63.00 | 9002060063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9002060064000 |
| 0.2539 | | 6.45 | 101.00 | 53.33 | 63.00 | 9002060064500 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9002060065000 |
| 0.2571 | | 6.53 | 101.00 | 53.21 | 63.00 | 9002060065300 |
| 0.2579 | | 6.55 | 101.00 | 53.18 | 63.00 | 9002060065500 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9002060066000 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9002060067000 |
| 0.2657 | 17/64 H | 6.75 | 109.00 | 58.88 | 69.00 | 9002060067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9002060068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9002060069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9002060070000 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9002060071000 |
| 0.2811 | 9/32 K | 7.14 | 109.00 | 58.29 | 69.00 | 9002060071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9002060072000 |
| 0.2854 | | 7.25 | 109.00 | 58.13 | 69.00 | 9002060072500 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9002060073000 |
| 0.2894 | | 7.35 | 109.00 | 57.98 | 69.00 | 9002060073500 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9002060074000 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9002060075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9002060075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9002060076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9002060077000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3051 | | 7.75 | 117.00 | 63.38 | 75.00 | 9002060077500 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9002060078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9002060079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9002060079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9002060080000 |
| 0.3169 | | 8.05 | 117.00 | 62.93 | 75.00 | 9002060080500 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9002060081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9002060082000 |
| 0.3248 | | 8.25 | 117.00 | 62.63 | 75.00 | 9002060082500 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9002060083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9002060083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9002060084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9002060084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9002060085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9002060086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9002060087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9002060087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9002060088000 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9002060089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9002060090000 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9002060091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9002060091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9002060092000 |
| 0.3642 | | 9.25 | 125.00 | 67.13 | 81.00 | 9002060092500 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9002060093000 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9002060094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9002060095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9002060095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9002060096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9002060097000 |
| 0.3839 | | 9.75 | 133.00 | 72.38 | 87.00 | 9002060097500 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9002060098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9002060099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9002060099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9002060100000 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9002060101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9002060102000 |
| 0.4035 | | 10.25 | 133.00 | 71.63 | 87.00 | 9002060102500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9002060103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9002060103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9002060105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9002060106000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9002060107200 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9002060108000 |
| 0.4291 | | 10.90 | 142.00 | 77.65 | 94.00 | 9002060109000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9002060110000 |
| 0.4370 | | 11.10 | 142.00 | 77.35 | 94.00 | 9002060111000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9002060111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9002060112000 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9002060113000 |
| 0.4488 | | 11.40 | 142.00 | 76.90 | 94.00 | 9002060114000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9002060115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9002060115100 |
| 0.4567 | | 11.60 | 142.00 | 76.60 | 94.00 | 9002060116000 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9002060117000 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9002060118000 |
| 0.4685 | | 11.90 | 151.00 | 83.15 | 101.00 | 9002060119000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9002060119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9002060120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9002060121000 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9002060122000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9002060123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9002060125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9002060127000 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9002060128000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9002060130000 |
| 0.5197 | | 13.20 | 151.00 | 81.20 | 101.00 | 9002060132000 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9002060135000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9002060140000 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9002060145000 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9002060150000 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9002060160000 |
| 0.6693 | | 17.00 | 184.00 | 99.50 | 125.00 | 9002060170000 |
| 0.7087 | | 18.00 | 191.00 | 103.00 | 130.00 | 9002060180000 |
| 0.7480 | | 19.00 | 198.00 | 106.50 | 135.00 | 9002060190000 |
| 0.7874 | | 20.00 | 205.00 | 110.00 | 140.00 | 9002060200000 |

Jobber Length



Tool material

HSS

Surface

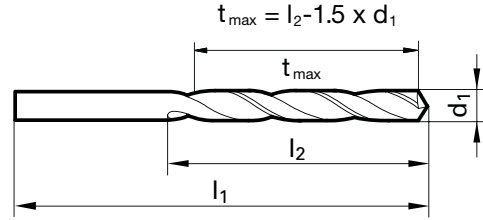


| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum ● |
| S | Titanium alloys |
| H | Hardened steel |

web thinning ≥ Ø 14.500 • relieved cone

soft, long chipping materials • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • soft plastics • wood

- =Optimal
- =Limited



Speeds and feeds information on pg. 497

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | tmax mm | l2 mm | EDP # | |
|---------------|----------|----------|------------|----------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0079 | #92 | 0.20 | 19.00 | 2.20 | 2.50 | 9002070002000 |
| 0.0118 | | 0.30 | 19.00 | 2.55 | 3.00 | 9002070003000 |
| 0.0138 | | 0.35 | 19.00 | 3.48 | 4.00 | 9002070003500 |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 9002070004000 |
| 0.0177 | | 0.45 | 20.00 | 4.33 | 5.00 | 9002070004500 |
| 0.0181 | #77 | 0.46 | 20.00 | 4.31 | 5.00 | 9002070004600 |
| 0.0197 | | 0.50 | 22.00 | 5.25 | 6.00 | 9002070005000 |
| 0.0201 | #76 | 0.51 | 22.00 | 5.24 | 6.00 | 9002070005100 |
| 0.0217 | | 0.55 | 24.00 | 6.18 | 7.00 | 9002070005500 |
| 0.0224 | #74 | 0.57 | 24.00 | 6.15 | 7.00 | 9002070005700 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9002070006000 |
| 0.0240 | #73 | 0.61 | 26.00 | 7.09 | 8.00 | 9002070006100 |
| 0.0244 | | 0.62 | 26.00 | 7.07 | 8.00 | 9002070006200 |
| 0.0252 | #72 | 0.64 | 26.00 | 7.04 | 8.00 | 9002070006400 |
| 0.0256 | | 0.65 | 26.00 | 7.03 | 8.00 | 9002070006500 |
| 0.0260 | #71 | 0.66 | 26.00 | 7.01 | 8.00 | 9002070006600 |
| 0.0276 | | 0.70 | 28.00 | 7.95 | 9.00 | 9002070007000 |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9002070007500 |
| 0.0307 | | 0.78 | 30.00 | 8.83 | 10.00 | 9002070007800 |
| 0.0311 | 1/32 #68 | 0.79 | 30.00 | 8.82 | 10.00 | 9002070007900 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9002070008000 |
| 0.0319 | #67 | 0.81 | 30.00 | 8.79 | 10.00 | 9002070008100 |
| 0.0331 | #66 | 0.84 | 30.00 | 8.74 | 10.00 | 9002070008400 |
| 0.0335 | | 0.85 | 30.00 | 8.73 | 10.00 | 9002070008500 |
| 0.0339 | | 0.86 | 32.00 | 9.71 | 11.00 | 9002070008600 |
| 0.0343 | | 0.87 | 32.00 | 9.70 | 11.00 | 9002070008700 |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9002070009000 |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9002070009500 |
| 0.0382 | #62 | 0.97 | 34.00 | 10.55 | 12.00 | 9002070009700 |
| 0.0386 | | 0.98 | 34.00 | 10.53 | 12.00 | 9002070009800 |
| 0.0390 | #61 | 0.99 | 34.00 | 10.52 | 12.00 | 9002070009900 |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9002070010000 |
| 0.0398 | | 1.01 | 34.00 | 10.49 | 12.00 | 9002070010100 |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9002070010200 |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9002070010500 |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9002070010700 |
| 0.0425 | | 1.08 | 36.00 | 12.38 | 14.00 | 9002070010800 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9002070011000 |
| 0.0441 | | 1.12 | 36.00 | 12.32 | 14.00 | 9002070011200 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9002070011500 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9002070011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9002070011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9002070012000 |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9002070012200 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9002070012500 |

| Diameter (d1) | | | l1 mm | tmax mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0500 | | 1.27 | 38.00 | 14.10 | 16.00 | 9002070012700 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9002070013000 |
| 0.0516 | | 1.31 | 38.00 | 14.04 | 16.00 | 9002070013100 |
| 0.0524 | | 1.33 | 40.00 | 16.01 | 18.00 | 9002070013300 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9002070013500 |
| 0.0543 | | 1.38 | 40.00 | 15.93 | 18.00 | 9002070013800 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9002070014000 |
| 0.0559 | | 1.42 | 40.00 | 15.87 | 18.00 | 9002070014200 |
| 0.0563 | | 1.43 | 40.00 | 15.86 | 18.00 | 9002070014300 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9002070014500 |
| 0.0579 | | 1.47 | 40.00 | 15.80 | 18.00 | 9002070014700 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9002070015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9002070015100 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9002070015500 |
| 0.0622 | | 1.58 | 43.00 | 17.63 | 20.00 | 9002070015800 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9002070015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9002070016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9002070016100 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9002070016500 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9002070017000 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9002070017500 |
| 0.0693 | | 1.76 | 46.00 | 19.36 | 22.00 | 9002070017600 |
| 0.0697 | | 1.77 | 46.00 | 19.35 | 22.00 | 9002070017700 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9002070017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9002070018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9002070018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9002070019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9002070019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9002070019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9002070019800 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9002070020000 |
| 0.0795 | | 2.02 | 49.00 | 20.97 | 24.00 | 9002070020200 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9002070020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9002070020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9002070020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9002070021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9002070021500 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9002070022000 |
| 0.0874 | | 2.22 | 53.00 | 23.67 | 27.00 | 9002070022200 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9002070022500 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9002070023000 |
| 0.0913 | | 2.32 | 53.00 | 23.52 | 27.00 | 9002070023200 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9002070023500 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9002070023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9002070024000 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/tr | | | | | mm |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9002070024500 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9002070024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9002070025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9002070025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9002070025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9002070025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9002070026000 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9002070026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9002070027000 |
| 0.1071 | | 2.72 | 61.00 | 28.92 | 33.00 | 9002070027200 |
| 0.1075 | | 2.73 | 61.00 | 28.91 | 33.00 | 9002070027300 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9002070027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9002070027800 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9002070028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9002070028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9002070028500 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9002070029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9002070029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9002070030000 |
| 0.1193 | | 3.03 | 65.00 | 31.46 | 36.00 | 9002070030300 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9002070030500 |
| 0.1205 | | 3.06 | 65.00 | 31.41 | 36.00 | 9002070030600 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9002070031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9002070031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9002070031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9002070032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9002070032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9002070032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9002070033000 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9002070033500 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9002070034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9002070034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9002070035000 |
| 0.1390 | | 3.53 | 70.00 | 33.71 | 39.00 | 9002070035300 |
| 0.1398 | | 3.55 | 70.00 | 33.68 | 39.00 | 9002070035500 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9002070035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9002070036000 |
| 0.1437 | | 3.65 | 70.00 | 33.53 | 39.00 | 9002070036500 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9002070037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9002070037300 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9002070037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9002070038000 |
| 0.1516 | | 3.85 | 75.00 | 37.23 | 43.00 | 9002070038500 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9002070039000 |
| 0.1555 | | 3.95 | 75.00 | 37.08 | 43.00 | 9002070039500 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9002070039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9002070040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9002070040400 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9002070040500 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9002070041000 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9002070041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9002070042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9002070042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9002070042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9002070043000 |
| 0.1713 | | 4.35 | 80.00 | 40.48 | 47.00 | 9002070043500 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9002070044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9002070045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9002070046000 |
| 0.1831 | | 4.65 | 80.00 | 40.03 | 47.00 | 9002070046500 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9002070047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9002070047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9002070047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9002070048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9002070048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9002070049000 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|---------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/tr | | | | | mm |
| 0.1949 | | 4.95 | 86.00 | 44.58 | 52.00 | 9002070049500 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9002070050000 |
| 0.1988 | | 5.05 | 86.00 | 44.43 | 52.00 | 9002070050500 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9002070051000 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9002070051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9002070052000 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9002070052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9002070053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9002070054000 |
| 0.2146 | | 5.45 | 93.00 | 48.83 | 57.00 | 9002070054500 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9002070055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9002070055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9002070056000 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9002070057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9002070057500 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9002070058000 |
| 0.2303 | | 5.85 | 93.00 | 48.23 | 57.00 | 9002070058500 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9002070059000 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9002070059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9002070060000 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9002070061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9002070061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9002070062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9002070062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9002070063000 |
| 0.2500 | 1/4 E | 6.35 | 101.00 | 53.48 | 63.00 | 9002070063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9002070064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9002070065000 |
| 0.2571 | | 6.53 | 101.00 | 53.21 | 63.00 | 9002070065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9002070066000 |
| 0.2618 | | 6.65 | 101.00 | 53.03 | 63.00 | 9002070066500 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9002070067000 |
| 0.2657 | 17/64 H | 6.75 | 109.00 | 58.88 | 69.00 | 9002070067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9002070068000 |
| 0.2697 | | 6.85 | 109.00 | 58.73 | 69.00 | 9002070068500 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9002070069000 |
| 0.2736 | | 6.95 | 109.00 | 58.58 | 69.00 | 9002070069500 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9002070070000 |
| 0.2776 | | 7.05 | 109.00 | 58.43 | 69.00 | 9002070070500 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9002070071000 |
| 0.2811 | 9/32 K | 7.14 | 109.00 | 58.29 | 69.00 | 9002070071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9002070072000 |
| 0.2854 | | 7.25 | 109.00 | 58.13 | 69.00 | 9002070072500 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9002070073000 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9002070074000 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9002070075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9002070075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9002070076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9002070077000 |
| 0.3051 | | 7.75 | 117.00 | 63.38 | 75.00 | 9002070077500 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9002070078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9002070079000 |
| 0.3125 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9002070079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9002070080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9002070080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9002070081000 |
| 0.3209 | | 8.15 | 117.00 | 62.78 | 75.00 | 9002070081500 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9002070082000 |
| 0.3248 | | 8.25 | 117.00 | 62.63 | 75.00 | 9002070082500 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9002070083000 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9002070084000 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9002070085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9002070086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9002070087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9002070087300 |
| 0.3445 | | 8.75 | 125.00 | 67.88 | 81.00 | 9002070087500 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9002070088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9002070088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9002070089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9002070090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9002070090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9002070091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9002070091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9002070092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9002070093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9002070093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9002070094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9002070095000 |
| 0.3750 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9002070095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9002070096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9002070097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9002070098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9002070099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9002070099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9002070100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9002070100800 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9002070101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9002070102000 |
| 0.4035 | | 10.25 | 133.00 | 71.63 | 87.00 | 9002070102500 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9002070102600 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9002070103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9002070103200 |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9002070104000 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9002070105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9002070106000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9002070107000 |
| 0.4232 | | 10.75 | 142.00 | 77.88 | 94.00 | 9002070107500 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9002070108000 |
| 0.4291 | | 10.90 | 142.00 | 77.65 | 94.00 | 9002070109000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9002070110000 |
| 0.4370 | | 11.10 | 142.00 | 77.35 | 94.00 | 9002070111000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9002070111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9002070112000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4429 | | 11.25 | 142.00 | 77.13 | 94.00 | 9002070112500 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9002070113000 |
| 0.4488 | | 11.40 | 142.00 | 76.90 | 94.00 | 9002070114000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9002070115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9002070115100 |
| 0.4567 | | 11.60 | 142.00 | 76.60 | 94.00 | 9002070116000 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9002070117000 |
| 0.4626 | | 11.75 | 142.00 | 76.38 | 94.00 | 9002070117500 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9002070118000 |
| 0.4685 | | 11.90 | 151.00 | 83.15 | 101.00 | 9002070119000 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9002070120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9002070121000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9002070123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9002070125000 |
| 0.4961 | | 12.60 | 151.00 | 82.10 | 101.00 | 9002070126000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9002070127000 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9002070128000 |
| 0.5079 | | 12.90 | 151.00 | 81.65 | 101.00 | 9002070129000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9002070130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9002070131000 |
| 0.5197 | | 13.20 | 151.00 | 81.20 | 101.00 | 9002070132000 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9002070135000 |
| 0.5433 | | 13.80 | 160.00 | 87.30 | 108.00 | 9002070138000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9002070140000 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9002070145000 |
| 0.5787 | | 14.70 | 169.00 | 91.95 | 114.00 | 9002070147000 |
| 0.5827 | | 14.80 | 169.00 | 91.80 | 114.00 | 9002070148000 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9002070150000 |
| 0.5984 | | 15.20 | 178.00 | 97.20 | 120.00 | 9002070152000 |
| 0.6102 | | 15.50 | 178.00 | 96.75 | 120.00 | 9002070155000 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9002070160000 |
| 0.6496 | | 16.50 | 184.00 | 100.25 | 125.00 | 9002070165000 |
| 0.6693 | | 17.00 | 184.00 | 99.50 | 125.00 | 9002070170000 |
| 0.7087 | | 18.00 | 191.00 | 103.00 | 130.00 | 9002070180000 |
| 0.7185 | | 18.25 | 198.00 | 107.63 | 135.00 | 9002070182500 |
| 0.7480 | | 19.00 | 198.00 | 106.50 | 135.00 | 9002070190000 |
| 0.7874 | | 20.00 | 205.00 | 110.00 | 140.00 | 9002070200000 |



Tool material

HSS

Surface

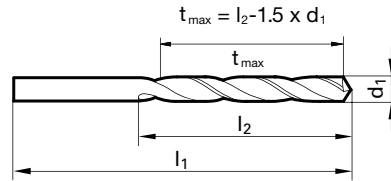


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | ● |
| N | Aluminum | ● |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning $\geq \varnothing 0.970$ • relieved cone • wide flutes • especially for drilling depths $> 3xD$

grey cast iron • steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels

●=Optimal
○=Limited



Jobber Length

Speeds and feeds information on pg. 519

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0236 | | 24.00 | 6.10 | 7.00 | 9005490006000 |
| 0.0276 | | 28.00 | 7.95 | 9.00 | 9005490007000 |
| 0.0280 | #70 | 28.00 | 7.94 | 9.00 | 9005490007100 |
| 0.0311 | 1/32 #68 | 30.00 | 8.82 | 10.00 | 9005490007900 |
| 0.0315 | | 30.00 | 8.80 | 10.00 | 9005490008000 |
| 0.0350 | #65 | 32.00 | 9.67 | 11.00 | 9005490008900 |
| 0.0374 | | 32.00 | 9.58 | 11.00 | 9005490009500 |
| 0.0382 | #62 | 34.00 | 10.55 | 12.00 | 9005490009700 |
| 0.0390 | #61 | 34.00 | 10.52 | 12.00 | 9005490009900 |
| 0.0394 | | 34.00 | 10.50 | 12.00 | 9005490010000 |
| 0.0402 | #60 | 34.00 | 10.47 | 12.00 | 9005490010200 |
| 0.0409 | #59 | 34.00 | 10.44 | 12.00 | 9005490010400 |
| 0.0413 | | 34.00 | 10.43 | 12.00 | 9005490010500 |
| 0.0421 | #58 | 36.00 | 12.40 | 14.00 | 9005490010700 |
| 0.0429 | #57 | 36.00 | 12.37 | 14.00 | 9005490010900 |
| 0.0433 | | 36.00 | 12.35 | 14.00 | 9005490011000 |
| 0.0453 | | 36.00 | 12.28 | 14.00 | 9005490011500 |
| 0.0465 | #56 | 36.00 | 12.23 | 14.00 | 9005490011800 |
| 0.0469 | 3/64 | 38.00 | 14.22 | 16.00 | 9005490011900 |
| 0.0472 | | 38.00 | 14.20 | 16.00 | 9005490012000 |
| 0.0480 | | 38.00 | 14.17 | 16.00 | 9005490012200 |
| 0.0488 | | 38.00 | 14.14 | 16.00 | 9005490012400 |
| 0.0492 | | 38.00 | 14.13 | 16.00 | 9005490012500 |
| 0.0512 | | 38.00 | 14.05 | 16.00 | 9005490013000 |
| 0.0520 | #55 | 38.00 | 14.02 | 16.00 | 9005490013200 |
| 0.0531 | | 40.00 | 15.98 | 18.00 | 9005490013500 |
| 0.0551 | #54 | 40.00 | 15.90 | 18.00 | 9005490014000 |
| 0.0571 | | 40.00 | 15.83 | 18.00 | 9005490014500 |
| 0.0575 | | 40.00 | 15.81 | 18.00 | 9005490014600 |
| 0.0591 | | 40.00 | 15.75 | 18.00 | 9005490015000 |
| 0.0594 | #53 | 43.00 | 17.74 | 20.00 | 9005490015100 |
| 0.0610 | | 43.00 | 17.68 | 20.00 | 9005490015500 |
| 0.0614 | | 43.00 | 17.66 | 20.00 | 9005490015600 |
| 0.0618 | | 43.00 | 17.65 | 20.00 | 9005490015700 |
| 0.0622 | | 43.00 | 17.63 | 20.00 | 9005490015800 |
| 0.0626 | 1/16 | 43.00 | 17.62 | 20.00 | 9005490015900 |
| 0.0630 | | 43.00 | 17.60 | 20.00 | 9005490016000 |
| 0.0634 | #52 | 43.00 | 17.59 | 20.00 | 9005490016100 |
| 0.0638 | | 43.00 | 17.57 | 20.00 | 9005490016200 |
| 0.0650 | | 43.00 | 17.53 | 20.00 | 9005490016500 |
| 0.0654 | | 43.00 | 17.51 | 20.00 | 9005490016600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.0657 | | 1.67 | 43.00 | 17.50 | 20.00 | 9005490016700 |
| 0.0661 | | 1.68 | 43.00 | 17.48 | 20.00 | 9005490016800 |
| 0.0665 | | 1.69 | 43.00 | 17.47 | 20.00 | 9005490016900 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9005490017000 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9005490017500 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9005490017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9005490018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9005490018500 |
| 0.0732 | | 1.86 | 46.00 | 19.21 | 22.00 | 9005490018600 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9005490019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9005490019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9005490019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9005490019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9005490019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9005490020000 |
| 0.0795 | | 2.02 | 49.00 | 20.97 | 24.00 | 9005490020200 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9005490020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9005490020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9005490020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9005490021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9005490021500 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9005490021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9005490022000 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9005490022500 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9005490022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9005490023000 |
| 0.0917 | | 2.33 | 53.00 | 23.51 | 27.00 | 9005490023300 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9005490023500 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9005490023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9005490023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9005490024000 |
| 0.0953 | | 2.42 | 57.00 | 26.37 | 30.00 | 9005490024200 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9005490024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9005490024500 |
| 0.0976 | | 2.48 | 57.00 | 26.28 | 30.00 | 9005490024800 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9005490024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9005490025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9005490025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9005490025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9005490025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9005490026000 |

Jobber Length

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9005490026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9005490026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9005490027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9005490027100 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9005490027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9005490027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9005490027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9005490028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9005490028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9005490028500 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9005490028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9005490029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9005490029500 |
| 0.1173 | | 2.98 | 61.00 | 28.53 | 33.00 | 9005490029800 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9005490030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9005490030500 |
| 0.1213 | | 3.08 | 65.00 | 31.38 | 36.00 | 9005490030800 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9005490031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9005490031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9005490031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9005490032000 |
| 0.1268 | | 3.22 | 65.00 | 31.17 | 36.00 | 9005490032200 |
| 0.1272 | | 3.23 | 65.00 | 31.16 | 36.00 | 9005490032300 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9005490032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9005490032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9005490033000 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9005490033500 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9005490034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9005490034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9005490035000 |
| 0.1398 | | 3.55 | 70.00 | 33.68 | 39.00 | 9005490035500 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9005490035700 |
| 0.1409 | | 3.58 | 70.00 | 33.63 | 39.00 | 9005490035800 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9005490036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9005490036600 |
| 0.1449 | | 3.68 | 70.00 | 33.48 | 39.00 | 9005490036800 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9005490037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9005490037300 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9005490037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9005490038000 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9005490038600 |
| 0.1524 | | 3.87 | 75.00 | 37.20 | 43.00 | 9005490038700 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9005490039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9005490039100 |
| 0.1555 | | 3.95 | 75.00 | 37.08 | 43.00 | 9005490039500 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9005490039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9005490039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9005490040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9005490040400 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9005490040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9005490041000 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9005490041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9005490042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9005490042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9005490042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9005490043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9005490043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9005490043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9005490044000 |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9005490044500 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9005490045000 |
| 0.1791 | | 4.55 | 80.00 | 40.18 | 47.00 | 9005490045500 |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9005490045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9005490046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9005490046200 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.1831 | | 4.65 | 80.00 | 40.03 | 47.00 | 9005490046500 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9005490047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9005490047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9005490047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9005490048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9005490048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9005490049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9005490049200 |
| 0.1949 | | 4.95 | 86.00 | 44.58 | 52.00 | 9005490049500 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9005490049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9005490050000 |
| 0.1988 | | 5.05 | 86.00 | 44.43 | 52.00 | 9005490050500 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9005490050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9005490051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9005490051100 |
| 0.2028 | | 5.15 | 86.00 | 44.28 | 52.00 | 9005490051500 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9005490051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9005490051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9005490052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9005490052200 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9005490052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9005490053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9005490053100 |
| 0.2106 | | 5.35 | 93.00 | 48.98 | 57.00 | 9005490053500 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9005490054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9005490054100 |
| 0.2146 | | 5.45 | 93.00 | 48.83 | 57.00 | 9005490054500 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9005490055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9005490055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9005490056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9005490056100 |
| 0.2224 | | 5.65 | 93.00 | 48.53 | 57.00 | 9005490056500 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9005490057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9005490057500 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9005490057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9005490058000 |
| 0.2303 | | 5.85 | 93.00 | 48.23 | 57.00 | 9005490058500 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9005490059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9005490059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9005490059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9005490060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9005490060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9005490061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9005490061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9005490062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9005490062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9005490063000 |
| 0.2500 | 1/4 E | 6.35 | 101.00 | 53.48 | 63.00 | 9005490063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9005490064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9005490065000 |
| 0.2571 | | 6.53 | 101.00 | 53.21 | 63.00 | 9005490065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9005490066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9005490066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9005490067000 |
| 0.2657 | 17/64 H | 6.75 | 109.00 | 58.88 | 69.00 | 9005490067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9005490068000 |
| 0.2689 | | 6.83 | 109.00 | 58.76 | 69.00 | 9005490068300 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9005490069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9005490070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9005490070300 |
| 0.2772 | | 7.04 | 109.00 | 58.44 | 69.00 | 9005490070400 |
| 0.2776 | | 7.05 | 109.00 | 58.43 | 69.00 | 9005490070500 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9005490071000 |
| 0.2811 | 9/32 K | 7.14 | 109.00 | 58.29 | 69.00 | 9005490071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9005490072000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2854 | | 7.25 | 109.00 | 58.13 | 69.00 | 9005490072500 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9005490073000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9005490073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9005490074000 |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9005490074900 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9005490075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9005490075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9005490076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9005490076700 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9005490077000 |
| 0.3051 | | 7.75 | 117.00 | 63.38 | 75.00 | 9005490077500 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9005490078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9005490079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9005490079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9005490080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9005490080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9005490081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9005490082000 |
| 0.3248 | | 8.25 | 117.00 | 62.63 | 75.00 | 9005490082500 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9005490083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9005490083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9005490084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9005490084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9005490085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9005490086000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9005490086100 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9005490087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9005490087300 |
| 0.3445 | | 8.75 | 125.00 | 67.88 | 81.00 | 9005490087500 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9005490088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9005490088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9005490089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9005490090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9005490090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9005490091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9005490091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9005490092000 |
| 0.3642 | | 9.25 | 125.00 | 67.13 | 81.00 | 9005490092500 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9005490093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9005490093400 |
| 0.3681 | | 9.35 | 125.00 | 66.98 | 81.00 | 9005490093500 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9005490094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9005490095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9005490095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9005490095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9005490096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9005490097000 |
| 0.3839 | | 9.75 | 133.00 | 72.38 | 87.00 | 9005490097500 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9005490098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9005490099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9005490099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9005490100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9005490100800 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9005490101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9005490102000 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9005490102600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9005490103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9005490103200 |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9005490104000 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9005490104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9005490105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9005490106000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9005490107000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9005490107200 |
| 0.4232 | | 10.75 | 142.00 | 77.88 | 94.00 | 9005490107500 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9005490108000 |
| 0.4291 | | 10.90 | 142.00 | 77.65 | 94.00 | 9005490109000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9005490110000 |
| 0.4370 | | 11.10 | 142.00 | 77.35 | 94.00 | 9005490111000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9005490111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9005490112000 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9005490113000 |
| 0.4488 | | 11.40 | 142.00 | 76.90 | 94.00 | 9005490114000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9005490115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9005490115100 |
| 0.4567 | | 11.60 | 142.00 | 76.60 | 94.00 | 9005490116000 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9005490117000 |
| 0.4626 | | 11.75 | 142.00 | 76.38 | 94.00 | 9005490117500 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9005490118000 |
| 0.4685 | | 11.90 | 151.00 | 83.15 | 101.00 | 9005490119000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9005490119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9005490120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9005490121000 |
| 0.4783 | | 12.15 | 151.00 | 82.78 | 101.00 | 9005490121500 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9005490122000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9005490123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9005490125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9005490127000 |
| 0.5020 | | 12.75 | 151.00 | 81.88 | 101.00 | 9005490127500 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9005490128000 |
| 0.5079 | | 12.90 | 151.00 | 81.65 | 101.00 | 9005490129000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9005490130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9005490131000 |
| 0.5197 | | 13.20 | 151.00 | 81.20 | 101.00 | 9005490132000 |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9005490134900 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9005490135000 |
| 0.5354 | | 13.60 | 160.00 | 87.60 | 108.00 | 9005490136000 |
| 0.5394 | | 13.70 | 160.00 | 87.45 | 108.00 | 9005490137000 |
| 0.5469 | 35/64 | 13.89 | 160.00 | 87.17 | 108.00 | 9005490138900 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9005490140000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9005490142900 |
| 0.5669 | | 14.40 | 169.00 | 92.40 | 114.00 | 9005490144000 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9005490145000 |
| 0.5780 | 37/64 | 14.68 | 169.00 | 91.98 | 114.00 | 9005490146800 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9005490150000 |
| 0.5937 | 19/32 | 15.08 | 178.00 | 97.38 | 120.00 | 9005490150800 |
| 0.6094 | 39/64 | 15.48 | 178.00 | 96.78 | 120.00 | 9005490154800 |
| 0.6102 | | 15.50 | 178.00 | 96.75 | 120.00 | 9005490155000 |
| 0.6201 | | 15.75 | 178.00 | 96.38 | 120.00 | 9005490157500 |
| 0.6248 | 5/8 | 15.87 | 178.00 | 96.20 | 120.00 | 9005490158700 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9005490160000 |

Jobber Length



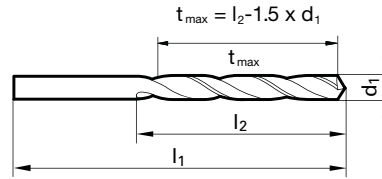
Tool material

HSS

Surface



- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 1.000$ • relieved cone • wide flutes • especially for drilling depths $> 3xD$ |
| M | Stainless steel | | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | | |
| H | Hardened steel | | grey cast iron • steels up to 1000 N/mm ² • Not recommended for: CrNi steels, stainless steels |
- =Optimal
○=Limited



Speeds and feeds information on pg. 519

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9005500010000 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9005500013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9005500013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9005500013500 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9005500014000 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9005500014500 |
| 0.0587 | | 1.49 | 40.00 | 15.77 | 18.00 | 9005500014900 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9005500015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9005500015100 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9005500015500 |
| 0.0622 | | 1.58 | 43.00 | 17.63 | 20.00 | 9005500015800 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9005500015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9005500016000 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9005500016500 |
| 0.0657 | | 1.67 | 43.00 | 17.50 | 20.00 | 9005500016700 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9005500017000 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9005500017500 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9005500017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9005500018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9005500018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9005500019000 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9005500019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9005500019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9005500019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9005500020000 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9005500020500 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9005500020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9005500021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9005500021500 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9005500022000 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9005500022500 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9005500022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9005500023000 |
| 0.0917 | | 2.33 | 53.00 | 23.51 | 27.00 | 9005500023300 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9005500023500 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9005500023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9005500023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9005500024000 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9005500024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9005500025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9005500025300 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9005500025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9005500025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9005500026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9005500026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9005500026500 |
| 0.1051 | | 2.67 | 61.00 | 29.00 | 33.00 | 9005500026700 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9005500027000 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9005500027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9005500027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9005500027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9005500028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9005500028200 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9005500028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9005500029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9005500029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9005500030000 |
| 0.1189 | | 3.02 | 65.00 | 31.47 | 36.00 | 9005500030200 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9005500030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9005500031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9005500031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9005500031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9005500032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9005500032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9005500032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9005500033000 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9005500033500 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9005500034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9005500034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9005500035000 |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9005500035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9005500036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9005500036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9005500037000 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9005500037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9005500038000 |
| 0.1516 | | 3.85 | 75.00 | 37.23 | 43.00 | 9005500038500 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9005500038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9005500039000 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9005500039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9005500039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9005500040000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9005500040400 | |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9005500041000 | |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9005500042000 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9005500043000 | |
| 0.1713 | | 4.35 | 80.00 | 40.48 | 47.00 | 9005500043500 | |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9005500043700 | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9005500044000 | |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9005500044500 | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9005500045000 | |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9005500046000 | |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9005500046200 | |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9005500047000 | |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9005500047600 | |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9005500048000 | |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9005500048500 | |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9005500049000 | |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9005500049800 | |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9005500050000 | |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9005500050600 | |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9005500051000 | |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9005500051600 | |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9005500052000 | |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9005500053000 | |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9005500054000 | |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9005500055000 | |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9005500055600 | |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9005500056000 | |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9005500057000 | |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9005500057500 | |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9005500057900 | |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9005500058000 | |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9005500059000 | |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9005500059500 | |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9005500060000 | |
| 0.2382 | | 6.05 | 101.00 | 53.93 | 63.00 | 9005500060500 | |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9005500061000 | |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9005500062000 | |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9005500062500 | |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9005500063000 | |
| 0.2500 | 1/4 | E | 6.35 | 101.00 | 53.48 | 63.00 | 9005500063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9005500064000 | |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9005500065000 | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9005500066000 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9005500067000 | |
| 0.2657 | 17/64 | H | 6.75 | 109.00 | 58.88 | 69.00 | 9005500067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9005500068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9005500069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9005500070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9005500071000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----|----------------------|------------------------|----------------------|--------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9005500071400 |
| 0.2835 | | | 7.20 | 109.00 | 58.20 | 69.00 | 9005500072000 |
| 0.2874 | | | 7.30 | 109.00 | 58.05 | 69.00 | 9005500073000 |
| 0.2913 | | | 7.40 | 109.00 | 57.90 | 69.00 | 9005500074000 |
| 0.2953 | | | 7.50 | 109.00 | 57.75 | 69.00 | 9005500075000 |
| 0.2969 | 19/64 | | 7.54 | 117.00 | 63.69 | 75.00 | 9005500075400 |
| 0.2992 | | | 7.60 | 117.00 | 63.60 | 75.00 | 9005500076000 |
| 0.3031 | | | 7.70 | 117.00 | 63.45 | 75.00 | 9005500077000 |
| 0.3071 | | | 7.80 | 117.00 | 63.30 | 75.00 | 9005500078000 |
| 0.3110 | | | 7.90 | 117.00 | 63.15 | 75.00 | 9005500079000 |
| 0.3126 | 5/16 | | 7.94 | 117.00 | 63.09 | 75.00 | 9005500079400 |
| 0.3150 | | | 8.00 | 117.00 | 63.00 | 75.00 | 9005500080000 |
| 0.3189 | | | 8.10 | 117.00 | 62.85 | 75.00 | 9005500081000 |
| 0.3228 | | P | 8.20 | 117.00 | 62.70 | 75.00 | 9005500082000 |
| 0.3268 | | | 8.30 | 117.00 | 62.55 | 75.00 | 9005500083000 |
| 0.3280 | 21/64 | | 8.33 | 117.00 | 62.51 | 75.00 | 9005500083300 |
| 0.3307 | | | 8.40 | 117.00 | 62.40 | 75.00 | 9005500084000 |
| 0.3346 | | | 8.50 | 117.00 | 62.25 | 75.00 | 9005500085000 |
| 0.3386 | | | 8.60 | 125.00 | 68.10 | 81.00 | 9005500086000 |
| 0.3425 | | | 8.70 | 125.00 | 67.95 | 81.00 | 9005500087000 |
| 0.3437 | 11/32 | | 8.73 | 125.00 | 67.91 | 81.00 | 9005500087300 |
| 0.3465 | | | 8.80 | 125.00 | 67.80 | 81.00 | 9005500088000 |
| 0.3504 | | | 8.90 | 125.00 | 67.65 | 81.00 | 9005500089000 |
| 0.3543 | | | 9.00 | 125.00 | 67.50 | 81.00 | 9005500090000 |
| 0.3594 | 23/64 | | 9.13 | 125.00 | 67.31 | 81.00 | 9005500091300 |
| 0.3622 | | | 9.20 | 125.00 | 67.20 | 81.00 | 9005500092000 |
| 0.3661 | | | 9.30 | 125.00 | 67.05 | 81.00 | 9005500093000 |
| 0.3701 | | | 9.40 | 125.00 | 66.90 | 81.00 | 9005500094000 |
| 0.3740 | | | 9.50 | 125.00 | 66.75 | 81.00 | 9005500095000 |
| 0.3748 | 3/8 | | 9.52 | 133.00 | 72.72 | 87.00 | 9005500095200 |
| 0.3780 | | | 9.60 | 133.00 | 72.60 | 87.00 | 9005500096000 |
| 0.3819 | | | 9.70 | 133.00 | 72.45 | 87.00 | 9005500097000 |
| 0.3858 | | W | 9.80 | 133.00 | 72.30 | 87.00 | 9005500098000 |
| 0.3898 | | | 9.90 | 133.00 | 72.15 | 87.00 | 9005500099000 |
| 0.3937 | | | 10.00 | 133.00 | 72.00 | 87.00 | 9005500100000 |
| 0.3976 | | | 10.10 | 133.00 | 71.85 | 87.00 | 9005500101000 |
| 0.4016 | | | 10.20 | 133.00 | 71.70 | 87.00 | 9005500102000 |
| 0.4055 | | | 10.30 | 133.00 | 71.55 | 87.00 | 9005500103000 |
| 0.4134 | | | 10.50 | 133.00 | 71.25 | 87.00 | 9005500105000 |
| 0.4252 | | | 10.80 | 142.00 | 77.80 | 94.00 | 9005500108000 |
| 0.4331 | | | 11.00 | 142.00 | 77.50 | 94.00 | 9005500110000 |
| 0.4370 | | | 11.10 | 142.00 | 77.35 | 94.00 | 9005500111000 |
| 0.4374 | 7/16 | | 11.11 | 142.00 | 77.34 | 94.00 | 9005500111100 |
| 0.4528 | | | 11.50 | 142.00 | 76.75 | 94.00 | 9005500115000 |
| 0.4606 | | | 11.70 | 142.00 | 76.45 | 94.00 | 9005500117000 |
| 0.4724 | | | 12.00 | 151.00 | 83.00 | 101.00 | 9005500120000 |
| 0.4921 | | | 12.50 | 151.00 | 82.25 | 101.00 | 9005500125000 |
| 0.5000 | 1/2 | | 12.70 | 151.00 | 81.95 | 101.00 | 9005500127000 |

Jobber Length



Tool material

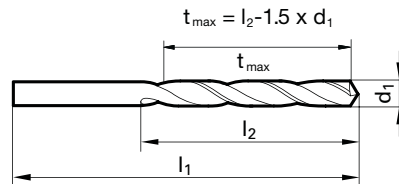
HSS

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone • wide flutes • especially for drilling depths > 3xD |
| M | Stainless steel | | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | | |
| H | Hardened steel | | grey cast iron • steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels |

●=Optimal
○=Limited



Speeds and feeds information on pg. 535

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9006520010000 |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9006520010200 |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9006520010400 |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9006520010700 |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9006520010900 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9006520011000 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9006520011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9006520011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9006520012000 |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9006520012200 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9006520012500 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9006520013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9006520013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9006520013500 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9006520014000 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9006520014500 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9006520015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9006520015100 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9006520015300 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9006520015500 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9006520015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9006520016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9006520016100 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9006520016500 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9006520017000 |
| 0.0677 | | 1.72 | 46.00 | 19.42 | 22.00 | 9006520017200 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9006520017500 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9006520017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9006520018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9006520018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9006520019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9006520019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9006520019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9006520019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9006520019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9006520020000 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9006520020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9006520020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9006520021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9006520021500 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9006520021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9006520022000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9006520022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9006520023000 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9006520023500 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9006520023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006520023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006520024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9006520024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9006520024500 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9006520024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006520025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006520025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9006520025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9006520025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006520026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9006520026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9006520026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006520027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9006520027100 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9006520027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006520027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9006520027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006520028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9006520028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9006520028500 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9006520028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006520029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006520029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006520030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006520030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006520031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006520031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006520032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9006520032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9006520032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006520033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006520034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9006520034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006520035000 |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9006520035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006520036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9006520036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006520037000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9006520037300 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9006520037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006520038000 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9006520038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006520039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9006520039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006520039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9006520039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006520040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9006520040400 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9006520040500 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9006520040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006520041000 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006520042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9006520042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9006520042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006520043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006520043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9006520043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006520044000 |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9006520044500 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006520045000 |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9006520045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006520046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9006520046200 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006520047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006520047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006520048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9006520048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006520049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9006520049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9006520049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006520050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9006520050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006520051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9006520051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006520051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9006520051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006520052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9006520052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006520053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9006520053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006520054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9006520054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006520055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006520055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9006520056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9006520056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006520057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9006520057500 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9006520057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006520058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006520059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9006520059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9006520059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006520060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9006520060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006520061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9006520061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006520062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9006520062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006520063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9006520063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9006520064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006520065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9006520065300 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9006520066000 | |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9006520066300 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9006520067000 | |
| 0.2657 | 17/64 | H | 6.75 | 109.00 | 58.88 | 69.00 | 9006520067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9006520068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9006520069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9006520070000 | |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9006520070300 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9006520071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9006520071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9006520072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9006520073000 | |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9006520073700 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9006520074000 | |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9006520074900 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9006520075000 | |
| 0.2969 | 19/64 | | 7.54 | 117.00 | 63.69 | 75.00 | 9006520075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9006520076000 | |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9006520076700 | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9006520077000 | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9006520078000 | |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9006520079000 | |
| 0.3126 | 5/16 | | 7.94 | 117.00 | 63.09 | 75.00 | 9006520079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9006520080000 | |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9006520080300 | |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9006520081000 | |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9006520082000 | |
| 0.3280 | 21/64 | | 8.33 | 117.00 | 62.51 | 75.00 | 9006520083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9006520084000 | |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9006520084300 | |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9006520085000 | |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9006520086000 | |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9006520086100 | |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9006520087000 | |
| 0.3437 | 11/32 | | 8.73 | 125.00 | 67.91 | 81.00 | 9006520087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9006520088000 | |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9006520088400 | |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9006520089000 | |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9006520090000 | |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9006520091000 | |
| 0.3594 | 23/64 | | 9.13 | 125.00 | 67.31 | 81.00 | 9006520091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9006520092000 | |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9006520093000 | |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9006520093400 | |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9006520094000 | |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9006520095000 | |
| 0.3748 | 3/8 | | 9.52 | 133.00 | 72.72 | 87.00 | 9006520095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9006520096000 | |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9006520097000 | |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9006520098000 | |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9006520099000 | |
| 0.3906 | 25/64 | | 9.92 | 133.00 | 72.12 | 87.00 | 9006520099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9006520100000 | |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9006520102000 | |
| 0.4063 | 13/32 | | 10.32 | 133.00 | 71.52 | 87.00 | 9006520103200 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9006520104900 | |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9006520105000 | |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9006520107000 | |
| 0.4220 | 27/64 | | 10.72 | 142.00 | 77.92 | 94.00 | 9006520107200 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9006520110000 | |
| 0.4374 | 7/16 | | 11.11 | 142.00 | 77.34 | 94.00 | 9006520111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9006520112000 | |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9006520115000 | |
| 0.4531 | 29/64 | | 11.51 | 142.00 | 76.74 | 94.00 | 9006520115100 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9006520117000 | |
| 0.4689 | 15/32 | | 11.91 | 151.00 | 83.14 | 101.00 | 9006520119100 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9006520120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9006520121000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9006520123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9006520125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9006520127000 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9006520128000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9006520130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9006520131000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9006520134900 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9006520135000 |
| 0.5469 | 35/64 | 13.89 | 160.00 | 87.17 | 108.00 | 9006520138900 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9006520140000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9006520142900 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9006520150000 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9006520160000 |



Tool material

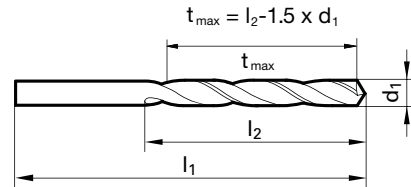
HSCO

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \text{Ø } 1.000$ • relieved cone • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | alloyed/unalloyed steel and cast steel • cast materials over 800 N/mm ² • hot and cold rolled steels • antifriction bearing steels • high-alloyed S steels • heat treatable and case hardened steels |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 509

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0079 | #92 | 0.20 | 19.00 | 2.20 | 2.50 | 9003050002000 |
| 0.0083 | #91 | 0.21 | 19.00 | 2.19 | 2.50 | 9003050002100 |
| 0.0087 | #90 | 0.22 | 19.00 | 2.17 | 2.50 | 9003050002200 |
| 0.0091 | #89 | 0.23 | 19.00 | 2.16 | 2.50 | 9003050002300 |
| 0.0098 | #87 | 0.25 | 19.00 | 2.63 | 3.00 | 9003050002500 |
| 0.0102 | | 0.26 | 19.00 | 2.61 | 3.00 | 9003050002600 |
| 0.0106 | #86 | 0.27 | 19.00 | 2.60 | 3.00 | 9003050002700 |
| 0.0110 | #85 | 0.28 | 19.00 | 2.58 | 3.00 | 9003050002800 |
| 0.0118 | | 0.30 | 19.00 | 2.55 | 3.00 | 9003050003000 |
| 0.0122 | #83 | 0.31 | 19.00 | 3.54 | 4.00 | 9003050003100 |
| 0.0126 | #82 | 0.32 | 19.00 | 3.52 | 4.00 | 9003050003200 |
| 0.0130 | #81 | 0.33 | 19.00 | 3.51 | 4.00 | 9003050003300 |
| 0.0134 | #80 | 0.34 | 19.00 | 3.49 | 4.00 | 9003050003400 |
| 0.0138 | | 0.35 | 19.00 | 3.48 | 4.00 | 9003050003500 |
| 0.0146 | #79 | 0.37 | 19.00 | 3.45 | 4.00 | 9003050003700 |
| 0.0150 | | 0.38 | 19.00 | 3.43 | 4.00 | 9003050003800 |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 9003050004000 |
| 0.0161 | #78 | 0.41 | 20.00 | 4.39 | 5.00 | 9003050004100 |
| 0.0165 | | 0.42 | 20.00 | 4.37 | 5.00 | 9003050004200 |
| 0.0169 | | 0.43 | 20.00 | 4.36 | 5.00 | 9003050004300 |
| 0.0173 | | 0.44 | 20.00 | 4.34 | 5.00 | 9003050004400 |
| 0.0177 | | 0.45 | 20.00 | 4.33 | 5.00 | 9003050004500 |
| 0.0181 | #77 | 0.46 | 20.00 | 4.31 | 5.00 | 9003050004600 |
| 0.0185 | | 0.47 | 20.00 | 4.30 | 5.00 | 9003050004700 |
| 0.0189 | | 0.48 | 20.00 | 4.28 | 5.00 | 9003050004800 |
| 0.0193 | | 0.49 | 22.00 | 5.27 | 6.00 | 9003050004900 |
| 0.0197 | | 0.50 | 22.00 | 5.25 | 6.00 | 9003050005000 |
| 0.0201 | #76 | 0.51 | 22.00 | 5.24 | 6.00 | 9003050005100 |
| 0.0205 | | 0.52 | 22.00 | 5.22 | 6.00 | 9003050005200 |
| 0.0209 | #75 | 0.53 | 22.00 | 5.21 | 6.00 | 9003050005300 |
| 0.0213 | | 0.54 | 24.00 | 6.19 | 7.00 | 9003050005400 |
| 0.0217 | | 0.55 | 24.00 | 6.18 | 7.00 | 9003050005500 |
| 0.0220 | | 0.56 | 24.00 | 6.16 | 7.00 | 9003050005600 |
| 0.0224 | #74 | 0.57 | 24.00 | 6.15 | 7.00 | 9003050005700 |
| 0.0232 | | 0.59 | 24.00 | 6.12 | 7.00 | 9003050005900 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9003050006000 |
| 0.0240 | #73 | 0.61 | 26.00 | 7.09 | 8.00 | 9003050006100 |
| 0.0244 | | 0.62 | 26.00 | 7.07 | 8.00 | 9003050006200 |
| 0.0252 | #72 | 0.64 | 26.00 | 7.04 | 8.00 | 9003050006400 |
| 0.0256 | | 0.65 | 26.00 | 7.03 | 8.00 | 9003050006500 |
| 0.0260 | #71 | 0.66 | 26.00 | 7.01 | 8.00 | 9003050006600 |
| 0.0264 | | 0.67 | 26.00 | 7.00 | 8.00 | 9003050006700 |
| 0.0268 | | 0.68 | 28.00 | 7.98 | 9.00 | 9003050006800 |
| 0.0276 | | 0.70 | 28.00 | 7.95 | 9.00 | 9003050007000 |
| 0.0280 | #70 | 0.71 | 28.00 | 7.94 | 9.00 | 9003050007100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0283 | | 0.72 | 28.00 | 7.92 | 9.00 | 9003050007200 | |
| 0.0291 | #69 | 0.74 | 28.00 | 7.89 | 9.00 | 9003050007400 | |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9003050007500 | |
| 0.0299 | | 0.76 | 30.00 | 8.86 | 10.00 | 9003050007600 | |
| 0.0303 | | 0.77 | 30.00 | 8.85 | 10.00 | 9003050007700 | |
| 0.0307 | | 0.78 | 30.00 | 8.83 | 10.00 | 9003050007800 | |
| 0.0311 | 1/32 | #68 | 0.79 | 30.00 | 8.82 | 10.00 | 9003050007900 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9003050008000 | |
| 0.0319 | #67 | 0.81 | 30.00 | 8.79 | 10.00 | 9003050008100 | |
| 0.0323 | | 0.82 | 30.00 | 8.77 | 10.00 | 9003050008200 | |
| 0.0331 | #66 | 0.84 | 30.00 | 8.74 | 10.00 | 9003050008400 | |
| 0.0335 | | 0.85 | 30.00 | 8.73 | 10.00 | 9003050008500 | |
| 0.0339 | | 0.86 | 32.00 | 9.71 | 11.00 | 9003050008600 | |
| 0.0343 | | 0.87 | 32.00 | 9.70 | 11.00 | 9003050008700 | |
| 0.0346 | | 0.88 | 32.00 | 9.68 | 11.00 | 9003050008800 | |
| 0.0350 | #65 | 0.89 | 32.00 | 9.67 | 11.00 | 9003050008900 | |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9003050009000 | |
| 0.0358 | #64 | 0.91 | 32.00 | 9.64 | 11.00 | 9003050009100 | |
| 0.0362 | | 0.92 | 32.00 | 9.62 | 11.00 | 9003050009200 | |
| 0.0370 | #63 | 0.94 | 32.00 | 9.59 | 11.00 | 9003050009400 | |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9003050009500 | |
| 0.0378 | | 0.96 | 34.00 | 10.56 | 12.00 | 9003050009600 | |
| 0.0382 | #62 | 0.97 | 34.00 | 10.55 | 12.00 | 9003050009700 | |
| 0.0390 | #61 | 0.99 | 34.00 | 10.52 | 12.00 | 9003050009900 | |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9003050010000 | |
| 0.0398 | | 1.01 | 34.00 | 10.49 | 12.00 | 9003050010100 | |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9003050010200 | |
| 0.0406 | | 1.03 | 34.00 | 10.46 | 12.00 | 9003050010300 | |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9003050010400 | |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9003050010500 | |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9003050010700 | |
| 0.0425 | | 1.08 | 36.00 | 12.38 | 14.00 | 9003050010800 | |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9003050010900 | |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9003050011000 | |
| 0.0449 | | 1.14 | 36.00 | 12.29 | 14.00 | 9003050011400 | |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9003050011500 | |
| 0.0457 | | 1.16 | 36.00 | 12.26 | 14.00 | 9003050011600 | |
| 0.0461 | | 1.17 | 36.00 | 12.25 | 14.00 | 9003050011700 | |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9003050011800 | |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9003050011900 | |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9003050012000 | |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9003050012200 | |
| 0.0484 | | 1.23 | 38.00 | 14.16 | 16.00 | 9003050012300 | |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9003050012500 | |
| 0.0508 | | 1.29 | 38.00 | 14.07 | 16.00 | 9003050012900 | |

Jobber Length

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9003050013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9003050013200 |
| 0.0524 | | 1.33 | 40.00 | 16.01 | 18.00 | 9003050013300 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9003050013500 |
| 0.0535 | | 1.36 | 40.00 | 15.96 | 18.00 | 9003050013600 |
| 0.0539 | | 1.37 | 40.00 | 15.95 | 18.00 | 9003050013700 |
| 0.0543 | | 1.38 | 40.00 | 15.93 | 18.00 | 9003050013800 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9003050014000 |
| 0.0555 | | 1.41 | 40.00 | 15.89 | 18.00 | 9003050014100 |
| 0.0559 | | 1.42 | 40.00 | 15.87 | 18.00 | 9003050014200 |
| 0.0563 | | 1.43 | 40.00 | 15.86 | 18.00 | 9003050014300 |
| 0.0567 | | 1.44 | 40.00 | 15.84 | 18.00 | 9003050014400 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9003050014500 |
| 0.0583 | | 1.48 | 40.00 | 15.78 | 18.00 | 9003050014800 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9003050015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9003050015100 |
| 0.0598 | | 1.52 | 43.00 | 17.72 | 20.00 | 9003050015200 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9003050015300 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9003050015500 |
| 0.0614 | | 1.56 | 43.00 | 17.66 | 20.00 | 9003050015600 |
| 0.0618 | | 1.57 | 43.00 | 17.65 | 20.00 | 9003050015700 |
| 0.0622 | | 1.58 | 43.00 | 17.63 | 20.00 | 9003050015800 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9003050015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9003050016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9003050016100 |
| 0.0638 | | 1.62 | 43.00 | 17.57 | 20.00 | 9003050016200 |
| 0.0646 | | 1.64 | 43.00 | 17.54 | 20.00 | 9003050016400 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9003050016500 |
| 0.0654 | | 1.66 | 43.00 | 17.51 | 20.00 | 9003050016600 |
| 0.0657 | | 1.67 | 43.00 | 17.50 | 20.00 | 9003050016700 |
| 0.0661 | | 1.68 | 43.00 | 17.48 | 20.00 | 9003050016800 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9003050017000 |
| 0.0673 | | 1.71 | 46.00 | 19.44 | 22.00 | 9003050017100 |
| 0.0677 | | 1.72 | 46.00 | 19.42 | 22.00 | 9003050017200 |
| 0.0681 | | 1.73 | 46.00 | 19.41 | 22.00 | 9003050017300 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9003050017500 |
| 0.0693 | | 1.76 | 46.00 | 19.36 | 22.00 | 9003050017600 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9003050017800 |
| 0.0705 | | 1.79 | 46.00 | 19.32 | 22.00 | 9003050017900 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9003050018000 |
| 0.0713 | | 1.81 | 46.00 | 19.29 | 22.00 | 9003050018100 |
| 0.0717 | | 1.82 | 46.00 | 19.27 | 22.00 | 9003050018200 |
| 0.0720 | | 1.83 | 46.00 | 19.26 | 22.00 | 9003050018300 |
| 0.0724 | | 1.84 | 46.00 | 19.24 | 22.00 | 9003050018400 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9003050018500 |
| 0.0732 | | 1.86 | 46.00 | 19.21 | 22.00 | 9003050018600 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9003050019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9003050019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9003050019500 |
| 0.0776 | | 1.97 | 49.00 | 21.05 | 24.00 | 9003050019700 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9003050019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9003050019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9003050020000 |
| 0.0791 | | 2.01 | 49.00 | 20.99 | 24.00 | 9003050020100 |
| 0.0795 | | 2.02 | 49.00 | 20.97 | 24.00 | 9003050020200 |
| 0.0799 | | 2.03 | 49.00 | 20.96 | 24.00 | 9003050020300 |
| 0.0803 | | 2.04 | 49.00 | 20.94 | 24.00 | 9003050020400 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9003050020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9003050020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9003050020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9003050021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9003050021500 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9003050021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9003050022000 |
| 0.0878 | | 2.23 | 53.00 | 23.66 | 27.00 | 9003050022300 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9003050022500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9003050022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9003050023000 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9003050023500 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9003050023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9003050023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9003050024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9003050024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9003050024500 |
| 0.0972 | | 2.47 | 57.00 | 26.30 | 30.00 | 9003050024700 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9003050024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9003050025000 |
| 0.0992 | | 2.52 | 57.00 | 26.22 | 30.00 | 9003050025200 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9003050025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9003050025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9003050025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9003050026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9003050026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9003050026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9003050027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9003050027100 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9003050027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9003050027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9003050027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9003050028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9003050028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9003050028500 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9003050028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9003050029000 |
| 0.1150 | | 2.92 | 61.00 | 28.62 | 33.00 | 9003050029200 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9003050029500 |
| 0.1169 | | 2.97 | 61.00 | 28.55 | 33.00 | 9003050029700 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9003050030000 |
| 0.1193 | | 3.03 | 65.00 | 31.46 | 36.00 | 9003050030300 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9003050030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9003050031000 |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9003050031500 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9003050031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9003050032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9003050032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9003050032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9003050033000 |
| 0.1311 | | 3.33 | 65.00 | 31.01 | 36.00 | 9003050033300 |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9003050033500 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9003050034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9003050034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9003050035000 |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9003050035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9003050036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9003050036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9003050037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9003050037300 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9003050037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9003050038000 |
| 0.1516 | | 3.85 | 75.00 | 37.23 | 43.00 | 9003050038500 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9003050038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9003050039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9003050039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9003050039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9003050039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9003050040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9003050040400 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9003050040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9003050041000 |
| 0.1622 | | 4.12 | 75.00 | 36.82 | 43.00 | 9003050041200 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9003050041500 |
| 0.1642 | | 4.17 | 75.00 | 36.75 | 43.00 | 9003050041700 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | mm |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9003050042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9003050042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9003050042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9003050043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9003050043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9003050043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9003050044000 |
| 0.1752 | | 4.45 | 80.00 | 40.33 | 47.00 | 9003050044500 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9003050045000 |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9003050045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9003050046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9003050046200 |
| 0.1831 | | 4.65 | 80.00 | 40.03 | 47.00 | 9003050046500 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9003050047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9003050047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9003050047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9003050048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9003050048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9003050049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9003050049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9003050049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9003050050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9003050050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9003050051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9003050051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9003050051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9003050051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9003050052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9003050052200 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9003050052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9003050053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9003050053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9003050054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9003050054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9003050055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9003050055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9003050056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9003050056100 |
| 0.2224 | | 5.65 | 93.00 | 48.53 | 57.00 | 9003050056500 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9003050057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9003050057500 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9003050057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9003050058000 |
| 0.2303 | | 5.85 | 93.00 | 48.23 | 57.00 | 9003050058500 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9003050059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9003050059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9003050059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9003050060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9003050060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9003050061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9003050061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9003050062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9003050062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9003050063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9003050063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9003050064000 |
| 0.2539 | | 6.45 | 101.00 | 53.33 | 63.00 | 9003050064500 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9003050065000 |
| 0.2571 | | 6.53 | 101.00 | 53.21 | 63.00 | 9003050065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9003050066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9003050066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9003050067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9003050067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9003050068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9003050069000 |
| 0.2736 | | 6.95 | 109.00 | 58.58 | 69.00 | 9003050069500 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|-------------------------------|
| inch | wire/ltr | | | | | mm | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9003050070000 | |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9003050070300 | |
| 0.2776 | | 7.05 | 109.00 | 58.43 | 69.00 | 9003050070500 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9003050071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9003050071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9003050072000 | |
| 0.2854 | | 7.25 | 109.00 | 58.13 | 69.00 | 9003050072500 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9003050073000 | |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9003050073700 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9003050074000 | |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9003050074900 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9003050075000 | |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9003050075400 | |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9003050076000 | |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9003050076700 | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9003050077000 | |
| 0.3051 | | 7.75 | 117.00 | 63.38 | 75.00 | 9003050077500 | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9003050078000 | |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9003050079000 | |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9003050079400 | |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9003050080000 | |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9003050080300 | |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9003050081000 | |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9003050082000 | |
| 0.3248 | | 8.25 | 117.00 | 62.63 | 75.00 | 9003050082500 | |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9003050083000 | |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9003050083300 | |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9003050084000 | |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9003050084300 | |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9003050085000 | |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9003050086000 | |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9003050086100 | |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9003050087000 | |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9003050087300 | |
| 0.3445 | | 8.75 | 125.00 | 67.88 | 81.00 | 9003050087500 | |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9003050088000 | |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9003050088400 | |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9003050089000 | |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9003050090000 | |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9003050090900 | |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9003050091000 | |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9003050091300 | |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9003050092000 | |
| 0.3642 | | 9.25 | 125.00 | 67.13 | 81.00 | 9003050092500 | |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9003050093000 | |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9003050093400 | |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9003050094000 | |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9003050095000 | |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9003050095200 | |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9003050095800 | |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9003050096000 | |
| 0.3799 | | 9.65 | 133.00 | 72.53 | 87.00 | 9003050096500 | |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9003050097000 | |
| 0.3839 | | 9.75 | 133.00 | 72.38 | 87.00 | 9003050097500 | |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9003050098000 | |
| 0.3878 | | 9.85 | 133.00 | 72.23 | 87.00 | 9003050098500 | |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9003050099000 | |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9003050099200 | |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9003050100000 | |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9003050100800 | |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9003050101000 | |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9003050102000 | |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9003050102600 | |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9003050103000 | |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9003050103200 | |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9003050104000 | |

Jobber Length

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9003050104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9003050105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9003050106000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9003050107000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9003050107200 |
| 0.4232 | | 10.75 | 142.00 | 77.88 | 94.00 | 9003050107500 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9003050108000 |
| 0.4291 | | 10.90 | 142.00 | 77.65 | 94.00 | 9003050109000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9003050110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9003050111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9003050112000 |
| 0.4429 | | 11.25 | 142.00 | 77.13 | 94.00 | 9003050112500 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9003050113000 |
| 0.4488 | | 11.40 | 142.00 | 76.90 | 94.00 | 9003050114000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9003050115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9003050115100 |
| 0.4567 | | 11.60 | 142.00 | 76.60 | 94.00 | 9003050116000 |
| 0.4626 | | 11.75 | 142.00 | 76.38 | 94.00 | 9003050117500 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9003050118000 |
| 0.4685 | | 11.90 | 151.00 | 83.15 | 101.00 | 9003050119000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9003050119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9003050120000 |
| 0.4764 | | 12.10 | 151.00 | 82.85 | 101.00 | 9003050121000 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9003050122000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9003050123000 |
| 0.4882 | | 12.40 | 151.00 | 82.40 | 101.00 | 9003050124000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9003050125000 |
| 0.4961 | | 12.60 | 151.00 | 82.10 | 101.00 | 9003050126000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9003050127000 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9003050128000 |
| 0.5079 | | 12.90 | 151.00 | 81.65 | 101.00 | 9003050129000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9003050130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9003050131000 |
| 0.5197 | | 13.20 | 151.00 | 81.20 | 101.00 | 9003050132000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.5236 | | 13.30 | 160.00 | 88.05 | 108.00 | 9003050133000 |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9003050134900 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9003050135000 |
| 0.5354 | | 13.60 | 160.00 | 87.60 | 108.00 | 9003050136000 |
| 0.5413 | | 13.75 | 160.00 | 87.38 | 108.00 | 9003050137500 |
| 0.5433 | | 13.80 | 160.00 | 87.30 | 108.00 | 9003050138000 |
| 0.5469 | 35/64 | 13.89 | 160.00 | 87.17 | 108.00 | 9003050138900 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9003050140000 |
| 0.5591 | | 14.20 | 169.00 | 92.70 | 114.00 | 9003050142000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9003050142900 |
| 0.5669 | | 14.40 | 169.00 | 92.40 | 114.00 | 9003050144000 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9003050145000 |
| 0.5780 | 37/64 | 14.68 | 169.00 | 91.98 | 114.00 | 9003050146800 |
| 0.5807 | | 14.75 | 169.00 | 91.88 | 114.00 | 9003050147500 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9003050150000 |
| 0.5945 | | 15.10 | 178.00 | 97.35 | 120.00 | 9003050151000 |
| 0.6004 | | 15.25 | 178.00 | 97.13 | 120.00 | 9003050152500 |
| 0.6024 | | 15.30 | 178.00 | 97.05 | 120.00 | 9003050153000 |
| 0.6094 | 39/64 | 15.48 | 178.00 | 96.78 | 120.00 | 9003050154800 |
| 0.6102 | | 15.50 | 178.00 | 96.75 | 120.00 | 9003050155000 |
| 0.6201 | | 15.75 | 178.00 | 96.38 | 120.00 | 9003050157500 |
| 0.6248 | 5/8 | 15.87 | 178.00 | 96.20 | 120.00 | 9003050158700 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9003050160000 |
| 0.6496 | | 16.50 | 184.00 | 100.25 | 125.00 | 9003050165000 |
| 0.6563 | 21/32 | 16.67 | 184.00 | 100.00 | 125.00 | 9003050166700 |
| 0.6693 | | 17.00 | 184.00 | 99.50 | 125.00 | 9003050170000 |
| 0.6874 | 11/16 | 17.46 | 191.00 | 103.81 | 130.00 | 9003050174600 |
| 0.6890 | | 17.50 | 191.00 | 103.75 | 130.00 | 9003050175000 |
| 0.7087 | | 18.00 | 191.00 | 103.00 | 130.00 | 9003050180000 |
| 0.7283 | | 18.50 | 198.00 | 107.25 | 135.00 | 9003050185000 |
| 0.7480 | | 19.00 | 198.00 | 106.50 | 135.00 | 9003050190000 |
| 0.7677 | | 19.50 | 205.00 | 110.75 | 140.00 | 9003050195000 |
| 0.7811 | 25/32 | 19.84 | 205.00 | 110.24 | 140.00 | 9003050198400 |
| 0.7874 | | 20.00 | 205.00 | 110.00 | 140.00 | 9003050200000 |



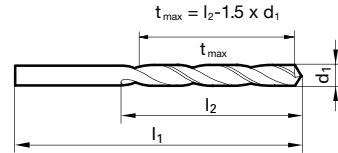
Tool material

HSCO

Surface



- P** Steel ● web thinning $\geq \varnothing 2.370$ • relieved cone • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ○
 - K** Cast iron ● alloyed and unalloyed steel • castings over 800 N/mm² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat S treatable and case hardened steels
 - N** Aluminum ○
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 510

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----------------------|------------------------|----------------------|------------------------------|
| inch | wire/ltr | | | | |
| 0.0189 | | 20.00 | 4.28 | 5.00 | 900308004800 |
| 0.0197 | | 22.00 | 5.25 | 6.00 | 900308005000 |
| 0.0295 | | 28.00 | 7.88 | 9.00 | 900308007500 |
| 0.0307 | | 30.00 | 8.83 | 10.00 | 900308007800 |
| 0.0315 | | 30.00 | 8.80 | 10.00 | 900308008000 |
| 0.0354 | | 32.00 | 9.65 | 11.00 | 900308009000 |
| 0.0358 | #64 | 32.00 | 9.64 | 11.00 | 900308009100 |
| 0.0366 | | 32.00 | 9.61 | 11.00 | 900308009300 |
| 0.0386 | | 34.00 | 10.53 | 12.00 | 900308009800 |
| 0.0394 | | 34.00 | 10.50 | 12.00 | 900308010000 |
| 0.0402 | #60 | 34.00 | 10.47 | 12.00 | 900308010200 |
| 0.0425 | | 36.00 | 12.38 | 14.00 | 900308010800 |
| 0.0433 | | 36.00 | 12.35 | 14.00 | 900308011000 |
| 0.0453 | | 36.00 | 12.28 | 14.00 | 900308011500 |
| 0.0465 | #56 | 36.00 | 12.23 | 14.00 | 900308011800 |
| 0.0469 | 3/64 | 38.00 | 14.22 | 16.00 | 900308011900 |
| 0.0472 | | 38.00 | 14.20 | 16.00 | 900308012000 |
| 0.0492 | | 38.00 | 14.13 | 16.00 | 900308012500 |
| 0.0512 | | 38.00 | 14.05 | 16.00 | 900308013000 |
| 0.0520 | #55 | 38.00 | 14.02 | 16.00 | 900308013200 |
| 0.0531 | | 40.00 | 15.98 | 18.00 | 900308013500 |
| 0.0551 | #54 | 40.00 | 15.90 | 18.00 | 900308014000 |
| 0.0563 | | 40.00 | 15.86 | 18.00 | 900308014300 |
| 0.0571 | | 40.00 | 15.83 | 18.00 | 900308014500 |
| 0.0579 | | 40.00 | 15.80 | 18.00 | 900308014700 |
| 0.0587 | | 40.00 | 15.77 | 18.00 | 900308014900 |
| 0.0591 | | 40.00 | 15.75 | 18.00 | 900308015000 |
| 0.0594 | #53 | 43.00 | 17.74 | 20.00 | 900308015100 |
| 0.0610 | | 43.00 | 17.68 | 20.00 | 900308015500 |
| 0.0626 | 1/16 | 43.00 | 17.62 | 20.00 | 900308015900 |
| 0.0630 | | 43.00 | 17.60 | 20.00 | 900308016000 |
| 0.0661 | | 43.00 | 17.48 | 20.00 | 900308016800 |
| 0.0669 | #51 | 43.00 | 17.45 | 20.00 | 900308017000 |
| 0.0677 | | 46.00 | 19.42 | 22.00 | 900308017200 |
| 0.0689 | | 46.00 | 19.38 | 22.00 | 900308017500 |
| 0.0701 | #50 | 46.00 | 19.33 | 22.00 | 900308017800 |
| 0.0709 | | 46.00 | 19.30 | 22.00 | 900308018000 |
| 0.0728 | #49 | 46.00 | 19.23 | 22.00 | 900308018500 |
| 0.0748 | | 46.00 | 19.15 | 22.00 | 900308019000 |
| 0.0760 | #48 | 49.00 | 21.11 | 24.00 | 900308019300 |
| 0.0768 | | 49.00 | 21.08 | 24.00 | 900308019500 |
| 0.0780 | 5/64 | 49.00 | 21.03 | 24.00 | 900308019800 |
| 0.0787 | | 49.00 | 21.00 | 24.00 | 900308020000 |
| 0.0811 | #46 | 49.00 | 20.91 | 24.00 | 900308020600 |

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----------------------|------------------------|----------------------|------------------------------|
| inch | wire/ltr | | | | |
| 0.0819 | #45 | 49.00 | 20.88 | 24.00 | 900308020800 |
| 0.0827 | | 49.00 | 20.85 | 24.00 | 900308021000 |
| 0.0858 | #44 | 53.00 | 23.73 | 27.00 | 900308021800 |
| 0.0866 | | 53.00 | 23.70 | 27.00 | 900308022000 |
| 0.0886 | | 53.00 | 23.63 | 27.00 | 900308022500 |
| 0.0890 | #43 | 53.00 | 23.61 | 27.00 | 900308022600 |
| 0.0906 | | 53.00 | 23.55 | 27.00 | 900308023000 |
| 0.0925 | | 53.00 | 23.48 | 27.00 | 900308023500 |
| 0.0933 | #42 | 57.00 | 26.45 | 30.00 | 900308023700 |
| 0.0937 | 3/32 | 57.00 | 26.43 | 30.00 | 900308023800 |
| 0.0945 | | 57.00 | 26.40 | 30.00 | 900308024000 |
| 0.0980 | #40 | 57.00 | 26.27 | 30.00 | 900308024900 |
| 0.0984 | | 57.00 | 26.25 | 30.00 | 900308025000 |
| 0.0996 | #39 | 57.00 | 26.21 | 30.00 | 900308025300 |
| 0.1024 | | 57.00 | 26.10 | 30.00 | 900308026000 |
| 0.1039 | #37 | 57.00 | 26.04 | 30.00 | 900308026400 |
| 0.1063 | | 61.00 | 28.95 | 33.00 | 900308027000 |
| 0.1083 | | 61.00 | 28.88 | 33.00 | 900308027500 |
| 0.1094 | 7/64 | 61.00 | 28.83 | 33.00 | 900308027800 |
| 0.1098 | #35 | 61.00 | 28.82 | 33.00 | 900308027900 |
| 0.1102 | | 61.00 | 28.80 | 33.00 | 900308028000 |
| 0.1110 | #34 | 61.00 | 28.77 | 33.00 | 900308028200 |
| 0.1142 | | 61.00 | 28.65 | 33.00 | 900308029000 |
| 0.1161 | #32 | 61.00 | 28.58 | 33.00 | 900308029500 |
| 0.1181 | | 61.00 | 28.50 | 33.00 | 900308030000 |
| 0.1201 | #31 | 65.00 | 31.43 | 36.00 | 900308030500 |
| 0.1220 | | 65.00 | 31.35 | 36.00 | 900308031000 |
| 0.1248 | 1/8 | 65.00 | 31.25 | 36.00 | 900308031700 |
| 0.1260 | | 65.00 | 31.20 | 36.00 | 900308032000 |
| 0.1299 | | 65.00 | 31.05 | 36.00 | 900308033000 |
| 0.1339 | | 70.00 | 33.90 | 39.00 | 900308034000 |
| 0.1358 | #29 | 70.00 | 33.83 | 39.00 | 900308034500 |
| 0.1378 | | 70.00 | 33.75 | 39.00 | 900308035000 |
| 0.1417 | | 70.00 | 33.60 | 39.00 | 900308036000 |
| 0.1437 | | 70.00 | 33.53 | 39.00 | 900308036500 |
| 0.1441 | #27 | 70.00 | 33.51 | 39.00 | 900308036600 |
| 0.1457 | | 70.00 | 33.45 | 39.00 | 900308037000 |
| 0.1469 | #26 | 70.00 | 33.41 | 39.00 | 900308037300 |
| 0.1496 | #25 | 75.00 | 37.30 | 43.00 | 900308038000 |
| 0.1520 | #24 | 75.00 | 37.21 | 43.00 | 900308038600 |
| 0.1535 | | 75.00 | 37.15 | 43.00 | 900308039000 |
| 0.1539 | #23 | 75.00 | 37.14 | 43.00 | 900308039100 |
| 0.1563 | 5/32 | 75.00 | 37.05 | 43.00 | 900308039700 |
| 0.1571 | #22 | 75.00 | 37.02 | 43.00 | 900308039900 |

Jobber Length

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9003080040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9003080040400 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9003080040500 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9003080040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9003080041000 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9003080041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9003080042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9003080042200 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9003080043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9003080043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9003080043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9003080044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9003080045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9003080046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9003080046200 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9003080047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9003080047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9003080048000 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9003080049000 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9003080049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9003080050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9003080050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9003080051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9003080051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9003080051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9003080051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9003080052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9003080052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9003080053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9003080053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9003080054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9003080054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9003080055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9003080055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9003080056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9003080056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9003080057000 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9003080058000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9003080059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9003080059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9003080060000 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9003080061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9003080061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9003080062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9003080062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9003080063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9003080063500 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9003080065000 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9003080066000 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9003080067000 |
| 0.2657 | 17/64 | H 6.75 | 109.00 | 58.88 | 69.00 | 9003080067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9003080068000 |

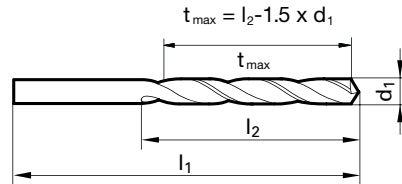
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9003080070000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9003080073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9003080074000 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9003080075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9003080075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9003080076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9003080077000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9003080079000 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9003080080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9003080080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9003080081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9003080082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9003080083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9003080083300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9003080085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9003080086000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9003080086100 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9003080087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9003080087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9003080088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9003080088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9003080089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9003080090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9003080090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9003080091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9003080091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9003080092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9003080093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9003080093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9003080094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9003080095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9003080095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9003080095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9003080096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9003080097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9003080098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9003080099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9003080099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9003080100000 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9003080102600 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9003080103200 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9003080104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9003080105000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9003080110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9003080111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9003080115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9003080115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9003080119100 |
| 0.4744 | | 12.05 | 151.00 | 82.93 | 101.00 | 9003080120500 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9003080125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9003080127000 |



Tool material **HSCO**
Surface

- P** Steel ○ web thinning ≥ Ø 0.970 • relieved cone split point • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ●
 - K** Cast iron
 - N** Aluminum
 - S** Titanium alloys ●
 - H** Hardened steel
- =Optimal
○=Limited

Titanium and Titanium alloys • stainless/acid-/heat-resistant austenitic steels • high tensile/short chipping steels over 900 N/mm² • Hastelloy, Inconel, Nimonic



Jobber Length

Speeds and feeds information on pg. 530

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | | | | |
| 0.0118 | | 19.00 | 2.55 | 3.00 | 9006050003000 |
| 0.0157 | 1/64 | 20.00 | 4.40 | 5.00 | 9006050004000 |
| 0.0173 | | 20.00 | 4.34 | 5.00 | 9006050004400 |
| 0.0177 | | 20.00 | 4.33 | 5.00 | 9006050004500 |
| 0.0197 | | 22.00 | 5.25 | 6.00 | 9006050005000 |
| 0.0201 | #76 | 22.00 | 5.24 | 6.00 | 9006050005100 |
| 0.0209 | #75 | 22.00 | 5.21 | 6.00 | 9006050005300 |
| 0.0217 | | 24.00 | 6.18 | 7.00 | 9006050005500 |
| 0.0224 | #74 | 24.00 | 6.15 | 7.00 | 9006050005700 |
| 0.0228 | | 24.00 | 6.13 | 7.00 | 9006050005800 |
| 0.0236 | | 24.00 | 6.10 | 7.00 | 9006050006000 |
| 0.0240 | #73 | 26.00 | 7.09 | 8.00 | 9006050006100 |
| 0.0252 | #72 | 26.00 | 7.04 | 8.00 | 9006050006400 |
| 0.0256 | | 26.00 | 7.03 | 8.00 | 9006050006500 |
| 0.0276 | | 28.00 | 7.95 | 9.00 | 9006050007000 |
| 0.0280 | #70 | 28.00 | 7.94 | 9.00 | 9006050007100 |
| 0.0283 | | 28.00 | 7.92 | 9.00 | 9006050007200 |
| 0.0295 | | 28.00 | 7.88 | 9.00 | 9006050007500 |
| 0.0299 | | 30.00 | 8.86 | 10.00 | 9006050007600 |
| 0.0311 | 1/32 #68 | 30.00 | 8.82 | 10.00 | 9006050007900 |
| 0.0315 | | 30.00 | 8.80 | 10.00 | 9006050008000 |
| 0.0319 | #67 | 30.00 | 8.79 | 10.00 | 9006050008100 |
| 0.0323 | | 30.00 | 8.77 | 10.00 | 9006050008200 |
| 0.0327 | | 30.00 | 8.76 | 10.00 | 9006050008300 |
| 0.0331 | #66 | 30.00 | 8.74 | 10.00 | 9006050008400 |
| 0.0335 | | 30.00 | 8.73 | 10.00 | 9006050008500 |
| 0.0339 | | 32.00 | 9.71 | 11.00 | 9006050008600 |
| 0.0343 | | 32.00 | 9.70 | 11.00 | 9006050008700 |
| 0.0346 | | 32.00 | 9.68 | 11.00 | 9006050008800 |
| 0.0350 | #65 | 32.00 | 9.67 | 11.00 | 9006050008900 |
| 0.0354 | | 32.00 | 9.65 | 11.00 | 9006050009000 |
| 0.0358 | #64 | 32.00 | 9.64 | 11.00 | 9006050009100 |
| 0.0362 | | 32.00 | 9.62 | 11.00 | 9006050009200 |
| 0.0370 | #63 | 32.00 | 9.59 | 11.00 | 9006050009400 |
| 0.0374 | | 32.00 | 9.58 | 11.00 | 9006050009500 |
| 0.0386 | | 34.00 | 10.53 | 12.00 | 9006050009800 |
| 0.0390 | #61 | 34.00 | 10.52 | 12.00 | 9006050009900 |
| 0.0394 | | 34.00 | 10.50 | 12.00 | 9006050010000 |
| 0.0402 | #60 | 34.00 | 10.47 | 12.00 | 9006050010200 |
| 0.0409 | #59 | 34.00 | 10.44 | 12.00 | 9006050010400 |
| 0.0413 | | 34.00 | 10.43 | 12.00 | 9006050010500 |
| 0.0421 | #58 | 36.00 | 12.40 | 14.00 | 9006050010700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0425 | | 1.08 | 36.00 | 12.38 | 14.00 | 9006050010800 |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9006050010900 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9006050011000 |
| 0.0449 | | 1.14 | 36.00 | 12.29 | 14.00 | 9006050011400 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9006050011500 |
| 0.0457 | | 1.16 | 36.00 | 12.26 | 14.00 | 9006050011600 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9006050011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9006050011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9006050012000 |
| 0.0476 | | 1.21 | 38.00 | 14.19 | 16.00 | 9006050012100 |
| 0.0480 | | 1.22 | 38.00 | 14.17 | 16.00 | 9006050012200 |
| 0.0484 | | 1.23 | 38.00 | 14.16 | 16.00 | 9006050012300 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9006050012500 |
| 0.0508 | | 1.29 | 38.00 | 14.07 | 16.00 | 9006050012900 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9006050013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9006050013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9006050013500 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9006050014000 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9006050014500 |
| 0.0575 | | 1.46 | 40.00 | 15.81 | 18.00 | 9006050014600 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9006050015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9006050015100 |
| 0.0598 | | 1.52 | 43.00 | 17.72 | 20.00 | 9006050015200 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9006050015300 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9006050015500 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9006050015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9006050016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9006050016100 |
| 0.0638 | | 1.62 | 43.00 | 17.57 | 20.00 | 9006050016200 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9006050016500 |
| 0.0661 | | 1.68 | 43.00 | 17.48 | 20.00 | 9006050016800 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9006050017000 |
| 0.0681 | | 1.73 | 46.00 | 19.41 | 22.00 | 9006050017300 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9006050017500 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9006050017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9006050018000 |
| 0.0717 | | 1.82 | 46.00 | 19.27 | 22.00 | 9006050018200 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9006050018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9006050019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9006050019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9006050019500 |
| 0.0776 | | 1.97 | 49.00 | 21.05 | 24.00 | 9006050019700 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|---------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9006050019800 | |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9006050019900 | |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9006050020000 | |
| 0.0795 | | 2.02 | 49.00 | 20.97 | 24.00 | 9006050020200 | |
| 0.0799 | | 2.03 | 49.00 | 20.96 | 24.00 | 9006050020300 | |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9006050020500 | |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9006050020800 | |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9006050021000 | |
| 0.0835 | | 2.12 | 49.00 | 20.82 | 24.00 | 9006050021200 | |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9006050021500 | |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9006050021800 | |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9006050022000 | |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9006050022500 | |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9006050022600 | |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9006050023000 | |
| 0.0913 | | 2.32 | 53.00 | 23.52 | 27.00 | 9006050023200 | |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9006050023500 | |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9006050023700 | |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006050023800 | |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006050024000 | |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9006050024500 | |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9006050024900 | |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006050025000 | |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006050025300 | |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9006050025500 | |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006050026000 | |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9006050026500 | |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006050027000 | |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9006050027100 | |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9006050027500 | |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006050027800 | |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9006050027900 | |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006050028000 | |
| 0.1106 | | 2.81 | 61.00 | 28.79 | 33.00 | 9006050028100 | |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9006050028200 | |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9006050028500 | |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9006050028700 | |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006050029000 | |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006050029500 | |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006050030000 | |
| 0.1193 | | 3.03 | 65.00 | 31.46 | 36.00 | 9006050030300 | |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006050030500 | |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006050031000 | |
| 0.1240 | | 3.15 | 65.00 | 31.28 | 36.00 | 9006050031500 | |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006050031700 | |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006050032000 | |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9006050032500 | |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9006050032600 | |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006050033000 | |
| 0.1319 | | 3.35 | 65.00 | 30.98 | 36.00 | 9006050033500 | |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006050034000 | |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9006050034500 | |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006050035000 | |
| 0.1398 | | 3.55 | 70.00 | 33.68 | 39.00 | 9006050035500 | |
| 0.1406 | 9/64 | #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9006050035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006050036000 | |
| 0.1437 | | 3.65 | 70.00 | 33.53 | 39.00 | 9006050036500 | |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006050037000 | |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9006050037500 | |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006050038000 | |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006050039000 | |
| 0.1555 | | 3.95 | 75.00 | 37.08 | 43.00 | 9006050039500 | |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006050039700 | |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006050040000 | |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9006050040400 | |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9006050040500 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|---------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006050041000 | |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9006050041500 | |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006050042000 | |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9006050042200 | |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9006050042500 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006050043000 | |
| 0.1713 | | 4.35 | 80.00 | 40.48 | 47.00 | 9006050043500 | |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006050043700 | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006050044000 | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006050045000 | |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9006050045700 | |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006050046000 | |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006050047000 | |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9006050047500 | |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006050047600 | |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006050048000 | |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9006050048500 | |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006050049000 | |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006050050000 | |
| 0.1988 | | 5.05 | 86.00 | 44.43 | 52.00 | 9006050050500 | |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006050051000 | |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9006050051100 | |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006050051600 | |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006050052000 | |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006050053000 | |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006050054000 | |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9006050054100 | |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006050055000 | |
| 0.2185 | | 5.55 | 93.00 | 48.68 | 57.00 | 9006050055500 | |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006050055600 | |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9006050056100 | |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006050057000 | |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9006050057500 | |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006050058000 | |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006050059000 | |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9006050059500 | |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006050060000 | |
| 0.2382 | | 6.05 | 101.00 | 53.93 | 63.00 | 9006050060500 | |
| 0.2394 | | 6.08 | 101.00 | 53.88 | 63.00 | 9006050060800 | |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006050061000 | |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006050062000 | |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006050063000 | |
| 0.2500 | 1/4 | E | 6.35 | 101.00 | 53.48 | 63.00 | 9006050063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9006050064000 | |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006050065000 | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9006050066000 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9006050067000 | |
| 0.2657 | 17/64 | H | 6.75 | 109.00 | 58.88 | 69.00 | 9006050067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9006050068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9006050069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9006050070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9006050071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9006050071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9006050072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9006050073000 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9006050074000 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9006050075000 | |
| 0.2969 | 19/64 | | 7.54 | 117.00 | 63.69 | 75.00 | 9006050075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9006050076000 | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9006050077000 | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9006050078000 | |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9006050079000 | |
| 0.3126 | 5/16 | | 7.94 | 117.00 | 63.09 | 75.00 | 9006050079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9006050080000 | |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9006050081000 | |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9006050082000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9006050083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9006050083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9006050084000 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9006050085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9006050086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9006050087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9006050087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9006050088000 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9006050089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9006050090000 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9006050091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9006050091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9006050092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9006050093000 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9006050094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9006050095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9006050095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9006050096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9006050097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9006050098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9006050099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9006050099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9006050100000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9006050102000 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9006050103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9006050103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9006050105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9006050106000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9006050107200 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9006050108000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9006050110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9006050111100 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9006050113000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9006050115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9006050115100 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9006050117000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9006050119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9006050120000 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9006050122000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9006050123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9006050125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9006050127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9006050130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9006050131000 |
| 0.5469 | 35/64 | 13.89 | 160.00 | 87.17 | 108.00 | 9006050138900 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9006050140000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9006050142900 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9006050145000 |
| 0.5780 | 37/64 | 14.68 | 169.00 | 91.98 | 114.00 | 9006050146800 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9006050150000 |
| 0.6102 | | 15.50 | 178.00 | 96.75 | 120.00 | 9006050155000 |
| 0.6299 | | 16.00 | 178.00 | 96.00 | 120.00 | 9006050160000 |
| 0.6496 | | 16.50 | 184.00 | 100.25 | 125.00 | 9006050165000 |
| 0.6693 | | 17.00 | 184.00 | 99.50 | 125.00 | 9006050170000 |
| 0.6890 | | 17.50 | 191.00 | 103.75 | 130.00 | 9006050175000 |
| 0.7087 | | 18.00 | 191.00 | 103.00 | 130.00 | 9006050180000 |
| 0.7480 | | 19.00 | 198.00 | 106.50 | 135.00 | 9006050190000 |

Jobber Length



Tool material

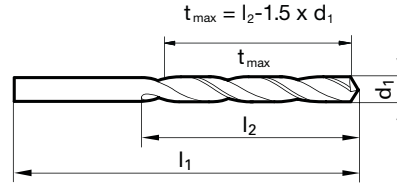
HSCO

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | web thinning ≥ Ø 1.000 • relieved cone split point • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | | Titanium and Titanium alloys • stainless/acid-/heat-resistant austenitic steels • high tensile/short chipping steels over 900 N/mm ² • Hastelloy, Inconel, Nimonic |
| N | Aluminum | | |
| S | Titanium alloys | ● | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 536

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0197 | | 0.50 | 22.00 | 5.25 | 6.00 | 9006570005000 |
| 0.0209 | #75 | 0.53 | 22.00 | 5.21 | 6.00 | 9006570005300 |
| 0.0236 | | 0.60 | 24.00 | 6.10 | 7.00 | 9006570006000 |
| 0.0256 | | 0.65 | 26.00 | 7.03 | 8.00 | 9006570006500 |
| 0.0276 | | 0.70 | 28.00 | 7.95 | 9.00 | 9006570007000 |
| 0.0295 | | 0.75 | 28.00 | 7.88 | 9.00 | 9006570007500 |
| 0.0315 | | 0.80 | 30.00 | 8.80 | 10.00 | 9006570008000 |
| 0.0335 | | 0.85 | 30.00 | 8.73 | 10.00 | 9006570008500 |
| 0.0346 | | 0.88 | 32.00 | 9.68 | 11.00 | 9006570008800 |
| 0.0354 | | 0.90 | 32.00 | 9.65 | 11.00 | 9006570009000 |
| 0.0362 | | 0.92 | 32.00 | 9.62 | 11.00 | 9006570009200 |
| 0.0370 | #63 | 0.94 | 32.00 | 9.59 | 11.00 | 9006570009400 |
| 0.0374 | | 0.95 | 32.00 | 9.58 | 11.00 | 9006570009500 |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9006570010000 |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9006570010400 |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9006570010500 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9006570011000 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9006570011500 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9006570011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9006570011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9006570012000 |
| 0.0476 | | 1.21 | 38.00 | 14.19 | 16.00 | 9006570012100 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9006570012500 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9006570013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9006570013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9006570013500 |
| 0.0547 | | 1.39 | 40.00 | 15.92 | 18.00 | 9006570013900 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9006570014000 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9006570014500 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9006570015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9006570015100 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9006570015500 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9006570015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9006570016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9006570016100 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9006570016500 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9006570017000 |
| 0.0689 | | 1.75 | 46.00 | 19.38 | 22.00 | 9006570017500 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9006570017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9006570018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9006570018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9006570019000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9006570019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9006570019800 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9006570020000 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9006570020500 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9006570021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9006570021500 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9006570022000 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9006570022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9006570023000 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9006570023500 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006570023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006570024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9006570024400 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006570025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006570025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9006570025500 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006570026000 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006570027000 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006570027800 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006570028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9006570028200 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006570029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006570029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006570030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006570030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006570031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006570031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006570032000 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9006570032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006570033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006570034000 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006570035000 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9006570035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006570036000 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006570037000 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006570038000 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006570039000 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006570039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006570040000 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006570041000 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006570042000 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9006570042500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006570043000 |
| 0.1713 | | 4.35 | 80.00 | 40.48 | 47.00 | 9006570043500 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006570043700 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006570044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006570045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006570046000 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006570047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006570047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006570048000 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006570049000 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006570050000 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006570051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9006570051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006570051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006570052000 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006570053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006570054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006570055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006570055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9006570056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9006570056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006570057000 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006570058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006570059000 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9006570059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006570060000 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006570061000 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006570062000 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006570063000 |
| 0.2500 | 1/4 | E | 101.00 | 53.48 | 63.00 | 9006570063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9006570064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006570065000 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9006570066000 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9006570067000 |
| 0.2657 | 17/64 | H | 109.00 | 58.88 | 69.00 | 9006570067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9006570068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9006570069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9006570070000 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9006570071000 |
| 0.2811 | 9/32 | K | 109.00 | 58.29 | 69.00 | 9006570071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9006570072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9006570073000 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9006570074000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9006570075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9006570075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9006570076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9006570077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9006570078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9006570079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9006570079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9006570080000 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9006570081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9006570082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9006570083000 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9006570084000 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9006570085000 |
| 0.3366 | | 8.55 | 125.00 | 68.18 | 81.00 | 9006570085500 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9006570086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9006570087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9006570087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9006570088000 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9006570089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9006570090000 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9006570091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9006570091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9006570092000 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9006570094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9006570095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9006570095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9006570096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9006570097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9006570098000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9006570099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9006570100000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9006570102000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9006570103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9006570105000 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9006570108000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9006570110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9006570111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9006570112000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9006570115000 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9006570120000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9006570125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9006570127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9006570130000 |

Jobber Length



Tool material

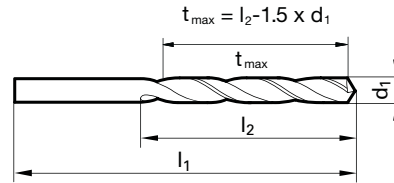
HSCO

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | web thinning ≥ Ø 1.000 • relieved cone split point • Co-alloyed high speed steel • increased wear resistance |
| M | Stainless steel | ● | |
| K | Cast iron | | Titanium and Titanium alloys • stainless/acid-/heat-resistant austenitic steels • high tensile/short chipping steels over 900 N/mm ² • Hastelloy, Inconel, Nimonic |
| N | Aluminum | | |
| S | Titanium alloys | ● | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 555

Shank diameter = cut diameter

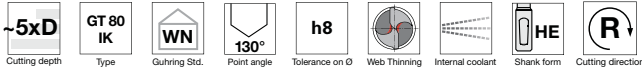
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0157 | 1/64 | 0.40 | 20.00 | 4.40 | 5.00 | 902458004000 |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9024580010000 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9024580011000 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9024580011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9024580012000 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9024580013000 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9024580014000 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9024580015000 |
| 0.0598 | | 1.52 | 43.00 | 17.72 | 20.00 | 9024580015200 |
| 0.0602 | | 1.53 | 43.00 | 17.71 | 20.00 | 9024580015300 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9024580015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9024580016000 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9024580016500 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9024580017000 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9024580018000 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9024580019000 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9024580019800 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9024580020000 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9024580020500 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9024580021000 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9024580022000 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9024580023000 |
| 0.0933 | #44 | 2.37 | 57.00 | 26.45 | 30.00 | 9024580023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9024580023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9024580024000 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9024580025000 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9024580026000 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9024580027000 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9024580027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9024580027800 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9024580028000 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9024580029000 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9024580030000 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9024580031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9024580031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9024580032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9024580032500 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9024580033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9024580034000 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9024580035000 |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9024580035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9024580036000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9024580037000 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9024580038000 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9024580039000 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9024580039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9024580040000 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9024580041000 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9024580041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9024580042000 |
| 0.1661 | | 4.22 | 75.00 | 36.67 | 43.00 | 9024580042200 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9024580043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9024580043700 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9024580044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9024580045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9024580046000 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9024580047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9024580047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9024580048000 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9024580049000 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9024580050000 |
| 0.1988 | | 5.05 | 86.00 | 44.43 | 52.00 | 9024580050500 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9024580051000 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9024580051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9024580052000 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9024580053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9024580054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9024580055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9024580055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9024580056000 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9024580057000 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9024580058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9024580059000 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9024580059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9024580060000 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9024580061000 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9024580062000 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9024580063000 |
| 0.2500 | 1/4 | E 6.35 | 101.00 | 53.48 | 63.00 | 9024580063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9024580064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9024580065000 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9024580066000 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9024580067000 |
| 0.2657 | 17/64 | H 6.75 | 109.00 | 58.88 | 69.00 | 9024580067500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9024580068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9024580069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9024580070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9024580071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9024580071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9024580072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9024580073000 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9024580074000 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9024580075000 | |
| 0.2969 | 19/64 | | 7.54 | 117.00 | 63.69 | 75.00 | 9024580075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9024580076000 | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9024580077000 | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9024580078000 | |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9024580079000 | |
| 0.3126 | 5/16 | | 7.94 | 117.00 | 63.09 | 75.00 | 9024580079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9024580080000 | |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9024580081000 | |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9024580082000 | |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9024580083000 | |
| 0.3280 | 21/64 | | 8.33 | 117.00 | 62.51 | 75.00 | 9024580083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9024580084000 | |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9024580085000 | |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9024580086000 | |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9024580087000 | |
| 0.3437 | 11/32 | | 8.73 | 125.00 | 67.91 | 81.00 | 9024580087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9024580088000 | |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9024580089000 | |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9024580090000 | |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9024580091000 | |
| 0.3594 | 23/64 | | 9.13 | 125.00 | 67.31 | 81.00 | 9024580091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9024580092000 | |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9024580093000 | |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9024580094000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9024580095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9024580095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9024580096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9024580097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9024580098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9024580099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9024580099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9024580100000 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9024580101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9024580102000 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9024580103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9024580103200 |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9024580104000 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9024580105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9024580107200 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9024580108000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9024580110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9024580111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9024580112000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9024580115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9024580115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9024580119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9024580120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9024580123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9024580125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9024580127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9024580130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9024580131000 |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9024580134900 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9024580140000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9024580142900 |
| 0.5709 | | 14.50 | 169.00 | 92.25 | 114.00 | 9024580145000 |
| 0.5906 | | 15.00 | 169.00 | 91.50 | 114.00 | 9024580150000 |

Jobber Length



Tool material

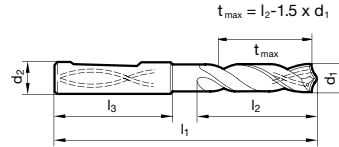
HSCo

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 5.000 • relieved cone • Co-alloyed high speed steel |
| M | Stainless steel | ● | |
| K | Cast iron | ● | long chipping materials up to 1000 N/mm ² • stainless steels • cast materials • non-ferrous metals |
| N | Aluminum | ● | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited

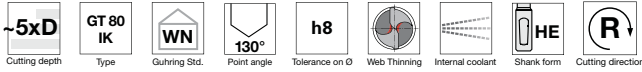


Speeds and feeds information on pg. 548

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | | |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9011310050000 | |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9011310055000 | |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9011310060000 | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9011310063500 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9011310065000 | |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9011310068000 | |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9011310070000 | |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9011310071400 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9011310075000 | |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9011310078000 | |
| 0.3126 | 5/16 | | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9011310079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9011310080000 | |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9011310085000 | |
| 0.3437 | 11/32 | | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9011310087300 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9011310090000 | |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9011310095000 | |
| 0.3748 | 3/8 | | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9011310095200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9011310100000 | |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9011310102000 | |
| 0.4063 | 13/32 | | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9011310103200 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9011310105000 | |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9011310110000 | |
| 0.4374 | 7/16 | | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9011310111100 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9011310115000 | |

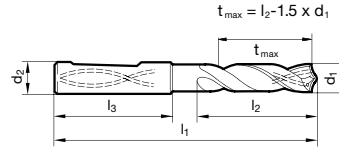
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9011310119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9011310120000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9011310125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9011310127000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9011310130000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 124.00 | 56.77 | 77.00 | 9011310134900 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9011310135000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9011310140000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9011310142900 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9011310145000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9011310150000 |
| 0.5937 | 19/32 | 15.08 | 16.00 | 133.00 | 60.38 | 83.00 | 9011310150800 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9011310155000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9011310158700 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9011310160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9011310165000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9011310170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9011310175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9011310180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9011310185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9011310190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9011310195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9011310200000 |

Jobber Length



Tool material **HSCO**
Surface **S**

- | | | |
|--------------------------|---|---|
| P Steel | ● | web thinning $\geq \varnothing 5.000$ • relieved cone • Co-alloyed high speed steel • increased wear resistance |
| M Stainless steel | ● | |
| K Cast iron | ● | long chipping materials up to 1000 N/mm ² • stainless steels • cast materials |
| N Aluminum | ● | • non-ferrous metals |
| S Titanium alloys | ● | |
| H Hardened steel | ○ | |
- =Optimal
○=Limited



Jobber Length

Speeds and feeds information on pg. 548

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9011320050000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9011320055000 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9011320060000 |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 91.00 | 43.48 | 9011320063500 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9011320065000 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9011320068000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9011320070000 |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 91.00 | 42.29 | 9011320071400 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9011320075000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9011320078000 |
| 0.3126 | 5/16 | | 7.94 | 8.00 | 91.00 | 41.09 | 9011320079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9011320080000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9011320085000 |
| 0.3437 | 11/32 | | 8.73 | 10.00 | 103.00 | 47.91 | 9011320087300 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9011320090000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9011320095000 |
| 0.3748 | 3/8 | | 9.52 | 10.00 | 103.00 | 46.72 | 9011320095200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9011320100000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9011320102000 |
| 0.4063 | 13/32 | | 10.32 | 12.00 | 118.00 | 55.52 | 9011320103200 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9011320105000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9011320110000 |
| 0.4374 | 7/16 | | 11.11 | 12.00 | 118.00 | 54.34 | 9011320111100 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9011320115000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9011320119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9011320120000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9011320125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9011320127000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9011320130000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 124.00 | 56.77 | 77.00 | 9011320134900 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9011320135000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9011320140000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9011320142900 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9011320145000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9011320150000 |
| 0.5937 | 19/32 | 15.08 | 16.00 | 133.00 | 60.38 | 83.00 | 9011320150800 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9011320155000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9011320158700 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9011320160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9011320165000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9011320170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9011320175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9011320180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9011320185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9011320190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9011320195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9011320200000 |



Tool material

HSCO

Surface

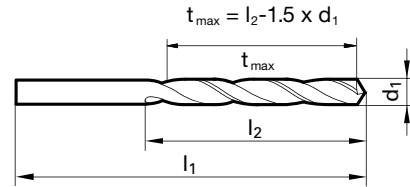


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | ○ |
| K | Cast iron | ● |
| N | Aluminum | ● |
| S | Titanium alloys | ● |
| H | Hardened steel | ● |

web thinning $\geq \text{Ø } 1.000$ • relieved cone • Co-alloyed high speed steel
• wide flutes • increased wear resistance • especially for drilling depths $> 3 \times D$

alloyed/unalloyed steel • cast materials over 800 N/mm^2 • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels

●=Optimal
○=Limited



Speeds and feeds information on pg. 534

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9006220010000 |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9006220010200 |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9006220010400 |
| 0.0413 | | 1.05 | 34.00 | 10.43 | 12.00 | 9006220010500 |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9006220010700 |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9006220010900 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9006220011000 |
| 0.0453 | | 1.15 | 36.00 | 12.28 | 14.00 | 9006220011500 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9006220011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9006220011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9006220012000 |
| 0.0492 | | 1.25 | 38.00 | 14.13 | 16.00 | 9006220012500 |
| 0.0500 | | 1.27 | 38.00 | 14.10 | 16.00 | 9006220012700 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9006220013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9006220013200 |
| 0.0531 | | 1.35 | 40.00 | 15.98 | 18.00 | 9006220013500 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9006220014000 |
| 0.0563 | | 1.43 | 40.00 | 15.86 | 18.00 | 9006220014300 |
| 0.0571 | | 1.45 | 40.00 | 15.83 | 18.00 | 9006220014500 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9006220015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9006220015100 |
| 0.0610 | | 1.55 | 43.00 | 17.68 | 20.00 | 9006220015500 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9006220015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9006220016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9006220016100 |
| 0.0650 | | 1.65 | 43.00 | 17.53 | 20.00 | 9006220016500 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9006220017000 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9006220017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9006220018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9006220018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9006220019000 |
| 0.0756 | | 1.92 | 49.00 | 21.12 | 24.00 | 9006220019200 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9006220019300 |
| 0.0768 | | 1.95 | 49.00 | 21.08 | 24.00 | 9006220019500 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9006220019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9006220019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9006220020000 |
| 0.0807 | | 2.05 | 49.00 | 20.93 | 24.00 | 9006220020500 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9006220020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9006220020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9006220021000 |
| 0.0846 | | 2.15 | 53.00 | 23.78 | 27.00 | 9006220021500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9006220021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9006220022000 |
| 0.0886 | | 2.25 | 53.00 | 23.63 | 27.00 | 9006220022500 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9006220022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9006220023000 |
| 0.0925 | | 2.35 | 53.00 | 23.48 | 27.00 | 9006220023500 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9006220023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006220023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006220024000 |
| 0.0953 | | 2.42 | 57.00 | 26.37 | 30.00 | 9006220024200 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9006220024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9006220024500 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9006220024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006220025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006220025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9006220025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9006220025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006220026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9006220026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9006220026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006220027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9006220027100 |
| 0.1083 | | 2.75 | 61.00 | 28.88 | 33.00 | 9006220027500 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006220027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9006220027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006220028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9006220028200 |
| 0.1122 | | 2.85 | 61.00 | 28.73 | 33.00 | 9006220028500 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9006220028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006220029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006220029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006220030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006220030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006220031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006220031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006220032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9006220032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9006220032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006220033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006220034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9006220034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006220035000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9006220035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006220036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9006220036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006220037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9006220037300 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006220038000 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9006220038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006220039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9006220039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006220039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9006220039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006220040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9006220040400 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9006220040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006220041000 |
| 0.1634 | | 4.15 | 75.00 | 36.78 | 43.00 | 9006220041500 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006220042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9006220042200 |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9006220042500 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006220043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006220043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9006220043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006220044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006220045000 |
| 0.1791 | | 4.55 | 80.00 | 40.18 | 47.00 | 9006220045500 |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9006220045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006220046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9006220046200 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006220047000 |
| 0.1870 | | 4.75 | 80.00 | 39.88 | 47.00 | 9006220047500 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006220047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006220048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9006220048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006220049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9006220049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9006220049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006220050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9006220050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006220051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9006220051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006220051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9006220051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006220052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9006220052200 |
| 0.2067 | | 5.25 | 86.00 | 44.13 | 52.00 | 9006220052500 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006220053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9006220053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006220054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9006220054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006220055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006220055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9006220056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9006220056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006220057000 |
| 0.2264 | | 5.75 | 93.00 | 48.38 | 57.00 | 9006220057500 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9006220057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006220058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006220059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9006220059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9006220059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006220060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9006220060400 |
| 0.2382 | | 6.05 | 101.00 | 53.93 | 63.00 | 9006220060500 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006220061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9006220061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006220062000 |

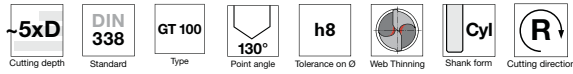
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9006220062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006220063000 |
| 0.2500 | 1/4 E | 6.35 | 101.00 | 53.48 | 63.00 | 9006220063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9006220064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006220065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9006220065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9006220066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9006220066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9006220067000 |
| 0.2657 | 17/64 H | 6.75 | 109.00 | 58.88 | 69.00 | 9006220067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9006220068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9006220069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9006220070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9006220070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9006220071000 |
| 0.2811 | 9/32 K | 7.14 | 109.00 | 58.29 | 69.00 | 9006220071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9006220072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9006220073000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9006220073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9006220074000 |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9006220074900 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9006220075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9006220075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9006220076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9006220076700 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9006220077000 |
| 0.3051 | | 7.75 | 117.00 | 63.38 | 75.00 | 9006220077500 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9006220078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9006220079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9006220079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9006220080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9006220080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9006220081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9006220082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9006220083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9006220083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9006220084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9006220084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9006220085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9006220086000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9006220086100 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9006220087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9006220087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9006220088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9006220088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9006220089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9006220090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9006220090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9006220091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9006220091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9006220092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9006220093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9006220093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9006220094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9006220095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9006220095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9006220095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9006220096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9006220097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9006220098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9006220099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9006220099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9006220100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9006220100800 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9006220101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9006220102000 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9006220102600 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9006220103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9006220103200 |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9006220104000 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9006220105000 |
| 0.4173 | | 10.60 | 133.00 | 71.10 | 87.00 | 9006220106000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9006220107000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9006220107200 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9006220108000 |
| 0.4291 | | 10.90 | 142.00 | 77.65 | 94.00 | 9006220109000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9006220110000 |
| 0.4370 | | 11.10 | 142.00 | 77.35 | 94.00 | 9006220111000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9006220111100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9006220112000 |
| 0.4449 | | 11.30 | 142.00 | 77.05 | 94.00 | 9006220113000 |
| 0.4488 | | 11.40 | 142.00 | 76.90 | 94.00 | 9006220114000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9006220115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9006220115100 |
| 0.4567 | | 11.60 | 142.00 | 76.60 | 94.00 | 9006220116000 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9006220117000 |
| 0.4646 | | 11.80 | 142.00 | 76.30 | 94.00 | 9006220118000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9006220119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9006220120000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9006220125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9006220127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9006220130000 |

Jobber Length



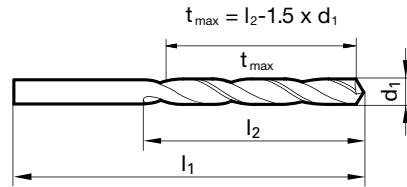
Tool material

HSCO

Surface



- P** Steel ● web thinning $\geq \varnothing 1.000$ • relieved cone • Co-alloyed high speed steel • wide flutes • increased wear resistance • especially for drilling depths $> 3xD$
 - M** Stainless steel ○
 - K** Cast iron ●
 - N** Aluminum ○ alloyed and unalloyed steel • cast materials over 800 N/mm² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Jobber Length

Speeds and feeds information on pg. 537

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 34.00 | 10.50 | 12.00 | 9006580010000 |
| 0.0402 | #60 | 34.00 | 10.47 | 12.00 | 9006580010200 |
| 0.0413 | 1.05 | 34.00 | 10.43 | 12.00 | 9006580010500 |
| 0.0421 | #58 | 36.00 | 12.40 | 14.00 | 9006580010700 |
| 0.0433 | 1.10 | 36.00 | 12.35 | 14.00 | 9006580011000 |
| 0.0445 | 1.13 | 36.00 | 12.31 | 14.00 | 9006580011300 |
| 0.0453 | 1.15 | 36.00 | 12.28 | 14.00 | 9006580011500 |
| 0.0469 | 3/64 | 38.00 | 14.22 | 16.00 | 9006580011900 |
| 0.0472 | 1.20 | 38.00 | 14.20 | 16.00 | 9006580012000 |
| 0.0512 | 1.30 | 38.00 | 14.05 | 16.00 | 9006580013000 |
| 0.0520 | #55 | 38.00 | 14.02 | 16.00 | 9006580013200 |
| 0.0531 | 1.35 | 40.00 | 15.98 | 18.00 | 9006580013500 |
| 0.0551 | #54 | 40.00 | 15.90 | 18.00 | 9006580014000 |
| 0.0571 | 1.45 | 40.00 | 15.83 | 18.00 | 9006580014500 |
| 0.0591 | 1.50 | 40.00 | 15.75 | 18.00 | 9006580015000 |
| 0.0610 | 1.55 | 43.00 | 17.68 | 20.00 | 9006580015500 |
| 0.0626 | 1/16 | 43.00 | 17.62 | 20.00 | 9006580015900 |
| 0.0630 | 1.60 | 43.00 | 17.60 | 20.00 | 9006580016000 |
| 0.0634 | #52 | 43.00 | 17.59 | 20.00 | 9006580016100 |
| 0.0642 | 1.63 | 43.00 | 17.56 | 20.00 | 9006580016300 |
| 0.0650 | 1.65 | 43.00 | 17.53 | 20.00 | 9006580016500 |
| 0.0669 | #51 | 43.00 | 17.45 | 20.00 | 9006580017000 |
| 0.0701 | #50 | 46.00 | 19.33 | 22.00 | 9006580017800 |
| 0.0709 | 1.80 | 46.00 | 19.30 | 22.00 | 9006580018000 |
| 0.0728 | #49 | 46.00 | 19.23 | 22.00 | 9006580018500 |
| 0.0748 | 1.90 | 46.00 | 19.15 | 22.00 | 9006580019000 |
| 0.0760 | #48 | 49.00 | 21.11 | 24.00 | 9006580019300 |
| 0.0768 | 1.95 | 49.00 | 21.08 | 24.00 | 9006580019500 |
| 0.0780 | 5/64 | 49.00 | 21.03 | 24.00 | 9006580019800 |
| 0.0783 | #47 | 49.00 | 21.02 | 24.00 | 9006580019900 |
| 0.0787 | 2.00 | 49.00 | 21.00 | 24.00 | 9006580020000 |
| 0.0807 | 2.05 | 49.00 | 20.93 | 24.00 | 9006580020500 |
| 0.0811 | #46 | 49.00 | 20.91 | 24.00 | 9006580020600 |
| 0.0819 | #45 | 49.00 | 20.88 | 24.00 | 9006580020800 |
| 0.0827 | 2.10 | 49.00 | 20.85 | 24.00 | 9006580021000 |
| 0.0846 | 2.15 | 53.00 | 23.78 | 27.00 | 9006580021500 |
| 0.0858 | #44 | 53.00 | 23.73 | 27.00 | 9006580021800 |
| 0.0866 | 2.20 | 53.00 | 23.70 | 27.00 | 9006580022000 |
| 0.0890 | #43 | 53.00 | 23.61 | 27.00 | 9006580022600 |
| 0.0906 | 2.30 | 53.00 | 23.55 | 27.00 | 9006580023000 |
| 0.0925 | 2.35 | 53.00 | 23.48 | 27.00 | 9006580023500 |
| 0.0933 | #42 | 57.00 | 26.45 | 30.00 | 9006580023700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9006580023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9006580024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9006580024400 |
| 0.0965 | | 2.45 | 57.00 | 26.33 | 30.00 | 9006580024500 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9006580024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9006580025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9006580025300 |
| 0.1004 | | 2.55 | 57.00 | 26.18 | 30.00 | 9006580025500 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9006580025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9006580026000 |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9006580026400 |
| 0.1043 | | 2.65 | 57.00 | 26.03 | 30.00 | 9006580026500 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9006580027000 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9006580027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9006580027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9006580028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9006580028200 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9006580028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9006580029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9006580029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9006580030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9006580030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9006580031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9006580031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9006580032000 |
| 0.1280 | | 3.25 | 65.00 | 31.13 | 36.00 | 9006580032500 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9006580032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9006580033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9006580034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9006580034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9006580035000 |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9006580035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9006580036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9006580036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9006580037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9006580037300 |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9006580037500 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9006580038000 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9006580038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9006580039000 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9006580039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9006580040000 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9006580040400 | |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9006580040900 | |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9006580041000 | |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9006580042000 | |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9006580042200 | |
| 0.1673 | | 4.25 | 75.00 | 36.63 | 43.00 | 9006580042500 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9006580043000 | |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9006580043700 | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9006580044000 | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9006580045000 | |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9006580045700 | |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9006580046000 | |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9006580047000 | |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9006580047600 | |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9006580048000 | |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9006580048500 | |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9006580049000 | |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9006580049200 | |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9006580049800 | |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9006580050000 | |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9006580051000 | |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9006580051600 | |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9006580052000 | |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9006580053000 | |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9006580054000 | |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9006580055000 | |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9006580055600 | |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9006580056000 | |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9006580056100 | |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9006580057000 | |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9006580058000 | |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9006580059000 | |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9006580059500 | |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9006580060000 | |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9006580061000 | |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9006580061500 | |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9006580062000 | |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9006580063000 | |
| 0.2500 | 1/4 | E | 6.35 | 101.00 | 53.48 | 63.00 | 9006580063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9006580064000 | |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9006580065000 | |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9006580065300 | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9006580066000 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9006580067000 | |
| 0.2657 | 17/64 | H | 6.75 | 109.00 | 58.88 | 69.00 | 9006580067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9006580068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9006580069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9006580070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9006580071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9006580071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9006580072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9006580073000 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9006580074000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9006580075000 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9006580076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9006580077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9006580078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9006580079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9006580079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9006580080000 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9006580081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9006580082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9006580083000 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9006580084000 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9006580085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9006580086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9006580087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9006580087300 |
| 0.3445 | | 8.75 | 125.00 | 67.88 | 81.00 | 9006580087500 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9006580088000 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9006580089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9006580090000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9006580091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9006580092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9006580093000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9006580095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9006580095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9006580096000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9006580098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9006580099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9006580099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9006580100000 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9006580101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9006580102000 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9006580103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9006580103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9006580105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9006580107200 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9006580108000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9006580110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9006580111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9006580112000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9006580115000 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9006580117000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9006580119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9006580120000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9006580125000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9006580130000 |
| 0.5315 | | 13.50 | 160.00 | | 108.00 | 9006580135000 |
| 0.5433 | | 13.80 | 160.00 | | 108.00 | 9006580138000 |
| 0.5512 | | 14.00 | 160.00 | | 108.00 | 9006580140000 |
| 0.5709 | | 14.50 | 169.00 | | 114.00 | 9006580145000 |
| 0.5827 | | 14.80 | 169.00 | | 114.00 | 9006580148000 |
| 0.5906 | | 15.00 | 169.00 | | 114.00 | 9006580150000 |
| 0.6102 | | 15.50 | 178.00 | | 120.00 | 9006580155000 |
| 0.6299 | | 16.00 | 178.00 | | 120.00 | 9006580160000 |



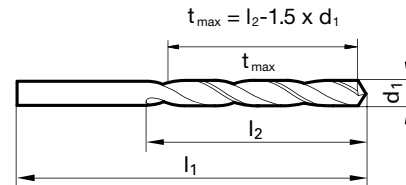
Tool material **HSCO**
Surface **C**

| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | ○ |
| N | Aluminum | |
| S | Titanium alloys | |
| H | | |

web thinning ≥ Ø 3.000 • relieved cone • Co-alloyed high speed steel
• wide flutes • increased wear resistance • especially for drilling depths > 3xD

alloyed and unalloyed steel • cast materials over 800 N/mm² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels

●=Optimal
○=Limited



Jobber Length

Speeds and feeds information on pg. 552

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9012210030000 | |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9012210030500 | |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9012210031000 | |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9012210031700 | |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9012210032000 | |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9012210033000 | |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9012210034000 | |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9012210034500 | |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9012210035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9012210035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9012210036000 | |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9012210036600 | |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9012210037000 | |
| 0.1476 | | 3.75 | 70.00 | 33.38 | 39.00 | 9012210037500 | |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9012210038000 | |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9012210039000 | |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9012210039700 | |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9012210040000 | |
| 0.1587 | | 4.03 | 75.00 | 36.96 | 43.00 | 9012210040300 | |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9012210040500 | |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9012210041000 | |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9012210042000 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9012210043000 | |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9012210043700 | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9012210044000 | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9012210045000 | |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9012210046000 | |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9012210047000 | |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9012210047600 | |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9012210048000 | |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9012210049000 | |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9012210049800 | |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9012210050000 | |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9012210051000 | |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9012210052000 | |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9012210053000 | |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9012210054000 | |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9012210055000 | |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9012210055600 | |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9012210056000 | |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9012210057000 | |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9012210058000 | |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9012210059000 | |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9012210059500 | |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9012210060000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9012210061000 | |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9012210062000 | |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9012210063000 | |
| 0.2500 | 1/4 | E | 6.35 | 101.00 | 53.48 | 63.00 | 9012210063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9012210064000 | |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9012210065000 | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9012210066000 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9012210067000 | |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9012210068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9012210069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9012210070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9012210071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9012210071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9012210072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9012210073000 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9012210074000 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9012210075000 | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9012210077000 | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9012210078000 | |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9012210079000 | |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9012210080000 | |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9012210081000 | |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9012210082000 | |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9012210084000 | |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9012210085000 | |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9012210086000 | |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9012210087000 | |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9012210088000 | |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9012210089000 | |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9012210090000 | |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9012210091300 | |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9012210095000 | |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9012210095200 | |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9012210099000 | |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9012210099200 | |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9012210100000 | |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9012210102000 | |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9012210105000 | |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9012210107000 | |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9012210107200 | |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9012210108000 | |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9012210110000 | |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9012210115000 | |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9012210119100 | |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9012210120000 | |



Tool material

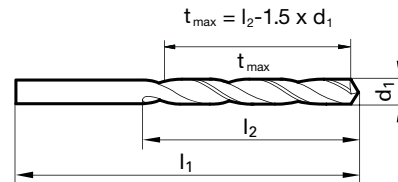
HSCO

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ○ | web thinning ≥ Ø 3.000 • relieved cone • Co-alloyed high speed steel • wide flutes • increased wear resistance • especially for drilling depths > 3xD |
| M | Stainless steel | | |
| K | Cast iron | ● | alloyed and unalloyed steel • cast materials over 800 N/mm ² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 552

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9012230030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9012230030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9012230031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9012230031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9012230032000 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9012230033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9012230034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9012230034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9012230035000 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9012230036000 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9012230037000 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9012230038000 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9012230039000 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9012230039700 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9012230040000 |
| 0.1587 | | 4.03 | 75.00 | 36.96 | 43.00 | 9012230040300 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9012230040400 |
| 0.1594 | | 4.05 | 75.00 | 36.93 | 43.00 | 9012230040500 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9012230041000 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9012230042000 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9012230043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9012230043700 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9012230044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9012230045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9012230046000 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9012230047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9012230047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9012230048000 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9012230049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9012230049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9012230049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9012230050000 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9012230051000 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9012230051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9012230052000 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9012230053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9012230054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9012230055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9012230055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9012230056000 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9012230057000 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9012230058000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9012230059000 | |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9012230059500 | |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9012230060000 | |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9012230061000 | |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9012230062000 | |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9012230063000 | |
| 0.2500 | 1/4 | E | 6.35 | 101.00 | 53.48 | 63.00 | 9012230063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9012230064000 | |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9012230065000 | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9012230066000 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9012230067000 | |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9012230068000 | |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9012230069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9012230070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9012230071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9012230071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9012230072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9012230073000 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9012230074000 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9012230075000 | |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9012230076000 | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9012230078000 | |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9012230079000 | |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9012230079400 | |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9012230080000 | |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9012230081000 | |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9012230082000 | |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9012230083000 | |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9012230084000 | |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9012230085000 | |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9012230086000 | |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9012230087000 | |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9012230087300 | |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9012230088000 | |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9012230089000 | |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9012230090000 | |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9012230091300 | |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9012230092000 | |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9012230095000 | |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9012230095200 | |
| 0.3752 | | 9.53 | 133.00 | 72.71 | 87.00 | 9012230095300 | |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9012230098000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9012230099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9012230099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9012230100000 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9012230101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9012230102000 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9012230103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9012230103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9012230105000 |
| 0.4213 | | 10.70 | 142.00 | 77.95 | 94.00 | 9012230107000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9012230107200 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9012230108000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9012230110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9012230111100 |
| 0.4409 | | 11.20 | 142.00 | 77.20 | 94.00 | 9012230112000 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9012230115000 |
| 0.4606 | | 11.70 | 142.00 | 76.45 | 94.00 | 9012230117000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9012230119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9012230120000 |



Tool material

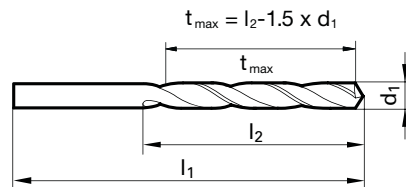
HSCO

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | • | web thinning $\geq \varnothing 1.000$ • facet split point • Co-alloyed high speed steel • low feed force required • low torque required • for universal application |
| M | Stainless steel | • | |
| K | Cast iron | • | alloyed/unalloyed steels up to 800 N/mm ² • cold/hot work steels • antifriction bearing steels • non-ferrous metals • cast materials • stainless steels • plastics |
| N | Aluminum | • | |
| S | Titanium alloys | • | |
| H | Hardened steel | | |

•=Optimal
○=Limited



Speeds and feeds information on pg. 575

Shank diameter = cut diameter

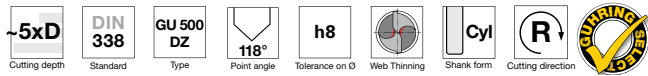
| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | 1.00 | 34.00 | 10.50 | 12.00 | 9055230010000 | |
| 0.0402 | 1.02 | 34.00 | 10.47 | 12.00 | 9055230010200 | |
| 0.0409 | 1.04 | 34.00 | 10.44 | 12.00 | 9055230010400 | |
| 0.0421 | 1.07 | 36.00 | 12.40 | 14.00 | 9055230010700 | |
| 0.0429 | 1.09 | 36.00 | 12.37 | 14.00 | 9055230010900 | |
| 0.0433 | 1.10 | 36.00 | 12.35 | 14.00 | 9055230011000 | |
| 0.0465 | 1.18 | 36.00 | 12.23 | 14.00 | 9055230011800 | |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9055230011900 |
| 0.0472 | 1.20 | 38.00 | 14.20 | 16.00 | 9055230012000 | |
| 0.0512 | 1.30 | 38.00 | 14.05 | 16.00 | 9055230013000 | |
| 0.0520 | 1.32 | 38.00 | 14.02 | 16.00 | 9055230013200 | |
| 0.0551 | 1.40 | 40.00 | 15.90 | 18.00 | 9055230014000 | |
| 0.0591 | 1.50 | 40.00 | 15.75 | 18.00 | 9055230015000 | |
| 0.0594 | 1.51 | 43.00 | 17.74 | 20.00 | 9055230015100 | |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9055230015900 |
| 0.0630 | 1.60 | 43.00 | 17.60 | 20.00 | 9055230016000 | |
| 0.0634 | 1.61 | 43.00 | 17.59 | 20.00 | 9055230016100 | |
| 0.0669 | 1.70 | 43.00 | 17.45 | 20.00 | 9055230017000 | |
| 0.0701 | 1.78 | 46.00 | 19.33 | 22.00 | 9055230017800 | |
| 0.0709 | 1.80 | 46.00 | 19.30 | 22.00 | 9055230018000 | |
| 0.0728 | 1.85 | 46.00 | 19.23 | 22.00 | 9055230018500 | |
| 0.0748 | 1.90 | 46.00 | 19.15 | 22.00 | 9055230019000 | |
| 0.0760 | 1.93 | 49.00 | 21.11 | 24.00 | 9055230019300 | |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9055230019800 |
| 0.0783 | 1.99 | 49.00 | 21.02 | 24.00 | 9055230019900 | |
| 0.0787 | 2.00 | 49.00 | 21.00 | 24.00 | 9055230020000 | |
| 0.0811 | 2.06 | 49.00 | 20.91 | 24.00 | 9055230020600 | |
| 0.0819 | 2.08 | 49.00 | 20.88 | 24.00 | 9055230020800 | |
| 0.0827 | 2.10 | 49.00 | 20.85 | 24.00 | 9055230021000 | |
| 0.0858 | 2.18 | 53.00 | 23.73 | 27.00 | 9055230021800 | |
| 0.0866 | 2.20 | 53.00 | 23.70 | 27.00 | 9055230022000 | |
| 0.0890 | 2.26 | 53.00 | 23.61 | 27.00 | 9055230022600 | |
| 0.0906 | 2.30 | 53.00 | 23.55 | 27.00 | 9055230023000 | |
| 0.0933 | 2.37 | 57.00 | 26.45 | 30.00 | 9055230023700 | |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9055230023800 |
| 0.0945 | 2.40 | 57.00 | 26.40 | 30.00 | 9055230024000 | |
| 0.0961 | 2.44 | 57.00 | 26.34 | 30.00 | 9055230024400 | |
| 0.0980 | 2.49 | 57.00 | 26.27 | 30.00 | 9055230024900 | |
| 0.0984 | 2.50 | 57.00 | 26.25 | 30.00 | 9055230025000 | |
| 0.0996 | 2.53 | 57.00 | 26.21 | 30.00 | 9055230025300 | |
| 0.1016 | 2.58 | 57.00 | 26.13 | 30.00 | 9055230025800 | |
| 0.1024 | 2.60 | 57.00 | 26.10 | 30.00 | 9055230026000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.1039 | | 2.64 | 57.00 | 26.04 | 30.00 | 9055230026400 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9055230027000 |
| 0.1067 | | 2.71 | 61.00 | 28.94 | 33.00 | 9055230027100 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9055230027800 |
| 0.1098 | | 2.79 | 61.00 | 28.82 | 33.00 | 9055230027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9055230028000 |
| 0.1110 | | 2.82 | 61.00 | 28.77 | 33.00 | 9055230028200 |
| 0.1130 | | 2.87 | 61.00 | 28.70 | 33.00 | 9055230028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9055230029000 |
| 0.1161 | | 2.95 | 61.00 | 28.58 | 33.00 | 9055230029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9055230030000 |
| 0.1201 | | 3.05 | 65.00 | 31.43 | 36.00 | 9055230030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9055230031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9055230031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9055230032000 |
| 0.1283 | | 3.26 | 65.00 | 31.11 | 36.00 | 9055230032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9055230033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9055230034000 |
| 0.1358 | | 3.45 | 70.00 | 33.83 | 39.00 | 9055230034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9055230035000 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9055230035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9055230036000 |
| 0.1441 | | 3.66 | 70.00 | 33.51 | 39.00 | 9055230036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9055230037000 |
| 0.1469 | | 3.73 | 70.00 | 33.41 | 39.00 | 9055230037300 |
| 0.1496 | | 3.80 | 75.00 | 37.30 | 43.00 | 9055230038000 |
| 0.1520 | | 3.86 | 75.00 | 37.21 | 43.00 | 9055230038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9055230039000 |
| 0.1539 | | 3.91 | 75.00 | 37.14 | 43.00 | 9055230039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9055230039700 |
| 0.1571 | | 3.99 | 75.00 | 37.02 | 43.00 | 9055230039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9055230040000 |
| 0.1591 | | 4.04 | 75.00 | 36.94 | 43.00 | 9055230040400 |
| 0.1610 | | 4.09 | 75.00 | 36.87 | 43.00 | 9055230040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9055230041000 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9055230042000 |
| 0.1661 | | 4.22 | 75.00 | 36.67 | 43.00 | 9055230042200 |
| 0.1693 | | 4.30 | 80.00 | 40.55 | 47.00 | 9055230043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9055230043700 |
| 0.1728 | | 4.39 | 80.00 | 40.42 | 47.00 | 9055230043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9055230044000 |
| 0.1772 | | 4.50 | 80.00 | 40.25 | 47.00 | 9055230045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | | 4.57 | 80.00 | 40.15 | 47.00 | 9055230045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9055230046000 |
| 0.1819 | | 4.62 | 80.00 | 40.07 | 47.00 | 9055230046200 |
| 0.1850 | 3/16 | 4.70 | 80.00 | 39.95 | 47.00 | 9055230047000 |
| 0.1874 | | 4.76 | 86.00 | 44.86 | 52.00 | 9055230047600 |
| 0.1890 | | 4.80 | 86.00 | 44.80 | 52.00 | 9055230048000 |
| 0.1909 | | 4.85 | 86.00 | 44.73 | 52.00 | 9055230048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9055230049000 |
| 0.1937 | | 4.92 | 86.00 | 44.62 | 52.00 | 9055230049200 |
| 0.1961 | | 4.98 | 86.00 | 44.53 | 52.00 | 9055230049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9055230050000 |
| 0.1992 | | 5.06 | 86.00 | 44.41 | 52.00 | 9055230050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9055230051000 |
| 0.2012 | | 5.11 | 86.00 | 44.34 | 52.00 | 9055230051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9055230051600 |
| 0.2039 | | 5.18 | 86.00 | 44.23 | 52.00 | 9055230051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9055230052000 |
| 0.2055 | | 5.22 | 86.00 | 44.17 | 52.00 | 9055230052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9055230053000 |
| 0.2091 | | 5.31 | 93.00 | 49.04 | 57.00 | 9055230053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9055230054000 |
| 0.2130 | | 5.41 | 93.00 | 48.89 | 57.00 | 9055230054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9055230055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9055230055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9055230056000 |
| 0.2209 | | 5.61 | 93.00 | 48.59 | 57.00 | 9055230056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9055230057000 |
| 0.2280 | | 5.79 | 93.00 | 48.32 | 57.00 | 9055230057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9055230058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9055230059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9055230059400 |
| 0.2343 | | 5.95 | 93.00 | 48.08 | 57.00 | 9055230059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9055230060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9055230060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9055230061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9055230061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9055230062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9055230062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9055230063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9055230063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9055230064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9055230065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9055230065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9055230066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9055230066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9055230067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9055230067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9055230068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9055230069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9055230070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9055230070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9055230071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9055230071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9055230072000 |
| 0.2874 | L | 7.30 | 109.00 | 58.05 | 69.00 | 9055230073000 |
| 0.2902 | | 7.37 | 109.00 | 57.95 | 69.00 | 9055230073700 |
| 0.2913 | M | 7.40 | 109.00 | 57.90 | 69.00 | 9055230074000 |
| 0.2949 | | 7.49 | 109.00 | 57.77 | 69.00 | 9055230074900 |
| 0.2953 | 19/64 | 7.50 | 109.00 | 57.75 | 69.00 | 9055230075000 |
| 0.2969 | | 7.54 | 117.00 | 63.69 | 75.00 | 9055230075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9055230076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9055230076700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9055230077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9055230078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9055230079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9055230079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9055230080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9055230080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9055230081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9055230082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9055230083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9055230083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9055230084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9055230084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9055230085000 |
| 0.3386 | R | 8.60 | 125.00 | 68.10 | 81.00 | 9055230086000 |
| 0.3390 | | 8.61 | 125.00 | 68.09 | 81.00 | 9055230086100 |
| 0.3425 | 11/32 | 8.70 | 125.00 | 67.95 | 81.00 | 9055230087000 |
| 0.3437 | | 8.73 | 125.00 | 67.91 | 81.00 | 9055230087300 |
| 0.3465 | S | 8.80 | 125.00 | 67.80 | 81.00 | 9055230088000 |
| 0.3480 | | 8.84 | 125.00 | 67.74 | 81.00 | 9055230088400 |
| 0.3504 | T | 8.90 | 125.00 | 67.65 | 81.00 | 9055230089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9055230090000 |
| 0.3579 | 23/64 | 9.09 | 125.00 | 67.37 | 81.00 | 9055230090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9055230091000 |
| 0.3594 | 9.13 | 125.00 | 67.31 | 81.00 | 9055230091300 | |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9055230092000 |
| 0.3661 | U | 9.30 | 125.00 | 67.05 | 81.00 | 9055230093000 |
| 0.3677 | | 9.34 | 125.00 | 66.99 | 81.00 | 9055230093400 |
| 0.3701 | 3/8 | 9.40 | 125.00 | 66.90 | 81.00 | 9055230094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9055230095000 |
| 0.3748 | V | 9.52 | 133.00 | 72.72 | 87.00 | 9055230095200 |
| 0.3772 | | 9.58 | 133.00 | 72.63 | 87.00 | 9055230095800 |
| 0.3780 | W | 9.60 | 133.00 | 72.60 | 87.00 | 9055230096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9055230097000 |
| 0.3858 | 25/64 | 9.80 | 133.00 | 72.30 | 87.00 | 9055230098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9055230099000 |
| 0.3906 | X | 9.92 | 133.00 | 72.12 | 87.00 | 9055230099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9055230100000 |
| 0.3969 | Y | 10.08 | 133.00 | 71.88 | 87.00 | 9055230100800 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9055230101000 |
| 0.4016 | 13/32 | 10.20 | 133.00 | 71.70 | 87.00 | 9055230102000 |
| 0.4039 | | 10.26 | 133.00 | 71.61 | 87.00 | 9055230102600 |
| 0.4055 | Z | 10.30 | 133.00 | 71.55 | 87.00 | 9055230103000 |
| 0.4063 | | 10.32 | 133.00 | 71.52 | 87.00 | 9055230103200 |
| 0.4094 | 10.40 | 133.00 | 71.40 | 87.00 | 9055230104000 | |
| 0.4130 | | 10.49 | 133.00 | 71.27 | 87.00 | 9055230104900 |
| 0.4134 | 27/64 | 10.50 | 133.00 | 71.25 | 87.00 | 9055230105000 |
| 0.4220 | | 10.72 | 142.00 | 77.92 | 94.00 | 9055230107200 |
| 0.4331 | 7/16 | 11.00 | 142.00 | 77.50 | 94.00 | 9055230110000 |
| 0.4374 | | 11.11 | 142.00 | 77.34 | 94.00 | 9055230111100 |
| 0.4528 | 29/64 | 11.50 | 142.00 | 76.75 | 94.00 | 9055230115000 |
| 0.4531 | | 11.51 | 142.00 | 76.74 | 94.00 | 9055230115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9055230119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9055230120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9055230123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9055230125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9055230127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9055230130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9055230131000 |
| 0.5311 | | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 |
| 0.5315 | 9/16 | 13.50 | 160.00 | 87.75 | 108.00 | 9055230135000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9055230140000 |
| 0.5626 | 14.29 | 169.00 | 92.57 | 114.00 | 9055230142900 | |

Jobber Length



Tool material

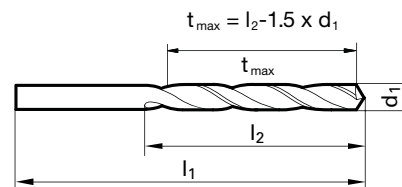
HSCO

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 1.000$ • facet split point • Co-alloyed high speed steel • low feed force required • low torque required • for universal application |
| M | Stainless steel | ● | |
| K | Cast iron | ● | |
| N | Aluminum | ● | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | alloyed/unalloyed steels up to 800 N/mm ² • cold/hot work steels • antifriction bearing steels • non-ferrous metals • cast materials • stainless steels • plastics |

●=Optimal
○=Limited



Speeds and feeds information on pg. 573

Shank diameter = cut diameter

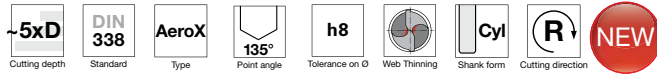
| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | 1.00 | 34.00 | 10.50 | 12.00 | 9055190010000 | |
| 0.0402 | 1.02 | 34.00 | 10.47 | 12.00 | 9055190010200 | |
| 0.0409 | 1.04 | 34.00 | 10.44 | 12.00 | 9055190010400 | |
| 0.0421 | 1.07 | 36.00 | 12.40 | 14.00 | 9055190010700 | |
| 0.0429 | 1.09 | 36.00 | 12.37 | 14.00 | 9055190010900 | |
| 0.0433 | 1.10 | 36.00 | 12.35 | 14.00 | 9055190011000 | |
| 0.0465 | 1.18 | 36.00 | 12.23 | 14.00 | 9055190011800 | |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9055190011900 |
| 0.0472 | 1.20 | 38.00 | 14.20 | 16.00 | 9055190012000 | |
| 0.0512 | 1.30 | 38.00 | 14.05 | 16.00 | 9055190013000 | |
| 0.0520 | 1.32 | 38.00 | 14.02 | 16.00 | 9055190013200 | |
| 0.0551 | 1.40 | 40.00 | 15.90 | 18.00 | 9055190014000 | |
| 0.0591 | 1.50 | 40.00 | 15.75 | 18.00 | 9055190015000 | |
| 0.0594 | 1.51 | 43.00 | 17.74 | 20.00 | 9055190015100 | |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9055190015900 |
| 0.0630 | 1.60 | 43.00 | 17.60 | 20.00 | 9055190016000 | |
| 0.0634 | 1.61 | 43.00 | 17.59 | 20.00 | 9055190016100 | |
| 0.0669 | 1.70 | 43.00 | 17.45 | 20.00 | 9055190017000 | |
| 0.0701 | 1.78 | 46.00 | 19.33 | 22.00 | 9055190017800 | |
| 0.0709 | 1.80 | 46.00 | 19.30 | 22.00 | 9055190018000 | |
| 0.0728 | 1.85 | 46.00 | 19.23 | 22.00 | 9055190018500 | |
| 0.0748 | 1.90 | 46.00 | 19.15 | 22.00 | 9055190019000 | |
| 0.0760 | 1.93 | 49.00 | 21.11 | 24.00 | 9055190019300 | |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9055190019800 |
| 0.0783 | 1.99 | 49.00 | 21.02 | 24.00 | 9055190019900 | |
| 0.0787 | 2.00 | 49.00 | 21.00 | 24.00 | 9055190020000 | |
| 0.0811 | 2.06 | 49.00 | 20.91 | 24.00 | 9055190020600 | |
| 0.0819 | 2.08 | 49.00 | 20.88 | 24.00 | 9055190020800 | |
| 0.0827 | 2.10 | 49.00 | 20.85 | 24.00 | 9055190021000 | |
| 0.0858 | 2.18 | 53.00 | 23.73 | 27.00 | 9055190021800 | |
| 0.0866 | 2.20 | 53.00 | 23.70 | 27.00 | 9055190022000 | |
| 0.0890 | 2.26 | 53.00 | 23.61 | 27.00 | 9055190022600 | |
| 0.0906 | 2.30 | 53.00 | 23.55 | 27.00 | 9055190023000 | |
| 0.0933 | 2.37 | 57.00 | 26.45 | 30.00 | 9055190023700 | |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9055190023800 |
| 0.0945 | 2.40 | 57.00 | 26.40 | 30.00 | 9055190024000 | |
| 0.0961 | 2.44 | 57.00 | 26.34 | 30.00 | 9055190024400 | |
| 0.0980 | 2.49 | 57.00 | 26.27 | 30.00 | 9055190024900 | |
| 0.0984 | 2.50 | 57.00 | 26.25 | 30.00 | 9055190025000 | |
| 0.0996 | 2.53 | 57.00 | 26.21 | 30.00 | 9055190025300 | |
| 0.1016 | 2.58 | 57.00 | 26.13 | 30.00 | 9055190025800 | |
| 0.1024 | 2.60 | 57.00 | 26.10 | 30.00 | 9055190026000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.1039 | | 2.64 | 57.00 | 26.04 | 30.00 | 9055190026400 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9055190027000 |
| 0.1067 | | 2.71 | 61.00 | 28.94 | 33.00 | 9055190027100 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9055190027800 |
| 0.1098 | | 2.79 | 61.00 | 28.82 | 33.00 | 9055190027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9055190028000 |
| 0.1110 | | 2.82 | 61.00 | 28.77 | 33.00 | 9055190028200 |
| 0.1130 | | 2.87 | 61.00 | 28.70 | 33.00 | 9055190028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9055190029000 |
| 0.1161 | | 2.95 | 61.00 | 28.58 | 33.00 | 9055190029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9055190030000 |
| 0.1201 | | 3.05 | 65.00 | 31.43 | 36.00 | 9055190030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9055190031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9055190031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9055190032000 |
| 0.1283 | | 3.26 | 65.00 | 31.11 | 36.00 | 9055190032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9055190033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9055190034000 |
| 0.1358 | | 3.45 | 70.00 | 33.83 | 39.00 | 9055190034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9055190035000 |
| 0.1406 | 9/64 #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9055190035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9055190036000 |
| 0.1441 | | 3.66 | 70.00 | 33.51 | 39.00 | 9055190036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9055190037000 |
| 0.1469 | | 3.73 | 70.00 | 33.41 | 39.00 | 9055190037300 |
| 0.1496 | | 3.80 | 75.00 | 37.30 | 43.00 | 9055190038000 |
| 0.1520 | | 3.86 | 75.00 | 37.21 | 43.00 | 9055190038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9055190039000 |
| 0.1539 | | 3.91 | 75.00 | 37.14 | 43.00 | 9055190039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9055190039700 |
| 0.1571 | | 3.99 | 75.00 | 37.02 | 43.00 | 9055190039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9055190040000 |
| 0.1591 | | 4.04 | 75.00 | 36.94 | 43.00 | 9055190040400 |
| 0.1610 | | 4.09 | 75.00 | 36.87 | 43.00 | 9055190040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9055190041000 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9055190042000 |
| 0.1661 | | 4.22 | 75.00 | 36.67 | 43.00 | 9055190042200 |
| 0.1693 | | 4.30 | 80.00 | 40.55 | 47.00 | 9055190043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9055190043700 |
| 0.1728 | | 4.39 | 80.00 | 40.42 | 47.00 | 9055190043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9055190044000 |
| 0.1772 | | 4.50 | 80.00 | 40.25 | 47.00 | 9055190045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | | 4.57 | 80.00 | 40.15 | 47.00 | 9055190045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9055190046000 |
| 0.1819 | | 4.62 | 80.00 | 40.07 | 47.00 | 9055190046200 |
| 0.1850 | | 4.70 | 80.00 | 39.95 | 47.00 | 9055190047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9055190047600 |
| 0.1890 | | 4.80 | 86.00 | 44.80 | 52.00 | 9055190048000 |
| 0.1909 | | 4.85 | 86.00 | 44.73 | 52.00 | 9055190048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9055190049000 |
| 0.1937 | | 4.92 | 86.00 | 44.62 | 52.00 | 9055190049200 |
| 0.1961 | | 4.98 | 86.00 | 44.53 | 52.00 | 9055190049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9055190050000 |
| 0.1992 | | 5.06 | 86.00 | 44.41 | 52.00 | 9055190050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9055190051000 |
| 0.2012 | | 5.11 | 86.00 | 44.34 | 52.00 | 9055190051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9055190051600 |
| 0.2039 | | 5.18 | 86.00 | 44.23 | 52.00 | 9055190051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9055190052000 |
| 0.2055 | | 5.22 | 86.00 | 44.17 | 52.00 | 9055190052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9055190053000 |
| 0.2091 | | 5.31 | 93.00 | 49.04 | 57.00 | 9055190053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9055190054000 |
| 0.2130 | | 5.41 | 93.00 | 48.89 | 57.00 | 9055190054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9055190055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9055190055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9055190056000 |
| 0.2209 | | 5.61 | 93.00 | 48.59 | 57.00 | 9055190056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9055190057000 |
| 0.2280 | | 5.79 | 93.00 | 48.32 | 57.00 | 9055190057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9055190058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9055190059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9055190059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9055190059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9055190060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9055190060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9055190061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9055190061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9055190062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9055190062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9055190063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9055190063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9055190064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9055190065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9055190065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9055190066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9055190066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9055190067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9055190067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9055190068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9055190069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9055190070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9055190070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9055190071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9055190071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9055190072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9055190073000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9055190073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9055190074000 |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9055190074900 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9055190075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9055190075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9055190076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9055190076700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9055190077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9055190078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9055190079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9055190079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9055190080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9055190080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9055190081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9055190082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9055190083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9055190083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9055190084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9055190084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9055190085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9055190086000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9055190086100 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9055190087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9055190087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9055190088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9055190088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9055190089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9055190090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9055190090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9055190091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9055190091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9055190092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9055190093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9055190093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9055190094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9055190095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9055190095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9055190095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9055190096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9055190097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9055190098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9055190099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9055190099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9055190100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9055190100800 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9055190101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9055190102000 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9055190102600 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9055190103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9055190103200 |
| 0.4094 | | 10.40 | 133.00 | 71.40 | 87.00 | 9055190104000 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9055190104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9055190105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9055190107200 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9055190110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9055190111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9055190115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9055190115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9055190119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9055190120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9055190123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9055190125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9055190127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9055190130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9055190131000 |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9055190134900 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9055190135000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9055190140000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9055190142900 |

Jobber Length



Tool material

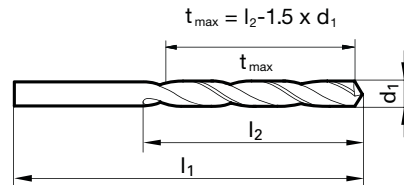
M42

Surface

 **Bronze Oxide**

- P** Steel ● web thinning $\geq \text{Ø } 1.000$ • optimized NAS 907 split point • 8% cobalt-alloyed HSCO high speed steel for maximum tool life, high thermal resistance and hardness
- M** Stainless steel ●
- K** Cast iron ●
- N** Aluminum ● unalloyed and high-alloyed steel materials • cast materials • non-ferrous metals • Titanium and Titanium alloys
- S** Titanium alloys ●
- H** Hardened steel ○

●=Optimal
○=Limited



Speeds and feeds information on pg. 546

Shank diameter = cut diameter

AeroX drills are stocked in Germany

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | | | | |
| 0.0394 | | 34.00 | 10.50 | 12.00 | 9010180010000 |
| 0.0433 | | 36.00 | 12.35 | 14.00 | 9010180011000 |
| 0.0472 | | 38.00 | 14.20 | 16.00 | 9010180012000 |
| 0.0512 | | 38.00 | 14.05 | 16.00 | 9010180013000 |
| 0.0551 | | 40.00 | 15.90 | 18.00 | 9010180014000 |
| 0.0591 | | 40.00 | 15.75 | 18.00 | 9010180015000 |
| 0.0626 | 1/16 | 43.00 | 17.62 | 20.00 | 9010180015900 |
| 0.0630 | | 43.00 | 17.60 | 20.00 | 9010180016000 |
| 0.0669 | | 43.00 | 17.45 | 20.00 | 9010180017000 |
| 0.0709 | | 46.00 | 19.30 | 22.00 | 9010180018000 |
| 0.0748 | | 46.00 | 19.15 | 22.00 | 9010180019000 |
| 0.0780 | 5/64 | 49.00 | 21.03 | 24.00 | 9010180019800 |
| 0.0787 | | 49.00 | 21.00 | 24.00 | 9010180020000 |
| 0.0827 | | 49.00 | 20.85 | 24.00 | 9010180021000 |
| 0.0866 | | 53.00 | 23.70 | 27.00 | 9010180022000 |
| 0.0906 | | 53.00 | 23.55 | 27.00 | 9010180023000 |
| 0.0937 | 3/32 | 57.00 | 26.43 | 30.00 | 9010180023800 |
| 0.0945 | | 57.00 | 26.40 | 30.00 | 9010180024000 |
| 0.0984 | | 57.00 | 26.25 | 30.00 | 9010180025000 |
| 0.1024 | | 57.00 | 26.10 | 30.00 | 9010180026000 |
| 0.1063 | | 61.00 | 28.95 | 33.00 | 9010180027000 |
| 0.1094 | 7/64 | 61.00 | 28.83 | 33.00 | 9010180027800 |
| 0.1102 | | 61.00 | 28.80 | 33.00 | 9010180028000 |
| 0.1142 | | 61.00 | 28.65 | 33.00 | 9010180029000 |
| 0.1181 | | 61.00 | 28.50 | 33.00 | 9010180030000 |
| 0.1220 | | 65.00 | 31.35 | 36.00 | 9010180031000 |
| 0.1248 | 1/8 | 65.00 | 31.25 | 36.00 | 9010180031700 |
| 0.1260 | | 65.00 | 31.20 | 36.00 | 9010180032000 |
| 0.1280 | | 65.00 | 31.13 | 36.00 | 9010180032500 |
| 0.1299 | | 65.00 | 31.05 | 36.00 | 9010180033000 |
| 0.1339 | | 70.00 | 33.90 | 39.00 | 9010180034000 |
| 0.1378 | | 70.00 | 33.75 | 39.00 | 9010180035000 |
| 0.1406 | 9/64 | 70.00 | 33.65 | 39.00 | 9010180035700 |
| 0.1417 | | 70.00 | 33.60 | 39.00 | 9010180036000 |
| 0.1457 | | 70.00 | 33.45 | 39.00 | 9010180037000 |
| 0.1496 | | 75.00 | 37.30 | 43.00 | 9010180038000 |
| 0.1535 | | 75.00 | 37.15 | 43.00 | 9010180039000 |
| 0.1563 | 5/32 | 75.00 | 37.05 | 43.00 | 9010180039700 |
| 0.1575 | | 75.00 | 37.00 | 43.00 | 9010180040000 |
| 0.1614 | | 75.00 | 36.85 | 43.00 | 9010180041000 |
| 0.1654 | | 75.00 | 36.70 | 43.00 | 9010180042000 |
| 0.1693 | | 80.00 | 40.55 | 47.00 | 9010180043000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9010180044000 |
| 0.1772 | | 4.50 | 80.00 | 40.25 | 47.00 | 9010180045000 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9010180046000 |
| 0.1850 | | 4.70 | 80.00 | 39.95 | 47.00 | 9010180047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9010180047600 |
| 0.1890 | | 4.80 | 86.00 | 44.80 | 52.00 | 9010180048000 |
| 0.1909 | | 4.85 | 86.00 | 44.73 | 52.00 | 9010180048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9010180049000 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9010180050000 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9010180051000 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9010180051600 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9010180052000 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9010180053000 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9010180054000 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9010180055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9010180055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9010180056000 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9010180057000 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9010180058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9010180059000 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9010180059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9010180060000 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9010180061000 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9010180062000 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9010180063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9010180063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9010180064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9010180065000 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9010180066000 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9010180067000 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9010180068000 |
| 0.2717 | | 6.90 | 109.00 | 58.65 | 69.00 | 9010180069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9010180070000 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9010180071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9010180071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9010180072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9010180073000 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9010180074000 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9010180075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9010180075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9010180076000 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9010180077000 |

Jobber Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9010180078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9010180079000 |
| 0.3125 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9010180079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9010180080000 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9010180081000 |
| 0.3228 | | 8.20 | 117.00 | 62.70 | 75.00 | 9010180082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9010180083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9010180083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9010180084000 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9010180085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9010180086000 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9010180087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9010180087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9010180088000 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9010180089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9010180090000 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9010180091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9010180091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9010180092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9010180093000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9010180095000 |
| 0.3750 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9010180095200 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9010180096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9010180097000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3858 | | 9.80 | 133.00 | 72.30 | 87.00 | 9010180098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9010180099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9010180099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9010180100000 |
| 0.3976 | | 10.10 | 133.00 | 71.85 | 87.00 | 9010180101000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9010180102000 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9010180103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9010180103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9010180105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9010180107200 |
| 0.4252 | | 10.80 | 142.00 | 77.80 | 94.00 | 9010180108000 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9010180110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9010180111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9010180115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9010180115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9010180119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9010180120000 |
| 0.4803 | | 12.20 | 151.00 | 82.70 | 101.00 | 9010180122000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9010180123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9010180125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9010180127000 |
| 0.5039 | | 12.80 | 151.00 | 81.80 | 101.00 | 9010180128000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9010180130000 |

Jobber Length



Tool material

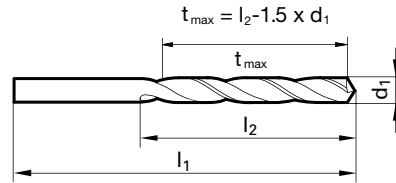
HSS-E-PM

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 1.000$ • relieved cone • PM-Co-alloyed high speed steel • especially high rigidity • especially high wear resistance |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | high-alloyed steels • heat treatable and case hardened steels • cast iron, brass, bronze |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 575

Shank diameter = cut diameter

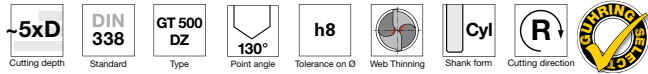
| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | 1.00 | 34.00 | 10.50 | 12.00 | 9055220010000 | |
| 0.0433 | 1.10 | 36.00 | 12.35 | 14.00 | 9055220011000 | |
| 0.0472 | 1.20 | 38.00 | 14.20 | 16.00 | 9055220012000 | |
| 0.0512 | 1.30 | 38.00 | 14.05 | 16.00 | 9055220013000 | |
| 0.0551 | #54 | 40.00 | 15.90 | 18.00 | 9055220014000 | |
| 0.0591 | 1.50 | 40.00 | 15.75 | 18.00 | 9055220015000 | |
| 0.0626 | 1/16 | 43.00 | 17.62 | 20.00 | 9055220015900 | |
| 0.0630 | 1.60 | 43.00 | 17.60 | 20.00 | 9055220016000 | |
| 0.0669 | #51 | 43.00 | 17.45 | 20.00 | 9055220017000 | |
| 0.0709 | 1.80 | 46.00 | 19.30 | 22.00 | 9055220018000 | |
| 0.0748 | 1.90 | 46.00 | 19.15 | 22.00 | 9055220019000 | |
| 0.0780 | 5/64 | 49.00 | 21.03 | 24.00 | 9055220019800 | |
| 0.0787 | 2.00 | 49.00 | 21.00 | 24.00 | 9055220020000 | |
| 0.0827 | 2.10 | 49.00 | 20.85 | 24.00 | 9055220021000 | |
| 0.0866 | 2.20 | 53.00 | 23.70 | 27.00 | 9055220022000 | |
| 0.0906 | 2.30 | 53.00 | 23.55 | 27.00 | 9055220023000 | |
| 0.0937 | 3/32 | 57.00 | 26.43 | 30.00 | 9055220023800 | |
| 0.0945 | 2.40 | 57.00 | 26.40 | 30.00 | 9055220024000 | |
| 0.0984 | 2.50 | 57.00 | 26.25 | 30.00 | 9055220025000 | |
| 0.1024 | 2.60 | 57.00 | 26.10 | 30.00 | 9055220026000 | |
| 0.1063 | 2.70 | 61.00 | 28.95 | 33.00 | 9055220027000 | |
| 0.1094 | 7/64 | 61.00 | 28.83 | 33.00 | 9055220027800 | |
| 0.1102 | 2.80 | 61.00 | 28.80 | 33.00 | 9055220028000 | |
| 0.1142 | 2.90 | 61.00 | 28.65 | 33.00 | 9055220029000 | |
| 0.1181 | 3.00 | 61.00 | 28.50 | 33.00 | 9055220030000 | |
| 0.1220 | 3.10 | 65.00 | 31.35 | 36.00 | 9055220031000 | |
| 0.1248 | 1/8 | 65.00 | 31.25 | 36.00 | 9055220031700 | |
| 0.1260 | 3.20 | 65.00 | 31.20 | 36.00 | 9055220032000 | |
| 0.1299 | 3.30 | 65.00 | 31.05 | 36.00 | 9055220033000 | |
| 0.1339 | 3.40 | 70.00 | 33.90 | 39.00 | 9055220034000 | |
| 0.1378 | 3.50 | 70.00 | 33.75 | 39.00 | 9055220035000 | |
| 0.1406 | 9/64 | #28 | 35.70 | 39.00 | 9055220035700 | |
| 0.1417 | 3.60 | 70.00 | 33.60 | 39.00 | 9055220036000 | |
| 0.1457 | 3.70 | 70.00 | 33.45 | 39.00 | 9055220037000 | |
| 0.1496 | #25 | 75.00 | 37.30 | 43.00 | 9055220038000 | |
| 0.1535 | 3.90 | 75.00 | 37.15 | 43.00 | 9055220039000 | |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9055220039700 |
| 0.1575 | 4.00 | 75.00 | 37.00 | 43.00 | 9055220040000 | |
| 0.1614 | 4.10 | 75.00 | 36.85 | 43.00 | 9055220041000 | |
| 0.1654 | 4.20 | 75.00 | 36.70 | 43.00 | 9055220042000 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9055220043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9055220043700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9055220044000 | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9055220045000 | |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9055220046000 | |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9055220047000 | |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9055220047600 | |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9055220048000 | |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9055220049000 | |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9055220050000 | |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9055220051000 | |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9055220051600 | |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9055220052000 | |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9055220053000 | |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9055220054000 | |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9055220055000 | |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9055220055600 | |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9055220056000 | |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9055220057000 | |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9055220058000 | |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9055220059000 | |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9055220059500 | |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9055220060000 | |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9055220061000 | |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9055220062000 | |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9055220063000 | |
| 0.2500 | 1/4 | E | 6.35 | 101.00 | 53.48 | 63.00 | 9055220063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9055220064000 | |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9055220065000 | |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9055220066000 | |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9055220067000 | |
| 0.2657 | 17/64 | H | 6.75 | 109.00 | 58.88 | 69.00 | 9055220067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9055220068000 | |
| 0.2717 | | 6.90 | 109.00 | 58.65 | 69.00 | 9055220069000 | |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9055220070000 | |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9055220071000 | |
| 0.2811 | 9/32 | K | 7.14 | 109.00 | 58.29 | 69.00 | 9055220071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9055220072000 | |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9055220073000 | |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9055220074000 | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9055220075000 | |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9055220075400 | |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9055220076000 | |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9055220077000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9055220078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9055220079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9055220079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9055220080000 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9055220081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9055220082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9055220083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9055220083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9055220084000 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9055220085000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9055220087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9055220088000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9055220090000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9055220091300 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9055220093000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9055220095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9055220095200 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9055220098000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9055220099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9055220100000 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9055220102000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9055220103200 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9055220105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9055220107200 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9055220110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9055220111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9055220115000 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9055220119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9055220120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9055220123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9055220125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9055220127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9055220130000 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9055220135000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9055220140000 |

Jobber Length

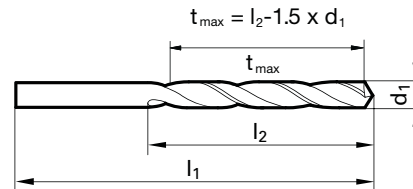


Tool material **HSS-E-PM**

Surface **F**

| | | | | |
|----------|-----------------|---|--|--|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone point geometry with special type B web thinning • PM-Co-alloyed high speed steel • especially high rigidity • especially high wear resistance | |
| M | Stainless steel | ○ | | |
| K | Cast iron | ● | | high-tensile materials, high-alloyed steels • heat treatable and case hardened steels • cast iron, brass, bronze |
| N | Aluminum | ○ | | |
| S | Titanium alloys | ○ | | |
| H | Hardened steel | ○ | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 517

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | | 1.00 | 34.00 | 10.50 | 12.00 | 9005300010000 |
| 0.0402 | #60 | 1.02 | 34.00 | 10.47 | 12.00 | 9005300010200 |
| 0.0409 | #59 | 1.04 | 34.00 | 10.44 | 12.00 | 9005300010400 |
| 0.0421 | #58 | 1.07 | 36.00 | 12.40 | 14.00 | 9005300010700 |
| 0.0429 | #57 | 1.09 | 36.00 | 12.37 | 14.00 | 9005300010900 |
| 0.0433 | | 1.10 | 36.00 | 12.35 | 14.00 | 9005300011000 |
| 0.0465 | #56 | 1.18 | 36.00 | 12.23 | 14.00 | 9005300011800 |
| 0.0469 | 3/64 | 1.19 | 38.00 | 14.22 | 16.00 | 9005300011900 |
| 0.0472 | | 1.20 | 38.00 | 14.20 | 16.00 | 9005300012000 |
| 0.0512 | | 1.30 | 38.00 | 14.05 | 16.00 | 9005300013000 |
| 0.0520 | #55 | 1.32 | 38.00 | 14.02 | 16.00 | 9005300013200 |
| 0.0551 | #54 | 1.40 | 40.00 | 15.90 | 18.00 | 9005300014000 |
| 0.0591 | | 1.50 | 40.00 | 15.75 | 18.00 | 9005300015000 |
| 0.0594 | #53 | 1.51 | 43.00 | 17.74 | 20.00 | 9005300015100 |
| 0.0626 | 1/16 | 1.59 | 43.00 | 17.62 | 20.00 | 9005300015900 |
| 0.0630 | | 1.60 | 43.00 | 17.60 | 20.00 | 9005300016000 |
| 0.0634 | #52 | 1.61 | 43.00 | 17.59 | 20.00 | 9005300016100 |
| 0.0669 | #51 | 1.70 | 43.00 | 17.45 | 20.00 | 9005300017000 |
| 0.0701 | #50 | 1.78 | 46.00 | 19.33 | 22.00 | 9005300017800 |
| 0.0709 | | 1.80 | 46.00 | 19.30 | 22.00 | 9005300018000 |
| 0.0728 | #49 | 1.85 | 46.00 | 19.23 | 22.00 | 9005300018500 |
| 0.0748 | | 1.90 | 46.00 | 19.15 | 22.00 | 9005300019000 |
| 0.0760 | #48 | 1.93 | 49.00 | 21.11 | 24.00 | 9005300019300 |
| 0.0780 | 5/64 | 1.98 | 49.00 | 21.03 | 24.00 | 9005300019800 |
| 0.0783 | #47 | 1.99 | 49.00 | 21.02 | 24.00 | 9005300019900 |
| 0.0787 | | 2.00 | 49.00 | 21.00 | 24.00 | 9005300020000 |
| 0.0811 | #46 | 2.06 | 49.00 | 20.91 | 24.00 | 9005300020600 |
| 0.0819 | #45 | 2.08 | 49.00 | 20.88 | 24.00 | 9005300020800 |
| 0.0827 | | 2.10 | 49.00 | 20.85 | 24.00 | 9005300021000 |
| 0.0858 | #44 | 2.18 | 53.00 | 23.73 | 27.00 | 9005300021800 |
| 0.0866 | | 2.20 | 53.00 | 23.70 | 27.00 | 9005300022000 |
| 0.0890 | #43 | 2.26 | 53.00 | 23.61 | 27.00 | 9005300022600 |
| 0.0906 | | 2.30 | 53.00 | 23.55 | 27.00 | 9005300023000 |
| 0.0933 | #42 | 2.37 | 57.00 | 26.45 | 30.00 | 9005300023700 |
| 0.0937 | 3/32 | 2.38 | 57.00 | 26.43 | 30.00 | 9005300023800 |
| 0.0945 | | 2.40 | 57.00 | 26.40 | 30.00 | 9005300024000 |
| 0.0961 | #41 | 2.44 | 57.00 | 26.34 | 30.00 | 9005300024400 |
| 0.0980 | #40 | 2.49 | 57.00 | 26.27 | 30.00 | 9005300024900 |
| 0.0984 | | 2.50 | 57.00 | 26.25 | 30.00 | 9005300025000 |
| 0.0996 | #39 | 2.53 | 57.00 | 26.21 | 30.00 | 9005300025300 |
| 0.1016 | #38 | 2.58 | 57.00 | 26.13 | 30.00 | 9005300025800 |
| 0.1024 | | 2.60 | 57.00 | 26.10 | 30.00 | 9005300026000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9005300026400 |
| 0.1063 | | 2.70 | 61.00 | 28.95 | 33.00 | 9005300027000 |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9005300027100 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9005300027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9005300027900 |
| 0.1102 | | 2.80 | 61.00 | 28.80 | 33.00 | 9005300028000 |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9005300028200 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9005300028700 |
| 0.1142 | | 2.90 | 61.00 | 28.65 | 33.00 | 9005300029000 |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9005300029500 |
| 0.1181 | | 3.00 | 61.00 | 28.50 | 33.00 | 9005300030000 |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9005300030500 |
| 0.1220 | | 3.10 | 65.00 | 31.35 | 36.00 | 9005300031000 |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9005300031700 |
| 0.1260 | | 3.20 | 65.00 | 31.20 | 36.00 | 9005300032000 |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9005300032600 |
| 0.1299 | | 3.30 | 65.00 | 31.05 | 36.00 | 9005300033000 |
| 0.1339 | | 3.40 | 70.00 | 33.90 | 39.00 | 9005300034000 |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9005300034500 |
| 0.1378 | | 3.50 | 70.00 | 33.75 | 39.00 | 9005300035000 |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9005300035700 |
| 0.1417 | | 3.60 | 70.00 | 33.60 | 39.00 | 9005300036000 |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9005300036600 |
| 0.1457 | | 3.70 | 70.00 | 33.45 | 39.00 | 9005300037000 |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9005300037300 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9005300038000 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9005300038600 |
| 0.1535 | | 3.90 | 75.00 | 37.15 | 43.00 | 9005300039000 |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9005300039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9005300039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9005300039900 |
| 0.1575 | | 4.00 | 75.00 | 37.00 | 43.00 | 9005300040000 |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9005300040400 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9005300040900 |
| 0.1614 | | 4.10 | 75.00 | 36.85 | 43.00 | 9005300041000 |
| 0.1654 | | 4.20 | 75.00 | 36.70 | 43.00 | 9005300042000 |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9005300042200 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9005300043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9005300043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9005300043900 |
| 0.1732 | | 4.40 | 80.00 | 40.40 | 47.00 | 9005300044000 |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9005300045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9005300045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9005300046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9005300046200 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9005300047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9005300047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9005300048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9005300048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9005300049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9005300049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9005300049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9005300050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9005300050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9005300051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9005300051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9005300051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9005300051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9005300052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9005300052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9005300053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9005300053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9005300054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9005300054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9005300055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9005300055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9005300056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9005300056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9005300057000 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9005300057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9005300058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9005300059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9005300059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9005300059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9005300060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9005300060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9005300061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9005300061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9005300062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9005300062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9005300063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9005300063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9005300064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9005300065000 |
| 0.2571 | | 6.53 | 101.00 | 53.21 | 63.00 | 9005300065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9005300066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9005300066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9005300067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9005300067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9005300068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9005300069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9005300070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9005300070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9005300071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9005300071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9005300072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9005300073000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9005300073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9005300074000 |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9005300074900 |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9005300075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9005300075400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9005300076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9005300076700 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9005300077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9005300078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9005300079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9005300079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9005300080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9005300080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9005300081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9005300082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9005300083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9005300083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9005300084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9005300084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9005300085000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9005300086100 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9005300087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9005300088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9005300088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9005300089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9005300090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9005300090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9005300091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9005300091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9005300092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9005300093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9005300093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9005300094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9005300095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9005300095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9005300095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9005300096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9005300097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9005300098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9005300099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9005300099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9005300100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9005300100800 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9005300102000 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9005300102600 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9005300103200 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9005300104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9005300105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9005300107200 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9005300110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9005300111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9005300115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9005300115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9005300119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9005300120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9005300123000 |
| 0.4921 | | 12.50 | 151.00 | 82.25 | 101.00 | 9005300125000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9005300127000 |
| 0.5118 | | 13.00 | 151.00 | 81.50 | 101.00 | 9005300130000 |
| 0.5157 | 33/64 | 13.10 | 151.00 | 81.35 | 101.00 | 9005300131000 |
| 0.5311 | 17/32 | 13.49 | 160.00 | 87.77 | 108.00 | 9005300134900 |
| 0.5315 | | 13.50 | 160.00 | 87.75 | 108.00 | 9005300135000 |
| 0.5512 | | 14.00 | 160.00 | 87.00 | 108.00 | 9005300140000 |
| 0.5626 | 9/16 | 14.29 | 169.00 | 92.57 | 114.00 | 9005300142900 |

Jobber Length



BUSHING & TAPER LENGTH HSS & HSCO DRILLS





Tool material

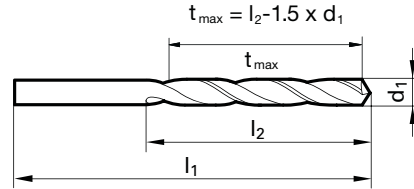
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone • for drilling through drill bushes |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 539

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 48.00 | 24.50 | 26.00 | 9006660010000 |
| 0.0433 | | 1.10 | 50.00 | 26.35 | 28.00 | 9006660011000 |
| 0.0472 | | 1.20 | 52.00 | 28.20 | 30.00 | 9006660012000 |
| 0.0512 | | 1.30 | 52.00 | 28.05 | 30.00 | 9006660013000 |
| 0.0551 | #54 | 1.40 | 55.00 | 30.90 | 33.00 | 9006660014000 |
| 0.0591 | | 1.50 | 55.00 | 30.75 | 33.00 | 9006660015000 |
| 0.0630 | | 1.60 | 58.00 | 32.60 | 35.00 | 9006660016000 |
| 0.0669 | #51 | 1.70 | 58.00 | 32.45 | 35.00 | 9006660017000 |
| 0.0709 | | 1.80 | 62.00 | 35.30 | 38.00 | 9006660018000 |
| 0.0748 | | 1.90 | 62.00 | 35.15 | 38.00 | 9006660019000 |
| 0.0780 | 5/64 | 1.98 | 66.00 | 38.03 | 41.00 | 9006660019800 |
| 0.0787 | | 2.00 | 66.00 | 38.00 | 41.00 | 9006660020000 |
| 0.0827 | | 2.10 | 66.00 | 37.85 | 41.00 | 9006660021000 |
| 0.0866 | | 2.20 | 70.00 | 40.70 | 44.00 | 9006660022000 |
| 0.0906 | | 2.30 | 70.00 | 40.55 | 44.00 | 9006660023000 |
| 0.0945 | | 2.40 | 74.00 | 43.40 | 47.00 | 9006660024000 |
| 0.0984 | | 2.50 | 74.00 | 43.25 | 47.00 | 9006660025000 |
| 0.1024 | | 2.60 | 74.00 | 43.10 | 47.00 | 9006660026000 |
| 0.1063 | | 2.70 | 79.00 | 46.95 | 51.00 | 9006660027000 |
| 0.1102 | | 2.80 | 79.00 | 46.80 | 51.00 | 9006660028000 |
| 0.1142 | | 2.90 | 79.00 | 46.65 | 51.00 | 9006660029000 |
| 0.1181 | | 3.00 | 79.00 | 46.50 | 51.00 | 9006660030000 |
| 0.1220 | | 3.10 | 84.00 | 50.35 | 55.00 | 9006660031000 |
| 0.1260 | | 3.20 | 84.00 | 50.20 | 55.00 | 9006660032000 |
| 0.1299 | | 3.30 | 84.00 | 50.05 | 55.00 | 9006660033000 |
| 0.1339 | | 3.40 | 91.00 | 54.90 | 60.00 | 9006660034000 |
| 0.1378 | | 3.50 | 91.00 | 54.75 | 60.00 | 9006660035000 |
| 0.1406 | 9/64 #28 | 3.57 | 91.00 | 54.65 | 60.00 | 9006660035700 |
| 0.1417 | | 3.60 | 91.00 | 54.60 | 60.00 | 9006660036000 |
| 0.1457 | | 3.70 | 91.00 | 54.45 | 60.00 | 9006660037000 |
| 0.1496 | #25 | 3.80 | 96.00 | 58.30 | 64.00 | 9006660038000 |
| 0.1535 | | 3.90 | 96.00 | 58.15 | 64.00 | 9006660039000 |
| 0.1575 | | 4.00 | 96.00 | 58.00 | 64.00 | 9006660040000 |
| 0.1614 | | 4.10 | 96.00 | 57.85 | 64.00 | 9006660041000 |
| 0.1654 | | 4.20 | 96.00 | 57.70 | 64.00 | 9006660042000 |
| 0.1693 | #18 | 4.30 | 102.00 | 62.55 | 69.00 | 9006660043000 |
| 0.1732 | | 4.40 | 102.00 | 62.40 | 69.00 | 9006660044000 |

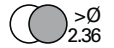
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1772 | #16 | 4.50 | 102.00 | 62.25 | 69.00 | 9006660045000 |
| 0.1811 | | 4.60 | 102.00 | 62.10 | 69.00 | 9006660046000 |
| 0.1890 | #12 | 4.80 | 108.00 | 66.80 | 74.00 | 9006660048000 |
| 0.1929 | | 4.90 | 108.00 | 66.65 | 74.00 | 9006660049000 |
| 0.1969 | | 5.00 | 108.00 | 66.50 | 74.00 | 9006660050000 |
| 0.2008 | | 5.10 | 108.00 | 66.35 | 74.00 | 9006660051000 |
| 0.2047 | | 5.20 | 108.00 | 66.20 | 74.00 | 9006660052000 |
| 0.2087 | | 5.30 | 108.00 | 66.05 | 74.00 | 9006660053000 |
| 0.2126 | | 5.40 | 116.00 | 71.90 | 80.00 | 9006660054000 |
| 0.2165 | | 5.50 | 116.00 | 71.75 | 80.00 | 9006660055000 |
| 0.2205 | | 5.60 | 116.00 | 71.60 | 80.00 | 9006660056000 |
| 0.2244 | | 5.70 | 116.00 | 71.45 | 80.00 | 9006660057000 |
| 0.2283 | | 5.80 | 116.00 | 71.30 | 80.00 | 9006660058000 |
| 0.2362 | | 6.00 | 116.00 | 71.00 | 80.00 | 9006660060000 |
| 0.2402 | | 6.10 | 124.00 | 76.85 | 86.00 | 9006660061000 |
| 0.2441 | | 6.20 | 124.00 | 76.70 | 86.00 | 9006660062000 |
| 0.2480 | | 6.30 | 124.00 | 76.55 | 86.00 | 9006660063000 |
| 0.2559 | | 6.50 | 124.00 | 76.25 | 86.00 | 9006660065000 |
| 0.2598 | | 6.60 | 124.00 | 76.10 | 86.00 | 9006660066000 |
| 0.2638 | | 6.70 | 124.00 | 75.95 | 86.00 | 9006660067000 |
| 0.2677 | | 6.80 | 133.00 | 82.80 | 93.00 | 9006660068000 |
| 0.2717 | I | 6.90 | 133.00 | 82.65 | 93.00 | 9006660069000 |
| 0.2756 | | 7.00 | 133.00 | 82.50 | 93.00 | 9006660070000 |
| 0.2835 | | 7.20 | 133.00 | 82.20 | 93.00 | 9006660072000 |
| 0.2874 | | 7.30 | 133.00 | 82.05 | 93.00 | 9006660073000 |
| 0.2953 | | 7.50 | 133.00 | 81.75 | 93.00 | 9006660075000 |
| 0.3031 | | 7.70 | 142.00 | 88.45 | 100.00 | 9006660077000 |
| 0.3071 | | 7.80 | 142.00 | 88.30 | 100.00 | 9006660078000 |
| 0.3110 | | 7.90 | 142.00 | 88.15 | 100.00 | 9006660079000 |
| 0.3126 | 5/16 | 7.94 | 142.00 | 88.09 | 100.00 | 9006660079400 |
| 0.3150 | | 8.00 | 142.00 | 88.00 | 100.00 | 9006660080000 |
| 0.3228 | P | 8.20 | 142.00 | 87.70 | 100.00 | 9006660082000 |
| 0.3307 | | 8.40 | 142.00 | 87.40 | 100.00 | 9006660084000 |
| 0.3346 | | 8.50 | 142.00 | 87.25 | 100.00 | 9006660085000 |
| 0.3543 | | 9.00 | 151.00 | 93.50 | 107.00 | 9006660090000 |
| 0.4528 | | 11.50 | 173.00 | 107.75 | 125.00 | 9006660115000 |



Tool material

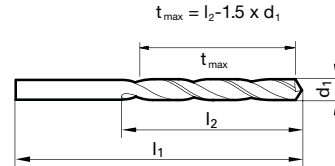
HSS

Surface



- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 1.000 • relieved cone • for deep holes |
| M | Stainless steel | | |
| K | Cast iron | ● | |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited

alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite



Speeds and feeds information on pg. 498

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0157 | 1/64 | 0.40 | 30.00 | 9.40 | 10.00 | 9002170004000 |
| 0.0173 | | 0.44 | 30.00 | 9.34 | 10.00 | 9002170004400 |
| 0.0185 | | 0.47 | 30.00 | 9.30 | 10.00 | 9002170004700 |
| 0.0197 | | 0.50 | 32.00 | 11.25 | 12.00 | 9002170005000 |
| 0.0205 | | 0.52 | 32.00 | 11.22 | 12.00 | 9002170005200 |
| 0.0217 | | 0.55 | 35.00 | 14.18 | 15.00 | 9002170005500 |
| 0.0224 | #74 | 0.57 | 35.00 | 14.15 | 15.00 | 9002170005700 |
| 0.0236 | | 0.60 | 35.00 | 14.10 | 15.00 | 9002170006000 |
| 0.0244 | | 0.62 | 38.00 | 17.07 | 18.00 | 9002170006200 |
| 0.0256 | | 0.65 | 38.00 | 17.03 | 18.00 | 9002170006500 |
| 0.0276 | | 0.70 | 42.00 | 19.95 | 21.00 | 9002170007000 |
| 0.0287 | | 0.73 | 42.00 | 19.91 | 21.00 | 9002170007300 |
| 0.0295 | | 0.75 | 42.00 | 19.88 | 21.00 | 9002170007500 |
| 0.0299 | | 0.76 | 46.00 | 23.86 | 25.00 | 9002170007600 |
| 0.0311 | 1/32 #68 | 0.79 | 46.00 | 23.82 | 25.00 | 9002170007900 |
| 0.0315 | | 0.80 | 46.00 | 23.80 | 25.00 | 9002170008000 |
| 0.0323 | | 0.82 | 46.00 | 23.77 | 25.00 | 9002170008200 |
| 0.0335 | | 0.85 | 46.00 | 23.73 | 25.00 | 9002170008500 |
| 0.0354 | | 0.90 | 51.00 | 27.65 | 29.00 | 9002170009000 |
| 0.0362 | | 0.92 | 51.00 | 27.62 | 29.00 | 9002170009200 |
| 0.0374 | | 0.95 | 51.00 | 27.58 | 29.00 | 9002170009500 |
| 0.0382 | #62 | 0.97 | 56.00 | 31.55 | 33.00 | 9002170009700 |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9002170010000 |
| 0.0402 | #60 | 1.02 | 56.00 | 31.47 | 33.00 | 9002170010200 |
| 0.0409 | #59 | 1.04 | 56.00 | 31.44 | 33.00 | 9002170010400 |
| 0.0413 | | 1.05 | 56.00 | 31.43 | 33.00 | 9002170010500 |
| 0.0421 | #58 | 1.07 | 60.00 | 35.40 | 37.00 | 9002170010700 |
| 0.0429 | #57 | 1.09 | 60.00 | 35.37 | 37.00 | 9002170010900 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 9002170011000 |
| 0.0441 | | 1.12 | 60.00 | 35.32 | 37.00 | 9002170011200 |
| 0.0453 | | 1.15 | 60.00 | 35.28 | 37.00 | 9002170011500 |
| 0.0465 | #56 | 1.18 | 60.00 | 35.23 | 37.00 | 9002170011800 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 39.22 | 41.00 | 9002170011900 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 9002170012000 |
| 0.0492 | | 1.25 | 65.00 | 39.13 | 41.00 | 9002170012500 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 9002170013000 |
| 0.0520 | #55 | 1.32 | 65.00 | 39.02 | 41.00 | 9002170013200 |
| 0.0531 | | 1.35 | 70.00 | 42.98 | 45.00 | 9002170013500 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 9002170014000 |
| 0.0571 | | 1.45 | 70.00 | 42.83 | 45.00 | 9002170014500 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9002170015000 |
| 0.0594 | #53 | 1.51 | 76.00 | 47.74 | 50.00 | 9002170015100 |
| 0.0610 | | 1.55 | 76.00 | 47.68 | 50.00 | 9002170015500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0626 | 1/16 | 1.59 | 76.00 | 47.62 | 50.00 | 9002170015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9002170016000 |
| 0.0634 | #52 | 1.61 | 76.00 | 47.59 | 50.00 | 9002170016100 |
| 0.0650 | | 1.65 | 76.00 | 47.53 | 50.00 | 9002170016500 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 9002170017000 |
| 0.0689 | | 1.75 | 80.00 | 50.38 | 53.00 | 9002170017500 |
| 0.0701 | #50 | 1.78 | 80.00 | 50.33 | 53.00 | 9002170017800 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9002170018000 |
| 0.0728 | #49 | 1.85 | 80.00 | 50.23 | 53.00 | 9002170018500 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9002170019000 |
| 0.0760 | #48 | 1.93 | 85.00 | 53.11 | 56.00 | 9002170019300 |
| 0.0768 | | 1.95 | 85.00 | 53.08 | 56.00 | 9002170019500 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 9002170019800 |
| 0.0783 | #47 | 1.99 | 85.00 | 53.02 | 56.00 | 9002170019900 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9002170020000 |
| 0.0799 | | 2.03 | 85.00 | 52.96 | 56.00 | 9002170020300 |
| 0.0807 | | 2.05 | 85.00 | 52.93 | 56.00 | 9002170020500 |
| 0.0811 | #46 | 2.06 | 85.00 | 52.91 | 56.00 | 9002170020600 |
| 0.0819 | #45 | 2.08 | 85.00 | 52.88 | 56.00 | 9002170020800 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9002170021000 |
| 0.0846 | | 2.15 | 90.00 | 55.78 | 59.00 | 9002170021500 |
| 0.0858 | #44 | 2.18 | 90.00 | 55.73 | 59.00 | 9002170021800 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9002170022000 |
| 0.0886 | | 2.25 | 90.00 | 55.63 | 59.00 | 9002170022500 |
| 0.0890 | #43 | 2.26 | 90.00 | 55.61 | 59.00 | 9002170022600 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9002170023000 |
| 0.0913 | | 2.32 | 90.00 | 55.52 | 59.00 | 9002170023200 |
| 0.0925 | | 2.35 | 90.00 | 55.48 | 59.00 | 9002170023500 |
| 0.0933 | #42 | 2.37 | 95.00 | 58.45 | 62.00 | 9002170023700 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 9002170023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9002170024000 |
| 0.0961 | #41 | 2.44 | 95.00 | 58.34 | 62.00 | 9002170024400 |
| 0.0965 | | 2.45 | 95.00 | 58.33 | 62.00 | 9002170024500 |
| 0.0980 | #40 | 2.49 | 95.00 | 58.27 | 62.00 | 9002170024900 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9002170025000 |
| 0.0996 | #39 | 2.53 | 95.00 | 58.21 | 62.00 | 9002170025300 |
| 0.1004 | | 2.55 | 95.00 | 58.18 | 62.00 | 9002170025500 |
| 0.1016 | #38 | 2.58 | 95.00 | 58.13 | 62.00 | 9002170025800 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9002170026000 |
| 0.1031 | | 2.62 | 95.00 | 58.07 | 62.00 | 9002170026200 |
| 0.1039 | #37 | 2.64 | 95.00 | 58.04 | 62.00 | 9002170026400 |
| 0.1043 | | 2.65 | 95.00 | 58.03 | 62.00 | 9002170026500 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9002170027000 |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1067 | #36 | 2.71 | 100.00 | 61.94 | 66.00 | 9002170027100 |
| 0.1083 | | 2.75 | 100.00 | 61.88 | 66.00 | 9002170027500 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9002170027800 |
| 0.1098 | #35 | 2.79 | 100.00 | 61.82 | 66.00 | 9002170027900 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9002170028000 |
| 0.1110 | #34 | 2.82 | 100.00 | 61.77 | 66.00 | 9002170028200 |
| 0.1122 | | 2.85 | 100.00 | 61.73 | 66.00 | 9002170028500 |
| 0.1130 | #33 | 2.87 | 100.00 | 61.70 | 66.00 | 9002170028700 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9002170029000 |
| 0.1161 | #32 | 2.95 | 100.00 | 61.58 | 66.00 | 9002170029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9002170030000 |
| 0.1201 | #31 | 3.05 | 106.00 | 64.43 | 69.00 | 9002170030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9002170031000 |
| 0.1240 | | 3.15 | 106.00 | 64.28 | 69.00 | 9002170031500 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9002170031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9002170032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9002170032500 |
| 0.1283 | #30 | 3.26 | 106.00 | 64.11 | 69.00 | 9002170032600 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9002170033000 |
| 0.1319 | | 3.35 | 106.00 | 63.98 | 69.00 | 9002170033500 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9002170034000 |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9002170034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9002170035000 |
| 0.1398 | | 3.55 | 112.00 | 67.68 | 73.00 | 9002170035500 |
| 0.1406 | 9/64 #28 | 3.57 | 112.00 | 67.65 | 73.00 | 9002170035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9002170036000 |
| 0.1437 | | 3.65 | 112.00 | 67.53 | 73.00 | 9002170036500 |
| 0.1441 | #27 | 3.66 | 112.00 | 67.51 | 73.00 | 9002170036600 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9002170037000 |
| 0.1469 | #26 | 3.73 | 112.00 | 67.41 | 73.00 | 9002170037300 |
| 0.1476 | | 3.75 | 112.00 | 67.38 | 73.00 | 9002170037500 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9002170038000 |
| 0.1516 | | 3.85 | 119.00 | 72.23 | 78.00 | 9002170038500 |
| 0.1520 | #24 | 3.86 | 119.00 | 72.21 | 78.00 | 9002170038600 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9002170039000 |
| 0.1539 | #23 | 3.91 | 119.00 | 72.14 | 78.00 | 9002170039100 |
| 0.1555 | | 3.95 | 119.00 | 72.08 | 78.00 | 9002170039500 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9002170039700 |
| 0.1571 | #22 | 3.99 | 119.00 | 72.02 | 78.00 | 9002170039900 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9002170040000 |
| 0.1591 | #21 | 4.04 | 119.00 | 71.94 | 78.00 | 9002170040400 |
| 0.1594 | | 4.05 | 119.00 | 71.93 | 78.00 | 9002170040500 |
| 0.1610 | #20 | 4.09 | 119.00 | 71.87 | 78.00 | 9002170040900 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9002170041000 |
| 0.1634 | | 4.15 | 119.00 | 71.78 | 78.00 | 9002170041500 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9002170042000 |
| 0.1661 | #19 | 4.22 | 119.00 | 71.67 | 78.00 | 9002170042200 |
| 0.1673 | | 4.25 | 119.00 | 71.63 | 78.00 | 9002170042500 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9002170043000 |
| 0.1713 | | 4.35 | 126.00 | 75.48 | 82.00 | 9002170043500 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 75.45 | 82.00 | 9002170043700 |
| 0.1728 | #17 | 4.39 | 126.00 | 75.42 | 82.00 | 9002170043900 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9002170044000 |
| 0.1752 | | 4.45 | 126.00 | 75.33 | 82.00 | 9002170044500 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9002170045000 |
| 0.1799 | #15 | 4.57 | 126.00 | 75.15 | 82.00 | 9002170045700 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9002170046000 |
| 0.1819 | #14 | 4.62 | 126.00 | 75.07 | 82.00 | 9002170046200 |
| 0.1831 | | 4.65 | 126.00 | 75.03 | 82.00 | 9002170046500 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9002170047000 |
| 0.1870 | | 4.75 | 126.00 | 74.88 | 82.00 | 9002170047500 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9002170047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9002170048000 |
| 0.1909 | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9002170048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9002170049000 |
| 0.1937 | #10 | 4.92 | 132.00 | 79.62 | 87.00 | 9002170049200 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1949 | | 4.95 | 132.00 | 79.58 | 87.00 | 9002170049500 |
| 0.1961 | #9 | 4.98 | 132.00 | 79.53 | 87.00 | 9002170049800 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9002170050000 |
| 0.1988 | | 5.05 | 132.00 | 79.43 | 87.00 | 9002170050500 |
| 0.1992 | #8 | 5.06 | 132.00 | 79.41 | 87.00 | 9002170050600 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9002170051000 |
| 0.2012 | #7 | 5.11 | 132.00 | 79.34 | 87.00 | 9002170051100 |
| 0.2028 | | 5.15 | 132.00 | 79.28 | 87.00 | 9002170051500 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9002170051600 |
| 0.2039 | #6 | 5.18 | 132.00 | 79.23 | 87.00 | 9002170051800 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9002170052000 |
| 0.2055 | #5 | 5.22 | 132.00 | 79.17 | 87.00 | 9002170052200 |
| 0.2067 | | 5.25 | 132.00 | 79.13 | 87.00 | 9002170052500 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9002170053000 |
| 0.2091 | #4 | 5.31 | 139.00 | 83.04 | 91.00 | 9002170053100 |
| 0.2106 | | 5.35 | 139.00 | 82.98 | 91.00 | 9002170053500 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9002170054000 |
| 0.2130 | #3 | 5.41 | 139.00 | 82.89 | 91.00 | 9002170054100 |
| 0.2146 | | 5.45 | 139.00 | 82.83 | 91.00 | 9002170054500 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9002170055000 |
| 0.2185 | | 5.55 | 139.00 | 82.68 | 91.00 | 9002170055500 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9002170055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9002170056000 |
| 0.2209 | #2 | 5.61 | 139.00 | 82.59 | 91.00 | 9002170056100 |
| 0.2224 | | 5.65 | 139.00 | 82.53 | 91.00 | 9002170056500 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9002170057000 |
| 0.2264 | | 5.75 | 139.00 | 82.38 | 91.00 | 9002170057500 |
| 0.2280 | #1 | 5.79 | 139.00 | 82.32 | 91.00 | 9002170057900 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9002170058000 |
| 0.2303 | | 5.85 | 139.00 | 82.23 | 91.00 | 9002170058500 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9002170059000 |
| 0.2339 | A | 5.94 | 139.00 | 82.09 | 91.00 | 9002170059400 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 82.08 | 91.00 | 9002170059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9002170060000 |
| 0.2378 | B | 6.04 | 148.00 | 87.94 | 97.00 | 9002170060400 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9002170061000 |
| 0.2421 | C | 6.15 | 148.00 | 87.78 | 97.00 | 9002170061500 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9002170062000 |
| 0.2461 | D | 6.25 | 148.00 | 87.63 | 97.00 | 9002170062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9002170063000 |
| 0.2500 | 1/4 E | 6.35 | 148.00 | 87.48 | 97.00 | 9002170063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9002170064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9002170065000 |
| 0.2571 | | 6.53 | 148.00 | 87.21 | 97.00 | 9002170065300 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9002170066000 |
| 0.2610 | G | 6.63 | 148.00 | 87.06 | 97.00 | 9002170066300 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9002170067000 |
| 0.2657 | 17/64 H | 6.75 | 156.00 | 91.88 | 102.00 | 9002170067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9002170068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9002170069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9002170070000 |
| 0.2768 | J | 7.03 | 156.00 | 91.46 | 102.00 | 9002170070300 |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9002170071000 |
| 0.2811 | 9/32 K | 7.14 | 156.00 | 91.29 | 102.00 | 9002170071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9002170072000 |
| 0.2854 | | 7.25 | 156.00 | 91.13 | 102.00 | 9002170072500 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9002170073000 |
| 0.2902 | L | 7.37 | 156.00 | 90.95 | 102.00 | 9002170073700 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9002170074000 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9002170075000 |
| 0.2969 | 19/64 | 7.54 | 165.00 | 97.69 | 109.00 | 9002170075400 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9002170076000 |
| 0.3020 | N | 7.67 | 165.00 | 97.50 | 109.00 | 9002170076700 |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9002170077000 |
| 0.3051 | | 7.75 | 165.00 | 97.38 | 109.00 | 9002170077500 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9002170078000 |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9002170079000 |
| 0.3126 | 5/16 | 7.94 | 165.00 | 97.09 | 109.00 | 9002170079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9002170080000 |
| 0.3161 | O | 8.03 | 165.00 | 96.96 | 109.00 | 9002170080300 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9002170081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9002170082000 |
| 0.3248 | | 8.25 | 165.00 | 96.63 | 109.00 | 9002170082500 |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9002170083000 |
| 0.3280 | 21/64 | 8.33 | 165.00 | 96.51 | 109.00 | 9002170083300 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9002170084000 |
| 0.3319 | Q | 8.43 | 165.00 | 96.36 | 109.00 | 9002170084300 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9002170085000 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9002170086000 |
| 0.3390 | R | 8.61 | 175.00 | 102.09 | 115.00 | 9002170086100 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9002170087000 |
| 0.3437 | 11/32 | 8.73 | 175.00 | 101.91 | 115.00 | 9002170087300 |
| 0.3445 | | 8.75 | 175.00 | 101.88 | 115.00 | 9002170087500 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9002170088000 |
| 0.3480 | S | 8.84 | 175.00 | 101.74 | 115.00 | 9002170088400 |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9002170089000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9002170090000 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9002170091000 |
| 0.3594 | 23/64 | 9.13 | 175.00 | 101.31 | 115.00 | 9002170091300 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9002170092000 |
| 0.3642 | | 9.25 | 175.00 | 101.13 | 115.00 | 9002170092500 |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9002170093000 |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9002170094000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9002170095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 106.72 | 121.00 | 9002170095200 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9002170096000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9002170097000 |
| 0.3839 | | 9.75 | 184.00 | 106.38 | 121.00 | 9002170097500 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9002170098000 |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9002170099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 106.12 | 121.00 | 9002170099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9002170100000 |
| 0.3969 | X | 10.08 | 184.00 | 105.88 | 121.00 | 9002170100800 |
| 0.3976 | | 10.10 | 184.00 | 105.85 | 121.00 | 9002170101000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9002170102000 |
| 0.4035 | | 10.25 | 184.00 | 105.63 | 121.00 | 9002170102500 |
| 0.4039 | Y | 10.26 | 184.00 | 105.61 | 121.00 | 9002170102600 |
| 0.4055 | | 10.30 | 184.00 | 105.55 | 121.00 | 9002170103000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 105.52 | 121.00 | 9002170103200 |
| 0.4094 | | 10.40 | 184.00 | 105.40 | 121.00 | 9002170104000 |
| 0.4130 | Z | 10.49 | 184.00 | 105.27 | 121.00 | 9002170104900 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9002170105000 |
| 0.4173 | | 10.60 | 184.00 | 105.10 | 121.00 | 9002170106000 |
| 0.4213 | | 10.70 | 195.00 | 111.95 | 128.00 | 9002170107000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 111.92 | 128.00 | 9002170107200 |
| 0.4232 | | 10.75 | 195.00 | 111.88 | 128.00 | 9002170107500 |
| 0.4252 | | 10.80 | 195.00 | 111.80 | 128.00 | 9002170108000 |
| 0.4291 | | 10.90 | 195.00 | 111.65 | 128.00 | 9002170109000 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9002170110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9002170111100 |
| 0.4409 | | 11.20 | 195.00 | 111.20 | 128.00 | 9002170112000 |
| 0.4429 | | 11.25 | 195.00 | 111.13 | 128.00 | 9002170112500 |
| 0.4449 | | 11.30 | 195.00 | 111.05 | 128.00 | 9002170113000 |
| 0.4488 | | 11.40 | 195.00 | 110.90 | 128.00 | 9002170114000 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9002170115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9002170115100 |
| 0.4567 | | 11.60 | 195.00 | 110.60 | 128.00 | 9002170116000 |
| 0.4626 | | 11.75 | 195.00 | 110.38 | 128.00 | 9002170117500 |
| 0.4646 | | 11.80 | 195.00 | 110.30 | 128.00 | 9002170118000 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 116.14 | 134.00 | 9002170119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9002170120000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4764 | | 12.10 | 205.00 | 115.85 | 134.00 | 9002170121000 |
| 0.4803 | | 12.20 | 205.00 | 115.70 | 134.00 | 9002170122000 |
| 0.4823 | | 12.25 | 205.00 | 115.63 | 134.00 | 9002170122500 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 115.55 | 134.00 | 9002170123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9002170125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 114.95 | 134.00 | 9002170127000 |
| 0.5020 | | 12.75 | 205.00 | 114.88 | 134.00 | 9002170127500 |
| 0.5039 | | 12.80 | 205.00 | 114.80 | 134.00 | 9002170128000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9002170130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 114.35 | 134.00 | 9002170131000 |
| 0.5197 | | 13.20 | 205.00 | 114.20 | 134.00 | 9002170132000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 119.77 | 140.00 | 9002170134900 |
| 0.5315 | | 13.50 | 214.00 | 119.75 | 140.00 | 9002170135000 |
| 0.5413 | | 13.75 | 214.00 | 119.38 | 140.00 | 9002170137500 |
| 0.5433 | | 13.80 | 214.00 | 119.30 | 140.00 | 9002170138000 |
| 0.5469 | 35/64 | 13.89 | 214.00 | 119.17 | 140.00 | 9002170138900 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9002170140000 |
| 0.5591 | | 14.20 | 220.00 | 122.70 | 144.00 | 9002170142000 |
| 0.5610 | | 14.25 | 220.00 | 122.63 | 144.00 | 9002170142500 |
| 0.5626 | 9/16 | 14.29 | 220.00 | 122.57 | 144.00 | 9002170142900 |
| 0.5709 | | 14.50 | 220.00 | 122.25 | 144.00 | 9002170145000 |
| 0.5780 | 37/64 | 14.68 | 220.00 | 121.98 | 144.00 | 9002170146800 |
| 0.5906 | | 15.00 | 220.00 | 121.50 | 144.00 | 9002170150000 |
| 0.5937 | 19/32 | 15.08 | 227.00 | 126.38 | 149.00 | 9002170150800 |
| 0.6004 | | 15.25 | 227.00 | 126.13 | 149.00 | 9002170152500 |
| 0.6063 | | 15.40 | 227.00 | 125.90 | 149.00 | 9002170154000 |
| 0.6094 | 39/64 | 15.48 | 227.00 | 125.78 | 149.00 | 9002170154800 |
| 0.6102 | | 15.50 | 227.00 | 125.75 | 149.00 | 9002170155000 |
| 0.6248 | 5/8 | 15.87 | 227.00 | 125.20 | 149.00 | 9002170158700 |
| 0.6299 | | 16.00 | 227.00 | 125.00 | 149.00 | 9002170160000 |
| 0.6406 | 41/64 | 16.27 | 235.00 | 129.60 | 154.00 | 9002170162700 |
| 0.6496 | | 16.50 | 235.00 | 129.25 | 154.00 | 9002170165000 |
| 0.6563 | 21/32 | 16.67 | 235.00 | 129.00 | 154.00 | 9002170166700 |
| 0.6693 | | 17.00 | 235.00 | 128.50 | 154.00 | 9002170170000 |
| 0.6720 | 43/64 | 17.07 | 241.00 | 132.40 | 158.00 | 9002170170700 |
| 0.6874 | 11/16 | 17.46 | 241.00 | 131.81 | 158.00 | 9002170174600 |
| 0.6890 | | 17.50 | 241.00 | 131.75 | 158.00 | 9002170175000 |
| 0.7031 | 45/64 | 17.86 | 241.00 | 131.21 | 158.00 | 9002170178600 |
| 0.7087 | | 18.00 | 241.00 | 131.00 | 158.00 | 9002170180000 |
| 0.7185 | | 18.25 | 247.00 | 134.63 | 162.00 | 9002170182500 |
| 0.7189 | 23/32 | 18.26 | 247.00 | 134.61 | 162.00 | 9002170182600 |
| 0.7283 | | 18.50 | 247.00 | 134.25 | 162.00 | 9002170185000 |
| 0.7343 | 47/64 | 18.65 | 247.00 | 134.03 | 162.00 | 9002170186500 |
| 0.7480 | | 19.00 | 247.00 | 133.50 | 162.00 | 9002170190000 |
| 0.7500 | 3/4 | 19.05 | 254.00 | 137.43 | 166.00 | 9002170190500 |
| 0.7657 | 49/64 | 19.45 | 254.00 | 136.83 | 166.00 | 9002170194500 |
| 0.7677 | | 19.50 | 254.00 | 136.75 | 166.00 | 9002170195000 |
| 0.7811 | 25/32 | 19.84 | 254.00 | 136.24 | 166.00 | 9002170198400 |
| 0.7874 | | 20.00 | 254.00 | 136.00 | 166.00 | 9002170200000 |
| 0.7969 | 51/64 | 20.24 | 261.00 | 140.64 | 171.00 | 9002170202400 |
| 0.8071 | | 20.50 | 261.00 | 140.25 | 171.00 | 9002170205000 |
| 0.8126 | 13/16 | 20.64 | 261.00 | 140.04 | 171.00 | 9002170206400 |
| 0.8169 | | 20.75 | 261.00 | 139.88 | 171.00 | 9002170207500 |
| 0.8268 | | 21.00 | 261.00 | 139.50 | 171.00 | 9002170210000 |
| 0.8280 | 53/64 | 21.03 | 261.00 | 139.46 | 171.00 | 9002170210300 |
| 0.8465 | | 21.50 | 268.00 | 143.75 | 176.00 | 9002170215000 |
| 0.8594 | 55/64 | 21.83 | 268.00 | 143.26 | 176.00 | 9002170218300 |
| 0.8661 | | 22.00 | 268.00 | 143.00 | 176.00 | 9002170220000 |
| 0.8748 | 7/8 | 22.22 | 268.00 | 142.67 | 176.00 | 9002170222200 |
| 0.8906 | 57/64 | 22.62 | 275.00 | 146.07 | 180.00 | 9002170226200 |
| 0.9063 | 29/32 | 23.02 | 275.00 | 145.47 | 180.00 | 9002170230200 |
| 0.9374 | 15/16 | 23.81 | 282.00 | 149.29 | 185.00 | 9002170238100 |
| 0.9449 | | 24.00 | 282.00 | 149.00 | 185.00 | 9002170240000 |
| 0.9689 | 31/32 | 24.61 | 282.00 | 148.09 | 185.00 | 9002170246100 |
| 0.9843 | 63/64 | 25.00 | 282.00 | 147.50 | 185.00 | 9002170250000 |

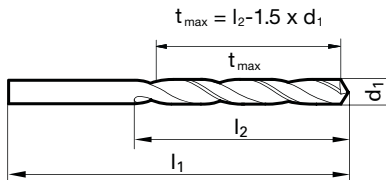
Taper Length



Tool material **HSS**

Surface **S**

- P** Steel ● web thinning $\geq \text{Ø } 1.000$ • relieved cone • for deep holes • for drilling through drill bushes
 - M** Stainless steel
 - K** Cast iron ● alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite
 - N** Aluminum ○
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 539

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0197 | 0.50 | 32.00 | 11.25 | 12.00 | 9006670005000 |
| 0.0236 | 0.60 | 35.00 | 14.10 | 15.00 | 9006670006000 |
| 0.0256 | 0.65 | 38.00 | 17.03 | 18.00 | 9006670006500 |
| 0.0276 | 0.70 | 42.00 | 19.95 | 21.00 | 9006670007000 |
| 0.0295 | 0.75 | 42.00 | 19.88 | 21.00 | 9006670007500 |
| 0.0315 | 0.80 | 46.00 | 23.80 | 25.00 | 9006670008000 |
| 0.0335 | 0.85 | 46.00 | 23.73 | 25.00 | 9006670008500 |
| 0.0354 | 0.90 | 51.00 | 27.65 | 29.00 | 9006670009000 |
| 0.0374 | 0.95 | 51.00 | 27.58 | 29.00 | 9006670009500 |
| 0.0394 | 1.00 | 56.00 | 31.50 | 33.00 | 9006670010000 |
| 0.0413 | 1.05 | 56.00 | 31.43 | 33.00 | 9006670010500 |
| 0.0433 | 1.10 | 60.00 | 35.35 | 37.00 | 9006670011000 |
| 0.0453 | 1.15 | 60.00 | 35.28 | 37.00 | 9006670011500 |
| 0.0472 | 1.20 | 65.00 | 39.20 | 41.00 | 9006670012000 |
| 0.0492 | 1.25 | 65.00 | 39.13 | 41.00 | 9006670012500 |
| 0.0512 | 1.30 | 65.00 | 39.05 | 41.00 | 9006670013000 |
| 0.0531 | 1.35 | 70.00 | 42.98 | 45.00 | 9006670013500 |
| 0.0551 | #54 | 70.00 | 42.90 | 45.00 | 9006670014000 |
| 0.0571 | 1.45 | 70.00 | 42.83 | 45.00 | 9006670014500 |
| 0.0591 | 1.50 | 70.00 | 42.75 | 45.00 | 9006670015000 |
| 0.0610 | 1.55 | 76.00 | 47.68 | 50.00 | 9006670015500 |
| 0.0626 | 1/16 | 76.00 | 47.62 | 50.00 | 9006670015900 |
| 0.0630 | 1.60 | 76.00 | 47.60 | 50.00 | 9006670016000 |
| 0.0650 | 1.65 | 76.00 | 47.53 | 50.00 | 9006670016500 |
| 0.0669 | #51 | 76.00 | 47.45 | 50.00 | 9006670017000 |
| 0.0689 | 1.75 | 80.00 | 50.38 | 53.00 | 9006670017500 |
| 0.0709 | 1.80 | 80.00 | 50.30 | 53.00 | 9006670018000 |
| 0.0728 | #49 | 80.00 | 50.23 | 53.00 | 9006670018500 |
| 0.0748 | 1.90 | 80.00 | 50.15 | 53.00 | 9006670019000 |
| 0.0760 | #48 | 85.00 | 53.11 | 56.00 | 9006670019300 |
| 0.0768 | 1.95 | 85.00 | 53.08 | 56.00 | 9006670019500 |
| 0.0780 | 5/64 | 85.00 | 53.03 | 56.00 | 9006670019800 |
| 0.0787 | 2.00 | 85.00 | 53.00 | 56.00 | 9006670020000 |
| 0.0807 | 2.05 | 85.00 | 52.93 | 56.00 | 9006670020500 |
| 0.0827 | 2.10 | 85.00 | 52.85 | 56.00 | 9006670021000 |
| 0.0866 | 2.20 | 90.00 | 55.70 | 59.00 | 9006670022000 |
| 0.0886 | 2.25 | 90.00 | 55.63 | 59.00 | 9006670022500 |
| 0.0906 | 2.30 | 90.00 | 55.55 | 59.00 | 9006670023000 |
| 0.0925 | 2.35 | 90.00 | 55.48 | 59.00 | 9006670023500 |
| 0.0937 | 3/32 | 95.00 | 58.43 | 62.00 | 9006670023800 |
| 0.0945 | 2.40 | 95.00 | 58.40 | 62.00 | 9006670024000 |
| 0.0961 | #41 | 95.00 | 58.34 | 62.00 | 9006670024400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0965 | | 2.45 | 95.00 | 58.33 | 62.00 | 9006670024500 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9006670025000 |
| 0.1004 | | 2.55 | 95.00 | 58.18 | 62.00 | 9006670025500 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9006670026000 |
| 0.1043 | | 2.65 | 95.00 | 58.03 | 62.00 | 9006670026500 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9006670027000 |
| 0.1083 | | 2.75 | 100.00 | 61.88 | 66.00 | 9006670027500 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9006670027800 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9006670028000 |
| 0.1122 | | 2.85 | 100.00 | 61.73 | 66.00 | 9006670028500 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9006670029000 |
| 0.1161 | #32 | 2.95 | 100.00 | 61.58 | 66.00 | 9006670029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9006670030000 |
| 0.1201 | #31 | 3.05 | 106.00 | 64.43 | 69.00 | 9006670030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9006670031000 |
| 0.1240 | | 3.15 | 106.00 | 64.28 | 69.00 | 9006670031500 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9006670031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9006670032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9006670032500 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9006670033000 |
| 0.1319 | | 3.35 | 106.00 | 63.98 | 69.00 | 9006670033500 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9006670034000 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9006670035000 |
| 0.1398 | | 3.55 | 112.00 | 67.68 | 73.00 | 9006670035500 |
| 0.1406 | 9/64 | #28 | 112.00 | 67.65 | 73.00 | 9006670035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9006670036000 |
| 0.1437 | | 3.65 | 112.00 | 67.53 | 73.00 | 9006670036500 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9006670037000 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9006670038000 |
| 0.1516 | | 3.85 | 119.00 | 72.23 | 78.00 | 9006670038500 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9006670039000 |
| 0.1555 | | 3.95 | 119.00 | 72.08 | 78.00 | 9006670039500 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9006670039700 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9006670040000 |
| 0.1594 | | 4.05 | 119.00 | 71.93 | 78.00 | 9006670040500 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9006670041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9006670042000 |
| 0.1673 | | 4.25 | 119.00 | 71.63 | 78.00 | 9006670042500 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9006670043000 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 75.45 | 82.00 | 9006670043700 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9006670044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9006670045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9006670046000 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9006670047000 |
| 0.1870 | | 4.75 | 126.00 | 74.88 | 82.00 | 9006670047500 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9006670047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9006670048000 |
| 0.1909 | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9006670048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9006670049000 |
| 0.1937 | #10 | 4.92 | 132.00 | 79.62 | 87.00 | 9006670049200 |
| 0.1961 | #9 | 4.98 | 132.00 | 79.53 | 87.00 | 9006670049800 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9006670050000 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9006670051000 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9006670051600 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9006670052000 |
| 0.2067 | | 5.25 | 132.00 | 79.13 | 87.00 | 9006670052500 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9006670053000 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9006670054000 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9006670055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9006670055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9006670056000 |
| 0.2209 | #2 | 5.61 | 139.00 | 82.59 | 91.00 | 9006670056100 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9006670057000 |
| 0.2280 | #1 | 5.79 | 139.00 | 82.32 | 91.00 | 9006670057900 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9006670058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9006670059000 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9006670060000 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9006670061000 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9006670062000 |
| 0.2461 | D | 6.25 | 148.00 | 87.63 | 97.00 | 9006670062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9006670063000 |
| 0.2500 | 1/4 E | 6.35 | 148.00 | 87.48 | 97.00 | 9006670063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9006670064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9006670065000 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9006670066000 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9006670067000 |
| 0.2657 | 17/64 H | 6.75 | 156.00 | 91.88 | 102.00 | 9006670067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9006670068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9006670069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9006670070000 |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9006670071000 |
| 0.2811 | 9/32 K | 7.14 | 156.00 | 91.29 | 102.00 | 9006670071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9006670072000 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9006670073000 |
| 0.2902 | L | 7.37 | 156.00 | 90.95 | 102.00 | 9006670073700 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9006670074000 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9006670075000 |
| 0.2969 | 19/64 | 7.54 | 165.00 | 97.69 | 109.00 | 9006670075400 |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9006670077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9006670078000 |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9006670079000 |
| 0.3126 | 5/16 | 7.94 | 165.00 | 97.09 | 109.00 | 9006670079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9006670080000 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9006670081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9006670082000 |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9006670083000 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9006670084000 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9006670085000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9006670086000 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9006670087000 |
| 0.3437 | 11/32 | 8.73 | 175.00 | 101.91 | 115.00 | 9006670087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9006670088000 |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9006670089000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9006670090000 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9006670091000 |
| 0.3594 | 23/64 | 9.13 | 175.00 | 101.31 | 115.00 | 9006670091300 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9006670092000 |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9006670093000 |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9006670094000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9006670095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 106.72 | 121.00 | 9006670095200 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9006670096000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9006670097000 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9006670098000 |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9006670099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 106.12 | 121.00 | 9006670099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9006670100000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9006670102000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 105.52 | 121.00 | 9006670103200 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9006670105000 |
| 0.4173 | | 10.60 | 184.00 | 105.10 | 121.00 | 9006670106000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 111.92 | 128.00 | 9006670107200 |
| 0.4252 | | 10.80 | 195.00 | 111.80 | 128.00 | 9006670108000 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9006670110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9006670111100 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9006670115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9006670115100 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 116.14 | 134.00 | 9006670119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9006670120000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9006670125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 114.95 | 134.00 | 9006670127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9006670130000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 119.77 | 140.00 | 9006670134900 |
| 0.5315 | | 13.50 | 214.00 | 119.75 | 140.00 | 9006670135000 |
| 0.5433 | | 13.80 | 214.00 | 119.30 | 140.00 | 9006670138000 |
| 0.5469 | 35/64 | 13.89 | 214.00 | 119.17 | 140.00 | 9006670138900 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9006670140000 |
| 0.5626 | 9/16 | 14.29 | 220.00 | 122.57 | 144.00 | 9006670142900 |
| 0.5709 | | 14.50 | 220.00 | 122.25 | 144.00 | 9006670145000 |
| 0.5780 | 37/64 | 14.68 | 220.00 | 121.98 | 144.00 | 9006670146800 |
| 0.5807 | | 14.75 | 220.00 | 121.88 | 144.00 | 9006670147500 |
| 0.5906 | | 15.00 | 220.00 | 121.50 | 144.00 | 9006670150000 |
| 0.5937 | 19/32 | 15.08 | 227.00 | 126.38 | 149.00 | 9006670150800 |
| 0.6094 | 39/64 | 15.48 | 227.00 | 125.78 | 149.00 | 9006670154800 |
| 0.6102 | | 15.50 | 227.00 | 125.75 | 149.00 | 9006670155000 |
| 0.6248 | 5/8 | 15.87 | 227.00 | 125.20 | 149.00 | 9006670158700 |
| 0.6299 | | 16.00 | 227.00 | 125.00 | 149.00 | 9006670160000 |
| 0.6496 | | 16.50 | 235.00 | 129.25 | 154.00 | 9006670165000 |
| 0.6563 | 21/32 | 16.67 | 235.00 | 129.00 | 154.00 | 9006670166700 |
| 0.6594 | | 16.75 | 235.00 | 128.88 | 154.00 | 9006670167500 |
| 0.6693 | | 17.00 | 235.00 | 128.50 | 154.00 | 9006670170000 |
| 0.6874 | 11/16 | 17.46 | 241.00 | 131.81 | 158.00 | 9006670174600 |
| 0.7087 | | 18.00 | 241.00 | 131.00 | 158.00 | 9006670180000 |
| 0.7185 | | 18.25 | 247.00 | 134.63 | 162.00 | 9006670182500 |

Taper Length



Tool material

HSS

Surface

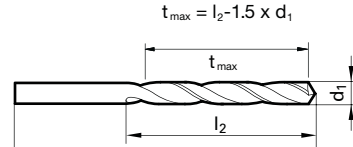


| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum ● |
| S | Titanium alloys |
| H | Hardened steel |

web thinning ≥ Ø 14.500 • relieved cone • for deep holes

soft, long chipping materials • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • soft synthetic materials, wood

●=Optimal
○=Limited



Speeds and feeds information on pg. 498

Shank diameter = cut diameter

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0157 | 1/64 | 0.40 | 30.00 | 9.40 | 10.00 | 900219004000 |
| 0.0197 | | 0.50 | 32.00 | 11.25 | 12.00 | 900219005000 |
| 0.0236 | | 0.60 | 35.00 | 14.10 | 15.00 | 900219006000 |
| 0.0256 | | 0.65 | 38.00 | 17.03 | 18.00 | 900219006500 |
| 0.0276 | | 0.70 | 42.00 | 19.95 | 21.00 | 900219007000 |
| 0.0291 | #69 | 0.74 | 42.00 | 19.89 | 21.00 | 900219007400 |
| 0.0295 | | 0.75 | 42.00 | 19.88 | 21.00 | 900219007500 |
| 0.0315 | | 0.80 | 46.00 | 23.80 | 25.00 | 900219008000 |
| 0.0335 | | 0.85 | 46.00 | 23.73 | 25.00 | 900219008500 |
| 0.0354 | | 0.90 | 51.00 | 27.65 | 29.00 | 900219009000 |
| 0.0374 | | 0.95 | 51.00 | 27.58 | 29.00 | 900219009500 |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 900219010000 |
| 0.0413 | | 1.05 | 56.00 | 31.43 | 33.00 | 900219010500 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 900219011000 |
| 0.0453 | | 1.15 | 60.00 | 35.28 | 37.00 | 900219011500 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 900219012000 |
| 0.0480 | | 1.22 | 65.00 | 39.17 | 41.00 | 900219012200 |
| 0.0492 | | 1.25 | 65.00 | 39.13 | 41.00 | 900219012500 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 900219013000 |
| 0.0531 | | 1.35 | 70.00 | 42.98 | 45.00 | 900219013500 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 900219014000 |
| 0.0571 | | 1.45 | 70.00 | 42.83 | 45.00 | 900219014500 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 900219015000 |
| 0.0610 | | 1.55 | 76.00 | 47.68 | 50.00 | 900219015500 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 900219016000 |
| 0.0650 | | 1.65 | 76.00 | 47.53 | 50.00 | 900219016500 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 900219017000 |
| 0.0689 | | 1.75 | 80.00 | 50.38 | 53.00 | 900219017500 |
| 0.0701 | #50 | 1.78 | 80.00 | 50.33 | 53.00 | 900219017800 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 900219018000 |
| 0.0728 | #49 | 1.85 | 80.00 | 50.23 | 53.00 | 900219018500 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 900219019000 |
| 0.0768 | | 1.95 | 85.00 | 53.08 | 56.00 | 900219019500 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 900219019800 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 900219020000 |
| 0.0807 | | 2.05 | 85.00 | 52.93 | 56.00 | 900219020500 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 900219021000 |
| 0.0846 | | 2.15 | 90.00 | 55.78 | 59.00 | 900219021500 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 900219022000 |
| 0.0886 | | 2.25 | 90.00 | 55.63 | 59.00 | 900219022500 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 900219023000 |
| 0.0925 | | 2.35 | 90.00 | 55.48 | 59.00 | 900219023500 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 900219023800 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9002190024000 |
| 0.0965 | | 2.45 | 95.00 | 58.33 | 62.00 | 9002190024500 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9002190025000 |
| 0.1004 | | 2.55 | 95.00 | 58.18 | 62.00 | 9002190025500 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9002190026000 |
| 0.1043 | | 2.65 | 95.00 | 58.03 | 62.00 | 9002190026500 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9002190027000 |
| 0.1083 | | 2.75 | 100.00 | 61.88 | 66.00 | 9002190027500 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9002190028000 |
| 0.1122 | | 2.85 | 100.00 | 61.73 | 66.00 | 9002190028500 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9002190029000 |
| 0.1161 | #32 | 2.95 | 100.00 | 61.58 | 66.00 | 9002190029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9002190030000 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9002190031000 |
| 0.1240 | | 3.15 | 106.00 | 64.28 | 69.00 | 9002190031500 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9002190031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9002190032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9002190032500 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9002190033000 |
| 0.1319 | | 3.35 | 106.00 | 63.98 | 69.00 | 9002190033500 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9002190034000 |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9002190034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9002190035000 |
| 0.1398 | | 3.55 | 112.00 | 67.68 | 73.00 | 9002190035500 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9002190036000 |
| 0.1437 | | 3.65 | 112.00 | 67.53 | 73.00 | 9002190036500 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9002190037000 |
| 0.1476 | | 3.75 | 112.00 | 67.38 | 73.00 | 9002190037500 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9002190038000 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9002190039000 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9002190040000 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9002190041000 |
| 0.1634 | | 4.15 | 119.00 | 71.78 | 78.00 | 9002190041500 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9002190042000 |
| 0.1673 | | 4.25 | 119.00 | 71.63 | 78.00 | 9002190042500 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9002190043000 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9002190044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9002190045000 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9002190046000 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9002190047000 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9002190048000 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9002190049000 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9002190050000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9002190051000 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9002190052000 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9002190053000 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9002190054000 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9002190055000 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9002190056000 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9002190057000 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9002190058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9002190059000 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9002190060000 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9002190061000 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9002190062000 |
| 0.2461 | D | 6.25 | 148.00 | 87.63 | 97.00 | 9002190062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9002190063000 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9002190064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9002190065000 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9002190066000 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9002190067000 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9002190068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9002190069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9002190070000 |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9002190071000 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9002190072000 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9002190073000 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9002190074000 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9002190075000 |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9002190077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9002190078000 |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9002190079000 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9002190080000 |
| 0.3169 | | 8.05 | 165.00 | 96.93 | 109.00 | 9002190080500 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9002190081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9002190082000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9002190083000 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9002190084000 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9002190085000 |
| 0.3366 | | 8.55 | 175.00 | 102.18 | 115.00 | 9002190085500 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9002190086000 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9002190087000 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9002190088000 |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9002190089000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9002190090000 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9002190091000 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9002190092000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9002190095000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9002190097000 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9002190098000 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9002190100000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9002190102000 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9002190105000 |
| 0.4252 | | 10.80 | 195.00 | 111.80 | 128.00 | 9002190108000 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9002190110000 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9002190115000 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9002190120000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9002190125000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9002190130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 114.35 | 134.00 | 9002190131000 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9002190140000 |
| 0.5709 | | 14.50 | 220.00 | 122.25 | 144.00 | 9002190145000 |
| 0.5906 | | 15.00 | 220.00 | 121.50 | 144.00 | 9002190150000 |
| 0.6299 | | 16.00 | 227.00 | 125.00 | 149.00 | 9002190160000 |
| 0.6693 | | 17.00 | 235.00 | 128.50 | 154.00 | 9002190170000 |
| 0.7087 | | 18.00 | 241.00 | 131.00 | 158.00 | 9002190180000 |
| 0.7480 | | 19.00 | 247.00 | 133.50 | 162.00 | 9002190190000 |
| 0.7874 | | 20.00 | 254.00 | 136.00 | 166.00 | 9002190200000 |

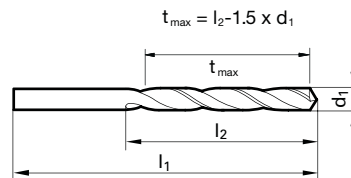
Taper Length



Tool material **HSS**

Surface

- P** Steel ○ web thinning ≥ Ø 2.370 • relieved cone • especially large flute
 - M** Stainless steel
 - K** Cast iron
 - N** Aluminum ● soft, long chipping materials up to 500 N/mm² • mild steels • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • zamak, argalium, soft plastics, wood
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 513

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9005010010000 |
| 0.0402 | #60 | 1.02 | 56.00 | 31.47 | 33.00 | 9005010010200 |
| 0.0409 | #59 | 1.04 | 56.00 | 31.44 | 33.00 | 9005010010400 |
| 0.0413 | | 1.05 | 56.00 | 31.43 | 33.00 | 9005010010500 |
| 0.0421 | #58 | 1.07 | 60.00 | 35.40 | 37.00 | 9005010010700 |
| 0.0429 | #57 | 1.09 | 60.00 | 35.37 | 37.00 | 9005010010900 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 9005010011000 |
| 0.0453 | | 1.15 | 60.00 | 35.28 | 37.00 | 9005010011500 |
| 0.0465 | #56 | 1.18 | 60.00 | 35.23 | 37.00 | 9005010011800 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 39.22 | 41.00 | 9005010011900 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 9005010012000 |
| 0.0492 | | 1.25 | 65.00 | 39.13 | 41.00 | 9005010012500 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 9005010013000 |
| 0.0520 | #55 | 1.32 | 65.00 | 39.02 | 41.00 | 9005010013200 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 9005010014000 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9005010015000 |
| 0.0594 | #53 | 1.51 | 76.00 | 47.74 | 50.00 | 9005010015100 |
| 0.0610 | | 1.55 | 76.00 | 47.68 | 50.00 | 9005010015500 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 47.62 | 50.00 | 9005010015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9005010016000 |
| 0.0634 | #52 | 1.61 | 76.00 | 47.59 | 50.00 | 9005010016100 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 9005010017000 |
| 0.0689 | | 1.75 | 80.00 | 50.38 | 53.00 | 9005010017500 |
| 0.0701 | #50 | 1.78 | 80.00 | 50.33 | 53.00 | 9005010017800 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9005010018000 |
| 0.0728 | #49 | 1.85 | 80.00 | 50.23 | 53.00 | 9005010018500 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9005010019000 |
| 0.0768 | | 1.95 | 85.00 | 53.08 | 56.00 | 9005010019500 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 9005010019800 |
| 0.0783 | #47 | 1.99 | 85.00 | 53.02 | 56.00 | 9005010019900 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9005010020000 |
| 0.0807 | | 2.05 | 85.00 | 52.93 | 56.00 | 9005010020500 |
| 0.0811 | #46 | 2.06 | 85.00 | 52.91 | 56.00 | 9005010020600 |
| 0.0819 | #45 | 2.08 | 85.00 | 52.88 | 56.00 | 9005010020800 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9005010021000 |
| 0.0846 | | 2.15 | 90.00 | 55.78 | 59.00 | 9005010021500 |
| 0.0858 | #44 | 2.18 | 90.00 | 55.73 | 59.00 | 9005010021800 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9005010022000 |
| 0.0886 | | 2.25 | 90.00 | 55.63 | 59.00 | 9005010022500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0890 | #43 | 2.26 | 90.00 | 55.61 | 59.00 | 9005010022600 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9005010023000 |
| 0.0925 | | 2.35 | 90.00 | 55.48 | 59.00 | 9005010023500 |
| 0.0933 | #42 | 2.37 | 95.00 | 58.45 | 62.00 | 9005010023700 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 9005010023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9005010024000 |
| 0.0961 | #41 | 2.44 | 95.00 | 58.34 | 62.00 | 9005010024400 |
| 0.0965 | | 2.45 | 95.00 | 58.33 | 62.00 | 9005010024500 |
| 0.0980 | #40 | 2.49 | 95.00 | 58.27 | 62.00 | 9005010024900 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9005010025000 |
| 0.0992 | | 2.52 | 95.00 | 58.22 | 62.00 | 9005010025200 |
| 0.0996 | #39 | 2.53 | 95.00 | 58.21 | 62.00 | 9005010025300 |
| 0.1004 | | 2.55 | 95.00 | 58.18 | 62.00 | 9005010025500 |
| 0.1016 | #38 | 2.58 | 95.00 | 58.13 | 62.00 | 9005010025800 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9005010026000 |
| 0.1039 | #37 | 2.64 | 95.00 | 58.04 | 62.00 | 9005010026400 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9005010027000 |
| 0.1067 | #36 | 2.71 | 100.00 | 61.94 | 66.00 | 9005010027100 |
| 0.1083 | | 2.75 | 100.00 | 61.88 | 66.00 | 9005010027500 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9005010027800 |
| 0.1098 | #35 | 2.79 | 100.00 | 61.82 | 66.00 | 9005010027900 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9005010028000 |
| 0.1110 | #34 | 2.82 | 100.00 | 61.77 | 66.00 | 9005010028200 |
| 0.1122 | | 2.85 | 100.00 | 61.73 | 66.00 | 9005010028500 |
| 0.1130 | #33 | 2.87 | 100.00 | 61.70 | 66.00 | 9005010028700 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9005010029000 |
| 0.1161 | #32 | 2.95 | 100.00 | 61.58 | 66.00 | 9005010029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9005010030000 |
| 0.1201 | #31 | 3.05 | 106.00 | 64.43 | 69.00 | 9005010030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9005010031000 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9005010031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9005010032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9005010032500 |
| 0.1283 | #30 | 3.26 | 106.00 | 64.11 | 69.00 | 9005010032600 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9005010033000 |
| 0.1319 | | 3.35 | 106.00 | 63.98 | 69.00 | 9005010033500 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9005010034000 |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9005010034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9005010035000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-----|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1406 | 9/64 | #28 | 3.57 | 112.00 | 67.65 | 73.00 | 9005010035700 |
| 0.1417 | | | 3.60 | 112.00 | 67.60 | 73.00 | 9005010036000 |
| 0.1437 | | | 3.65 | 112.00 | 67.53 | 73.00 | 9005010036500 |
| 0.1441 | | #27 | 3.66 | 112.00 | 67.51 | 73.00 | 9005010036600 |
| 0.1457 | | | 3.70 | 112.00 | 67.45 | 73.00 | 9005010037000 |
| 0.1496 | | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9005010038000 |
| 0.1520 | | #24 | 3.86 | 119.00 | 72.21 | 78.00 | 9005010038600 |
| 0.1535 | | | 3.90 | 119.00 | 72.15 | 78.00 | 9005010039000 |
| 0.1539 | | #23 | 3.91 | 119.00 | 72.14 | 78.00 | 9005010039100 |
| 0.1563 | 5/32 | | 3.97 | 119.00 | 72.05 | 78.00 | 9005010039700 |
| 0.1571 | | #22 | 3.99 | 119.00 | 72.02 | 78.00 | 9005010039900 |
| 0.1575 | | | 4.00 | 119.00 | 72.00 | 78.00 | 9005010040000 |
| 0.1591 | | #21 | 4.04 | 119.00 | 71.94 | 78.00 | 9005010040400 |
| 0.1610 | | #20 | 4.09 | 119.00 | 71.87 | 78.00 | 9005010040900 |
| 0.1614 | | | 4.10 | 119.00 | 71.85 | 78.00 | 9005010041000 |
| 0.1654 | | | 4.20 | 119.00 | 71.70 | 78.00 | 9005010042000 |
| 0.1661 | | #19 | 4.22 | 119.00 | 71.67 | 78.00 | 9005010042200 |
| 0.1673 | | | 4.25 | 119.00 | 71.63 | 78.00 | 9005010042500 |
| 0.1693 | | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9005010043000 |
| 0.1720 | 11/64 | | 4.37 | 126.00 | 75.45 | 82.00 | 9005010043700 |
| 0.1728 | | #17 | 4.39 | 126.00 | 75.42 | 82.00 | 9005010043900 |
| 0.1732 | | | 4.40 | 126.00 | 75.40 | 82.00 | 9005010044000 |
| 0.1772 | | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9005010045000 |
| 0.1799 | | #15 | 4.57 | 126.00 | 75.15 | 82.00 | 9005010045700 |
| 0.1811 | | | 4.60 | 126.00 | 75.10 | 82.00 | 9005010046000 |
| 0.1819 | | #14 | 4.62 | 126.00 | 75.07 | 82.00 | 9005010046200 |
| 0.1850 | | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9005010047000 |
| 0.1870 | | | 4.75 | 126.00 | 74.88 | 82.00 | 9005010047500 |
| 0.1874 | 3/16 | | 4.76 | 132.00 | 79.86 | 87.00 | 9005010047600 |
| 0.1890 | | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9005010048000 |
| 0.1909 | | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9005010048500 |
| 0.1929 | | | 4.90 | 132.00 | 79.65 | 87.00 | 9005010049000 |
| 0.1937 | | #10 | 4.92 | 132.00 | 79.62 | 87.00 | 9005010049200 |
| 0.1961 | | #9 | 4.98 | 132.00 | 79.53 | 87.00 | 9005010049800 |
| 0.1969 | | | 5.00 | 132.00 | 79.50 | 87.00 | 9005010050000 |
| 0.1988 | | | 5.05 | 132.00 | 79.43 | 87.00 | 9005010050500 |
| 0.1992 | | #8 | 5.06 | 132.00 | 79.41 | 87.00 | 9005010050600 |
| 0.2008 | | | 5.10 | 132.00 | 79.35 | 87.00 | 9005010051000 |
| 0.2012 | | #7 | 5.11 | 132.00 | 79.34 | 87.00 | 9005010051100 |
| 0.2031 | 13/64 | | 5.16 | 132.00 | 79.26 | 87.00 | 9005010051600 |
| 0.2039 | | #6 | 5.18 | 132.00 | 79.23 | 87.00 | 9005010051800 |
| 0.2047 | | | 5.20 | 132.00 | 79.20 | 87.00 | 9005010052000 |
| 0.2055 | | #5 | 5.22 | 132.00 | 79.17 | 87.00 | 9005010052200 |
| 0.2087 | | | 5.30 | 132.00 | 79.05 | 87.00 | 9005010053000 |
| 0.2091 | | #4 | 5.31 | 139.00 | 83.04 | 91.00 | 9005010053100 |
| 0.2126 | | | 5.40 | 139.00 | 82.90 | 91.00 | 9005010054000 |
| 0.2130 | | #3 | 5.41 | 139.00 | 82.89 | 91.00 | 9005010054100 |
| 0.2165 | | | 5.50 | 139.00 | 82.75 | 91.00 | 9005010055000 |
| 0.2189 | 7/32 | | 5.56 | 139.00 | 82.66 | 91.00 | 9005010055600 |
| 0.2205 | | | 5.60 | 139.00 | 82.60 | 91.00 | 9005010056000 |
| 0.2209 | | #2 | 5.61 | 139.00 | 82.59 | 91.00 | 9005010056100 |
| 0.2244 | | | 5.70 | 139.00 | 82.45 | 91.00 | 9005010057000 |
| 0.2280 | | #1 | 5.79 | 139.00 | 82.32 | 91.00 | 9005010057900 |
| 0.2283 | | | 5.80 | 139.00 | 82.30 | 91.00 | 9005010058000 |
| 0.2323 | | | 5.90 | 139.00 | 82.15 | 91.00 | 9005010059000 |
| 0.2339 | | A | 5.94 | 139.00 | 82.09 | 91.00 | 9005010059400 |
| 0.2343 | 15/64 | | 5.95 | 139.00 | 82.08 | 91.00 | 9005010059500 |
| 0.2362 | | | 6.00 | 139.00 | 82.00 | 91.00 | 9005010060000 |
| 0.2378 | | B | 6.04 | 148.00 | 87.94 | 97.00 | 9005010060400 |
| 0.2402 | | | 6.10 | 148.00 | 87.85 | 97.00 | 9005010061000 |
| 0.2421 | | C | 6.15 | 148.00 | 87.78 | 97.00 | 9005010061500 |
| 0.2441 | | | 6.20 | 148.00 | 87.70 | 97.00 | 9005010062000 |
| 0.2461 | | D | 6.25 | 148.00 | 87.63 | 97.00 | 9005010062500 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----|----------------------|------------------------|----------------------|--------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2480 | | | 6.30 | 148.00 | 87.55 | 97.00 | 9005010063000 |
| 0.2500 | 1/4 | E | 6.35 | 148.00 | 87.48 | 97.00 | 9005010063500 |
| 0.2520 | | | 6.40 | 148.00 | 87.40 | 97.00 | 9005010064000 |
| 0.2559 | | | 6.50 | 148.00 | 87.25 | 97.00 | 9005010065000 |
| 0.2571 | | | 6.53 | 148.00 | 87.21 | 97.00 | 9005010065300 |
| 0.2598 | | | 6.60 | 148.00 | 87.10 | 97.00 | 9005010066000 |
| 0.2610 | | G | 6.63 | 148.00 | 87.06 | 97.00 | 9005010066300 |
| 0.2638 | | | 6.70 | 148.00 | 86.95 | 97.00 | 9005010067000 |
| 0.2657 | 17/64 | H | 6.75 | 156.00 | 91.88 | 102.00 | 9005010067500 |
| 0.2677 | | | 6.80 | 156.00 | 91.80 | 102.00 | 9005010068000 |
| 0.2717 | | I | 6.90 | 156.00 | 91.65 | 102.00 | 9005010069000 |
| 0.2756 | | | 7.00 | 156.00 | 91.50 | 102.00 | 9005010070000 |
| 0.2772 | | | 7.04 | 156.00 | 91.44 | 102.00 | 9005010070400 |
| 0.2795 | | | 7.10 | 156.00 | 91.35 | 102.00 | 9005010071000 |
| 0.2811 | 9/32 | K | 7.14 | 156.00 | 91.29 | 102.00 | 9005010071400 |
| 0.2835 | | | 7.20 | 156.00 | 91.20 | 102.00 | 9005010072000 |
| 0.2874 | | | 7.30 | 156.00 | 91.05 | 102.00 | 9005010073000 |
| 0.2902 | | L | 7.37 | 156.00 | 90.95 | 102.00 | 9005010073700 |
| 0.2913 | | | 7.40 | 156.00 | 90.90 | 102.00 | 9005010074000 |
| 0.2949 | | M | 7.49 | 156.00 | 90.77 | 102.00 | 9005010074900 |
| 0.2953 | | | 7.50 | 156.00 | 90.75 | 102.00 | 9005010075000 |
| 0.2969 | 19/64 | | 7.54 | 165.00 | 97.69 | 109.00 | 9005010075400 |
| 0.2992 | | | 7.60 | 165.00 | 97.60 | 109.00 | 9005010076000 |
| 0.3020 | | N | 7.67 | 165.00 | 97.50 | 109.00 | 9005010076700 |
| 0.3031 | | | 7.70 | 165.00 | 97.45 | 109.00 | 9005010077000 |
| 0.3071 | | | 7.80 | 165.00 | 97.30 | 109.00 | 9005010078000 |
| 0.3110 | | | 7.90 | 165.00 | 97.15 | 109.00 | 9005010079000 |
| 0.3126 | 5/16 | | 7.94 | 165.00 | 97.09 | 109.00 | 9005010079400 |
| 0.3150 | | | 8.00 | 165.00 | 97.00 | 109.00 | 9005010080000 |
| 0.3161 | | O | 8.03 | 165.00 | 96.96 | 109.00 | 9005010080300 |
| 0.3189 | | | 8.10 | 165.00 | 96.85 | 109.00 | 9005010081000 |
| 0.3228 | | P | 8.20 | 165.00 | 96.70 | 109.00 | 9005010082000 |
| 0.3268 | | | 8.30 | 165.00 | 96.55 | 109.00 | 9005010083000 |
| 0.3280 | 21/64 | | 8.33 | 165.00 | 96.51 | 109.00 | 9005010083300 |
| 0.3307 | | | 8.40 | 165.00 | 96.40 | 109.00 | 9005010084000 |
| 0.3319 | | Q | 8.43 | 165.00 | 96.36 | 109.00 | 9005010084300 |
| 0.3346 | | | 8.50 | 165.00 | 96.25 | 109.00 | 9005010085000 |
| 0.3386 | | | 8.60 | 175.00 | 102.10 | 115.00 | 9005010086000 |
| 0.3390 | | R | 8.61 | 175.00 | 102.09 | 115.00 | 9005010086100 |
| 0.3425 | | | 8.70 | 175.00 | 101.95 | 115.00 | 9005010087000 |
| 0.3437 | 11/32 | | 8.73 | 175.00 | 101.91 | 115.00 | 9005010087300 |
| 0.3465 | | | 8.80 | 175.00 | 101.80 | 115.00 | 9005010088000 |
| 0.3504 | | | 8.90 | 175.00 | 101.65 | 115.00 | 9005010089000 |
| 0.3543 | | | 9.00 | 175.00 | 101.50 | 115.00 | 9005010090000 |
| 0.3579 | | T | 9.09 | 175.00 | 101.37 | 115.00 | 9005010090900 |
| 0.3583 | | | 9.10 | 175.00 | 101.35 | 115.00 | 9005010091000 |
| 0.3594 | 23/64 | | 9.13 | 175.00 | 101.31 | 115.00 | 9005010091300 |
| 0.3622 | | | 9.20 | 175.00 | 101.20 | 115.00 | 9005010092000 |
| 0.3661 | | | 9.30 | 175.00 | 101.05 | 115.00 | 9005010093000 |
| 0.3677 | | U | 9.34 | 175.00 | 100.99 | 115.00 | 9005010093400 |
| 0.3681 | | | 9.35 | 175.00 | 100.98 | 115.00 | 9005010093500 |
| 0.3701 | | | 9.40 | 175.00 | 100.90 | 115.00 | 9005010094000 |
| 0.3740 | | | 9.50 | 175.00 | 100.75 | 115.00 | 9005010095000 |
| 0.3748 | 3/8 | | 9.52 | 184.00 | 106.72 | 121.00 | 9005010095200 |
| 0.3772 | | V | 9.58 | 184.00 | 106.63 | 121.00 | 9005010095800 |
| 0.3780 | | | 9.60 | 184.00 | 106.60 | 121.00 | 9005010096000 |
| 0.3858 | | W | 9.80 | 184.00 | 106.30 | 121.00 | 9005010098000 |
| 0.3898 | | | 9.90 | 184.00 | 106.15 | 121.00 | 9005010099000 |
| 0.3906 | 25/64 | | 9.92 | 184.00 | 106.12 | 121.00 | 9005010099200 |
| 0.3937 | | | 10.00 | 184.00 | 106.00 | 121.00 | 9005010100000 |
| 0.3969 | | X | 10.08 | 184.00 | 105.88 | 121.00 | 9005010100800 |
| 0.3976 | | | 10.10 | 184.00 | 105.85 | 121.00 | 9005010101000 |
| 0.4016 | | | 10.20 | 184.00 | 105.70 | 121.00 | 9005010102000 |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4039 | Y | 10.26 | 184.00 | 105.61 | 121.00 | 9005010102600 |
| 0.4055 | | 10.30 | 184.00 | 105.55 | 121.00 | 9005010103000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 105.52 | 121.00 | 9005010103200 |
| 0.4094 | | 10.40 | 184.00 | 105.40 | 121.00 | 9005010104000 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9005010105000 |
| 0.4173 | | 10.60 | 184.00 | 105.10 | 121.00 | 9005010106000 |
| 0.4213 | | 10.70 | 195.00 | 111.95 | 128.00 | 9005010107000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 111.92 | 128.00 | 9005010107200 |
| 0.4252 | | 10.80 | 195.00 | 111.80 | 128.00 | 9005010108000 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9005010110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9005010111100 |
| 0.4409 | | 11.20 | 195.00 | 111.20 | 128.00 | 9005010112000 |
| 0.4449 | | 11.30 | 195.00 | 111.05 | 128.00 | 9005010113000 |
| 0.4488 | | 11.40 | 195.00 | 110.90 | 128.00 | 9005010114000 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9005010115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9005010115100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | |
| 0.4567 | | 11.60 | 195.00 | 110.60 | 128.00 | 9005010116000 |
| 0.4626 | | 11.75 | 195.00 | 110.38 | 128.00 | 9005010117500 |
| 0.4646 | | 11.80 | 195.00 | 110.30 | 128.00 | 9005010118000 |
| 0.4685 | | 11.90 | 205.00 | 116.15 | 134.00 | 9005010119000 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 116.14 | 134.00 | 9005010119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9005010120000 |
| 0.4803 | | 12.20 | 205.00 | 115.70 | 134.00 | 9005010122000 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 115.55 | 134.00 | 9005010123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9005010125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 114.95 | 134.00 | 9005010127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9005010130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 114.35 | 134.00 | 9005010131000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 119.77 | 140.00 | 9005010134900 |
| 0.5469 | 35/64 | 13.89 | 214.00 | 119.17 | 140.00 | 9005010138900 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9005010140000 |



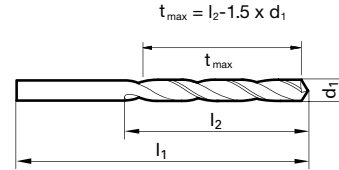
Tool material

HSS

Surface



- | | | | |
|----------|-----------------|---|---|
| P | Steel | • | web thinning $\geq \varnothing 1.000$ • relieved cone • wide flutes • in case of unsatisfactory chip evacuation |
| M | Stainless steel | | |
| K | Cast iron | • | cast iron and steels up to 1000 N/mm ² • Not recommended for: CrNi steels, stainless steels |
| N | Aluminum | • | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 518

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9005350010000 |
| 0.0402 | #60 | 1.02 | 56.00 | 31.47 | 33.00 | 9005350010200 |
| 0.0409 | #59 | 1.04 | 56.00 | 31.44 | 33.00 | 9005350010400 |
| 0.0413 | | 1.05 | 56.00 | 31.43 | 33.00 | 9005350010500 |
| 0.0421 | #58 | 1.07 | 60.00 | 35.40 | 37.00 | 9005350010700 |
| 0.0429 | #57 | 1.09 | 60.00 | 35.37 | 37.00 | 9005350010900 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 9005350011000 |
| 0.0453 | | 1.15 | 60.00 | 35.28 | 37.00 | 9005350011500 |
| 0.0465 | #56 | 1.18 | 60.00 | 35.23 | 37.00 | 9005350011800 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 39.22 | 41.00 | 9005350011900 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 9005350012000 |
| 0.0492 | | 1.25 | 65.00 | 39.13 | 41.00 | 9005350012500 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 9005350013000 |
| 0.0520 | #55 | 1.32 | 65.00 | 39.02 | 41.00 | 9005350013200 |
| 0.0531 | | 1.35 | 70.00 | 42.98 | 45.00 | 9005350013500 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 9005350014000 |
| 0.0571 | | 1.45 | 70.00 | 42.83 | 45.00 | 9005350014500 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9005350015000 |
| 0.0594 | #53 | 1.51 | 76.00 | 47.74 | 50.00 | 9005350015100 |
| 0.0598 | | 1.52 | 76.00 | 47.72 | 50.00 | 9005350015200 |
| 0.0610 | | 1.55 | 76.00 | 47.68 | 50.00 | 9005350015500 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 47.62 | 50.00 | 9005350015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9005350016000 |
| 0.0650 | | 1.65 | 76.00 | 47.53 | 50.00 | 9005350016500 |
| 0.0657 | | 1.67 | 76.00 | 47.50 | 50.00 | 9005350016700 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 9005350017000 |
| 0.0689 | | 1.75 | 80.00 | 50.38 | 53.00 | 9005350017500 |
| 0.0701 | #50 | 1.78 | 80.00 | 50.33 | 53.00 | 9005350017800 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9005350018000 |
| 0.0728 | #49 | 1.85 | 80.00 | 50.23 | 53.00 | 9005350018500 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9005350019000 |
| 0.0760 | #48 | 1.93 | 85.00 | 53.11 | 56.00 | 9005350019300 |
| 0.0768 | | 1.95 | 85.00 | 53.08 | 56.00 | 9005350019500 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 9005350019800 |
| 0.0783 | #47 | 1.99 | 85.00 | 53.02 | 56.00 | 9005350019900 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9005350020000 |
| 0.0807 | | 2.05 | 85.00 | 52.93 | 56.00 | 9005350020500 |
| 0.0811 | #46 | 2.06 | 85.00 | 52.91 | 56.00 | 9005350020600 |
| 0.0819 | #45 | 2.08 | 85.00 | 52.88 | 56.00 | 9005350020800 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9005350021000 |
| 0.0846 | | 2.15 | 90.00 | 55.78 | 59.00 | 9005350021500 |
| 0.0858 | #44 | 2.18 | 90.00 | 55.73 | 59.00 | 9005350021800 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9005350022000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0886 | | 2.25 | 90.00 | 55.63 | 59.00 | 9005350022500 |
| 0.0890 | #43 | 2.26 | 90.00 | 55.61 | 59.00 | 9005350022600 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9005350023000 |
| 0.0925 | | 2.35 | 90.00 | 55.48 | 59.00 | 9005350023500 |
| 0.0933 | #42 | 2.37 | 95.00 | 58.45 | 62.00 | 9005350023700 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 9005350023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9005350024000 |
| 0.0961 | #41 | 2.44 | 95.00 | 58.34 | 62.00 | 9005350024400 |
| 0.0965 | | 2.45 | 95.00 | 58.33 | 62.00 | 9005350024500 |
| 0.0980 | #40 | 2.49 | 95.00 | 58.27 | 62.00 | 9005350024900 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9005350025000 |
| 0.0996 | #39 | 2.53 | 95.00 | 58.21 | 62.00 | 9005350025300 |
| 0.1004 | | 2.55 | 95.00 | 58.18 | 62.00 | 9005350025500 |
| 0.1016 | #38 | 2.58 | 95.00 | 58.13 | 62.00 | 9005350025800 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9005350026000 |
| 0.1039 | #37 | 2.64 | 95.00 | 58.04 | 62.00 | 9005350026400 |
| 0.1043 | | 2.65 | 95.00 | 58.03 | 62.00 | 9005350026500 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9005350027000 |
| 0.1067 | #36 | 2.71 | 100.00 | 61.94 | 66.00 | 9005350027100 |
| 0.1083 | | 2.75 | 100.00 | 61.88 | 66.00 | 9005350027500 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9005350027800 |
| 0.1098 | #35 | 2.79 | 100.00 | 61.82 | 66.00 | 9005350027900 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9005350028000 |
| 0.1110 | #34 | 2.82 | 100.00 | 61.77 | 66.00 | 9005350028200 |
| 0.1114 | | 2.83 | 100.00 | 61.76 | 66.00 | 9005350028300 |
| 0.1122 | | 2.85 | 100.00 | 61.73 | 66.00 | 9005350028500 |
| 0.1130 | #33 | 2.87 | 100.00 | 61.70 | 66.00 | 9005350028700 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9005350029000 |
| 0.1161 | #32 | 2.95 | 100.00 | 61.58 | 66.00 | 9005350029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9005350030000 |
| 0.1201 | #31 | 3.05 | 106.00 | 64.43 | 69.00 | 9005350030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9005350031000 |
| 0.1240 | | 3.15 | 106.00 | 64.28 | 69.00 | 9005350031500 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9005350031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9005350032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9005350032500 |
| 0.1283 | #30 | 3.26 | 106.00 | 64.11 | 69.00 | 9005350032600 |
| 0.1287 | | 3.27 | 106.00 | 64.10 | 69.00 | 9005350032700 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9005350033000 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9005350034000 |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9005350034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9005350035000 |
| 0.1406 | 9/64 #28 | 3.57 | 112.00 | 67.65 | 73.00 | 9005350035700 |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9005350036000 |
| 0.1441 | #27 | 3.66 | 112.00 | 67.51 | 73.00 | 9005350036600 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9005350037000 |
| 0.1469 | #26 | 3.73 | 112.00 | 67.41 | 73.00 | 9005350037300 |
| 0.1476 | | 3.75 | 112.00 | 67.38 | 73.00 | 9005350037500 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9005350038000 |
| 0.1520 | #24 | 3.86 | 119.00 | 72.21 | 78.00 | 9005350038600 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9005350039000 |
| 0.1539 | #23 | 3.91 | 119.00 | 72.14 | 78.00 | 9005350039100 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9005350039700 |
| 0.1571 | #22 | 3.99 | 119.00 | 72.02 | 78.00 | 9005350039900 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9005350040000 |
| 0.1591 | #21 | 4.04 | 119.00 | 71.94 | 78.00 | 9005350040400 |
| 0.1610 | #20 | 4.09 | 119.00 | 71.87 | 78.00 | 9005350040900 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9005350041000 |
| 0.1634 | | 4.15 | 119.00 | 71.78 | 78.00 | 9005350041500 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9005350042000 |
| 0.1661 | #19 | 4.22 | 119.00 | 71.67 | 78.00 | 9005350042200 |
| 0.1673 | | 4.25 | 119.00 | 71.63 | 78.00 | 9005350042500 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9005350043000 |
| 0.1713 | | 4.35 | 126.00 | 75.48 | 82.00 | 9005350043500 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 75.45 | 82.00 | 9005350043700 |
| 0.1728 | #17 | 4.39 | 126.00 | 75.42 | 82.00 | 9005350043900 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9005350044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9005350045000 |
| 0.1799 | #15 | 4.57 | 126.00 | 75.15 | 82.00 | 9005350045700 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9005350046000 |
| 0.1819 | #14 | 4.62 | 126.00 | 75.07 | 82.00 | 9005350046200 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9005350047000 |
| 0.1870 | | 4.75 | 126.00 | 74.88 | 82.00 | 9005350047500 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9005350047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9005350048000 |
| 0.1909 | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9005350048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9005350049000 |
| 0.1937 | #10 | 4.92 | 132.00 | 79.62 | 87.00 | 9005350049200 |
| 0.1961 | #9 | 4.98 | 132.00 | 79.53 | 87.00 | 9005350049800 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9005350050000 |
| 0.1988 | | 5.05 | 132.00 | 79.43 | 87.00 | 9005350050500 |
| 0.1992 | #8 | 5.06 | 132.00 | 79.41 | 87.00 | 9005350050600 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9005350051000 |
| 0.2012 | #7 | 5.11 | 132.00 | 79.34 | 87.00 | 9005350051100 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9005350051600 |
| 0.2039 | #6 | 5.18 | 132.00 | 79.23 | 87.00 | 9005350051800 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9005350052000 |
| 0.2055 | #5 | 5.22 | 132.00 | 79.17 | 87.00 | 9005350052200 |
| 0.2067 | | 5.25 | 132.00 | 79.13 | 87.00 | 9005350052500 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9005350053000 |
| 0.2091 | #4 | 5.31 | 139.00 | 83.04 | 91.00 | 9005350053100 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9005350054000 |
| 0.2130 | #3 | 5.41 | 139.00 | 82.89 | 91.00 | 9005350054100 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9005350055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9005350055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9005350056000 |
| 0.2209 | #2 | 5.61 | 139.00 | 82.59 | 91.00 | 9005350056100 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9005350057000 |
| 0.2264 | | 5.75 | 139.00 | 82.38 | 91.00 | 9005350057500 |
| 0.2280 | #1 | 5.79 | 139.00 | 82.32 | 91.00 | 9005350057900 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9005350058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9005350059000 |
| 0.2339 | A | 5.94 | 139.00 | 82.09 | 91.00 | 9005350059400 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 82.08 | 91.00 | 9005350059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9005350060000 |
| 0.2378 | B | 6.04 | 148.00 | 87.94 | 97.00 | 9005350060400 |
| 0.2382 | | 6.05 | 148.00 | 87.93 | 97.00 | 9005350060500 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9005350061000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2421 | C | 6.15 | 148.00 | 87.78 | 97.00 | 9005350061500 | |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9005350062000 | |
| 0.2461 | D | 6.25 | 148.00 | 87.63 | 97.00 | 9005350062500 | |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9005350063000 | |
| 0.2500 | 1/4 | E | 6.35 | 148.00 | 87.48 | 97.00 | 9005350063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9005350064000 | |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9005350065000 | |
| 0.2571 | | 6.53 | 148.00 | 87.21 | 97.00 | 9005350065300 | |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9005350066000 | |
| 0.2610 | G | 6.63 | 148.00 | 87.06 | 97.00 | 9005350066300 | |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9005350067000 | |
| 0.2657 | 17/64 | H | 6.75 | 156.00 | 91.88 | 102.00 | 9005350067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9005350068000 | |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9005350069000 | |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9005350070000 | |
| 0.2768 | J | 7.03 | 156.00 | 91.46 | 102.00 | 9005350070300 | |
| 0.2772 | | 7.04 | 156.00 | 91.44 | 102.00 | 9005350070400 | |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9005350071000 | |
| 0.2811 | 9/32 | K | 7.14 | 156.00 | 91.29 | 102.00 | 9005350071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9005350072000 | |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9005350073000 | |
| 0.2902 | L | 7.37 | 156.00 | 90.95 | 102.00 | 9005350073700 | |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9005350074000 | |
| 0.2933 | | 7.45 | 156.00 | 90.83 | 102.00 | 9005350074500 | |
| 0.2949 | M | 7.49 | 156.00 | 90.77 | 102.00 | 9005350074900 | |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9005350075000 | |
| 0.2969 | 19/64 | | 7.54 | 165.00 | 97.69 | 109.00 | 9005350075400 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9005350076000 | |
| 0.3020 | N | 7.67 | 165.00 | 97.50 | 109.00 | 9005350076700 | |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9005350077000 | |
| 0.3051 | | 7.75 | 165.00 | 97.38 | 109.00 | 9005350077500 | |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9005350078000 | |
| 0.3091 | | 7.85 | 165.00 | 97.23 | 109.00 | 9005350078500 | |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9005350079000 | |
| 0.3126 | 5/16 | | 7.94 | 165.00 | 97.09 | 109.00 | 9005350079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9005350080000 | |
| 0.3161 | O | 8.03 | 165.00 | 96.96 | 109.00 | 9005350080300 | |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9005350081000 | |
| 0.3228 | | 8.20 | 165.00 | 96.70 | 109.00 | 9005350082000 | |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9005350083000 | |
| 0.3280 | 21/64 | | 8.33 | 165.00 | 96.51 | 109.00 | 9005350083300 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9005350084000 | |
| 0.3319 | Q | 8.43 | 165.00 | 96.36 | 109.00 | 9005350084300 | |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9005350085000 | |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9005350086000 | |
| 0.3390 | R | 8.61 | 175.00 | 102.09 | 115.00 | 9005350086100 | |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9005350087000 | |
| 0.3437 | 11/32 | | 8.73 | 175.00 | 101.91 | 115.00 | 9005350087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9005350088000 | |
| 0.3480 | S | 8.84 | 175.00 | 101.74 | 115.00 | 9005350088400 | |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9005350089000 | |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9005350090000 | |
| 0.3579 | T | 9.09 | 175.00 | 101.37 | 115.00 | 9005350090900 | |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9005350091000 | |
| 0.3594 | 23/64 | | 9.13 | 175.00 | 101.31 | 115.00 | 9005350091300 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9005350092000 | |
| 0.3642 | | 9.25 | 175.00 | 101.13 | 115.00 | 9005350092500 | |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9005350093000 | |
| 0.3681 | | 9.35 | 175.00 | 100.98 | 115.00 | 9005350093500 | |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9005350094000 | |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9005350095000 | |
| 0.3748 | 3/8 | | 9.52 | 184.00 | 106.72 | 121.00 | 9005350095200 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9005350096000 | |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9005350097000 | |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9005350098000 | |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9005350099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 106.12 | 121.00 | 9005350099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9005350100000 |
| 0.3969 | X | 10.08 | 184.00 | 105.88 | 121.00 | 9005350100800 |
| 0.3976 | | 10.10 | 184.00 | 105.85 | 121.00 | 9005350101000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9005350102000 |
| 0.4055 | | 10.30 | 184.00 | 105.55 | 121.00 | 9005350103000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 105.52 | 121.00 | 9005350103200 |
| 0.4094 | | 10.40 | 184.00 | 105.40 | 121.00 | 9005350104000 |
| 0.4130 | Z | 10.49 | 184.00 | 105.27 | 121.00 | 9005350104900 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9005350105000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 111.92 | 128.00 | 9005350107200 |
| 0.4252 | | 10.80 | 195.00 | 111.80 | 128.00 | 9005350108000 |
| 0.4291 | | 10.90 | 195.00 | 111.65 | 128.00 | 9005350109000 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9005350110000 |
| 0.4370 | | 11.10 | 195.00 | 111.35 | 128.00 | 9005350111000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9005350111100 |
| 0.4449 | | 11.30 | 195.00 | 111.05 | 128.00 | 9005350113000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4488 | | 11.40 | 195.00 | 110.90 | 128.00 | 9005350114000 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9005350115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9005350115100 |
| 0.4646 | | 11.80 | 195.00 | 110.30 | 128.00 | 9005350118000 |
| 0.4685 | | 11.90 | 205.00 | 116.15 | 134.00 | 9005350119000 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 116.14 | 134.00 | 9005350119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9005350120000 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 115.55 | 134.00 | 9005350123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9005350125000 |
| 0.4961 | | 12.60 | 205.00 | 115.10 | 134.00 | 9005350126000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 114.95 | 134.00 | 9005350127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9005350130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 114.35 | 134.00 | 9005350131000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 119.77 | 140.00 | 9005350134900 |
| 0.5315 | | 13.50 | 214.00 | 119.75 | 140.00 | 9005350135000 |
| 0.5469 | 35/64 | 13.89 | 214.00 | 119.17 | 140.00 | 9005350138900 |
| 0.5472 | | 13.90 | 214.00 | 119.15 | 140.00 | 9005350139000 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9005350140000 |



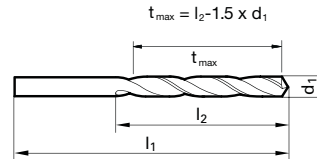
Tool material

HSS

Surface



- | | | | |
|----------|-----------------|---|---|
| P | Steel | • | web thinning $\geq \varnothing 1.000$ • relieved cone • wide flutes • in case of unsatisfactory chip evacuation |
| M | Stainless steel | | |
| K | Cast iron | • | cast iron and steels up to 1000 N/mm ² • Not recommended for: CrNi steels, stainless steels |
| N | Aluminum | • | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 540

Shank diameter = cut diameter

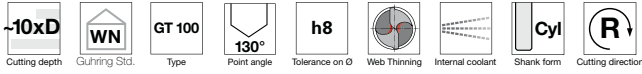
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9006680010000 |
| 0.0429 | #57 | 1.09 | 60.00 | 35.37 | 37.00 | 9006680010900 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 9006680011000 |
| 0.0465 | #56 | 1.18 | 60.00 | 35.23 | 37.00 | 9006680011800 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 39.22 | 41.00 | 9006680011900 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 9006680012000 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 9006680013000 |
| 0.0520 | #55 | 1.32 | 65.00 | 39.02 | 41.00 | 9006680013200 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 9006680014000 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9006680015000 |
| 0.0594 | #53 | 1.51 | 76.00 | 47.74 | 50.00 | 9006680015100 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 47.62 | 50.00 | 9006680015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9006680016000 |
| 0.0650 | | 1.65 | 76.00 | 47.53 | 50.00 | 9006680016500 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 9006680017000 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9006680018000 |
| 0.0728 | #49 | 1.85 | 80.00 | 50.23 | 53.00 | 9006680018500 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9006680019000 |
| 0.0760 | #48 | 1.93 | 85.00 | 53.11 | 56.00 | 9006680019300 |
| 0.0768 | | 1.95 | 85.00 | 53.08 | 56.00 | 9006680019500 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 9006680019800 |
| 0.0783 | #47 | 1.99 | 85.00 | 53.02 | 56.00 | 9006680019900 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9006680020000 |
| 0.0811 | #46 | 2.06 | 85.00 | 52.91 | 56.00 | 9006680020600 |
| 0.0819 | #45 | 2.08 | 85.00 | 52.88 | 56.00 | 9006680020800 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9006680021000 |
| 0.0858 | #44 | 2.18 | 90.00 | 55.73 | 59.00 | 9006680021800 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9006680022000 |
| 0.0886 | | 2.25 | 90.00 | 55.63 | 59.00 | 9006680022500 |
| 0.0890 | #43 | 2.26 | 90.00 | 55.61 | 59.00 | 9006680022600 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9006680023000 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 9006680023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9006680024000 |
| 0.0980 | #40 | 2.49 | 95.00 | 58.27 | 62.00 | 9006680024900 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9006680025000 |
| 0.0996 | #39 | 2.53 | 95.00 | 58.21 | 62.00 | 9006680025300 |
| 0.1016 | #38 | 2.58 | 95.00 | 58.13 | 62.00 | 9006680025800 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9006680026000 |
| 0.1039 | #37 | 2.64 | 95.00 | 58.04 | 62.00 | 9006680026400 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9006680027000 |
| 0.1067 | #36 | 2.71 | 100.00 | 61.94 | 66.00 | 9006680027100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9006680027800 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9006680028000 |
| 0.1110 | #34 | 2.82 | 100.00 | 61.77 | 66.00 | 9006680028200 |
| 0.1130 | #33 | 2.87 | 100.00 | 61.70 | 66.00 | 9006680028700 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9006680029000 |
| 0.1161 | #32 | 2.95 | 100.00 | 61.58 | 66.00 | 9006680029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9006680030000 |
| 0.1201 | #31 | 3.05 | 106.00 | 64.43 | 69.00 | 9006680030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9006680031000 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9006680031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9006680032000 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9006680033000 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9006680034000 |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9006680034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9006680035000 |
| 0.1406 | 9/64 | #28 | 112.00 | 67.65 | 73.00 | 9006680035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9006680036000 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9006680037000 |
| 0.1469 | #26 | 3.73 | 112.00 | 67.41 | 73.00 | 9006680037300 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9006680038000 |
| 0.1520 | #24 | 3.86 | 119.00 | 72.21 | 78.00 | 9006680038600 |
| 0.1524 | | 3.87 | 119.00 | 72.20 | 78.00 | 9006680038700 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9006680039000 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9006680039700 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9006680040000 |
| 0.1591 | #21 | 4.04 | 119.00 | 71.94 | 78.00 | 9006680040400 |
| 0.1610 | #20 | 4.09 | 119.00 | 71.87 | 78.00 | 9006680040900 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9006680041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9006680042000 |
| 0.1661 | #19 | 4.22 | 119.00 | 71.67 | 78.00 | 9006680042200 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9006680043000 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 75.45 | 82.00 | 9006680043700 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9006680044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9006680045000 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9006680046000 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9006680047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9006680047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9006680048000 |
| 0.1909 | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9006680048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9006680049000 |
| 0.1933 | | 4.91 | 132.00 | 79.64 | 87.00 | 9006680049100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1937 | #10 | 4.92 | 132.00 | 79.62 | 87.00 | 9006680049200 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9006680050000 |
| 0.1992 | #8 | 5.06 | 132.00 | 79.41 | 87.00 | 9006680050600 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9006680051000 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9006680051600 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9006680052000 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9006680053000 |
| 0.2091 | #4 | 5.31 | 139.00 | 83.04 | 91.00 | 9006680053100 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9006680054000 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9006680055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9006680055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9006680056000 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9006680057000 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9006680058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9006680059000 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 82.08 | 91.00 | 9006680059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9006680060000 |
| 0.2378 | B | 6.04 | 148.00 | 87.94 | 97.00 | 9006680060400 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9006680061000 |
| 0.2421 | C | 6.15 | 148.00 | 87.78 | 97.00 | 9006680061500 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9006680062000 |
| 0.2461 | D | 6.25 | 148.00 | 87.63 | 97.00 | 9006680062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9006680063000 |
| 0.2500 | 1/4 | 6.35 | 148.00 | 87.48 | 97.00 | 9006680063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9006680064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9006680065000 |
| 0.2571 | F | 6.53 | 148.00 | 87.21 | 97.00 | 9006680065300 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9006680066000 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9006680067000 |
| 0.2657 | 17/64 | 6.75 | 156.00 | 91.88 | 102.00 | 9006680067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9006680068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9006680069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9006680070000 |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9006680071000 |
| 0.2811 | 9/32 | 7.14 | 156.00 | 91.29 | 102.00 | 9006680071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9006680072000 |
| 0.2854 | | 7.25 | 156.00 | 91.13 | 102.00 | 9006680072500 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9006680073000 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9006680074000 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9006680075000 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9006680076000 |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9006680077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9006680078000 |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9006680079000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3126 | 5/16 | 7.94 | 165.00 | 97.09 | 109.00 | 9006680079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9006680080000 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9006680081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9006680082000 |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9006680083000 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9006680084000 |
| 0.3319 | Q | 8.43 | 165.00 | 96.36 | 109.00 | 9006680084300 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9006680085000 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9006680086000 |
| 0.3390 | R | 8.61 | 175.00 | 102.09 | 115.00 | 9006680086100 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9006680087000 |
| 0.3437 | 11/32 | 8.73 | 175.00 | 101.91 | 115.00 | 9006680087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9006680088000 |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9006680089000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9006680090000 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9006680091000 |
| 0.3594 | 23/64 | 9.13 | 175.00 | 101.31 | 115.00 | 9006680091300 |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9006680093000 |
| 0.3677 | U | 9.34 | 175.00 | 100.99 | 115.00 | 9006680093400 |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9006680094000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9006680095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 106.72 | 121.00 | 9006680095200 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9006680096000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9006680097000 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9006680098000 |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9006680099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 106.12 | 121.00 | 9006680099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9006680100000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9006680102000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 105.52 | 121.00 | 9006680103200 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9006680105000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 111.92 | 128.00 | 9006680107200 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9006680110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9006680111100 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9006680115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9006680115100 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 116.14 | 134.00 | 9006680119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9006680120000 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 115.55 | 134.00 | 9006680123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9006680125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 114.95 | 134.00 | 9006680127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9006680130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 114.35 | 134.00 | 9006680131000 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9006680140000 |

Taper Length



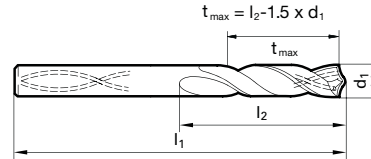
Tool material

HSS

Surface



- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 3.000$ • relieved cone • also for drilling through drill bushes • especially for drilling depths $> 5xD$ |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | laminated sheet metal • steel and cast steel, grey cast iron • austenitic steels up to 800 N/mm ² |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 513

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1181 | 3.00 | 100.00 | 61.50 | 66.00 | 9003900030000 |
| 0.1299 | 3.30 | 106.00 | 64.05 | 69.00 | 9003900033000 |
| 0.1378 | 3.50 | 112.00 | 67.75 | 73.00 | 9003900035000 |
| 0.1575 | 4.00 | 119.00 | 72.00 | 78.00 | 9003900040000 |
| 0.1654 | 4.20 | 119.00 | 71.70 | 78.00 | 9003900042000 |
| 0.1772 | #16 4.50 | 126.00 | 75.25 | 82.00 | 9003900045000 |
| 0.1969 | 5.00 | 132.00 | 79.50 | 87.00 | 9003900050000 |
| 0.2165 | 5.50 | 139.00 | 82.75 | 91.00 | 9003900055000 |
| 0.2362 | 6.00 | 139.00 | 82.00 | 91.00 | 9003900060000 |
| 0.2559 | 6.50 | 148.00 | 87.25 | 97.00 | 9003900065000 |
| 0.2677 | 6.80 | 156.00 | 91.80 | 102.00 | 9003900068000 |
| 0.2756 | 7.00 | 156.00 | 91.50 | 102.00 | 9003900070000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|--------|----------------------|------------------------|-------------------------------|-------|
| inch | wire/ltr mm | mm | | | | |
| 0.2953 | 7.50 | 156.00 | 90.75 | 102.00 | 9003900075000 | |
| 0.3150 | 8.00 | 165.00 | 97.00 | 109.00 | 9003900080000 | |
| 0.3346 | 8.50 | 165.00 | 96.25 | 109.00 | 9003900085000 | |
| 0.3543 | 9.00 | 175.00 | 101.50 | 115.00 | 9003900090000 | |
| 0.3740 | 9.50 | 175.00 | 100.75 | 115.00 | 9003900095000 | |
| 0.3937 | 10.00 | 184.00 | 106.00 | 121.00 | 9003900100000 | |
| 0.4016 | 10.20 | 184.00 | 105.70 | 121.00 | 9003900102000 | |
| 0.4134 | 10.50 | 184.00 | 105.25 | 121.00 | 9003900105000 | |
| 0.4331 | 11.00 | 195.00 | 111.50 | 128.00 | 9003900110000 | |
| 0.4528 | 11.50 | 195.00 | 110.75 | 128.00 | 9003900115000 | |
| 0.4724 | 12.00 | 205.00 | 116.00 | 134.00 | 9003900120000 | |
| 0.5118 | 13.00 | 205.00 | 114.50 | 134.00 | 9003900130000 | |

Taper Length



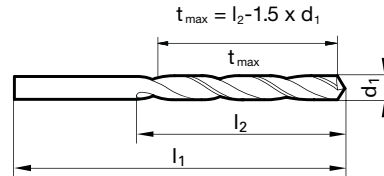
Tool material

HSCO

Surface



- | | | |
|--------------------------|---|---|
| P Steel | ● | web thinning $\geq \varnothing 1.000$ • relieved cone • Co-alloyed high speed steel • increased wear resistance |
| M Stainless steel | ○ | |
| K Cast iron | ● | alloyed/unalloyed steels and castings over 800 N/mm ² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels |
| N Aluminum | ● | |
| S Titanium alloys | ○ | |
| H Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 510

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0197 | | 0.50 | 32.00 | 11.25 | 12.00 | 9003170005000 |
| 0.0256 | | 0.65 | 38.00 | 17.03 | 18.00 | 9003170006500 |
| 0.0276 | | 0.70 | 42.00 | 19.95 | 21.00 | 9003170007000 |
| 0.0295 | | 0.75 | 42.00 | 19.88 | 21.00 | 9003170007500 |
| 0.0315 | | 0.80 | 46.00 | 23.80 | 25.00 | 9003170008000 |
| 0.0335 | | 0.85 | 46.00 | 23.73 | 25.00 | 9003170008500 |
| 0.0354 | | 0.90 | 51.00 | 27.65 | 29.00 | 9003170009000 |
| 0.0374 | | 0.95 | 51.00 | 27.58 | 29.00 | 9003170009500 |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9003170010000 |
| 0.0402 | #60 | 1.02 | 56.00 | 31.47 | 33.00 | 9003170010200 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 9003170011000 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 39.22 | 41.00 | 9003170011900 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 9003170012000 |
| 0.0492 | | 1.25 | 65.00 | 39.13 | 41.00 | 9003170012500 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 9003170013000 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 9003170014000 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9003170015000 |
| 0.0594 | #53 | 1.51 | 76.00 | 47.74 | 50.00 | 9003170015100 |
| 0.0610 | | 1.55 | 76.00 | 47.68 | 50.00 | 9003170015500 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 47.62 | 50.00 | 9003170015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9003170016000 |
| 0.0650 | | 1.65 | 76.00 | 47.53 | 50.00 | 9003170016500 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 9003170017000 |
| 0.0701 | #50 | 1.78 | 80.00 | 50.33 | 53.00 | 9003170017800 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9003170018000 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9003170019000 |
| 0.0768 | | 1.95 | 85.00 | 53.08 | 56.00 | 9003170019500 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 9003170019800 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9003170020000 |
| 0.0807 | | 2.05 | 85.00 | 52.93 | 56.00 | 9003170020500 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9003170021000 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9003170022000 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9003170023000 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 9003170023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9003170024000 |
| 0.0965 | | 2.45 | 95.00 | 58.33 | 62.00 | 9003170024500 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9003170025000 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9003170026000 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9003170027000 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9003170027800 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9003170028000 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9003170029000 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9003170030000 |

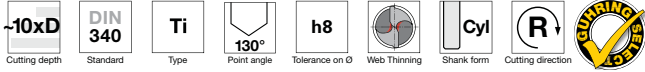
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1201 | #31 | 3.05 | 106.00 | 64.43 | 69.00 | 9003170030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9003170031000 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9003170031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9003170032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9003170032500 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9003170033000 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9003170034000 |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9003170034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9003170035000 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9003170036000 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9003170037000 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9003170038000 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9003170039000 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9003170039700 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9003170040000 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9003170041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9003170042000 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9003170043000 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 75.45 | 82.00 | 9003170043700 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9003170044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9003170045000 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9003170046000 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9003170047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9003170047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9003170048000 |
| 0.1909 | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9003170048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9003170049000 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9003170050000 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9003170051000 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9003170051600 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9003170052000 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9003170053000 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9003170054000 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9003170055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9003170055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9003170056000 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9003170057000 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9003170058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9003170059000 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 82.08 | 91.00 | 9003170059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9003170060000 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9003170061000 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9003170062000 |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9003170063000 |
| 0.2500 | 1/4 | E 6.35 | 148.00 | 87.48 | 97.00 | 9003170063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9003170064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9003170065000 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9003170066000 |
| 0.2610 | | G 6.63 | 148.00 | 87.06 | 97.00 | 9003170066300 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9003170067000 |
| 0.2657 | 17/64 | H 6.75 | 156.00 | 91.88 | 102.00 | 9003170067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9003170068000 |
| 0.2717 | | I 6.90 | 156.00 | 91.65 | 102.00 | 9003170069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9003170070000 |
| 0.2811 | 9/32 | K 7.14 | 156.00 | 91.29 | 102.00 | 9003170071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9003170072000 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9003170073000 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9003170074000 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9003170075000 |
| 0.2969 | 19/64 | 7.54 | 165.00 | 97.69 | 109.00 | 9003170075400 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9003170076000 |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9003170077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9003170078000 |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9003170079000 |
| 0.3126 | 5/16 | 7.94 | 165.00 | 97.09 | 109.00 | 9003170079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9003170080000 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9003170081000 |
| 0.3228 | | P 8.20 | 165.00 | 96.70 | 109.00 | 9003170082000 |
| 0.3280 | 21/64 | 8.33 | 165.00 | 96.51 | 109.00 | 9003170083300 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9003170084000 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9003170085000 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9003170086000 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9003170087000 |
| 0.3437 | 11/32 | 8.73 | 175.00 | 101.91 | 115.00 | 9003170087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9003170088000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9003170090000 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9003170091000 |
| 0.3594 | 23/64 | 9.13 | 175.00 | 101.31 | 115.00 | 9003170091300 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9003170092000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9003170093000 |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9003170094000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9003170095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 106.72 | 121.00 | 9003170095200 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9003170096000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9003170097000 |
| 0.3858 | | W 9.80 | 184.00 | 106.30 | 121.00 | 9003170098000 |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9003170099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 106.12 | 121.00 | 9003170099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9003170100000 |
| 0.3976 | | 10.10 | 184.00 | 105.85 | 121.00 | 9003170101000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9003170102000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 105.52 | 121.00 | 9003170103200 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9003170105000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 111.92 | 128.00 | 9003170107200 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9003170110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9003170111100 |
| 0.4409 | | 11.20 | 195.00 | 111.20 | 128.00 | 9003170112000 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9003170115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9003170115100 |
| 0.4646 | | 11.80 | 195.00 | 110.30 | 128.00 | 9003170118000 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 116.14 | 134.00 | 9003170119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9003170120000 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 115.55 | 134.00 | 9003170123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9003170125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 114.95 | 134.00 | 9003170127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9003170130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 114.35 | 134.00 | 9003170131000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 119.77 | 140.00 | 9003170134900 |
| 0.5315 | | 13.50 | 214.00 | 119.75 | 140.00 | 9003170135000 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9003170140000 |
| 0.5626 | 9/16 | 14.29 | 220.00 | 122.57 | 144.00 | 9003170142900 |
| 0.5906 | | 15.00 | 220.00 | 121.50 | 144.00 | 9003170150000 |
| 0.6094 | 39/64 | 15.48 | 227.00 | 125.78 | 149.00 | 9003170154800 |
| 0.6248 | 5/8 | 15.87 | 227.00 | 125.20 | 149.00 | 9003170158700 |
| 0.6299 | | 16.00 | 227.00 | 125.00 | 149.00 | 9003170160000 |

Taper Length



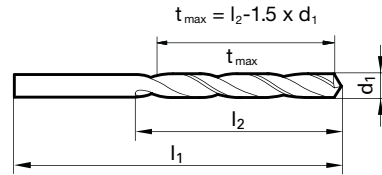
Tool material

HSC0

Surface



- P** Steel ○ web thinning $\geq \varnothing 1.000$ • relieved cone split point • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ●
 - K** Cast iron
 - N** Aluminum
 - S** Titanium alloys ● Titanium and Titanium alloys • stainless/acid-/heat-resistant austenitic steels • high tensile/short chipping steels over 900 N/mm² • antifriction bearing steels • Hastelloy, Inconel, Nimonic
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 532

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 56.00 | 31.50 | 33.00 | 9006170010000 |
| 0.0433 | 1.10 | 60.00 | 35.35 | 37.00 | 9006170011000 |
| 0.0472 | 1.20 | 65.00 | 39.20 | 41.00 | 9006170012000 |
| 0.0512 | 1.30 | 65.00 | 39.05 | 41.00 | 9006170013000 |
| 0.0551 | #54 | 70.00 | 42.90 | 45.00 | 9006170014000 |
| 0.0571 | 1.45 | 70.00 | 42.83 | 45.00 | 9006170014500 |
| 0.0591 | 1.50 | 70.00 | 42.75 | 45.00 | 9006170015000 |
| 0.0626 | 1/16 | 76.00 | 47.62 | 50.00 | 9006170015900 |
| 0.0630 | 1.60 | 76.00 | 47.60 | 50.00 | 9006170016000 |
| 0.0634 | #52 | 76.00 | 47.59 | 50.00 | 9006170016100 |
| 0.0650 | 1.65 | 76.00 | 47.53 | 50.00 | 9006170016500 |
| 0.0669 | #51 | 76.00 | 47.45 | 50.00 | 9006170017000 |
| 0.0689 | 1.75 | 80.00 | 50.38 | 53.00 | 9006170017500 |
| 0.0709 | 1.80 | 80.00 | 50.30 | 53.00 | 9006170018000 |
| 0.0728 | #49 | 80.00 | 50.23 | 53.00 | 9006170018500 |
| 0.0748 | 1.90 | 80.00 | 50.15 | 53.00 | 9006170019000 |
| 0.0760 | #48 | 85.00 | 53.11 | 56.00 | 9006170019300 |
| 0.0768 | 1.95 | 85.00 | 53.08 | 56.00 | 9006170019500 |
| 0.0780 | 5/64 | 85.00 | 53.03 | 56.00 | 9006170019800 |
| 0.0787 | 2.00 | 85.00 | 53.00 | 56.00 | 9006170020000 |
| 0.0807 | 2.05 | 85.00 | 52.93 | 56.00 | 9006170020500 |
| 0.0827 | 2.10 | 85.00 | 52.85 | 56.00 | 9006170021000 |
| 0.0846 | 2.15 | 90.00 | 55.78 | 59.00 | 9006170021500 |
| 0.0866 | 2.20 | 90.00 | 55.70 | 59.00 | 9006170022000 |
| 0.0890 | #43 | 90.00 | 55.61 | 59.00 | 9006170022600 |
| 0.0906 | 2.30 | 90.00 | 55.55 | 59.00 | 9006170023000 |
| 0.0937 | 3/32 | 95.00 | 58.43 | 62.00 | 9006170023800 |
| 0.0945 | 2.40 | 95.00 | 58.40 | 62.00 | 9006170024000 |
| 0.0965 | 2.45 | 95.00 | 58.33 | 62.00 | 9006170024500 |
| 0.0984 | 2.50 | 95.00 | 58.25 | 62.00 | 9006170025000 |
| 0.1004 | 2.55 | 95.00 | 58.18 | 62.00 | 9006170025500 |
| 0.1024 | 2.60 | 95.00 | 58.10 | 62.00 | 9006170026000 |
| 0.1063 | 2.70 | 100.00 | 61.95 | 66.00 | 9006170027000 |
| 0.1094 | 7/64 | 100.00 | 61.83 | 66.00 | 9006170027800 |
| 0.1102 | 2.80 | 100.00 | 61.80 | 66.00 | 9006170028000 |
| 0.1142 | 2.90 | 100.00 | 61.65 | 66.00 | 9006170029000 |
| 0.1181 | 3.00 | 100.00 | 61.50 | 66.00 | 9006170030000 |
| 0.1201 | #31 | 106.00 | 64.43 | 69.00 | 9006170030500 |
| 0.1220 | 3.10 | 106.00 | 64.35 | 69.00 | 9006170031000 |
| 0.1248 | 1/8 | 106.00 | 64.25 | 69.00 | 9006170031700 |
| 0.1260 | 3.20 | 106.00 | 64.20 | 69.00 | 9006170032000 |
| 0.1280 | 3.25 | 106.00 | 64.13 | 69.00 | 9006170032500 |
| 0.1299 | 3.30 | 106.00 | 64.05 | 69.00 | 9006170033000 |
| 0.1339 | 3.40 | 112.00 | 67.90 | 73.00 | 9006170034000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1358 | #29 | 3.45 | 112.00 | 67.83 | 73.00 | 9006170034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9006170035000 |
| 0.1406 | 9/64 | #28 | 112.00 | 67.65 | 73.00 | 9006170035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9006170036000 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9006170037000 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9006170038000 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9006170039000 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9006170039700 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9006170040000 |
| 0.1594 | | 4.05 | 119.00 | 71.93 | 78.00 | 9006170040500 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9006170041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9006170042000 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9006170043000 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9006170044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9006170045000 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9006170046000 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9006170047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9006170047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9006170048000 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9006170049000 |
| 0.1949 | | 4.95 | 132.00 | 79.58 | 87.00 | 9006170049500 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9006170050000 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9006170051000 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9006170051600 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9006170052000 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9006170053000 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9006170054000 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9006170055000 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9006170056000 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9006170057000 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9006170058000 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9006170060000 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9006170061000 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9006170062000 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9006170063000 |
| 0.2500 | 1/4 | E | 148.00 | 87.48 | 97.00 | 9006170063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9006170064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9006170065000 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9006170066000 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9006170067000 |
| 0.2657 | 17/64 | H | 156.00 | 91.88 | 102.00 | 9006170067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9006170068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9006170069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9006170070000 |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9006170071000 |
| 0.2811 | 9/32 K | 7.14 | 156.00 | 91.29 | 102.00 | 9006170071400 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9006170074000 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9006170075000 |
| 0.2969 | 19/64 | 7.54 | 165.00 | 97.69 | 109.00 | 9006170075400 |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9006170077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9006170078000 |
| 0.3126 | 5/16 | 7.94 | 165.00 | 97.09 | 109.00 | 9006170079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9006170080000 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9006170081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9006170082000 |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9006170083000 |
| 0.3280 | 21/64 | 8.33 | 165.00 | 96.51 | 109.00 | 9006170083300 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9006170084000 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9006170085000 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9006170086000 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9006170087000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3437 | 11/32 | 8.73 | 175.00 | 101.91 | 115.00 | 9006170087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9006170088000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9006170090000 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9006170091000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9006170095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 106.72 | 121.00 | 9006170095200 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9006170098000 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9006170100000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9006170102000 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9006170105000 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9006170110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 111.34 | 128.00 | 9006170111100 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 110.74 | 128.00 | 9006170115100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9006170120000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9006170125000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9006170130000 |
| 0.5906 | | 15.00 | 220.00 | 121.50 | 144.00 | 9006170150000 |

Taper Length



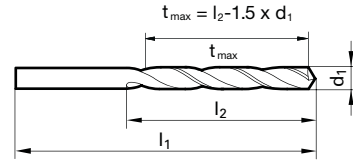
Tool material

HSC0

Surface



- P** Steel ○ web thinning ≥ Ø 1.000 • relieved cone split point • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ●
 - K** Cast iron
 - N** Aluminum
 - S** Titanium alloys ● Titanium and Titanium alloys • stainless/acid-/heat-resistant austenitic steels • high tensile/short chipping steels over 900 N/mm² • antifriction bearing steels • Hastelloy, Inconel, Nimonic
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 540

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9006690010000 |
| 0.0551 | #54 | 1.40 | 70.00 | 42.90 | 45.00 | 9006690014000 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9006690015000 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 47.62 | 50.00 | 9006690015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9006690016000 |
| 0.0650 | | 1.65 | 76.00 | 47.53 | 50.00 | 9006690016500 |
| 0.0669 | #51 | 1.70 | 76.00 | 47.45 | 50.00 | 9006690017000 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9006690018000 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9006690019000 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 53.03 | 56.00 | 9006690019800 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9006690020000 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9006690021000 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9006690022000 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9006690023000 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 58.43 | 62.00 | 9006690023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9006690024000 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9006690025000 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9006690026000 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9006690027000 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 61.83 | 66.00 | 9006690027800 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9006690028000 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9006690029000 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9006690030000 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9006690031000 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 64.25 | 69.00 | 9006690031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9006690032000 |
| 0.1280 | | 3.25 | 106.00 | 64.13 | 69.00 | 9006690032500 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9006690033000 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9006690034000 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9006690035000 |
| 0.1406 | 9/64 | #28 | 112.00 | 67.65 | 73.00 | 9006690035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9006690036000 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9006690037000 |
| 0.1496 | #25 | 3.80 | 119.00 | 72.30 | 78.00 | 9006690038000 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9006690039000 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 72.05 | 78.00 | 9006690039700 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9006690040000 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9006690041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9006690042000 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9006690043000 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9006690044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9006690045000 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9006690047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9006690047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9006690048000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9006690049000 | |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9006690050000 | |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9006690051000 | |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9006690051600 | |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9006690052000 | |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9006690053000 | |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9006690055000 | |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9006690055600 | |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9006690056000 | |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9006690057000 | |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9006690058000 | |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9006690059000 | |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9006690060000 | |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9006690061000 | |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9006690062000 | |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9006690063000 | |
| 0.2500 | 1/4 | E | 6.35 | 148.00 | 87.48 | 97.00 | 9006690063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9006690064000 | |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9006690065000 | |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9006690066000 | |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9006690067000 | |
| 0.2657 | 17/64 | H | 6.75 | 156.00 | 91.88 | 102.00 | 9006690067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9006690068000 | |
| 0.2717 | | 6.90 | 156.00 | 91.65 | 102.00 | 9006690069000 | |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9006690070000 | |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9006690071000 | |
| 0.2811 | 9/32 | K | 7.14 | 156.00 | 91.29 | 102.00 | 9006690071400 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9006690073000 | |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9006690074000 | |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9006690075000 | |
| 0.2969 | 19/64 | | 7.54 | 165.00 | 97.69 | 109.00 | 9006690075400 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9006690076000 | |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9006690077000 | |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9006690078000 | |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9006690079000 | |
| 0.3126 | 5/16 | | 7.94 | 165.00 | 97.09 | 109.00 | 9006690079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9006690080000 | |
| 0.3228 | | P | 8.20 | 165.00 | 96.70 | 109.00 | 9006690082000 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9006690084000 | |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9006690085000 | |
| 0.3437 | 11/32 | | 8.73 | 175.00 | 101.91 | 115.00 | 9006690087300 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9006690090000 | |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9006690095000 | |
| 0.3748 | 3/8 | | 9.52 | 184.00 | 106.72 | 121.00 | 9006690095200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9006690100000 | |

Taper Length



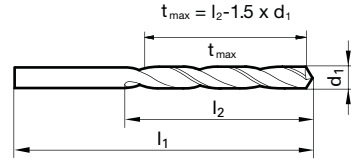
Tool material

HSC0

Surface



- | | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning $\geq \varnothing 1.000$ • relieved cone • Co-alloyed high speed steel • wide flutes • increased wear resistance • in case of unsatisfactory chip evacuation |
| M | Stainless steel | ● | |
| K | Cast iron | ● | alloyed/unalloyed steels and castings over 800 N/mm ² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat treatable and case hardened steels |
| N | Aluminum | ● | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 511

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 56.00 | 31.50 | 33.00 | 9003360010000 |
| 0.0402 | #60 1.02 | 56.00 | 31.47 | 33.00 | 9003360010200 |
| 0.0409 | #59 1.04 | 56.00 | 31.44 | 33.00 | 9003360010400 |
| 0.0421 | #58 1.07 | 60.00 | 35.40 | 37.00 | 9003360010700 |
| 0.0429 | #57 1.09 | 60.00 | 35.37 | 37.00 | 9003360010900 |
| 0.0433 | 1.10 | 60.00 | 35.35 | 37.00 | 9003360011000 |
| 0.0465 | #56 1.18 | 60.00 | 35.23 | 37.00 | 9003360011800 |
| 0.0469 | 3/64 1.19 | 65.00 | 39.22 | 41.00 | 9003360011900 |
| 0.0472 | 1.20 | 65.00 | 39.20 | 41.00 | 9003360012000 |
| 0.0492 | 1.25 | 65.00 | 39.13 | 41.00 | 9003360012500 |
| 0.0512 | 1.30 | 65.00 | 39.05 | 41.00 | 9003360013000 |
| 0.0520 | #55 1.32 | 65.00 | 39.02 | 41.00 | 9003360013200 |
| 0.0551 | #54 1.40 | 70.00 | 42.90 | 45.00 | 9003360014000 |
| 0.0591 | 1.50 | 70.00 | 42.75 | 45.00 | 9003360015000 |
| 0.0594 | #53 1.51 | 76.00 | 47.74 | 50.00 | 9003360015100 |
| 0.0610 | 1.55 | 76.00 | 47.68 | 50.00 | 9003360015500 |
| 0.0626 | 1/16 1.59 | 76.00 | 47.62 | 50.00 | 9003360015900 |
| 0.0630 | 1.60 | 76.00 | 47.60 | 50.00 | 9003360016000 |
| 0.0634 | #52 1.61 | 76.00 | 47.59 | 50.00 | 9003360016100 |
| 0.0669 | #51 1.70 | 76.00 | 47.45 | 50.00 | 9003360017000 |
| 0.0689 | 1.75 | 80.00 | 50.38 | 53.00 | 9003360017500 |
| 0.0701 | #50 1.78 | 80.00 | 50.33 | 53.00 | 9003360017800 |
| 0.0709 | 1.80 | 80.00 | 50.30 | 53.00 | 9003360018000 |
| 0.0728 | #49 1.85 | 80.00 | 50.23 | 53.00 | 9003360018500 |
| 0.0748 | 1.90 | 80.00 | 50.15 | 53.00 | 9003360019000 |
| 0.0760 | #48 1.93 | 85.00 | 53.11 | 56.00 | 9003360019300 |
| 0.0780 | 5/64 1.98 | 85.00 | 53.03 | 56.00 | 9003360019800 |
| 0.0783 | #47 1.99 | 85.00 | 53.02 | 56.00 | 9003360019900 |
| 0.0787 | 2.00 | 85.00 | 53.00 | 56.00 | 9003360020000 |
| 0.0807 | 2.05 | 85.00 | 52.93 | 56.00 | 9003360020500 |
| 0.0811 | #46 2.06 | 85.00 | 52.91 | 56.00 | 9003360020600 |
| 0.0819 | #45 2.08 | 85.00 | 52.88 | 56.00 | 9003360020800 |
| 0.0827 | 2.10 | 85.00 | 52.85 | 56.00 | 9003360021000 |
| 0.0858 | #44 2.18 | 90.00 | 55.73 | 59.00 | 9003360021800 |
| 0.0866 | 2.20 | 90.00 | 55.70 | 59.00 | 9003360022000 |
| 0.0886 | 2.25 | 90.00 | 55.63 | 59.00 | 9003360022500 |
| 0.0890 | #43 2.26 | 90.00 | 55.61 | 59.00 | 9003360022600 |
| 0.0906 | 2.30 | 90.00 | 55.55 | 59.00 | 9003360023000 |
| 0.0925 | 2.35 | 90.00 | 55.48 | 59.00 | 9003360023500 |
| 0.0933 | #42 2.37 | 95.00 | 58.45 | 62.00 | 9003360023700 |
| 0.0937 | 3/32 2.38 | 95.00 | 58.43 | 62.00 | 9003360023800 |
| 0.0945 | 2.40 | 95.00 | 58.40 | 62.00 | 9003360024000 |
| 0.0961 | #41 2.44 | 95.00 | 58.34 | 62.00 | 9003360024400 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|--------|----------------------|------------------------|-------------------------------|-------|
| inch | wire/ltr mm | mm | | | | |
| 0.0965 | 2.45 | 95.00 | 58.33 | 62.00 | 9003360024500 | |
| 0.0980 | #40 2.49 | 95.00 | 58.27 | 62.00 | 9003360024900 | |
| 0.0984 | 2.50 | 95.00 | 58.25 | 62.00 | 9003360025000 | |
| 0.0996 | #39 2.53 | 95.00 | 58.21 | 62.00 | 9003360025300 | |
| 0.1004 | 2.55 | 95.00 | 58.18 | 62.00 | 9003360025500 | |
| 0.1016 | #38 2.58 | 95.00 | 58.13 | 62.00 | 9003360025800 | |
| 0.1024 | 2.60 | 95.00 | 58.10 | 62.00 | 9003360026000 | |
| 0.1039 | #37 2.64 | 95.00 | 58.04 | 62.00 | 9003360026400 | |
| 0.1063 | 2.70 | 100.00 | 61.95 | 66.00 | 9003360027000 | |
| 0.1067 | #36 2.71 | 100.00 | 61.94 | 66.00 | 9003360027100 | |
| 0.1083 | 2.75 | 100.00 | 61.88 | 66.00 | 9003360027500 | |
| 0.1094 | 7/64 2.78 | 100.00 | 61.83 | 66.00 | 9003360027800 | |
| 0.1098 | #35 2.79 | 100.00 | 61.82 | 66.00 | 9003360027900 | |
| 0.1102 | 2.80 | 100.00 | 61.80 | 66.00 | 9003360028000 | |
| 0.1110 | #34 2.82 | 100.00 | 61.77 | 66.00 | 9003360028200 | |
| 0.1122 | 2.85 | 100.00 | 61.73 | 66.00 | 9003360028500 | |
| 0.1130 | #33 2.87 | 100.00 | 61.70 | 66.00 | 9003360028700 | |
| 0.1142 | 2.90 | 100.00 | 61.65 | 66.00 | 9003360029000 | |
| 0.1161 | #32 2.95 | 100.00 | 61.58 | 66.00 | 9003360029500 | |
| 0.1181 | 3.00 | 100.00 | 61.50 | 66.00 | 9003360030000 | |
| 0.1201 | #31 3.05 | 106.00 | 64.43 | 69.00 | 9003360030500 | |
| 0.1220 | 3.10 | 106.00 | 64.35 | 69.00 | 9003360031000 | |
| 0.1248 | 1/8 3.17 | 106.00 | 64.25 | 69.00 | 9003360031700 | |
| 0.1260 | 3.20 | 106.00 | 64.20 | 69.00 | 9003360032000 | |
| 0.1283 | #30 3.26 | 106.00 | 64.11 | 69.00 | 9003360032600 | |
| 0.1299 | 3.30 | 106.00 | 64.05 | 69.00 | 9003360033000 | |
| 0.1339 | 3.40 | 112.00 | 67.90 | 73.00 | 9003360034000 | |
| 0.1354 | 3.44 | 112.00 | 67.84 | 73.00 | 9003360034400 | |
| 0.1358 | #29 3.45 | 112.00 | 67.83 | 73.00 | 9003360034500 | |
| 0.1378 | 3.50 | 112.00 | 67.75 | 73.00 | 9003360035000 | |
| 0.1406 | 9/64 #28 3.57 | 112.00 | 67.65 | 73.00 | 9003360035700 | |
| 0.1417 | 3.60 | 112.00 | 67.60 | 73.00 | 9003360036000 | |
| 0.1441 | #27 3.66 | 112.00 | 67.51 | 73.00 | 9003360036600 | |
| 0.1457 | 3.70 | 112.00 | 67.45 | 73.00 | 9003360037000 | |
| 0.1469 | #26 3.73 | 112.00 | 67.41 | 73.00 | 9003360037300 | |
| 0.1496 | #25 3.80 | 119.00 | 72.30 | 78.00 | 9003360038000 | |
| 0.1520 | #24 3.86 | 119.00 | 72.21 | 78.00 | 9003360038600 | |
| 0.1535 | 3.90 | 119.00 | 72.15 | 78.00 | 9003360039000 | |
| 0.1539 | #23 3.91 | 119.00 | 72.14 | 78.00 | 9003360039100 | |
| 0.1563 | 5/32 3.97 | 119.00 | 72.05 | 78.00 | 9003360039700 | |
| 0.1571 | #22 3.99 | 119.00 | 72.02 | 78.00 | 9003360039900 | |
| 0.1575 | 4.00 | 119.00 | 72.00 | 78.00 | 9003360040000 | |
| 0.1591 | #21 4.04 | 119.00 | 71.94 | 78.00 | 9003360040400 | |

Taper Length

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1610 | #20 | 4.09 | 119.00 | 71.87 | 78.00 | 9003360040900 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9003360041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9003360042000 |
| 0.1661 | #19 | 4.22 | 119.00 | 71.67 | 78.00 | 9003360042200 |
| 0.1693 | #18 | 4.30 | 126.00 | 75.55 | 82.00 | 9003360043000 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 75.45 | 82.00 | 9003360043700 |
| 0.1728 | #17 | 4.39 | 126.00 | 75.42 | 82.00 | 9003360043900 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9003360044000 |
| 0.1772 | #16 | 4.50 | 126.00 | 75.25 | 82.00 | 9003360045000 |
| 0.1799 | #15 | 4.57 | 126.00 | 75.15 | 82.00 | 9003360045700 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9003360046000 |
| 0.1819 | #14 | 4.62 | 126.00 | 75.07 | 82.00 | 9003360046200 |
| 0.1850 | #13 | 4.70 | 126.00 | 74.95 | 82.00 | 9003360047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 79.86 | 87.00 | 9003360047600 |
| 0.1890 | #12 | 4.80 | 132.00 | 79.80 | 87.00 | 9003360048000 |
| 0.1909 | #11 | 4.85 | 132.00 | 79.73 | 87.00 | 9003360048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9003360049000 |
| 0.1937 | #10 | 4.92 | 132.00 | 79.62 | 87.00 | 9003360049200 |
| 0.1961 | #9 | 4.98 | 132.00 | 79.53 | 87.00 | 9003360049800 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9003360050000 |
| 0.1992 | #8 | 5.06 | 132.00 | 79.41 | 87.00 | 9003360050600 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9003360051000 |
| 0.2012 | #7 | 5.11 | 132.00 | 79.34 | 87.00 | 9003360051100 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 79.26 | 87.00 | 9003360051600 |
| 0.2039 | #6 | 5.18 | 132.00 | 79.23 | 87.00 | 9003360051800 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9003360052000 |
| 0.2055 | #5 | 5.22 | 132.00 | 79.17 | 87.00 | 9003360052200 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9003360053000 |
| 0.2091 | #4 | 5.31 | 139.00 | 83.04 | 91.00 | 9003360053100 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9003360054000 |
| 0.2130 | #3 | 5.41 | 139.00 | 82.89 | 91.00 | 9003360054100 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9003360055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 82.66 | 91.00 | 9003360055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9003360056000 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9003360057000 |
| 0.2280 | #1 | 5.79 | 139.00 | 82.32 | 91.00 | 9003360057900 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9003360058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9003360059000 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 82.08 | 91.00 | 9003360059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9003360060000 |
| 0.2378 | B | 6.04 | 148.00 | 87.94 | 97.00 | 9003360060400 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9003360061000 |
| 0.2421 | C | 6.15 | 148.00 | 87.78 | 97.00 | 9003360061500 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9003360062000 |
| 0.2461 | D | 6.25 | 148.00 | 87.63 | 97.00 | 9003360062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9003360063000 |
| 0.2500 | 1/4 | 6.35 | 148.00 | 87.48 | 97.00 | 9003360063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9003360064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9003360065000 |
| 0.2571 | | 6.53 | 148.00 | 87.21 | 97.00 | 9003360065300 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9003360066000 |
| 0.2610 | G | 6.63 | 148.00 | 87.06 | 97.00 | 9003360066300 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9003360067000 |

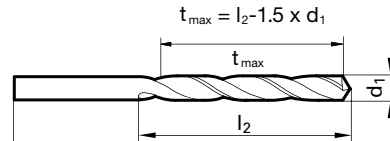
| Diameter (d ₁) | | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | mm | | | | |
| 0.2657 | 17/64 | H | 6.75 | 156.00 | 91.88 | 102.00 | 9003360067500 |
| 0.2677 | | | 6.80 | 156.00 | 91.80 | 102.00 | 9003360068000 |
| 0.2717 | | I | 6.90 | 156.00 | 91.65 | 102.00 | 9003360069000 |
| 0.2756 | | | 7.00 | 156.00 | 91.50 | 102.00 | 9003360070000 |
| 0.2768 | | J | 7.03 | 156.00 | 91.46 | 102.00 | 9003360070300 |
| 0.2795 | | | 7.10 | 156.00 | 91.35 | 102.00 | 9003360071000 |
| 0.2811 | 9/32 | K | 7.14 | 156.00 | 91.29 | 102.00 | 9003360071400 |
| 0.2835 | | | 7.20 | 156.00 | 91.20 | 102.00 | 9003360072000 |
| 0.2874 | | | 7.30 | 156.00 | 91.05 | 102.00 | 9003360073000 |
| 0.2913 | | | 7.40 | 156.00 | 90.90 | 102.00 | 9003360074000 |
| 0.2953 | | | 7.50 | 156.00 | 90.75 | 102.00 | 9003360075000 |
| 0.2969 | 19/64 | | 7.54 | 165.00 | 97.69 | 109.00 | 9003360075400 |
| 0.3020 | | N | 7.67 | 165.00 | 97.50 | 109.00 | 9003360076700 |
| 0.3031 | | | 7.70 | 165.00 | 97.45 | 109.00 | 9003360077000 |
| 0.3071 | | | 7.80 | 165.00 | 97.30 | 109.00 | 9003360078000 |
| 0.3110 | | | 7.90 | 165.00 | 97.15 | 109.00 | 9003360079000 |
| 0.3126 | 5/16 | | 7.94 | 165.00 | 97.09 | 109.00 | 9003360079400 |
| 0.3150 | | | 8.00 | 165.00 | 97.00 | 109.00 | 9003360080000 |
| 0.3161 | | O | 8.03 | 165.00 | 96.96 | 109.00 | 9003360080300 |
| 0.3189 | | | 8.10 | 165.00 | 96.85 | 109.00 | 9003360081000 |
| 0.3228 | | P | 8.20 | 165.00 | 96.70 | 109.00 | 9003360082000 |
| 0.3268 | | | 8.30 | 165.00 | 96.55 | 109.00 | 9003360083000 |
| 0.3307 | | | 8.40 | 165.00 | 96.40 | 109.00 | 9003360084000 |
| 0.3346 | | | 8.50 | 165.00 | 96.25 | 109.00 | 9003360085000 |
| 0.3386 | | | 8.60 | 175.00 | 102.10 | 115.00 | 9003360086000 |
| 0.3390 | | R | 8.61 | 175.00 | 102.09 | 115.00 | 9003360086100 |
| 0.3425 | | | 8.70 | 175.00 | 101.95 | 115.00 | 9003360087000 |
| 0.3437 | 11/32 | | 8.73 | 175.00 | 101.91 | 115.00 | 9003360087300 |
| 0.3465 | | | 8.80 | 175.00 | 101.80 | 115.00 | 9003360088000 |
| 0.3480 | | S | 8.84 | 175.00 | 101.74 | 115.00 | 9003360088400 |
| 0.3504 | | | 8.90 | 175.00 | 101.65 | 115.00 | 9003360089000 |
| 0.3543 | | | 9.00 | 175.00 | 101.50 | 115.00 | 9003360090000 |
| 0.3579 | | T | 9.09 | 175.00 | 101.37 | 115.00 | 9003360090900 |
| 0.3583 | | | 9.10 | 175.00 | 101.35 | 115.00 | 9003360091000 |
| 0.3622 | | | 9.20 | 175.00 | 101.20 | 115.00 | 9003360092000 |
| 0.3661 | | | 9.30 | 175.00 | 101.05 | 115.00 | 9003360093000 |
| 0.3677 | | U | 9.34 | 175.00 | 100.99 | 115.00 | 9003360093400 |
| 0.3701 | | | 9.40 | 175.00 | 100.90 | 115.00 | 9003360094000 |
| 0.3740 | | | 9.50 | 175.00 | 100.75 | 115.00 | 9003360095000 |
| 0.3748 | 3/8 | | 9.52 | 184.00 | 106.72 | 121.00 | 9003360095200 |
| 0.3819 | | | 9.70 | 184.00 | 106.45 | 121.00 | 9003360097000 |
| 0.3839 | | | 9.75 | 184.00 | 106.38 | 121.00 | 9003360097500 |
| 0.3858 | | W | 9.80 | 184.00 | 106.30 | 121.00 | 9003360098000 |
| 0.3898 | | | 9.90 | 184.00 | 106.15 | 121.00 | 9003360099000 |
| 0.3937 | | | 10.00 | 184.00 | 106.00 | 121.00 | 9003360100000 |
| 0.4016 | | | 10.20 | 184.00 | 105.70 | 121.00 | 9003360102000 |
| 0.4134 | | | 10.50 | 184.00 | 105.25 | 121.00 | 9003360105000 |
| 0.4252 | | | 10.80 | 195.00 | 111.80 | 128.00 | 9003360108000 |
| 0.4331 | | | 11.00 | 195.00 | 111.50 | 128.00 | 9003360110000 |
| 0.4528 | | | 11.50 | 195.00 | 110.75 | 128.00 | 9003360115000 |
| 0.4646 | | | 11.80 | 195.00 | 110.30 | 128.00 | 9003360118000 |
| 0.4689 | 15/32 | | 11.91 | 205.00 | 116.14 | 134.00 | 9003360119100 |
| 0.4724 | | | 12.00 | 205.00 | 116.00 | 134.00 | 9003360120000 |

Taper Length



Tool material **HSCO**
Surface

- | | | | |
|----------|-----------------|---|---|
| P | Steel | • | web thinning $\geq \varnothing 1.000$ • facet split point • Co-alloyed high speed steel • low feed force required • low torque required • increased wear resistance • for universal application • only suitable for short drilling depths when used at full length for reach purposes |
| M | Stainless steel | • | |
| K | Cast iron | • | |
| N | Aluminum | • | |
| S | Titanium alloys | • | |
| H | Hardened steel | | alloyed/unalloyed steels up to 800 N/mm ² • cold/hot work steels • antifriction bearing steels • non-ferrous metals • cast materials • stainless steels • plastics |
- =Optimal
○=Limited



Speeds and feeds information on pg. 577

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 56.00 | 31.50 | 33.00 | 9055360010000 |
| 0.0402 | 1.02 | 56.00 | 32.00 | 33.00 | 9055360010200 |
| 0.0409 | 1.04 | 56.00 | 32.00 | 33.00 | 9055360010400 |
| 0.0421 | 1.07 | 60.00 | 36.00 | 37.00 | 9055360010700 |
| 0.0429 | 1.09 | 60.00 | 36.00 | 37.00 | 9055360010900 |
| 0.0433 | 1.10 | 60.00 | 35.35 | 37.00 | 9055360011000 |
| 0.0465 | 1.18 | 60.00 | 36.00 | 37.00 | 9055360011800 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 40.00 | 9055360011900 |
| 0.0472 | 1.20 | 65.00 | 39.20 | 41.00 | 9055360012000 |
| 0.0512 | 1.30 | 65.00 | 39.05 | 41.00 | 9055360013000 |
| 0.0520 | 1.32 | 65.00 | 40.00 | 41.00 | 9055360013200 |
| 0.0551 | 1.40 | 70.00 | 42.90 | 45.00 | 9055360014000 |
| 0.0591 | 1.50 | 70.00 | 42.75 | 45.00 | 9055360015000 |
| 0.0594 | 1.51 | 76.00 | 49.00 | 50.00 | 9055360015100 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 49.00 | 9055360015900 |
| 0.0630 | 1.60 | 76.00 | 47.60 | 50.00 | 9055360016000 |
| 0.0634 | 1.61 | 76.00 | 49.00 | 50.00 | 9055360016100 |
| 0.0669 | 1.70 | 76.00 | 47.45 | 50.00 | 9055360017000 |
| 0.0701 | 1.78 | 80.00 | 51.00 | 53.00 | 9055360017800 |
| 0.0709 | 1.80 | 80.00 | 50.30 | 53.00 | 9055360018000 |
| 0.0728 | 1.85 | 80.00 | 51.00 | 53.00 | 9055360018500 |
| 0.0748 | 1.90 | 80.00 | 50.15 | 53.00 | 9055360019000 |
| 0.0760 | 1.93 | 85.00 | 54.00 | 56.00 | 9055360019300 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 54.00 | 9055360019800 |
| 0.0783 | 1.99 | 85.00 | 54.00 | 56.00 | 9055360019900 |
| 0.0787 | 2.00 | 85.00 | 53.00 | 56.00 | 9055360020000 |
| 0.0811 | 2.06 | 85.00 | 54.00 | 56.00 | 9055360020600 |
| 0.0819 | 2.08 | 85.00 | 54.00 | 56.00 | 9055360020800 |
| 0.0827 | 2.10 | 85.00 | 52.85 | 56.00 | 9055360021000 |
| 0.0858 | 2.18 | 90.00 | 57.00 | 59.00 | 9055360021800 |
| 0.0866 | 2.20 | 90.00 | 55.70 | 59.00 | 9055360022000 |
| 0.0890 | 2.26 | 90.00 | 57.00 | 59.00 | 9055360022600 |
| 0.0906 | 2.30 | 90.00 | 55.55 | 59.00 | 9055360023000 |
| 0.0933 | 2.37 | 95.00 | 60.00 | 62.00 | 9055360023700 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 60.00 | 9055360023800 |
| 0.0945 | 2.40 | 95.00 | 58.40 | 62.00 | 9055360024000 |
| 0.0961 | 2.44 | 95.00 | 60.00 | 62.00 | 9055360024400 |
| 0.0980 | 2.49 | 95.00 | 60.00 | 62.00 | 9055360024900 |
| 0.0984 | 2.50 | 95.00 | 58.25 | 62.00 | 9055360025000 |
| 0.0996 | 2.53 | 95.00 | 60.00 | 62.00 | 9055360025300 |
| 0.1016 | 2.58 | 95.00 | 60.00 | 62.00 | 9055360025800 |
| 0.1024 | 2.60 | 95.00 | 58.10 | 62.00 | 9055360026000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1039 | | 2.64 | 95.00 | 60.00 | 62.00 | 9055360026400 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9055360027000 |
| 0.1067 | | 2.71 | 100.00 | 64.00 | 66.00 | 9055360027100 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 63.00 | 66.00 | 9055360027800 |
| 0.1098 | | 2.79 | 100.00 | 63.00 | 66.00 | 9055360027900 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9055360028000 |
| 0.1110 | | 2.82 | 100.00 | 63.00 | 66.00 | 9055360028200 |
| 0.1130 | | 2.87 | 100.00 | 63.00 | 66.00 | 9055360028700 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9055360029000 |
| 0.1161 | | 2.95 | 100.00 | 63.00 | 66.00 | 9055360029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9055360030000 |
| 0.1201 | | 3.05 | 106.00 | 66.00 | 69.00 | 9055360030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9055360031000 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 66.00 | 69.00 | 9055360031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9055360032000 |
| 0.1283 | | 3.26 | 106.00 | 66.00 | 69.00 | 9055360032600 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9055360033000 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9055360034000 |
| 0.1358 | | 3.45 | 112.00 | 70.00 | 73.00 | 9055360034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9055360035000 |
| 0.1406 | 9/64 #28 | 3.57 | 112.00 | 70.00 | 73.00 | 9055360035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9055360036000 |
| 0.1441 | | 3.66 | 112.00 | 70.00 | 73.00 | 9055360036600 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9055360037000 |
| 0.1469 | | 3.73 | 112.00 | 70.00 | 73.00 | 9055360037300 |
| 0.1496 | | 3.80 | 119.00 | 72.30 | 78.00 | 9055360038000 |
| 0.1520 | | 3.86 | 119.00 | 75.00 | 78.00 | 9055360038600 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9055360039000 |
| 0.1539 | | 3.91 | 119.00 | 74.00 | 78.00 | 9055360039100 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 74.00 | 78.00 | 9055360039700 |
| 0.1571 | | 3.99 | 119.00 | 74.00 | 78.00 | 9055360039900 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9055360040000 |
| 0.1591 | | 4.04 | 119.00 | 74.00 | 78.00 | 9055360040400 |
| 0.1610 | | 4.09 | 119.00 | 74.00 | 78.00 | 9055360040900 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9055360041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9055360042000 |
| 0.1661 | | 4.22 | 119.00 | 74.00 | 78.00 | 9055360042200 |
| 0.1693 | | 4.30 | 126.00 | 75.55 | 82.00 | 9055360043000 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 78.00 | 82.00 | 9055360043700 |
| 0.1728 | | 4.39 | 126.00 | 78.00 | 82.00 | 9055360043900 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9055360044000 |
| 0.1772 | | 4.50 | 126.00 | 75.25 | 82.00 | 9055360045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | | 4.57 | 126.00 | 78.00 | 82.00 | 9055360045700 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9055360046000 |
| 0.1819 | | 4.62 | 126.00 | 78.00 | 82.00 | 9055360046200 |
| 0.1850 | | 4.70 | 126.00 | 74.95 | 82.00 | 9055360047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 83.00 | 87.00 | 9055360047600 |
| 0.1890 | | 4.80 | 132.00 | 79.80 | 87.00 | 9055360048000 |
| 0.1909 | | 4.85 | 132.00 | 83.00 | 87.00 | 9055360048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9055360049000 |
| 0.1937 | | 4.92 | 132.00 | 83.00 | 87.00 | 9055360049200 |
| 0.1961 | | 4.98 | 132.00 | 83.00 | 87.00 | 9055360049800 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9055360050000 |
| 0.1992 | | 5.06 | 132.00 | 82.00 | 87.00 | 9055360050600 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9055360051000 |
| 0.2012 | | 5.11 | 132.00 | 82.00 | 87.00 | 9055360051100 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 82.00 | 87.00 | 9055360051600 |
| 0.2039 | | 5.18 | 132.00 | 82.00 | 87.00 | 9055360051800 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9055360052000 |
| 0.2055 | | 5.22 | 132.00 | 82.00 | 87.00 | 9055360052200 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9055360053000 |
| 0.2091 | | 5.31 | 139.00 | 86.00 | 91.00 | 9055360053100 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9055360054000 |
| 0.2130 | | 5.41 | 139.00 | 86.00 | 91.00 | 9055360054100 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9055360055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 86.00 | 91.00 | 9055360055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9055360056000 |
| 0.2209 | | 5.61 | 139.00 | 86.00 | 91.00 | 9055360056100 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9055360057000 |
| 0.2280 | | 5.79 | 139.00 | 86.00 | 91.00 | 9055360057900 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9055360058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9055360059000 |
| 0.2339 | A | 5.94 | 139.00 | 86.00 | 91.00 | 9055360059400 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 86.00 | 91.00 | 9055360059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9055360060000 |
| 0.2378 | B | 6.04 | 148.00 | 92.00 | 97.00 | 9055360060400 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9055360061000 |
| 0.2421 | C | 6.15 | 148.00 | 91.00 | 97.00 | 9055360061500 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9055360062000 |
| 0.2461 | D | 6.25 | 148.00 | 91.00 | 97.00 | 9055360062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9055360063000 |
| 0.2500 | 1/4 | 6.35 | 148.00 | 91.00 | 97.00 | 9055360063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9055360064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9055360065000 |
| 0.2571 | F | 6.53 | 148.00 | 91.00 | 97.00 | 9055360065300 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9055360066000 |
| 0.2610 | G | 6.63 | 148.00 | 91.00 | 97.00 | 9055360066300 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9055360067000 |
| 0.2657 | 17/64 | 6.75 | 156.00 | 96.00 | 102.00 | 9055360067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9055360068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9055360069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9055360070000 |
| 0.2768 | J | 7.03 | 156.00 | 96.00 | 102.00 | 9055360070300 |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9055360071000 |
| 0.2811 | 9/32 | 7.14 | 156.00 | 96.00 | 102.00 | 9055360071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9055360072000 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9055360073000 |
| 0.2902 | L | 7.37 | 156.00 | 95.00 | 102.00 | 9055360073700 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9055360074000 |
| 0.2949 | M | 7.49 | 156.00 | 95.00 | 102.00 | 9055360074900 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9055360075000 |
| 0.2969 | 19/64 | 7.54 | 165.00 | 102.00 | 109.00 | 9055360075400 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9055360076000 |
| 0.3020 | N | 7.67 | 165.00 | 102.00 | 109.00 | 9055360076700 |

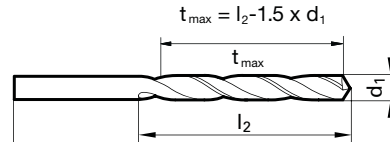
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9055360077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9055360078000 |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9055360079000 |
| 0.3126 | 5/16 | 7.94 | 165.00 | 102.00 | 109.00 | 9055360079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9055360080000 |
| 0.3161 | O | 8.03 | 165.00 | 102.00 | 109.00 | 9055360080300 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9055360081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9055360082000 |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9055360083000 |
| 0.3280 | 21/64 | 8.33 | 165.00 | 101.00 | 109.00 | 9055360083300 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9055360084000 |
| 0.3319 | Q | 8.43 | 165.00 | 101.00 | 109.00 | 9055360084300 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9055360085000 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9055360086000 |
| 0.3390 | R | 8.61 | 175.00 | 107.00 | 115.00 | 9055360086100 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9055360087000 |
| 0.3437 | 11/32 | 8.73 | 175.00 | 107.00 | 115.00 | 9055360087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9055360088000 |
| 0.3480 | S | 8.84 | 175.00 | 107.00 | 115.00 | 9055360088400 |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9055360089000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9055360090000 |
| 0.3579 | T | 9.09 | 175.00 | 107.00 | 115.00 | 9055360090900 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9055360091000 |
| 0.3594 | 23/64 | 9.13 | 175.00 | 107.00 | 115.00 | 9055360091300 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9055360092000 |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9055360093000 |
| 0.3677 | U | 9.34 | 175.00 | 107.00 | 115.00 | 9055360093400 |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9055360094000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9055360095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 112.00 | 121.00 | 9055360095200 |
| 0.3772 | V | 9.58 | 184.00 | 112.00 | 121.00 | 9055360095800 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9055360096000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9055360097000 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9055360098000 |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9055360099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 112.00 | 121.00 | 9055360099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9055360100000 |
| 0.3969 | X | 10.08 | 184.00 | 112.00 | 121.00 | 9055360100800 |
| 0.3976 | | 10.10 | 184.00 | 105.85 | 121.00 | 9055360101000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9055360102000 |
| 0.4039 | Y | 10.26 | 184.00 | 112.00 | 121.00 | 9055360102600 |
| 0.4055 | | 10.30 | 184.00 | 105.55 | 121.00 | 9055360103000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 112.00 | 121.00 | 9055360103200 |
| 0.4094 | | 10.40 | 184.00 | 105.40 | 121.00 | 9055360104000 |
| 0.4130 | Z | 10.49 | 184.00 | 111.00 | 121.00 | 9055360104900 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9055360105000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 118.00 | 128.00 | 9055360107200 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9055360110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 118.00 | 128.00 | 9055360111100 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9055360115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 118.00 | 128.00 | 9055360115100 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 123.00 | 134.00 | 9055360119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9055360120000 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 123.00 | 134.00 | 9055360123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9055360125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 123.00 | 134.00 | 9055360127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9055360130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 122.00 | 134.00 | 9055360131000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 128.00 | 140.00 | 9055360134900 |
| 0.5315 | | 13.50 | 214.00 | 119.75 | 140.00 | 9055360135000 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9055360140000 |
| 0.5626 | 9/16 | 14.29 | 220.00 | 131.00 | 144.00 | 9055360142900 |

Taper Length



Tool material **HSCO**
Surface **S**

- P** Steel ● web thinning ≥ Ø 1.000 • facet split point • Co-alloyed high speed steel • low feed force required • low torque required • increased wear resistance • for universal application • only suitable for short drilling depths when used at full length for reach purposes
 - M** Stainless steel ●
 - K** Cast iron ●
 - N** Aluminum ●
 - S** Titanium alloys ● alloyed/unalloyed steels up to 800 N/mm² • cold/hot work steels • antifriction bearing steels • non-ferrous metals • cast materials • stainless steels • plastics
 - H** Hardened steel ●
- =Optimal
○=Limited



Speeds and feeds information on pg. 577

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|
| inch | wire/ltr | | | | | |
| 0.0394 | | 1.00 | 56.00 | 31.50 | 33.00 | 9055370010000 |
| 0.0402 | | 1.02 | 56.00 | 32.00 | 33.00 | 9055370010200 |
| 0.0409 | | 1.04 | 56.00 | 32.00 | 33.00 | 9055370010400 |
| 0.0421 | | 1.07 | 60.00 | 36.00 | 37.00 | 9055370010700 |
| 0.0429 | | 1.09 | 60.00 | 36.00 | 37.00 | 9055370010900 |
| 0.0433 | | 1.10 | 60.00 | 35.35 | 37.00 | 9055370011000 |
| 0.0465 | | 1.18 | 60.00 | 36.00 | 37.00 | 9055370011800 |
| 0.0469 | 3/64 | 1.19 | 65.00 | 40.00 | 41.00 | 9055370011900 |
| 0.0472 | | 1.20 | 65.00 | 39.20 | 41.00 | 9055370012000 |
| 0.0512 | | 1.30 | 65.00 | 39.05 | 41.00 | 9055370013000 |
| 0.0520 | | 1.32 | 65.00 | 40.00 | 41.00 | 9055370013200 |
| 0.0551 | | 1.40 | 70.00 | 42.90 | 45.00 | 9055370014000 |
| 0.0591 | | 1.50 | 70.00 | 42.75 | 45.00 | 9055370015000 |
| 0.0594 | | 1.51 | 76.00 | 49.00 | 50.00 | 9055370015100 |
| 0.0626 | 1/16 | 1.59 | 76.00 | 49.00 | 50.00 | 9055370015900 |
| 0.0630 | | 1.60 | 76.00 | 47.60 | 50.00 | 9055370016000 |
| 0.0634 | | 1.61 | 76.00 | 49.00 | 50.00 | 9055370016100 |
| 0.0669 | | 1.70 | 76.00 | 47.45 | 50.00 | 9055370017000 |
| 0.0701 | | 1.78 | 80.00 | 51.00 | 53.00 | 9055370017800 |
| 0.0709 | | 1.80 | 80.00 | 50.30 | 53.00 | 9055370018000 |
| 0.0728 | | 1.85 | 80.00 | 51.00 | 53.00 | 9055370018500 |
| 0.0748 | | 1.90 | 80.00 | 50.15 | 53.00 | 9055370019000 |
| 0.0760 | | 1.93 | 85.00 | 54.00 | 56.00 | 9055370019300 |
| 0.0780 | 5/64 | 1.98 | 85.00 | 54.00 | 56.00 | 9055370019800 |
| 0.0783 | | 1.99 | 85.00 | 54.00 | 56.00 | 9055370019900 |
| 0.0787 | | 2.00 | 85.00 | 53.00 | 56.00 | 9055370020000 |
| 0.0811 | | 2.06 | 85.00 | 54.00 | 56.00 | 9055370020600 |
| 0.0819 | | 2.08 | 85.00 | 54.00 | 56.00 | 9055370020800 |
| 0.0827 | | 2.10 | 85.00 | 52.85 | 56.00 | 9055370021000 |
| 0.0858 | | 2.18 | 90.00 | 57.00 | 59.00 | 9055370021800 |
| 0.0866 | | 2.20 | 90.00 | 55.70 | 59.00 | 9055370022000 |
| 0.0890 | | 2.26 | 90.00 | 57.00 | 59.00 | 9055370022600 |
| 0.0906 | | 2.30 | 90.00 | 55.55 | 59.00 | 9055370023000 |
| 0.0933 | | 2.37 | 95.00 | 60.00 | 62.00 | 9055370023700 |
| 0.0937 | 3/32 | 2.38 | 95.00 | 60.00 | 62.00 | 9055370023800 |
| 0.0945 | | 2.40 | 95.00 | 58.40 | 62.00 | 9055370024000 |
| 0.0961 | | 2.44 | 95.00 | 60.00 | 62.00 | 9055370024400 |
| 0.0980 | | 2.49 | 95.00 | 60.00 | 62.00 | 9055370024900 |
| 0.0984 | | 2.50 | 95.00 | 58.25 | 62.00 | 9055370025000 |
| 0.0996 | | 2.53 | 95.00 | 60.00 | 62.00 | 9055370025300 |
| 0.1016 | | 2.58 | 95.00 | 60.00 | 62.00 | 9055370025800 |
| 0.1024 | | 2.60 | 95.00 | 58.10 | 62.00 | 9055370026000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1039 | | 2.64 | 95.00 | 60.00 | 62.00 | 9055370026400 |
| 0.1063 | | 2.70 | 100.00 | 61.95 | 66.00 | 9055370027000 |
| 0.1067 | | 2.71 | 100.00 | 64.00 | 66.00 | 9055370027100 |
| 0.1094 | 7/64 | 2.78 | 100.00 | 63.00 | 66.00 | 9055370027800 |
| 0.1098 | | 2.79 | 100.00 | 63.00 | 66.00 | 9055370027900 |
| 0.1102 | | 2.80 | 100.00 | 61.80 | 66.00 | 9055370028000 |
| 0.1110 | | 2.82 | 100.00 | 63.00 | 66.00 | 9055370028200 |
| 0.1130 | | 2.87 | 100.00 | 63.00 | 66.00 | 9055370028700 |
| 0.1142 | | 2.90 | 100.00 | 61.65 | 66.00 | 9055370029000 |
| 0.1161 | | 2.95 | 100.00 | 63.00 | 66.00 | 9055370029500 |
| 0.1181 | | 3.00 | 100.00 | 61.50 | 66.00 | 9055370030000 |
| 0.1201 | | 3.05 | 106.00 | 66.00 | 69.00 | 9055370030500 |
| 0.1220 | | 3.10 | 106.00 | 64.35 | 69.00 | 9055370031000 |
| 0.1248 | 1/8 | 3.17 | 106.00 | 66.00 | 69.00 | 9055370031700 |
| 0.1260 | | 3.20 | 106.00 | 64.20 | 69.00 | 9055370032000 |
| 0.1283 | | 3.26 | 106.00 | 66.00 | 69.00 | 9055370032600 |
| 0.1299 | | 3.30 | 106.00 | 64.05 | 69.00 | 9055370033000 |
| 0.1339 | | 3.40 | 112.00 | 67.90 | 73.00 | 9055370034000 |
| 0.1358 | | 3.45 | 112.00 | 70.00 | 73.00 | 9055370034500 |
| 0.1378 | | 3.50 | 112.00 | 67.75 | 73.00 | 9055370035000 |
| 0.1406 | 9/64 #28 | 3.57 | 112.00 | 70.00 | 73.00 | 9055370035700 |
| 0.1417 | | 3.60 | 112.00 | 67.60 | 73.00 | 9055370036000 |
| 0.1441 | | 3.66 | 112.00 | 70.00 | 73.00 | 9055370036600 |
| 0.1457 | | 3.70 | 112.00 | 67.45 | 73.00 | 9055370037000 |
| 0.1469 | | 3.73 | 112.00 | 70.00 | 73.00 | 9055370037300 |
| 0.1496 | | 3.80 | 119.00 | 72.30 | 78.00 | 9055370038000 |
| 0.1520 | | 3.86 | 119.00 | 75.00 | 78.00 | 9055370038600 |
| 0.1535 | | 3.90 | 119.00 | 72.15 | 78.00 | 9055370039000 |
| 0.1539 | | 3.91 | 119.00 | 74.00 | 78.00 | 9055370039100 |
| 0.1563 | 5/32 | 3.97 | 119.00 | 74.00 | 78.00 | 9055370039700 |
| 0.1571 | | 3.99 | 119.00 | 74.00 | 78.00 | 9055370039900 |
| 0.1575 | | 4.00 | 119.00 | 72.00 | 78.00 | 9055370040000 |
| 0.1591 | | 4.04 | 119.00 | 74.00 | 78.00 | 9055370040400 |
| 0.1610 | | 4.09 | 119.00 | 74.00 | 78.00 | 9055370040900 |
| 0.1614 | | 4.10 | 119.00 | 71.85 | 78.00 | 9055370041000 |
| 0.1654 | | 4.20 | 119.00 | 71.70 | 78.00 | 9055370042000 |
| 0.1661 | | 4.22 | 119.00 | 74.00 | 78.00 | 9055370042200 |
| 0.1693 | | 4.30 | 126.00 | 75.55 | 82.00 | 9055370043000 |
| 0.1720 | 11/64 | 4.37 | 126.00 | 78.00 | 82.00 | 9055370043700 |
| 0.1728 | | 4.39 | 126.00 | 78.00 | 82.00 | 9055370043900 |
| 0.1732 | | 4.40 | 126.00 | 75.40 | 82.00 | 9055370044000 |
| 0.1772 | | 4.50 | 126.00 | 75.25 | 82.00 | 9055370045000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | | 4.57 | 126.00 | 78.00 | 82.00 | 9055370045700 |
| 0.1811 | | 4.60 | 126.00 | 75.10 | 82.00 | 9055370046000 |
| 0.1819 | | 4.62 | 126.00 | 78.00 | 82.00 | 9055370046200 |
| 0.1850 | | 4.70 | 126.00 | 74.95 | 82.00 | 9055370047000 |
| 0.1874 | 3/16 | 4.76 | 132.00 | 83.00 | 87.00 | 9055370047600 |
| 0.1890 | | 4.80 | 132.00 | 79.80 | 87.00 | 9055370048000 |
| 0.1909 | | 4.85 | 132.00 | 83.00 | 87.00 | 9055370048500 |
| 0.1929 | | 4.90 | 132.00 | 79.65 | 87.00 | 9055370049000 |
| 0.1937 | | 4.92 | 132.00 | 83.00 | 87.00 | 9055370049200 |
| 0.1961 | | 4.98 | 132.00 | 83.00 | 87.00 | 9055370049800 |
| 0.1969 | | 5.00 | 132.00 | 79.50 | 87.00 | 9055370050000 |
| 0.1992 | | 5.06 | 132.00 | 82.00 | 87.00 | 9055370050600 |
| 0.2008 | | 5.10 | 132.00 | 79.35 | 87.00 | 9055370051000 |
| 0.2012 | | 5.11 | 132.00 | 82.00 | 87.00 | 9055370051100 |
| 0.2031 | 13/64 | 5.16 | 132.00 | 82.00 | 87.00 | 9055370051600 |
| 0.2039 | | 5.18 | 132.00 | 82.00 | 87.00 | 9055370051800 |
| 0.2047 | | 5.20 | 132.00 | 79.20 | 87.00 | 9055370052000 |
| 0.2055 | | 5.22 | 132.00 | 82.00 | 87.00 | 9055370052200 |
| 0.2087 | | 5.30 | 132.00 | 79.05 | 87.00 | 9055370053000 |
| 0.2091 | | 5.31 | 139.00 | 86.00 | 91.00 | 9055370053100 |
| 0.2126 | | 5.40 | 139.00 | 82.90 | 91.00 | 9055370054000 |
| 0.2130 | | 5.41 | 139.00 | 86.00 | 91.00 | 9055370054100 |
| 0.2165 | | 5.50 | 139.00 | 82.75 | 91.00 | 9055370055000 |
| 0.2189 | 7/32 | 5.56 | 139.00 | 86.00 | 91.00 | 9055370055600 |
| 0.2205 | | 5.60 | 139.00 | 82.60 | 91.00 | 9055370056000 |
| 0.2209 | | 5.61 | 139.00 | 86.00 | 91.00 | 9055370056100 |
| 0.2244 | | 5.70 | 139.00 | 82.45 | 91.00 | 9055370057000 |
| 0.2280 | | 5.79 | 139.00 | 86.00 | 91.00 | 9055370057900 |
| 0.2283 | | 5.80 | 139.00 | 82.30 | 91.00 | 9055370058000 |
| 0.2323 | | 5.90 | 139.00 | 82.15 | 91.00 | 9055370059000 |
| 0.2339 | A | 5.94 | 139.00 | 86.00 | 91.00 | 9055370059400 |
| 0.2343 | 15/64 | 5.95 | 139.00 | 86.00 | 91.00 | 9055370059500 |
| 0.2362 | | 6.00 | 139.00 | 82.00 | 91.00 | 9055370060000 |
| 0.2378 | B | 6.04 | 148.00 | 92.00 | 97.00 | 9055370060400 |
| 0.2402 | | 6.10 | 148.00 | 87.85 | 97.00 | 9055370061000 |
| 0.2421 | C | 6.15 | 148.00 | 91.00 | 97.00 | 9055370061500 |
| 0.2441 | | 6.20 | 148.00 | 87.70 | 97.00 | 9055370062000 |
| 0.2461 | D | 6.25 | 148.00 | 91.00 | 97.00 | 9055370062500 |
| 0.2480 | | 6.30 | 148.00 | 87.55 | 97.00 | 9055370063000 |
| 0.2500 | 1/4 | 6.35 | 148.00 | 91.00 | 97.00 | 9055370063500 |
| 0.2520 | | 6.40 | 148.00 | 87.40 | 97.00 | 9055370064000 |
| 0.2559 | | 6.50 | 148.00 | 87.25 | 97.00 | 9055370065000 |
| 0.2571 | F | 6.53 | 148.00 | 91.00 | 97.00 | 9055370065300 |
| 0.2598 | | 6.60 | 148.00 | 87.10 | 97.00 | 9055370066000 |
| 0.2610 | G | 6.63 | 148.00 | 91.00 | 97.00 | 9055370066300 |
| 0.2638 | | 6.70 | 148.00 | 86.95 | 97.00 | 9055370067000 |
| 0.2657 | 17/64 | 6.75 | 156.00 | 96.00 | 102.00 | 9055370067500 |
| 0.2677 | | 6.80 | 156.00 | 91.80 | 102.00 | 9055370068000 |
| 0.2717 | I | 6.90 | 156.00 | 91.65 | 102.00 | 9055370069000 |
| 0.2756 | | 7.00 | 156.00 | 91.50 | 102.00 | 9055370070000 |
| 0.2768 | J | 7.03 | 156.00 | 96.00 | 102.00 | 9055370070300 |
| 0.2795 | | 7.10 | 156.00 | 91.35 | 102.00 | 9055370071000 |
| 0.2811 | 9/32 | 7.14 | 156.00 | 96.00 | 102.00 | 9055370071400 |
| 0.2835 | | 7.20 | 156.00 | 91.20 | 102.00 | 9055370072000 |
| 0.2874 | | 7.30 | 156.00 | 91.05 | 102.00 | 9055370073000 |
| 0.2902 | L | 7.37 | 156.00 | 95.00 | 102.00 | 9055370073700 |
| 0.2913 | | 7.40 | 156.00 | 90.90 | 102.00 | 9055370074000 |
| 0.2949 | M | 7.49 | 156.00 | 95.00 | 102.00 | 9055370074900 |
| 0.2953 | | 7.50 | 156.00 | 90.75 | 102.00 | 9055370075000 |
| 0.2969 | 19/64 | 7.54 | 165.00 | 102.00 | 109.00 | 9055370075400 |
| 0.2992 | | 7.60 | 165.00 | 97.60 | 109.00 | 9055370076000 |
| 0.3020 | N | 7.67 | 165.00 | 102.00 | 109.00 | 9055370076700 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3031 | | 7.70 | 165.00 | 97.45 | 109.00 | 9055370077000 |
| 0.3071 | | 7.80 | 165.00 | 97.30 | 109.00 | 9055370078000 |
| 0.3110 | | 7.90 | 165.00 | 97.15 | 109.00 | 9055370079000 |
| 0.3126 | 5/16 | 7.94 | 165.00 | 102.00 | 109.00 | 9055370079400 |
| 0.3150 | | 8.00 | 165.00 | 97.00 | 109.00 | 9055370080000 |
| 0.3161 | O | 8.03 | 165.00 | 102.00 | 109.00 | 9055370080300 |
| 0.3189 | | 8.10 | 165.00 | 96.85 | 109.00 | 9055370081000 |
| 0.3228 | P | 8.20 | 165.00 | 96.70 | 109.00 | 9055370082000 |
| 0.3268 | | 8.30 | 165.00 | 96.55 | 109.00 | 9055370083000 |
| 0.3280 | 21/64 | 8.33 | 165.00 | 101.00 | 109.00 | 9055370083300 |
| 0.3307 | | 8.40 | 165.00 | 96.40 | 109.00 | 9055370084000 |
| 0.3319 | Q | 8.43 | 165.00 | 101.00 | 109.00 | 9055370084300 |
| 0.3346 | | 8.50 | 165.00 | 96.25 | 109.00 | 9055370085000 |
| 0.3386 | | 8.60 | 175.00 | 102.10 | 115.00 | 9055370086000 |
| 0.3390 | R | 8.61 | 175.00 | 107.00 | 115.00 | 9055370086100 |
| 0.3425 | | 8.70 | 175.00 | 101.95 | 115.00 | 9055370087000 |
| 0.3437 | 11/32 | 8.73 | 175.00 | 107.00 | 115.00 | 9055370087300 |
| 0.3465 | | 8.80 | 175.00 | 101.80 | 115.00 | 9055370088000 |
| 0.3480 | S | 8.84 | 175.00 | 107.00 | 115.00 | 9055370088400 |
| 0.3504 | | 8.90 | 175.00 | 101.65 | 115.00 | 9055370089000 |
| 0.3543 | | 9.00 | 175.00 | 101.50 | 115.00 | 9055370090000 |
| 0.3579 | T | 9.09 | 175.00 | 107.00 | 115.00 | 9055370090900 |
| 0.3583 | | 9.10 | 175.00 | 101.35 | 115.00 | 9055370091000 |
| 0.3594 | 23/64 | 9.13 | 175.00 | 107.00 | 115.00 | 9055370091300 |
| 0.3622 | | 9.20 | 175.00 | 101.20 | 115.00 | 9055370092000 |
| 0.3661 | | 9.30 | 175.00 | 101.05 | 115.00 | 9055370093000 |
| 0.3677 | U | 9.34 | 175.00 | 107.00 | 115.00 | 9055370093400 |
| 0.3701 | | 9.40 | 175.00 | 100.90 | 115.00 | 9055370094000 |
| 0.3740 | | 9.50 | 175.00 | 100.75 | 115.00 | 9055370095000 |
| 0.3748 | 3/8 | 9.52 | 184.00 | 112.00 | 121.00 | 9055370095200 |
| 0.3772 | V | 9.58 | 184.00 | 112.00 | 121.00 | 9055370095800 |
| 0.3780 | | 9.60 | 184.00 | 106.60 | 121.00 | 9055370096000 |
| 0.3819 | | 9.70 | 184.00 | 106.45 | 121.00 | 9055370097000 |
| 0.3858 | W | 9.80 | 184.00 | 106.30 | 121.00 | 9055370098000 |
| 0.3898 | | 9.90 | 184.00 | 106.15 | 121.00 | 9055370099000 |
| 0.3906 | 25/64 | 9.92 | 184.00 | 112.00 | 121.00 | 9055370099200 |
| 0.3937 | | 10.00 | 184.00 | 106.00 | 121.00 | 9055370100000 |
| 0.3969 | X | 10.08 | 184.00 | 112.00 | 121.00 | 9055370100800 |
| 0.3976 | | 10.10 | 184.00 | 105.85 | 121.00 | 9055370101000 |
| 0.4016 | | 10.20 | 184.00 | 105.70 | 121.00 | 9055370102000 |
| 0.4039 | Y | 10.26 | 184.00 | 112.00 | 121.00 | 9055370102600 |
| 0.4055 | | 10.30 | 184.00 | 105.55 | 121.00 | 9055370103000 |
| 0.4063 | 13/32 | 10.32 | 184.00 | 112.00 | 121.00 | 9055370103200 |
| 0.4094 | | 10.40 | 184.00 | 105.40 | 121.00 | 9055370104000 |
| 0.4130 | Z | 10.49 | 184.00 | 111.00 | 121.00 | 9055370104900 |
| 0.4134 | | 10.50 | 184.00 | 105.25 | 121.00 | 9055370105000 |
| 0.4220 | 27/64 | 10.72 | 195.00 | 118.00 | 128.00 | 9055370107200 |
| 0.4331 | | 11.00 | 195.00 | 111.50 | 128.00 | 9055370110000 |
| 0.4374 | 7/16 | 11.11 | 195.00 | 118.00 | 128.00 | 9055370111100 |
| 0.4528 | | 11.50 | 195.00 | 110.75 | 128.00 | 9055370115000 |
| 0.4531 | 29/64 | 11.51 | 195.00 | 118.00 | 128.00 | 9055370115100 |
| 0.4689 | 15/32 | 11.91 | 205.00 | 123.00 | 134.00 | 9055370119100 |
| 0.4724 | | 12.00 | 205.00 | 116.00 | 134.00 | 9055370120000 |
| 0.4843 | 31/64 | 12.30 | 205.00 | 123.00 | 134.00 | 9055370123000 |
| 0.4921 | | 12.50 | 205.00 | 115.25 | 134.00 | 9055370125000 |
| 0.5000 | 1/2 | 12.70 | 205.00 | 123.00 | 134.00 | 9055370127000 |
| 0.5118 | | 13.00 | 205.00 | 114.50 | 134.00 | 9055370130000 |
| 0.5157 | 33/64 | 13.10 | 205.00 | 122.00 | 134.00 | 9055370131000 |
| 0.5311 | 17/32 | 13.49 | 214.00 | 128.00 | 140.00 | 9055370134900 |
| 0.5315 | | 13.50 | 214.00 | 119.75 | 140.00 | 9055370135000 |
| 0.5512 | | 14.00 | 214.00 | 119.00 | 140.00 | 9055370140000 |
| 0.5626 | 9/16 | 14.29 | 220.00 | 131.00 | 144.00 | 9055370142900 |

Taper Length



EXTRA LENGTH HSS & HSCO DRILLS





Tool material

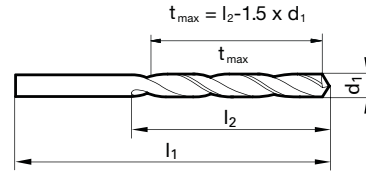
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 2.380 • relieved cone • for extremely deep holes |
| M | Stainless steel | | |
| K | Cast iron | ● | alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 501

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0630 | | 1.600 | 115.00 | 72.60 | 75.00 | 9002350016000 |
| 0.0709 | | 1.800 | 120.00 | 77.30 | 80.00 | 9002350018000 |
| 0.0748 | | 1.900 | 120.00 | 77.15 | 80.00 | 9002350019000 |
| 0.0768 | | 1.950 | 125.00 | 82.08 | 85.00 | 9002350019500 |
| 0.0787 | | 2.000 | 125.00 | 82.00 | 85.00 | 9002350020000 |
| 0.0807 | | 2.050 | 125.00 | 81.93 | 85.00 | 9002350020500 |
| 0.0827 | | 2.100 | 125.00 | 81.85 | 85.00 | 9002350021000 |
| 0.0866 | | 2.200 | 135.00 | 86.70 | 90.00 | 9002350022000 |
| 0.0906 | | 2.300 | 135.00 | 86.55 | 90.00 | 9002350023000 |
| 0.0937 | 3/32 | 2.380 | 140.00 | 91.43 | 95.00 | 9002350023800 |
| 0.0945 | | 2.400 | 140.00 | 91.40 | 95.00 | 9002350024000 |
| 0.0984 | | 2.500 | 140.00 | 91.25 | 95.00 | 9002350025000 |
| 0.1024 | | 2.600 | 140.00 | 91.10 | 95.00 | 9002350026000 |
| 0.1063 | | 2.700 | 150.00 | 95.95 | 100.00 | 9002350027000 |
| 0.1094 | 7/64 | 2.780 | 150.00 | 95.83 | 100.00 | 9002350027800 |
| 0.1102 | | 2.800 | 150.00 | 95.80 | 100.00 | 9002350028000 |
| 0.1142 | | 2.900 | 150.00 | 95.65 | 100.00 | 9002350029000 |
| 0.1181 | | 3.000 | 150.00 | 95.50 | 100.00 | 9002350030000 |
| 0.1220 | | 3.100 | 155.00 | 100.35 | 105.00 | 9002350031000 |
| 0.1248 | 1/8 | 3.170 | 155.00 | 100.25 | 105.00 | 9002350031700 |
| 0.1260 | | 3.200 | 155.00 | 100.20 | 105.00 | 9002350032000 |
| 0.1280 | | 3.250 | 155.00 | 100.13 | 105.00 | 9002350032500 |
| 0.1299 | | 3.300 | 155.00 | 100.05 | 105.00 | 9002350033000 |
| 0.1339 | | 3.400 | 165.00 | 109.90 | 115.00 | 9002350034000 |
| 0.1378 | | 3.500 | 165.00 | 109.75 | 115.00 | 9002350035000 |
| 0.1406 | 9/64 #28 | 3.570 | 165.00 | 109.65 | 115.00 | 9002350035700 |
| 0.1417 | | 3.600 | 165.00 | 109.60 | 115.00 | 9002350036000 |
| 0.1457 | | 3.700 | 165.00 | 109.45 | 115.00 | 9002350037000 |
| 0.1496 | #25 | 3.800 | 175.00 | 114.30 | 120.00 | 9002350038000 |
| 0.1535 | | 3.900 | 175.00 | 114.15 | 120.00 | 9002350039000 |
| 0.1563 | 5/32 | 3.970 | 175.00 | 114.05 | 120.00 | 9002350039700 |
| 0.1575 | | 4.000 | 175.00 | 114.00 | 120.00 | 9002350040000 |
| 0.1614 | | 4.100 | 175.00 | 113.85 | 120.00 | 9002350041000 |
| 0.1654 | | 4.200 | 175.00 | 113.70 | 120.00 | 9002350042000 |
| 0.1693 | #18 | 4.300 | 185.00 | 118.55 | 125.00 | 9002350043000 |
| 0.1720 | 11/64 | 4.370 | 185.00 | 118.45 | 125.00 | 9002350043700 |
| 0.1732 | | 4.400 | 185.00 | 118.40 | 125.00 | 9002350044000 |
| 0.1772 | #16 | 4.500 | 185.00 | 118.25 | 125.00 | 9002350045000 |
| 0.1811 | | 4.600 | 185.00 | 118.10 | 125.00 | 9002350046000 |
| 0.1850 | #13 | 4.700 | 185.00 | 117.95 | 125.00 | 9002350047000 |
| 0.1874 | 3/16 | 4.760 | 195.00 | 127.86 | 135.00 | 9002350047600 |
| 0.1890 | #12 | 4.800 | 195.00 | 127.80 | 135.00 | 9002350048000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1929 | | 4.900 | 195.00 | 127.65 | 135.00 | 9002350049000 |
| 0.1969 | | 5.000 | 195.00 | 127.50 | 135.00 | 9002350050000 |
| 0.2008 | | 5.100 | 195.00 | 127.35 | 135.00 | 9002350051000 |
| 0.2047 | | 5.200 | 195.00 | 127.20 | 135.00 | 9002350052000 |
| 0.2087 | | 5.300 | 195.00 | 127.05 | 135.00 | 9002350053000 |
| 0.2126 | | 5.400 | 205.00 | 131.90 | 140.00 | 9002350054000 |
| 0.2165 | | 5.500 | 205.00 | 131.75 | 140.00 | 9002350055000 |
| 0.2189 | 7/32 | 5.560 | 205.00 | 131.66 | 140.00 | 9002350055600 |
| 0.2205 | | 5.600 | 205.00 | 131.60 | 140.00 | 9002350056000 |
| 0.2244 | | 5.700 | 205.00 | 131.45 | 140.00 | 9002350057000 |
| 0.2283 | | 5.800 | 205.00 | 131.30 | 140.00 | 9002350058000 |
| 0.2323 | | 5.900 | 205.00 | 131.15 | 140.00 | 9002350059000 |
| 0.2343 | 15/64 | 5.950 | 205.00 | 131.08 | 140.00 | 9002350059500 |
| 0.2362 | | 6.000 | 205.00 | 131.00 | 140.00 | 9002350060000 |
| 0.2402 | | 6.100 | 215.00 | 140.85 | 150.00 | 9002350061000 |
| 0.2441 | | 6.200 | 215.00 | 140.70 | 150.00 | 9002350062000 |
| 0.2480 | | 6.300 | 215.00 | 140.55 | 150.00 | 9002350063000 |
| 0.2500 | 1/4 E | 6.350 | 215.00 | 140.48 | 150.00 | 9002350063500 |
| 0.2520 | | 6.400 | 215.00 | 140.40 | 150.00 | 9002350064000 |
| 0.2559 | | 6.500 | 215.00 | 140.25 | 150.00 | 9002350065000 |
| 0.2598 | | 6.600 | 215.00 | 140.10 | 150.00 | 9002350066000 |
| 0.2638 | | 6.700 | 215.00 | 139.95 | 150.00 | 9002350067000 |
| 0.2657 | 17/64 H | 6.750 | 225.00 | 144.88 | 155.00 | 9002350067500 |
| 0.2677 | | 6.800 | 225.00 | 144.80 | 155.00 | 9002350068000 |
| 0.2756 | | 7.000 | 225.00 | 144.50 | 155.00 | 9002350070000 |
| 0.2795 | | 7.100 | 225.00 | 144.35 | 155.00 | 9002350071000 |
| 0.2811 | 9/32 K | 7.140 | 225.00 | 144.29 | 155.00 | 9002350071400 |
| 0.2835 | | 7.200 | 225.00 | 144.20 | 155.00 | 9002350072000 |
| 0.2913 | | 7.400 | 225.00 | 143.90 | 155.00 | 9002350074000 |
| 0.2953 | | 7.500 | 225.00 | 143.75 | 155.00 | 9002350075000 |
| 0.2969 | 19/64 | 5.950 | 240.00 | 153.69 | 165.00 | 9002350075400 |
| 0.3031 | | 7.700 | 240.00 | 153.45 | 165.00 | 9002350077000 |
| 0.3071 | | 7.800 | 240.00 | 153.30 | 165.00 | 9002350078000 |
| 0.3110 | | 7.900 | 240.00 | 153.15 | 165.00 | 9002350079000 |
| 0.3126 | 5/16 | 7.940 | 240.00 | 153.09 | 165.00 | 9002350079400 |
| 0.3150 | | 8.000 | 240.00 | 153.00 | 165.00 | 9002350080000 |
| 0.3189 | | 8.100 | 240.00 | 152.85 | 165.00 | 9002350081000 |
| 0.3228 | P | 8.200 | 240.00 | 152.70 | 165.00 | 9002350082000 |
| 0.3268 | | 8.300 | 240.00 | 152.55 | 165.00 | 9002350083000 |
| 0.3280 | 21/64 | 8.330 | 240.00 | 152.51 | 165.00 | 9002350083300 |
| 0.3307 | | 8.400 | 240.00 | 152.40 | 165.00 | 9002350084000 |
| 0.3346 | | 8.500 | 240.00 | 152.25 | 165.00 | 9002350085000 |

Extra Length Drills

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3386 | | 8.600 | 250.00 | 162.10 | 175.00 | 9002350086000 |
| 0.3425 | | 8.700 | 250.00 | 161.95 | 175.00 | 9002350087000 |
| 0.3437 | 11/32 | 8.730 | 250.00 | 161.91 | 175.00 | 9002350087300 |
| 0.3465 | | 8.800 | 250.00 | 161.80 | 175.00 | 9002350088000 |
| 0.3543 | | 9.000 | 250.00 | 161.50 | 175.00 | 9002350090000 |
| 0.3594 | 23/64 | 9.130 | 250.00 | 161.31 | 175.00 | 9002350091300 |
| 0.3740 | | 9.500 | 250.00 | 160.75 | 175.00 | 9002350095000 |
| 0.3748 | 3/8 | 9.520 | 265.00 | 170.72 | 185.00 | 9002350095200 |
| 0.3780 | | 9.600 | 265.00 | 170.60 | 185.00 | 9002350096000 |
| 0.3819 | | 9.700 | 265.00 | 170.45 | 185.00 | 9002350097000 |
| 0.3858 | W | 9.800 | 265.00 | 170.30 | 185.00 | 9002350098000 |
| 0.3898 | | 9.900 | 265.00 | 170.15 | 185.00 | 9002350099000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3937 | | 10.000 | 265.00 | 170.00 | 185.00 | 9002350100000 |
| 0.4063 | 13/32 | 10.320 | 265.00 | 169.52 | 185.00 | 9002350103200 |
| 0.4134 | | 10.500 | 265.00 | 169.25 | 185.00 | 9002350105000 |
| 0.4331 | | 11.000 | 280.00 | 178.50 | 195.00 | 9002350110000 |
| 0.4374 | 7/16 | 11.110 | 280.00 | 178.34 | 195.00 | 9002350111100 |
| 0.4528 | | 11.500 | 280.00 | 177.75 | 195.00 | 9002350115000 |
| 0.4724 | | 12.000 | 295.00 | 187.00 | 205.00 | 9002350120000 |
| 0.4764 | | 12.100 | 295.00 | 186.85 | 205.00 | 9002350121000 |
| 0.4843 | 31/64 | 12.300 | 295.00 | 186.55 | 205.00 | 9002350123000 |
| 0.4921 | | 12.500 | 295.00 | 186.25 | 205.00 | 9002350125000 |
| 0.5000 | 1/2 | 12.700 | 295.00 | 185.95 | 205.00 | 9002350127000 |
| 0.5118 | | 13.000 | 295.00 | 185.50 | 205.00 | 9002350130000 |



Tool material

HSS

Surface

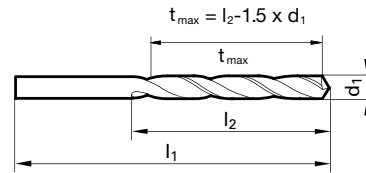


| | | |
|----------|-----------------|---|
| P | Steel | ○ |
| M | Stainless steel | |
| K | Cast iron | |
| N | Aluminum | ● |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning ≥ Ø 2.380 • relieved cone • for extremely deep holes

soft, long chipping materials up to 500 N/mm² • mild steels • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • zamak, argalium, soft plastics, wood

- =Optimal
- =Limited



Speeds and feeds information on pg. 516

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | | | | |
| 0.0787 | | 125.00 | 82.00 | 85.00 | 9005240020000 |
| 0.0827 | | 125.00 | 81.85 | 85.00 | 9005240021000 |
| 0.0866 | | 135.00 | 86.70 | 90.00 | 9005240022000 |
| 0.0906 | | 135.00 | 86.55 | 90.00 | 9005240023000 |
| 0.0925 | | 135.00 | 86.48 | 90.00 | 9005240023500 |
| 0.0937 | 3/32 | 140.00 | 91.43 | 95.00 | 9005240023800 |
| 0.0945 | | 140.00 | 91.40 | 95.00 | 9005240024000 |
| 0.0965 | | 140.00 | 91.33 | 95.00 | 9005240024500 |
| 0.0984 | | 140.00 | 91.25 | 95.00 | 9005240025000 |
| 0.1024 | | 140.00 | 91.10 | 95.00 | 9005240026000 |
| 0.1094 | 7/64 | 150.00 | 95.83 | 100.00 | 9005240027800 |
| 0.1102 | | 150.00 | 95.80 | 100.00 | 9005240028000 |
| 0.1142 | | 150.00 | 95.65 | 100.00 | 9005240029000 |
| 0.1161 | #32 | 150.00 | 95.58 | 100.00 | 9005240029500 |
| 0.1181 | | 150.00 | 95.50 | 100.00 | 9005240030000 |
| 0.1220 | | 155.00 | 100.35 | 105.00 | 9005240031000 |
| 0.1248 | 1/8 | 155.00 | 100.25 | 105.00 | 9005240031700 |
| 0.1260 | | 155.00 | 100.20 | 105.00 | 9005240032000 |
| 0.1299 | | 155.00 | 100.05 | 105.00 | 9005240033000 |
| 0.1319 | | 155.00 | 99.98 | 105.00 | 9005240033500 |
| 0.1339 | | 165.00 | 109.90 | 115.00 | 9005240034000 |
| 0.1358 | #29 | 165.00 | 109.83 | 115.00 | 9005240034500 |
| 0.1378 | | 165.00 | 109.75 | 115.00 | 9005240035000 |
| 0.1390 | | 165.00 | 109.71 | 115.00 | 9005240035300 |
| 0.1406 | 9/64 #28 | 165.00 | 109.65 | 115.00 | 9005240035700 |
| 0.1417 | | 165.00 | 109.60 | 115.00 | 9005240036000 |
| 0.1457 | | 165.00 | 109.45 | 115.00 | 9005240037000 |
| 0.1496 | #25 | 175.00 | 114.30 | 120.00 | 9005240038000 |
| 0.1535 | | 175.00 | 114.15 | 120.00 | 9005240039000 |
| 0.1563 | 5/32 | 175.00 | 114.05 | 120.00 | 9005240039700 |
| 0.1575 | | 175.00 | 114.00 | 120.00 | 9005240040000 |
| 0.1614 | | 175.00 | 113.85 | 120.00 | 9005240041000 |
| 0.1654 | | 175.00 | 113.70 | 120.00 | 9005240042000 |
| 0.1673 | | 175.00 | 113.63 | 120.00 | 9005240042500 |
| 0.1693 | #18 | 185.00 | 118.55 | 125.00 | 9005240043000 |
| 0.1720 | 11/64 | 185.00 | 118.45 | 125.00 | 9005240043700 |
| 0.1732 | | 185.00 | 118.40 | 125.00 | 9005240044000 |
| 0.1772 | #16 | 185.00 | 118.25 | 125.00 | 9005240045000 |
| 0.1811 | | 185.00 | 118.10 | 125.00 | 9005240046000 |
| 0.1850 | #13 | 185.00 | 117.95 | 125.00 | 9005240047000 |
| 0.1874 | 3/16 | 195.00 | 127.86 | 135.00 | 9005240047600 |
| 0.1890 | #12 | 195.00 | 127.80 | 135.00 | 9005240048000 |
| 0.1969 | | 195.00 | 127.50 | 135.00 | 9005240050000 |
| 0.2008 | | 195.00 | 127.35 | 135.00 | 9005240051000 |
| 0.2031 | 13/64 | 195.00 | 127.26 | 135.00 | 9005240051600 |
| 0.2047 | | 195.00 | 127.20 | 135.00 | 9005240052000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2087 | | 5.30 | 195.00 | 127.05 | 135.00 | 9005240053000 |
| 0.2126 | | 5.40 | 205.00 | 131.90 | 140.00 | 9005240054000 |
| 0.2165 | | 5.50 | 205.00 | 131.75 | 140.00 | 9005240055000 |
| 0.2189 | 7/32 | 5.56 | 205.00 | 131.66 | 140.00 | 9005240055600 |
| 0.2283 | | 5.80 | 205.00 | 131.30 | 140.00 | 9005240058000 |
| 0.2343 | 15/64 | 5.95 | 205.00 | 131.08 | 140.00 | 9005240059500 |
| 0.2362 | | 6.00 | 205.00 | 131.00 | 140.00 | 9005240060000 |
| 0.2402 | | 6.10 | 215.00 | 140.85 | 150.00 | 9005240061000 |
| 0.2500 | 1/4 E | 6.35 | 215.00 | 140.48 | 150.00 | 9005240063500 |
| 0.2520 | | 6.40 | 215.00 | 140.40 | 150.00 | 9005240064000 |
| 0.2559 | | 6.50 | 215.00 | 140.25 | 150.00 | 9005240065000 |
| 0.2598 | | 6.60 | 215.00 | 140.10 | 150.00 | 9005240066000 |
| 0.2638 | | 6.70 | 215.00 | 139.95 | 150.00 | 9005240067000 |
| 0.2657 | 17/64 H | 6.75 | 225.00 | 144.88 | 155.00 | 9005240067500 |
| 0.2677 | | 6.80 | 225.00 | 144.80 | 155.00 | 9005240068000 |
| 0.2756 | | 7.00 | 225.00 | 144.50 | 155.00 | 9005240070000 |
| 0.2874 | | 7.30 | 225.00 | 144.05 | 155.00 | 9005240073000 |
| 0.2953 | | 7.50 | 225.00 | 143.75 | 155.00 | 9005240075000 |
| 0.2969 | 19/64 | 7.54 | 240.00 | 153.69 | 165.00 | 9005240075400 |
| 0.2992 | | 7.60 | 240.00 | 153.60 | 165.00 | 9005240076000 |
| 0.3071 | | 7.80 | 240.00 | 153.30 | 165.00 | 9005240078000 |
| 0.3110 | | 7.90 | 240.00 | 153.15 | 165.00 | 9005240079000 |
| 0.3126 | 5/16 | 7.94 | 240.00 | 153.09 | 165.00 | 9005240079400 |
| 0.3150 | | 8.00 | 240.00 | 153.00 | 165.00 | 9005240080000 |
| 0.3189 | | 8.10 | 240.00 | 152.85 | 165.00 | 9005240081000 |
| 0.3228 | P | 8.20 | 240.00 | 152.70 | 165.00 | 9005240082000 |
| 0.3280 | 21/64 | 8.33 | 240.00 | 152.51 | 165.00 | 9005240083300 |
| 0.3346 | | 8.50 | 240.00 | 152.25 | 165.00 | 9005240085000 |
| 0.3386 | | 8.60 | 250.00 | 162.10 | 175.00 | 9005240086000 |
| 0.3437 | 11/32 | 8.73 | 250.00 | 161.91 | 175.00 | 9005240087300 |
| 0.3504 | | 8.90 | 250.00 | 161.65 | 175.00 | 9005240089000 |
| 0.3543 | | 9.00 | 250.00 | 161.50 | 175.00 | 9005240090000 |
| 0.3594 | 23/64 | 9.13 | 250.00 | 161.31 | 175.00 | 9005240091300 |
| 0.3622 | | 9.20 | 250.00 | 161.20 | 175.00 | 9005240092000 |
| 0.3740 | | 9.50 | 250.00 | 160.75 | 175.00 | 9005240095000 |
| 0.3748 | 3/8 | 9.52 | 265.00 | 170.72 | 185.00 | 9005240095200 |
| 0.3937 | | 10.00 | 265.00 | 170.00 | 185.00 | 9005240100000 |
| 0.4063 | 13/32 | 10.32 | 265.00 | 169.52 | 185.00 | 9005240103200 |
| 0.4134 | | 10.50 | 265.00 | 169.25 | 185.00 | 9005240105000 |
| 0.4331 | | 11.00 | 280.00 | 178.50 | 195.00 | 9005240110000 |
| 0.4374 | 7/16 | 11.11 | 280.00 | 178.34 | 195.00 | 9005240111100 |
| 0.4528 | | 11.50 | 280.00 | 177.75 | 195.00 | 9005240115000 |
| 0.4689 | 15/32 | 11.91 | 295.00 | 187.14 | 205.00 | 9005240119100 |
| 0.4724 | | 12.00 | 295.00 | 187.00 | 205.00 | 9005240120000 |
| 0.5000 | 1/2 | 12.70 | 295.00 | 185.95 | 205.00 | 9005240127000 |



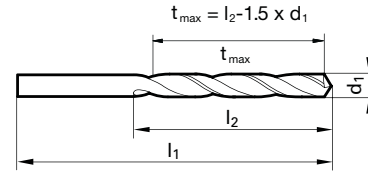
Tool material

HSS

Surface



- P** Steel ● web thinning $\geq \text{Ø } 1.950$ • relieved cone • wide flutes • for extremely deep holes • in case of unsatisfactory chip evacuation
 - M** Stainless steel ○
 - K** Cast iron ● cast iron and steels up to 1000 N/mm^2 • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 514

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0768 | 1.95 | 125.00 | 82.08 | 85.00 | 9005020019500 |
| 0.0787 | 2.00 | 125.00 | 82.00 | 85.00 | 9005020020000 |
| 0.0807 | 2.05 | 125.00 | 81.93 | 85.00 | 9005020020500 |
| 0.0827 | 2.10 | 125.00 | 81.85 | 85.00 | 9005020021000 |
| 0.0866 | 2.20 | 135.00 | 86.70 | 90.00 | 9005020022000 |
| 0.0906 | 2.30 | 135.00 | 86.55 | 90.00 | 9005020023000 |
| 0.0933 | #42 2.37 | 140.00 | 91.45 | 95.00 | 9005020023700 |
| 0.0937 | 3/32 2.38 | 140.00 | 91.43 | 95.00 | 9005020023800 |
| 0.0945 | 2.40 | 140.00 | 91.40 | 95.00 | 9005020024000 |
| 0.0984 | 2.50 | 140.00 | 91.25 | 95.00 | 9005020025000 |
| 0.1004 | 2.55 | 140.00 | 91.18 | 95.00 | 9005020025500 |
| 0.1016 | #38 2.58 | 140.00 | 91.13 | 95.00 | 9005020025800 |
| 0.1024 | 2.60 | 140.00 | 91.10 | 95.00 | 9005020026000 |
| 0.1063 | 2.70 | 150.00 | 95.95 | 100.00 | 9005020027000 |
| 0.1094 | 7/64 2.78 | 150.00 | 95.83 | 100.00 | 9005020027800 |
| 0.1102 | 2.80 | 150.00 | 95.80 | 100.00 | 9005020028000 |
| 0.1122 | 2.85 | 150.00 | 95.73 | 100.00 | 9005020028500 |
| 0.1130 | #33 2.87 | 150.00 | 95.70 | 100.00 | 9005020028700 |
| 0.1142 | 2.90 | 150.00 | 95.65 | 100.00 | 9005020029000 |
| 0.1161 | #32 2.95 | 150.00 | 95.58 | 100.00 | 9005020029500 |
| 0.1181 | 3.00 | 150.00 | 95.50 | 100.00 | 9005020030000 |
| 0.1193 | 3.03 | 155.00 | 100.46 | 105.00 | 9005020030300 |
| 0.1220 | 3.10 | 155.00 | 100.35 | 105.00 | 9005020031000 |
| 0.1248 | 1/8 3.17 | 155.00 | 100.25 | 105.00 | 9005020031700 |
| 0.1260 | 3.20 | 155.00 | 100.20 | 105.00 | 9005020032000 |
| 0.1280 | 3.25 | 155.00 | 100.13 | 105.00 | 9005020032500 |
| 0.1299 | 3.30 | 155.00 | 100.05 | 105.00 | 9005020033000 |
| 0.1339 | 3.40 | 165.00 | 109.90 | 115.00 | 9005020034000 |
| 0.1378 | 3.50 | 165.00 | 109.75 | 115.00 | 9005020035000 |
| 0.1406 | 9/64 #28 3.57 | 165.00 | 109.65 | 115.00 | 9005020035700 |
| 0.1417 | 3.60 | 165.00 | 109.60 | 115.00 | 9005020036000 |
| 0.1457 | 3.70 | 165.00 | 109.45 | 115.00 | 9005020037000 |
| 0.1476 | 3.75 | 165.00 | 109.38 | 115.00 | 9005020037500 |
| 0.1496 | #25 3.80 | 175.00 | 114.30 | 120.00 | 9005020038000 |
| 0.1520 | #24 3.86 | 175.00 | 114.21 | 120.00 | 9005020038600 |
| 0.1535 | 3.90 | 175.00 | 114.15 | 120.00 | 9005020039000 |
| 0.1563 | 5/32 3.97 | 175.00 | 114.05 | 120.00 | 9005020039700 |
| 0.1575 | 4.00 | 175.00 | 114.00 | 120.00 | 9005020040000 |
| 0.1614 | 4.10 | 175.00 | 113.85 | 120.00 | 9005020041000 |
| 0.1654 | 4.20 | 175.00 | 113.70 | 120.00 | 9005020042000 |
| 0.1693 | #18 4.30 | 185.00 | 118.55 | 125.00 | 9005020043000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.1720 | 11/64 | 4.37 | 185.00 | 118.45 | 125.00 | 9005020043700 |
| 0.1732 | | 4.40 | 185.00 | 118.40 | 125.00 | 9005020044000 |
| 0.1772 | #16 | 4.50 | 185.00 | 118.25 | 125.00 | 9005020045000 |
| 0.1799 | #15 | 4.57 | 185.00 | 118.15 | 125.00 | 9005020045700 |
| 0.1811 | | 4.60 | 185.00 | 118.10 | 125.00 | 9005020046000 |
| 0.1850 | #13 | 4.70 | 185.00 | 117.95 | 125.00 | 9005020047000 |
| 0.1874 | 3/16 | 4.76 | 195.00 | 127.86 | 135.00 | 9005020047600 |
| 0.1890 | #12 | 4.80 | 195.00 | 127.80 | 135.00 | 9005020048000 |
| 0.1929 | | 4.90 | 195.00 | 127.65 | 135.00 | 9005020049000 |
| 0.1969 | | 5.00 | 195.00 | 127.50 | 135.00 | 9005020050000 |
| 0.2008 | | 5.10 | 195.00 | 127.35 | 135.00 | 9005020051000 |
| 0.2012 | #7 | 5.11 | 195.00 | 127.34 | 135.00 | 9005020051100 |
| 0.2031 | 13/64 | 5.16 | 195.00 | 127.26 | 135.00 | 9005020051600 |
| 0.2047 | | 5.20 | 195.00 | 127.20 | 135.00 | 9005020052000 |
| 0.2087 | | 5.30 | 195.00 | 127.05 | 135.00 | 9005020053000 |
| 0.2126 | | 5.40 | 205.00 | 131.90 | 140.00 | 9005020054000 |
| 0.2165 | | 5.50 | 205.00 | 131.75 | 140.00 | 9005020055000 |
| 0.2189 | 7/32 | 5.56 | 205.00 | 131.66 | 140.00 | 9005020055600 |
| 0.2205 | | 5.60 | 205.00 | 131.60 | 140.00 | 9005020056000 |
| 0.2244 | | 5.70 | 205.00 | 131.45 | 140.00 | 9005020057000 |
| 0.2264 | | 5.75 | 205.00 | 131.38 | 140.00 | 9005020057500 |
| 0.2283 | | 5.80 | 205.00 | 131.30 | 140.00 | 9005020058000 |
| 0.2323 | | 5.90 | 205.00 | 131.15 | 140.00 | 9005020059000 |
| 0.2343 | 15/64 | 5.95 | 205.00 | 131.08 | 140.00 | 9005020059500 |
| 0.2362 | | 6.00 | 205.00 | 131.00 | 140.00 | 9005020060000 |
| 0.2382 | | 6.05 | 215.00 | 140.93 | 150.00 | 9005020060500 |
| 0.2402 | | 6.10 | 215.00 | 140.85 | 150.00 | 9005020061000 |
| 0.2441 | | 6.20 | 215.00 | 140.70 | 150.00 | 9005020062000 |
| 0.2461 | D | 6.25 | 215.00 | 140.63 | 150.00 | 9005020062500 |
| 0.2480 | | 6.30 | 215.00 | 140.55 | 150.00 | 9005020063000 |
| 0.2500 | 1/4 E | 6.35 | 215.00 | 140.48 | 150.00 | 9005020063500 |
| 0.2520 | | 6.40 | 215.00 | 140.40 | 150.00 | 9005020064000 |
| 0.2559 | | 6.50 | 215.00 | 140.25 | 150.00 | 9005020065000 |
| 0.2598 | | 6.60 | 215.00 | 140.10 | 150.00 | 9005020066000 |
| 0.2638 | | 6.70 | 215.00 | 139.95 | 150.00 | 9005020067000 |
| 0.2657 | 17/64 H | 6.75 | 225.00 | 144.88 | 155.00 | 9005020067500 |
| 0.2677 | | 6.80 | 225.00 | 144.80 | 155.00 | 9005020068000 |
| 0.2717 | I | 6.90 | 225.00 | 144.65 | 155.00 | 9005020069000 |
| 0.2756 | | 7.00 | 225.00 | 144.50 | 155.00 | 9005020070000 |
| 0.2795 | | 7.10 | 225.00 | 144.35 | 155.00 | 9005020071000 |
| 0.2835 | | 7.20 | 225.00 | 144.20 | 155.00 | 9005020072000 |

Extra Length Drills

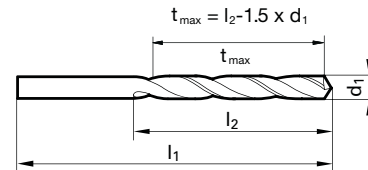
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2874 | | 7.30 | 225.00 | 144.05 | 155.00 | 9005020073000 |
| 0.2913 | | 7.40 | 225.00 | 143.90 | 155.00 | 9005020074000 |
| 0.2953 | | 7.50 | 225.00 | 143.75 | 155.00 | 9005020075000 |
| 0.2969 | 19/64 | 7.54 | 240.00 | 153.69 | 165.00 | 9005020075400 |
| 0.2992 | | 7.60 | 240.00 | 153.60 | 165.00 | 9005020076000 |
| 0.3031 | | 7.70 | 240.00 | 153.45 | 165.00 | 9005020077000 |
| 0.3051 | | 7.75 | 240.00 | 153.38 | 165.00 | 9005020077500 |
| 0.3071 | | 7.80 | 240.00 | 153.30 | 165.00 | 9005020078000 |
| 0.3110 | | 7.90 | 240.00 | 153.15 | 165.00 | 9005020079000 |
| 0.3126 | 5/16 | 7.94 | 240.00 | 153.09 | 165.00 | 9005020079400 |
| 0.3150 | | 8.00 | 240.00 | 153.00 | 165.00 | 9005020080000 |
| 0.3189 | | 8.10 | 240.00 | 152.85 | 165.00 | 9005020081000 |
| 0.3228 | P | 8.20 | 240.00 | 152.70 | 165.00 | 9005020082000 |
| 0.3268 | | 8.30 | 240.00 | 152.55 | 165.00 | 9005020083000 |
| 0.3280 | 21/64 | 8.33 | 240.00 | 152.51 | 165.00 | 9005020083300 |
| 0.3307 | | 8.40 | 240.00 | 152.40 | 165.00 | 9005020084000 |
| 0.3319 | Q | 8.43 | 240.00 | 152.36 | 165.00 | 9005020084300 |
| 0.3346 | | 8.50 | 240.00 | 152.25 | 165.00 | 9005020085000 |
| 0.3386 | | 8.60 | 250.00 | 162.10 | 175.00 | 9005020086000 |
| 0.3425 | | 8.70 | 250.00 | 161.95 | 175.00 | 9005020087000 |
| 0.3437 | 11/32 | 8.73 | 250.00 | 161.91 | 175.00 | 9005020087300 |
| 0.3465 | | 8.80 | 250.00 | 161.80 | 175.00 | 9005020088000 |
| 0.3543 | | 9.00 | 250.00 | 161.50 | 175.00 | 9005020090000 |
| 0.3622 | | 9.20 | 250.00 | 161.20 | 175.00 | 9005020092000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3661 | | 9.30 | 250.00 | 161.05 | 175.00 | 9005020093000 |
| 0.3701 | | 9.40 | 250.00 | 160.90 | 175.00 | 9005020094000 |
| 0.3740 | | 9.50 | 250.00 | 160.75 | 175.00 | 9005020095000 |
| 0.3748 | 3/8 | 9.52 | 265.00 | 170.72 | 185.00 | 9005020095200 |
| 0.3780 | | 9.60 | 265.00 | 170.60 | 185.00 | 9005020096000 |
| 0.3819 | | 9.70 | 265.00 | 170.45 | 185.00 | 9005020097000 |
| 0.3858 | W | 9.80 | 265.00 | 170.30 | 185.00 | 9005020098000 |
| 0.3898 | | 9.90 | 265.00 | 170.15 | 185.00 | 9005020099000 |
| 0.3906 | 25/64 | 9.92 | 265.00 | 170.12 | 185.00 | 9005020099200 |
| 0.3937 | | 10.00 | 265.00 | 170.00 | 185.00 | 9005020100000 |
| 0.4016 | | 10.20 | 265.00 | 169.70 | 185.00 | 9005020102000 |
| 0.4063 | 13/32 | 10.32 | 265.00 | 169.52 | 185.00 | 9005020103200 |
| 0.4134 | | 10.50 | 265.00 | 169.25 | 185.00 | 9005020105000 |
| 0.4220 | 27/64 | 10.72 | 280.00 | 178.92 | 195.00 | 9005020107200 |
| 0.4331 | | 11.00 | 280.00 | 178.50 | 195.00 | 9005020110000 |
| 0.4374 | 7/16 | 11.11 | 280.00 | 178.34 | 195.00 | 9005020111100 |
| 0.4409 | | 11.20 | 280.00 | 178.20 | 195.00 | 9005020112000 |
| 0.4528 | | 11.50 | 280.00 | 177.75 | 195.00 | 9005020115000 |
| 0.4531 | 29/64 | 11.51 | 280.00 | 177.74 | 195.00 | 9005020115100 |
| 0.4646 | | 11.80 | 280.00 | 177.30 | 195.00 | 9005020118000 |
| 0.4724 | | 12.00 | 295.00 | 187.00 | 205.00 | 9005020120000 |
| 0.4921 | | 12.50 | 295.00 | 186.25 | 205.00 | 9005020125000 |
| 0.5000 | 1/2 | 12.70 | 295.00 | 185.95 | 205.00 | 9005020127000 |
| 0.5118 | | 13.00 | 295.00 | 185.50 | 205.00 | 9005020130000 |



Tool material **HSS**
Surface **S**

- P** Steel ● web thinning ≥ Ø 1.980 • relieved cone • wide flutes • for extremely deep holes • in case of unsatisfactory chip evacuation
 - M** Stainless steel
 - K** Cast iron ● cast iron and steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 541

Shank diameter = cut diameter

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.0780 | 5/64 | 1.98 | 125.00 | 82.03 | 85.00 | 9006700019800 |
| 0.0787 | | 2.00 | 125.00 | 82.00 | 85.00 | 9006700020000 |
| 0.0827 | | 2.10 | 125.00 | 81.85 | 85.00 | 9006700021000 |
| 0.0866 | | 2.20 | 135.00 | 86.70 | 90.00 | 9006700022000 |
| 0.0906 | | 2.30 | 135.00 | 86.55 | 90.00 | 9006700023000 |
| 0.0937 | 3/32 | 2.38 | 140.00 | 91.43 | 95.00 | 9006700023800 |
| 0.0945 | | 2.40 | 140.00 | 91.40 | 95.00 | 9006700024000 |
| 0.0984 | | 2.50 | 140.00 | 91.25 | 95.00 | 9006700025000 |
| 0.1102 | | 2.80 | 150.00 | 95.80 | 100.00 | 9006700028000 |
| 0.1161 | #32 | 2.95 | 150.00 | 95.58 | 100.00 | 9006700029500 |
| 0.1181 | | 3.00 | 150.00 | 95.50 | 100.00 | 9006700030000 |
| 0.1220 | | 3.10 | 155.00 | 100.35 | 105.00 | 9006700031000 |
| 0.1248 | 1/8 | 3.17 | 155.00 | 100.25 | 105.00 | 9006700031700 |
| 0.1260 | | 3.20 | 155.00 | 100.20 | 105.00 | 9006700032000 |
| 0.1268 | | 3.22 | 155.00 | 100.17 | 105.00 | 9006700032200 |
| 0.1299 | | 3.30 | 155.00 | 100.05 | 105.00 | 9006700033000 |
| 0.1378 | | 3.50 | 165.00 | 109.75 | 115.00 | 9006700035000 |
| 0.1406 | 9/64 #28 | 3.57 | 165.00 | 109.65 | 115.00 | 9006700035700 |
| 0.1417 | | 3.60 | 165.00 | 109.60 | 115.00 | 9006700036000 |
| 0.1496 | #25 | 3.80 | 175.00 | 114.30 | 120.00 | 9006700038000 |
| 0.1535 | | 3.90 | 175.00 | 114.15 | 120.00 | 9006700039000 |
| 0.1539 | #23 | 3.91 | 175.00 | 114.14 | 120.00 | 9006700039100 |
| 0.1563 | 5/32 | 3.97 | 175.00 | 114.05 | 120.00 | 9006700039700 |
| 0.1575 | | 4.00 | 175.00 | 114.00 | 120.00 | 9006700040000 |
| 0.1614 | | 4.10 | 175.00 | 113.85 | 120.00 | 9006700041000 |
| 0.1654 | | 4.20 | 175.00 | 113.70 | 120.00 | 9006700042000 |
| 0.1720 | 11/64 | 4.37 | 185.00 | 118.45 | 125.00 | 9006700043700 |
| 0.1772 | #16 | 4.50 | 185.00 | 118.25 | 125.00 | 9006700045000 |
| 0.1811 | | 4.60 | 185.00 | 118.10 | 125.00 | 9006700046000 |
| 0.1874 | 3/16 | 4.76 | 195.00 | 127.86 | 135.00 | 9006700047600 |
| 0.1890 | #12 | 4.80 | 195.00 | 127.80 | 135.00 | 9006700048000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1969 | | 5.00 | 195.00 | 127.50 | 135.00 | 9006700050000 |
| 0.2008 | | 5.10 | 195.00 | 127.35 | 135.00 | 9006700051000 |
| 0.2031 | 13/64 | 5.16 | 195.00 | 127.26 | 135.00 | 9006700051600 |
| 0.2047 | | 5.20 | 195.00 | 127.20 | 135.00 | 9006700052000 |
| 0.2165 | | 5.50 | 205.00 | 131.75 | 140.00 | 9006700055000 |
| 0.2189 | 7/32 | 5.56 | 205.00 | 131.66 | 140.00 | 9006700055600 |
| 0.2362 | | 6.00 | 205.00 | 131.00 | 140.00 | 9006700060000 |
| 0.2402 | | 6.10 | 215.00 | 140.85 | 150.00 | 9006700061000 |
| 0.2441 | | 6.20 | 215.00 | 140.70 | 150.00 | 9006700062000 |
| 0.2500 | 1/4 E | 6.35 | 215.00 | 140.48 | 150.00 | 9006700063500 |
| 0.2559 | | 6.50 | 215.00 | 140.25 | 150.00 | 9006700065000 |
| 0.2638 | | 6.70 | 215.00 | 139.95 | 150.00 | 9006700067000 |
| 0.2756 | | 7.00 | 225.00 | 144.50 | 155.00 | 9006700070000 |
| 0.2811 | 9/32 K | 7.14 | 225.00 | 144.29 | 155.00 | 9006700071400 |
| 0.2953 | | 7.50 | 225.00 | 143.75 | 155.00 | 9006700075000 |
| 0.2969 | 19/64 | 7.54 | 240.00 | 153.69 | 165.00 | 9006700075400 |
| 0.3126 | 5/16 | 7.94 | 240.00 | 153.09 | 165.00 | 9006700079400 |
| 0.3150 | | 8.00 | 240.00 | 153.00 | 165.00 | 9006700080000 |
| 0.3346 | | 8.50 | 240.00 | 152.25 | 165.00 | 9006700085000 |
| 0.3386 | | 8.60 | 250.00 | 162.10 | 175.00 | 9006700086000 |
| 0.3437 | 11/32 | 8.73 | 250.00 | 161.91 | 175.00 | 9006700087300 |
| 0.3465 | | 8.80 | 250.00 | 161.80 | 175.00 | 9006700088000 |
| 0.3543 | | 9.00 | 250.00 | 161.50 | 175.00 | 9006700090000 |
| 0.3740 | | 9.50 | 250.00 | 160.75 | 175.00 | 9006700095000 |
| 0.3748 | 3/8 | 9.52 | 265.00 | 170.72 | 185.00 | 9006700095200 |
| 0.3906 | 25/64 | 9.92 | 265.00 | 170.12 | 185.00 | 9006700099200 |
| 0.3937 | | 10.00 | 265.00 | 170.00 | 185.00 | 9006700100000 |
| 0.4331 | | 11.00 | 280.00 | 178.50 | 195.00 | 9006700110000 |
| 0.4724 | | 12.00 | 295.00 | 187.00 | 205.00 | 9006700120000 |
| 0.4921 | | 12.50 | 295.00 | 186.25 | 205.00 | 9006700125000 |

Extra Length Drills



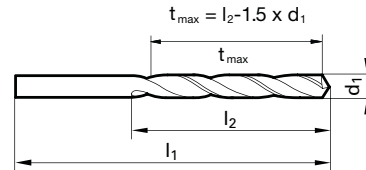
Tool material

HSCO

Surface



- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 2.700 • relieved cone • Co-alloyed high speed steel • wide flutes • increased wear resistance • for extremely deep holes • in case of unsatisfactory chip evacuation |
| M | Stainless steel | ● | |
| K | Cast iron | ● | high tensile steels and cast steels • grey cast iron, malleable and spheroidal iron |
| N | Aluminum | ● | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 533

Shank diameter = cut diameter

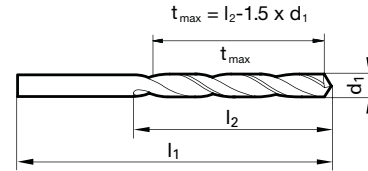
| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1063 | 2.70 | 150.00 | 95.95 | 100.00 | 9006180027000 |
| 0.1142 | 2.90 | 150.00 | 95.65 | 100.00 | 9006180029000 |
| 0.1181 | 3.00 | 150.00 | 95.50 | 100.00 | 9006180030000 |
| 0.1220 | 3.10 | 155.00 | 100.35 | 105.00 | 9006180031000 |
| 0.1248 | 1/8 | 155.00 | 100.25 | 105.00 | 9006180031700 |
| 0.1260 | 3.20 | 155.00 | 100.20 | 105.00 | 9006180032000 |
| 0.1299 | 3.30 | 155.00 | 100.05 | 105.00 | 9006180033000 |
| 0.1339 | 3.40 | 165.00 | 109.90 | 115.00 | 9006180034000 |
| 0.1378 | 3.50 | 165.00 | 109.75 | 115.00 | 9006180035000 |
| 0.1417 | 3.60 | 165.00 | 109.60 | 115.00 | 9006180036000 |
| 0.1457 | 3.70 | 165.00 | 109.45 | 115.00 | 9006180037000 |
| 0.1496 | #25 | 175.00 | 114.30 | 120.00 | 9006180038000 |
| 0.1535 | 3.90 | 175.00 | 114.15 | 120.00 | 9006180039000 |
| 0.1563 | 5/32 | 175.00 | 114.05 | 120.00 | 9006180039700 |
| 0.1575 | 4.00 | 175.00 | 114.00 | 120.00 | 9006180040000 |
| 0.1614 | 4.10 | 175.00 | 113.85 | 120.00 | 9006180041000 |
| 0.1654 | 4.20 | 175.00 | 113.70 | 120.00 | 9006180042000 |
| 0.1693 | #18 | 185.00 | 118.55 | 125.00 | 9006180043000 |
| 0.1720 | 11/64 | 185.00 | 118.45 | 125.00 | 9006180043700 |
| 0.1732 | 4.40 | 185.00 | 118.40 | 125.00 | 9006180044000 |
| 0.1772 | #16 | 185.00 | 118.25 | 125.00 | 9006180045000 |
| 0.1811 | 4.60 | 185.00 | 118.10 | 125.00 | 9006180046000 |
| 0.1874 | 3/16 | 195.00 | 127.86 | 135.00 | 9006180047600 |
| 0.1890 | #12 | 195.00 | 127.80 | 135.00 | 9006180048000 |
| 0.1909 | #11 | 195.00 | 127.73 | 135.00 | 9006180048500 |
| 0.1969 | 5.00 | 195.00 | 127.50 | 135.00 | 9006180050000 |
| 0.2008 | 5.10 | 195.00 | 127.35 | 135.00 | 9006180051000 |
| 0.2031 | 13/64 | 195.00 | 127.26 | 135.00 | 9006180051600 |
| 0.2047 | 5.20 | 195.00 | 127.20 | 135.00 | 9006180052000 |
| 0.2087 | 5.30 | 195.00 | 127.05 | 135.00 | 9006180053000 |
| 0.2126 | 5.40 | 205.00 | 131.90 | 140.00 | 9006180054000 |
| 0.2165 | 5.50 | 205.00 | 131.75 | 140.00 | 9006180055000 |
| 0.2189 | 7/32 | 205.00 | 131.66 | 140.00 | 9006180055600 |
| 0.2205 | 5.60 | 205.00 | 131.60 | 140.00 | 9006180056000 |
| 0.2244 | 5.70 | 205.00 | 131.45 | 140.00 | 9006180057000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|--------|----------------------|------------------------|-------------------------------|-------|
| inch | wire/ltr mm | mm | | | | |
| 0.2283 | 5.80 | 205.00 | 131.30 | 140.00 | 9006180058000 | |
| 0.2362 | 6.00 | 205.00 | 131.00 | 140.00 | 9006180060000 | |
| 0.2402 | 6.10 | 215.00 | 140.85 | 150.00 | 9006180061000 | |
| 0.2441 | 6.20 | 215.00 | 140.70 | 150.00 | 9006180062000 | |
| 0.2480 | 6.30 | 215.00 | 140.55 | 150.00 | 9006180063000 | |
| 0.2500 | 1/4 E | 215.00 | 140.48 | 150.00 | 9006180063500 | |
| 0.2520 | 6.40 | 215.00 | 140.40 | 150.00 | 9006180064000 | |
| 0.2559 | 6.50 | 215.00 | 140.25 | 150.00 | 9006180065000 | |
| 0.2598 | 6.60 | 215.00 | 140.10 | 150.00 | 9006180066000 | |
| 0.2638 | 6.70 | 215.00 | 139.95 | 150.00 | 9006180067000 | |
| 0.2657 | 17/64 H | 225.00 | 144.88 | 155.00 | 9006180067500 | |
| 0.2677 | 6.80 | 225.00 | 144.80 | 155.00 | 9006180068000 | |
| 0.2756 | 7.00 | 225.00 | 144.50 | 155.00 | 9006180070000 | |
| 0.2811 | 9/32 K | 225.00 | 144.29 | 155.00 | 9006180071400 | |
| 0.2913 | 7.40 | 225.00 | 143.90 | 155.00 | 9006180074000 | |
| 0.2953 | 7.50 | 225.00 | 143.75 | 155.00 | 9006180075000 | |
| 0.2969 | 19/64 | 240.00 | 153.69 | 165.00 | 9006180075400 | |
| 0.3031 | 7.70 | 240.00 | 153.45 | 165.00 | 9006180077000 | |
| 0.3126 | 5/16 | 240.00 | 153.09 | 165.00 | 9006180079400 | |
| 0.3150 | 8.00 | 240.00 | 153.00 | 165.00 | 9006180080000 | |
| 0.3228 | P | 240.00 | 152.70 | 165.00 | 9006180082000 | |
| 0.3280 | 21/64 | 240.00 | 152.51 | 165.00 | 9006180083300 | |
| 0.3307 | 8.40 | 240.00 | 152.40 | 165.00 | 9006180084000 | |
| 0.3346 | 8.50 | 240.00 | 152.25 | 165.00 | 9006180085000 | |
| 0.3425 | 8.70 | 250.00 | 161.95 | 175.00 | 9006180087000 | |
| 0.3437 | 11/32 | 250.00 | 161.91 | 175.00 | 9006180087300 | |
| 0.3465 | 8.80 | 250.00 | 161.80 | 175.00 | 9006180088000 | |
| 0.3543 | 9.00 | 250.00 | 161.50 | 175.00 | 9006180090000 | |
| 0.3594 | 23/64 | 250.00 | 161.31 | 175.00 | 9006180091300 | |
| 0.3701 | 9.40 | 250.00 | 160.90 | 175.00 | 9006180094000 | |
| 0.3740 | 9.50 | 250.00 | 160.75 | 175.00 | 9006180095000 | |
| 0.3748 | 3/8 | 265.00 | 170.72 | 185.00 | 9006180095200 | |
| 0.3819 | 9.70 | 265.00 | 170.45 | 185.00 | 9006180097000 | |
| 0.3937 | 10.00 | 265.00 | 170.00 | 185.00 | 9006180100000 | |

Extra Length Drills



- P** Steel ● web thinning $\geq \text{Ø } 2.000$ • relieved cone • wide flutes • for extremely deep holes • in case of unsatisfactory chip evacuation
 - M** Stainless steel ○
 - K** Cast iron ● cast iron and steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 514

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | |
| 0.0906 | 2.30 | 170.00 | 111.55 | 115.00 | 9005030023000 | |
| 0.1102 | 2.80 | 190.00 | 125.80 | 130.00 | 9005030028000 | |
| 0.1181 | 3.00 | 190.00 | 125.50 | 130.00 | 9005030030000 | |
| 0.1193 | 3.03 | 200.00 | 130.46 | 135.00 | 9005030030300 | |
| 0.1220 | 3.10 | 200.00 | 130.35 | 135.00 | 9005030031000 | |
| 0.1248 | 1/8 | 3.17 | 200.00 | 130.25 | 135.00 | 9005030032000 |
| 0.1260 | 3.20 | 200.00 | 130.20 | 135.00 | 9005030032000 | |
| 0.1299 | 3.30 | 200.00 | 130.05 | 135.00 | 9005030033000 | |
| 0.1339 | 3.40 | 210.00 | 139.90 | 145.00 | 9005030034000 | |
| 0.1378 | 3.50 | 210.00 | 139.75 | 145.00 | 9005030035000 | |
| 0.1406 | 9/64 #28 | 3.57 | 210.00 | 139.65 | 145.00 | 9005030035700 |
| 0.1417 | 3.60 | 210.00 | 139.60 | 145.00 | 9005030036000 | |
| 0.1457 | 3.70 | 210.00 | 139.45 | 145.00 | 9005030037000 | |
| 0.1496 | #25 | 3.80 | 220.00 | 144.30 | 150.00 | 9005030038000 |
| 0.1535 | 3.90 | 220.00 | 144.15 | 150.00 | 9005030039000 | |
| 0.1563 | 5/32 | 3.97 | 220.00 | 144.05 | 150.00 | 9005030039700 |
| 0.1575 | 4.00 | 220.00 | 144.00 | 150.00 | 9005030040000 | |
| 0.1614 | 4.10 | 220.00 | 143.85 | 150.00 | 9005030041000 | |
| 0.1654 | 4.20 | 220.00 | 143.70 | 150.00 | 9005030042000 | |
| 0.1693 | #18 | 4.30 | 235.00 | 153.55 | 160.00 | 9005030043000 |
| 0.1720 | 11/64 | 4.37 | 235.00 | 153.45 | 160.00 | 9005030043700 |
| 0.1732 | 4.40 | 235.00 | 153.40 | 160.00 | 9005030044000 | |
| 0.1772 | #16 | 4.50 | 235.00 | 153.25 | 160.00 | 9005030045000 |
| 0.1850 | #13 | 4.70 | 235.00 | 152.95 | 160.00 | 9005030047000 |
| 0.1874 | 3/16 | 4.76 | 245.00 | 162.86 | 170.00 | 9005030047600 |
| 0.1890 | #12 | 4.80 | 245.00 | 162.80 | 170.00 | 9005030048000 |
| 0.1929 | 4.90 | 245.00 | 162.65 | 170.00 | 9005030049000 | |
| 0.1969 | 5.00 | 245.00 | 162.50 | 170.00 | 9005030050000 | |
| 0.2008 | 5.10 | 245.00 | 162.35 | 170.00 | 9005030051000 | |
| 0.2031 | 13/64 | 5.16 | 245.00 | 162.26 | 170.00 | 9005030051600 |
| 0.2047 | 5.20 | 245.00 | 162.20 | 170.00 | 9005030052000 | |
| 0.2087 | 5.30 | 245.00 | 162.05 | 170.00 | 9005030053000 | |
| 0.2126 | 5.40 | 260.00 | 171.90 | 180.00 | 9005030054000 | |
| 0.2165 | 5.50 | 260.00 | 171.75 | 180.00 | 9005030055000 | |
| 0.2189 | 7/32 | 5.56 | 260.00 | 171.66 | 180.00 | 9005030055600 |
| 0.2244 | 5.70 | 260.00 | 171.45 | 180.00 | 9005030057000 | |
| 0.2283 | 5.80 | 260.00 | 171.30 | 180.00 | 9005030058000 | |
| 0.2323 | 5.90 | 260.00 | 171.15 | 180.00 | 9005030059000 | |
| 0.2343 | 15/64 | 5.95 | 260.00 | 171.08 | 180.00 | 9005030059500 |
| 0.2362 | 6.00 | 260.00 | 171.00 | 180.00 | 9005030060000 | |
| 0.2402 | 6.10 | 275.00 | 180.85 | 190.00 | 9005030061000 | |
| 0.2421 | C | 6.15 | 275.00 | 180.78 | 190.00 | 9005030061500 |
| 0.2441 | 6.20 | 275.00 | 180.70 | 190.00 | 9005030062000 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.2480 | | 6.30 | 275.00 | 180.55 | 190.00 | 9005030063000 |
| 0.2500 | 1/4 E | 6.35 | 275.00 | 180.48 | 190.00 | 9005030063500 |
| 0.2520 | | 6.40 | 275.00 | 180.40 | 190.00 | 9005030064000 |
| 0.2559 | | 6.50 | 275.00 | 180.25 | 190.00 | 9005030065000 |
| 0.2598 | | 6.60 | 275.00 | 180.10 | 190.00 | 9005030066000 |
| 0.2638 | | 6.70 | 275.00 | 179.95 | 190.00 | 9005030067000 |
| 0.2657 | 17/64 H | 6.75 | 290.00 | 189.88 | 200.00 | 9005030067500 |
| 0.2677 | | 6.80 | 290.00 | 189.80 | 200.00 | 9005030068000 |
| 0.2717 | I | 6.90 | 290.00 | 189.65 | 200.00 | 9005030069000 |
| 0.2756 | | 7.00 | 290.00 | 189.50 | 200.00 | 9005030070000 |
| 0.2811 | 9/32 K | 7.14 | 290.00 | 189.29 | 200.00 | 9005030071400 |
| 0.2835 | | 7.20 | 290.00 | 189.20 | 200.00 | 9005030072000 |
| 0.2953 | | 7.50 | 290.00 | 188.75 | 200.00 | 9005030075000 |
| 0.2969 | 19/64 | 7.54 | 305.00 | 198.69 | 210.00 | 9005030075400 |
| 0.3071 | | 7.80 | 305.00 | 198.30 | 210.00 | 9005030078000 |
| 0.3126 | 5/16 | 7.94 | 305.00 | 198.09 | 210.00 | 9005030079400 |
| 0.3150 | | 8.00 | 305.00 | 198.00 | 210.00 | 9005030080000 |
| 0.3228 | P | 8.20 | 305.00 | 197.70 | 210.00 | 9005030082000 |
| 0.3280 | 21/64 | 8.33 | 305.00 | 197.51 | 210.00 | 9005030083300 |
| 0.3346 | | 8.50 | 305.00 | 197.25 | 210.00 | 9005030085000 |
| 0.3386 | | 8.60 | 320.00 | 207.10 | 220.00 | 9005030086000 |
| 0.3437 | 11/32 | 8.73 | 320.00 | 206.91 | 220.00 | 9005030087300 |
| 0.3543 | | 9.00 | 320.00 | 206.50 | 220.00 | 9005030090000 |
| 0.3583 | | 9.10 | 320.00 | 206.35 | 220.00 | 9005030091000 |
| 0.3740 | | 9.50 | 320.00 | 205.75 | 220.00 | 9005030095000 |
| 0.3748 | 3/8 | 9.52 | 340.00 | 220.72 | 235.00 | 9005030095200 |
| 0.3819 | | 9.70 | 340.00 | 220.45 | 235.00 | 9005030097000 |
| 0.3858 | W | 9.80 | 340.00 | 220.30 | 235.00 | 9005030098000 |
| 0.3906 | 25/64 | 9.92 | 340.00 | 220.12 | 235.00 | 9005030099200 |
| 0.3937 | | 10.00 | 340.00 | 220.00 | 235.00 | 9005030100000 |
| 0.4134 | | 10.50 | 340.00 | 219.25 | 235.00 | 9005030105000 |
| 0.4220 | 27/64 | 10.72 | 365.00 | 233.92 | 250.00 | 9005030107200 |
| 0.4331 | | 11.00 | 365.00 | 233.50 | 250.00 | 9005030110000 |
| 0.4374 | 7/16 | 11.11 | 365.00 | 233.34 | 250.00 | 9005030111100 |
| 0.4528 | | 11.50 | 365.00 | 232.75 | 250.00 | 9005030115000 |
| 0.4531 | 29/64 | 11.51 | 365.00 | 232.74 | 250.00 | 9005030115100 |
| 0.4689 | 15/32 | 11.91 | 375.00 | 242.14 | 260.00 | 9005030119100 |
| 0.4724 | | 12.00 | 375.00 | 242.00 | 260.00 | 9005030120000 |
| 0.4843 | 31/64 | 12.30 | 375.00 | 241.55 | 260.00 | 9005030123000 |
| 0.4921 | | 12.50 | 375.00 | 241.25 | 260.00 | 9005030125000 |
| 0.5000 | 1/2 | 12.70 | 375.00 | 240.95 | 260.00 | 9005030127000 |
| 0.5118 | | 13.00 | 375.00 | 240.50 | 260.00 | 9005030130000 |

Extra Length Drills



Tool material

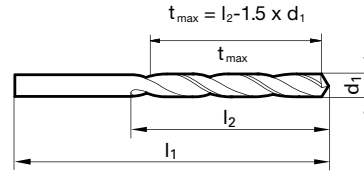
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \text{Ø } 2.300$ • relieved cone • wide flutes • for extremely deep holes • in case of unsatisfactory chip evacuation |
| M | Stainless steel | | |
| K | Cast iron | ● | cast iron and steels up to 1000 N/mm ² • Not recommended for: CrNi steels, stainless steels |
| N | Aluminum | ● | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 541

Shank diameter = cut diameter

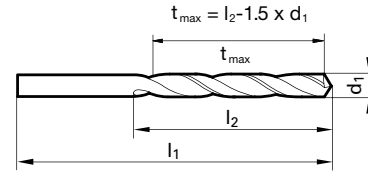
| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1181 | | 190.00 | 125.50 | 130.00 | 9006710030000 |
| 0.1220 | | 200.00 | 130.35 | 135.00 | 9006710031000 |
| 0.1248 | 1/8 | 200.00 | 130.25 | 135.00 | 9006710031700 |
| 0.1260 | | 200.00 | 130.20 | 135.00 | 9006710032000 |
| 0.1339 | | 210.00 | 139.90 | 145.00 | 9006710034000 |
| 0.1378 | | 210.00 | 139.75 | 145.00 | 9006710035000 |
| 0.1406 | 9/64 | 210.00 | 139.65 | 145.00 | 9006710035700 |
| 0.1496 | #25 | 220.00 | 144.30 | 150.00 | 9006710038000 |
| 0.1563 | 5/32 | 220.00 | 144.05 | 150.00 | 9006710039700 |
| 0.1575 | | 220.00 | 144.00 | 150.00 | 9006710040000 |
| 0.1610 | #20 | 220.00 | 143.87 | 150.00 | 9006710040900 |
| 0.1673 | | 220.00 | 143.63 | 150.00 | 9006710042500 |
| 0.1720 | 11/64 | 235.00 | 153.45 | 160.00 | 9006710043700 |
| 0.1732 | | 235.00 | 153.40 | 160.00 | 9006710044000 |
| 0.1772 | #16 | 235.00 | 153.25 | 160.00 | 9006710045000 |
| 0.1811 | | 235.00 | 153.10 | 160.00 | 9006710046000 |
| 0.1874 | 3/16 | 245.00 | 162.86 | 170.00 | 9006710047600 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|--------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | |
| 0.1890 | #12 | 4.80 | 245.00 | 162.80 | 170.00 | 9006710048000 |
| 0.1969 | | 5.00 | 245.00 | 162.50 | 170.00 | 9006710050000 |
| 0.2008 | | 5.10 | 245.00 | 162.35 | 170.00 | 9006710051000 |
| 0.2087 | | 5.30 | 245.00 | 162.05 | 170.00 | 9006710053000 |
| 0.2165 | | 5.50 | 260.00 | 171.75 | 180.00 | 9006710055000 |
| 0.2189 | 7/32 | 5.56 | 260.00 | 171.66 | 180.00 | 9006710055600 |
| 0.2343 | 15/64 | 5.95 | 260.00 | 171.08 | 180.00 | 9006710059500 |
| 0.2362 | | 6.00 | 260.00 | 171.00 | 180.00 | 9006710060000 |
| 0.2402 | | 6.10 | 275.00 | 180.85 | 190.00 | 9006710061000 |
| 0.2500 | 1/4 | E 6.35 | 275.00 | 180.48 | 190.00 | 9006710063500 |
| 0.2520 | | 6.40 | 275.00 | 180.40 | 190.00 | 9006710064000 |
| 0.2559 | | 6.50 | 275.00 | 180.25 | 190.00 | 9006710065000 |
| 0.2677 | | 6.80 | 290.00 | 189.80 | 200.00 | 9006710068000 |
| 0.2756 | | 7.00 | 290.00 | 189.50 | 200.00 | 9006710070000 |
| 0.2953 | | 7.50 | 290.00 | 188.75 | 200.00 | 9006710075000 |
| 0.3126 | 5/16 | 7.94 | 305.00 | 198.09 | 210.00 | 9006710079400 |
| 0.3150 | | 8.00 | 305.00 | 198.00 | 210.00 | 9006710080000 |



Tool material **HSCO**
 Surface

- P** Steel ● web thinning $\geq \varnothing 3.000$ • relieved cone • Co-alloyed high speed steel • wide flutes • increased wear resistance • for extremely deep holes • in case of unsatisfactory chip evacuation
 - M** Stainless steel ●
 - K** Cast iron ●
 - N** Aluminum ● high tensile steels and cast steels • grey cast iron, malleable and spheroidal iron
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
 ○=Limited



Speeds and feeds information on pg. 533

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1181 | | 190.00 | 125.50 | 130.00 | 9006190030000 |
| 0.1248 | 1/8 | 200.00 | 130.25 | 135.00 | 9006190031700 |
| 0.1260 | | 200.00 | 130.20 | 135.00 | 9006190032000 |
| 0.1299 | | 200.00 | 130.05 | 135.00 | 9006190033000 |
| 0.1378 | | 210.00 | 139.75 | 145.00 | 9006190035000 |
| 0.1406 | 9/64 #28 | 210.00 | 139.65 | 145.00 | 9006190035700 |
| 0.1563 | 5/32 | 220.00 | 144.05 | 150.00 | 9006190039700 |
| 0.1575 | | 220.00 | 144.00 | 150.00 | 9006190040000 |
| 0.1614 | | 220.00 | 143.85 | 150.00 | 9006190041000 |
| 0.1654 | | 220.00 | 143.70 | 150.00 | 9006190042000 |
| 0.1720 | 11/64 | 235.00 | 153.45 | 160.00 | 9006190043700 |
| 0.1772 | #16 | 235.00 | 153.25 | 160.00 | 9006190045000 |
| 0.1874 | 3/16 | 245.00 | 162.86 | 170.00 | 9006190047600 |
| 0.1890 | #12 | 245.00 | 162.80 | 170.00 | 9006190048000 |
| 0.1929 | | 245.00 | 162.65 | 170.00 | 9006190049000 |
| 0.1969 | | 245.00 | 162.50 | 170.00 | 9006190050000 |
| 0.2047 | | 245.00 | 162.20 | 170.00 | 9006190052000 |
| 0.2165 | | 260.00 | 171.75 | 180.00 | 9006190055000 |
| 0.2189 | 7/32 | 260.00 | 171.66 | 180.00 | 9006190055600 |
| 0.2244 | | 260.00 | 171.45 | 180.00 | 9006190057000 |
| 0.2343 | 15/64 | 260.00 | 171.08 | 180.00 | 9006190059500 |
| 0.2362 | | 260.00 | 171.00 | 180.00 | 9006190060000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2402 | | 6.10 | 275.00 | 180.85 | 190.00 | 9006190061000 |
| 0.2441 | | 6.20 | 275.00 | 180.70 | 190.00 | 9006190062000 |
| 0.2500 | 1/4 E | 6.35 | 275.00 | 180.48 | 190.00 | 9006190063500 |
| 0.2559 | | 6.50 | 275.00 | 180.25 | 190.00 | 9006190065000 |
| 0.2638 | | 6.70 | 275.00 | 179.95 | 190.00 | 9006190067000 |
| 0.2657 | 17/64 H | 6.75 | 290.00 | 189.88 | 200.00 | 9006190067500 |
| 0.2756 | | 7.00 | 290.00 | 189.50 | 200.00 | 9006190070000 |
| 0.2811 | 9/32 K | 7.14 | 290.00 | 189.29 | 200.00 | 9006190071400 |
| 0.2913 | | 7.40 | 290.00 | 188.90 | 200.00 | 9006190074000 |
| 0.2953 | | 7.50 | 290.00 | 188.75 | 200.00 | 9006190075000 |
| 0.2969 | 19/64 | 7.54 | 305.00 | 198.69 | 210.00 | 9006190075400 |
| 0.3031 | | 7.70 | 305.00 | 198.45 | 210.00 | 9006190077000 |
| 0.3126 | 5/16 | 7.94 | 305.00 | 198.09 | 210.00 | 9006190079400 |
| 0.3150 | | 8.00 | 305.00 | 198.00 | 210.00 | 9006190080000 |
| 0.3228 | P | 8.20 | 305.00 | 197.70 | 210.00 | 9006190082000 |
| 0.3346 | | 8.50 | 305.00 | 197.25 | 210.00 | 9006190085000 |
| 0.3425 | | 8.70 | 320.00 | 206.95 | 220.00 | 9006190087000 |
| 0.3437 | 11/32 | 8.73 | 320.00 | 206.91 | 220.00 | 9006190087300 |
| 0.3543 | | 9.00 | 320.00 | 206.50 | 220.00 | 9006190090000 |
| 0.3740 | | 9.50 | 320.00 | 205.75 | 220.00 | 9006190095000 |
| 0.3748 | 3/8 | 9.52 | 340.00 | 220.72 | 235.00 | 9006190095200 |
| 0.3937 | | 10.00 | 340.00 | 220.00 | 235.00 | 9006190100000 |



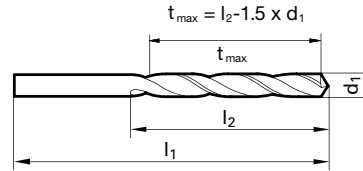
Tool material

HSS

Surface



- P** Steel ● web thinning $\geq \varnothing 2.500$ • relieved cone • wide flutes • in case of unsatisfactory chip evacuation • for extremely deep holes
 - M** Stainless steel ○
 - K** Cast iron ● cast iron and steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 515

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1181 | | 240.00 | 155.50 | 160.00 | 9005040030000 |
| 0.1220 | | 250.00 | 165.35 | 170.00 | 9005040031000 |
| 0.1248 | 1/8 | 250.00 | 165.25 | 170.00 | 9005040031700 |
| 0.1260 | | 250.00 | 165.20 | 170.00 | 9005040032000 |
| 0.1299 | | 250.00 | 165.05 | 170.00 | 9005040033000 |
| 0.1339 | | 265.00 | 174.90 | 180.00 | 9005040034000 |
| 0.1378 | | 265.00 | 174.75 | 180.00 | 9005040035000 |
| 0.1406 | 9/64 | 265.00 | 174.65 | 180.00 | 9005040035700 |
| 0.1417 | | 265.00 | 174.60 | 180.00 | 9005040036000 |
| 0.1457 | | 265.00 | 174.45 | 180.00 | 9005040037000 |
| 0.1496 | #25 | 280.00 | 184.30 | 190.00 | 9005040038000 |
| 0.1535 | | 280.00 | 184.15 | 190.00 | 9005040039000 |
| 0.1563 | 5/32 | 280.00 | 184.05 | 190.00 | 9005040039700 |
| 0.1575 | | 280.00 | 184.00 | 190.00 | 9005040040000 |
| 0.1614 | | 280.00 | 183.85 | 190.00 | 9005040041000 |
| 0.1654 | | 280.00 | 183.70 | 190.00 | 9005040042000 |
| 0.1693 | #18 | 295.00 | 193.55 | 200.00 | 9005040043000 |
| 0.1720 | 11/64 | 295.00 | 193.45 | 200.00 | 9005040043700 |
| 0.1732 | | 295.00 | 193.40 | 200.00 | 9005040044000 |
| 0.1772 | #16 | 295.00 | 193.25 | 200.00 | 9005040045000 |
| 0.1811 | | 295.00 | 193.10 | 200.00 | 9005040046000 |
| 0.1874 | 3/16 | 315.00 | 202.86 | 210.00 | 9005040047600 |
| 0.1890 | #12 | 315.00 | 202.80 | 210.00 | 9005040048000 |
| 0.1929 | | 315.00 | 202.65 | 210.00 | 9005040049000 |
| 0.1969 | | 315.00 | 202.50 | 210.00 | 9005040050000 |
| 0.2008 | | 315.00 | 202.35 | 210.00 | 9005040051000 |
| 0.2047 | | 315.00 | 202.20 | 210.00 | 9005040052000 |
| 0.2165 | | 330.00 | 216.75 | 225.00 | 9005040055000 |
| 0.2189 | 7/32 | 330.00 | 216.66 | 225.00 | 9005040055600 |
| 0.2283 | | 330.00 | 216.30 | 225.00 | 9005040058000 |
| 0.2343 | 15/64 | 330.00 | 216.08 | 225.00 | 9005040059500 |
| 0.2362 | | 330.00 | 216.00 | 225.00 | 9005040060000 |
| 0.2402 | | 350.00 | 225.85 | 235.00 | 9005040061000 |
| 0.2441 | | 350.00 | 225.70 | 235.00 | 9005040062000 |
| 0.2480 | | 350.00 | 225.55 | 235.00 | 9005040063000 |
| 0.2500 | 1/4 | 350.00 | 225.48 | 235.00 | 9005040063500 |
| 0.2520 | | 350.00 | 225.40 | 235.00 | 9005040064000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2559 | | 6.50 | 350.00 | 225.25 | 235.00 | 9005040065000 | |
| 0.2598 | | 6.60 | 350.00 | 225.10 | 235.00 | 9005040066000 | |
| 0.2638 | | 6.70 | 350.00 | 224.95 | 235.00 | 9005040067000 | |
| 0.2657 | 17/64 | H | 6.75 | 370.00 | 239.88 | 250.00 | 9005040067500 |
| 0.2677 | | | 6.80 | 370.00 | 239.80 | 250.00 | 9005040068000 |
| 0.2756 | | | 7.00 | 370.00 | 239.50 | 250.00 | 9005040070000 |
| 0.2811 | 9/32 | K | 7.14 | 370.00 | 239.29 | 250.00 | 9005040071400 |
| 0.2835 | | | 7.20 | 370.00 | 239.20 | 250.00 | 9005040072000 |
| 0.2953 | | | 7.50 | 370.00 | 238.75 | 250.00 | 9005040075000 |
| 0.2969 | 19/64 | | 7.54 | 390.00 | 253.69 | 265.00 | 9005040075400 |
| 0.2992 | | | 7.60 | 390.00 | 253.60 | 265.00 | 9005040076000 |
| 0.3071 | | | 7.80 | 390.00 | 253.30 | 265.00 | 9005040078000 |
| 0.3110 | | | 7.90 | 390.00 | 253.15 | 265.00 | 9005040079000 |
| 0.3126 | 5/16 | | 7.94 | 390.00 | 253.09 | 265.00 | 9005040079400 |
| 0.3150 | | | 8.00 | 390.00 | 253.00 | 265.00 | 9005040080000 |
| 0.3228 | | P | 8.20 | 390.00 | 252.70 | 265.00 | 9005040082000 |
| 0.3280 | 21/64 | | 8.33 | 390.00 | 252.51 | 265.00 | 9005040083300 |
| 0.3346 | | | 8.50 | 390.00 | 252.25 | 265.00 | 9005040085000 |
| 0.3386 | | | 8.60 | 410.00 | 267.10 | 280.00 | 9005040086000 |
| 0.3437 | 11/32 | | 8.73 | 410.00 | 266.91 | 280.00 | 9005040087300 |
| 0.3504 | | | 8.90 | 410.00 | 266.65 | 280.00 | 9005040089000 |
| 0.3543 | | | 9.00 | 410.00 | 266.50 | 280.00 | 9005040090000 |
| 0.3583 | | | 9.10 | 410.00 | 266.35 | 280.00 | 9005040091000 |
| 0.3622 | | | 9.20 | 410.00 | 266.20 | 280.00 | 9005040092000 |
| 0.3740 | | | 9.50 | 410.00 | 265.75 | 280.00 | 9005040095000 |
| 0.3748 | 3/8 | | 9.52 | 430.00 | 280.72 | 295.00 | 9005040095200 |
| 0.3906 | 25/64 | | 9.92 | 430.00 | 280.12 | 295.00 | 9005040099200 |
| 0.3937 | | | 10.00 | 430.00 | 280.00 | 295.00 | 9005040100000 |
| 0.4063 | 13/32 | | 10.32 | 430.00 | 279.52 | 295.00 | 9005040103200 |
| 0.4134 | | | 10.50 | 430.00 | 279.25 | 295.00 | 9005040105000 |
| 0.4220 | 27/64 | | 10.72 | 455.00 | 293.92 | 310.00 | 9005040107200 |
| 0.4331 | | | 11.00 | 455.00 | 293.50 | 310.00 | 9005040110000 |
| 0.4374 | 7/16 | | 11.11 | 455.00 | 293.34 | 310.00 | 9005040111100 |
| 0.4528 | | | 11.50 | 455.00 | 292.75 | 310.00 | 9005040115000 |
| 0.4724 | | | 12.00 | 480.00 | 312.00 | 330.00 | 9005040120000 |
| 0.4921 | | | 12.50 | 480.00 | 311.25 | 330.00 | 9005040125000 |
| 0.5118 | | | 13.00 | 480.00 | 310.50 | 330.00 | 9005040130000 |

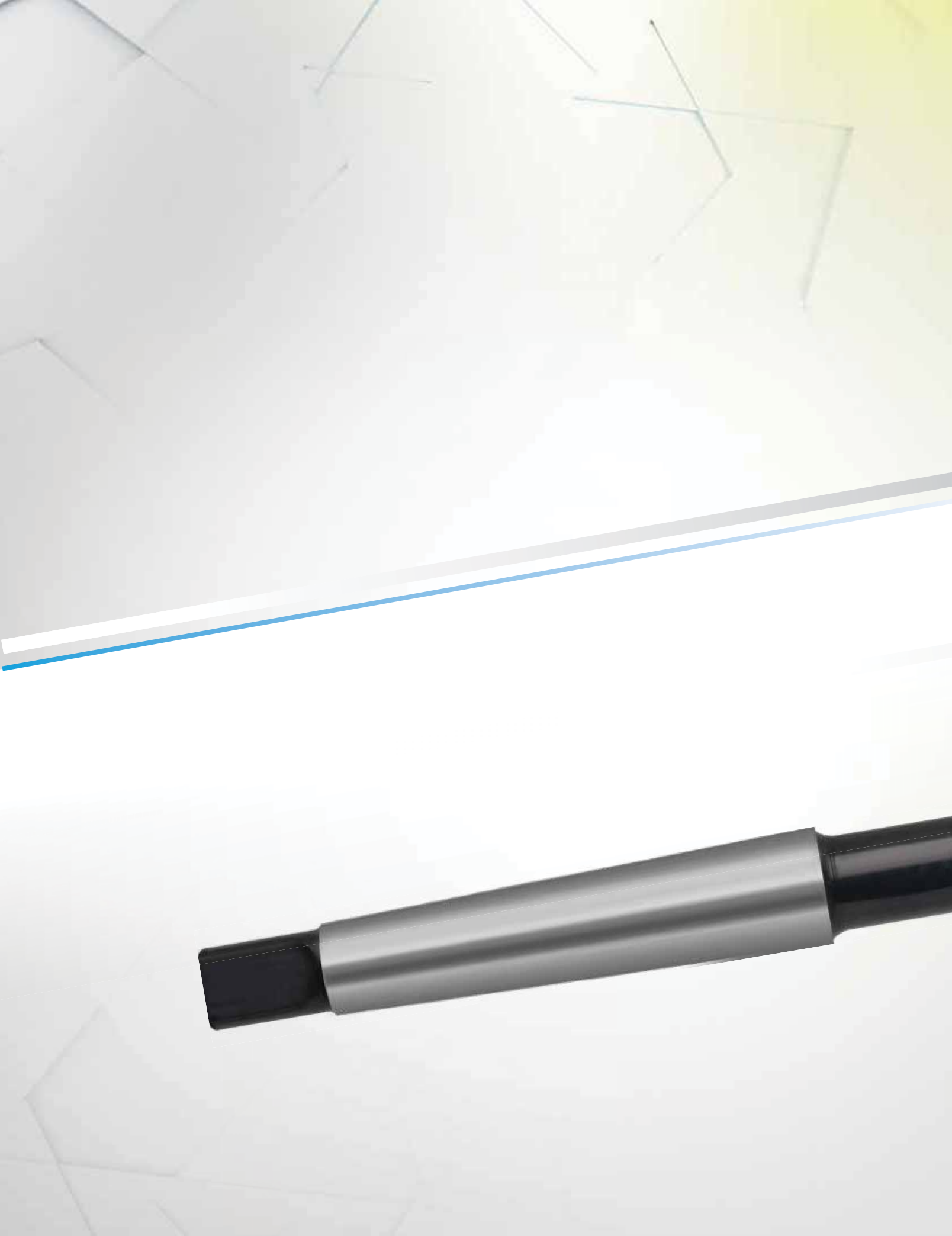
Extra Length Drills

GUHRING

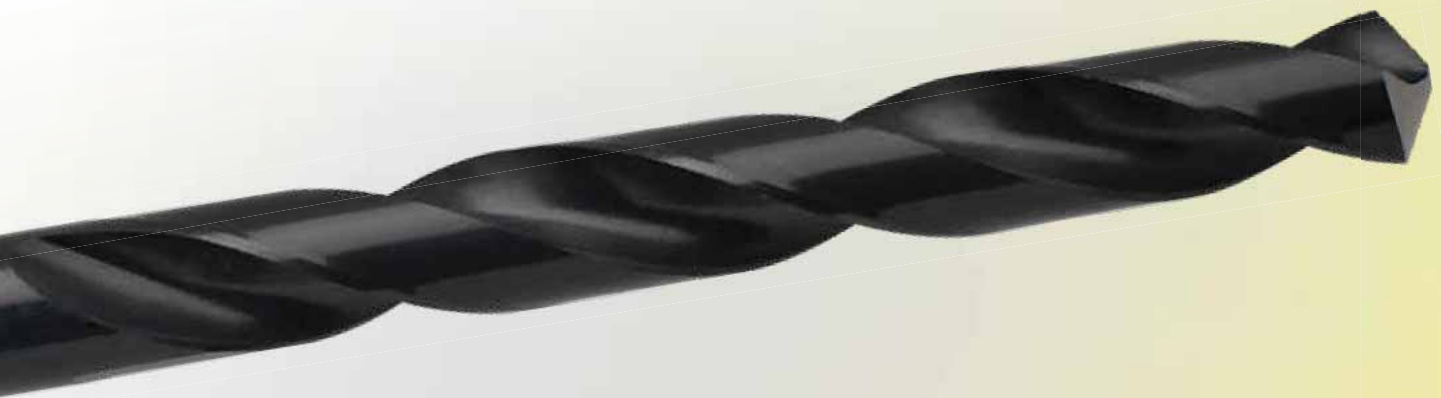
GROOVING SYSTEMS



Guhring now offers a complete line of holders and inserts for boring, grooving, chamfering, threading, broaching and parting.



TAPER SHANK DRILLS





Tool material

HSS

Surface

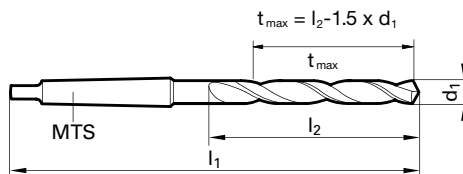


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | ● |
| N | Aluminum | ○ |
| S | Titanium alloys | |
| H | Hardened steel | |

● web thinning $\geq \varnothing 14.050 \cdot$ relieved cone

● alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite

●=Optimal
○=Limited



Speeds and feeds information on pg. 501

Morse Taper Length

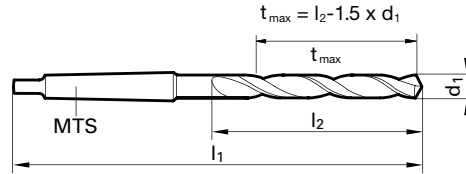
| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|----------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.0937 | 3/32 | 2.38 | MTS 1 | 111.00 | 26.43 | 30.00 | 9002450023800 |
| 0.0984 | | 2.50 | MTS 1 | 111.00 | 26.25 | 30.00 | 9002450025000 |
| 0.1094 | 7/64 | 2.78 | MTS 1 | 114.00 | 28.83 | 33.00 | 9002450027800 |
| 0.1248 | 1/8 | 3.17 | MTS 1 | 117.00 | 31.25 | 36.00 | 9002450031700 |
| 0.1406 | 9/64 | #28 3.57 | MTS 1 | 120.00 | 33.65 | 39.00 | 9002450035700 |
| 0.1496 | | #25 3.80 | MTS 1 | 124.00 | 37.30 | 43.00 | 9002450038000 |
| 0.1563 | 5/32 | 3.97 | MTS 1 | 124.00 | 37.05 | 43.00 | 9002450039700 |
| 0.1575 | | 4.00 | MTS 1 | 124.00 | 37.00 | 43.00 | 9002450040000 |
| 0.1673 | | 4.25 | MTS 1 | 124.00 | 36.63 | 43.00 | 9002450042500 |
| 0.1720 | 11/64 | 4.37 | MTS 1 | 128.00 | 40.45 | 47.00 | 9002450043700 |
| 0.1772 | | #16 4.50 | MTS 1 | 128.00 | 40.25 | 47.00 | 9002450045000 |
| 0.1874 | 3/16 | 4.76 | MTS 1 | 133.00 | 44.86 | 52.00 | 9002450047600 |
| 0.1969 | | 5.00 | MTS 1 | 133.00 | 44.50 | 52.00 | 9002450050000 |
| 0.2008 | | 5.10 | MTS 1 | 133.00 | 44.35 | 52.00 | 9002450051000 |
| 0.2031 | 13/64 | 5.16 | MTS 1 | 133.00 | 44.26 | 52.00 | 9002450051600 |
| 0.2047 | | 5.20 | MTS 1 | 133.00 | 44.20 | 52.00 | 9002450052000 |
| 0.2067 | | 5.25 | MTS 1 | 133.00 | 44.13 | 52.00 | 9002450052500 |
| 0.2087 | | 5.30 | MTS 1 | 133.00 | 44.05 | 52.00 | 9002450053000 |
| 0.2126 | | 5.40 | MTS 1 | 138.00 | 48.90 | 57.00 | 9002450054000 |
| 0.2165 | | 5.50 | MTS 1 | 138.00 | 48.75 | 57.00 | 9002450055000 |
| 0.2189 | 7/32 | 5.56 | MTS 1 | 138.00 | 48.66 | 57.00 | 9002450055600 |
| 0.2205 | | 5.60 | MTS 1 | 138.00 | 48.60 | 57.00 | 9002450056000 |
| 0.2244 | | 5.70 | MTS 1 | 138.00 | 48.45 | 57.00 | 9002450057000 |
| 0.2264 | | 5.75 | MTS 1 | 138.00 | 48.38 | 57.00 | 9002450057500 |
| 0.2283 | | 5.80 | MTS 1 | 138.00 | 48.30 | 57.00 | 9002450058000 |
| 0.2323 | | 5.90 | MTS 1 | 138.00 | 48.15 | 57.00 | 9002450059000 |
| 0.2343 | 15/64 | 5.95 | MTS 1 | 138.00 | 48.08 | 57.00 | 9002450059500 |
| 0.2362 | | 6.00 | MTS 1 | 138.00 | 48.00 | 57.00 | 9002450060000 |
| 0.2402 | | 6.10 | MTS 1 | 144.00 | 53.85 | 63.00 | 9002450061000 |
| 0.2441 | | 6.20 | MTS 1 | 144.00 | 53.70 | 63.00 | 9002450062000 |
| 0.2461 | | D 6.25 | MTS 1 | 144.00 | 53.63 | 63.00 | 9002450062500 |
| 0.2480 | | 6.30 | MTS 1 | 144.00 | 53.55 | 63.00 | 9002450063000 |
| 0.2500 | 1/4 | E 6.35 | MTS 1 | 144.00 | 53.48 | 63.00 | 9002450063500 |
| 0.2520 | | 6.40 | MTS 1 | 144.00 | 53.40 | 63.00 | 9002450064000 |
| 0.2559 | | 6.50 | MTS 1 | 144.00 | 53.25 | 63.00 | 9002450065000 |
| 0.2598 | | 6.60 | MTS 1 | 144.00 | 53.10 | 63.00 | 9002450066000 |
| 0.2638 | | 6.70 | MTS 1 | 144.00 | 52.95 | 63.00 | 9002450067000 |
| 0.2657 | 17/64 | H 6.75 | MTS 1 | 150.00 | 58.88 | 69.00 | 9002450067500 |
| 0.2677 | | 6.80 | MTS 1 | 150.00 | 58.80 | 69.00 | 9002450068000 |
| 0.2717 | | I 6.90 | MTS 1 | 150.00 | 58.65 | 69.00 | 9002450069000 |
| 0.2756 | | 7.00 | MTS 1 | 150.00 | 58.50 | 69.00 | 9002450070000 |
| 0.2811 | 9/32 | K 7.14 | MTS 1 | 150.00 | 58.29 | 69.00 | 9002450071400 |
| 0.2835 | | 7.20 | MTS 1 | 150.00 | 58.20 | 69.00 | 9002450072000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2854 | | 7.25 | MTS 1 | 150.00 | 58.13 | 69.00 | 9002450072500 |
| 0.2874 | | 7.30 | MTS 1 | 150.00 | 58.05 | 69.00 | 9002450073000 |
| 0.2913 | | 7.40 | MTS 1 | 150.00 | 57.90 | 69.00 | 9002450074000 |
| 0.2953 | | 7.50 | MTS 1 | 150.00 | 57.75 | 69.00 | 9002450075000 |
| 0.2969 | 19/64 | 7.54 | MTS 1 | 156.00 | 63.69 | 75.00 | 9002450075400 |
| 0.2992 | | 7.60 | MTS 1 | 156.00 | 63.60 | 75.00 | 9002450076000 |
| 0.3031 | | 7.70 | MTS 1 | 156.00 | 63.45 | 75.00 | 9002450077000 |
| 0.3051 | | 7.75 | MTS 1 | 156.00 | 63.38 | 75.00 | 9002450077500 |
| 0.3071 | | 7.80 | MTS 1 | 156.00 | 63.30 | 75.00 | 9002450078000 |
| 0.3110 | | 7.90 | MTS 1 | 156.00 | 63.15 | 75.00 | 9002450079000 |
| 0.3126 | 5/16 | 7.94 | MTS 1 | 156.00 | 63.09 | 75.00 | 9002450079400 |
| 0.3150 | | 8.00 | MTS 1 | 156.00 | 63.00 | 75.00 | 9002450080000 |
| 0.3189 | | 8.10 | MTS 1 | 156.00 | 62.85 | 75.00 | 9002450081000 |
| 0.3228 | | P 8.20 | MTS 1 | 156.00 | 62.70 | 75.00 | 9002450082000 |
| 0.3248 | | 8.25 | MTS 1 | 156.00 | 62.63 | 75.00 | 9002450082500 |
| 0.3268 | | 8.30 | MTS 1 | 156.00 | 62.55 | 75.00 | 9002450083000 |
| 0.3280 | 21/64 | 8.33 | MTS 1 | 156.00 | 62.51 | 75.00 | 9002450083300 |
| 0.3307 | | 8.40 | MTS 1 | 156.00 | 62.40 | 75.00 | 9002450084000 |
| 0.3346 | | 8.50 | MTS 1 | 156.00 | 62.25 | 75.00 | 9002450085000 |
| 0.3386 | | 8.60 | MTS 1 | 162.00 | 68.10 | 81.00 | 9002450086000 |
| 0.3425 | | 8.70 | MTS 1 | 162.00 | 67.95 | 81.00 | 9002450087000 |
| 0.3437 | 11/32 | 8.73 | MTS 1 | 162.00 | 67.91 | 81.00 | 9002450087300 |
| 0.3445 | | 8.75 | MTS 1 | 162.00 | 67.88 | 81.00 | 9002450087500 |
| 0.3465 | | 8.80 | MTS 1 | 162.00 | 67.80 | 81.00 | 9002450088000 |
| 0.3504 | | 8.90 | MTS 1 | 162.00 | 67.65 | 81.00 | 9002450089000 |
| 0.3543 | | 9.00 | MTS 1 | 162.00 | 67.50 | 81.00 | 9002450090000 |
| 0.3583 | | 9.10 | MTS 1 | 162.00 | 67.35 | 81.00 | 9002450091000 |
| 0.3594 | 23/64 | 9.13 | MTS 1 | 162.00 | 67.31 | 81.00 | 9002450091300 |
| 0.3622 | | 9.20 | MTS 1 | 162.00 | 67.20 | 81.00 | 9002450092000 |
| 0.3642 | | 9.25 | MTS 1 | 162.00 | 67.13 | 81.00 | 9002450092500 |
| 0.3661 | | 9.30 | MTS 1 | 162.00 | 67.05 | 81.00 | 9002450093000 |
| 0.3701 | | 9.40 | MTS 1 | 162.00 | 66.90 | 81.00 | 9002450094000 |
| 0.3740 | | 9.50 | MTS 1 | 162.00 | 66.75 | 81.00 | 9002450095000 |
| 0.3748 | 3/8 | 9.52 | MTS 1 | 168.00 | 72.72 | 87.00 | 9002450095200 |
| 0.3819 | | 9.70 | MTS 1 | 168.00 | 72.45 | 87.00 | 9002450097000 |
| 0.3839 | | 9.75 | MTS 1 | 168.00 | 72.38 | 87.00 | 9002450097500 |
| 0.3858 | | W 9.80 | MTS 1 | 168.00 | 72.30 | 87.00 | 9002450098000 |
| 0.3898 | | 9.90 | MTS 1 | 168.00 | 72.15 | 87.00 | 9002450099000 |
| 0.3906 | 25/64 | 9.92 | MTS 1 | 168.00 | 72.12 | 87.00 | 9002450099200 |
| 0.3937 | | 10.00 | MTS 1 | 168.00 | 72.00 | 87.00 | 9002450100000 |
| 0.3976 | | 10.10 | MTS 1 | 168.00 | 71.85 | 87.00 | 9002450101000 |
| 0.4016 | | 10.20 | MTS 1 | 168.00 | 71.70 | 87.00 | 9002450102000 |
| 0.4035 | | 10.25 | MTS 1 | 168.00 | 71.63 | 87.00 | 9002450102500 |



Tool material **HSS**
Surface **S**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning ≥ Ø 3.000 • relieved cone |
| M | Stainless steel | | |
| K | Cast iron | ● | alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 536

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | MTS 1 | 114.00 | 28.50 | 33.00 | 900654003000 |
| 0.1720 | 11/64 | 4.37 | MTS 1 | 128.00 | 40.45 | 47.00 | 9006540043700 |
| 0.1874 | 3/16 | 4.76 | MTS 1 | 133.00 | 44.86 | 52.00 | 9006540047600 |
| 0.2031 | 13/64 | 5.16 | MTS 1 | 133.00 | 44.26 | 52.00 | 9006540051600 |
| 0.2559 | | 6.50 | MTS 1 | 144.00 | 53.25 | 63.00 | 9006540065000 |
| 0.2657 | 17/64 | H 6.75 | MTS 1 | 150.00 | 58.88 | 69.00 | 9006540067500 |
| 0.2811 | 9/32 | K 7.14 | MTS 1 | 150.00 | 58.29 | 69.00 | 9006540071400 |
| 0.2969 | 19/64 | 7.54 | MTS 1 | 156.00 | 63.69 | 75.00 | 9006540075400 |
| 0.3031 | | 7.70 | MTS 1 | 156.00 | 63.45 | 75.00 | 9006540077000 |
| 0.3125 | 5/16 | 7.94 | MTS 1 | 156.00 | 63.09 | 75.00 | 9006540079400 |
| 0.3150 | | 8.00 | MTS 1 | 156.00 | 63.00 | 75.00 | 9006540080000 |
| 0.3228 | | P 8.20 | MTS 1 | 156.00 | 62.70 | 75.00 | 9006540082000 |
| 0.3280 | 21/64 | 8.33 | MTS 1 | 156.00 | 62.51 | 75.00 | 9006540083300 |
| 0.3437 | 11/32 | 8.73 | MTS 1 | 162.00 | 67.91 | 81.00 | 9006540087300 |
| 0.3750 | 3/8 | 9.52 | MTS 1 | 168.00 | 72.72 | 87.00 | 9006540095200 |
| 0.3858 | | W 9.80 | MTS 1 | 168.00 | 72.30 | 87.00 | 9006540098000 |
| 0.3937 | | 10.00 | MTS 1 | 168.00 | 72.00 | 87.00 | 9006540100000 |
| 0.4016 | | 10.20 | MTS 1 | 168.00 | 71.70 | 87.00 | 9006540102000 |
| 0.4035 | | 10.25 | MTS 1 | 168.00 | 71.63 | 87.00 | 9006540102500 |
| 0.4063 | 13/32 | 10.32 | MTS 1 | 168.00 | 71.52 | 87.00 | 9006540103200 |
| 0.4134 | | 10.50 | MTS 1 | 168.00 | 71.25 | 87.00 | 9006540105000 |
| 0.4220 | 27/64 | 10.72 | MTS 1 | 175.00 | 77.92 | 94.00 | 9006540107200 |
| 0.4252 | | 10.80 | MTS 1 | 175.00 | 77.80 | 94.00 | 9006540108000 |
| 0.4331 | | 11.00 | MTS 1 | 175.00 | 77.50 | 94.00 | 9006540110000 |
| 0.4374 | 7/16 | 11.11 | MTS 1 | 175.00 | 77.34 | 94.00 | 9006540111100 |
| 0.4409 | | 11.20 | MTS 1 | 175.00 | 77.20 | 94.00 | 9006540112000 |
| 0.4429 | | 11.25 | MTS 1 | 175.00 | 77.13 | 94.00 | 9006540112500 |
| 0.4528 | | 11.50 | MTS 1 | 175.00 | 76.75 | 94.00 | 9006540115000 |
| 0.4531 | 29/64 | 11.51 | MTS 1 | 175.00 | 76.74 | 94.00 | 9006540115100 |
| 0.4626 | | 11.75 | MTS 1 | 175.00 | 76.38 | 94.00 | 9006540117500 |
| 0.4646 | | 11.80 | MTS 1 | 175.00 | 76.30 | 94.00 | 9006540118000 |
| 0.4689 | 15/32 | 11.91 | MTS 1 | 182.00 | 83.14 | 101.00 | 9006540119100 |
| 0.4724 | | 12.00 | MTS 1 | 182.00 | 83.00 | 101.00 | 9006540120000 |
| 0.4803 | | 12.20 | MTS 1 | 182.00 | 82.70 | 101.00 | 9006540122000 |
| 0.4823 | | 12.25 | MTS 1 | 182.00 | 82.63 | 101.00 | 9006540122500 |
| 0.4843 | 31/64 | 12.30 | MTS 1 | 182.00 | 82.55 | 101.00 | 9006540123000 |
| 0.4921 | | 12.50 | MTS 1 | 182.00 | 82.25 | 101.00 | 9006540125000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 182.00 | 81.95 | 101.00 | 9006540127000 |
| 0.5020 | | 12.75 | MTS 1 | 182.00 | 81.88 | 101.00 | 9006540127500 |
| 0.5039 | | 12.80 | MTS 1 | 182.00 | 81.80 | 101.00 | 9006540128000 |
| 0.5118 | | 13.00 | MTS 1 | 182.00 | 81.50 | 101.00 | 9006540130000 |
| 0.5157 | 33/64 | 13.10 | MTS 1 | 182.00 | 81.35 | 101.00 | 9006540131000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5217 | | 13.25 | MTS 1 | 189.00 | 88.13 | 108.00 | 9006540132500 |
| 0.5311 | 17/32 | 13.49 | MTS 1 | 189.00 | 87.77 | 108.00 | 9006540134900 |
| 0.5315 | | 13.50 | MTS 1 | 189.00 | 87.75 | 108.00 | 9006540135000 |
| 0.5413 | | 13.75 | MTS 1 | 189.00 | 87.38 | 108.00 | 9006540137500 |
| 0.5469 | 35/64 | 13.89 | MTS 1 | 189.00 | 87.17 | 108.00 | 9006540138900 |
| 0.5512 | | 14.00 | MTS 1 | 189.00 | 87.00 | 108.00 | 9006540140000 |
| 0.5591 | | 14.20 | MTS 2 | 212.00 | 92.70 | 114.00 | 9006540142000 |
| 0.5610 | | 14.25 | MTS 2 | 212.00 | 92.63 | 114.00 | 9006540142500 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 212.00 | 92.57 | 114.00 | 9006540142900 |
| 0.5709 | | 14.50 | MTS 2 | 212.00 | 92.25 | 114.00 | 9006540145000 |
| 0.5748 | | 14.60 | MTS 2 | 212.00 | 92.10 | 114.00 | 9006540146000 |
| 0.5780 | 37/64 | 14.68 | MTS 2 | 212.00 | 91.98 | 114.00 | 9006540146800 |
| 0.5807 | | 14.75 | MTS 2 | 212.00 | 91.88 | 114.00 | 9006540147500 |
| 0.5906 | | 15.00 | MTS 2 | 212.00 | 91.50 | 114.00 | 9006540150000 |
| 0.5937 | 19/32 | 15.08 | MTS 2 | 218.00 | 97.38 | 120.00 | 9006540150800 |
| 0.5945 | | 15.10 | MTS 2 | 218.00 | 97.35 | 120.00 | 9006540151000 |
| 0.6004 | | 15.25 | MTS 2 | 218.00 | 97.13 | 120.00 | 9006540152500 |
| 0.6094 | 39/64 | 15.48 | MTS 2 | 218.00 | 96.78 | 120.00 | 9006540154800 |
| 0.6102 | | 15.50 | MTS 2 | 218.00 | 96.75 | 120.00 | 9006540155000 |
| 0.6201 | | 15.75 | MTS 2 | 218.00 | 96.38 | 120.00 | 9006540157500 |
| 0.6250 | 5/8 | 15.87 | MTS 2 | 218.00 | 96.20 | 120.00 | 9006540158700 |
| 0.6299 | | 16.00 | MTS 2 | 218.00 | 96.00 | 120.00 | 9006540160000 |
| 0.6398 | | 16.25 | MTS 2 | 223.00 | 100.63 | 125.00 | 9006540162500 |
| 0.6406 | 41/64 | 16.27 | MTS 2 | 223.00 | 100.60 | 125.00 | 9006540162700 |
| 0.6496 | | 16.50 | MTS 2 | 223.00 | 100.25 | 125.00 | 9006540165000 |
| 0.6563 | 21/32 | 16.67 | MTS 2 | 223.00 | 100.00 | 125.00 | 9006540166700 |
| 0.6594 | | 16.75 | MTS 2 | 223.00 | 99.88 | 125.00 | 9006540167500 |
| 0.6693 | | 17.00 | MTS 2 | 223.00 | 99.50 | 125.00 | 9006540170000 |
| 0.6720 | 43/64 | 17.07 | MTS 2 | 228.00 | 104.40 | 130.00 | 9006540170700 |
| 0.6791 | | 17.25 | MTS 2 | 228.00 | 104.13 | 130.00 | 9006540172500 |
| 0.6874 | 11/16 | 17.46 | MTS 2 | 228.00 | 103.81 | 130.00 | 9006540174600 |
| 0.6890 | | 17.50 | MTS 2 | 228.00 | 103.75 | 130.00 | 9006540175000 |
| 0.6988 | | 17.75 | MTS 2 | 228.00 | 103.38 | 130.00 | 9006540177500 |
| 0.7087 | | 18.00 | MTS 2 | 228.00 | 103.00 | 130.00 | 9006540180000 |
| 0.7185 | | 18.25 | MTS 2 | 233.00 | 107.63 | 135.00 | 9006540182500 |
| 0.7189 | 23/32 | 18.26 | MTS 2 | 233.00 | 107.61 | 135.00 | 9006540182600 |
| 0.7283 | | 18.50 | MTS 2 | 233.00 | 107.25 | 135.00 | 9006540185000 |
| 0.7343 | 47/64 | 18.65 | MTS 2 | 233.00 | 107.03 | 135.00 | 9006540186500 |
| 0.7382 | | 18.75 | MTS 2 | 233.00 | 106.88 | 135.00 | 9006540187500 |
| 0.7480 | | 19.00 | MTS 2 | 233.00 | 106.50 | 135.00 | 9006540190000 |
| 0.7500 | 3/4 | 19.05 | MTS 2 | 238.00 | 111.43 | 140.00 | 9006540190500 |
| 0.7579 | | 19.25 | MTS 2 | 238.00 | 111.13 | 140.00 | 9006540192500 |

Morse Taper Length

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.7657 | 49/64 | 19.45 | MTS 2 | 238.00 | 110.83 | 140.00 | 9006540194500 |
| 0.7677 | | 19.50 | MTS 2 | 238.00 | 110.75 | 140.00 | 9006540195000 |
| 0.7776 | | 19.75 | MTS 2 | 238.00 | 110.38 | 140.00 | 9006540197500 |
| 0.7811 | 25/32 | 19.84 | MTS 2 | 238.00 | 110.24 | 140.00 | 9006540198400 |
| 0.7874 | | 20.00 | MTS 2 | 238.00 | 110.00 | 140.00 | 9006540200000 |
| 0.7972 | | 20.25 | MTS 2 | 243.00 | 114.63 | 145.00 | 9006540202500 |
| 0.8071 | | 20.50 | MTS 2 | 243.00 | 114.25 | 145.00 | 9006540205000 |
| 0.8126 | 13/16 | 20.64 | MTS 2 | 243.00 | 114.04 | 145.00 | 9006540206400 |
| 0.8169 | | 20.75 | MTS 2 | 243.00 | 113.88 | 145.00 | 9006540207500 |
| 0.8268 | | 21.00 | MTS 2 | 243.00 | 113.50 | 145.00 | 9006540210000 |
| 0.8366 | | 21.25 | MTS 2 | 248.00 | 118.13 | 150.00 | 9006540212500 |
| 0.8437 | 27/32 | 21.43 | MTS 2 | 248.00 | 117.86 | 150.00 | 9006540214300 |
| 0.8465 | | 21.50 | MTS 2 | 248.00 | 117.75 | 150.00 | 9006540215000 |
| 0.8563 | | 21.75 | MTS 2 | 248.00 | 117.38 | 150.00 | 9006540217500 |
| 0.8594 | 55/64 | 21.83 | MTS 2 | 248.00 | 117.26 | 150.00 | 9006540218300 |
| 0.8661 | | 22.00 | MTS 2 | 248.00 | 117.00 | 150.00 | 9006540220000 |
| 0.8748 | 7/8 | 22.22 | MTS 2 | 248.00 | 116.67 | 150.00 | 9006540222200 |
| 0.8858 | | 22.50 | MTS 2 | 253.00 | 121.25 | 155.00 | 9006540225000 |
| 0.9055 | | 23.00 | MTS 2 | 253.00 | 120.50 | 155.00 | 9006540230000 |
| 0.9252 | | 23.50 | MTS 3 | 276.00 | 119.75 | 155.00 | 9006540235000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.9350 | | 23.75 | MTS 3 | 281.00 | 124.38 | 160.00 | 9006540237500 |
| 0.9374 | 15/16 | 23.81 | MTS 3 | 281.00 | 124.29 | 160.00 | 9006540238100 |
| 0.9449 | | 24.00 | MTS 3 | 281.00 | 124.00 | 160.00 | 9006540240000 |
| 0.9646 | | 24.50 | MTS 3 | 281.00 | 123.25 | 160.00 | 9006540245000 |
| 0.9744 | | 24.75 | MTS 3 | 281.00 | 122.88 | 160.00 | 9006540247500 |
| 0.9843 | 63/64 | 25.00 | MTS 3 | 281.00 | 122.50 | 160.00 | 9006540250000 |
| 1.0000 | 1.0000 | 25.40 | MTS 3 | 286.00 | 126.90 | 165.00 | 9006540254000 |
| 1.0039 | | 25.50 | MTS 3 | 286.00 | 126.75 | 165.00 | 9006540255000 |
| 1.0236 | | 26.00 | MTS 3 | 286.00 | 126.00 | 165.00 | 9006540260000 |
| 1.0433 | | 26.50 | MTS 3 | 286.00 | 125.25 | 165.00 | 9006540265000 |
| 1.0625 | 1 1/16 | 26.99 | MTS 3 | 291.00 | 129.52 | 170.00 | 9006540269900 |
| 1.0630 | | 27.00 | MTS 3 | 291.00 | 129.50 | 170.00 | 9006540270000 |
| 1.1024 | | 28.00 | MTS 3 | 291.00 | 128.00 | 170.00 | 9006540280000 |
| 1.1220 | | 28.50 | MTS 3 | 296.00 | 132.25 | 175.00 | 9006540285000 |
| 1.1252 | 1 1/8 | 28.57 | MTS 3 | 296.00 | 132.15 | 175.00 | 9006540285700 |
| 1.1417 | | 29.00 | MTS 3 | 296.00 | 131.50 | 175.00 | 9006540290000 |
| 1.1614 | | 29.50 | MTS 3 | 296.00 | 130.75 | 175.00 | 9006540295000 |
| 1.1713 | | 29.75 | MTS 3 | 296.00 | 130.38 | 175.00 | 9006540297500 |
| 1.2008 | | 30.50 | MTS 3 | 301.00 | 134.25 | 180.00 | 9006540305000 |

Morse Taper Length



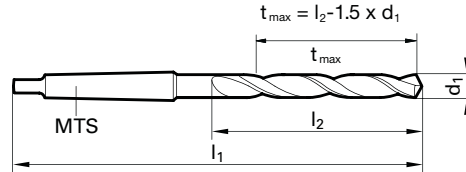
Tool material

HSCO

Surface



- P** Steel ● web thinning $\geq \varnothing 3.000$ • relieved cone • Co-alloyed high speed steel • increased wear resistance
 - M** Stainless steel ○
 - K** Cast iron ● alloyed/unalloyed steels and castings over 800 N/mm² • hot and cold rolled steels • antifriction bearing steels • high-alloyed steels • heat S treatable and case hardened steels
 - N** Aluminum ○
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 512

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|------------|-------------------|---------------------|-------------------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | MTS 1 | 114.00 | 28.50 | 33.00 | 9003450030000 |
| 0.1575 | | 4.00 | MTS 1 | 124.00 | 37.00 | 43.00 | 9003450040000 |
| 0.1969 | | 5.00 | MTS 1 | 133.00 | 44.50 | 52.00 | 9003450050000 |
| 0.2047 | | 5.20 | MTS 1 | 133.00 | 44.20 | 52.00 | 9003450052000 |
| 0.2165 | | 5.50 | MTS 1 | 138.00 | 48.75 | 57.00 | 9003450055000 |
| 0.2362 | | 6.00 | MTS 1 | 138.00 | 48.00 | 57.00 | 9003450060000 |
| 0.2441 | | 6.20 | MTS 1 | 144.00 | 53.70 | 63.00 | 9003450062000 |
| 0.2500 | 1/4 | E 6.35 | MTS 1 | 144.00 | 53.48 | 63.00 | 9003450063500 |
| 0.2559 | | 6.50 | MTS 1 | 144.00 | 53.25 | 63.00 | 9003450065000 |
| 0.2657 | 17/64 | H 6.75 | MTS 1 | 150.00 | 58.88 | 69.00 | 9003450067500 |
| 0.2756 | | 7.00 | MTS 1 | 150.00 | 58.50 | 69.00 | 9003450070000 |
| 0.3125 | 5/16 | 7.94 | MTS 1 | 156.00 | 63.09 | 75.00 | 9003450079400 |
| 0.3425 | | 8.70 | MTS 1 | 162.00 | 67.95 | 81.00 | 9003450087000 |
| 0.3701 | | 9.40 | MTS 1 | 162.00 | 66.90 | 81.00 | 9003450094000 |
| 0.3750 | 3/8 | 9.52 | MTS 1 | 168.00 | 72.72 | 87.00 | 9003450095200 |
| 0.3906 | 25/64 | 9.92 | MTS 1 | 168.00 | 72.12 | 87.00 | 9003450099200 |
| 0.3937 | | 10.00 | MTS 1 | 168.00 | 72.00 | 87.00 | 9003450100000 |
| 0.3976 | | 10.10 | MTS 1 | 168.00 | 71.85 | 87.00 | 9003450101000 |
| 0.4016 | | 10.20 | MTS 1 | 168.00 | 71.70 | 87.00 | 9003450102000 |
| 0.4035 | | 10.25 | MTS 1 | 168.00 | 71.63 | 87.00 | 9003450102500 |
| 0.4055 | | 10.30 | MTS 1 | 168.00 | 71.55 | 87.00 | 9003450103000 |
| 0.4063 | 13/32 | 10.32 | MTS 1 | 168.00 | 71.52 | 87.00 | 9003450103200 |
| 0.4134 | | 10.50 | MTS 1 | 168.00 | 71.25 | 87.00 | 9003450105000 |
| 0.4220 | 27/64 | 10.72 | MTS 1 | 175.00 | 77.92 | 94.00 | 9003450107200 |
| 0.4232 | | 10.75 | MTS 1 | 175.00 | 77.88 | 94.00 | 9003450107500 |
| 0.4252 | | 10.80 | MTS 1 | 175.00 | 77.80 | 94.00 | 9003450108000 |
| 0.4331 | | 11.00 | MTS 1 | 175.00 | 77.50 | 94.00 | 9003450110000 |
| 0.4374 | 7/16 | 11.11 | MTS 1 | 175.00 | 77.34 | 94.00 | 9003450111100 |
| 0.4409 | | 11.20 | MTS 1 | 175.00 | 77.20 | 94.00 | 9003450112000 |
| 0.4429 | | 11.25 | MTS 1 | 175.00 | 77.13 | 94.00 | 9003450112500 |
| 0.4528 | | 11.50 | MTS 1 | 175.00 | 76.75 | 94.00 | 9003450115000 |
| 0.4606 | | 11.70 | MTS 1 | 175.00 | 76.45 | 94.00 | 9003450117000 |
| 0.4626 | | 11.75 | MTS 1 | 175.00 | 76.38 | 94.00 | 9003450117500 |
| 0.4646 | | 11.80 | MTS 1 | 175.00 | 76.30 | 94.00 | 9003450118000 |
| 0.4689 | 15/32 | 11.91 | MTS 1 | 182.00 | 83.14 | 101.00 | 9003450119100 |
| 0.4724 | | 12.00 | MTS 1 | 182.00 | 83.00 | 101.00 | 9003450120000 |
| 0.4764 | | 12.10 | MTS 1 | 182.00 | 82.85 | 101.00 | 9003450121000 |
| 0.4803 | | 12.20 | MTS 1 | 182.00 | 82.70 | 101.00 | 9003450122000 |
| 0.4823 | | 12.25 | MTS 1 | 182.00 | 82.63 | 101.00 | 9003450122500 |
| 0.4843 | 31/64 | 12.30 | MTS 1 | 182.00 | 82.55 | 101.00 | 9003450123000 |
| 0.4921 | | 12.50 | MTS 1 | 182.00 | 82.25 | 101.00 | 9003450125000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 182.00 | 81.95 | 101.00 | 9003450127000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.5020 | | 12.75 | MTS 1 | 182.00 | 81.88 | 101.00 | 9003450127500 |
| 0.5039 | | 12.80 | MTS 1 | 182.00 | 81.80 | 101.00 | 9003450128000 |
| 0.5118 | | 13.00 | MTS 1 | 182.00 | 81.50 | 101.00 | 9003450130000 |
| 0.5157 | 33/64 | 13.10 | MTS 1 | 182.00 | 81.35 | 101.00 | 9003450131000 |
| 0.5197 | | 13.20 | MTS 1 | 182.00 | 81.20 | 101.00 | 9003450132000 |
| 0.5217 | | 13.25 | MTS 1 | 189.00 | 88.13 | 108.00 | 9003450132500 |
| 0.5311 | 17/32 | 13.49 | MTS 1 | 189.00 | 87.77 | 108.00 | 9003450134900 |
| 0.5315 | | 13.50 | MTS 1 | 189.00 | 87.75 | 108.00 | 9003450135000 |
| 0.5354 | | 13.60 | MTS 1 | 189.00 | 87.60 | 108.00 | 9003450136000 |
| 0.5394 | | 13.70 | MTS 1 | 189.00 | 87.45 | 108.00 | 9003450137000 |
| 0.5413 | | 13.75 | MTS 1 | 189.00 | 87.38 | 108.00 | 9003450137500 |
| 0.5433 | | 13.80 | MTS 1 | 189.00 | 87.30 | 108.00 | 9003450138000 |
| 0.5469 | 35/64 | 13.89 | MTS 1 | 189.00 | 87.17 | 108.00 | 9003450138900 |
| 0.5512 | | 14.00 | MTS 1 | 189.00 | 87.00 | 108.00 | 9003450140000 |
| 0.5551 | | 14.10 | MTS 2 | 212.00 | 92.85 | 114.00 | 9003450141000 |
| 0.5591 | | 14.20 | MTS 2 | 212.00 | 92.70 | 114.00 | 9003450142000 |
| 0.5610 | | 14.25 | MTS 2 | 212.00 | 92.63 | 114.00 | 9003450142500 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 212.00 | 92.57 | 114.00 | 9003450142900 |
| 0.5709 | | 14.50 | MTS 2 | 212.00 | 92.25 | 114.00 | 9003450145000 |
| 0.5780 | 37/64 | 14.68 | MTS 2 | 212.00 | 91.98 | 114.00 | 9003450146800 |
| 0.5807 | | 14.75 | MTS 2 | 212.00 | 91.88 | 114.00 | 9003450147500 |
| 0.5906 | | 15.00 | MTS 2 | 212.00 | 91.50 | 114.00 | 9003450150000 |
| 0.5937 | 19/32 | 15.08 | MTS 2 | 218.00 | 97.38 | 120.00 | 9003450150800 |
| 0.5984 | | 15.20 | MTS 2 | 218.00 | 97.20 | 120.00 | 9003450152000 |
| 0.6004 | | 15.25 | MTS 2 | 218.00 | 97.13 | 120.00 | 9003450152500 |
| 0.6102 | | 15.50 | MTS 2 | 218.00 | 96.75 | 120.00 | 9003450155000 |
| 0.6201 | | 15.75 | MTS 2 | 218.00 | 96.38 | 120.00 | 9003450157500 |
| 0.6250 | 5/8 | 15.87 | MTS 2 | 218.00 | 96.20 | 120.00 | 9003450158700 |
| 0.6260 | | 15.90 | MTS 2 | 218.00 | 96.15 | 120.00 | 9003450159000 |
| 0.6299 | | 16.00 | MTS 2 | 218.00 | 96.00 | 120.00 | 9003450160000 |
| 0.6398 | | 16.25 | MTS 2 | 223.00 | 100.63 | 125.00 | 9003450162500 |
| 0.6406 | 41/64 | 16.27 | MTS 2 | 223.00 | 100.60 | 125.00 | 9003450162700 |
| 0.6457 | | 16.40 | MTS 2 | 223.00 | 100.40 | 125.00 | 9003450164000 |
| 0.6496 | | 16.50 | MTS 2 | 223.00 | 100.25 | 125.00 | 9003450165000 |
| 0.6563 | 21/32 | 16.67 | MTS 2 | 223.00 | 100.00 | 125.00 | 9003450166700 |
| 0.6594 | | 16.75 | MTS 2 | 223.00 | 99.88 | 125.00 | 9003450167500 |
| 0.6693 | | 17.00 | MTS 2 | 223.00 | 99.50 | 125.00 | 9003450170000 |
| 0.6720 | 43/64 | 17.07 | MTS 2 | 228.00 | 104.40 | 130.00 | 9003450170700 |
| 0.6791 | | 17.25 | MTS 2 | 228.00 | 104.13 | 130.00 | 9003450172500 |
| 0.6874 | 11/16 | 17.46 | MTS 2 | 228.00 | 103.81 | 130.00 | 9003450174600 |
| 0.6890 | | 17.50 | MTS 2 | 228.00 | 103.75 | 130.00 | 9003450175000 |
| 0.6988 | | 17.75 | MTS 2 | 228.00 | 103.38 | 130.00 | 9003450177500 |

Morse Taper Length

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.7031 | 45/64 | 17.86 | MTS 2 | 228.00 | 103.21 | 130.00 | 9003450178600 |
| 0.7087 | | 18.00 | MTS 2 | 228.00 | 103.00 | 130.00 | 9003450180000 |
| 0.7185 | | 18.25 | MTS 2 | 233.00 | 107.63 | 135.00 | 9003450182500 |
| 0.7189 | 23/32 | 18.26 | MTS 2 | 233.00 | 107.61 | 135.00 | 9003450182600 |
| 0.7283 | | 18.50 | MTS 2 | 233.00 | 107.25 | 135.00 | 9003450185000 |
| 0.7343 | 47/64 | 18.65 | MTS 2 | 233.00 | 107.03 | 135.00 | 9003450186500 |
| 0.7382 | | 18.75 | MTS 2 | 233.00 | 106.88 | 135.00 | 9003450187500 |
| 0.7480 | | 19.00 | MTS 2 | 233.00 | 106.50 | 135.00 | 9003450190000 |
| 0.7500 | 3/4 | 19.05 | MTS 2 | 238.00 | 111.43 | 140.00 | 9003450190500 |
| 0.7579 | | 19.25 | MTS 2 | 238.00 | 111.13 | 140.00 | 9003450192500 |
| 0.7657 | 49/64 | 19.45 | MTS 2 | 238.00 | 110.83 | 140.00 | 9003450194500 |
| 0.7677 | | 19.50 | MTS 2 | 238.00 | 110.75 | 140.00 | 9003450195000 |
| 0.7776 | | 19.75 | MTS 2 | 238.00 | 110.38 | 140.00 | 9003450197500 |
| 0.7811 | 25/32 | 19.84 | MTS 2 | 238.00 | 110.24 | 140.00 | 9003450198400 |
| 0.7874 | | 20.00 | MTS 2 | 238.00 | 110.00 | 140.00 | 9003450200000 |
| 0.7972 | | 20.25 | MTS 2 | 243.00 | 114.63 | 145.00 | 9003450202500 |
| 0.8071 | | 20.50 | MTS 2 | 243.00 | 114.25 | 145.00 | 9003450205000 |
| 0.8126 | 13/16 | 20.64 | MTS 2 | 243.00 | 114.04 | 145.00 | 9003450206400 |
| 0.8169 | | 20.75 | MTS 2 | 243.00 | 113.88 | 145.00 | 9003450207500 |

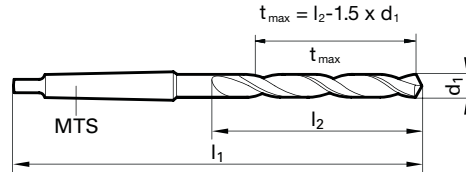
| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.8268 | | 21.00 | MTS 2 | 243.00 | 113.50 | 145.00 | 9003450210000 |
| 0.8366 | | 21.25 | MTS 2 | 248.00 | 118.13 | 150.00 | 9003450212500 |
| 0.8465 | | 21.50 | MTS 2 | 248.00 | 117.75 | 150.00 | 9003450215000 |
| 0.8563 | | 21.75 | MTS 2 | 248.00 | 117.38 | 150.00 | 9003450217500 |
| 0.8661 | | 22.00 | MTS 2 | 248.00 | 117.00 | 150.00 | 9003450220000 |
| 0.8748 | 7/8 | 22.22 | MTS 2 | 248.00 | 116.67 | 150.00 | 9003450222200 |
| 0.8760 | | 22.25 | MTS 2 | 248.00 | 116.63 | 150.00 | 9003450222500 |
| 0.8858 | | 22.50 | MTS 2 | 253.00 | 121.25 | 155.00 | 9003450225000 |
| 0.9055 | | 23.00 | MTS 2 | 253.00 | 120.50 | 155.00 | 9003450230000 |
| 0.9063 | 29/32 | 23.02 | MTS 2 | 253.00 | 120.47 | 155.00 | 9003450230200 |
| 0.9252 | | 23.50 | MTS 3 | 276.00 | 119.75 | 155.00 | 9003450235000 |
| 0.9370 | | 23.80 | MTS 3 | 281.00 | 124.30 | 160.00 | 9003450238000 |
| 0.9374 | 15/16 | 23.81 | MTS 3 | 281.00 | 124.29 | 160.00 | 9003450238100 |
| 0.9449 | | 24.00 | MTS 3 | 281.00 | 124.00 | 160.00 | 9003450240000 |
| 0.9547 | | 24.25 | MTS 3 | 281.00 | 123.63 | 160.00 | 9003450242500 |
| 0.9646 | | 24.50 | MTS 3 | 281.00 | 123.25 | 160.00 | 9003450245000 |
| 0.9843 | 63/64 | 25.00 | MTS 3 | 281.00 | 122.50 | 160.00 | 9003450250000 |
| 0.9941 | | 25.25 | MTS 3 | 286.00 | 127.13 | 165.00 | 9003450252500 |
| 1.0000 | 1.0000 | 25.40 | MTS 3 | 286.00 | 126.90 | 165.00 | 9003450254000 |

Morse Taper Length



Tool material **HSS**
Surface

- P** Steel ● web thinning $\geq \varnothing 14.100$ • relieved cone • for drilling through drill bushes
 - M** Stainless steel
 - K** Cast iron ● alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite
 - N** Aluminum ○
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 502

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1575 | | 4.00 | MTS 1 | 145.00 | 58.00 | 64.00 | 9002570040000 |
| 0.2008 | | 5.10 | MTS 1 | 155.00 | 66.35 | 74.00 | 9002570051000 |
| 0.2520 | | 6.40 | MTS 1 | 167.00 | 76.40 | 86.00 | 9002570064000 |
| 0.2559 | | 6.50 | MTS 1 | 167.00 | 76.25 | 86.00 | 9002570065000 |
| 0.2657 | 17/64 | H 6.75 | MTS 1 | 174.00 | 82.88 | 93.00 | 9002570067500 |
| 0.3228 | | P 8.20 | MTS 1 | 181.00 | 87.70 | 100.00 | 9002570082000 |
| 0.3346 | | 8.50 | MTS 1 | 181.00 | 87.25 | 100.00 | 9002570085000 |
| 0.3740 | | 9.50 | MTS 1 | 188.00 | 92.75 | 107.00 | 9002570095000 |
| 0.3937 | | 10.00 | MTS 1 | 197.00 | 101.00 | 116.00 | 9002570100000 |
| 0.3976 | | 10.10 | MTS 1 | 197.00 | 100.85 | 116.00 | 9002570101000 |
| 0.4016 | | 10.20 | MTS 1 | 197.00 | 100.70 | 116.00 | 9002570102000 |
| 0.4035 | | 10.25 | MTS 1 | 197.00 | 100.63 | 116.00 | 9002570102500 |
| 0.4055 | | 10.30 | MTS 1 | 197.00 | 100.55 | 116.00 | 9002570103000 |
| 0.4094 | | 10.40 | MTS 1 | 197.00 | 100.40 | 116.00 | 9002570104000 |
| 0.4134 | | 10.50 | MTS 1 | 197.00 | 100.25 | 116.00 | 9002570105000 |
| 0.4173 | | 10.60 | MTS 1 | 197.00 | 100.10 | 116.00 | 9002570106000 |
| 0.4213 | | 10.70 | MTS 1 | 206.00 | 108.95 | 125.00 | 9002570107000 |
| 0.4232 | | 10.75 | MTS 1 | 206.00 | 108.88 | 125.00 | 9002570107500 |
| 0.4252 | | 10.80 | MTS 1 | 206.00 | 108.80 | 125.00 | 9002570108000 |
| 0.4291 | | 10.90 | MTS 1 | 206.00 | 108.65 | 125.00 | 9002570109000 |
| 0.4331 | | 11.00 | MTS 1 | 206.00 | 108.50 | 125.00 | 9002570110000 |
| 0.4370 | | 11.10 | MTS 1 | 206.00 | 108.35 | 125.00 | 9002570111000 |
| 0.4409 | | 11.20 | MTS 1 | 206.00 | 108.20 | 125.00 | 9002570112000 |
| 0.4429 | | 11.25 | MTS 1 | 206.00 | 108.13 | 125.00 | 9002570112500 |
| 0.4449 | | 11.30 | MTS 1 | 206.00 | 108.05 | 125.00 | 9002570113000 |
| 0.4488 | | 11.40 | MTS 1 | 206.00 | 107.90 | 125.00 | 9002570114000 |
| 0.4528 | | 11.50 | MTS 1 | 206.00 | 107.75 | 125.00 | 9002570115000 |
| 0.4567 | | 11.60 | MTS 1 | 206.00 | 107.60 | 125.00 | 9002570116000 |
| 0.4626 | | 11.75 | MTS 1 | 206.00 | 107.38 | 125.00 | 9002570117500 |
| 0.4646 | | 11.80 | MTS 1 | 206.00 | 107.30 | 125.00 | 9002570118000 |
| 0.4685 | | 11.90 | MTS 1 | 215.00 | 116.15 | 134.00 | 9002570119000 |
| 0.4724 | | 12.00 | MTS 1 | 215.00 | 116.00 | 134.00 | 9002570120000 |
| 0.4764 | | 12.10 | MTS 1 | 215.00 | 115.85 | 134.00 | 9002570121000 |
| 0.4803 | | 12.20 | MTS 1 | 215.00 | 115.70 | 134.00 | 9002570122000 |
| 0.4823 | | 12.25 | MTS 1 | 215.00 | 115.63 | 134.00 | 9002570122500 |
| 0.4843 | 31/64 | 12.30 | MTS 1 | 215.00 | 115.55 | 134.00 | 9002570123000 |
| 0.4882 | | 12.40 | MTS 1 | 215.00 | 115.40 | 134.00 | 9002570124000 |
| 0.4921 | | 12.50 | MTS 1 | 215.00 | 115.25 | 134.00 | 9002570125000 |
| 0.4961 | | 12.60 | MTS 1 | 215.00 | 115.10 | 134.00 | 9002570126000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 215.00 | 114.95 | 134.00 | 9002570127000 |
| 0.5020 | | 12.75 | MTS 1 | 215.00 | 114.88 | 134.00 | 9002570127500 |
| 0.5039 | | 12.80 | MTS 1 | 215.00 | 114.80 | 134.00 | 9002570128000 |
| 0.5118 | | 13.00 | MTS 1 | 215.00 | 114.50 | 134.00 | 9002570130000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5157 | 33/64 | 13.10 | MTS 1 | 215.00 | 114.35 | 134.00 | 9002570131000 |
| 0.5197 | | 13.20 | MTS 1 | 215.00 | 114.20 | 134.00 | 9002570132000 |
| 0.5217 | | 13.25 | MTS 1 | 223.00 | 122.13 | 142.00 | 9002570132500 |
| 0.5236 | | 13.30 | MTS 1 | 223.00 | 122.05 | 142.00 | 9002570133000 |
| 0.5311 | 17/32 | 13.49 | MTS 1 | 223.00 | 121.77 | 142.00 | 9002570134900 |
| 0.5315 | | 13.50 | MTS 1 | 223.00 | 121.75 | 142.00 | 9002570135000 |
| 0.5354 | | 13.60 | MTS 1 | 223.00 | 121.60 | 142.00 | 9002570136000 |
| 0.5413 | | 13.75 | MTS 1 | 223.00 | 121.38 | 142.00 | 9002570137500 |
| 0.5433 | | 13.80 | MTS 1 | 223.00 | 121.30 | 142.00 | 9002570138000 |
| 0.5472 | | 13.90 | MTS 1 | 223.00 | 121.15 | 142.00 | 9002570139000 |
| 0.5512 | | 14.00 | MTS 1 | 223.00 | 121.00 | 142.00 | 9002570140000 |
| 0.5551 | | 14.10 | MTS 2 | 245.00 | 125.85 | 147.00 | 9002570141000 |
| 0.5591 | | 14.20 | MTS 2 | 245.00 | 125.70 | 147.00 | 9002570142000 |
| 0.5610 | | 14.25 | MTS 2 | 245.00 | 125.63 | 147.00 | 9002570142500 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 245.00 | 125.57 | 147.00 | 9002570142900 |
| 0.5630 | | 14.30 | MTS 2 | 245.00 | 125.55 | 147.00 | 9002570143000 |
| 0.5709 | | 14.50 | MTS 2 | 245.00 | 125.25 | 147.00 | 9002570145000 |
| 0.5807 | | 14.75 | MTS 2 | 245.00 | 124.88 | 147.00 | 9002570147500 |
| 0.5827 | | 14.80 | MTS 2 | 245.00 | 124.80 | 147.00 | 9002570148000 |
| 0.5866 | | 14.90 | MTS 2 | 245.00 | 124.65 | 147.00 | 9002570149000 |
| 0.5906 | | 15.00 | MTS 2 | 245.00 | 124.50 | 147.00 | 9002570150000 |
| 0.5937 | 19/32 | 15.08 | MTS 2 | 251.00 | 130.38 | 153.00 | 9002570150800 |
| 0.5945 | | 15.10 | MTS 2 | 251.00 | 130.35 | 153.00 | 9002570151000 |
| 0.5984 | | 15.20 | MTS 2 | 251.00 | 130.20 | 153.00 | 9002570152000 |
| 0.6004 | | 15.25 | MTS 2 | 251.00 | 130.13 | 153.00 | 9002570152500 |
| 0.6024 | | 15.30 | MTS 2 | 251.00 | 130.05 | 153.00 | 9002570153000 |
| 0.6102 | | 15.50 | MTS 2 | 251.00 | 129.75 | 153.00 | 9002570155000 |
| 0.6142 | | 15.60 | MTS 2 | 251.00 | 129.60 | 153.00 | 9002570156000 |
| 0.6201 | | 15.75 | MTS 2 | 251.00 | 129.38 | 153.00 | 9002570157500 |
| 0.6220 | | 15.80 | MTS 2 | 251.00 | 129.30 | 153.00 | 9002570158000 |
| 0.6250 | 5/8 | 15.87 | MTS 2 | 251.00 | 129.20 | 153.00 | 9002570158700 |
| 0.6299 | | 16.00 | MTS 2 | 251.00 | 129.00 | 153.00 | 9002570160000 |
| 0.6339 | | 16.10 | MTS 2 | 257.00 | 134.85 | 159.00 | 9002570161000 |
| 0.6398 | | 16.25 | MTS 2 | 257.00 | 134.63 | 159.00 | 9002570162500 |
| 0.6406 | 41/64 | 16.27 | MTS 2 | 257.00 | 134.60 | 159.00 | 9002570162700 |
| 0.6457 | | 16.40 | MTS 2 | 257.00 | 134.40 | 159.00 | 9002570164000 |
| 0.6496 | | 16.50 | MTS 2 | 257.00 | 134.25 | 159.00 | 9002570165000 |
| 0.6563 | 21/32 | 16.67 | MTS 2 | 257.00 | 134.00 | 159.00 | 9002570166700 |
| 0.6594 | | 16.75 | MTS 2 | 257.00 | 133.88 | 159.00 | 9002570167500 |
| 0.6693 | | 17.00 | MTS 2 | 257.00 | 133.50 | 159.00 | 9002570170000 |
| 0.6791 | | 17.25 | MTS 2 | 263.00 | 139.13 | 165.00 | 9002570172500 |
| 0.6874 | 11/16 | 17.46 | MTS 2 | 263.00 | 138.81 | 165.00 | 9002570174600 |
| 0.6890 | | 17.50 | MTS 2 | 263.00 | 138.75 | 165.00 | 9002570175000 |

Morse Taper Length

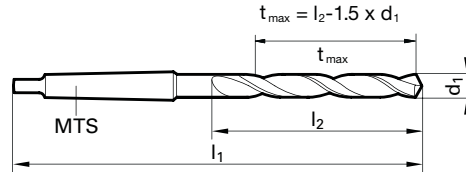
| Diameter (d ₁) | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|---------|------------|-------------------|---------------------|-------------------|--------|-------------------------------|
| inch | wire/tr | | | | | | mm |
| 0.6988 | | 17.75 | MTS 2 | 263.00 | 138.38 | 165.00 | 9002570177500 |
| 0.7087 | | 18.00 | MTS 2 | 263.00 | 138.00 | 165.00 | 9002570180000 |
| 0.7185 | | 18.25 | MTS 2 | 269.00 | 143.63 | 171.00 | 9002570182500 |
| 0.7189 | 23/32 | 18.26 | MTS 2 | 269.00 | 143.61 | 171.00 | 9002570182600 |
| 0.7283 | | 18.50 | MTS 2 | 269.00 | 143.25 | 171.00 | 9002570185000 |
| 0.7382 | | 18.75 | MTS 2 | 269.00 | 142.88 | 171.00 | 9002570187500 |
| 0.7480 | | 19.00 | MTS 2 | 269.00 | 142.50 | 171.00 | 9002570190000 |
| 0.7579 | | 19.25 | MTS 2 | 275.00 | 148.13 | 177.00 | 9002570192500 |
| 0.7677 | | 19.50 | MTS 2 | 275.00 | 147.75 | 177.00 | 9002570195000 |
| 0.7776 | | 19.75 | MTS 2 | 275.00 | 147.38 | 177.00 | 9002570197500 |
| 0.7811 | 25/32 | 19.84 | MTS 2 | 275.00 | 147.24 | 177.00 | 9002570198400 |
| 0.7874 | | 20.00 | MTS 2 | 275.00 | 147.00 | 177.00 | 9002570200000 |
| 0.7972 | | 20.25 | MTS 2 | 282.00 | 153.63 | 184.00 | 9002570202500 |
| 0.8071 | | 20.50 | MTS 2 | 282.00 | 153.25 | 184.00 | 9002570205000 |
| 0.8126 | 13/16 | 20.64 | MTS 2 | 282.00 | 153.04 | 184.00 | 9002570206400 |
| 0.8268 | | 21.00 | MTS 2 | 282.00 | 152.50 | 184.00 | 9002570210000 |
| 0.8465 | | 21.50 | MTS 2 | 289.00 | 158.75 | 191.00 | 9002570215000 |
| 0.8563 | | 21.75 | MTS 2 | 289.00 | 158.38 | 191.00 | 9002570217500 |
| 0.8661 | | 22.00 | MTS 2 | 289.00 | 158.00 | 191.00 | 9002570220000 |
| 0.8748 | 7/8 | 22.22 | MTS 2 | 289.00 | 157.67 | 191.00 | 9002570222200 |
| 0.8760 | | 22.25 | MTS 2 | 289.00 | 157.63 | 191.00 | 9002570222500 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.8858 | | 22.50 | MTS 2 | 296.00 | 164.25 | 198.00 | 9002570225000 |
| 0.9055 | | 23.00 | MTS 2 | 296.00 | 163.50 | 198.00 | 9002570230000 |
| 0.9154 | | 23.25 | MTS 3 | 319.00 | 163.13 | 198.00 | 9002570232500 |
| 0.9252 | | 23.50 | MTS 3 | 319.00 | 162.75 | 198.00 | 9002570235000 |
| 0.9350 | | 23.75 | MTS 3 | 327.00 | 170.38 | 206.00 | 9002570237500 |
| 0.9374 | 15/16 | 23.81 | MTS 3 | 327.00 | 170.29 | 206.00 | 9002570238100 |
| 0.9449 | | 24.00 | MTS 3 | 327.00 | 170.00 | 206.00 | 9002570240000 |
| 0.9547 | | 24.25 | MTS 3 | 327.00 | 169.63 | 206.00 | 9002570242500 |
| 0.9646 | | 24.50 | MTS 3 | 327.00 | 169.25 | 206.00 | 9002570245000 |
| 0.9843 | 63/64 | 25.00 | MTS 3 | 327.00 | 168.50 | 206.00 | 9002570250000 |
| 0.9941 | | 25.25 | MTS 3 | 335.00 | 176.13 | 214.00 | 9002570252500 |
| 1.0039 | | 25.50 | MTS 3 | 335.00 | 175.75 | 214.00 | 9002570255000 |
| 1.0236 | | 26.00 | MTS 3 | 335.00 | 175.00 | 214.00 | 9002570260000 |
| 1.0433 | | 26.50 | MTS 3 | 335.00 | 174.25 | 214.00 | 9002570265000 |
| 1.0630 | | 27.00 | MTS 3 | 343.00 | 181.50 | 222.00 | 9002570270000 |
| 1.0827 | | 27.50 | MTS 3 | 343.00 | 180.75 | 222.00 | 9002570275000 |
| 1.1024 | | 28.00 | MTS 3 | 343.00 | 180.00 | 222.00 | 9002570280000 |
| 1.1220 | | 28.50 | MTS 3 | 351.00 | 187.25 | 230.00 | 9002570285000 |
| 1.1417 | | 29.00 | MTS 3 | 351.00 | 186.50 | 230.00 | 9002570290000 |
| 1.1563 | 1 5/32 | 29.37 | MTS 3 | 351.00 | 185.95 | 230.00 | 9002570293700 |

Morse Taper Length



- P** Steel ● web thinning $\geq \varnothing 5.500$ • relieved cone • wide flutes • in case of unsatisfactory chip evacuation
 - M** Stainless steel ○
 - K** Cast iron ● cast iron and steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 520

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|--------|------------|-------------------|---------------------|-------------------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.2362 | | 6.00 | MTS 1 | 161.00 | 71.00 | 80.00 | 9005510060000 |
| 0.2559 | | 6.50 | MTS 1 | 167.00 | 76.25 | 86.00 | 9005510065000 |
| 0.2657 | 17/64 | H 6.75 | MTS 1 | 174.00 | 82.88 | 93.00 | 9005510067500 |
| 0.2953 | | 7.50 | MTS 1 | 174.00 | 81.75 | 93.00 | 9005510075000 |
| 0.3125 | 5/16 | 7.94 | MTS 1 | 181.00 | 88.09 | 100.00 | 9005510079400 |
| 0.3280 | 21/64 | 8.33 | MTS 1 | 181.00 | 87.51 | 100.00 | 9005510083300 |
| 0.3346 | | 8.50 | MTS 1 | 181.00 | 87.25 | 100.00 | 9005510085000 |
| 0.3543 | | 9.00 | MTS 1 | 188.00 | 93.50 | 107.00 | 9005510090000 |
| 0.3740 | | 9.50 | MTS 1 | 188.00 | 92.75 | 107.00 | 9005510095000 |
| 0.3750 | 3/8 | 9.52 | MTS 1 | 197.00 | 101.72 | 116.00 | 9005510095200 |
| 0.3898 | | 9.90 | MTS 1 | 197.00 | 101.15 | 116.00 | 9005510099000 |
| 0.3906 | 25/64 | 9.92 | MTS 1 | 197.00 | 101.12 | 116.00 | 9005510099200 |
| 0.3937 | | 10.00 | MTS 1 | 197.00 | 101.00 | 116.00 | 9005510100000 |
| 0.4016 | | 10.20 | MTS 1 | 197.00 | 100.70 | 116.00 | 9005510102000 |
| 0.4035 | | 10.25 | MTS 1 | 197.00 | 100.63 | 116.00 | 9005510102500 |
| 0.4055 | | 10.30 | MTS 1 | 197.00 | 100.55 | 116.00 | 9005510103000 |
| 0.4063 | 13/32 | 10.32 | MTS 1 | 197.00 | 100.52 | 116.00 | 9005510103200 |
| 0.4134 | | 10.50 | MTS 1 | 197.00 | 100.25 | 116.00 | 9005510105000 |
| 0.4173 | | 10.60 | MTS 1 | 197.00 | 100.10 | 116.00 | 9005510106000 |
| 0.4220 | 27/64 | 10.72 | MTS 1 | 206.00 | 108.92 | 125.00 | 9005510107200 |
| 0.4331 | | 11.00 | MTS 1 | 206.00 | 108.50 | 125.00 | 9005510110000 |
| 0.4374 | 7/16 | 11.11 | MTS 1 | 206.00 | 108.34 | 125.00 | 9005510111100 |
| 0.4409 | | 11.20 | MTS 1 | 206.00 | 108.20 | 125.00 | 9005510112000 |
| 0.4528 | | 11.50 | MTS 1 | 206.00 | 107.75 | 125.00 | 9005510115000 |
| 0.4531 | 29/64 | 11.51 | MTS 1 | 206.00 | 107.74 | 125.00 | 9005510115100 |
| 0.4646 | | 11.80 | MTS 1 | 206.00 | 107.30 | 125.00 | 9005510118000 |
| 0.4689 | 15/32 | 11.91 | MTS 1 | 215.00 | 116.14 | 134.00 | 9005510119100 |
| 0.4724 | | 12.00 | MTS 1 | 215.00 | 116.00 | 134.00 | 9005510120000 |
| 0.4803 | | 12.20 | MTS 1 | 215.00 | 115.70 | 134.00 | 9005510122000 |
| 0.4843 | 31/64 | 12.30 | MTS 1 | 215.00 | 115.55 | 134.00 | 9005510123000 |
| 0.4921 | | 12.50 | MTS 1 | 215.00 | 115.25 | 134.00 | 9005510125000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 215.00 | 114.95 | 134.00 | 9005510127000 |
| 0.5039 | | 12.80 | MTS 1 | 215.00 | 114.80 | 134.00 | 9005510128000 |
| 0.5118 | | 13.00 | MTS 1 | 215.00 | 114.50 | 134.00 | 9005510130000 |
| 0.5157 | 33/64 | 13.10 | MTS 1 | 215.00 | 114.35 | 134.00 | 9005510131000 |
| 0.5197 | | 13.20 | MTS 1 | 215.00 | 114.20 | 134.00 | 9005510132000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.5311 | 17/32 | 13.49 | MTS 1 | 223.00 | 121.77 | 142.00 | 9005510134900 |
| 0.5315 | | 13.50 | MTS 1 | 223.00 | 121.75 | 142.00 | 9005510135000 |
| 0.5433 | | 13.80 | MTS 1 | 223.00 | 121.30 | 142.00 | 9005510138000 |
| 0.5469 | 35/64 | 13.89 | MTS 1 | 223.00 | 121.17 | 142.00 | 9005510138900 |
| 0.5512 | | 14.00 | MTS 1 | 223.00 | 121.00 | 142.00 | 9005510140000 |
| 0.5591 | | 14.20 | MTS 2 | 245.00 | 125.70 | 147.00 | 9005510142000 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 245.00 | 125.57 | 147.00 | 9005510142900 |
| 0.5709 | | 14.50 | MTS 2 | 245.00 | 125.25 | 147.00 | 9005510145000 |
| 0.5807 | | 14.75 | MTS 2 | 245.00 | 124.88 | 147.00 | 9005510147500 |
| 0.5906 | | 15.00 | MTS 2 | 245.00 | 124.50 | 147.00 | 9005510150000 |
| 0.6004 | | 15.25 | MTS 2 | 251.00 | 130.13 | 153.00 | 9005510152500 |
| 0.6094 | 39/64 | 15.48 | MTS 2 | 251.00 | 129.78 | 153.00 | 9005510154800 |
| 0.6102 | | 15.50 | MTS 2 | 251.00 | 129.75 | 153.00 | 9005510155000 |
| 0.6201 | | 15.75 | MTS 2 | 251.00 | 129.38 | 153.00 | 9005510157500 |
| 0.6250 | 5/8 | 15.87 | MTS 2 | 251.00 | 129.20 | 153.00 | 9005510158700 |
| 0.6299 | | 16.00 | MTS 2 | 251.00 | 129.00 | 153.00 | 9005510160000 |
| 0.6406 | 41/64 | 16.27 | MTS 2 | 257.00 | 134.60 | 159.00 | 9005510162700 |
| 0.6496 | | 16.50 | MTS 2 | 257.00 | 134.25 | 159.00 | 9005510165000 |
| 0.6563 | 21/32 | 16.67 | MTS 2 | 257.00 | 134.00 | 159.00 | 9005510166700 |
| 0.6614 | | 16.80 | MTS 2 | 257.00 | 133.80 | 159.00 | 9005510168000 |
| 0.6693 | | 17.00 | MTS 2 | 257.00 | 133.50 | 159.00 | 9005510170000 |
| 0.6874 | 11/16 | 17.46 | MTS 2 | 263.00 | 138.81 | 165.00 | 9005510174600 |
| 0.6890 | | 17.50 | MTS 2 | 263.00 | 138.75 | 165.00 | 9005510175000 |
| 0.7087 | | 18.00 | MTS 2 | 263.00 | 138.00 | 165.00 | 9005510180000 |
| 0.7189 | 23/32 | 18.26 | MTS 2 | 269.00 | 143.61 | 171.00 | 9005510182600 |
| 0.7480 | | 19.00 | MTS 2 | 269.00 | 142.50 | 171.00 | 9005510190000 |
| 0.7500 | 3/4 | 19.05 | MTS 2 | 275.00 | 148.43 | 177.00 | 9005510190500 |
| 0.7657 | 49/64 | 19.45 | MTS 2 | 275.00 | 147.83 | 177.00 | 9005510194500 |
| 0.7677 | | 19.50 | MTS 2 | 275.00 | 147.75 | 177.00 | 9005510195000 |
| 0.7811 | 25/32 | 19.84 | MTS 2 | 275.00 | 147.24 | 177.00 | 9005510198400 |
| 0.9374 | 15/16 | 23.81 | MTS 3 | 327.00 | 170.29 | 206.00 | 9005510238100 |
| 1.1417 | | 29.00 | MTS 3 | 351.00 | 186.50 | 230.00 | 9005510290000 |
| 1.1874 | 1 3/16 | 30.16 | MTS 3 | 360.00 | 193.76 | 239.00 | 9005510301600 |
| 1.2008 | | 30.50 | MTS 3 | 360.00 | 193.25 | 239.00 | 9005510305000 |
| 1.2205 | | 31.00 | MTS 3 | 360.00 | 192.50 | 239.00 | 9005510310000 |
| 1.2402 | | 31.50 | MTS 3 | 360.00 | 191.75 | 239.00 | 9005510315000 |

Morse Taper Length



Tool material

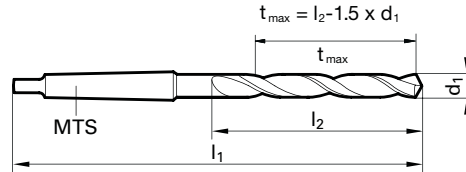
HSS

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 7.800$ • relieved cone • for extremely deep holes |
| M | Stainless steel | | |
| K | Cast iron | ● | |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | alloyed/unalloyed steel and cast steel • grey cast iron, malleable and spheroidal iron • sintered powder metal, German silver and graphite |

●=Optimal
○=Limited



Speeds and feeds information on pg. 502

Morse Taper Length

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3346 | | 8.50 | MTS 1 | 265.00 | 152.25 | 165.00 | 9002660085000 |
| 0.3543 | | 9.00 | MTS 1 | 275.00 | 161.50 | 175.00 | 9002660090000 |
| 0.3937 | | 10.00 | MTS 1 | 285.00 | 170.00 | 185.00 | 9002660100000 |
| 0.4016 | | 10.20 | MTS 1 | 285.00 | 169.70 | 185.00 | 9002660102000 |
| 0.4035 | | 10.25 | MTS 1 | 285.00 | 169.63 | 185.00 | 9002660102500 |
| 0.4063 | 13/32 | 10.32 | MTS 1 | 285.00 | 169.52 | 185.00 | 9002660103200 |
| 0.4134 | | 10.50 | MTS 1 | 285.00 | 169.25 | 185.00 | 9002660105000 |
| 0.4331 | | 11.00 | MTS 1 | 300.00 | 178.50 | 195.00 | 9002660110000 |
| 0.4374 | 7/16 | 11.11 | MTS 1 | 300.00 | 178.34 | 195.00 | 9002660111100 |
| 0.4528 | | 11.50 | MTS 1 | 300.00 | 177.75 | 195.00 | 9002660115000 |
| 0.4646 | | 11.80 | MTS 1 | 300.00 | 177.30 | 195.00 | 9002660118000 |
| 0.4724 | | 12.00 | MTS 1 | 310.00 | 187.00 | 205.00 | 9002660120000 |
| 0.4921 | | 12.50 | MTS 1 | 310.00 | 186.25 | 205.00 | 9002660125000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 310.00 | 185.95 | 205.00 | 9002660127000 |
| 0.5118 | | 13.00 | MTS 1 | 310.00 | 185.50 | 205.00 | 9002660130000 |
| 0.5311 | 17/32 | 13.49 | MTS 1 | 325.00 | 199.77 | 220.00 | 9002660134900 |
| 0.5315 | | 13.50 | MTS 1 | 325.00 | 199.75 | 220.00 | 9002660135000 |
| 0.5512 | | 14.00 | MTS 1 | 325.00 | 199.00 | 220.00 | 9002660140000 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 340.00 | 198.57 | 220.00 | 9002660142900 |
| 0.5709 | | 14.50 | MTS 2 | 340.00 | 198.25 | 220.00 | 9002660145000 |
| 0.5906 | | 15.00 | MTS 2 | 340.00 | 197.50 | 220.00 | 9002660150000 |
| 0.6004 | | 15.25 | MTS 2 | 355.00 | 207.13 | 230.00 | 9002660152500 |
| 0.6102 | | 15.50 | MTS 2 | 355.00 | 206.75 | 230.00 | 9002660155000 |

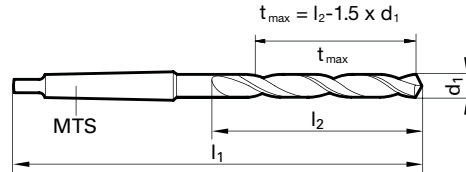
| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.6299 | | 16.00 | MTS 2 | 355.00 | 206.00 | 230.00 | 9002660160000 |
| 0.6496 | | 16.50 | MTS 2 | 355.00 | 205.25 | 230.00 | 9002660165000 |
| 0.6563 | 21/32 | 16.67 | MTS 2 | 355.00 | 205.00 | 230.00 | 9002660166700 |
| 0.6693 | | 17.00 | MTS 2 | 355.00 | 204.50 | 230.00 | 9002660170000 |
| 0.6890 | | 17.50 | MTS 2 | 370.00 | 218.75 | 245.00 | 9002660175000 |
| 0.7087 | | 18.00 | MTS 2 | 370.00 | 218.00 | 245.00 | 9002660180000 |
| 0.7283 | | 18.50 | MTS 2 | 370.00 | 217.25 | 245.00 | 9002660185000 |
| 0.7343 | 47/64 | 18.65 | MTS 2 | 370.00 | 217.03 | 245.00 | 9002660186500 |
| 0.7480 | | 19.00 | MTS 2 | 370.00 | 216.50 | 245.00 | 9002660190000 |
| 0.7500 | 3/4 | 19.05 | MTS 2 | 385.00 | 231.43 | 260.00 | 9002660190500 |
| 0.7677 | | 19.50 | MTS 2 | 385.00 | 230.75 | 260.00 | 9002660195000 |
| 0.7776 | | 19.75 | MTS 2 | 385.00 | 230.38 | 260.00 | 9002660197500 |
| 0.7874 | | 20.00 | MTS 2 | 385.00 | 230.00 | 260.00 | 9002660200000 |
| 0.8071 | | 20.50 | MTS 2 | 385.00 | 229.25 | 260.00 | 9002660205000 |
| 0.8126 | 13/16 | 20.64 | MTS 2 | 385.00 | 229.04 | 260.00 | 9002660206400 |
| 0.8268 | | 21.00 | MTS 2 | 385.00 | 228.50 | 260.00 | 9002660210000 |
| 0.8465 | | 21.50 | MTS 2 | 405.00 | 237.75 | 270.00 | 9002660215000 |
| 0.8661 | | 22.00 | MTS 2 | 405.00 | 237.00 | 270.00 | 9002660220000 |
| 0.8858 | | 22.50 | MTS 2 | 405.00 | 236.25 | 270.00 | 9002660225000 |
| 0.9055 | | 23.00 | MTS 2 | 405.00 | 235.50 | 270.00 | 9002660230000 |
| 0.9063 | 29/32 | 23.02 | MTS 2 | 405.00 | 235.47 | 270.00 | 9002660230200 |
| 1.3386 | | 34.00 | MTS 4 | 530.00 | 289.00 | 340.00 | 9002660340000 |



Tool material **HSS**

Surface

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 5.800$ • relieved cone • wide flutes • for extremely deep holes • in case of unsatisfactory chip evacuation |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | cast iron and steels up to 1000 N/mm ² • Not recommended for: CrNi steels, stainless steels |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 516

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3150 | | 8.00 | MTS 1 | 265.00 | 153.00 | 165.00 | 9005260080000 |
| 0.3346 | | 8.50 | MTS 1 | 265.00 | 152.25 | 165.00 | 9005260085000 |
| 0.3465 | | 8.80 | MTS 1 | 275.00 | 161.80 | 175.00 | 9005260088000 |
| 0.3750 | 3/8 | 9.52 | MTS 1 | 285.00 | 170.72 | 185.00 | 9005260095200 |
| 0.3906 | 25/64 | 9.92 | MTS 1 | 285.00 | 170.12 | 185.00 | 9005260099200 |
| 0.3937 | | 10.00 | MTS 1 | 285.00 | 170.00 | 185.00 | 9005260100000 |
| 0.4063 | 13/32 | 10.32 | MTS 1 | 285.00 | 169.52 | 185.00 | 9005260103200 |
| 0.4134 | | 10.50 | MTS 1 | 285.00 | 169.25 | 185.00 | 9005260105000 |
| 0.4220 | 27/64 | 10.72 | MTS 1 | 300.00 | 178.92 | 195.00 | 9005260107200 |
| 0.4252 | | 10.80 | MTS 1 | 300.00 | 178.80 | 195.00 | 9005260108000 |
| 0.4331 | | 11.00 | MTS 1 | 300.00 | 178.50 | 195.00 | 9005260110000 |
| 0.4374 | 7/16 | 11.11 | MTS 1 | 300.00 | 178.34 | 195.00 | 9005260111100 |
| 0.4528 | | 11.50 | MTS 1 | 300.00 | 177.75 | 195.00 | 9005260115000 |
| 0.4531 | 29/64 | 11.51 | MTS 1 | 300.00 | 177.74 | 195.00 | 9005260115100 |
| 0.4724 | | 12.00 | MTS 1 | 310.00 | 187.00 | 205.00 | 9005260120000 |
| 0.4843 | 31/64 | 12.30 | MTS 1 | 310.00 | 186.55 | 205.00 | 9005260123000 |
| 0.4921 | | 12.50 | MTS 1 | 310.00 | 186.25 | 205.00 | 9005260125000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 310.00 | 185.95 | 205.00 | 9005260127000 |
| 0.5079 | | 12.90 | MTS 1 | 310.00 | 185.65 | 205.00 | 9005260129000 |
| 0.5118 | | 13.00 | MTS 1 | 310.00 | 185.50 | 205.00 | 9005260130000 |
| 0.5311 | 17/32 | 13.49 | MTS 1 | 325.00 | 199.77 | 220.00 | 9005260134900 |
| 0.5315 | | 13.50 | MTS 1 | 325.00 | 199.75 | 220.00 | 9005260135000 |
| 0.5512 | | 14.00 | MTS 1 | 325.00 | 199.00 | 220.00 | 9005260140000 |

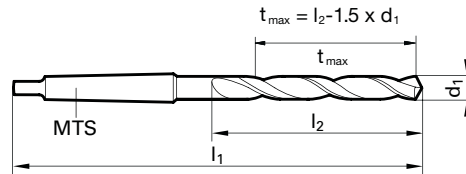
| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5591 | | 14.20 | MTS 2 | 340.00 | 198.70 | 220.00 | 9005260142000 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 340.00 | 198.57 | 220.00 | 9005260142900 |
| 0.5709 | | 14.50 | MTS 2 | 340.00 | 198.25 | 220.00 | 9005260145000 |
| 0.5780 | 37/64 | 14.68 | MTS 2 | 340.00 | 197.98 | 220.00 | 9005260146800 |
| 0.5906 | | 15.00 | MTS 2 | 340.00 | 197.50 | 220.00 | 9005260150000 |
| 0.6102 | | 15.50 | MTS 2 | 355.00 | 206.75 | 230.00 | 9005260155000 |
| 0.6250 | 5/8 | 15.87 | MTS 2 | 355.00 | 206.20 | 230.00 | 9005260158700 |
| 0.6299 | | 16.00 | MTS 2 | 355.00 | 206.00 | 230.00 | 9005260160000 |
| 0.6496 | | 16.50 | MTS 2 | 355.00 | 205.25 | 230.00 | 9005260165000 |
| 0.6563 | 21/32 | 16.67 | MTS 2 | 355.00 | 205.00 | 230.00 | 9005260166700 |
| 0.6693 | | 17.00 | MTS 2 | 355.00 | 204.50 | 230.00 | 9005260170000 |
| 0.6720 | 43/64 | 17.07 | MTS 2 | 370.00 | 219.40 | 245.00 | 9005260170700 |
| 0.6874 | 11/16 | 17.46 | MTS 2 | 370.00 | 218.81 | 245.00 | 9005260174600 |
| 0.6890 | | 17.50 | MTS 2 | 370.00 | 218.75 | 245.00 | 9005260175000 |
| 0.7087 | | 18.00 | MTS 2 | 370.00 | 218.00 | 245.00 | 9005260180000 |
| 0.7283 | | 18.50 | MTS 2 | 370.00 | 217.25 | 245.00 | 9005260185000 |
| 0.7480 | | 19.00 | MTS 2 | 370.00 | 216.50 | 245.00 | 9005260190000 |
| 0.7657 | 49/64 | 19.45 | MTS 2 | 385.00 | 230.83 | 260.00 | 9005260194500 |
| 0.7677 | | 19.50 | MTS 2 | 385.00 | 230.75 | 260.00 | 9005260195000 |
| 1.0827 | | 27.50 | MTS 3 | 460.00 | 263.75 | 305.00 | 9005260275000 |
| 1.1220 | | 28.50 | MTS 3 | 460.00 | 262.25 | 305.00 | 9005260285000 |
| 1.1811 | | 30.00 | MTS 3 | 460.00 | 260.00 | 305.00 | 9005260300000 |
| 1.1874 | 1 3/16 | 30.16 | MTS 3 | 480.00 | 274.76 | 320.00 | 9005260301600 |

Morse Taper Length



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 7.800 • relieved cone • wide flutes • in case of unsatisfactory chip evacuation • for extremely deep holes |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | cast iron and steels up to 1000 N/mm ² • Not recommended for: CrNi steels, stainless steels |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



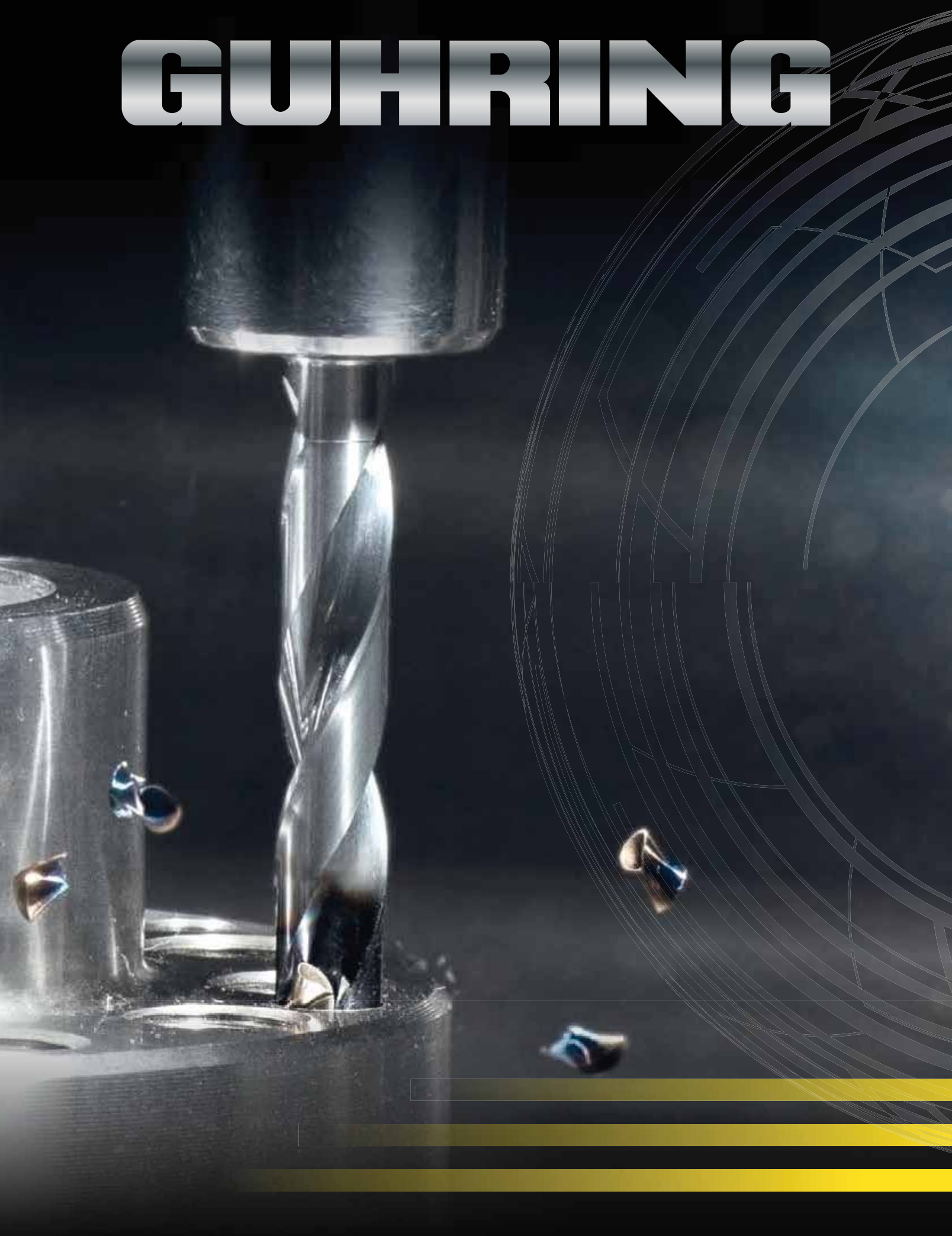
Speeds and feeds information on pg. 517

Morse Taper Length

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3150 | | 8.00 | MTS 1 | 330.00 | 198.00 | 210.00 | 9005270080000 |
| 0.3307 | | 8.40 | MTS 1 | 330.00 | 197.40 | 210.00 | 9005270084000 |
| 0.3346 | | 8.50 | MTS 1 | 330.00 | 197.25 | 210.00 | 9005270085000 |
| 0.3504 | | 8.90 | MTS 1 | 345.00 | 206.65 | 220.00 | 9005270089000 |
| 0.3937 | | 10.00 | MTS 1 | 360.00 | 220.00 | 235.00 | 9005270100000 |
| 0.4063 | 13/32 | 10.32 | MTS 1 | 360.00 | 219.52 | 235.00 | 9005270103200 |
| 0.4134 | | 10.50 | MTS 1 | 360.00 | 219.25 | 235.00 | 9005270105000 |
| 0.4331 | | 11.00 | MTS 1 | 375.00 | 233.50 | 250.00 | 9005270110000 |
| 0.4374 | 7/16 | 11.11 | MTS 1 | 375.00 | 233.34 | 250.00 | 9005270111100 |
| 0.4528 | | 11.50 | MTS 1 | 375.00 | 232.75 | 250.00 | 9005270115000 |
| 0.4531 | 29/64 | 11.51 | MTS 1 | 375.00 | 232.74 | 250.00 | 9005270115100 |
| 0.4689 | 15/32 | 11.91 | MTS 1 | 395.00 | 242.14 | 260.00 | 9005270119100 |
| 0.4724 | | 12.00 | MTS 1 | 395.00 | 242.00 | 260.00 | 9005270120000 |
| 0.4843 | 31/64 | 12.30 | MTS 1 | 395.00 | 241.55 | 260.00 | 9005270123000 |
| 0.4921 | | 12.50 | MTS 1 | 395.00 | 241.25 | 260.00 | 9005270125000 |
| 0.5000 | 1/2 | 12.70 | MTS 1 | 395.00 | 240.95 | 260.00 | 9005270127000 |
| 0.5118 | | 13.00 | MTS 1 | 395.00 | 240.50 | 260.00 | 9005270130000 |
| 0.5315 | | 13.50 | MTS 1 | 410.00 | 254.75 | 275.00 | 9005270135000 |
| 0.5469 | 35/64 | 13.89 | MTS 1 | 410.00 | 254.17 | 275.00 | 9005270138900 |
| 0.5512 | | 14.00 | MTS 1 | 410.00 | 254.00 | 275.00 | 9005270140000 |
| 0.5591 | | 14.20 | MTS 2 | 425.00 | 253.70 | 275.00 | 9005270142000 |
| 0.5626 | 9/16 | 14.29 | MTS 2 | 425.00 | 253.57 | 275.00 | 9005270142900 |
| 0.5709 | | 14.50 | MTS 2 | 425.00 | 253.25 | 275.00 | 9005270145000 |

| Diameter (d ₁) | | | Shank Size | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|------------|-------------------|---------------------|-------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5906 | | 15.00 | MTS 2 | 425.00 | 252.50 | 275.00 | 9005270150000 |
| 0.6102 | | 15.50 | MTS 2 | 445.00 | 271.75 | 295.00 | 9005270155000 |
| 0.6299 | | 16.00 | MTS 2 | 445.00 | 271.00 | 295.00 | 9005270160000 |
| 0.6496 | | 16.50 | MTS 2 | 445.00 | 270.25 | 295.00 | 9005270165000 |
| 0.6693 | | 17.00 | MTS 2 | 445.00 | 269.50 | 295.00 | 9005270170000 |
| 0.6720 | 43/64 | 17.07 | MTS 2 | 465.00 | 284.40 | 310.00 | 9005270170700 |
| 0.6890 | | 17.50 | MTS 2 | 465.00 | 283.75 | 310.00 | 9005270175000 |
| 0.7008 | | 17.80 | MTS 2 | 465.00 | 283.30 | 310.00 | 9005270178000 |
| 0.7087 | | 18.00 | MTS 2 | 465.00 | 283.00 | 310.00 | 9005270180000 |
| 0.7283 | | 18.50 | MTS 2 | 465.00 | 282.25 | 310.00 | 9005270185000 |
| 0.7480 | | 19.00 | MTS 2 | 465.00 | 281.50 | 310.00 | 9005270190000 |
| 0.7657 | 49/64 | 19.45 | MTS 2 | 490.00 | 295.83 | 325.00 | 9005270194500 |
| 0.7677 | | 19.50 | MTS 2 | 490.00 | 295.75 | 325.00 | 9005270195000 |
| 0.8280 | 53/64 | 21.03 | MTS 2 | 490.00 | 293.46 | 325.00 | 9005270210300 |
| 0.8594 | 55/64 | 21.83 | MTS 2 | 515.00 | 312.26 | 345.00 | 9005270218300 |
| 0.9532 | 61/64 | 24.21 | MTS 3 | 555.00 | 328.69 | 365.00 | 9005270242100 |
| 0.9646 | | 24.50 | MTS 3 | 555.00 | 328.25 | 365.00 | 9005270245000 |
| 1.0827 | | 27.50 | MTS 3 | 580.00 | 343.75 | 385.00 | 9005270275000 |
| 1.0937 | 1 3/32 | 27.78 | MTS 3 | 580.00 | 343.33 | 385.00 | 9005270277800 |
| 1.1220 | | 28.50 | MTS 3 | 580.00 | 342.25 | 385.00 | 9005270285000 |
| 1.1319 | | 28.75 | MTS 3 | 580.00 | 341.88 | 385.00 | 9005270287500 |
| 1.1614 | | 29.50 | MTS 3 | 580.00 | 340.75 | 385.00 | 9005270295000 |

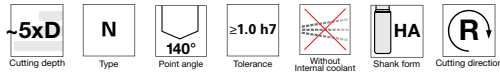
GUHRING





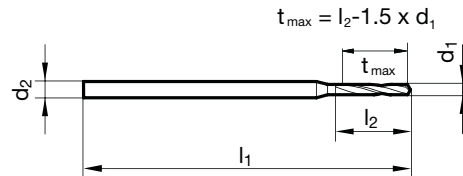
CARBIDE MICRO- PRECISION DRILLS





Tool material **Solid Carbide**
Surface **A**

- P** Steel ● web thinning $\geq \varnothing 0.800$ • facet point grinding
 - M** Stainless steel
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • cast materials
 - N** Aluminum
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 561

Micro Drills

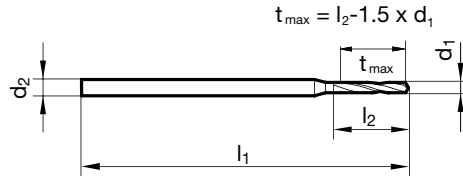
| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0039 | | 0.10 | 3.00 | 38.00 | 1.05 | 1.20 | 9038990001000 |
| 0.0043 | | 0.11 | 3.00 | 38.00 | 1.04 | 1.20 | 9038990001100 |
| 0.0047 | | 0.12 | 3.00 | 38.00 | 1.22 | 1.40 | 9038990001200 |
| 0.0051 | | 0.13 | 3.00 | 38.00 | 1.21 | 1.40 | 9038990001300 |
| 0.0055 | | 0.14 | 3.00 | 38.00 | 1.19 | 1.40 | 9038990001400 |
| 0.0059 | #97 | 0.15 | 3.00 | 38.00 | 1.78 | 2.00 | 9038990001500 |
| 0.0063 | #96 | 0.16 | 3.00 | 38.00 | 1.76 | 2.00 | 9038990001600 |
| 0.0067 | #95 | 0.17 | 3.00 | 38.00 | 1.75 | 2.00 | 9038990001700 |
| 0.0071 | #94 | 0.18 | 3.00 | 38.00 | 1.73 | 2.00 | 9038990001800 |
| 0.0075 | #93 | 0.19 | 3.00 | 38.00 | 1.72 | 2.00 | 9038990001900 |
| 0.0079 | #92 | 0.20 | 3.00 | 38.00 | 2.20 | 3.00 | 9038990002000 |
| 0.0083 | #91 | 0.21 | 3.00 | 38.00 | 2.19 | 3.00 | 9038990002100 |
| 0.0087 | #90 | 0.22 | 3.00 | 38.00 | 2.17 | 3.00 | 9038990002200 |
| 0.0091 | #89 | 0.23 | 3.00 | 38.00 | 2.16 | 3.00 | 9038990002300 |
| 0.0094 | #88 | 0.24 | 3.00 | 38.00 | 2.14 | 3.00 | 9038990002400 |
| 0.0098 | #87 | 0.25 | 3.00 | 38.00 | 2.63 | 3.00 | 9038990002500 |
| 0.0102 | | 0.26 | 3.00 | 38.00 | 2.61 | 3.00 | 9038990002600 |
| 0.0106 | #86 | 0.27 | 3.00 | 38.00 | 2.60 | 3.00 | 9038990002700 |
| 0.0110 | #85 | 0.28 | 3.00 | 38.00 | 2.58 | 3.00 | 9038990002800 |
| 0.0114 | #84 | 0.29 | 3.00 | 38.00 | 2.57 | 3.00 | 9038990002900 |
| 0.0118 | | 0.30 | 3.00 | 38.00 | 4.55 | 5.00 | 9038990003000 |
| 0.0122 | #83 | 0.31 | 3.00 | 38.00 | 4.54 | 5.00 | 9038990003100 |
| 0.0126 | #82 | 0.32 | 3.00 | 38.00 | 4.52 | 5.00 | 9038990003200 |
| 0.0130 | #81 | 0.33 | 3.00 | 38.00 | 4.51 | 5.00 | 9038990003300 |
| 0.0134 | #80 | 0.34 | 3.00 | 38.00 | 4.49 | 5.00 | 9038990003400 |
| 0.0138 | | 0.35 | 3.00 | 38.00 | 5.48 | 6.00 | 9038990003500 |
| 0.0142 | | 0.36 | 3.00 | 38.00 | 5.46 | 6.00 | 9038990003600 |
| 0.0146 | #79 | 0.37 | 3.00 | 38.00 | 5.45 | 6.00 | 9038990003700 |
| 0.0150 | | 0.38 | 3.00 | 38.00 | 5.43 | 6.00 | 9038990003800 |
| 0.0154 | | 0.39 | 3.00 | 38.00 | 5.42 | 6.00 | 9038990003900 |
| 0.0157 | 1/64 | 0.40 | 3.00 | 38.00 | 6.40 | 7.00 | 9038990004000 |
| 0.0161 | #78 | 0.41 | 3.00 | 38.00 | 6.39 | 7.00 | 9038990004100 |
| 0.0165 | | 0.42 | 3.00 | 38.00 | 6.37 | 7.00 | 9038990004200 |
| 0.0169 | | 0.43 | 3.00 | 38.00 | 6.36 | 7.00 | 9038990004300 |
| 0.0173 | | 0.44 | 3.00 | 38.00 | 6.34 | 7.00 | 9038990004400 |
| 0.0177 | | 0.45 | 3.00 | 38.00 | 6.33 | 7.00 | 9038990004500 |
| 0.0181 | #77 | 0.46 | 3.00 | 38.00 | 6.31 | 7.00 | 9038990004600 |
| 0.0185 | | 0.47 | 3.00 | 38.00 | 6.30 | 7.00 | 9038990004700 |
| 0.0189 | | 0.48 | 3.00 | 38.00 | 6.28 | 7.00 | 9038990004800 |
| 0.0193 | | 0.49 | 3.00 | 38.00 | 6.27 | 7.00 | 9038990004900 |
| 0.0197 | | 0.50 | 3.00 | 38.00 | 6.25 | 7.00 | 9038990005000 |
| 0.0201 | #76 | 0.51 | 3.00 | 38.00 | 6.24 | 7.00 | 9038990005100 |

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0205 | | 0.52 | 3.00 | 38.00 | 6.22 | 7.00 | 9038990005200 |
| 0.0209 | #75 | 0.53 | 3.00 | 38.00 | 6.21 | 7.00 | 9038990005300 |
| 0.0213 | | 0.54 | 3.00 | 38.00 | 6.19 | 7.00 | 9038990005400 |
| 0.0217 | | 0.55 | 3.00 | 38.00 | 6.18 | 7.00 | 9038990005500 |
| 0.0220 | | 0.56 | 3.00 | 38.00 | 6.16 | 7.00 | 9038990005600 |
| 0.0224 | #74 | 0.57 | 3.00 | 38.00 | 6.15 | 7.00 | 9038990005700 |
| 0.0228 | | 0.58 | 3.00 | 38.00 | 6.13 | 7.00 | 9038990005800 |
| 0.0232 | | 0.59 | 3.00 | 38.00 | 6.12 | 7.00 | 9038990005900 |
| 0.0236 | | 0.60 | 3.00 | 38.00 | 6.10 | 7.00 | 9038990006000 |
| 0.0240 | #73 | 0.61 | 3.00 | 38.00 | 6.09 | 7.00 | 9038990006100 |
| 0.0244 | | 0.62 | 3.00 | 38.00 | 6.07 | 7.00 | 9038990006200 |
| 0.0248 | | 0.63 | 3.00 | 38.00 | 6.06 | 7.00 | 9038990006300 |
| 0.0252 | #72 | 0.64 | 3.00 | 38.00 | 6.04 | 7.00 | 9038990006400 |
| 0.0256 | | 0.65 | 3.00 | 38.00 | 6.03 | 7.00 | 9038990006500 |
| 0.0260 | #71 | 0.66 | 3.00 | 38.00 | 6.01 | 7.00 | 9038990006600 |
| 0.0264 | | 0.67 | 3.00 | 38.00 | 6.00 | 7.00 | 9038990006700 |
| 0.0268 | | 0.68 | 3.00 | 38.00 | 5.98 | 7.00 | 9038990006800 |
| 0.0272 | | 0.69 | 3.00 | 38.00 | 5.97 | 7.00 | 9038990006900 |
| 0.0276 | | 0.70 | 3.00 | 38.00 | 6.95 | 8.00 | 9038990007000 |
| 0.0280 | #70 | 0.71 | 3.00 | 38.00 | 6.94 | 8.00 | 9038990007100 |
| 0.0283 | | 0.72 | 3.00 | 38.00 | 6.92 | 8.00 | 9038990007200 |
| 0.0287 | | 0.73 | 3.00 | 38.00 | 6.91 | 8.00 | 9038990007300 |
| 0.0291 | #69 | 0.74 | 3.00 | 38.00 | 6.89 | 8.00 | 9038990007400 |
| 0.0295 | | 0.75 | 3.00 | 38.00 | 6.88 | 8.00 | 9038990007500 |
| 0.0299 | | 0.76 | 3.00 | 38.00 | 6.86 | 8.00 | 9038990007600 |
| 0.0303 | | 0.77 | 3.00 | 38.00 | 6.85 | 8.00 | 9038990007700 |
| 0.0307 | | 0.78 | 3.00 | 38.00 | 6.83 | 8.00 | 9038990007800 |
| 0.0311 | 1/32 | #68 | 3.00 | 38.00 | 6.82 | 8.00 | 9038990007900 |
| 0.0315 | | 0.80 | 3.00 | 38.00 | 8.80 | 10.00 | 9038990008000 |
| 0.0319 | #67 | 0.81 | 3.00 | 38.00 | 8.79 | 10.00 | 9038990008100 |
| 0.0323 | | 0.82 | 3.00 | 38.00 | 8.77 | 10.00 | 9038990008200 |
| 0.0327 | | 0.83 | 3.00 | 38.00 | 8.76 | 10.00 | 9038990008300 |
| 0.0331 | #66 | 0.84 | 3.00 | 38.00 | 8.74 | 10.00 | 9038990008400 |
| 0.0335 | | 0.85 | 3.00 | 38.00 | 8.73 | 10.00 | 9038990008500 |
| 0.0339 | | 0.86 | 3.00 | 38.00 | 8.71 | 10.00 | 9038990008600 |
| 0.0343 | | 0.87 | 3.00 | 38.00 | 8.70 | 10.00 | 9038990008700 |
| 0.0346 | | 0.88 | 3.00 | 38.00 | 8.68 | 10.00 | 9038990008800 |
| 0.0350 | #65 | 0.89 | 3.00 | 38.00 | 8.67 | 10.00 | 9038990008900 |
| 0.0354 | | 0.90 | 3.00 | 38.00 | 8.65 | 10.00 | 9038990009000 |
| 0.0358 | #64 | 0.91 | 3.00 | 38.00 | 8.64 | 10.00 | 9038990009100 |
| 0.0362 | | 0.92 | 3.00 | 38.00 | 8.62 | 10.00 | 9038990009200 |
| 0.0366 | | 0.93 | 3.00 | 38.00 | 8.61 | 10.00 | 9038990009300 |



Tool material **Solid Carbide**
Surface **A**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 0.500$ • facet point grinding • main cutting edge form straight • edge preparation |
| M | Stainless steel | ● | |
| K | Cast iron | ● | structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm ² • stainless steels • cast materials |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 585

Micro Drills

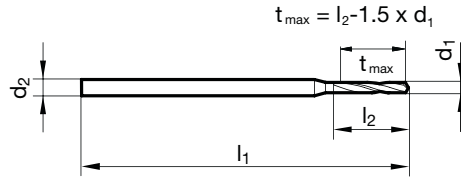
| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0197 | | 0.50 | 3.00 | 47.00 | 2.40 | 3.00 | 906400005000 |
| 0.0217 | | 0.55 | 3.00 | 47.00 | 2.60 | 3.30 | 906400005500 |
| 0.0236 | | 0.60 | 3.00 | 47.00 | 2.90 | 3.60 | 906400006000 |
| 0.0256 | | 0.65 | 3.00 | 47.00 | 3.10 | 3.90 | 906400006500 |
| 0.0276 | | 0.70 | 3.00 | 47.00 | 3.30 | 4.20 | 906400007000 |
| 0.0295 | | 0.75 | 3.00 | 47.00 | 3.60 | 4.50 | 906400007500 |
| 0.0315 | | 0.80 | 3.00 | 47.00 | 3.80 | 4.80 | 906400008000 |
| 0.0335 | | 0.85 | 3.00 | 47.00 | 4.10 | 5.10 | 906400008500 |
| 0.0354 | | 0.90 | 3.00 | 47.00 | 4.30 | 5.40 | 906400009000 |
| 0.0374 | | 0.95 | 3.00 | 47.00 | 4.50 | 5.70 | 906400009500 |
| 0.0394 | | 1.00 | 3.00 | 47.00 | 4.80 | 6.00 | 906400010000 |
| 0.0413 | | 1.05 | 3.00 | 47.00 | 5.00 | 6.30 | 906400010500 |
| 0.0433 | | 1.10 | 3.00 | 47.00 | 5.30 | 6.60 | 906400011000 |
| 0.0453 | | 1.15 | 3.00 | 47.00 | 5.50 | 6.90 | 906400011500 |
| 0.0472 | | 1.20 | 3.00 | 47.00 | 5.70 | 7.20 | 906400012000 |
| 0.0492 | | 1.25 | 3.00 | 47.00 | 6.00 | 7.50 | 906400012500 |
| 0.0512 | | 1.30 | 3.00 | 47.00 | 6.20 | 7.80 | 906400013000 |
| 0.0531 | | 1.35 | 3.00 | 47.00 | 6.40 | 8.10 | 906400013500 |
| 0.0551 | #54 | 1.40 | 3.00 | 47.00 | 6.70 | 8.40 | 906400014000 |
| 0.0571 | | 1.45 | 3.00 | 47.00 | 6.90 | 8.70 | 906400014500 |
| 0.0591 | | 1.50 | 3.00 | 47.00 | 7.20 | 9.00 | 906400015000 |
| 0.0610 | | 1.55 | 3.00 | 47.00 | 7.40 | 9.30 | 906400015500 |
| 0.0626 | 1/16 | 1.59 | 3.00 | 47.00 | 7.70 | 9.60 | 906400015900 |
| 0.0630 | | 1.60 | 3.00 | 47.00 | 7.60 | 9.60 | 906400016000 |
| 0.0650 | | 1.65 | 3.00 | 47.00 | 7.90 | 9.90 | 906400016500 |
| 0.0669 | #51 | 1.70 | 3.00 | 47.00 | 8.10 | 10.20 | 906400017000 |
| 0.0689 | | 1.75 | 3.00 | 47.00 | 8.40 | 10.50 | 906400017500 |
| 0.0709 | | 1.80 | 3.00 | 52.00 | 8.60 | 10.80 | 906400018000 |

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0728 | #49 | 1.85 | 3.00 | 52.00 | 8.80 | 11.10 | 9064000018500 |
| 0.0748 | | 1.90 | 3.00 | 52.00 | 9.10 | 11.40 | 9064000019000 |
| 0.0768 | | 1.95 | 3.00 | 52.00 | 9.30 | 11.70 | 9064000019500 |
| 0.0780 | 5/64 | 1.98 | 4.00 | 59.00 | 9.60 | 12.00 | 9064000019800 |
| 0.0787 | | 2.00 | 4.00 | 59.00 | 9.60 | 12.00 | 9064000020000 |
| 0.0807 | | 2.05 | 4.00 | 59.00 | 9.80 | 12.30 | 9064000020500 |
| 0.0827 | | 2.10 | 4.00 | 59.00 | 10.00 | 12.60 | 9064000021000 |
| 0.0846 | | 2.15 | 4.00 | 59.00 | 10.30 | 12.90 | 9064000021500 |
| 0.0866 | | 2.20 | 4.00 | 59.00 | 10.50 | 13.20 | 9064000022000 |
| 0.0886 | | 2.25 | 4.00 | 59.00 | 10.70 | 13.50 | 9064000022500 |
| 0.0906 | | 2.30 | 4.00 | 59.00 | 11.00 | 13.80 | 9064000023000 |
| 0.0925 | | 2.35 | 4.00 | 59.00 | 11.20 | 14.10 | 9064000023500 |
| 0.0937 | 3/32 | 2.38 | 4.00 | 59.00 | 11.50 | 14.40 | 9064000023800 |
| 0.0945 | | 2.40 | 4.00 | 59.00 | 11.50 | 14.40 | 9064000024000 |
| 0.0965 | | 2.45 | 4.00 | 59.00 | 11.70 | 14.70 | 9064000024500 |
| 0.0984 | | 2.50 | 4.00 | 59.00 | 11.90 | 15.00 | 9064000025000 |
| 0.1004 | | 2.55 | 4.00 | 59.00 | 12.20 | 15.30 | 9064000025500 |
| 0.1024 | | 2.60 | 4.00 | 59.00 | 12.40 | 15.60 | 9064000026000 |
| 0.1043 | | 2.65 | 4.00 | 59.00 | 12.70 | 15.90 | 9064000026500 |
| 0.1063 | | 2.70 | 4.00 | 59.00 | 12.90 | 16.20 | 9064000027000 |
| 0.1083 | | 2.75 | 4.00 | 59.00 | 13.10 | 16.50 | 9064000027500 |
| 0.1094 | 7/64 | 2.78 | 4.00 | 59.00 | 13.40 | 16.80 | 9064000027800 |
| 0.1102 | | 2.80 | 4.00 | 59.00 | 13.40 | 16.80 | 9064000028000 |
| 0.1122 | | 2.85 | 4.00 | 59.00 | 13.60 | 17.10 | 9064000028500 |
| 0.1142 | | 2.90 | 4.00 | 59.00 | 13.90 | 17.40 | 9064000029000 |
| 0.1161 | #32 | 2.95 | 4.00 | 59.00 | 14.10 | 17.70 | 9064000029500 |
| 0.1181 | | 3.00 | 4.00 | 59.00 | 14.30 | 18.00 | 9064000030000 |



Tool material **Solid Carbide**
Surface **A**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 1.400$ • facet point grinding • main cutting edge form straight • edge preparation |
| M | Stainless steel | ● | |
| K | Cast iron | ● | structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm ² • stainless steels • cast materials |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 586

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0551 | #54 | 1.40 | 4.00 | 52.00 | 9.30 | 11.00 | 9064050014000 |
| 0.0571 | | 1.45 | 4.00 | 52.00 | 10.20 | 12.00 | 9064050014500 |
| 0.0591 | | 1.50 | 4.00 | 52.00 | 10.20 | 12.00 | 9064050015000 |
| 0.0610 | | 1.55 | 4.00 | 52.00 | 10.10 | 12.00 | 9064050015500 |
| 0.0626 | 1/16 | 1.59 | 4.00 | 52.00 | 11.10 | 13.00 | 9064050015900 |
| 0.0630 | | 1.60 | 4.00 | 52.00 | 11.00 | 13.00 | 9064050016000 |
| 0.0650 | | 1.65 | 4.00 | 52.00 | 11.00 | 13.00 | 9064050016500 |
| 0.0669 | #51 | 1.70 | 4.00 | 56.00 | 11.90 | 14.00 | 9064050017000 |
| 0.0689 | | 1.75 | 4.00 | 56.00 | 11.90 | 14.00 | 9064050017500 |
| 0.0709 | | 1.80 | 4.00 | 56.00 | 11.80 | 14.00 | 9064050018000 |
| 0.0728 | #49 | 1.85 | 4.00 | 56.00 | 12.70 | 15.00 | 9064050018500 |
| 0.0748 | | 1.90 | 4.00 | 56.00 | 12.70 | 15.00 | 9064050019000 |
| 0.0768 | | 1.95 | 4.00 | 56.00 | 13.60 | 16.00 | 9064050019500 |
| 0.0780 | 5/64 | 1.98 | 4.00 | 56.00 | 13.60 | 16.00 | 9064050019800 |
| 0.0787 | | 2.00 | 4.00 | 56.00 | 13.60 | 16.00 | 9064050020000 |
| 0.0807 | | 2.05 | 4.00 | 56.00 | 13.50 | 16.00 | 9064050020500 |
| 0.0827 | | 2.10 | 4.00 | 62.00 | 14.40 | 17.00 | 9064050021000 |
| 0.0846 | | 2.15 | 4.00 | 62.00 | 14.40 | 17.00 | 9064050021500 |
| 0.0866 | | 2.20 | 4.00 | 62.00 | 15.30 | 18.00 | 9064050022000 |

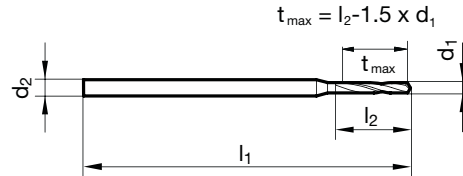
| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0886 | | 2.25 | 4.00 | 62.00 | 15.20 | 18.00 | 9064050022500 |
| 0.0906 | | 2.30 | 4.00 | 62.00 | 15.20 | 18.00 | 9064050023000 |
| 0.0925 | | 2.35 | 4.00 | 62.00 | 16.10 | 19.00 | 9064050023500 |
| 0.0937 | 3/32 | 2.38 | 4.00 | 62.00 | 16.10 | 19.00 | 9064050023800 |
| 0.0945 | | 2.40 | 4.00 | 62.00 | 16.10 | 19.00 | 9064050024000 |
| 0.0965 | | 2.45 | 4.00 | 62.00 | 17.00 | 20.00 | 9064050024500 |
| 0.0984 | | 2.50 | 4.00 | 62.00 | 16.90 | 20.00 | 9064050025000 |
| 0.1004 | | 2.55 | 4.00 | 62.00 | 16.90 | 20.00 | 9064050025500 |
| 0.1024 | | 2.60 | 4.00 | 66.00 | 17.80 | 21.00 | 9064050026000 |
| 0.1043 | | 2.65 | 4.00 | 66.00 | 17.80 | 21.00 | 9064050026500 |
| 0.1063 | | 2.70 | 4.00 | 66.00 | 18.70 | 22.00 | 9064050027000 |
| 0.1083 | | 2.75 | 4.00 | 66.00 | 18.60 | 22.00 | 9064050027500 |
| 0.1094 | 7/64 | 2.78 | 4.00 | 66.00 | 18.60 | 22.00 | 9064050028000 |
| 0.1102 | | 2.80 | 4.00 | 66.00 | 18.60 | 22.00 | 9064050028000 |
| 0.1122 | | 2.85 | 4.00 | 66.00 | 19.50 | 23.00 | 9064050028500 |
| 0.1142 | | 2.90 | 4.00 | 66.00 | 19.50 | 23.00 | 9064050029000 |
| 0.1161 | #32 | 2.95 | 4.00 | 66.00 | 20.40 | 24.00 | 9064050029500 |
| 0.1181 | | 3.00 | 4.00 | 66.00 | 20.30 | 24.00 | 9064050030000 |

Micro Drills



Tool material **Solid Carbide**
Surface **A**

- P** Steel ● web thinning $\geq \varnothing 0.500$ • facet point grinding • main cutting edge form straight • edge preparation
 - M** Stainless steel ●
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • stainless steels • cast materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 585

Micro Drills

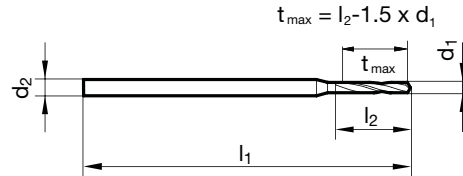
| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0197 | | 0.50 | 3.00 | 47.00 | 3.40 | 4.00 | 9064010005000 |
| 0.0217 | | 0.55 | 3.00 | 47.00 | 3.70 | 4.40 | 9064010005500 |
| 0.0236 | | 0.60 | 3.00 | 47.00 | 4.10 | 4.80 | 9064010006000 |
| 0.0256 | | 0.65 | 3.00 | 47.00 | 4.40 | 5.20 | 9064010006500 |
| 0.0276 | | 0.70 | 3.00 | 47.00 | 4.70 | 5.60 | 9064010007000 |
| 0.0295 | | 0.75 | 3.00 | 47.00 | 5.10 | 6.00 | 9064010007500 |
| 0.0315 | | 0.80 | 3.00 | 47.00 | 5.40 | 6.40 | 9064010008000 |
| 0.0335 | | 0.85 | 3.00 | 47.00 | 5.80 | 6.80 | 9064010008500 |
| 0.0354 | | 0.90 | 3.00 | 47.00 | 6.10 | 7.20 | 9064010009000 |
| 0.0374 | | 0.95 | 3.00 | 47.00 | 6.40 | 7.60 | 9064010009500 |
| 0.0394 | | 1.00 | 3.00 | 47.00 | 6.80 | 8.00 | 9064010010000 |
| 0.0413 | | 1.05 | 3.00 | 47.00 | 7.10 | 8.40 | 9064010010500 |
| 0.0433 | | 1.10 | 3.00 | 47.00 | 7.50 | 8.80 | 9064010011000 |
| 0.0453 | | 1.15 | 3.00 | 47.00 | 7.80 | 9.20 | 9064010011500 |
| 0.0472 | | 1.20 | 3.00 | 52.00 | 9.30 | 10.80 | 9064010012000 |
| 0.0492 | | 1.25 | 3.00 | 52.00 | 9.80 | 11.30 | 9064010012500 |
| 0.0512 | | 1.30 | 3.00 | 52.00 | 10.10 | 11.70 | 9064010013000 |
| 0.0531 | | 1.35 | 3.00 | 52.00 | 10.50 | 12.20 | 9064010013500 |
| 0.0551 | #54 | 1.40 | 3.00 | 52.00 | 10.90 | 12.60 | 9064010014000 |
| 0.0571 | | 1.45 | 3.00 | 52.00 | 11.30 | 13.10 | 9064010014500 |
| 0.0591 | | 1.50 | 3.00 | 52.00 | 11.70 | 13.50 | 9064010015000 |
| 0.0610 | | 1.55 | 3.00 | 52.00 | 12.10 | 14.00 | 9064010015500 |
| 0.0626 | 1/16 | 1.59 | 3.00 | 52.00 | 12.50 | 14.40 | 9064010015900 |
| 0.0630 | | 1.60 | 3.00 | 52.00 | 12.40 | 14.40 | 9064010016000 |
| 0.0650 | | 1.65 | 3.00 | 52.00 | 12.90 | 14.90 | 9064010016500 |
| 0.0669 | #51 | 1.70 | 3.00 | 52.00 | 13.20 | 15.30 | 9064010017000 |
| 0.0689 | | 1.75 | 3.00 | 52.00 | 13.70 | 15.80 | 9064010017500 |
| 0.0709 | | 1.80 | 3.00 | 52.00 | 14.00 | 16.20 | 9064010018000 |

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0728 | #49 | 1.85 | 3.00 | 52.00 | 14.40 | 16.70 | 9064010018500 |
| 0.0748 | | 1.90 | 3.00 | 52.00 | 14.80 | 17.10 | 9064010019000 |
| 0.0768 | | 1.95 | 3.00 | 52.00 | 15.20 | 17.60 | 9064010019500 |
| 0.0780 | 5/64 | 1.98 | 4.00 | 63.00 | 15.60 | 18.00 | 9064010019800 |
| 0.0787 | | 2.00 | 4.00 | 63.00 | 15.60 | 18.00 | 9064010020000 |
| 0.0807 | | 2.05 | 4.00 | 63.00 | 16.00 | 18.50 | 9064010020500 |
| 0.0827 | | 2.10 | 4.00 | 63.00 | 16.30 | 18.90 | 9064010021000 |
| 0.0846 | | 2.15 | 4.00 | 63.00 | 16.80 | 19.40 | 9064010021500 |
| 0.0866 | | 2.20 | 4.00 | 63.00 | 17.10 | 19.80 | 9064010022000 |
| 0.0886 | | 2.25 | 4.00 | 63.00 | 17.50 | 20.30 | 9064010022500 |
| 0.0906 | | 2.30 | 4.00 | 63.00 | 17.90 | 20.70 | 9064010023000 |
| 0.0925 | | 2.35 | 4.00 | 63.00 | 18.30 | 21.20 | 9064010023500 |
| 0.0937 | 3/32 | 2.38 | 4.00 | 63.00 | 18.70 | 21.60 | 9064010023800 |
| 0.0945 | | 2.40 | 4.00 | 63.00 | 18.70 | 21.60 | 9064010024000 |
| 0.0965 | | 2.45 | 4.00 | 63.00 | 19.10 | 22.10 | 9064010024500 |
| 0.0984 | | 2.50 | 4.00 | 63.00 | 19.40 | 22.50 | 9064010025000 |
| 0.1004 | | 2.55 | 4.00 | 63.00 | 19.90 | 23.00 | 9064010025500 |
| 0.1024 | | 2.60 | 4.00 | 67.00 | 20.20 | 23.40 | 9064010026000 |
| 0.1043 | | 2.65 | 4.00 | 67.00 | 20.70 | 23.90 | 9064010026500 |
| 0.1063 | | 2.70 | 4.00 | 67.00 | 21.00 | 24.30 | 9064010027000 |
| 0.1083 | | 2.75 | 4.00 | 67.00 | 21.40 | 24.80 | 9064010027500 |
| 0.1094 | 7/64 | 2.78 | 4.00 | 67.00 | 21.80 | 25.20 | 9064010027800 |
| 0.1102 | | 2.80 | 4.00 | 67.00 | 21.80 | 25.20 | 9064010028000 |
| 0.1122 | | 2.85 | 4.00 | 67.00 | 22.20 | 25.70 | 9064010028500 |
| 0.1142 | | 2.90 | 4.00 | 67.00 | 22.60 | 26.10 | 9064010029000 |
| 0.1161 | #32 | 2.95 | 4.00 | 67.00 | 23.00 | 26.60 | 9064010029500 |
| 0.1181 | | 3.00 | 4.00 | 67.00 | 23.30 | 27.00 | 9064010030000 |



Tool material **Solid Carbide**
Surface **A**

- P** Steel ● web thinning $\geq \varnothing 1.400$ • facet point grinding • main cutting edge form straight • edge preparation
 - M** Stainless steel ●
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • stainless steels • cast materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 586

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0551 | #54 | 1.40 | 4.00 | 52.00 | 12.80 | 15.00 | 9064080014000 |
| 0.0571 | | 1.45 | 4.00 | 52.00 | 13.80 | 16.00 | 9064080014500 |
| 0.0591 | | 1.50 | 4.00 | 52.00 | 14.70 | 17.00 | 9064080015000 |
| 0.0610 | | 1.55 | 4.00 | 52.00 | 14.60 | 17.00 | 9064080015500 |
| 0.0626 | 1/16 | 1.59 | 4.00 | 52.00 | 15.50 | 18.00 | 9064080015900 |
| 0.0630 | | 1.60 | 4.00 | 52.00 | 15.50 | 18.00 | 9064080016000 |
| 0.0650 | | 1.65 | 4.00 | 52.00 | 15.40 | 18.00 | 9064080016500 |
| 0.0669 | #51 | 1.70 | 4.00 | 56.00 | 16.40 | 19.00 | 9064080017000 |
| 0.0689 | | 1.75 | 4.00 | 56.00 | 16.30 | 19.00 | 9064080017500 |
| 0.0709 | | 1.80 | 4.00 | 56.00 | 17.70 | 20.00 | 9064080018000 |
| 0.0728 | #49 | 1.85 | 4.00 | 56.00 | 17.70 | 20.00 | 9064080018500 |
| 0.0748 | | 1.90 | 4.00 | 56.00 | 18.60 | 21.00 | 9064080019000 |
| 0.0768 | | 1.95 | 4.00 | 56.00 | 18.60 | 21.00 | 9064080019500 |
| 0.0780 | 5/64 | 1.98 | 4.00 | 56.00 | 19.50 | 22.00 | 9064080019800 |
| 0.0787 | | 2.00 | 4.00 | 56.00 | 19.50 | 22.00 | 9064080020000 |
| 0.0807 | | 2.05 | 4.00 | 56.00 | 20.40 | 23.00 | 9064080020500 |
| 0.0827 | | 2.10 | 4.00 | 62.00 | 20.40 | 23.00 | 9064080021000 |
| 0.0846 | | 2.15 | 4.00 | 62.00 | 21.30 | 24.00 | 9064080021500 |
| 0.0866 | | 2.20 | 4.00 | 62.00 | 21.20 | 24.00 | 9064080022000 |

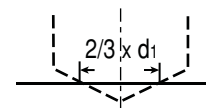
| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0886 | | 2.25 | 4.00 | 62.00 | 22.20 | 25.00 | 9064080022500 |
| 0.0906 | | 2.30 | 4.00 | 62.00 | 22.10 | 25.00 | 9064080023000 |
| 0.0925 | | 2.35 | 4.00 | 62.00 | 23.10 | 26.00 | 9064080023500 |
| 0.0937 | 3/32 | 2.38 | 4.00 | 62.00 | 23.00 | 26.00 | 9064080023800 |
| 0.0945 | | 2.40 | 4.00 | 62.00 | 23.00 | 26.00 | 9064080024000 |
| 0.0965 | | 2.45 | 4.00 | 62.00 | 23.90 | 27.00 | 9064080024500 |
| 0.0984 | | 2.50 | 4.00 | 62.00 | 24.90 | 28.00 | 9064080025000 |
| 0.1004 | | 2.55 | 4.00 | 62.00 | 24.80 | 28.00 | 9064080025500 |
| 0.1024 | | 2.60 | 4.00 | 66.00 | 25.70 | 29.00 | 9064080026000 |
| 0.1043 | | 2.65 | 4.00 | 66.00 | 25.70 | 29.00 | 9064080026500 |
| 0.1063 | | 2.70 | 4.00 | 66.00 | 26.60 | 30.00 | 9064080027000 |
| 0.1083 | | 2.75 | 4.00 | 66.00 | 26.60 | 30.00 | 9064080027500 |
| 0.1094 | 7/64 | 2.78 | 4.00 | 66.00 | 27.50 | 31.00 | 9064080028000 |
| 0.1102 | | 2.80 | 4.00 | 66.00 | 27.50 | 31.00 | 9064080028000 |
| 0.1122 | | 2.85 | 4.00 | 66.00 | 27.40 | 31.00 | 9064080028500 |
| 0.1142 | | 2.90 | 4.00 | 66.00 | 28.40 | 32.00 | 9064080029000 |
| 0.1161 | #32 | 2.95 | 4.00 | 66.00 | 28.30 | 32.00 | 9064080029500 |
| 0.1181 | | 3.00 | 4.00 | 66.00 | 29.20 | 33.00 | 9064080030000 |

Micro Drills

Spot Drilling

In order to achieve full performance with Series 6408 carbide micro-precision drills, we recommend spot drilling.

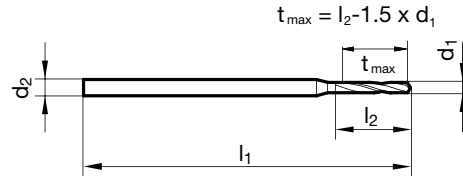
The Series 6400 solid carbide micro-precision drill can be applied for this purpose. The spot drill diameter should be approximately 2/3 of the subsequent hole diameter.





Tool material **Solid Carbide**
Surface **A**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 1.400$ • facet point grinding • main cutting edge form straight • edge preparation |
| M | Stainless steel | ● | |
| K | Cast iron | ● | structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm ² • stainless steels • cast materials |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | | |
- =Optimal
○=Limited



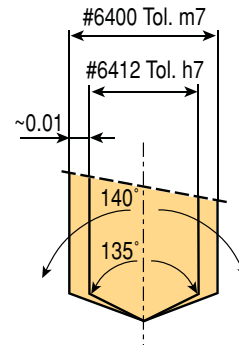
Speeds and feeds information on pg. 587

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0551 | | 1.40 | 4.00 | 62.00 | 22.80 | 25.00 | 9064120014000 |
| 0.0591 | | 1.50 | 4.00 | 62.00 | 24.70 | 27.00 | 9064120015000 |
| 0.0626 | 1/16 | 1.59 | 4.00 | 62.00 | 26.50 | 29.00 | 9064120015900 |
| 0.0630 | | 1.60 | 4.00 | 62.00 | 26.50 | 29.00 | 9064120016000 |
| 0.0669 | | 1.70 | 4.00 | 70.00 | 28.40 | 31.00 | 9064120017000 |
| 0.0689 | | 1.75 | 4.00 | 70.00 | 29.30 | 32.00 | 9064120017500 |
| 0.0709 | | 1.80 | 4.00 | 70.00 | 29.70 | 32.00 | 9064120018000 |
| 0.0748 | | 1.90 | 4.00 | 70.00 | 31.60 | 34.00 | 9064120019000 |
| 0.0780 | 5/64 | 1.98 | 4.00 | 70.00 | 33.50 | 36.00 | 9064120019800 |
| 0.0787 | | 2.00 | 4.00 | 70.00 | 33.50 | 36.00 | 9064120020000 |
| 0.0827 | | 2.10 | 4.00 | 78.00 | 35.40 | 38.00 | 9064120021000 |

| Diameter (d ₁) | | | d2 h6 | l ₁ | t _{max} | l ₂ | EDP # |
|----------------------------|----------|------|-------|----------------|------------------|----------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.0866 | | 2.20 | 4.00 | 78.00 | 37.20 | 40.00 | 9064120022000 |
| 0.0906 | | 2.30 | 4.00 | 78.00 | 39.10 | 42.00 | 9064120023000 |
| 0.0937 | 3/32 | 2.38 | 4.00 | 78.00 | 41.00 | 44.00 | 9064120023800 |
| 0.0945 | | 2.40 | 4.00 | 78.00 | 41.00 | 44.00 | 9064120024000 |
| 0.0984 | | 2.50 | 4.00 | 78.00 | 41.90 | 45.00 | 9064120025000 |
| 0.1024 | | 2.60 | 4.00 | 87.00 | 43.70 | 47.00 | 9064120026000 |
| 0.1063 | | 2.70 | 4.00 | 87.00 | 44.60 | 48.00 | 9064120027000 |
| 0.1094 | 7/64 | 2.78 | 4.00 | 87.00 | 46.50 | 50.00 | 9064120027800 |
| 0.1102 | | 2.80 | 4.00 | 87.00 | 46.50 | 50.00 | 9064120028000 |
| 0.1142 | | 2.90 | 4.00 | 87.00 | 48.40 | 52.00 | 9064120029000 |
| 0.1181 | | 3.00 | 4.00 | 87.00 | 50.20 | 54.00 | 9064120030000 |

Pilot drilling

It is recommended to utilize a pilot drill for the series 6412 deep hole micro drill. Use series 6400 or 6405 drills with m7 diameter tolerance and 140° point to drill a minimum of 1xD deep. Then enter the pilot hole with the deep hole drill at max. 300RPM and 20IPM stopping shy of the bottom of the pilot hole. Start high pressure coolant and increase RPM to recommended operating speed. Drill at recommended feed rate to hole depth without pecking. Slow to max. 300RPM before retracting.



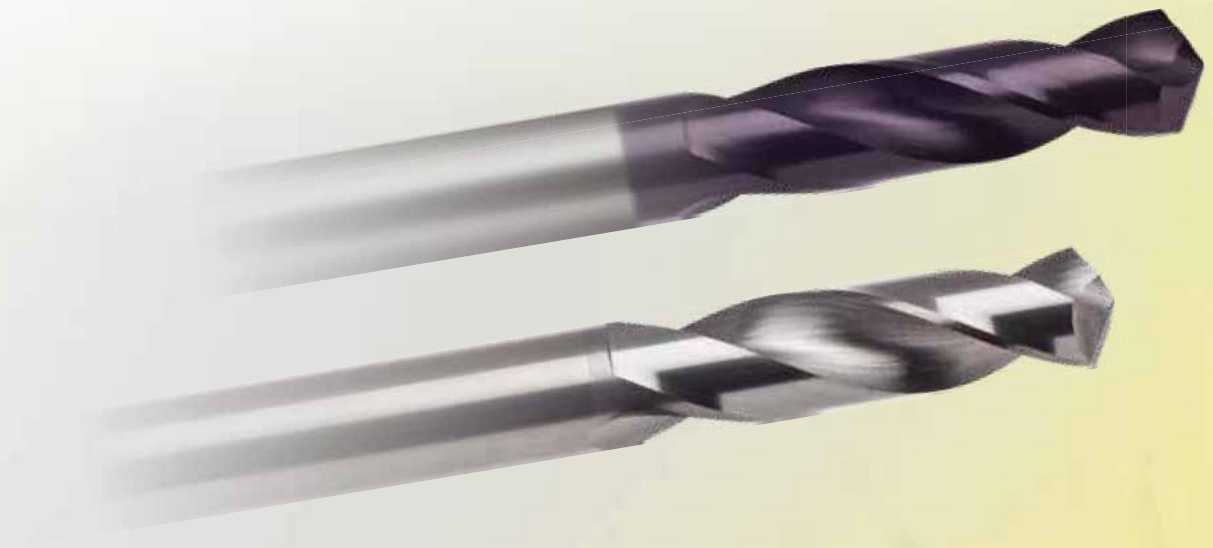
GUHRING PCD SPECIALS

We build tools to meet your application needs.





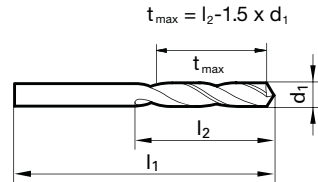
STUB LENGTH CARBIDE DRILLS





Tool material **Solid Carbide**
Surface

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ○ | web thinning $\geq \text{Ø } 2.060$ • facet point grinding • main cutting edge form straight |
| M | Stainless steel | ○ | |
| K | Cast iron | ○ | |
| N | Aluminum | ● | structural and case hardened steels • free-cutting steels, heat-treatable steels |
| S | Titanium alloys | ○ | • grey cast iron • bronze, brass • aluminum and Al-alloys • magnesium |
| H | Hardened steel | | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 543

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0197 | 0.50 | 20.00 | 2.25 | 3.00 | 9007300005000 |
| 0.0236 | 0.60 | 21.00 | 2.60 | 3.50 | 9007300006000 |
| 0.0276 | 0.70 | 23.00 | 3.45 | 4.50 | 9007300007000 |
| 0.0315 | 0.80 | 24.00 | 3.80 | 5.00 | 9007300008000 |
| 0.0354 | 0.90 | 25.00 | 4.15 | 5.50 | 9007300009000 |
| 0.0394 | 1.00 | 26.00 | 4.50 | 6.00 | 9007300010000 |
| 0.0402 | #60 1.02 | 26.00 | 4.47 | 6.00 | 9007300010200 |
| 0.0409 | #59 1.04 | 26.00 | 4.44 | 6.00 | 9007300010400 |
| 0.0421 | #58 1.07 | 28.00 | 5.40 | 7.00 | 9007300010700 |
| 0.0429 | #57 1.09 | 28.00 | 5.37 | 7.00 | 9007300010900 |
| 0.0433 | 1.10 | 28.00 | 5.35 | 7.00 | 9007300011000 |
| 0.0465 | #56 1.18 | 28.00 | 5.23 | 7.00 | 9007300011800 |
| 0.0469 | 3/64 1.19 | 30.00 | 6.22 | 8.00 | 9007300011900 |
| 0.0472 | 1.20 | 30.00 | 6.20 | 8.00 | 9007300012000 |
| 0.0512 | 1.30 | 30.00 | 6.05 | 8.00 | 9007300013000 |
| 0.0520 | #55 1.32 | 30.00 | 6.02 | 8.00 | 9007300013200 |
| 0.0551 | #54 1.40 | 32.00 | 6.90 | 9.00 | 9007300014000 |
| 0.0591 | 1.50 | 32.00 | 6.75 | 9.00 | 9007300015000 |
| 0.0594 | #53 1.51 | 34.00 | 7.74 | 10.00 | 9007300015100 |
| 0.0626 | 1/16 1.59 | 34.00 | 7.62 | 10.00 | 9007300015900 |
| 0.0630 | 1.60 | 34.00 | 7.60 | 10.00 | 9007300016000 |
| 0.0634 | #52 1.61 | 34.00 | 7.59 | 10.00 | 9007300016100 |
| 0.0669 | #51 1.70 | 34.00 | 7.45 | 10.00 | 9007300017000 |
| 0.0701 | #50 1.78 | 36.00 | 8.33 | 11.00 | 9007300017800 |
| 0.0709 | 1.80 | 36.00 | 8.30 | 11.00 | 9007300018000 |
| 0.0728 | #49 1.85 | 36.00 | 8.23 | 11.00 | 9007300018500 |
| 0.0748 | 1.90 | 36.00 | 8.15 | 11.00 | 9007300019000 |
| 0.0760 | #48 1.93 | 38.00 | 9.11 | 12.00 | 9007300019300 |
| 0.0780 | 5/64 1.98 | 38.00 | 9.03 | 12.00 | 9007300019800 |
| 0.0783 | #47 1.99 | 38.00 | 9.02 | 12.00 | 9007300019900 |
| 0.0787 | 2.00 | 38.00 | 9.00 | 12.00 | 9007300020000 |
| 0.0811 | #46 2.06 | 38.00 | 8.91 | 12.00 | 9007300020600 |
| 0.0819 | #45 2.08 | 38.00 | 8.88 | 12.00 | 9007300020800 |
| 0.0827 | 2.10 | 38.00 | 8.85 | 12.00 | 9007300021000 |
| 0.0858 | #44 2.18 | 40.00 | 9.73 | 13.00 | 9007300021800 |
| 0.0866 | 2.20 | 40.00 | 9.70 | 13.00 | 9007300022000 |
| 0.0886 | 2.25 | 40.00 | 9.63 | 13.00 | 9007300022500 |
| 0.0890 | #43 2.26 | 40.00 | 9.61 | 13.00 | 9007300022600 |
| 0.0906 | 2.30 | 40.00 | 9.55 | 13.00 | 9007300023000 |
| 0.0933 | #42 2.37 | 43.00 | 10.45 | 14.00 | 9007300023700 |
| 0.0937 | 3/32 2.38 | 43.00 | 10.43 | 14.00 | 9007300023800 |
| 0.0945 | 2.40 | 43.00 | 10.40 | 14.00 | 9007300024000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------------|-------|----------|------------------------|-------------------------------|-------|
| inch | wire/ltr mm | mm | | | | |
| 0.0961 | #41 2.44 | 43.00 | 10.34 | 14.00 | 9007300024400 | |
| 0.0980 | #40 2.49 | 43.00 | 10.27 | 14.00 | 9007300024900 | |
| 0.0984 | 2.50 | 43.00 | 10.25 | 14.00 | 9007300025000 | |
| 0.0996 | #39 2.53 | 43.00 | 10.21 | 14.00 | 9007300025300 | |
| 0.1016 | #38 2.58 | 43.00 | 10.13 | 14.00 | 9007300025800 | |
| 0.1024 | 2.60 | 43.00 | 10.10 | 14.00 | 9007300026000 | |
| 0.1039 | #37 2.64 | 43.00 | 10.04 | 14.00 | 9007300026400 | |
| 0.1063 | 2.70 | 46.00 | 11.95 | 16.00 | 9007300027000 | |
| 0.1067 | #36 2.71 | 46.00 | 11.94 | 16.00 | 9007300027100 | |
| 0.1094 | 7/64 2.78 | 46.00 | 11.83 | 16.00 | 9007300027800 | |
| 0.1098 | #35 2.79 | 46.00 | 11.82 | 16.00 | 9007300027900 | |
| 0.1102 | 2.80 | 46.00 | 11.80 | 16.00 | 9007300028000 | |
| 0.1110 | #34 2.82 | 46.00 | 11.77 | 16.00 | 9007300028200 | |
| 0.1130 | #33 2.87 | 46.00 | 11.70 | 16.00 | 9007300028700 | |
| 0.1142 | 2.90 | 46.00 | 11.65 | 16.00 | 9007300029000 | |
| 0.1161 | #32 2.95 | 46.00 | 11.58 | 16.00 | 9007300029500 | |
| 0.1181 | 3.00 | 46.00 | 11.50 | 16.00 | 9007300030000 | |
| 0.1201 | 3.05 | 49.00 | 13.43 | 18.00 | 9007300030500 | |
| 0.1220 | 3.10 | 49.00 | 13.35 | 18.00 | 9007300031000 | |
| 0.1248 | 1/8 3.17 | 49.00 | 13.25 | 18.00 | 9007300031700 | |
| 0.1260 | 3.20 | 49.00 | 13.20 | 18.00 | 9007300032000 | |
| 0.1283 | #30 3.26 | 49.00 | 13.11 | 18.00 | 9007300032600 | |
| 0.1299 | 3.30 | 49.00 | 13.05 | 18.00 | 9007300033000 | |
| 0.1339 | 3.40 | 52.00 | 14.90 | 20.00 | 9007300034000 | |
| 0.1358 | #29 3.45 | 52.00 | 14.83 | 20.00 | 9007300034500 | |
| 0.1378 | 3.50 | 52.00 | 14.75 | 20.00 | 9007300035000 | |
| 0.1406 | 9/64 #28 3.57 | 52.00 | 14.65 | 20.00 | 9007300035700 | |
| 0.1417 | 3.60 | 52.00 | 14.60 | 20.00 | 9007300036000 | |
| 0.1441 | #27 3.66 | 52.00 | 14.51 | 20.00 | 9007300036600 | |
| 0.1457 | 3.70 | 52.00 | 14.45 | 20.00 | 9007300037000 | |
| 0.1469 | #26 3.73 | 52.00 | 14.41 | 20.00 | 9007300037300 | |
| 0.1496 | #25 3.80 | 55.00 | 16.30 | 22.00 | 9007300038000 | |
| 0.1520 | #24 3.86 | 55.00 | 16.21 | 22.00 | 9007300038600 | |
| 0.1535 | 3.90 | 55.00 | 16.15 | 22.00 | 9007300039000 | |
| 0.1539 | #23 3.91 | 55.00 | 16.14 | 22.00 | 9007300039100 | |
| 0.1563 | 5/32 3.97 | 55.00 | 16.05 | 22.00 | 9007300039700 | |
| 0.1571 | #22 3.99 | 55.00 | 16.02 | 22.00 | 9007300039900 | |
| 0.1575 | 4.00 | 55.00 | 16.00 | 22.00 | 9007300040000 | |
| 0.1591 | #21 4.04 | 55.00 | 15.94 | 22.00 | 9007300040400 | |
| 0.1614 | 4.10 | 55.00 | 15.85 | 22.00 | 9007300041000 | |
| 0.1654 | 4.20 | 55.00 | 15.70 | 22.00 | 9007300042000 | |
| 0.1661 | #19 4.22 | 55.00 | 15.67 | 22.00 | 9007300042200 | |

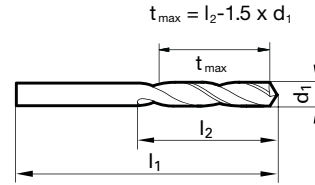
| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1693 | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9007300043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9007300043700 |
| 0.1728 | #17 | 4.39 | 58.00 | 17.42 | 24.00 | 9007300043900 |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9007300044000 |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9007300045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9007300045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9007300046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9007300046200 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9007300047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9007300047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9007300048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9007300048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9007300049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9007300049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9007300049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9007300050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9007300050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9007300051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9007300051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9007300051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9007300051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9007300052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9007300052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9007300053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9007300053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9007300054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9007300054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9007300055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9007300055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9007300056000 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9007300057000 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9007300057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9007300058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9007300059000 |
| 0.2339 | | 5.94 | 66.00 | 19.09 | 28.00 | 9007300059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9007300059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9007300060000 |
| 0.2378 | | 6.04 | 70.00 | 21.94 | 31.00 | 9007300060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9007300061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9007300061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9007300062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9007300062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9007300063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9007300063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9007300064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9007300065000 |
| 0.2571 | | 6.53 | 70.00 | 21.21 | 31.00 | 9007300065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9007300066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9007300066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9007300067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9007300067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9007300068000 |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9007300069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9007300070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9007300070300 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9007300071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9007300071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9007300072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9007300073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9007300073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9007300074000 |
| 0.2949 | M | 7.49 | 74.00 | 22.77 | 34.00 | 9007300074900 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9007300075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9007300075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9007300076000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3020 | | 7.67 | 79.00 | 25.50 | 37.00 | 9007300076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9007300077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9007300078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9007300079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9007300079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9007300080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9007300080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9007300081000 |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9007300082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9007300083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9007300083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9007300084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9007300084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9007300085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9007300086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9007300086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9007300087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9007300087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9007300088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9007300088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9007300089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9007300090000 |
| 0.3579 | | 9.09 | 84.00 | 26.37 | 40.00 | 9007300090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9007300091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9007300091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9007300092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9007300093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9007300093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9007300094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9007300095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9007300095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9007300095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9007300096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9007300097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9007300098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9007300099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9007300099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9007300100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9007300100800 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9007300102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9007300102600 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9007300103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9007300103200 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9007300104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9007300105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9007300107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9007300110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9007300111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9007300115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9007300115100 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9007300119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9007300120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9007300123000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9007300127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9007300130000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9007300134900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9007300140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9007300142900 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9007300150000 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9007300160000 |



Tool material **Solid Carbide**
Surface **F**

- P** Steel ○ web thinning $\geq \varnothing 2.060$
 - M** Stainless steel ○ • facet point grinding
 - K** Cast iron ○ • main cutting edge form straight
 - N** Aluminum ● structural and case hardened steels • free-cutting steels, heat-treatable steels • cast materials • brass • Al materials with
 - S** Titanium alloys ○ high Si-content • magnesium and magnesium alloys • plastics and fiber reinforced plastics
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 556

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 26.00 | 4.50 | 6.00 | 9024630010000 |
| 0.0402 | #60 1.02 | 26.00 | 4.47 | 6.00 | 9024630010200 |
| 0.0409 | #59 1.04 | 26.00 | 4.44 | 6.00 | 9024630010400 |
| 0.0421 | #58 1.07 | 28.00 | 5.40 | 7.00 | 9024630010700 |
| 0.0429 | #57 1.09 | 28.00 | 5.37 | 7.00 | 9024630010900 |
| 0.0433 | 1.10 | 28.00 | 5.35 | 7.00 | 9024630011000 |
| 0.0465 | #56 1.18 | 28.00 | 5.23 | 7.00 | 9024630011800 |
| 0.0469 | 3/64 1.19 | 30.00 | 6.22 | 8.00 | 9024630011900 |
| 0.0472 | 1.20 | 30.00 | 6.20 | 8.00 | 9024630012000 |
| 0.0512 | 1.30 | 30.00 | 6.05 | 8.00 | 9024630013000 |
| 0.0520 | #55 1.32 | 30.00 | 6.02 | 8.00 | 9024630013200 |
| 0.0551 | #54 1.40 | 32.00 | 6.90 | 9.00 | 9024630014000 |
| 0.0591 | 1.50 | 32.00 | 6.75 | 9.00 | 9024630015000 |
| 0.0594 | #53 1.51 | 34.00 | 7.74 | 10.00 | 9024630015100 |
| 0.0626 | 1/16 1.59 | 34.00 | 7.62 | 10.00 | 9024630015900 |
| 0.0630 | 1.60 | 34.00 | 7.60 | 10.00 | 9024630016000 |
| 0.0634 | #52 1.61 | 34.00 | 7.59 | 10.00 | 9024630016100 |
| 0.0669 | #51 1.70 | 34.00 | 7.45 | 10.00 | 9024630017000 |
| 0.0701 | #50 1.78 | 36.00 | 8.33 | 11.00 | 9024630017800 |
| 0.0709 | 1.80 | 36.00 | 8.30 | 11.00 | 9024630018000 |
| 0.0728 | #49 1.85 | 36.00 | 8.23 | 11.00 | 9024630018500 |
| 0.0748 | 1.90 | 36.00 | 8.15 | 11.00 | 9024630019000 |
| 0.0760 | #48 1.93 | 38.00 | 9.11 | 12.00 | 9024630019300 |
| 0.0780 | 5/64 1.98 | 38.00 | 9.03 | 12.00 | 9024630019800 |
| 0.0783 | #47 1.99 | 38.00 | 9.02 | 12.00 | 9024630019900 |
| 0.0787 | 2.00 | 38.00 | 9.00 | 12.00 | 9024630020000 |
| 0.0811 | #46 2.06 | 38.00 | 8.91 | 12.00 | 9024630020600 |
| 0.0819 | #45 2.08 | 38.00 | 8.88 | 12.00 | 9024630020800 |
| 0.0827 | 2.10 | 38.00 | 8.85 | 12.00 | 9024630021000 |
| 0.0858 | #44 2.18 | 40.00 | 9.73 | 13.00 | 9024630021800 |
| 0.0866 | 2.20 | 40.00 | 9.70 | 13.00 | 9024630022000 |
| 0.0886 | 2.25 | 40.00 | 9.63 | 13.00 | 9024630022500 |
| 0.0890 | #43 2.26 | 40.00 | 9.61 | 13.00 | 9024630022600 |
| 0.0906 | 2.30 | 40.00 | 9.55 | 13.00 | 9024630023000 |
| 0.0933 | #47 2.37 | 43.00 | 10.45 | 14.00 | 9024630023700 |
| 0.0937 | 3/32 2.38 | 43.00 | 10.43 | 14.00 | 9024630023800 |
| 0.0945 | 2.40 | 43.00 | 10.40 | 14.00 | 9024630024000 |
| 0.0961 | #41 2.44 | 43.00 | 10.34 | 14.00 | 9024630024400 |
| 0.0980 | #40 2.49 | 43.00 | 10.27 | 14.00 | 9024630024900 |
| 0.0984 | 2.50 | 43.00 | 10.25 | 14.00 | 9024630025000 |
| 0.0996 | #39 2.53 | 43.00 | 10.21 | 14.00 | 9024630025300 |
| 0.1016 | #38 2.58 | 43.00 | 10.13 | 14.00 | 9024630025800 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------------|-------|----------|------------------------|-------------------------------|-------|
| inch | wire/ltr mm | mm | | | | |
| 0.1024 | 2.60 | 43.00 | 10.10 | 14.00 | 9024630026000 | |
| 0.1039 | #37 2.64 | 43.00 | 10.04 | 14.00 | 9024630026400 | |
| 0.1063 | 2.70 | 46.00 | 11.95 | 16.00 | 9024630027000 | |
| 0.1067 | #36 2.71 | 46.00 | 11.94 | 16.00 | 9024630027100 | |
| 0.1094 | 7/64 2.78 | 46.00 | 11.83 | 16.00 | 9024630027800 | |
| 0.1098 | #35 2.79 | 46.00 | 11.82 | 16.00 | 9024630027900 | |
| 0.1102 | 2.80 | 46.00 | 11.80 | 16.00 | 9024630028000 | |
| 0.1110 | #34 2.82 | 46.00 | 11.77 | 16.00 | 9024630028200 | |
| 0.1130 | #33 2.87 | 46.00 | 11.70 | 16.00 | 9024630028700 | |
| 0.1142 | 2.90 | 46.00 | 11.65 | 16.00 | 9024630029000 | |
| 0.1161 | #32 2.95 | 46.00 | 11.58 | 16.00 | 9024630029500 | |
| 0.1181 | 3.00 | 46.00 | 11.50 | 16.00 | 9024630030000 | |
| 0.1201 | #31 3.05 | 49.00 | 13.43 | 18.00 | 9024630030500 | |
| 0.1220 | 3.10 | 49.00 | 13.35 | 18.00 | 9024630031000 | |
| 0.1248 | 1/8 3.17 | 49.00 | 13.25 | 18.00 | 9024630031700 | |
| 0.1260 | 3.20 | 49.00 | 13.20 | 18.00 | 9024630032000 | |
| 0.1283 | #30 3.26 | 49.00 | 13.11 | 18.00 | 9024630032600 | |
| 0.1299 | 3.30 | 49.00 | 13.05 | 18.00 | 9024630033000 | |
| 0.1339 | 3.40 | 52.00 | 14.90 | 20.00 | 9024630034000 | |
| 0.1358 | #29 3.45 | 52.00 | 14.83 | 20.00 | 9024630034500 | |
| 0.1378 | 3.50 | 52.00 | 14.75 | 20.00 | 9024630035000 | |
| 0.1406 | 9/64 #28 3.57 | 52.00 | 14.65 | 20.00 | 9024630035700 | |
| 0.1417 | 3.60 | 52.00 | 14.60 | 20.00 | 9024630036000 | |
| 0.1441 | #27 3.66 | 52.00 | 14.51 | 20.00 | 9024630036600 | |
| 0.1457 | 3.70 | 52.00 | 14.45 | 20.00 | 9024630037000 | |
| 0.1469 | #26 3.73 | 52.00 | 14.41 | 20.00 | 9024630037300 | |
| 0.1496 | #25 3.80 | 55.00 | 16.30 | 22.00 | 9024630038000 | |
| 0.1520 | #24 3.86 | 55.00 | 16.21 | 22.00 | 9024630038600 | |
| 0.1535 | 3.90 | 55.00 | 16.15 | 22.00 | 9024630039000 | |
| 0.1539 | #23 3.91 | 55.00 | 16.14 | 22.00 | 9024630039100 | |
| 0.1563 | 5/32 3.97 | 55.00 | 16.05 | 22.00 | 9024630039700 | |
| 0.1571 | #22 3.99 | 55.00 | 16.02 | 22.00 | 9024630039900 | |
| 0.1575 | 4.00 | 55.00 | 16.00 | 22.00 | 9024630040000 | |
| 0.1591 | #21 4.04 | 55.00 | 15.94 | 22.00 | 9024630040400 | |
| 0.1610 | #20 4.09 | 55.00 | 15.87 | 22.00 | 9024630040900 | |
| 0.1614 | 4.10 | 55.00 | 15.85 | 22.00 | 9024630041000 | |
| 0.1654 | 4.20 | 55.00 | 15.70 | 22.00 | 9024630042000 | |
| 0.1661 | #19 4.22 | 55.00 | 15.67 | 22.00 | 9024630042200 | |
| 0.1693 | #18 4.30 | 58.00 | 17.55 | 24.00 | 9024630043000 | |
| 0.1720 | 11/64 4.37 | 58.00 | 17.45 | 24.00 | 9024630043700 | |
| 0.1728 | #17 4.39 | 58.00 | 17.42 | 24.00 | 9024630043900 | |
| 0.1732 | 4.40 | 58.00 | 17.40 | 24.00 | 9024630044000 | |

3xD Drills

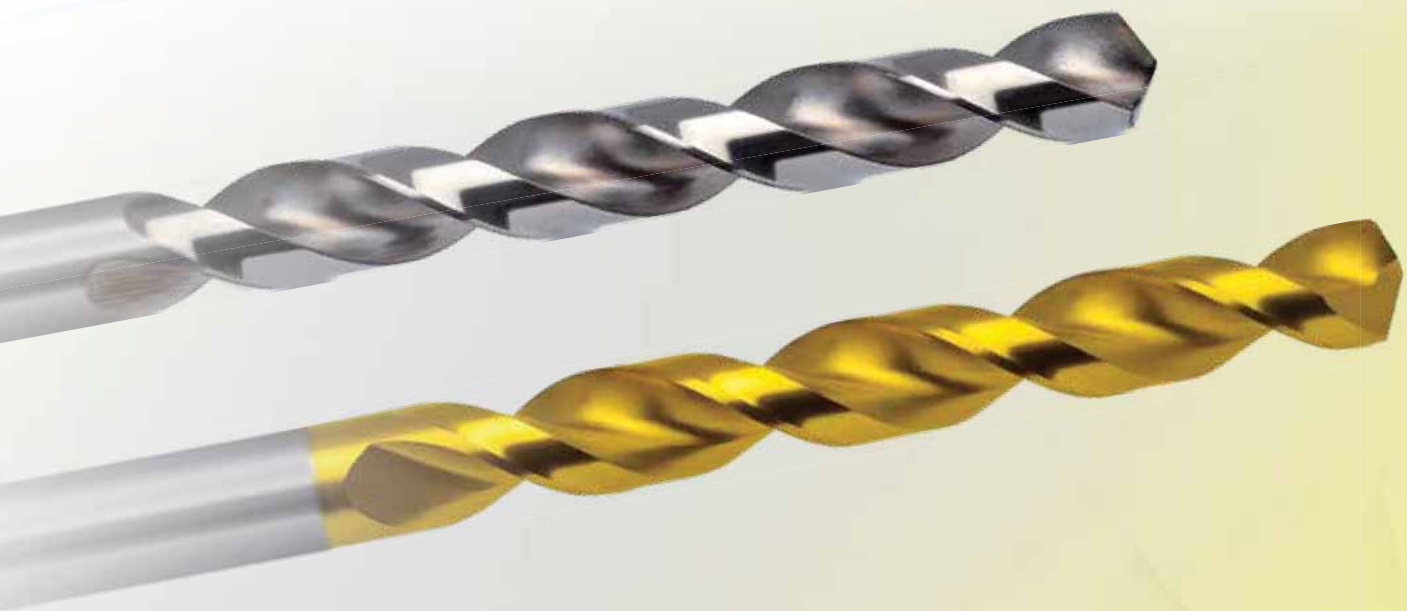
| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1772 | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9024630045000 |
| 0.1799 | #15 | 4.57 | 58.00 | 17.15 | 24.00 | 9024630045700 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9024630046000 |
| 0.1819 | #14 | 4.62 | 58.00 | 17.07 | 24.00 | 9024630046200 |
| 0.1850 | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9024630047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9024630047600 |
| 0.1890 | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9024630048000 |
| 0.1909 | #11 | 4.85 | 62.00 | 18.73 | 26.00 | 9024630048500 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9024630049000 |
| 0.1937 | #10 | 4.92 | 62.00 | 18.62 | 26.00 | 9024630049200 |
| 0.1961 | #9 | 4.98 | 62.00 | 18.53 | 26.00 | 9024630049800 |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9024630050000 |
| 0.1992 | #8 | 5.06 | 62.00 | 18.41 | 26.00 | 9024630050600 |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9024630051000 |
| 0.2012 | #7 | 5.11 | 62.00 | 18.34 | 26.00 | 9024630051100 |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9024630051600 |
| 0.2039 | #6 | 5.18 | 62.00 | 18.23 | 26.00 | 9024630051800 |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9024630052000 |
| 0.2055 | #5 | 5.22 | 62.00 | 18.17 | 26.00 | 9024630052200 |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9024630053000 |
| 0.2091 | #4 | 5.31 | 66.00 | 20.04 | 28.00 | 9024630053100 |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9024630054000 |
| 0.2130 | #3 | 5.41 | 66.00 | 19.89 | 28.00 | 9024630054100 |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9024630055000 |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9024630055600 |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9024630056000 |
| 0.2209 | #2 | 5.61 | 66.00 | 19.59 | 28.00 | 9024630056100 |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9024630057000 |
| 0.2280 | #1 | 5.79 | 66.00 | 19.32 | 28.00 | 9024630057900 |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9024630058000 |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9024630059000 |
| 0.2339 | A | 5.94 | 66.00 | 19.09 | 28.00 | 9024630059400 |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9024630059500 |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9024630060000 |
| 0.2378 | B | 6.04 | 70.00 | 21.94 | 31.00 | 9024630060400 |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9024630061000 |
| 0.2421 | C | 6.15 | 70.00 | 21.78 | 31.00 | 9024630061500 |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9024630062000 |
| 0.2461 | D | 6.25 | 70.00 | 21.63 | 31.00 | 9024630062500 |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9024630063000 |
| 0.2500 | 1/4 | 6.35 | 70.00 | 21.48 | 31.00 | 9024630063500 |
| 0.2520 | | 6.40 | 70.00 | 21.40 | 31.00 | 9024630064000 |
| 0.2559 | | 6.50 | 70.00 | 21.25 | 31.00 | 9024630065000 |
| 0.2571 | F | 6.53 | 70.00 | 21.21 | 31.00 | 9024630065300 |
| 0.2598 | | 6.60 | 70.00 | 21.10 | 31.00 | 9024630066000 |
| 0.2610 | G | 6.63 | 70.00 | 21.06 | 31.00 | 9024630066300 |
| 0.2638 | | 6.70 | 70.00 | 20.95 | 31.00 | 9024630067000 |
| 0.2657 | 17/64 | 6.75 | 74.00 | 23.88 | 34.00 | 9024630067500 |
| 0.2677 | | 6.80 | 74.00 | 23.80 | 34.00 | 9024630068000 |
| 0.2717 | | 6.90 | 74.00 | 23.65 | 34.00 | 9024630069000 |
| 0.2756 | | 7.00 | 74.00 | 23.50 | 34.00 | 9024630070000 |
| 0.2768 | J | 7.03 | 74.00 | 23.46 | 34.00 | 9024630070300 |
| 0.2795 | | 7.10 | 74.00 | 23.35 | 34.00 | 9024630071000 |
| 0.2811 | 9/32 | 7.14 | 74.00 | 23.29 | 34.00 | 9024630071400 |
| 0.2835 | | 7.20 | 74.00 | 23.20 | 34.00 | 9024630072000 |
| 0.2874 | | 7.30 | 74.00 | 23.05 | 34.00 | 9024630073000 |
| 0.2902 | L | 7.37 | 74.00 | 22.95 | 34.00 | 9024630073700 |
| 0.2913 | | 7.40 | 74.00 | 22.90 | 34.00 | 9024630074000 |
| 0.2953 | | 7.50 | 74.00 | 22.75 | 34.00 | 9024630075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9024630075400 |
| 0.2992 | | 7.60 | 79.00 | 25.60 | 37.00 | 9024630076000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3020 | N | 7.67 | 79.00 | 25.50 | 37.00 | 9024630076700 |
| 0.3031 | | 7.70 | 79.00 | 25.45 | 37.00 | 9024630077000 |
| 0.3071 | | 7.80 | 79.00 | 25.30 | 37.00 | 9024630078000 |
| 0.3110 | | 7.90 | 79.00 | 25.15 | 37.00 | 9024630079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9024630079400 |
| 0.3150 | | 8.00 | 79.00 | 25.00 | 37.00 | 9024630080000 |
| 0.3161 | O | 8.03 | 79.00 | 24.96 | 37.00 | 9024630080300 |
| 0.3189 | | 8.10 | 79.00 | 24.85 | 37.00 | 9024630081000 |
| 0.3228 | | 8.20 | 79.00 | 24.70 | 37.00 | 9024630082000 |
| 0.3268 | | 8.30 | 79.00 | 24.55 | 37.00 | 9024630083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9024630083300 |
| 0.3307 | | 8.40 | 79.00 | 24.40 | 37.00 | 9024630084000 |
| 0.3319 | Q | 8.43 | 79.00 | 24.36 | 37.00 | 9024630084300 |
| 0.3346 | | 8.50 | 79.00 | 24.25 | 37.00 | 9024630085000 |
| 0.3386 | | 8.60 | 84.00 | 27.10 | 40.00 | 9024630086000 |
| 0.3390 | R | 8.61 | 84.00 | 27.09 | 40.00 | 9024630086100 |
| 0.3425 | | 8.70 | 84.00 | 26.95 | 40.00 | 9024630087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9024630087300 |
| 0.3465 | | 8.80 | 84.00 | 26.80 | 40.00 | 9024630088000 |
| 0.3480 | S | 8.84 | 84.00 | 26.74 | 40.00 | 9024630088400 |
| 0.3504 | | 8.90 | 84.00 | 26.65 | 40.00 | 9024630089000 |
| 0.3543 | | 9.00 | 84.00 | 26.50 | 40.00 | 9024630090000 |
| 0.3579 | T | 9.09 | 84.00 | 26.37 | 40.00 | 9024630090900 |
| 0.3583 | | 9.10 | 84.00 | 26.35 | 40.00 | 9024630091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9024630091300 |
| 0.3622 | | 9.20 | 84.00 | 26.20 | 40.00 | 9024630092000 |
| 0.3661 | | 9.30 | 84.00 | 26.05 | 40.00 | 9024630093000 |
| 0.3677 | U | 9.34 | 84.00 | 25.99 | 40.00 | 9024630093400 |
| 0.3701 | | 9.40 | 84.00 | 25.90 | 40.00 | 9024630094000 |
| 0.3740 | | 9.50 | 84.00 | 25.75 | 40.00 | 9024630095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9024630095200 |
| 0.3772 | V | 9.58 | 89.00 | 28.63 | 43.00 | 9024630095800 |
| 0.3780 | | 9.60 | 89.00 | 28.60 | 43.00 | 9024630096000 |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9024630097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9024630098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9024630099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9024630099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9024630100000 |
| 0.3969 | X | 10.08 | 89.00 | 27.88 | 43.00 | 9024630100800 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9024630102000 |
| 0.4039 | Y | 10.26 | 89.00 | 27.61 | 43.00 | 9024630102600 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9024630103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9024630103200 |
| 0.4130 | Z | 10.49 | 89.00 | 27.27 | 43.00 | 9024630104900 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9024630105000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9024630107200 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9024630110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9024630111100 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9024630115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9024630115100 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9024630119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9024630120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9024630123000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9024630127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9024630130000 |
| 0.5311 | 17/32 | 13.49 | 107.00 | 33.77 | 54.00 | 9024630134900 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9024630140000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 34.57 | 56.00 | 9024630142900 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9024630150000 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9024630160000 |

3xD Drills



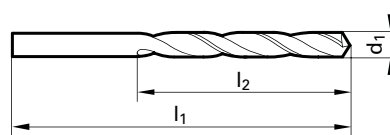
JOBBER LENGTH CARBIDE DRILLS





Tool material **Solid Carbide**
Surface

- P** Steel ○ web thinning ≥ Ø 2.060
• facet point grinding
• main cutting edge form straight
 - M** Stainless steel ○
 - K** Cast iron ○
 - N** Aluminum ● structural and case hardened steels • free-cutting steels,
heat-treatable steels • grey cast iron • bronze • aluminium
and Al-alloys • magnesium and magnesium alloys • plastics and
fiber reinforced plastics
 - S** Titanium alloys ○
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 543

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 34.00 | 10.50 | 12.00 | 9007320010000 |
| 0.0402 | #60 1.02 | 34.00 | 10.47 | 12.00 | 9007320010200 |
| 0.0409 | #59 1.04 | 34.00 | 10.44 | 12.00 | 9007320010400 |
| 0.0421 | #58 1.07 | 36.00 | 12.40 | 14.00 | 9007320010700 |
| 0.0429 | #57 1.09 | 36.00 | 12.37 | 14.00 | 9007320010900 |
| 0.0433 | 1.10 | 36.00 | 12.35 | 14.00 | 9007320011000 |
| 0.0465 | #56 1.18 | 36.00 | 12.23 | 14.00 | 9007320011800 |
| 0.0469 | 3/64 1.19 | 38.00 | 14.22 | 16.00 | 9007320011900 |
| 0.0472 | 1.20 | 38.00 | 14.20 | 16.00 | 9007320012000 |
| 0.0512 | 1.30 | 38.00 | 14.05 | 16.00 | 9007320013000 |
| 0.0520 | #55 1.32 | 38.00 | 14.02 | 16.00 | 9007320013200 |
| 0.0551 | #54 1.40 | 40.00 | 15.90 | 18.00 | 9007320014000 |
| 0.0591 | 1.50 | 40.00 | 15.75 | 18.00 | 9007320015000 |
| 0.0594 | #53 1.51 | 43.00 | 17.74 | 20.00 | 9007320015100 |
| 0.0626 | 1/16 1.59 | 43.00 | 17.62 | 20.00 | 9007320015900 |
| 0.0630 | 1.60 | 43.00 | 17.60 | 20.00 | 9007320016000 |
| 0.0634 | #52 1.61 | 43.00 | 17.59 | 20.00 | 9007320016100 |
| 0.0669 | #51 1.70 | 43.00 | 17.45 | 20.00 | 9007320017000 |
| 0.0701 | #50 1.78 | 46.00 | 19.33 | 22.00 | 9007320017800 |
| 0.0709 | 1.80 | 46.00 | 19.30 | 22.00 | 9007320018000 |
| 0.0728 | #49 1.85 | 46.00 | 19.23 | 22.00 | 9007320018500 |
| 0.0748 | 1.90 | 46.00 | 19.15 | 22.00 | 9007320019000 |
| 0.0760 | #48 1.93 | 49.00 | 21.11 | 24.00 | 9007320019300 |
| 0.0780 | 5/64 1.98 | 49.00 | 21.03 | 24.00 | 9007320019800 |
| 0.0783 | #47 1.99 | 49.00 | 21.02 | 24.00 | 9007320019900 |
| 0.0787 | 2.00 | 49.00 | 21.00 | 24.00 | 9007320020000 |
| 0.0811 | #46 2.06 | 49.00 | 20.91 | 24.00 | 9007320020600 |
| 0.0819 | #45 2.08 | 49.00 | 20.88 | 24.00 | 9007320020800 |
| 0.0827 | 2.10 | 49.00 | 20.85 | 24.00 | 9007320021000 |
| 0.0858 | #44 2.18 | 53.00 | 23.73 | 27.00 | 9007320021800 |
| 0.0866 | 2.20 | 53.00 | 23.70 | 27.00 | 9007320022000 |
| 0.0890 | #43 2.26 | 53.00 | 23.61 | 27.00 | 9007320022600 |
| 0.0906 | 2.30 | 53.00 | 23.55 | 27.00 | 9007320023000 |
| 0.0933 | #42 2.37 | 57.00 | 26.45 | 30.00 | 9007320023700 |
| 0.0937 | 3/32 2.38 | 57.00 | 26.43 | 30.00 | 9007320023800 |
| 0.0945 | 2.40 | 57.00 | 26.40 | 30.00 | 9007320024000 |
| 0.0961 | #41 2.44 | 57.00 | 26.34 | 30.00 | 9007320024400 |
| 0.0980 | #40 2.49 | 57.00 | 26.27 | 30.00 | 9007320024900 |
| 0.0984 | 2.50 | 57.00 | 26.25 | 30.00 | 9007320025000 |
| 0.0996 | #39 2.53 | 57.00 | 26.21 | 30.00 | 9007320025300 |
| 0.1016 | #38 2.58 | 57.00 | 26.13 | 30.00 | 9007320025800 |
| 0.1024 | 2.60 | 57.00 | 26.10 | 30.00 | 9007320026000 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9007320026400 |
| 0.1063 | 2.70 | 61.00 | 28.95 | 33.00 | 9007320027000 | |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9007320027100 |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9007320027800 |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9007320027900 |
| 0.1102 | 2.80 | 61.00 | 28.80 | 33.00 | 9007320028000 | |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9007320028200 |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9007320028700 |
| 0.1142 | 2.90 | 61.00 | 28.65 | 33.00 | 9007320029000 | |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9007320029500 |
| 0.1181 | 3.00 | 61.00 | 28.50 | 33.00 | 9007320030000 | |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9007320030500 |
| 0.1220 | 3.10 | 65.00 | 31.35 | 36.00 | 9007320031000 | |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9007320031700 |
| 0.1260 | 3.20 | 65.00 | 31.20 | 36.00 | 9007320032000 | |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9007320032600 |
| 0.1299 | 3.30 | 65.00 | 31.05 | 36.00 | 9007320033000 | |
| 0.1339 | 3.40 | 70.00 | 33.90 | 39.00 | 9007320034000 | |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9007320034500 |
| 0.1378 | 3.50 | 70.00 | 33.75 | 39.00 | 9007320035000 | |
| 0.1406 | 9/64 | 3.57 | 70.00 | 33.65 | 39.00 | 9007320035700 |
| 0.1417 | 3.60 | 70.00 | 33.60 | 39.00 | 9007320036000 | |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9007320036600 |
| 0.1457 | 3.70 | 70.00 | 33.45 | 39.00 | 9007320037000 | |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9007320037300 |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9007320038000 |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9007320038600 |
| 0.1535 | 3.90 | 75.00 | 37.15 | 43.00 | 9007320039000 | |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9007320039100 |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9007320039700 |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9007320039900 |
| 0.1575 | 4.00 | 75.00 | 37.00 | 43.00 | 9007320040000 | |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9007320040400 |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9007320040900 |
| 0.1614 | 4.10 | 75.00 | 36.85 | 43.00 | 9007320041000 | |
| 0.1654 | 4.20 | 75.00 | 36.70 | 43.00 | 9007320042000 | |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9007320042200 |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9007320043000 |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9007320043700 |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9007320043900 |
| 0.1732 | 4.40 | 80.00 | 40.40 | 47.00 | 9007320044000 | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9007320045000 |

5xD Drills

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9007320045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9007320046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9007320046200 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9007320047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9007320047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9007320048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9007320048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9007320049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9007320049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9007320049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9007320050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9007320050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9007320051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9007320051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9007320051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9007320051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9007320052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9007320052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9007320053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9007320053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9007320054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9007320054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9007320055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9007320055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9007320056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9007320056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9007320057000 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9007320057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9007320058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9007320059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9007320059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9007320059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9007320060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9007320060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9007320061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9007320061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9007320062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9007320062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9007320063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9007320063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9007320064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9007320065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9007320065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9007320066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9007320066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9007320067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9007320067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9007320068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9007320069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9007320070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9007320070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9007320071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9007320071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9007320072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9007320073000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9007320073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9007320074000 |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9007320074900 |

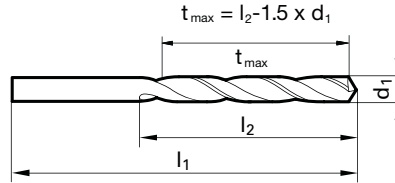
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9007320075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9007320075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9007320076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9007320076700 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9007320077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9007320078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9007320079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9007320079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9007320080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9007320080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9007320081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9007320082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9007320083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9007320083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9007320084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9007320084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9007320085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9007320086000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9007320086100 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9007320087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9007320087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9007320088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9007320088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9007320089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9007320090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9007320090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9007320091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9007320091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9007320092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9007320093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9007320093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9007320094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9007320095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9007320095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9007320095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9007320096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9007320097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9007320098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9007320099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9007320099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9007320100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9007320100800 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9007320102000 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9007320102600 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9007320103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9007320103200 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9007320104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9007320105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9007320107200 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9007320110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9007320111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9007320115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9007320115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9007320119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9007320120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9007320123000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9007320127000 |

5xD Drills



Tool material **Solid Carbide**
Surface **F**

- P** Steel ○ web thinning ≥ Ø 2.060
• facet point grinding
• main cutting edge form straight
 - M** Stainless steel ○
 - K** Cast iron ○
 - N** Aluminum ● structural and case hardened steels • free-cutting steels,
heat-treatable steels • cast materials • brass • Al materials with
 - S** Titanium alloys ○ high Si-content • magnesium and magnesium alloys • plastics
and fiber reinforced plastics
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 556

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.0394 | 1.00 | 34.00 | 10.50 | 12.00 | 9024640010000 |
| 0.0402 | #60 | 34.00 | 10.47 | 12.00 | 9024640010200 |
| 0.0409 | #59 | 34.00 | 10.44 | 12.00 | 9024640010400 |
| 0.0421 | #58 | 36.00 | 12.40 | 14.00 | 9024640010700 |
| 0.0429 | #57 | 36.00 | 12.37 | 14.00 | 9024640010900 |
| 0.0433 | 1.10 | 36.00 | 12.35 | 14.00 | 9024640011000 |
| 0.0465 | #56 | 36.00 | 12.23 | 14.00 | 9024640011800 |
| 0.0469 | 3/64 | 38.00 | 14.22 | 16.00 | 9024640011900 |
| 0.0472 | 1.20 | 38.00 | 14.20 | 16.00 | 9024640012000 |
| 0.0512 | 1.30 | 38.00 | 14.05 | 16.00 | 9024640013000 |
| 0.0520 | #55 | 38.00 | 14.02 | 16.00 | 9024640013200 |
| 0.0551 | #54 | 40.00 | 15.90 | 18.00 | 9024640014000 |
| 0.0591 | 1.50 | 40.00 | 15.75 | 18.00 | 9024640015000 |
| 0.0594 | #53 | 43.00 | 17.74 | 20.00 | 9024640015100 |
| 0.0626 | 1/16 | 43.00 | 17.62 | 20.00 | 9024640015900 |
| 0.0630 | 1.60 | 43.00 | 17.60 | 20.00 | 9024640016000 |
| 0.0634 | #52 | 43.00 | 17.59 | 20.00 | 9024640016100 |
| 0.0669 | #51 | 43.00 | 17.45 | 20.00 | 9024640017000 |
| 0.0701 | #50 | 46.00 | 19.33 | 22.00 | 9024640017800 |
| 0.0709 | 1.80 | 46.00 | 19.30 | 22.00 | 9024640018000 |
| 0.0728 | #49 | 46.00 | 19.23 | 22.00 | 9024640018500 |
| 0.0748 | 1.90 | 46.00 | 19.15 | 22.00 | 9024640019000 |
| 0.0760 | #48 | 49.00 | 21.11 | 24.00 | 9024640019300 |
| 0.0780 | 5/64 | 49.00 | 21.03 | 24.00 | 9024640019800 |
| 0.0783 | #47 | 49.00 | 21.02 | 24.00 | 9024640019900 |
| 0.0787 | 2.00 | 49.00 | 21.00 | 24.00 | 9024640020000 |
| 0.0811 | #46 | 49.00 | 20.91 | 24.00 | 9024640020600 |
| 0.0819 | #45 | 49.00 | 20.88 | 24.00 | 9024640020800 |
| 0.0827 | 2.10 | 49.00 | 20.85 | 24.00 | 9024640021000 |
| 0.0858 | #44 | 53.00 | 23.73 | 27.00 | 9024640021800 |
| 0.0866 | 2.20 | 53.00 | 23.70 | 27.00 | 9024640022000 |
| 0.0890 | #43 | 53.00 | 23.61 | 27.00 | 9024640022600 |
| 0.0906 | 2.30 | 53.00 | 23.55 | 27.00 | 9024640023000 |
| 0.0933 | #42 | 57.00 | 26.45 | 30.00 | 9024640023700 |
| 0.0937 | 3/32 | 57.00 | 26.43 | 30.00 | 9024640023800 |
| 0.0945 | 2.40 | 57.00 | 26.40 | 30.00 | 9024640024000 |
| 0.0961 | #41 | 57.00 | 26.34 | 30.00 | 9024640024400 |
| 0.0980 | #40 | 57.00 | 26.27 | 30.00 | 9024640024900 |
| 0.0984 | 2.50 | 57.00 | 26.25 | 30.00 | 9024640025000 |
| 0.0996 | #39 | 57.00 | 26.21 | 30.00 | 9024640025300 |
| 0.1016 | #38 | 57.00 | 26.13 | 30.00 | 9024640025800 |
| 0.1024 | 2.60 | 57.00 | 26.10 | 30.00 | 9024640026000 |

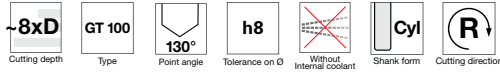
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------------|-------|----------------------|------------------------|-------------------------------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | mm | | | | | |
| 0.1039 | #37 | 2.64 | 57.00 | 26.04 | 30.00 | 9024640026400 | |
| 0.1063 | 2.70 | 61.00 | 28.95 | 33.00 | 9024640027000 | | |
| 0.1067 | #36 | 2.71 | 61.00 | 28.94 | 33.00 | 9024640027100 | |
| 0.1094 | 7/64 | 2.78 | 61.00 | 28.83 | 33.00 | 9024640027800 | |
| 0.1098 | #35 | 2.79 | 61.00 | 28.82 | 33.00 | 9024640027900 | |
| 0.1102 | 2.80 | 61.00 | 28.80 | 33.00 | 9024640028000 | | |
| 0.1110 | #34 | 2.82 | 61.00 | 28.77 | 33.00 | 9024640028200 | |
| 0.1130 | #33 | 2.87 | 61.00 | 28.70 | 33.00 | 9024640028700 | |
| 0.1142 | 2.90 | 61.00 | 28.65 | 33.00 | 9024640029000 | | |
| 0.1161 | #32 | 2.95 | 61.00 | 28.58 | 33.00 | 9024640029500 | |
| 0.1181 | 3.00 | 61.00 | 28.50 | 33.00 | 9024640030000 | | |
| 0.1201 | #31 | 3.05 | 65.00 | 31.43 | 36.00 | 9024640030500 | |
| 0.1220 | 3.10 | 65.00 | 31.35 | 36.00 | 9024640031000 | | |
| 0.1248 | 1/8 | 3.17 | 65.00 | 31.25 | 36.00 | 9024640031700 | |
| 0.1260 | 3.20 | 65.00 | 31.20 | 36.00 | 9024640032000 | | |
| 0.1283 | #30 | 3.26 | 65.00 | 31.11 | 36.00 | 9024640032600 | |
| 0.1299 | 3.30 | 65.00 | 31.05 | 36.00 | 9024640033000 | | |
| 0.1339 | 3.40 | 70.00 | 33.90 | 39.00 | 9024640034000 | | |
| 0.1358 | #29 | 3.45 | 70.00 | 33.83 | 39.00 | 9024640034500 | |
| 0.1378 | 3.50 | 70.00 | 33.75 | 39.00 | 9024640035000 | | |
| 0.1406 | 9/64 | #28 | 3.57 | 70.00 | 33.65 | 39.00 | 9024640035700 |
| 0.1417 | 3.60 | 70.00 | 33.60 | 39.00 | 9024640036000 | | |
| 0.1441 | #27 | 3.66 | 70.00 | 33.51 | 39.00 | 9024640036600 | |
| 0.1457 | 3.70 | 70.00 | 33.45 | 39.00 | 9024640037000 | | |
| 0.1469 | #26 | 3.73 | 70.00 | 33.41 | 39.00 | 9024640037300 | |
| 0.1496 | #25 | 3.80 | 75.00 | 37.30 | 43.00 | 9024640038000 | |
| 0.1520 | #24 | 3.86 | 75.00 | 37.21 | 43.00 | 9024640038600 | |
| 0.1535 | 3.90 | 75.00 | 37.15 | 43.00 | 9024640039000 | | |
| 0.1539 | #23 | 3.91 | 75.00 | 37.14 | 43.00 | 9024640039100 | |
| 0.1563 | 5/32 | 3.97 | 75.00 | 37.05 | 43.00 | 9024640039700 | |
| 0.1571 | #22 | 3.99 | 75.00 | 37.02 | 43.00 | 9024640039900 | |
| 0.1575 | 4.00 | 75.00 | 37.00 | 43.00 | 9024640040000 | | |
| 0.1591 | #21 | 4.04 | 75.00 | 36.94 | 43.00 | 9024640040400 | |
| 0.1610 | #20 | 4.09 | 75.00 | 36.87 | 43.00 | 9024640040900 | |
| 0.1614 | 4.10 | 75.00 | 36.85 | 43.00 | 9024640041000 | | |
| 0.1654 | 4.20 | 75.00 | 36.70 | 43.00 | 9024640042000 | | |
| 0.1661 | #19 | 4.22 | 75.00 | 36.67 | 43.00 | 9024640042200 | |
| 0.1693 | #18 | 4.30 | 80.00 | 40.55 | 47.00 | 9024640043000 | |
| 0.1720 | 11/64 | 4.37 | 80.00 | 40.45 | 47.00 | 9024640043700 | |
| 0.1728 | #17 | 4.39 | 80.00 | 40.42 | 47.00 | 9024640043900 | |
| 0.1732 | 4.40 | 80.00 | 40.40 | 47.00 | 9024640044000 | | |
| 0.1772 | #16 | 4.50 | 80.00 | 40.25 | 47.00 | 9024640045000 | |

5xD Drills

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1799 | #15 | 4.57 | 80.00 | 40.15 | 47.00 | 9024640045700 |
| 0.1811 | | 4.60 | 80.00 | 40.10 | 47.00 | 9024640046000 |
| 0.1819 | #14 | 4.62 | 80.00 | 40.07 | 47.00 | 9024640046200 |
| 0.1850 | #13 | 4.70 | 80.00 | 39.95 | 47.00 | 9024640047000 |
| 0.1874 | 3/16 | 4.76 | 86.00 | 44.86 | 52.00 | 9024640047600 |
| 0.1890 | #12 | 4.80 | 86.00 | 44.80 | 52.00 | 9024640048000 |
| 0.1909 | #11 | 4.85 | 86.00 | 44.73 | 52.00 | 9024640048500 |
| 0.1929 | | 4.90 | 86.00 | 44.65 | 52.00 | 9024640049000 |
| 0.1937 | #10 | 4.92 | 86.00 | 44.62 | 52.00 | 9024640049200 |
| 0.1961 | #9 | 4.98 | 86.00 | 44.53 | 52.00 | 9024640049800 |
| 0.1969 | | 5.00 | 86.00 | 44.50 | 52.00 | 9024640050000 |
| 0.1992 | #8 | 5.06 | 86.00 | 44.41 | 52.00 | 9024640050600 |
| 0.2008 | | 5.10 | 86.00 | 44.35 | 52.00 | 9024640051000 |
| 0.2012 | #7 | 5.11 | 86.00 | 44.34 | 52.00 | 9024640051100 |
| 0.2031 | 13/64 | 5.16 | 86.00 | 44.26 | 52.00 | 9024640051600 |
| 0.2039 | #6 | 5.18 | 86.00 | 44.23 | 52.00 | 9024640051800 |
| 0.2047 | | 5.20 | 86.00 | 44.20 | 52.00 | 9024640052000 |
| 0.2055 | #5 | 5.22 | 86.00 | 44.17 | 52.00 | 9024640052200 |
| 0.2087 | | 5.30 | 86.00 | 44.05 | 52.00 | 9024640053000 |
| 0.2091 | #4 | 5.31 | 93.00 | 49.04 | 57.00 | 9024640053100 |
| 0.2126 | | 5.40 | 93.00 | 48.90 | 57.00 | 9024640054000 |
| 0.2130 | #3 | 5.41 | 93.00 | 48.89 | 57.00 | 9024640054100 |
| 0.2165 | | 5.50 | 93.00 | 48.75 | 57.00 | 9024640055000 |
| 0.2189 | 7/32 | 5.56 | 93.00 | 48.66 | 57.00 | 9024640055600 |
| 0.2205 | | 5.60 | 93.00 | 48.60 | 57.00 | 9024640056000 |
| 0.2209 | #2 | 5.61 | 93.00 | 48.59 | 57.00 | 9024640056100 |
| 0.2244 | | 5.70 | 93.00 | 48.45 | 57.00 | 9024640057000 |
| 0.2280 | #1 | 5.79 | 93.00 | 48.32 | 57.00 | 9024640057900 |
| 0.2283 | | 5.80 | 93.00 | 48.30 | 57.00 | 9024640058000 |
| 0.2323 | | 5.90 | 93.00 | 48.15 | 57.00 | 9024640059000 |
| 0.2339 | A | 5.94 | 93.00 | 48.09 | 57.00 | 9024640059400 |
| 0.2343 | 15/64 | 5.95 | 93.00 | 48.08 | 57.00 | 9024640059500 |
| 0.2362 | | 6.00 | 93.00 | 48.00 | 57.00 | 9024640060000 |
| 0.2378 | B | 6.04 | 101.00 | 53.94 | 63.00 | 9024640060400 |
| 0.2402 | | 6.10 | 101.00 | 53.85 | 63.00 | 9024640061000 |
| 0.2421 | C | 6.15 | 101.00 | 53.78 | 63.00 | 9024640061500 |
| 0.2441 | | 6.20 | 101.00 | 53.70 | 63.00 | 9024640062000 |
| 0.2461 | D | 6.25 | 101.00 | 53.63 | 63.00 | 9024640062500 |
| 0.2480 | | 6.30 | 101.00 | 53.55 | 63.00 | 9024640063000 |
| 0.2500 | 1/4 | 6.35 | 101.00 | 53.48 | 63.00 | 9024640063500 |
| 0.2520 | | 6.40 | 101.00 | 53.40 | 63.00 | 9024640064000 |
| 0.2559 | | 6.50 | 101.00 | 53.25 | 63.00 | 9024640065000 |
| 0.2571 | F | 6.53 | 101.00 | 53.21 | 63.00 | 9024640065300 |
| 0.2598 | | 6.60 | 101.00 | 53.10 | 63.00 | 9024640066000 |
| 0.2610 | G | 6.63 | 101.00 | 53.06 | 63.00 | 9024640066300 |
| 0.2638 | | 6.70 | 101.00 | 52.95 | 63.00 | 9024640067000 |
| 0.2657 | 17/64 | 6.75 | 109.00 | 58.88 | 69.00 | 9024640067500 |
| 0.2677 | | 6.80 | 109.00 | 58.80 | 69.00 | 9024640068000 |
| 0.2717 | I | 6.90 | 109.00 | 58.65 | 69.00 | 9024640069000 |
| 0.2756 | | 7.00 | 109.00 | 58.50 | 69.00 | 9024640070000 |
| 0.2768 | J | 7.03 | 109.00 | 58.46 | 69.00 | 9024640070300 |
| 0.2795 | | 7.10 | 109.00 | 58.35 | 69.00 | 9024640071000 |
| 0.2811 | 9/32 | 7.14 | 109.00 | 58.29 | 69.00 | 9024640071400 |
| 0.2835 | | 7.20 | 109.00 | 58.20 | 69.00 | 9024640072000 |
| 0.2874 | | 7.30 | 109.00 | 58.05 | 69.00 | 9024640073000 |
| 0.2902 | L | 7.37 | 109.00 | 57.95 | 69.00 | 9024640073700 |
| 0.2913 | | 7.40 | 109.00 | 57.90 | 69.00 | 9024640074000 |
| 0.2949 | M | 7.49 | 109.00 | 57.77 | 69.00 | 9024640074900 |

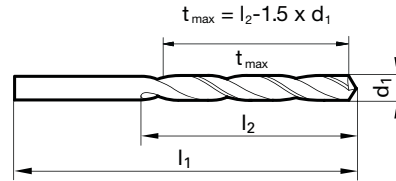
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2953 | | 7.50 | 109.00 | 57.75 | 69.00 | 9024640075000 |
| 0.2969 | 19/64 | 7.54 | 117.00 | 63.69 | 75.00 | 9024640075400 |
| 0.2992 | | 7.60 | 117.00 | 63.60 | 75.00 | 9024640076000 |
| 0.3020 | N | 7.67 | 117.00 | 63.50 | 75.00 | 9024640076700 |
| 0.3031 | | 7.70 | 117.00 | 63.45 | 75.00 | 9024640077000 |
| 0.3071 | | 7.80 | 117.00 | 63.30 | 75.00 | 9024640078000 |
| 0.3110 | | 7.90 | 117.00 | 63.15 | 75.00 | 9024640079000 |
| 0.3126 | 5/16 | 7.94 | 117.00 | 63.09 | 75.00 | 9024640079400 |
| 0.3150 | | 8.00 | 117.00 | 63.00 | 75.00 | 9024640080000 |
| 0.3161 | O | 8.03 | 117.00 | 62.96 | 75.00 | 9024640080300 |
| 0.3189 | | 8.10 | 117.00 | 62.85 | 75.00 | 9024640081000 |
| 0.3228 | P | 8.20 | 117.00 | 62.70 | 75.00 | 9024640082000 |
| 0.3268 | | 8.30 | 117.00 | 62.55 | 75.00 | 9024640083000 |
| 0.3280 | 21/64 | 8.33 | 117.00 | 62.51 | 75.00 | 9024640083300 |
| 0.3307 | | 8.40 | 117.00 | 62.40 | 75.00 | 9024640084000 |
| 0.3319 | Q | 8.43 | 117.00 | 62.36 | 75.00 | 9024640084300 |
| 0.3346 | | 8.50 | 117.00 | 62.25 | 75.00 | 9024640085000 |
| 0.3386 | | 8.60 | 125.00 | 68.10 | 81.00 | 9024640086000 |
| 0.3390 | R | 8.61 | 125.00 | 68.09 | 81.00 | 9024640086100 |
| 0.3425 | | 8.70 | 125.00 | 67.95 | 81.00 | 9024640087000 |
| 0.3437 | 11/32 | 8.73 | 125.00 | 67.91 | 81.00 | 9024640087300 |
| 0.3465 | | 8.80 | 125.00 | 67.80 | 81.00 | 9024640088000 |
| 0.3480 | S | 8.84 | 125.00 | 67.74 | 81.00 | 9024640088400 |
| 0.3504 | | 8.90 | 125.00 | 67.65 | 81.00 | 9024640089000 |
| 0.3543 | | 9.00 | 125.00 | 67.50 | 81.00 | 9024640090000 |
| 0.3579 | T | 9.09 | 125.00 | 67.37 | 81.00 | 9024640090900 |
| 0.3583 | | 9.10 | 125.00 | 67.35 | 81.00 | 9024640091000 |
| 0.3594 | 23/64 | 9.13 | 125.00 | 67.31 | 81.00 | 9024640091300 |
| 0.3622 | | 9.20 | 125.00 | 67.20 | 81.00 | 9024640092000 |
| 0.3661 | | 9.30 | 125.00 | 67.05 | 81.00 | 9024640093000 |
| 0.3677 | U | 9.34 | 125.00 | 66.99 | 81.00 | 9024640093400 |
| 0.3701 | | 9.40 | 125.00 | 66.90 | 81.00 | 9024640094000 |
| 0.3740 | | 9.50 | 125.00 | 66.75 | 81.00 | 9024640095000 |
| 0.3748 | 3/8 | 9.52 | 133.00 | 72.72 | 87.00 | 9024640095200 |
| 0.3772 | V | 9.58 | 133.00 | 72.63 | 87.00 | 9024640095800 |
| 0.3780 | | 9.60 | 133.00 | 72.60 | 87.00 | 9024640096000 |
| 0.3819 | | 9.70 | 133.00 | 72.45 | 87.00 | 9024640097000 |
| 0.3858 | W | 9.80 | 133.00 | 72.30 | 87.00 | 9024640098000 |
| 0.3898 | | 9.90 | 133.00 | 72.15 | 87.00 | 9024640099000 |
| 0.3906 | 25/64 | 9.92 | 133.00 | 72.12 | 87.00 | 9024640099200 |
| 0.3937 | | 10.00 | 133.00 | 72.00 | 87.00 | 9024640100000 |
| 0.3969 | X | 10.08 | 133.00 | 71.88 | 87.00 | 9024640100800 |
| 0.4016 | | 10.20 | 133.00 | 71.70 | 87.00 | 9024640102000 |
| 0.4039 | Y | 10.26 | 133.00 | 71.61 | 87.00 | 9024640102600 |
| 0.4055 | | 10.30 | 133.00 | 71.55 | 87.00 | 9024640103000 |
| 0.4063 | 13/32 | 10.32 | 133.00 | 71.52 | 87.00 | 9024640103200 |
| 0.4130 | Z | 10.49 | 133.00 | 71.27 | 87.00 | 9024640104900 |
| 0.4134 | | 10.50 | 133.00 | 71.25 | 87.00 | 9024640105000 |
| 0.4220 | 27/64 | 10.72 | 142.00 | 77.92 | 94.00 | 9024640107200 |
| 0.4331 | | 11.00 | 142.00 | 77.50 | 94.00 | 9024640110000 |
| 0.4374 | 7/16 | 11.11 | 142.00 | 77.34 | 94.00 | 9024640111100 |
| 0.4528 | | 11.50 | 142.00 | 76.75 | 94.00 | 9024640115000 |
| 0.4531 | 29/64 | 11.51 | 142.00 | 76.74 | 94.00 | 9024640115100 |
| 0.4689 | 15/32 | 11.91 | 151.00 | 83.14 | 101.00 | 9024640119100 |
| 0.4724 | | 12.00 | 151.00 | 83.00 | 101.00 | 9024640120000 |
| 0.4843 | 31/64 | 12.30 | 151.00 | 82.55 | 101.00 | 9024640123000 |
| 0.5000 | 1/2 | 12.70 | 151.00 | 81.95 | 101.00 | 9024640127000 |

5xD Drills



Tool material **Solid Carbide**
Surface

- P** Steel ● web thinning $\geq \varnothing 3.17$ • relieved cone • wide flutes • especially for drilling depths > 3xD
 - M** Stainless steel
 - K** Cast iron ● grey cast iron • steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 558

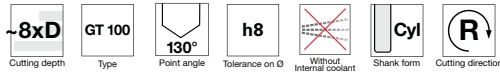
Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|-------------------------------|
| inch | wire/ltr | | | | | | |
| 0.1248 | 1/8 | 3.17 | 70.70 | 37.05 | 41.80 | 9026010031700 | |
| 0.1260 | | 3.20 | 70.70 | 37.00 | 41.80 | 9026010032000 | |
| 0.1283 | #30 | 3.26 | 70.70 | 36.91 | 41.80 | 9026010032600 | |
| 0.1299 | | 3.30 | 73.80 | 39.95 | 44.90 | 9026010033000 | |
| 0.1339 | | 3.40 | 73.80 | 39.80 | 44.90 | 9026010034000 | |
| 0.1358 | #29 | 3.45 | 73.80 | 39.73 | 44.90 | 9026010034500 | |
| 0.1378 | | 3.50 | 73.80 | 39.65 | 44.90 | 9026010035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 73.80 | 39.55 | 44.90 | 9026010035700 |
| 0.1441 | #27 | 3.66 | 76.90 | 43.31 | 48.80 | 9026010036600 | |
| 0.1469 | #26 | 3.73 | 76.90 | 43.21 | 48.80 | 9026010037300 | |
| 0.1496 | #25 | 3.80 | 76.90 | 43.10 | 48.80 | 9026010038000 | |
| 0.1520 | #24 | 3.86 | 80.00 | 46.11 | 51.90 | 9026010038600 | |
| 0.1539 | #23 | 3.91 | 80.00 | 46.04 | 51.90 | 9026010039100 | |
| 0.1563 | 5/32 | 3.97 | 80.00 | 45.95 | 51.90 | 9026010039700 | |
| 0.1571 | #22 | 3.99 | 80.00 | 45.92 | 51.90 | 9026010039900 | |
| 0.1575 | | 4.00 | 84.00 | 49.00 | 55.00 | 9026010040000 | |
| 0.1591 | #21 | 4.04 | 84.00 | 48.94 | 55.00 | 9026010040400 | |
| 0.1610 | #20 | 4.09 | 84.00 | 48.87 | 55.00 | 9026010040900 | |
| 0.1661 | #19 | 4.22 | 84.00 | 48.67 | 55.00 | 9026010042200 | |
| 0.1693 | #18 | 4.30 | 84.00 | 48.55 | 55.00 | 9026010043000 | |
| 0.1720 | 11/64 | 4.37 | 84.00 | 48.45 | 55.00 | 9026010043700 | |
| 0.1728 | #17 | 4.39 | 87.00 | 50.42 | 57.00 | 9026010043900 | |
| 0.1772 | #16 | 4.50 | 87.00 | 50.25 | 57.00 | 9026010045000 | |
| 0.1799 | #15 | 4.57 | 87.00 | 50.15 | 57.00 | 9026010045700 | |
| 0.1819 | #14 | 4.62 | 87.00 | 50.07 | 57.00 | 9026010046200 | |
| 0.1850 | #13 | 4.70 | 90.10 | 53.05 | 60.10 | 9026010047000 | |
| 0.1874 | 3/16 | 4.76 | 90.10 | 52.96 | 60.10 | 9026010047600 | |
| 0.1890 | #12 | 4.80 | 90.10 | 52.90 | 60.10 | 9026010048000 | |
| 0.1909 | #11 | 4.85 | 90.10 | 52.83 | 60.10 | 9026010048500 | |
| 0.1937 | #10 | 4.92 | 93.20 | 55.82 | 63.20 | 9026010049200 | |
| 0.1961 | #9 | 4.98 | 93.20 | 55.73 | 63.20 | 9026010049800 | |
| 0.1969 | | 5.00 | 93.20 | 55.70 | 63.20 | 9026010050000 | |
| 0.1992 | #8 | 5.06 | 93.20 | 55.61 | 63.20 | 9026010050600 | |
| 0.2012 | #7 | 5.11 | 93.20 | 55.54 | 63.20 | 9026010051100 | |
| 0.2031 | 13/64 | 5.16 | 93.20 | 55.46 | 63.20 | 9026010051600 | |
| 0.2039 | #6 | 5.18 | 96.30 | 57.43 | 65.20 | 9026010051800 | |
| 0.2055 | #5 | 5.22 | 96.30 | 57.37 | 65.20 | 9026010052200 | |
| 0.2091 | #4 | 5.31 | 96.30 | 57.24 | 65.20 | 9026010053100 | |
| 0.2130 | #3 | 5.41 | 96.30 | 57.09 | 65.20 | 9026010054100 | |
| 0.2165 | | 5.50 | 96.30 | 56.95 | 65.20 | 9026010055000 | |
| 0.2189 | 7/32 | 5.56 | 96.30 | 56.86 | 65.20 | 9026010055600 | |
| 0.2209 | #2 | 5.61 | 99.40 | 59.89 | 68.30 | 9026010056100 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2280 | #1 | 5.79 | 99.40 | 59.62 | 68.30 | 9026010057900 | |
| 0.2339 | A | 5.94 | 99.40 | 59.39 | 68.30 | 9026010059400 | |
| 0.2343 | 15/64 | 5.95 | 99.40 | 59.38 | 68.30 | 9026010059500 | |
| 0.2362 | | 6.00 | 103.40 | 62.40 | 71.40 | 9026010060000 | |
| 0.2378 | B | 6.04 | 103.40 | 62.34 | 71.40 | 9026010060400 | |
| 0.2421 | C | 6.15 | 103.40 | 62.18 | 71.40 | 9026010061500 | |
| 0.2461 | D | 6.25 | 103.40 | 62.03 | 71.40 | 9026010062500 | |
| 0.2500 | 1/4 | E | 6.35 | 103.40 | 61.88 | 71.40 | 9026010063500 |
| 0.2559 | | 6.50 | 106.60 | 64.85 | 74.60 | 9026010065000 | |
| 0.2571 | F | 6.53 | 106.60 | 64.81 | 74.60 | 9026010065300 | |
| 0.2610 | G | 6.63 | 106.60 | 64.66 | 74.60 | 9026010066300 | |
| 0.2657 | 17/64 | H | 6.75 | 106.60 | 64.48 | 74.60 | 9026010067500 |
| 0.2717 | I | 6.90 | 106.60 | 64.25 | 74.60 | 9026010069000 | |
| 0.2756 | | 7.00 | 106.60 | 64.10 | 74.60 | 9026010070000 | |
| 0.2768 | J | 7.03 | 106.60 | 64.06 | 74.60 | 9026010070300 | |
| 0.2811 | 9/32 | K | 7.14 | 109.70 | 65.99 | 76.70 | 9026010071400 |
| 0.2902 | L | 7.37 | 109.70 | 65.65 | 76.70 | 9026010073700 | |
| 0.2949 | M | 7.49 | 112.80 | 68.47 | 79.70 | 9026010074900 | |
| 0.2953 | | 7.50 | 112.80 | 68.45 | 79.70 | 9026010075000 | |
| 0.2969 | 19/64 | N | 7.54 | 112.80 | 68.39 | 79.70 | 9026010075400 |
| 0.3020 | | 7.67 | 112.80 | 68.20 | 79.70 | 9026010076700 | |
| 0.3126 | 5/16 | 7.94 | 115.90 | 70.89 | 82.80 | 9026010079400 | |
| 0.3150 | | 8.00 | 115.90 | 70.80 | 82.80 | 9026010080000 | |
| 0.3161 | O | 8.03 | 115.90 | 70.76 | 82.80 | 9026010080300 | |
| 0.3228 | P | 8.20 | 119.00 | 73.70 | 86.00 | 9026010082000 | |
| 0.3280 | 21/64 | 8.33 | 119.00 | 73.51 | 86.00 | 9026010083300 | |
| 0.3319 | Q | 8.43 | 123.10 | 76.46 | 89.10 | 9026010084300 | |
| 0.3346 | | 8.50 | 123.10 | 76.35 | 89.10 | 9026010085000 | |
| 0.3390 | R | 8.61 | 123.10 | 76.19 | 89.10 | 9026010086100 | |
| 0.3437 | 11/32 | 8.73 | 123.10 | 76.01 | 89.10 | 9026010087300 | |
| 0.3480 | S | 8.84 | 126.10 | 77.84 | 91.10 | 9026010088400 | |
| 0.3543 | | 9.00 | 126.10 | 77.60 | 91.10 | 9026010090000 | |
| 0.3579 | T | 9.09 | 126.10 | 77.47 | 91.10 | 9026010090900 | |
| 0.3594 | 23/64 | 9.13 | 126.10 | 77.41 | 91.10 | 9026010091300 | |
| 0.3677 | U | 9.34 | 129.20 | 80.19 | 94.20 | 9026010093400 | |
| 0.3740 | | 9.50 | 129.20 | 79.95 | 94.20 | 9026010095000 | |
| 0.3748 | 3/8 | 9.52 | 129.20 | 79.92 | 94.20 | 9026010095200 | |
| 0.3772 | V | 9.58 | 129.20 | 79.83 | 94.20 | 9026010095800 | |
| 0.3858 | W | 9.80 | 132.40 | 82.70 | 97.40 | 9026010098000 | |
| 0.3906 | 25/64 | 9.92 | 132.40 | 82.52 | 97.40 | 9026010099200 | |
| 0.3937 | | 10.00 | 132.40 | 82.40 | 97.40 | 9026010100000 | |
| 0.3969 | X | 10.08 | 132.40 | 82.28 | 97.40 | 9026010100800 | |

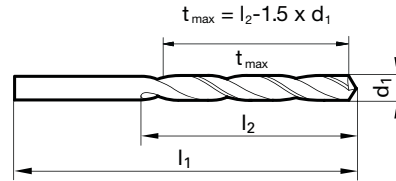
| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4039 | Y | 10.26 | 135.50 | 85.11 | 100.50 | 9026010102600 |
| 0.4063 | 13/32 | 10.32 | 135.50 | 85.02 | 100.50 | 9026010103200 |
| 0.4130 | Z | 10.49 | 135.50 | 84.77 | 100.50 | 9026010104900 |
| 0.4134 | | 10.50 | 135.50 | 84.75 | 100.50 | 9026010105000 |
| 0.4220 | 27/64 | 10.72 | 139.40 | 86.42 | 102.50 | 9026010107200 |
| 0.4331 | | 11.00 | 142.50 | 89.10 | 105.60 | 9026010110000 |
| 0.4374 | 7/16 | 11.11 | 142.50 | 88.94 | 105.60 | 9026010111100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4528 | | 11.50 | 145.60 | 91.45 | 108.70 | 9026010115000 |
| 0.4531 | 29/64 | 11.51 | 145.60 | 91.44 | 108.70 | 9026010115100 |
| 0.4689 | 15/32 | 11.91 | 148.80 | 94.84 | 112.70 | 9026010119100 |
| 0.4724 | | 12.00 | 151.90 | 95.90 | 113.90 | 9026010120000 |
| 0.4843 | 31/64 | 12.30 | 151.90 | 95.45 | 113.90 | 9026010123000 |
| 0.4921 | | 12.50 | 155.10 | 98.35 | 117.10 | 9026010125000 |
| 0.5000 | 1/2 | 12.70 | 155.10 | 98.05 | 117.10 | 9026010127000 |



Tool material **Solid Carbide**
Surface **S**

- P** Steel ● web thinning $\geq \varnothing 3.17$ • relieved cone • wide flutes • especially for drilling depths > 3xD
 - M** Stainless steel
 - K** Cast iron ● grey cast iron • steels up to 1000 N/mm² • Not recommended for: CrNi steels, stainless steels
 - N** Aluminum ●
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 559

Shank diameter = cut diameter

| Diameter (d ₁) | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | | |
|----------------------------|----------|----------------------|------------------------|----------------------|-------|-------------------------------|-------------------------------|
| inch | wire/ltr | | | | | | |
| 0.1248 | 1/8 | 3.17 | 70.70 | 37.05 | 41.80 | 9026020031700 | |
| 0.1260 | | 3.20 | 70.70 | 37.00 | 41.80 | 9026020032000 | |
| 0.1283 | #30 | 3.26 | 70.70 | 36.91 | 41.80 | 9026020032600 | |
| 0.1299 | | 3.30 | 73.80 | 39.95 | 44.90 | 9026020033000 | |
| 0.1339 | | 3.40 | 73.80 | 39.80 | 44.90 | 9026020034000 | |
| 0.1358 | #29 | 3.45 | 73.80 | 39.73 | 44.90 | 9026020034500 | |
| 0.1378 | | 3.50 | 73.80 | 39.65 | 44.90 | 9026020035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 73.80 | 39.55 | 44.90 | 9026020035700 |
| 0.1441 | #27 | 3.66 | 76.90 | 43.31 | 48.80 | 9026020036600 | |
| 0.1469 | #26 | 3.73 | 76.90 | 43.21 | 48.80 | 9026020037300 | |
| 0.1496 | #25 | 3.80 | 76.90 | 43.10 | 48.80 | 9026020038000 | |
| 0.1520 | #24 | 3.86 | 80.00 | 46.11 | 51.90 | 9026020038600 | |
| 0.1539 | #23 | 3.91 | 80.00 | 46.04 | 51.90 | 9026020039100 | |
| 0.1563 | 5/32 | 3.97 | 80.00 | 45.95 | 51.90 | 9026020039700 | |
| 0.1571 | #22 | 3.99 | 80.00 | 45.92 | 51.90 | 9026020039900 | |
| 0.1575 | | 4.00 | 84.00 | 49.00 | 55.00 | 9026020040000 | |
| 0.1591 | #21 | 4.04 | 84.00 | 48.94 | 55.00 | 9026020040400 | |
| 0.1610 | #20 | 4.09 | 84.00 | 48.87 | 55.00 | 9026020040900 | |
| 0.1661 | #19 | 4.22 | 84.00 | 48.67 | 55.00 | 9026020042200 | |
| 0.1693 | #18 | 4.30 | 84.00 | 48.55 | 55.00 | 9026020043000 | |
| 0.1720 | 11/64 | 4.37 | 84.00 | 48.45 | 55.00 | 9026020043700 | |
| 0.1728 | #17 | 4.39 | 87.00 | 50.42 | 57.00 | 9026020043900 | |
| 0.1772 | #16 | 4.50 | 87.00 | 50.25 | 57.00 | 9026020045000 | |
| 0.1799 | #15 | 4.57 | 87.00 | 50.15 | 57.00 | 9026020045700 | |
| 0.1819 | #14 | 4.62 | 87.00 | 50.07 | 57.00 | 9026020046200 | |
| 0.1850 | #13 | 4.70 | 90.10 | 53.05 | 60.10 | 9026020047000 | |
| 0.1874 | 3/16 | 4.76 | 90.10 | 52.96 | 60.10 | 9026020047600 | |
| 0.1890 | #12 | 4.80 | 90.10 | 52.90 | 60.10 | 9026020048000 | |
| 0.1909 | #11 | 4.85 | 90.10 | 52.83 | 60.10 | 9026020048500 | |
| 0.1937 | #10 | 4.92 | 93.20 | 55.82 | 63.20 | 9026020049200 | |
| 0.1961 | #9 | 4.98 | 93.20 | 55.73 | 63.20 | 9026020049800 | |
| 0.1969 | | 5.00 | 93.20 | 55.70 | 63.20 | 9026020050000 | |
| 0.1992 | #8 | 5.06 | 93.20 | 55.61 | 63.20 | 9026020050600 | |
| 0.2012 | #7 | 5.11 | 93.20 | 55.54 | 63.20 | 9026020051100 | |
| 0.2031 | 13/64 | 5.16 | 93.20 | 55.46 | 63.20 | 9026020051600 | |
| 0.2039 | #6 | 5.18 | 96.30 | 57.43 | 65.20 | 9026020051800 | |
| 0.2055 | #5 | 5.22 | 96.30 | 57.37 | 65.20 | 9026020052200 | |
| 0.2091 | #4 | 5.31 | 96.30 | 57.24 | 65.20 | 9026020053100 | |
| 0.2130 | #3 | 5.41 | 96.30 | 57.09 | 65.20 | 9026020054100 | |
| 0.2165 | | 5.50 | 96.30 | 56.95 | 65.20 | 9026020055000 | |
| 0.2189 | 7/32 | 5.56 | 96.30 | 56.86 | 65.20 | 9026020055600 | |
| 0.2209 | #2 | 5.61 | 99.40 | 59.89 | 68.30 | 9026020056100 | |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # | |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2280 | #1 | 5.79 | 99.40 | 59.62 | 68.30 | 9026020057900 | |
| 0.2339 | A | 5.94 | 99.40 | 59.39 | 68.30 | 9026020059400 | |
| 0.2343 | 15/64 | 5.95 | 99.40 | 59.38 | 68.30 | 9026020059500 | |
| 0.2362 | | 6.00 | 103.40 | 62.40 | 71.40 | 9026020060000 | |
| 0.2378 | B | 6.04 | 103.40 | 62.34 | 71.40 | 9026020060400 | |
| 0.2421 | C | 6.15 | 103.40 | 62.18 | 71.40 | 9026020061500 | |
| 0.2461 | D | 6.25 | 103.40 | 62.03 | 71.40 | 9026020062500 | |
| 0.2500 | 1/4 | E | 6.35 | 103.40 | 61.88 | 71.40 | 9026020063500 |
| 0.2559 | | 6.50 | 106.60 | 64.85 | 74.60 | 9026020065000 | |
| 0.2571 | F | 6.53 | 106.60 | 64.81 | 74.60 | 9026020065300 | |
| 0.2610 | G | 6.63 | 106.60 | 64.66 | 74.60 | 9026020066300 | |
| 0.2657 | 17/64 | H | 6.75 | 106.60 | 64.48 | 74.60 | 9026020067500 |
| 0.2717 | I | 6.90 | 106.60 | 64.25 | 74.60 | 9026020069000 | |
| 0.2756 | | 7.00 | 106.60 | 64.10 | 74.60 | 9026020070000 | |
| 0.2768 | J | 7.03 | 106.60 | 64.06 | 74.60 | 9026020070300 | |
| 0.2811 | 9/32 | K | 7.14 | 109.70 | 65.99 | 76.70 | 9026020071400 |
| 0.2902 | L | 7.37 | 109.70 | 65.65 | 76.70 | 9026020073700 | |
| 0.2949 | M | 7.49 | 112.80 | 68.47 | 79.70 | 9026020074900 | |
| 0.2953 | | 7.50 | 112.80 | 68.45 | 79.70 | 9026020075000 | |
| 0.2969 | 19/64 | 7.54 | 112.80 | 68.39 | 79.70 | 9026020075400 | |
| 0.3020 | N | 7.67 | 112.80 | 68.20 | 79.70 | 9026020076700 | |
| 0.3126 | 5/16 | 7.94 | 115.90 | 70.89 | 82.80 | 9026020079400 | |
| 0.3150 | | 8.00 | 115.90 | 70.80 | 82.80 | 9026020080000 | |
| 0.3161 | O | 8.03 | 115.90 | 70.76 | 82.80 | 9026020080300 | |
| 0.3228 | P | 8.20 | 119.00 | 73.70 | 86.00 | 9026020082000 | |
| 0.3280 | 21/64 | 8.33 | 119.00 | 73.51 | 86.00 | 9026020083300 | |
| 0.3319 | Q | 8.43 | 123.10 | 76.46 | 89.10 | 9026020084300 | |
| 0.3346 | | 8.50 | 123.10 | 76.35 | 89.10 | 9026020085000 | |
| 0.3390 | R | 8.61 | 123.10 | 76.19 | 89.10 | 9026020086100 | |
| 0.3437 | 11/32 | 8.73 | 123.10 | 76.01 | 89.10 | 9026020087300 | |
| 0.3480 | S | 8.84 | 126.10 | 77.84 | 91.10 | 9026020088400 | |
| 0.3543 | | 9.00 | 126.10 | 77.60 | 91.10 | 9026020090000 | |
| 0.3579 | T | 9.09 | 126.10 | 77.47 | 91.10 | 9026020090900 | |
| 0.3594 | 23/64 | 9.13 | 126.10 | 77.41 | 91.10 | 9026020091300 | |
| 0.3677 | U | 9.34 | 129.20 | 80.19 | 94.20 | 9026020093400 | |
| 0.3740 | | 9.50 | 129.20 | 79.95 | 94.20 | 9026020095000 | |
| 0.3748 | 3/8 | 9.52 | 129.20 | 79.92 | 94.20 | 9026020095200 | |
| 0.3772 | V | 9.58 | 129.20 | 79.83 | 94.20 | 9026020095800 | |
| 0.3858 | W | 9.80 | 132.40 | 82.70 | 97.40 | 9026020098000 | |
| 0.3906 | 25/64 | 9.92 | 132.40 | 82.52 | 97.40 | 9026020099200 | |
| 0.3937 | | 10.00 | 132.40 | 82.40 | 97.40 | 9026020100000 | |
| 0.3969 | X | 10.08 | 132.40 | 82.28 | 97.40 | 9026020100800 | |

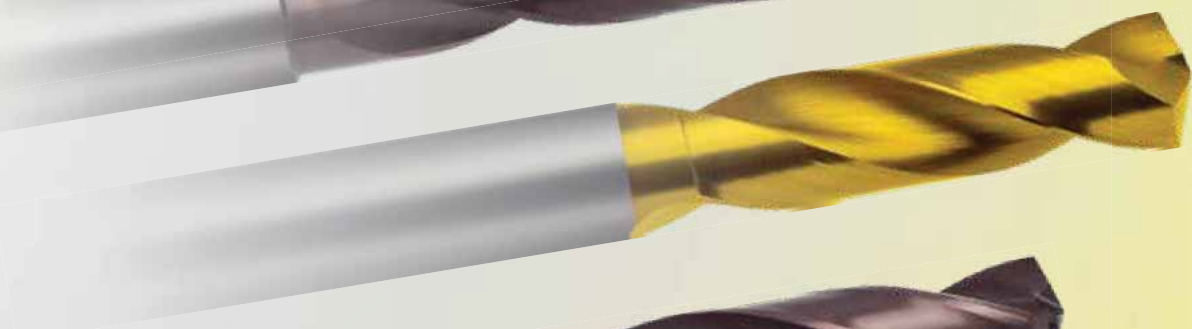
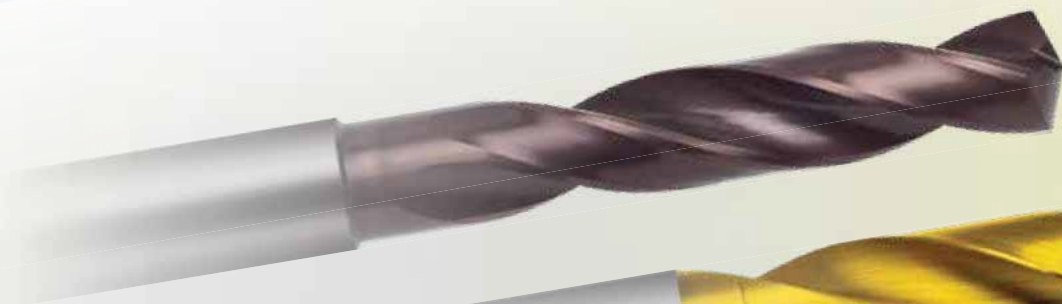
5xD Drills

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4039 | Y | 10.26 | 135.50 | 85.11 | 100.50 | 9026020102600 |
| 0.4063 | 13/32 | 10.32 | 135.50 | 85.02 | 100.50 | 9026020103200 |
| 0.4130 | Z | 10.49 | 135.50 | 84.77 | 100.50 | 9026020104900 |
| 0.4134 | | 10.50 | 135.50 | 84.75 | 100.50 | 9026020105000 |
| 0.4220 | 27/64 | 10.72 | 139.40 | 86.42 | 102.50 | 9026020107200 |
| 0.4331 | | 11.00 | 142.50 | 89.10 | 105.60 | 9026020110000 |
| 0.4374 | 7/16 | 11.11 | 142.50 | 88.94 | 105.60 | 9026020111100 |

| Diameter (d ₁) | | | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4528 | | 11.50 | 145.60 | 91.45 | 108.70 | 9026020115000 |
| 0.4531 | 29/64 | 11.51 | 145.60 | 91.44 | 108.70 | 9026020115100 |
| 0.4689 | 15/32 | 11.91 | 148.80 | 94.84 | 112.70 | 9026020119100 |
| 0.4724 | | 12.00 | 151.90 | 95.90 | 113.90 | 9026020120000 |
| 0.4843 | 31/64 | 12.30 | 151.90 | 95.45 | 113.90 | 9026020123000 |
| 0.4921 | | 12.50 | 155.10 | 98.35 | 117.10 | 9026020125000 |
| 0.5000 | 1/2 | 12.70 | 155.10 | 98.05 | 117.10 | 9026020127000 |



3xD CARBIDE RATIO DRILLS





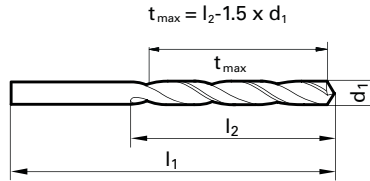
Tool material

Solid Carbide

Surface



- | | | | |
|----------|-----------------|---|--|
| P | Steel | ○ | web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge form concave • optimized cutting geometry • sharp cutting edges |
| M | Stainless steel | ● | |
| K | Cast iron | ○ | stainless/acid-/heat-resistant steels • Inconel, Hastelloy, Monel • brass, bronzes • aluminum and Al-alloys • magnesium and magnesium alloys • Titanium and Titanium alloys • sintered powder metals • high-alloyed steels |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 555

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | t _{max} mm | l2 mm | EDP # | | |
|---------------|----------------|----------|------------------------|----------|-------|---------------|---------------|
| inch | wire/ltr mm | | | | | | |
| 0.1181 | | 3.00 | 46.00 | 11.50 | 16.00 | 9017020030000 | |
| 0.1220 | | 3.10 | 49.00 | 13.35 | 18.00 | 9017020031000 | |
| 0.1248 | 1/8 | 3.17 | 49.00 | 13.25 | 18.00 | 9017020031700 | |
| 0.1260 | | 3.20 | 49.00 | 13.20 | 18.00 | 9017020032000 | |
| 0.1299 | | 3.30 | 49.00 | 13.05 | 18.00 | 9017020033000 | |
| 0.1339 | | 3.40 | 52.00 | 14.90 | 20.00 | 9017020034000 | |
| 0.1378 | | 3.50 | 52.00 | 14.75 | 20.00 | 9017020035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 52.00 | 14.65 | 20.00 | 9017020035700 |
| 0.1417 | | 3.60 | 52.00 | 14.60 | 20.00 | 9017020036000 | |
| 0.1457 | | 3.70 | 52.00 | 14.45 | 20.00 | 9017020037000 | |
| 0.1496 | | #25 | 3.80 | 55.00 | 16.30 | 22.00 | 9017020038000 |
| 0.1535 | | 3.90 | 55.00 | 16.15 | 22.00 | 9017020039000 | |
| 0.1563 | 5/32 | 3.97 | 55.00 | 16.05 | 22.00 | 9017020039700 | |
| 0.1575 | | 4.00 | 55.00 | 16.00 | 22.00 | 9017020040000 | |
| 0.1614 | | 4.10 | 55.00 | 15.85 | 22.00 | 9017020041000 | |
| 0.1654 | | 4.20 | 55.00 | 15.70 | 22.00 | 9017020042000 | |
| 0.1693 | | #18 | 4.30 | 58.00 | 17.55 | 24.00 | 9017020043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 17.45 | 24.00 | 9017020043700 | |
| 0.1732 | | 4.40 | 58.00 | 17.40 | 24.00 | 9017020044000 | |
| 0.1772 | | #16 | 4.50 | 58.00 | 17.25 | 24.00 | 9017020045000 |
| 0.1811 | | 4.60 | 58.00 | 17.10 | 24.00 | 9017020046000 | |
| 0.1850 | | #13 | 4.70 | 58.00 | 16.95 | 24.00 | 9017020047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 18.86 | 26.00 | 9017020047600 | |
| 0.1890 | | #12 | 4.80 | 62.00 | 18.80 | 26.00 | 9017020048000 |
| 0.1929 | | 4.90 | 62.00 | 18.65 | 26.00 | 9017020049000 | |
| 0.1969 | | 5.00 | 62.00 | 18.50 | 26.00 | 9017020050000 | |
| 0.2008 | | 5.10 | 62.00 | 18.35 | 26.00 | 9017020051000 | |
| 0.2031 | 13/64 | 5.16 | 62.00 | 18.26 | 26.00 | 9017020051600 | |
| 0.2047 | | 5.20 | 62.00 | 18.20 | 26.00 | 9017020052000 | |
| 0.2087 | | 5.30 | 62.00 | 18.05 | 26.00 | 9017020053000 | |
| 0.2126 | | 5.40 | 66.00 | 19.90 | 28.00 | 9017020054000 | |
| 0.2165 | | 5.50 | 66.00 | 19.75 | 28.00 | 9017020055000 | |
| 0.2189 | 7/32 | 5.56 | 66.00 | 19.66 | 28.00 | 9017020055600 | |
| 0.2205 | | 5.60 | 66.00 | 19.60 | 28.00 | 9017020056000 | |
| 0.2244 | | 5.70 | 66.00 | 19.45 | 28.00 | 9017020057000 | |
| 0.2283 | | 5.80 | 66.00 | 19.30 | 28.00 | 9017020058000 | |
| 0.2323 | | 5.90 | 66.00 | 19.15 | 28.00 | 9017020059000 | |
| 0.2343 | 15/64 | 5.95 | 66.00 | 19.08 | 28.00 | 9017020059500 | |
| 0.2362 | | 6.00 | 66.00 | 19.00 | 28.00 | 9017020060000 | |
| 0.2402 | | 6.10 | 70.00 | 21.85 | 31.00 | 9017020061000 | |
| 0.2441 | | 6.20 | 70.00 | 21.70 | 31.00 | 9017020062000 | |
| 0.2480 | | 6.30 | 70.00 | 21.55 | 31.00 | 9017020063000 | |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------------|----|----------|------------------------|----------|-------|---------------|
| inch | wire/ltr mm | mm | | | | | |
| 0.2500 | 1/4 | E | 6.35 | 70.00 | 21.48 | 31.00 | 9017020063500 |
| 0.2520 | | | 6.40 | 70.00 | 21.40 | 31.00 | 9017020064000 |
| 0.2559 | | | 6.50 | 70.00 | 21.25 | 31.00 | 9017020065000 |
| 0.2598 | | | 6.60 | 70.00 | 21.10 | 31.00 | 9017020066000 |
| 0.2638 | | | 6.70 | 70.00 | 20.95 | 31.00 | 9017020067000 |
| 0.2657 | 17/64 | H | 6.75 | 74.00 | 23.88 | 34.00 | 9017020067500 |
| 0.2677 | | | 6.80 | 74.00 | 23.80 | 34.00 | 9017020068000 |
| 0.2717 | | I | 6.90 | 74.00 | 23.65 | 34.00 | 9017020069000 |
| 0.2756 | | | 7.00 | 74.00 | 23.50 | 34.00 | 9017020070000 |
| 0.2795 | | | 7.10 | 74.00 | 23.35 | 34.00 | 9017020071000 |
| 0.2811 | 9/32 | K | 7.14 | 74.00 | 23.29 | 34.00 | 9017020071400 |
| 0.2835 | | | 7.20 | 74.00 | 23.20 | 34.00 | 9017020072000 |
| 0.2874 | | | 7.30 | 74.00 | 23.05 | 34.00 | 9017020073000 |
| 0.2913 | | | 7.40 | 74.00 | 22.90 | 34.00 | 9017020074000 |
| 0.2953 | | | 7.50 | 74.00 | 22.75 | 34.00 | 9017020075000 |
| 0.2969 | 19/64 | | 7.54 | 79.00 | 25.69 | 37.00 | 9017020075400 |
| 0.2992 | | | 7.60 | 79.00 | 25.60 | 37.00 | 9017020076000 |
| 0.3031 | | | 7.70 | 79.00 | 25.45 | 37.00 | 9017020077000 |
| 0.3071 | | | 7.80 | 79.00 | 25.30 | 37.00 | 9017020078000 |
| 0.3110 | | | 7.90 | 79.00 | 25.15 | 37.00 | 9017020079000 |
| 0.3126 | 5/16 | | 7.94 | 79.00 | 25.09 | 37.00 | 9017020079400 |
| 0.3150 | | | 8.00 | 79.00 | 25.00 | 37.00 | 9017020080000 |
| 0.3189 | | | 8.10 | 79.00 | 24.85 | 37.00 | 9017020081000 |
| 0.3228 | | P | 8.20 | 79.00 | 24.70 | 37.00 | 9017020082000 |
| 0.3268 | | | 8.30 | 79.00 | 24.55 | 37.00 | 9017020083000 |
| 0.3280 | 21/64 | | 8.33 | 79.00 | 24.51 | 37.00 | 9017020083300 |
| 0.3307 | | | 8.40 | 79.00 | 24.40 | 37.00 | 9017020084000 |
| 0.3346 | | | 8.50 | 79.00 | 24.25 | 37.00 | 9017020085000 |
| 0.3386 | | | 8.60 | 84.00 | 27.10 | 40.00 | 9017020086000 |
| 0.3425 | | | 8.70 | 84.00 | 26.95 | 40.00 | 9017020087000 |
| 0.3437 | 11/32 | | 8.73 | 84.00 | 26.91 | 40.00 | 9017020087300 |
| 0.3465 | | | 8.80 | 84.00 | 26.80 | 40.00 | 9017020088000 |
| 0.3504 | | | 8.90 | 84.00 | 26.65 | 40.00 | 9017020089000 |
| 0.3543 | | | 9.00 | 84.00 | 26.50 | 40.00 | 9017020090000 |
| 0.3583 | | | 9.10 | 84.00 | 26.35 | 40.00 | 9017020091000 |
| 0.3594 | 23/64 | | 9.13 | 84.00 | 26.31 | 40.00 | 9017020091300 |
| 0.3622 | | | 9.20 | 84.00 | 26.20 | 40.00 | 9017020092000 |
| 0.3661 | | | 9.30 | 84.00 | 26.05 | 40.00 | 9017020093000 |
| 0.3701 | | | 9.40 | 84.00 | 25.90 | 40.00 | 9017020094000 |
| 0.3740 | | | 9.50 | 84.00 | 25.75 | 40.00 | 9017020095000 |
| 0.3748 | 3/8 | | 9.52 | 89.00 | 28.72 | 43.00 | 9017020095200 |
| 0.3780 | | | 9.60 | 89.00 | 28.60 | 43.00 | 9017020096000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|----------------------|
| inch | wire/ltr | mm | | | | |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9017020097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9017020098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9017020099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9017020099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9017020100000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9017020102000 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9017020103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9017020103200 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9017020105000 |
| 0.4213 | | 10.70 | 95.00 | 30.95 | 47.00 | 9017020107000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9017020107200 |
| 0.4252 | | 10.80 | 95.00 | 30.80 | 47.00 | 9017020108000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9017020110000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9017020111100 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|----------------------|
| inch | wire/ltr | mm | | | | |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9017020115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9017020115100 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9017020118000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9017020119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9017020120000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 32.55 | 51.00 | 9017020123000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9017020125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9017020127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9017020130000 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9017020135000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9017020140000 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9017020145000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9017020150000 |

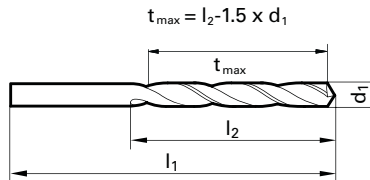


Tool material **Solid Carbide**

Surface



- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | web thinning $\geq \varnothing 3.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm ² • cast materials • bronze, brass • high-alloyed AlSi-alloys |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 553

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1181 | 3.00 | 46.00 | 11.50 | 16.00 | 9012420030000 |
| 0.1220 | 3.10 | 49.00 | 13.35 | 18.00 | 9012420031000 |
| 0.1248 | 1/8 3.17 | 49.00 | 13.25 | 18.00 | 9012420031700 |
| 0.1260 | 3.20 | 49.00 | 13.20 | 18.00 | 9012420032000 |
| 0.1299 | 3.30 | 49.00 | 13.05 | 18.00 | 9012420033000 |
| 0.1339 | 3.40 | 52.00 | 14.90 | 20.00 | 9012420034000 |
| 0.1378 | 3.50 | 52.00 | 14.75 | 20.00 | 9012420035000 |
| 0.1406 | 9/64 #28 3.57 | 52.00 | 14.65 | 20.00 | 9012420035700 |
| 0.1417 | 3.60 | 52.00 | 14.60 | 20.00 | 9012420036000 |
| 0.1457 | 3.70 | 52.00 | 14.45 | 20.00 | 9012420037000 |
| 0.1496 | #25 3.80 | 55.00 | 16.30 | 22.00 | 9012420038000 |
| 0.1535 | 3.90 | 55.00 | 16.15 | 22.00 | 9012420039000 |
| 0.1563 | 5/32 3.97 | 55.00 | 16.05 | 22.00 | 9012420039700 |
| 0.1575 | 4.00 | 55.00 | 16.00 | 22.00 | 9012420040000 |
| 0.1614 | 4.10 | 55.00 | 15.85 | 22.00 | 9012420041000 |
| 0.1654 | 4.20 | 55.00 | 15.70 | 22.00 | 9012420042000 |
| 0.1693 | #18 4.30 | 58.00 | 17.55 | 24.00 | 9012420043000 |
| 0.1720 | 11/64 4.37 | 58.00 | 17.45 | 24.00 | 9012420043700 |
| 0.1732 | 4.40 | 58.00 | 17.40 | 24.00 | 9012420044000 |
| 0.1772 | #16 4.50 | 58.00 | 17.25 | 24.00 | 9012420045000 |
| 0.1811 | 4.60 | 58.00 | 17.10 | 24.00 | 9012420046000 |
| 0.1850 | #13 4.70 | 58.00 | 16.95 | 24.00 | 9012420047000 |
| 0.1874 | 3/16 4.76 | 62.00 | 18.86 | 26.00 | 9012420047600 |
| 0.1890 | #12 4.80 | 62.00 | 18.80 | 26.00 | 9012420048000 |
| 0.1929 | 4.90 | 62.00 | 18.65 | 26.00 | 9012420049000 |
| 0.1969 | 5.00 | 62.00 | 18.50 | 26.00 | 9012420050000 |
| 0.2008 | 5.10 | 62.00 | 18.35 | 26.00 | 9012420051000 |
| 0.2031 | 13/64 5.16 | 62.00 | 18.26 | 26.00 | 9012420051600 |
| 0.2047 | 5.20 | 62.00 | 18.20 | 26.00 | 9012420052000 |
| 0.2087 | 5.30 | 62.00 | 18.05 | 26.00 | 9012420053000 |
| 0.2126 | 5.40 | 66.00 | 19.90 | 28.00 | 9012420054000 |
| 0.2165 | 5.50 | 66.00 | 19.75 | 28.00 | 9012420055000 |
| 0.2189 | 7/32 5.56 | 66.00 | 19.66 | 28.00 | 9012420055600 |
| 0.2205 | 5.60 | 66.00 | 19.60 | 28.00 | 9012420056000 |
| 0.2244 | 5.70 | 66.00 | 19.45 | 28.00 | 9012420057000 |
| 0.2283 | 5.80 | 66.00 | 19.30 | 28.00 | 9012420058000 |
| 0.2323 | 5.90 | 66.00 | 19.15 | 28.00 | 9012420059000 |
| 0.2343 | 15/64 5.95 | 66.00 | 19.08 | 28.00 | 9012420059500 |
| 0.2362 | 6.00 | 66.00 | 19.00 | 28.00 | 9012420060000 |
| 0.2402 | 6.10 | 70.00 | 21.85 | 31.00 | 9012420061000 |
| 0.2441 | 6.20 | 70.00 | 21.70 | 31.00 | 9012420062000 |
| 0.2480 | 6.30 | 70.00 | 21.55 | 31.00 | 9012420063000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 21.48 | 31.00 | 9012420063500 |
| 0.2520 | 6.40 | 70.00 | 21.40 | 31.00 | 9012420064000 | |
| 0.2559 | 6.50 | 70.00 | 21.25 | 31.00 | 9012420065000 | |
| 0.2598 | 6.60 | 70.00 | 21.10 | 31.00 | 9012420066000 | |
| 0.2638 | 6.70 | 70.00 | 20.95 | 31.00 | 9012420067000 | |
| 0.2657 | 17/64 H | 6.75 | 74.00 | 23.88 | 34.00 | 9012420067500 |
| 0.2677 | 6.80 | 74.00 | 23.80 | 34.00 | 9012420068000 | |
| 0.2717 | I | 6.90 | 74.00 | 23.65 | 34.00 | 9012420069000 |
| 0.2756 | 7.00 | 74.00 | 23.50 | 34.00 | 9012420070000 | |
| 0.2795 | 7.10 | 74.00 | 23.35 | 34.00 | 9012420071000 | |
| 0.2811 | 9/32 K | 7.14 | 74.00 | 23.29 | 34.00 | 9012420071400 |
| 0.2835 | 7.20 | 74.00 | 23.20 | 34.00 | 9012420072000 | |
| 0.2874 | 7.30 | 74.00 | 23.05 | 34.00 | 9012420073000 | |
| 0.2913 | 7.40 | 74.00 | 22.90 | 34.00 | 9012420074000 | |
| 0.2953 | 7.50 | 74.00 | 22.75 | 34.00 | 9012420075000 | |
| 0.2969 | 19/64 | 7.54 | 79.00 | 25.69 | 37.00 | 9012420075400 |
| 0.2992 | 7.60 | 79.00 | 25.60 | 37.00 | 9012420076000 | |
| 0.3031 | 7.70 | 79.00 | 25.45 | 37.00 | 9012420077000 | |
| 0.3071 | 7.80 | 79.00 | 25.30 | 37.00 | 9012420078000 | |
| 0.3110 | 7.90 | 79.00 | 25.15 | 37.00 | 9012420079000 | |
| 0.3126 | 5/16 | 7.94 | 79.00 | 25.09 | 37.00 | 9012420079400 |
| 0.3150 | 8.00 | 79.00 | 25.00 | 37.00 | 9012420080000 | |
| 0.3189 | 8.10 | 79.00 | 24.85 | 37.00 | 9012420081000 | |
| 0.3228 | P | 8.20 | 79.00 | 24.70 | 37.00 | 9012420082000 |
| 0.3268 | 8.30 | 79.00 | 24.55 | 37.00 | 9012420083000 | |
| 0.3280 | 21/64 | 8.33 | 79.00 | 24.51 | 37.00 | 9012420083300 |
| 0.3307 | 8.40 | 79.00 | 24.40 | 37.00 | 9012420084000 | |
| 0.3346 | 8.50 | 79.00 | 24.25 | 37.00 | 9012420085000 | |
| 0.3386 | 8.60 | 84.00 | 27.10 | 40.00 | 9012420086000 | |
| 0.3425 | 8.70 | 84.00 | 26.95 | 40.00 | 9012420087000 | |
| 0.3437 | 11/32 | 8.73 | 84.00 | 26.91 | 40.00 | 9012420087300 |
| 0.3465 | 8.80 | 84.00 | 26.80 | 40.00 | 9012420088000 | |
| 0.3504 | 8.90 | 84.00 | 26.65 | 40.00 | 9012420089000 | |
| 0.3543 | 9.00 | 84.00 | 26.50 | 40.00 | 9012420090000 | |
| 0.3583 | 9.10 | 84.00 | 26.35 | 40.00 | 9012420091000 | |
| 0.3594 | 23/64 | 9.13 | 84.00 | 26.31 | 40.00 | 9012420091300 |
| 0.3622 | 9.20 | 84.00 | 26.20 | 40.00 | 9012420092000 | |
| 0.3661 | 9.30 | 84.00 | 26.05 | 40.00 | 9012420093000 | |
| 0.3701 | 9.40 | 84.00 | 25.90 | 40.00 | 9012420094000 | |
| 0.3740 | 9.50 | 84.00 | 25.75 | 40.00 | 9012420095000 | |
| 0.3748 | 3/8 | 9.52 | 89.00 | 28.72 | 43.00 | 9012420095200 |
| 0.3780 | 9.60 | 89.00 | 28.60 | 43.00 | 9012420096000 | |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3819 | | 9.70 | 89.00 | 28.45 | 43.00 | 9012420097000 |
| 0.3858 | W | 9.80 | 89.00 | 28.30 | 43.00 | 9012420098000 |
| 0.3898 | | 9.90 | 89.00 | 28.15 | 43.00 | 9012420099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 28.12 | 43.00 | 9012420099200 |
| 0.3937 | | 10.00 | 89.00 | 28.00 | 43.00 | 9012420100000 |
| 0.3976 | | 10.10 | 89.00 | 27.85 | 43.00 | 9012420101000 |
| 0.4016 | | 10.20 | 89.00 | 27.70 | 43.00 | 9012420102000 |
| 0.4055 | | 10.30 | 89.00 | 27.55 | 43.00 | 9012420103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 27.52 | 43.00 | 9012420103200 |
| 0.4094 | | 10.40 | 89.00 | 27.40 | 43.00 | 9012420104000 |
| 0.4134 | | 10.50 | 89.00 | 27.25 | 43.00 | 9012420105000 |
| 0.4173 | | 10.60 | 89.00 | 27.10 | 43.00 | 9012420106000 |
| 0.4213 | | 10.70 | 95.00 | 30.95 | 47.00 | 9012420107000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 30.92 | 47.00 | 9012420107200 |
| 0.4252 | | 10.80 | 95.00 | 30.80 | 47.00 | 9012420108000 |
| 0.4291 | | 10.90 | 95.00 | 30.65 | 47.00 | 9012420109000 |
| 0.4331 | | 11.00 | 95.00 | 30.50 | 47.00 | 9012420110000 |
| 0.4370 | | 11.10 | 95.00 | 30.35 | 47.00 | 9012420111000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 30.34 | 47.00 | 9012420111100 |
| 0.4409 | | 11.20 | 95.00 | 30.20 | 47.00 | 9012420112000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4449 | | 11.30 | 95.00 | 30.05 | 47.00 | 9012420113000 |
| 0.4488 | | 11.40 | 95.00 | 29.90 | 47.00 | 9012420114000 |
| 0.4528 | | 11.50 | 95.00 | 29.75 | 47.00 | 9012420115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 29.74 | 47.00 | 9012420115100 |
| 0.4567 | | 11.60 | 95.00 | 29.60 | 47.00 | 9012420116000 |
| 0.4606 | | 11.70 | 95.00 | 29.45 | 47.00 | 9012420117000 |
| 0.4646 | | 11.80 | 95.00 | 29.30 | 47.00 | 9012420118000 |
| 0.4685 | | 11.90 | 102.00 | 33.15 | 51.00 | 9012420119000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 33.14 | 51.00 | 9012420119100 |
| 0.4724 | | 12.00 | 102.00 | 33.00 | 51.00 | 9012420120000 |
| 0.4921 | | 12.50 | 102.00 | 32.25 | 51.00 | 9012420125000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 31.95 | 51.00 | 9012420127000 |
| 0.5118 | | 13.00 | 102.00 | 31.50 | 51.00 | 9012420130000 |
| 0.5315 | | 13.50 | 107.00 | 33.75 | 54.00 | 9012420135000 |
| 0.5512 | | 14.00 | 107.00 | 33.00 | 54.00 | 9012420140000 |
| 0.5709 | | 14.50 | 111.00 | 34.25 | 56.00 | 9012420145000 |
| 0.5906 | | 15.00 | 111.00 | 33.50 | 56.00 | 9012420150000 |
| 0.6102 | | 15.50 | 115.00 | 34.75 | 58.00 | 9012420155000 |
| 0.6299 | | 16.00 | 115.00 | 34.00 | 58.00 | 9012420160000 |



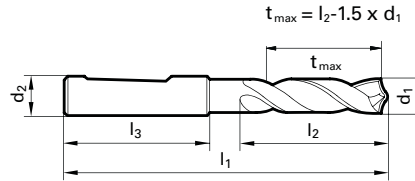
Tool material

Solid Carbide

Surface



- P** Steel ● web thinning $\geq \varnothing 3.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • cast materials • bronze, brass
 - N** Aluminum ○ • high-alloyed AlSi-alloys
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 551

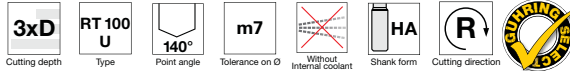
3xD Drills

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9011840030000 | |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9011840031000 | |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9011840031700 | |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9011840032000 | |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9011840033000 | |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9011840034000 | |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9011840035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9011840035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9011840036000 | |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9011840037000 | |
| 0.1496 | | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9011840038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9011840039000 | |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9011840039700 | |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9011840040000 | |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9011840041000 | |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9011840042000 | |
| 0.1693 | #18 | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9011840043000 | |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9011840043700 | |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9011840044000 | |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9011840045000 | |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9011840046000 | |
| 0.1850 | #13 | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9011840047000 | |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9011840047600 | |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9011840048000 | |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9011840049000 | |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9011840050000 | |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9011840051000 | |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9011840051600 | |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9011840052000 | |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9011840053000 | |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9011840054000 | |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9011840055000 | |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9011840055600 | |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9011840056000 | |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9011840057000 | |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9011840058000 | |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9011840059000 | |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9011840059500 | |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9011840060000 | |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9011840061000 | |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9011840062000 | |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9011840063000 | |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|----|------|-------|------------------|-------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9011840063500 |
| 0.2520 | | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9011840064000 |
| 0.2559 | | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9011840065000 |
| 0.2598 | | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9011840066000 |
| 0.2638 | | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9011840067000 |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9011840067500 |
| 0.2677 | | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9011840068000 |
| 0.2717 | | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9011840069000 |
| 0.2756 | | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9011840070000 |
| 0.2795 | | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9011840071000 |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9011840071400 |
| 0.2835 | | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9011840072000 |
| 0.2874 | | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9011840073000 |
| 0.2913 | | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9011840074000 |
| 0.2953 | | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9011840075000 |
| 0.2969 | 19/64 | | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9011840075400 |
| 0.2992 | | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9011840076000 |
| 0.3031 | | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9011840077000 |
| 0.3071 | | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9011840078000 |
| 0.3110 | | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9011840079000 |
| 0.3126 | 5/16 | | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9011840079400 |
| 0.3150 | | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9011840080000 |
| 0.3189 | | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9011840081000 |
| 0.3228 | | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9011840082000 |
| 0.3268 | | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9011840083000 |
| 0.3280 | 21/64 | | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9011840083300 |
| 0.3307 | | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9011840084000 |
| 0.3346 | | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9011840085000 |
| 0.3386 | | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9011840086000 |
| 0.3425 | | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9011840087000 |
| 0.3437 | 11/32 | | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9011840087300 |
| 0.3465 | | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9011840088000 |
| 0.3504 | | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9011840089000 |
| 0.3543 | | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9011840090000 |
| 0.3583 | | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9011840091000 |
| 0.3594 | 23/64 | | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9011840091300 |
| 0.3622 | | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9011840092000 |
| 0.3661 | | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9011840093000 |
| 0.3701 | | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9011840094000 |
| 0.3740 | | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9011840095000 |
| 0.3748 | 3/8 | | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9011840095200 |
| 0.3780 | | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9011840096000 |

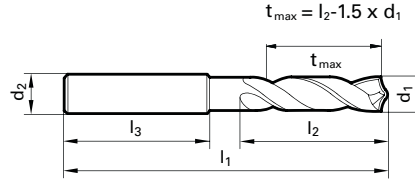
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9011840097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9011840098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9011840099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9011840099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9011840100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9011840101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9011840102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9011840103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9011840103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9011840104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9011840105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9011840106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9011840107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 102.00 | 38.92 | 55.00 | 9011840107200 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9011840108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9011840109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9011840110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9011840111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9011840111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9011840112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9011840113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9011840114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9011840115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 102.00 | 37.74 | 55.00 | 9011840115100 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9011840116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9011840117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9011840118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9011840119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9011840119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9011840120000 |
| 0.4764 | | 12.10 | 14.00 | 107.00 | 41.85 | 60.00 | 9011840121000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9011840122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 107.00 | 41.55 | 60.00 | 9011840123000 |
| 0.4882 | | 12.40 | 14.00 | 107.00 | 41.40 | 60.00 | 9011840124000 |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9011840125000 |
| 0.4961 | | 12.60 | 14.00 | 107.00 | 41.10 | 60.00 | 9011840126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9011840127000 |
| 0.5039 | | 12.80 | 14.00 | 107.00 | 40.80 | 60.00 | 9011840128000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9011840130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 107.00 | 40.35 | 60.00 | 9011840131000 |
| 0.5197 | | 13.20 | 14.00 | 107.00 | 40.20 | 60.00 | 9011840132000 |
| 0.5236 | | 13.30 | 14.00 | 107.00 | 40.05 | 60.00 | 9011840133000 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9011840135000 |
| 0.5354 | | 13.60 | 14.00 | 107.00 | 39.60 | 60.00 | 9011840136000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9011840137000 |
| 0.5433 | | 13.80 | 14.00 | 107.00 | 39.30 | 60.00 | 9011840138000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 107.00 | 39.17 | 60.00 | 9011840138900 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5472 | | 13.90 | 14.00 | 107.00 | 39.15 | 60.00 | 9011840139000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9011840140000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9011840142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9011840142900 |
| 0.5630 | | 14.30 | 16.00 | 115.00 | 43.55 | 65.00 | 9011840143000 |
| 0.5669 | | 14.40 | 16.00 | 115.00 | 43.40 | 65.00 | 9011840144000 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9011840145000 |
| 0.5748 | | 14.60 | 16.00 | 115.00 | 43.10 | 65.00 | 9011840146000 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9011840147000 |
| 0.5827 | | 14.80 | 16.00 | 115.00 | 42.80 | 65.00 | 9011840148000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9011840150000 |
| 0.5945 | | 15.10 | 16.00 | 115.00 | 42.35 | 65.00 | 9011840151000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9011840152000 |
| 0.6063 | | 15.40 | 16.00 | 115.00 | 41.90 | 65.00 | 9011840154000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 115.00 | 41.78 | 65.00 | 9011840154800 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9011840155000 |
| 0.6142 | | 15.60 | 16.00 | 115.00 | 41.60 | 65.00 | 9011840156000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9011840157000 |
| 0.6220 | | 15.80 | 16.00 | 115.00 | 41.30 | 65.00 | 9011840158000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 115.00 | 41.20 | 65.00 | 9011840158700 |
| 0.6260 | | 15.90 | 16.00 | 115.00 | 41.15 | 65.00 | 9011840159000 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9011840160000 |
| 0.6339 | | 16.10 | 18.00 | 123.00 | 48.85 | 73.00 | 9011840161000 |
| 0.6378 | | 16.20 | 18.00 | 123.00 | 48.70 | 73.00 | 9011840162000 |
| 0.6406 | 41/64 | 16.27 | 18.00 | 123.00 | 48.60 | 73.00 | 9011840162700 |
| 0.6417 | | 16.30 | 18.00 | 123.00 | 48.55 | 73.00 | 9011840163000 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9011840165000 |
| 0.6614 | | 16.80 | 18.00 | 123.00 | 47.80 | 73.00 | 9011840168000 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9011840170000 |
| 0.6811 | | 17.30 | 18.00 | 123.00 | 47.05 | 73.00 | 9011840173000 |
| 0.6874 | 11/16 | 17.46 | 18.00 | 123.00 | 46.81 | 73.00 | 9011840174600 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9011840175000 |
| 0.6969 | | 17.70 | 18.00 | 123.00 | 46.45 | 73.00 | 9011840177000 |
| 0.7008 | | 17.80 | 18.00 | 123.00 | 46.30 | 73.00 | 9011840178000 |
| 0.7031 | 45/64 | 17.86 | 18.00 | 123.00 | 46.21 | 73.00 | 9011840178600 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9011840180000 |
| 0.7126 | | 18.10 | 20.00 | 131.00 | 51.85 | 79.00 | 9011840181000 |
| 0.7205 | | 18.30 | 20.00 | 131.00 | 51.55 | 79.00 | 9011840183000 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9011840185000 |
| 0.7343 | 47/64 | 18.65 | 20.00 | 131.00 | 51.03 | 79.00 | 9011840186500 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9011840190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 131.00 | 50.43 | 79.00 | 9011840190500 |
| 0.7559 | | 19.20 | 20.00 | 131.00 | 50.20 | 79.00 | 9011840192000 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9011840195000 |
| 0.7717 | | 19.60 | 20.00 | 131.00 | 49.60 | 79.00 | 9011840196000 |
| 0.7795 | | 19.80 | 20.00 | 131.00 | 49.30 | 79.00 | 9011840198000 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9011840200000 |



Tool material **Solid Carbide**
 Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
 Speeds and feeds information on pg. 572

3xD Drills

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9055140030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9055140031000 |
| 0.1248 | 1/8 | 3.18 | 6.00 | 62.00 | 15.23 | 20.00 | 9055140031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9055140032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9055140032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9055140033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9055140034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9055140035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9055140035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9055140036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9055140037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9055140038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9055140039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9055140039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9055140040000 |
| 0.1591 | #21 | 4.04 | 6.00 | 66.00 | 17.94 | 24.00 | 9055140040400 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9055140041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9055140042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9055140043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9055140043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9055140044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9055140045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9055140046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9055140046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9055140047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9055140047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9055140048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9055140049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9055140050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9055140051000 |
| 0.2012 | #7 | 5.11 | 6.00 | 66.00 | 20.34 | 28.00 | 9055140051100 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9055140051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9055140052000 |
| 0.2067 | | 5.25 | 6.00 | 66.00 | 20.13 | 28.00 | 9055140052500 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9055140053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9055140054000 |
| 0.2130 | #3 | 5.41 | 6.00 | 66.00 | 19.89 | 28.00 | 9055140054100 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9055140055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9055140055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9055140055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9055140056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9055140057000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9055140058000 |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9055140059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9055140059500 |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9055140060000 |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9055140061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9055140062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9055140063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9055140063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9055140064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9055140065000 |
| 0.2571 | F | 6.53 | 8.00 | 79.00 | 24.21 | 34.00 | 9055140065300 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9055140066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9055140067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9055140067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9055140068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9055140069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9055140070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9055140071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9055140071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9055140072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9055140073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9055140074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9055140075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9055140075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9055140076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9055140077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9055140078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9055140079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9055140079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9055140080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9055140081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9055140082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9055140083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9055140083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9055140084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9055140085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9055140086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9055140087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9055140087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9055140088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9055140089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9055140090000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9055140091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9055140091300 |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9055140092000 |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9055140092500 |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9055140093000 |
| 0.3677 | U | 9.34 | 10.00 | 89.00 | 32.99 | 47.00 | 9055140093400 |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9055140094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9055140095000 |
| 0.3750 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9055140095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9055140096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9055140097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9055140098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9055140099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9055140099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9055140100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9055140101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9055140102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9055140103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9055140103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9055140104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9055140105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9055140106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9055140107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 102.00 | 38.92 | 55.00 | 9055140107200 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9055140108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9055140109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9055140110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9055140111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9055140111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9055140112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9055140113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9055140114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9055140115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 102.00 | 37.74 | 55.00 | 9055140115100 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9055140116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9055140117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9055140118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9055140119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9055140119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9055140120000 |
| 0.4764 | | 12.10 | 14.00 | 107.00 | 41.85 | 60.00 | 9055140121000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9055140122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 107.00 | 41.55 | 60.00 | 9055140123000 |
| 0.4882 | | 12.40 | 14.00 | 107.00 | 41.40 | 60.00 | 9055140124000 |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9055140125000 |
| 0.4961 | | 12.60 | 14.00 | 107.00 | 41.10 | 60.00 | 9055140126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9055140127000 |
| 0.5039 | | 12.80 | 14.00 | 107.00 | 40.80 | 60.00 | 9055140128000 |
| 0.5079 | | 12.90 | 14.00 | 107.00 | 40.65 | 60.00 | 9055140129000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9055140130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 107.00 | 40.35 | 60.00 | 9055140131000 |
| 0.5197 | | 13.20 | 14.00 | 107.00 | 40.20 | 60.00 | 9055140132000 |
| 0.5236 | | 13.30 | 14.00 | 107.00 | 40.05 | 60.00 | 9055140133000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5276 | | 13.40 | 14.00 | 107.00 | 39.90 | 60.00 | 9055140134000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 107.00 | 39.77 | 60.00 | 9055140134900 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9055140135000 |
| 0.5354 | | 13.60 | 14.00 | 107.00 | 39.60 | 60.00 | 9055140136000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9055140137000 |
| 0.5433 | | 13.80 | 14.00 | 107.00 | 39.30 | 60.00 | 9055140138000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 107.00 | 39.17 | 60.00 | 9055140138900 |
| 0.5472 | | 13.90 | 14.00 | 107.00 | 39.15 | 60.00 | 9055140139000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9055140140000 |
| 0.5551 | | 14.10 | 16.00 | 115.00 | 43.85 | 65.00 | 9055140141000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9055140142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9055140142900 |
| 0.5630 | | 14.30 | 16.00 | 115.00 | 43.55 | 65.00 | 9055140143000 |
| 0.5669 | | 14.40 | 16.00 | 115.00 | 43.40 | 65.00 | 9055140144000 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9055140145000 |
| 0.5748 | | 14.60 | 16.00 | 115.00 | 43.10 | 65.00 | 9055140146000 |
| 0.5780 | 37/64 | 14.68 | 16.00 | 115.00 | 42.98 | 65.00 | 9055140146800 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9055140147000 |
| 0.5827 | | 14.80 | 16.00 | 115.00 | 42.80 | 65.00 | 9055140148000 |
| 0.5866 | | 14.90 | 16.00 | 115.00 | 42.65 | 65.00 | 9055140149000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9055140150000 |
| 0.5937 | 19/32 | 15.08 | 16.00 | 115.00 | 42.38 | 65.00 | 9055140150800 |
| 0.5945 | | 15.10 | 16.00 | 115.00 | 42.35 | 65.00 | 9055140151000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9055140152000 |
| 0.6024 | | 15.30 | 16.00 | 115.00 | 42.05 | 65.00 | 9055140153000 |
| 0.6063 | | 15.40 | 16.00 | 115.00 | 41.90 | 65.00 | 9055140154000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 115.00 | 41.78 | 65.00 | 9055140154800 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9055140155000 |
| 0.6142 | | 15.60 | 16.00 | 115.00 | 41.60 | 65.00 | 9055140156000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9055140157000 |
| 0.6220 | | 15.80 | 16.00 | 115.00 | 41.30 | 65.00 | 9055140158000 |
| 0.6250 | 5/8 | 15.87 | 16.00 | 115.00 | 41.20 | 65.00 | 9055140158700 |
| 0.6260 | | 15.90 | 16.00 | 115.00 | 41.15 | 65.00 | 9055140159000 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9055140160000 |
| 0.6406 | 41/64 | 16.27 | 18.00 | 123.00 | 48.60 | 73.00 | 9055140162700 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9055140165000 |
| 0.6563 | 21/32 | 16.67 | 18.00 | 123.00 | 48.00 | 73.00 | 9055140166700 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9055140170000 |
| 0.6720 | 43/64 | 17.07 | 18.00 | 123.00 | 47.40 | 73.00 | 9055140170700 |
| 0.6874 | 11/16 | 17.46 | 18.00 | 123.00 | 46.81 | 73.00 | 9055140174600 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9055140175000 |
| 0.7031 | 45/64 | 17.86 | 18.00 | 123.00 | 46.21 | 73.00 | 9055140178600 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9055140180000 |
| 0.7189 | 23/32 | 18.26 | 20.00 | 131.00 | 51.61 | 79.00 | 9055140182600 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9055140185000 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9055140190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 131.00 | 50.43 | 79.00 | 9055140190500 |
| 0.7579 | | 19.25 | 20.00 | 131.00 | 50.13 | 79.00 | 9055140192500 |
| 0.7657 | 49/64 | 19.45 | 20.00 | 131.00 | 49.83 | 79.00 | 9055140194460 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9055140195000 |
| 0.7811 | 25/32 | 19.84 | 20.00 | 131.00 | 49.24 | 79.00 | 9055140198400 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9055140200000 |

3xD Drills



Tool material

Solid Carbide

Surface

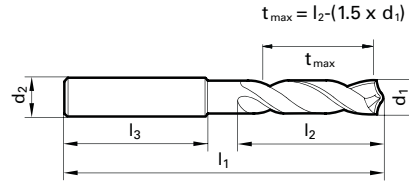


| | | |
|----------|-----------------|---|
| P | Steel | |
| M | Stainless steel | ● |
| K | Cast iron | |
| N | Aluminum | |
| S | Titanium alloys | ● |
| H | Hardened steel | ○ |

web thinning ≥ Ø 3.000 • relieved cone • main cutting edge form concave • optimized cutting geometry

stainless/acid-/heat-resistant steels • alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys

●=Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 581

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9057410030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9057410031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9057410031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9057410032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9057410032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9057410033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9057410034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9057410035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9057410035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9057410036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9057410037000 |
| 0.1496 | | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9057410038000 |
| 0.1535 | 3 9/10 | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9057410039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9057410039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9057410040000 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9057410041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9057410042000 |
| 0.1693 | | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9057410043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9057410043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9057410044000 |
| 0.1772 | | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9057410045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9057410046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9057410046500 |
| 0.1850 | | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9057410047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9057410047600 |
| 0.1890 | | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9057410048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9057410049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9057410050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9057410051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9057410051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9057410052000 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9057410053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9057410054000 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9057410055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9057410055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9057410055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9057410056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9057410057000 |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9057410058000 |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9057410059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9057410059500 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9057410060000 |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9057410061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9057410062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9057410063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9057410063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9057410064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9057410065000 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9057410066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9057410067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9057410067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9057410068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9057410069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9057410070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9057410071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9057410071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9057410072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9057410073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9057410074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9057410075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9057410075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9057410076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9057410077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9057410078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9057410079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9057410079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9057410080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9057410081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9057410082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9057410083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9057410083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9057410084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9057410085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9057410086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9057410087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9057410087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9057410088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9057410089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9057410090000 |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9057410091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9057410091300 |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9057410092000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9057410092500 |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9057410093000 |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9057410094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9057410095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9057410095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9057410096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9057410097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9057410098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9057410099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9057410099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9057410100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9057410101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9057410102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9057410103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9057410103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9057410104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9057410105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9057410106000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 102.00 | 38.92 | 55.00 | 9057410107200 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9057410108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9057410109000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9057410110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9057410111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9057410111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9057410112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9057410113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9057410114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9057410115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 102.00 | 37.74 | 55.00 | 9057410115100 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9057410116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9057410117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9057410118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9057410119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9057410119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9057410120000 |
| 0.4764 | | 12.10 | 14.00 | 107.00 | 41.85 | 60.00 | 9057410121000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9057410122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 107.00 | 41.55 | 60.00 | 9057410123000 |
| 0.4882 | | 12.40 | 14.00 | 107.00 | 41.40 | 60.00 | 9057410124000 |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9057410125000 |
| 0.4961 | | 12.60 | 14.00 | 107.00 | 41.10 | 60.00 | 9057410126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9057410127000 |



Tool material

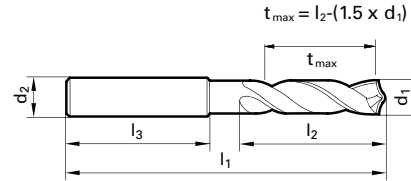
Solid Carbide

Surface



| | | | |
|----------|-----------------|---|---|
| P | Steel | ● | web thinning ≥ Ø 3.000 • relieved cone • main cutting edge is slightly concave • optimized cutting geometry • double margin |
| M | Stainless steel | | |
| K | Cast iron | | |
| N | Aluminum | | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | alloyed and high tensile steels up to 1600 N/mm ² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys |

●=Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 593

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9085240030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9085240031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9085240031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9085240032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9085240032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9085240033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9085240034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9085240035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9085240035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9085240036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9085240037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9085240038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9085240039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9085240039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9085240040000 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9085240041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9085240042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9085240043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9085240043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9085240044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9085240045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9085240046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9085240046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9085240047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9085240047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9085240048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9085240049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9085240050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9085240051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9085240051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9085240052000 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9085240053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9085240054000 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9085240055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9085240055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9085240055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9085240056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9085240057000 |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9085240058000 |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9085240059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9085240059500 |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9085240060000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9085240061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9085240062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9085240063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9085240063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9085240064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9085240065000 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9085240066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9085240067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9085240067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9085240068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9085240069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9085240070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9085240071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9085240071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9085240072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9085240073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9085240074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9085240075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9085240075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9085240076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9085240077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9085240078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9085240079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9085240079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9085240080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9085240081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9085240082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9085240083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9085240083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9085240084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9085240085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9085240086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9085240087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9085240087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9085240088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9085240089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9085240090000 |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9085240091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9085240091300 |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9085240092000 |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9085240092500 |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9085240093000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9085240094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9085240095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9085240095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9085240096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9085240097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9085240098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9085240099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9085240099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9085240100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9085240101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9085240102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9085240103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9085240103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9085240104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9085240105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9085240106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9085240107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 102.00 | 38.92 | 55.00 | 9085240107200 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9085240108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9085240109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9085240110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9085240111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9085240111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9085240112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9085240113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9085240114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9085240115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 102.00 | 37.74 | 55.00 | 9085240115100 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9085240116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9085240117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9085240118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9085240119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9085240119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9085240120000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9085240122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 107.00 | 41.55 | 60.00 | 9085240123000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9085240125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9085240127000 |
| 0.5039 | | 12.80 | 14.00 | 107.00 | 40.80 | 60.00 | 9085240128000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9085240130000 |
| 0.5236 | | 13.30 | 14.00 | 107.00 | 40.05 | 60.00 | 9085240133000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 107.00 | 39.77 | 60.00 | 9085240134900 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9085240135000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9085240137000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9085240140000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9085240142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9085240142900 |
| 0.5630 | | 14.30 | 16.00 | 115.00 | 43.55 | 65.00 | 9085240143000 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9085240145000 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9085240147000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9085240150000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9085240152000 |
| 0.6024 | | 15.30 | 16.00 | 115.00 | 42.05 | 65.00 | 9085240153000 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9085240155000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9085240157000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 115.00 | 41.20 | 65.00 | 9085240158700 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9085240160000 |
| 0.6417 | | 16.30 | 18.00 | 123.00 | 48.55 | 73.00 | 9085240163000 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9085240165000 |
| 0.6654 | | 16.90 | 18.00 | 123.00 | 47.65 | 73.00 | 9085240169000 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9085240170000 |
| 0.6811 | | 17.30 | 18.00 | 123.00 | 47.05 | 73.00 | 9085240173000 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9085240175000 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9085240180000 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9085240185000 |
| 0.7441 | | 18.90 | 20.00 | 131.00 | 50.65 | 79.00 | 9085240189000 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9085240190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 131.00 | 50.43 | 79.00 | 9085240190500 |
| 0.7598 | | 19.30 | 20.00 | 131.00 | 50.05 | 79.00 | 9085240193000 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9085240195000 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9085240200000 |



Tool material

Solid Carbide

Surface

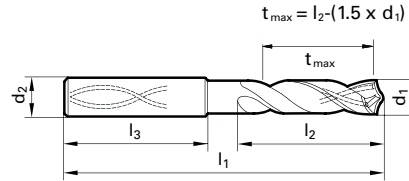


| | | |
|----------|-----------------|---|
| P | Steel | ★ |
| M | Stainless steel | ○ |
| K | Cast iron | ● |
| N | Aluminum | ○ |
| S | Titanium alloys | ○ |
| H | Hardened steel | ○ |

web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry

structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 570

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9055100030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9055100031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9055100031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9055100032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9055100032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9055100033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9055100034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9055100035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9055100035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9055100036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9055100037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9055100038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9055100039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9055100039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9055100040000 |
| 0.1591 | #21 | 4.04 | 6.00 | 66.00 | 17.94 | 24.00 | 9055100040400 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9055100041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9055100042000 |
| 0.1693 | | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9055100043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9055100043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9055100044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9055100045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9055100046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9055100046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9055100047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9055100047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9055100048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9055100049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9055100050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9055100051000 |
| 0.2012 | #7 | 5.11 | 6.00 | 66.00 | 20.34 | 28.00 | 9055100051100 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9055100051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9055100052000 |
| 0.2067 | | 5.25 | 6.00 | 66.00 | 20.13 | 28.00 | 9055100052500 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9055100053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9055100054000 |
| 0.2130 | #3 | 5.41 | 6.00 | 66.00 | 19.89 | 28.00 | 9055100054100 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9055100055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9055100055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9055100055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9055100056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9055100057000 |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9055100058000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9055100059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9055100059500 |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9055100060000 |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9055100061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9055100062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9055100063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9055100063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9055100064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9055100065000 |
| 0.2571 | F | 6.53 | 8.00 | 79.00 | 24.21 | 34.00 | 9055100065300 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9055100066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9055100067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9055100067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9055100068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9055100069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9055100070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9055100071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9055100071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9055100072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9055100073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9055100074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9055100075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9055100075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9055100076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9055100077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9055100078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9055100079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9055100079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9055100080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9055100081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9055100082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9055100083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9055100083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9055100084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9055100085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9055100086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9055100087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9055100087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9055100088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9055100089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9055100090000 |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9055100091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9055100091300 |

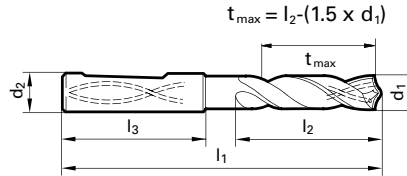
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9055100092000 |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9055100092500 |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9055100093000 |
| 0.3677 | U | 9.34 | 10.00 | 89.00 | 32.99 | 47.00 | 9055100093400 |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9055100094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9055100095000 |
| 0.3750 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9055100095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9055100096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9055100097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9055100098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9055100099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9055100099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9055100100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9055100101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9055100102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9055100103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9055100103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9055100104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9055100105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9055100106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9055100107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 102.00 | 38.92 | 55.00 | 9055100107200 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9055100108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9055100109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9055100110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9055100111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9055100111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9055100112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9055100113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9055100114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9055100115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 102.00 | 37.74 | 55.00 | 9055100115100 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9055100116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9055100117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9055100118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9055100119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9055100119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9055100120000 |
| 0.4764 | | 12.10 | 14.00 | 107.00 | 41.85 | 60.00 | 9055100121000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9055100122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 107.00 | 41.55 | 60.00 | 9055100123000 |
| 0.4882 | | 12.40 | 14.00 | 107.00 | 41.40 | 60.00 | 9055100124000 |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9055100125000 |
| 0.4961 | | 12.60 | 14.00 | 107.00 | 41.10 | 60.00 | 9055100126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9055100127000 |
| 0.5039 | | 12.80 | 14.00 | 107.00 | 40.80 | 60.00 | 9055100128000 |
| 0.5079 | | 12.90 | 14.00 | 107.00 | 40.65 | 60.00 | 9055100129000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9055100130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 107.00 | 40.35 | 60.00 | 9055100131000 |
| 0.5197 | | 13.20 | 14.00 | 107.00 | 40.20 | 60.00 | 9055100132000 |
| 0.5236 | | 13.30 | 14.00 | 107.00 | 40.05 | 60.00 | 9055100133000 |
| 0.5276 | | 13.40 | 14.00 | 107.00 | 39.90 | 60.00 | 9055100134000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 107.00 | 39.77 | 60.00 | 9055100134900 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9055100135000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5354 | | 13.60 | 14.00 | 107.00 | 39.60 | 60.00 | 9055100136000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9055100137000 |
| 0.5433 | | 13.80 | 14.00 | 107.00 | 39.30 | 60.00 | 9055100138000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 107.00 | 39.17 | 60.00 | 9055100138900 |
| 0.5472 | | 13.90 | 14.00 | 107.00 | 39.15 | 60.00 | 9055100139000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9055100140000 |
| 0.5551 | | 14.10 | 16.00 | 115.00 | 43.85 | 65.00 | 9055100141000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9055100142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9055100142900 |
| 0.5630 | | 14.30 | 16.00 | 115.00 | 43.55 | 65.00 | 9055100143000 |
| 0.5669 | | 14.40 | 16.00 | 115.00 | 43.40 | 65.00 | 9055100144000 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9055100145000 |
| 0.5748 | | 14.60 | 16.00 | 115.00 | 43.10 | 65.00 | 9055100146000 |
| 0.5780 | 37/64 | 14.68 | 16.00 | 115.00 | 42.98 | 65.00 | 9055100146800 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9055100147000 |
| 0.5827 | | 14.80 | 16.00 | 115.00 | 42.80 | 65.00 | 9055100148000 |
| 0.5866 | | 14.90 | 16.00 | 115.00 | 42.65 | 65.00 | 9055100149000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9055100150000 |
| 0.5937 | 19/32 | 15.08 | 16.00 | 115.00 | 42.38 | 65.00 | 9055100150800 |
| 0.5945 | | 15.10 | 16.00 | 115.00 | 42.35 | 65.00 | 9055100151000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9055100152000 |
| 0.6024 | | 15.30 | 16.00 | 115.00 | 42.05 | 65.00 | 9055100153000 |
| 0.6063 | | 15.40 | 16.00 | 115.00 | 41.90 | 65.00 | 9055100154000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 115.00 | 41.78 | 65.00 | 9055100154800 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9055100155000 |
| 0.6142 | | 15.60 | 16.00 | 115.00 | 41.60 | 65.00 | 9055100156000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9055100157000 |
| 0.6220 | | 15.80 | 16.00 | 115.00 | 41.30 | 65.00 | 9055100158000 |
| 0.6250 | 5/8 | 15.87 | 16.00 | 115.00 | 41.20 | 65.00 | 9055100158700 |
| 0.6260 | | 15.90 | 16.00 | 115.00 | 41.15 | 65.00 | 9055100159000 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9055100160000 |
| 0.6378 | | 16.20 | 18.00 | 123.00 | 48.70 | 73.00 | 9055100162000 |
| 0.6406 | 41/64 | 16.27 | 18.00 | 123.00 | 48.60 | 73.00 | 9055100162700 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9055100165000 |
| 0.6563 | 21/32 | 16.67 | 18.00 | 123.00 | 48.00 | 73.00 | 9055100166700 |
| 0.6654 | | 16.90 | 18.00 | 123.00 | 47.65 | 73.00 | 9055100169000 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9055100170000 |
| 0.6720 | 43/64 | 17.07 | 18.00 | 123.00 | 47.40 | 73.00 | 9055100170700 |
| 0.6874 | 11/16 | 17.46 | 18.00 | 123.00 | 46.81 | 73.00 | 9055100174600 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9055100175000 |
| 0.6929 | | 17.60 | 18.00 | 123.00 | 46.60 | 73.00 | 9055100176000 |
| 0.6969 | | 17.70 | 18.00 | 123.00 | 46.45 | 73.00 | 9055100177000 |
| 0.7031 | 45/64 | 17.86 | 18.00 | 123.00 | 46.21 | 73.00 | 9055100178600 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9055100180000 |
| 0.7189 | 23/32 | 18.26 | 20.00 | 131.00 | 51.61 | 79.00 | 9055100182600 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9055100185000 |
| 0.7441 | | 18.90 | 20.00 | 131.00 | 50.65 | 79.00 | 9055100189000 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9055100190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 131.00 | 50.43 | 79.00 | 9055100190500 |
| 0.7579 | | 19.25 | 20.00 | 131.00 | 50.13 | 79.00 | 9055100192500 |
| 0.7657 | 49/64 | 19.45 | 20.00 | 131.00 | 49.83 | 79.00 | 9055100194460 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9055100195000 |
| 0.7811 | 25/32 | 19.84 | 20.00 | 131.00 | 49.24 | 79.00 | 9055100198400 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9055100200000 |



Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 578

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9056100030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9056100031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9056100031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9056100032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9056100032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9056100033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9056100034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9056100035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9056100035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9056100036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9056100037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9056100038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9056100039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9056100039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9056100040000 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9056100041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9056100042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9056100043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9056100043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9056100044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9056100045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9056100046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9056100046500 |
| 0.1850 | | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9056100047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9056100047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9056100048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9056100049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9056100050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9056100051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9056100051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9056100052000 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9056100053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9056100054000 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9056100055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9056100055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9056100055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9056100056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9056100057000 |
| 0.2264 | | 5.75 | 6.00 | 66.00 | 19.38 | 28.00 | 9056100057500 |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9056100058000 |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9056100059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9056100059500 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9056100060000 |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9056100061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9056100062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9056100063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9056100063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9056100064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9056100065000 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9056100066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9056100067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9056100067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9056100068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9056100069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9056100070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9056100071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9056100071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9056100072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9056100073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9056100074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9056100075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9056100075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9056100076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9056100077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9056100078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9056100079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9056100079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9056100080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9056100081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9056100082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9056100083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9056100083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9056100084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9056100085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9056100086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9056100087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9056100087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9056100088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9056100089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9056100090000 |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9056100091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9056100091300 |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9056100092000 |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9056100092500 |

3xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9056100093000 |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9056100094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9056100095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9056100095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9056100096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9056100097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9056100098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9056100099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9056100099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9056100100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9056100101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9056100102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9056100103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9056100103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9056100104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9056100105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9056100106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9056100107000 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9056100108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9056100109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9056100110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9056100111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9056100111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9056100112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9056100113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9056100114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9056100115000 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9056100116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9056100117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9056100118000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9056100119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9056100119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9056100120000 |
| 0.4764 | | 12.10 | 14.00 | 107.00 | 41.85 | 60.00 | 9056100121000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9056100122000 |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9056100125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9056100127000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9056100130000 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9056100135000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9056100137000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9056100140000 |
| 0.5551 | | 14.10 | 16.00 | 115.00 | 43.85 | 65.00 | 9056100141000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9056100142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9056100142900 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9056100145000 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9056100147000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9056100150000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9056100152000 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9056100155000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9056100157000 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9056100160000 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9056100165000 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9056100170000 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9056100175000 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9056100180000 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9056100185000 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9056100190000 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9056100195000 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9056100200000 |



Tool material

Solid Carbide

Surface

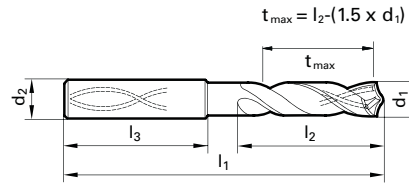


| | |
|----------|-------------------|
| P | Steel |
| M | Stainless steel ★ |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys ● |
| H | Hardened steel |

web thinning $\geq \varnothing 3.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry

stainless/acid-/heat-resistant steels • Titanium and Titanium alloys • Inconel, Hastelloy, Monel

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 591

3xD Drills

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9085100030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9085100031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9085100031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9085100032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9085100032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9085100033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9085100034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9085100035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9085100035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9085100036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9085100037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9085100038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9085100039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9085100039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9085100040000 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9085100041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9085100042000 |
| 0.1693 | | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9085100043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9085100043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9085100044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9085100045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9085100046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9085100046500 |
| 0.1850 | | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9085100047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9085100047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9085100048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9085100049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9085100050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9085100051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9085100051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9085100052000 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9085100053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9085100054000 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9085100055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9085100055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9085100055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9085100056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9085100057000 |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9085100058000 |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9085100059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9085100059500 |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9085100060000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9085100061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9085100062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9085100063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9085100063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9085100064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9085100065000 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9085100066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9085100067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9085100067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9085100068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9085100069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9085100070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9085100071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9085100071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9085100072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9085100073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9085100074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9085100075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9085100075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9085100076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9085100077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9085100078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9085100079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9085100079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9085100080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9085100081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9085100082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9085100083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9085100083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9085100084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9085100085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9085100086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9085100087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9085100087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9085100088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9085100089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9085100090000 |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9085100091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9085100091300 |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9085100092000 |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9085100092500 |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9085100093000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9085100094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9085100095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9085100095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9085100096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9085100097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9085100098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9085100099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9085100099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9085100100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9085100101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9085100102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9085100103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9085100103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9085100104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9085100105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9085100106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9085100107000 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9085100108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9085100109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9085100110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9085100111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9085100111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9085100112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9085100113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9085100114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9085100115000 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9085100116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9085100117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9085100118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9085100119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9085100119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9085100120000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9085100122000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9085100125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9085100127000 |
| 0.5039 | | 12.80 | 14.00 | 107.00 | 40.80 | 60.00 | 9085100128000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9085100130000 |
| 0.5236 | | 13.30 | 14.00 | 107.00 | 40.05 | 60.00 | 9085100133000 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9085100135000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9085100137000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9085100140000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9085100142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9085100142900 |
| 0.5630 | | 14.30 | 16.00 | 115.00 | 43.55 | 65.00 | 9085100143000 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9085100145000 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9085100147000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9085100150000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9085100152000 |
| 0.6024 | | 15.30 | 16.00 | 115.00 | 42.05 | 65.00 | 9085100153000 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9085100155000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9085100157000 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9085100160000 |
| 0.6417 | | 16.30 | 18.00 | 123.00 | 48.55 | 73.00 | 9085100163000 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9085100165000 |
| 0.6654 | | 16.90 | 18.00 | 123.00 | 47.65 | 73.00 | 9085100169000 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9085100170000 |
| 0.6811 | | 17.30 | 18.00 | 123.00 | 47.05 | 73.00 | 9085100173000 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9085100175000 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9085100180000 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9085100185000 |
| 0.7441 | | 18.90 | 20.00 | 131.00 | 50.65 | 79.00 | 9085100189000 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9085100190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 131.00 | 50.43 | 79.00 | 9085100190500 |
| 0.7598 | | 19.30 | 20.00 | 131.00 | 50.05 | 79.00 | 9085100193000 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9085100195000 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9085100200000 |



Tool material

Solid Carbide

Surface

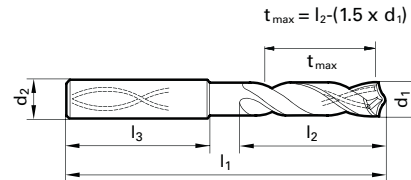


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | |
| N | Aluminum | |
| S | Titanium alloys | ★ |
| H | Hardened steel | ○ |

web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge is slightly concave • optimized cutting geometry • double margin

alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 592

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 62.00 | 15.50 | 20.00 | 9085200030000 |
| 0.1220 | | 3.10 | 6.00 | 62.00 | 15.35 | 20.00 | 9085200031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 62.00 | 15.25 | 20.00 | 9085200031700 |
| 0.1260 | | 3.20 | 6.00 | 62.00 | 15.20 | 20.00 | 9085200032000 |
| 0.1280 | | 3.25 | 6.00 | 62.00 | 15.13 | 20.00 | 9085200032500 |
| 0.1299 | | 3.30 | 6.00 | 62.00 | 15.05 | 20.00 | 9085200033000 |
| 0.1339 | | 3.40 | 6.00 | 62.00 | 14.90 | 20.00 | 9085200034000 |
| 0.1378 | | 3.50 | 6.00 | 62.00 | 14.75 | 20.00 | 9085200035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 62.00 | 14.65 | 20.00 | 9085200035700 |
| 0.1417 | | 3.60 | 6.00 | 62.00 | 14.60 | 20.00 | 9085200036000 |
| 0.1457 | | 3.70 | 6.00 | 62.00 | 14.45 | 20.00 | 9085200037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 66.00 | 18.30 | 24.00 | 9085200038000 |
| 0.1535 | | 3.90 | 6.00 | 66.00 | 18.15 | 24.00 | 9085200039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 66.00 | 18.05 | 24.00 | 9085200039700 |
| 0.1575 | | 4.00 | 6.00 | 66.00 | 18.00 | 24.00 | 9085200040000 |
| 0.1614 | | 4.10 | 6.00 | 66.00 | 17.85 | 24.00 | 9085200041000 |
| 0.1654 | | 4.20 | 6.00 | 66.00 | 17.70 | 24.00 | 9085200042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 66.00 | 17.55 | 24.00 | 9085200043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 66.00 | 17.45 | 24.00 | 9085200043700 |
| 0.1732 | | 4.40 | 6.00 | 66.00 | 17.40 | 24.00 | 9085200044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 66.00 | 17.25 | 24.00 | 9085200045000 |
| 0.1811 | | 4.60 | 6.00 | 66.00 | 17.10 | 24.00 | 9085200046000 |
| 0.1831 | | 4.65 | 6.00 | 66.00 | 17.03 | 24.00 | 9085200046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 66.00 | 16.95 | 24.00 | 9085200047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 66.00 | 20.86 | 28.00 | 9085200047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 66.00 | 20.80 | 28.00 | 9085200048000 |
| 0.1929 | | 4.90 | 6.00 | 66.00 | 20.65 | 28.00 | 9085200049000 |
| 0.1969 | | 5.00 | 6.00 | 66.00 | 20.50 | 28.00 | 9085200050000 |
| 0.2008 | | 5.10 | 6.00 | 66.00 | 20.35 | 28.00 | 9085200051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 66.00 | 20.26 | 28.00 | 9085200051600 |
| 0.2047 | | 5.20 | 6.00 | 66.00 | 20.20 | 28.00 | 9085200052000 |
| 0.2087 | | 5.30 | 6.00 | 66.00 | 20.05 | 28.00 | 9085200053000 |
| 0.2126 | | 5.40 | 6.00 | 66.00 | 19.90 | 28.00 | 9085200054000 |
| 0.2165 | | 5.50 | 6.00 | 66.00 | 19.75 | 28.00 | 9085200055000 |
| 0.2185 | | 5.55 | 6.00 | 66.00 | 19.68 | 28.00 | 9085200055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 66.00 | 19.66 | 28.00 | 9085200055600 |
| 0.2205 | | 5.60 | 6.00 | 66.00 | 19.60 | 28.00 | 9085200056000 |
| 0.2244 | | 5.70 | 6.00 | 66.00 | 19.45 | 28.00 | 9085200057000 |
| 0.2283 | | 5.80 | 6.00 | 66.00 | 19.30 | 28.00 | 9085200058000 |
| 0.2323 | | 5.90 | 6.00 | 66.00 | 19.15 | 28.00 | 9085200059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 66.00 | 19.08 | 28.00 | 9085200059500 |
| 0.2362 | | 6.00 | 6.00 | 66.00 | 19.00 | 28.00 | 9085200060000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2402 | | 6.10 | 8.00 | 79.00 | 24.85 | 34.00 | 9085200061000 |
| 0.2441 | | 6.20 | 8.00 | 79.00 | 24.70 | 34.00 | 9085200062000 |
| 0.2480 | | 6.30 | 8.00 | 79.00 | 24.55 | 34.00 | 9085200063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 79.00 | 24.48 | 34.00 | 9085200063500 |
| 0.2520 | | 6.40 | 8.00 | 79.00 | 24.40 | 34.00 | 9085200064000 |
| 0.2559 | | 6.50 | 8.00 | 79.00 | 24.25 | 34.00 | 9085200065000 |
| 0.2598 | | 6.60 | 8.00 | 79.00 | 24.10 | 34.00 | 9085200066000 |
| 0.2638 | | 6.70 | 8.00 | 79.00 | 23.95 | 34.00 | 9085200067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 79.00 | 23.88 | 34.00 | 9085200067500 |
| 0.2677 | | 6.80 | 8.00 | 79.00 | 23.80 | 34.00 | 9085200068000 |
| 0.2717 | I | 6.90 | 8.00 | 79.00 | 23.65 | 34.00 | 9085200069000 |
| 0.2756 | | 7.00 | 8.00 | 79.00 | 23.50 | 34.00 | 9085200070000 |
| 0.2795 | | 7.10 | 8.00 | 79.00 | 30.35 | 41.00 | 9085200071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 79.00 | 30.29 | 41.00 | 9085200071400 |
| 0.2835 | | 7.20 | 8.00 | 79.00 | 30.20 | 41.00 | 9085200072000 |
| 0.2874 | | 7.30 | 8.00 | 79.00 | 30.05 | 41.00 | 9085200073000 |
| 0.2913 | | 7.40 | 8.00 | 79.00 | 29.90 | 41.00 | 9085200074000 |
| 0.2953 | | 7.50 | 8.00 | 79.00 | 29.75 | 41.00 | 9085200075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 79.00 | 29.69 | 41.00 | 9085200075400 |
| 0.2992 | | 7.60 | 8.00 | 79.00 | 29.60 | 41.00 | 9085200076000 |
| 0.3031 | | 7.70 | 8.00 | 79.00 | 29.45 | 41.00 | 9085200077000 |
| 0.3071 | | 7.80 | 8.00 | 79.00 | 29.30 | 41.00 | 9085200078000 |
| 0.3110 | | 7.90 | 8.00 | 79.00 | 29.15 | 41.00 | 9085200079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 79.00 | 29.09 | 41.00 | 9085200079400 |
| 0.3150 | | 8.00 | 8.00 | 79.00 | 29.00 | 41.00 | 9085200080000 |
| 0.3189 | | 8.10 | 10.00 | 89.00 | 34.85 | 47.00 | 9085200081000 |
| 0.3228 | P | 8.20 | 10.00 | 89.00 | 34.70 | 47.00 | 9085200082000 |
| 0.3268 | | 8.30 | 10.00 | 89.00 | 34.55 | 47.00 | 9085200083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 89.00 | 34.51 | 47.00 | 9085200083300 |
| 0.3307 | | 8.40 | 10.00 | 89.00 | 34.40 | 47.00 | 9085200084000 |
| 0.3346 | | 8.50 | 10.00 | 89.00 | 34.25 | 47.00 | 9085200085000 |
| 0.3386 | | 8.60 | 10.00 | 89.00 | 34.10 | 47.00 | 9085200086000 |
| 0.3425 | | 8.70 | 10.00 | 89.00 | 33.95 | 47.00 | 9085200087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 89.00 | 33.91 | 47.00 | 9085200087300 |
| 0.3465 | | 8.80 | 10.00 | 89.00 | 33.80 | 47.00 | 9085200088000 |
| 0.3504 | | 8.90 | 10.00 | 89.00 | 33.65 | 47.00 | 9085200089000 |
| 0.3543 | | 9.00 | 10.00 | 89.00 | 33.50 | 47.00 | 9085200090000 |
| 0.3583 | | 9.10 | 10.00 | 89.00 | 33.35 | 47.00 | 9085200091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 89.00 | 33.31 | 47.00 | 9085200091300 |
| 0.3622 | | 9.20 | 10.00 | 89.00 | 33.20 | 47.00 | 9085200092000 |
| 0.3642 | | 9.25 | 10.00 | 89.00 | 33.13 | 47.00 | 9085200092500 |
| 0.3661 | | 9.30 | 10.00 | 89.00 | 33.05 | 47.00 | 9085200093000 |

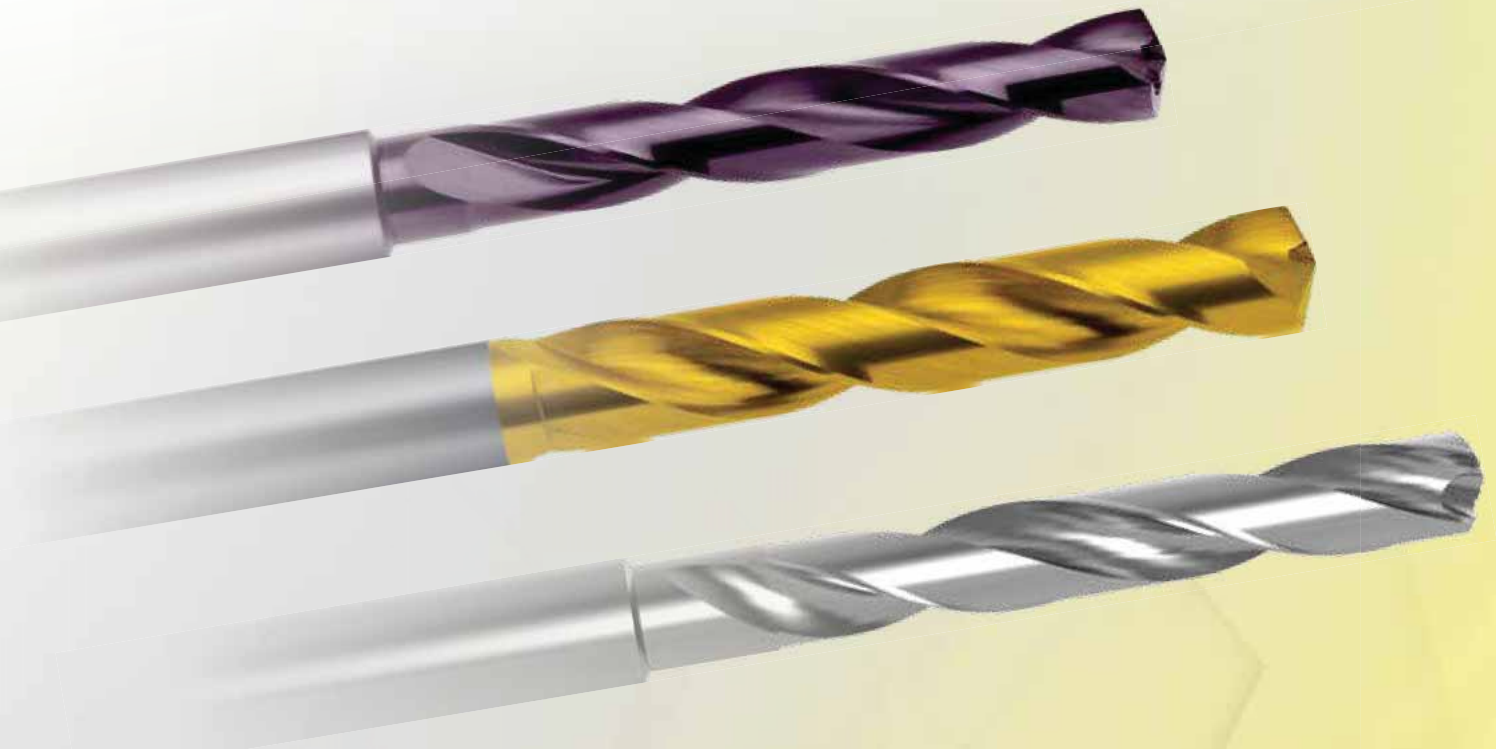
3xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 89.00 | 32.90 | 47.00 | 9085200094000 |
| 0.3740 | | 9.50 | 10.00 | 89.00 | 32.75 | 47.00 | 9085200095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 89.00 | 32.72 | 47.00 | 9085200095200 |
| 0.3780 | | 9.60 | 10.00 | 89.00 | 32.60 | 47.00 | 9085200096000 |
| 0.3819 | | 9.70 | 10.00 | 89.00 | 32.45 | 47.00 | 9085200097000 |
| 0.3858 | W | 9.80 | 10.00 | 89.00 | 32.30 | 47.00 | 9085200098000 |
| 0.3898 | | 9.90 | 10.00 | 89.00 | 32.15 | 47.00 | 9085200099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 89.00 | 32.12 | 47.00 | 9085200099200 |
| 0.3937 | | 10.00 | 10.00 | 89.00 | 32.00 | 47.00 | 9085200100000 |
| 0.3976 | | 10.10 | 12.00 | 102.00 | 39.85 | 55.00 | 9085200101000 |
| 0.4016 | | 10.20 | 12.00 | 102.00 | 39.70 | 55.00 | 9085200102000 |
| 0.4055 | | 10.30 | 12.00 | 102.00 | 39.55 | 55.00 | 9085200103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 102.00 | 39.52 | 55.00 | 9085200103200 |
| 0.4094 | | 10.40 | 12.00 | 102.00 | 39.40 | 55.00 | 9085200104000 |
| 0.4134 | | 10.50 | 12.00 | 102.00 | 39.25 | 55.00 | 9085200105000 |
| 0.4173 | | 10.60 | 12.00 | 102.00 | 39.10 | 55.00 | 9085200106000 |
| 0.4213 | | 10.70 | 12.00 | 102.00 | 38.95 | 55.00 | 9085200107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 102.00 | 38.92 | 55.00 | 9085200107200 |
| 0.4252 | | 10.80 | 12.00 | 102.00 | 38.80 | 55.00 | 9085200108000 |
| 0.4291 | | 10.90 | 12.00 | 102.00 | 38.65 | 55.00 | 9085200109000 |
| 0.4331 | | 11.00 | 12.00 | 102.00 | 38.50 | 55.00 | 9085200110000 |
| 0.4370 | | 11.10 | 12.00 | 102.00 | 38.35 | 55.00 | 9085200111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 102.00 | 38.34 | 55.00 | 9085200111100 |
| 0.4409 | | 11.20 | 12.00 | 102.00 | 38.20 | 55.00 | 9085200112000 |
| 0.4449 | | 11.30 | 12.00 | 102.00 | 38.05 | 55.00 | 9085200113000 |
| 0.4488 | | 11.40 | 12.00 | 102.00 | 37.90 | 55.00 | 9085200114000 |
| 0.4528 | | 11.50 | 12.00 | 102.00 | 37.75 | 55.00 | 9085200115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 102.00 | 37.74 | 55.00 | 9085200115100 |
| 0.4567 | | 11.60 | 12.00 | 102.00 | 37.60 | 55.00 | 9085200116000 |
| 0.4606 | | 11.70 | 12.00 | 102.00 | 37.45 | 55.00 | 9085200117000 |
| 0.4646 | | 11.80 | 12.00 | 102.00 | 37.30 | 55.00 | 9085200118000 |
| 0.4685 | | 11.90 | 12.00 | 102.00 | 37.15 | 55.00 | 9085200119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 102.00 | 37.14 | 55.00 | 9085200119100 |
| 0.4724 | | 12.00 | 12.00 | 102.00 | 37.00 | 55.00 | 9085200120000 |
| 0.4803 | | 12.20 | 14.00 | 107.00 | 41.70 | 60.00 | 9085200122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 107.00 | 41.55 | 60.00 | 9085200123000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4921 | | 12.50 | 14.00 | 107.00 | 41.25 | 60.00 | 9085200125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 107.00 | 40.95 | 60.00 | 9085200127000 |
| 0.5039 | | 12.80 | 14.00 | 107.00 | 40.80 | 60.00 | 9085200128000 |
| 0.5118 | | 13.00 | 14.00 | 107.00 | 40.50 | 60.00 | 9085200130000 |
| 0.5236 | | 13.30 | 14.00 | 107.00 | 40.05 | 60.00 | 9085200133000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 107.00 | 39.77 | 60.00 | 9085200134900 |
| 0.5315 | | 13.50 | 14.00 | 107.00 | 39.75 | 60.00 | 9085200135000 |
| 0.5394 | | 13.70 | 14.00 | 107.00 | 39.45 | 60.00 | 9085200137000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9085200140000 |
| 0.5591 | | 14.20 | 16.00 | 115.00 | 43.70 | 65.00 | 9085200142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 115.00 | 43.57 | 65.00 | 9085200142900 |
| 0.5630 | | 14.30 | 16.00 | 115.00 | 43.55 | 65.00 | 9085200143000 |
| 0.5709 | | 14.50 | 16.00 | 115.00 | 43.25 | 65.00 | 9085200145000 |
| 0.5787 | | 14.70 | 16.00 | 115.00 | 42.95 | 65.00 | 9085200147000 |
| 0.5906 | | 15.00 | 16.00 | 115.00 | 42.50 | 65.00 | 9085200150000 |
| 0.5984 | | 15.20 | 16.00 | 115.00 | 42.20 | 65.00 | 9085200152000 |
| 0.6024 | | 15.30 | 16.00 | 115.00 | 42.05 | 65.00 | 9085200153000 |
| 0.6102 | | 15.50 | 16.00 | 115.00 | 41.75 | 65.00 | 9085200155000 |
| 0.6181 | | 15.70 | 16.00 | 115.00 | 41.45 | 65.00 | 9085200157000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 115.00 | 41.20 | 65.00 | 9085200158700 |
| 0.6299 | | 16.00 | 16.00 | 115.00 | 41.00 | 65.00 | 9085200160000 |
| 0.6417 | | 16.30 | 18.00 | 123.00 | 48.55 | 73.00 | 9085200163000 |
| 0.6496 | | 16.50 | 18.00 | 123.00 | 48.25 | 73.00 | 9085200165000 |
| 0.6654 | | 16.90 | 18.00 | 123.00 | 47.65 | 73.00 | 9085200169000 |
| 0.6693 | | 17.00 | 18.00 | 123.00 | 47.50 | 73.00 | 9085200170000 |
| 0.6811 | | 17.30 | 18.00 | 123.00 | 47.05 | 73.00 | 9085200173000 |
| 0.6890 | | 17.50 | 18.00 | 123.00 | 46.75 | 73.00 | 9085200175000 |
| 0.7087 | | 18.00 | 18.00 | 123.00 | 46.00 | 73.00 | 9085200180000 |
| 0.7283 | | 18.50 | 20.00 | 131.00 | 51.25 | 79.00 | 9085200185000 |
| 0.7441 | | 18.90 | 20.00 | 131.00 | 50.65 | 79.00 | 9085200189000 |
| 0.7480 | | 19.00 | 20.00 | 131.00 | 50.50 | 79.00 | 9085200190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 131.00 | 50.43 | 79.00 | 9085200190500 |
| 0.7598 | | 19.30 | 20.00 | 131.00 | 50.05 | 79.00 | 9085200193000 |
| 0.7677 | | 19.50 | 20.00 | 131.00 | 49.75 | 79.00 | 9085200195000 |
| 0.7874 | | 20.00 | 20.00 | 131.00 | 49.00 | 79.00 | 9085200200000 |



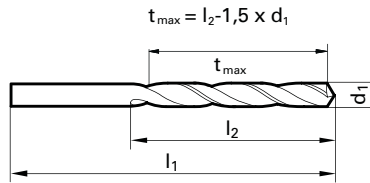
5xD CARBIDE RATIO DRILLS





Tool material **Solid Carbide**
Surface **S**

- P** Steel ● web thinning $\geq \varnothing 5.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • cast materials • bronze, brass
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 553

Shank diameter = cut diameter

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.1969 | | 5.00 | 73.00 | 26.50 | 34.00 | 9012430050000 |
| 0.2008 | | 5.10 | 76.00 | 30.35 | 38.00 | 9012430051000 |
| 0.2031 | 13/64 | 5.16 | 76.00 | 30.26 | 38.00 | 9012430051600 |
| 0.2047 | | 5.20 | 76.00 | 30.20 | 38.00 | 9012430052000 |
| 0.2087 | | 5.30 | 76.00 | 30.05 | 38.00 | 9012430053000 |
| 0.2126 | | 5.40 | 76.00 | 29.90 | 38.00 | 9012430054000 |
| 0.2165 | | 5.50 | 76.00 | 29.75 | 38.00 | 9012430055000 |
| 0.2189 | 7/32 | 5.56 | 81.00 | 32.66 | 41.00 | 9012430055600 |
| 0.2205 | | 5.60 | 81.00 | 32.60 | 41.00 | 9012430056000 |
| 0.2244 | | 5.70 | 81.00 | 32.45 | 41.00 | 9012430057000 |
| 0.2283 | | 5.80 | 81.00 | 32.30 | 41.00 | 9012430058000 |
| 0.2323 | | 5.90 | 81.00 | 32.15 | 41.00 | 9012430059000 |
| 0.2343 | 15/64 | 5.95 | 81.00 | 32.08 | 41.00 | 9012430059500 |
| 0.2362 | | 6.00 | 81.00 | 32.00 | 41.00 | 9012430060000 |
| 0.2402 | | 6.10 | 81.00 | 31.85 | 41.00 | 9012430061000 |
| 0.2441 | | 6.20 | 81.00 | 31.70 | 41.00 | 9012430062000 |
| 0.2480 | | 6.30 | 81.00 | 31.55 | 41.00 | 9012430063000 |
| 0.2500 | 1/4 E | 6.35 | 81.00 | 31.48 | 41.00 | 9012430063500 |
| 0.2520 | | 6.40 | 81.00 | 31.40 | 41.00 | 9012430064000 |
| 0.2559 | | 6.50 | 81.00 | 31.25 | 41.00 | 9012430065000 |
| 0.2598 | | 6.60 | 83.00 | 33.10 | 43.00 | 9012430066000 |
| 0.2638 | | 6.70 | 83.00 | 32.95 | 43.00 | 9012430067000 |
| 0.2657 | 17/64 H | 6.75 | 83.00 | 32.88 | 43.00 | 9012430067500 |
| 0.2677 | | 6.80 | 83.00 | 32.80 | 43.00 | 9012430068000 |
| 0.2717 | I | 6.90 | 83.00 | 32.65 | 43.00 | 9012430069000 |
| 0.2756 | | 7.00 | 83.00 | 32.50 | 43.00 | 9012430070000 |
| 0.2795 | | 7.10 | 87.00 | 34.35 | 45.00 | 9012430071000 |
| 0.2811 | 9/32 K | 7.14 | 87.00 | 34.29 | 45.00 | 9012430071400 |
| 0.2835 | | 7.20 | 87.00 | 34.20 | 45.00 | 9012430072000 |
| 0.2874 | | 7.30 | 87.00 | 34.05 | 45.00 | 9012430073000 |
| 0.2913 | | 7.40 | 87.00 | 33.90 | 45.00 | 9012430074000 |
| 0.2953 | | 7.50 | 87.00 | 33.75 | 45.00 | 9012430075000 |
| 0.2969 | 19/64 | 7.54 | 90.00 | 36.69 | 48.00 | 9012430075400 |
| 0.2992 | | 7.60 | 90.00 | 36.60 | 48.00 | 9012430076000 |
| 0.3031 | | 7.70 | 90.00 | 36.45 | 48.00 | 9012430077000 |
| 0.3071 | | 7.80 | 90.00 | 36.30 | 48.00 | 9012430078000 |
| 0.3110 | | 7.90 | 90.00 | 36.15 | 48.00 | 9012430079000 |
| 0.3126 | 5/16 | 7.94 | 90.00 | 36.09 | 48.00 | 9012430079400 |
| 0.3150 | | 8.00 | 90.00 | 36.00 | 48.00 | 9012430080000 |
| 0.3189 | | 8.10 | 96.00 | 40.85 | 53.00 | 9012430081000 |
| 0.3228 | P | 8.20 | 96.00 | 40.70 | 53.00 | 9012430082000 |
| 0.3268 | | 8.30 | 96.00 | 40.55 | 53.00 | 9012430083000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3280 | 21/64 | 8.33 | 96.00 | 40.51 | 53.00 | 9012430083300 |
| 0.3307 | | 8.40 | 96.00 | 40.40 | 53.00 | 9012430084000 |
| 0.3346 | | 8.50 | 96.00 | 40.25 | 53.00 | 9012430085000 |
| 0.3386 | | 8.60 | 98.00 | 42.10 | 55.00 | 9012430086000 |
| 0.3425 | | 8.70 | 98.00 | 41.95 | 55.00 | 9012430087000 |
| 0.3437 | 11/32 | 8.73 | 98.00 | 41.91 | 55.00 | 9012430087300 |
| 0.3465 | | 8.80 | 98.00 | 41.80 | 55.00 | 9012430088000 |
| 0.3504 | | 8.90 | 98.00 | 41.65 | 55.00 | 9012430089000 |
| 0.3543 | | 9.00 | 98.00 | 41.50 | 55.00 | 9012430090000 |
| 0.3583 | | 9.10 | 102.00 | 44.35 | 58.00 | 9012430091000 |
| 0.3594 | 23/64 | 9.13 | 102.00 | 44.31 | 58.00 | 9012430091300 |
| 0.3622 | | 9.20 | 102.00 | 44.20 | 58.00 | 9012430092000 |
| 0.3661 | | 9.30 | 102.00 | 44.05 | 58.00 | 9012430093000 |
| 0.3701 | | 9.40 | 102.00 | 43.90 | 58.00 | 9012430094000 |
| 0.3740 | | 9.50 | 102.00 | 43.75 | 58.00 | 9012430095000 |
| 0.3748 | 3/8 | 9.52 | 105.00 | 45.72 | 60.00 | 9012430095200 |
| 0.3780 | | 9.60 | 105.00 | 45.60 | 60.00 | 9012430096000 |
| 0.3819 | | 9.70 | 105.00 | 45.45 | 60.00 | 9012430097000 |
| 0.3858 | W | 9.80 | 105.00 | 45.30 | 60.00 | 9012430098000 |
| 0.3898 | | 9.90 | 105.00 | 45.15 | 60.00 | 9012430099000 |
| 0.3906 | 25/64 | 9.92 | 105.00 | 45.12 | 60.00 | 9012430099200 |
| 0.3937 | | 10.00 | 105.00 | 45.00 | 60.00 | 9012430100000 |
| 0.3976 | | 10.10 | 112.00 | 50.85 | 66.00 | 9012430101000 |
| 0.4016 | | 10.20 | 112.00 | 50.70 | 66.00 | 9012430102000 |
| 0.4055 | | 10.30 | 112.00 | 50.55 | 66.00 | 9012430103000 |
| 0.4063 | 13/32 | 10.32 | 112.00 | 50.52 | 66.00 | 9012430103200 |
| 0.4094 | | 10.40 | 112.00 | 50.40 | 66.00 | 9012430104000 |
| 0.4134 | | 10.50 | 112.00 | 50.25 | 66.00 | 9012430105000 |
| 0.4173 | | 10.60 | 114.00 | 52.10 | 68.00 | 9012430106000 |
| 0.4213 | | 10.70 | 114.00 | 51.95 | 68.00 | 9012430107000 |
| 0.4220 | 27/64 | 10.72 | 114.00 | 51.92 | 68.00 | 9012430107200 |
| 0.4252 | | 10.80 | 114.00 | 51.80 | 68.00 | 9012430108000 |
| 0.4291 | | 10.90 | 114.00 | 51.65 | 68.00 | 9012430109000 |
| 0.4331 | | 11.00 | 114.00 | 51.50 | 68.00 | 9012430110000 |
| 0.4370 | | 11.10 | 118.00 | 54.35 | 71.00 | 9012430111000 |
| 0.4374 | 7/16 | 11.11 | 118.00 | 54.34 | 71.00 | 9012430111100 |
| 0.4409 | | 11.20 | 118.00 | 54.20 | 71.00 | 9012430112000 |
| 0.4449 | | 11.30 | 118.00 | 54.05 | 71.00 | 9012430113000 |
| 0.4488 | | 11.40 | 118.00 | 53.90 | 71.00 | 9012430114000 |
| 0.4528 | | 11.50 | 118.00 | 53.75 | 71.00 | 9012430115000 |
| 0.4531 | 29/64 | 11.51 | 121.00 | 55.74 | 73.00 | 9012430115100 |
| 0.4567 | | 11.60 | 121.00 | 55.60 | 73.00 | 9012430116000 |

5xD Drills

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.4606 | | 11.70 | 121.00 | 55.45 | 73.00 | 9012430117000 |
| 0.4646 | | 11.80 | 121.00 | 55.30 | 73.00 | 9012430118000 |
| 0.4685 | | 11.90 | 121.00 | 55.15 | 73.00 | 9012430119000 |
| 0.4689 | 15/32 | 11.91 | 121.00 | 55.14 | 73.00 | 9012430119100 |
| 0.4724 | | 12.00 | 121.00 | 55.00 | 73.00 | 9012430120000 |
| 0.4921 | | 12.50 | 135.00 | 57.25 | 76.00 | 9012430125000 |
| 0.5000 | 1/2 | 12.70 | 137.00 | 58.95 | 78.00 | 9012430127000 |

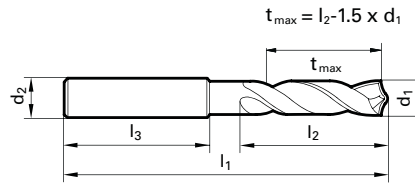
| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.5118 | | 13.00 | 137.00 | 58.50 | 78.00 | 9012430130000 |
| 0.5315 | | 13.50 | 144.00 | 63.75 | 84.00 | 9012430135000 |
| 0.5512 | | 14.00 | 147.00 | 65.00 | 86.00 | 9012430140000 |
| 0.5709 | | 14.50 | 151.00 | 67.25 | 89.00 | 9012430145000 |
| 0.5906 | | 15.00 | 153.00 | 68.50 | 91.00 | 9012430150000 |
| 0.6102 | | 15.50 | 157.00 | 70.75 | 94.00 | 9012430155000 |
| 0.6299 | | 16.00 | 160.00 | 72.00 | 96.00 | 9012430160000 |



Tool material **Solid Carbide**

Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 572

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9055150030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9055150031000 |
| 0.1248 | 1/8 | 3.18 | 6.00 | 66.00 | 23.23 | 28.00 | 9055150031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9055150032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9055150032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9055150033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9055150034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9055150035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9055150035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9055150036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9055150037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9055150038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9055150039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9055150039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9055150040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9055150041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9055150042000 |
| 0.1693 | | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9055150043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9055150043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9055150044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9055150045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9055150046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9055150046500 |
| 0.1850 | | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9055150047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9055150047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9055150048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9055150049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9055150050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9055150051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9055150051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9055150052000 |
| 0.2067 | | 5.25 | 6.00 | 82.00 | 36.13 | 44.00 | 9055150052500 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9055150053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9055150054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9055150055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9055150055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9055150055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9055150056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9055150057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9055150058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9055150059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9055150059500 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9055150060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9055150061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9055150062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9055150063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9055150063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9055150064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9055150065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9055150066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9055150067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9055150067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9055150068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9055150069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9055150070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9055150071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9055150071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9055150072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9055150073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9055150074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9055150075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9055150075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9055150076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9055150077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9055150078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9055150079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9055150079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9055150080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9055150081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9055150082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9055150083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9055150083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9055150084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9055150085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9055150086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9055150087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9055150087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9055150088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9055150089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9055150090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9055150091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9055150091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9055150092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9055150092500 |

5xD Drills

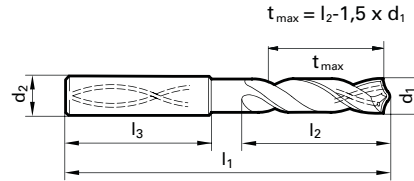
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9055150093000 |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9055150094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9055150095000 |
| 0.3750 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9055150095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9055150096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9055150097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9055150098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9055150099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9055150099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9055150100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9055150101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9055150102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9055150103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9055150103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9055150104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9055150105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9055150106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9055150107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9055150107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9055150108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9055150109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9055150110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9055150111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9055150111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9055150112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9055150113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9055150114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9055150115000 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9055150116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9055150117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9055150118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9055150119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9055150119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9055150120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9055150121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9055150122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9055150123000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4882 | | 12.40 | 14.00 | 124.00 | 58.40 | 77.00 | 9055150124000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9055150125000 |
| 0.4961 | | 12.60 | 14.00 | 124.00 | 58.10 | 77.00 | 9055150126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9055150127000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9055150130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 124.00 | 57.35 | 77.00 | 9055150131000 |
| 0.5197 | | 13.20 | 14.00 | 124.00 | 57.20 | 77.00 | 9055150132000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9055150133000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9055150135000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9055150137000 |
| 0.5433 | | 13.80 | 14.00 | 124.00 | 56.30 | 77.00 | 9055150138000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9055150140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9055150141000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9055150142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9055150142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9055150143000 |
| 0.5669 | | 14.40 | 16.00 | 133.00 | 61.40 | 83.00 | 9055150144000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9055150145000 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9055150147000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9055150150000 |
| 0.5945 | | 15.10 | 16.00 | 133.00 | 60.35 | 83.00 | 9055150151000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9055150152000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9055150155000 |
| 0.6142 | | 15.60 | 16.00 | 133.00 | 59.60 | 83.00 | 9055150156000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9055150157000 |
| 0.6220 | | 15.80 | 16.00 | 133.00 | 59.30 | 83.00 | 9055150158000 |
| 0.6250 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9055150158700 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9055150160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9055150165000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9055150170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9055150175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9055150180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9055150185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9055150190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9055150195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9055150200000 |



Tool material **Solid Carbide**
Surface **S**

- P** Steel ○ web thinning ≥ Ø 3.000 • relieved cone • main cutting edge form concave • optimized cutting geometry • sharp cutting edges
 - M** Stainless steel ○
 - K** Cast iron ○ high-alloyed steels • stainless/acid-/heat-resistant steels • Inconel, Hastelloy, Monel • brass, bronzes • aluminum and Al-alloys • magnesium and magnesium alloys • Titanium and Titanium alloys • sintered powder metals
 - N** Aluminum ○
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 554

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|------|-------|------------------|-------|---------------|---------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9016620030000 | |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9016620031000 | |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9016620031700 | |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9016620032000 | |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9016620033000 | |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9016620034000 | |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9016620035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9016620035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9016620036000 | |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9016620037000 | |
| 0.1496 | | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9016620038000 | |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9016620039000 | |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9016620039700 | |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9016620040000 | |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9016620041000 | |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9016620042000 | |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9016620043000 | |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9016620043700 | |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9016620044000 | |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9016620045000 | |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9016620046000 | |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9016620046500 | |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9016620047000 | |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9016620047600 | |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9016620048000 | |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9016620049000 | |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9016620050000 | |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9016620051000 | |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9016620051600 | |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9016620052000 | |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9016620053000 | |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9016620054000 | |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9016620055000 | |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9016620055500 | |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9016620055600 | |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9016620056000 | |
| 0.2185 | | 5.65 | 6.00 | 82.00 | 35.53 | 44.00 | 9016620056500 | |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9016620057000 | |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9016620058000 | |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9016620059000 | |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9016620059500 | |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9016620060000 | |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|-------|--------|------------------|-------|---------------|---------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9016620061000 | |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9016620062000 | |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9016620063000 | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9016620063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9016620064000 | |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9016620065000 | |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9016620066000 | |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9016620067000 | |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9016620067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9016620068000 | |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9016620069000 | |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9016620070000 | |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9016620071000 | |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9016620071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9016620072000 | |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9016620073000 | |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9016620074000 | |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9016620075000 | |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9016620075400 | |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9016620076000 | |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9016620077000 | |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9016620078000 | |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9016620079000 | |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9016620079400 | |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9016620080000 | |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9016620081000 | |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9016620082000 | |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9016620083000 | |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9016620083300 | |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9016620084000 | |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9016620085000 | |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9016620086000 | |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9016620087000 | |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9016620087300 | |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9016620088000 | |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9016620089000 | |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9016620090000 | |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9016620091000 | |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9016620091300 | |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9016620092000 | |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9016620092500 | |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9016620093000 | |

5xD Drills

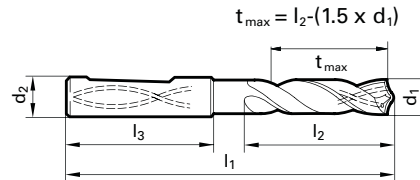
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9016620094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9016620095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9016620095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9016620096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9016620097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9016620098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9016620099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9016620099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9016620100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9016620101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9016620102000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9016620103200 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9016620105000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9016620107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9016620107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9016620108000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9016620110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9016620111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9016620111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9016620112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9016620113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9016620114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9016620115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 118.00 | 53.74 | 71.00 | 9016620115100 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9016620117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9016620118000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9016620119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9016620120000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|---------------|
| inch | wire/ltr | mm | | | | | |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9016620121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9016620122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9016620123000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9016620125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9016620127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9016620128000 |
| 0.5079 | | 12.90 | 14.00 | 124.00 | 57.65 | 77.00 | 9016620129000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9016620130000 |
| 0.5197 | | 13.20 | 14.00 | 124.00 | 57.20 | 77.00 | 9016620132000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9016620133000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9016620135000 |
| 0.5433 | | 13.80 | 14.00 | 124.00 | 56.30 | 77.00 | 9016620138000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9016620140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9016620141000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9016620145000 |
| 0.5709 | | 14.60 | 16.00 | 133.00 | 61.10 | 83.00 | 9016620146000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9016620150000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9016620153000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9016620155000 |
| 0.6220 | | 15.80 | 16.00 | 133.00 | 59.30 | 83.00 | 9016620158000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9016620160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9016620165000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9016620170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9016620175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9016620180000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9016620190000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9016620200000 |



Tool material **Solid Carbide**
Surface **S**

- P** Steel ● web thinning ≥ Ø 3.300 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • cast materials • bronze, brass
 - N** Aluminum ○ • high-alloyed AlSi-alloys
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 551

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9011830030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9011830031000 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9011830032000 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9011830033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9011830034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9011830035000 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9011830036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9011830037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9011830038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9011830039000 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9011830040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9011830041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9011830042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9011830043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9011830043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9011830044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9011830045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9011830046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9011830046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9011830047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9011830047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9011830048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9011830049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9011830050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9011830051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9011830051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9011830052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9011830053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9011830054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9011830055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9011830055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9011830056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9011830057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9011830058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9011830059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9011830059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9011830060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9011830061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9011830062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9011830063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9011830063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9011830064000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9011830065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9011830066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9011830067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9011830067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9011830068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9011830069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9011830070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9011830071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9011830071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9011830072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9011830073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9011830074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9011830075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9011830075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9011830076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9011830077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9011830078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9011830079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9011830079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9011830080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9011830081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9011830082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9011830083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9011830083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9011830084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9011830085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9011830086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9011830087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9011830087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9011830088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9011830089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9011830090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9011830091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9011830091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9011830092000 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9011830093000 |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9011830094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9011830095000 |
| 0.3750 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9011830095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9011830096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9011830097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9011830098000 |

5xD Drills

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9011830099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9011830099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9011830100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9011830101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9011830102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9011830103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9011830103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9011830104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9011830105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9011830106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9011830107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9011830107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9011830108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9011830109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9011830110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9011830111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9011830111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9011830112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9011830113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9011830114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9011830115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 118.00 | 53.74 | 71.00 | 9011830115100 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9011830116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9011830117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9011830118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9011830119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9011830119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9011830120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9011830121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9011830122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9011830123000 |
| 0.4882 | | 12.40 | 14.00 | 124.00 | 58.40 | 77.00 | 9011830124000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9011830125000 |
| 0.4961 | | 12.60 | 14.00 | 124.00 | 58.10 | 77.00 | 9011830126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9011830127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9011830128000 |
| 0.5079 | | 12.90 | 14.00 | 124.00 | 57.65 | 77.00 | 9011830129000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9011830130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 124.00 | 57.35 | 77.00 | 9011830131000 |
| 0.5197 | | 13.20 | 14.00 | 124.00 | 57.20 | 77.00 | 9011830132000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9011830133000 |
| 0.5276 | | 13.40 | 14.00 | 124.00 | 56.90 | 77.00 | 9011830134000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9011830135000 |
| 0.5354 | | 13.60 | 14.00 | 124.00 | 56.60 | 77.00 | 9011830136000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9011830137000 |
| 0.5433 | | 13.80 | 14.00 | 124.00 | 56.30 | 77.00 | 9011830138000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 124.00 | 56.17 | 77.00 | 9011830138900 |
| 0.5472 | | 13.90 | 14.00 | 124.00 | 56.15 | 77.00 | 9011830139000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9011830140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9011830141000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9011830142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9011830142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9011830143000 |
| 0.5669 | | 14.40 | 16.00 | 133.00 | 61.40 | 83.00 | 9011830144000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9011830145000 |
| 0.5748 | | 14.60 | 16.00 | 133.00 | 61.10 | 83.00 | 9011830146000 |
| 0.5780 | 37/64 | 14.68 | 16.00 | 133.00 | 60.98 | 83.00 | 9011830146800 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9011830147000 |
| 0.5827 | | 14.80 | 16.00 | 133.00 | 60.80 | 83.00 | 9011830148000 |
| 0.5866 | | 14.90 | 16.00 | 133.00 | 60.65 | 83.00 | 9011830149000 |

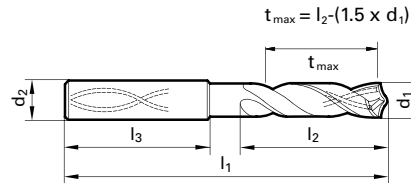
| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9011830150000 |
| 0.5945 | | 15.10 | 16.00 | 133.00 | 60.35 | 83.00 | 9011830151000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9011830152000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9011830153000 |
| 0.6063 | | 15.40 | 16.00 | 133.00 | 59.90 | 83.00 | 9011830154000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 133.00 | 59.78 | 83.00 | 9011830154800 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9011830155000 |
| 0.6142 | | 15.60 | 16.00 | 133.00 | 59.60 | 83.00 | 9011830156000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9011830157000 |
| 0.6220 | | 15.80 | 16.00 | 133.00 | 59.30 | 83.00 | 9011830158000 |
| 0.6250 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9011830158700 |
| 0.6260 | | 15.90 | 16.00 | 133.00 | 59.15 | 83.00 | 9011830159000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9011830160000 |
| 0.6339 | | 16.10 | 18.00 | 143.00 | 68.85 | 93.00 | 9011830161000 |
| 0.6378 | | 16.20 | 18.00 | 143.00 | 68.70 | 93.00 | 9011830162000 |
| 0.6406 | 41/64 | 16.27 | 18.00 | 143.00 | 68.60 | 93.00 | 9011830162700 |
| 0.6417 | | 16.30 | 18.00 | 143.00 | 68.55 | 93.00 | 9011830163000 |
| 0.6457 | | 16.40 | 18.00 | 143.00 | 68.40 | 93.00 | 9011830164000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9011830165000 |
| 0.6535 | | 16.60 | 18.00 | 143.00 | 68.10 | 93.00 | 9011830166000 |
| 0.6575 | | 16.70 | 18.00 | 143.00 | 67.95 | 93.00 | 9011830167000 |
| 0.6614 | | 16.80 | 18.00 | 143.00 | 67.80 | 93.00 | 9011830168000 |
| 0.6654 | | 16.90 | 18.00 | 143.00 | 67.65 | 93.00 | 9011830169000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9011830170000 |
| 0.6720 | 43/64 | 17.07 | 18.00 | 143.00 | 67.40 | 93.00 | 9011830170700 |
| 0.6732 | | 17.10 | 18.00 | 143.00 | 67.35 | 93.00 | 9011830171000 |
| 0.6772 | | 17.20 | 18.00 | 143.00 | 67.20 | 93.00 | 9011830172000 |
| 0.6811 | | 17.30 | 18.00 | 143.00 | 67.05 | 93.00 | 9011830173000 |
| 0.6850 | | 17.40 | 18.00 | 143.00 | 66.90 | 93.00 | 9011830174000 |
| 0.6874 | 11/16 | 17.46 | 18.00 | 143.00 | 66.81 | 93.00 | 9011830174600 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9011830175000 |
| 0.6929 | | 17.60 | 18.00 | 143.00 | 66.60 | 93.00 | 9011830176000 |
| 0.6969 | | 17.70 | 18.00 | 143.00 | 66.45 | 93.00 | 9011830177000 |
| 0.7008 | | 17.80 | 18.00 | 143.00 | 66.30 | 93.00 | 9011830178000 |
| 0.7031 | 45/64 | 17.86 | 18.00 | 143.00 | 66.21 | 93.00 | 9011830178600 |
| 0.7047 | | 17.90 | 18.00 | 143.00 | 66.15 | 93.00 | 9011830179000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9011830180000 |
| 0.7126 | | 18.10 | 20.00 | 153.00 | 73.85 | 101.00 | 9011830181000 |
| 0.7165 | | 18.20 | 20.00 | 153.00 | 73.70 | 101.00 | 9011830182000 |
| 0.7205 | | 18.30 | 20.00 | 153.00 | 73.55 | 101.00 | 9011830183000 |
| 0.7244 | | 18.40 | 20.00 | 153.00 | 73.40 | 101.00 | 9011830184000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9011830185000 |
| 0.7323 | | 18.60 | 20.00 | 153.00 | 73.10 | 101.00 | 9011830186000 |
| 0.7343 | 47/64 | 18.65 | 20.00 | 153.00 | 73.03 | 101.00 | 9011830186500 |
| 0.7362 | | 18.70 | 20.00 | 153.00 | 72.95 | 101.00 | 9011830187000 |
| 0.7402 | | 18.80 | 20.00 | 153.00 | 72.80 | 101.00 | 9011830188000 |
| 0.7441 | | 18.90 | 20.00 | 153.00 | 72.65 | 101.00 | 9011830189000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9011830190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 153.00 | 72.43 | 101.00 | 9011830190500 |
| 0.7520 | | 19.10 | 20.00 | 153.00 | 72.35 | 101.00 | 9011830191000 |
| 0.7559 | | 19.20 | 20.00 | 153.00 | 72.20 | 101.00 | 9011830192000 |
| 0.7598 | | 19.30 | 20.00 | 153.00 | 72.05 | 101.00 | 9011830193000 |
| 0.7657 | 49/64 | 19.45 | 20.00 | 153.00 | 71.83 | 101.00 | 9011830194500 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9011830195000 |
| 0.7717 | | 19.60 | 20.00 | 153.00 | 71.60 | 101.00 | 9011830196000 |
| 0.7756 | | 19.70 | 20.00 | 153.00 | 71.45 | 101.00 | 9011830197000 |
| 0.7795 | | 19.80 | 20.00 | 153.00 | 71.30 | 101.00 | 9011830198000 |
| 0.7835 | | 19.90 | 20.00 | 153.00 | 71.15 | 101.00 | 9011830199000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9011830200000 |

5xD Drills



Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AISi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 570

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9055110030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9055110031000 |
| 0.1248 | 1/8 | 3.18 | 6.00 | 66.00 | 23.23 | 28.00 | 9055110031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9055110032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9055110032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9055110033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9055110034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9055110035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9055110035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9055110036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9055110037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9055110038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9055110039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9055110039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9055110040000 |
| 0.1591 | #21 | 4.04 | 6.00 | 74.00 | 29.94 | 36.00 | 9055110040400 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9055110041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9055110042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9055110043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9055110043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9055110044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9055110045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9055110046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9055110046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9055110047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9055110047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9055110048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9055110049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9055110050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9055110051000 |
| 0.2012 | #7 | 5.11 | 6.00 | 82.00 | 36.34 | 44.00 | 9055110051100 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9055110051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9055110052000 |
| 0.2067 | | 5.25 | 6.00 | 82.00 | 36.13 | 44.00 | 9055110052500 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9055110053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9055110054000 |
| 0.2130 | #3 | 5.41 | 6.00 | 82.00 | 35.89 | 44.00 | 9055110054100 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9055110055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9055110055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9055110055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9055110056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9055110057000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9055110058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9055110059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9055110059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9055110060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9055110061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9055110062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9055110063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9055110063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9055110064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9055110065000 |
| 0.2571 | F | 6.53 | 8.00 | 91.00 | 43.21 | 53.00 | 9055110065300 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9055110066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9055110067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9055110067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9055110068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9055110069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9055110070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9055110071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9055110071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9055110072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9055110073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9055110074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9055110075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9055110075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9055110076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9055110077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9055110078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9055110079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9055110079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9055110080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9055110081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9055110082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9055110083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9055110083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9055110084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9055110085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9055110086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9055110087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9055110087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9055110088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9055110089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9055110090000 |

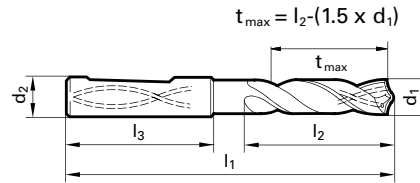
| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9055110091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9055110091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9055110092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9055110092500 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9055110093000 |
| 0.3677 | U | 9.34 | 10.00 | 103.00 | 46.99 | 61.00 | 9055110093400 |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9055110094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9055110095000 |
| 0.3750 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9055110095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9055110096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9055110097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9055110098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9055110099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9055110099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9055110100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9055110101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9055110102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9055110103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9055110103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9055110104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9055110105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9055110106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9055110107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9055110107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9055110108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9055110109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9055110110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9055110111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9055110111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9055110112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9055110113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9055110114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9055110115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 118.00 | 53.74 | 71.00 | 9055110115100 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9055110116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9055110117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9055110118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9055110119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9055110119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9055110120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9055110121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9055110122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9055110123000 |
| 0.4882 | | 12.40 | 14.00 | 124.00 | 58.40 | 77.00 | 9055110124000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9055110125000 |
| 0.4961 | | 12.60 | 14.00 | 124.00 | 58.10 | 77.00 | 9055110126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9055110127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9055110128000 |
| 0.5079 | | 12.90 | 14.00 | 124.00 | 57.65 | 77.00 | 9055110129000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9055110130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 124.00 | 57.35 | 77.00 | 9055110131000 |
| 0.5197 | | 13.20 | 14.00 | 124.00 | 57.20 | 77.00 | 9055110132000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9055110133000 |
| 0.5276 | | 13.40 | 14.00 | 124.00 | 56.90 | 77.00 | 9055110134000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 124.00 | 56.77 | 77.00 | 9055110134900 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9055110135000 |
| 0.5354 | | 13.60 | 14.00 | 124.00 | 56.60 | 77.00 | 9055110136000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9055110137000 |
| 0.5433 | | 13.80 | 14.00 | 124.00 | 56.30 | 77.00 | 9055110138000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 124.00 | 56.17 | 77.00 | 9055110138900 |
| 0.5472 | | 13.90 | 14.00 | 124.00 | 56.15 | 77.00 | 9055110139000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9055110140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9055110141000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9055110142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9055110142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9055110143000 |
| 0.5669 | | 14.40 | 16.00 | 133.00 | 61.40 | 83.00 | 9055110144000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9055110145000 |
| 0.5748 | | 14.60 | 16.00 | 133.00 | 61.10 | 83.00 | 9055110146000 |
| 0.5780 | 37/64 | 14.68 | 16.00 | 133.00 | 60.98 | 83.00 | 9055110146800 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9055110147000 |
| 0.5827 | | 14.80 | 16.00 | 133.00 | 60.80 | 83.00 | 9055110148000 |
| 0.5866 | | 14.90 | 16.00 | 133.00 | 60.65 | 83.00 | 9055110149000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9055110150000 |
| 0.5937 | 19/32 | 15.08 | 16.00 | 133.00 | 60.38 | 83.00 | 9055110150800 |
| 0.5945 | | 15.10 | 16.00 | 133.00 | 60.35 | 83.00 | 9055110151000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9055110152000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9055110153000 |
| 0.6063 | | 15.40 | 16.00 | 133.00 | 59.90 | 83.00 | 9055110154000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 133.00 | 59.78 | 83.00 | 9055110154800 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9055110155000 |
| 0.6142 | | 15.60 | 16.00 | 133.00 | 59.60 | 83.00 | 9055110156000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9055110157000 |
| 0.6220 | | 15.80 | 16.00 | 133.00 | 59.30 | 83.00 | 9055110158000 |
| 0.6250 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9055110158700 |
| 0.6260 | | 15.90 | 16.00 | 133.00 | 59.15 | 83.00 | 9055110159000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9055110160000 |
| 0.6331 | | 16.08 | 18.00 | 143.00 | 68.88 | 93.00 | 9055110160800 |
| 0.6406 | 41/64 | 16.27 | 18.00 | 143.00 | 68.60 | 93.00 | 9055110162700 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9055110165000 |
| 0.6563 | 21/32 | 16.67 | 18.00 | 143.00 | 68.00 | 93.00 | 9055110166700 |
| 0.6575 | | 16.70 | 18.00 | 143.00 | 67.95 | 93.00 | 9055110167000 |
| 0.6654 | | 16.90 | 18.00 | 143.00 | 67.65 | 93.00 | 9055110169000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9055110170000 |
| 0.6720 | 43/64 | 17.07 | 18.00 | 143.00 | 67.40 | 93.00 | 9055110170700 |
| 0.6874 | 11/16 | 17.46 | 18.00 | 143.00 | 66.81 | 93.00 | 9055110174600 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9055110175000 |
| 0.6969 | | 17.70 | 18.00 | 143.00 | 66.45 | 93.00 | 9055110177000 |
| 0.7031 | 45/64 | 17.86 | 18.00 | 143.00 | 66.21 | 93.00 | 9055110178600 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9055110180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9055110185000 |
| 0.7362 | | 18.70 | 20.00 | 153.00 | 72.95 | 101.00 | 9055110187000 |
| 0.7441 | | 18.90 | 20.00 | 153.00 | 72.65 | 101.00 | 9055110189000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9055110190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 153.00 | 72.43 | 101.00 | 9055110190500 |
| 0.7543 | | 19.16 | 20.00 | 153.00 | 72.26 | 101.00 | 9055110191600 |
| 0.7579 | | 19.25 | 20.00 | 153.00 | 72.13 | 101.00 | 9055110192500 |
| 0.7598 | | 19.30 | 20.00 | 153.00 | 72.05 | 101.00 | 9055110193000 |
| 0.7657 | 49/64 | 19.45 | 20.00 | 153.00 | 71.83 | 101.00 | 9055110194460 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9055110195000 |
| 0.7756 | | 19.70 | 20.00 | 153.00 | 71.45 | 101.00 | 9055110197000 |
| 0.7811 | 25/32 | 19.84 | 20.00 | 153.00 | 71.24 | 101.00 | 9055110198400 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9055110200000 |



Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 578

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9056110030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9056110031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9056110031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9056110032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9056110032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9056110033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9056110034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9056110035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9056110035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9056110036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9056110037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9056110038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9056110039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9056110039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9056110040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9056110041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9056110042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9056110043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9056110043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9056110044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9056110045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9056110046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9056110046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9056110047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9056110047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9056110048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9056110049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9056110050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9056110051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9056110051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9056110052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9056110053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9056110054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9056110055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9056110055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9056110055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9056110056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9056110057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9056110058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9056110059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9056110059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9056110060000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9056110061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9056110062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9056110063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9056110063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9056110064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9056110065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9056110066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9056110067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9056110067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9056110068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9056110069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9056110070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9056110071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9056110071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9056110072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9056110073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9056110074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9056110075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9056110075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9056110076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9056110077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9056110078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9056110079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9056110079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9056110080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9056110081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9056110082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9056110083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9056110083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9056110084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9056110085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9056110086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9056110087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9056110087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9056110088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9056110089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9056110090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9056110091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9056110091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9056110092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9056110092500 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9056110093000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9056110094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9056110095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9056110095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9056110096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9056110097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9056110098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9056110099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9056110099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9056110100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9056110101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9056110102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9056110103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9056110103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9056110104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9056110105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9056110106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9056110107000 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9056110108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9056110109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9056110110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9056110111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9056110111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9056110112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9056110113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9056110114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9056110115000 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9056110116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9056110117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9056110118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9056110119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9056110119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9056110120000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9056110121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9056110122000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9056110125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9056110127000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9056110130000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9056110135000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9056110137000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9056110140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9056110141000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9056110142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9056110142900 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9056110145000 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9056110147000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9056110150000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9056110152000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9056110155000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9056110157000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9056110160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9056110165000 |
| 0.6575 | | 16.70 | 18.00 | 143.00 | 67.95 | 93.00 | 9056110167000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9056110170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9056110175000 |
| 0.6969 | | 17.70 | 18.00 | 143.00 | 66.45 | 93.00 | 9056110177000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9056110180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9056110185000 |
| 0.7362 | | 18.70 | 20.00 | 153.00 | 72.95 | 101.00 | 9056110187000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9056110190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 153.00 | 72.43 | 101.00 | 9056110190500 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9056110195000 |
| 0.7756 | | 19.70 | 20.00 | 153.00 | 71.45 | 101.00 | 9056110197000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9056110200000 |



Tool material

Solid Carbide

Surface

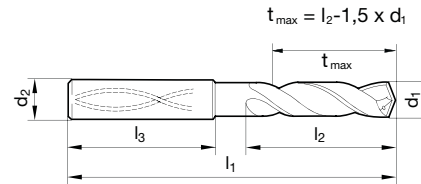


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | ○ |
| K | Cast iron | ○ |
| N | Aluminum | ○ |
| S | Titanium alloys | ○ |
| H | Hardened steel | ○ |

relieved cone • main cutting edge form concave • optimized cutting geometry • maximum performance • double margin

structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1400 N/mm²

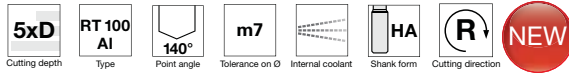
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 568

| Diameter (d1) | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|------|------------------|-------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9054980030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9054980031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9054980031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9054980032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9054980032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9054980033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9054980034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9054980035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9054980035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9054980036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9054980037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9054980038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9054980039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9054980039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9054980040000 |
| 0.1591 | #21 | 4.04 | 6.00 | 74.00 | 29.94 | 36.00 | 9054980040400 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9054980041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9054980042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9054980043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9054980043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9054980044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9054980045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9054980046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9054980046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9054980047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9054980047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9054980048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9054980049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9054980050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9054980051000 |
| 0.2012 | #7 | 5.11 | 6.00 | 82.00 | 36.34 | 44.00 | 9054980051100 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9054980051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9054980052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9054980053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9054980054000 |
| 0.2130 | #3 | 5.41 | 6.00 | 82.00 | 35.89 | 44.00 | 9054980054100 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9054980055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9054980055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9054980055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9054980056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9054980057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9054980058000 |

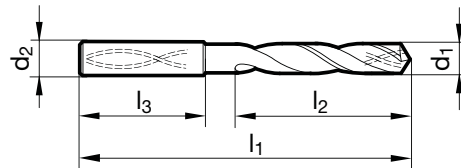
| Diameter (d1) | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|-------|------------------|-------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | | |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9054980059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9054980059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9054980060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9054980061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9054980062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9054980063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9054980063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9054980064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9054980065000 |
| 0.2571 | F | 6.53 | 8.00 | 91.00 | 43.21 | 53.00 | 9054980065300 |
| 0.2579 | | 6.55 | 8.00 | 91.00 | 43.18 | 53.00 | 9054980065500 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9054980066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9054980067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9054980067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9054980068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9054980069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9054980070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9054980071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9054980071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9054980072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9054980073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9054980074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9054980075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9054980075400 |
| 0.2972 | | 7.55 | 8.00 | 91.00 | 41.68 | 53.00 | 9054980075500 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9054980076000 |
| 0.3012 | | 7.65 | 8.00 | 91.00 | 41.53 | 53.00 | 9054980076500 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9054980077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9054980078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9054980079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9054980079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9054980080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9054980081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9054980082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9054980083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9054980083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9054980084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9054980085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9054980086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9054980087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9054980087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9054980088000 |



Tool material **Solid Carbide**
Surface

| | | |
|----------|-----------------|--|
| P | Steel | relieved cone • main cutting edge is slightly concave • optimized cutting geometry • sharp cutting edges NEW |
| M | Stainless steel | |
| K | Cast iron | aluminum and Al-alloys • Al materials with high Si-content |
| N | Aluminum ★ | |
| S | Titanium alloys | |
| H | Hardened steel | |

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 583

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9057680030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9057680031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9057680031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9057680032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9057680032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9057680033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9057680034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9057680035000 |
| 0.1406 | 9/64 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9057680035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9057680036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9057680037000 |
| 0.1496 | | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9057680038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9057680039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9057680039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9057680040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9057680041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9057680042000 |
| 0.1693 | | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9057680043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9057680043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9057680044000 |
| 0.1772 | | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9057680045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9057680046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9057680046500 |
| 0.1850 | | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9057680047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9057680047600 |
| 0.1890 | | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9057680048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9057680049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9057680050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9057680051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9057680051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9057680052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9057680053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9057680054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9057680055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9057680055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9057680055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9057680056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9057680057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9057680058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9057680059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9057680059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9057680060000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9057680061000 | |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9057680062000 | |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9057680063000 | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9057680063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9057680064000 | |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9057680065000 | |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9057680066000 | |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9057680067000 | |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9057680067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9057680068000 | |
| 0.2717 | | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9057680069000 | |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9057680070000 | |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9057680071000 | |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9057680071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9057680072000 | |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9057680073000 | |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9057680074000 | |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9057680075000 | |
| 0.2969 | 19/64 | | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9057680075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9057680076000 | |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9057680077000 | |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9057680078000 | |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9057680079000 | |
| 0.3126 | 5/16 | | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9057680079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9057680080000 | |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9057680081000 | |
| 0.3228 | | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9057680082000 | |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9057680083000 | |
| 0.3280 | 21/64 | | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9057680083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9057680084000 | |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9057680085000 | |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9057680086000 | |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9057680087000 | |
| 0.3437 | 11/64 | | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9057680087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9057680088000 | |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9057680089000 | |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9057680090000 | |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9057680091000 | |
| 0.3594 | 23/64 | | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9057680091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9057680092000 | |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9057680092500 | |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9057680093000 | |

5xD Drills

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3677 | | 9.34 | 10.00 | 103.00 | 46.99 | 61.00 | 9057680093400 |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9057680094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9057680095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9057680095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9057680096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9057680097000 |
| 0.3858 | | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9057680098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9057680099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9057680099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9057680100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9057680101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9057680102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9057680103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9057680103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9057680104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9057680105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9057680106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9057680107000 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9057680108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9057680109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9057680110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9057680111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9057680111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9057680112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9057680113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9057680114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9057680115000 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9057680116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9057680117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9057680118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9057680119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9057680119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9057680120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9057680121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9057680122000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9057680125000 |
| 0.4961 | | 12.60 | 14.00 | 124.00 | 58.10 | 77.00 | 9057680126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9057680127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9057680128000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.5079 | | 12.90 | 14.00 | 124.00 | 57.65 | 77.00 | 9057680129000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9057680130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 124.00 | 57.35 | 77.00 | 9057680131000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9057680133000 |
| 0.5276 | | 13.40 | 14.00 | 124.00 | 56.90 | 77.00 | 9057680134000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9057680135000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9057680137000 |
| 0.5433 | | 13.80 | 14.00 | 124.00 | 56.30 | 77.00 | 9057680138000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9057680140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9057680141000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9057680142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9057680142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9057680143000 |
| 0.5669 | | 14.40 | 16.00 | 133.00 | 61.40 | 83.00 | 9057680144000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9057680145000 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9057680147000 |
| 0.5827 | | 14.80 | 16.00 | 133.00 | 60.80 | 83.00 | 9057680148000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9057680150000 |
| 0.5945 | | 15.10 | 16.00 | 133.00 | 60.35 | 83.00 | 9057680151000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9057680152000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9057680153000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9057680155000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9057680157000 |
| 0.6220 | | 15.80 | 16.00 | 133.00 | 59.30 | 83.00 | 9057680158000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9057680160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9057680165000 |
| 0.6575 | | 16.70 | 18.00 | 143.00 | 67.95 | 93.00 | 9057680167000 |
| 0.6654 | | 16.90 | 18.00 | 143.00 | 67.65 | 93.00 | 9057680169000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9057680170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9057680175000 |
| 0.6969 | | 17.70 | 18.00 | 143.00 | 66.45 | 93.00 | 9057680177000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9057680180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9057680185000 |
| 0.7441 | | 18.90 | 20.00 | 153.00 | 72.65 | 101.00 | 9057680189000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9057680190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 153.00 | 72.43 | 101.00 | 9057680190500 |
| 0.7598 | | 19.30 | 20.00 | 153.00 | 72.05 | 101.00 | 9057680193000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9057680195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9057680200000 |



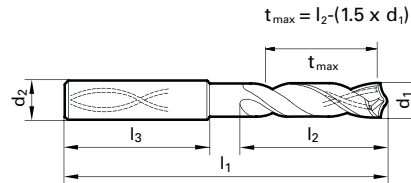
Tool material **Solid Carbide**
Surface **a**

| | |
|----------|-------------------|
| P | Steel |
| M | Stainless steel ● |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys ● |
| H | Hardened steel ○ |

web thinning ≥ Ø 3.000 • relieved cone • main cutting edge form concave • optimized cutting geometry

stainless/acid-/heat-resistant steels • alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys

●=Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 582

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9057440030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9057440031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9057440031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9057440032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9057440032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9057440033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9057440034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9057440035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9057440035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9057440036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9057440037000 |
| 0.1496 | | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9057440038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9057440039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9057440039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9057440040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9057440041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9057440042000 |
| 0.1693 | | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9057440043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9057440043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9057440044000 |
| 0.1772 | | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9057440045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9057440046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9057440046500 |
| 0.1850 | | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9057440047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9057440047600 |
| 0.1890 | | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9057440048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9057440049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9057440050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9057440051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9057440051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9057440052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9057440053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9057440054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9057440055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9057440055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9057440055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9057440056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9057440057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9057440058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9057440059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9057440059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9057440060000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9057440061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9057440062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9057440063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9057440063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9057440064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9057440065000 |
| 0.2571 | F | 6.53 | 8.00 | 91.00 | 43.21 | 53.00 | 9057440065300 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9057440066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9057440067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9057440067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9057440068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9057440069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9057440070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9057440071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9057440071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9057440072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9057440073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9057440074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9057440075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9057440075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9057440076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9057440077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9057440078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9057440079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9057440079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9057440080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9057440081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9057440082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9057440083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9057440083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9057440084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9057440085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9057440086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9057440087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9057440087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9057440088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9057440089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9057440090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9057440091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9057440091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9057440092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9057440092500 |

5xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9057440093000 |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9057440094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9057440095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9057440095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9057440096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9057440097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9057440098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9057440099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9057440099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9057440100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9057440101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9057440102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9057440103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9057440103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9057440104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9057440105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9057440106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9057440107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9057440107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9057440108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9057440109000 |

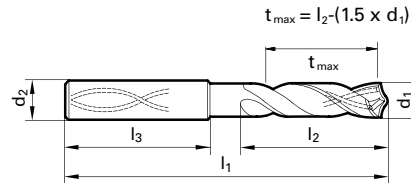
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9057440110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9057440111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9057440111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9057440112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9057440113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9057440114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9057440115000 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9057440116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9057440117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9057440118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9057440119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9057440119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9057440120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9057440121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9057440122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9057440123000 |
| 0.4882 | | 12.40 | 14.00 | 124.00 | 58.40 | 77.00 | 9057440124000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9057440125000 |
| 0.4961 | | 12.60 | 14.00 | 124.00 | 58.10 | 77.00 | 9057440126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9057440127000 |



Tool material **Solid Carbide**
Surface **a**

| | | |
|----------|-------------------|--|
| P | Steel | web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry |
| M | Stainless steel ★ | |
| K | Cast iron | stainless/acid-/heat-resistant steels • Titanium and Titanium alloys • Inconel, Hastelloy, Monel |
| N | Aluminum | |
| S | Titanium alloys ● | |
| H | Hardened steel | |

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 591

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9085110030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9085110031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9085110031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9085110032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9085110032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9085110033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9085110034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9085110035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9085110035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9085110036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9085110037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9085110038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9085110039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9085110039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9085110040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9085110041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9085110042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9085110043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9085110043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9085110044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9085110045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9085110046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9085110046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9085110047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9085110047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9085110048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9085110049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9085110050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9085110051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9085110051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9085110052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9085110053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9085110054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9085110055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9085110055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9085110055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9085110056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9085110057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9085110058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9085110059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9085110059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9085110060000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9085110061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9085110062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9085110063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9085110063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9085110064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9085110065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9085110066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9085110067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9085110067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9085110068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9085110069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9085110070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9085110071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9085110071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9085110072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9085110073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9085110074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9085110075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9085110075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9085110076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9085110077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9085110078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9085110079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9085110079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9085110080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9085110081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9085110082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9085110083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9085110083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9085110084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9085110085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9085110086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9085110087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9085110087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9085110088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9085110089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9085110090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9085110091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9085110091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9085110092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9085110092500 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9085110093000 |

5xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9085110094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9085110095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9085110095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9085110096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9085110097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9085110098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9085110099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9085110099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9085110100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9085110101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9085110102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9085110103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9085110103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9085110104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9085110105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9085110106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9085110107000 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9085110108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9085110109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9085110110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9085110111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9085110111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9085110112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9085110113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9085110114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9085110115000 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9085110116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9085110117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9085110118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9085110119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9085110119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9085110120000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9085110122000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9085110125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9085110127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9085110128000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9085110130000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9085110133000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9085110135000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9085110137000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9085110140000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9085110142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9085110142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9085110143000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9085110145000 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9085110147000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9085110150000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9085110152000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9085110153000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9085110155000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9085110157000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9085110160000 |
| 0.6417 | | 16.30 | 18.00 | 143.00 | 68.55 | 93.00 | 9085110163000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9085110165000 |
| 0.6654 | | 16.90 | 18.00 | 143.00 | 67.65 | 93.00 | 9085110169000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9085110170000 |
| 0.6811 | | 17.30 | 18.00 | 143.00 | 67.05 | 93.00 | 9085110173000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9085110175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9085110180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9085110185000 |
| 0.7441 | | 18.90 | 20.00 | 153.00 | 72.65 | 101.00 | 9085110189000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9085110190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 153.00 | 72.43 | 101.00 | 9085110190500 |
| 0.7598 | | 19.30 | 20.00 | 153.00 | 72.05 | 101.00 | 9085110193000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9085110195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9085110200000 |

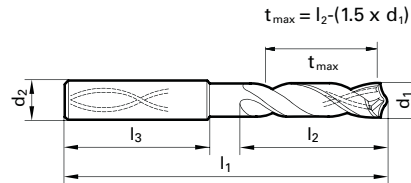


Tool material **Solid Carbide**
Surface **Y**

| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | |
| N | Aluminum | |
| S | Titanium alloys | ★ |
| H | Hardened steel | ○ |

web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge is slightly concave • optimized cutting geometry • double margin
 alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
 Speeds and feeds information on pg. 592

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9085210030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9085210031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9085210031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9085210032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9085210032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9085210033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9085210034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9085210035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9085210035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9085210036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9085210037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9085210038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9085210039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9085210039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9085210040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9085210041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9085210042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9085210043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9085210043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9085210044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9085210045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9085210046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9085210046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9085210047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9085210047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9085210048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9085210049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9085210050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9085210051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9085210051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9085210052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9085210053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9085210054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9085210055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9085210055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9085210055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9085210056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9085210057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9085210058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9085210059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9085210059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9085210060000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9085210061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9085210062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9085210063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9085210063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9085210064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9085210065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9085210066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9085210067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9085210067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9085210068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9085210069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9085210070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9085210071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9085210071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9085210072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9085210073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9085210074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9085210075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9085210075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9085210076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9085210077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9085210078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9085210079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9085210079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9085210080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9085210081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9085210082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9085210083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9085210083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9085210084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9085210085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9085210086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9085210087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9085210087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9085210088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9085210089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9085210090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9085210091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9085210091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9085210092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9085210092500 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9085210093000 |

5xD Drills

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9085210094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9085210095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9085210095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9085210096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9085210097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9085210098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9085210099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9085210099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9085210100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9085210101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9085210102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9085210103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9085210103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9085210104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9085210105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9085210106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9085210107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9085210107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9085210108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9085210109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9085210110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9085210111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9085210111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9085210112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9085210113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9085210114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9085210115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 118.00 | 53.74 | 71.00 | 9085210115100 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9085210116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9085210117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9085210118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9085210119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9085210119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9085210120000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9085210122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9085210123000 |

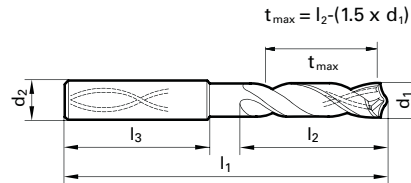
| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9085210125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9085210127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9085210128000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9085210130000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9085210133000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 124.00 | 56.77 | 77.00 | 9085210134900 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9085210135000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9085210137000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9085210140000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9085210142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9085210142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9085210143000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9085210145000 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9085210147000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9085210150000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9085210152000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9085210153000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9085210155000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9085210157000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9085210158700 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9085210160000 |
| 0.6417 | | 16.30 | 18.00 | 143.00 | 68.55 | 93.00 | 9085210163000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9085210165000 |
| 0.6654 | | 16.90 | 18.00 | 143.00 | 67.65 | 93.00 | 9085210169000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9085210170000 |
| 0.6811 | | 17.30 | 18.00 | 143.00 | 67.05 | 93.00 | 9085210173000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9085210175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9085210180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9085210185000 |
| 0.7441 | | 18.90 | 20.00 | 153.00 | 72.65 | 101.00 | 9085210189000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9085210190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 153.00 | 72.43 | 101.00 | 9085210190500 |
| 0.7598 | | 19.30 | 20.00 | 153.00 | 72.05 | 101.00 | 9085210193000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9085210195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9085210200000 |



Tool material **Solid Carbide**
Surface **F**

| | | |
|----------|-----------------|--|
| P | Steel | web thinning $\geq \varnothing 3.000$ • patented radius point grind • main cutting edge form straight (after correction) |
| M | Stainless steel | |
| K | Cast iron ★ | vermicular cast iron GGV and ADI, CDI • grey cast iron, malleable and spheroidal iron |
| N | Aluminum | |
| S | Titanium alloys | |
| H | Hardened steel | |

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 587

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9065010030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9065010031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 66.00 | 23.25 | 28.00 | 9065010031700 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9065010032000 |
| 0.1280 | | 3.25 | 6.00 | 66.00 | 23.13 | 28.00 | 9065010032500 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9065010033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 22.90 | 28.00 | 9065010034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9065010035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 66.00 | 22.65 | 28.00 | 9065010035700 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 22.60 | 28.00 | 9065010036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9065010037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9065010038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 30.15 | 36.00 | 9065010039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 74.00 | 30.05 | 36.00 | 9065010039700 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9065010040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9065010041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9065010042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 29.55 | 36.00 | 9065010043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 74.00 | 29.45 | 36.00 | 9065010043700 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 29.40 | 36.00 | 9065010044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9065010045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 29.10 | 36.00 | 9065010046000 |
| 0.1831 | | 4.65 | 6.00 | 74.00 | 29.03 | 36.00 | 9065010046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 28.95 | 36.00 | 9065010047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 82.00 | 36.86 | 44.00 | 9065010047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9065010048000 |
| 0.1929 | | 4.90 | 6.00 | 82.00 | 36.65 | 44.00 | 9065010049000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9065010050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9065010051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 82.00 | 36.26 | 44.00 | 9065010051600 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9065010052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9065010053000 |
| 0.2126 | | 5.40 | 6.00 | 82.00 | 35.90 | 44.00 | 9065010054000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9065010055000 |
| 0.2185 | | 5.55 | 6.00 | 82.00 | 35.68 | 44.00 | 9065010055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 82.00 | 35.66 | 44.00 | 9065010055600 |
| 0.2205 | | 5.60 | 6.00 | 82.00 | 35.60 | 44.00 | 9065010056000 |
| 0.2244 | | 5.70 | 6.00 | 82.00 | 35.45 | 44.00 | 9065010057000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9065010058000 |
| 0.2323 | | 5.90 | 6.00 | 82.00 | 35.15 | 44.00 | 9065010059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 82.00 | 35.08 | 44.00 | 9065010059500 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9065010060000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9065010061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9065010062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9065010063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9065010063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9065010064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9065010065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9065010066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9065010067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9065010067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9065010068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9065010069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9065010070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9065010071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9065010071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9065010072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9065010073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9065010074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9065010075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9065010075400 |
| 0.2992 | | 7.60 | 8.00 | 91.00 | 41.60 | 53.00 | 9065010076000 |
| 0.3031 | | 7.70 | 8.00 | 91.00 | 41.45 | 53.00 | 9065010077000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9065010078000 |
| 0.3110 | | 7.90 | 8.00 | 91.00 | 41.15 | 53.00 | 9065010079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 91.00 | 41.09 | 53.00 | 9065010079400 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9065010080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9065010081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9065010082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9065010083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 103.00 | 48.51 | 61.00 | 9065010083300 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9065010084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9065010085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9065010086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9065010087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9065010087300 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9065010088000 |
| 0.3504 | | 8.90 | 10.00 | 103.00 | 47.65 | 61.00 | 9065010089000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9065010090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9065010091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9065010091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9065010092000 |
| 0.3642 | | 9.25 | 10.00 | 103.00 | 47.13 | 61.00 | 9065010092500 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9065010093000 |

5xD Drills

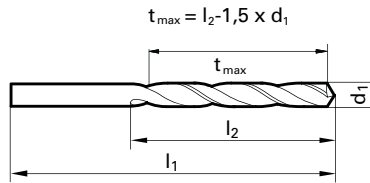
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3701 | | 9.40 | 10.00 | 103.00 | 46.90 | 61.00 | 9065010094000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9065010095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9065010095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9065010096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9065010097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9065010098000 |
| 0.3898 | | 9.90 | 10.00 | 103.00 | 46.15 | 61.00 | 9065010099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9065010099200 |
| 0.3937 | | 10.00 | 10.00 | 105.00 | 30.00 | 45.00 | 9065010100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9065010101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9065010102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9065010103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9065010103200 |
| 0.4094 | | 10.40 | 12.00 | 118.00 | 55.40 | 71.00 | 9065010104000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9065010105000 |
| 0.4173 | | 10.60 | 12.00 | 118.00 | 55.10 | 71.00 | 9065010106000 |
| 0.4213 | | 10.70 | 12.00 | 118.00 | 54.95 | 71.00 | 9065010107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9065010107200 |
| 0.4252 | | 10.80 | 12.00 | 118.00 | 54.80 | 71.00 | 9065010108000 |
| 0.4291 | | 10.90 | 12.00 | 118.00 | 54.65 | 71.00 | 9065010109000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9065010110000 |
| 0.4370 | | 11.10 | 12.00 | 118.00 | 54.35 | 71.00 | 9065010111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9065010111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9065010112000 |
| 0.4449 | | 11.30 | 12.00 | 118.00 | 54.05 | 71.00 | 9065010113000 |
| 0.4488 | | 11.40 | 12.00 | 118.00 | 53.90 | 71.00 | 9065010114000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9065010115000 |
| 0.4567 | | 11.60 | 12.00 | 118.00 | 53.60 | 71.00 | 9065010116000 |
| 0.4606 | | 11.70 | 12.00 | 118.00 | 53.45 | 71.00 | 9065010117000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9065010118000 |
| 0.4685 | | 11.90 | 12.00 | 118.00 | 53.15 | 71.00 | 9065010119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9065010119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9065010120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9065010121000 |
| 0.4803 | | 12.20 | 14.00 | 124.00 | 58.70 | 77.00 | 9065010122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 58.55 | 77.00 | 9065010123000 |
| 0.4882 | | 12.40 | 14.00 | 124.00 | 58.40 | 77.00 | 9065010124000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9065010125000 |
| 0.4961 | | 12.60 | 14.00 | 124.00 | 58.10 | 77.00 | 9065010126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 57.95 | 77.00 | 9065010127000 |
| 0.5039 | | 12.80 | 14.00 | 124.00 | 57.80 | 77.00 | 9065010128000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5079 | | 12.90 | 14.00 | 124.00 | 57.65 | 77.00 | 9065010129000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9065010130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 124.00 | 57.35 | 77.00 | 9065010131000 |
| 0.5236 | | 13.30 | 14.00 | 124.00 | 57.05 | 77.00 | 9065010133000 |
| 0.5276 | | 13.40 | 14.00 | 124.00 | 56.90 | 77.00 | 9065010134000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9065010135000 |
| 0.5394 | | 13.70 | 14.00 | 124.00 | 56.45 | 77.00 | 9065010137000 |
| 0.5433 | | 13.80 | 14.00 | 124.00 | 56.30 | 77.00 | 9065010138000 |
| 0.5472 | | 13.90 | 14.00 | 124.00 | 56.15 | 77.00 | 9065010139000 |
| 0.5512 | | 14.00 | 14.00 | 107.00 | 39.00 | 60.00 | 9065010140000 |
| 0.5551 | | 14.10 | 16.00 | 133.00 | 61.85 | 83.00 | 9065010141000 |
| 0.5591 | | 14.20 | 16.00 | 133.00 | 61.70 | 83.00 | 9065010142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 133.00 | 61.57 | 83.00 | 9065010142900 |
| 0.5630 | | 14.30 | 16.00 | 133.00 | 61.55 | 83.00 | 9065010143000 |
| 0.5669 | | 14.40 | 16.00 | 133.00 | 61.40 | 83.00 | 9065010144000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9065010145000 |
| 0.5748 | | 14.60 | 16.00 | 133.00 | 61.10 | 83.00 | 9065010146000 |
| 0.5787 | | 14.70 | 16.00 | 133.00 | 60.95 | 83.00 | 9065010147000 |
| 0.5866 | | 14.90 | 16.00 | 133.00 | 60.65 | 83.00 | 9065010149000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9065010150000 |
| 0.5945 | | 15.10 | 16.00 | 133.00 | 60.35 | 83.00 | 9065010151000 |
| 0.5984 | | 15.20 | 16.00 | 133.00 | 60.20 | 83.00 | 9065010152000 |
| 0.6024 | | 15.30 | 16.00 | 133.00 | 60.05 | 83.00 | 9065010153000 |
| 0.6063 | | 15.40 | 16.00 | 133.00 | 59.90 | 83.00 | 9065010154000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9065010155000 |
| 0.6142 | | 15.60 | 16.00 | 133.00 | 59.60 | 83.00 | 9065010156000 |
| 0.6181 | | 15.70 | 16.00 | 133.00 | 59.45 | 83.00 | 9065010157000 |
| 0.6220 | | 15.80 | 16.00 | 133.00 | 59.30 | 83.00 | 9065010158000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 133.00 | 59.20 | 83.00 | 9065010158700 |
| 0.6260 | | 15.90 | 16.00 | 133.00 | 59.15 | 83.00 | 9065010159000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9065010160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9065010165000 |
| 0.6563 | 21/32 | 16.67 | 18.00 | 143.00 | 68.00 | 93.00 | 9065010166700 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9065010170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9065010175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9065010180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9065010185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9065010190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9065010195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9065010200000 |



Tool material **Solid Carbide**
Surface

- P** Steel ○ web thinning ≥ Ø 3.000 • facet point grinding • for holes with high alignment accuracy • very good surface quality of hole • suitable for interrupted cutting
 - M** Stainless steel ○
 - K** Cast iron ○ cast steel • alloyed/unalloyed steels up to 1000 N/mm²
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 554

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr mm | | | | |
| 0.1181 | 3.00 | 46.00 | 17.50 | 22.00 | 9014520030000 |
| 0.1201 | #31 3.05 | 49.00 | 19.43 | 24.00 | 9014520030500 |
| 0.1220 | 3.10 | 49.00 | 19.35 | 24.00 | 9014520031000 |
| 0.1248 | 1/8 3.17 | 49.00 | 19.25 | 24.00 | 9014520031700 |
| 0.1260 | 3.20 | 49.00 | 19.20 | 24.00 | 9014520032000 |
| 0.1299 | 3.30 | 49.00 | 19.05 | 24.00 | 9014520033000 |
| 0.1339 | 3.40 | 52.00 | 21.90 | 27.00 | 9014520034000 |
| 0.1358 | #29 3.45 | 52.00 | 21.83 | 27.00 | 9014520034500 |
| 0.1378 | 3.50 | 52.00 | 21.75 | 27.00 | 9014520035000 |
| 0.1406 | 9/64 #28 3.57 | 52.00 | 21.65 | 27.00 | 9014520035700 |
| 0.1417 | 3.60 | 52.00 | 21.60 | 27.00 | 9014520036000 |
| 0.1457 | 3.70 | 52.00 | 21.45 | 27.00 | 9014520037000 |
| 0.1496 | #25 3.80 | 55.00 | 24.30 | 30.00 | 9014520038000 |
| 0.1535 | 3.90 | 55.00 | 24.15 | 30.00 | 9014520039000 |
| 0.1563 | 5/32 3.97 | 55.00 | 24.05 | 30.00 | 9014520039700 |
| 0.1575 | 4.00 | 55.00 | 24.00 | 30.00 | 9014520040000 |
| 0.1614 | 4.10 | 55.00 | 23.85 | 30.00 | 9014520041000 |
| 0.1654 | 4.20 | 55.00 | 23.70 | 30.00 | 9014520042000 |
| 0.1693 | #18 4.30 | 58.00 | 25.55 | 32.00 | 9014520043000 |
| 0.1720 | 11/64 4.37 | 58.00 | 25.45 | 32.00 | 9014520043700 |
| 0.1732 | 4.40 | 58.00 | 25.40 | 32.00 | 9014520044000 |
| 0.1772 | #16 4.50 | 58.00 | 25.25 | 32.00 | 9014520045000 |
| 0.1811 | 4.60 | 58.00 | 25.10 | 32.00 | 9014520046000 |
| 0.1850 | #13 4.70 | 58.00 | 24.95 | 32.00 | 9014520047000 |
| 0.1874 | 3/16 4.76 | 62.00 | 27.86 | 35.00 | 9014520047600 |
| 0.1890 | #12 4.80 | 62.00 | 27.80 | 35.00 | 9014520048000 |
| 0.1929 | 4.90 | 62.00 | 27.65 | 35.00 | 9014520049000 |
| 0.1969 | 5.00 | 62.00 | 27.50 | 35.00 | 9014520050000 |
| 0.2008 | 5.10 | 62.00 | 27.35 | 35.00 | 9014520051000 |
| 0.2031 | 13/64 5.16 | 62.00 | 27.26 | 35.00 | 9014520051600 |
| 0.2047 | 5.20 | 62.00 | 27.20 | 35.00 | 9014520052000 |
| 0.2087 | 5.30 | 62.00 | 27.05 | 35.00 | 9014520053000 |
| 0.2126 | 5.40 | 66.00 | 30.90 | 39.00 | 9014520054000 |
| 0.2165 | 5.50 | 66.00 | 30.75 | 39.00 | 9014520055000 |
| 0.2189 | 7/32 5.56 | 66.00 | 30.66 | 39.00 | 9014520055600 |
| 0.2205 | 5.60 | 66.00 | 30.60 | 39.00 | 9014520056000 |
| 0.2244 | 5.70 | 66.00 | 30.45 | 39.00 | 9014520057000 |
| 0.2283 | 5.80 | 66.00 | 30.30 | 39.00 | 9014520058000 |
| 0.2323 | 5.90 | 66.00 | 30.15 | 39.00 | 9014520059000 |
| 0.2343 | 15/64 5.95 | 66.00 | 30.08 | 39.00 | 9014520059500 |
| 0.2362 | 6.00 | 66.00 | 30.00 | 39.00 | 9014520060000 |
| 0.2402 | 6.10 | 70.00 | 32.85 | 42.00 | 9014520061000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.2421 | C | 6.15 | 70.00 | 32.78 | 42.00 | 9014520061500 |
| 0.2441 | | 6.20 | 70.00 | 32.70 | 42.00 | 9014520062000 |
| 0.2480 | | 6.30 | 70.00 | 32.55 | 42.00 | 9014520063000 |
| 0.2500 | 1/4 E | 6.35 | 70.00 | 32.48 | 42.00 | 9014520063500 |
| 0.2520 | | 6.40 | 70.00 | 32.40 | 42.00 | 9014520064000 |
| 0.2559 | | 6.50 | 70.00 | 32.25 | 42.00 | 9014520065000 |
| 0.2598 | | 6.60 | 70.00 | 32.10 | 42.00 | 9014520066000 |
| 0.2638 | | 6.70 | 70.00 | 31.95 | 42.00 | 9014520067000 |
| 0.2657 | 17/64 H | 6.75 | 74.00 | 34.88 | 45.00 | 9014520067500 |
| 0.2677 | | 6.80 | 74.00 | 34.80 | 45.00 | 9014520068000 |
| 0.2717 | I | 6.90 | 74.00 | 34.65 | 45.00 | 9014520069000 |
| 0.2756 | | 7.00 | 74.00 | 34.50 | 45.00 | 9014520070000 |
| 0.2795 | | 7.10 | 74.00 | 34.35 | 45.00 | 9014520071000 |
| 0.2811 | 9/32 K | 7.14 | 74.00 | 34.29 | 45.00 | 9014520071400 |
| 0.2835 | | 7.20 | 74.00 | 34.20 | 45.00 | 9014520072000 |
| 0.2874 | | 7.30 | 74.00 | 34.05 | 45.00 | 9014520073000 |
| 0.2913 | | 7.40 | 74.00 | 33.90 | 45.00 | 9014520074000 |
| 0.2953 | | 7.50 | 74.00 | 33.75 | 45.00 | 9014520075000 |
| 0.2969 | 19/64 | 7.54 | 79.00 | 36.69 | 48.00 | 9014520075400 |
| 0.2992 | | 7.60 | 79.00 | 36.60 | 48.00 | 9014520076000 |
| 0.3031 | | 7.70 | 79.00 | 36.45 | 48.00 | 9014520077000 |
| 0.3071 | | 7.80 | 79.00 | 36.30 | 48.00 | 9014520078000 |
| 0.3110 | | 7.90 | 79.00 | 36.15 | 48.00 | 9014520079000 |
| 0.3126 | 5/16 | 7.94 | 79.00 | 36.09 | 48.00 | 9014520079400 |
| 0.3150 | | 8.00 | 79.00 | 36.00 | 48.00 | 9014520080000 |
| 0.3189 | | 8.10 | 79.00 | 35.85 | 48.00 | 9014520081000 |
| 0.3228 | P | 8.20 | 79.00 | 35.70 | 48.00 | 9014520082000 |
| 0.3268 | | 8.30 | 79.00 | 35.55 | 48.00 | 9014520083000 |
| 0.3280 | 21/64 | 8.33 | 79.00 | 35.51 | 48.00 | 9014520083300 |
| 0.3307 | | 8.40 | 79.00 | 35.40 | 48.00 | 9014520084000 |
| 0.3319 | Q | 8.43 | 79.00 | 35.36 | 48.00 | 9014520084300 |
| 0.3346 | | 8.50 | 79.00 | 35.25 | 48.00 | 9014520085000 |
| 0.3386 | | 8.60 | 84.00 | 39.10 | 52.00 | 9014520086000 |
| 0.3425 | | 8.70 | 84.00 | 38.95 | 52.00 | 9014520087000 |
| 0.3437 | 11/32 | 8.73 | 84.00 | 38.91 | 52.00 | 9014520087300 |
| 0.3465 | | 8.80 | 84.00 | 38.80 | 52.00 | 9014520088000 |
| 0.3504 | | 8.90 | 84.00 | 38.65 | 52.00 | 9014520089000 |
| 0.3543 | | 9.00 | 84.00 | 38.50 | 52.00 | 9014520090000 |
| 0.3583 | | 9.10 | 84.00 | 38.35 | 52.00 | 9014520091000 |
| 0.3594 | 23/64 | 9.13 | 84.00 | 38.31 | 52.00 | 9014520091300 |
| 0.3622 | | 9.20 | 84.00 | 38.20 | 52.00 | 9014520092000 |
| 0.3661 | | 9.30 | 84.00 | 38.05 | 52.00 | 9014520093000 |

5xD Drills

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3701 | | 9.40 | 84.00 | 37.90 | 52.00 | 9014520094000 |
| 0.3740 | | 9.50 | 84.00 | 37.75 | 52.00 | 9014520095000 |
| 0.3748 | 3/8 | 9.52 | 89.00 | 40.72 | 55.00 | 9014520095200 |
| 0.3780 | | 9.60 | 89.00 | 40.60 | 55.00 | 9014520096000 |
| 0.3819 | | 9.70 | 89.00 | 40.45 | 55.00 | 9014520097000 |
| 0.3858 | W | 9.80 | 89.00 | 40.30 | 55.00 | 9014520098000 |
| 0.3898 | | 9.90 | 89.00 | 40.15 | 55.00 | 9014520099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 40.12 | 55.00 | 9014520099200 |
| 0.3937 | | 10.00 | 89.00 | 40.00 | 55.00 | 9014520100000 |
| 0.3976 | | 10.10 | 89.00 | 39.85 | 55.00 | 9014520101000 |
| 0.4016 | | 10.20 | 89.00 | 39.70 | 55.00 | 9014520102000 |
| 0.4055 | | 10.30 | 89.00 | 39.55 | 55.00 | 9014520103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 39.52 | 55.00 | 9014520103200 |
| 0.4094 | | 10.40 | 89.00 | 39.40 | 55.00 | 9014520104000 |
| 0.4134 | | 10.50 | 89.00 | 39.25 | 55.00 | 9014520105000 |
| 0.4173 | | 10.60 | 89.00 | 39.10 | 55.00 | 9014520106000 |
| 0.4213 | | 10.70 | 95.00 | 43.95 | 60.00 | 9014520107000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 43.92 | 60.00 | 9014520107200 |
| 0.4252 | | 10.80 | 95.00 | 43.80 | 60.00 | 9014520108000 |
| 0.4291 | | 10.90 | 95.00 | 43.65 | 60.00 | 9014520109000 |
| 0.4331 | | 11.00 | 95.00 | 43.50 | 60.00 | 9014520110000 |
| 0.4370 | | 11.10 | 95.00 | 43.35 | 60.00 | 9014520111000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 43.34 | 60.00 | 9014520111100 |
| 0.4409 | | 11.20 | 95.00 | 43.20 | 60.00 | 9014520112000 |
| 0.4449 | | 11.30 | 95.00 | 43.05 | 60.00 | 9014520113000 |
| 0.4488 | | 11.40 | 95.00 | 42.90 | 60.00 | 9014520114000 |
| 0.4528 | | 11.50 | 95.00 | 42.75 | 60.00 | 9014520115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 42.74 | 60.00 | 9014520115100 |
| 0.4567 | | 11.60 | 95.00 | 42.60 | 60.00 | 9014520116000 |
| 0.4606 | | 11.70 | 95.00 | 42.45 | 60.00 | 9014520117000 |
| 0.4646 | | 11.80 | 95.00 | 42.30 | 60.00 | 9014520118000 |
| 0.4685 | | 11.90 | 102.00 | 47.15 | 65.00 | 9014520119000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 47.14 | 65.00 | 9014520119100 |
| 0.4724 | | 12.00 | 102.00 | 47.00 | 65.00 | 9014520120000 |
| 0.4764 | | 12.10 | 102.00 | 46.85 | 65.00 | 9014520121000 |
| 0.4803 | | 12.20 | 102.00 | 46.70 | 65.00 | 9014520122000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 46.55 | 65.00 | 9014520123000 |
| 0.4882 | | 12.40 | 102.00 | 46.40 | 65.00 | 9014520124000 |
| 0.4921 | | 12.50 | 102.00 | 46.25 | 65.00 | 9014520125000 |
| 0.4961 | | 12.60 | 102.00 | 46.10 | 65.00 | 9014520126000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 45.95 | 65.00 | 9014520127000 |
| 0.5039 | | 12.80 | 102.00 | 45.80 | 65.00 | 9014520128000 |
| 0.5079 | | 12.90 | 102.00 | 45.65 | 65.00 | 9014520129000 |
| 0.5118 | | 13.00 | 102.00 | 45.50 | 65.00 | 9014520130000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.5157 | 33/64 | 13.10 | 102.00 | 45.35 | 65.00 | 9014520131000 |
| 0.5197 | | 13.20 | 102.00 | 45.20 | 65.00 | 9014520132000 |
| 0.5236 | | 13.30 | 107.00 | 46.05 | 66.00 | 9014520133000 |
| 0.5276 | | 13.40 | 107.00 | 45.90 | 66.00 | 9014520134000 |
| 0.5315 | | 13.50 | 107.00 | 45.75 | 66.00 | 9014520135000 |
| 0.5354 | | 13.60 | 107.00 | 45.60 | 66.00 | 9014520136000 |
| 0.5394 | | 13.70 | 107.00 | 45.45 | 66.00 | 9014520137000 |
| 0.5433 | | 13.80 | 107.00 | 45.30 | 66.00 | 9014520138000 |
| 0.5472 | | 13.90 | 107.00 | 45.15 | 66.00 | 9014520139000 |
| 0.5512 | | 14.00 | 107.00 | 45.00 | 66.00 | 9014520140000 |
| 0.5551 | | 14.10 | 111.00 | 48.85 | 70.00 | 9014520141000 |
| 0.5591 | | 14.20 | 111.00 | 48.70 | 70.00 | 9014520142000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 48.57 | 70.00 | 9014520142900 |
| 0.5630 | | 14.30 | 111.00 | 48.55 | 70.00 | 9014520143000 |
| 0.5669 | | 14.40 | 111.00 | 48.40 | 70.00 | 9014520144000 |
| 0.5709 | | 14.50 | 111.00 | 48.25 | 70.00 | 9014520145000 |
| 0.5748 | | 14.60 | 111.00 | 48.10 | 70.00 | 9014520146000 |
| 0.5787 | | 14.70 | 111.00 | 47.95 | 70.00 | 9014520147000 |
| 0.5827 | | 14.80 | 111.00 | 47.80 | 70.00 | 9014520148000 |
| 0.5866 | | 14.90 | 111.00 | 47.65 | 70.00 | 9014520149000 |
| 0.5906 | | 15.00 | 111.00 | 47.50 | 70.00 | 9014520150000 |
| 0.5945 | | 15.10 | 115.00 | 50.35 | 73.00 | 9014520151000 |
| 0.5984 | | 15.20 | 115.00 | 50.20 | 73.00 | 9014520152000 |
| 0.6024 | | 15.30 | 115.00 | 50.05 | 73.00 | 9014520153000 |
| 0.6063 | | 15.40 | 115.00 | 49.90 | 73.00 | 9014520154000 |
| 0.6102 | | 15.50 | 115.00 | 49.75 | 73.00 | 9014520155000 |
| 0.6142 | | 15.60 | 115.00 | 49.60 | 73.00 | 9014520156000 |
| 0.6181 | | 15.70 | 115.00 | 49.45 | 73.00 | 9014520157000 |
| 0.6220 | | 15.80 | 115.00 | 49.30 | 73.00 | 9014520158000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 49.20 | 73.00 | 9014520158700 |
| 0.6260 | | 15.90 | 115.00 | 49.15 | 73.00 | 9014520159000 |
| 0.6299 | | 16.00 | 115.00 | 49.00 | 73.00 | 9014520160000 |
| 0.6406 | 41/64 | 16.27 | 119.00 | 48.60 | 73.00 | 9014520162700 |
| 0.6496 | | 16.50 | 119.00 | 48.25 | 73.00 | 9014520165000 |
| 0.6563 | 21/32 | 16.67 | 119.00 | 48.00 | 73.00 | 9014520166700 |
| 0.6693 | | 17.00 | 119.00 | 47.50 | 73.00 | 9014520170000 |
| 0.6874 | 11/16 | 17.46 | 123.00 | 49.81 | 76.00 | 9014520174600 |
| 0.6890 | | 17.50 | 123.00 | 49.75 | 76.00 | 9014520175000 |
| 0.7087 | | 18.00 | 123.00 | 49.00 | 76.00 | 9014520180000 |
| 0.7283 | | 18.50 | 127.00 | 48.25 | 76.00 | 9014520185000 |
| 0.7480 | | 19.00 | 127.00 | 47.50 | 76.00 | 9014520190000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 50.43 | 79.00 | 9014520190500 |
| 0.7677 | | 19.50 | 131.00 | 49.75 | 79.00 | 9014520195000 |
| 0.7874 | | 20.00 | 131.00 | 49.00 | 79.00 | 9014520200000 |

5xD Drills

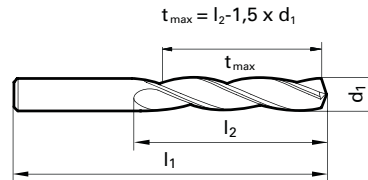


Tool material **Solid Carbide**

Surface **S**

| | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | web thinning ≥ Ø 3.000 • facet point grinding • for holes with high alignment accuracy • very good surface quality of hole • suitable for interrupted cutting |
| M | Stainless steel | | |
| K | Cast iron | ○ | cast steel • alloyed/unalloyed steels up to 1000 N/mm² |
| N | Aluminum | ○ | |
| S | Titanium alloys | | |
| H | Hardened steel | | |

●=Optimal
○=Limited



Speeds and feeds information on pg. 531

Shank diameter = cut diameter

| Diameter (d1) | | l1 mm | t _{max} mm | l2 mm | EDP # | | |
|---------------|----------------|----------|------------------------|----------|-------|-------------------------------|-------------------------------|
| inch | wire/ltr mm | | | | | | |
| 0.1181 | | 3.00 | 46.00 | 17.50 | 22.00 | 9006090030000 | |
| 0.1220 | | 3.10 | 49.00 | 19.35 | 24.00 | 9006090031000 | |
| 0.1248 | 1/8 | 3.17 | 49.00 | 19.25 | 24.00 | 9006090031700 | |
| 0.1260 | | 3.20 | 49.00 | 19.20 | 24.00 | 9006090032000 | |
| 0.1299 | | 3.30 | 49.00 | 19.05 | 24.00 | 9006090033000 | |
| 0.1339 | | 3.40 | 52.00 | 21.90 | 27.00 | 9006090034000 | |
| 0.1378 | | 3.50 | 52.00 | 21.75 | 27.00 | 9006090035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 52.00 | 21.65 | 27.00 | 9006090035700 |
| 0.1417 | | 3.60 | 52.00 | 21.60 | 27.00 | 9006090036000 | |
| 0.1457 | | 3.70 | 52.00 | 21.45 | 27.00 | 9006090037000 | |
| 0.1496 | | #25 | 3.80 | 55.00 | 24.30 | 30.00 | 9006090038000 |
| 0.1535 | | 3.90 | 55.00 | 24.15 | 30.00 | 9006090039000 | |
| 0.1563 | 5/32 | 3.97 | 55.00 | 24.05 | 30.00 | 9006090039700 | |
| 0.1575 | | 4.00 | 55.00 | 24.00 | 30.00 | 9006090040000 | |
| 0.1614 | | 4.10 | 55.00 | 23.85 | 30.00 | 9006090041000 | |
| 0.1654 | | 4.20 | 55.00 | 23.70 | 30.00 | 9006090042000 | |
| 0.1693 | | #18 | 4.30 | 58.00 | 25.55 | 32.00 | 9006090043000 |
| 0.1720 | 11/64 | 4.37 | 58.00 | 25.45 | 32.00 | 9006090043700 | |
| 0.1732 | | 4.40 | 58.00 | 25.40 | 32.00 | 9006090044000 | |
| 0.1772 | | #16 | 4.50 | 58.00 | 25.25 | 32.00 | 9006090045000 |
| 0.1811 | | 4.60 | 58.00 | 25.10 | 32.00 | 9006090046000 | |
| 0.1850 | | #13 | 4.70 | 58.00 | 24.95 | 32.00 | 9006090047000 |
| 0.1874 | 3/16 | 4.76 | 62.00 | 27.86 | 35.00 | 9006090047600 | |
| 0.1890 | | #12 | 4.80 | 62.00 | 27.80 | 35.00 | 9006090048000 |
| 0.1929 | | 4.90 | 62.00 | 27.65 | 35.00 | 9006090049000 | |
| 0.1969 | | 5.00 | 62.00 | 27.50 | 35.00 | 9006090050000 | |
| 0.2008 | | 5.10 | 62.00 | 27.35 | 35.00 | 9006090051000 | |
| 0.2031 | 13/64 | 5.16 | 62.00 | 27.26 | 35.00 | 9006090051600 | |
| 0.2047 | | 5.20 | 62.00 | 27.20 | 35.00 | 9006090052000 | |
| 0.2087 | | 5.30 | 62.00 | 27.05 | 35.00 | 9006090053000 | |
| 0.2126 | | 5.40 | 66.00 | 30.90 | 39.00 | 9006090054000 | |
| 0.2165 | | 5.50 | 66.00 | 30.75 | 39.00 | 9006090055000 | |
| 0.2189 | 7/32 | 5.56 | 66.00 | 30.66 | 39.00 | 9006090055600 | |
| 0.2205 | | 5.60 | 66.00 | 30.60 | 39.00 | 9006090056000 | |
| 0.2244 | | 5.70 | 66.00 | 30.45 | 39.00 | 9006090057000 | |
| 0.2283 | | 5.80 | 66.00 | 30.30 | 39.00 | 9006090058000 | |
| 0.2323 | | 5.90 | 66.00 | 30.15 | 39.00 | 9006090059000 | |
| 0.2343 | 15/64 | 5.95 | 66.00 | 30.08 | 39.00 | 9006090059500 | |
| 0.2362 | | 6.00 | 66.00 | 30.00 | 39.00 | 9006090060000 | |
| 0.2402 | | 6.10 | 70.00 | 32.85 | 42.00 | 9006090061000 | |
| 0.2441 | | 6.20 | 70.00 | 32.70 | 42.00 | 9006090062000 | |
| 0.2480 | | 6.30 | 70.00 | 32.55 | 42.00 | 9006090063000 | |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|----|----------|------------------------|----------|-------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2500 | 1/4 | E | 6.35 | 70.00 | 32.48 | 42.00 | 9006090063500 |
| 0.2520 | | | 6.40 | 70.00 | 32.40 | 42.00 | 9006090064000 |
| 0.2559 | | | 6.50 | 70.00 | 32.25 | 42.00 | 9006090065000 |
| 0.2598 | | | 6.60 | 70.00 | 32.10 | 42.00 | 9006090066000 |
| 0.2638 | | | 6.70 | 70.00 | 31.95 | 42.00 | 9006090067000 |
| 0.2657 | 17/64 | H | 6.75 | 74.00 | 34.88 | 45.00 | 9006090067500 |
| 0.2677 | | | 6.80 | 74.00 | 34.80 | 45.00 | 9006090068000 |
| 0.2717 | | I | 6.90 | 74.00 | 34.65 | 45.00 | 9006090069000 |
| 0.2756 | | | 7.00 | 74.00 | 34.50 | 45.00 | 9006090070000 |
| 0.2795 | | | 7.10 | 74.00 | 34.35 | 45.00 | 9006090071000 |
| 0.2811 | 9/32 | K | 7.14 | 74.00 | 34.29 | 45.00 | 9006090071400 |
| 0.2835 | | | 7.20 | 74.00 | 34.20 | 45.00 | 9006090072000 |
| 0.2874 | | | 7.30 | 74.00 | 34.05 | 45.00 | 9006090073000 |
| 0.2913 | | | 7.40 | 74.00 | 33.90 | 45.00 | 9006090074000 |
| 0.2953 | | | 7.50 | 74.00 | 33.75 | 45.00 | 9006090075000 |
| 0.2969 | 19/64 | | 7.54 | 79.00 | 36.69 | 48.00 | 9006090075400 |
| 0.2992 | | | 7.60 | 79.00 | 36.60 | 48.00 | 9006090076000 |
| 0.3031 | | | 7.70 | 79.00 | 36.45 | 48.00 | 9006090077000 |
| 0.3071 | | | 7.80 | 79.00 | 36.30 | 48.00 | 9006090078000 |
| 0.3110 | | | 7.90 | 79.00 | 36.15 | 48.00 | 9006090079000 |
| 0.3126 | 5/16 | | 7.94 | 79.00 | 36.09 | 48.00 | 9006090079400 |
| 0.3150 | | | 8.00 | 79.00 | 36.00 | 48.00 | 9006090080000 |
| 0.3189 | | | 8.10 | 79.00 | 35.85 | 48.00 | 9006090081000 |
| 0.3228 | | P | 8.20 | 79.00 | 35.70 | 48.00 | 9006090082000 |
| 0.3268 | | | 8.30 | 79.00 | 35.55 | 48.00 | 9006090083000 |
| 0.3280 | 21/64 | | 8.33 | 79.00 | 35.51 | 48.00 | 9006090083300 |
| 0.3307 | | | 8.40 | 79.00 | 35.40 | 48.00 | 9006090084000 |
| 0.3346 | | | 8.50 | 79.00 | 35.25 | 48.00 | 9006090085000 |
| 0.3386 | | | 8.60 | 84.00 | 39.10 | 52.00 | 9006090086000 |
| 0.3425 | | | 8.70 | 84.00 | 38.95 | 52.00 | 9006090087000 |
| 0.3437 | 11/32 | | 8.73 | 84.00 | 38.91 | 52.00 | 9006090087300 |
| 0.3465 | | | 8.80 | 84.00 | 38.80 | 52.00 | 9006090088000 |
| 0.3504 | | | 8.90 | 84.00 | 38.65 | 52.00 | 9006090089000 |
| 0.3543 | | | 9.00 | 84.00 | 38.50 | 52.00 | 9006090090000 |
| 0.3583 | | | 9.10 | 84.00 | 38.35 | 52.00 | 9006090091000 |
| 0.3594 | 23/64 | | 9.13 | 84.00 | 38.31 | 52.00 | 9006090091300 |
| 0.3622 | | | 9.20 | 84.00 | 38.20 | 52.00 | 9006090092000 |
| 0.3661 | | | 9.30 | 84.00 | 38.05 | 52.00 | 9006090093000 |
| 0.3701 | | | 9.40 | 84.00 | 37.90 | 52.00 | 9006090094000 |
| 0.3740 | | | 9.50 | 84.00 | 37.75 | 52.00 | 9006090095000 |
| 0.3748 | 3/8 | | 9.52 | 89.00 | 40.72 | 55.00 | 9006090095200 |
| 0.3780 | | | 9.60 | 89.00 | 40.60 | 55.00 | 9006090096000 |

5xD Drills

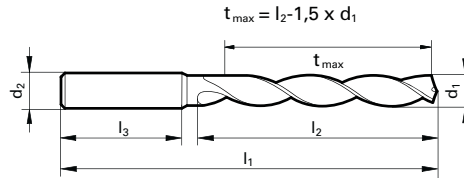
| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.3819 | | 9.70 | 89.00 | 40.45 | 55.00 | 9006090097000 |
| 0.3858 | W | 9.80 | 89.00 | 40.30 | 55.00 | 9006090098000 |
| 0.3898 | | 9.90 | 89.00 | 40.15 | 55.00 | 9006090099000 |
| 0.3906 | 25/64 | 9.92 | 89.00 | 40.12 | 55.00 | 9006090099200 |
| 0.3937 | | 10.00 | 89.00 | 40.00 | 55.00 | 9006090100000 |
| 0.3976 | | 10.10 | 89.00 | 39.85 | 55.00 | 9006090101000 |
| 0.4016 | | 10.20 | 89.00 | 39.70 | 55.00 | 9006090102000 |
| 0.4055 | | 10.30 | 89.00 | 39.55 | 55.00 | 9006090103000 |
| 0.4063 | 13/32 | 10.32 | 89.00 | 39.52 | 55.00 | 9006090103200 |
| 0.4094 | | 10.40 | 89.00 | 39.40 | 55.00 | 9006090104000 |
| 0.4134 | | 10.50 | 89.00 | 39.25 | 55.00 | 9006090105000 |
| 0.4173 | | 10.60 | 89.00 | 39.10 | 55.00 | 9006090106000 |
| 0.4213 | | 10.70 | 95.00 | 43.95 | 60.00 | 9006090107000 |
| 0.4220 | 27/64 | 10.72 | 95.00 | 43.92 | 60.00 | 9006090107200 |
| 0.4252 | | 10.80 | 95.00 | 43.80 | 60.00 | 9006090108000 |
| 0.4291 | | 10.90 | 95.00 | 43.65 | 60.00 | 9006090109000 |
| 0.4331 | | 11.00 | 95.00 | 43.50 | 60.00 | 9006090110000 |
| 0.4370 | | 11.10 | 95.00 | 43.35 | 60.00 | 9006090111000 |
| 0.4374 | 7/16 | 11.11 | 95.00 | 43.34 | 60.00 | 9006090111100 |
| 0.4409 | | 11.20 | 95.00 | 43.20 | 60.00 | 9006090112000 |
| 0.4449 | | 11.30 | 95.00 | 43.05 | 60.00 | 9006090113000 |
| 0.4488 | | 11.40 | 95.00 | 42.90 | 60.00 | 9006090114000 |
| 0.4528 | | 11.50 | 95.00 | 42.75 | 60.00 | 9006090115000 |
| 0.4531 | 29/64 | 11.51 | 95.00 | 42.74 | 60.00 | 9006090115100 |
| 0.4567 | | 11.60 | 95.00 | 42.60 | 60.00 | 9006090116000 |
| 0.4606 | | 11.70 | 95.00 | 42.45 | 60.00 | 9006090117000 |
| 0.4646 | | 11.80 | 95.00 | 42.30 | 60.00 | 9006090118000 |
| 0.4685 | | 11.90 | 102.00 | 47.15 | 65.00 | 9006090119000 |
| 0.4689 | 15/32 | 11.91 | 102.00 | 47.14 | 65.00 | 9006090119100 |
| 0.4724 | | 12.00 | 102.00 | 47.00 | 65.00 | 9006090120000 |
| 0.4764 | | 12.10 | 102.00 | 46.85 | 65.00 | 9006090121000 |
| 0.4803 | | 12.20 | 102.00 | 46.70 | 65.00 | 9006090122000 |
| 0.4843 | 31/64 | 12.30 | 102.00 | 46.55 | 65.00 | 9006090123000 |
| 0.4882 | | 12.40 | 102.00 | 46.40 | 65.00 | 9006090124000 |
| 0.4921 | | 12.50 | 102.00 | 46.25 | 65.00 | 9006090125000 |
| 0.4961 | | 12.60 | 102.00 | 46.10 | 65.00 | 9006090126000 |
| 0.5000 | 1/2 | 12.70 | 102.00 | 45.95 | 65.00 | 9006090127000 |
| 0.5039 | | 12.80 | 102.00 | 45.80 | 65.00 | 9006090128000 |
| 0.5079 | | 12.90 | 102.00 | 45.65 | 65.00 | 9006090129000 |

| Diameter (d1) | | | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | |
| 0.5118 | | 13.00 | 102.00 | 45.50 | 65.00 | 9006090130000 |
| 0.5157 | 33/64 | 13.10 | 102.00 | 45.35 | 65.00 | 9006090131000 |
| 0.5197 | | 13.20 | 102.00 | 45.20 | 65.00 | 9006090132000 |
| 0.5236 | | 13.30 | 107.00 | 46.05 | 66.00 | 9006090133000 |
| 0.5276 | | 13.40 | 107.00 | 45.90 | 66.00 | 9006090134000 |
| 0.5315 | | 13.50 | 107.00 | 45.75 | 66.00 | 9006090135000 |
| 0.5354 | | 13.60 | 107.00 | 45.60 | 66.00 | 9006090136000 |
| 0.5394 | | 13.70 | 107.00 | 45.45 | 66.00 | 9006090137000 |
| 0.5433 | | 13.80 | 107.00 | 45.30 | 66.00 | 9006090138000 |
| 0.5472 | | 13.90 | 107.00 | 45.15 | 66.00 | 9006090139000 |
| 0.5512 | | 14.00 | 107.00 | 45.00 | 66.00 | 9006090140000 |
| 0.5551 | | 14.10 | 111.00 | 48.85 | 70.00 | 9006090141000 |
| 0.5591 | | 14.20 | 111.00 | 48.70 | 70.00 | 9006090142000 |
| 0.5626 | 9/16 | 14.29 | 111.00 | 48.57 | 70.00 | 9006090142900 |
| 0.5630 | | 14.30 | 111.00 | 48.55 | 70.00 | 9006090143000 |
| 0.5669 | | 14.40 | 111.00 | 48.40 | 70.00 | 9006090144000 |
| 0.5709 | | 14.50 | 111.00 | 48.25 | 70.00 | 9006090145000 |
| 0.5748 | | 14.60 | 111.00 | 48.10 | 70.00 | 9006090146000 |
| 0.5787 | | 14.70 | 111.00 | 47.95 | 70.00 | 9006090147000 |
| 0.5827 | | 14.80 | 111.00 | 47.80 | 70.00 | 9006090148000 |
| 0.5866 | | 14.90 | 111.00 | 47.65 | 70.00 | 9006090149000 |
| 0.5906 | | 15.00 | 111.00 | 47.50 | 70.00 | 9006090150000 |
| 0.5945 | | 15.10 | 115.00 | 50.35 | 73.00 | 9006090151000 |
| 0.5984 | | 15.20 | 115.00 | 50.20 | 73.00 | 9006090152000 |
| 0.6024 | | 15.30 | 115.00 | 50.05 | 73.00 | 9006090153000 |
| 0.6063 | | 15.40 | 115.00 | 49.90 | 73.00 | 9006090154000 |
| 0.6102 | | 15.50 | 115.00 | 49.75 | 73.00 | 9006090155000 |
| 0.6142 | | 15.60 | 115.00 | 49.60 | 73.00 | 9006090156000 |
| 0.6181 | | 15.70 | 115.00 | 49.45 | 73.00 | 9006090157000 |
| 0.6220 | | 15.80 | 115.00 | 49.30 | 73.00 | 9006090158000 |
| 0.6248 | 5/8 | 15.87 | 115.00 | 49.20 | 73.00 | 9006090158700 |
| 0.6260 | | 15.90 | 115.00 | 49.15 | 73.00 | 9006090159000 |
| 0.6693 | | 17.00 | 119.00 | 47.50 | 73.00 | 9006090170000 |
| 0.7087 | | 18.00 | 123.00 | 49.00 | 76.00 | 9006090180000 |
| 0.7283 | | 18.50 | 127.00 | 48.25 | 76.00 | 9006090185000 |
| 0.7480 | | 19.00 | 127.00 | 47.50 | 76.00 | 9006090190000 |
| 0.7500 | 3/4 | 19.05 | 131.00 | 50.43 | 79.00 | 9006090190500 |
| 0.7677 | | 19.50 | 131.00 | 49.75 | 79.00 | 9006090195000 |
| 0.7874 | | 20.00 | 131.00 | 49.00 | 79.00 | 9006090200000 |



Tool material **Solid Carbide**
Surface

- | | | |
|----------|-----------------|---|
| P | Steel | web thinning $\geq \varnothing 3.000$ • spiro-point • wide flutes • optimal centering • suitable for interrupted cutting |
| M | Stainless steel | |
| K | Cast iron | cast iron • long chipping Al-alloys • brass, bronzes |
| N | Aluminum | |
| S | Titanium alloys | |
| H | Hardened steel | |
- =Optimal
○=Limited



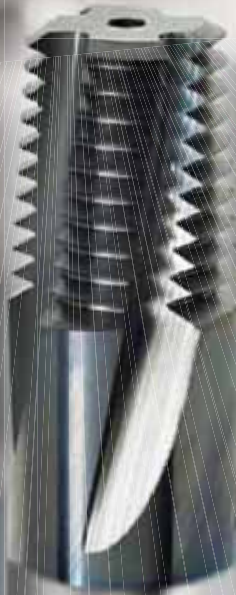
For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 573

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 23.50 | 28.00 | 9055180030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 23.35 | 28.00 | 9055180031000 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 23.20 | 28.00 | 9055180032000 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 23.05 | 28.00 | 9055180033000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 22.75 | 28.00 | 9055180035000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 22.45 | 28.00 | 9055180037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 30.30 | 36.00 | 9055180038000 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 30.00 | 36.00 | 9055180040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 29.85 | 36.00 | 9055180041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 29.70 | 36.00 | 9055180042000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 29.25 | 36.00 | 9055180045000 |
| 0.1890 | #12 | 4.80 | 6.00 | 82.00 | 36.80 | 44.00 | 9055180048000 |
| 0.1969 | | 5.00 | 6.00 | 82.00 | 36.50 | 44.00 | 9055180050000 |
| 0.2008 | | 5.10 | 6.00 | 82.00 | 36.35 | 44.00 | 9055180051000 |
| 0.2047 | | 5.20 | 6.00 | 82.00 | 36.20 | 44.00 | 9055180052000 |
| 0.2087 | | 5.30 | 6.00 | 82.00 | 36.05 | 44.00 | 9055180053000 |
| 0.2165 | | 5.50 | 6.00 | 82.00 | 35.75 | 44.00 | 9055180055000 |
| 0.2283 | | 5.80 | 6.00 | 82.00 | 35.30 | 44.00 | 9055180058000 |
| 0.2362 | | 6.00 | 6.00 | 82.00 | 35.00 | 44.00 | 9055180060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9055180061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9055180062000 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9055180064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9055180065000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9055180067000 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9055180068000 |
| 0.2717 | | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9055180069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9055180070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9055180071000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9055180074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9055180075000 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9055180078000 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9055180080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9055180081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9055180082000 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9055180084000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9055180085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9055180086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9055180087000 |
| 0.3465 | | 8.80 | 10.00 | 103.00 | 47.80 | 61.00 | 9055180088000 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9055180090000 |
| 0.3583 | | 9.10 | 10.00 | 103.00 | 47.35 | 61.00 | 9055180091000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9055180095000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9055180098000 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9055180100000 |
| 0.3976 | | 10.10 | 12.00 | 118.00 | 55.85 | 71.00 | 9055180101000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9055180102000 |
| 0.4055 | | 10.30 | 12.00 | 118.00 | 55.55 | 71.00 | 9055180103000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9055180105000 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9055180110000 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9055180112000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9055180115000 |
| 0.4646 | | 11.80 | 12.00 | 118.00 | 53.30 | 71.00 | 9055180118000 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9055180120000 |
| 0.4764 | | 12.10 | 14.00 | 124.00 | 58.85 | 77.00 | 9055180121000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 58.25 | 77.00 | 9055180125000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 57.50 | 77.00 | 9055180130000 |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 56.75 | 77.00 | 9055180135000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 56.00 | 77.00 | 9055180140000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9055180145000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9055180150000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9055180155000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9055180160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9055180165000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9055180170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9055180175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9055180180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9055180185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9055180190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9055180195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9055180200000 |

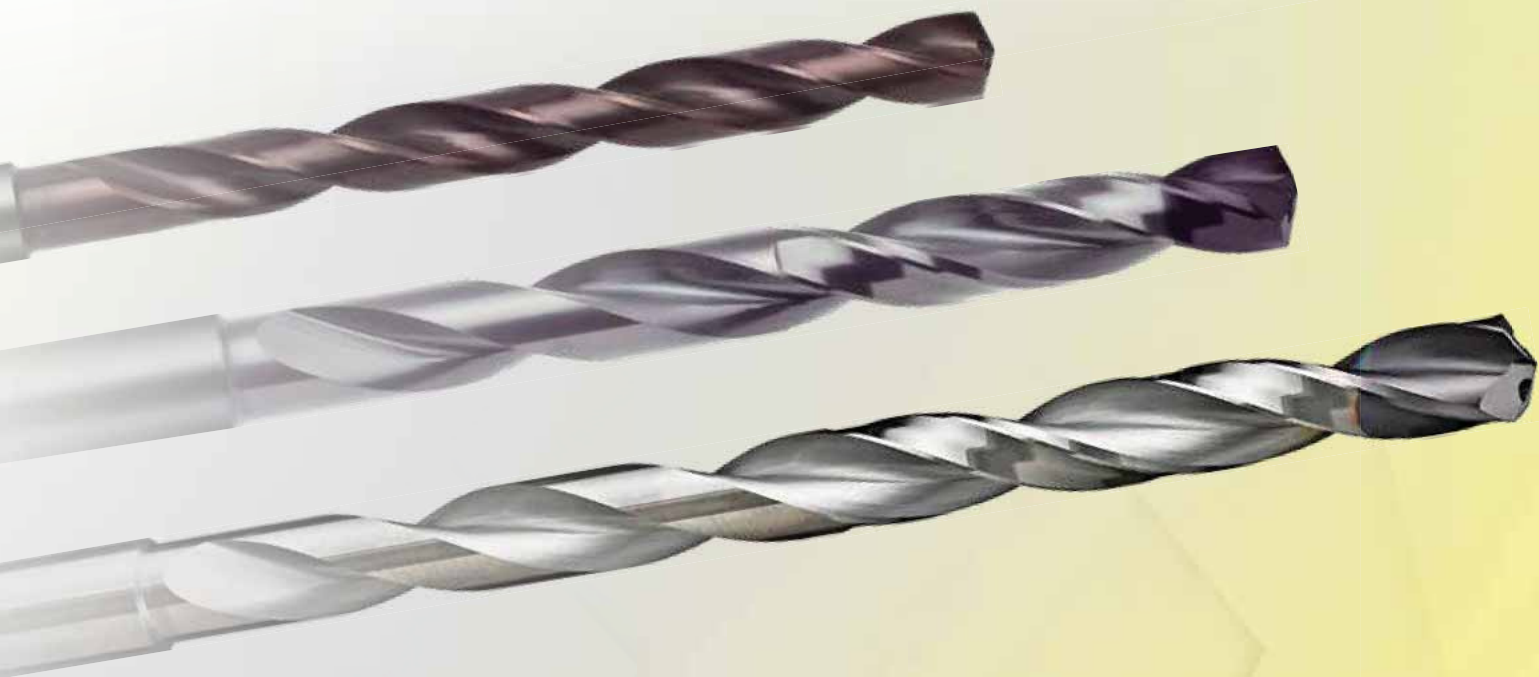
5xD Drills

GUHRING THREAD MILLS





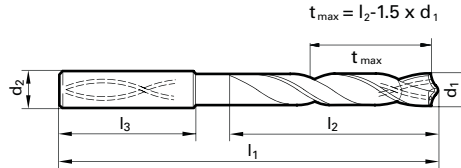
7xD, 8xD, 12xD
CARBIDE RATIO DRILLS





Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry • double margin
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 571

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 70.00 | 25.50 | 30.00 | 9055120030000 |
| 0.1220 | | 3.10 | 6.00 | 70.00 | 25.35 | 30.00 | 9055120031000 |
| 0.1248 | 1/8 | 3.18 | 6.00 | 70.00 | 25.23 | 30.00 | 9055120031700 |
| 0.1260 | | 3.20 | 6.00 | 70.00 | 25.20 | 30.00 | 9055120032000 |
| 0.1280 | | 3.25 | 6.00 | 70.00 | 25.13 | 30.00 | 9055120032500 |
| 0.1299 | | 3.30 | 6.00 | 70.00 | 25.05 | 30.00 | 9055120033000 |
| 0.1339 | | 3.40 | 6.00 | 75.00 | 30.40 | 35.50 | 9055120034000 |
| 0.1378 | | 3.50 | 6.00 | 75.00 | 30.25 | 35.50 | 9055120035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 75.00 | 30.15 | 35.50 | 9055120035700 |
| 0.1417 | | 3.60 | 6.00 | 75.00 | 30.10 | 35.50 | 9055120036000 |
| 0.1457 | | 3.70 | 6.00 | 75.00 | 29.95 | 35.50 | 9055120037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 75.00 | 31.80 | 37.50 | 9055120038000 |
| 0.1535 | | 3.90 | 6.00 | 75.00 | 31.65 | 37.50 | 9055120039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 75.00 | 31.55 | 37.50 | 9055120039700 |
| 0.1575 | | 4.00 | 6.00 | 75.00 | 31.50 | 37.50 | 9055120040000 |
| 0.1591 | #21 | 4.04 | 6.00 | 75.00 | 31.44 | 37.50 | 9055120040400 |
| 0.1614 | | 4.10 | 6.00 | 75.00 | 31.35 | 37.50 | 9055120041000 |
| 0.1654 | | 4.20 | 6.00 | 75.00 | 31.20 | 37.50 | 9055120042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 85.00 | 38.55 | 45.00 | 9055120043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 85.00 | 38.45 | 45.00 | 9055120043700 |
| 0.1732 | | 4.40 | 6.00 | 85.00 | 38.40 | 45.00 | 9055120044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 85.00 | 38.25 | 45.00 | 9055120045000 |
| 0.1811 | | 4.60 | 6.00 | 85.00 | 38.10 | 45.00 | 9055120046000 |
| 0.1831 | | 4.65 | 6.00 | 85.00 | 38.03 | 45.00 | 9055120046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 85.00 | 37.95 | 45.00 | 9055120047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 90.00 | 42.86 | 50.00 | 9055120047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 90.00 | 42.80 | 50.00 | 9055120048000 |
| 0.1929 | | 4.90 | 6.00 | 90.00 | 42.65 | 50.00 | 9055120049000 |
| 0.1969 | | 5.00 | 6.00 | 90.00 | 42.50 | 50.00 | 9055120050000 |
| 0.2008 | | 5.10 | 6.00 | 90.00 | 42.35 | 50.00 | 9055120051000 |
| 0.2012 | #7 | 5.11 | 6.00 | 90.00 | 42.34 | 50.00 | 9055120051100 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 90.00 | 42.26 | 50.00 | 9055120051600 |
| 0.2047 | | 5.20 | 6.00 | 90.00 | 42.20 | 50.00 | 9055120052000 |
| 0.2067 | | 5.25 | 6.00 | 90.00 | 42.13 | 50.00 | 9055120052500 |
| 0.2087 | | 5.30 | 6.00 | 90.00 | 42.05 | 50.00 | 9055120053000 |
| 0.2126 | | 5.40 | 6.00 | 97.00 | 48.90 | 57.00 | 9055120054000 |
| 0.2130 | #3 | 5.41 | 6.00 | 97.00 | 48.89 | 57.00 | 9055120054100 |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9055120055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 97.00 | 48.66 | 57.00 | 9055120055600 |
| 0.2205 | | 5.60 | 6.00 | 97.00 | 48.60 | 57.00 | 9055120056000 |
| 0.2244 | | 5.70 | 6.00 | 97.00 | 48.45 | 57.00 | 9055120057000 |
| 0.2283 | | 5.80 | 6.00 | 97.00 | 48.30 | 57.00 | 9055120058000 |

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2323 | | 5.90 | 6.00 | 97.00 | 48.15 | 57.00 | 9055120059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 97.00 | 48.08 | 57.00 | 9055120059500 |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9055120060000 |
| 0.2402 | | 6.10 | 8.00 | 106.00 | 56.85 | 66.00 | 9055120061000 |
| 0.2441 | | 6.20 | 8.00 | 106.00 | 56.70 | 66.00 | 9055120062000 |
| 0.2480 | | 6.30 | 8.00 | 106.00 | 56.55 | 66.00 | 9055120063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 106.00 | 56.48 | 66.00 | 9055120063500 |
| 0.2520 | | 6.40 | 8.00 | 106.00 | 56.40 | 66.00 | 9055120064000 |
| 0.2559 | | 6.50 | 8.00 | 106.00 | 56.25 | 66.00 | 9055120065000 |
| 0.2571 | F | 6.53 | 8.00 | 106.00 | 56.21 | 66.00 | 9055120065300 |
| 0.2598 | | 6.60 | 8.00 | 106.00 | 56.10 | 66.00 | 9055120066000 |
| 0.2638 | | 6.70 | 8.00 | 106.00 | 55.95 | 66.00 | 9055120067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 106.00 | 55.88 | 66.00 | 9055120067500 |
| 0.2677 | | 6.80 | 8.00 | 106.00 | 55.80 | 66.00 | 9055120068000 |
| 0.2717 | I | 6.90 | 8.00 | 116.00 | 65.65 | 76.00 | 9055120069000 |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9055120070000 |
| 0.2795 | | 7.10 | 8.00 | 116.00 | 65.35 | 76.00 | 9055120071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9055120071400 |
| 0.2835 | | 7.20 | 8.00 | 116.00 | 65.20 | 76.00 | 9055120072000 |
| 0.2874 | | 7.30 | 8.00 | 116.00 | 65.05 | 76.00 | 9055120073000 |
| 0.2913 | | 7.40 | 8.00 | 116.00 | 64.90 | 76.00 | 9055120074000 |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9055120075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 116.00 | 64.69 | 76.00 | 9055120075400 |
| 0.2992 | | 7.60 | 8.00 | 116.00 | 64.60 | 76.00 | 9055120076000 |
| 0.3031 | | 7.70 | 8.00 | 116.00 | 64.45 | 76.00 | 9055120077000 |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9055120078000 |
| 0.3110 | | 7.90 | 8.00 | 116.00 | 64.15 | 76.00 | 9055120079000 |
| 0.3125 | 5/16 | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9055120079400 |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9055120080000 |
| 0.3189 | | 8.10 | 10.00 | 131.00 | 74.85 | 87.00 | 9055120081000 |
| 0.3228 | P | 8.20 | 10.00 | 131.00 | 74.70 | 87.00 | 9055120082000 |
| 0.3268 | | 8.30 | 10.00 | 131.00 | 74.55 | 87.00 | 9055120083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 131.00 | 74.51 | 87.00 | 9055120083300 |
| 0.3307 | | 8.40 | 10.00 | 131.00 | 74.40 | 87.00 | 9055120084000 |
| 0.3346 | | 8.50 | 10.00 | 131.00 | 74.25 | 87.00 | 9055120085000 |
| 0.3386 | | 8.60 | 10.00 | 131.00 | 74.10 | 87.00 | 9055120086000 |
| 0.3425 | | 8.70 | 10.00 | 131.00 | 73.95 | 87.00 | 9055120087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 131.00 | 73.91 | 87.00 | 9055120087300 |
| 0.3465 | | 8.80 | 10.00 | 131.00 | 73.80 | 87.00 | 9055120088000 |
| 0.3504 | | 8.90 | 10.00 | 131.00 | 73.65 | 87.00 | 9055120089000 |
| 0.3543 | | 9.00 | 10.00 | 131.00 | 73.50 | 87.00 | 9055120090000 |
| 0.3583 | | 9.10 | 10.00 | 139.00 | 81.35 | 95.00 | 9055120091000 |

7xD Drills

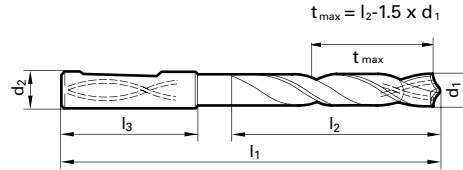
| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3594 | 23/64 | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9055120091300 |
| 0.3622 | | 9.20 | 10.00 | 139.00 | 81.20 | 95.00 | 9055120092000 |
| 0.3642 | | 9.25 | 10.00 | 139.00 | 81.13 | 95.00 | 9055120092500 |
| 0.3661 | | 9.30 | 10.00 | 139.00 | 81.05 | 95.00 | 9055120093000 |
| 0.3677 | U | 9.34 | 10.00 | 139.00 | 80.99 | 95.00 | 9055120093400 |
| 0.3701 | | 9.40 | 10.00 | 139.00 | 80.90 | 95.00 | 9055120094000 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9055120095000 |
| 0.3750 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9055120095200 |
| 0.3780 | | 9.60 | 10.00 | 139.00 | 80.60 | 95.00 | 9055120096000 |
| 0.3819 | | 9.70 | 10.00 | 139.00 | 80.45 | 95.00 | 9055120097000 |
| 0.3858 | W | 9.80 | 10.00 | 139.00 | 80.30 | 95.00 | 9055120098000 |
| 0.3898 | | 9.90 | 10.00 | 139.00 | 80.15 | 95.00 | 9055120099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 139.00 | 80.12 | 95.00 | 9055120099200 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9055120100000 |
| 0.3976 | | 10.10 | 12.00 | 155.00 | 90.85 | 106.00 | 9055120101000 |
| 0.4016 | | 10.20 | 12.00 | 155.00 | 90.70 | 106.00 | 9055120102000 |
| 0.4055 | | 10.30 | 12.00 | 155.00 | 90.55 | 106.00 | 9055120103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 155.00 | 90.52 | 106.00 | 9055120103200 |
| 0.4094 | | 10.40 | 12.00 | 155.00 | 90.40 | 106.00 | 9055120104000 |
| 0.4134 | | 10.50 | 12.00 | 155.00 | 90.25 | 106.00 | 9055120105000 |
| 0.4173 | | 10.60 | 12.00 | 155.00 | 90.10 | 106.00 | 9055120106000 |
| 0.4213 | | 10.70 | 12.00 | 155.00 | 89.95 | 106.00 | 9055120107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 155.00 | 89.92 | 106.00 | 9055120107200 |
| 0.4252 | | 10.80 | 12.00 | 155.00 | 89.80 | 106.00 | 9055120108000 |
| 0.4291 | | 10.90 | 12.00 | 155.00 | 89.65 | 106.00 | 9055120109000 |
| 0.4331 | | 11.00 | 12.00 | 155.00 | 89.50 | 106.00 | 9055120110000 |
| 0.4370 | | 11.10 | 12.00 | 163.00 | 97.35 | 114.00 | 9055120111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9055120111100 |
| 0.4409 | | 11.20 | 12.00 | 163.00 | 97.20 | 114.00 | 9055120112000 |
| 0.4449 | | 11.30 | 12.00 | 163.00 | 97.05 | 114.00 | 9055120113000 |
| 0.4488 | | 11.40 | 12.00 | 163.00 | 96.90 | 114.00 | 9055120114000 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9055120115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 163.00 | 96.74 | 114.00 | 9055120115100 |
| 0.4567 | | 11.60 | 12.00 | 163.00 | 96.60 | 114.00 | 9055120116000 |
| 0.4606 | | 11.70 | 12.00 | 163.00 | 96.45 | 114.00 | 9055120117000 |
| 0.4646 | | 11.80 | 12.00 | 163.00 | 96.30 | 114.00 | 9055120118000 |

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4685 | | 11.90 | 12.00 | 163.00 | 96.15 | 114.00 | 9055120119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 163.00 | 96.14 | 114.00 | 9055120119100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9055120120000 |
| 0.4764 | | 12.10 | 14.00 | 182.00 | 114.85 | 133.00 | 9055120121000 |
| 0.4803 | | 12.20 | 14.00 | 182.00 | 114.70 | 133.00 | 9055120122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9055120123000 |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9055120125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9055120127000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9055120130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 182.00 | 113.35 | 133.00 | 9055120131000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 182.00 | 112.77 | 133.00 | 9055120134900 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9055120135000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 182.00 | 112.17 | 133.00 | 9055120138900 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9055120140000 |
| 0.5551 | | 14.10 | 16.00 | 204.00 | 130.85 | 152.00 | 9055120141000 |
| 0.5591 | | 14.20 | 16.00 | 204.00 | 130.70 | 152.00 | 9055120142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 204.00 | 130.57 | 152.00 | 9055120142900 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9055120145000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9055120150000 |
| 0.5945 | | 15.10 | 16.00 | 204.00 | 129.35 | 152.00 | 9055120151000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 204.00 | 128.78 | 152.00 | 9055120154800 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9055120155000 |
| 0.6250 | 5/8 | 15.87 | 16.00 | 204.00 | 128.20 | 152.00 | 9055120158700 |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9055120160000 |
| 0.6496 | | 16.50 | 18.00 | 223.00 | 146.25 | 171.00 | 9055120165000 |
| 0.6563 | 21/32 | 16.67 | 18.00 | 223.00 | 146.00 | 171.00 | 9055120166700 |
| 0.6654 | | 16.90 | 18.00 | 223.00 | 145.65 | 171.00 | 9055120169000 |
| 0.6693 | | 17.00 | 18.00 | 223.00 | 145.50 | 171.00 | 9055120170000 |
| 0.6890 | | 17.50 | 18.00 | 223.00 | 144.75 | 171.00 | 9055120175000 |
| 0.7087 | | 18.00 | 18.00 | 223.00 | 144.00 | 171.00 | 9055120180000 |
| 0.7283 | | 18.50 | 20.00 | 244.00 | 162.25 | 190.00 | 9055120185000 |
| 0.7441 | | 18.90 | 20.00 | 244.00 | 161.65 | 190.00 | 9055120189000 |
| 0.7480 | | 19.00 | 20.00 | 244.00 | 161.50 | 190.00 | 9055120190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 244.00 | 161.43 | 190.00 | 9055120190500 |
| 0.7677 | | 19.50 | 20.00 | 244.00 | 160.75 | 190.00 | 9055120195000 |
| 0.7874 | | 20.00 | 20.00 | 244.00 | 160.00 | 190.00 | 9055120200000 |



Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning ≥ Ø 3.000 • facet point grinding • main cutting edge form straight • optimized cutting geometry
 - M** Stainless steel ○
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 579

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 70.00 | 25.50 | 30.00 | 9056120030000 |
| 0.1220 | | 3.10 | 6.00 | 70.00 | 25.35 | 30.00 | 9056120031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 70.00 | 25.25 | 30.00 | 9056120031700 |
| 0.1260 | | 3.20 | 6.00 | 70.00 | 25.20 | 30.00 | 9056120032000 |
| 0.1280 | | 3.25 | 6.00 | 70.00 | 25.13 | 30.00 | 9056120032500 |
| 0.1299 | | 3.30 | 6.00 | 70.00 | 25.05 | 30.00 | 9056120033000 |
| 0.1339 | | 3.40 | 6.00 | 75.00 | 30.40 | 35.50 | 9056120034000 |
| 0.1378 | | 3.50 | 6.00 | 75.00 | 30.25 | 35.50 | 9056120035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 75.00 | 30.15 | 35.50 | 9056120035700 |
| 0.1417 | | 3.60 | 6.00 | 75.00 | 30.10 | 35.50 | 9056120036000 |
| 0.1457 | | 3.70 | 6.00 | 75.00 | 29.95 | 35.50 | 9056120037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 75.00 | 31.80 | 37.50 | 9056120038000 |
| 0.1535 | | 3.90 | 6.00 | 75.00 | 31.65 | 37.50 | 9056120039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 75.00 | 31.55 | 37.50 | 9056120039700 |
| 0.1575 | | 4.00 | 6.00 | 75.00 | 31.50 | 37.50 | 9056120040000 |
| 0.1614 | | 4.10 | 6.00 | 75.00 | 31.35 | 37.50 | 9056120041000 |
| 0.1654 | | 4.20 | 6.00 | 75.00 | 31.20 | 37.50 | 9056120042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 85.00 | 38.55 | 45.00 | 9056120043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 85.00 | 38.45 | 45.00 | 9056120043700 |
| 0.1732 | | 4.40 | 6.00 | 85.00 | 38.40 | 45.00 | 9056120044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 85.00 | 38.25 | 45.00 | 9056120045000 |
| 0.1811 | | 4.60 | 6.00 | 85.00 | 38.10 | 45.00 | 9056120046000 |
| 0.1831 | | 4.65 | 6.00 | 85.00 | 38.03 | 45.00 | 9056120046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 85.00 | 37.95 | 45.00 | 9056120047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 90.00 | 42.86 | 50.00 | 9056120047600 |
| 0.1890 | | 4.80 | 6.00 | 90.00 | 42.80 | 50.00 | 9056120048000 |
| 0.1929 | | 4.90 | 6.00 | 90.00 | 42.65 | 50.00 | 9056120049000 |
| 0.1969 | | 5.00 | 6.00 | 90.00 | 42.50 | 50.00 | 9056120050000 |
| 0.2008 | | 5.10 | 6.00 | 90.00 | 42.35 | 50.00 | 9056120051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 90.00 | 42.26 | 50.00 | 9056120051600 |
| 0.2047 | | 5.20 | 6.00 | 90.00 | 42.20 | 50.00 | 9056120052000 |
| 0.2087 | | 5.30 | 6.00 | 90.00 | 42.05 | 50.00 | 9056120053000 |
| 0.2126 | | 5.40 | 6.00 | 97.00 | 48.90 | 57.00 | 9056120054000 |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9056120055000 |
| 0.2244 | | 5.70 | 6.00 | 97.00 | 48.45 | 57.00 | 9056120057000 |
| 0.2283 | | 5.80 | 6.00 | 97.00 | 48.30 | 57.00 | 9056120058000 |
| 0.2323 | | 5.90 | 6.00 | 97.00 | 48.15 | 57.00 | 9056120059000 |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9056120060000 |
| 0.2441 | | 6.20 | 8.00 | 106.00 | 56.70 | 66.00 | 9056120062000 |
| 0.2480 | | 6.30 | 8.00 | 106.00 | 56.55 | 66.00 | 9056120063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 106.00 | 56.48 | 66.00 | 9056120063500 |
| 0.2559 | | 6.50 | 8.00 | 106.00 | 56.25 | 66.00 | 9056120065000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2598 | | 6.60 | 8.00 | 106.00 | 56.10 | 66.00 | 9056120066000 |
| 0.2638 | | 6.70 | 8.00 | 106.00 | 55.95 | 66.00 | 9056120067000 |
| 0.2677 | | 6.80 | 8.00 | 106.00 | 55.80 | 66.00 | 9056120068000 |
| 0.2717 | I | 6.90 | 8.00 | 116.00 | 65.65 | 76.00 | 9056120069000 |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9056120070000 |
| 0.2795 | | 7.10 | 8.00 | 116.00 | 65.35 | 76.00 | 9056120071000 |
| 0.2835 | | 7.20 | 8.00 | 116.00 | 65.20 | 76.00 | 9056120072000 |
| 0.2913 | | 7.40 | 8.00 | 116.00 | 64.90 | 76.00 | 9056120074000 |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9056120075000 |
| 0.2992 | | 7.60 | 8.00 | 116.00 | 64.60 | 76.00 | 9056120076000 |
| 0.3031 | | 7.70 | 8.00 | 116.00 | 64.45 | 76.00 | 9056120077000 |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9056120078000 |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9056120080000 |
| 0.3189 | | 8.10 | 10.00 | 131.00 | 74.85 | 87.00 | 9056120081000 |
| 0.3228 | P | 8.20 | 10.00 | 131.00 | 74.70 | 87.00 | 9056120082000 |
| 0.3307 | | 8.40 | 10.00 | 131.00 | 74.40 | 87.00 | 9056120084000 |
| 0.3346 | 21/64 | 8.50 | 10.00 | 131.00 | 74.25 | 87.00 | 9056120085000 |
| 0.3386 | | 8.60 | 10.00 | 131.00 | 74.10 | 87.00 | 9056120086000 |
| 0.3425 | | 8.70 | 10.00 | 131.00 | 73.95 | 87.00 | 9056120087000 |
| 0.3465 | | 8.80 | 10.00 | 131.00 | 73.80 | 87.00 | 9056120088000 |
| 0.3543 | | 9.00 | 10.00 | 131.00 | 73.50 | 87.00 | 9056120090000 |
| 0.3583 | | 9.10 | 10.00 | 139.00 | 81.35 | 95.00 | 9056120091000 |
| 0.3622 | | 9.20 | 10.00 | 139.00 | 81.20 | 95.00 | 9056120092000 |
| 0.3661 | | 9.30 | 10.00 | 139.00 | 81.05 | 95.00 | 9056120093000 |
| 0.3701 | | 9.40 | 10.00 | 139.00 | 80.90 | 95.00 | 9056120094000 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9056120095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9056120095200 |
| 0.3819 | | 9.70 | 10.00 | 139.00 | 80.45 | 95.00 | 9056120097000 |
| 0.3858 | W | 9.80 | 10.00 | 139.00 | 80.30 | 95.00 | 9056120098000 |
| 0.3898 | | 9.90 | 10.00 | 139.00 | 80.15 | 95.00 | 9056120099000 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9056120100000 |
| 0.4016 | | 10.20 | 12.00 | 155.00 | 90.70 | 106.00 | 9056120102000 |
| 0.4055 | | 10.30 | 12.00 | 155.00 | 90.55 | 106.00 | 9056120103000 |
| 0.4134 | | 10.50 | 12.00 | 155.00 | 90.25 | 106.00 | 9056120105000 |
| 0.4252 | | 10.80 | 12.00 | 155.00 | 89.80 | 106.00 | 9056120108000 |
| 0.4331 | | 11.00 | 12.00 | 155.00 | 89.50 | 106.00 | 9056120110000 |
| 0.4409 | | 11.20 | 12.00 | 163.00 | 97.20 | 114.00 | 9056120112000 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9056120115000 |
| 0.4646 | | 11.80 | 12.00 | 163.00 | 96.30 | 114.00 | 9056120118000 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9056120120000 |
| 0.4764 | | 12.10 | 14.00 | 182.00 | 114.85 | 133.00 | 9056120121000 |
| 0.4803 | | 12.20 | 14.00 | 182.00 | 114.70 | 133.00 | 9056120122000 |

7xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9056120125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9056120127000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9056120130000 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9056120135000 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9056120140000 |
| 0.5551 | | 14.10 | 16.00 | 204.00 | 130.85 | 152.00 | 9056120141000 |
| 0.5591 | | 14.20 | 16.00 | 204.00 | 130.70 | 152.00 | 9056120142000 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9056120145000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9056120150000 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9056120155000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9056120160000 |
| 0.6496 | | 16.50 | 18.00 | 223.00 | 146.25 | 171.00 | 9056120165000 |
| 0.6693 | | 17.00 | 18.00 | 223.00 | 145.50 | 171.00 | 9056120170000 |
| 0.6890 | | 17.50 | 18.00 | 223.00 | 144.75 | 171.00 | 9056120175000 |
| 0.7087 | | 18.00 | 18.00 | 223.00 | 144.00 | 171.00 | 9056120180000 |
| 0.7283 | | 18.50 | 20.00 | 244.00 | 162.25 | 190.00 | 9056120185000 |
| 0.7480 | | 19.00 | 20.00 | 244.00 | 161.50 | 190.00 | 9056120190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 244.00 | 161.43 | 190.00 | 9056120190500 |
| 0.7677 | | 19.50 | 20.00 | 244.00 | 160.75 | 190.00 | 9056120195000 |
| 0.7874 | | 20.00 | 20.00 | 244.00 | 160.00 | 190.00 | 9056120200000 |



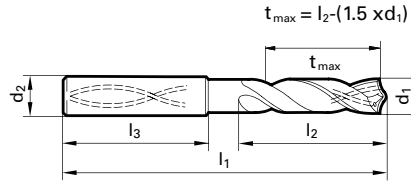
Tool material **Solid Carbide**
Surface **a**

| | | |
|----------|-----------------|---|
| P | Steel | |
| M | Stainless steel | ★ |
| K | Cast iron | |
| N | Aluminum | |
| S | Titanium alloys | ● |
| H | Hardened steel | ○ |

web thinning ≥ Ø 3.000 • relieved cone • main cutting edge form concave • optimized cutting geometry

stainless/acid-/heat-resistant steels • alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 582

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | | |
| 0.1181 | | 3.00 | 6.00 | 70.00 | 25.50 | 30.00 | 9057460030000 | |
| 0.1220 | | 3.10 | 6.00 | 70.00 | 25.35 | 30.00 | 9057460031000 | |
| 0.1248 | 1/8 | 3.17 | 6.00 | 70.00 | 25.25 | 30.00 | 9057460031700 | |
| 0.1260 | | 3.20 | 6.00 | 70.00 | 25.20 | 30.00 | 9057460032000 | |
| 0.1299 | | 3.30 | 6.00 | 70.00 | 25.05 | 30.00 | 9057460033000 | |
| 0.1339 | | 3.40 | 6.00 | 75.00 | 30.40 | 35.50 | 9057460034000 | |
| 0.1378 | | 3.50 | 6.00 | 75.00 | 30.25 | 35.50 | 9057460035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 6.00 | 75.00 | 30.15 | 35.50 | 9057460035700 |
| 0.1417 | | 3.60 | 6.00 | 75.00 | 30.10 | 35.50 | 9057460036000 | |
| 0.1457 | | 3.70 | 6.00 | 75.00 | 29.95 | 35.50 | 9057460037000 | |
| 0.1496 | | 3.80 | 6.00 | 75.00 | 31.80 | 37.50 | 9057460038000 | |
| 0.1535 | | 3.90 | 6.00 | 75.00 | 31.65 | 37.50 | 9057460039000 | |
| 0.1563 | 5/32 | 3.97 | 6.00 | 75.00 | 31.55 | 37.50 | 9057460039700 | |
| 0.1575 | | 4.00 | 6.00 | 75.00 | 31.50 | 37.50 | 9057460040000 | |
| 0.1614 | | 4.10 | 6.00 | 75.00 | 31.35 | 37.50 | 9057460041000 | |
| 0.1654 | | 4.20 | 6.00 | 75.00 | 31.20 | 37.50 | 9057460042000 | |
| 0.1693 | | 4.30 | 6.00 | 85.00 | 38.55 | 45.00 | 9057460043000 | |
| 0.1720 | 11/64 | 4.37 | 6.00 | 85.00 | 38.45 | 45.00 | 9057460043700 | |
| 0.1732 | | 4.40 | 6.00 | 85.00 | 38.40 | 45.00 | 9057460044000 | |
| 0.1772 | | 4.50 | 6.00 | 85.00 | 38.25 | 45.00 | 9057460045000 | |
| 0.1811 | | 4.60 | 6.00 | 85.00 | 38.10 | 45.00 | 9057460046000 | |
| 0.1831 | | 4.65 | 6.00 | 85.00 | 38.03 | 45.00 | 9057460046500 | |
| 0.1850 | | 4.70 | 6.00 | 85.00 | 37.95 | 45.00 | 9057460047000 | |
| 0.1874 | 3/16 | 4.76 | 6.00 | 90.00 | 42.86 | 50.00 | 9057460047600 | |
| 0.1890 | | 4.80 | 6.00 | 90.00 | 42.80 | 50.00 | 9057460048000 | |
| 0.1929 | | 4.90 | 6.00 | 90.00 | 42.65 | 50.00 | 9057460049000 | |
| 0.1969 | | 5.00 | 6.00 | 90.00 | 42.50 | 50.00 | 9057460050000 | |
| 0.2008 | | 5.10 | 6.00 | 90.00 | 42.35 | 50.00 | 9057460051000 | |
| 0.2031 | 13/64 | 5.16 | 6.00 | 90.00 | 42.26 | 50.00 | 9057460051600 | |
| 0.2047 | | 5.20 | 6.00 | 90.00 | 42.20 | 50.00 | 9057460052000 | |
| 0.2087 | | 5.30 | 6.00 | 90.00 | 42.05 | 50.00 | 9057460053000 | |
| 0.2126 | | 5.40 | 6.00 | 97.00 | 48.90 | 57.00 | 9057460054000 | |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9057460055000 | |
| 0.2189 | 7/32 | 5.56 | 6.00 | 97.00 | 48.66 | 57.00 | 9057460055600 | |
| 0.2244 | | 5.70 | 6.00 | 97.00 | 48.45 | 57.00 | 9057460057000 | |
| 0.2283 | | 5.80 | 6.00 | 97.00 | 48.30 | 57.00 | 9057460058000 | |
| 0.2323 | | 5.90 | 6.00 | 97.00 | 48.15 | 57.00 | 9057460059000 | |
| 0.2343 | 15/64 | 5.95 | 6.00 | 97.00 | 48.08 | 57.00 | 9057460059500 | |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9057460060000 | |
| 0.2402 | | 6.10 | 8.00 | 106.00 | 56.85 | 66.00 | 9057460061000 | |
| 0.2441 | | 6.20 | 8.00 | 106.00 | 56.70 | 66.00 | 9057460062000 | |
| 0.2480 | | 6.30 | 8.00 | 106.00 | 56.55 | 66.00 | 9057460063000 | |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|----|----------|----------|------------------------|----------|-------|-------------------------------|
| inch | wire/ltr | mm | | | | | | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 106.00 | 56.48 | 66.00 | 9057460063500 |
| 0.2559 | | | 6.50 | 8.00 | 106.00 | 56.25 | 66.00 | 9057460065000 |
| 0.2571 | | F | 6.53 | 8.00 | 106.00 | 56.21 | 66.00 | 9057460065300 |
| 0.2598 | | | 6.60 | 8.00 | 106.00 | 56.10 | 66.00 | 9057460066000 |
| 0.2638 | | | 6.70 | 8.00 | 106.00 | 55.95 | 66.00 | 9057460067000 |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 106.00 | 55.88 | 66.00 | 9057460067500 |
| 0.2677 | | | 6.80 | 8.00 | 106.00 | 55.80 | 66.00 | 9057460068000 |
| 0.2717 | | I | 6.90 | 8.00 | 116.00 | 65.65 | 76.00 | 9057460069000 |
| 0.2756 | | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9057460070000 |
| 0.2795 | | | 7.10 | 8.00 | 116.00 | 65.35 | 76.00 | 9057460071000 |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9057460071400 |
| 0.2835 | | | 7.20 | 8.00 | 116.00 | 65.20 | 76.00 | 9057460072000 |
| 0.2874 | | | 7.30 | 8.00 | 116.00 | 65.05 | 76.00 | 9057460073000 |
| 0.2913 | | | 7.40 | 8.00 | 116.00 | 64.90 | 76.00 | 9057460074000 |
| 0.2953 | | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9057460075000 |
| 0.2969 | 19/64 | | 7.54 | 8.00 | 116.00 | 64.69 | 76.00 | 9057460075400 |
| 0.2992 | | | 7.60 | 8.00 | 116.00 | 64.60 | 76.00 | 9057460076000 |
| 0.3031 | | | 7.70 | 8.00 | 116.00 | 64.45 | 76.00 | 9057460077000 |
| 0.3071 | | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9057460078000 |
| 0.3126 | 5/16 | | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9057460079400 |
| 0.3150 | | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9057460080000 |
| 0.3189 | | | 8.10 | 10.00 | 131.00 | 74.85 | 87.00 | 9057460081000 |
| 0.3228 | | P | 8.20 | 10.00 | 131.00 | 74.70 | 87.00 | 9057460082000 |
| 0.3280 | 21/64 | | 8.33 | 10.00 | 131.00 | 74.51 | 87.00 | 9057460083300 |
| 0.3307 | | | 8.40 | 10.00 | 131.00 | 74.40 | 87.00 | 9057460084000 |
| 0.3346 | | | 8.50 | 10.00 | 131.00 | 74.25 | 87.00 | 9057460085000 |
| 0.3386 | | | 8.60 | 10.00 | 131.00 | 74.10 | 87.00 | 9057460086000 |
| 0.3425 | | | 8.70 | 10.00 | 131.00 | 73.95 | 87.00 | 9057460087000 |
| 0.3437 | 11/32 | | 8.73 | 10.00 | 131.00 | 73.91 | 87.00 | 9057460087300 |
| 0.3465 | | | 8.80 | 10.00 | 131.00 | 73.80 | 87.00 | 9057460088000 |
| 0.3543 | | | 9.00 | 10.00 | 131.00 | 73.50 | 87.00 | 9057460090000 |
| 0.3583 | | | 9.10 | 10.00 | 139.00 | 81.35 | 95.00 | 9057460091000 |
| 0.3594 | 23/64 | | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9057460091300 |
| 0.3622 | | | 9.20 | 10.00 | 139.00 | 81.20 | 95.00 | 9057460092000 |
| 0.3661 | | | 9.30 | 10.00 | 139.00 | 81.05 | 95.00 | 9057460093000 |
| 0.3701 | | | 9.40 | 10.00 | 139.00 | 80.90 | 95.00 | 9057460094000 |
| 0.3740 | | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9057460095000 |
| 0.3748 | 3/8 | | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9057460095200 |
| 0.3819 | | | 9.70 | 10.00 | 139.00 | 80.45 | 95.00 | 9057460097000 |
| 0.3858 | | W | 9.80 | 10.00 | 139.00 | 80.30 | 95.00 | 9057460098000 |
| 0.3898 | | | 9.90 | 10.00 | 139.00 | 80.15 | 95.00 | 9057460099000 |
| 0.3906 | 25/64 | | 9.92 | 10.00 | 139.00 | 80.12 | 95.00 | 9057460099200 |

7xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9057460100000 |
| 0.4016 | | 10.20 | 12.00 | 155.00 | 90.70 | 106.00 | 9057460102000 |
| 0.4055 | | 10.30 | 12.00 | 155.00 | 90.55 | 106.00 | 9057460103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 155.00 | 90.52 | 106.00 | 9057460103200 |
| 0.4134 | | 10.50 | 12.00 | 155.00 | 90.25 | 106.00 | 9057460105000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 155.00 | 89.92 | 106.00 | 9057460107200 |
| 0.4252 | | 10.80 | 12.00 | 155.00 | 89.80 | 106.00 | 9057460108000 |
| 0.4331 | | 11.00 | 12.00 | 155.00 | 89.50 | 106.00 | 9057460110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9057460111100 |
| 0.4409 | | 11.20 | 12.00 | 163.00 | 97.20 | 114.00 | 9057460112000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9057460115000 |
| 0.4646 | | 11.80 | 12.00 | 163.00 | 96.30 | 114.00 | 9057460118000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 163.00 | 96.14 | 114.00 | 9057460119100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9057460120000 |
| 0.4764 | | 12.10 | 14.00 | 182.00 | 114.85 | 133.00 | 9057460121000 |
| 0.4803 | | 12.20 | 14.00 | 182.00 | 114.70 | 133.00 | 9057460122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9057460123000 |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9057460125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9057460127000 |



Tool material

Solid Carbide

Surface

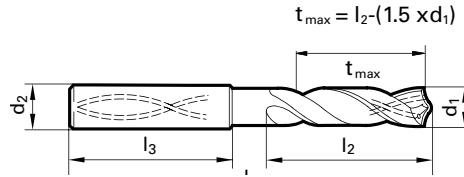


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | |
| K | Cast iron | |
| N | Aluminum | |
| S | Titanium alloys | ★ |
| H | Hardened steel | ○ |

web thinning ≥ Ø 3.000 • relieved cone • main cutting edge is slightly concave • optimized cutting geometry • double margin

alloyed and high tensile steels up to 1600 N/mm² • Inconel, Hastelloy, Monel • Titanium and Titanium alloys

- ★ = 1st choice
- = Optimal
- = Limited

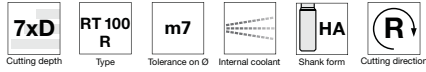


For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 593

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # | |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | | |
| 0.1181 | | 3.00 | 6.00 | 70.00 | 25.50 | 30.00 | 9085220030000 | |
| 0.1248 | 1/8 | 3.17 | 6.00 | 70.00 | 25.25 | 30.00 | 9085220031700 | |
| 0.1280 | | 3.25 | 6.00 | 70.00 | 25.13 | 30.00 | 9085220032500 | |
| 0.1299 | | 3.30 | 6.00 | 70.00 | 25.05 | 30.00 | 9085220033000 | |
| 0.1339 | | 3.40 | 6.00 | 75.00 | 30.40 | 35.50 | 9085220034000 | |
| 0.1378 | | 3.50 | 6.00 | 75.00 | 30.25 | 35.50 | 9085220035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 6.00 | 75.00 | 30.15 | 35.50 | 9085220035700 |
| 0.1457 | | 3.70 | 6.00 | 75.00 | 29.95 | 35.50 | 9085220037000 | |
| 0.1563 | 5/32 | 3.97 | 6.00 | 75.00 | 31.55 | 37.50 | 9085220039700 | |
| 0.1575 | | 4.00 | 6.00 | 75.00 | 31.50 | 37.50 | 9085220040000 | |
| 0.1654 | | 4.20 | 6.00 | 75.00 | 31.20 | 37.50 | 9085220042000 | |
| 0.1693 | | #18 | 4.30 | 6.00 | 85.00 | 38.55 | 45.00 | 9085220043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 85.00 | 38.45 | 45.00 | 9085220043700 | |
| 0.1772 | | 4.50 | 6.00 | 85.00 | 38.25 | 45.00 | 9085220045000 | |
| 0.1831 | | 4.65 | 6.00 | 85.00 | 38.03 | 45.00 | 9085220046500 | |
| 0.1874 | 3/16 | 4.76 | 6.00 | 90.00 | 42.86 | 50.00 | 9085220047600 | |
| 0.1969 | | 5.00 | 6.00 | 90.00 | 42.50 | 50.00 | 9085220050000 | |
| 0.2008 | | 5.10 | 6.00 | 90.00 | 42.35 | 50.00 | 9085220051000 | |
| 0.2031 | 13/64 | 5.16 | 6.00 | 90.00 | 42.26 | 50.00 | 9085220051600 | |
| 0.2047 | | 5.20 | 6.00 | 90.00 | 42.20 | 50.00 | 9085220052000 | |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9085220055000 | |
| 0.2185 | | 5.55 | 6.00 | 97.00 | 48.68 | 57.00 | 9085220055500 | |
| 0.2189 | 7/32 | 5.56 | 6.00 | 97.00 | 48.66 | 57.00 | 9085220055600 | |
| 0.2343 | 15/64 | 5.95 | 6.00 | 97.00 | 48.08 | 57.00 | 9085220059500 | |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9085220060000 | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 106.00 | 56.48 | 66.00 | 9085220063500 |
| 0.2559 | | 6.50 | 8.00 | 106.00 | 56.25 | 66.00 | 9085220065000 | |
| 0.2571 | | F | 6.53 | 8.00 | 106.00 | 56.21 | 66.00 | 9085220065300 |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 106.00 | 55.88 | 66.00 | 9085220067500 |
| 0.2677 | | 6.80 | 8.00 | 106.00 | 55.80 | 66.00 | 9085220068000 | |
| 0.2717 | | I | 6.90 | 8.00 | 116.00 | 65.65 | 76.00 | 9085220069000 |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9085220070000 | |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9085220071400 |
| 0.2913 | | 7.40 | 8.00 | 116.00 | 64.90 | 76.00 | 9085220074000 | |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9085220075000 | |
| 0.2969 | 19/64 | 7.54 | 8.00 | 116.00 | 64.69 | 76.00 | 9085220075400 | |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9085220078000 | |
| 0.3126 | 5/16 | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9085220079400 | |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9085220080000 | |
| 0.3280 | 21/64 | 8.33 | 10.00 | 131.00 | 74.51 | 87.00 | 9085220083300 | |
| 0.3346 | | 8.50 | 10.00 | 131.00 | 74.25 | 87.00 | 9085220085000 | |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3386 | | 8.60 | 10.00 | 131.00 | 74.10 | 87.00 | 9085220086000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 131.00 | 73.91 | 87.00 | 9085220087300 |
| 0.3465 | | 8.80 | 10.00 | 131.00 | 73.80 | 87.00 | 9085220088000 |
| 0.3543 | | 9.00 | 10.00 | 131.00 | 73.50 | 87.00 | 9085220090000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9085220091300 |
| 0.3642 | | 9.25 | 10.00 | 139.00 | 81.13 | 95.00 | 9085220092500 |
| 0.3677 | U | 9.34 | 10.00 | 139.00 | 80.99 | 95.00 | 9085220093400 |
| 0.3701 | | 9.40 | 10.00 | 139.00 | 80.90 | 95.00 | 9085220094000 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9085220095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9085220095200 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 139.00 | 80.12 | 95.00 | 9085220099200 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9085220100000 |
| 0.4015 | | 10.20 | 12.00 | 155.00 | 90.70 | 106.00 | 9085220102000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 155.00 | 90.52 | 106.00 | 9085220103200 |
| 0.4094 | | 10.40 | 12.00 | 155.00 | 90.40 | 106.00 | 9085220104000 |
| 0.4134 | | 10.50 | 12.00 | 155.00 | 90.25 | 106.00 | 9085220105000 |
| 0.4252 | | 10.80 | 12.00 | 155.00 | 89.80 | 106.00 | 9085220108000 |
| 0.4331 | | 11.00 | 12.00 | 155.00 | 89.50 | 106.00 | 9085220110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9085220111100 |
| 0.4449 | | 11.30 | 12.00 | 163.00 | 97.05 | 114.00 | 9085220113000 |
| 0.4488 | | 11.40 | 12.00 | 163.00 | 96.90 | 114.00 | 9085220114000 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9085220115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 163.00 | 96.74 | 114.00 | 9085220115100 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 163.00 | 96.14 | 114.00 | 9085220119100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9085220120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9085220123000 |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9085220125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9085220127000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9085220130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 182.00 | 113.35 | 133.00 | 9085220131000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 182.00 | 112.77 | 133.00 | 9085220134900 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9085220135000 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9085220140000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 204.00 | 130.57 | 152.00 | 9085220142900 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9085220145000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9085220150000 |
| 0.5945 | | 15.10 | 16.00 | 204.00 | 129.35 | 152.00 | 9085220151000 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9085220155000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 204.00 | 128.20 | 152.00 | 9085220158700 |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9085220160000 |

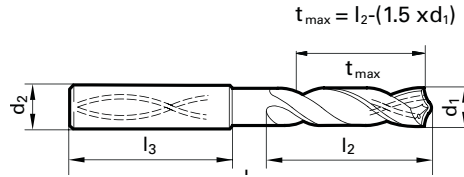
7xD Drills



Tool material **Solid Carbide**
Surface **F**

| | | |
|----------|-----------------|---|
| P | Steel | web thinning ≥ Ø 4.000 • patented radius point grind • main cutting edge form straight (after correction) |
| M | Stainless steel | |
| K | Cast iron ★ | vermicular cast iron GGv and ADI, CDI • grey cast iron, malleable and spheroidal iron |
| N | Aluminum | |
| S | Titanium alloys | |
| H | Hardened steel | |

- ★ = 1st choice
- = Optimal
- = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 588

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|------|--------|------------------|-------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.1575 | | 4.00 | 6.00 | 75.00 | 31.50 | 38.00 | 9065020040000 | |
| 0.1614 | | 4.10 | 6.00 | 75.00 | 31.35 | 38.00 | 9065020041000 | |
| 0.1654 | | 4.20 | 6.00 | 75.00 | 31.20 | 38.00 | 9065020042000 | |
| 0.1693 | #18 | 4.30 | 6.00 | 85.00 | 38.55 | 45.00 | 9065020043000 | |
| 0.1720 | 11/64 | 4.37 | 6.00 | 85.00 | 38.45 | 45.00 | 9065020043700 | |
| 0.1732 | | 4.40 | 6.00 | 85.00 | 38.40 | 45.00 | 9065020044000 | |
| 0.1772 | #16 | 4.50 | 6.00 | 85.00 | 38.25 | 45.00 | 9065020045000 | |
| 0.1811 | | 4.60 | 6.00 | 85.00 | 38.10 | 45.00 | 9065020046000 | |
| 0.1831 | | 4.65 | 6.00 | 85.00 | 38.03 | 45.00 | 9065020046500 | |
| 0.1850 | #13 | 4.70 | 6.00 | 85.00 | 37.95 | 45.00 | 9065020047000 | |
| 0.1874 | 3/16 | 4.76 | 6.00 | 90.00 | 42.86 | 50.00 | 9065020047600 | |
| 0.1890 | #12 | 4.80 | 6.00 | 90.00 | 42.80 | 50.00 | 9065020048000 | |
| 0.1929 | | 4.90 | 6.00 | 90.00 | 42.65 | 50.00 | 9065020049000 | |
| 0.1969 | | 5.00 | 6.00 | 90.00 | 42.50 | 50.00 | 9065020050000 | |
| 0.2008 | | 5.10 | 6.00 | 90.00 | 42.35 | 50.00 | 9065020051000 | |
| 0.2031 | 13/64 | 5.16 | 6.00 | 90.00 | 42.26 | 50.00 | 9065020051600 | |
| 0.2047 | | 5.20 | 6.00 | 90.00 | 42.20 | 50.00 | 9065020052000 | |
| 0.2087 | | 5.30 | 6.00 | 90.00 | 42.05 | 50.00 | 9065020053000 | |
| 0.2126 | | 5.40 | 6.00 | 97.00 | 48.90 | 57.00 | 9065020054000 | |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9065020055000 | |
| 0.2185 | | 5.55 | 6.00 | 97.00 | 48.68 | 57.00 | 9065020055500 | |
| 0.2189 | 7/32 | 5.56 | 6.00 | 97.00 | 48.66 | 57.00 | 9065020055600 | |
| 0.2205 | | 5.60 | 6.00 | 97.00 | 48.60 | 57.00 | 9065020056000 | |
| 0.2244 | | 5.70 | 6.00 | 97.00 | 48.45 | 57.00 | 9065020057000 | |
| 0.2283 | | 5.80 | 6.00 | 97.00 | 48.30 | 57.00 | 9065020058000 | |
| 0.2323 | | 5.90 | 6.00 | 97.00 | 48.15 | 57.00 | 9065020059000 | |
| 0.2343 | 15/64 | 5.95 | 6.00 | 97.00 | 48.08 | 57.00 | 9065020059500 | |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9065020060000 | |
| 0.2402 | | 6.10 | 8.00 | 106.00 | 56.85 | 66.00 | 9065020061000 | |
| 0.2441 | | 6.20 | 8.00 | 106.00 | 56.70 | 66.00 | 9065020062000 | |
| 0.2480 | | 6.30 | 8.00 | 106.00 | 56.55 | 66.00 | 9065020063000 | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 106.00 | 56.48 | 66.00 | 9065020063500 |
| 0.2520 | | 6.40 | 8.00 | 106.00 | 56.40 | 66.00 | 9065020064000 | |
| 0.2559 | | 6.50 | 8.00 | 106.00 | 56.25 | 66.00 | 9065020065000 | |
| 0.2598 | | 6.60 | 8.00 | 106.00 | 56.10 | 66.00 | 9065020066000 | |
| 0.2638 | | 6.70 | 8.00 | 106.00 | 55.95 | 66.00 | 9065020067000 | |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 106.00 | 55.88 | 66.00 | 9065020067500 |
| 0.2677 | | 6.80 | 8.00 | 106.00 | 55.80 | 66.00 | 9065020068000 | |
| 0.2717 | I | 6.90 | 8.00 | 116.00 | 65.65 | 76.00 | 9065020069000 | |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9065020070000 | |
| 0.2795 | | 7.10 | 8.00 | 116.00 | 65.35 | 76.00 | 9065020071000 | |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9065020071400 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2835 | | 7.20 | 8.00 | 116.00 | 65.20 | 76.00 | 9065020072000 |
| 0.2874 | | 7.30 | 8.00 | 116.00 | 65.05 | 76.00 | 9065020073000 |
| 0.2913 | | 7.40 | 8.00 | 116.00 | 64.90 | 76.00 | 9065020074000 |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9065020075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 116.00 | 64.69 | 76.00 | 9065020075400 |
| 0.2992 | | 7.60 | 8.00 | 116.00 | 64.60 | 76.00 | 9065020076000 |
| 0.3031 | | 7.70 | 8.00 | 116.00 | 64.45 | 76.00 | 9065020077000 |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9065020078000 |
| 0.3110 | | 7.90 | 8.00 | 116.00 | 64.15 | 76.00 | 9065020079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9065020079400 |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9065020080000 |
| 0.3189 | | 8.10 | 10.00 | 131.00 | 74.85 | 87.00 | 9065020081000 |
| 0.3228 | P | 8.20 | 10.00 | 131.00 | 74.70 | 87.00 | 9065020082000 |
| 0.3268 | | 8.30 | 10.00 | 131.00 | 74.55 | 87.00 | 9065020083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 131.00 | 74.51 | 87.00 | 9065020083300 |
| 0.3307 | | 8.40 | 10.00 | 131.00 | 74.40 | 87.00 | 9065020084000 |
| 0.3346 | | 8.50 | 10.00 | 131.00 | 74.25 | 87.00 | 9065020085000 |
| 0.3386 | | 8.60 | 10.00 | 131.00 | 74.10 | 87.00 | 9065020086000 |
| 0.3425 | | 8.70 | 10.00 | 131.00 | 73.95 | 87.00 | 9065020087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 131.00 | 73.91 | 87.00 | 9065020087300 |
| 0.3465 | | 8.80 | 10.00 | 131.00 | 73.80 | 87.00 | 9065020088000 |
| 0.3504 | | 8.90 | 10.00 | 131.00 | 73.65 | 87.00 | 9065020089000 |
| 0.3543 | | 9.00 | 10.00 | 131.00 | 73.50 | 87.00 | 9065020090000 |
| 0.3583 | | 9.10 | 10.00 | 139.00 | 81.35 | 95.00 | 9065020091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9065020091300 |
| 0.3622 | | 9.20 | 10.00 | 139.00 | 81.20 | 95.00 | 9065020092000 |
| 0.3642 | | 9.25 | 10.00 | 139.00 | 81.13 | 95.00 | 9065020092500 |
| 0.3661 | | 9.30 | 10.00 | 139.00 | 81.05 | 95.00 | 9065020093000 |
| 0.3701 | | 9.40 | 10.00 | 139.00 | 80.90 | 95.00 | 9065020094000 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9065020095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9065020095200 |
| 0.3780 | | 9.60 | 10.00 | 139.00 | 80.60 | 95.00 | 9065020096000 |
| 0.3819 | | 9.70 | 10.00 | 139.00 | 80.45 | 95.00 | 9065020097000 |
| 0.3858 | W | 9.80 | 10.00 | 139.00 | 80.30 | 95.00 | 9065020098000 |
| 0.3898 | | 9.90 | 10.00 | 139.00 | 80.15 | 95.00 | 9065020099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 139.00 | 80.12 | 95.00 | 9065020099200 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9065020100000 |
| 0.3976 | | 10.10 | 12.00 | 155.00 | 90.85 | 106.00 | 9065020101000 |
| 0.4016 | | 10.20 | 12.00 | 155.00 | 90.70 | 106.00 | 9065020102000 |
| 0.4055 | | 10.30 | 12.00 | 155.00 | 90.55 | 106.00 | 9065020103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 155.00 | 90.52 | 106.00 | 9065020103200 |
| 0.4094 | | 10.40 | 12.00 | 155.00 | 90.40 | 106.00 | 9065020104000 |

7xD Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4134 | | 10.50 | 12.00 | 155.00 | 90.25 | 106.00 | 9065020105000 |
| 0.4173 | | 10.60 | 12.00 | 155.00 | 90.10 | 106.00 | 9065020106000 |
| 0.4213 | | 10.70 | 12.00 | 155.00 | 89.95 | 106.00 | 9065020107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 155.00 | 89.92 | 106.00 | 9065020107200 |
| 0.4252 | | 10.80 | 12.00 | 155.00 | 89.80 | 106.00 | 9065020108000 |
| 0.4291 | | 10.90 | 12.00 | 155.00 | 89.65 | 106.00 | 9065020109000 |
| 0.4331 | | 11.00 | 12.00 | 155.00 | 89.50 | 106.00 | 9065020110000 |
| 0.4370 | | 11.10 | 12.00 | 163.00 | 97.35 | 114.00 | 9065020111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9065020111100 |
| 0.4409 | | 11.20 | 12.00 | 163.00 | 97.20 | 114.00 | 9065020112000 |
| 0.4449 | | 11.30 | 12.00 | 163.00 | 97.05 | 114.00 | 9065020113000 |
| 0.4488 | | 11.40 | 12.00 | 163.00 | 96.90 | 114.00 | 9065020114000 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9065020115000 |
| 0.4567 | | 11.60 | 12.00 | 163.00 | 96.60 | 114.00 | 9065020116000 |
| 0.4606 | | 11.70 | 12.00 | 163.00 | 96.45 | 114.00 | 9065020117000 |
| 0.4646 | | 11.80 | 12.00 | 163.00 | 96.30 | 114.00 | 9065020118000 |
| 0.4685 | | 11.90 | 12.00 | 163.00 | 96.15 | 114.00 | 9065020119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 163.00 | 96.14 | 114.00 | 9065020119100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9065020120000 |
| 0.4764 | | 12.10 | 14.00 | 182.00 | 114.85 | 133.00 | 9065020121000 |
| 0.4803 | | 12.20 | 14.00 | 182.00 | 114.70 | 133.00 | 9065020122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9065020123000 |
| 0.4882 | | 12.40 | 14.00 | 182.00 | 114.40 | 133.00 | 9065020124000 |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9065020125000 |
| 0.4961 | | 12.60 | 14.00 | 182.00 | 114.10 | 133.00 | 9065020126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9065020127000 |
| 0.5039 | | 12.80 | 14.00 | 182.00 | 113.80 | 133.00 | 9065020128000 |
| 0.5079 | | 12.90 | 14.00 | 182.00 | 113.65 | 133.00 | 9065020129000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9065020130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 182.00 | 113.35 | 133.00 | 9065020131000 |
| 0.5236 | | 13.30 | 14.00 | 182.00 | 113.05 | 133.00 | 9065020133000 |
| 0.5276 | | 13.40 | 14.00 | 182.00 | 112.90 | 133.00 | 9065020134000 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9065020135000 |
| 0.5394 | | 13.70 | 14.00 | 182.00 | 112.45 | 133.00 | 9065020137000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5433 | | 13.80 | 14.00 | 182.00 | 112.30 | 133.00 | 9065020138000 |
| 0.5472 | | 13.90 | 14.00 | 182.00 | 112.15 | 133.00 | 9065020139000 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9065020140000 |
| 0.5551 | | 14.10 | 16.00 | 204.00 | 130.85 | 152.00 | 9065020141000 |
| 0.5591 | | 14.20 | 16.00 | 204.00 | 130.70 | 152.00 | 9065020142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 204.00 | 130.57 | 152.00 | 9065020142900 |
| 0.5630 | | 14.30 | 16.00 | 204.00 | 130.55 | 152.00 | 9065020143000 |
| 0.5669 | | 14.40 | 16.00 | 204.00 | 130.40 | 152.00 | 9065020144000 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9065020145000 |
| 0.5748 | | 14.60 | 16.00 | 204.00 | 130.10 | 152.00 | 9065020146000 |
| 0.5787 | | 14.70 | 16.00 | 204.00 | 129.95 | 152.00 | 9065020147000 |
| 0.5866 | | 14.90 | 16.00 | 204.00 | 129.65 | 152.00 | 9065020149000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9065020150000 |
| 0.5945 | | 15.10 | 16.00 | 204.00 | 129.35 | 152.00 | 9065020151000 |
| 0.5984 | | 15.20 | 16.00 | 204.00 | 129.20 | 152.00 | 9065020152000 |
| 0.6024 | | 15.30 | 16.00 | 204.00 | 129.05 | 152.00 | 9065020153000 |
| 0.6063 | | 15.40 | 16.00 | 204.00 | 128.90 | 152.00 | 9065020154000 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9065020155000 |
| 0.6142 | | 15.60 | 16.00 | 204.00 | 128.60 | 152.00 | 9065020156000 |
| 0.6181 | | 15.70 | 16.00 | 204.00 | 128.45 | 152.00 | 9065020157000 |
| 0.6220 | | 15.80 | 16.00 | 204.00 | 128.30 | 152.00 | 9065020158000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 204.00 | 128.20 | 152.00 | 9065020158700 |
| 0.6260 | | 15.90 | 16.00 | 204.00 | 128.15 | 152.00 | 9065020159000 |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9065020160000 |
| 0.6496 | | 16.50 | 18.00 | 223.00 | 146.25 | 171.00 | 9065020165000 |
| 0.6563 | 21/32 | 16.67 | 18.00 | 223.00 | 146.00 | 171.00 | 9065020166700 |
| 0.6693 | | 17.00 | 18.00 | 223.00 | 145.50 | 171.00 | 9065020170000 |
| 0.6890 | | 17.50 | 18.00 | 223.00 | 144.75 | 171.00 | 9065020175000 |
| 0.7087 | | 18.00 | 18.00 | 223.00 | 144.00 | 171.00 | 9065020180000 |
| 0.7283 | | 18.50 | 20.00 | 244.00 | 162.25 | 190.00 | 9065020185000 |
| 0.7480 | | 19.00 | 20.00 | 244.00 | 161.50 | 190.00 | 9065020190000 |
| 0.7677 | | 19.50 | 20.00 | 244.00 | 160.75 | 190.00 | 9065020195000 |
| 0.7874 | | 20.00 | 20.00 | 244.00 | 160.00 | 190.00 | 9065020200000 |



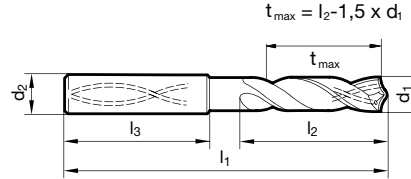
Tool material **Solid Carbide**
Surface **F**

| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | ○ |
| K | Cast iron | ○ |
| N | Aluminum | ○ |
| S | Titanium alloys | ○ |
| H | Hardened steel | ○ |

relieved cone • main cutting edge form concave • optimized cutting geometry • maximum performance • double margin

structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1400 N/mm²

● = Optimal
○ = Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 568

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 70.00 | 25.50 | 30.00 | 9054990030000 |
| 0.1220 | | 3.10 | 6.00 | 70.00 | 25.35 | 30.00 | 9054990031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 70.00 | 25.25 | 30.00 | 9054990031700 |
| 0.1260 | | 3.20 | 6.00 | 70.00 | 25.20 | 30.00 | 9054990032000 |
| 0.1280 | | 3.25 | 6.00 | 70.00 | 25.13 | 30.00 | 9054990032500 |
| 0.1299 | | 3.30 | 6.00 | 70.00 | 25.05 | 30.00 | 9054990033000 |
| 0.1339 | | 3.40 | 6.00 | 75.00 | 30.40 | 35.50 | 9054990034000 |
| 0.1378 | | 3.50 | 6.00 | 75.00 | 30.25 | 35.50 | 9054990035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 75.00 | 30.15 | 35.50 | 9054990035700 |
| 0.1417 | | 3.60 | 6.00 | 75.00 | 30.10 | 35.50 | 9054990036000 |
| 0.1457 | | 3.70 | 6.00 | 75.00 | 29.95 | 35.50 | 9054990037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 75.00 | 31.80 | 37.50 | 9054990038000 |
| 0.1535 | | 3.90 | 6.00 | 75.00 | 31.65 | 37.50 | 9054990039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 75.00 | 31.55 | 37.50 | 9054990039700 |
| 0.1575 | | 4.00 | 6.00 | 75.00 | 31.50 | 37.50 | 9054990040000 |
| 0.1591 | #21 | 4.04 | 6.00 | 75.00 | 31.44 | 37.50 | 9054990040400 |
| 0.1614 | | 4.10 | 6.00 | 75.00 | 31.35 | 37.50 | 9054990041000 |
| 0.1654 | | 4.20 | 6.00 | 75.00 | 31.20 | 37.50 | 9054990042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 85.00 | 38.55 | 45.00 | 9054990043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 85.00 | 38.45 | 45.00 | 9054990043700 |
| 0.1732 | | 4.40 | 6.00 | 85.00 | 38.40 | 45.00 | 9054990044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 85.00 | 38.25 | 45.00 | 9054990045000 |
| 0.1811 | | 4.60 | 6.00 | 85.00 | 38.10 | 45.00 | 9054990046000 |
| 0.1831 | | 4.65 | 6.00 | 85.00 | 38.03 | 45.00 | 9054990046500 |
| 0.1850 | #13 | 4.70 | 6.00 | 85.00 | 37.95 | 45.00 | 9054990047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 90.00 | 42.86 | 50.00 | 9054990047600 |
| 0.1890 | #12 | 4.80 | 6.00 | 90.00 | 42.80 | 50.00 | 9054990048000 |
| 0.1929 | | 4.90 | 6.00 | 90.00 | 42.65 | 50.00 | 9054990049000 |
| 0.1969 | | 5.00 | 6.00 | 90.00 | 42.50 | 50.00 | 9054990050000 |
| 0.2008 | | 5.10 | 6.00 | 90.00 | 42.35 | 50.00 | 9054990051000 |
| 0.2012 | #7 | 5.11 | 6.00 | 90.00 | 42.34 | 50.00 | 9054990051100 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 90.00 | 42.26 | 50.00 | 9054990051600 |
| 0.2047 | | 5.20 | 6.00 | 90.00 | 42.20 | 50.00 | 9054990052000 |
| 0.2087 | | 5.30 | 6.00 | 90.00 | 42.05 | 50.00 | 9054990053000 |
| 0.2126 | | 5.40 | 6.00 | 97.00 | 48.90 | 57.00 | 9054990054000 |
| 0.2130 | #3 | 5.41 | 6.00 | 97.00 | 48.89 | 57.00 | 9054990054100 |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9054990055000 |
| 0.2185 | | 5.55 | 6.00 | 97.00 | 48.68 | 57.00 | 9054990055500 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 97.00 | 48.66 | 57.00 | 9054990055600 |
| 0.2205 | | 5.60 | 6.00 | 97.00 | 48.60 | 57.00 | 9054990056000 |
| 0.2244 | | 5.70 | 6.00 | 97.00 | 48.45 | 57.00 | 9054990057000 |
| 0.2283 | | 5.80 | 6.00 | 97.00 | 48.30 | 57.00 | 9054990058000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|---------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.2323 | | 5.90 | 6.00 | 97.00 | 48.15 | 57.00 | 9054990059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 97.00 | 48.08 | 57.00 | 9054990059500 |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9054990060000 |
| 0.2402 | | 6.10 | 8.00 | 106.00 | 56.85 | 66.00 | 9054990061000 |
| 0.2441 | | 6.20 | 8.00 | 106.00 | 56.70 | 66.00 | 9054990062000 |
| 0.2480 | | 6.30 | 8.00 | 106.00 | 56.55 | 66.00 | 9054990063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 106.00 | 56.48 | 66.00 | 9054990063500 |
| 0.2520 | | 6.40 | 8.00 | 106.00 | 56.40 | 66.00 | 9054990064000 |
| 0.2559 | | 6.50 | 8.00 | 106.00 | 56.25 | 66.00 | 9054990065000 |
| 0.2571 | F | 6.53 | 8.00 | 106.00 | 56.21 | 66.00 | 9054990065300 |
| 0.2579 | | 6.55 | 8.00 | 106.00 | 56.18 | 66.00 | 9054990065500 |
| 0.2598 | | 6.60 | 8.00 | 106.00 | 56.10 | 66.00 | 9054990066000 |
| 0.2638 | | 6.70 | 8.00 | 106.00 | 55.95 | 66.00 | 9054990067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 106.00 | 55.88 | 66.00 | 9054990067500 |
| 0.2677 | | 6.80 | 8.00 | 106.00 | 55.80 | 66.00 | 9054990068000 |
| 0.2717 | I | 6.90 | 8.00 | 116.00 | 65.65 | 76.00 | 9054990069000 |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9054990070000 |
| 0.2795 | | 7.10 | 8.00 | 116.00 | 65.35 | 76.00 | 9054990071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9054990071400 |
| 0.2835 | | 7.20 | 8.00 | 116.00 | 65.20 | 76.00 | 9054990072000 |
| 0.2874 | | 7.30 | 8.00 | 116.00 | 65.05 | 76.00 | 9054990073000 |
| 0.2913 | | 7.40 | 8.00 | 116.00 | 64.90 | 76.00 | 9054990074000 |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9054990075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 116.00 | 64.69 | 76.00 | 9054990075400 |
| 0.2992 | | 7.60 | 8.00 | 116.00 | 64.60 | 76.00 | 9054990076000 |
| 0.3031 | | 7.70 | 8.00 | 116.00 | 64.45 | 76.00 | 9054990077000 |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9054990078000 |
| 0.3110 | | 7.90 | 8.00 | 116.00 | 64.15 | 76.00 | 9054990079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9054990079400 |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9054990080000 |
| 0.3189 | | 8.10 | 10.00 | 131.00 | 74.85 | 87.00 | 9054990081000 |
| 0.3228 | P | 8.20 | 10.00 | 131.00 | 74.70 | 87.00 | 9054990082000 |
| 0.3268 | | 8.30 | 10.00 | 131.00 | 74.55 | 87.00 | 9054990083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 131.00 | 74.51 | 87.00 | 9054990083300 |
| 0.3307 | | 8.40 | 10.00 | 131.00 | 74.40 | 87.00 | 9054990084000 |
| 0.3346 | | 8.50 | 10.00 | 131.00 | 74.25 | 87.00 | 9054990085000 |
| 0.3386 | | 8.60 | 10.00 | 131.00 | 74.10 | 87.00 | 9054990086000 |
| 0.3425 | | 8.70 | 10.00 | 131.00 | 73.95 | 87.00 | 9054990087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 131.00 | 73.91 | 87.00 | 9054990087300 |
| 0.3465 | | 8.80 | 10.00 | 131.00 | 73.80 | 87.00 | 9054990088000 |
| 0.3504 | | 8.90 | 10.00 | 131.00 | 73.65 | 87.00 | 9054990089000 |
| 0.3543 | | 9.00 | 10.00 | 131.00 | 73.50 | 87.00 | 9054990090000 |

7xD Drills

| Diameter (d ₁) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|----------------------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3583 | | 9.10 | 10.00 | 139.00 | 81.35 | 95.00 | 9054990091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9054990091300 |
| 0.3622 | | 9.20 | 10.00 | 139.00 | 81.20 | 95.00 | 9054990092000 |
| 0.3642 | | 9.25 | 10.00 | 139.00 | 81.13 | 95.00 | 9054990092500 |
| 0.3661 | | 9.30 | 10.00 | 139.00 | 81.05 | 95.00 | 9054990093000 |
| 0.3677 | U | 9.34 | 10.00 | 139.00 | 80.99 | 95.00 | 9054990093400 |
| 0.3701 | | 9.40 | 10.00 | 139.00 | 80.90 | 95.00 | 9054990094000 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9054990095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9054990095200 |
| 0.3780 | | 9.60 | 10.00 | 139.00 | 80.60 | 95.00 | 9054990096000 |
| 0.3819 | | 9.70 | 10.00 | 139.00 | 80.45 | 95.00 | 9054990097000 |
| 0.3858 | W | 9.80 | 10.00 | 139.00 | 80.30 | 95.00 | 9054990098000 |
| 0.3898 | | 9.90 | 10.00 | 139.00 | 80.15 | 95.00 | 9054990099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 139.00 | 80.12 | 95.00 | 9054990099200 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9054990100000 |
| 0.3976 | | 10.10 | 12.00 | 155.00 | 90.85 | 106.00 | 9054990101000 |
| 0.4016 | | 10.20 | 12.00 | 155.00 | 90.70 | 106.00 | 9054990102000 |
| 0.4055 | | 10.30 | 12.00 | 155.00 | 90.55 | 106.00 | 9054990103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 155.00 | 90.52 | 106.00 | 9054990103200 |
| 0.4094 | | 10.40 | 12.00 | 155.00 | 90.40 | 106.00 | 9054990104000 |
| 0.4134 | | 10.50 | 12.00 | 155.00 | 90.25 | 106.00 | 9054990105000 |
| 0.4173 | | 10.60 | 12.00 | 155.00 | 90.10 | 106.00 | 9054990106000 |
| 0.4213 | | 10.70 | 12.00 | 155.00 | 89.95 | 106.00 | 9054990107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 155.00 | 89.92 | 106.00 | 9054990107200 |
| 0.4252 | | 10.80 | 12.00 | 155.00 | 89.80 | 106.00 | 9054990108000 |
| 0.4291 | | 10.90 | 12.00 | 155.00 | 89.65 | 106.00 | 9054990109000 |
| 0.4331 | | 11.00 | 12.00 | 155.00 | 89.50 | 106.00 | 9054990110000 |
| 0.4370 | | 11.10 | 12.00 | 163.00 | 97.35 | 114.00 | 9054990111000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9054990111100 |
| 0.4409 | | 11.20 | 12.00 | 163.00 | 97.20 | 114.00 | 9054990112000 |
| 0.4449 | | 11.30 | 12.00 | 163.00 | 97.05 | 114.00 | 9054990113000 |
| 0.4488 | | 11.40 | 12.00 | 163.00 | 96.90 | 114.00 | 9054990114000 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9054990115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 163.00 | 96.74 | 114.00 | 9054990115100 |
| 0.4567 | | 11.60 | 12.00 | 163.00 | 96.60 | 114.00 | 9054990116000 |
| 0.4606 | | 11.70 | 12.00 | 163.00 | 96.45 | 114.00 | 9054990117000 |
| 0.4646 | | 11.80 | 12.00 | 163.00 | 96.30 | 114.00 | 9054990118000 |
| 0.4685 | | 11.90 | 12.00 | 163.00 | 96.15 | 114.00 | 9054990119000 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 163.00 | 96.14 | 114.00 | 9054990119100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9054990120000 |
| 0.4764 | | 12.10 | 14.00 | 182.00 | 114.85 | 133.00 | 9054990121000 |
| 0.4803 | | 12.20 | 14.00 | 182.00 | 114.70 | 133.00 | 9054990122000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9054990123000 |
| 0.4882 | | 12.40 | 14.00 | 182.00 | 114.40 | 133.00 | 9054990124000 |

| Diameter (d ₁) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|----------------------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9054990125000 |
| 0.4961 | | 12.60 | 14.00 | 182.00 | 114.10 | 133.00 | 9054990126000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9054990127000 |
| 0.5039 | | 12.80 | 14.00 | 182.00 | 113.80 | 133.00 | 9054990128000 |
| 0.5079 | | 12.90 | 14.00 | 182.00 | 113.65 | 133.00 | 9054990129000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9054990130000 |
| 0.5157 | 33/64 | 13.10 | 14.00 | 182.00 | 113.35 | 133.00 | 9054990131000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 182.00 | 112.77 | 133.00 | 9054990134900 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9054990135000 |
| 0.5394 | | 13.70 | 14.00 | 182.00 | 112.45 | 133.00 | 9054990137000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 182.00 | 112.17 | 133.00 | 9054990138900 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9054990140000 |
| 0.5551 | | 14.10 | 16.00 | 204.00 | 130.85 | 152.00 | 9054990141000 |
| 0.5591 | | 14.20 | 16.00 | 204.00 | 130.70 | 152.00 | 9054990142000 |
| 0.5626 | 9/16 | 14.29 | 16.00 | 204.00 | 130.57 | 152.00 | 9054990142900 |
| 0.5630 | | 14.30 | 16.00 | 204.00 | 130.55 | 152.00 | 9054990143000 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9054990145000 |
| 0.5787 | | 14.70 | 16.00 | 204.00 | 129.95 | 152.00 | 9054990147000 |
| 0.5827 | | 14.80 | 16.00 | 204.00 | 129.80 | 152.00 | 9054990148000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9054990150000 |
| 0.5945 | | 15.10 | 16.00 | 204.00 | 129.35 | 152.00 | 9054990151000 |
| 0.6024 | | 15.30 | 16.00 | 204.00 | 129.05 | 152.00 | 9054990153000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 204.00 | 128.78 | 152.00 | 9054990154800 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9054990155000 |
| 0.6181 | | 15.70 | 16.00 | 204.00 | 128.45 | 152.00 | 9054990157000 |
| 0.6220 | | 15.80 | 16.00 | 204.00 | 128.30 | 152.00 | 9054990158000 |
| 0.6248 | 5/8 | 15.87 | 16.00 | 204.00 | 128.20 | 152.00 | 9054990158700 |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9054990160000 |
| 0.6417 | | 16.30 | 18.00 | 223.00 | 146.55 | 171.00 | 9054990163000 |
| 0.6496 | | 16.50 | 18.00 | 223.00 | 146.25 | 171.00 | 9054990165000 |
| 0.6575 | | 16.70 | 18.00 | 223.00 | 145.95 | 171.00 | 9054990167000 |
| 0.6654 | | 16.90 | 18.00 | 223.00 | 145.65 | 171.00 | 9054990169000 |
| 0.6693 | | 17.00 | 18.00 | 223.00 | 145.50 | 171.00 | 9054990170000 |
| 0.6890 | | 17.50 | 18.00 | 223.00 | 144.75 | 171.00 | 9054990175000 |
| 0.6969 | | 17.70 | 18.00 | 223.00 | 144.45 | 171.00 | 9054990177000 |
| 0.7087 | | 18.00 | 18.00 | 223.00 | 144.00 | 171.00 | 9054990180000 |
| 0.7283 | | 18.50 | 20.00 | 244.00 | 162.25 | 190.00 | 9054990185000 |
| 0.7441 | | 18.90 | 20.00 | 244.00 | 161.65 | 190.00 | 9054990189000 |
| 0.7480 | | 19.00 | 20.00 | 244.00 | 161.50 | 190.00 | 9054990190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 244.00 | 161.43 | 190.00 | 9054990190500 |
| 0.7677 | | 19.50 | 20.00 | 244.00 | 160.75 | 190.00 | 9054990195000 |
| 0.7795 | | 19.80 | 20.00 | 244.00 | 160.30 | 190.00 | 9054990198000 |
| 0.7874 | | 20.00 | 20.00 | 244.00 | 160.00 | 190.00 | 9054990200000 |

7xD Drills



Tool material

Solid Carbide

Surface

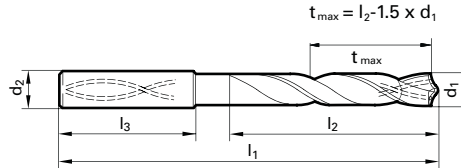


| | | |
|----------|-----------------|---|
| P | Steel | ● |
| M | Stainless steel | ○ |
| K | Cast iron | ● |
| N | Aluminum | ○ |
| S | Titanium alloys | ○ |
| H | Hardened steel | ○ |

web thinning $\geq \varnothing 3.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry • double margin

structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AlSi-alloys

●=Optimal
○=Limited



For L3 dimensions per DIN 6537, please see page 468
Speeds and feeds information on pg. 576

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 90.00 | 45.50 | 50.00 | 9055250030000 |
| 0.1220 | | 3.10 | 6.00 | 90.00 | 45.35 | 50.00 | 9055250031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 90.00 | 45.25 | 50.00 | 9055250031700 |
| 0.1260 | | 3.20 | 6.00 | 90.00 | 45.20 | 50.00 | 9055250032000 |
| 0.1280 | | 3.25 | 6.00 | 90.00 | 45.13 | 50.00 | 9055250032500 |
| 0.1299 | | 3.30 | 6.00 | 90.00 | 45.05 | 50.00 | 9055250033000 |
| 0.1339 | | 3.40 | 6.00 | 90.00 | 44.90 | 50.00 | 9055250034000 |
| 0.1378 | | 3.50 | 6.00 | 90.00 | 44.75 | 50.00 | 9055250035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 90.00 | 44.65 | 50.00 | 9055250035700 |
| 0.1417 | | 3.60 | 6.00 | 90.00 | 44.60 | 50.00 | 9055250036000 |
| 0.1457 | | 3.70 | 6.00 | 90.00 | 44.45 | 50.00 | 9055250037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 102.00 | 58.30 | 64.00 | 9055250038000 |
| 0.1535 | | 3.90 | 6.00 | 102.00 | 58.15 | 64.00 | 9055250039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 102.00 | 58.05 | 64.00 | 9055250039700 |
| 0.1575 | | 4.00 | 6.00 | 102.00 | 58.00 | 64.00 | 9055250040000 |
| 0.1614 | | 4.10 | 6.00 | 102.00 | 57.85 | 64.00 | 9055250041000 |
| 0.1654 | | 4.20 | 6.00 | 102.00 | 57.70 | 64.00 | 9055250042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 102.00 | 57.55 | 64.00 | 9055250043000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 102.00 | 57.45 | 64.00 | 9055250043700 |
| 0.1732 | | 4.40 | 6.00 | 102.00 | 57.40 | 64.00 | 9055250044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 102.00 | 57.25 | 64.00 | 9055250045000 |
| 0.1811 | | 4.60 | 6.00 | 102.00 | 57.10 | 64.00 | 9055250046000 |
| 0.1831 | | 4.65 | 6.00 | 102.00 | 57.03 | 64.00 | 9055250046500 |
| 0.1850 | | 4.70 | 6.00 | 102.00 | 56.95 | 64.00 | 9055250047000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 116.00 | 70.86 | 78.00 | 9055250047600 |
| 0.1890 | | 4.80 | 6.00 | 116.00 | 70.80 | 78.00 | 9055250048000 |
| 0.1929 | | 4.90 | 6.00 | 116.00 | 70.65 | 78.00 | 9055250049000 |
| 0.1969 | | 5.00 | 6.00 | 116.00 | 70.50 | 78.00 | 9055250050000 |
| 0.2008 | | 5.10 | 6.00 | 116.00 | 70.35 | 78.00 | 9055250051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 116.00 | 70.26 | 78.00 | 9055250051600 |
| 0.2047 | | 5.20 | 6.00 | 116.00 | 70.20 | 78.00 | 9055250052000 |
| 0.2087 | | 5.30 | 6.00 | 116.00 | 70.05 | 78.00 | 9055250053000 |
| 0.2126 | | 5.40 | 6.00 | 116.00 | 69.90 | 78.00 | 9055250054000 |
| 0.2165 | | 5.50 | 6.00 | 116.00 | 69.75 | 78.00 | 9055250055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 116.00 | 69.66 | 78.00 | 9055250055600 |
| 0.2205 | | 5.60 | 6.00 | 116.00 | 69.60 | 78.00 | 9055250056000 |
| 0.2244 | | 5.70 | 6.00 | 116.00 | 69.45 | 78.00 | 9055250057000 |
| 0.2283 | | 5.80 | 6.00 | 116.00 | 69.30 | 78.00 | 9055250058000 |
| 0.2323 | | 5.90 | 6.00 | 116.00 | 69.15 | 78.00 | 9055250059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 116.00 | 69.08 | 78.00 | 9055250059500 |
| 0.2362 | | 6.00 | 6.00 | 116.00 | 69.00 | 78.00 | 9055250060000 |
| 0.2402 | | 6.10 | 8.00 | 146.00 | 98.85 | 108.00 | 9055250061000 |

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|---------|------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/tr | mm | | | | | |
| 0.2441 | | 6.20 | 8.00 | 146.00 | 98.70 | 108.00 | 9055250062000 |
| 0.2480 | | 6.30 | 8.00 | 146.00 | 98.55 | 108.00 | 9055250063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 146.00 | 98.48 | 108.00 | 9055250063500 |
| 0.2520 | | 6.40 | 8.00 | 146.00 | 98.40 | 108.00 | 9055250064000 |
| 0.2559 | | 6.50 | 8.00 | 146.00 | 98.25 | 108.00 | 9055250065000 |
| 0.2598 | | 6.60 | 8.00 | 146.00 | 98.10 | 108.00 | 9055250066000 |
| 0.2638 | | 6.70 | 8.00 | 146.00 | 97.95 | 108.00 | 9055250067000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 146.00 | 97.88 | 108.00 | 9055250067500 |
| 0.2677 | | 6.80 | 8.00 | 146.00 | 97.80 | 108.00 | 9055250068000 |
| 0.2717 | | 6.90 | 8.00 | 146.00 | 97.65 | 108.00 | 9055250069000 |
| 0.2756 | | 7.00 | 8.00 | 146.00 | 97.50 | 108.00 | 9055250070000 |
| 0.2795 | | 7.10 | 8.00 | 146.00 | 97.35 | 108.00 | 9055250071000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 146.00 | 97.29 | 108.00 | 9055250071400 |
| 0.2835 | | 7.20 | 8.00 | 146.00 | 97.20 | 108.00 | 9055250072000 |
| 0.2874 | | 7.30 | 8.00 | 146.00 | 97.05 | 108.00 | 9055250073000 |
| 0.2913 | | 7.40 | 8.00 | 146.00 | 96.90 | 108.00 | 9055250074000 |
| 0.2953 | | 7.50 | 8.00 | 146.00 | 96.75 | 108.00 | 9055250075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 146.00 | 96.69 | 108.00 | 9055250075400 |
| 0.2992 | | 7.60 | 8.00 | 146.00 | 96.60 | 108.00 | 9055250076000 |
| 0.3031 | | 7.70 | 8.00 | 146.00 | 96.45 | 108.00 | 9055250077000 |
| 0.3071 | | 7.80 | 8.00 | 146.00 | 96.30 | 108.00 | 9055250078000 |
| 0.3110 | | 7.90 | 8.00 | 146.00 | 96.15 | 108.00 | 9055250079000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 146.00 | 96.09 | 108.00 | 9055250079400 |
| 0.3150 | | 8.00 | 8.00 | 146.00 | 96.00 | 108.00 | 9055250080000 |
| 0.3189 | | 8.10 | 10.00 | 162.00 | 107.85 | 120.00 | 9055250081000 |
| 0.3228 | | 8.20 | 10.00 | 162.00 | 107.70 | 120.00 | 9055250082000 |
| 0.3268 | | 8.30 | 10.00 | 162.00 | 107.55 | 120.00 | 9055250083000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 162.00 | 107.51 | 120.00 | 9055250083300 |
| 0.3307 | | 8.40 | 10.00 | 162.00 | 107.40 | 120.00 | 9055250084000 |
| 0.3346 | | 8.50 | 10.00 | 162.00 | 107.25 | 120.00 | 9055250085000 |
| 0.3386 | | 8.60 | 10.00 | 162.00 | 107.10 | 120.00 | 9055250086000 |
| 0.3425 | | 8.70 | 10.00 | 162.00 | 106.95 | 120.00 | 9055250087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 162.00 | 106.91 | 120.00 | 9055250087300 |
| 0.3465 | | 8.80 | 10.00 | 162.00 | 106.80 | 120.00 | 9055250088000 |
| 0.3504 | | 8.90 | 10.00 | 162.00 | 106.65 | 120.00 | 9055250089000 |
| 0.3543 | | 9.00 | 10.00 | 162.00 | 106.50 | 120.00 | 9055250090000 |
| 0.3583 | | 9.10 | 10.00 | 162.00 | 106.35 | 120.00 | 9055250091000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 162.00 | 106.31 | 120.00 | 9055250091300 |
| 0.3622 | | 9.20 | 10.00 | 162.00 | 106.20 | 120.00 | 9055250092000 |
| 0.3642 | | 9.25 | 10.00 | 162.00 | 106.13 | 120.00 | 9055250092500 |
| 0.3661 | | 9.30 | 10.00 | 162.00 | 106.05 | 120.00 | 9055250093000 |
| 0.3701 | | 9.40 | 10.00 | 162.00 | 105.90 | 120.00 | 9055250094000 |

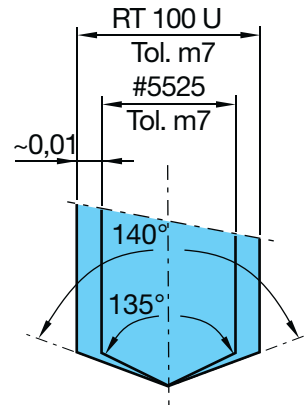
12xD Drills

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3740 | | 9.50 | 10.00 | 162.00 | 105.75 | 120.00 | 9055250095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 162.00 | 105.72 | 120.00 | 9055250095200 |
| 0.3780 | | 9.60 | 10.00 | 162.00 | 105.60 | 120.00 | 9055250096000 |
| 0.3819 | | 9.70 | 10.00 | 162.00 | 105.45 | 120.00 | 9055250097000 |
| 0.3858 | | 9.80 | 10.00 | 162.00 | 105.30 | 120.00 | 9055250098000 |
| 0.3898 | | 9.90 | 10.00 | 162.00 | 105.15 | 120.00 | 9055250099000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 162.00 | 105.12 | 120.00 | 9055250099200 |
| 0.3937 | | 10.00 | 10.00 | 162.00 | 105.00 | 120.00 | 9055250100000 |
| 0.3976 | | 10.10 | 12.00 | 204.00 | 140.85 | 156.00 | 9055250101000 |
| 0.4016 | | 10.20 | 12.00 | 204.00 | 140.70 | 156.00 | 9055250102000 |
| 0.4055 | | 10.30 | 12.00 | 204.00 | 140.55 | 156.00 | 9055250103000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 204.00 | 140.52 | 156.00 | 9055250103200 |
| 0.4134 | | 10.50 | 12.00 | 204.00 | 140.25 | 156.00 | 9055250105000 |
| 0.4173 | | 10.60 | 12.00 | 204.00 | 140.10 | 156.00 | 9055250106000 |
| 0.4213 | | 10.70 | 12.00 | 204.00 | 139.95 | 156.00 | 9055250107000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 204.00 | 139.92 | 156.00 | 9055250107200 |
| 0.4252 | | 10.80 | 12.00 | 204.00 | 139.80 | 156.00 | 9055250108000 |
| 0.4291 | | 10.90 | 12.00 | 204.00 | 139.65 | 156.00 | 9055250109000 |
| 0.4331 | | 11.00 | 12.00 | 204.00 | 139.50 | 156.00 | 9055250110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 204.00 | 139.34 | 156.00 | 9055250111100 |
| 0.4528 | | 11.50 | 12.00 | 204.00 | 138.75 | 156.00 | 9055250115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 204.00 | 138.74 | 156.00 | 9055250115100 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 204.00 | 138.14 | 156.00 | 9055250119100 |

| Diameter (d ₁) | | | d ₂ mm | l ₁ mm | t _{max} mm | l ₂ mm | EDP # |
|----------------------------|----------|-------|----------------------|----------------------|------------------------|----------------------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4724 | | 12.00 | 12.00 | 204.00 | 138.00 | 156.00 | 9055250120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 230.00 | 163.55 | 182.00 | 9055250123000 |
| 0.4921 | | 12.50 | 14.00 | 230.00 | 163.25 | 182.00 | 9055250125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 230.00 | 162.95 | 182.00 | 9055250127000 |
| 0.5118 | | 13.00 | 14.00 | 230.00 | 162.50 | 182.00 | 9055250130000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 230.00 | 161.77 | 182.00 | 9055250134900 |
| 0.5315 | | 13.50 | 14.00 | 230.00 | 161.75 | 182.00 | 9055250135000 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 230.00 | 161.17 | 182.00 | 9055250138900 |
| 0.5512 | | 14.00 | 14.00 | 230.00 | 161.00 | 182.00 | 9055250140000 |
| 0.5709 | | 14.50 | 16.00 | 260.00 | 186.25 | 208.00 | 9055250145000 |
| 0.5906 | | 15.00 | 16.00 | 260.00 | 185.50 | 208.00 | 9055250150000 |
| 0.6094 | 39/64 | 15.48 | 16.00 | 260.00 | 184.78 | 208.00 | 9055250154800 |
| 0.6102 | | 15.50 | 16.00 | 260.00 | 184.75 | 208.00 | 9055250155000 |
| 0.6299 | | 16.00 | 16.00 | 260.00 | 184.00 | 208.00 | 9055250160000 |
| 0.6496 | | 16.50 | 18.00 | 285.00 | 209.25 | 234.00 | 9055250165000 |
| 0.6693 | | 17.00 | 18.00 | 285.00 | 208.50 | 234.00 | 9055250170000 |
| 0.6890 | | 17.50 | 18.00 | 285.00 | 207.75 | 234.00 | 9055250175000 |
| 0.7087 | | 18.00 | 18.00 | 285.00 | 207.00 | 234.00 | 9055250180000 |
| 0.7283 | | 18.50 | 20.00 | 310.00 | 230.25 | 258.00 | 9055250185000 |
| 0.7480 | | 19.00 | 20.00 | 310.00 | 229.50 | 258.00 | 9055250190000 |
| 0.7500 | 3/4 | 19.05 | 20.00 | 310.00 | 229.43 | 258.00 | 9055250190500 |
| 0.7677 | | 19.50 | 20.00 | 310.00 | 228.75 | 258.00 | 9055250195000 |
| 0.7874 | | 20.00 | 20.00 | 310.00 | 228.00 | 258.00 | 9055250200000 |

Pilot drilling

It is recommended to utilize a pilot drill for the series 5525 deep hole drill. Use series 5510, or similar drill with m7 diameter tolerance and 140° point, to drill a minimum of 1xD deep. Then enter the pilot hole with the deep hole drill at max. 300RPM and 20IPM stopping shy of the bottom of the pilot hole. Start high pressure coolant and increase RPM to recommended operating speed. Drill at recommended feed rate to hole depth without pecking. Slow to max. 300RPM before retracting.



12xD Drills

Tool Reconditioning

RE-GRINDING AND RE-COATING





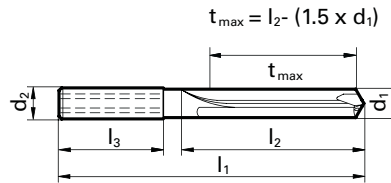
CARBIDE STRAIGHT FLUTE DRILLS





Tool material **Solid Carbide**
Surface

- P** Steel web thinning ≥ Ø 3.000 • relieved cone • close diameter tolerances • very good surface quality of hole • observe coolant pressure • double margin
 - M** Stainless steel
 - K** Cast iron ○ aluminum and Al-alloys • Al materials with high Si-content
 - N** Aluminum ●
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 544

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 19.50 | 24.00 | 9007680030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 19.35 | 24.00 | 9007680031000 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 19.20 | 24.00 | 9007680032000 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 19.05 | 24.00 | 9007680033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 18.90 | 24.00 | 9007680034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 18.75 | 24.00 | 9007680035000 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 18.60 | 24.00 | 9007680036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 18.45 | 24.00 | 9007680037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 24.30 | 30.00 | 9007680038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 24.15 | 30.00 | 9007680039000 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 24.00 | 30.00 | 9007680040000 |
| 0.1614 | | 4.10 | 6.00 | 74.00 | 23.85 | 30.00 | 9007680041000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 23.70 | 30.00 | 9007680042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 74.00 | 23.55 | 30.00 | 9007680043000 |
| 0.1732 | | 4.40 | 6.00 | 74.00 | 23.40 | 30.00 | 9007680044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 23.25 | 30.00 | 9007680045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 23.10 | 30.00 | 9007680046000 |
| 0.1850 | #13 | 4.70 | 6.00 | 74.00 | 22.95 | 30.00 | 9007680047000 |
| 0.1890 | #12 | 4.80 | 6.00 | 74.00 | 22.80 | 36.00 | 9007680048000 |
| 0.1929 | | 4.90 | 6.00 | 74.00 | 22.65 | 36.00 | 9007680049000 |
| 0.1969 | | 5.00 | 6.00 | 74.00 | 22.50 | 36.00 | 9007680050000 |
| 0.2008 | | 5.10 | 6.00 | 74.00 | 22.35 | 36.00 | 9007680051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 74.00 | 22.26 | 36.00 | 9007680051600 |
| 0.2047 | | 5.20 | 6.00 | 74.00 | 22.20 | 36.00 | 9007680052000 |
| 0.2087 | | 5.30 | 6.00 | 74.00 | 22.05 | 36.00 | 9007680053000 |
| 0.2126 | | 5.40 | 6.00 | 74.00 | 21.90 | 36.00 | 9007680054000 |
| 0.2165 | | 5.50 | 6.00 | 74.00 | 21.75 | 36.00 | 9007680055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 74.00 | 21.66 | 36.00 | 9007680055600 |
| 0.2205 | | 5.60 | 6.00 | 74.00 | 21.60 | 36.00 | 9007680056000 |
| 0.2244 | | 5.70 | 6.00 | 74.00 | 21.45 | 36.00 | 9007680057000 |
| 0.2283 | | 5.80 | 6.00 | 74.00 | 21.30 | 36.00 | 9007680058000 |
| 0.2323 | | 5.90 | 6.00 | 74.00 | 21.15 | 36.00 | 9007680059000 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 74.00 | 21.08 | 36.00 | 9007680059500 |
| 0.2362 | | 6.00 | 6.00 | 74.00 | 21.00 | 36.00 | 9007680060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9007680061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9007680062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9007680063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9007680063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9007680064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9007680065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9007680066000 |
| 0.2638 | | 6.70 | 8.00 | 91.00 | 42.95 | 53.00 | 9007680067000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|----|-------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 91.00 | 42.88 | 9007680067500 |
| 0.2677 | | | 6.80 | 8.00 | 91.00 | 42.80 | 9007680068000 |
| 0.2717 | | I | 6.90 | 8.00 | 91.00 | 42.65 | 9007680069000 |
| 0.2756 | | | 7.00 | 8.00 | 91.00 | 42.50 | 9007680070000 |
| 0.2795 | | | 7.10 | 8.00 | 91.00 | 42.35 | 9007680071000 |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 91.00 | 42.29 | 9007680071400 |
| 0.2835 | | | 7.20 | 8.00 | 91.00 | 42.20 | 9007680072000 |
| 0.2874 | | | 7.30 | 8.00 | 91.00 | 42.05 | 9007680073000 |
| 0.2913 | | | 7.40 | 8.00 | 91.00 | 41.90 | 9007680074000 |
| 0.2953 | | | 7.50 | 8.00 | 91.00 | 41.75 | 9007680075000 |
| 0.2969 | 19/64 | | 7.54 | 8.00 | 91.00 | 41.69 | 9007680075400 |
| 0.2992 | | | 7.60 | 8.00 | 91.00 | 41.60 | 9007680076000 |
| 0.3031 | | | 7.70 | 8.00 | 91.00 | 41.45 | 9007680077000 |
| 0.3071 | | | 7.80 | 8.00 | 91.00 | 41.30 | 9007680078000 |
| 0.3110 | | | 7.90 | 8.00 | 91.00 | 41.15 | 9007680079000 |
| 0.3126 | 5/16 | | 7.94 | 8.00 | 91.00 | 41.09 | 9007680079400 |
| 0.3150 | | | 8.00 | 8.00 | 91.00 | 41.00 | 9007680080000 |
| 0.3189 | | | 8.10 | 10.00 | 103.00 | 48.85 | 9007680081000 |
| 0.3228 | | P | 8.20 | 10.00 | 103.00 | 48.70 | 9007680082000 |
| 0.3268 | | | 8.30 | 10.00 | 103.00 | 48.55 | 9007680083000 |
| 0.3280 | 21/64 | | 8.33 | 10.00 | 103.00 | 48.51 | 9007680083300 |
| 0.3307 | | | 8.40 | 10.00 | 103.00 | 48.40 | 9007680084000 |
| 0.3346 | | | 8.50 | 10.00 | 103.00 | 48.25 | 9007680085000 |
| 0.3386 | | | 8.60 | 10.00 | 103.00 | 48.10 | 9007680086000 |
| 0.3425 | | | 8.70 | 10.00 | 103.00 | 47.95 | 9007680087000 |
| 0.3437 | 11/32 | | 8.73 | 10.00 | 103.00 | 47.91 | 9007680087300 |
| 0.3465 | | | 8.80 | 10.00 | 103.00 | 47.80 | 9007680088000 |
| 0.3504 | | | 8.90 | 10.00 | 103.00 | 47.65 | 9007680089000 |
| 0.3543 | | | 9.00 | 10.00 | 103.00 | 47.50 | 9007680090000 |
| 0.3583 | | | 9.10 | 10.00 | 103.00 | 47.35 | 9007680091000 |
| 0.3594 | 23/64 | | 9.13 | 10.00 | 103.00 | 47.31 | 9007680091300 |
| 0.3622 | | | 9.20 | 10.00 | 103.00 | 47.20 | 9007680092000 |
| 0.3661 | | | 9.30 | 10.00 | 103.00 | 47.05 | 9007680093000 |
| 0.3701 | | | 9.40 | 10.00 | 103.00 | 46.90 | 9007680094000 |
| 0.3740 | | | 9.50 | 10.00 | 103.00 | 46.75 | 9007680095000 |
| 0.3748 | 3/8 | | 9.52 | 10.00 | 103.00 | 46.72 | 9007680095200 |
| 0.3780 | | | 9.60 | 10.00 | 103.00 | 46.60 | 9007680096000 |
| 0.3819 | | | 9.70 | 10.00 | 103.00 | 46.45 | 9007680097000 |
| 0.3858 | | W | 9.80 | 10.00 | 103.00 | 46.30 | 9007680098000 |
| 0.3898 | | | 9.90 | 10.00 | 103.00 | 46.15 | 9007680099000 |
| 0.3906 | 25/64 | | 9.92 | 10.00 | 103.00 | 46.12 | 9007680099200 |
| 0.3937 | | | 10.00 | 10.00 | 103.00 | 46.00 | 9007680100000 |

RT 150 GG Drills

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9007680102000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 118.00 | 55.52 | 71.00 | 9007680103200 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9007680105000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9007680107200 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9007680110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9007680111100 |
| 0.4409 | | 11.20 | 12.00 | 118.00 | 54.20 | 71.00 | 9007680112000 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9007680115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 118.00 | 53.74 | 71.00 | 9007680115100 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 118.00 | 53.14 | 71.00 | 9007680119100 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9007680120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 55.55 | 74.00 | 9007680123000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 55.25 | 74.00 | 9007680125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 54.95 | 74.00 | 9007680127000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 54.50 | 74.00 | 9007680130000 |

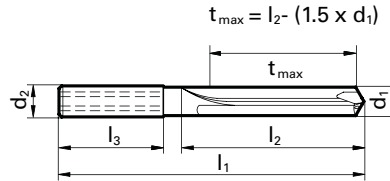
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 53.75 | 74.00 | 9007680135000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 53.00 | 74.00 | 9007680140000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9007680145000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9007680150000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9007680155000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9007680160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9007680165000 |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9007680170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9007680175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9007680180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9007680185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9007680190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9007680195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9007680200000 |



Tool material **Solid Carbide**

Surface

- P** Steel web thinning ≥ Ø 3.000 • facet point grinding • close diameter tolerances
 - M** Stainless steel • very good surface quality of hole • observe optimal coolant pressure
 - K** Cast iron • double margin
 - N** Aluminum ○ grey cast iron, malleable and spheroidal iron
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 583

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|-------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 66.00 | 19.50 | 24.00 | 9060680030000 |
| 0.1220 | | 3.10 | 6.00 | 66.00 | 19.35 | 24.00 | 9060680031000 |
| 0.1260 | | 3.20 | 6.00 | 66.00 | 19.20 | 24.00 | 9060680032000 |
| 0.1299 | | 3.30 | 6.00 | 66.00 | 19.05 | 24.00 | 9060680033000 |
| 0.1339 | | 3.40 | 6.00 | 66.00 | 18.90 | 24.00 | 9060680034000 |
| 0.1378 | | 3.50 | 6.00 | 66.00 | 18.75 | 24.00 | 9060680035000 |
| 0.1417 | | 3.60 | 6.00 | 66.00 | 18.60 | 24.00 | 9060680036000 |
| 0.1457 | | 3.70 | 6.00 | 66.00 | 18.45 | 24.00 | 9060680037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 74.00 | 24.30 | 30.00 | 9060680038000 |
| 0.1535 | | 3.90 | 6.00 | 74.00 | 24.15 | 30.00 | 9060680039000 |
| 0.1575 | | 4.00 | 6.00 | 74.00 | 24.00 | 30.00 | 9060680040000 |
| 0.1654 | | 4.20 | 6.00 | 74.00 | 23.70 | 30.00 | 9060680042000 |
| 0.1772 | #16 | 4.50 | 6.00 | 74.00 | 23.25 | 30.00 | 9060680045000 |
| 0.1811 | | 4.60 | 6.00 | 74.00 | 23.10 | 30.00 | 9060680046000 |
| 0.1890 | #12 | 4.80 | 6.00 | 74.00 | 28.80 | 36.00 | 9060680048000 |
| 0.1969 | | 5.00 | 6.00 | 74.00 | 28.50 | 36.00 | 9060680050000 |
| 0.2008 | | 5.10 | 6.00 | 74.00 | 28.35 | 36.00 | 9060680051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 74.00 | 28.26 | 36.00 | 9060680051600 |
| 0.2047 | | 5.20 | 6.00 | 74.00 | 28.20 | 36.00 | 9060680052000 |
| 0.2087 | | 5.30 | 6.00 | 74.00 | 28.05 | 36.00 | 9060680053000 |
| 0.2126 | | 5.40 | 6.00 | 74.00 | 27.90 | 36.00 | 9060680054000 |
| 0.2165 | | 5.50 | 6.00 | 74.00 | 27.75 | 36.00 | 9060680055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 74.00 | 27.66 | 36.00 | 9060680055600 |
| 0.2205 | | 5.60 | 6.00 | 74.00 | 27.60 | 36.00 | 9060680056000 |
| 0.2283 | | 5.80 | 6.00 | 74.00 | 27.30 | 36.00 | 9060680058000 |
| 0.2362 | | 6.00 | 6.00 | 74.00 | 27.00 | 36.00 | 9060680060000 |
| 0.2402 | | 6.10 | 8.00 | 91.00 | 43.85 | 53.00 | 9060680061000 |
| 0.2441 | | 6.20 | 8.00 | 91.00 | 43.70 | 53.00 | 9060680062000 |
| 0.2480 | | 6.30 | 8.00 | 91.00 | 43.55 | 53.00 | 9060680063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 91.00 | 43.48 | 53.00 | 9060680063500 |
| 0.2520 | | 6.40 | 8.00 | 91.00 | 43.40 | 53.00 | 9060680064000 |
| 0.2559 | | 6.50 | 8.00 | 91.00 | 43.25 | 53.00 | 9060680065000 |
| 0.2598 | | 6.60 | 8.00 | 91.00 | 43.10 | 53.00 | 9060680066000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 91.00 | 42.88 | 53.00 | 9060680067500 |
| 0.2677 | | 6.80 | 8.00 | 91.00 | 42.80 | 53.00 | 9060680068000 |
| 0.2717 | I | 6.90 | 8.00 | 91.00 | 42.65 | 53.00 | 9060680069000 |
| 0.2756 | | 7.00 | 8.00 | 91.00 | 42.50 | 53.00 | 9060680070000 |
| 0.2795 | | 7.10 | 8.00 | 91.00 | 42.35 | 53.00 | 9060680071000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 91.00 | 42.29 | 53.00 | 9060680071400 |
| 0.2835 | | 7.20 | 8.00 | 91.00 | 42.20 | 53.00 | 9060680072000 |
| 0.2874 | | 7.30 | 8.00 | 91.00 | 42.05 | 53.00 | 9060680073000 |
| 0.2913 | | 7.40 | 8.00 | 91.00 | 41.90 | 53.00 | 9060680074000 |
| 0.2953 | | 7.50 | 8.00 | 91.00 | 41.75 | 53.00 | 9060680075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 91.00 | 41.69 | 53.00 | 9060680075400 |
| 0.3071 | | 7.80 | 8.00 | 91.00 | 41.30 | 53.00 | 9060680078000 |
| 0.3150 | | 8.00 | 8.00 | 91.00 | 41.00 | 53.00 | 9060680080000 |
| 0.3189 | | 8.10 | 10.00 | 103.00 | 48.85 | 61.00 | 9060680081000 |
| 0.3228 | P | 8.20 | 10.00 | 103.00 | 48.70 | 61.00 | 9060680082000 |
| 0.3268 | | 8.30 | 10.00 | 103.00 | 48.55 | 61.00 | 9060680083000 |
| 0.3307 | | 8.40 | 10.00 | 103.00 | 48.40 | 61.00 | 9060680084000 |
| 0.3346 | | 8.50 | 10.00 | 103.00 | 48.25 | 61.00 | 9060680085000 |
| 0.3386 | | 8.60 | 10.00 | 103.00 | 48.10 | 61.00 | 9060680086000 |
| 0.3425 | | 8.70 | 10.00 | 103.00 | 47.95 | 61.00 | 9060680087000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 103.00 | 47.91 | 61.00 | 9060680087300 |
| 0.3543 | | 9.00 | 10.00 | 103.00 | 47.50 | 61.00 | 9060680090000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 103.00 | 47.31 | 61.00 | 9060680091300 |
| 0.3622 | | 9.20 | 10.00 | 103.00 | 47.20 | 61.00 | 9060680092000 |
| 0.3661 | | 9.30 | 10.00 | 103.00 | 47.05 | 61.00 | 9060680093000 |
| 0.3740 | | 9.50 | 10.00 | 103.00 | 46.75 | 61.00 | 9060680095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 103.00 | 46.72 | 61.00 | 9060680095200 |
| 0.3780 | | 9.60 | 10.00 | 103.00 | 46.60 | 61.00 | 9060680096000 |
| 0.3819 | | 9.70 | 10.00 | 103.00 | 46.45 | 61.00 | 9060680097000 |
| 0.3858 | W | 9.80 | 10.00 | 103.00 | 46.30 | 61.00 | 9060680098000 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 103.00 | 46.12 | 61.00 | 9060680099200 |
| 0.3937 | | 10.00 | 10.00 | 103.00 | 46.00 | 61.00 | 9060680100000 |
| 0.4016 | | 10.20 | 12.00 | 118.00 | 55.70 | 71.00 | 9060680102000 |
| 0.4134 | | 10.50 | 12.00 | 118.00 | 55.25 | 71.00 | 9060680105000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 118.00 | 54.92 | 71.00 | 9060680107200 |
| 0.4331 | | 11.00 | 12.00 | 118.00 | 54.50 | 71.00 | 9060680110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 118.00 | 54.34 | 71.00 | 9060680111100 |
| 0.4528 | | 11.50 | 12.00 | 118.00 | 53.75 | 71.00 | 9060680115000 |
| 0.4724 | | 12.00 | 12.00 | 118.00 | 53.00 | 71.00 | 9060680120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 124.00 | 55.55 | 74.00 | 9060680123000 |
| 0.4921 | | 12.50 | 14.00 | 124.00 | 55.25 | 74.00 | 9060680125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 124.00 | 54.95 | 74.00 | 9060680127000 |
| 0.5118 | | 13.00 | 14.00 | 124.00 | 54.50 | 74.00 | 9060680130000 |

RT 150 GG Drills

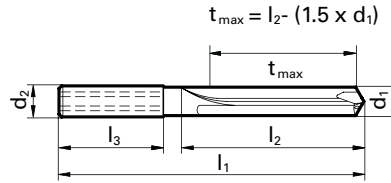
| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.5315 | | 13.50 | 14.00 | 124.00 | 53.75 | 74.00 | 9060680135000 |
| 0.5512 | | 14.00 | 14.00 | 124.00 | 53.00 | 74.00 | 9060680140000 |
| 0.5709 | | 14.50 | 16.00 | 133.00 | 61.25 | 83.00 | 9060680145000 |
| 0.5906 | | 15.00 | 16.00 | 133.00 | 60.50 | 83.00 | 9060680150000 |
| 0.6102 | | 15.50 | 16.00 | 133.00 | 59.75 | 83.00 | 9060680155000 |
| 0.6299 | | 16.00 | 16.00 | 133.00 | 59.00 | 83.00 | 9060680160000 |
| 0.6496 | | 16.50 | 18.00 | 143.00 | 68.25 | 93.00 | 9060680165000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.6693 | | 17.00 | 18.00 | 143.00 | 67.50 | 93.00 | 9060680170000 |
| 0.6890 | | 17.50 | 18.00 | 143.00 | 66.75 | 93.00 | 9060680175000 |
| 0.7087 | | 18.00 | 18.00 | 143.00 | 66.00 | 93.00 | 9060680180000 |
| 0.7283 | | 18.50 | 20.00 | 153.00 | 73.25 | 101.00 | 9060680185000 |
| 0.7480 | | 19.00 | 20.00 | 153.00 | 72.50 | 101.00 | 9060680190000 |
| 0.7677 | | 19.50 | 20.00 | 153.00 | 71.75 | 101.00 | 9060680195000 |
| 0.7874 | | 20.00 | 20.00 | 153.00 | 71.00 | 101.00 | 9060680200000 |



Tool material **Solid Carbide**
Surface

- P** Steel web thinning ≥ Ø 3.000 • relieved cone • close diameter tolerances • very good surface quality of hole • observe coolant pressure • double margin
 - M** Stainless steel
 - K** Cast iron ○ aluminum and Al-alloys • Al materials with high Si-content
 - N** Aluminum ●
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 545

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 74.00 | 27.50 | 32.00 | 9007690030000 |
| 0.1220 | | 3.10 | 6.00 | 74.00 | 27.35 | 32.00 | 9007690031000 |
| 0.1260 | | 3.20 | 6.00 | 74.00 | 27.20 | 32.00 | 9007690032000 |
| 0.1299 | | 3.30 | 6.00 | 74.00 | 27.05 | 32.00 | 9007690033000 |
| 0.1339 | | 3.40 | 6.00 | 74.00 | 28.90 | 34.00 | 9007690034000 |
| 0.1378 | | 3.50 | 6.00 | 74.00 | 28.75 | 34.00 | 9007690035000 |
| 0.1417 | | 3.60 | 6.00 | 74.00 | 28.60 | 34.00 | 9007690036000 |
| 0.1457 | | 3.70 | 6.00 | 74.00 | 28.45 | 34.00 | 9007690037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 97.00 | 39.30 | 45.00 | 9007690038000 |
| 0.1535 | | 3.90 | 6.00 | 97.00 | 39.15 | 45.00 | 9007690039000 |
| 0.1575 | | 4.00 | 6.00 | 97.00 | 39.00 | 45.00 | 9007690040000 |
| 0.1614 | | 4.10 | 6.00 | 97.00 | 38.85 | 45.00 | 9007690041000 |
| 0.1654 | | 4.20 | 6.00 | 97.00 | 38.70 | 45.00 | 9007690042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 97.00 | 38.55 | 45.00 | 9007690043000 |
| 0.1732 | | 4.40 | 6.00 | 97.00 | 38.40 | 45.00 | 9007690044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 97.00 | 38.25 | 45.00 | 9007690045000 |
| 0.1850 | #13 | 4.70 | 6.00 | 97.00 | 37.95 | 45.00 | 9007690047000 |
| 0.1890 | #12 | 4.80 | 6.00 | 97.00 | 49.80 | 57.00 | 9007690048000 |
| 0.1929 | | 4.90 | 6.00 | 97.00 | 49.65 | 57.00 | 9007690049000 |
| 0.1969 | | 5.00 | 6.00 | 97.00 | 49.50 | 57.00 | 9007690050000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 97.00 | 49.26 | 57.00 | 9007690051000 |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9007690055000 |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9007690060000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 116.00 | 66.48 | 76.00 | 9007690063500 |
| 0.2559 | | 6.50 | 8.00 | 116.00 | 66.25 | 76.00 | 9007690065000 |
| 0.2677 | | 6.80 | 8.00 | 116.00 | 65.80 | 76.00 | 9007690068000 |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9007690070000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9007690071400 |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9007690075000 |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9007690078000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9007690079400 |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9007690080000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 139.00 | 82.51 | 95.00 | 9007690083300 |
| 0.3346 | | 8.50 | 10.00 | 139.00 | 82.25 | 95.00 | 9007690085000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3437 | 11/32 | 8.73 | 10.00 | 139.00 | 81.91 | 95.00 | 9007690087300 |
| 0.3543 | | 9.00 | 10.00 | 139.00 | 81.50 | 95.00 | 9007690090000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9007690091300 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9007690095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9007690095200 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9007690100000 |
| 0.4016 | | 10.20 | 12.00 | 163.00 | 98.70 | 114.00 | 9007690102000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 163.00 | 98.52 | 114.00 | 9007690103200 |
| 0.4134 | | 10.50 | 12.00 | 163.00 | 98.25 | 114.00 | 9007690105000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 163.00 | 97.92 | 114.00 | 9007690107200 |
| 0.4331 | | 11.00 | 12.00 | 163.00 | 97.50 | 114.00 | 9007690110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9007690111100 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9007690115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 163.00 | 96.74 | 114.00 | 9007690115100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9007690120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9007690123000 |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9007690125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9007690127000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9007690130000 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9007690135000 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9007690140000 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9007690145000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9007690150000 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9007690155000 |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9007690160000 |
| 0.6496 | | 16.50 | 18.00 | 223.00 | 146.25 | 171.00 | 9007690165000 |
| 0.6693 | | 17.00 | 18.00 | 223.00 | 145.50 | 171.00 | 9007690170000 |
| 0.6890 | | 17.50 | 18.00 | 223.00 | 144.75 | 171.00 | 9007690175000 |
| 0.7087 | | 18.00 | 18.00 | 223.00 | 144.00 | 171.00 | 9007690180000 |
| 0.7283 | | 18.50 | 20.00 | 244.00 | 162.25 | 190.00 | 9007690185000 |
| 0.7480 | | 19.00 | 20.00 | 244.00 | 161.50 | 190.00 | 9007690190000 |
| 0.7677 | | 19.50 | 20.00 | 244.00 | 160.75 | 190.00 | 9007690195000 |
| 0.7874 | | 20.00 | 20.00 | 244.00 | 160.00 | 190.00 | 9007690200000 |

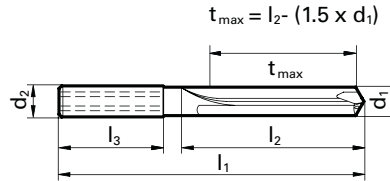
RT 150 GG Drills



Tool material **Solid Carbide**

Surface

- P** Steel web thinning ≥ Ø 3.000 • facet point grinding • close diameter tolerances
 - M** Stainless steel • very good surface quality of hole • observe optimal coolant pressure
 - K** Cast iron • double margin
 - N** Aluminum ○ grey cast iron, malleable and spheroidal iron
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 584

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|-------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 74.00 | 27.50 | 32.00 | 9060690030000 |
| 0.1220 | | 3.10 | 6.00 | 74.00 | 27.35 | 32.00 | 9060690031000 |
| 0.1260 | | 3.20 | 6.00 | 74.00 | 27.20 | 32.00 | 9060690032000 |
| 0.1299 | | 3.30 | 6.00 | 74.00 | 27.05 | 32.00 | 9060690033000 |
| 0.1339 | | 3.40 | 6.00 | 74.00 | 28.90 | 34.00 | 9060690034000 |
| 0.1378 | | 3.50 | 6.00 | 74.00 | 28.75 | 34.00 | 9060690035000 |
| 0.1417 | | 3.60 | 6.00 | 74.00 | 28.60 | 34.00 | 9060690036000 |
| 0.1457 | | 3.70 | 6.00 | 74.00 | 28.45 | 34.00 | 9060690037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 97.00 | 39.30 | 45.00 | 9060690038000 |
| 0.1535 | | 3.90 | 6.00 | 97.00 | 39.15 | 45.00 | 9060690039000 |
| 0.1575 | | 4.00 | 6.00 | 97.00 | 39.00 | 45.00 | 9060690040000 |
| 0.1614 | | 4.10 | 6.00 | 97.00 | 38.85 | 45.00 | 9060690041000 |
| 0.1654 | | 4.20 | 6.00 | 97.00 | 38.70 | 45.00 | 9060690042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 97.00 | 38.55 | 45.00 | 9060690043000 |
| 0.1732 | | 4.40 | 6.00 | 97.00 | 38.40 | 45.00 | 9060690044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 97.00 | 38.25 | 45.00 | 9060690045000 |
| 0.1850 | #13 | 4.70 | 6.00 | 97.00 | 37.95 | 45.00 | 9060690047000 |
| 0.1890 | #12 | 4.80 | 6.00 | 97.00 | 49.80 | 57.00 | 9060690048000 |
| 0.1929 | | 4.90 | 6.00 | 97.00 | 49.65 | 57.00 | 9060690049000 |
| 0.1969 | | 5.00 | 6.00 | 97.00 | 49.50 | 57.00 | 9060690050000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 97.00 | 49.26 | 57.00 | 9060690051600 |
| 0.2165 | | 5.50 | 6.00 | 97.00 | 48.75 | 57.00 | 9060690055000 |
| 0.2362 | | 6.00 | 6.00 | 97.00 | 48.00 | 57.00 | 9060690060000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 116.00 | 66.48 | 76.00 | 9060690063500 |
| 0.2559 | | 6.50 | 8.00 | 116.00 | 66.25 | 76.00 | 9060690065000 |
| 0.2677 | | 6.80 | 8.00 | 116.00 | 65.80 | 76.00 | 9060690068000 |
| 0.2756 | | 7.00 | 8.00 | 116.00 | 65.50 | 76.00 | 9060690070000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 116.00 | 65.29 | 76.00 | 9060690071400 |
| 0.2953 | | 7.50 | 8.00 | 116.00 | 64.75 | 76.00 | 9060690075000 |
| 0.3071 | | 7.80 | 8.00 | 116.00 | 64.30 | 76.00 | 9060690078000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 116.00 | 64.09 | 76.00 | 9060690079400 |
| 0.3150 | | 8.00 | 8.00 | 116.00 | 64.00 | 76.00 | 9060690080000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 139.00 | 82.51 | 95.00 | 9060690083300 |
| 0.3346 | | 8.50 | 10.00 | 139.00 | 82.25 | 95.00 | 9060690085000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3437 | 11/32 | 8.73 | 10.00 | 139.00 | 81.91 | 95.00 | 9060690087300 |
| 0.3543 | | 9.00 | 10.00 | 139.00 | 81.50 | 95.00 | 9060690090000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 139.00 | 81.31 | 95.00 | 9060690091300 |
| 0.3740 | | 9.50 | 10.00 | 139.00 | 80.75 | 95.00 | 9060690095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 139.00 | 80.72 | 95.00 | 9060690095200 |
| 0.3937 | | 10.00 | 10.00 | 139.00 | 80.00 | 95.00 | 9060690100000 |
| 0.4016 | | 10.20 | 12.00 | 163.00 | 98.70 | 114.00 | 9060690102000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 163.00 | 98.52 | 114.00 | 9060690103200 |
| 0.4134 | | 10.50 | 12.00 | 163.00 | 98.25 | 114.00 | 9060690105000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 163.00 | 97.92 | 114.00 | 9060690107200 |
| 0.4331 | | 11.00 | 12.00 | 163.00 | 97.50 | 114.00 | 9060690110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 163.00 | 97.34 | 114.00 | 9060690111100 |
| 0.4528 | | 11.50 | 12.00 | 163.00 | 96.75 | 114.00 | 9060690115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 163.00 | 96.74 | 114.00 | 9060690115100 |
| 0.4724 | | 12.00 | 12.00 | 163.00 | 96.00 | 114.00 | 9060690120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 182.00 | 114.55 | 133.00 | 9060690123000 |
| 0.4921 | | 12.50 | 14.00 | 182.00 | 114.25 | 133.00 | 9060690125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 182.00 | 113.95 | 133.00 | 9060690127000 |
| 0.5118 | | 13.00 | 14.00 | 182.00 | 113.50 | 133.00 | 9060690130000 |
| 0.5315 | | 13.50 | 14.00 | 182.00 | 112.75 | 133.00 | 9060690135000 |
| 0.5512 | | 14.00 | 14.00 | 182.00 | 112.00 | 133.00 | 9060690140000 |
| 0.5709 | | 14.50 | 16.00 | 204.00 | 130.25 | 152.00 | 9060690145000 |
| 0.5906 | | 15.00 | 16.00 | 204.00 | 129.50 | 152.00 | 9060690150000 |
| 0.6102 | | 15.50 | 16.00 | 204.00 | 128.75 | 152.00 | 9060690155000 |
| 0.6299 | | 16.00 | 16.00 | 204.00 | 128.00 | 152.00 | 9060690160000 |
| 0.6496 | | 16.50 | 18.00 | 223.00 | 146.25 | 171.00 | 9060690165000 |
| 0.6693 | | 17.00 | 18.00 | 223.00 | 145.50 | 171.00 | 9060690170000 |
| 0.6890 | | 17.50 | 18.00 | 223.00 | 144.75 | 171.00 | 9060690175000 |
| 0.7087 | | 18.00 | 18.00 | 223.00 | 144.00 | 171.00 | 9060690180000 |
| 0.7283 | | 18.50 | 20.00 | 244.00 | 162.25 | 190.00 | 9060690185000 |
| 0.7480 | | 19.00 | 20.00 | 244.00 | 161.50 | 190.00 | 9060690190000 |
| 0.7677 | | 19.50 | 20.00 | 244.00 | 160.75 | 190.00 | 9060690195000 |
| 0.7874 | | 20.00 | 20.00 | 244.00 | 160.00 | 190.00 | 9060690200000 |

RT 150 GG Drills



Tool material **Solid Carbide**

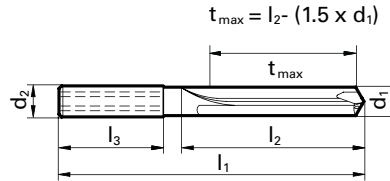
Surface

| | | |
|----------|-----------------|---|
| P | Steel | |
| M | Stainless steel | |
| K | Cast iron | ○ |
| N | Aluminum | ● |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning $\geq \varnothing 3.000$ • relieved cone • close diameter tolerances
 • very good surface quality of hole • observe coolant pressure • double margin

aluminum and Al-alloys • Al materials with high Si-content

●=Optimal
 ○=Limited



Speeds and feeds information on pg. 571

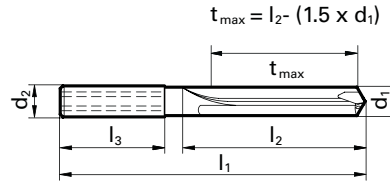
| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 91.00 | 37.50 | 42.00 | 9055130030000 |
| 0.1220 | | 3.10 | 6.00 | 91.00 | 37.35 | 42.00 | 9055130031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 91.00 | 37.25 | 42.00 | 9055130031700 |
| 0.1260 | | 3.20 | 6.00 | 91.00 | 37.20 | 42.00 | 9055130032000 |
| 0.1280 | | 3.25 | 6.00 | 91.00 | 37.13 | 42.00 | 9055130032500 |
| 0.1299 | | 3.30 | 6.00 | 91.00 | 37.05 | 42.00 | 9055130033000 |
| 0.1339 | | 3.40 | 6.00 | 91.00 | 42.90 | 48.00 | 9055130034000 |
| 0.1378 | | 3.50 | 6.00 | 91.00 | 42.75 | 48.00 | 9055130035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 91.00 | 42.65 | 48.00 | 9055130035700 |
| 0.1417 | | 3.60 | 6.00 | 91.00 | 42.60 | 48.00 | 9055130036000 |
| 0.1457 | #25 | 3.70 | 6.00 | 91.00 | 42.45 | 48.00 | 9055130037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 121.00 | 71.30 | 77.00 | 9055130038000 |
| 0.1535 | | 3.90 | 6.00 | 121.00 | 71.15 | 77.00 | 9055130039000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 121.00 | 71.05 | 77.00 | 9055130039700 |
| 0.1575 | | 4.00 | 6.00 | 121.00 | 71.00 | 77.00 | 9055130040000 |
| 0.1654 | | 4.20 | 6.00 | 121.00 | 70.70 | 77.00 | 9055130042000 |
| 0.1772 | #16 | 4.50 | 6.00 | 121.00 | 70.25 | 77.00 | 9055130045000 |
| 0.1969 | | 5.00 | 6.00 | 121.00 | 74.50 | 82.00 | 9055130050000 |
| 0.2165 | | 5.50 | 6.00 | 121.00 | 73.75 | 82.00 | 9055130055000 |
| 0.2362 | | 6.00 | 6.00 | 121.00 | 73.00 | 82.00 | 9055130060000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 146.00 | 96.48 | 106.00 | 9055130063500 |
| 0.2559 | | 6.50 | 8.00 | 146.00 | 96.25 | 106.00 | 9055130065000 |
| 0.2677 | | 6.80 | 8.00 | 146.00 | 95.80 | 106.00 | 9055130068000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2756 | | 7.00 | 8.00 | 146.00 | 95.50 | 106.00 | 9055130070000 |
| 0.2953 | | 7.50 | 8.00 | 146.00 | 94.75 | 106.00 | 9055130075000 |
| 0.3071 | | 7.80 | 8.00 | 146.00 | 94.30 | 106.00 | 9055130078000 |
| 0.3150 | | 8.00 | 8.00 | 146.00 | 94.00 | 106.00 | 9055130080000 |
| 0.3346 | | 8.50 | 10.00 | 175.00 | 117.25 | 130.00 | 9055130085000 |
| 0.3543 | | 9.00 | 10.00 | 175.00 | 116.50 | 130.00 | 9055130090000 |
| 0.3740 | | 9.50 | 10.00 | 175.00 | 115.75 | 130.00 | 9055130095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 175.00 | 115.72 | 130.00 | 9055130095200 |
| 0.3937 | | 10.00 | 10.00 | 175.00 | 115.00 | 130.00 | 9055130100000 |
| 0.4016 | | 10.20 | 12.00 | 209.00 | 143.70 | 159.00 | 9055130102000 |
| 0.4134 | | 10.50 | 12.00 | 209.00 | 143.25 | 159.00 | 9055130105000 |
| 0.4331 | | 11.00 | 12.00 | 209.00 | 142.50 | 159.00 | 9055130110000 |
| 0.4528 | | 11.50 | 12.00 | 209.00 | 141.75 | 159.00 | 9055130115000 |
| 0.4724 | | 12.00 | 12.00 | 209.00 | 141.00 | 159.00 | 9055130120000 |
| 0.4921 | | 12.50 | 14.00 | 233.00 | 164.25 | 183.00 | 9055130125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 233.00 | 163.95 | 183.00 | 9055130127000 |
| 0.5118 | | 13.00 | 14.00 | 233.00 | 163.50 | 183.00 | 9055130130000 |
| 0.5315 | | 13.50 | 14.00 | 233.00 | 162.75 | 183.00 | 9055130135000 |
| 0.5512 | | 14.00 | 14.00 | 233.00 | 162.00 | 183.00 | 9055130140000 |
| 0.5709 | | 14.50 | 16.00 | 260.00 | 185.25 | 207.00 | 9055130145000 |
| 0.5906 | | 15.00 | 16.00 | 260.00 | 184.50 | 207.00 | 9055130150000 |
| 0.6102 | | 15.50 | 16.00 | 260.00 | 183.75 | 207.00 | 9055130155000 |
| 0.6299 | | 16.00 | 16.00 | 260.00 | 183.00 | 207.00 | 9055130160000 |



Tool material **Solid Carbide**
Surface

- P** Steel web thinning ≥ Ø 3.000 • facet point grinding • close diameter tolerances
 - M** Stainless steel • very good surface quality of hole • observe optimal coolant pressure
 - K** Cast iron • double margin
 - N** Aluminum ○ grey cast iron, malleable and spheroidal iron
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 584

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 91.00 | 37.50 | 42.00 | 9060700030000 |
| 0.1220 | | 3.10 | 6.00 | 91.00 | 37.35 | 42.00 | 9060700031000 |
| 0.1260 | | 3.20 | 6.00 | 91.00 | 37.20 | 42.00 | 9060700032000 |
| 0.1299 | | 3.30 | 6.00 | 91.00 | 37.05 | 42.00 | 9060700033000 |
| 0.1339 | | 3.40 | 6.00 | 91.00 | 42.90 | 48.00 | 9060700034000 |
| 0.1378 | | 3.50 | 6.00 | 91.00 | 42.75 | 48.00 | 9060700035000 |
| 0.1417 | | 3.60 | 6.00 | 91.00 | 42.60 | 48.00 | 9060700036000 |
| 0.1457 | | 3.70 | 6.00 | 91.00 | 42.45 | 48.00 | 9060700037000 |
| 0.1496 | #25 | 3.80 | 6.00 | 121.00 | 71.30 | 77.00 | 9060700038000 |
| 0.1535 | | 3.90 | 6.00 | 121.00 | 71.15 | 77.00 | 9060700039000 |
| 0.1575 | | 4.00 | 6.00 | 121.00 | 71.00 | 77.00 | 9060700040000 |
| 0.1614 | | 4.10 | 6.00 | 121.00 | 70.85 | 77.00 | 9060700041000 |
| 0.1654 | | 4.20 | 6.00 | 121.00 | 70.70 | 77.00 | 9060700042000 |
| 0.1693 | #18 | 4.30 | 6.00 | 121.00 | 70.55 | 77.00 | 9060700043000 |
| 0.1732 | | 4.40 | 6.00 | 121.00 | 70.40 | 77.00 | 9060700044000 |
| 0.1772 | #16 | 4.50 | 6.00 | 121.00 | 70.25 | 77.00 | 9060700045000 |
| 0.1850 | #13 | 4.70 | 6.00 | 121.00 | 69.95 | 77.00 | 9060700047000 |
| 0.1890 | #12 | 4.80 | 6.00 | 121.00 | 74.80 | 82.00 | 9060700048000 |
| 0.1929 | | 4.90 | 6.00 | 121.00 | 74.65 | 82.00 | 9060700049000 |
| 0.1969 | | 5.00 | 6.00 | 121.00 | 74.50 | 82.00 | 9060700050000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 121.00 | 74.26 | 82.00 | 9060700051600 |
| 0.2165 | | 5.50 | 6.00 | 121.00 | 73.75 | 82.00 | 9060700055000 |
| 0.2362 | | 6.00 | 6.00 | 121.00 | 73.00 | 82.00 | 9060700060000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 146.00 | 96.48 | 106.00 | 9060700063500 |
| 0.2559 | | 6.50 | 8.00 | 146.00 | 96.25 | 106.00 | 9060700065000 |
| 0.2677 | | 6.80 | 8.00 | 146.00 | 95.80 | 106.00 | 9060700068000 |
| 0.2756 | | 7.00 | 8.00 | 146.00 | 95.50 | 106.00 | 9060700070000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 146.00 | 95.29 | 106.00 | 9060700071400 |
| 0.2953 | | 7.50 | 8.00 | 146.00 | 94.75 | 106.00 | 9060700075000 |
| 0.3071 | | 7.80 | 8.00 | 146.00 | 94.30 | 106.00 | 9060700078000 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 146.00 | 94.09 | 106.00 | 9060700079400 |
| 0.3150 | | 8.00 | 8.00 | 146.00 | 94.00 | 106.00 | 9060700080000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 175.00 | 117.51 | 130.00 | 9060700083300 |
| 0.3346 | | 8.50 | 10.00 | 175.00 | 117.25 | 130.00 | 9060700085000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.3437 | 11/32 | 8.73 | 10.00 | 175.00 | 116.91 | 130.00 | 9060700087300 |
| 0.3543 | | 9.00 | 10.00 | 175.00 | 116.50 | 130.00 | 9060700090000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 175.00 | 116.31 | 130.00 | 9060700091300 |
| 0.3740 | | 9.50 | 10.00 | 175.00 | 115.75 | 130.00 | 9060700095000 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 175.00 | 115.72 | 130.00 | 9060700095200 |
| 0.3937 | | 10.00 | 10.00 | 175.00 | 115.00 | 130.00 | 9060700100000 |
| 0.4016 | | 10.20 | 12.00 | 209.00 | 143.70 | 159.00 | 9060700102000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 209.00 | 143.52 | 159.00 | 9060700103200 |
| 0.4134 | | 10.50 | 12.00 | 209.00 | 143.25 | 159.00 | 9060700105000 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 209.00 | 142.92 | 159.00 | 9060700107200 |
| 0.4331 | | 11.00 | 12.00 | 209.00 | 142.50 | 159.00 | 9060700110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 209.00 | 142.34 | 159.00 | 9060700111100 |
| 0.4528 | | 11.50 | 12.00 | 209.00 | 141.75 | 159.00 | 9060700115000 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 209.00 | 141.74 | 159.00 | 9060700115100 |
| 0.4724 | | 12.00 | 12.00 | 209.00 | 141.00 | 159.00 | 9060700120000 |
| 0.4843 | 31/64 | 12.30 | 14.00 | 233.00 | 164.55 | 183.00 | 9060700123000 |
| 0.4921 | | 12.50 | 14.00 | 233.00 | 164.25 | 183.00 | 9060700125000 |
| 0.5000 | 1/2 | 12.70 | 14.00 | 233.00 | 163.95 | 183.00 | 9060700127000 |
| 0.5118 | | 13.00 | 14.00 | 233.00 | 163.50 | 183.00 | 9060700130000 |
| 0.5315 | | 13.50 | 14.00 | 233.00 | 162.75 | 183.00 | 9060700135000 |
| 0.5512 | | 14.00 | 14.00 | 233.00 | 162.00 | 183.00 | 9060700140000 |
| 0.5709 | | 14.50 | 16.00 | 260.00 | 185.25 | 207.00 | 9060700145000 |
| 0.5906 | | 15.00 | 16.00 | 260.00 | 184.50 | 207.00 | 9060700150000 |
| 0.6102 | | 15.50 | 16.00 | 260.00 | 183.75 | 207.00 | 9060700155000 |
| 0.6299 | | 16.00 | 16.00 | 260.00 | 183.00 | 207.00 | 9060700160000 |
| 0.6496 | | 16.50 | 18.00 | 284.00 | 206.25 | 231.00 | 9060700165000 |
| 0.6693 | | 17.00 | 18.00 | 284.00 | 205.50 | 231.00 | 9060700170000 |
| 0.6890 | | 17.50 | 18.00 | 284.00 | 204.75 | 231.00 | 9060700175000 |
| 0.7087 | | 18.00 | 18.00 | 284.00 | 204.00 | 231.00 | 9060700180000 |
| 0.7283 | | 18.50 | 20.00 | 308.00 | 227.25 | 255.00 | 9060700185000 |
| 0.7480 | | 19.00 | 20.00 | 308.00 | 226.50 | 255.00 | 9060700190000 |
| 0.7677 | | 19.50 | 20.00 | 308.00 | 225.75 | 255.00 | 9060700195000 |
| 0.7874 | | 20.00 | 20.00 | 308.00 | 225.00 | 255.00 | 9060700200000 |

RT 150 GG Drills



Tool material **Solid Carbide**

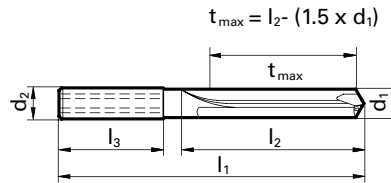
Surface

| | | |
|----------|-----------------|---|
| P | Steel | |
| M | Stainless steel | |
| K | Cast iron | • |
| N | Aluminum | • |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning $\geq \varnothing 5.000$ • relieved cone • negative helix • for holes with high alignment accuracy • very good surface quality of hole • observe coolant pressure • double margin

aluminum and Al-alloys • Al materials with high Si-content • grey cast iron, malleable and spheroidal iron

•=Optimal
○=Limited



Speeds and feeds information on pg. 545

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1969 | | 5.00 | 6.00 | 145.00 | 97.50 | 105.00 | 9007730050000 |
| 0.2362 | | 6.00 | 6.00 | 145.00 | 96.00 | 105.00 | 9007730060000 |
| 0.3150 | | 8.00 | 8.00 | 180.00 | 125.00 | 137.00 | 9007730080000 |
| 0.3543 | | 9.00 | 10.00 | 217.00 | 156.50 | 170.00 | 9007730090000 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.3937 | | 10.00 | 10.00 | 217.00 | 155.00 | 170.00 | 9007730100000 |
| 0.4331 | | 11.00 | 12.00 | 258.00 | 188.50 | 205.00 | 9007730110000 |
| 0.4724 | | 12.00 | 12.00 | 258.00 | 187.00 | 205.00 | 9007730120000 |
| 0.5512 | | 14.00 | 14.00 | 290.00 | 215.00 | 236.00 | 9007730140000 |

RF 100 *diver*



**Drilling
Ramping
Finishing
Roughing
Slotting**

3-fluted

- ▶ for less powerful machines & less stable clamping conditions
- ▶ for turning machines & driven tools
- ▶ specially for slotting with smaller milling cutter diameters
- ▶ with and without coolant through

4-fluted

- ▶ for stable machines & clamping
- ▶ high-performance milling with maximum cutting speeds
- ▶ with and without coolant through

4-fluted, short

- ▶ for more stability when slotting
- ▶ up to 25 % higher feed rate
- ▶ reduced deflection
- ▶ without coolant through

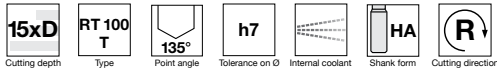
4-fluted, corner radii

- ▶ for pocketing and slotting
- ▶ multiple radii per diameter
- ▶ up to 25 % higher feed rate
- ▶ without coolant through



CARBIDE DEEP HOLE DRILLS





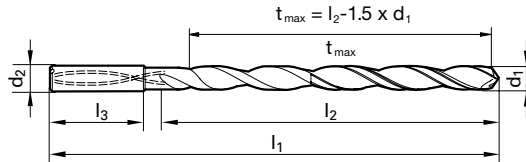
Tool material

Solid Carbide

Surface



- P** Steel ● double margin • web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge form concave • optimized flute design • maximum diameter of coolant ducts • observe coolant pressure
 - M** Stainless steel ●
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • stainless steels • cast materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 456 for technical operation info
Speeds and feeds information on pg. 588

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.000 | 6.00 | 95.00 | 50.50 | 55.00 | 9065090030000 |
| 0.1220 | | 3.100 | 6.00 | 106.00 | 62.35 | 67.00 | 9065090031000 |
| 0.1248 | 1/8 | 3.170 | 6.00 | 106.00 | 62.25 | 67.00 | 9065090031700 |
| 0.1260 | | 3.200 | 6.00 | 106.00 | 62.20 | 67.00 | 9065090032000 |
| 0.1299 | | 3.300 | 6.00 | 106.00 | 62.05 | 67.00 | 9065090033000 |
| 0.1378 | | 3.500 | 6.00 | 116.00 | 70.75 | 76.00 | 9065090035000 |
| 0.1406 | 9/64 #28 | 3.570 | 6.00 | 116.00 | 70.65 | 76.00 | 9065090035700 |
| 0.1457 | | 3.700 | 6.00 | 116.00 | 70.45 | 76.00 | 9065090037000 |
| 0.1496 | | 3.800 | 6.00 | 116.00 | 70.30 | 76.00 | 9065090038000 |
| 0.1563 | 5/32 | 3.970 | 6.00 | 116.00 | 70.05 | 76.00 | 9065090039700 |
| 0.1575 | | 4.000 | 6.00 | 116.00 | 70.00 | 76.00 | 9065090040000 |
| 0.1614 | | 4.100 | 6.00 | 133.00 | 86.70 | 93.00 | 9065090041000 |
| 0.1654 | | 4.200 | 6.00 | 133.00 | 86.70 | 93.00 | 9065090042000 |
| 0.1693 | | 4.300 | 6.00 | 133.00 | 86.55 | 93.00 | 9065090043000 |
| 0.1720 | 11/64 | 4.370 | 6.00 | 133.00 | 86.45 | 93.00 | 9065090043700 |
| 0.1772 | | 4.500 | 6.00 | 133.00 | 86.25 | 93.00 | 9065090045000 |
| 0.1811 | | 4.600 | 6.00 | 133.00 | 86.10 | 93.00 | 9065090046000 |
| 0.1874 | 3/16 | 4.760 | 6.00 | 133.00 | 85.86 | 93.00 | 9065090047600 |
| 0.1890 | #12 | 4.800 | 6.00 | 133.00 | 85.80 | 93.00 | 9065090048000 |
| 0.1969 | | 5.000 | 6.00 | 133.00 | 85.50 | 93.00 | 9065090050000 |
| 0.2008 | | 5.100 | 6.00 | 150.00 | 102.35 | 110.00 | 9065090051000 |
| 0.2031 | 13/64 | 5.160 | 6.00 | 150.00 | 102.26 | 110.00 | 9065090051600 |
| 0.2130 | | 5.410 | 6.00 | 150.00 | 101.89 | 110.00 | 9065090054100 |
| 0.2165 | | 5.500 | 6.00 | 150.00 | 101.75 | 110.00 | 9065090055000 |
| 0.2189 | 7/32 | 5.560 | 6.00 | 150.00 | 101.66 | 110.00 | 9065090055600 |
| 0.2205 | | 5.600 | 6.00 | 150.00 | 101.60 | 110.00 | 9065090056000 |
| 0.2283 | | 5.800 | 6.00 | 150.00 | 101.30 | 110.00 | 9065090058000 |
| 0.2343 | 15/64 | 5.950 | 6.00 | 150.00 | 101.08 | 110.00 | 9065090059500 |
| 0.2362 | | 6.000 | 6.00 | 150.00 | 101.00 | 110.00 | 9065090060000 |
| 0.2480 | | 6.300 | 8.00 | 167.00 | 117.55 | 127.00 | 9065090063000 |
| 0.2500 | 1/4 E | 6.350 | 8.00 | 167.00 | 117.48 | 127.00 | 9065090063500 |
| 0.2559 | | 6.500 | 8.00 | 167.00 | 117.25 | 127.00 | 9065090065000 |
| 0.2657 | 17/64 H | 6.750 | 8.00 | 167.00 | 116.88 | 127.00 | 9065090067500 |
| 0.2677 | | 6.800 | 8.00 | 167.00 | 116.80 | 127.00 | 9065090068000 |
| 0.2756 | | 7.000 | 8.00 | 167.00 | 116.50 | 127.00 | 9065090070000 |
| 0.2811 | 9/32 K | 7.140 | 8.00 | 183.00 | 132.29 | 143.00 | 9065090071400 |
| 0.2953 | | 7.500 | 8.00 | 183.00 | 131.75 | 143.00 | 9065090075000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|--------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2969 | 19/64 | 7.540 | 8.00 | 183.00 | 131.69 | 143.00 | 9065090075400 |
| 0.3071 | | 7.800 | 8.00 | 183.00 | 131.30 | 143.00 | 9065090078000 |
| 0.3126 | 5/16 | 7.940 | 8.00 | 183.00 | 131.09 | 143.00 | 9065090079400 |
| 0.3150 | | 8.000 | 8.00 | 183.00 | 131.00 | 143.00 | 9065090080000 |
| 0.3280 | 21/64 | 8.330 | 10.00 | 204.00 | 147.51 | 160.00 | 9065090083300 |
| 0.3346 | | 8.500 | 10.00 | 204.00 | 147.25 | 160.00 | 9065090085000 |
| 0.3437 | 11/32 | 8.730 | 10.00 | 204.00 | 146.91 | 160.00 | 9065090087300 |
| 0.3465 | | 8.800 | 10.00 | 204.00 | 146.80 | 160.00 | 9065090088000 |
| 0.3543 | | 9.000 | 10.00 | 204.00 | 146.50 | 160.00 | 9065090090000 |
| 0.3594 | 23/64 | 9.130 | 10.00 | 221.00 | 163.31 | 177.00 | 9065090091300 |
| 0.3740 | | 9.500 | 10.00 | 221.00 | 162.75 | 177.00 | 9065090095000 |
| 0.3748 | 3/8 | 9.520 | 10.00 | 221.00 | 162.72 | 177.00 | 9065090095200 |
| 0.3858 | | 9.800 | 10.00 | 221.00 | 162.30 | 177.00 | 9065090098000 |
| 0.3906 | 25/64 | 9.920 | 10.00 | 221.00 | 162.12 | 177.00 | 9065090099200 |
| 0.3937 | | 10.000 | 10.00 | 221.00 | 162.00 | 177.00 | 9065090100000 |
| 0.4016 | | 10.200 | 12.00 | 247.00 | 182.70 | 198.00 | 9065090102000 |
| 0.4063 | 13/32 | 10.320 | 12.00 | 247.00 | 182.52 | 198.00 | 9065090103200 |
| 0.4134 | | 10.500 | 12.00 | 247.00 | 182.25 | 198.00 | 9065090105000 |
| 0.4220 | 27/64 | 10.720 | 12.00 | 247.00 | 181.92 | 198.00 | 9065090107200 |
| 0.4331 | | 11.000 | 12.00 | 247.00 | 181.50 | 198.00 | 9065090110000 |
| 0.4374 | 7/16 | 11.110 | 12.00 | 263.00 | 197.34 | 214.00 | 9065090111100 |
| 0.4531 | 29/64 | 11.510 | 12.00 | 263.00 | 196.74 | 214.00 | 9065090115100 |
| 0.4646 | | 11.800 | 12.00 | 263.00 | 196.30 | 214.00 | 9065090118000 |
| 0.4689 | 15/32 | 11.910 | 12.00 | 263.00 | 196.14 | 214.00 | 9065090119100 |
| 0.4724 | | 12.000 | 12.00 | 263.00 | 196.00 | 214.00 | 9065090120000 |
| 0.4843 | 31/64 | 12.300 | 14.00 | 297.00 | 229.55 | 248.00 | 9065090123000 |
| 0.4921 | | 12.500 | 14.00 | 297.00 | 229.25 | 248.00 | 9065090125000 |
| 0.5000 | 1/2 | 12.700 | 14.00 | 297.00 | 228.95 | 248.00 | 9065090127000 |
| 0.5118 | | 13.000 | 14.00 | 297.00 | 228.50 | 248.00 | 9065090130000 |
| 0.5157 | 33/64 | 13.100 | 14.00 | 297.00 | 228.35 | 248.00 | 9065090131000 |
| 0.5311 | 17/32 | 13.490 | 14.00 | 297.00 | 227.77 | 248.00 | 9065090134900 |
| 0.5469 | 35/64 | 13.890 | 14.00 | 297.00 | 227.17 | 248.00 | 9065090138900 |
| 0.5512 | | 14.000 | 14.00 | 297.00 | 227.00 | 248.00 | 9065090140000 |
| 0.5626 | 0.5625 | 14.290 | 16.00 | 333.00 | 259.57 | 281.00 | 9065090142900 |
| 0.5906 | | 15.000 | 16.00 | 333.00 | 258.50 | 281.00 | 9065090150000 |
| 0.6248 | 0.625 | 15.870 | 16.00 | 333.00 | 257.20 | 281.00 | 9065090158700 |
| 0.6299 | | 16.000 | 16.00 | 333.00 | 257.00 | 281.00 | 9065090160000 |



Tool material

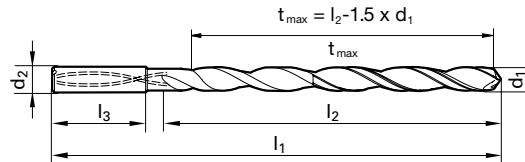
Solid Carbide

Surface



| | | | |
|----------|-----------------|---|--|
| P | Steel | ● | double margin • web thinning $\geq \text{Ø } 3.000$ • relieved cone • main cutting edge form concave • optimized flute design • maximum diameter of coolant ducts • observe coolant pressure |
| M | Stainless steel | ● | |
| K | Cast iron | ● | structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm ² • stainless steels • cast materials |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

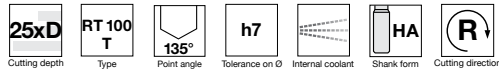
●=Optimal
○=Limited



See page 456 for technical operation info
Speeds and feeds information on pg. 589

| Diameter (d1) | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|-------|------|------------------|--------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | | |
| 0.1181 | | 3.000 | 6.00 | 110.00 | 65.50 | 70.00 | 9065110030000 |
| 0.1220 | | 3.100 | 6.00 | 123.00 | 78.35 | 83.00 | 9065110031000 |
| 0.1248 | 1/8 | 3.170 | 6.00 | 123.00 | 78.25 | 83.00 | 9065110031700 |
| 0.1260 | | 3.200 | 6.00 | 123.00 | 78.20 | 83.00 | 9065110032000 |
| 0.1299 | | 3.300 | 6.00 | 123.00 | 78.05 | 83.00 | 9065110033000 |
| 0.1378 | | 3.500 | 6.00 | 136.00 | 90.75 | 96.00 | 9065110035000 |
| 0.1406 | 9/64 #28 | 3.570 | 6.00 | 136.00 | 90.65 | 96.00 | 9065110035700 |
| 0.1457 | | 3.700 | 6.00 | 136.00 | 90.45 | 96.00 | 9065110037000 |
| 0.1496 | | 3.800 | 6.00 | 136.00 | 90.30 | 96.00 | 9065110038000 |
| 0.1563 | 5/32 | 3.970 | 6.00 | 136.00 | 90.05 | 96.00 | 9065110039700 |
| 0.1575 | | 4.000 | 6.00 | 136.00 | 90.00 | 96.00 | 9065110040000 |
| 0.1614 | | 4.100 | 6.00 | 158.00 | 111.70 | 118.00 | 9065110041000 |
| 0.1654 | | 4.200 | 6.00 | 158.00 | 111.70 | 118.00 | 9065110042000 |
| 0.1693 | | 4.300 | 6.00 | 158.00 | 111.55 | 118.00 | 9065110043000 |
| 0.1720 | 11/64 | 4.370 | 6.00 | 158.00 | 111.45 | 118.00 | 9065110043700 |
| 0.1772 | | 4.500 | 6.00 | 158.00 | 111.25 | 118.00 | 9065110045000 |
| 0.1811 | | 4.600 | 6.00 | 158.00 | 111.10 | 118.00 | 9065110046000 |
| 0.1874 | 3/16 | 4.760 | 6.00 | 158.00 | 110.86 | 118.00 | 9065110047600 |
| 0.1890 | #12 | 4.800 | 6.00 | 158.00 | 110.80 | 118.00 | 9065110048000 |
| 0.1969 | | 5.000 | 6.00 | 158.00 | 110.50 | 118.00 | 9065110050000 |
| 0.2008 | | 5.100 | 6.00 | 180.00 | 132.35 | 140.00 | 9065110051000 |
| 0.2031 | 13/64 | 5.160 | 6.00 | 180.00 | 132.26 | 140.00 | 9065110051600 |
| 0.2130 | #3 | 5.410 | 6.00 | 180.00 | 131.89 | 140.00 | 9065110054100 |
| 0.2165 | | 5.500 | 6.00 | 180.00 | 131.75 | 140.00 | 9065110055000 |
| 0.2189 | 7/32 | 5.560 | 6.00 | 180.00 | 131.66 | 140.00 | 9065110055600 |
| 0.2283 | | 5.800 | 6.00 | 180.00 | 131.30 | 140.00 | 9065110058000 |
| 0.2343 | 15/64 | 5.950 | 6.00 | 180.00 | 131.08 | 140.00 | 9065110059500 |
| 0.2362 | | 6.000 | 6.00 | 180.00 | 131.00 | 140.00 | 9065110060000 |
| 0.2500 | 1/4 E | 6.350 | 8.00 | 202.00 | 152.48 | 162.00 | 9065110063500 |
| 0.2559 | | 6.500 | 8.00 | 202.00 | 152.25 | 162.00 | 9065110065000 |
| 0.2657 | 17/64 H | 6.750 | 8.00 | 202.00 | 151.88 | 162.00 | 9065110067500 |
| 0.2677 | | 6.800 | 8.00 | 202.00 | 151.80 | 162.00 | 9065110068000 |
| 0.2756 | | 7.000 | 8.00 | 202.00 | 151.50 | 162.00 | 9065110070000 |
| 0.2811 | 9/32 K | 7.140 | 8.00 | 223.00 | 172.29 | 183.00 | 9065110071400 |
| 0.2953 | | 7.500 | 8.00 | 223.00 | 171.75 | 183.00 | 9065110075000 |

| Diameter (d1) | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|--------|-------|------------------|--------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | | |
| 0.2969 | 19/64 | 7.540 | 8.00 | 223.00 | 171.69 | 183.00 | 9065110075400 |
| 0.3071 | | 7.800 | 8.00 | 223.00 | 171.30 | 183.00 | 9065110078000 |
| 0.3126 | 5/16 | 7.940 | 8.00 | 223.00 | 171.09 | 183.00 | 9065110079400 |
| 0.3150 | | 8.000 | 8.00 | 223.00 | 171.00 | 183.00 | 9065110080000 |
| 0.3280 | 21/64 | 8.330 | 10.00 | 249.00 | 192.51 | 205.00 | 9065110083300 |
| 0.3346 | | 8.500 | 10.00 | 249.00 | 192.25 | 205.00 | 9065110085000 |
| 0.3437 | 11/32 | 8.730 | 10.00 | 249.00 | 191.91 | 205.00 | 9065110087300 |
| 0.3465 | | 8.800 | 10.00 | 249.00 | 191.80 | 205.00 | 9065110088000 |
| 0.3543 | | 9.000 | 10.00 | 249.00 | 191.50 | 205.00 | 9065110090000 |
| 0.3594 | 23/64 | 9.130 | 10.00 | 271.00 | 213.31 | 227.00 | 9065110091300 |
| 0.3748 | 3/8 | 9.520 | 10.00 | 271.00 | 212.72 | 227.00 | 9065110095200 |
| 0.3906 | 25/64 | 9.920 | 10.00 | 271.00 | 212.12 | 227.00 | 9065110099200 |
| 0.3937 | | 10.000 | 10.00 | 271.00 | 212.00 | 227.00 | 9065110100000 |
| 0.4016 | | 10.200 | 12.00 | 302.00 | 237.70 | 253.00 | 9065110102000 |
| 0.4063 | 13/32 | 10.320 | 12.00 | 302.00 | 237.52 | 253.00 | 9065110103200 |
| 0.4134 | | 10.500 | 12.00 | 302.00 | 237.25 | 253.00 | 9065110105000 |
| 0.4220 | 27/64 | 10.720 | 12.00 | 302.00 | 236.92 | 253.00 | 9065110107200 |
| 0.4330 | | 11.000 | 12.00 | 302.00 | 236.50 | 253.00 | 9065110110000 |
| 0.4374 | 7/16 | 11.110 | 12.00 | 323.00 | 257.34 | 274.00 | 9065110111100 |
| 0.4531 | 29/64 | 11.510 | 12.00 | 323.00 | 256.74 | 274.00 | 9065110115100 |
| 0.4646 | | 11.800 | 12.00 | 323.00 | 256.30 | 274.00 | 9065110118000 |
| 0.4689 | 15/32 | 11.910 | 12.00 | 323.00 | 256.14 | 274.00 | 9065110119100 |
| 0.4724 | | 12.000 | 12.00 | 323.00 | 256.00 | 274.00 | 9065110120000 |
| 0.4843 | 31/64 | 12.300 | 14.00 | 367.00 | 299.55 | 318.00 | 9065110123000 |
| 0.4921 | | 12.500 | 14.00 | 367.00 | 299.25 | 318.00 | 9065110125000 |
| 0.5000 | 1/2 | 12.700 | 14.00 | 367.00 | 298.95 | 318.00 | 9065110127000 |
| 0.5118 | | 13.000 | 14.00 | 367.00 | 298.50 | 318.00 | 9065110130000 |
| 0.5157 | 33/64 | 13.100 | 14.00 | 367.00 | 298.35 | 318.00 | 9065110131000 |
| 0.5311 | 17/32 | 13.490 | 14.00 | 367.00 | 297.77 | 318.00 | 9065110134900 |
| 0.5469 | 35/64 | 13.890 | 14.00 | 367.00 | 297.17 | 318.00 | 9065110138900 |
| 0.5512 | | 14.000 | 14.00 | 367.00 | 297.00 | 318.00 | 9065110140000 |
| 0.5626 | 0.5625 | 14.290 | 16.00 | 413.00 | 339.57 | 361.00 | 9065110142900 |
| 0.5906 | | 15.000 | 16.00 | 413.00 | 338.50 | 361.00 | 9065110150000 |
| 0.6248 | 0.625 | 15.870 | 16.00 | 413.00 | 337.20 | 361.00 | 9065110158700 |
| 0.6299 | | 16.000 | 16.00 | 413.00 | 337.00 | 361.00 | 9065110160000 |



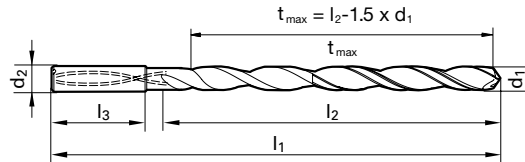
Tool material

Solid Carbide

Surface



- P** Steel ● double margin • web thinning $\geq \text{Ø } 3.000$ • relieved cone • main cutting edge form concave • optimized flute design • maximum diameter of coolant ducts • observe coolant pressure
 - M** Stainless steel ●
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • stainless steels • cast materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 456 for technical operation info
Speeds and feeds information on pg. 589

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|------|------|--------|------------------|--------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.1181 | | 3.00 | 6.00 | 125.00 | 80.50 | 85.00 | 9065120030000 | |
| 0.1220 | | 3.10 | 6.00 | 141.00 | 96.35 | 101.00 | 9065120031000 | |
| 0.1248 | 1/8 | 3.17 | 6.00 | 141.00 | 96.23 | 101.00 | 9065120031700 | |
| 0.1260 | | 3.20 | 6.00 | 141.00 | 96.20 | 101.00 | 9065120032000 | |
| 0.1299 | | 3.30 | 6.00 | 141.00 | 96.05 | 101.00 | 9065120033000 | |
| 0.1378 | | 3.50 | 6.00 | 156.00 | 110.75 | 116.00 | 9065120035000 | |
| 0.1406 | 9/64 | #28 | 3.57 | 6.00 | 156.00 | 116.00 | 9065120035700 | |
| 0.1457 | | 3.70 | 6.00 | 156.00 | 110.45 | 116.00 | 9065120037000 | |
| 0.1496 | | 3.80 | 6.00 | 156.00 | 110.30 | 116.00 | 9065120038000 | |
| 0.1563 | 5/32 | 3.97 | 6.00 | 156.00 | 110.05 | 116.00 | 9065120039700 | |
| 0.1575 | | 4.00 | 6.00 | 156.00 | 110.00 | 116.00 | 9065120040000 | |
| 0.1614 | | 4.10 | 6.00 | 183.00 | 136.70 | 143.00 | 9065120041000 | |
| 0.1654 | | 4.20 | 6.00 | 183.00 | 136.70 | 143.00 | 9065120042000 | |
| 0.1693 | | 4.30 | 6.00 | 183.00 | 136.55 | 143.00 | 9065120043000 | |
| 0.1720 | 11/64 | 4.37 | 6.00 | 183.00 | 136.45 | 143.00 | 9065120043700 | |
| 0.1772 | | 4.50 | 6.00 | 183.00 | 136.25 | 143.00 | 9065120045000 | |
| 0.1811 | | 4.60 | 6.00 | 183.00 | 136.10 | 143.00 | 9065120046000 | |
| 0.1874 | 3/16 | 4.76 | 6.00 | 183.00 | 135.86 | 143.00 | 9065120047600 | |
| 0.1890 | | #12 | 4.80 | 6.00 | 183.00 | 135.80 | 143.00 | 9065120048000 |
| 0.1969 | | 5.00 | 6.00 | 183.00 | 135.50 | 143.00 | 9065120050000 | |
| 0.2008 | | 5.10 | 6.00 | 210.00 | 162.35 | 170.00 | 9065120051000 | |
| 0.2031 | 13/64 | 5.16 | 6.00 | 210.00 | 162.26 | 170.00 | 9065120051600 | |
| 0.2130 | | #3 | 5.41 | 6.00 | 210.00 | 161.89 | 170.00 | 9065120054100 |
| 0.2165 | | 5.50 | 6.00 | 210.00 | 161.75 | 170.00 | 9065120055000 | |
| 0.2189 | 7/32 | 5.56 | 6.00 | 210.00 | 161.66 | 170.00 | 9065120055600 | |
| 0.2283 | | 5.80 | 6.00 | 210.00 | 161.30 | 170.00 | 9065120058000 | |
| 0.2343 | 15/64 | 5.95 | 6.00 | 210.00 | 161.08 | 170.00 | 9065120059500 | |
| 0.2362 | | 6.00 | 6.00 | 210.00 | 161.00 | 170.00 | 9065120060000 | |
| 0.2480 | | 6.30 | 8.00 | 237.00 | 187.55 | 197.00 | 9065120063000 | |
| 0.2500 | 1/4 | E | 6.35 | 8.00 | 237.00 | 187.48 | 197.00 | 9065120063500 |
| 0.2559 | | 6.50 | 8.00 | 237.00 | 187.25 | 197.00 | 9065120065000 | |
| 0.2657 | 17/64 | H | 6.75 | 8.00 | 237.00 | 186.88 | 197.00 | 9065120067500 |
| 0.2677 | | 6.80 | 8.00 | 237.00 | 186.80 | 197.00 | 9065120068000 | |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # | |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | | |
| 0.2756 | | 7.00 | 8.00 | 237.00 | 186.50 | 197.00 | 9065120070000 | |
| 0.2811 | 9/32 | K | 7.14 | 8.00 | 263.00 | 212.29 | 223.00 | 9065120071400 |
| 0.2953 | | 7.50 | 8.00 | 263.00 | 211.75 | 223.00 | 9065120075000 | |
| 0.2969 | 19/64 | 7.54 | 8.00 | 263.00 | 211.69 | 223.00 | 9065120075400 | |
| 0.3125 | 5/16 | 7.94 | 8.00 | 263.00 | 211.09 | 223.00 | 9065120079400 | |
| 0.3150 | | 8.00 | 8.00 | 263.00 | 211.00 | 223.00 | 9065120080000 | |
| 0.3280 | 21/64 | 8.33 | 10.00 | 294.00 | 237.51 | 250.00 | 9065120083300 | |
| 0.3346 | | 8.50 | 10.00 | 294.00 | 237.25 | 250.00 | 9065120085000 | |
| 0.3437 | 11/32 | 8.73 | 10.00 | 294.00 | 236.91 | 250.00 | 9065120087300 | |
| 0.3465 | | 8.80 | 10.00 | 294.00 | 236.80 | 250.00 | 9065120088000 | |
| 0.3543 | | 9.00 | 10.00 | 294.00 | 236.50 | 250.00 | 9065120090000 | |
| 0.3594 | 23/64 | 9.13 | 10.00 | 321.00 | 263.31 | 277.00 | 9065120091300 | |
| 0.3750 | 3/8 | 9.52 | 10.00 | 321.00 | 262.72 | 277.00 | 9065120095200 | |
| 0.3906 | 25/64 | 9.92 | 10.00 | 321.00 | 262.12 | 277.00 | 9065120099200 | |
| 0.3937 | | 10.00 | 10.00 | 321.00 | 262.00 | 277.00 | 9065120100000 | |
| 0.4063 | 13/32 | 10.32 | 12.00 | 359.00 | 294.52 | 310.00 | 9065120103200 | |
| 0.4220 | 27/64 | 10.72 | 12.00 | 359.00 | 293.92 | 310.00 | 9065120107200 | |
| 0.4331 | | 11.00 | 12.00 | 359.00 | 293.50 | 310.00 | 9065120110000 | |
| 0.4374 | 7/16 | 11.11 | 12.00 | 386.00 | 320.34 | 337.00 | 9065120111100 | |
| 0.4531 | 29/64 | 11.51 | 12.00 | 386.00 | 319.74 | 337.00 | 9065120115100 | |
| 0.4689 | 15/32 | 11.91 | 12.00 | 386.00 | 319.14 | 337.00 | 9065120119100 | |
| 0.4724 | | 12.00 | 12.00 | 386.00 | 319.00 | 337.00 | 9065120120000 | |
| 0.4843 | | 12.30 | 14.00 | 437.00 | 369.55 | 388.00 | 9065120123000 | |
| 0.5000 | | 12.70 | 14.00 | 437.00 | 368.95 | 388.00 | 9065120127000 | |
| 0.5118 | | 13.00 | 14.00 | 437.00 | 368.50 | 388.00 | 9065120130000 | |
| 0.5157 | | 13.10 | 14.00 | 437.00 | 368.35 | 388.00 | 9065120131000 | |
| 0.5311 | 17/32 | 13.49 | 14.00 | 437.00 | 367.77 | 388.00 | 9065120134900 | |
| 0.5469 | 35/64 | 13.89 | 14.00 | 437.00 | 367.17 | 388.00 | 9065120138900 | |
| 0.5512 | | 14.00 | 14.00 | 437.00 | 367.00 | 388.00 | 9065120140000 | |
| 0.5626 | 9/16 | 14.29 | 16.00 | 493.00 | 419.57 | 441.00 | 9065120142900 | |
| 0.5906 | | 15.00 | 16.00 | 493.00 | 418.50 | 441.00 | 9065120150000 | |
| 0.6248 | 5/8 | 15.87 | 16.00 | 493.00 | 417.20 | 441.00 | 9065120158700 | |
| 0.6299 | | 16.00 | 16.00 | 493.00 | 417.00 | 441.00 | 9065120160000 | |



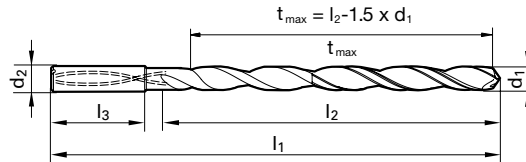
Tool material

Solid Carbide

Surface



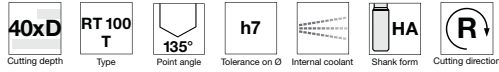
- P** Steel ● double margin • web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge form concave • optimized flute design • maximum diameter of coolant ducts • observe coolant pressure
 - M** Stainless steel ●
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • stainless steels • cast materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 456 for technical operation info
Speeds and feeds information on pg. 590

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|------|------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.1181 | | 3.00 | 6.00 | 140.00 | 95.50 | 100.00 | 9065130030000 |
| 0.1220 | | 3.10 | 6.00 | 158.00 | 113.35 | 118.00 | 9065130031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 158.00 | 113.25 | 118.00 | 9065130031700 |
| 0.1260 | | 3.20 | 6.00 | 158.00 | 113.20 | 118.00 | 9065130032000 |
| 0.1299 | | 3.30 | 6.00 | 158.00 | 113.05 | 118.00 | 9065130033000 |
| 0.1378 | | 3.50 | 6.00 | 176.00 | 130.75 | 136.00 | 9065130035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 176.00 | 130.65 | 136.00 | 9065130035700 |
| 0.1457 | | 3.70 | 6.00 | 176.00 | 130.45 | 136.00 | 9065130037000 |
| 0.1496 | | 3.80 | 6.00 | 176.00 | 130.30 | 136.00 | 9065130038000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 176.00 | 130.05 | 136.00 | 9065130039700 |
| 0.1575 | | 4.00 | 6.00 | 176.00 | 130.00 | 136.00 | 9065130040000 |
| 0.1614 | | 4.10 | 6.00 | 208.00 | 161.70 | 168.00 | 9065130041000 |
| 0.1654 | | 4.20 | 6.00 | 208.00 | 161.70 | 168.00 | 9065130042000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 208.00 | 161.45 | 168.00 | 9065130043700 |
| 0.1772 | | 4.50 | 6.00 | 208.00 | 161.25 | 168.00 | 9065130045000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 208.00 | 160.86 | 168.00 | 9065130047600 |
| 0.1969 | | 5.00 | 6.00 | 208.00 | 160.50 | 168.00 | 9065130050000 |
| 0.2008 | | 5.10 | 6.00 | 240.00 | 192.35 | 200.00 | 9065130051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 240.00 | 192.26 | 200.00 | 9065130051600 |
| 0.2130 | #3 | 5.41 | 6.00 | 240.00 | 191.89 | 200.00 | 9065130054100 |
| 0.2165 | | 5.50 | 6.00 | 240.00 | 191.75 | 200.00 | 9065130055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 240.00 | 191.66 | 200.00 | 9065130055600 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 240.00 | 191.08 | 200.00 | 9065130059500 |
| 0.2362 | | 6.00 | 6.00 | 240.00 | 191.00 | 200.00 | 9065130060000 |
| 0.2480 | | 6.30 | 8.00 | 272.00 | 222.55 | 232.00 | 9065130063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 272.00 | 222.48 | 232.00 | 9065130063500 |
| 0.2559 | | 6.50 | 8.00 | 272.00 | 222.25 | 232.00 | 9065130065000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 272.00 | 221.88 | 232.00 | 9065130067500 |
| 0.2677 | | 6.80 | 8.00 | 272.00 | 221.80 | 232.00 | 9065130068000 |

| Diameter (d1) | | | d2 | l1 | t _{max} | l2 | EDP # |
|---------------|----------|-------|-------|--------|------------------|--------|-------------------------------|
| inch | wire/ltr | mm | mm | mm | mm | mm | |
| 0.2756 | | 7.00 | 8.00 | 272.00 | 221.50 | 232.00 | 9065130070000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 303.00 | 252.29 | 263.00 | 9065130071400 |
| 0.2953 | | 7.50 | 8.00 | 303.00 | 251.75 | 263.00 | 9065130075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 303.00 | 251.69 | 263.00 | 9065130075400 |
| 0.3126 | 5/16 | 7.94 | 8.00 | 303.00 | 251.09 | 263.00 | 9065130079400 |
| 0.3150 | | 8.00 | 8.00 | 303.00 | 251.00 | 263.00 | 9065130080000 |
| 0.3280 | 21/64 | 8.33 | 10.00 | 339.00 | 282.51 | 295.00 | 9065130083300 |
| 0.3346 | | 8.50 | 10.00 | 339.00 | 282.25 | 295.00 | 9065130085000 |
| 0.3437 | 11/32 | 8.73 | 10.00 | 339.00 | 281.91 | 295.00 | 9065130087300 |
| 0.3465 | | 8.80 | 10.00 | 339.00 | 281.80 | 295.00 | 9065130088000 |
| 0.3543 | | 9.00 | 10.00 | 339.00 | 281.50 | 295.00 | 9065130090000 |
| 0.3594 | 23/64 | 9.13 | 10.00 | 371.00 | 313.31 | 327.00 | 9065130091300 |
| 0.3748 | 3/8 | 9.52 | 10.00 | 371.00 | 312.72 | 327.00 | 9065130095200 |
| 0.3906 | 25/64 | 9.92 | 10.00 | 371.00 | 312.12 | 327.00 | 9065130099200 |
| 0.3937 | | 10.00 | 10.00 | 371.00 | 312.00 | 327.00 | 9065130100000 |
| 0.4063 | 13/32 | 10.32 | 12.00 | 412.00 | 347.52 | 363.00 | 9065130103200 |
| 0.4220 | 27/64 | 10.72 | 12.00 | 412.00 | 346.92 | 363.00 | 9065130107200 |
| 0.4331 | | 11.00 | 12.00 | 412.00 | 346.50 | 363.00 | 9065130110000 |
| 0.4374 | 7/16 | 11.11 | 12.00 | 443.00 | 377.34 | 394.00 | 9065130111100 |
| 0.4531 | 29/64 | 11.51 | 12.00 | 443.00 | 376.74 | 394.00 | 9065130115100 |
| 0.4689 | 15/32 | 11.91 | 12.00 | 443.00 | 376.14 | 394.00 | 9065130119100 |
| 0.4724 | | 12.00 | 12.00 | 443.00 | 376.00 | 394.00 | 9065130120000 |
| 0.4843 | | 12.30 | 14.00 | 507.00 | 439.55 | 458.00 | 9065130123000 |
| 0.5000 | | 12.70 | 14.00 | 507.00 | 438.95 | 458.00 | 9065130127000 |
| 0.5118 | | 13.00 | 14.00 | 507.00 | 438.50 | 458.00 | 9065130130000 |
| 0.5157 | | 13.10 | 14.00 | 507.00 | 438.35 | 458.00 | 9065130131000 |
| 0.5311 | 17/32 | 13.49 | 14.00 | 507.00 | 437.77 | 458.00 | 9065130134900 |
| 0.5469 | 35/64 | 13.89 | 14.00 | 507.00 | 437.17 | 458.00 | 9065130138900 |
| 0.5512 | | 14.00 | 14.00 | 507.00 | 437.00 | 458.00 | 9065130140000 |



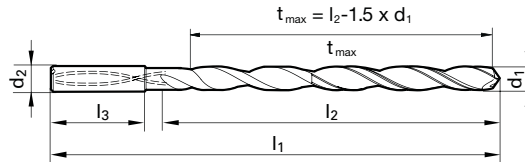
Tool material

Solid Carbide

Surface



- P** Steel ● double margin • web thinning $\geq \varnothing 3.000$ • relieved cone • main cutting edge form concave • optimized flute design • maximum diameter of coolant ducts • observe coolant pressure
 - M** Stainless steel ●
 - K** Cast iron ● structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm² • stainless steels • cast materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 456 for technical operation info
Speeds and feeds information on pg. 590

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.1181 | | 3.00 | 6.00 | 170.00 | 125.50 | 130.00 | 9065140030000 |
| 0.1220 | | 3.10 | 6.00 | 193.00 | 148.35 | 153.00 | 9065140031000 |
| 0.1248 | 1/8 | 3.17 | 6.00 | 193.00 | 148.25 | 153.00 | 9065140031700 |
| 0.1260 | | 3.20 | 6.00 | 193.00 | 148.20 | 153.00 | 9065140032000 |
| 0.1299 | | 3.30 | 6.00 | 193.00 | 148.05 | 153.00 | 9065140033000 |
| 0.1378 | | 3.50 | 6.00 | 193.00 | 147.75 | 153.00 | 9065140035000 |
| 0.1406 | 9/64 #28 | 3.57 | 6.00 | 216.00 | 170.65 | 176.00 | 9065140035700 |
| 0.1496 | | 3.80 | 6.00 | 216.00 | 170.30 | 176.00 | 9065140038000 |
| 0.1563 | 5/32 | 3.97 | 6.00 | 216.00 | 170.05 | 176.00 | 9065140039700 |
| 0.1575 | | 4.00 | 6.00 | 216.00 | 170.00 | 176.00 | 9065140040000 |
| 0.1654 | | 4.20 | 6.00 | 238.00 | 191.70 | 198.00 | 9065140042000 |
| 0.1720 | 11/64 | 4.37 | 6.00 | 238.00 | 191.45 | 198.00 | 9065140043700 |
| 0.1772 | | 4.50 | 6.00 | 238.00 | 191.25 | 198.00 | 9065140045000 |
| 0.1874 | 3/16 | 4.76 | 6.00 | 258.00 | 210.86 | 218.00 | 9065140047600 |
| 0.1969 | | 5.00 | 6.00 | 258.00 | 210.50 | 218.00 | 9065140050000 |
| 5.1000 | | 5.10 | 6.00 | 280.00 | 232.35 | 240.00 | 9065140051000 |
| 0.2031 | 13/64 | 5.16 | 6.00 | 280.00 | 232.26 | 240.00 | 9065140051600 |
| 0.2129 | | 5.41 | 6.00 | 280.00 | 231.89 | 240.00 | 9065140054100 |

| Diameter (d1) | | | d2 mm | l1 mm | t _{max} mm | l2 mm | EDP # |
|---------------|----------|-------|----------|----------|------------------------|----------|-------------------------------|
| inch | wire/ltr | mm | | | | | |
| 0.2165 | | 5.50 | 6.00 | 280.00 | 231.75 | 240.00 | 9065140055000 |
| 0.2189 | 7/32 | 5.56 | 6.00 | 300.00 | 251.66 | 260.00 | 9065140055600 |
| 0.2343 | 15/64 | 5.95 | 6.00 | 300.00 | 251.08 | 260.00 | 9065140059500 |
| 0.2362 | | 6.00 | 6.00 | 300.00 | 251.00 | 260.00 | 9065140060000 |
| 0.2480 | | 6.30 | 8.00 | 322.00 | 272.55 | 282.00 | 9065140063000 |
| 0.2500 | 1/4 E | 6.35 | 8.00 | 322.00 | 272.48 | 282.00 | 9065140063500 |
| 0.2559 | | 6.50 | 8.00 | 322.00 | 272.25 | 282.00 | 9065140065000 |
| 0.2657 | 17/64 H | 6.75 | 8.00 | 342.00 | 291.88 | 302.00 | 9065140067500 |
| 0.2677 | | 6.80 | 8.00 | 342.00 | 291.80 | 302.00 | 9065140068000 |
| 0.2756 | | 7.00 | 8.00 | 342.00 | 291.50 | 302.00 | 9065140070000 |
| 0.2811 | 9/32 K | 7.14 | 8.00 | 363.00 | 312.29 | 323.00 | 9065140071400 |
| 0.2953 | | 7.50 | 8.00 | 363.00 | 311.75 | 323.00 | 9065140075000 |
| 0.2969 | 19/64 | 7.54 | 8.00 | 383.00 | 331.69 | 343.00 | 9065140075400 |
| 0.3120 | 5/16 | 7.94 | 8.00 | 383.00 | 331.09 | 343.00 | 9065140079400 |
| 0.3150 | | 8.00 | 8.00 | 383.00 | 331.00 | 343.00 | 9065140080000 |
| 0.3346 | | 8.50 | 10.00 | 409.00 | 352.25 | 365.00 | 9065140085000 |
| 0.3543 | | 9.00 | 10.00 | 429.00 | 372.50 | 386.00 | 9065140090000 |
| 0.3937 | | 10.00 | 10.00 | 471.00 | 412.00 | 427.00 | 9065140100000 |

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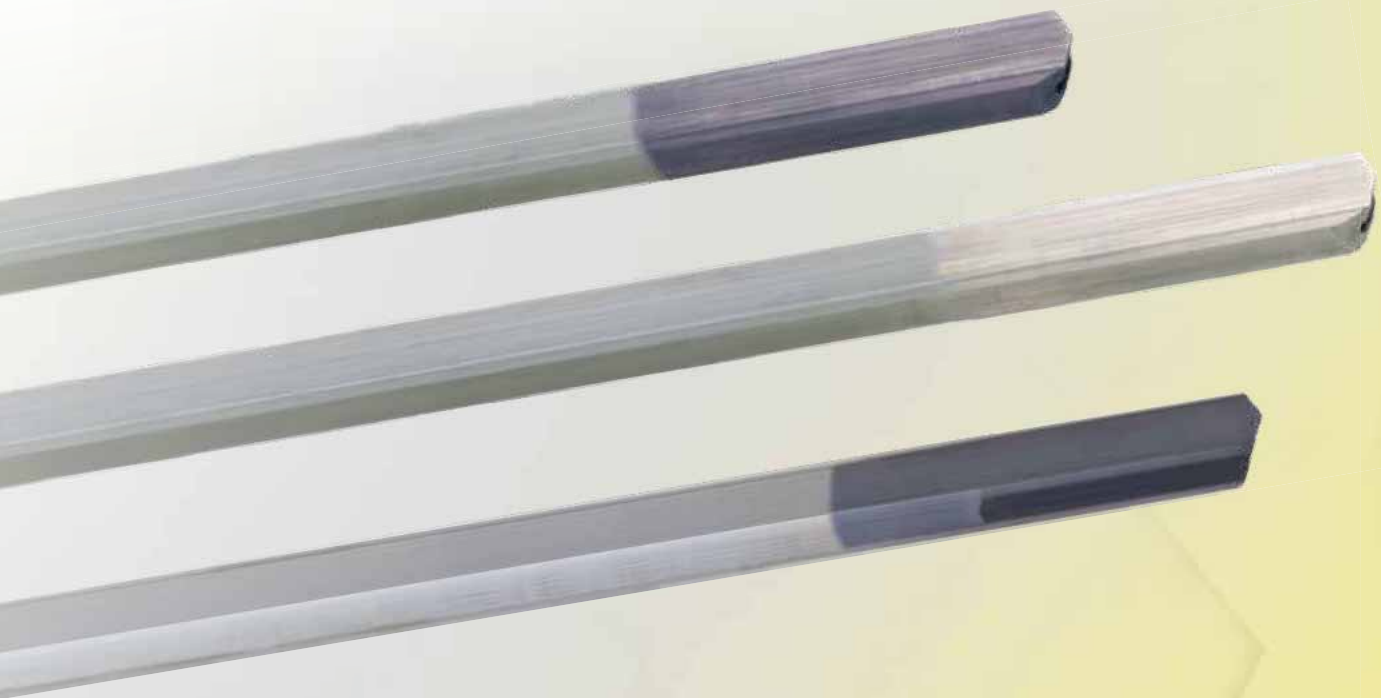
POWER
PRICE

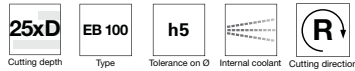
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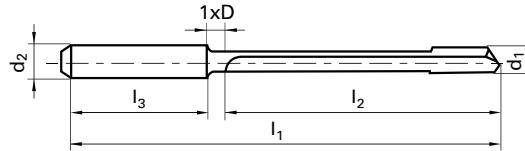




Tool material **Solid Carbide**

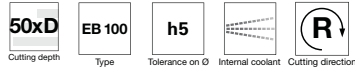
Surface **a**

- P** Steel ● head form G • solid carbide shank with tapered MQL shank end from d1 = 3 mm / d2 = 6 mm
 - M** Stainless steel ●
 - K** Cast iron ○
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 567

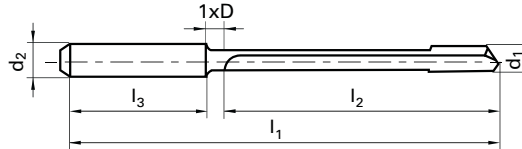
| Diameter (d1) | | mm | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|---------------|----------|--------|-------|--------|--------|-------|----------|-------------------------------|
| inch | wire/ltr | | | | | | | |
| 0.0394 | | 1.000 | 3.00 | 65.00 | 32.00 | 28.00 | 1.000 | 9056460010000 |
| 0.0469 | 3/64 | 1.191 | 3.00 | 70.00 | 39.00 | 28.00 | 1.190 | 9056460011900 |
| 0.0591 | | 1.500 | 4.00 | 80.00 | 49.00 | 28.00 | 1.500 | 9056460015000 |
| 0.0625 | 1/16 | 1.588 | 4.00 | 85.00 | 51.00 | 28.00 | 1.590 | 9056460015900 |
| 0.0781 | 5/64 | 1.984 | 4.00 | 95.00 | 64.00 | 28.00 | 1.980 | 9056460019800 |
| 0.0787 | | 2.000 | 4.00 | 95.00 | 65.00 | 28.00 | 2.000 | 9056460020000 |
| 0.0937 | 3/32 | 2.381 | 4.00 | 100.00 | 70.00 | 28.00 | 2.380 | 9056460023800 |
| 0.0984 | | 2.500 | 4.00 | 115.00 | 85.00 | 28.00 | 2.500 | 9056460025000 |
| 0.1094 | 7/64 | 2.778 | 4.00 | 115.00 | 85.00 | 28.00 | 2.780 | 9056460027800 |
| 0.1181 | | 3.000 | 6.00 | 145.00 | 105.00 | 36.00 | 3.000 | 9056460030000 |
| 0.1250 | 1/8 | 3.175 | 6.00 | 145.00 | 105.00 | 36.00 | 3.170 | 9056460031700 |
| 0.1378 | | 3.500 | 6.00 | 145.00 | 105.00 | 36.00 | 3.500 | 9056460035000 |
| 0.1406 | 9/64 | 3.572 | 6.00 | 160.00 | 120.00 | 36.00 | 3.570 | 9056460035700 |
| 0.1563 | 5/32 | 3.969 | 6.00 | 160.00 | 120.00 | 36.00 | 3.970 | 9056460039700 |
| 0.1575 | | 4.000 | 6.00 | 160.00 | 120.00 | 36.00 | 4.000 | 9056460040000 |
| 0.1719 | 11/64 | 4.366 | 6.00 | 220.00 | 180.00 | 36.00 | 4.370 | 9056460043700 |
| 0.1875 | 3/16 | 4.763 | 6.00 | 220.00 | 180.00 | 36.00 | 4.760 | 9056460047600 |
| 0.1969 | | 5.000 | 6.00 | 220.00 | 180.00 | 36.00 | 5.000 | 9056460050000 |
| 0.2031 | 13/64 | 5.159 | 6.00 | 220.00 | 180.00 | 36.00 | 5.160 | 9056460051600 |
| 0.2187 | 7/32 | 5.556 | 6.00 | 220.00 | 180.00 | 36.00 | 5.560 | 9056460055600 |
| 0.2344 | 15/64 | 5.953 | 6.00 | 220.00 | 180.00 | 36.00 | 5.950 | 9056460059500 |
| 0.2362 | | 6.000 | 6.00 | 220.00 | 180.00 | 36.00 | 6.000 | 9056460060000 |
| 0.2500 | 1/4 | 6.350 | 8.00 | 260.00 | 210.00 | 36.00 | 6.350 | 9056460063500 |
| 0.2559 | | 6.500 | 8.00 | 260.00 | 210.00 | 36.00 | 6.500 | 9056460065000 |
| 0.2656 | 17/64 | 6.747 | 8.00 | 260.00 | 210.00 | 36.00 | 6.750 | 9056460067500 |
| 0.2756 | | 7.000 | 8.00 | 260.00 | 210.00 | 36.00 | 7.000 | 9056460070000 |
| 0.2813 | 9/32 | 7.144 | 8.00 | 285.00 | 240.00 | 36.00 | 7.140 | 9056460071400 |
| 0.2969 | 19/64 | 7.541 | 8.00 | 285.00 | 240.00 | 36.00 | 7.540 | 9056460075400 |
| 0.3125 | 5/16 | 7.938 | 8.00 | 285.00 | 240.00 | 36.00 | 7.940 | 9056460079400 |
| 0.3150 | | 8.000 | 8.00 | 285.00 | 240.00 | 36.00 | 8.000 | 9056460080000 |
| 0.3543 | | 9.000 | 10.00 | 350.00 | 300.00 | 40.00 | 9.000 | 9056460090000 |
| 0.3937 | | 10.000 | 10.00 | 350.00 | 300.00 | 40.00 | 10.000 | 9056460100000 |
| 0.4331 | | 11.000 | 12.00 | 420.00 | 360.00 | 45.00 | 11.000 | 9056460110000 |
| 0.4375 | 7/16 | 11.113 | 12.00 | 420.00 | 360.00 | 45.00 | 11.113 | 9056460111130 |
| 0.4724 | | 12.000 | 12.00 | 420.00 | 360.00 | 45.00 | 12.000 | 9056460120000 |
| 0.5000 | 1/2 | 12.700 | 14.00 | 455.00 | 396.00 | 45.00 | 12.700 | 9056460127000 |
| 0.5512 | | 14.000 | 14.00 | 500.00 | 437.00 | 45.00 | 14.000 | 9056460140000 |
| 0.5906 | | 15.000 | 16.00 | 535.00 | 468.00 | 48.00 | 15.000 | 9056460150000 |
| 0.6250 | 5/8 | 15.875 | 16.00 | 560.00 | 495.00 | 48.00 | 15.875 | 9056460158750 |
| 0.6299 | | 16.000 | 16.00 | 565.00 | 499.00 | 48.00 | 16.000 | 9056460160000 |



Tool material **Solid Carbide**

Surface **a**

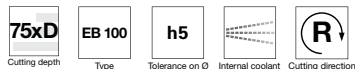
- P** Steel ● head form G · solid carbide shank with tapered MQL shank end from d1 = 3 mm / d2 = 6 mm
 - M** Stainless steel ●
 - K** Cast iron ○
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 567

| Diameter (d1) | | mm | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|---------------|----------|--------|-------|--------|--------|-------|----------|-------------------------------|
| inch | wire/ltr | | | | | | | |
| 0.0394 | | 1.000 | 3.00 | 90.00 | 57.00 | 28.00 | 1.000 | 9056470010000 |
| 0.0469 | 3/64 | 1.191 | 3.00 | 100.00 | 68.00 | 28.00 | 1.190 | 9056470011900 |
| 0.0591 | | 1.500 | 4.00 | 120.00 | 86.00 | 28.00 | 1.500 | 9056470015000 |
| 0.0625 | 1/16 | 1.588 | 4.00 | 125.00 | 91.00 | 28.00 | 1.590 | 9056470015900 |
| 0.0781 | 5/64 | 1.984 | 4.00 | 145.00 | 114.00 | 28.00 | 1.980 | 9056470019800 |
| 0.0787 | | 2.000 | 4.00 | 145.00 | 115.00 | 28.00 | 2.000 | 9056470020000 |
| 0.0937 | 3/32 | 2.381 | 4.00 | 160.00 | 130.00 | 28.00 | 2.380 | 9056470023800 |
| 0.0984 | | 2.500 | 4.00 | 185.00 | 155.00 | 28.00 | 2.500 | 9056470025000 |
| 0.1094 | 7/64 | 2.778 | 4.00 | 185.00 | 155.00 | 28.00 | 2.780 | 9056470027800 |
| 0.1181 | | 3.000 | 6.00 | 230.00 | 190.00 | 36.00 | 3.000 | 9056470030000 |
| 0.1250 | 1/8 | 3.175 | 6.00 | 230.00 | 190.00 | 36.00 | 3.170 | 9056470031700 |
| 0.1378 | | 3.500 | 6.00 | 230.00 | 190.00 | 36.00 | 3.500 | 9056470035000 |
| 0.1406 | 9/64 | 3.572 | 6.00 | 260.00 | 220.00 | 36.00 | 3.570 | 9056470035700 |
| 0.1563 | 5/32 | 3.969 | 6.00 | 260.00 | 220.00 | 36.00 | 3.970 | 9056470039700 |
| 0.1575 | | 4.000 | 6.00 | 260.00 | 220.00 | 36.00 | 4.000 | 9056470040000 |
| 0.1719 | 11/64 | 4.366 | 6.00 | 290.00 | 245.00 | 36.00 | 4.370 | 9056470043700 |
| 0.1875 | 3/16 | 4.763 | 6.00 | 310.00 | 268.00 | 36.00 | 4.760 | 9056470047600 |
| 0.1969 | | 5.000 | 6.00 | 370.00 | 330.00 | 36.00 | 5.000 | 9056470050000 |
| 0.2031 | 13/64 | 5.159 | 6.00 | 370.00 | 330.00 | 36.00 | 5.160 | 9056470051600 |
| 0.2187 | 7/32 | 5.556 | 6.00 | 370.00 | 330.00 | 36.00 | 5.560 | 9056470055600 |
| 0.2344 | 15/64 | 5.953 | 6.00 | 370.00 | 330.00 | 36.00 | 5.950 | 9056470059500 |
| 0.2362 | | 6.000 | 6.00 | 370.00 | 330.00 | 36.00 | 6.000 | 9056470060000 |
| 0.2500 | 1/4 | 6.350 | 8.00 | 430.00 | 385.00 | 36.00 | 6.350 | 9056470063500 |
| 0.2559 | | 6.500 | 8.00 | 430.00 | 385.00 | 36.00 | 6.500 | 9056470065000 |
| 0.2656 | 17/64 | 6.747 | 8.00 | 430.00 | 385.00 | 36.00 | 6.750 | 9056470067500 |
| 0.2756 | | 7.000 | 8.00 | 430.00 | 385.00 | 36.00 | 7.000 | 9056470070000 |
| 0.2813 | 9/32 | 7.144 | 8.00 | 485.00 | 440.00 | 36.00 | 7.140 | 9056470071400 |
| 0.2969 | 19/64 | 7.541 | 8.00 | 485.00 | 440.00 | 36.00 | 7.540 | 9056470075400 |
| 0.3125 | 5/16 | 7.938 | 8.00 | 485.00 | 440.00 | 36.00 | 7.940 | 9056470079400 |
| 0.3150 | | 8.000 | 8.00 | 485.00 | 440.00 | 36.00 | 8.000 | 9056470080000 |
| 0.3543 | | 9.000 | 10.00 | 555.00 | 506.00 | 40.00 | 9.000 | 9056470090000 |
| 0.3937 | | 10.000 | 10.00 | 615.00 | 562.00 | 40.00 | 10.000 | 9056470100000 |

Gun Drills

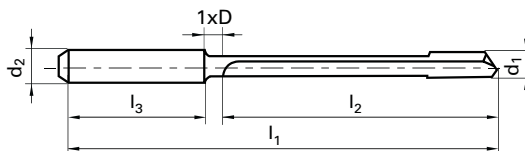


Tool material **Solid Carbide**

Surface **a**

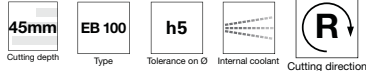
- P** Steel ● head form G • solid carbide shank with tapered MQL shank end from d1 = 3 mm / d2 = 6 mm
- M** Stainless steel ●
- K** Cast iron ○
- N** Aluminum ○
- S** Titanium alloys ○
- H** Hardened steel ○

●=Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 567

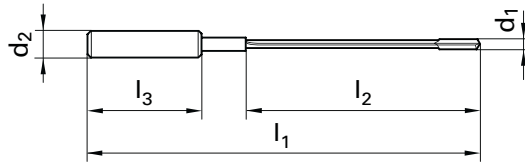
| Diameter (d1) | | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # | |
|---------------|------------|-------|-------|--------|--------|----------|-------|-------------------------------|
| inch | wire/tr mm | | | | | | | |
| 0.0394 | | 1.000 | 3.00 | 115.00 | 80.50 | 28.00 | 1.000 | 9056480010000 |
| 0.0469 | 3/64 | 1.191 | 3.00 | 130.00 | 96.21 | 28.00 | 1.190 | 9056480011900 |
| 0.0591 | | 1.500 | 4.00 | 155.00 | 121.75 | 28.00 | 1.500 | 9056480015000 |
| 0.0625 | 1/16 | 1.588 | 4.00 | 165.00 | 128.62 | 28.00 | 1.590 | 9056480015900 |
| 0.0781 | 5/64 | 1.984 | 4.00 | 195.00 | 160.02 | 28.00 | 1.980 | 9056480019800 |
| 0.0787 | | 2.000 | 4.00 | 195.00 | 162.00 | 28.00 | 2.000 | 9056480020000 |
| 0.0937 | 3/32 | 2.381 | 4.00 | 220.00 | 186.43 | 28.00 | 2.380 | 9056480023800 |
| 0.0984 | | 2.500 | 4.00 | 255.00 | 216.25 | 28.00 | 2.500 | 9056480025000 |
| 0.1094 | 7/64 | 2.778 | 4.00 | 255.00 | 215.83 | 28.00 | 2.780 | 9056480027800 |
| 0.1181 | | 3.000 | 6.00 | 290.00 | 269.50 | 36.00 | 3.000 | 9056480030000 |
| 0.1250 | 1/8 | 3.175 | 6.00 | 320.00 | 275.24 | 36.00 | 3.170 | 9056480031700 |
| 0.1378 | | 3.500 | 6.00 | 320.00 | 274.75 | 36.00 | 3.500 | 9056480035000 |
| 0.1406 | 9/64 | 3.572 | 6.00 | 360.00 | 314.64 | 36.00 | 3.570 | 9056480035700 |
| 0.1563 | 5/32 | 3.969 | 6.00 | 360.00 | 314.05 | 36.00 | 3.970 | 9056480039700 |
| 0.1575 | | 4.000 | 6.00 | 360.00 | 314.00 | 36.00 | 4.000 | 9056480040000 |
| 0.1719 | 11/64 | 4.366 | 6.00 | 395.00 | 348.45 | 36.00 | 4.370 | 9056480043700 |
| 0.1875 | 3/16 | 4.763 | 6.00 | 430.00 | 379.86 | 36.00 | 4.760 | 9056480047600 |
| 0.1969 | | 5.000 | 6.00 | 450.00 | 398.50 | 36.00 | 5.000 | 9056480050000 |
| 0.2031 | 13/64 | 5.159 | 6.00 | 465.00 | 411.26 | 36.00 | 5.160 | 9056480051600 |
| 0.2187 | 7/32 | 5.556 | 6.00 | 525.00 | 476.67 | 36.00 | 5.560 | 9056480055600 |
| 0.2344 | 15/64 | 5.953 | 6.00 | 525.00 | 476.07 | 36.00 | 5.950 | 9056480059500 |
| 0.2362 | | 6.000 | 6.00 | 525.00 | 476.00 | 36.00 | 6.000 | 9056480060000 |
| 0.2500 | 1/4 | 6.350 | 8.00 | 560.00 | 506.48 | 36.00 | 6.350 | 9056480063500 |
| 0.2559 | | 6.500 | 8.00 | 575.00 | 518.25 | 36.00 | 6.500 | 9056480065000 |
| 0.2656 | 17/64 | 6.747 | 8.00 | 595.00 | 537.88 | 36.00 | 6.750 | 9056480067500 |
| 0.2756 | | 7.000 | 8.00 | 615.00 | 557.50 | 36.00 | 7.000 | 9056480070000 |
| 0.2813 | 9/32 | 7.144 | 8.00 | 625.00 | 569.28 | 36.00 | 7.140 | 9056480071400 |



Tool material **Solid Carbide**

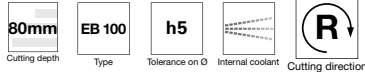
Surface

- P** Steel ○ flute lengths of 45, 80, 120 & 160 mm • head form G
 - M** Stainless steel ○
 - K** Cast iron ○
 - N** Aluminum ●
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 567

| Diameter (d1) | | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|---------------|----------------|----------|----------|----------|----------|----------|-------------------------------|
| inch | wire/ltr mm | | | | | | |
| 0.0354 | | 4.00 | 90.00 | 43.65 | 28.00 | 0.900 | 9050240009000 |
| 0.0394 | | 4.00 | 90.00 | 43.50 | 28.00 | 1.000 | 9050240010000 |
| 0.0433 | | 4.00 | 90.00 | 43.35 | 28.00 | 1.100 | 9050240011000 |
| 0.0469 | 3/64 | 4.00 | 90.00 | 43.21 | 28.00 | 1.190 | 9050240011900 |
| 0.0472 | | 4.00 | 90.00 | 43.20 | 28.00 | 1.200 | 9050240012000 |
| 0.0512 | | 4.00 | 90.00 | 43.05 | 28.00 | 1.300 | 9050240013000 |
| 0.0551 | | 4.00 | 90.00 | 42.90 | 28.00 | 1.400 | 9050240014000 |
| 0.0591 | | 4.00 | 90.00 | 42.75 | 28.00 | 1.500 | 9050240015000 |
| 0.0625 | 1/16 | 4.00 | 90.00 | 42.62 | 28.00 | 1.590 | 9050240015900 |
| 0.0630 | | 4.00 | 90.00 | 42.60 | 28.00 | 1.600 | 9050240016000 |
| 0.0748 | | 4.00 | 90.00 | 42.15 | 28.00 | 1.900 | 9050240019000 |
| 0.0781 | 5/64 | 4.00 | 90.00 | 42.02 | 28.00 | 1.980 | 9050240019800 |
| 0.0787 | | 4.00 | 90.00 | 42.00 | 28.00 | 2.000 | 9050240020000 |
| 0.0984 | | 10.00 | 100.00 | 41.25 | 40.00 | 2.500 | 9050240025000 |
| 0.1063 | | 10.00 | 100.00 | 40.95 | 40.00 | 2.700 | 9050240027000 |
| 0.1181 | | 10.00 | 100.00 | 40.50 | 40.00 | 3.000 | 9050240030000 |
| 0.1260 | | 10.00 | 100.00 | 40.20 | 40.00 | 3.200 | 9050240032000 |

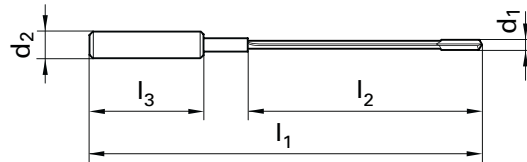


Tool material **Solid Carbide**

Surface

| | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | flute lengths of 45, 80, 120 & 160 mm • head form G |
| M | Stainless steel | ○ | |
| K | Cast iron | ○ | |
| N | Aluminum | ● | |
| S | Titanium alloys | ● | |
| H | Hardened steel | ○ | |

●=Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 567

| Diameter (d1) | | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|---------------|----------------|----------|----------|----------|----------|----------|-------------------------------|
| inch | wire/ltr mm | | | | | | |
| 0.0394 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.000 | 9050200010000 |
| 0.0433 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.100 | 9050200011000 |
| 0.0469 | 3/64 | 4.00 | 125.00 | 80.00 | 28.00 | 1.190 | 9050200011900 |
| 0.0472 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.200 | 9050200012000 |
| 0.0512 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.300 | 9050200013000 |
| 0.0551 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.400 | 9050200014000 |
| 0.0591 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.500 | 9050200015000 |
| 0.0625 | 1/16 | 4.00 | 125.00 | 80.00 | 28.00 | 1.590 | 9050200015900 |
| 0.0630 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.600 | 9050200016000 |
| 0.0748 | | 4.00 | 125.00 | 80.00 | 28.00 | 1.900 | 9050200019000 |
| 0.0781 | 5/64 | 4.00 | 125.00 | 80.00 | 28.00 | 1.980 | 9050200019800 |
| 0.0787 | | 4.00 | 125.00 | 80.00 | 28.00 | 2.000 | 9050200020000 |
| 0.0984 | | 10.00 | 135.00 | 80.00 | 40.00 | 2.500 | 9050200025000 |
| 0.1063 | | 10.00 | 135.00 | 80.00 | 40.00 | 2.700 | 9050200027000 |
| 0.1181 | | 10.00 | 135.00 | 80.00 | 40.00 | 3.000 | 9050200030000 |
| 0.1260 | | 10.00 | 135.00 | 80.00 | 40.00 | 3.200 | 9050200032000 |
| 0.1378 | | 10.00 | 135.00 | 80.00 | 40.00 | 3.500 | 9050200035000 |
| 0.1575 | | 10.00 | 135.00 | 80.00 | 40.00 | 4.000 | 9050200040000 |
| 0.1654 | | 10.00 | 135.00 | 80.00 | 40.00 | 4.200 | 9050200042000 |
| 0.1772 | | 10.00 | 135.00 | 80.00 | 40.00 | 4.500 | 9050200045000 |
| 0.1969 | | 10.00 | 135.00 | 80.00 | 40.00 | 5.000 | 9050200050000 |

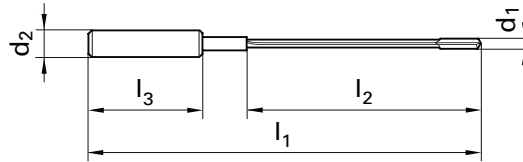


Tool material **Solid Carbide**

Surface

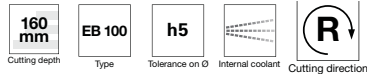


- P** Steel ○ flute lengths of 45, 80, 120 & 160 mm • head form G
 - M** Stainless steel ○
 - K** Cast iron ○
 - N** Aluminum ●
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
○=Limited



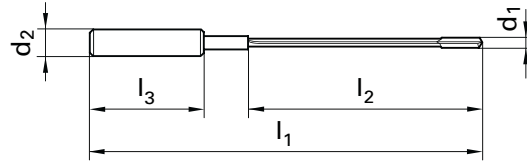
See page 455 for technical operation info
Speeds and feeds information on pg. 567

| Diameter (d1) | | mm | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|---------------|----------|-------|-------|--------|--------|-------|----------|-------------------------------|
| inch | wire/ltr | | | | | | | |
| 0.0591 | | 1.500 | 4.00 | 165.00 | 120.00 | 28.00 | 1.500 | 9050260015000 |
| 0.0625 | 1/16 | 1.588 | 4.00 | 165.00 | 120.00 | 28.00 | 1.590 | 9050260015900 |
| 0.0630 | | 1.600 | 4.00 | 165.00 | 120.00 | 28.00 | 1.600 | 9050260016000 |
| 0.0781 | 5/64 | 1.984 | 4.00 | 165.00 | 120.00 | 28.00 | 1.980 | 9050260019800 |
| 0.0787 | | 2.000 | 4.00 | 165.00 | 120.00 | 28.00 | 2.000 | 9050260020000 |
| 0.0984 | | 2.500 | 10.00 | 175.00 | 120.00 | 40.00 | 2.500 | 9050260025000 |
| 0.1063 | | 2.700 | 10.00 | 175.00 | 120.00 | 40.00 | 2.700 | 9050260027000 |
| 0.1181 | | 3.000 | 10.00 | 175.00 | 120.00 | 40.00 | 3.000 | 9050260030000 |
| 0.1260 | | 3.200 | 10.00 | 175.00 | 120.00 | 40.00 | 3.200 | 9050260032000 |
| 0.1378 | | 3.500 | 10.00 | 175.00 | 120.00 | 40.00 | 3.500 | 9050260035000 |
| 0.1575 | | 4.000 | 10.00 | 175.00 | 120.00 | 40.00 | 4.000 | 9050260040000 |
| 0.1654 | | 4.200 | 10.00 | 175.00 | 120.00 | 40.00 | 4.200 | 9050260042000 |
| 0.1772 | | 4.500 | 10.00 | 175.00 | 120.00 | 40.00 | 4.500 | 9050260045000 |
| 0.1969 | | 5.000 | 10.00 | 175.00 | 120.00 | 40.00 | 5.000 | 9050260050000 |



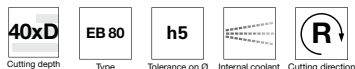
Tool material **Solid Carbide**
Surface

- P** Steel ○ flute lengths of 45, 80, 120 & 160 mm • head form G
 - M** Stainless steel ○
 - K** Cast iron ○
 - N** Aluminum ●
 - S** Titanium alloys ●
 - H** Hardened steel ○
- =Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 567

| inch | Diameter (d1) | | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|--------|---------------|-------|-------|--------|--------|-------|----------|-------------------------------|
| | wire/tr | mm | | | | | | |
| 0.0591 | | 1.500 | 4.00 | 205.00 | 160.00 | 28.00 | 1.500 | 9050210015000 |
| 0.0625 | 1/16 | 1.588 | 4.00 | 205.00 | 160.00 | 28.00 | 1.590 | 9050210015900 |
| 0.0630 | | 1.600 | 4.00 | 205.00 | 160.00 | 28.00 | 1.600 | 9050210016000 |
| 0.0781 | 5/64 | 1.984 | 4.00 | 205.00 | 160.00 | 28.00 | 1.980 | 9050210019800 |
| 0.0787 | | 2.000 | 4.00 | 205.00 | 160.00 | 28.00 | 2.000 | 9050210020000 |
| 0.0984 | | 2.500 | 10.00 | 215.00 | 160.00 | 40.00 | 2.500 | 9050210025000 |
| 0.1063 | | 2.700 | 10.00 | 215.00 | 160.00 | 40.00 | 2.700 | 9050210027000 |
| 0.1181 | | 3.000 | 10.00 | 215.00 | 160.00 | 40.00 | 3.000 | 9050210030000 |
| 0.1260 | | 3.200 | 10.00 | 215.00 | 160.00 | 40.00 | 3.200 | 9050210032000 |
| 0.1378 | | 3.500 | 10.00 | 215.00 | 160.00 | 40.00 | 3.500 | 9050210035000 |
| 0.1575 | | 4.000 | 10.00 | 215.00 | 160.00 | 40.00 | 4.000 | 9050210040000 |
| 0.1654 | | 4.200 | 10.00 | 215.00 | 160.00 | 40.00 | 4.200 | 9050210042000 |
| 0.1772 | | 4.500 | 10.00 | 215.00 | 160.00 | 40.00 | 4.500 | 9050210045000 |
| 0.1969 | | 5.000 | 10.00 | 215.00 | 160.00 | 40.00 | 5.000 | 9050210050000 |
| 0.2362 | | 6.000 | 16.00 | 225.00 | 160.00 | 40.00 | 6.000 | 9050210060000 |
| 0.3150 | | 8.000 | 16.00 | 225.00 | 160.00 | 48.00 | 8.000 | 9050210080000 |

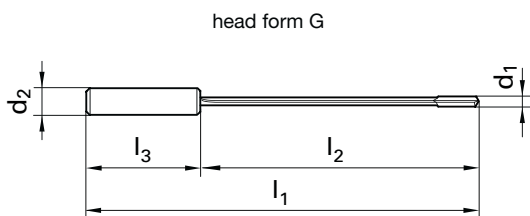


Tool material **Solid Carbide**

Surface **C**

| | | |
|----------|-----------------|---|
| P | Steel | ○ |
| M | Stainless steel | ● |
| K | Cast iron | ○ |
| N | Aluminum | ○ |
| S | Titanium alloys | ● |
| H | Hardened steel | ○ |

●=Optimal
○=Limited



See page 455 for technical operation info
Speeds and feeds information on pg. 579

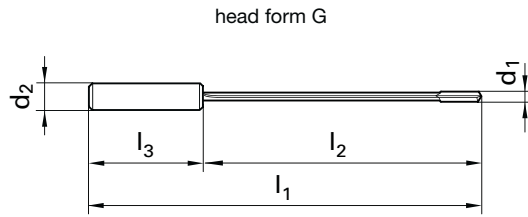
| Diameter (d1) | | mm | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|---------------|----------|--------|-------|--------|--------|-------|----------|-------------------------------|
| inch | wire/ltr | | | | | | | |
| 0.1563 | 5/32 | 3.969 | 10.00 | 230.00 | 185.00 | 40.00 | 3.970 | 9056410039700 |
| 0.1575 | | 4.000 | 12.00 | 230.00 | 185.00 | 45.00 | 4.000 | 9056410040000 |
| 0.1654 | | 4.200 | 12.00 | 240.00 | 195.00 | 45.00 | 4.200 | 9056410042000 |
| 0.1772 | | 4.500 | 12.00 | 250.00 | 205.00 | 45.00 | 4.500 | 9056410045000 |
| 0.1969 | | 5.000 | 16.00 | 280.00 | 232.00 | 48.00 | 5.000 | 9056410050000 |
| 0.2031 | 13/64 | 5.159 | 16.00 | 280.00 | 232.00 | 48.00 | 5.156 | 9056410051560 |
| 0.2165 | | 5.500 | 16.00 | 300.00 | 252.00 | 48.00 | 5.500 | 9056410055000 |
| 0.2362 | | 6.000 | 16.00 | 320.00 | 272.00 | 48.00 | 6.000 | 9056410060000 |
| 0.2500 | 1/4 | 6.350 | 16.00 | 340.00 | 292.00 | 48.00 | 6.350 | 9056410063500 |
| 0.2559 | | 6.500 | 16.00 | 340.00 | 292.00 | 48.00 | 6.500 | 9056410065000 |
| 0.2756 | | 7.000 | 16.00 | 370.00 | 322.00 | 48.00 | 7.000 | 9056410070000 |
| 0.3125 | 5/16 | 7.938 | 16.00 | 420.00 | 372.00 | 48.00 | 7.938 | 9056410079380 |
| 0.3150 | | 8.000 | 16.00 | 420.00 | 372.00 | 48.00 | 8.000 | 9056410080000 |
| 0.3543 | | 9.000 | 16.00 | 450.00 | 402.00 | 48.00 | 9.000 | 9056410090000 |
| 0.3750 | 3/8 | 9.525 | 16.00 | 480.00 | 432.00 | 48.00 | 9.525 | 9056410095250 |
| 0.3937 | | 10.000 | 20.00 | 510.00 | 460.00 | 50.00 | 10.000 | 9056410100000 |
| 0.4331 | | 11.000 | 20.00 | 550.00 | 500.00 | 50.00 | 11.000 | 9056410110000 |
| 0.4375 | 7/16 | 11.113 | 20.00 | 550.00 | 500.00 | 50.00 | 11.113 | 9056410111130 |
| 0.4724 | | 12.000 | 20.00 | 600.00 | 550.00 | 50.00 | 12.000 | 9056410120000 |
| 0.5000 | 1/2 | 12.700 | 20.00 | 635.00 | 585.00 | 50.00 | 12.700 | 9056410127000 |



Tool material **Solid Carbide**
 Surface **C**

| | | |
|----------|-----------------|---|
| P | Steel | ○ |
| M | Stainless steel | ● |
| K | Cast iron | ○ |
| N | Aluminum | ○ |
| S | Titanium alloys | ● |
| H | Hardened steel | ○ |

●=Optimal
 ○=Limited



See page 455 for technical operation info
 Speeds and feeds information on pg. 580

| inch | Diameter (d1) | | d2 mm | l1 mm | l2 mm | l3 mm | Code no. | EDP # |
|--------|---------------|--------|----------|----------|----------|----------|----------|-------------------------------|
| | wire/ltr | mm | | | | | | |
| 0.1949 | | 4.950 | 16.00 | 480.00 | 432.00 | 48.00 | 4.950 | 9056420049500 |
| 0.2010 | | 5.106 | 16.00 | 480.00 | 432.00 | 48.00 | 5.106 | 9056420051060 |
| 0.2146 | | 5.450 | 16.00 | 520.00 | 470.00 | 48.00 | 5.450 | 9056420054500 |
| 0.2344 | | 5.953 | 16.00 | 560.00 | 512.00 | 48.00 | 5.950 | 9056420059500 |
| 0.2480 | | 6.300 | 16.00 | 590.00 | 542.00 | 48.00 | 6.300 | 9056420063000 |
| 0.2539 | | 6.450 | 16.00 | 605.00 | 556.00 | 48.00 | 6.450 | 9056420064500 |
| 0.2736 | | 6.950 | 16.00 | 650.00 | 602.00 | 48.00 | 6.950 | 9056420069500 |
| 0.3106 | | 7.888 | 16.00 | 740.00 | 692.00 | 48.00 | 7.888 | 9056420078880 |
| 0.3130 | | 7.950 | 16.00 | 740.00 | 692.00 | 48.00 | 7.950 | 9056420079500 |
| 0.3524 | | 8.950 | 16.00 | 820.00 | 772.00 | 48.00 | 8.950 | 9056420089500 |
| 0.3730 | | 9.475 | 16.00 | 870.00 | 822.00 | 48.00 | 9.475 | 9056420094750 |
| 0.3917 | | 9.950 | 20.00 | 910.00 | 860.00 | 50.00 | 9.950 | 9056420099500 |
| 0.4311 | | 10.950 | 20.00 | 995.00 | 945.00 | 50.00 | 10.950 | 9056420109500 |
| 0.4356 | | 11.063 | 20.00 | 995.00 | 945.00 | 50.00 | 11.063 | 9056420110630 |
| 0.4705 | | 11.950 | 20.00 | 1080.00 | 1030.00 | 50.00 | 11.950 | 9056420119500 |
| 0.4980 | | 12.650 | 20.00 | 1140.00 | 1090.00 | 50.00 | 12.650 | 9056420126500 |

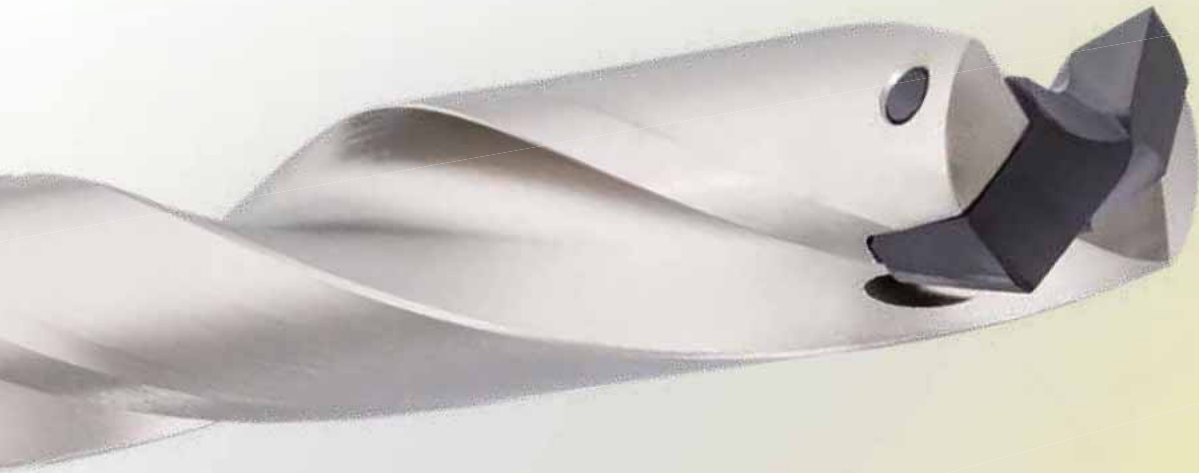
MICRO-PRECISION TOOLS

Gühring's micro-precision tools range from micro-precision drills with a radius of 0.05 mm to special solutions in larger sizes and from HSS to solid carbide. The micro-precision tool range comprises 75 types in over 2,400 sizes and therefore offers stocked tool solutions for a variety of applications. Specially adapted geometries, substrates and surfaces guarantee optimum performance and processing safety for drilling, milling, reaming and threading in micro applications.





REPLACEABLE TIP DRILLS



HT 800 WP Replaceable Tip Drilling System

With the HT 800 WP interchangeable drilling system Guhring provides high-performance and cost-efficient drill bodies for hole diameters ranging from 11.00 to 40.0 mm.

The HT 800 WP drilling system is ideal for the production of large, highly accurate holes in various materials, making it suitable for energy, automotive, steel construction, and general machining industries.

EXTENDED TOOL LIFE

- interchangeable inserts perfectly adapted to the field of application regarding tool material, geometry and coating
- optimal machining results in steel, stainless steel, cast iron or aluminum

OPTIMAL CHIP EVACUATION

- special flute cross-section
- ultra-smooth surface finish

RIGID BODIES

- minimal diameter variances between body and insert reduce wear
- improved workpiece surfaces
- improved guidance of the tool increases the rigidity
- longer tool life

HIGHLY ACCURATE AND RIGID INSERT SEAT

- insert change possible in the machine
- holder remains clamped
- tool change and re-setting not required
- increased process reliability and reduced setup time

IDEAL COOLING LUBRICATION

- coolant ducts with maximum cross section
- exit from flute directly to cutting edge



The ideal insert for any material and application



HT 800 WP

The ideal body holder for any drilling depth and application

| Series # | 4105 | 4106 | 4107 | 4108 | 4109 | 4110 |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Drilling depth | 1 x D | 1,5 x D | 3 x D | 5 x D | 7 x D | 10 x D |
| Diameter | 11.0 - 40.00 | 11.0 - 40.00 | 11.0 - 40.00 | 11.0 - 40.00 | 11.0 - 31.99 | 11.0 - 31.99 |
| Shank | DIN 6535-HE | DIN 6535-HE | DIN 6535-HE | DIN 6535-HE | DIN 6535-HE | DIN 6535-HE |



The series 4105 pilot drill body incorporates countersink inserts making it possible to machine a 45° chamfer while drilling the pilot hole.



Tool material

Surface

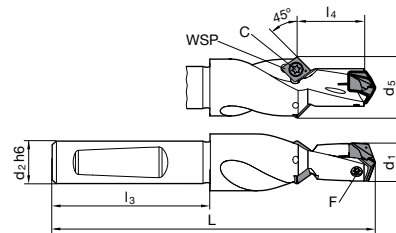


| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

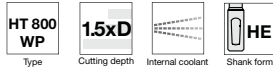
nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. 4071 and 6128 included • screwdriver art. no. 1612 included

for piloting and countersinking 45°

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d2 h6 frac. | d5 mm | L mm | l3 mm | l4 mm | WSP | C | F | Code no. | EDP # |
|---------------|----------|-------------|-------|--------|-------|-------|------------|------------|------------|----------|-------------------------------|
| 11.00 - 11.99 | 12.000 | | 17.00 | 81.00 | 45.00 | 12.00 | CP..0502.. | 6128 2.000 | 4071 2.200 | 11.000 | 9041050110000 |
| 11.00 - 11.99 | 12.700 | 1/2 | 17.00 | 81.00 | 45.00 | 12.00 | CP..0502.. | 6128 2.000 | 4071 2.200 | 11.005 | 9041050110050 |
| 12.00 - 12.99 | 12.000 | | 18.00 | 84.00 | 45.00 | 13.00 | CP..0502.. | 6128 2.000 | 4071 2.201 | 12.000 | 9041050120000 |
| 12.00 - 12.99 | 12.700 | 1/2 | 18.00 | 84.00 | 45.00 | 13.00 | CP..0502.. | 6128 2.000 | 4071 2.201 | 12.005 | 9041050120050 |
| 13.00 - 13.99 | 14.000 | | 18.00 | 86.00 | 45.00 | 14.00 | CP..0502.. | 6128 2.000 | 4071 2.500 | 13.000 | 9041050130000 |
| 13.00 - 13.99 | 15.875 | 5/8 | 18.00 | 86.00 | 45.00 | 14.00 | CP..0502.. | 6128 2.000 | 4071 2.500 | 13.005 | 9041050130050 |
| 14.00 - 15.99 | 16.000 | | 18.00 | 93.00 | 48.00 | 16.00 | CP..0502.. | 6128 2.000 | 4071 3.000 | 14.000 | 9041050140000 |
| 14.00 - 15.99 | 15.875 | 5/8 | 18.00 | 93.00 | 48.00 | 16.00 | CP..0502.. | 6128 2.000 | 4071 3.000 | 14.005 | 9041050140050 |
| 16.00 - 17.99 | 18.000 | | 20.00 | 99.00 | 48.00 | 18.00 | CP..0602.. | 6128 2.500 | 4071 3.500 | 16.000 | 9041050160000 |
| 16.00 - 17.99 | 19.050 | 3/4 | 20.00 | 99.00 | 48.00 | 18.00 | CP..0602.. | 6128 2.500 | 4071 3.500 | 16.005 | 9041050160050 |
| 18.00 - 19.99 | 20.000 | | 22.00 | 106.00 | 50.00 | 20.00 | CP..0602.. | 6128 2.500 | 4071 4.000 | 18.000 | 9041050180000 |
| 18.00 - 19.99 | 19.050 | 3/4 | 22.00 | 106.00 | 50.00 | 20.00 | CP..0602.. | 6128 2.500 | 4071 4.000 | 18.005 | 9041050180050 |
| 20.00 - 21.99 | 25.000 | | 24.00 | 117.00 | 56.00 | 22.00 | CP..0602.. | 6128 2.500 | 4071 4.500 | 20.000 | 9041050200000 |
| 20.00 - 21.99 | 25.400 | 1 | 24.00 | 117.00 | 56.00 | 22.00 | CP..0602.. | 6128 2.500 | 4071 4.500 | 20.005 | 9041050200050 |
| 22.00 - 23.99 | 25.000 | | 26.00 | 122.00 | 56.00 | 24.00 | CP..0602.. | 6128 2.500 | 4071 4.500 | 22.000 | 9041050220000 |
| 22.00 - 23.99 | 25.400 | 1 | 26.00 | 122.00 | 56.00 | 24.00 | CP..0602.. | 6128 2.500 | 4071 4.500 | 22.005 | 9041050220050 |
| 24.00 - 25.99 | 25.000 | | 28.00 | 128.00 | 56.00 | 26.00 | CP..0602.. | 6128 2.500 | 4071 5.001 | 24.000 | 9041050240000 |
| 24.00 - 25.99 | 25.400 | 1 | 28.00 | 128.00 | 56.00 | 26.00 | CP..0602.. | 6128 2.500 | 4071 5.001 | 24.005 | 9041050240050 |
| 26.00 - 27.99 | 32.000 | | 32.00 | 142.00 | 60.00 | 28.00 | CP..0602.. | 6128 2.500 | 4071 5.003 | 26.000 | 9041050260000 |
| 26.00 - 27.99 | 31.750 | 1 1/4 | 32.00 | 142.00 | 60.00 | 28.00 | CP..0602.. | 6128 2.500 | 4071 5.003 | 26.005 | 9041050260050 |
| 28.00 - 29.99 | 32.000 | | 34.00 | 147.00 | 60.00 | 30.00 | CP..0602.. | 6128 2.500 | 4071 5.003 | 28.000 | 9041050280000 |
| 28.00 - 29.99 | 31.750 | 1 1/4 | 34.00 | 147.00 | 60.00 | 30.00 | CP..0602.. | 6128 2.500 | 4071 5.003 | 28.005 | 9041050280050 |
| 30.00 - 31.99 | 32.000 | | 38.00 | 152.00 | 60.00 | 32.00 | CP..09T3.. | 6128 4.006 | 4071 6.000 | 30.000 | 9041050300000 |
| 30.00 - 31.99 | 31.750 | 1 1/4 | 38.00 | 152.00 | 60.00 | 32.00 | CP..09T3.. | 6128 4.006 | 4071 6.000 | 30.005 | 9041050300050 |
| 32.00 - 35.99 | 32.000 | | 42.00 | 163.00 | 60.00 | 36.00 | CP..09T3.. | 6128 4.006 | 4071 6.001 | 32.000 | 9041050320000 |
| 32.00 - 35.99 | 31.750 | 1 1/4 | 42.00 | 163.00 | 60.00 | 36.00 | CP..09T3.. | 6128 4.006 | 4071 6.001 | 32.005 | 9041050320050 |
| 36.00 - 40.00 | 32.000 | | 46.00 | 173.00 | 60.00 | 40.00 | CP..09T3.. | 6128 4.006 | 4071 6.002 | 36.000 | 9041050360000 |
| 36.00 - 40.00 | 31.750 | 1 1/4 | 46.00 | 173.00 | 60.00 | 40.00 | CP..09T3.. | 6128 4.006 | 4071 6.002 | 36.005 | 9041050360050 |



Tool material

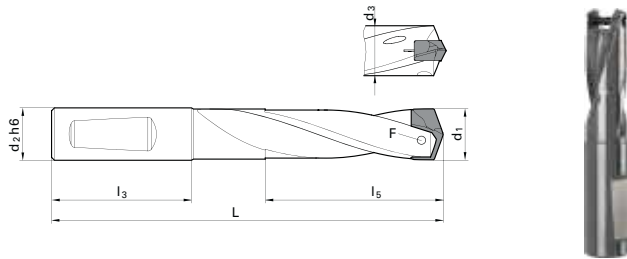
Surface



| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

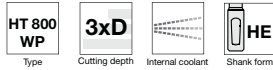
nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. M 4071 included • screwdriver art. no. 1612 included

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | l3 mm | l5 mm | F | Code no. | EDP # |
|---------------|----------|-------------|-------|--------|-------|-------|------------|----------|-------------------------------|
| 11.00 - 11.49 | 12.000 | | 10.70 | 84.00 | 45.00 | 19.30 | 4071 2.200 | 11.000 | 9041060110000 |
| 11.00 - 11.49 | 12.700 | 1/2 | 10.70 | 84.00 | 45.00 | 19.30 | 4071 2.200 | 11.005 | 9041060110050 |
| 11.50 - 11.99 | 12.000 | | 11.20 | 85.00 | 45.00 | 20.10 | 4071 2.200 | 11.500 | 9041060115000 |
| 11.50 - 11.99 | 12.700 | 1/2 | 11.20 | 85.00 | 45.00 | 20.10 | 4071 2.200 | 11.505 | 9041060115050 |
| 12.00 - 12.49 | 12.000 | | 11.70 | 87.00 | 45.00 | 21.00 | 4071 2.201 | 12.000 | 9041060120000 |
| 12.00 - 12.49 | 12.700 | 1/2 | 11.70 | 87.00 | 45.00 | 21.00 | 4071 2.201 | 12.005 | 9041060120050 |
| 12.50 - 12.99 | 14.000 | | 12.20 | 89.00 | 45.00 | 21.90 | 4071 2.201 | 12.500 | 9041060125000 |
| 12.50 - 12.99 | 15.875 | 5/8 | 12.20 | 89.00 | 45.00 | 21.90 | 4071 2.201 | 12.505 | 9041060125050 |
| 13.00 - 13.49 | 14.000 | | 12.70 | 90.00 | 45.00 | 22.60 | 4071 2.500 | 13.000 | 9041060130000 |
| 13.00 - 13.49 | 15.875 | 5/8 | 12.70 | 90.00 | 45.00 | 22.60 | 4071 2.500 | 13.005 | 9041060130050 |
| 13.50 - 13.99 | 14.000 | | 13.20 | 92.00 | 45.00 | 23.60 | 4071 2.500 | 13.500 | 9041060135000 |
| 13.50 - 13.99 | 15.875 | 5/8 | 13.20 | 92.00 | 45.00 | 23.60 | 4071 2.500 | 13.505 | 9041060135050 |
| 14.00 - 14.49 | 14.000 | | 13.70 | 93.00 | 45.00 | 24.50 | 4071 3.000 | 14.000 | 9041060140000 |
| 14.00 - 14.49 | 15.875 | 5/8 | 13.70 | 93.00 | 45.00 | 24.50 | 4071 3.000 | 14.005 | 9041060140050 |
| 14.50 - 14.99 | 16.000 | | 14.20 | 98.00 | 48.00 | 25.30 | 4071 3.000 | 14.500 | 9041060145000 |
| 14.50 - 14.99 | 15.875 | 5/8 | 14.20 | 98.00 | 48.00 | 25.30 | 4071 3.000 | 14.505 | 9041060145050 |
| 15.00 - 15.49 | 16.000 | | 14.70 | 100.00 | 48.00 | 26.10 | 4071 3.001 | 15.000 | 9041060150000 |
| 15.00 - 15.49 | 15.875 | 5/8 | 14.70 | 100.00 | 48.00 | 26.10 | 4071 3.001 | 15.005 | 9041060150050 |
| 15.50 - 15.99 | 16.000 | | 15.20 | 101.00 | 48.00 | 27.00 | 4071 3.001 | 15.500 | 9041060155000 |
| 15.50 - 15.99 | 15.875 | 5/8 | 15.20 | 101.00 | 48.00 | 27.00 | 4071 3.001 | 15.505 | 9041060155050 |
| 16.00 - 16.49 | 16.000 | | 15.70 | 102.00 | 48.00 | 27.80 | 4071 3.500 | 16.000 | 9041060160000 |
| 16.00 - 16.49 | 15.875 | 5/8 | 15.70 | 102.00 | 48.00 | 27.80 | 4071 3.500 | 16.005 | 9041060160050 |
| 16.50 - 16.99 | 18.000 | | 16.20 | 105.00 | 48.00 | 28.70 | 4071 3.500 | 16.500 | 9041060165000 |
| 16.50 - 16.99 | 19.050 | 3/4 | 16.20 | 105.00 | 48.00 | 28.70 | 4071 3.500 | 16.505 | 9041060165050 |
| 17.00 - 17.49 | 18.000 | | 16.70 | 106.00 | 48.00 | 29.60 | 4071 3.500 | 17.000 | 9041060170000 |
| 17.00 - 17.49 | 19.050 | 3/4 | 16.70 | 106.00 | 48.00 | 29.60 | 4071 3.500 | 17.005 | 9041060170050 |
| 17.50 - 17.99 | 18.000 | | 17.20 | 107.00 | 48.00 | 30.40 | 4071 3.500 | 17.500 | 9041060175000 |
| 17.50 - 17.99 | 19.050 | 3/4 | 17.20 | 107.00 | 48.00 | 30.40 | 4071 3.500 | 17.505 | 9041060175050 |
| 18.00 - 18.49 | 18.000 | | 17.70 | 109.00 | 48.00 | 31.20 | 4071 4.000 | 18.000 | 9041060180000 |
| 18.00 - 18.49 | 19.050 | 3/4 | 17.70 | 109.00 | 48.00 | 31.20 | 4071 4.000 | 18.005 | 9041060180050 |
| 18.50 - 18.99 | 20.000 | | 18.20 | 113.00 | 50.00 | 32.10 | 4071 4.000 | 18.500 | 9041060185000 |
| 18.50 - 18.99 | 19.050 | 3/4 | 18.20 | 113.00 | 50.00 | 32.10 | 4071 4.000 | 18.505 | 9041060185050 |
| 19.00 - 19.49 | 20.000 | | 18.70 | 114.00 | 50.00 | 32.90 | 4071 4.000 | 19.000 | 9041060190000 |
| 19.00 - 19.49 | 19.050 | 3/4 | 18.70 | 114.00 | 50.00 | 32.90 | 4071 4.000 | 19.005 | 9041060190050 |
| 19.50 - 19.99 | 20.000 | | 19.20 | 116.00 | 50.00 | 33.70 | 4071 4.000 | 19.500 | 9041060195000 |
| 19.50 - 19.99 | 19.050 | 3/4 | 19.20 | 116.00 | 50.00 | 33.70 | 4071 4.000 | 19.505 | 9041060195050 |
| 20.00 - 20.49 | 20.000 | | 19.70 | 117.00 | 50.00 | 34.60 | 4071 4.500 | 20.000 | 9041060200000 |
| 20.00 - 20.49 | 19.050 | 3/4 | 19.70 | 117.00 | 50.00 | 34.60 | 4071 4.500 | 20.005 | 9041060200050 |
| 20.50 - 20.99 | 25.000 | | 20.20 | 128.00 | 56.00 | 35.50 | 4071 4.500 | 20.500 | 9041060205000 |
| 20.50 - 20.99 | 25.400 | 1 | 20.20 | 128.00 | 56.00 | 35.50 | 4071 4.500 | 20.505 | 9041060205050 |
| 21.00 - 21.49 | 25.000 | | 20.70 | 129.00 | 56.00 | 36.40 | 4071 4.500 | 21.000 | 9041060210000 |
| 21.00 - 21.49 | 25.400 | 1 | 20.70 | 129.00 | 56.00 | 36.40 | 4071 4.500 | 21.005 | 9041060210050 |
| 21.50 - 21.99 | 25.000 | | 21.20 | 130.00 | 56.00 | 37.20 | 4071 4.500 | 21.500 | 9041060215000 |

| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | I3 mm | I5 mm | F | Code no. | EDP # |
|---------------|-------------|----------------|----------|---------|----------|----------|------------|----------|-------------------------------|
| 21.50 - 21.99 | 25.400 | 1 | 21.20 | 130.00 | 56.00 | 37.20 | 4071 4.500 | 21.505 | 9041060215050 |
| 22.00 - 22.49 | 25.000 | | 21.70 | 131.00 | 56.00 | 38.00 | 4071 5.000 | 22.000 | 9041060220000 |
| 22.00 - 22.49 | 25.400 | 1 | 21.70 | 131.00 | 56.00 | 38.00 | 4071 5.000 | 22.005 | 9041060220050 |
| 22.50 - 22.99 | 25.000 | | 22.20 | 134.00 | 56.00 | 38.90 | 4071 5.000 | 22.500 | 9041060225000 |
| 22.50 - 22.99 | 25.400 | 1 | 22.20 | 134.00 | 56.00 | 38.90 | 4071 5.000 | 22.505 | 9041060225050 |
| 23.00 - 23.49 | 25.000 | | 22.70 | 135.00 | 56.00 | 39.80 | 4071 5.000 | 23.000 | 9041060230000 |
| 23.00 - 23.49 | 25.400 | 1 | 22.70 | 135.00 | 56.00 | 39.80 | 4071 5.000 | 23.005 | 9041060230050 |
| 23.50 - 23.99 | 25.000 | | 23.20 | 137.00 | 56.00 | 40.60 | 4071 5.000 | 23.500 | 9041060235000 |
| 23.50 - 23.99 | 25.400 | 1 | 23.20 | 137.00 | 56.00 | 40.60 | 4071 5.000 | 23.505 | 9041060235050 |
| 24.00 - 24.49 | 25.000 | | 23.70 | 138.00 | 56.00 | 41.50 | 4071 5.001 | 24.000 | 9041060240000 |
| 24.00 - 24.49 | 25.400 | 1 | 23.70 | 138.00 | 56.00 | 41.50 | 4071 5.001 | 24.005 | 9041060240050 |
| 24.50 - 24.99 | 25.000 | | 24.20 | 140.00 | 56.00 | 42.30 | 4071 5.001 | 24.500 | 9041060245000 |
| 24.50 - 24.99 | 25.400 | 1 | 24.20 | 140.00 | 56.00 | 42.30 | 4071 5.001 | 24.505 | 9041060245050 |
| 25.00 - 25.49 | 25.000 | | 24.70 | 142.00 | 56.00 | 43.20 | 4071 5.001 | 25.000 | 9041060250000 |
| 25.00 - 25.49 | 25.400 | 1 | 24.70 | 142.00 | 56.00 | 43.20 | 4071 5.001 | 25.005 | 9041060250050 |
| 25.50 - 25.99 | 32.000 | | 25.20 | 148.00 | 60.00 | 44.00 | 4071 5.001 | 25.500 | 9041060255000 |
| 25.50 - 25.99 | 31.750 | 1 1/4 | 25.20 | 148.00 | 60.00 | 44.00 | 4071 5.001 | 25.505 | 9041060255050 |
| 26.00 - 26.49 | 32.000 | | 25.70 | 151.00 | 60.00 | 44.30 | 4071 5.003 | 26.000 | 9041060260000 |
| 26.00 - 26.49 | 31.750 | 1 1/4 | 25.70 | 151.00 | 60.00 | 44.30 | 4071 5.003 | 26.005 | 9041060260050 |
| 26.50 - 26.99 | 32.000 | | 26.20 | 153.00 | 60.00 | 45.10 | 4071 5.003 | 26.500 | 9041060265000 |
| 26.50 - 26.99 | 31.750 | 1 1/4 | 26.20 | 153.00 | 60.00 | 45.10 | 4071 5.003 | 26.505 | 9041060265050 |
| 27.00 - 27.49 | 32.000 | | 26.70 | 155.00 | 60.00 | 46.00 | 4071 5.003 | 27.000 | 9041060270000 |
| 27.00 - 27.49 | 31.750 | 1 1/4 | 26.70 | 155.00 | 60.00 | 46.00 | 4071 5.003 | 27.005 | 9041060270050 |
| 27.50 - 27.99 | 32.000 | | 27.20 | 156.00 | 60.00 | 46.80 | 4071 5.003 | 27.500 | 9041060275000 |
| 27.50 - 27.99 | 31.750 | 1 1/4 | 27.20 | 156.00 | 60.00 | 46.80 | 4071 5.003 | 27.505 | 9041060275050 |
| 28.00 - 28.49 | 32.000 | | 27.70 | 157.00 | 60.00 | 47.70 | 4071 5.003 | 28.000 | 9041060280000 |
| 28.00 - 28.49 | 31.750 | 1 1/4 | 27.70 | 157.00 | 60.00 | 47.70 | 4071 5.003 | 28.005 | 9041060280050 |
| 28.50 - 28.99 | 32.000 | | 28.20 | 159.00 | 60.00 | 48.50 | 4071 5.003 | 28.500 | 9041060285000 |
| 28.50 - 28.99 | 31.750 | 1 1/4 | 28.20 | 159.00 | 60.00 | 48.50 | 4071 5.003 | 28.505 | 9041060285050 |
| 29.00 - 29.49 | 32.000 | | 28.70 | 161.00 | 60.00 | 49.40 | 4071 5.003 | 29.000 | 9041060290000 |
| 29.00 - 29.49 | 31.750 | 1 1/4 | 28.70 | 161.00 | 60.00 | 49.40 | 4071 5.003 | 29.005 | 9041060290050 |
| 29.50 - 29.99 | 32.000 | | 29.20 | 162.00 | 60.00 | 50.20 | 4071 5.003 | 29.500 | 9041060295000 |
| 29.50 - 29.99 | 31.750 | 1 1/4 | 29.20 | 162.00 | 60.00 | 50.20 | 4071 5.003 | 29.505 | 9041060295050 |
| 30.00 - 30.49 | 32.000 | | 29.70 | 164.00 | 60.00 | 50.90 | 4071 6.000 | 30.000 | 9041060300000 |
| 30.00 - 30.49 | 31.750 | 1 1/4 | 29.70 | 164.00 | 60.00 | 50.90 | 4071 6.000 | 30.005 | 9041060300050 |
| 30.50 - 30.99 | 32.000 | | 30.20 | 166.00 | 60.00 | 51.70 | 4071 6.000 | 30.500 | 9041060305000 |
| 30.50 - 30.99 | 31.750 | 1 1/4 | 30.20 | 166.00 | 60.00 | 51.70 | 4071 6.000 | 30.505 | 9041060305050 |
| 31.00 - 31.49 | 32.000 | | 30.70 | 167.00 | 60.00 | 52.60 | 4071 6.000 | 31.000 | 9041060310000 |
| 31.00 - 31.49 | 31.750 | 1 1/4 | 30.70 | 167.00 | 60.00 | 52.60 | 4071 6.000 | 31.005 | 9041060310050 |
| 31.50 - 31.99 | 32.000 | | 31.20 | 168.00 | 60.00 | 53.40 | 4071 6.000 | 31.500 | 9041060315000 |
| 31.50 - 31.99 | 31.750 | 1 1/4 | 31.20 | 168.00 | 60.00 | 53.40 | 4071 6.000 | 31.505 | 9041060315050 |
| 32.00 - 32.99 | 32.000 | | 31.70 | 172.00 | 60.00 | 55.10 | 4071 6.001 | 32.000 | 9041060320000 |
| 32.00 - 32.99 | 31.750 | 1 1/4 | 31.70 | 172.00 | 60.00 | 55.10 | 4071 6.001 | 32.005 | 9041060320050 |
| 33.00 - 33.99 | 32.000 | | 32.70 | 175.00 | 60.00 | 56.80 | 4071 6.001 | 33.000 | 9041060330000 |
| 33.00 - 33.99 | 31.750 | 1 1/4 | 32.70 | 175.00 | 60.00 | 56.80 | 4071 6.001 | 33.005 | 9041060330050 |
| 34.00 - 34.99 | 32.000 | | 33.70 | 178.00 | 60.00 | 58.50 | 4071 6.001 | 34.000 | 9041060340000 |
| 34.00 - 34.99 | 31.750 | 1 1/4 | 33.70 | 178.00 | 60.00 | 58.50 | 4071 6.001 | 34.005 | 9041060340050 |
| 35.00 - 35.99 | 32.000 | | 34.70 | 181.00 | 60.00 | 60.20 | 4071 6.001 | 35.000 | 9041060350000 |
| 35.00 - 35.99 | 31.750 | 1 1/4 | 34.70 | 181.00 | 60.00 | 60.20 | 4071 6.001 | 35.005 | 9041060350050 |
| 36.00 - 36.99 | 32.000 | | 35.70 | 184.00 | 60.00 | 61.80 | 4071 6.002 | 36.000 | 9041060360000 |
| 36.00 - 36.99 | 31.750 | 1 1/4 | 35.70 | 184.00 | 60.00 | 61.80 | 4071 6.002 | 36.005 | 9041060360050 |
| 37.00 - 37.99 | 32.000 | | 36.70 | 188.00 | 60.00 | 63.50 | 4071 6.002 | 37.000 | 9041060370000 |
| 37.00 - 37.99 | 31.750 | 1 1/4 | 36.70 | 188.00 | 60.00 | 63.50 | 4071 6.002 | 37.005 | 9041060370050 |
| 38.00 - 38.99 | 32.000 | | 37.70 | 191.00 | 60.00 | 65.20 | 4071 6.002 | 38.000 | 9041060380000 |
| 38.00 - 38.99 | 31.750 | 1 1/4 | 37.70 | 191.00 | 60.00 | 65.20 | 4071 6.002 | 38.005 | 9041060380050 |
| 39.00 - 40.00 | 32.000 | | 38.70 | 194.00 | 60.00 | 66.90 | 4071 6.002 | 39.000 | 9041060390000 |
| 39.00 - 40.00 | 31.750 | 1 1/4 | 38.70 | 194.00 | 60.00 | 66.90 | 4071 6.002 | 39.005 | 9041060390050 |



Tool material

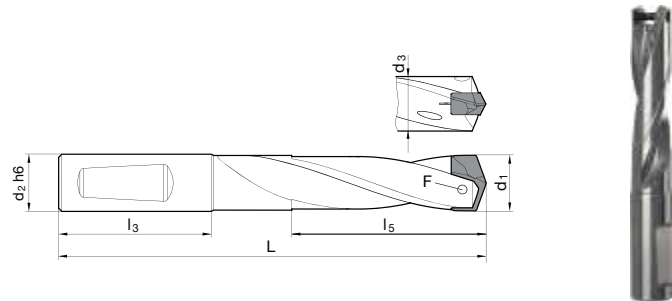
Surface



| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

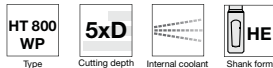
nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. 4071 included • screwdriver art. no. 1612 included

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | l3 mm | l5 mm | F | Code no. | EDP # |
|---------------|----------|-------------|-------|--------|-------|-------|------------|----------|-------------------------------|
| 11.00 - 11.49 | 12.000 | | 10.70 | 101.00 | 45.00 | 36.60 | 4071 2.200 | 11.000 | 9041070110000 |
| 11.00 - 11.49 | 12.700 | 1/2 | 10.70 | 101.00 | 45.00 | 36.60 | 4071 2.200 | 11.005 | 9041070110050 |
| 11.50 - 11.99 | 12.000 | | 11.20 | 103.00 | 45.00 | 38.10 | 4071 2.200 | 11.500 | 9041070115000 |
| 11.50 - 11.99 | 12.700 | 1/2 | 11.20 | 103.00 | 45.00 | 38.10 | 4071 2.200 | 11.505 | 9041070115050 |
| 12.00 - 12.49 | 12.000 | | 11.70 | 106.00 | 45.00 | 39.70 | 4071 2.201 | 12.000 | 9041070120000 |
| 12.00 - 12.49 | 12.700 | 1/2 | 11.70 | 106.00 | 45.00 | 39.70 | 4071 2.201 | 12.005 | 9041070120050 |
| 12.50 - 12.99 | 14.000 | | 12.20 | 108.00 | 45.00 | 41.30 | 4071 2.201 | 12.500 | 9041070125000 |
| 12.50 - 12.99 | 15.875 | 5/8 | 12.20 | 108.00 | 45.00 | 41.30 | 4071 2.201 | 12.505 | 9041070125050 |
| 13.00 - 13.49 | 14.000 | | 12.70 | 110.00 | 45.00 | 42.90 | 4071 2.500 | 13.000 | 9041070130000 |
| 13.00 - 13.49 | 15.875 | 5/8 | 12.70 | 110.00 | 45.00 | 42.90 | 4071 2.500 | 13.005 | 9041070130050 |
| 13.50 - 13.99 | 14.000 | | 13.20 | 113.00 | 45.00 | 44.60 | 4071 2.500 | 13.500 | 9041070135000 |
| 13.50 - 13.99 | 15.875 | 5/8 | 13.20 | 113.00 | 45.00 | 44.60 | 4071 2.500 | 13.505 | 9041070135050 |
| 14.00 - 14.49 | 14.000 | | 13.70 | 115.00 | 45.00 | 46.20 | 4071 3.000 | 14.000 | 9041070140000 |
| 14.00 - 14.49 | 15.875 | 5/8 | 13.70 | 115.00 | 45.00 | 46.20 | 4071 3.000 | 14.005 | 9041070140050 |
| 14.50 - 14.99 | 16.000 | | 14.20 | 120.00 | 48.00 | 47.80 | 4071 3.000 | 14.500 | 9041070145000 |
| 14.50 - 14.99 | 15.875 | 5/8 | 14.20 | 120.00 | 48.00 | 47.80 | 4071 3.000 | 14.505 | 9041070145050 |
| 15.00 - 15.49 | 16.000 | | 14.70 | 123.00 | 48.00 | 49.30 | 4071 3.001 | 15.000 | 9041070150000 |
| 15.00 - 15.49 | 15.875 | 5/8 | 14.70 | 123.00 | 48.00 | 49.30 | 4071 3.001 | 15.005 | 9041070150050 |
| 15.50 - 15.99 | 16.000 | | 15.20 | 125.00 | 48.00 | 50.90 | 4071 3.001 | 15.500 | 9041070155000 |
| 15.50 - 15.99 | 15.875 | 5/8 | 15.20 | 125.00 | 48.00 | 50.90 | 4071 3.001 | 15.505 | 9041070155050 |
| 16.00 - 16.49 | 16.000 | | 15.70 | 127.00 | 48.00 | 52.90 | 4071 3.500 | 16.000 | 9041070160000 |
| 16.00 - 16.49 | 15.875 | 5/8 | 15.70 | 127.00 | 48.00 | 52.90 | 4071 3.500 | 16.005 | 9041070160050 |
| 16.50 - 16.99 | 18.000 | | 16.20 | 130.00 | 48.00 | 54.10 | 4071 3.500 | 16.500 | 9041070165000 |
| 16.50 - 16.99 | 19.050 | 3/4 | 16.20 | 130.00 | 48.00 | 54.10 | 4071 3.500 | 16.505 | 9041070165050 |
| 17.00 - 17.49 | 18.000 | | 16.70 | 132.00 | 48.00 | 55.80 | 4071 3.500 | 17.000 | 9041070170000 |
| 17.00 - 17.49 | 19.050 | 3/4 | 16.70 | 132.00 | 48.00 | 55.80 | 4071 3.500 | 17.005 | 9041070170050 |
| 17.50 - 17.99 | 18.000 | | 17.20 | 134.00 | 48.00 | 57.40 | 4071 3.500 | 17.500 | 9041070175000 |
| 17.50 - 17.99 | 19.050 | 3/4 | 17.20 | 134.00 | 48.00 | 57.40 | 4071 3.500 | 17.505 | 9041070175050 |
| 18.00 - 18.49 | 18.000 | | 17.70 | 137.00 | 48.00 | 58.90 | 4071 4.000 | 18.000 | 9041070180000 |
| 18.00 - 18.49 | 19.050 | 3/4 | 17.70 | 137.00 | 48.00 | 58.90 | 4071 4.000 | 18.005 | 9041070180050 |
| 18.50 - 18.99 | 20.000 | | 18.20 | 141.00 | 50.00 | 60.50 | 4071 4.000 | 18.500 | 9041070185000 |
| 18.50 - 18.99 | 19.050 | 3/4 | 18.20 | 141.00 | 50.00 | 60.50 | 4071 4.000 | 18.505 | 9041070185050 |
| 19.00 - 19.49 | 20.000 | | 18.70 | 143.00 | 50.00 | 62.10 | 4071 4.000 | 19.000 | 9041070190000 |
| 19.00 - 19.49 | 19.050 | 3/4 | 18.70 | 143.00 | 50.00 | 62.10 | 4071 4.000 | 19.005 | 9041070190050 |
| 19.50 - 19.99 | 20.000 | | 19.20 | 146.00 | 50.00 | 63.70 | 4071 4.000 | 19.500 | 9041070195000 |
| 19.50 - 19.99 | 19.050 | 3/4 | 19.20 | 146.00 | 50.00 | 63.70 | 4071 4.000 | 19.505 | 9041070195050 |
| 20.00 - 20.49 | 20.000 | | 19.70 | 148.00 | 50.00 | 65.30 | 4071 4.500 | 20.000 | 9041070200000 |
| 20.00 - 20.49 | 19.050 | 3/4 | 19.70 | 148.00 | 50.00 | 65.30 | 4071 4.500 | 20.005 | 9041070200050 |
| 20.50 - 20.99 | 25.000 | | 20.20 | 159.00 | 56.00 | 67.00 | 4071 4.500 | 20.500 | 9041070205000 |
| 20.50 - 20.99 | 25.400 | 1 | 20.20 | 159.00 | 56.00 | 67.00 | 4071 4.500 | 20.505 | 9041070205050 |
| 21.00 - 21.49 | 25.000 | | 20.70 | 161.00 | 56.00 | 68.60 | 4071 4.500 | 21.000 | 9041070210000 |
| 21.00 - 21.49 | 25.400 | 1 | 20.70 | 161.00 | 56.00 | 68.60 | 4071 4.500 | 21.005 | 9041070210050 |
| 21.50 - 21.99 | 25.000 | | 21.20 | 163.00 | 56.00 | 70.10 | 4071 4.500 | 21.500 | 9041070215000 |

| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | l3 mm | l5 mm | F | Code no. | EDP # |
|---------------|-------------|----------------|----------|---------|----------|----------|------------|----------|-------------------------------|
| 21.50 - 21.99 | 25.400 | 1 | 21.20 | 163.00 | 56.00 | 70.10 | 4071 4.500 | 21.505 | 9041070215050 |
| 22.00 - 22.49 | 25.000 | | 21.70 | 165.00 | 56.00 | 71.70 | 4071 5.000 | 22.000 | 9041070220000 |
| 22.00 - 22.49 | 25.400 | 1 | 21.70 | 165.00 | 56.00 | 71.70 | 4071 5.000 | 22.005 | 9041070220050 |
| 22.50 - 22.99 | 25.000 | | 22.20 | 168.00 | 56.00 | 73.30 | 4071 5.000 | 22.500 | 9041070225000 |
| 22.50 - 22.99 | 25.400 | 1 | 22.20 | 168.00 | 56.00 | 73.30 | 4071 5.000 | 22.505 | 9041070225050 |
| 23.00 - 23.49 | 25.000 | | 22.70 | 170.00 | 56.00 | 74.90 | 4071 5.000 | 23.000 | 9041070230000 |
| 23.00 - 23.49 | 25.400 | 1 | 22.70 | 170.00 | 56.00 | 74.90 | 4071 5.000 | 23.005 | 9041070230050 |
| 23.50 - 23.99 | 25.000 | | 23.20 | 173.00 | 56.00 | 76.50 | 4071 5.000 | 23.500 | 9041070235000 |
| 23.50 - 23.99 | 25.400 | 1 | 23.20 | 173.00 | 56.00 | 76.50 | 4071 5.000 | 23.505 | 9041070235050 |
| 24.00 - 24.49 | 25.000 | | 23.70 | 175.00 | 56.00 | 78.10 | 4071 5.001 | 24.000 | 9041070240000 |
| 24.00 - 24.49 | 25.400 | 1 | 23.70 | 175.00 | 56.00 | 78.10 | 4071 5.001 | 24.005 | 9041070240050 |
| 24.50 - 24.99 | 25.000 | | 24.20 | 177.00 | 56.00 | 79.70 | 4071 5.001 | 24.500 | 9041070245000 |
| 24.50 - 24.99 | 25.400 | 1 | 24.20 | 177.00 | 56.00 | 79.70 | 4071 5.001 | 24.505 | 9041070245050 |
| 25.00 - 25.49 | 25.000 | | 24.70 | 180.00 | 56.00 | 81.30 | 4071 5.001 | 25.000 | 9041070250000 |
| 25.00 - 25.49 | 25.400 | 1 | 24.70 | 180.00 | 56.00 | 81.30 | 4071 5.001 | 25.005 | 9041070250050 |
| 25.50 - 25.99 | 32.000 | | 25.20 | 187.00 | 60.00 | 82.90 | 4071 5.001 | 25.500 | 9041070255000 |
| 25.50 - 25.99 | 31.750 | 1 1/4 | 25.20 | 187.00 | 60.00 | 82.90 | 4071 5.001 | 25.505 | 9041070255050 |
| 26.00 - 26.49 | 32.000 | | 25.70 | 191.00 | 60.00 | 84.00 | 4071 5.003 | 26.000 | 9041070260000 |
| 26.00 - 26.49 | 31.750 | 1 1/4 | 25.70 | 191.00 | 60.00 | 84.00 | 4071 5.003 | 26.005 | 9041070260050 |
| 26.50 - 26.99 | 32.000 | | 26.20 | 193.00 | 60.00 | 86.10 | 4071 5.003 | 26.500 | 9041070265000 |
| 26.50 - 26.99 | 31.750 | 1 1/4 | 26.20 | 193.00 | 60.00 | 86.10 | 4071 5.003 | 26.505 | 9041070265050 |
| 27.00 - 27.49 | 32.000 | | 26.70 | 196.00 | 60.00 | 87.20 | 4071 5.003 | 27.000 | 9041070270000 |
| 27.00 - 27.49 | 31.750 | 1 1/4 | 26.70 | 196.00 | 60.00 | 87.20 | 4071 5.003 | 27.005 | 9041070270050 |
| 27.50 - 27.99 | 32.000 | | 27.20 | 198.00 | 60.00 | 88.90 | 4071 5.003 | 27.500 | 9041070275000 |
| 27.50 - 27.99 | 31.750 | 1 1/4 | 27.20 | 198.00 | 60.00 | 88.90 | 4071 5.003 | 27.505 | 9041070275050 |
| 28.00 - 28.49 | 32.000 | | 27.70 | 200.00 | 60.00 | 90.50 | 4071 5.003 | 28.000 | 9041070280000 |
| 28.00 - 28.49 | 31.750 | 1 1/4 | 27.70 | 200.00 | 60.00 | 90.50 | 4071 5.003 | 28.005 | 9041070280050 |
| 28.50 - 28.99 | 32.000 | | 28.20 | 202.00 | 60.00 | 92.50 | 4071 5.003 | 28.500 | 9041070285000 |
| 28.50 - 28.99 | 31.750 | 1 1/4 | 28.20 | 202.00 | 60.00 | 92.50 | 4071 5.003 | 28.505 | 9041070285050 |
| 29.00 - 29.49 | 32.000 | | 28.70 | 205.00 | 60.00 | 94.60 | 4071 5.003 | 29.000 | 9041070290000 |
| 29.00 - 29.49 | 31.750 | 1 1/4 | 28.70 | 205.00 | 60.00 | 94.60 | 4071 5.003 | 29.005 | 9041070290050 |
| 29.50 - 29.99 | 32.000 | | 29.20 | 207.00 | 60.00 | 95.10 | 4071 5.003 | 29.500 | 9041070295000 |
| 29.50 - 29.99 | 31.750 | 1 1/4 | 29.20 | 207.00 | 60.00 | 95.10 | 4071 5.003 | 29.505 | 9041070295050 |
| 30.00 - 30.49 | 32.000 | | 29.70 | 210.00 | 60.00 | 96.70 | 4071 6.000 | 30.000 | 9041070300000 |
| 30.00 - 30.49 | 31.750 | 1 1/4 | 29.70 | 210.00 | 60.00 | 96.70 | 4071 6.000 | 30.005 | 9041070300050 |
| 30.50 - 30.99 | 32.000 | | 30.20 | 212.00 | 60.00 | 98.30 | 4071 6.000 | 30.500 | 9041070305000 |
| 30.50 - 30.99 | 31.750 | 1 1/4 | 30.20 | 212.00 | 60.00 | 98.30 | 4071 6.000 | 30.505 | 9041070305050 |
| 31.00 - 31.49 | 32.000 | | 30.70 | 214.00 | 60.00 | 99.80 | 4071 6.000 | 31.000 | 9041070310000 |
| 31.00 - 31.49 | 31.750 | 1 1/4 | 30.70 | 214.00 | 60.00 | 99.80 | 4071 6.000 | 31.005 | 9041070310050 |
| 31.50 - 31.99 | 32.000 | | 31.20 | 216.00 | 60.00 | 101.40 | 4071 6.000 | 31.500 | 9041070315000 |
| 31.50 - 31.99 | 31.750 | 1 1/4 | 31.20 | 216.00 | 60.00 | 101.40 | 4071 6.000 | 31.505 | 9041070315050 |
| 32.00 - 32.99 | 32.000 | | 31.70 | 221.00 | 60.00 | 104.60 | 4071 6.001 | 32.000 | 9041070320000 |
| 32.00 - 32.99 | 31.750 | 1 1/4 | 31.70 | 221.00 | 60.00 | 104.60 | 4071 6.001 | 32.005 | 9041070320050 |
| 33.00 - 33.99 | 32.000 | | 32.70 | 226.00 | 60.00 | 107.80 | 4071 6.001 | 33.000 | 9041070330000 |
| 33.00 - 33.99 | 31.750 | 1 1/4 | 32.70 | 226.00 | 60.00 | 107.80 | 4071 6.001 | 33.005 | 9041070330050 |
| 34.00 - 34.99 | 32.000 | | 33.70 | 230.00 | 60.00 | 111.00 | 4071 6.001 | 34.000 | 9041070340000 |
| 34.00 - 34.99 | 31.750 | 1 1/4 | 33.70 | 230.00 | 60.00 | 111.00 | 4071 6.001 | 34.005 | 9041070340050 |
| 35.00 - 35.99 | 32.000 | | 34.70 | 235.00 | 60.00 | 114.20 | 4071 6.001 | 35.000 | 9041070350000 |
| 35.00 - 35.99 | 31.750 | 1 1/4 | 34.70 | 235.00 | 60.00 | 114.20 | 4071 6.001 | 35.005 | 9041070350050 |
| 36.00 - 36.99 | 32.000 | | 35.70 | 240.00 | 60.00 | 117.30 | 4071 6.002 | 36.000 | 9041070360000 |
| 36.00 - 36.99 | 31.750 | 1 1/4 | 35.70 | 240.00 | 60.00 | 117.30 | 4071 6.002 | 36.005 | 9041070360050 |
| 37.00 - 37.99 | 32.000 | | 36.70 | 245.00 | 60.00 | 120.50 | 4071 6.002 | 37.000 | 9041070370000 |
| 37.00 - 37.99 | 31.750 | 1 1/4 | 36.70 | 245.00 | 60.00 | 120.50 | 4071 6.002 | 37.005 | 9041070370050 |
| 38.00 - 38.99 | 32.000 | | 37.70 | 249.00 | 60.00 | 123.70 | 4071 6.002 | 38.000 | 9041070380000 |
| 38.00 - 38.99 | 31.750 | 1 1/4 | 37.70 | 249.00 | 60.00 | 123.70 | 4071 6.002 | 38.005 | 9041070380050 |
| 39.00 - 40.00 | 32.000 | | 38.70 | 254.00 | 60.00 | 126.90 | 4071 6.002 | 39.000 | 9041070390000 |
| 39.00 - 40.00 | 31.750 | 1 1/4 | 38.70 | 254.00 | 60.00 | 126.90 | 4071 6.002 | 39.005 | 9041070390050 |



Tool material

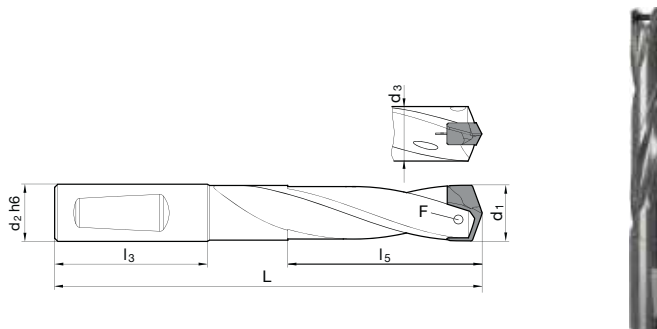
Surface



| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

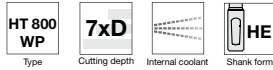
nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. 4071 included • screwdriver art. no. 1612 included

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | l3 mm | l5 mm | F | Code no. | EDP # |
|---------------|----------|-------------|-------|--------|-------|--------|------------|----------|-------------------------------|
| 11.00 - 11.49 | 12.000 | | 10.70 | 124.00 | 45.00 | 59.60 | 4071 2.200 | 11.000 | 9041080110000 |
| 11.00 - 11.49 | 12.700 | 1/2 | 10.70 | 124.00 | 45.00 | 59.60 | 4071 2.200 | 11.005 | 9041080110050 |
| 11.50 - 11.99 | 12.000 | | 11.20 | 127.00 | 45.00 | 62.10 | 4071 2.200 | 11.500 | 9041080115000 |
| 11.50 - 11.99 | 12.700 | 1/2 | 11.20 | 127.00 | 45.00 | 62.10 | 4071 2.200 | 11.505 | 9041080115050 |
| 12.00 - 12.49 | 12.000 | | 11.70 | 131.00 | 45.00 | 64.70 | 4071 2.201 | 12.000 | 9041080120000 |
| 12.00 - 12.49 | 12.700 | 1/2 | 11.70 | 131.00 | 45.00 | 64.70 | 4071 2.201 | 12.005 | 9041080120050 |
| 12.50 - 12.99 | 14.000 | | 12.20 | 134.00 | 45.00 | 67.30 | 4071 2.201 | 12.500 | 9041080125000 |
| 12.50 - 12.99 | 15.875 | 5/8 | 12.20 | 134.00 | 45.00 | 67.30 | 4071 2.201 | 12.505 | 9041080125050 |
| 13.00 - 13.49 | 14.000 | | 12.70 | 137.00 | 45.00 | 69.90 | 4071 2.500 | 13.000 | 9041080130000 |
| 13.00 - 13.49 | 15.875 | 5/8 | 12.70 | 137.00 | 45.00 | 69.90 | 4071 2.500 | 13.005 | 9041080130050 |
| 13.50 - 13.99 | 14.000 | | 13.20 | 141.00 | 45.00 | 72.60 | 4071 2.500 | 13.500 | 9041080135000 |
| 13.50 - 13.99 | 15.875 | 5/8 | 13.20 | 141.00 | 45.00 | 72.60 | 4071 2.500 | 13.505 | 9041080135050 |
| 14.00 - 14.49 | 14.000 | | 13.70 | 144.00 | 45.00 | 75.20 | 4071 3.000 | 14.000 | 9041080140000 |
| 14.00 - 14.49 | 15.875 | 5/8 | 13.70 | 144.00 | 45.00 | 75.20 | 4071 3.000 | 14.005 | 9041080140050 |
| 14.50 - 14.99 | 16.000 | | 14.20 | 150.00 | 48.00 | 77.80 | 4071 3.000 | 14.500 | 9041080145000 |
| 14.50 - 14.99 | 15.875 | 5/8 | 14.20 | 150.00 | 48.00 | 77.80 | 4071 3.000 | 14.505 | 9041080145050 |
| 15.00 - 15.49 | 16.000 | | 14.70 | 154.00 | 48.00 | 80.30 | 4071 3.001 | 15.000 | 9041080150000 |
| 15.00 - 15.49 | 15.875 | 5/8 | 14.70 | 154.00 | 48.00 | 80.30 | 4071 3.001 | 15.005 | 9041080150050 |
| 15.50 - 15.99 | 16.000 | | 15.20 | 157.00 | 48.00 | 82.90 | 4071 3.001 | 15.500 | 9041080155000 |
| 15.50 - 15.99 | 15.875 | 5/8 | 15.20 | 157.00 | 48.00 | 82.90 | 4071 3.001 | 15.505 | 9041080155050 |
| 16.00 - 16.49 | 16.000 | | 15.70 | 160.00 | 48.00 | 85.90 | 4071 3.500 | 16.000 | 9041080160000 |
| 16.00 - 16.49 | 15.875 | 5/8 | 15.70 | 160.00 | 48.00 | 85.90 | 4071 3.500 | 16.005 | 9041080160050 |
| 16.50 - 16.99 | 18.000 | | 16.20 | 164.00 | 48.00 | 88.10 | 4071 3.500 | 16.500 | 9041080165000 |
| 16.50 - 16.99 | 19.050 | 3/4 | 16.20 | 164.00 | 48.00 | 88.10 | 4071 3.500 | 16.505 | 9041080165050 |
| 17.00 - 17.49 | 18.000 | | 16.70 | 167.00 | 48.00 | 90.80 | 4071 3.500 | 17.000 | 9041080170000 |
| 17.00 - 17.49 | 19.050 | 3/4 | 16.70 | 167.00 | 48.00 | 90.80 | 4071 3.500 | 17.005 | 9041080170050 |
| 17.50 - 17.99 | 18.000 | | 17.20 | 170.00 | 48.00 | 93.40 | 4071 3.500 | 17.500 | 9041080175000 |
| 17.50 - 17.99 | 19.050 | 3/4 | 17.20 | 170.00 | 48.00 | 93.40 | 4071 3.500 | 17.505 | 9041080175050 |
| 18.00 - 18.49 | 18.000 | | 17.70 | 174.00 | 48.00 | 95.90 | 4071 4.000 | 18.000 | 9041080180000 |
| 18.00 - 18.49 | 19.050 | 3/4 | 17.70 | 174.00 | 48.00 | 95.90 | 4071 4.000 | 18.005 | 9041080180050 |
| 18.50 - 18.99 | 20.000 | | 18.20 | 179.00 | 50.00 | 98.50 | 4071 4.000 | 18.500 | 9041080185000 |
| 18.50 - 18.99 | 19.050 | 3/4 | 18.20 | 179.00 | 50.00 | 98.50 | 4071 4.000 | 18.505 | 9041080185050 |
| 19.00 - 19.49 | 20.000 | | 18.70 | 182.00 | 50.00 | 101.10 | 4071 4.000 | 19.000 | 9041080190000 |
| 19.00 - 19.49 | 19.050 | 3/4 | 18.70 | 182.00 | 50.00 | 101.10 | 4071 4.000 | 19.005 | 9041080190050 |
| 19.50 - 19.99 | 20.000 | | 19.20 | 186.00 | 50.00 | 103.70 | 4071 4.000 | 19.500 | 9041080195000 |
| 19.50 - 19.99 | 19.050 | 3/4 | 19.20 | 186.00 | 50.00 | 103.70 | 4071 4.000 | 19.505 | 9041080195050 |
| 20.00 - 20.49 | 20.000 | | 19.70 | 189.00 | 50.00 | 106.30 | 4071 4.500 | 20.000 | 9041080200000 |
| 20.00 - 20.49 | 19.050 | 3/4 | 19.70 | 189.00 | 50.00 | 106.30 | 4071 4.500 | 20.005 | 9041080200050 |
| 20.50 - 20.99 | 25.000 | | 20.20 | 201.00 | 56.00 | 109.00 | 4071 4.500 | 20.500 | 9041080205000 |
| 20.50 - 20.99 | 25.400 | 1 | 20.20 | 201.00 | 56.00 | 109.00 | 4071 4.500 | 20.505 | 9041080205050 |
| 21.00 - 21.49 | 25.000 | | 20.70 | 204.00 | 56.00 | 111.60 | 4071 4.500 | 21.000 | 9041080210000 |
| 21.00 - 21.49 | 25.400 | 1 | 20.70 | 204.00 | 56.00 | 111.60 | 4071 4.500 | 21.005 | 9041080210050 |
| 21.50 - 21.99 | 25.000 | | 21.20 | 207.00 | 56.00 | 114.10 | 4071 4.500 | 21.500 | 9041080215000 |

| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | I3 mm | I5 mm | F | Code no. | EDP # |
|---------------|-------------|----------------|----------|---------|----------|----------|------------|----------|-------------------------------|
| 21.50 - 21.99 | 25.400 | 1 | 21.20 | 207.00 | 56.00 | 114.10 | 4071 4.500 | 21.505 | 9041080215050 |
| 22.00 - 22.49 | 25.000 | | 21.70 | 210.00 | 56.00 | 116.70 | 4071 5.000 | 22.000 | 9041080220000 |
| 22.00 - 22.49 | 25.400 | 1 | 21.70 | 210.00 | 56.00 | 116.70 | 4071 5.000 | 22.005 | 9041080220050 |
| 22.50 - 22.99 | 25.000 | | 22.20 | 214.00 | 56.00 | 119.30 | 4071 5.000 | 22.500 | 9041080225000 |
| 22.50 - 22.99 | 25.400 | 1 | 22.20 | 214.00 | 56.00 | 119.30 | 4071 5.000 | 22.505 | 9041080225050 |
| 23.00 - 23.49 | 25.000 | | 22.70 | 217.00 | 56.00 | 121.90 | 4071 5.000 | 23.000 | 9041080230000 |
| 23.00 - 23.49 | 25.400 | 1 | 22.70 | 217.00 | 56.00 | 121.90 | 4071 5.000 | 23.005 | 9041080230050 |
| 23.50 - 23.99 | 25.000 | | 23.20 | 221.00 | 56.00 | 124.50 | 4071 5.000 | 23.500 | 9041080235000 |
| 23.50 - 23.99 | 25.400 | 1 | 23.20 | 221.00 | 56.00 | 124.50 | 4071 5.000 | 23.505 | 9041080235050 |
| 24.00 - 24.49 | 25.000 | | 23.70 | 224.00 | 56.00 | 127.10 | 4071 5.001 | 24.000 | 9041080240000 |
| 24.00 - 24.49 | 25.400 | 1 | 23.70 | 224.00 | 56.00 | 127.10 | 4071 5.001 | 24.005 | 9041080240050 |
| 24.50 - 24.99 | 25.000 | | 24.20 | 227.00 | 56.00 | 129.70 | 4071 5.001 | 24.500 | 9041080245000 |
| 24.50 - 24.99 | 25.400 | 1 | 24.20 | 227.00 | 56.00 | 129.70 | 4071 5.001 | 24.505 | 9041080245050 |
| 25.00 - 25.49 | 25.000 | | 24.70 | 231.00 | 56.00 | 132.30 | 4071 5.001 | 25.000 | 9041080250000 |
| 25.00 - 25.49 | 25.400 | 1 | 24.70 | 231.00 | 56.00 | 132.30 | 4071 5.001 | 25.005 | 9041080250050 |
| 25.50 - 25.99 | 32.000 | | 25.20 | 239.00 | 60.00 | 134.90 | 4071 5.001 | 25.500 | 9041080255000 |
| 25.50 - 25.99 | 31.750 | 1 1/4 | 25.20 | 239.00 | 60.00 | 134.90 | 4071 5.001 | 25.505 | 9041080255050 |
| 26.00 - 26.49 | 32.000 | | 25.70 | 244.00 | 60.00 | 137.00 | 4071 5.003 | 26.000 | 9041080260000 |
| 26.00 - 26.49 | 31.750 | 1 1/4 | 25.70 | 244.00 | 60.00 | 137.00 | 4071 5.003 | 26.005 | 9041080260050 |
| 26.50 - 26.99 | 32.000 | | 26.20 | 247.00 | 60.00 | 140.00 | 4071 5.003 | 26.500 | 9041080265000 |
| 26.50 - 26.99 | 31.750 | 1 1/4 | 26.20 | 247.00 | 60.00 | 140.00 | 4071 5.003 | 26.505 | 9041080265050 |
| 27.00 - 27.49 | 32.000 | | 26.70 | 251.00 | 60.00 | 142.00 | 4071 5.003 | 27.000 | 9041080270000 |
| 27.00 - 27.49 | 31.750 | 1 1/4 | 26.70 | 251.00 | 60.00 | 142.00 | 4071 5.003 | 27.005 | 9041080270050 |
| 27.50 - 27.99 | 32.000 | | 27.20 | 254.00 | 60.00 | 144.80 | 4071 5.003 | 27.500 | 9041080275000 |
| 27.50 - 27.99 | 31.750 | 1 1/4 | 27.20 | 254.00 | 60.00 | 144.80 | 4071 5.003 | 27.505 | 9041080275050 |
| 28.00 - 28.49 | 32.000 | | 27.70 | 257.00 | 60.00 | 147.40 | 4071 5.003 | 28.000 | 9041080280000 |
| 28.00 - 28.49 | 31.750 | 1 1/4 | 27.70 | 257.00 | 60.00 | 147.40 | 4071 5.003 | 28.005 | 9041080280050 |
| 28.50 - 28.99 | 32.000 | | 28.20 | 260.00 | 60.00 | 150.40 | 4071 5.003 | 28.500 | 9041080285000 |
| 28.50 - 28.99 | 31.750 | 1 1/4 | 28.20 | 260.00 | 60.00 | 150.40 | 4071 5.003 | 28.505 | 9041080285050 |
| 29.00 - 29.49 | 32.000 | | 28.70 | 264.00 | 60.00 | 153.50 | 4071 5.003 | 29.000 | 9041080290000 |
| 29.00 - 29.49 | 31.750 | 1 1/4 | 28.70 | 264.00 | 60.00 | 153.50 | 4071 5.003 | 29.005 | 9041080290050 |
| 29.50 - 29.99 | 32.000 | | 29.20 | 267.00 | 60.00 | 155.10 | 4071 5.003 | 29.500 | 9041080295000 |
| 29.50 - 29.99 | 31.750 | 1 1/4 | 29.20 | 267.00 | 60.00 | 155.10 | 4071 5.003 | 29.505 | 9041080295050 |
| 30.00 - 30.49 | 32.000 | | 29.70 | 271.00 | 60.00 | 157.60 | 4071 6.000 | 30.000 | 9041080300000 |
| 30.00 - 30.49 | 31.750 | 1 1/4 | 29.70 | 271.00 | 60.00 | 157.60 | 4071 6.000 | 30.005 | 9041080300050 |
| 30.50 - 30.99 | 32.000 | | 30.20 | 274.00 | 60.00 | 160.20 | 4071 6.000 | 30.500 | 9041080305000 |
| 30.50 - 30.99 | 31.750 | 1 1/4 | 30.20 | 274.00 | 60.00 | 160.20 | 4071 6.000 | 30.505 | 9041080305050 |
| 31.00 - 31.49 | 32.000 | | 30.70 | 277.00 | 60.00 | 162.80 | 4071 6.000 | 31.000 | 9041080310000 |
| 31.00 - 31.49 | 31.750 | 1 1/4 | 30.70 | 277.00 | 60.00 | 162.80 | 4071 6.000 | 31.005 | 9041080310050 |
| 31.50 - 31.99 | 32.000 | | 31.20 | 280.00 | 60.00 | 165.40 | 4071 6.000 | 31.500 | 9041080315000 |
| 31.50 - 31.99 | 31.750 | 1 1/4 | 31.20 | 280.00 | 60.00 | 165.40 | 4071 6.000 | 31.505 | 9041080315050 |
| 32.00 - 32.99 | 32.000 | | 31.70 | 287.00 | 60.00 | 170.60 | 4071 6.001 | 32.000 | 9041080320000 |
| 32.00 - 32.99 | 31.750 | 1 1/4 | 31.70 | 287.00 | 60.00 | 170.60 | 4071 6.001 | 32.005 | 9041080320050 |
| 33.00 - 33.99 | 32.000 | | 32.70 | 294.00 | 60.00 | 175.80 | 4071 6.001 | 33.000 | 9041080330000 |
| 33.00 - 33.99 | 31.750 | 1 1/4 | 32.70 | 294.00 | 60.00 | 175.80 | 4071 6.001 | 33.005 | 9041080330050 |
| 34.00 - 34.99 | 32.000 | | 33.70 | 300.00 | 60.00 | 181.00 | 4071 6.001 | 34.000 | 9041080340000 |
| 34.00 - 34.99 | 31.750 | 1 1/4 | 33.70 | 300.00 | 60.00 | 181.00 | 4071 6.001 | 34.005 | 9041080340050 |
| 35.00 - 35.99 | 32.000 | | 34.70 | 307.00 | 60.00 | 186.20 | 4071 6.001 | 35.000 | 9041080350000 |
| 35.00 - 35.99 | 31.750 | 1 1/4 | 34.70 | 307.00 | 60.00 | 186.20 | 4071 6.001 | 35.005 | 9041080350050 |
| 36.00 - 36.99 | 32.000 | | 35.70 | 314.00 | 60.00 | 191.30 | 4071 6.002 | 36.000 | 9041080360000 |
| 36.00 - 36.99 | 31.750 | 1 1/4 | 35.70 | 314.00 | 60.00 | 191.30 | 4071 6.002 | 36.005 | 9041080360050 |
| 37.00 - 37.99 | 32.000 | | 36.70 | 321.00 | 60.00 | 196.50 | 4071 6.002 | 37.000 | 9041080370000 |
| 37.00 - 37.99 | 31.750 | 1 1/4 | 36.70 | 321.00 | 60.00 | 196.50 | 4071 6.002 | 37.005 | 9041080370050 |
| 38.00 - 38.99 | 32.000 | | 37.70 | 327.00 | 60.00 | 201.70 | 4071 6.002 | 38.000 | 9041080380000 |
| 38.00 - 38.99 | 31.750 | 1 1/4 | 37.70 | 327.00 | 60.00 | 201.70 | 4071 6.002 | 38.005 | 9041080380050 |
| 39.00 - 40.00 | 32.000 | | 38.70 | 334.00 | 60.00 | 206.90 | 4071 6.002 | 39.000 | 9041080390000 |
| 39.00 - 40.00 | 31.750 | 1 1/4 | 38.70 | 334.00 | 60.00 | 206.90 | 4071 6.002 | 39.005 | 9041080390050 |



Tool material

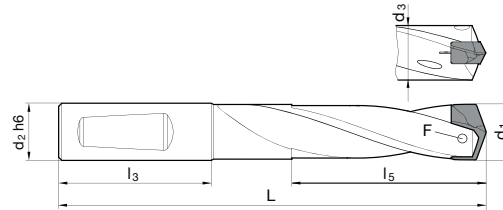
Surface



| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

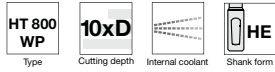
nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. 4071 included • screwdriver art. no. 1612 included

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | l3 mm | l5 mm | F | Code no. | EDP # |
|---------------|----------|-------------|-------|--------|-------|--------|------------|----------|-------------------------------|
| 11.00 - 11.49 | 12.000 | | 10.70 | 147.00 | 45.00 | 82.60 | 4071 2.200 | 11.000 | 9041090110000 |
| 11.00 - 11.49 | 12.700 | 1/2 | 10.70 | 147.00 | 45.00 | 82.60 | 4071 2.200 | 11.005 | 9041090110050 |
| 11.50 - 11.99 | 12.000 | | 11.20 | 151.00 | 45.00 | 86.10 | 4071 2.200 | 11.500 | 9041090115000 |
| 11.50 - 11.99 | 12.700 | 1/2 | 11.20 | 151.00 | 45.00 | 86.10 | 4071 2.200 | 11.505 | 9041090115050 |
| 12.00 - 12.49 | 12.000 | | 11.70 | 156.00 | 45.00 | 89.70 | 4071 2.201 | 12.000 | 9041090120000 |
| 12.00 - 12.49 | 12.700 | 1/2 | 11.70 | 156.00 | 45.00 | 89.70 | 4071 2.201 | 12.005 | 9041090120050 |
| 12.50 - 12.99 | 14.000 | | 12.20 | 160.00 | 45.00 | 93.30 | 4071 2.201 | 12.500 | 9041090125000 |
| 12.50 - 12.99 | 15.875 | 5/8 | 12.20 | 160.00 | 45.00 | 93.30 | 4071 2.201 | 12.505 | 9041090125050 |
| 13.00 - 13.49 | 14.000 | | 12.70 | 164.00 | 45.00 | 96.90 | 4071 2.500 | 13.000 | 9041090130000 |
| 13.00 - 13.49 | 15.875 | 5/8 | 12.70 | 164.00 | 45.00 | 96.90 | 4071 2.500 | 13.005 | 9041090130050 |
| 13.50 - 13.99 | 14.000 | | 13.20 | 169.00 | 45.00 | 100.60 | 4071 2.500 | 13.500 | 9041090135000 |
| 13.50 - 13.99 | 15.875 | 5/8 | 13.20 | 169.00 | 45.00 | 100.60 | 4071 2.500 | 13.505 | 9041090135050 |
| 14.00 - 14.49 | 14.000 | | 13.70 | 173.00 | 45.00 | 104.20 | 4071 3.000 | 14.000 | 9041090140000 |
| 14.00 - 14.49 | 15.875 | 5/8 | 13.70 | 173.00 | 45.00 | 104.20 | 4071 3.000 | 14.005 | 9041090140050 |
| 14.50 - 14.99 | 16.000 | | 14.20 | 180.00 | 48.00 | 107.80 | 4071 3.000 | 14.500 | 9041090145000 |
| 14.50 - 14.99 | 15.875 | 5/8 | 14.20 | 180.00 | 48.00 | 107.80 | 4071 3.000 | 14.505 | 9041090145050 |
| 15.00 - 15.49 | 16.000 | | 14.70 | 185.00 | 48.00 | 111.30 | 4071 3.001 | 15.000 | 9041090150000 |
| 15.00 - 15.49 | 15.875 | 5/8 | 14.70 | 185.00 | 48.00 | 111.30 | 4071 3.001 | 15.005 | 9041090150050 |
| 15.50 - 15.99 | 16.000 | | 15.20 | 189.00 | 48.00 | 114.90 | 4071 3.001 | 15.500 | 9041090155000 |
| 15.50 - 15.99 | 15.875 | 5/8 | 15.20 | 189.00 | 48.00 | 114.90 | 4071 3.001 | 15.505 | 9041090155050 |
| 16.00 - 16.49 | 16.000 | | 15.70 | 193.00 | 48.00 | 118.90 | 4071 3.500 | 16.000 | 9041090160000 |
| 16.00 - 16.49 | 15.875 | 5/8 | 15.70 | 193.00 | 48.00 | 118.90 | 4071 3.500 | 16.005 | 9041090160050 |
| 16.50 - 16.99 | 18.000 | | 16.20 | 198.00 | 48.00 | 122.10 | 4071 3.500 | 16.500 | 9041090165000 |
| 16.50 - 16.99 | 19.050 | 3/4 | 16.20 | 198.00 | 48.00 | 122.10 | 4071 3.500 | 16.505 | 9041090165050 |
| 17.00 - 17.49 | 18.000 | | 16.70 | 202.00 | 48.00 | 125.80 | 4071 3.500 | 17.000 | 9041090170000 |
| 17.00 - 17.49 | 19.050 | 3/4 | 16.70 | 202.00 | 48.00 | 125.80 | 4071 3.500 | 17.005 | 9041090170050 |
| 17.50 - 17.99 | 18.000 | | 17.20 | 206.00 | 48.00 | 129.40 | 4071 3.500 | 17.500 | 9041090175000 |
| 17.50 - 17.99 | 19.050 | 3/4 | 17.20 | 206.00 | 48.00 | 129.40 | 4071 3.500 | 17.505 | 9041090175050 |
| 18.00 - 18.49 | 18.000 | | 17.70 | 211.00 | 48.00 | 132.90 | 4071 4.000 | 18.000 | 9041090180000 |
| 18.00 - 18.49 | 19.050 | 3/4 | 17.70 | 211.00 | 48.00 | 132.90 | 4071 4.000 | 18.005 | 9041090180050 |
| 18.50 - 18.99 | 20.000 | | 18.20 | 217.00 | 50.00 | 136.50 | 4071 4.000 | 18.500 | 9041090185000 |
| 18.50 - 18.99 | 19.050 | 3/4 | 18.20 | 217.00 | 50.00 | 136.50 | 4071 4.000 | 18.505 | 9041090185050 |
| 19.00 - 19.49 | 20.000 | | 18.70 | 221.00 | 50.00 | 140.10 | 4071 4.000 | 19.000 | 9041090190000 |
| 19.00 - 19.49 | 19.050 | 3/4 | 18.70 | 221.00 | 50.00 | 140.10 | 4071 4.000 | 19.005 | 9041090190050 |
| 19.50 - 19.99 | 20.000 | | 19.20 | 226.00 | 50.00 | 143.70 | 4071 4.000 | 19.500 | 9041090195000 |
| 19.50 - 19.99 | 19.050 | 3/4 | 19.20 | 226.00 | 50.00 | 143.70 | 4071 4.000 | 19.505 | 9041090195050 |
| 20.00 - 20.49 | 20.000 | | 19.70 | 230.00 | 50.00 | 147.30 | 4071 4.500 | 20.000 | 9041090200000 |
| 20.00 - 20.49 | 19.050 | 3/4 | 19.70 | 230.00 | 50.00 | 147.30 | 4071 4.500 | 20.005 | 9041090200050 |
| 20.50 - 20.99 | 25.000 | | 20.20 | 243.00 | 56.00 | 151.00 | 4071 4.500 | 20.500 | 9041090205000 |
| 20.50 - 20.99 | 25.400 | 1 | 20.20 | 243.00 | 56.00 | 151.00 | 4071 4.500 | 20.505 | 9041090205050 |
| 21.00 - 21.49 | 25.000 | | 20.70 | 247.00 | 56.00 | 154.60 | 4071 4.500 | 21.000 | 9041090210000 |
| 21.00 - 21.49 | 25.400 | 1 | 20.70 | 247.00 | 56.00 | 154.60 | 4071 4.500 | 21.005 | 9041090210050 |
| 21.50 - 21.99 | 25.000 | | 21.20 | 251.00 | 56.00 | 158.10 | 4071 4.500 | 21.500 | 9041090215000 |

| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | I3 mm | I5 mm | F | Code no. | EDP # |
|---------------|-------------|----------------|----------|---------|----------|----------|------------|----------|-------------------------------|
| 21.50 - 21.99 | 25.400 | 1 | 21.20 | 251.00 | 56.00 | 158.10 | 4071 4.500 | 21.505 | 9041090215050 |
| 22.00 - 22.49 | 25.000 | | 21.70 | 255.00 | 56.00 | 161.70 | 4071 5.000 | 22.000 | 9041090220000 |
| 22.00 - 22.49 | 25.400 | 1 | 21.70 | 255.00 | 56.00 | 161.70 | 4071 5.000 | 22.005 | 9041090220050 |
| 22.50 - 22.99 | 25.000 | | 22.20 | 260.00 | 56.00 | 165.30 | 4071 5.000 | 22.500 | 9041090225000 |
| 22.50 - 22.99 | 25.400 | 1 | 22.20 | 260.00 | 56.00 | 165.30 | 4071 5.000 | 22.505 | 9041090225050 |
| 23.00 - 23.49 | 25.000 | | 22.70 | 264.00 | 56.00 | 168.90 | 4071 5.000 | 23.000 | 9041090230000 |
| 23.00 - 23.49 | 25.400 | 1 | 22.70 | 264.00 | 56.00 | 168.90 | 4071 5.000 | 23.005 | 9041090230050 |
| 23.50 - 23.99 | 25.000 | | 23.20 | 269.00 | 56.00 | 172.50 | 4071 5.000 | 23.500 | 9041090235000 |
| 23.50 - 23.99 | 25.400 | 1 | 23.20 | 269.00 | 56.00 | 172.50 | 4071 5.000 | 23.505 | 9041090235050 |
| 24.00 - 24.49 | 25.000 | | 23.70 | 273.00 | 56.00 | 176.10 | 4071 5.001 | 24.000 | 9041090240000 |
| 24.00 - 24.49 | 25.400 | 1 | 23.70 | 273.00 | 56.00 | 176.10 | 4071 5.001 | 24.005 | 9041090240050 |
| 24.50 - 24.99 | 25.000 | | 24.20 | 277.00 | 56.00 | 179.70 | 4071 5.001 | 24.500 | 9041090245000 |
| 24.50 - 24.99 | 25.400 | 1 | 24.20 | 277.00 | 56.00 | 179.70 | 4071 5.001 | 24.505 | 9041090245050 |
| 25.00 - 25.49 | 25.000 | | 24.70 | 282.00 | 56.00 | 183.30 | 4071 5.001 | 25.000 | 9041090250000 |
| 25.00 - 25.49 | 25.400 | 1 | 24.70 | 282.00 | 56.00 | 183.30 | 4071 5.001 | 25.005 | 9041090250050 |
| 25.50 - 25.99 | 32.000 | | 25.20 | 291.00 | 60.00 | 186.90 | 4071 5.001 | 25.500 | 9041090255000 |
| 25.50 - 25.99 | 31.750 | 1 1/4 | 25.20 | 291.00 | 60.00 | 186.90 | 4071 5.001 | 25.505 | 9041090255050 |
| 26.00 - 26.49 | 32.000 | | 25.70 | 297.00 | 60.00 | 190.00 | 4071 5.003 | 26.000 | 9041090260000 |
| 26.00 - 26.49 | 31.750 | 1 1/4 | 25.70 | 297.00 | 60.00 | 190.00 | 4071 5.003 | 26.005 | 9041090260050 |
| 26.50 - 26.99 | 32.000 | | 26.20 | 301.00 | 60.00 | 194.00 | 4071 5.003 | 26.500 | 9041090265000 |
| 26.50 - 26.99 | 31.750 | 1 1/4 | 26.20 | 301.00 | 60.00 | 194.00 | 4071 5.003 | 26.505 | 9041090265050 |
| 27.00 - 27.49 | 32.000 | | 26.70 | 306.00 | 60.00 | 197.20 | 4071 5.003 | 27.000 | 9041090270000 |
| 27.00 - 27.49 | 31.750 | 1 1/4 | 26.70 | 306.00 | 60.00 | 197.20 | 4071 5.003 | 27.005 | 9041090270050 |
| 27.50 - 27.99 | 32.000 | | 27.20 | 310.00 | 60.00 | 200.80 | 4071 5.003 | 27.500 | 9041090275000 |
| 27.50 - 27.99 | 31.750 | 1 1/4 | 27.20 | 310.00 | 60.00 | 200.80 | 4071 5.003 | 27.505 | 9041090275050 |
| 28.00 - 28.49 | 32.000 | | 27.70 | 314.00 | 60.00 | 204.40 | 4071 5.003 | 28.000 | 9041090280000 |
| 28.00 - 28.49 | 31.750 | 1 1/4 | 27.70 | 314.00 | 60.00 | 204.40 | 4071 5.003 | 28.005 | 9041090280050 |
| 28.50 - 28.99 | 32.000 | | 28.20 | 318.00 | 60.00 | 208.40 | 4071 5.003 | 28.500 | 9041090285000 |
| 28.50 - 28.99 | 31.750 | 1 1/4 | 28.20 | 318.00 | 60.00 | 208.40 | 4071 5.003 | 28.505 | 9041090285050 |
| 29.00 - 29.49 | 32.000 | | 28.70 | 323.00 | 60.00 | 212.50 | 4071 5.003 | 29.000 | 9041090290000 |
| 29.00 - 29.49 | 31.750 | 1 1/4 | 28.70 | 323.00 | 60.00 | 212.50 | 4071 5.003 | 29.005 | 9041090290050 |
| 29.50 - 29.99 | 32.000 | | 29.20 | 327.00 | 60.00 | 215.10 | 4071 5.003 | 29.500 | 9041090295000 |
| 29.50 - 29.99 | 31.750 | 1 1/4 | 29.20 | 327.00 | 60.00 | 215.10 | 4071 5.003 | 29.505 | 9041090295050 |
| 30.00 - 30.49 | 32.000 | | 29.70 | 332.00 | 60.00 | 218.60 | 4071 6.000 | 30.000 | 9041090300000 |
| 30.00 - 30.49 | 31.750 | 1 1/4 | 29.70 | 332.00 | 60.00 | 218.60 | 4071 6.000 | 30.005 | 9041090300050 |
| 30.50 - 30.99 | 32.000 | | 30.20 | 336.00 | 60.00 | 222.20 | 4071 6.000 | 30.500 | 9041090305000 |
| 30.50 - 30.99 | 31.750 | 1 1/4 | 30.20 | 336.00 | 60.00 | 222.20 | 4071 6.000 | 30.505 | 9041090305050 |
| 31.00 - 31.49 | 32.000 | | 30.70 | 340.00 | 60.00 | 225.80 | 4071 6.000 | 31.000 | 9041090310000 |
| 31.00 - 31.49 | 31.750 | 1 1/4 | 30.70 | 340.00 | 60.00 | 225.80 | 4071 6.000 | 31.005 | 9041090310050 |
| 31.50 - 31.99 | 32.000 | | 31.20 | 344.00 | 60.00 | 229.40 | 4071 6.000 | 31.500 | 9041090315000 |
| 31.50 - 31.99 | 31.750 | 1 1/4 | 31.20 | 344.00 | 60.00 | 229.40 | 4071 6.000 | 31.505 | 9041090315050 |



Tool material

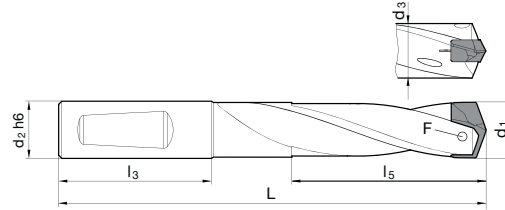
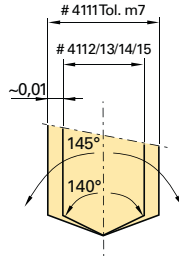
Surface



| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

●=Optimal
○=Limited

nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. 4071 included • screwdriver art. no. 1612 included

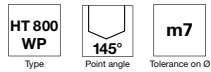


Drilling depths over 7xD will typically require piloting operation using shorter drill body series 4105 or 4106, and series 4111 insert.

| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | l3 mm | l5 mm | F | Code no. | EDP # |
|---------------|----------|-------------|-------|--------|-------|--------|------------|----------|-------------------------------|
| 11.00 - 11.49 | 12.000 | | 10.70 | 182.00 | 45.00 | 117.10 | 4071 2.200 | 11.000 | 9041100110000 |
| 11.00 - 11.49 | 12.700 | 1/2 | 10.70 | 182.00 | 45.00 | 117.10 | 4071 2.200 | 11.005 | 9041100110050 |
| 11.50 - 11.99 | 12.000 | | 11.20 | 187.00 | 45.00 | 122.10 | 4071 2.200 | 11.500 | 9041100115000 |
| 11.50 - 11.99 | 12.700 | 1/2 | 11.20 | 187.00 | 45.00 | 122.10 | 4071 2.200 | 11.505 | 9041100115050 |
| 12.00 - 12.49 | 12.000 | | 11.70 | 194.00 | 45.00 | 127.20 | 4071 2.201 | 12.000 | 9041100120000 |
| 12.00 - 12.49 | 12.700 | 1/2 | 11.70 | 194.00 | 45.00 | 127.20 | 4071 2.201 | 12.005 | 9041100120050 |
| 12.50 - 12.99 | 14.000 | | 12.20 | 199.00 | 45.00 | 132.30 | 4071 2.201 | 12.500 | 9041100125000 |
| 12.50 - 12.99 | 15.875 | 5/8 | 12.20 | 199.00 | 45.00 | 132.30 | 4071 2.201 | 12.505 | 9041100125050 |
| 13.00 - 13.49 | 14.000 | | 12.70 | 205.00 | 45.00 | 137.50 | 4071 2.500 | 13.000 | 9041100130000 |
| 13.00 - 13.49 | 15.875 | 5/8 | 12.70 | 205.00 | 45.00 | 137.50 | 4071 2.500 | 13.005 | 9041100130050 |
| 13.50 - 13.99 | 14.000 | | 13.20 | 211.00 | 45.00 | 142.50 | 4071 2.500 | 13.500 | 9041100135000 |
| 13.50 - 13.99 | 15.875 | 5/8 | 13.20 | 211.00 | 45.00 | 142.50 | 4071 2.500 | 13.505 | 9041100135050 |
| 14.00 - 14.49 | 14.000 | | 13.70 | 217.00 | 45.00 | 147.70 | 4071 3.000 | 14.000 | 9041100140000 |
| 14.00 - 14.49 | 15.875 | 5/8 | 13.70 | 217.00 | 45.00 | 147.70 | 4071 3.000 | 14.005 | 9041100140050 |
| 14.50 - 14.99 | 16.000 | | 14.20 | 225.00 | 48.00 | 152.80 | 4071 3.000 | 14.500 | 9041100145000 |
| 14.50 - 14.99 | 15.875 | 5/8 | 14.20 | 225.00 | 48.00 | 152.80 | 4071 3.000 | 14.505 | 9041100145050 |
| 15.00 - 15.49 | 16.000 | | 14.70 | 232.00 | 48.00 | 157.80 | 4071 3.001 | 15.000 | 9041100150000 |
| 15.00 - 15.49 | 15.875 | 5/8 | 14.70 | 232.00 | 48.00 | 157.80 | 4071 3.001 | 15.005 | 9041100150050 |
| 15.50 - 15.99 | 16.000 | | 15.20 | 237.00 | 48.00 | 162.90 | 4071 3.001 | 15.500 | 9041100155000 |
| 15.50 - 15.99 | 15.875 | 5/8 | 15.20 | 237.00 | 48.00 | 162.90 | 4071 3.001 | 15.505 | 9041100155050 |
| 16.00 - 16.49 | 16.000 | | 15.70 | 243.00 | 48.00 | 168.00 | 4071 3.500 | 16.000 | 9041100160000 |
| 16.00 - 16.49 | 15.875 | 5/8 | 15.70 | 243.00 | 48.00 | 168.00 | 4071 3.500 | 16.005 | 9041100160050 |
| 16.50 - 16.99 | 18.000 | | 16.20 | 249.00 | 48.00 | 173.10 | 4071 3.500 | 16.500 | 9041100165000 |
| 16.50 - 16.99 | 19.050 | 3/4 | 16.20 | 249.00 | 48.00 | 173.10 | 4071 3.500 | 16.505 | 9041100165050 |
| 17.00 - 17.49 | 18.000 | | 16.70 | 255.00 | 48.00 | 178.30 | 4071 3.500 | 17.000 | 9041100170000 |
| 17.00 - 17.49 | 19.050 | 3/4 | 16.70 | 255.00 | 48.00 | 178.30 | 4071 3.500 | 17.005 | 9041100170050 |
| 17.50 - 17.99 | 18.000 | | 17.20 | 260.00 | 48.00 | 183.50 | 4071 3.500 | 17.500 | 9041100175000 |
| 17.50 - 17.99 | 19.050 | 3/4 | 17.20 | 260.00 | 48.00 | 183.50 | 4071 3.500 | 17.505 | 9041100175050 |
| 18.00 - 18.49 | 18.000 | | 17.70 | 267.00 | 48.00 | 188.40 | 4071 4.000 | 18.000 | 9041100180000 |
| 18.00 - 18.49 | 19.050 | 3/4 | 17.70 | 267.00 | 48.00 | 188.40 | 4071 4.000 | 18.005 | 9041100180050 |
| 18.50 - 18.99 | 20.000 | | 18.20 | 274.00 | 50.00 | 193.50 | 4071 4.000 | 18.500 | 9041100185000 |
| 18.50 - 18.99 | 19.050 | 3/4 | 18.20 | 274.00 | 50.00 | 193.50 | 4071 4.000 | 18.505 | 9041100185050 |
| 19.00 - 19.49 | 20.000 | | 18.70 | 280.00 | 50.00 | 198.70 | 4071 4.000 | 19.000 | 9041100190000 |
| 19.00 - 19.49 | 19.050 | 3/4 | 18.70 | 280.00 | 50.00 | 198.70 | 4071 4.000 | 19.005 | 9041100190050 |
| 19.50 - 19.99 | 20.000 | | 19.20 | 286.00 | 50.00 | 203.70 | 4071 4.000 | 19.500 | 9041100195000 |
| 19.50 - 19.99 | 19.050 | 3/4 | 19.20 | 286.00 | 50.00 | 203.70 | 4071 4.000 | 19.505 | 9041100195050 |
| 20.00 - 20.49 | 20.000 | | 19.70 | 292.00 | 50.00 | 208.90 | 4071 4.500 | 20.000 | 9041100200000 |
| 20.00 - 20.49 | 19.050 | 3/4 | 19.70 | 292.00 | 50.00 | 208.90 | 4071 4.500 | 20.005 | 9041100200050 |
| 20.50 - 20.99 | 25.000 | | 20.20 | 306.00 | 56.00 | 214.00 | 4071 4.500 | 20.500 | 9041100205000 |
| 20.50 - 20.99 | 25.400 | 1 | 20.20 | 306.00 | 56.00 | 214.00 | 4071 4.500 | 20.505 | 9041100205050 |
| 21.00 - 21.49 | 25.000 | | 20.70 | 312.00 | 56.00 | 219.10 | 4071 4.500 | 21.000 | 9041100210000 |
| 21.00 - 21.49 | 25.400 | 1 | 20.70 | 312.00 | 56.00 | 219.10 | 4071 4.500 | 21.005 | 9041100210050 |
| 21.50 - 21.99 | 25.000 | | 21.20 | 317.00 | 56.00 | 224.20 | 4071 4.500 | 21.500 | 9041100215000 |

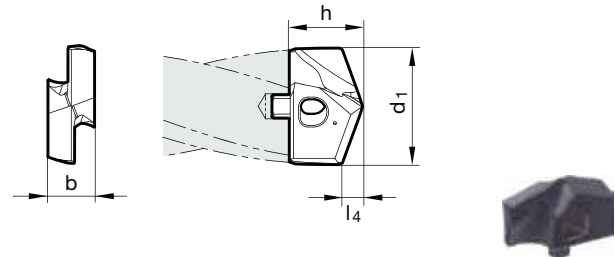
HT 800 Drills

| d1 mm | d2 h6 mm | d2 h6 frac. | d3 mm | L mm | I3 mm | I5 mm | F | Code no. | EDP # |
|---------------|-------------|----------------|----------|---------|----------|----------|------------|----------|-------------------------------|
| 21.50 - 21.99 | 25.400 | 1 | 21.20 | 317.00 | 56.00 | 224.20 | 4071 4.500 | 21.505 | 9041100215050 |
| 22.00 - 22.49 | 25.000 | | 21.70 | 323.00 | 56.00 | 229.30 | 4071 5.000 | 22.000 | 9041100220000 |
| 22.00 - 22.49 | 25.400 | 1 | 21.70 | 323.00 | 56.00 | 229.30 | 4071 5.000 | 22.005 | 9041100220050 |
| 22.50 - 22.99 | 25.000 | | 22.20 | 329.00 | 56.00 | 234.40 | 4071 5.000 | 22.500 | 9041100225000 |
| 22.50 - 22.99 | 25.400 | 1 | 22.20 | 329.00 | 56.00 | 234.40 | 4071 5.000 | 22.505 | 9041100225050 |
| 23.00 - 23.49 | 25.000 | | 22.70 | 335.00 | 56.00 | 239.50 | 4071 5.000 | 23.000 | 9041100230000 |
| 23.00 - 23.49 | 25.400 | 1 | 22.70 | 335.00 | 56.00 | 239.50 | 4071 5.000 | 23.005 | 9041100230050 |
| 23.50 - 23.99 | 25.000 | | 23.20 | 341.00 | 56.00 | 244.60 | 4071 5.000 | 23.500 | 9041100235000 |
| 23.50 - 23.99 | 25.400 | 1 | 23.20 | 341.00 | 56.00 | 244.60 | 4071 5.000 | 23.505 | 9041100235050 |
| 24.00 - 24.49 | 25.000 | | 23.70 | 347.00 | 56.00 | 249.70 | 4071 5.001 | 24.000 | 9041100240000 |
| 24.00 - 24.49 | 25.400 | 1 | 23.70 | 347.00 | 56.00 | 249.70 | 4071 5.001 | 24.005 | 9041100240050 |
| 24.50 - 24.99 | 25.000 | | 24.20 | 352.00 | 56.00 | 254.80 | 4071 5.001 | 24.500 | 9041100245000 |
| 24.50 - 24.99 | 25.400 | 1 | 24.20 | 352.00 | 56.00 | 254.80 | 4071 5.001 | 24.505 | 9041100245050 |
| 25.00 - 25.49 | 25.000 | | 24.70 | 359.00 | 56.00 | 259.90 | 4071 5.001 | 25.000 | 9041100250000 |
| 25.00 - 25.49 | 25.400 | 1 | 24.70 | 359.00 | 56.00 | 259.90 | 4071 5.001 | 25.005 | 9041100250050 |
| 25.50 - 25.99 | 32.000 | | 25.20 | 369.00 | 60.00 | 265.00 | 4071 5.001 | 25.500 | 9041100255000 |
| 25.50 - 25.99 | 31.750 | 1 1/4 | 25.20 | 369.00 | 60.00 | 265.00 | 4071 5.001 | 25.505 | 9041100255050 |
| 26.00 - 26.49 | 32.000 | | 25.70 | 377.00 | 60.00 | 270.00 | 4071 5.003 | 26.000 | 9041100260000 |
| 26.00 - 26.49 | 31.750 | 1 1/4 | 25.70 | 377.00 | 60.00 | 270.00 | 4071 5.003 | 26.005 | 9041100260050 |
| 26.50 - 26.99 | 32.000 | | 26.20 | 382.00 | 60.00 | 275.00 | 4071 5.003 | 26.500 | 9041100265000 |
| 26.50 - 26.99 | 31.750 | 1 1/4 | 26.20 | 382.00 | 60.00 | 275.00 | 4071 5.003 | 26.505 | 9041100265050 |
| 27.00 - 27.49 | 32.000 | | 26.70 | 388.00 | 60.00 | 280.10 | 4071 5.003 | 27.000 | 9041100270000 |
| 27.00 - 27.49 | 31.750 | 1 1/4 | 26.70 | 388.00 | 60.00 | 280.10 | 4071 5.003 | 27.005 | 9041100270050 |
| 27.50 - 27.99 | 32.000 | | 27.20 | 394.00 | 60.00 | 285.20 | 4071 5.003 | 27.500 | 9041100275000 |
| 27.50 - 27.99 | 31.750 | 1 1/4 | 27.20 | 394.00 | 60.00 | 285.20 | 4071 5.003 | 27.505 | 9041100275050 |
| 28.00 - 28.49 | 32.000 | | 27.70 | 400.00 | 60.00 | 290.30 | 4071 5.003 | 28.000 | 9041100280000 |
| 28.00 - 28.49 | 31.750 | 1 1/4 | 27.70 | 400.00 | 60.00 | 290.30 | 4071 5.003 | 28.005 | 9041100280050 |
| 28.50 - 28.99 | 32.000 | | 28.20 | 405.00 | 60.00 | 295.40 | 4071 5.003 | 28.500 | 9041100285000 |
| 28.50 - 28.99 | 31.750 | 1 1/4 | 28.20 | 405.00 | 60.00 | 295.40 | 4071 5.003 | 28.505 | 9041100285050 |
| 29.00 - 29.49 | 32.000 | | 28.70 | 412.00 | 60.00 | 300.50 | 4071 5.003 | 29.000 | 9041100290000 |
| 29.00 - 29.49 | 31.750 | 1 1/4 | 28.70 | 412.00 | 60.00 | 300.50 | 4071 5.003 | 29.005 | 9041100290050 |
| 29.50 - 29.99 | 32.000 | | 29.20 | 418.00 | 60.00 | 305.60 | 4071 5.003 | 29.500 | 9041100295000 |
| 29.50 - 29.99 | 31.750 | 1 1/4 | 29.20 | 418.00 | 60.00 | 305.60 | 4071 5.003 | 29.505 | 9041100295050 |
| 30.00 - 30.49 | 32.000 | | 29.70 | 424.00 | 60.00 | 310.60 | 4071 6.000 | 30.000 | 9041100300000 |
| 30.00 - 30.49 | 31.750 | 1 1/4 | 29.70 | 424.00 | 60.00 | 310.60 | 4071 6.000 | 30.005 | 9041100300050 |
| 30.50 - 30.99 | 32.000 | | 30.20 | 429.00 | 60.00 | 315.70 | 4071 6.000 | 30.500 | 9041100305000 |
| 30.50 - 30.99 | 31.750 | 1 1/4 | 30.20 | 429.00 | 60.00 | 315.70 | 4071 6.000 | 30.505 | 9041100305050 |
| 31.00 - 31.49 | 32.000 | | 30.70 | 435.00 | 60.00 | 320.80 | 4071 6.000 | 31.000 | 9041100310000 |
| 31.00 - 31.49 | 31.750 | 1 1/4 | 30.70 | 435.00 | 60.00 | 320.80 | 4071 6.000 | 31.005 | 9041100310050 |
| 31.50 - 31.99 | 32.000 | | 31.20 | 441.00 | 60.00 | 325.90 | 4071 6.000 | 31.500 | 9041100315000 |
| 31.50 - 31.99 | 31.750 | 1 1/4 | 31.20 | 441.00 | 60.00 | 325.90 | 4071 6.000 | 31.505 | 9041100315050 |



Tool material **Solid Carbide**
Surface **a**

- P** Steel ○ web thinning $\geq \varnothing 11.000$ • facet point grinding • main cutting edge form straight (after correction) • clamping screws art. no. 4071 included
 - M** Stainless steel ○
 - K** Cast iron ○ Piloting in all materials
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited

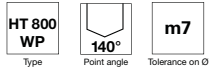


Speeds and feeds information on pg. 561

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|-------|----------|-------------------------------|
| 11.000 | | 1.800 | 4.500 | 7.200 | 11.000 | 9041110110000 |
| 11.200 | | 1.800 | 4.500 | 7.200 | 11.200 | 9041110112000 |
| 11.500 | | 1.900 | 4.500 | 7.200 | 11.500 | 9041110115000 |
| 11.510 | 29/64 | 1.900 | 4.500 | 7.200 | 11.510 | 9041110115100 |
| 11.700 | | 1.900 | 4.500 | 7.200 | 11.700 | 9041110117000 |
| 11.800 | | 1.900 | 4.500 | 7.200 | 11.800 | 9041110118000 |
| 11.910 | 15/32 | 1.900 | 4.500 | 7.200 | 11.910 | 9041110119100 |
| 12.000 | | 1.900 | 5.000 | 7.400 | 12.000 | 9041110120000 |
| 12.100 | | 2.000 | 5.000 | 7.400 | 12.100 | 9041110121000 |
| 12.200 | | 2.000 | 5.000 | 7.400 | 12.200 | 9041110122000 |
| 12.300 | 31/64 | 2.000 | 5.000 | 7.400 | 12.300 | 9041110123000 |
| 12.500 | | 2.000 | 5.000 | 7.400 | 12.500 | 9041110125000 |
| 12.600 | | 2.000 | 5.000 | 7.400 | 12.600 | 9041110126000 |
| 12.700 | 1/2 | 2.100 | 5.000 | 7.400 | 12.700 | 9041110127000 |
| 12.800 | | 2.100 | 5.000 | 7.400 | 12.800 | 9041110128000 |
| 12.900 | | 2.100 | 5.000 | 7.400 | 12.900 | 9041110129000 |
| 13.000 | | 2.100 | 5.500 | 8.200 | 13.000 | 9041110130000 |
| 13.100 | 33/64 | 2.100 | 5.500 | 8.200 | 13.100 | 9041110131000 |
| 13.490 | 17/32 | 2.200 | 5.500 | 8.200 | 13.490 | 9041110134900 |
| 13.500 | | 2.200 | 5.500 | 8.200 | 13.500 | 9041110135000 |
| 13.600 | | 2.200 | 5.500 | 8.200 | 13.600 | 9041110136000 |
| 13.700 | | 2.200 | 5.500 | 8.200 | 13.700 | 9041110137000 |
| 13.800 | | 2.200 | 5.500 | 8.200 | 13.800 | 9041110138000 |
| 13.890 | 35/64 | 2.200 | 5.500 | 8.200 | 13.890 | 9041110138900 |
| 14.000 | | 2.300 | 6.000 | 9.400 | 14.000 | 9041110140000 |
| 14.100 | | 2.300 | 6.000 | 9.400 | 14.100 | 9041110141000 |
| 14.290 | 9/16 | 2.300 | 6.000 | 9.400 | 14.290 | 9041110142900 |
| 14.400 | | 2.300 | 6.000 | 9.400 | 14.400 | 9041110144000 |
| 14.500 | | 2.300 | 6.000 | 9.400 | 14.500 | 9041110145000 |
| 14.600 | | 2.400 | 6.000 | 9.400 | 14.600 | 9041110146000 |
| 14.680 | 37/64 | 2.400 | 6.000 | 9.400 | 14.680 | 9041110146800 |
| 14.700 | | 2.400 | 6.000 | 9.400 | 14.700 | 9041110147000 |
| 14.800 | | 2.400 | 6.000 | 9.400 | 14.800 | 9041110148000 |
| 15.000 | | 2.400 | 6.000 | 9.400 | 15.000 | 9041110150000 |
| 15.080 | 19/32 | 2.400 | 6.000 | 9.400 | 15.080 | 9041110150800 |
| 15.100 | | 2.400 | 6.000 | 9.400 | 15.100 | 9041110151000 |
| 15.200 | | 2.400 | 6.000 | 9.400 | 15.200 | 9041110152000 |
| 15.300 | | 2.500 | 6.000 | 9.400 | 15.300 | 9041110153000 |
| 15.480 | 39/64 | 2.500 | 6.000 | 9.400 | 15.480 | 9041110154800 |
| 15.500 | | 2.500 | 6.000 | 9.400 | 15.500 | 9041110155000 |
| 15.600 | | 2.500 | 6.000 | 9.400 | 15.600 | 9041110156000 |
| 15.700 | | 2.500 | 6.000 | 9.400 | 15.700 | 9041110157000 |
| 15.800 | | 2.500 | 6.000 | 9.400 | 15.800 | 9041110158000 |

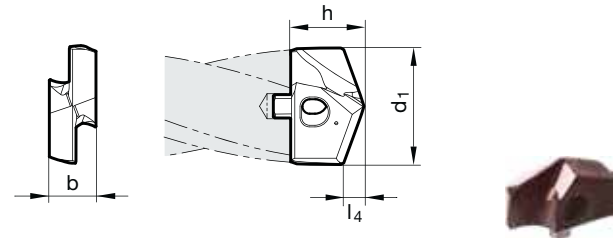
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|--------|----------|---------|---------|----------|-------------------------------|
| 15.870 | 5/8 | 2.600 | 6.000 | 9.400 | 15.870 | 9041110158700 |
| 16.000 | | 2.600 | 7.000 | 10.600 | 16.000 | 9041110160000 |
| 16.270 | 41/64 | 2.600 | 7.000 | 10.600 | 16.270 | 9041110162700 |
| 16.500 | | 2.700 | 7.000 | 10.600 | 16.500 | 9041110165000 |
| 16.670 | 21/32 | 2.700 | 7.000 | 10.600 | 16.670 | 9041110166700 |
| 17.000 | | 2.700 | 7.000 | 10.600 | 17.000 | 9041110170000 |
| 17.070 | 43/64 | 2.700 | 7.000 | 10.600 | 17.070 | 9041110170700 |
| 17.460 | 11/16 | 2.800 | 7.000 | 10.600 | 17.460 | 9041110174600 |
| 17.500 | | 2.800 | 7.000 | 10.600 | 17.500 | 9041110175000 |
| 17.600 | | 2.800 | 7.000 | 10.600 | 17.600 | 9041110176000 |
| 17.860 | 45/64 | 2.900 | 7.000 | 10.600 | 17.860 | 9041110178600 |
| 18.000 | | 2.900 | 8.000 | 12.100 | 18.000 | 9041110180000 |
| 18.260 | 23/32 | 2.900 | 8.000 | 12.100 | 18.260 | 9041110182600 |
| 18.500 | | 3.000 | 8.000 | 12.100 | 18.500 | 9041110185000 |
| 18.650 | 47/64 | 3.000 | 8.000 | 12.100 | 18.650 | 9041110186500 |
| 19.000 | | 3.000 | 8.000 | 12.100 | 19.000 | 9041110190000 |
| 19.050 | 3/4 | 3.100 | 8.000 | 12.100 | 19.050 | 9041110190500 |
| 19.450 | 49/64 | 3.100 | 8.000 | 12.100 | 19.450 | 9041110194500 |
| 19.500 | | 3.100 | 8.000 | 12.100 | 19.500 | 9041110195000 |
| 19.600 | | 3.100 | 8.000 | 12.100 | 19.600 | 9041110196000 |
| 19.840 | 25/32 | 3.200 | 8.000 | 12.100 | 19.840 | 9041110198400 |
| 20.000 | | 3.200 | 9.000 | 13.300 | 20.000 | 9041110200000 |
| 20.240 | 51/64 | 3.200 | 9.000 | 13.300 | 20.240 | 9041110202400 |
| 20.500 | | 3.300 | 9.000 | 13.300 | 20.500 | 9041110205000 |
| 20.640 | 13/16 | 3.300 | 9.000 | 13.300 | 20.640 | 9041110206400 |
| 21.000 | | 3.400 | 9.000 | 13.300 | 21.000 | 9041110210000 |
| 21.030 | 53/64 | 3.400 | 9.000 | 13.300 | 21.030 | 9041110210300 |
| 21.100 | | 3.400 | 9.000 | 13.300 | 21.100 | 9041110211000 |
| 21.430 | 27/32 | 3.400 | 9.000 | 13.300 | 21.430 | 9041110214300 |
| 21.500 | | 3.400 | 9.000 | 13.300 | 21.500 | 9041110215000 |
| 21.830 | 55/64 | 3.500 | 9.000 | 13.300 | 21.830 | 9041110218300 |
| 22.000 | | 3.500 | 10.000 | 14.800 | 22.000 | 9041110220000 |
| 22.220 | 7/8 | 3.600 | 10.000 | 14.800 | 22.220 | 9041110222200 |
| 22.500 | | 3.600 | 10.000 | 14.800 | 22.500 | 9041110225000 |
| 22.620 | 57/64 | 3.600 | 10.000 | 14.800 | 22.620 | 9041110226200 |
| 23.000 | | 3.700 | 10.000 | 14.800 | 23.000 | 9041110230000 |
| 23.020 | 29/32 | 3.700 | 10.000 | 14.800 | 23.020 | 9041110230200 |
| 23.420 | 59/64 | 3.700 | 10.000 | 14.800 | 23.420 | 9041110234200 |
| 23.500 | | 3.800 | 10.000 | 14.800 | 23.500 | 9041110235000 |
| 23.810 | 15/16 | 3.800 | 10.000 | 14.800 | 23.810 | 9041110238100 |
| 24.000 | | 3.800 | 11.000 | 15.300 | 24.000 | 9041110240000 |
| 24.100 | | 3.800 | 11.000 | 15.300 | 24.100 | 9041110241000 |
| 24.210 | 61/64 | 3.900 | 11.000 | 15.300 | 24.210 | 9041110242100 |
| 24.500 | | 3.900 | 11.000 | 15.300 | 24.500 | 9041110245000 |
| 24.610 | 31/32 | 3.900 | 11.000 | 15.300 | 24.610 | 9041110246100 |
| 25.000 | 63/64 | 4.000 | 11.000 | 15.300 | 25.000 | 9041110250000 |
| 25.400 | 1 | 4.100 | 11.000 | 15.300 | 25.400 | 9041110254000 |
| 25.500 | | 4.100 | 11.000 | 15.300 | 25.500 | 9041110255000 |
| 25.700 | | 4.100 | 11.000 | 15.300 | 25.700 | 9041110257000 |
| 26.000 | | 4.100 | 12.000 | 19.400 | 26.000 | 9041110260000 |
| 26.190 | 1 1/32 | 4.200 | 12.000 | 19.400 | 26.190 | 9041110261900 |
| 26.500 | | 4.200 | 12.000 | 19.400 | 26.500 | 9041110265000 |
| 26.590 | 1 3/64 | 4.200 | 12.000 | 19.400 | 26.590 | 9041110265900 |
| 27.000 | | 4.300 | 12.000 | 19.400 | 27.000 | 9041110270000 |
| 27.500 | | 4.400 | 12.000 | 19.400 | 27.500 | 9041110275000 |
| 27.700 | | 4.400 | 12.000 | 19.400 | 27.700 | 9041110277000 |
| 27.780 | 1 3/32 | 4.400 | 12.000 | 19.400 | 27.780 | 9041110277800 |
| 28.000 | | 4.500 | 13.000 | 20.100 | 28.000 | 9041110280000 |
| 28.180 | 1 7/64 | 4.500 | 13.000 | 20.100 | 28.180 | 9041110281800 |
| 28.500 | | 4.500 | 13.000 | 20.100 | 28.500 | 9041110285000 |
| 28.580 | | 4.600 | 13.000 | 20.100 | 28.580 | 9041110285800 |
| 29.000 | | 4.600 | 13.000 | 20.100 | 29.000 | 9041110290000 |
| 29.370 | 1 5/32 | 4.700 | 13.000 | 20.100 | 29.370 | 9041110293700 |
| 29.500 | | 4.700 | 13.000 | 20.100 | 29.500 | 9041110295000 |
| 30.000 | | 4.800 | 14.000 | 21.700 | 30.000 | 9041110300000 |
| 30.160 | 1 3/16 | 4.800 | 14.000 | 21.700 | 30.160 | 9041110301600 |

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|---------|----------|---------|---------|----------|-------------------------------|
| 30.500 | | 4.900 | 14.000 | 21.700 | 30.500 | 9041110305000 |
| 30.960 | 1 7/32 | 4.900 | 14.000 | 21.700 | 30.960 | 9041110309600 |
| 31.000 | | 4.900 | 14.000 | 21.700 | 31.000 | 9041110310000 |
| 31.500 | | 5.000 | 14.000 | 21.700 | 31.500 | 9041110315000 |
| 31.750 | 1 1/4 | 5.100 | 14.000 | 21.700 | 31.750 | 9041110317500 |
| 32.000 | | 5.100 | 15.000 | 22.400 | 32.000 | 9041110320000 |
| 32.500 | | 5.200 | 15.000 | 22.400 | 32.500 | 9041110325000 |
| 32.540 | 1 9/32 | 5.200 | 15.000 | 22.400 | 32.540 | 9041110325400 |
| 33.000 | | 5.300 | 15.000 | 22.400 | 33.000 | 9041110330000 |
| 33.340 | 1 5/16 | 5.300 | 15.000 | 22.400 | 33.340 | 9041110333400 |
| 33.500 | | 5.300 | 15.000 | 22.400 | 33.500 | 9041110335000 |
| 34.000 | | 5.400 | 15.000 | 22.400 | 34.000 | 9041110340000 |
| 34.130 | 1 11/32 | 5.400 | 15.000 | 22.400 | 34.130 | 9041110341300 |
| 34.500 | | 5.500 | 15.000 | 22.400 | 34.500 | 9041110345000 |
| 34.930 | | 5.600 | 15.000 | 22.400 | 34.930 | 9041110349300 |
| 35.000 | | 5.600 | 15.000 | 22.400 | 35.000 | 9041110350000 |
| 35.500 | | 5.600 | 15.000 | 22.400 | 35.500 | 9041110355000 |
| 35.720 | 1 13/32 | 5.700 | 15.000 | 22.400 | 35.720 | 9041110357200 |
| 36.000 | | 5.700 | 16.000 | 23.200 | 36.000 | 9041110360000 |
| 36.500 | | 5.800 | 16.000 | 23.200 | 36.500 | 9041110365000 |
| 36.510 | 1 7/16 | 5.800 | 16.000 | 23.200 | 36.510 | 9041110365100 |
| 37.000 | | 5.900 | 16.000 | 23.200 | 37.000 | 9041110370000 |
| 37.310 | 1 15/32 | 5.900 | 16.000 | 23.200 | 37.310 | 9041110373100 |
| 37.500 | | 6.000 | 16.000 | 23.200 | 37.500 | 9041110375000 |
| 38.000 | | 6.000 | 16.000 | 23.200 | 38.000 | 9041110380000 |
| 38.100 | 1 1/2 | 6.100 | 16.000 | 23.200 | 38.100 | 9041110381000 |
| 38.500 | 1 33/64 | 6.100 | 16.000 | 23.200 | 38.500 | 9041110385000 |
| 39.000 | | 6.200 | 16.000 | 23.200 | 39.000 | 9041110390000 |
| 39.500 | | 6.300 | 16.000 | 23.200 | 39.500 | 9041110395000 |
| 40.000 | | 6.400 | 16.000 | 23.200 | 40.000 | 9041110400000 |



Tool material **Solid Carbide**
Surface **Y**

- P** Steel ○ web thinning $\geq \varnothing 11.000$ • facet point grinding • main cutting edge form straight (after correction) • clamping screws art. no. 4071 included
 - M** Stainless steel ○
 - K** Cast iron ● vermicular cast iron GGK • grey cast iron, malleable and spheroidal iron
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



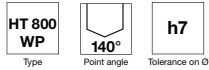
Speeds and feeds information on pg. 563

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|-------|----------|-------------------------------|
| 11.000 | | 2.700 | 4.500 | 7.500 | 11.000 | 9041130110000 |
| 11.200 | | 2.700 | 4.500 | 7.500 | 11.200 | 9041130112000 |
| 11.500 | | 2.800 | 4.500 | 7.500 | 11.500 | 9041130115000 |
| 11.510 | 29/64 | 2.800 | 4.500 | 7.500 | 11.510 | 9041130115100 |
| 11.700 | | 2.800 | 4.500 | 7.500 | 11.700 | 9041130117000 |
| 11.800 | | 2.800 | 4.500 | 7.500 | 11.800 | 9041130118000 |
| 11.910 | 15/32 | 2.800 | 4.500 | 7.500 | 11.910 | 9041130119100 |
| 12.000 | | 2.900 | 5.000 | 7.700 | 12.000 | 9041130120000 |
| 12.100 | | 2.900 | 5.000 | 7.700 | 12.100 | 9041130121000 |
| 12.200 | | 2.900 | 5.000 | 7.700 | 12.200 | 9041130122000 |
| 12.300 | 31/64 | 2.900 | 5.000 | 7.700 | 12.300 | 9041130123000 |
| 12.500 | | 3.100 | 5.000 | 7.700 | 12.500 | 9041130125000 |
| 12.600 | | 3.100 | 5.000 | 7.700 | 12.600 | 9041130126000 |
| 12.700 | 1/2 | 3.100 | 5.000 | 7.700 | 12.700 | 9041130127000 |
| 12.800 | | 3.100 | 5.000 | 7.700 | 12.800 | 9041130128000 |
| 12.900 | | 3.100 | 5.000 | 7.700 | 12.900 | 9041130129000 |
| 13.000 | | 3.200 | 5.500 | 8.500 | 13.000 | 9041130130000 |
| 13.100 | 33/64 | 3.200 | 5.500 | 8.500 | 13.100 | 9041130131000 |
| 13.300 | | 3.200 | 5.500 | 8.500 | 13.300 | 9041130133000 |
| 13.490 | 17/32 | 3.200 | 5.500 | 8.500 | 13.490 | 9041130134900 |
| 13.500 | | 3.300 | 5.500 | 8.500 | 13.500 | 9041130135000 |
| 13.600 | | 3.300 | 5.500 | 8.500 | 13.600 | 9041130136000 |
| 13.700 | | 3.300 | 5.500 | 8.500 | 13.700 | 9041130137000 |
| 13.800 | | 3.300 | 5.500 | 8.500 | 13.800 | 9041130138000 |
| 13.890 | 35/64 | 3.300 | 5.500 | 8.500 | 13.890 | 9041130138900 |
| 14.000 | | 3.400 | 6.000 | 9.600 | 14.000 | 9041130140000 |
| 14.100 | | 3.400 | 6.000 | 9.600 | 14.100 | 9041130141000 |
| 14.290 | 9/16 | 3.400 | 6.000 | 9.600 | 14.290 | 9041130142900 |
| 14.400 | | 3.400 | 6.000 | 9.600 | 14.400 | 9041130144000 |
| 14.500 | | 3.600 | 6.000 | 9.600 | 14.500 | 9041130145000 |
| 14.600 | | 3.600 | 6.000 | 9.600 | 14.600 | 9041130146000 |
| 14.680 | 37/64 | 3.600 | 6.000 | 9.600 | 14.680 | 9041130146800 |
| 14.700 | | 3.600 | 6.000 | 9.600 | 14.700 | 9041130147000 |
| 14.800 | | 3.600 | 6.000 | 9.600 | 14.800 | 9041130148000 |
| 15.000 | | 3.700 | 6.000 | 9.800 | 15.000 | 9041130150000 |
| 15.080 | 19/32 | 3.700 | 6.000 | 9.800 | 15.080 | 9041130150800 |
| 15.100 | | 3.700 | 6.000 | 9.800 | 15.100 | 9041130151000 |
| 15.200 | | 3.700 | 6.000 | 9.800 | 15.200 | 9041130152000 |
| 15.300 | | 3.700 | 6.000 | 9.800 | 15.300 | 9041130153000 |
| 15.480 | 39/64 | 3.700 | 6.000 | 9.800 | 15.480 | 9041130154800 |
| 15.500 | | 3.800 | 6.000 | 9.800 | 15.500 | 9041130155000 |
| 15.600 | | 3.800 | 6.000 | 9.800 | 15.600 | 9041130156000 |
| 15.700 | | 3.800 | 6.000 | 9.800 | 15.700 | 9041130157000 |

HT 800 Drills

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|--------|----------|---------|---------|----------|-------------------------------|
| 15.800 | | 3.800 | 6.000 | 9.800 | 15.800 | 9041130158000 |
| 15.870 | 5/8 | 3.800 | 6.000 | 9.800 | 15.870 | 9041130158700 |
| 16.000 | | 3.900 | 7.000 | 11.000 | 16.000 | 9041130160000 |
| 16.270 | 41/64 | 3.900 | 7.000 | 11.000 | 16.270 | 9041130162700 |
| 16.500 | | 4.100 | 7.000 | 11.000 | 16.500 | 9041130165000 |
| 16.670 | 21/32 | 4.100 | 7.000 | 11.000 | 16.670 | 9041130166700 |
| 17.000 | | 4.200 | 7.000 | 11.000 | 17.000 | 9041130170000 |
| 17.070 | 43/64 | 4.200 | 7.000 | 11.000 | 17.070 | 9041130170700 |
| 17.300 | | 4.200 | 7.000 | 11.000 | 17.300 | 9041130173000 |
| 17.460 | 11/16 | 4.200 | 7.000 | 11.000 | 17.460 | 9041130174600 |
| 17.500 | | 4.300 | 7.000 | 11.000 | 17.500 | 9041130175000 |
| 17.600 | | 4.300 | 7.000 | 11.000 | 17.600 | 9041130176000 |
| 17.860 | 45/64 | 4.300 | 7.000 | 11.000 | 17.860 | 9041130178600 |
| 18.000 | | 4.400 | 8.000 | 12.600 | 18.000 | 9041130180000 |
| 18.260 | 23/32 | 4.400 | 8.000 | 12.600 | 18.260 | 9041130182600 |
| 18.500 | | 4.500 | 8.000 | 12.600 | 18.500 | 9041130185000 |
| 18.650 | 47/64 | 4.500 | 8.000 | 12.600 | 18.650 | 9041130186500 |
| 18.900 | | 4.500 | 8.000 | 12.600 | 18.900 | 9041130189000 |
| 19.000 | | 4.700 | 8.000 | 12.600 | 19.000 | 9041130190000 |
| 19.050 | 3/4 | 4.700 | 8.000 | 12.600 | 19.050 | 9041130190500 |
| 19.250 | | 4.700 | 8.000 | 12.600 | 19.250 | 9041130192500 |
| 19.300 | | 4.700 | 8.000 | 12.600 | 19.300 | 9041130193000 |
| 19.450 | 49/64 | 4.700 | 8.000 | 12.600 | 19.450 | 9041130194500 |
| 19.500 | | 4.800 | 8.000 | 12.600 | 19.500 | 9041130195000 |
| 19.600 | | 4.800 | 8.000 | 12.600 | 19.600 | 9041130196000 |
| 19.840 | 25/32 | 4.800 | 8.000 | 12.600 | 19.840 | 9041130198400 |
| 20.000 | | 4.900 | 9.000 | 13.900 | 20.000 | 9041130200000 |
| 20.240 | 51/64 | 4.900 | 9.000 | 13.900 | 20.240 | 9041130202400 |
| 20.500 | | 5.100 | 9.000 | 13.900 | 20.500 | 9041130205000 |
| 20.640 | 13/16 | 5.100 | 9.000 | 13.900 | 20.640 | 9041130206400 |
| 20.900 | | 5.100 | 9.000 | 13.900 | 20.900 | 9041130209000 |
| 21.000 | | 5.200 | 9.000 | 13.900 | 21.000 | 9041130210000 |
| 21.030 | 53/64 | 5.200 | 9.000 | 13.900 | 21.030 | 9041130210300 |
| 21.100 | | 5.200 | 9.000 | 13.900 | 21.100 | 9041130211000 |
| 21.430 | 27/32 | 5.200 | 9.000 | 13.900 | 21.430 | 9041130214300 |
| 21.500 | | 5.300 | 9.000 | 13.900 | 21.500 | 9041130215000 |
| 21.700 | | 5.300 | 9.000 | 13.900 | 21.700 | 9041130217000 |
| 21.830 | 55/64 | 5.300 | 9.000 | 13.900 | 21.830 | 9041130218300 |
| 22.000 | | 5.400 | 10.000 | 15.300 | 22.000 | 9041130220000 |
| 22.220 | 7/8 | 5.400 | 10.000 | 15.300 | 22.220 | 9041130222200 |
| 22.500 | | 5.600 | 10.000 | 15.300 | 22.500 | 9041130225000 |
| 22.620 | 57/64 | 5.600 | 10.000 | 15.300 | 22.620 | 9041130226200 |
| 22.700 | | 5.600 | 10.000 | 15.300 | 22.700 | 9041130227000 |
| 23.000 | | 5.700 | 10.000 | 15.300 | 23.000 | 9041130230000 |
| 23.020 | 29/32 | 5.700 | 10.000 | 15.300 | 23.020 | 9041130230200 |
| 23.420 | 59/64 | 5.700 | 10.000 | 15.300 | 23.420 | 9041130234200 |
| 23.500 | | 5.800 | 10.000 | 15.300 | 23.500 | 9041130235000 |
| 23.700 | | 5.800 | 10.000 | 15.300 | 23.700 | 9041130237000 |
| 23.810 | 15/16 | 5.800 | 10.000 | 15.300 | 23.810 | 9041130238100 |
| 24.000 | | 6.000 | 11.000 | 15.800 | 24.000 | 9041130240000 |
| 24.100 | | 6.000 | 11.000 | 15.800 | 24.100 | 9041130241000 |
| 24.210 | 61/64 | 6.000 | 11.000 | 15.800 | 24.210 | 9041130242100 |
| 24.500 | | 6.100 | 11.000 | 15.800 | 24.500 | 9041130245000 |
| 24.610 | 31/32 | 6.100 | 11.000 | 15.800 | 24.610 | 9041130246100 |
| 25.000 | 63/64 | 6.200 | 11.000 | 15.800 | 25.000 | 9041130250000 |
| 25.400 | 1 | 6.200 | 11.000 | 15.800 | 25.400 | 9041130254000 |
| 25.500 | | 6.300 | 11.000 | 15.800 | 25.500 | 9041130255000 |
| 25.670 | | 6.300 | 11.000 | 15.800 | 25.670 | 9041130256700 |
| 25.700 | | 6.300 | 11.000 | 15.800 | 25.700 | 9041130257000 |
| 25.810 | | 6.300 | 11.000 | 15.800 | 25.810 | 9041130258100 |
| 26.000 | | 6.400 | 12.000 | 20.000 | 26.000 | 9041130260000 |
| 26.190 | 1 1/32 | 6.400 | 12.000 | 20.000 | 26.190 | 9041130261900 |
| 26.500 | | 6.500 | 12.000 | 20.000 | 26.500 | 9041130265000 |
| 26.590 | 1 3/64 | 6.500 | 12.000 | 20.000 | 26.590 | 9041130265900 |
| 27.000 | | 6.600 | 12.000 | 20.000 | 27.000 | 9041130270000 |
| 27.500 | | 6.700 | 12.000 | 20.000 | 27.500 | 9041130275000 |

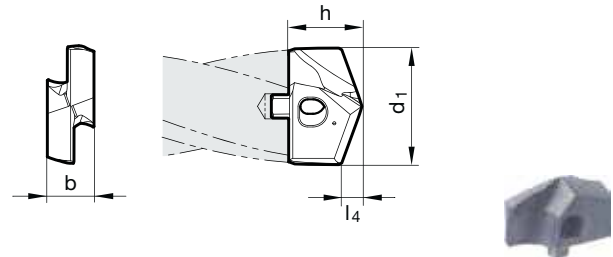
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|---------|----------|---------|---------|----------|-------------------------------|
| 27.700 | | 6.700 | 12.000 | 20.000 | 27.700 | 9041130277000 |
| 27.780 | 1 3/32 | 6.700 | 12.000 | 20.000 | 27.780 | 9041130277800 |
| 28.000 | | 6.800 | 13.000 | 20.700 | 28.000 | 9041130280000 |
| 28.180 | 1 7/64 | 6.800 | 13.000 | 20.700 | 28.180 | 9041130281800 |
| 28.500 | | 6.900 | 13.000 | 20.700 | 28.500 | 9041130285000 |
| 28.580 | | 6.900 | 13.000 | 20.700 | 28.580 | 9041130285800 |
| 29.000 | | 7.100 | 13.000 | 20.700 | 29.000 | 9041130290000 |
| 29.370 | 1 5/32 | 7.100 | 13.000 | 20.700 | 29.370 | 9041130293700 |
| 29.500 | | 7.200 | 13.000 | 20.700 | 29.500 | 9041130295000 |
| 29.770 | 1 11/64 | 7.200 | 13.000 | 20.700 | 29.770 | 9041130297700 |
| 30.000 | | 7.300 | 14.000 | 22.300 | 30.000 | 9041130300000 |
| 30.160 | 1 3/16 | 7.300 | 14.000 | 22.300 | 30.160 | 9041130301600 |
| 30.500 | | 7.400 | 14.000 | 22.300 | 30.500 | 9041130305000 |
| 30.960 | 1 7/32 | 7.400 | 14.000 | 22.300 | 30.960 | 9041130309600 |
| 31.000 | | 7.500 | 14.000 | 22.300 | 31.000 | 9041130310000 |
| 31.500 | | 7.600 | 14.000 | 22.300 | 31.500 | 9041130315000 |
| 31.750 | 1 1/4 | 7.600 | 14.000 | 22.300 | 31.750 | 9041130317500 |
| 32.000 | | 7.700 | 15.000 | 23.100 | 32.000 | 9041130320000 |
| 32.500 | | 7.800 | 15.000 | 23.100 | 32.500 | 9041130325000 |
| 32.540 | 1 9/32 | 7.800 | 15.000 | 23.100 | 32.540 | 9041130325400 |
| 32.940 | 1 19/64 | 7.800 | 15.000 | 23.100 | 32.940 | 9041130329400 |
| 33.000 | | 7.900 | 15.000 | 23.100 | 33.000 | 9041130330000 |
| 33.340 | 1 5/16 | 7.900 | 15.000 | 23.100 | 33.340 | 9041130333400 |
| 33.500 | | 8.100 | 15.000 | 23.100 | 33.500 | 9041130335000 |
| 34.000 | | 8.200 | 15.000 | 23.100 | 34.000 | 9041130340000 |
| 34.130 | 1 11/32 | 8.200 | 15.000 | 23.100 | 34.130 | 9041130341300 |
| 34.500 | | 8.400 | 15.000 | 23.100 | 34.500 | 9041130345000 |
| 34.930 | | 8.400 | 15.000 | 23.100 | 34.930 | 9041130349300 |
| 35.000 | | 8.500 | 15.000 | 23.100 | 35.000 | 9041130350000 |
| 35.500 | | 8.600 | 15.000 | 23.100 | 35.500 | 9041130355000 |
| 35.720 | 1 13/32 | 8.600 | 15.000 | 23.100 | 35.720 | 9041130357200 |
| 36.000 | | 8.700 | 16.000 | 23.900 | 36.000 | 9041130360000 |
| 36.500 | | 8.800 | 16.000 | 23.900 | 36.500 | 9041130365000 |



Tool material **Solid Carbide**
Surface ○

| | | |
|----------|-----------------|---|
| P | Steel | web thinning ≥ Ø 11.000 • relieved cone • main cutting edge form concave • clamping screws art. no. 4071 included aluminium and Al-alloys • non-ferrous metals |
| M | Stainless steel | |
| K | Cast iron | |
| N | Aluminum ● | |
| S | Titanium alloys | |
| H | Hardened steel | |

●=Optimal
○=Limited

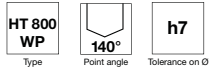


Speeds and feeds information on pg. 564

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|-------|----------|-------------------------------|
| 11.000 | | 2.100 | 4.500 | 7.500 | 11.000 | 9041140110000 |
| 11.200 | | 2.100 | 4.500 | 7.500 | 11.200 | 9041140112000 |
| 11.500 | | 2.100 | 4.500 | 7.500 | 11.500 | 9041140115000 |
| 11.510 | 29/64 | 2.100 | 4.500 | 7.500 | 11.510 | 9041140115100 |
| 11.700 | | 2.200 | 4.500 | 7.500 | 11.700 | 9041140117000 |
| 11.800 | | 2.200 | 4.500 | 7.500 | 11.800 | 9041140118000 |
| 11.910 | 15/32 | 2.200 | 4.500 | 7.500 | 11.910 | 9041140119100 |
| 12.000 | | 2.200 | 5.000 | 7.700 | 12.000 | 9041140120000 |
| 12.100 | | 2.300 | 5.000 | 7.700 | 12.100 | 9041140121000 |
| 12.200 | | 2.300 | 5.000 | 7.700 | 12.200 | 9041140122000 |
| 12.300 | 31/64 | 2.300 | 5.000 | 7.700 | 12.300 | 9041140123000 |
| 12.500 | | 2.300 | 5.000 | 7.700 | 12.500 | 9041140125000 |
| 12.600 | | 2.300 | 5.000 | 7.700 | 12.600 | 9041140126000 |
| 12.700 | 1/2 | 2.400 | 5.000 | 7.700 | 12.700 | 9041140127000 |
| 12.800 | | 2.400 | 5.000 | 7.700 | 12.800 | 9041140128000 |
| 12.900 | | 2.400 | 5.000 | 7.700 | 12.900 | 9041140129000 |
| 13.000 | | 2.400 | 5.500 | 8.500 | 13.000 | 9041140130000 |
| 13.100 | 33/64 | 2.400 | 5.500 | 8.500 | 13.100 | 9041140131000 |
| 13.490 | 17/32 | 2.500 | 5.500 | 8.500 | 13.490 | 9041140134900 |
| 13.500 | | 2.500 | 5.500 | 8.500 | 13.500 | 9041140135000 |
| 13.600 | | 2.500 | 5.500 | 8.500 | 13.600 | 9041140136000 |
| 13.700 | | 2.500 | 5.500 | 8.500 | 13.700 | 9041140137000 |
| 13.800 | | 2.600 | 5.500 | 8.500 | 13.800 | 9041140138000 |
| 13.890 | 35/64 | 2.600 | 5.500 | 8.500 | 13.890 | 9041140138900 |
| 14.000 | | 2.600 | 6.000 | 9.600 | 14.000 | 9041140140000 |
| 14.100 | | 2.600 | 6.000 | 9.600 | 14.100 | 9041140141000 |
| 14.290 | 9/16 | 2.700 | 6.000 | 9.600 | 14.290 | 9041140142900 |
| 14.400 | | 2.700 | 6.000 | 9.600 | 14.400 | 9041140144000 |
| 14.500 | | 2.700 | 6.000 | 9.600 | 14.500 | 9041140145000 |
| 14.600 | | 2.700 | 6.000 | 9.600 | 14.600 | 9041140146000 |
| 14.680 | 37/64 | 2.700 | 6.000 | 9.600 | 14.680 | 9041140146800 |
| 14.700 | | 2.700 | 6.000 | 9.600 | 14.700 | 9041140147000 |
| 14.800 | | 2.700 | 6.000 | 9.600 | 14.800 | 9041140148000 |
| 15.000 | | 2.800 | 6.000 | 9.800 | 15.000 | 9041140150000 |
| 15.080 | 19/32 | 2.800 | 6.000 | 9.800 | 15.080 | 9041140150800 |
| 15.100 | | 2.800 | 6.000 | 9.800 | 15.100 | 9041140151000 |
| 15.200 | | 2.800 | 6.000 | 9.800 | 15.200 | 9041140152000 |
| 15.300 | | 2.800 | 6.000 | 9.800 | 15.300 | 9041140153000 |
| 15.480 | 39/64 | 2.900 | 6.000 | 9.800 | 15.480 | 9041140154800 |
| 15.500 | | 2.900 | 6.000 | 9.800 | 15.500 | 9041140155000 |
| 15.600 | | 2.900 | 6.000 | 9.800 | 15.600 | 9041140156000 |
| 15.700 | | 2.900 | 6.000 | 9.800 | 15.700 | 9041140157000 |
| 15.800 | | 2.900 | 6.000 | 9.800 | 15.800 | 9041140158000 |

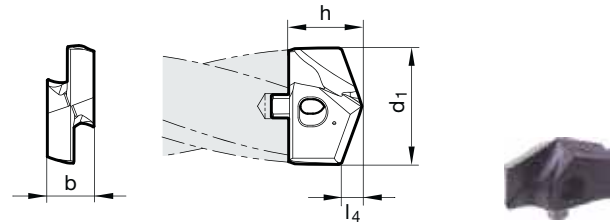
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|--------|----------|---------|---------|----------|-------------------------------|
| 15.870 | 5/8 | 2.900 | 6.000 | 9.800 | 15.870 | 9041140158700 |
| 16.000 | | 3.000 | 7.000 | 11.000 | 16.000 | 9041140160000 |
| 16.270 | 41/64 | 3.000 | 7.000 | 11.000 | 16.270 | 9041140162700 |
| 16.500 | | 3.100 | 7.000 | 11.000 | 16.500 | 9041140165000 |
| 16.670 | 21/32 | 3.100 | 7.000 | 11.000 | 16.670 | 9041140166700 |
| 17.000 | | 3.100 | 7.000 | 11.000 | 17.000 | 9041140170000 |
| 17.070 | 43/64 | 3.200 | 7.000 | 11.000 | 17.070 | 9041140170700 |
| 17.460 | 11/16 | 3.200 | 7.000 | 11.000 | 17.460 | 9041140174600 |
| 17.500 | | 3.200 | 7.000 | 11.000 | 17.500 | 9041140175000 |
| 17.600 | | 3.300 | 7.000 | 11.000 | 17.600 | 9041140176000 |
| 17.860 | 45/64 | 3.300 | 7.000 | 11.000 | 17.860 | 9041140178600 |
| 18.000 | | 3.300 | 8.000 | 12.600 | 18.000 | 9041140180000 |
| 18.260 | 23/32 | 3.400 | 8.000 | 12.600 | 18.260 | 9041140182600 |
| 18.500 | | 3.400 | 8.000 | 12.600 | 18.500 | 9041140185000 |
| 18.650 | 47/64 | 3.400 | 8.000 | 12.600 | 18.650 | 9041140186500 |
| 19.000 | | 3.500 | 8.000 | 12.600 | 19.000 | 9041140190000 |
| 19.050 | 3/4 | 3.500 | 8.000 | 12.600 | 19.050 | 9041140190500 |
| 19.250 | | 3.600 | 8.000 | 12.600 | 19.250 | 9041140192500 |
| 19.450 | 49/64 | 3.600 | 8.000 | 12.600 | 19.450 | 9041140194500 |
| 19.500 | | 3.600 | 8.000 | 12.600 | 19.500 | 9041140195000 |
| 19.600 | | 3.600 | 8.000 | 12.600 | 19.600 | 9041140196000 |
| 19.840 | 25/32 | 3.700 | 8.000 | 12.600 | 19.840 | 9041140198400 |
| 20.000 | | 3.700 | 9.000 | 13.900 | 20.000 | 9041140200000 |
| 20.240 | 51/64 | 3.700 | 9.000 | 13.900 | 20.240 | 9041140202400 |
| 20.500 | | 3.800 | 9.000 | 13.900 | 20.500 | 9041140205000 |
| 20.640 | 13/16 | 3.800 | 9.000 | 13.900 | 20.640 | 9041140206400 |
| 21.000 | | 3.900 | 9.000 | 13.900 | 21.000 | 9041140210000 |
| 21.030 | 53/64 | 3.900 | 9.000 | 13.900 | 21.030 | 9041140210300 |
| 21.100 | | 3.900 | 9.000 | 13.900 | 21.100 | 9041140211000 |
| 21.430 | 27/32 | 3.900 | 9.000 | 13.900 | 21.430 | 9041140214300 |
| 21.500 | | 4.000 | 9.000 | 13.900 | 21.500 | 9041140215000 |
| 21.830 | 55/64 | 4.000 | 9.000 | 13.900 | 21.830 | 9041140218300 |
| 22.000 | | 4.100 | 10.000 | 15.300 | 22.000 | 9041140220000 |
| 22.220 | 7/8 | 4.100 | 10.000 | 15.300 | 22.220 | 9041140222200 |
| 22.500 | | 4.100 | 10.000 | 15.300 | 22.500 | 9041140225000 |
| 22.620 | 57/64 | 4.200 | 10.000 | 15.300 | 22.620 | 9041140226200 |
| 23.000 | | 4.200 | 10.000 | 15.300 | 23.000 | 9041140230000 |
| 23.020 | 29/32 | 4.200 | 10.000 | 15.300 | 23.020 | 9041140230200 |
| 23.420 | 59/64 | 4.300 | 10.000 | 15.300 | 23.420 | 9041140234200 |
| 23.500 | | 4.300 | 10.000 | 15.300 | 23.500 | 9041140235000 |
| 23.810 | 15/16 | 4.400 | 10.000 | 15.300 | 23.810 | 9041140238100 |
| 24.000 | | 4.400 | 11.000 | 15.800 | 24.000 | 9041140240000 |
| 24.100 | | 4.400 | 11.000 | 15.800 | 24.100 | 9041140241000 |
| 24.210 | 61/64 | 4.500 | 11.000 | 15.800 | 24.210 | 9041140242100 |
| 24.500 | | 4.500 | 11.000 | 15.800 | 24.500 | 9041140245000 |
| 24.610 | 31/32 | 4.500 | 11.000 | 15.800 | 24.610 | 9041140246100 |
| 25.000 | 63/64 | 4.600 | 11.000 | 15.800 | 25.000 | 9041140250000 |
| 25.400 | 1 | 4.700 | 11.000 | 15.800 | 25.400 | 9041140254000 |
| 25.500 | | 4.700 | 11.000 | 15.800 | 25.500 | 9041140255000 |
| 25.670 | | 4.700 | 11.000 | 15.800 | 25.670 | 9041140256700 |
| 25.700 | | 4.700 | 11.000 | 15.800 | 25.700 | 9041140257000 |
| 25.810 | | 4.700 | 11.000 | 15.800 | 25.810 | 9041140258100 |
| 26.000 | | 4.800 | 12.000 | 20.000 | 26.000 | 9041140260000 |
| 26.190 | 1 1/32 | 4.800 | 12.000 | 20.000 | 26.190 | 9041140261900 |
| 26.500 | | 4.900 | 12.000 | 20.000 | 26.500 | 9041140265000 |
| 26.590 | 1 3/64 | 4.900 | 12.000 | 20.000 | 26.590 | 9041140265900 |
| 27.000 | | 5.000 | 12.000 | 20.000 | 27.000 | 9041140270000 |
| 27.500 | | 5.100 | 12.000 | 20.000 | 27.500 | 9041140275000 |
| 27.700 | | 5.100 | 12.000 | 20.000 | 27.700 | 9041140277000 |
| 27.780 | 1 3/32 | 5.100 | 12.000 | 20.000 | 27.780 | 9041140277800 |
| 28.000 | | 5.100 | 13.000 | 20.700 | 28.000 | 9041140280000 |
| 28.180 | 1 7/64 | 5.200 | 13.000 | 20.700 | 28.180 | 9041140281800 |
| 28.500 | | 5.200 | 13.000 | 20.700 | 28.500 | 9041140285000 |
| 28.580 | | 5.300 | 13.000 | 20.700 | 28.580 | 9041140285800 |
| 29.000 | | 5.300 | 13.000 | 20.700 | 29.000 | 9041140290000 |
| 29.370 | 1 5/32 | 5.400 | 13.000 | 20.700 | 29.370 | 9041140293700 |

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|---------|----------|---------|---------|----------|-------------------------------|
| 29.500 | | 5.400 | 13.000 | 20.700 | 29.500 | 9041140295000 |
| 29.770 | 1 11/64 | 5.500 | 13.000 | 20.700 | 29.770 | 9041140297700 |
| 30.000 | | 5.500 | 14.000 | 22.300 | 30.000 | 9041140300000 |
| 30.160 | 1 3/16 | 5.500 | 14.000 | 22.300 | 30.160 | 9041140301600 |
| 30.500 | | 5.600 | 14.000 | 22.300 | 30.500 | 9041140305000 |
| 30.960 | 1 7/32 | 5.700 | 14.000 | 22.300 | 30.960 | 9041140309600 |
| 31.000 | | 5.700 | 14.000 | 22.300 | 31.000 | 9041140310000 |
| 31.500 | | 5.800 | 14.000 | 22.300 | 31.500 | 9041140315000 |
| 31.750 | 1 1/4 | 5.800 | 14.000 | 22.300 | 31.750 | 9041140317500 |
| 32.000 | | 5.900 | 15.000 | 23.100 | 32.000 | 9041140320000 |
| 32.500 | | 6.000 | 15.000 | 23.100 | 32.500 | 9041140325000 |
| 32.540 | 1 9/32 | 6.000 | 15.000 | 23.100 | 32.540 | 9041140325400 |
| 32.940 | 1 19/64 | 6.000 | 15.000 | 23.100 | 32.940 | 9041140329400 |
| 33.000 | | 6.100 | 15.000 | 23.100 | 33.000 | 9041140330000 |
| 33.340 | 1 5/16 | 6.100 | 15.000 | 23.100 | 33.340 | 9041140333400 |
| 33.500 | | 6.100 | 15.000 | 23.100 | 33.500 | 9041140335000 |
| 34.000 | | 6.200 | 15.000 | 23.100 | 34.000 | 9041140340000 |
| 34.130 | 1 11/32 | 6.300 | 15.000 | 23.100 | 34.130 | 9041140341300 |
| 34.500 | | 6.300 | 15.000 | 23.100 | 34.500 | 9041140345000 |
| 34.930 | | 6.400 | 15.000 | 23.100 | 34.930 | 9041140349300 |
| 35.000 | | 6.400 | 15.000 | 23.100 | 35.000 | 9041140350000 |
| 35.500 | | 6.500 | 15.000 | 23.100 | 35.500 | 9041140355000 |
| 35.720 | 1 13/32 | 6.600 | 15.000 | 23.100 | 35.720 | 9041140357200 |
| 36.000 | | 6.600 | 16.000 | 23.900 | 36.000 | 9041140360000 |
| 36.500 | | 6.700 | 16.000 | 23.900 | 36.500 | 9041140365000 |
| 36.510 | 1 7/16 | 6.700 | 16.000 | 23.900 | 36.510 | 9041140365100 |
| 37.000 | | 6.800 | 16.000 | 23.900 | 37.000 | 9041140370000 |
| 37.310 | 1 15/32 | 6.800 | 16.000 | 23.900 | 37.310 | 9041140373100 |
| 37.500 | | 6.900 | 16.000 | 23.900 | 37.500 | 9041140375000 |
| 38.000 | | 7.000 | 16.000 | 23.900 | 38.000 | 9041140380000 |
| 38.100 | 1 1/2 | 7.000 | 16.000 | 23.900 | 38.100 | 9041140381000 |
| 38.500 | 1 33/64 | 7.100 | 16.000 | 23.900 | 38.500 | 9041140385000 |
| 39.000 | | 7.100 | 16.000 | 23.900 | 39.000 | 9041140390000 |
| 39.500 | | 7.200 | 16.000 | 23.900 | 39.500 | 9041140395000 |
| 40.000 | | 7.300 | 16.000 | 23.900 | 40.000 | 9041140400000 |



Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning $\geq \text{Ø } 11.000$ • facet point grinding • main cutting edge form straight (after correction) • clamping screws art. no. 4071 included
 - M** Stainless steel ○
 - K** Cast iron ○
 - N** Aluminum
 - S** Titanium alloys
 - H** Hardened steel
- S structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm²
- =Optimal
○=Limited

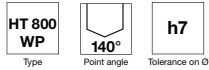


Speeds and feeds information on pg. 562

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|-------|----------|-------------------------------|
| 11.000 | | 2.100 | 4.500 | 7.500 | 11.000 | 9041120110000 |
| 11.200 | | 2.100 | 4.500 | 7.500 | 11.200 | 9041120112000 |
| 11.500 | | 2.100 | 4.500 | 7.500 | 11.500 | 9041120115000 |
| 11.510 | 29/64 | 2.100 | 4.500 | 7.500 | 11.510 | 9041120115100 |
| 11.700 | | 2.200 | 4.500 | 7.500 | 11.700 | 9041120117000 |
| 11.800 | | 2.200 | 4.500 | 7.500 | 11.800 | 9041120118000 |
| 11.910 | 15/32 | 2.200 | 4.500 | 7.500 | 11.910 | 9041120119100 |
| 12.000 | | 2.200 | 5.000 | 7.700 | 12.000 | 9041120120000 |
| 12.100 | | 2.300 | 5.000 | 7.700 | 12.100 | 9041120121000 |
| 12.200 | | 2.300 | 5.000 | 7.700 | 12.200 | 9041120122000 |
| 12.300 | 31/64 | 2.300 | 5.000 | 7.700 | 12.300 | 9041120123000 |
| 12.500 | | 2.300 | 5.000 | 7.700 | 12.500 | 9041120125000 |
| 12.600 | | 2.300 | 5.000 | 7.700 | 12.600 | 9041120126000 |
| 12.700 | 1/2 | 2.400 | 5.000 | 7.700 | 12.700 | 9041120127000 |
| 12.800 | | 2.400 | 5.000 | 7.700 | 12.800 | 9041120128000 |
| 12.900 | | 2.400 | 5.000 | 7.700 | 12.900 | 9041120129000 |
| 13.000 | | 2.400 | 5.500 | 8.500 | 13.000 | 9041120130000 |
| 13.100 | 33/64 | 2.400 | 5.500 | 8.500 | 13.100 | 9041120131000 |
| 13.300 | | 2.500 | 5.500 | 8.500 | 13.300 | 9041120133000 |
| 13.490 | 17/32 | 2.500 | 5.500 | 8.500 | 13.490 | 9041120134900 |
| 13.500 | | 2.500 | 5.500 | 8.500 | 13.500 | 9041120135000 |
| 13.600 | | 2.500 | 5.500 | 8.500 | 13.600 | 9041120136000 |
| 13.700 | | 2.500 | 5.500 | 8.500 | 13.700 | 9041120137000 |
| 13.800 | | 2.600 | 5.500 | 8.500 | 13.800 | 9041120138000 |
| 13.890 | 35/64 | 2.600 | 5.500 | 8.500 | 13.890 | 9041120138900 |
| 14.000 | | 2.600 | 6.000 | 9.600 | 14.000 | 9041120140000 |
| 14.100 | | 2.600 | 6.000 | 9.600 | 14.100 | 9041120141000 |
| 14.290 | 9/16 | 2.700 | 6.000 | 9.600 | 14.290 | 9041120142900 |
| 14.400 | | 2.700 | 6.000 | 9.600 | 14.400 | 9041120144000 |
| 14.500 | | 2.700 | 6.000 | 9.600 | 14.500 | 9041120145000 |
| 14.600 | | 2.700 | 6.000 | 9.600 | 14.600 | 9041120146000 |
| 14.680 | 37/64 | 2.700 | 6.000 | 9.600 | 14.680 | 9041120146800 |
| 14.700 | | 2.700 | 6.000 | 9.600 | 14.700 | 9041120147000 |
| 14.800 | | 2.700 | 6.000 | 9.600 | 14.800 | 9041120148000 |
| 15.000 | | 2.800 | 6.000 | 9.800 | 15.000 | 9041120150000 |
| 15.080 | 19/32 | 2.800 | 6.000 | 9.800 | 15.080 | 9041120150800 |
| 15.100 | | 2.800 | 6.000 | 9.800 | 15.100 | 9041120151000 |
| 15.200 | | 2.800 | 6.000 | 9.800 | 15.200 | 9041120152000 |
| 15.300 | | 2.800 | 6.000 | 9.800 | 15.300 | 9041120153000 |
| 15.480 | 39/64 | 2.900 | 6.000 | 9.800 | 15.480 | 9041120154800 |
| 15.500 | | 2.900 | 6.000 | 9.800 | 15.500 | 9041120155000 |
| 15.600 | | 2.900 | 6.000 | 9.800 | 15.600 | 9041120156000 |
| 15.700 | | 2.900 | 6.000 | 9.800 | 15.700 | 9041120157000 |

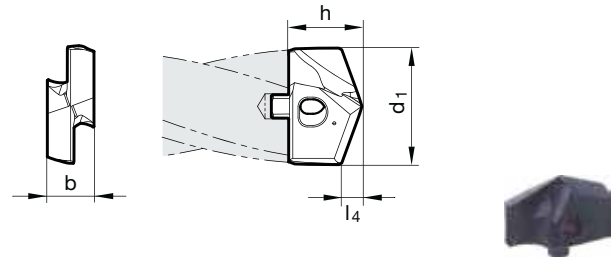
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|--------|----------|---------|---------|----------|-------------------------------|
| 15.800 | | 2.900 | 6.000 | 9.800 | 15.800 | 9041120158000 |
| 15.870 | 5/8 | 2.900 | 6.000 | 9.800 | 15.870 | 9041120158700 |
| 16.000 | | 3.000 | 7.000 | 11.000 | 16.000 | 9041120160000 |
| 16.270 | 41/64 | 3.000 | 7.000 | 11.000 | 16.270 | 9041120162700 |
| 16.500 | | 3.100 | 7.000 | 11.000 | 16.500 | 9041120165000 |
| 16.670 | 21/32 | 3.100 | 7.000 | 11.000 | 16.670 | 9041120166700 |
| 17.000 | | 3.100 | 7.000 | 11.000 | 17.000 | 9041120170000 |
| 17.070 | 43/64 | 3.200 | 7.000 | 11.000 | 17.070 | 9041120170700 |
| 17.300 | | 3.200 | 7.000 | 11.000 | 17.300 | 9041120173000 |
| 17.460 | 11/16 | 3.200 | 7.000 | 11.000 | 17.460 | 9041120174600 |
| 17.500 | | 3.200 | 7.000 | 11.000 | 17.500 | 9041120175000 |
| 17.600 | | 3.300 | 7.000 | 11.000 | 17.600 | 9041120176000 |
| 17.860 | 45/64 | 3.300 | 7.000 | 11.000 | 17.860 | 9041120178600 |
| 18.000 | | 3.300 | 8.000 | 12.600 | 18.000 | 9041120180000 |
| 18.260 | 23/32 | 3.400 | 8.000 | 12.600 | 18.260 | 9041120182600 |
| 18.500 | | 3.400 | 8.000 | 12.600 | 18.500 | 9041120185000 |
| 18.650 | 47/64 | 3.400 | 8.000 | 12.600 | 18.650 | 9041120186500 |
| 18.900 | | 3.500 | 8.000 | 12.600 | 18.900 | 9041120189000 |
| 19.000 | | 3.500 | 8.000 | 12.600 | 19.000 | 9041120190000 |
| 19.050 | 3/4 | 3.500 | 8.000 | 12.600 | 19.050 | 9041120190500 |
| 19.250 | | 3.600 | 8.000 | 12.600 | 19.250 | 9041120192500 |
| 19.300 | | 3.600 | 8.000 | 12.600 | 19.300 | 9041120193000 |
| 19.450 | 49/64 | 3.600 | 8.000 | 12.600 | 19.450 | 9041120194500 |
| 19.500 | | 3.600 | 8.000 | 12.600 | 19.500 | 9041120195000 |
| 19.600 | | 3.600 | 8.000 | 12.600 | 19.600 | 9041120196000 |
| 19.840 | 25/32 | 3.700 | 8.000 | 12.600 | 19.840 | 9041120198400 |
| 20.000 | | 3.700 | 9.000 | 13.900 | 20.000 | 9041120200000 |
| 20.240 | 51/64 | 3.700 | 9.000 | 13.900 | 20.240 | 9041120202400 |
| 20.500 | | 3.800 | 9.000 | 13.900 | 20.500 | 9041120205000 |
| 20.640 | 13/16 | 3.800 | 9.000 | 13.900 | 20.640 | 9041120206400 |
| 20.900 | | 3.900 | 9.000 | 13.900 | 20.900 | 9041120209000 |
| 21.000 | | 3.900 | 9.000 | 13.900 | 21.000 | 9041120210000 |
| 21.030 | 53/64 | 3.900 | 9.000 | 13.900 | 21.030 | 9041120210300 |
| 21.100 | | 3.900 | 9.000 | 13.900 | 21.100 | 9041120211000 |
| 21.430 | 27/32 | 3.900 | 9.000 | 13.900 | 21.430 | 9041120214300 |
| 21.500 | | 4.000 | 9.000 | 13.900 | 21.500 | 9041120215000 |
| 21.700 | | 4.000 | 9.000 | 13.900 | 21.700 | 9041120217000 |
| 21.830 | 55/64 | 4.000 | 9.000 | 13.900 | 21.830 | 9041120218300 |
| 22.000 | | 4.100 | 10.000 | 15.300 | 22.000 | 9041120220000 |
| 22.220 | 7/8 | 4.100 | 10.000 | 15.300 | 22.220 | 9041120222200 |
| 22.500 | | 4.100 | 10.000 | 15.300 | 22.500 | 9041120225000 |
| 22.620 | 57/64 | 4.200 | 10.000 | 15.300 | 22.620 | 9041120226200 |
| 22.700 | | 4.200 | 10.000 | 15.300 | 22.700 | 9041120227000 |
| 23.000 | | 4.200 | 10.000 | 15.300 | 23.000 | 9041120230000 |
| 23.020 | 29/32 | 4.200 | 10.000 | 15.300 | 23.020 | 9041120230200 |
| 23.420 | 59/64 | 4.300 | 10.000 | 15.300 | 23.420 | 9041120234200 |
| 23.500 | | 4.300 | 10.000 | 15.300 | 23.500 | 9041120235000 |
| 23.700 | | 4.400 | 10.000 | 15.300 | 23.700 | 9041120237000 |
| 23.810 | 15/16 | 4.400 | 10.000 | 15.300 | 23.810 | 9041120238100 |
| 24.000 | | 4.400 | 11.000 | 15.800 | 24.000 | 9041120240000 |
| 24.100 | | 4.400 | 11.000 | 15.800 | 24.100 | 9041120241000 |
| 24.210 | 61/64 | 4.500 | 11.000 | 15.800 | 24.210 | 9041120242100 |
| 24.500 | | 4.500 | 11.000 | 15.800 | 24.500 | 9041120245000 |
| 24.610 | 31/32 | 4.500 | 11.000 | 15.800 | 24.610 | 9041120246100 |
| 25.000 | 63/64 | 4.600 | 11.000 | 15.800 | 25.000 | 9041120250000 |
| 25.400 | 1 | 4.700 | 11.000 | 15.800 | 25.400 | 9041120254000 |
| 25.500 | | 4.700 | 11.000 | 15.800 | 25.500 | 9041120255000 |
| 25.670 | | 4.700 | 11.000 | 15.800 | 25.670 | 9041120256700 |
| 25.700 | | 4.700 | 11.000 | 15.800 | 25.700 | 9041120257000 |
| 25.810 | | 4.700 | 11.000 | 15.800 | 25.810 | 9041120258100 |
| 26.000 | | 4.800 | 12.000 | 20.000 | 26.000 | 9041120260000 |
| 26.190 | 1 1/32 | 4.800 | 12.000 | 20.000 | 26.190 | 9041120261900 |
| 26.500 | | 4.900 | 12.000 | 20.000 | 26.500 | 9041120265000 |
| 26.590 | 1 3/64 | 4.900 | 12.000 | 20.000 | 26.590 | 9041120265900 |
| 27.000 | | 5.000 | 12.000 | 20.000 | 27.000 | 9041120270000 |

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|---------|----------|---------|---------|----------|-------------------------------|
| 27.500 | | 5.100 | 12.000 | 20.000 | 27.500 | 9041120275000 |
| 27.700 | | 5.100 | 12.000 | 20.000 | 27.700 | 9041120277000 |
| 27.780 | 1 3/32 | 5.100 | 12.000 | 20.000 | 27.780 | 9041120277800 |
| 28.000 | | 5.100 | 13.000 | 20.700 | 28.000 | 9041120280000 |
| 28.180 | 1 7/64 | 5.200 | 13.000 | 20.700 | 28.180 | 9041120281800 |
| 28.500 | | 5.200 | 13.000 | 20.700 | 28.500 | 9041120285000 |
| 28.580 | | 5.300 | 13.000 | 20.700 | 28.580 | 9041120285800 |
| 29.000 | | 5.300 | 13.000 | 20.700 | 29.000 | 9041120290000 |
| 29.370 | 1 5/32 | 5.400 | 13.000 | 20.700 | 29.370 | 9041120293700 |
| 29.500 | | 5.400 | 13.000 | 20.700 | 29.500 | 9041120295000 |
| 29.600 | | 5.400 | 13.000 | 20.700 | 29.600 | 9041120296000 |
| 29.770 | 1 11/64 | 5.500 | 13.000 | 20.700 | 29.770 | 9041120297700 |
| 30.000 | | 5.500 | 14.000 | 22.300 | 30.000 | 9041120300000 |
| 30.160 | 1 3/16 | 5.500 | 14.000 | 22.300 | 30.160 | 9041120301600 |
| 30.500 | | 5.600 | 14.000 | 22.300 | 30.500 | 9041120305000 |
| 30.960 | 1 7/32 | 5.700 | 14.000 | 22.300 | 30.960 | 9041120309600 |
| 31.000 | | 5.700 | 14.000 | 22.300 | 31.000 | 9041120310000 |
| 31.500 | | 5.800 | 14.000 | 22.300 | 31.500 | 9041120315000 |
| 31.750 | 1 1/4 | 5.800 | 14.000 | 22.300 | 31.750 | 9041120317500 |
| 32.000 | | 5.900 | 15.000 | 23.100 | 32.000 | 9041120320000 |
| 32.500 | | 6.000 | 15.000 | 23.100 | 32.500 | 9041120325000 |
| 32.540 | 1 9/32 | 6.000 | 15.000 | 23.100 | 32.540 | 9041120325400 |
| 32.940 | 1 19/64 | 6.000 | 15.000 | 23.100 | 32.940 | 9041120329400 |
| 33.000 | | 6.100 | 15.000 | 23.100 | 33.000 | 9041120330000 |
| 33.340 | 1 5/16 | 6.100 | 15.000 | 23.100 | 33.340 | 9041120333400 |
| 33.500 | | 6.100 | 15.000 | 23.100 | 33.500 | 9041120335000 |
| 34.000 | | 6.200 | 15.000 | 23.100 | 34.000 | 9041120340000 |
| 34.130 | 1 11/32 | 6.300 | 15.000 | 23.100 | 34.130 | 9041120341300 |
| 34.500 | | 6.300 | 15.000 | 23.100 | 34.500 | 9041120345000 |
| 34.930 | | 6.400 | 15.000 | 23.100 | 34.930 | 9041120349300 |
| 35.000 | | 6.400 | 15.000 | 23.100 | 35.000 | 9041120350000 |
| 35.500 | | 6.500 | 15.000 | 23.100 | 35.500 | 9041120355000 |
| 35.720 | 1 13/32 | 6.600 | 15.000 | 23.100 | 35.720 | 9041120357200 |
| 36.000 | | 6.600 | 16.000 | 23.900 | 36.000 | 9041120360000 |
| 36.500 | | 6.700 | 16.000 | 23.900 | 36.500 | 9041120365000 |
| 36.510 | 1 7/16 | 6.700 | 16.000 | 23.900 | 36.510 | 9041120365100 |
| 37.000 | | 6.800 | 16.000 | 23.900 | 37.000 | 9041120370000 |
| 37.310 | 1 15/32 | 6.800 | 16.000 | 23.900 | 37.310 | 9041120373100 |
| 37.500 | | 6.900 | 16.000 | 23.900 | 37.500 | 9041120375000 |
| 38.000 | | 7.000 | 16.000 | 23.900 | 38.000 | 9041120380000 |
| 38.100 | 1 1/2 | 7.000 | 16.000 | 23.900 | 38.100 | 9041120381000 |
| 38.500 | 1 33/64 | 7.100 | 16.000 | 23.900 | 38.500 | 9041120385000 |
| 39.000 | | 7.100 | 16.000 | 23.900 | 39.000 | 9041120390000 |
| 39.500 | | 7.200 | 16.000 | 23.900 | 39.500 | 9041120395000 |
| 40.000 | | 7.300 | 16.000 | 23.900 | 40.000 | 9041120400000 |



Tool material **Solid Carbide**
Surface **a**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ○ | web thinning $\geq \varnothing 11.000$ • relieved cone • main cutting edge form straight (after correction) • clamping screws art. no. 4071 included |
| M | Stainless steel | ● | |
| K | Cast iron | ○ | |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | stainless steels |
- =Optimal
○=Limited



Speeds and feeds information on pg. 565

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|--------|----------|-------------------------------|
| 11.000 | | 2.100 | 4.500 | 7.500 | 11.000 | 9041150110000 |
| 11.200 | | 2.100 | 4.500 | 7.500 | 11.200 | 9041150112000 |
| 11.500 | | 2.100 | 4.500 | 7.500 | 11.500 | 9041150115000 |
| 11.510 | 29/64 | 2.100 | 4.500 | 7.500 | 11.510 | 9041150115100 |
| 11.700 | | 2.200 | 4.500 | 7.500 | 11.700 | 9041150117000 |
| 11.800 | | 2.200 | 4.500 | 7.500 | 11.800 | 9041150118000 |
| 11.910 | 15/32 | 2.200 | 4.500 | 7.500 | 11.910 | 9041150119100 |
| 12.000 | | 2.200 | 5.000 | 7.700 | 12.000 | 9041150120000 |
| 12.100 | | 2.300 | 5.000 | 7.700 | 12.100 | 9041150121000 |
| 12.200 | | 2.300 | 5.000 | 7.700 | 12.200 | 9041150122000 |
| 12.300 | 31/64 | 2.300 | 5.000 | 7.700 | 12.300 | 9041150123000 |
| 12.500 | | 2.300 | 5.000 | 7.700 | 12.500 | 9041150125000 |
| 12.600 | | 2.300 | 5.000 | 7.700 | 12.600 | 9041150126000 |
| 12.700 | 1/2 | 2.400 | 5.000 | 7.700 | 12.700 | 9041150127000 |
| 12.800 | | 2.400 | 5.000 | 7.700 | 12.800 | 9041150128000 |
| 12.900 | | 2.400 | 5.000 | 7.700 | 12.900 | 9041150129000 |
| 13.000 | | 2.400 | 5.500 | 8.500 | 13.000 | 9041150130000 |
| 13.100 | 33/64 | 2.400 | 5.500 | 8.500 | 13.100 | 9041150131000 |
| 13.490 | 17/32 | 2.500 | 5.500 | 8.500 | 13.490 | 9041150134900 |
| 13.500 | | 2.500 | 5.500 | 8.500 | 13.500 | 9041150135000 |
| 13.600 | | 2.500 | 5.500 | 8.500 | 13.600 | 9041150136000 |
| 13.700 | | 2.500 | 5.500 | 8.500 | 13.700 | 9041150137000 |
| 13.800 | | 2.600 | 5.500 | 8.500 | 13.800 | 9041150138000 |
| 13.890 | 35/64 | 2.600 | 5.500 | 8.500 | 13.890 | 9041150138900 |
| 14.000 | | 2.600 | 6.000 | 9.600 | 14.000 | 9041150140000 |
| 14.100 | | 2.600 | 6.000 | 9.600 | 14.100 | 9041150141000 |
| 14.290 | 9/16 | 2.700 | 6.000 | 9.600 | 14.290 | 9041150142900 |
| 14.400 | | 2.700 | 6.000 | 9.600 | 14.400 | 9041150144000 |
| 14.500 | | 2.700 | 6.000 | 9.600 | 14.500 | 9041150145000 |
| 14.600 | | 2.700 | 6.000 | 9.600 | 14.600 | 9041150146000 |
| 14.700 | | 2.700 | 6.000 | 9.600 | 14.700 | 9041150147000 |
| 14.800 | | 2.700 | 6.000 | 9.600 | 14.800 | 9041150148000 |
| 15.000 | | 2.800 | 6.000 | 9.800 | 15.000 | 9041150150000 |
| 15.080 | 19/32 | 2.800 | 6.000 | 9.800 | 15.080 | 9041150150800 |
| 15.100 | | 2.800 | 6.000 | 9.800 | 15.100 | 9041150151000 |
| 15.200 | | 2.800 | 6.000 | 9.800 | 15.200 | 9041150152000 |
| 15.300 | | 2.800 | 6.000 | 9.800 | 15.300 | 9041150153000 |
| 15.500 | | 2.900 | 6.000 | 9.800 | 15.500 | 9041150155000 |
| 15.600 | | 2.900 | 6.000 | 9.800 | 15.600 | 9041150156000 |
| 15.700 | | 2.900 | 6.000 | 9.800 | 15.700 | 9041150157000 |
| 15.800 | | 2.900 | 6.000 | 9.800 | 15.800 | 9041150158000 |
| 15.870 | 5/8 | 2.900 | 6.000 | 9.800 | 15.870 | 9041150158700 |
| 16.000 | | 3.000 | 7.000 | 11.000 | 16.000 | 9041150160000 |

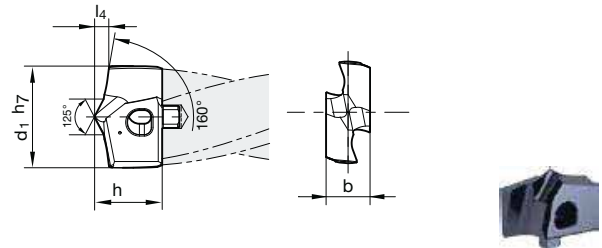
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|---------|----------|---------|---------|----------|-------------------------------|
| 16.270 | 41/64 | 3.000 | 7.000 | 11.000 | 16.270 | 9041150162700 |
| 16.500 | | 3.100 | 7.000 | 11.000 | 16.500 | 9041150165000 |
| 16.670 | 21/32 | 3.100 | 7.000 | 11.000 | 16.670 | 9041150166700 |
| 17.000 | | 3.100 | 7.000 | 11.000 | 17.000 | 9041150170000 |
| 17.070 | 43/64 | 3.200 | 7.000 | 11.000 | 17.070 | 9041150170700 |
| 17.460 | 11/16 | 3.200 | 7.000 | 11.000 | 17.460 | 9041150174600 |
| 17.500 | | 3.200 | 7.000 | 11.000 | 17.500 | 9041150175000 |
| 17.600 | | 3.300 | 7.000 | 11.000 | 17.600 | 9041150176000 |
| 17.860 | 45/64 | 3.300 | 7.000 | 11.000 | 17.860 | 9041150178600 |
| 18.000 | | 3.300 | 8.000 | 12.600 | 18.000 | 9041150180000 |
| 18.260 | 23/32 | 3.400 | 8.000 | 12.600 | 18.260 | 9041150182600 |
| 18.500 | | 3.400 | 8.000 | 12.600 | 18.500 | 9041150185000 |
| 18.650 | 47/64 | 3.400 | 8.000 | 12.600 | 18.650 | 9041150186500 |
| 19.000 | | 3.500 | 8.000 | 12.600 | 19.000 | 9041150190000 |
| 19.050 | 3/4 | 3.500 | 8.000 | 12.600 | 19.050 | 9041150190500 |
| 19.250 | | 3.600 | 8.000 | 12.600 | 19.250 | 9041150192500 |
| 19.450 | 49/64 | 3.600 | 8.000 | 12.600 | 19.450 | 9041150194500 |
| 19.500 | | 3.600 | 8.000 | 12.600 | 19.500 | 9041150195000 |
| 19.600 | | 3.600 | 8.000 | 12.600 | 19.600 | 9041150196000 |
| 19.840 | 25/32 | 3.700 | 8.000 | 12.600 | 19.840 | 9041150198400 |
| 20.000 | | 3.700 | 9.000 | 13.900 | 20.000 | 9041150200000 |
| 20.240 | 51/64 | 3.700 | 9.000 | 13.900 | 20.240 | 9041150202400 |
| 20.500 | | 3.800 | 9.000 | 13.900 | 20.500 | 9041150205000 |
| 20.640 | 13/16 | 3.800 | 9.000 | 13.900 | 20.640 | 9041150206400 |
| 21.000 | | 3.900 | 9.000 | 13.900 | 21.000 | 9041150210000 |
| 21.030 | 53/64 | 3.900 | 9.000 | 13.900 | 21.030 | 9041150210300 |
| 21.100 | | 3.900 | 9.000 | 13.900 | 21.100 | 9041150211000 |
| 21.430 | 27/32 | 3.900 | 9.000 | 13.900 | 21.430 | 9041150214300 |
| 21.500 | | 4.000 | 9.000 | 13.900 | 21.500 | 9041150215000 |
| 21.830 | 55/64 | 4.000 | 9.000 | 13.900 | 21.830 | 9041150218300 |
| 22.000 | | 4.100 | 10.000 | 15.300 | 22.000 | 9041150220000 |
| 22.220 | 7/8 | 4.100 | 10.000 | 15.300 | 22.220 | 9041150222200 |
| 22.500 | | 4.100 | 10.000 | 15.300 | 22.500 | 9041150225000 |
| 22.620 | 57/64 | 4.200 | 10.000 | 15.300 | 22.620 | 9041150226200 |
| 23.000 | | 4.200 | 10.000 | 15.300 | 23.000 | 9041150230000 |
| 23.020 | 29/32 | 4.200 | 10.000 | 15.300 | 23.020 | 9041150230200 |
| 23.420 | 59/64 | 4.300 | 10.000 | 15.300 | 23.420 | 9041150234200 |
| 23.500 | | 4.300 | 10.000 | 15.300 | 23.500 | 9041150235000 |
| 23.810 | 15/16 | 4.400 | 10.000 | 15.300 | 23.810 | 9041150238100 |
| 24.000 | | 4.400 | 11.000 | 15.800 | 24.000 | 9041150240000 |
| 24.100 | | 4.400 | 11.000 | 15.800 | 24.100 | 9041150241000 |
| 24.210 | 61/64 | 4.500 | 11.000 | 15.800 | 24.210 | 9041150242100 |
| 24.500 | | 4.500 | 11.000 | 15.800 | 24.500 | 9041150245000 |
| 24.610 | 31/32 | 4.500 | 11.000 | 15.800 | 24.610 | 9041150246100 |
| 25.000 | 63/64 | 4.600 | 11.000 | 15.800 | 25.000 | 9041150250000 |
| 25.400 | 1 | 4.700 | 11.000 | 15.800 | 25.400 | 9041150254000 |
| 25.500 | | 4.700 | 11.000 | 15.800 | 25.500 | 9041150255000 |
| 25.700 | | 4.700 | 11.000 | 15.800 | 25.700 | 9041150257000 |
| 26.000 | | 4.800 | 12.000 | 20.000 | 26.000 | 9041150260000 |
| 26.190 | 1 1/32 | 4.800 | 12.000 | 20.000 | 26.190 | 9041150261900 |
| 26.500 | | 4.900 | 12.000 | 20.000 | 26.500 | 9041150265000 |
| 26.590 | 1 3/64 | 4.900 | 12.000 | 20.000 | 26.590 | 9041150265900 |
| 27.000 | | 5.000 | 12.000 | 20.000 | 27.000 | 9041150270000 |
| 27.500 | | 5.100 | 12.000 | 20.000 | 27.500 | 9041150275000 |
| 27.700 | | 5.100 | 12.000 | 20.000 | 27.700 | 9041150277000 |
| 27.780 | 1 3/32 | 5.100 | 12.000 | 20.000 | 27.780 | 9041150277800 |
| 28.000 | | 5.100 | 13.000 | 20.700 | 28.000 | 9041150280000 |
| 28.180 | 1 7/64 | 5.200 | 13.000 | 20.700 | 28.180 | 9041150281800 |
| 28.500 | | 5.200 | 13.000 | 20.700 | 28.500 | 9041150285000 |
| 28.580 | | 5.300 | 13.000 | 20.700 | 28.580 | 9041150285800 |
| 29.000 | | 5.300 | 13.000 | 20.700 | 29.000 | 9041150290000 |
| 29.370 | 1 5/32 | 5.400 | 13.000 | 20.700 | 29.370 | 9041150293700 |
| 29.500 | | 5.400 | 13.000 | 20.700 | 29.500 | 9041150295000 |
| 29.770 | 1 11/64 | 5.500 | 13.000 | 20.700 | 29.770 | 9041150297700 |
| 30.000 | | 5.500 | 14.000 | 22.300 | 30.000 | 9041150300000 |
| 30.160 | 1 3/16 | 5.500 | 14.000 | 22.300 | 30.160 | 9041150301600 |

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|---------|----------|---------|---------|----------|-------------------------------|
| 30.500 | | 5.600 | 14.000 | 22.300 | 30.500 | 9041150305000 |
| 30.960 | 1 7/32 | 5.700 | 14.000 | 22.300 | 30.960 | 9041150309600 |
| 31.000 | | 5.700 | 14.000 | 22.300 | 31.000 | 9041150310000 |
| 31.500 | | 5.800 | 14.000 | 22.300 | 31.500 | 9041150315000 |
| 31.750 | 1 1/4 | 5.800 | 14.000 | 22.300 | 31.750 | 9041150317500 |
| 32.000 | | 5.900 | 15.000 | 23.100 | 32.000 | 9041150320000 |
| 32.500 | | 6.000 | 15.000 | 23.100 | 32.500 | 9041150325000 |
| 32.540 | 1 9/32 | 6.000 | 15.000 | 23.100 | 32.540 | 9041150325400 |
| 33.000 | | 6.100 | 15.000 | 23.100 | 33.000 | 9041150330000 |
| 33.340 | 1 5/16 | 6.100 | 15.000 | 23.100 | 33.340 | 9041150333400 |
| 33.500 | | 6.100 | 15.000 | 23.100 | 33.500 | 9041150335000 |
| 34.000 | | 6.200 | 15.000 | 23.100 | 34.000 | 9041150340000 |
| 34.130 | 1 11/32 | 6.300 | 15.000 | 23.100 | 34.130 | 9041150341300 |
| 34.500 | | 6.300 | 15.000 | 23.100 | 34.500 | 9041150345000 |
| 34.930 | | 6.400 | 15.000 | 23.100 | 34.930 | 9041150349300 |
| 35.000 | | 6.400 | 15.000 | 23.100 | 35.000 | 9041150350000 |
| 35.500 | | 6.500 | 15.000 | 23.100 | 35.500 | 9041150355000 |
| 35.720 | 1 13/32 | 6.600 | 15.000 | 23.100 | 35.720 | 9041150357200 |
| 36.000 | | 6.600 | 16.000 | 23.900 | 36.000 | 9041150360000 |
| 36.500 | | 6.700 | 16.000 | 23.900 | 36.500 | 9041150365000 |
| 36.510 | 1 7/16 | 6.700 | 16.000 | 23.900 | 36.510 | 9041150365100 |
| 37.000 | | 6.800 | 16.000 | 23.900 | 37.000 | 9041150370000 |
| 37.310 | 1 15/32 | 6.800 | 16.000 | 23.900 | 37.310 | 9041150373100 |
| 37.500 | | 6.900 | 16.000 | 23.900 | 37.500 | 9041150375000 |
| 38.000 | | 7.000 | 16.000 | 23.900 | 38.000 | 9041150380000 |
| 38.100 | 1 1/2 | 7.000 | 16.000 | 23.900 | 38.100 | 9041150381000 |
| 38.500 | 1 33/64 | 7.100 | 16.000 | 23.900 | 38.500 | 9041150385000 |
| 39.000 | | 7.100 | 16.000 | 23.900 | 39.000 | 9041150390000 |
| 39.500 | | 7.200 | 16.000 | 23.900 | 39.500 | 9041150395000 |
| 40.000 | | 7.300 | 16.000 | 23.900 | 40.000 | 9041150400000 |



Tool material **Solid Carbide**
Surface **F**

- P** Steel ● facet point grinding • main cutting edge form concave • special point geometry with 160° point angle and 125° center point • clamping screws art. no. 4071 included
 - M** Stainless steel ○
 - K** Cast iron ○ application for the machining of structural steel components
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 566

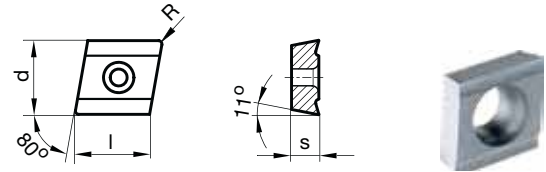
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|--------|-------|-------|-------|----------|-------------------------------|
| 12.000 | | 1.70 | 5.00 | 7.50 | 12.000 | 9042290120000 |
| 12.700 | 1/2 | 1.80 | 5.00 | 7.50 | 12.700 | 9042290127000 |
| 14.000 | | 2.00 | 6.00 | 9.60 | 14.000 | 9042290140000 |
| 14.290 | 9/16 | 2.10 | 6.00 | 9.50 | 14.290 | 9042290142900 |
| 15.870 | 5/8 | 2.30 | 6.00 | 9.60 | 15.870 | 9042290158700 |
| 16.000 | | 2.30 | 7.00 | 10.80 | 16.000 | 9042290160000 |
| 17.460 | 11/16 | 2.50 | 7.00 | 10.80 | 17.460 | 9042290174600 |
| 18.000 | | 2.60 | 8.00 | 12.30 | 18.000 | 9042290180000 |
| 19.050 | 3/4 | 2.80 | 8.00 | 12.30 | 19.050 | 9042290190500 |
| 20.000 | | 2.90 | 9.00 | 13.60 | 20.000 | 9042290200000 |
| 20.640 | 13/16 | 3.00 | 9.00 | 13.60 | 20.640 | 9042290206400 |
| 21.000 | | 3.00 | 9.00 | 13.60 | 21.000 | 9042290210000 |
| 22.000 | | 3.20 | 10.00 | 14.90 | 22.000 | 9042290220000 |
| 22.220 | 7/8 | 3.20 | 10.00 | 14.90 | 22.220 | 9042290222200 |
| 23.810 | 15/16 | 3.40 | 10.00 | 15.00 | 23.810 | 9042290238100 |
| 24.000 | | 3.50 | 11.00 | 15.50 | 24.000 | 9042290240000 |
| 25.000 | 63/64 | 3.60 | 11.00 | 15.50 | 25.000 | 9042290250000 |
| 25.400 | 1 | 3.70 | 11.00 | 15.50 | 25.400 | 9042290254000 |
| 26.000 | | 3.80 | 12.00 | 18.50 | 26.000 | 9042290260000 |
| 27.000 | | 3.90 | 12.00 | 18.60 | 27.000 | 9042290270000 |
| 28.000 | | 4.10 | 13.00 | 19.20 | 28.000 | 9042290280000 |
| 28.580 | 1 1/8 | 4.10 | 13.00 | 19.80 | 28.580 | 9042290285800 |
| 29.000 | | 4.20 | 13.00 | 19.60 | 29.000 | 9042290290000 |
| 30.000 | | 4.40 | 14.00 | 19.90 | 30.000 | 9042290300000 |
| 30.160 | 1 3/16 | 4.40 | 14.00 | 19.90 | 30.160 | 9042290301600 |
| 31.750 | 1 1/4 | 4.60 | 14.00 | 20.60 | 31.750 | 9042290317500 |
| 32.000 | | 4.60 | 15.00 | 21.30 | 32.000 | 9042290320000 |
| 33.000 | | 4.80 | 15.00 | 21.90 | 33.000 | 9042290330000 |
| 33.340 | 1 5/16 | 4.80 | 15.00 | 21.70 | 33.340 | 9042290333400 |
| 34.000 | | 4.90 | 15.00 | 22.00 | 34.000 | 9042290340000 |
| 34.930 | 1 3/8 | 5.10 | 15.00 | 22.20 | 34.930 | 9042290349300 |
| 36.000 | | 5.20 | 16.00 | 22.50 | 36.000 | 9042290360000 |
| 36.510 | 1 7/16 | 5.30 | 16.00 | 22.50 | 36.510 | 9042290365100 |
| 38.000 | | 5.50 | 16.00 | 22.70 | 38.000 | 9042290380000 |
| 38.100 | 1 1/2 | 5.50 | 16.00 | 23.00 | 38.100 | 9042290381000 |
| 40.000 | | 5.80 | 16.00 | 23.30 | 40.000 | 9042290400000 |



Tool material **Solid Carbide**
 Surface ○

| | | |
|----------|-----------------|--|
| P | Steel | clamping screws art. no. 6128 not included |
| M | Stainless steel | |
| K | Cast iron | aluminium and Al-alloys • non-ferrous metals |
| N | Aluminum ● | |
| S | Titanium alloys | |
| H | Hardened steel | |

●=Optimal
 ○=Limited

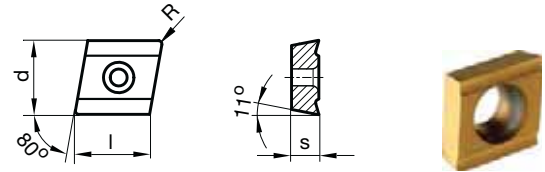


| ISO | d inch | s mm | R mm | l mm | Code no. | EDP # |
|-----------------|-----------|---------|---------|---------|----------|-------------------------------|
| CPGT050202FR-AL | 5.560 | 2.380 | 0.200 | 5.640 | 52.020 | 9076350520200 |
| CPGT050204FR-AL | 5.560 | 2.380 | 0.400 | 5.640 | 52.040 | 9076350520400 |
| CPGT060202FR-AL | 6.350 | 2.380 | 0.200 | 6.450 | 62.020 | 9076350620200 |
| CPGT060204FR-AL | 6.350 | 2.380 | 0.400 | 6.450 | 62.040 | 9076350620400 |
| CPGT09T308FR-AL | 9.525 | 3.970 | 0.800 | 9.670 | 93.080 | 9076350930800 |



Tool material **Solid Carbide**
 Surface **S**

- | | | | |
|----------|-----------------|---|--|
| P | Steel | ● | clamping screws art. no. 6128 not included |
| M | Stainless steel | ○ | |
| K | Cast iron | ○ | alloyed/unalloyed steel and cast steel |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |
- =Optimal
 ○=Limited



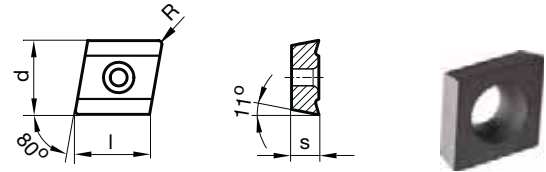
| ISO | d inch | s mm | R mm | l mm | Code no. | EDP # |
|----------------|-----------|---------|---------|---------|----------|-------------------------------|
| CPGT050202FR-P | 5.560 | 2.380 | 0.200 | 5.640 | 52.020 | 9076450520200 |
| CPGT050204FR-P | 5.560 | 2.380 | 0.400 | 5.640 | 52.040 | 9076450520400 |
| CPGT060202FR-P | 6.350 | 2.380 | 0.200 | 6.450 | 62.020 | 9076450620200 |
| CPGT060204FR-P | 6.350 | 2.380 | 0.400 | 6.450 | 62.040 | 9076450620400 |
| CPGT09T308FR-P | 9.525 | 3.970 | 0.800 | 9.670 | 93.080 | 9076450930800 |



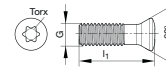
Tool material **Solid Carbide**
Surface **A**

| | | | |
|----------|-----------------|---|---|
| P | Steel | ○ | clamping screws art. no. 6128 not included |
| M | Stainless steel | ○ | |
| K | Cast iron | ● | grey cast iron, malleable and spheroidal iron |
| N | Aluminum | ○ | |
| S | Titanium alloys | ○ | |
| H | Hardened steel | ○ | |

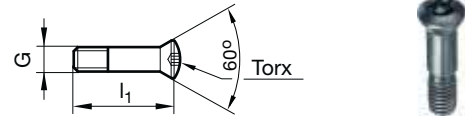
●=Optimal
○=Limited



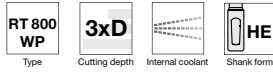
| ISO | d inch | s mm | R mm | l mm | Code no. | EDP # |
|----------------|-----------|---------|---------|---------|----------|-------------------------------|
| CPGW050202FN-K | 5.560 | 2.380 | 0.200 | 5.640 | 52.020 | 9076320520200 |
| CPGW050204FN-K | 5.560 | 2.380 | 0.400 | 5.640 | 52.040 | 9076320520400 |
| CPGW060202FN-K | 6.350 | 2.380 | 0.200 | 6.450 | 62.020 | 9076320620200 |
| CPGW060204FN-K | 6.350 | 2.380 | 0.400 | 6.450 | 62.040 | 9076320620400 |
| CPGW09T308FN-K | 9.525 | 3.970 | 0.800 | 9.670 | 93.080 | 9076320930800 |



| G | l1 inch | Torx | Code no. | EDP # |
|------------|------------|------|----------|-------------------------------|
| M 2 X5.5 | 5.500 | T6 | 2.000 | 9061280020000 |
| M 2.2 X5 | 5.000 | T6 | 2.200 | 9061280022000 |
| M 2 X5.3 | 5.300 | T7 | 2.500 | 9061280025000 |
| M2.5 x 6.5 | 6.500 | T7 | 2.501 | 9061280025010 |
| M 2.5 X5.7 | 5.700 | T7 | 2.502 | 9061280025020 |
| M 3.5 X10 | 10.000 | T15 | 3.500 | 9061280035000 |
| M3.5 x 12 | 12.000 | T15 | 3.501 | 9061280035010 |
| M3.5 x 8.5 | 8.500 | T15 | 3.502 | 9061280035020 |
| M 3.5 X8 | 8.000 | T15 | 3.503 | 9061280035030 |
| M4 x 13.5 | 13.500 | T15 | 4.000 | 9061280040000 |
| M4 x 8.4 | 8.400 | T15 | 4.001 | 9061280040010 |
| M4 x 10.8 | 10.800 | T15 | 4.002 | 9061280040020 |
| M 4 X0.5 | 11.000 | T15 | 4.003 | 9061280040030 |
| M 4 X9.5 | 9.500 | T20 | 4.004 | 9061280040040 |
| M 4 X0.5 | 9.000 | T15 | 4.005 | 9061280040050 |
| M 4 X9.5 | 9.500 | T15 | 4.006 | 9061280040060 |
| M4.5 x 11 | 11.000 | T15 | 4.500 | 9061280045000 |
| M4.5 x 7.5 | 7.500 | T15 | 4.501 | 9061280045010 |
| M4.5 x 11 | 11.000 | T20 | 4.502 | 9061280045020 |
| M5 x 17 | 17.000 | T20 | 5.000 | 9061280050000 |
| M5 x 11 | 11.000 | T20 | 5.001 | 9061280050010 |



| G | l1 inch | Torx | Code no. | EDP # |
|-------|------------|------|----------|-------------------------------|
| M 1.6 | 4.000 | T5 | 1.600 | 9040710016000 |
| M 1.6 | 4.400 | T5 | 1.601 | 9040710016010 |
| M 2.2 | 9.500 | T7 | 2.200 | 9040710022000 |
| M 2.2 | 10.500 | T7 | 2.201 | 9040710022010 |
| M 2.2 | 5.600 | T7 | 2.202 | 9040710022020 |
| M 2.2 | 4.600 | T7 | 2.203 | 9040710022030 |
| M 2.5 | 11.400 | T8 | 2.500 | 9040710025000 |
| M 2.5 | 6.400 | T8 | 2.501 | 9040710025010 |
| M 2.5 | 5.200 | T8 | 2.502 | 9040710025020 |
| M 3 | 13.100 | T9 | 3.001 | 9040710030010 |
| M 3 | 6.400 | T9 | 3.002 | 9040710030020 |
| M 3 | 8.000 | T9 | 3.003 | 9040710030030 |
| M 3.5 | 14.250 | T10 | 3.500 | 9040710035000 |
| M 4 | 16.000 | T15 | 4.000 | 9040710040000 |
| M 4 | 7.700 | T15 | 4.001 | 9040710040010 |
| M 4 | 10.600 | T15 | 4.002 | 9040710040020 |
| M 4.5 | 18.000 | T15 | 4.500 | 9040710045000 |
| M 5 | 19.750 | T20 | 5.000 | 9040710050000 |
| M 5 | 21.750 | T20 | 5.001 | 9040710050010 |
| M 5 | 14.200 | T20 | 5.002 | 9040710050020 |
| M 5 | 23.400 | T20 | 5.003 | 9040710050030 |
| M 6 | 27.000 | T25 | 6.000 | 9040710060000 |
| M 6 | 28.500 | T25 | 6.001 | 9040710060010 |
| M 6 | 32.500 | T25 | 6.002 | 9040710060020 |



Tool material

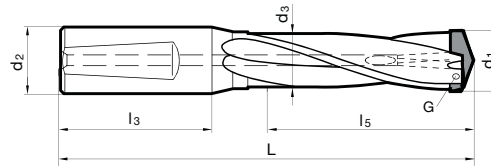
Surface



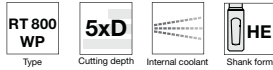
| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

web thinning $\geq \varnothing 17.000$ • short design • secure clamping of interchangeable insert in the holder • clamping screws art. no. 1071 included • screwdriver art. no. 1612 included

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d3 mm | L mm | l3 mm | l5 mm | G | Code no. | EDP # |
|-------------|----------|--------|---------|--------|---------|------------|----------|-------------------------------|
| 16.00-17.00 | 20.000 | 15.700 | 130.000 | 50.000 | 54.000 | 1071 3.006 | 17.000 | 9052420170000 |
| 16.00-17.00 | 19.050 | 15.700 | 130.000 | 50.000 | 54.000 | 1071 3.006 | 17.005 | 9052420170050 |
| 17.01-17.99 | 20.000 | 16.700 | 130.000 | 50.000 | 54.000 | 1071 3.006 | 17.990 | 9052420179900 |
| 17.01-17.99 | 19.050 | 16.700 | 130.000 | 50.000 | 54.000 | 1071 3.006 | 17.995 | 9052420179950 |
| 18.00-19.00 | 20.000 | 17.700 | 138.000 | 50.000 | 60.000 | 1071 3.000 | 19.000 | 9052420190000 |
| 18.00-19.00 | 19.050 | 17.700 | 138.000 | 50.000 | 60.000 | 1071 3.000 | 19.005 | 9052420190050 |
| 19.01-20.00 | 20.000 | 18.700 | 138.000 | 50.000 | 60.000 | 1071 3.000 | 20.000 | 9052420200000 |
| 19.01-20.00 | 19.050 | 18.700 | 138.000 | 50.000 | 60.000 | 1071 3.000 | 20.005 | 9052420200050 |
| 20.01-21.00 | 25.000 | 19.700 | 153.000 | 56.000 | 66.000 | 1071 3.000 | 21.000 | 9052420210000 |
| 20.01-21.00 | 25.400 | 19.700 | 153.000 | 56.000 | 66.000 | 1071 3.000 | 21.005 | 9052420210050 |
| 21.01-22.50 | 25.000 | 20.700 | 153.000 | 56.000 | 66.000 | 1071 3.000 | 22.500 | 9052420225000 |
| 21.01-22.50 | 25.400 | 21.200 | 153.000 | 56.000 | 66.000 | 1071 3.000 | 22.505 | 9052420225050 |
| 22.51-24.00 | 25.000 | 22.200 | 161.000 | 56.000 | 72.000 | 1071 3.500 | 24.000 | 9052420240000 |
| 22.51-24.00 | 25.400 | 22.700 | 161.000 | 56.000 | 72.000 | 1071 3.500 | 24.005 | 9052420240050 |
| 24.01-25.50 | 25.000 | 23.700 | 170.000 | 56.000 | 78.000 | 1071 3.500 | 25.500 | 9052420255000 |
| 24.01-25.50 | 25.400 | 24.200 | 170.000 | 56.000 | 78.000 | 1071 3.500 | 25.505 | 9052420255050 |
| 25.51-27.50 | 32.000 | 25.200 | 182.000 | 60.000 | 84.000 | 1071 4.000 | 27.500 | 9052420275000 |
| 25.51-27.50 | 31.750 | 26.200 | 182.000 | 60.000 | 84.000 | 1071 4.000 | 27.505 | 9052420275050 |
| 27.51-29.50 | 32.000 | 27.200 | 190.000 | 60.000 | 90.000 | 1071 4.000 | 29.500 | 9052420295000 |
| 27.51-29.50 | 31.750 | 28.200 | 190.000 | 60.000 | 90.000 | 1071 4.000 | 29.505 | 9052420295050 |
| 29.51-32.00 | 32.000 | 29.200 | 198.000 | 60.000 | 96.000 | 1071 4.500 | 32.000 | 9052420320000 |
| 29.51-32.00 | 31.750 | 30.700 | 198.000 | 60.000 | 96.000 | 1071 4.500 | 32.005 | 9052420320050 |
| 32.01-34.50 | 32.000 | 31.700 | 206.000 | 60.000 | 102.000 | 1071 4.500 | 34.500 | 9052420345000 |
| 32.01-34.50 | 31.750 | 33.200 | 206.000 | 60.000 | 102.000 | 1071 4.500 | 34.505 | 9052420345050 |
| 34.51-37.50 | 32.000 | 34.000 | 218.000 | 60.000 | 114.000 | 1071 5.000 | 37.500 | 9052420375000 |
| 34.51-37.50 | 31.750 | 36.200 | 218.000 | 60.000 | 114.000 | 1071 5.000 | 37.505 | 9052420375050 |
| 37.51-40.50 | 32.000 | 37.000 | 231.000 | 60.000 | 120.000 | 1071 5.000 | 40.500 | 9052420405000 |
| 37.51-40.50 | 31.750 | 39.200 | 231.000 | 60.000 | 120.000 | 1071 5.000 | 40.505 | 9052420405050 |



Tool material

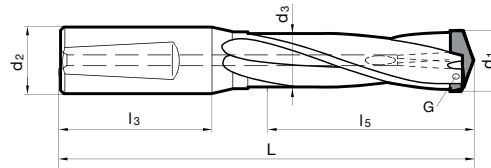
Surface



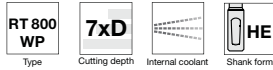
| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

web thinning $\geq \varnothing 17.000$ • short design • secure clamping of interchangeable insert in the holder • clamping screws art. no. 1071 included • screwdriver art. no. 1612 included

- =Optimal
- =Limited



| d1 mm | d2 h6 mm | d3 mm | L mm | l3 mm | l5 mm | G | Code no. | EDP # |
|-------------|----------|--------|---------|--------|---------|------------|----------|-------------------------------|
| 16.00-17.00 | 20.000 | 15.700 | 166.000 | 50.000 | 90.000 | 1071 3.006 | 17.000 | 9052430170000 |
| 16.00-17.00 | 19.050 | 15.700 | 166.000 | 50.000 | 90.000 | 1071 3.006 | 17.005 | 9052430170050 |
| 17.01-17.99 | 20.000 | 16.700 | 166.000 | 50.000 | 90.000 | 1071 3.006 | 17.990 | 9052430179900 |
| 17.01-17.99 | 19.050 | 16.700 | 166.000 | 50.000 | 90.000 | 1071 3.006 | 17.995 | 9052430179950 |
| 18.00-19.00 | 20.000 | 17.700 | 178.000 | 50.000 | 100.000 | 1071 3.000 | 19.000 | 9052430190000 |
| 18.00-19.00 | 19.050 | 17.700 | 178.000 | 50.000 | 100.000 | 1071 3.000 | 19.005 | 9052430190050 |
| 19.01-20.00 | 20.000 | 18.700 | 178.000 | 50.000 | 100.000 | 1071 3.000 | 20.000 | 9052430200000 |
| 19.01-20.00 | 19.050 | 18.700 | 178.000 | 50.000 | 100.000 | 1071 3.000 | 20.005 | 9052430200050 |
| 20.01-21.00 | 25.000 | 19.700 | 197.000 | 56.000 | 110.000 | 1071 3.000 | 21.000 | 9052430210000 |
| 20.01-21.00 | 25.400 | 19.700 | 197.000 | 56.000 | 110.000 | 1071 3.000 | 21.005 | 9052430210050 |
| 21.01-22.50 | 25.000 | 20.700 | 197.000 | 56.000 | 110.000 | 1071 3.000 | 22.500 | 9052430225000 |
| 21.01-22.50 | 25.400 | 21.200 | 197.000 | 56.000 | 110.000 | 1071 3.000 | 22.505 | 9052430225050 |
| 22.51-24.00 | 25.000 | 22.200 | 209.000 | 56.000 | 120.000 | 1071 3.500 | 24.000 | 9052430240000 |
| 22.51-24.00 | 25.400 | 22.700 | 209.000 | 56.000 | 120.000 | 1071 3.500 | 24.005 | 9052430240050 |
| 24.01-25.50 | 25.000 | 23.700 | 222.000 | 56.000 | 130.000 | 1071 3.500 | 25.500 | 9052430255000 |
| 24.01-25.50 | 25.400 | 24.200 | 222.000 | 56.000 | 130.000 | 1071 3.500 | 25.505 | 9052430255050 |
| 25.51-27.50 | 32.000 | 25.200 | 238.000 | 60.000 | 140.000 | 1071 4.000 | 27.500 | 9052430275000 |
| 25.51-27.50 | 31.750 | 26.200 | 238.000 | 60.000 | 140.000 | 1071 4.000 | 27.505 | 9052430275050 |
| 27.51-29.50 | 32.000 | 27.200 | 250.000 | 60.000 | 150.000 | 1071 4.000 | 29.500 | 9052430295000 |
| 27.51-29.50 | 31.750 | 28.200 | 250.000 | 60.000 | 150.000 | 1071 4.000 | 29.505 | 9052430295050 |
| 29.51-32.00 | 32.000 | 29.200 | 262.000 | 60.000 | 160.000 | 1071 4.500 | 32.000 | 9052430320000 |
| 29.51-32.00 | 31.750 | 30.700 | 262.000 | 60.000 | 160.000 | 1071 4.500 | 32.005 | 9052430320050 |
| 32.01-34.50 | 32.000 | 31.700 | 274.000 | 60.000 | 170.000 | 1071 4.500 | 34.500 | 9052430345000 |
| 32.01-34.50 | 31.750 | 33.200 | 274.000 | 60.000 | 170.000 | 1071 4.500 | 34.505 | 9052430345050 |
| 34.51-37.50 | 32.000 | 34.000 | 292.000 | 60.000 | 190.000 | 1071 5.000 | 37.500 | 9052430375000 |
| 34.51-37.50 | 31.750 | 36.200 | 292.000 | 60.000 | 190.000 | 1071 5.000 | 37.505 | 9052430375050 |
| 37.51-40.50 | 32.000 | 37.000 | 311.000 | 60.000 | 200.000 | 1071 5.000 | 40.500 | 9052430405000 |
| 37.51-40.50 | 31.750 | 39.200 | 311.000 | 60.000 | 200.000 | 1071 5.000 | 40.505 | 9052430405050 |



Tool material

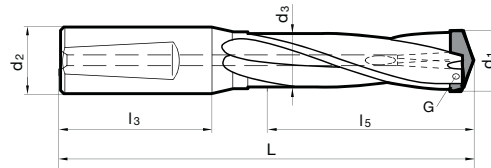
Surface



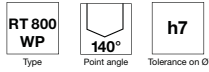
| | |
|----------|-----------------|
| P | Steel |
| M | Stainless steel |
| K | Cast iron |
| N | Aluminum |
| S | Titanium alloys |
| H | Hardened steel |

●=Optimal
○=Limited

web thinning $\geq \varnothing 17.000$ • short design • secure clamping of interchangeable insert in the holder • clamping screws art. no. 1071 included • screwdriver art. no. 1612 included

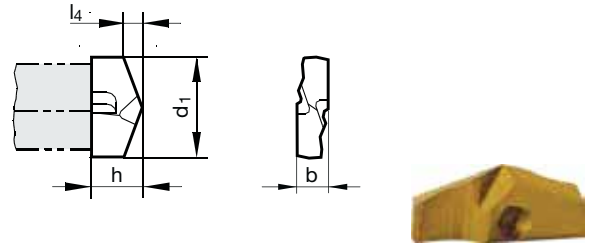


| d1 mm | d2 h6 mm | d3 mm | L mm | l3 mm | l5 mm | G | Code no. | EDP # |
|-------------|----------|--------|---------|--------|---------|------------|----------|-------------------------------|
| 16.00-17.00 | 20.000 | 15.700 | 202.000 | 50.000 | 126.000 | 1071 3.006 | 17.000 | 9052480170000 |
| 16.00-17.00 | 19.050 | 15.700 | 202.000 | 50.000 | 126.000 | 1071 3.006 | 17.005 | 9052480170050 |
| 17.01-17.99 | 20.000 | 16.700 | 202.000 | 50.000 | 126.000 | 1071 3.006 | 17.990 | 9052480179900 |
| 17.01-17.99 | 19.050 | 16.700 | 202.000 | 50.000 | 126.000 | 1071 3.006 | 17.995 | 9052480179950 |
| 18.00-19.00 | 20.000 | 17.700 | 218.000 | 50.000 | 140.000 | 1071 3.000 | 19.000 | 9052480190000 |
| 18.00-19.00 | 19.050 | 17.700 | 218.000 | 50.000 | 140.000 | 1071 3.000 | 19.005 | 9052480190050 |
| 19.01-20.00 | 20.000 | 18.700 | 218.000 | 50.000 | 140.000 | 1071 3.000 | 20.000 | 9052480200000 |
| 19.01-20.00 | 19.050 | 18.700 | 218.000 | 50.000 | 140.000 | 1071 3.000 | 20.005 | 9052480200050 |
| 20.01-21.00 | 25.000 | 19.700 | 241.000 | 56.000 | 154.000 | 1071 3.000 | 21.000 | 9052480210000 |
| 20.01-21.00 | 25.400 | 19.700 | 241.000 | 56.000 | 154.000 | 1071 3.000 | 21.005 | 9052480210050 |
| 21.01-22.50 | 25.000 | 20.700 | 241.000 | 56.000 | 154.000 | 1071 3.000 | 22.500 | 9052480225000 |
| 21.01-22.50 | 25.400 | 21.200 | 241.000 | 56.000 | 154.000 | 1071 3.000 | 22.505 | 9052480225050 |
| 22.51-24.00 | 25.000 | 22.200 | 257.000 | 56.000 | 168.000 | 1071 3.500 | 24.000 | 9052480240000 |
| 22.51-24.00 | 25.400 | 22.700 | 257.000 | 56.000 | 168.000 | 1071 3.500 | 24.005 | 9052480240050 |
| 24.01-25.50 | 25.000 | 23.700 | 274.000 | 56.000 | 182.000 | 1071 3.500 | 25.500 | 9052480255000 |
| 24.01-25.50 | 25.400 | 24.200 | 274.000 | 56.000 | 182.000 | 1071 3.500 | 25.505 | 9052480255050 |
| 25.51-27.50 | 32.000 | 25.200 | 294.000 | 60.000 | 196.000 | 1071 4.000 | 27.500 | 9052480275000 |
| 25.51-27.50 | 31.750 | 26.200 | 294.000 | 60.000 | 196.000 | 1071 4.000 | 27.505 | 9052480275050 |
| 27.51-29.50 | 32.000 | 27.200 | 310.000 | 60.000 | 210.000 | 1071 4.000 | 29.500 | 9052480295000 |
| 27.51-29.50 | 31.750 | 28.200 | 310.000 | 60.000 | 210.000 | 1071 4.000 | 29.505 | 9052480295050 |
| 29.51-32.00 | 32.000 | 29.200 | 326.000 | 60.000 | 224.000 | 1071 4.500 | 32.000 | 9052480320000 |
| 29.51-32.00 | 31.750 | 30.700 | 326.000 | 60.000 | 224.000 | 1071 4.500 | 32.005 | 9052480320050 |
| 32.01-34.50 | 32.000 | 31.700 | 342.000 | 60.000 | 238.000 | 1071 4.500 | 34.500 | 9052480345000 |
| 32.01-34.50 | 31.750 | 33.200 | 342.000 | 60.000 | 238.000 | 1071 4.500 | 34.505 | 9052480345050 |
| 34.51-37.50 | 32.000 | 34.000 | 366.000 | 60.000 | 266.000 | 1071 5.000 | 37.500 | 9052480375000 |
| 34.51-37.50 | 31.750 | 36.200 | 366.000 | 60.000 | 266.000 | 1071 5.000 | 37.505 | 9052480375050 |
| 37.51-40.50 | 32.000 | 37.000 | 391.000 | 60.000 | 280.000 | 1071 5.000 | 40.500 | 9052480405000 |
| 37.51-40.50 | 31.750 | 39.200 | 391.000 | 60.000 | 280.000 | 1071 5.000 | 40.505 | 9052480405050 |



Tool material **Solid Carbide**
Surface **S**

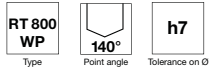
- P** Steel ● web thinning $\geq \varnothing 16.000$ • relieved cone • main cutting edge form concave • clamping screws art. no. 1071 included
 - M** Stainless steel ○
 - K** Cast iron ● steels up to 1000 N/mm²
 - N** Aluminum ○
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 546

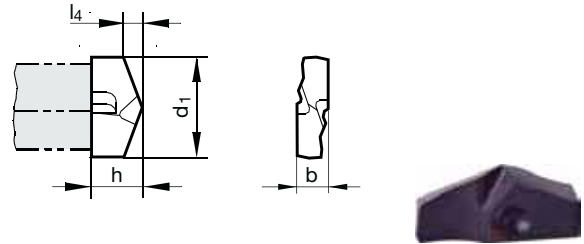
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|--------|----------|-------------------------------|
| 16.000 | | 3.000 | 4.500 | 8.000 | 16.000 | 9010470160000 |
| 16.270 | 41/64 | 3.000 | 4.500 | 8.000 | 16.270 | 9010470162700 |
| 16.500 | | 3.100 | 4.500 | 8.000 | 16.500 | 9010470165000 |
| 16.670 | 21/32 | 3.100 | 4.500 | 8.000 | 16.670 | 9010470166700 |
| 17.000 | | 3.100 | 4.500 | 8.000 | 17.000 | 9010470170000 |
| 17.070 | 43/64 | 3.200 | 4.500 | 8.000 | 17.070 | 9010470170700 |
| 17.460 | 11/16 | 3.200 | 4.500 | 8.000 | 17.460 | 9010470174600 |
| 17.500 | | 3.200 | 4.500 | 8.000 | 17.500 | 9010470175000 |
| 17.860 | 45/64 | 3.300 | 4.500 | 8.000 | 17.860 | 9010470178600 |
| 18.000 | | 3.300 | 5.000 | 8.000 | 18.000 | 9010470180000 |
| 18.260 | 23/32 | 3.400 | 5.000 | 8.000 | 18.260 | 9010470182600 |
| 18.500 | | 3.400 | 5.000 | 8.000 | 18.500 | 9010470185000 |
| 18.650 | 47/64 | 3.400 | 5.000 | 8.000 | 18.650 | 9010470186500 |
| 19.000 | | 3.500 | 5.000 | 8.000 | 19.000 | 9010470190000 |
| 19.050 | 3/4 | 3.500 | 5.000 | 8.000 | 19.050 | 9010470190500 |
| 19.250 | | 3.600 | 5.000 | 8.000 | 19.250 | 9010470192500 |
| 19.450 | 49/64 | 3.600 | 5.000 | 8.000 | 19.450 | 9010470194500 |
| 19.500 | | 3.600 | 5.000 | 8.000 | 19.500 | 9010470195000 |
| 19.840 | 25/32 | 3.700 | 5.000 | 8.000 | 19.840 | 9010470198400 |
| 20.000 | | 3.700 | 5.000 | 8.000 | 20.000 | 9010470200000 |
| 20.240 | 51/64 | 3.700 | 5.500 | 8.800 | 20.240 | 9010470202400 |
| 20.500 | | 3.800 | 5.500 | 8.800 | 20.500 | 9010470205000 |
| 20.640 | 13/16 | 3.800 | 5.500 | 8.800 | 20.640 | 9010470206400 |
| 21.000 | | 3.900 | 5.500 | 8.800 | 21.000 | 9010470210000 |
| 21.030 | 53/64 | 3.900 | 5.500 | 8.800 | 21.030 | 9010470210300 |
| 21.430 | 27/32 | 3.900 | 5.500 | 8.800 | 21.430 | 9010470214300 |
| 21.500 | | 4.000 | 5.500 | 8.800 | 21.500 | 9010470215000 |
| 21.830 | 55/64 | 4.000 | 5.500 | 8.800 | 21.830 | 9010470218300 |
| 22.000 | | 4.100 | 5.500 | 8.800 | 22.000 | 9010470220000 |
| 22.220 | 7/8 | 4.100 | 5.500 | 8.800 | 22.220 | 9010470222200 |
| 22.500 | | 4.100 | 5.500 | 8.800 | 22.500 | 9010470225000 |
| 22.620 | 57/64 | 4.200 | 6.300 | 10.000 | 22.620 | 9010470226200 |
| 23.000 | | 4.200 | 6.300 | 10.000 | 23.000 | 9010470230000 |
| 23.020 | 29/32 | 4.200 | 6.300 | 10.000 | 23.020 | 9010470230200 |
| 23.420 | 59/64 | 4.300 | 6.300 | 10.000 | 23.420 | 9010470234200 |
| 23.500 | | 4.300 | 6.300 | 10.000 | 23.500 | 9010470235000 |
| 23.810 | 15/16 | 4.400 | 6.300 | 10.000 | 23.810 | 9010470238100 |
| 24.000 | | 4.400 | 6.300 | 10.000 | 24.000 | 9010470240000 |
| 24.210 | 61/64 | 4.500 | 6.300 | 10.000 | 24.210 | 9010470242100 |
| 24.500 | | 4.500 | 6.300 | 10.000 | 24.500 | 9010470245000 |
| 24.610 | 31/32 | 4.500 | 6.300 | 10.000 | 24.610 | 9010470246100 |
| 25.000 | 63/64 | 4.600 | 6.300 | 10.000 | 25.000 | 9010470250000 |
| 25.400 | 1 | 4.700 | 6.300 | 10.000 | 25.400 | 9010470254000 |

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|------|----------|---------|---------|----------|-------------------------------|
| 25.500 | | 4.700 | 6.300 | 10.000 | 25.500 | 9010470255000 |
| 26.000 | | 4.800 | 7.300 | 11.600 | 26.000 | 9010470260000 |
| 26.500 | | 4.900 | 7.300 | 11.600 | 26.500 | 9010470265000 |
| 27.000 | | 5.000 | 7.300 | 11.600 | 27.000 | 9010470270000 |
| 27.500 | | 5.100 | 7.300 | 11.600 | 27.500 | 9010470275000 |
| 28.000 | | 5.100 | 7.300 | 11.600 | 28.000 | 9010470280000 |
| 28.500 | | 5.200 | 7.300 | 11.600 | 28.500 | 9010470285000 |
| 29.000 | | 5.300 | 7.300 | 11.600 | 29.000 | 9010470290000 |
| 29.500 | | 5.400 | 7.300 | 11.600 | 29.500 | 9010470295000 |
| 30.000 | | 5.500 | 8.500 | 13.600 | 30.000 | 9010470300000 |
| 30.500 | | 5.600 | 8.500 | 13.600 | 30.500 | 9010470305000 |
| 31.000 | | 5.700 | 8.500 | 13.600 | 31.000 | 9010470310000 |
| 31.500 | | 5.800 | 8.500 | 13.600 | 31.500 | 9010470315000 |
| 32.000 | | 5.900 | 8.500 | 13.600 | 32.000 | 9010470320000 |
| 32.500 | | 6.000 | 8.500 | 13.600 | 32.500 | 9010470325000 |
| 33.000 | | 6.100 | 8.500 | 13.600 | 33.000 | 9010470330000 |
| 33.500 | | 6.100 | 8.500 | 13.600 | 33.500 | 9010470335000 |
| 34.000 | | 6.200 | 8.500 | 13.600 | 34.000 | 9010470340000 |
| 34.500 | | 6.300 | 8.500 | 13.600 | 34.500 | 9010470345000 |
| 35.000 | | 6.400 | 10.000 | 16.000 | 35.000 | 9010470350000 |
| 36.000 | | 6.600 | 10.000 | 16.000 | 36.000 | 9010470360000 |
| 37.000 | | 6.800 | 10.000 | 16.000 | 37.000 | 9010470370000 |
| 37.500 | | 6.900 | 10.000 | 16.000 | 37.500 | 9010470375000 |
| 38.000 | | 7.000 | 10.000 | 16.000 | 38.000 | 9010470380000 |
| 39.000 | | 7.100 | 10.000 | 16.000 | 39.000 | 9010470390000 |
| 40.000 | | 7.300 | 10.000 | 16.000 | 40.000 | 9010470400000 |
| 40.500 | | 7.400 | 10.000 | 16.000 | 40.500 | 9010470405000 |



Tool material **Solid Carbide**
Surface **F**

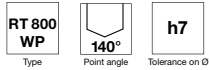
- P** Steel ● web thinning $\geq \varnothing 16.000$ • relieved cone • main cutting edge form concave • clamping screws art. no. 1071 included
 - M** Stainless steel ○
 - K** Cast iron ● steels up to 1000 N/mm²
 - N** Aluminum ○
 - S** Titanium alloys
 - H** Hardened steel
- =Optimal
○=Limited



Speeds and feeds information on pg. 557

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|--------|----------|-------------------------------|
| 16.000 | | 3.000 | 4.500 | 8.000 | 16.000 | 9024850160000 |
| 16.270 | 41/64 | 3.000 | 4.500 | 8.000 | 16.270 | 9024850162700 |
| 16.500 | | 3.100 | 4.500 | 8.000 | 16.500 | 9024850165000 |
| 16.670 | 21/32 | 3.100 | 4.500 | 8.000 | 16.670 | 9024850166700 |
| 17.000 | | 3.100 | 4.500 | 8.000 | 17.000 | 9024850170000 |
| 17.070 | 43/64 | 3.200 | 4.500 | 8.000 | 17.070 | 9024850170700 |
| 17.460 | 11/16 | 3.200 | 4.500 | 8.000 | 17.460 | 9024850174600 |
| 17.500 | | 3.200 | 4.500 | 8.000 | 17.500 | 9024850175000 |
| 17.860 | 45/64 | 3.300 | 4.500 | 8.000 | 17.860 | 9024850178600 |
| 18.000 | | 3.300 | 5.000 | 8.000 | 18.000 | 9024850180000 |
| 18.260 | 23/32 | 3.400 | 5.000 | 8.000 | 18.260 | 9024850182600 |
| 18.500 | | 3.400 | 5.000 | 8.000 | 18.500 | 9024850185000 |
| 18.650 | 47/64 | 3.400 | 5.000 | 8.000 | 18.650 | 9024850186500 |
| 19.000 | | 3.500 | 5.000 | 8.000 | 19.000 | 9024850190000 |
| 19.050 | 3/4 | 3.500 | 5.000 | 8.000 | 19.050 | 9024850190500 |
| 19.250 | | 3.600 | 5.000 | 8.000 | 19.250 | 9024850192500 |
| 19.450 | 49/64 | 3.600 | 5.000 | 8.000 | 19.450 | 9024850194500 |
| 19.500 | | 3.600 | 5.000 | 8.000 | 19.500 | 9024850195000 |
| 19.840 | 25/32 | 3.700 | 5.000 | 8.000 | 19.840 | 9024850198400 |
| 20.000 | | 3.700 | 5.000 | 8.000 | 20.000 | 9024850200000 |
| 20.240 | 51/64 | 3.700 | 5.500 | 8.800 | 20.240 | 9024850202400 |
| 20.500 | | 3.800 | 5.500 | 8.800 | 20.500 | 9024850205000 |
| 20.640 | 13/16 | 3.800 | 5.500 | 8.800 | 20.640 | 9024850206400 |
| 21.000 | | 3.900 | 5.500 | 8.800 | 21.000 | 9024850210000 |
| 21.030 | 53/64 | 3.900 | 5.500 | 8.800 | 21.030 | 9024850210300 |
| 21.430 | 27/32 | 3.900 | 5.500 | 8.800 | 21.430 | 9024850214300 |
| 21.500 | | 4.000 | 5.500 | 8.800 | 21.500 | 9024850215000 |
| 21.830 | 55/64 | 4.000 | 5.500 | 8.800 | 21.830 | 9024850218300 |
| 22.000 | | 4.100 | 5.500 | 8.800 | 22.000 | 9024850220000 |
| 22.220 | 7/8 | 4.100 | 5.500 | 8.800 | 22.220 | 9024850222200 |
| 22.500 | | 4.100 | 5.500 | 8.800 | 22.500 | 9024850225000 |
| 22.620 | 57/64 | 4.200 | 6.300 | 10.000 | 22.620 | 9024850226200 |
| 23.000 | | 4.200 | 6.300 | 10.000 | 23.000 | 9024850230000 |
| 23.020 | 29/32 | 4.200 | 6.300 | 10.000 | 23.020 | 9024850230200 |
| 23.420 | 59/64 | 4.300 | 6.300 | 10.000 | 23.420 | 9024850234200 |
| 23.500 | | 4.300 | 6.300 | 10.000 | 23.500 | 9024850235000 |
| 23.810 | 15/16 | 4.400 | 6.300 | 10.000 | 23.810 | 9024850238100 |
| 24.000 | | 4.400 | 6.300 | 10.000 | 24.000 | 9024850240000 |
| 24.210 | 61/64 | 4.500 | 6.300 | 10.000 | 24.210 | 9024850242100 |
| 24.500 | | 4.500 | 6.300 | 10.000 | 24.500 | 9024850245000 |
| 24.610 | 31/32 | 4.500 | 6.300 | 10.000 | 24.610 | 9024850246100 |
| 25.000 | 63/64 | 4.600 | 6.300 | 10.000 | 25.000 | 9024850250000 |
| 25.400 | 1 | 4.700 | 6.300 | 10.000 | 25.400 | 9024850254000 |

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|------|----------|---------|---------|----------|-------------------------------|
| 25.500 | | 4.700 | 6.300 | 10.000 | 25.500 | 9024850255000 |
| 26.000 | | 4.800 | 7.300 | 11.600 | 26.000 | 9024850260000 |
| 26.500 | | 4.900 | 7.300 | 11.600 | 26.500 | 9024850265000 |
| 27.000 | | 5.000 | 7.300 | 11.600 | 27.000 | 9024850270000 |
| 27.500 | | 5.100 | 7.300 | 11.600 | 27.500 | 9024850275000 |
| 28.000 | | 5.100 | 7.300 | 11.600 | 28.000 | 9024850280000 |
| 28.500 | | 5.200 | 7.300 | 11.600 | 28.500 | 9024850285000 |
| 29.000 | | 5.300 | 7.300 | 11.600 | 29.000 | 9024850290000 |
| 29.500 | | 5.400 | 7.300 | 11.600 | 29.500 | 9024850295000 |
| 30.000 | | 5.500 | 8.500 | 13.600 | 30.000 | 9024850300000 |
| 30.500 | | 5.600 | 8.500 | 13.600 | 30.500 | 9024850305000 |
| 31.000 | | 5.700 | 8.500 | 13.600 | 31.000 | 9024850310000 |
| 31.500 | | 5.800 | 8.500 | 13.600 | 31.500 | 9024850315000 |
| 32.000 | | 5.900 | 8.500 | 13.600 | 32.000 | 9024850320000 |
| 32.500 | | 6.000 | 8.500 | 13.600 | 32.500 | 9024850325000 |
| 33.000 | | 6.100 | 8.500 | 13.600 | 33.000 | 9024850330000 |
| 33.500 | | 6.100 | 8.500 | 13.600 | 33.500 | 9024850335000 |
| 34.000 | | 6.200 | 8.500 | 13.600 | 34.000 | 9024850340000 |
| 34.500 | | 6.300 | 8.500 | 13.600 | 34.500 | 9024850345000 |
| 35.000 | | 6.400 | 10.000 | 16.000 | 35.000 | 9024850350000 |
| 36.000 | | 6.600 | 10.000 | 16.000 | 36.000 | 9024850360000 |
| 37.000 | | 6.800 | 10.000 | 16.000 | 37.000 | 9024850370000 |
| 37.500 | | 6.900 | 10.000 | 16.000 | 37.500 | 9024850375000 |
| 38.000 | | 7.000 | 10.000 | 16.000 | 38.000 | 9024850380000 |
| 39.000 | | 7.100 | 10.000 | 16.000 | 39.000 | 9024850390000 |
| 40.000 | | 7.300 | 10.000 | 16.000 | 40.000 | 9024850400000 |
| 40.500 | | 7.400 | 10.000 | 16.000 | 40.500 | 9024850405000 |



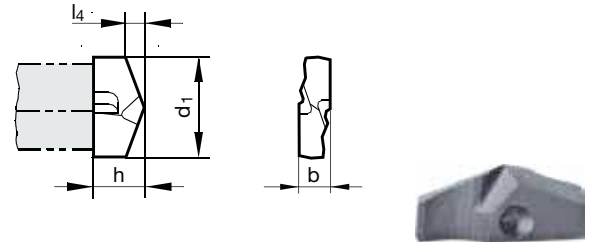
Tool material **Solid Carbide**
Surface

| | | |
|----------|-----------------|---|
| P | Steel | |
| M | Stainless steel | |
| K | Cast iron | ○ |
| N | Aluminum | ● |
| S | Titanium alloys | |
| H | Hardened steel | |

web thinning $\geq \varnothing 16.000$ • relieved cone • main cutting edge form concave • clamping screws art. no. 1071 included

cast and AlSi-alloys

●=Optimal
○=Limited



Speeds and feeds information on pg. 559

| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|--------|-------|-------|-------|--------|----------|-------------------------------|
| 16.000 | | 3.000 | 4.500 | 8.000 | 16.000 | 9027470160000 |
| 16.500 | | 3.100 | 4.500 | 8.000 | 16.500 | 9027470165000 |
| 17.000 | | 3.100 | 4.500 | 8.000 | 17.000 | 9027470170000 |
| 17.070 | 43/64 | 3.200 | 4.500 | 8.000 | 17.070 | 9027470170700 |
| 17.500 | | 3.200 | 4.500 | 8.000 | 17.500 | 9027470175000 |
| 18.000 | | 3.300 | 5.000 | 8.000 | 18.000 | 9027470180000 |
| 18.260 | 23/32 | 3.400 | 5.000 | 8.000 | 18.260 | 9027470182600 |
| 18.650 | 47/64 | 3.400 | 5.000 | 8.000 | 18.650 | 9027470186500 |
| 19.000 | | 3.500 | 5.000 | 8.000 | 19.000 | 9027470190000 |
| 19.050 | 3/4 | 3.500 | 5.000 | 8.000 | 19.050 | 9027470190500 |
| 19.250 | | 3.600 | 5.000 | 8.000 | 19.250 | 9027470192500 |
| 19.450 | 49/64 | 3.600 | 5.000 | 8.000 | 19.450 | 9027470194500 |
| 19.500 | | 3.600 | 5.000 | 8.000 | 19.500 | 9027470195000 |
| 19.840 | 25/32 | 3.700 | 5.000 | 8.000 | 19.840 | 9027470198400 |
| 20.000 | | 3.700 | 5.000 | 8.000 | 20.000 | 9027470200000 |
| 20.500 | | 3.800 | 5.500 | 8.800 | 20.500 | 9027470205000 |
| 20.640 | 13/16 | 3.800 | 5.500 | 8.800 | 20.640 | 9027470206400 |
| 21.000 | | 3.900 | 5.500 | 8.800 | 21.000 | 9027470210000 |
| 21.030 | 53/64 | 3.900 | 5.500 | 8.800 | 21.030 | 9027470210300 |
| 21.430 | 27/32 | 3.900 | 5.500 | 8.800 | 21.430 | 9027470214300 |
| 21.830 | 55/64 | 4.000 | 5.500 | 8.800 | 21.830 | 9027470218300 |
| 22.000 | | 4.100 | 5.500 | 8.800 | 22.000 | 9027470220000 |
| 23.000 | | 4.200 | 6.300 | 10.000 | 23.000 | 9027470230000 |
| 23.420 | 59/64 | 4.300 | 6.300 | 10.000 | 23.420 | 9027470234200 |
| 23.500 | | 4.300 | 6.300 | 10.000 | 23.500 | 9027470235000 |
| 24.000 | | 4.400 | 6.300 | 10.000 | 24.000 | 9027470240000 |
| 24.210 | 61/64 | 4.500 | 6.300 | 10.000 | 24.210 | 9027470242100 |
| 24.500 | | 4.500 | 6.300 | 10.000 | 24.500 | 9027470245000 |
| 25.000 | 63/64 | 4.600 | 6.300 | 10.000 | 25.000 | 9027470250000 |
| 25.500 | | 4.700 | 6.300 | 10.000 | 25.500 | 9027470255000 |
| 26.000 | | 4.800 | 7.300 | 11.600 | 26.000 | 9027470260000 |
| 26.500 | | 4.900 | 7.300 | 11.600 | 26.500 | 9027470265000 |
| 27.000 | | 5.000 | 7.300 | 11.600 | 27.000 | 9027470270000 |
| 27.500 | | 5.100 | 7.300 | 11.600 | 27.500 | 9027470275000 |
| 28.000 | | 5.100 | 7.300 | 11.600 | 28.000 | 9027470280000 |
| 29.500 | | 5.400 | 7.300 | 11.600 | 29.500 | 9027470295000 |
| 30.000 | | 5.500 | 8.500 | 13.600 | 30.000 | 9027470300000 |
| 30.500 | | 5.600 | 8.500 | 13.600 | 30.500 | 9027470305000 |
| 31.000 | | 5.700 | 8.500 | 13.600 | 31.000 | 9027470310000 |
| 31.500 | | 5.800 | 8.500 | 13.600 | 31.500 | 9027470315000 |
| 32.000 | | 5.900 | 8.500 | 13.600 | 32.000 | 9027470320000 |
| 32.500 | | 6.000 | 8.500 | 13.600 | 32.500 | 9027470325000 |
| 33.000 | | 6.100 | 8.500 | 13.600 | 33.000 | 9027470330000 |

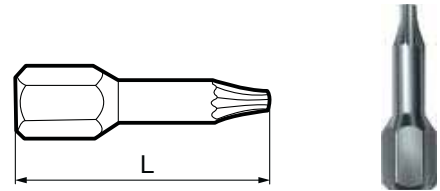
| d1 mm | inch | l4 mm | b mm | h mm | Code no. | EDP # |
|----------|------|----------|---------|---------|----------|-------------------------------|
| 33.500 | | 6.100 | 8.500 | 13.600 | 33.500 | 9027470335000 |
| 34.000 | | 6.200 | 8.500 | 13.600 | 34.000 | 9027470340000 |
| 34.500 | | 6.300 | 8.500 | 13.600 | 34.500 | 9027470345000 |
| 35.000 | | 6.400 | 10.000 | 16.000 | 35.000 | 9027470350000 |
| 36.000 | | 6.600 | 10.000 | 16.000 | 36.000 | 9027470360000 |
| 37.000 | | 6.800 | 10.000 | 16.000 | 37.000 | 9027470370000 |
| 39.000 | | 7.100 | 10.000 | 16.000 | 39.000 | 9027470390000 |
| 40.000 | | 7.300 | 10.000 | 16.000 | 40.000 | 9027470400000 |



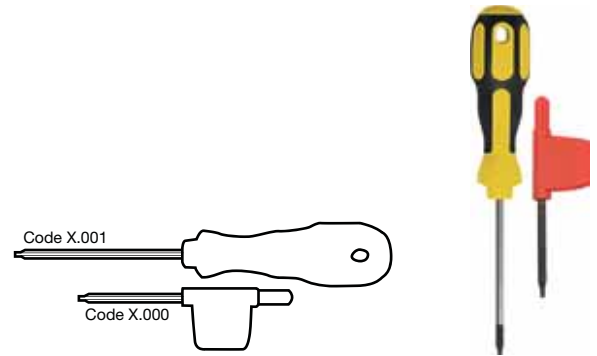
| G | l1 mm | Torx | Code no. | EDP # |
|-------------|----------|------|----------|---------------|
| M 3 X0.35 | 7.000 | T6 | 3.000 | 9010710030000 |
| M 3 X0.35 | 6.000 | T6 | 3.006 | 9010710030060 |
| M 3.5 X0.35 | 8.000 | T7 | 3.500 | 9010710035000 |
| M 4 X0.5 | 9.000 | T8 | 4.000 | 9010710040000 |
| M 4 X0.5 | 10.000 | T8 | 4.500 | 9010710045000 |
| M 5 X0.5 | 11.000 | T10 | 5.000 | 9010710050000 |



| Drive | | Nm | Type | Code no. | EDP # |
|-------|-----------|--------|------|----------|-------------------------------|
| 1/4" | hexagonal | 0,4-1 | A | 1.001 | 9049150010010 |
| 1/4" | hexagonal | 0,8-2 | A | 2.000 | 9049150020000 |
| 1/4" | hexagonal | 1-5 | A | 5.001 | 9049150050010 |
| 1/4" | hexagonal | 2-8 | A | 8.000 | 9049150080000 |
| 1/4" | hexagonal | 12 | D | 12.000 | 9049150120000 |
| 1/4" | hexagonal | 5-14 | D | 14.000 | 9049150140000 |
| 3/8" | square | 5-50 | B | 50.000 | 9049150500000 |
| 1/2" | square | 20-200 | C | 200.000 | 9049152000000 |



| Drive | | Torx | L mm | Code no. | EDP # |
|-------|-----------|------|---------|----------|-------------------------------|
| 1/4 | hexagonal | T5 | 25.000 | 5.000 | 9049170050000 |
| 1/4 | hexagonal | T6 | 25.000 | 6.000 | 9049170060000 |
| 1/4 | hexagonal | T7 | 25.000 | 7.000 | 9049170070000 |
| 1/4 | hexagonal | T8 | 25.000 | 8.000 | 9049170080000 |
| 1/4 | hexagonal | T9 | 25.000 | 9.000 | 9049170090000 |
| 1/4 | hexagonal | T10 | 25.000 | 10.000 | 9049170100000 |
| 1/4 | hexagonal | T15 | 25.000 | 15.000 | 9049170150000 |
| 1/4 | hexagonal | T20 | 25.000 | 20.000 | 9049170200000 |
| 1/2 | square | T25 | 25.000 | 25.000 | 9049170250000 |



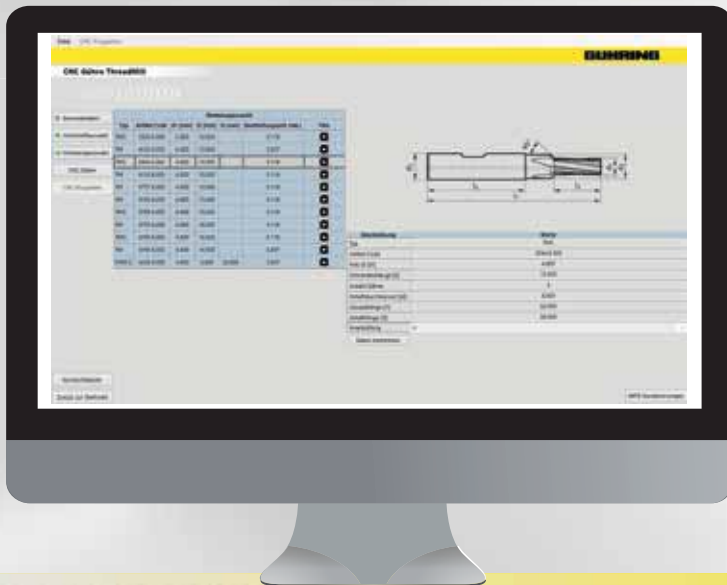
| Torx | Code no. | EDP # |
|------|----------|-------------------------------|
| T5 | 5.001 | 9016120050010 |
| T6 | 6.000 | 9016120060000 |
| T6 | 6.001 | 9016120060010 |
| T7 | 7.001 | 9016120070010 |
| T8 | 8.000 | 9016120080000 |
| T8 | 8.001 | 9016120080010 |
| T9 | 9.001 | 9016120090010 |
| T10 | 10.001 | 9016120100010 |
| T15 | 15.000 | 9016120150000 |
| T15 | 15.001 | 9016120150010 |
| T20 | 20.001 | 9016120200010 |
| T25 | 25.001 | 9016120250010 |
| T30 | 30.001 | 9016120300010 |

THREAD MILL PROGRAM GENERATOR



Complimentary programming software
for thread milling cutters and drill thread milling cutters

CNC Gühro ThreadMill



In an effort to make using Guhring thread mills even more user-friendly, we have developed the intuitive and complimentary “CNC Gühro Threadmill” software.

“CNC Gühro Thread Mill” is available for download from our homepage www.guhring.com.

Five steps to the optimal CNC program

1. Specify the thread data

UNC, UNF, Metric, Metric Fine, UN, etc.

2. Select the material you are threading

This will optimize the feeds and speeds

3. Select the thread mill needed

Every option Guhring offers for your application is listed, along with line drawings, part numbers, and videos of the tools in operation

4. Define your milling strategy

Climb or conventional, number of passes, and language; then select from one of our pre-loaded post processors (Sinumerik, Heidenhain, FANUC, Philips, Mazatrol or Hurco)

5. Review your data

Email, print or transfer the newly created thread mill program





INDEX

| | from page |
|---|-----------|
| Innovative technologies | |
| RT 100 AL | 433 |
| Fiber composite plastics (FCP's) | 434 |
| Machining with added movement | 437 |
| MQL technology | 441 |
| Surface treatment and coatings for drilling tools | 446 |
| Application recommendations for Guhring coatings | 449 |
| General information on drilling | |
| Centering and pilot drilling | 450 |
| Spotting strategies | 451 |
| Coolant pressure and volumes | 453 |
| Drill hole qualities | 454 |
| Brief introduction to deep hole drilling | 455 |
| Application/Troubleshooting | 460 |
| Tables | |
| Guhring tool materials | 463 |
| Definitions, dimensions and angles | 466 |
| Point geometry | 467 |
| Dimensions | 468 |
| Shank designs | 477 |
| Tolerances | 480 |
| Tapping size holes | 481 |
| Conversion table inch - millimeter | 484 |
| Material abbreviations | 485 |

RT 100 AL

Gühring's new solid carbide drill for the machining of aluminum materials

For aluminum drilling chip formation with chip evacuation are both of vital importance.
 With RT 100 AL optimal chip formation is achieved at the cutting edge in the entire material range – from tough aluminum wrought alloys to aluminum cast alloys with high silicon content.

Extremely high surface finish quality of web thinning, front face and clearance rake areas

- reduction in process temperatures
- prevents formation of built-up edges

Open point geometry and cutting edge form:

- optimal chip formation behavior

Sharp, micro-treated cutting edges

- perfect cutting behavior, also in heat-treated AlSi-alloys
- short chip fracture also in aluminum wrought alloys

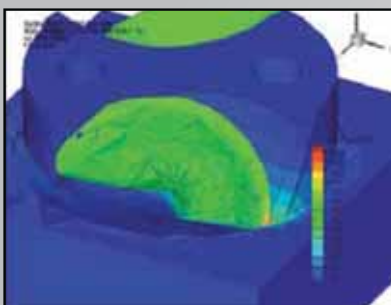
Flute geometry

- polished flutes for optimal chip evacuation
- minimizing friction
- prevention of material adhesion

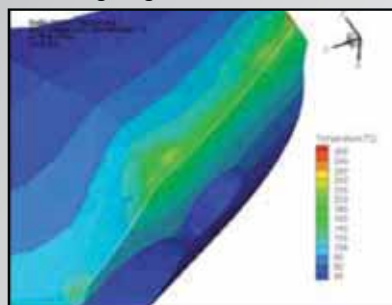
RT 100 AL distinguishes itself thanks to an ideal geometry with high surface finish qualities in the web thinning, front face and clearance rake areas. Micro-treated cutting edges and corners complement the point geometry and ensure perfect cutting behavior, low process temperatures prevent the formation of built-up edges when machining aluminum.



Chip formation



Temperature distribution at cutting edge



The tools are designed with a bright finish, for heavily abrasive aluminum materials an additional head coating for further tool life improvement is possible.

Special dimensions as well as single- or multi-step tools are available on request

Fiber composite plastics (FCP's)

Modern fiber composite plastics (FCP's) are making an entry into a broad range of industrial applications for reasons of efficiency, weight reduction, strength and dynamics. With their specific properties they extend the group of conventional metal lightweight construction materials such as aluminum- and titanium-alloys. FCP's or multi-material systems, ie. a mixture of FCP and metallic materials, are therefore no longer exclusively retained for the aerospace industry, motorsport and other high-end applications.

It is especially worth high-lighting the great growth in the vehicle and commercial vehicle technology, the wind energy sector as well as general mechanical engineering. FCP's are applied where high specific strength and low weight as well as high dynamic or energy efficient processes can be found.

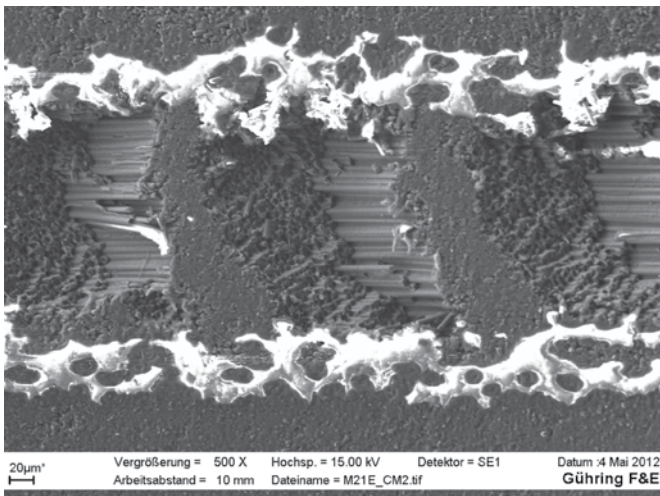
Since the mid 1980's Guhring has provided tooling solutions in the standard and special sector for the machining of FCP's. This long-term experience resulted in the development of a wide variety of specialized high-performance tools, adapted to different conditions and application cases such as manual drilling, drilling with drill feed units, machining with robots or machining in conventional machining centers.

Guhring tools for the machining of FCP meet the general requirements for the machining of modern lightweight construction materials.

- **Components without fiber projections**
- **Delamination-free component surface**
- **No component damage through "peel-up" or "push-out"**
- **Prevention of split fibers "pull-outs" on component**
- **Minimizing burr development**
- **Prevention of thermal damage**

For the machining of FCP materials without component damage, cutting edge quality and wear resistance of the tool material are of absolute importance. Prerequisite for a

process reliable separation of the heavily abrasive fibers, especially materials with a fiber volume ratio of more than 55 percent, is a sharp cutting edge.



CFRP cutting area with 500-fold magnification

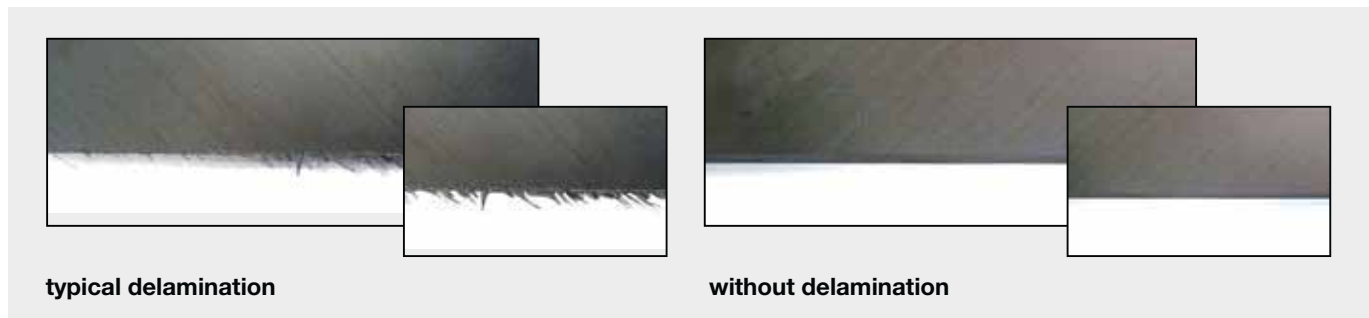
The scanning electron microscope shows how the materials fiber structure and fiber direction is retained after machining. Fibers are neither pressed into the matrix, nor torn out of the composite.

GFRP / CFRP

Glass fiber reinforced plastics (GFRP) are industrially applied in large volume for wind energy applications as well as in the transportation and construction sector. GFRP is generally only applied for moderately load bearing components, mostly large area shell components. The lesser load bearing GFRP components are in many cases preferred to the lighter carbon fiber reinforced plastics (CFRP) as they can be produced considerably more cost-efficient and are easier to machine.

Carbon reinforced plastics (CFRP) by comparison have considerably higher strength. Depending on the manufacturing process and fiber diameter, pure carbon fibers achieve a higher tensile strength weight ratio compared with steel materials. For this reason CFRP is extensively used for high load bearing structural components.

To protect the fibers in CFRP and GFRP from applied forces they are bedded into a matrix. The ratio of fiber to matrix determines the so-called fiber volume ratio and in heavily stressed CFRP components it can be up to 65 percent. For finish machining the type of fiber and fiber direction of the components must be observed. The fiber direction with CFRP is the deciding factor for the tendency for the material to delaminate and fiber splitting. Therefore, unidirectional layers especially at the hole exit tend to delaminate heavily. The tendency to delaminate must be counteracted with the tool geometry.



The machining of CFRP and GFRP materials require specific tooling solutions especially designed to suit the heavily abrasive fibers. To prevent typical FCP component damage, Guhring provides application specific high-performance tools.

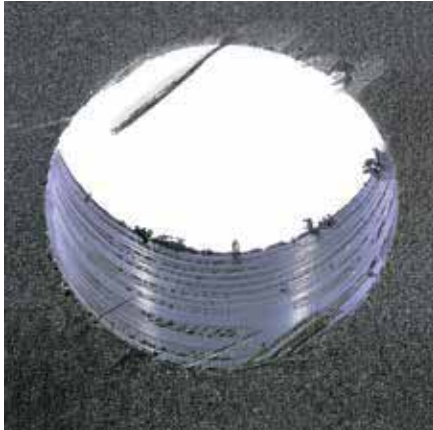
This prevents the material from delaminating due to targeted control of the cutting forces.



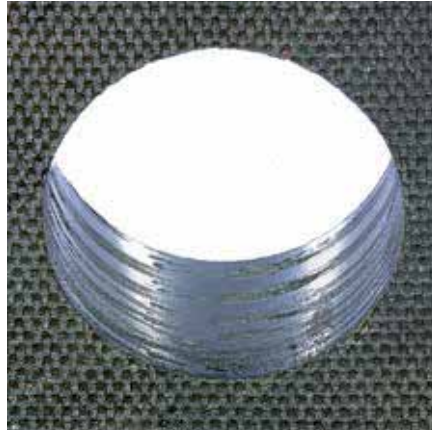
FCP drilling operations

For drilling operations, specific drilling tools with different point geometries are applied. Thanks to specifically designed tools, the fibers can be reliably separated in unidirectional fiber layers as well as in fabric layers. Delamination on the component

surface on tool entry and exit (“peel up” / “push out”) as well as in the component can be prevented.



Hole D = 6.35 mm
With fiber projection on cover coating and delamination



Hole D = 6.35 mm
CFRP with fabric layer, optimal machining quality



Hole D = 6.35 mm
Unidirectional CFRP with optimal machining quality

Stack materials

The combination of at least two different materials with differing properties is described as a stack material or just stack. Often applied material pairings for lightweight construction applications are CFRP/titanium as well as CFRP/aluminium. But also other combinations of the materials CFRP, titanium, stainless steel and aluminum in different combinations are possible. To insert the connection elements, the different materials must be machined together in a process. The challenge for cutting tools during the machining process results from the very different material properties and the machining strategies of the combined materials. When machining CFRP/titanium stacks CFRP is heavily abrasive and quickly leads to a rounding of the cutting edges of the tool. Titanium in contrast is very tough and causes high machining temperatures due to its low thermal conductivity. The CFRP is very quickly damaged when machining due to high machining forces and temperatures. Despite the different materials a secure accurate machining process must be ensured over a long tool life.

Guhring also provides special solid carbide, coated carbide and PCD tooling solutions for this material group. They are specially adapted to the respective material structure and ensure chip evacuation as well as uniform hole diameters across all materials.



Process optimization when machining with added movement

The machining of new materials with fiber reinforced materials to very tough materials such as titanium- or copper-alloys as well as very brittle ceramic materials poses a challenge for conventional machining because of the extreme wear and chip formation behavior. New approaches for process optimization

by added motion in feed direction open new opportunities for improved chip formation, reduced process forces and higher quality of the produced surfaces as well as maximizing the achievable tool life.

Basic considerations

When adding axial movements via a continuous feed movement, different frequency ranges from a few Hertz up to several thousand Hertz are applied depending on the application case. In addition, a defined modification of effective direction angle and an increase in tool cutting edge speed is made. Dependent on the application and tool type, various effects are achieved by vibration supported machining.

Machining with added movement is currently applied for the machining of difficult-to-machine materials such as super-alloys, fiber-reinforced plastics and stack-materials as well as long-chipping alloys, for example, lead-free copper-alloys. With added vibration, one differentiates between low-frequency and high-frequency vibrations.

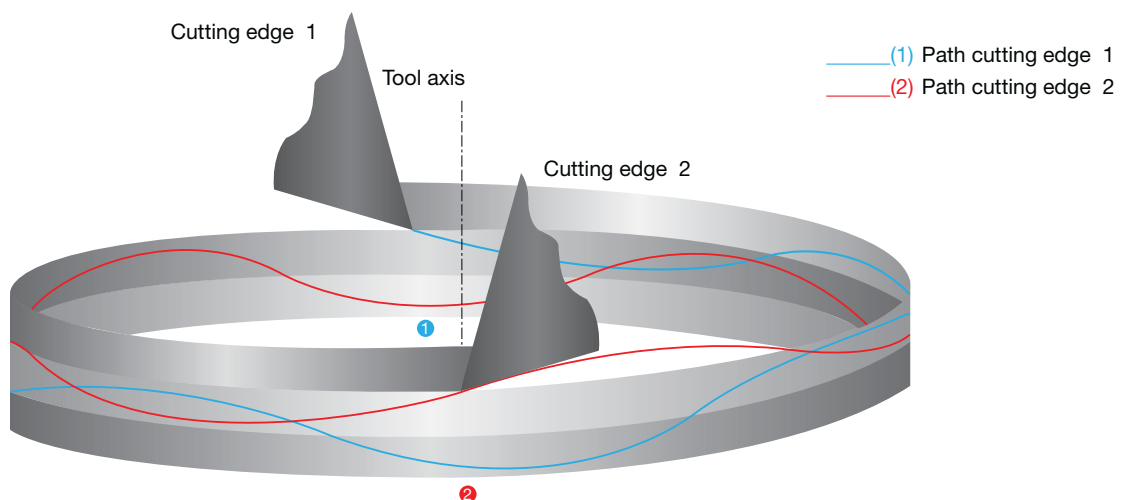
- more favorable chip formation/improved chip fracture
- improved chip evacuation
- production of predetermined breaking point in chip
- reduced built up edge
- prolonging tool life
- reduced machining forces
- reduced temperatures

1.) Low-frequency impulse

With low-frequency impulse frequencies to 1 kHz and amplitudes up to 0.5 mm are used. This category also includes programmed pecking by lifting the tool or an interrupted feed movement by dwelling cycles. On conventional machining centers, this discontinuous feed movement cannot be increased unrestrictedly due to the limited dynamics of axial movement. To achieve added movement with frequencies matching multiple spindle machines, special mechanical transmissions are applied.

These transmissions can be directly integrated in the machine or designed as gear heads attached to the spindle. The stroke is mechanically produced by the gear ratio in the feed axis or by moving over a corresponding cam disc.

Deviating from a spiral-shaped cutting path with a constant chip thickness when drilling with a constant feed rate, the addition of axial movement results in varying chip thickness.



Low-frequency added axial movement enables the production of controllable chips, even with ductile materials. The amplitude of the added axial movement controls the chip thickness. The amplitude setting can be changed to control the chip as a

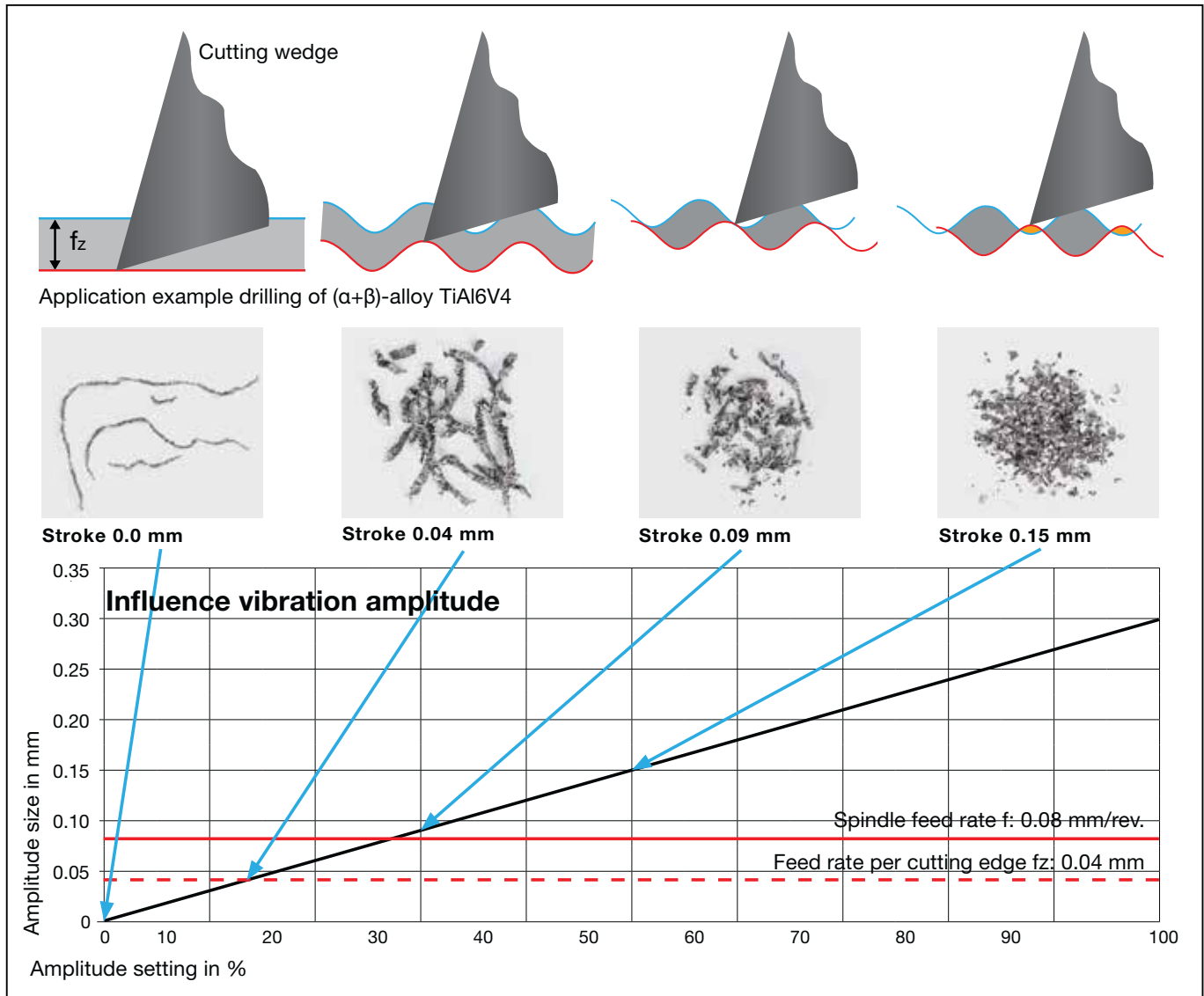
peck and therefore an interruption of the chip formation. With rotational speed linked frequency, the number of pecks can be determined.

Influence of vibration on chip formation

In a test, holes were produced in a standard titanium-alloy (TiAl6V4), where the levels of vibration were varied. All tests were carried out completely dry with identical drilling tools of diameter $d = 6.35$ mm. The cutting rates were $v_c = 30$ m/min and $f = 0.08$ mm/rev.

An observation of the produced chips clearly shows the influence of amplitude on the chip formation. Already an amplitude in the height of the chip thickness clearly reduces the chip length. To produce very short chips, without exception in

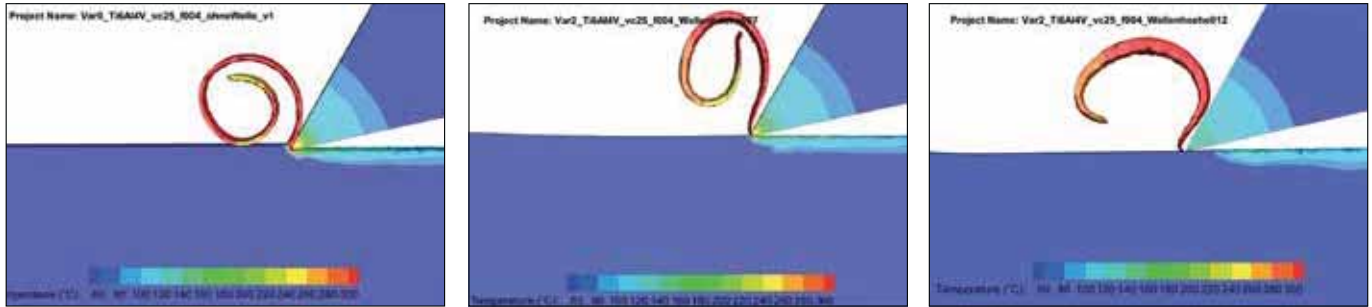
ductile materials, the amplitude must be selected considerably higher than the feed rate of the cutting edges. Therefore, the cutting edge completely lifts-off the workpiece surface and the chip formation process is specifically interrupted. Machining with applied vibration is already well established for the machining of hybrid material combinations, so-called sandwich or stack materials. Here, leaching in fiber composite layers can be prevented and machining temperatures reduced in total thanks to securing the chip break.



Influence of applied vibration on the process temperature

With the assistance of the Finite-Element-Method (FEM) the chip formation at the cutting edge is simulated for different application conditions. The following images show a the chip in a FEM simulation. The results of the simulation show the increasing chip thickness and shortening of the chip with the

amplitude of the vibration. Furthermore, it shows with a continuous cut a higher temperature level is achieved at the cutting edge

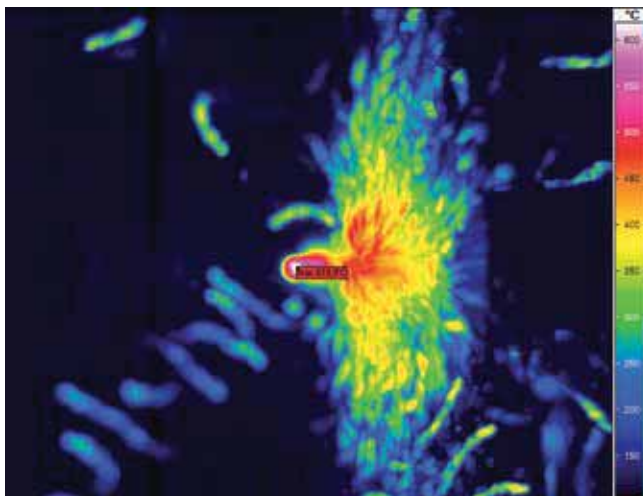


This becomes especially clear when comparing the machining temperatures when machining CFRP/titanium material combinations. Identical drilling tools with diameter $d = 6.35$ mm were applied dry for the test. The cutting rates were $vc = 30$ m/min and $f = 0.08$ mm/rev.

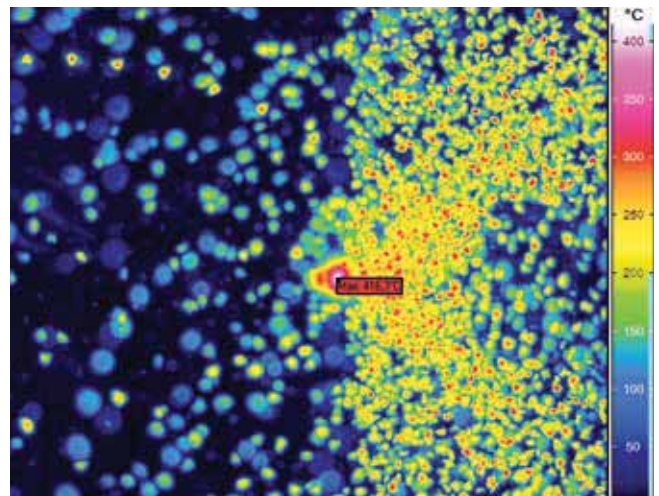
The heat created during the machining of a CFRP/titanium stack material is recorded in real time with a thermography camera. The test panel had a total thickness of 20 mm, 6 mm CFRP and 14 mm titanium (TiAl6V4). It was drilled so that the remaining residual wall was 1.5 mm to the panel face. A

comparison of the temperature at the cutting edge on exit of the material and chip temperature was measured to show the difference between conventional machining and machining with vibration. Without vibration, a maximum temperature of 600°C was measured at the cutting edge. With vibration the maximum temperature under identical conditions was reduced by approximately a third to under 450°C . Furthermore, a considerably improved hole quality and increased tool life was achieved thanks to an improved chip break.

Recording stack machining CFRP / ($\alpha+\beta$)-alloy TiAl6V4



Conventional dry
 ϑ_{max} : 619°C



Vibration supported dry
 ϑ_{max} : 416°C

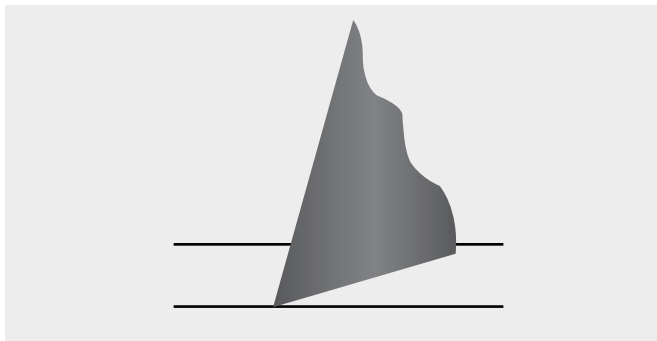
2.) High-frequency impulse (ultra-sound supported)

With high-frequency impulse metal-cutting manufacturing processes – also called ultra-sound supported – an overlaying of the conventional process kinematics with an oscillating tool movement in axial direction takes place exhibiting a considerably higher frequency of > 16.55 kHz in contrast to a low-frequency impulse. The maximum achievable amplitude at the tool point, mostly between 2...30 μm, is heavily dependent on the combination of tool, impulse system and power applied, as the oscillation results from the impulse of the tool with its resonance frequency.

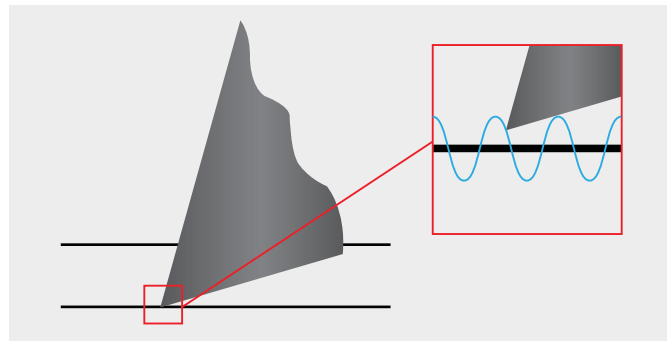
The impulse takes place via actuator, consisting of a generator, converter, booster and the combination of tool and holder, the so-called sonotrode. The generator converts electrical energy into high-frequency sine oscillation that is transferred to the converter. The booster transforms from the converter received vibration amplitude and transfers it enlarged to the sonotrode in which the electrical energy is converted into mechanical energy by piezo actuators.

The combination of feed movement and an oscillating linear movement also enables a more economical machining of high-tensile materials such as ceramic composite materials. Previously, ultra-sound supported machining was predominantly applied for the machining of so-called advance materials such as glass, ceramics and carbide using tools with geometrically undefined cutting edges. High-frequency impulse machining is increasingly applied also in the machining with a defined cutting edge thanks to the drilling and milling of composite materials such as fiber reinforced plastics, sandwich structures and foam. When machining with a defined cutting edge a micro-break-up supports the machining of the material partly visible affecting the surface quality and resulting in a reduction of the process forces.

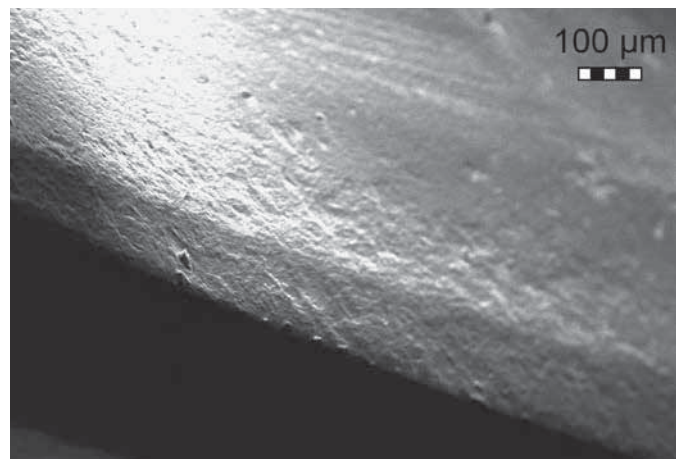
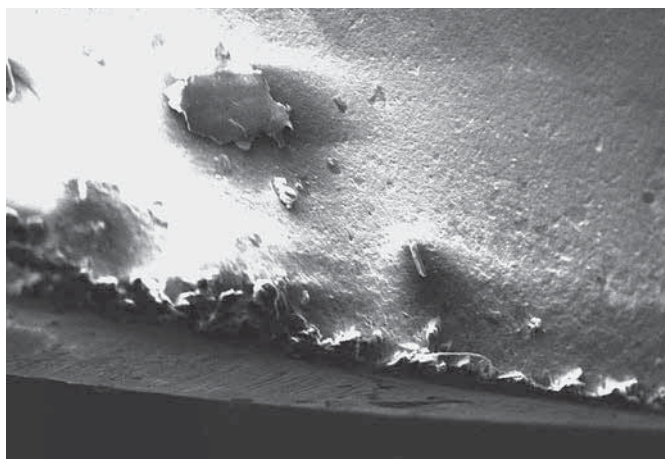
Alongside positively influencing the wear behavior when machining steel materials, a reduction in edge build-up can be identified when drilling nickel based alloys.



Without ultra-sound support



With ultra-sound support

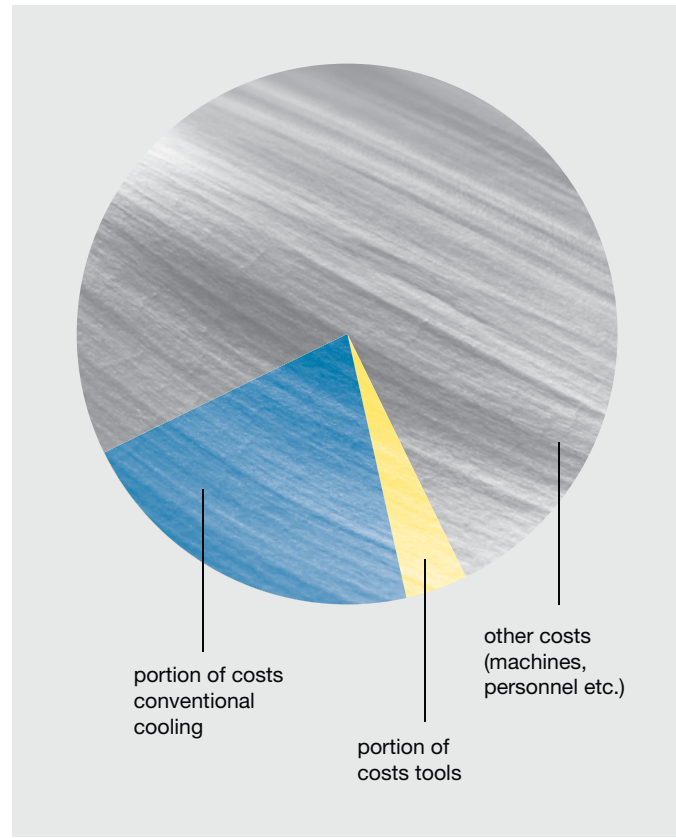


MLQ technology

Basics

Alongside the machine and tooling the costs for coolant are a considerable portion of the overall cost of the machining process. Therefore, a reduction in the cooling lubrication requirements offers a potential for cost savings.

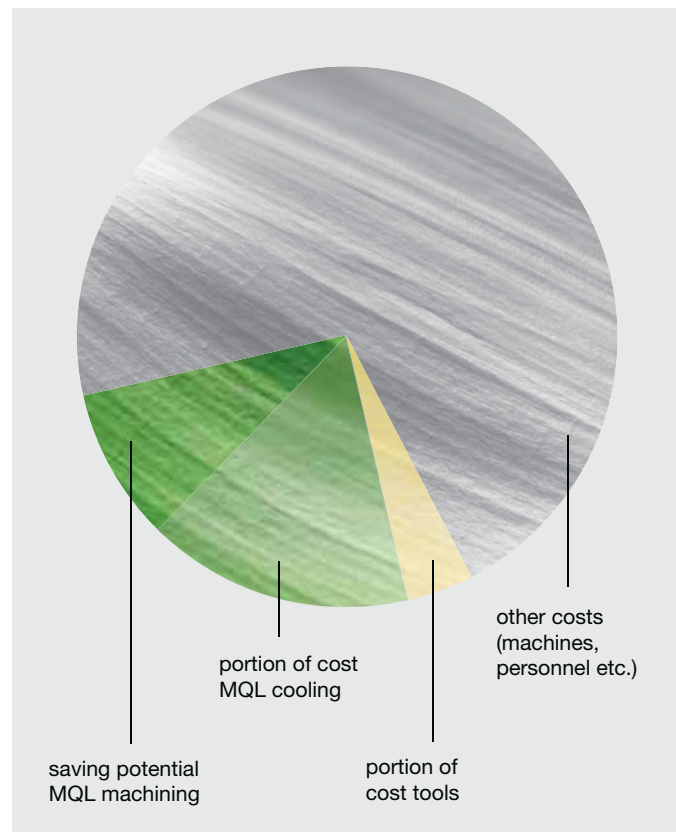
The reduction of cooling lubricants is not only cost saving but is also of benefit to the environment and health protection. Guhring is one of the pioneers in the research and development of MLQ that began in the mid 1990's.



The aim of MLQ machining

The acquisition of a new MLQ cooling lubricant system is significantly less expensive than conventional cooling!

- reduction of thermal stresses at the tool point
- less tool wear
- effective chip evacuation from deep holes
- reduction of cooling lubricant requirement
- high cooling and lubrication effect especially in deep holes
- lowering the resulting costs such as:
 - component cleaning costs
 - cooling lubricant disposal costs
 - swarf disposal costs
- environment and health protection



The development of present-day MQL systems

Thanks to the research in MQL machining Guhring created the precondition for a practical MQL technology. From the clamping set to the tool's cutting edge all the components were integrated in the development – the result was the first MQL delivery system.

Features:

- modular constructed and standardized system
- MQL and conventional clamping set are freely interchangeable thanks to an identical spindle contour
- hydraulic, shrink fit and synchro chucks are all designed for the MQL clamping set



Guhring's current MQL system

By incorporating the MQL length adjustment screw to Guhring's first MQL delivery system in 2007, the original drawback was eliminated. There is, therefore, currently a MQL delivery system available to the customer that optimally meets the requirements of the present-day production process.

Features of the first Guhring MQL delivery system:

- no lubricant delays
- special MQL coolant delivery unit
- MQL suitable tool shank end
- tapered length setting screw

The user, therefore, benefits from a standardized system and a clearly reduced stock keeping thanks to compatible components.

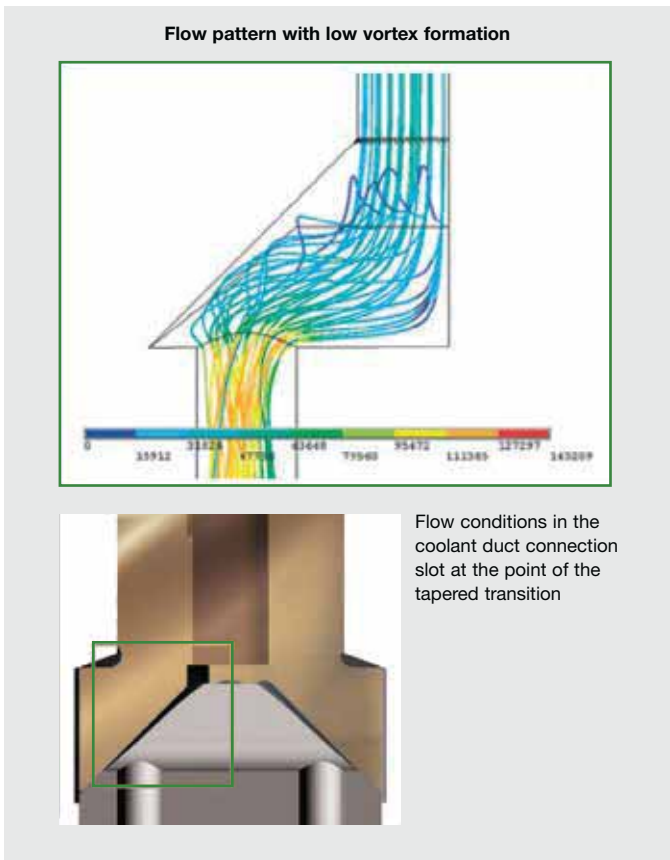


**Optimally formed shank end!
For a secure MQL delivery**

The delivery of these extremely low coolant quantities directly to the effective area is of utmost importance. Hereby, the geometric design of the shank end plays a significant role! The Guhring developed conical shank end optimally satisfies the relevant MQL conditions.

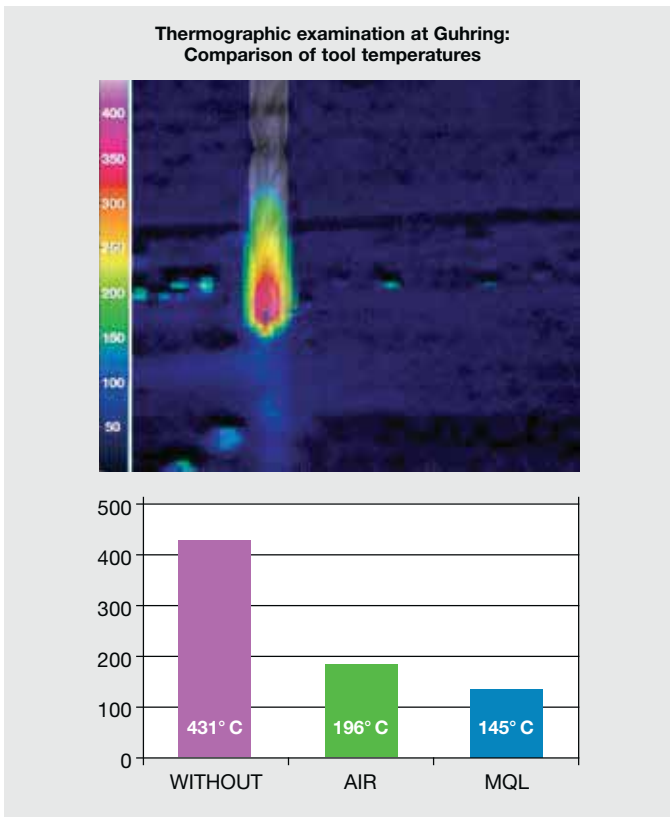
Advantages of the tapered shank end:

- no lubricant delays
- minimal dead area
- simple operation
- cost-efficient production



Keeping a cool point

With MQL the process temperature can be considerably reduced in comparison to dry machining resulting in longer tool life and an increased process reliability.



The best form for MQL!

Optimal MQL machining results thanks to the optimized tool geometry of RT 100 T!



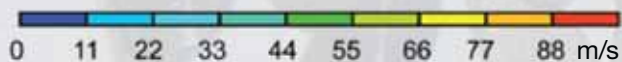
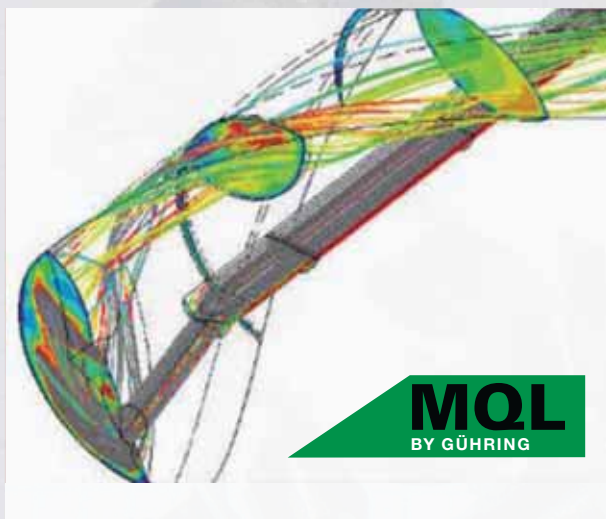
1. Flute cross section:

The flute geometry of Guhring MQL tools ensures short chips that are optimally evacuated from deep holes.

2. Maximum coolant duct cross-section:

The cooling lubricant supply as well as the chip evacuation have been optimized through the tool's maximum coolant duct cross-section.

Flow speed comparison



The flow speed

in the flute with MQL is 30.4 m/s.

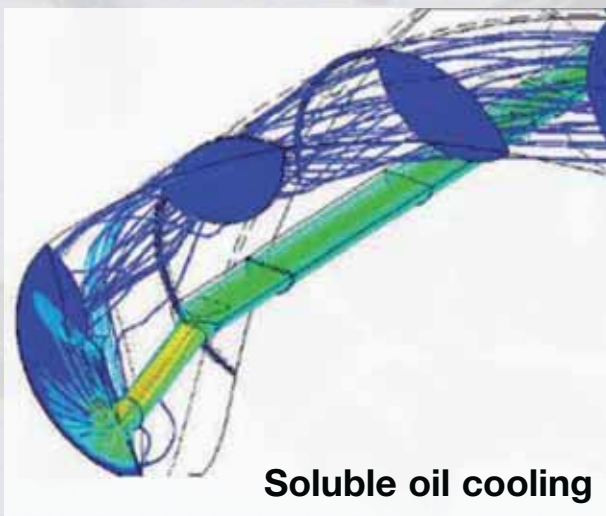
The volume with MQL

is 6.960 l/h (std.litres air/h).

Tool Ø = 11.7 mm

Pressure at pump = 6 bar

Pressure at tool = 4 bar



The flow speed

In the flute with soluble oil is 3.5 m/s.

The volume with soluble oil

is 600 l/h (std.litres air/h).

Tool Ø = 11.7 mm

Pressure at pump = 60 bar

Pressure at tool = 31 bar

MQL system types

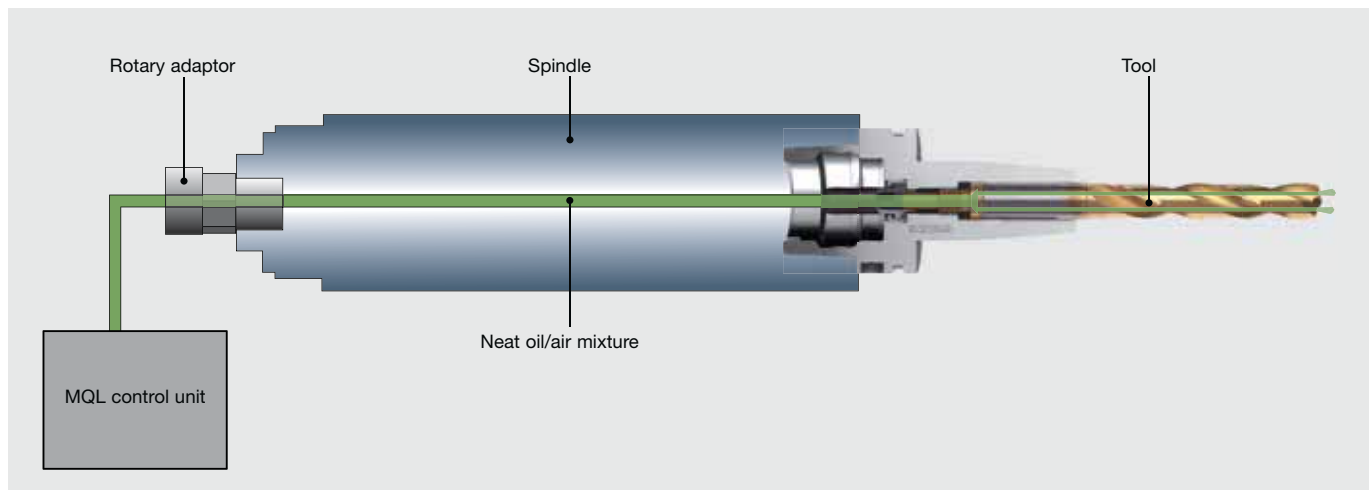
The provision of the MQL medium to the tool can be achieved in two ways: the aerosol mixture can be prepared outside the machine and conveyed to the machining location (1-channel system) or compressed air and MQL medium are conveyed separately to the mixing chamber where they are then mixed together (2-channel system). The aerosol feed to the

machining location is achieved via a suitable minimal quantity lubrication rotary adaptor (preferably with axial flowthrough), the spindle, the clamping system and finally the cutting tool. Unavoidable cross-section modifications should be as streamlined as possible.

1-channel MQL system

With a 1-channel MQL system, a lubricating aerosol is created in a separate MQL unit attached to the machine tool. Special nozzle systems inside a pressurised container create a lubricating aerosol via a regulated compressed air feed,

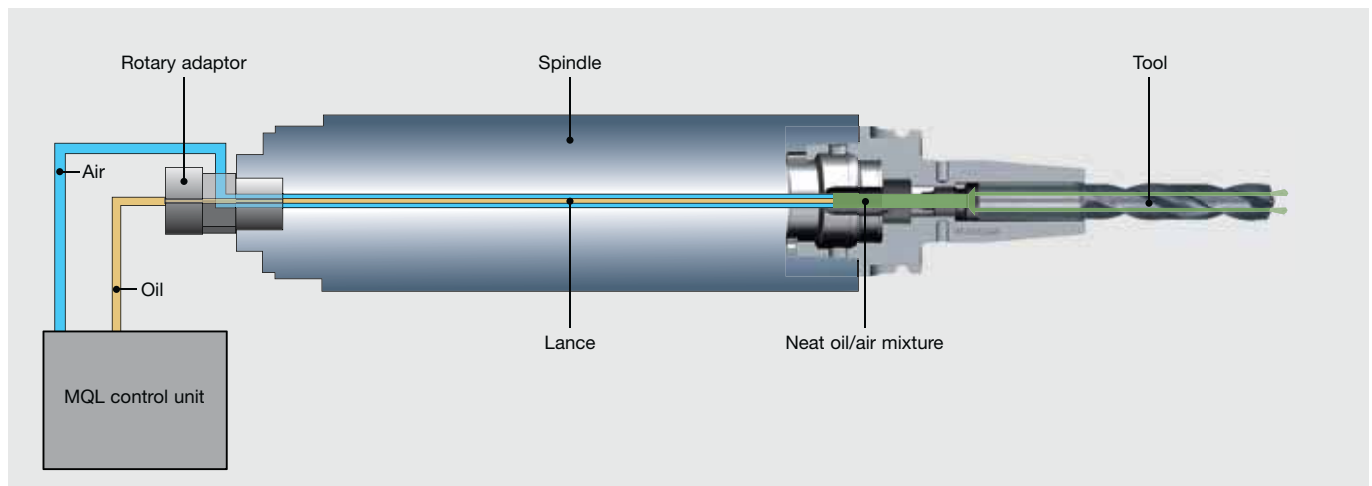
its neat oil content adjustable and then maintained within the physical limits by the MQL control.



The 2-channel MQL system

With a 2-channel system the neat oil reaches the rotary adaptor from the unit via a ring line and a as short as possible stub line. In it is incorporated a quick valve that regulates minute quantities of neat oil. The neat oil is transported into the tool holder via a lance attached in the spindle. The second channel of the rotary adaptor is used for the air supply to the tool holder. Only at this point the air is mixed with the neat oil.

To achieve this, the tool holder possesses a pressed-in pipe nozzle in which the mixing chamber is located. Neat oil and air can be mixed with this system in more or less any quantities. The route from the mixing chamber to the point of destination is only minimal resulting in a rapid response time and allowing a very quick alteration of the volume of neat oil.

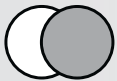


Bright finish



Especially for the machining of wrought and cast aluminum alloys with a high silicon content, uncoated drills offer a very good machining performance. In order to counter adhesive (formation of built-up edges), these tools are optimally suited to this field of application thanks to a special geometry combined with a high surface quality in the point thinning, flute and clearance areas.

Steam tempered/nitrided surface finish



A steam tempered surface finish provides an improved corrosion protection as well as an improved tribological behavior of the tools thanks to the oxidation of the surface area (approx. 3 to 10 µm). Nitriding the land is recommended for abrasive applications, it increases the hardness of the surface on the land and therefore improves wear resistance of the tool. However, using hard material / soft material coatings often provide better results, this type of surface treatment is becoming increasingly less important.

TiN coating



Max. application temperature: <600° C
 Color: Golden yellow
 Structure: Single-layer
 Hardness: 2300 HV0.05

Introduced by Guhring at the beginning of the 1980's, TiN-coating is applied to HSS and carbide for drilling operations as a cost-efficient general purpose coating.

FIREX®/nano-FIREX® coating



Max. application temperature: <800° C
 Color: Violet
 Structure: Multi-layer
 Hardness: 3300 HV0.05

FIREX® and nano-FIREX® coatings contain aluminum, titanium and nitrogen. These coatings were introduced towards the end of the 1990's and are a further development of the TiN-coating. They excel thanks to increased hardness and good thermochemical resistance, they are suitable for HSS and carbide.

nano-Ra coating



Max. application temperature: < 800°C
 Color: Pale golden
 Structure: Multi-layer
 Hardness: 3300 HV0.05

The TiN/TiAlN multi-layer structure of Raptor is the key component for the good performance when machining steel. Thanks to the additional friction reducing top layer coating, based on zircon, the performance could now be further extended for steels that tend to adhere during machining (i.e. ferritic, austenitic and Duplex steels).

TiAlN coating



Max. application temperature: <800° C
 Color: Violet
 Structure: Single-layer
 Hardness: 3300 HV0.05

The TiAlN coating displays similar characteristics to FIREX and nano-FIREX and with its single-layer structure is mostly applied in the field of micro-precision drills.

nano-A coating



Max. application temperature: <900° C
 Color: Blue violet
 Structure: Multi-layer, nano-structured
 Hardness: 3300 HV0.05

TiAlN based nano-A has proven itself in the machining of stainless steels and is suitable for drilling cast iron, nickel based alloys and cobalt chrome alloys. Thanks to its nano-layered structure the fracture growth is delayed. Furthermore, thanks to its adapted composition it possesses a higher thermochemical resistance than for example TiAlN.

Sirius coating



Max. application temperature: < 900°C
 Color: Pale golden
 Structure: Multi-layer, nano-structured
 Hardness: 3400 HV0.05

Sirius, essentially based on AlTiN is especially suitable for the machining of stainless steels. Thanks to the nano-structured design, it displays good hardness and toughness. The zircon containing top layer coating is to largely eliminate chemical reactions with the material and therefore encourage chip evacuation.

nano-Si coating



Max. application temperature: <800° C
 Color: Bronze
 Structure: Multi-layered nano-composite
 Hardness: 5500 HV0.05

The nano-Si coating belongs to the group of Nano-composites. The micro-structure features extremely fine TiAlN nano-crystals bedded into a glass-like, high temperature resistant silicon nitride matrix. This results in a high hardness especially making the nano-Si coating the first choice for hardened steels and cast materials.

Endurum coating



Max. application temperature: <800° C
 Color: Copper
 Structure: Multi-layered nano-composite
 Hardness: 4000 HV0.05




















Endurum coating, another coating of the Nano-composite family, this was specifically designed for the machining of carbon, free-cutting and manganese alloyed steels.

Zenit coating



Max. application temperature: <700° C
 Color: Pale gold
 Structure: Multi-layer, nano-structured
 Hardness: 2500 HV0.05

The nano-structured Zenit coating was specifically optimized for the machining of titanium alloys. The special structure as well as the composition contribute to a significant reduction of tribochemical wear and therefore make it a true specialist. In parallel it also achieves good results when drilling aluminium cast alloys with moderate silicon content.

| | D R I L L I N G | | |
|---|---------------------------------|---------------------------------|-----------------------------|
| | C A R B I D E | | H S S |
| | conv. coolant | MQL | |
| C-steels, Free-cutting steels, Mn-steels  | Endurum nano-Ra nano-FIREX | Endurum nano-Ra nano-FIREX | nano-FIREX |
| Steel, low-alloyed  | nano-FIREX Endurum nano-Ra | nano-FIREX Endurum nano-Ra | nano-FIREX TiN |
| Steel, alloyed  | nano-Si nano-FIREX TiAlN | nano-Si nano-FIREX TiAlN | nano-FIREX TiN |
| Steel, hardened, <55 HRC  | nano-Si nano-FIREX TiAlN | nano-Si nano-FIREX TiAlN | |
| Steel, hardened, 55-65 HRC  | nano-Si nano-FIREX TiAlN | nano-Si nano-FIREX TiAlN | bright |
| Steel, stainless and acid-resistant  | nano-A Sirius Endurum | nano-A Sirius Endurum | Sirius nano-FIREX TiN |
| Cast iron  | nano-Si nano-FIREX nano-A | nano-Si nano-FIREX nano-A | nano-FIREX |
| Nickel-based alloys (i.e. Inconel)  | nano-A nano-Si nano-FIREX | nano-A nano-Si nano-FIREX | nano-FIREX |
| Titanium/titanium-alloys  | Zenit nano-A | Zenit nano-A | nano-FIREX |
| Cobalt-chromium-alloys  | nano-A nano-Si nano-FIREX | nano-A nano-Si nano-FIREX | |
| Precious metals  | nano-A | nano-A | |
| Aluminium-wrought alloys  | bright | bright | |
| Aluminium-cast alloys (<12% Silizium)  | bright Zenit | bright Zenit | bright Zenit |
| Aluminium-cast alloys (≥12% Silizium)  | | | |
| Copper/bronze/brass  | | | TiN |
| Ceramics  | | | |
| Plastics, not reinforced  | | | |
| Plastics, fiber-reinforced  | nano-Si | nano-Si | |
| Graphite  | | | |

Note: The overview shows the general application recommendations for Guhring coatings. Prioritization is from top to bottom.

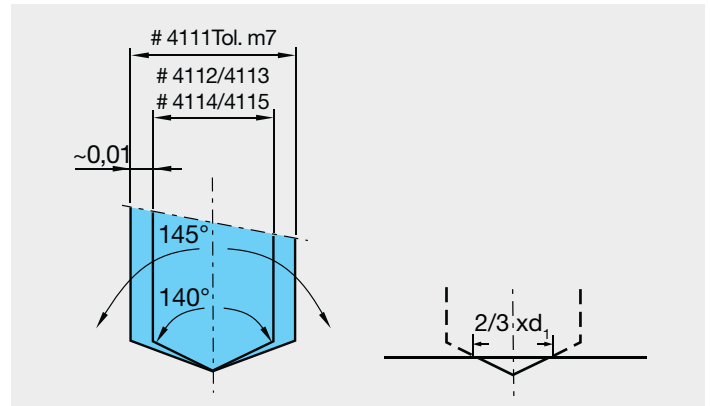
Centering and pilot drilling

Centering and pilot drilling for HT 800

Generally we recommend centering/pilot drilling for HT 800 with drilling depths above 7xD.

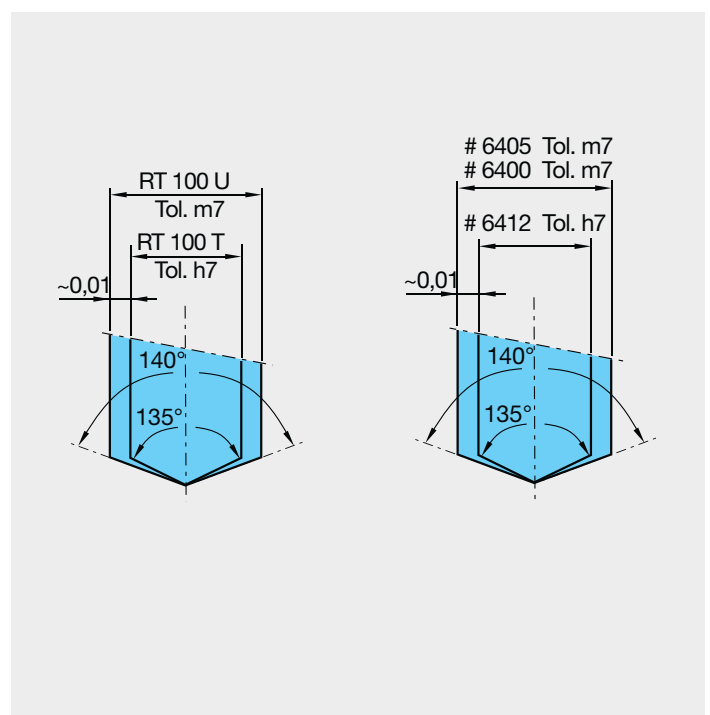
When centering, the drilling diameter should be approximately 2/3 of the hole diameter to be produced. With pilot drilling we recommend a drilling depth of 1xD. In addition, the point angle as well as the diameter of the pilot drill should be larger than the point angle and the diameter of the following drill.

To ensure this, we recommend the application of the pilot drilling inserts series no. 4111 with 145° point angle and m7 diameter tolerance in an extra short, rigid holder series no. 4105 or 4106.



Recommended drilling procedure for RT 100 T drills

- Machine a pilot hole with an m7 toleranced Guhring type RT 100 drill (i.e., series 5510) to a minimum pilot depth of 1.5xD to 3xD.
- Enter the pilot hole at a speed of approx. 300 RPM, and with a feed rate of approx. 20 IPM stopping just shy of the bottom of the hole.
- Start high coolant pressure and increase RPM to recommended value.
- Feed drill at recommended feed rate to final hole depth. No peck cycle required.
- For through holes with oblique exit, reduce the feed rate to 40% approx. 1 mm prior to break-through.
- After reaching hole depth, turn off coolant, reduce machine spindle speed to 300 RPM and withdraw the drill at a maximum feed rate of 200 IPM.



Centering and pilot drilling for Exclusive Line micro drills

With pilot drilling for the Exclusive Line micro-precision drill 15xD (series no. 6412) we recommend the application of Exclusive Line micro-precision drill 4xD without internal cooling (series no. 6400) or 5xD with internal cooling (series no. 6405), as they are optimally adapted regarding point angle and diameter tolerance.

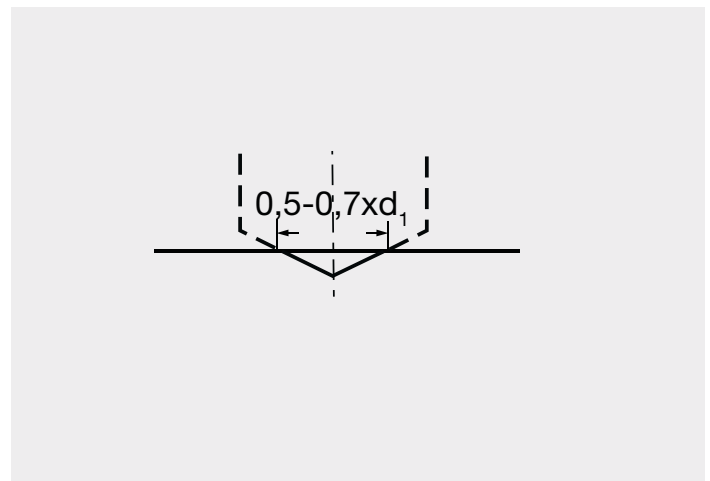
Centering and pilot drilling for HSS

Centering with drill lengths to DIN 340

When using long series drills (DIN340) in HSS/HSCO, we recommend spot drilling with a spotting diameter of 0.5 to 0.7xD (D = drill diameter). HSS NC spotting drills are optimally suited for this process. Detailed information regarding NC spotting drills can be found in the NC spot drilling section.

Pilot drilling with drill lengths to DIN 1869

When applying extra length HSS/HSCO drills to DIN 1869 we recommend the production of a pilot hole with a depth of 1xD to 2xD. Stub drills type GV 120 to DIN 1897 are optimally suited.



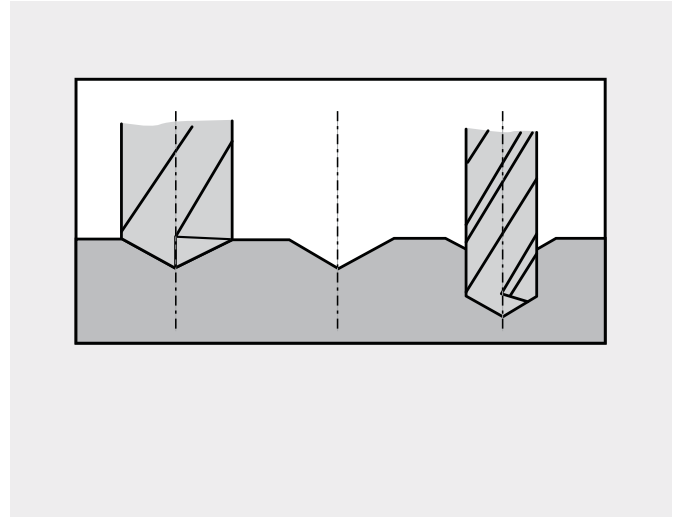
NC spotting drills

NC spotting drills

When producing accurately positioned holes, holes with close diameter tolerances, deep holes or generally with unfavorably shaped workpieces (round, rough. etc.) it's recommended to use a NC spotting drill. This ensures the following drill, drills accurately and prevents the drill from running off.

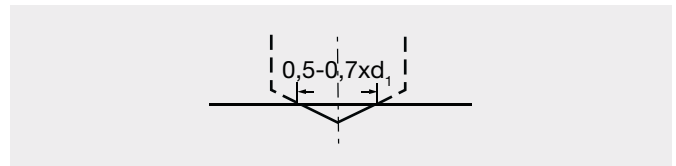
NC spotting drills can also be used to produce chamfers or countersinks (when using a spot drill with a larger diameter than the actual hole) and centering in one operation.

NC spotting drills are designed with a very short flute length and without body clearance to ensure a very rigid design and therefore accurately positioned spotting. Due to the design, NC spot drills are only suitable for spotting, drilling depths must not exceed the length of the point geometry.



Selecting an NC spotting drill

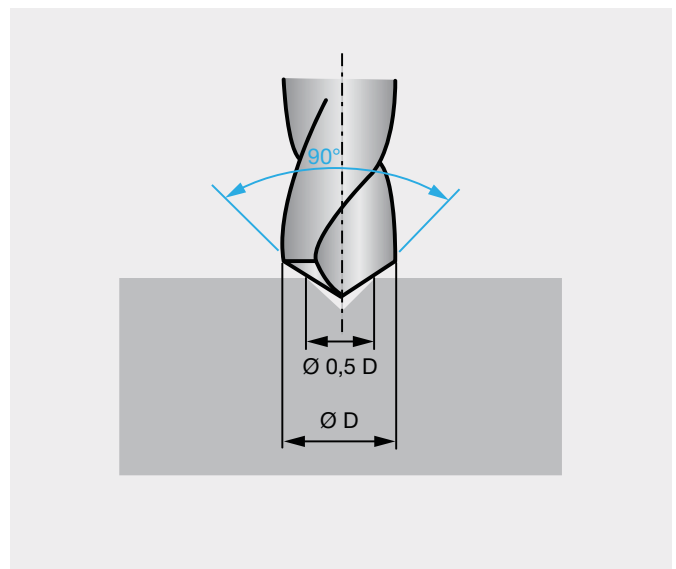
Ideally, the spotting diameter should be chosen between 0.5 to 0.7xD.



90° NC spotting drills

NC spotting drills with a 90° point angle are ideally suited for spotting if the following HSS/HSCO drills have a relatively large chisel edge. This ensures that the following HSS/HSCO drill drills with the cutting lip first and is guided by the most stable points of the cutting edge.

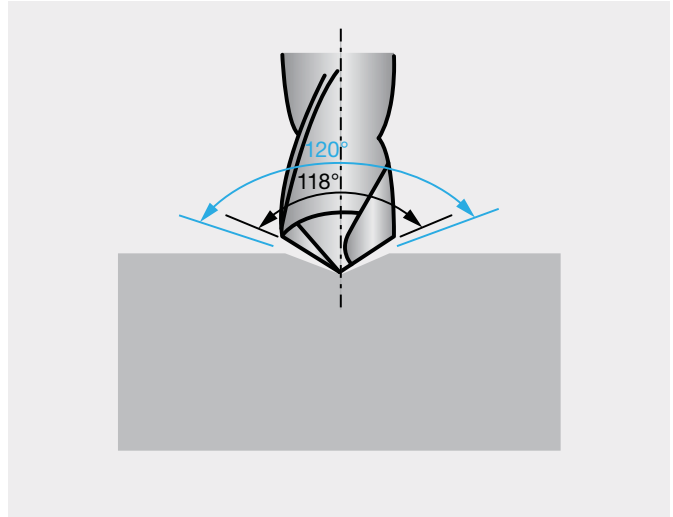
In addition, NC spotting drills with a 90° point angle are used to produce a 90° countersink and center in one operation if the spotting diameter is larger than the actual hole diameter.



NC spotting drills

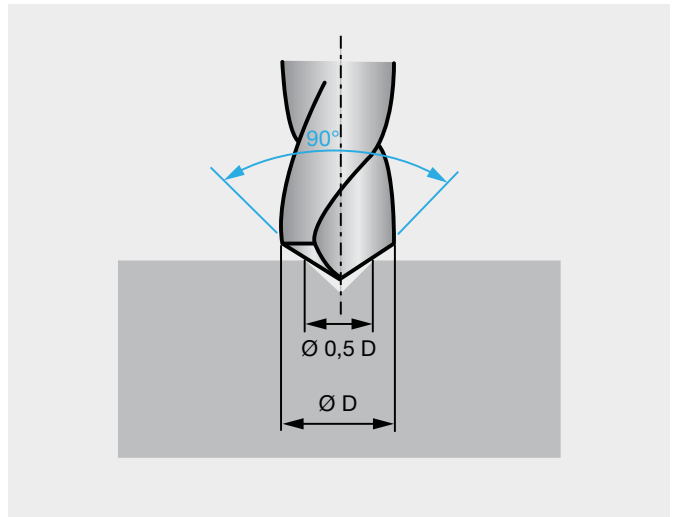
120° NC-spotting drills




NC-spotting drills with a 120° point angle are specially suited for spotting operations if the actual hole is subsequently produced with HSS/HSCO drills with a 118° point angle. This ensures the following HSS/HSCO drill spots with the point first and is well guided.



142° NC-spotting drills

NC-spotting drills with 142° point angle are specially suited for spotting operations if the actual hole is subsequently produced with carbide drills with a 135° - 140° point angle. This ensures the following carbide drill spots with the point first, centers and is well guided. If the cutting corners of the carbide drill meet the material to be machined before the point, there is the risk of corner crumbling with carbide drills.



| NC spotting drills | | |
|---|---|---|
| 90° | 120° | 142° |
|  |  |  |

Coolant pressure and volumes Ratio drills

The illustrated optimum, good and minimum required coolant volume apply only to spiral-fluted Ratio drills type RT 100. In contrast to the pressure, which is a feature of the machine tool; the cooling system fitted to it and also the possibility of leakage, volume does not depend on the machine (fig. 1). The pressure figures given are therefore recommendations which serve only as guidelines. Ratio drills type RT 80 with central coolant duct are subject to different standards (fig. 2). The diagrams shown are for Ratio drills in their most important application, machining of steel. But they are also guidelines for the machining of other materials, primarily because the highest coolant pressures are constantly required for the machining of steel. The effects of cooling using straight-fluted Ratio drills type RT 150 is particularly sensitive and is clearly demonstrated in the examples for particular workpiece materials. For example, the loss in tool life through low pressures when machining grey cast iron is considerably higher than when machining AISi

alloys. But this is only the case when the AISi alloy is short-chipping! The absolute necessary minimum pressure or good pressure should, when machining cast iron, be generally a little higher than for AISi machining (figures 3 and 4).

The recommended values are to be used only for drilling depths of up to approx. 5 x D. Deeper holes should be produced with tools having internal coolant ducts, as for example RT 150 GN, otherwise the production of deeper holes (depending on the material) becomes uneconomical.

Required coolant pressures
█ optimum pressure
█ good pressure
█ minimum pressure

Required coolant volumes
█ optimum volume
█ good volume
█ minimum volume

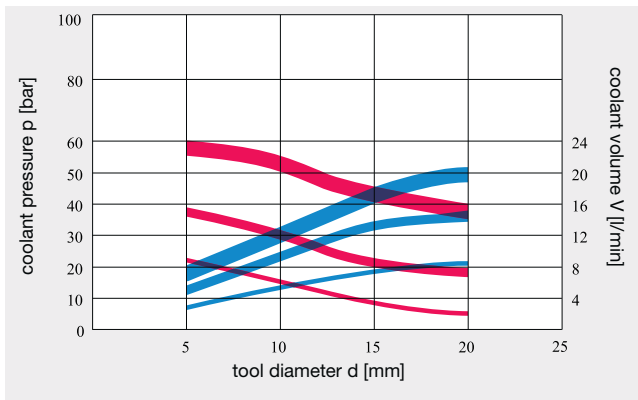


fig. 1: Required coolant pressures and volumes for RT 100 Ratio drills with internal spiral coolant ducts.

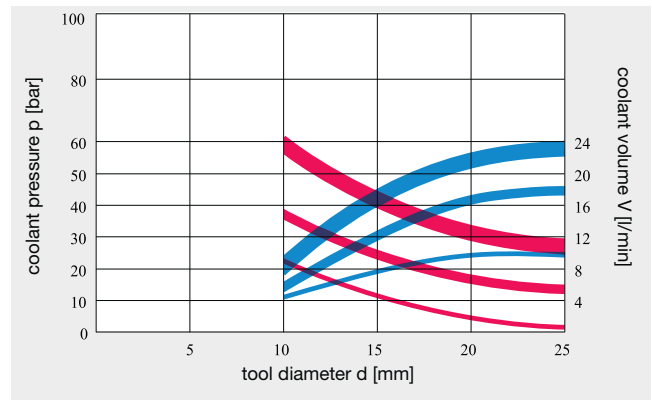


fig. 2: Required coolant pressures and volumes for RT 80 Ratio drills with central internal coolant duct.

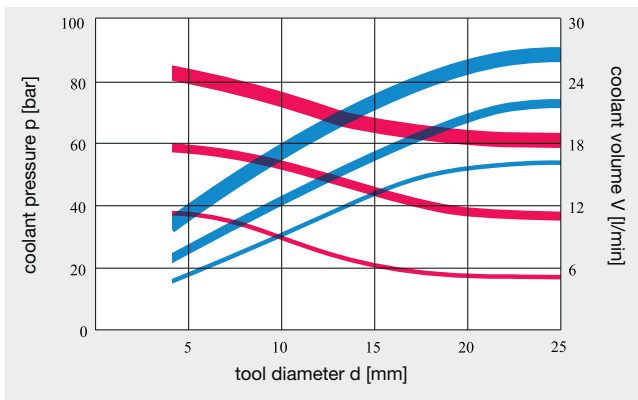


fig. 3: Required coolant pressures and volumes for straight-fluted Ratio drill type 150 GG when machining cast iron.

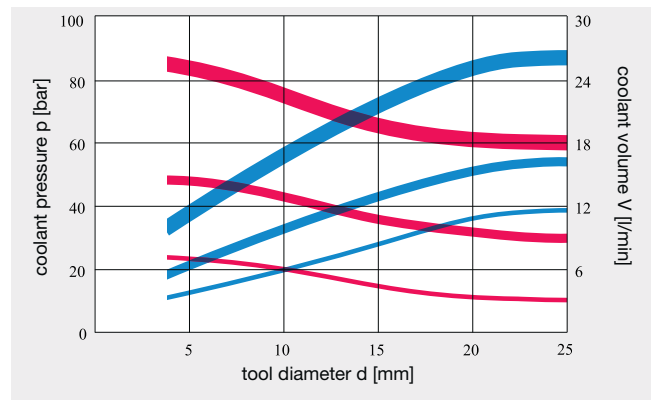


fig. 4: Required coolant pressures and volumes for straight-fluted Ratio drill type 150 GG when machining AISi7.

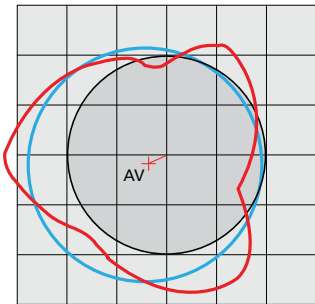
Typical hole quality characteristics

1. in 42CrMo4V, Ø 14.5 mm

HSS drills, type N Guhring no. 651 **S**

vc = 25 m/min
f = 0.25 mm/rev.
+Rmax = 131.8 µm
-Rmax = -49.1 µm
actual D = 14.566 mm
dRmax = 103.5 µm
AV = 49.2 µm
Ra = 2.6 µm, Rz = 6.8 µm

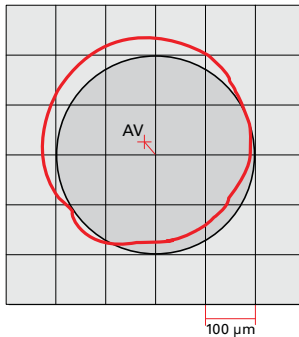
IT12



Ratio drills, type RT 80 Guhring no. 1171 **S**

vc = 70 m/min
f = 0.25 mm/rev.
+Rmax = 42.7 µm
-Rmax = -29.6 µm
actual D = 14.515 mm
dRmax = 12.9 µm
AV = 35.3 µm
Ra = 1.4 µm, Rz = 4.31 µm

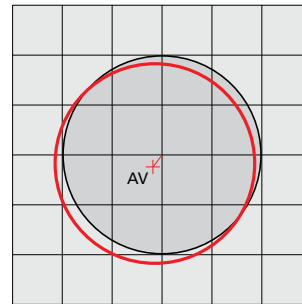
IT9



Ratio drills, type RT 100 Guhring no. 1181 **S**

vc = 70 m/min
f = 0.25 mm/rev.
+Rmax = 26.7 µm
-Rmax = -17.2 µm
actual D = 14.509 mm
dRmax = 5.2 µm
AV = 22.8 µm
Ra = 1.04 µm, Rz = 3.2 µm

IT8



The overall total of the maximum positive and negative deviations is the sum of the total run-out in relation to the black circle as measured on standard instruments (dRmax). The red lines at the hole centers indicate the direction and amplitude of the displacements AV (Axis Shifting) of the produced hole from the true center point. The parameter showing the largest deviation is decisive for the IT quality class of the hole in relation to the tool diameter.

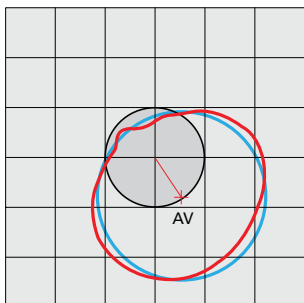
The black circle in the diagram represents the nominal hole diameter which the tool should ideally produce. The red circle indicates the form actually produced. The mean value of the radius of the red circle, i.e. the average diameter, is shown by the blue circle. (with our Ratio drills the average diameter is practically identical to the actual diameter produced).

2. in GGG40, Ø 10.0 mm

HSS drills, type N Guhring no. 651 **S**

vc = 30 m/min
f = 0.2 mm/rev.
actual D = 10.077 mm
+Rmax = 106 µm
-Rmax = -28 µm
dRmax = 42 µm
AV = 68.5 µm
Ra = 3.7 µm, Rz = 17.2 µm

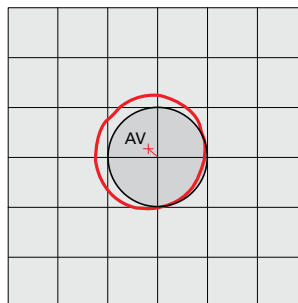
IT12



Ratio drills, type RT 100 Guhring no. 1181 **S**

vc = 90 m/min
f = 0.3 mm/rev.
actual D = 10.027 mm
+Rmax = 34 µm
-Rmax = -9.2 µm
dRmax = 6.5 µm
AV = 22.5 µm
Ra = 2.2 µm, Rz = 11.5 µm

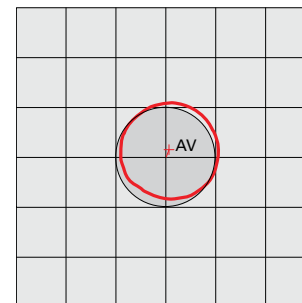
IT9



Ratio drills, type RT 150 GG Guhring no. 768 **O**

vc = 130 m/min
f = 0.2 mm/rev.
actual D = 9.994 mm
+Rmax = 11.5 µm
-Rmax = -18 µm
dRmax = 5 µm
AV = 14 µm
Ra = 1.99 µm, Rz = 11.2 µm

IT8



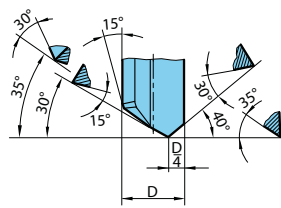
Point Grinds - Gun Drills

EB 100

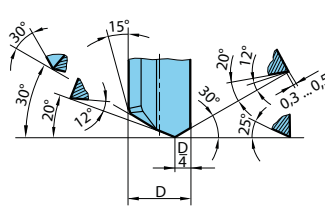
Standard point grinds

(special point grinds on request)

Ø 2...4.00 mm



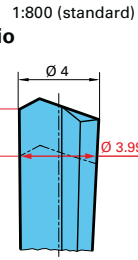
Ø > 4.01...20 mm



EB 100

Back taper ratio

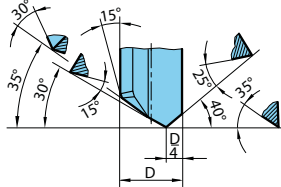
(dimensions in mm)



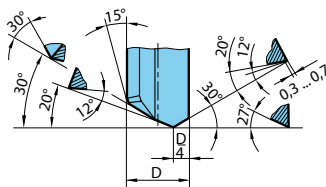
EB 80 standard point grinds

(special point grinds available)

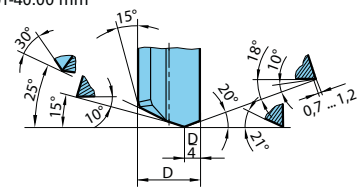
Ø 2.00-4.00 mm



Ø 4.01-20.00 mm



Ø 20.01-40.00 mm



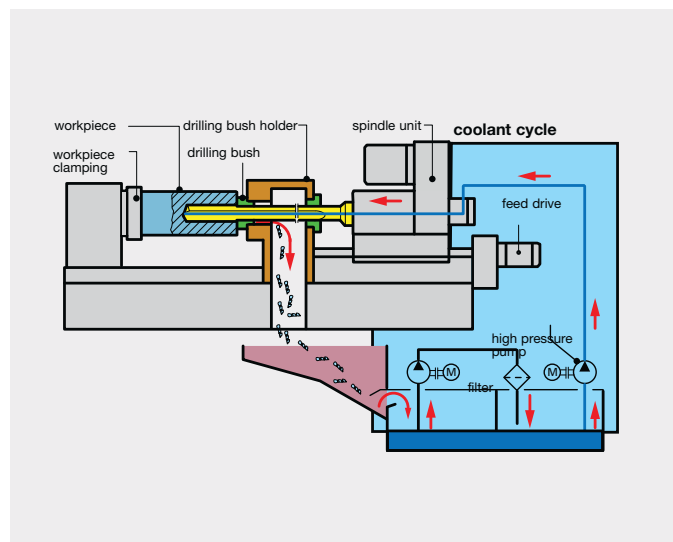
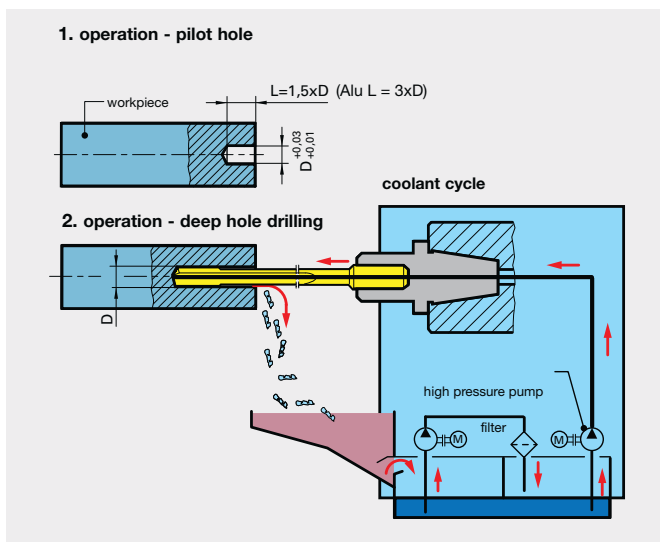
All gun drills must utilize a pilot hole (CNC machine) or drill bushing (gun drilling machine) to guide the drill. Gun drills must never operate at full speed without support in the pilot hole or drill bushing.

Recommended drilling procedure using gun drills on CNC machine tools:

- Machine a pilot hole using a Guhring carbide drill with an m7 tolerance (i.e., series 6400, series 5510, etc.) to a minimum pilot depth of 1.5xD to 3xD.
- Enter pilot hole at low speed, approx. 200 RPM, feed rate approx. 20 IPM, stopping just shy of the bottom of the hole. With tools for drilling depths in excess than 40xD enter the pilot hole with the spindle rotating in the counter-clockwise direction.
- Start high coolant pressure and increase RPM to the recommended value.
- Feed drill at recommended feed rate to final hole depth. No peck cycle required.
- For through holes with oblique exit, reduce the feed rate to 40% approx. 1 mm prior to break-through.
- After reaching hole depth, turn off coolant, reduce machine spindle speed to 200RPM and withdraw the drill at a maximum feed rate of 200IPM.

CNC machine tools

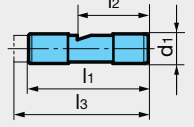
Gun drilling machines



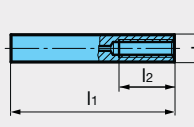
The range of drivers introduced below is available ex stock. However, it only represents a small selection of drivers from our complete range. We naturally also produce individual

drivers of the highest precision to customer drawings. Attention! EB 100 requires drivers with positioning lugs. Further information on request.

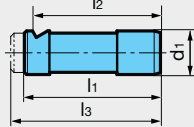
Drivers for deep drilling machines



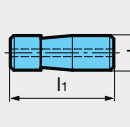
| code no. | d ₁ | l ₁ | l ₂ | l ₃ |
|----------|----------------|----------------|----------------|----------------|
| 1.1 | 10 | 40 | 24 | - |
| 1.2 | 10 | 40 | 24 | 45 |
| 1.3 | 10 | 40 | 24 | 55 |
| 1.4 | 16 | 45 | 31,2 | - |
| 1.5 | 25 | 70 | 34 | - |
| 1.6 | 25 | 70 | 34 | 78 |



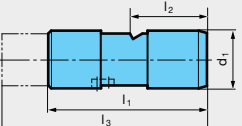
| code no. | d ₁ | l ₁ | l ₂ |
|----------|----------------|----------------|----------------|
| 5.1 | 10 | 60 | 20 |
| 5.2 | 16 | 80 | 28 |
| 5.3 | 25 | 100 | 50 |
| 5.4 | 10 | 100 | - |
| 5.5 | 10 | 110 | - |



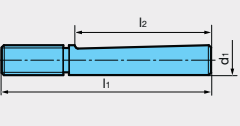
| code no. | d ₁ | l ₁ | l ₂ | l ₃ |
|----------|----------------|----------------|----------------|----------------|
| 2.1 | 16 | 50 | 47 | - |
| 2.2 | 16 | 50 | 47 | 55 |
| 2.3 | 16 | 50 | 47 | 70 |



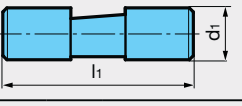
| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 6.1 | 12,7 | 38 |
| 6.2 | 19,05 | 70 |
| 6.3 | 38,1 | 70 |



| code no. | d ₁ | l ₁ | l ₂ | l ₃ |
|----------|----------------|----------------|----------------|----------------|
| 3.1 | 25 | 70 | 34 | 100 |



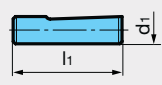
| code no. | d ₁ | l ₁ | l ₂ |
|----------|----------------|----------------|----------------|
| 7.1 | 16 | 112 | 73 |
| 7.2 | 20 | 126 | 82 |



| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 4.1 | 19,05 | 70 |
| 4.2 | 12,70 | 70 |
| 4.3 | 25,40 | 70 |
| 4.4 | 31,75 | - |
| 4.5 | 36,10 | 70 |

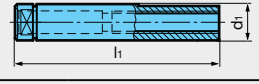
Drivers to DIN 1835

form E



| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 9.1 | 8 | 36 |
| 9.2 | 10 | 40 |
| 9.3 | 12 | 45 |
| 9.4 | 16 | 48 |
| 9.5 | 20 | 50 |
| 9.6 | 25 | 56 |
| 9.7 | 32 | 60 |
| 9.8 | 31,75 | 70 |
| 9.9 | 38,1 | 70 |
| 9.10 | 40 | 70 |

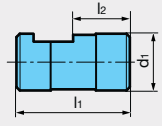
Drivers to VDI-draft



| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 12.1 | 10 | 68 |
| 12.2 | 16 | 90 |
| 12.3 | 25 | 112 |

also be used for deep hole drilling machines

Drivers to Speed-Bit-System

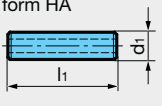


| code no. | d ₁ | l ₁ | l ₂ |
|----------|----------------|----------------|----------------|
| 13.1 | 16 | 40 | 16 |
| 13.2 | 25 | 50 | 25 |
| 13.2 | 35,6 | 60 | - |

also be used for deep hole drilling machines

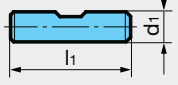
Drivers to DIN 6535

form HA

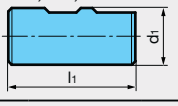


| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 10.1 | 8 | 36 |
| 10.2 | 10 | 40 |
| 10.3 | 12 | 45 |
| 10.4 | 16 | 48 |
| 10.5 | 20 | 50 |
| 10.6 | 25 | 56 |
| 10.7 | 32 | 60 |
| 10.8 | 25 | 70 |
| 10.9 | 40 | 70 |

form HB

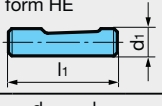


with code no. 8.6, 8.7, 8.8



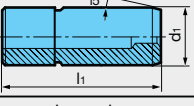
| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 8.1 | 8 | 36 |
| 8.2 | 10 | 40 |
| 8.3 | 12 | 45 |
| 8.4 | 16 | 48 |
| 8.5 | 20 | 50 |
| 8.6 | 25 | 56 |
| 8.7 | 32 | 60 |
| 8.8 | 40 | 70 |

form HE



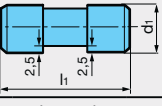
| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 11.1 | 8 | 36 |
| 11.2 | 10 | 40 |
| 11.3 | 12 | 45 |
| 11.4 | 16 | 48 |
| 11.5 | 20 | 50 |
| 11.6 | 25,4 | 70 |
| 11.7 | 25 | 56 |
| 11.8 | 32 | 60 |
| 11.9 | 40 | 70 |

similar form HA (shrinkable)



| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 16.1 | 10 | 50 |
| 16.2 | 16 | 64 |
| 16.3 | 20 | 70 |
| 16.4 | 25 | 81 |
| 16.5 | 32 | 92 |

similar form HE

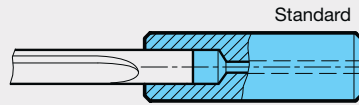


| code no. | d ₁ | l ₁ |
|----------|----------------|----------------|
| 17.1 | 19,05 | 70 |
| 17.2 | 25,40 | 70 |
| 17.3 | 31,75 | 70 |
| 17.4 | 38,1 | 70 |

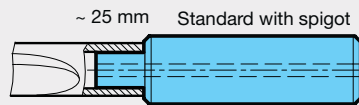
also be used for deep hole drilling machines

Driver variations to suit gun drill tubes

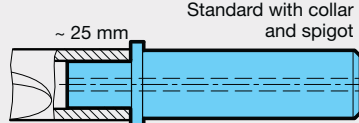
Solution for nom.-Ø < driver-Ø
(difference must be appr. 6 mm):
tube shank installed in driver



Solution for nom.-Ø ≠ driver-Ø
(close to parallel):
tube shank installed over spigot



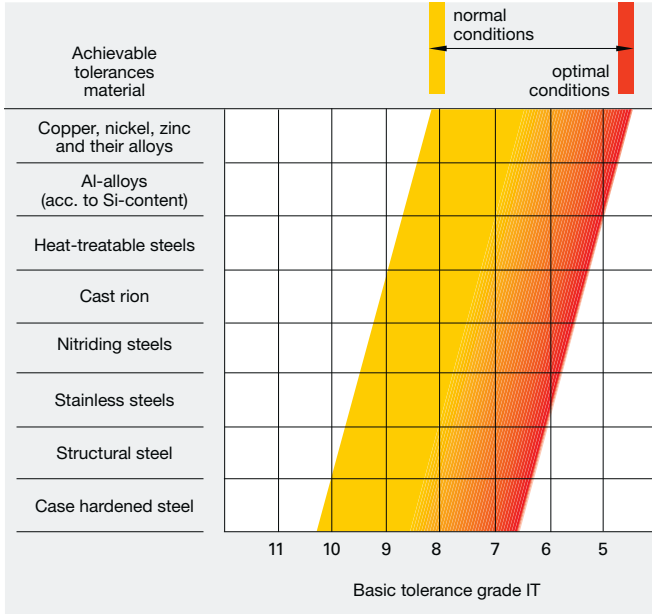
Solution for nom.-Ø > driver-Ø:
tube shank installed over spigot,
inside-Ø of tube shank > driver-Ø,
tube shank fits against collar shoulder.



Single fluted gun drill accuracy

Basic tolerances*

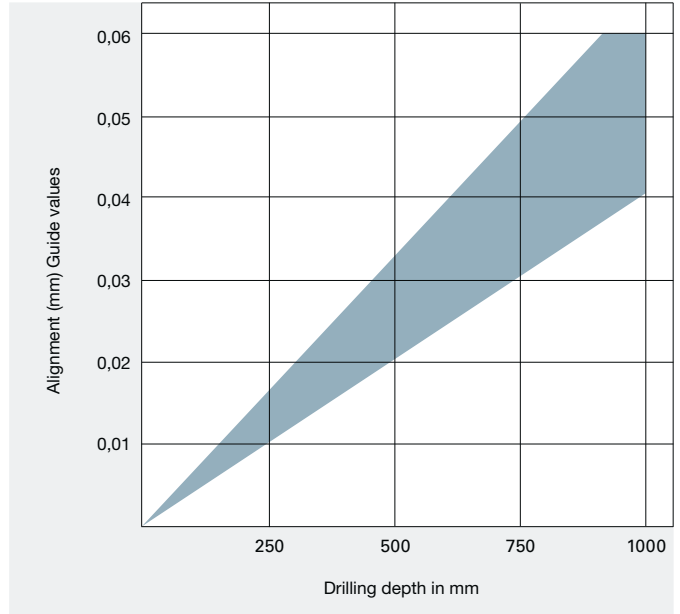
The application of single-fluted gun drills can achieve a lower basic tolerance, as the cutting forces at the cutting edge are absorbed by the supporting strips, unlike twist drills where the slightest deviation of the two cutting edges causes a larger hole.



Alignment accuracy*

Because brazed single-fluted gun drills always have the precision carbide head brazed on to a flexible tube, the tool achieves very accurate aligned holes remaining unaffected by possible concentricity errors.

However, extreme material fluctuations and other influencing factors can impair the alignment accuracy.

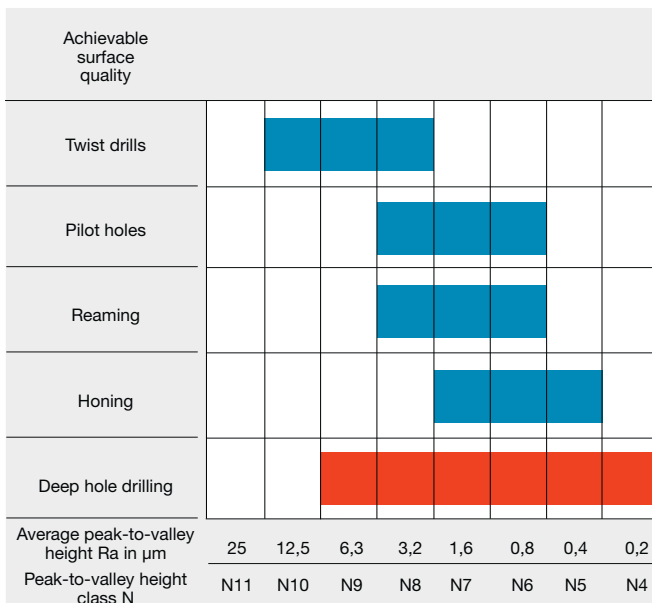


Surface quality*

The forces at the cutting edge are absorbed by the support bushes, which in return burnishes the surface.

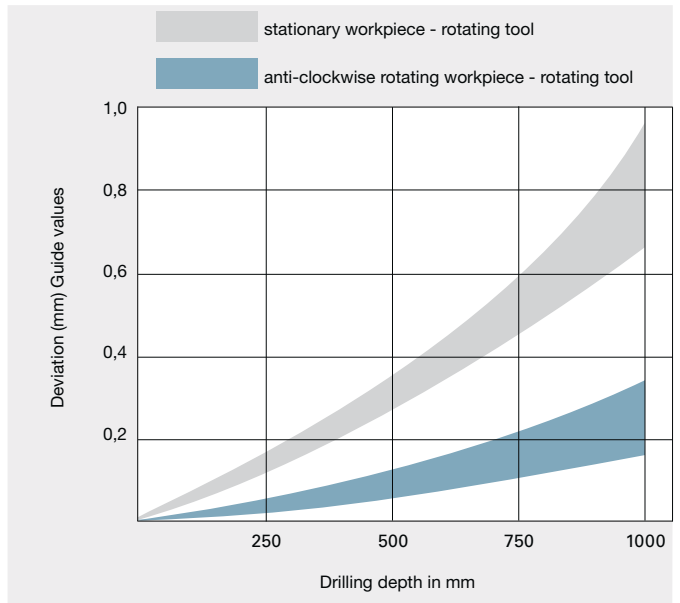
Lubrication between the supporting strips and hole surface is therefore very important.

The better the lubricant, the better the surface quality.



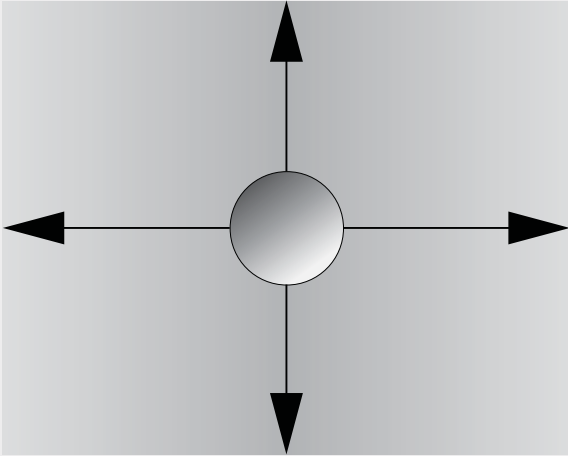
Deviation from concentricity*

When a hole is produced with, for example, a commercial twist drill, the quality of the point grind affects the concentricity of the hole. An imbalance of forces is created at the cutting edges. With gun drills, these cutting forces are absorbed by the supporting strips, resulting in excellent concentricity.

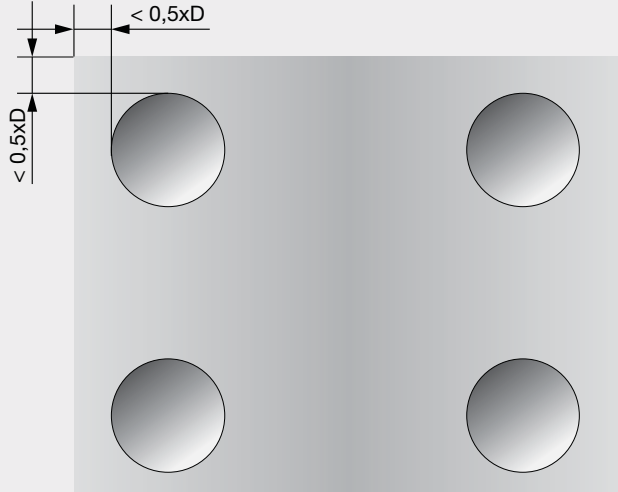


* Gun drills with two cutting edges – straight-fluted as well as spiral-fluted – achieve approx. twice of the values stated

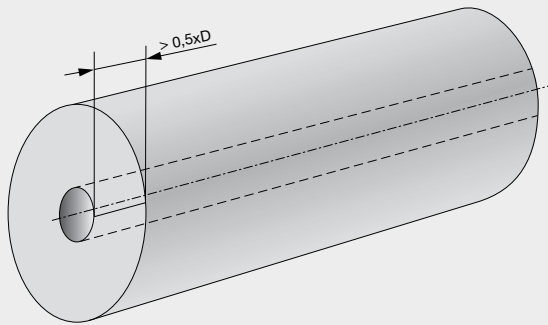
Hole straightness/deviation



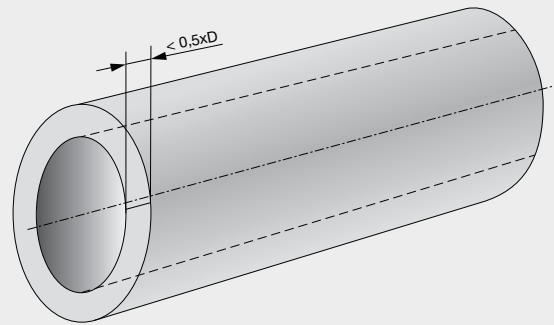
Hole distance to edge $> 0.5xD$



Hole distance to edge $< 0.5xD$



Sufficient wall distance
 $(> 0.5xD) > \text{optimal}$

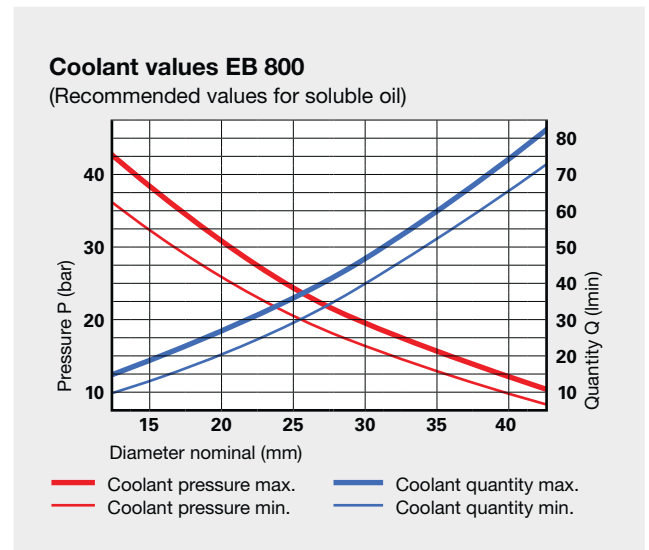
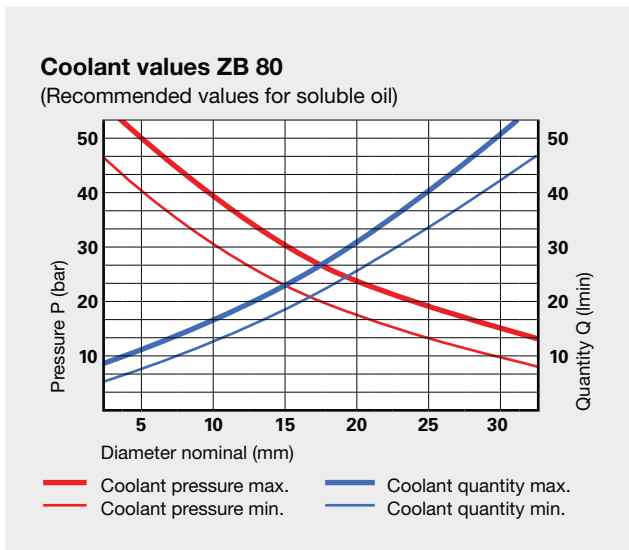
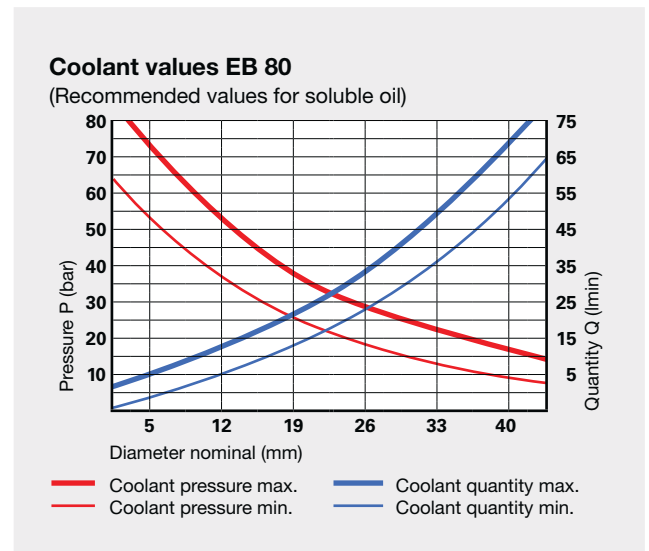
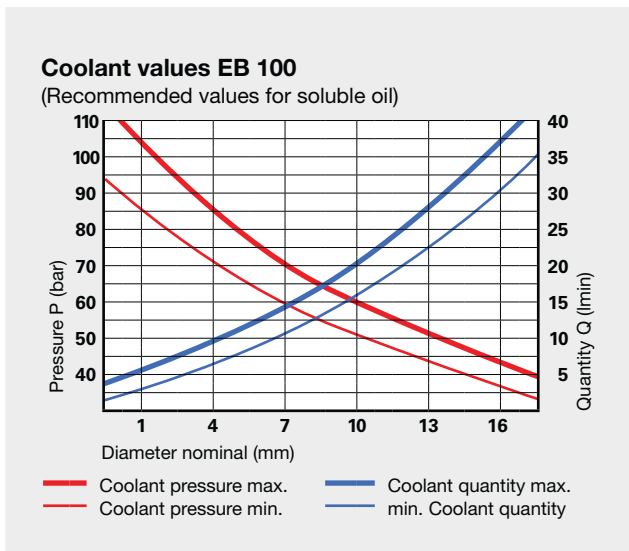


Minimum distance ($0.5xD$)
 falling short \rightarrow can lead to losses
 in hole straightness

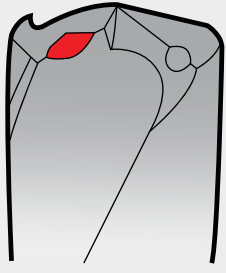
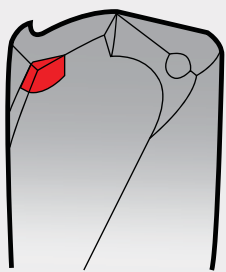
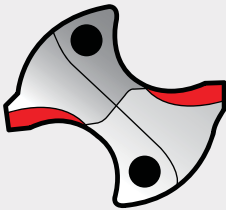
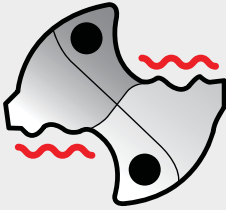
Coolant values

Please note:

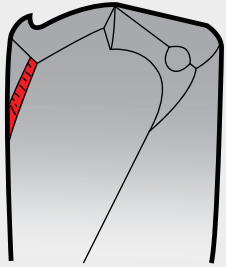
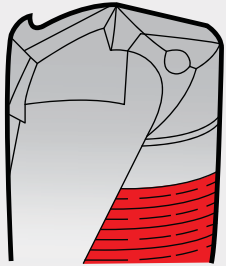
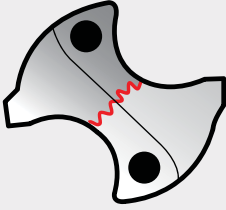
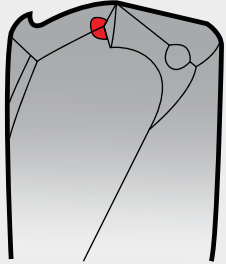
- All gun drills must be applied with internal cooling, either air, water or oil. Without internal cooling the chips cannot be evacuated.
- All gun drills can be applied with oil as the medium for internal cooling. However, in this case a 30% higher pressure is required in order to achieve the same coolant volume.
- When MQL is applied with gun drills an increase in pressure may be necessary for smaller nominal diameters dependent on the pressure of the MQL system.
- If the cooling lubricant data is insufficient the cutting parameters may be reduced. Pressure boosting systems are also possible.
- With increased gun drill length a pressure increase has to be expected to transport the required coolant volume through the coolant ducts.



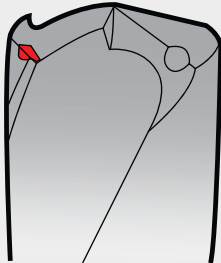
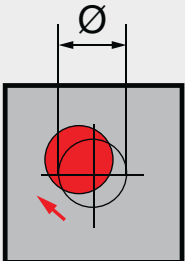
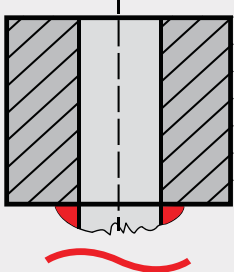
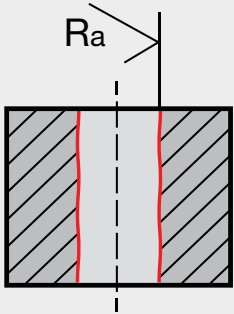
Application/Troubleshooting

| Problem | Cause | Remedy |
|--|--|--|
| <p>1. Cutting edge build up</p>  | <ul style="list-style-type: none"> ■ low cutting speed ■ excessive honing of cutting lip ■ bright finish cutting lip | <ul style="list-style-type: none"> ■ increase cutting speed ■ reduce cutting lip honing ■ have tool coated |
| <p>2. Crumbling of outer corners</p>  | <ul style="list-style-type: none"> ■ non rigid conditions, insufficient workpiece clamping ■ deviation from concentricity too large ■ interrupted cut | <ul style="list-style-type: none"> ■ rigid clamping of workpiece ■ check and correct concentricity if possible ■ reduce feed |
| <p>3. Heavy wear at flank</p>  | <ul style="list-style-type: none"> ■ cutting speed too high ■ feed too low ■ clearance angle too small | <ul style="list-style-type: none"> ■ reduce cutting speed ■ increase feed ■ increase clearance angle |
| <p>4. Crumbling on cutting lips</p>  | <ul style="list-style-type: none"> ■ non rigid conditions, insufficient workpiece clamping ■ interrupted cut ■ max. wear values exceeded ■ incorrect tool type | <ul style="list-style-type: none"> ■ rigid clamping of workpiece ■ reduce feed ■ reduce tool change intervals ■ apply suitable tool) |

Application/Troubleshooting

| Problem | Cause | Remedy |
|--|--|--|
| 5. Land wear  | <ul style="list-style-type: none"> ■ non rigid conditions, insufficient workpiece clamping ■ deviation from concentricity too large ■ back taper too small ■ incorrect coolant (oil), coolant too weak | <ul style="list-style-type: none"> ■ rigid clamping of workpiece ■ check and correct concentricity if possible ■ reduce tool change intervals ■ increase strength of coolant or use neat oil |
| 6. Scoring on tool body  | <ul style="list-style-type: none"> ■ non rigid conditions, insufficient workpiece clamping ■ deviation from concentricity too large ■ interrupted cut ■ abrasive workpiece material | <ul style="list-style-type: none"> ■ rigid clamping of workpiece ■ check and correct concentricity if possible ■ increase back taper ■ increase strength of coolant or use neat oil |
| 7. Heavy chisel edge wear  | <ul style="list-style-type: none"> ■ cutting speed too low ■ feed too high ■ excessive honing of cutting lip | <ul style="list-style-type: none"> ■ increase cutting speed ■ reduce feed ■ reduce cutting lip honing |
| 8. Crumbling at intersection, web thinning and cutting lip  | <ul style="list-style-type: none"> ■ clearance angle too small ■ excessive honing of cutting lip ■ incorrect tool type | <ul style="list-style-type: none"> ■ increase clearance angle ■ reduce cutting lip honing ■ apply suitable tool |

Application/Troubleshooting

| Problem | Cause | Remedy |
|--|--|--|
| <p>9. Plastic deformation of outer corner</p>  | <ul style="list-style-type: none"> cutting speed too high insufficient coolant volume incorrect or no honing at corner | <ul style="list-style-type: none"> reduce cutting speed increase volume/pressure correct honing |
| <p>10. Misalignment</p>  | <ul style="list-style-type: none"> non rigid conditions, insufficient workpiece clamping deviation from concentricity too large spotting area transverse chisel edge too large | <ul style="list-style-type: none"> rigid clamping of workpiece check and correct concentricity if possible use milling cutter (2-fluted) for spotting reduce chisel edge |
| <p>11. Heavy burring on breakthrough</p>  | <ul style="list-style-type: none"> feed too high max. wear values exceeded excessive honing of cutting lip | <ul style="list-style-type: none"> reduce feed reduce tool change intervals reduce cutting lip honing |
| <p>12. Unsatisfactory surface quality</p>  | <ul style="list-style-type: none"> non rigid conditions, insufficient workpiece clamping deviation from concentricity too large insufficient coolant volume | <ul style="list-style-type: none"> rigid clamping of workpiece check and correct concentricity if possible increase volume/pressure |

High speed steels

We only produce tools in the highest quality, carefully selected high speed grades. Depending on the alloying component, the tools have specific properties suited to the application case:

Tungsten, molybdenum: Increases the temper resistance and the wear resistance.

Vanadium: Increases the wear resistance.

Cobalt: Increases the wear resistance, increases the thermal hardness.

| Guhring description | Type | Field of application, properties |
|---------------------|---|---|
| HSS | Conventional high speed steel | Standard tool material for universal applications |
| HSCO / HSS-E | Cobalt-alloyed high speed steel | Tool material with high thermal hardness for increased demands, especially suitable for higher machining temperatures or unfavorable cooling. |
| M42 | 8% cobalt-alloyed high speed steel | Tool material with increased thermal resistance and hardness, suitable for machining difficult-to-machine materials. |
| HSS-E | | |
| HSS-E-PM | Powder metallurgically produced cobalt-alloyed high speed steel | Tool material with a very dense and uniform structure. High hardness and thermal resistance, high wear resistance and cutting edge stability. |

The most important carbide grades for Guhring tools

The following table lists the most important carbides that are available from Guhring ex-stock for general applications.

In more than 80% of applications known to Guhring, the results of DK460UF carbide grade tools together with a specially adapted coating could not be surpassed by any other carbide

grades, including coated tools. This and the availability of the material ex-stock simplify tool selection immensely. For further information regarding the application of other carbide grades please contact our technical engineers.

| Grade | Co-content [M-%] | Tungsten carbide grain size [µm] | Hardness [HV] | ISO classification [ISO 513] | Characteristics |
|------------------|------------------|----------------------------------|---------------|------------------------------|--|
| DK460UF K40UF | 10 | 0.6 | 1620 | K20-K40 | A carbide grade with wide range of application possibilities. It is applied, mostly coated, for the machining of steel, soft Al alloys, cast iron as well as "super alloys" such as Inconel 718. This grade is the backbone of our carbide production. |
| DK500UF K44UF | 12 | 0.5 | 1690 | K20-K30 | The grade has been especially developed for hard machining. It possesses a higher hardness and deformation tolerance in comparison to DK460UF. Due to the high Co-content, a coated application is strongly recommended. |
| DK255F | 8 | 0.7 | 1720 | K20 | The grade is recommended for hard machining, the machining of high tensile grey cast iron and hard AISI-alloys. Dry machining is possible. A coated application is preferable. |
| DK120 | 6 | 1.3 | 1620 | K15-K20 | The grade is especially suitable for the application with diamond coating. |
| DK120UF | 7 | 0.7 | 1850 | K05-K10 | Ultra fine grain type offering extreme wear resistance, suitable for absolutely rigid machines, preferred for reamers. |
| K55SF | 9 | 0.2-0.4 | 1920 | K05-K10 | For application with high wear resistant materials, stainless steels, composite materials such as Kevlar and GRP, high speed machining and dry machining. |
| DK400N | 10 | 0.7 | 1580 | K20-K40 | An extremely tough grade for the machining of high heat resistant metals. |
| DK256EH | 10 | 0.6 | 1750 | K20 | The grade is especially suitable for the machining of nickel-based alloys. |
| K6UF | 6 | 0.6 | 1870 | K05-K10 | Ultra fine grain type offering extreme wear resistance. Especially suitable for application with high wear resistant materials, composite materials, GRP and Kevlar. |
| K5UF | 5 | 0.5 | 2010 | K05-K10 | Newly developed extremely hard grade for drilling and reaming. Especially suitable for application with composite materials and GRP. |

Superhard tool materials

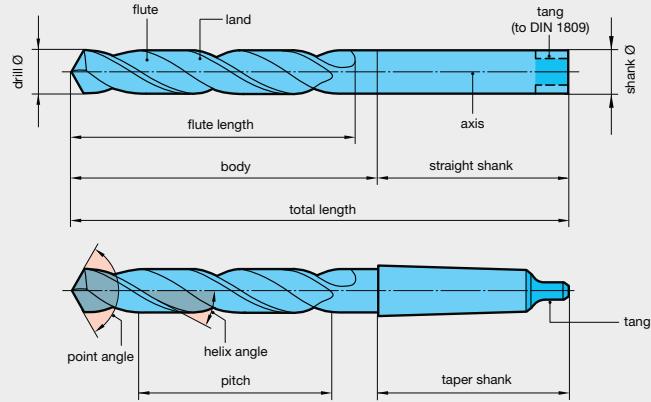
It is not only the extreme hardness of superhard tool materials but also their high heat-resistance which enables highest cutting rates and increased productivity. PCD (Poly-Crystalline Diamond) stands for maximum wear resistance. PCD's main field of application is the machining of aluminum and fiber

composites. PcBN (Polycrystalline cubic Boron Nitride) finds application in ferrous materials. To unfold the full potential of these tool materials, the application on the most rigid of machine tools is recommended

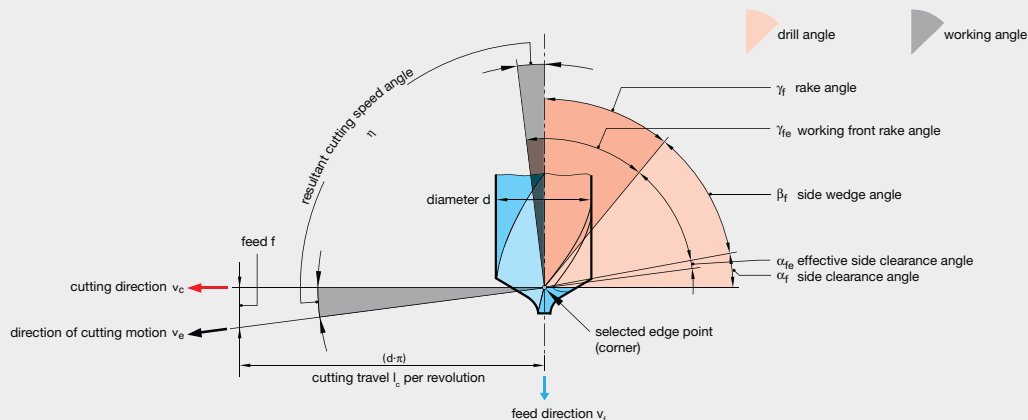
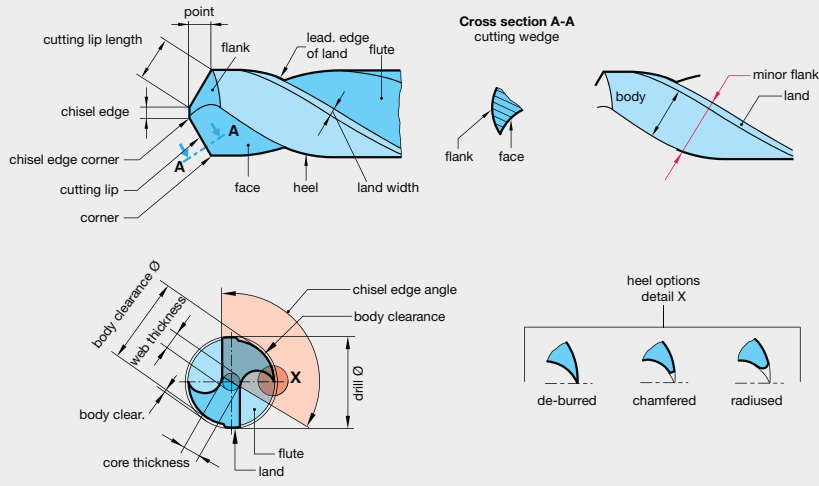
| Guhring description | Classification | Range of application | Average grain size | Diamond content |
|---------------------|---------------------------------------|--|--------------------|-----------------|
| PCD | Fine grain | Aluminum and AISi-alloys <10%Si, magnesium alloys, brass, copper, bronze, excellent cutting edge quality, high abrasion resistance, excellent surface qualities. | 2-4 µm | > 90% PCD |
| | Medium grain | Universal grade (general finishing applications) AISi-alloys <14%Si, copper alloys, graphite and graphite composite materials, fiber composite plastics, unsintered ceramic and carbide (<15% binding metal content) excellent resistance, good surface qualities. | 5-10 µm | approx. 92% PCD |
| | Coarse grain | Roughing applications AISi-alloys >14%Si and other abrasive machining applications, MMC, sintered ceramic and carbide (<15% binding metal content, extreme abrasion resistance, high shock resistance, long tool life with acceptable surface quality. | >25 µm | approx. 94% PCD |
| | Mixed grain | Abrasive machining applications (i.e.: >14% AISi-alloys, MMC, fiber composite plastics) highest wear resistance, excellent shock resistance, extreme abrasion resistance with good edge roughness, long tool life with good surface quality. | 4 µm+ 25 µm | approx. 95% PCD |
| PcBN 10.. | Low CBN-content with carbide base | For finish machining of case hardened, hardened heat-treatable and tool steels, suitable for continuous and medium to heavily interrupted cutting with ap smaller 0.3 mm. High wear resistance, resistance to impact, temperature resistance, toughness. | <1-4 µm | 40-65% CBN |
| PcBN 20.. | High CBN-content with carbide base | For the machining of perlitic grey cast iron (> 45 HRC), PM-steels, chilled cast iron. Application in continuous and interrupted cutting with ap of 0.5-1.5 mm. High wear resistance, resistance to impact. | 2-3 µm | 70-90% CBN |
| PcBN 30.. | High CBN-content without carbide base | Massive PcBN tool material suitable for roughing operations. Perlitic grey cast iron, hard casting, hardened steels. For application in clamping holders, drilling and boring tools, milling heads with jaw clamping. High wear resistance, resistance to impact. | 2-20 µm | 70-87% CBN |

Definitions, dimensions and angles DIN ISO 5419 (extract; edition 06/98)

Twist drills with straight/Morse taper shank

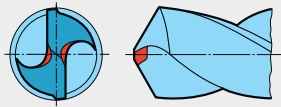


Cutting portion

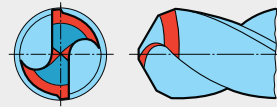


Special point geometry and manufacturing tolerances

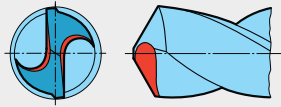
Special point geometry to DIN 1412 (extract; edition 03/01)



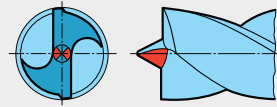
Form A
Thinned
chisel edge



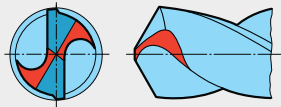
Form D
Point ground
for cast iron



Form B
Thinned chisel edge
with corrected
cutting lips



Form E
Brad point
(center point)



Form C
Split point

Twist drill manufacturing tolerances to DIN ISO 286, part 2

| diameter (nominal size) up to and incl. mm | tolerance range μm | |
|--|----------------------------------|----|
| | h8 | h7 |
| 0.38 ... 0.60 | 10 | 7 |
| 0.95 | 12 | 8 |
| 3.00 | 14 | 10 |
| 6.00 | 18 | 12 |
| 10.00 | 22 | 15 |
| 18.00 | 27 | 18 |
| 30.00 | 33 | 21 |
| 50.00 | 39 | 25 |
| 80.00 | 46 | 30 |
| 120.00 | 54 | 35 |

* If you need tolerances other than ISO h8 please let us know. Additional charges for closer diameter tolerance see additional charges at the end of chapter Drilling Tools.

Reference to other relevant standards

- DIN 228 Part 1 machine tapers; Morse tapers and metric tapers, taper shank
- DIN 1414-1 Directions for design and use for high speed steel twist drills
- DIN 6580 Definitions of the metal-cutting industry; motions and geometry of the cutting process
- DIN 6581 Definitions of the metal-cutting industry; Cutting portion reference systems and angles

The standard descriptions above are given with the permission from the German Standards Institute (Deutsches Institut für Normung). The most recent editions of the standard sheets apply and are available in DIN A 4 format from Beuth-Verlag GmbH, D-10787 Berlin.

Outside Diameter (O.D.) Manufacturing Tolerances

Twist drills

| h6 Tolerance Range | |
|--------------------|--------------------|
| Ø-range mm | tolerance range mm |
| > 0.600 - 0.950 | +0.000 / -0.005 |
| > 0.950 - 3.000 | +0.000 / -0.006 |
| > 3.000 - 6.000 | +0.000 / -0.008 |
| > 6.000 - 10.000 | +0.000 / -0.009 |
| > 10.000 - 18.000 | +0.000 / -0.011 |
| > 18.000 - 30.000 | +0.000 / -0.013 |
| > 30.000 - 50.000 | +0.000 / -0.016 |

| h7 Tolerance Range | |
|--------------------|--------------------|
| Ø-range mm | tolerance range mm |
| 0.380 - 0.600 | +0.000 / -0.007 |
| > 0.600 - 0.950 | +0.000 / -0.008 |
| > 0.950 - 3.000 | +0.000 / -0.010 |
| > 3.000 - 6.000 | +0.000 / -0.012 |
| > 6.000 - 10.000 | +0.000 / -0.015 |
| > 10.000 - 18.000 | +0.000 / -0.018 |
| > 18.000 - 30.000 | +0.000 / -0.021 |
| > 30.000 - 50.000 | +0.000 / -0.025 |

| h5 Tolerance Range | |
|--------------------|--------------------|
| Ø-range mm | tolerance range mm |
| ≤ 3.000 | +0.000 / -0.004 |
| > 3.000 - 6.000 | +0.000 / -0.005 |

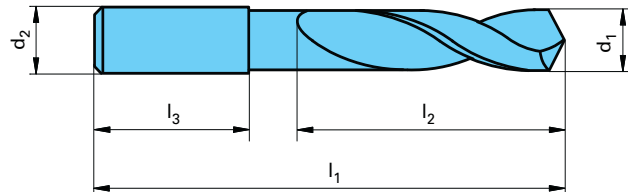
| h8 Tolerance Range | |
|--------------------|--------------------|
| Ø-range mm | tolerance range mm |
| 0.380 - 0.600 | +0.000 / -0.010 |
| > 0.600 - 0.950 | +0.000 / -0.012 |
| > 0.950 - 3.000 | +0.000 / -0.014 |
| > 3.000 - 6.000 | +0.000 / -0.018 |
| > 6.000 - 10.000 | +0.000 / -0.022 |
| > 10.000 - 18.000 | +0.000 / -0.027 |
| > 18.000 - 30.000 | +0.000 / -0.033 |
| > 30.000 - 50.000 | +0.000 / -0.039 |

| m7 Tolerance Range | |
|--------------------|--------------------|
| Ø-range mm | tolerance range mm |
| 0.800 - 3.000 | +0.002 / +0.012 |
| 3.000 - 6.000 | +0.004 / +0.016 |
| > 6.000 - 10.000 | +0.006 / +0.021 |
| > 10.000 - 18.000 | +0.007 / +0.025 |
| > 18.000 - 30.000 | +0.008 / +0.029 |

Carbide twist drills (Ratio drills)

Carbide twist drills (Ratio drills) DIN 6537

Applies to solid carbide twist drills with 2 or 3 cutting edges and straight shank to DIN 6535



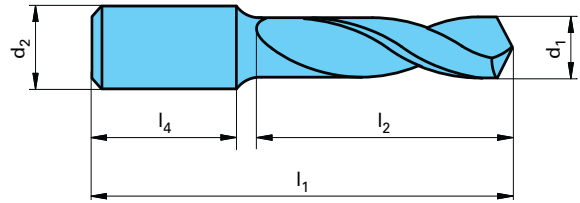
Dimensions in mm

| nom. Ø-range up to d1m7 | shank Ø d2h6 | Ratio drills for 3 x D | | Ratio drills for 5 x D | | shank length l4 |
|-------------------------|--------------|------------------------|----------------------|------------------------|----------------------|-----------------|
| | | overall length l1 | max. flute length l2 | overall length l1 | max. flute length l2 | |
| 2.9...3.75 | 6 | 62 | 20 | 66 | 28 | 36 |
| 4.75 | 6 | 66 | 24 | 74 | 36 | 36 |
| 6.00 | 6 | 66 | 28 | 82 | 44 | 36 |
| 7.00 | 8 | 79 | 34 | 91 | 53 | 36 |
| 8.00 | 8 | 79 | 41 | 91 | 53 | 36 |
| 10.00 | 10 | 89 | 47 | 103 | 61 | 40 |
| 12.00 | 12 | 102 | 55 | 118 | 71 | 45 |
| 14.00 | 14 | 107 | 60 | 124 | 77 | 45 |
| 16.00 | 16 | 115 | 65 | 133 | 83 | 48 |
| 18.00 | 18 | 123 | 73 | 143 | 93 | 48 |
| 20.00 | 20 | 131 | 79 | 153 | 101 | 50 |

Carbide twist drills (Ratio drills)

Carbide twist drills (Ratio drills) DIN 6538

Applies to twist drills with brazed carbide tip or head with reinforced straight shank (steel) to DIN 6535. The brazed head can be a part or the complete cutting portion.

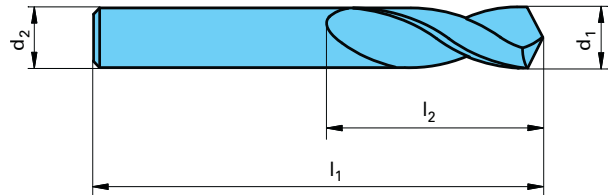


Dimensions in mm

| nom. Ø-range up to d1h7 | shank Ø d2h6 | Ratio drills for 3 x D | | Ratio drills for 5 x D | | Ratio drills for 7 x D | | shank length l4 |
|-------------------------------|-----------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|-----------------------|
| | | overall length | max. flute length l2 | overall length | max. flute length l2 | overall length | max. flute length l2 | |
| | | l1 | l2 | l1 | l2 | l1 | l2 | |
| 9.5...12.0 | 16 | 103 | 51 | 127 | 75 | 151 | 99 | 48 |
| 14.0 | 16 | 111 | 59 | 139 | 87 | 167 | 115 | 48 |
| 16.0 | 20 | 122 | 68 | 154 | 100 | 186 | 132 | 50 |
| 18.0 | 20 | 130 | 76 | 166 | 112 | 202 | 148 | 50 |
| 20.0 | 25 | 144 | 84 | 184 | 124 | 224 | 164 | 56 |
| 22.0 | 25 | 153 | 93 | 197 | 137 | 241 | 181 | 56 |
| 24.0 | 25 | 161 | 101 | 209 | 149 | 257 | 197 | 56 |
| 26.0 | 32 | 174 | 110 | 226 | 162 | 278 | 214 | 60 |
| 28.0 | 32 | 182 | 118 | 238 | 174 | 294 | 230 | 60 |
| 30.0 | 32 | 190 | 126 | 250 | 186 | 310 | 246 | 60 |

Carbide twist drills (Ratio drills) DIN 6539

Applies to solid carbide twist drills with parallel shank, i.e. equal nom. drill and shank diameter.



Dimensions in mm

| nom. Ø-range up to (= shank Ø d2) d1 | overall length l1 | flute length l2 |
|---|----------------------|--------------------|
| 1.90...2.12 | 38 | 12 |
| 2.36 | 40 | 13 |
| 2.65 | 43 | 14 |
| 3.00 | 46 | 16 |
| 3.35 | 49 | 18 |
| 3.75 | 52 | 20 |
| 4.25 | 55 | 22 |
| 4.75 | 58 | 24 |
| 5.30 | 62 | 26 |
| 6.00 | 66 | 28 |
| 6.70 | 70 | 31 |
| 7.50 | 74 | 34 |
| 8.00 | 79 | 37 |
| 8.50 | 79 | 37 |
| 9.50 | 84 | 40 |

| nom. Ø-range up to (= shank Ø d2) d1 | overall length l1 | flute length l2 |
|---|----------------------|--------------------|
| 10.00 | 89 | 43 |
| 10.60 | 89 | 43 |
| 11.80 | 95 | 47 |
| 12.00 | 102 | 51 |
| 13.20 | 102 | 51 |
| 14.00 | 107 | 54 |
| 15.00 | 111 | 56 |
| 16.00 | 115 | 58 |
| 17.00 | 119 | 60 |
| 18.00 | 123 | 62 |
| 19.00 | 127 | 64 |
| 20.00 | 131 | 66 |

Straight shank twist drills

| dia. to (incl.) mm | DIN 338 | | DIN 339 | | DIN 340 | | DIN 1897 | | DIN 1869 Extra length twist drills | | | | | |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | total length mm | flute length mm | total length mm | flute length mm | total length mm | flute length mm | total length mm | flute length mm | series 1 | | series 2 | | series 3 | |
| | | | | | | | | | total length mm | flute length mm | total length mm | flute length mm | total length mm | flute length mm |
| ≤ 0.24 | 19 | 2.5 | | | | | 19 | 1.5 | | | | | | |
| 0.30 | 19 | 3 | | | | | 19 | 1.5 | | | | | | |
| 0.38 | 19 | 4 | | | | | 19 | 2 | | | | | | |
| 0.48 | 20 | 5 | | | 30* | 10* | 19 | 2.5 | | | | | | |
| 0.53 | 22 | 6 | | | 32* | 12* | 20 | 3 | | | | | | |
| 0.60 | 24 | 7 | 32* | 15* | 35* | 15* | 21 | 3.5 | | | | | | |
| 0.67 | 26 | 8 | 36* | 18* | 38* | 18* | 22 | 4 | | | | | | |
| 0.75 | 28 | 9 | 39* | 20* | 42* | 21* | 23 | 4.5 | | | | | | |
| 0.85 | 30 | 10 | 42* | 22* | 46* | 25* | 24 | 5 | | | | | | |
| 0.95 | 32 | 11 | 45* | 24* | 51* | 29* | 25 | 5.5 | | | | | | |
| 1.06 | 34 | 12 | 48 | 26 | 56 | 33 | 26 | 6 | | | | | | |
| 1.18 | 36 | 14 | 50 | 28 | 60 | 37 | 28 | 7 | | | | | | |
| 1.32 | 38 | 16 | 52 | 30 | 65 | 41 | 30 | 8 | | | | | | |
| 1.50 | 40 | 18 | 55 | 33 | 70 | 45 | 32 | 9 | | | | | | |
| 1.70 | 43 | 20 | 58 | 35 | 76 | 50 | 34 | 10 | 115* | 75* | | | | |
| 1.90 | 46 | 22 | 62 | 38 | 80 | 53 | 36 | 11 | 120* | 80* | | | | |
| 2.12 | 49 | 24 | 66 | 41 | 85 | 56 | 38 | 12 | 125 | 85 | 160* | 110* | 205* | 135* |
| 2.36 | 53 | 27 | 70 | 44 | 90 | 59 | 40 | 13 | 135 | 90 | 170* | 115* | 215* | 145* |
| 2.65 | 57 | 30 | 74 | 47 | 95 | 62 | 43 | 14 | 140 | 95 | 180* | 120* | 225* | 150* |
| 3.00 | 61 | 33 | 79 | 51 | 100 | 66 | 46 | 16 | 150 | 100 | 190 | 130 | 240* | 160* |
| 3.35 | 65 | 36 | 84 | 55 | 106 | 69 | 49 | 18 | 155 | 105 | 200 | 135 | 250* | 170* |
| 3.75 | 70 | 39 | 91 | 60 | 112 | 73 | 52 | 20 | 165 | 115 | 210 | 145 | 265 | 180 |
| 4.25 | 75 | 43 | 96 | 64 | 119 | 78 | 55 | 22 | 175 | 120 | 220 | 150 | 280 | 190 |
| 4.75 | 80 | 47 | 102 | 69 | 126 | 82 | 58 | 24 | 185 | 125 | 235 | 160 | 295 | 200 |
| 5.30 | 86 | 52 | 108 | 74 | 132 | 87 | 62 | 26 | 195 | 135 | 245 | 170 | 315 | 210 |
| 6.00 | 93 | 57 | 116 | 80 | 139 | 91 | 66 | 28 | 205 | 140 | 260 | 180 | 330 | 225 |
| 6.70 | 101 | 63 | 124 | 86 | 148 | 97 | 70 | 31 | 215 | 150 | 275 | 190 | 350 | 235 |
| 7.50 | 109 | 69 | 133 | 93 | 156 | 102 | 74 | 34 | 225 | 155 | 290 | 200 | 370 | 250 |
| 8.50 | 117 | 75 | 142 | 100 | 165 | 109 | 79 | 37 | 240 | 165 | 305 | 210 | 390 | 265 |
| 9.50 | 125 | 81 | 151 | 107 | 175 | 115 | 84 | 40 | 250 | 175 | 320 | 220 | 410 | 280 |
| 10.60 | 133 | 87 | 162 | 116 | 184 | 121 | 89 | 43 | 265 | 185 | 340 | 235 | 430 | 295 |
| 11.80 | 142 | 94 | 173 | 125 | 195 | 128 | 95 | 47 | 280* | 195* | 365* | 250* | 455* | 310* |
| 13.20 | 151 | 101 | 184 | 134 | 205 | 134 | 102 | 51 | 295* | 205* | 375* | 260* | 480* | 330* |
| 14.00 | 160 | 108 | 194 | 142 | 214 | 140 | 107 | 54 | | | | | | |
| 15.00 | 169 | 114 | 202 | 147 | 220 | 144 | 111 | 56 | | | | | | |
| 16.00 | 178 | 120 | 211 | 153 | 227 | 149 | 115 | 58 | | | | | | |
| 17.00 | 184 | 125 | 218 | 159 | 235 | 154 | 119 | 60 | | | | | | |
| 18.00 | 191 | 130 | 226 | 165 | 241 | 158 | 123 | 62 | | | | | | |
| 19.00 | 198 | 135 | 234 | 171 | 247 | 162 | 127 | 64 | | | | | | |
| 20.00 | 205 | 140 | 242 | 177 | 254 | 166 | 131 | 66 | | | | | | |
| 21.20 | | | | | 261 | 171 | 136 | 68 | | | | | | |
| 22.40 | | | | | 268 | 176 | 141 | 70 | | | | | | |
| 23.60 | | | | | 275 | 180 | 146 | 72 | | | | | | |
| 25.00 | | | | | 282 | 185 | 151 | 75 | | | | | | |
| 26.50 | | | | | 290 | 190 | 156 | 78 | | | | | | |
| 28.00 | | | | | 298 | 195 | 162 | 81 | | | | | | |
| 30.00 | | | | | 307 | 201 | 168 | 84 | | | | | | |
| 31.50 | | | | | 316 | 207 | 174 | 87 | | | | | | |
| 33.50 | | | | | | | 180 | 90 | | | | | | |
| 35.50 | | | | | | | 186 | 93 | | | | | | |
| 37.50 | | | | | | | 193 | 96 | | | | | | |
| 40.00 | | | | | | | 200 | 100 | | | | | | |
| 42.50 | | | | | | | 207 | 104 | | | | | | |
| 45.00 | | | | | | | 214 | 108 | | | | | | |
| 47.50 | | | | | | | 221 | 112 | | | | | | |
| 50.00 | | | | | | | 228 | 116 | | | | | | |

Guhring delivers twist drills to Guhring standard up to total length of 1000 mm
Guhring no. 242, 243, 244

* Guhring std.

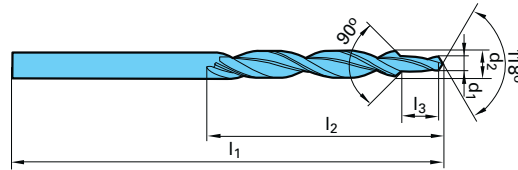
Morse taper twist drills

| dia. to (incl.) mm | DIN 345 | | | DIN 346 | | | DIN 341 | | | Bushing drills with oversize taper* | | | GV/VA-drills* for drilling difficult materials | | | DIN 1870 Extra length twist drills | | | | | |
|--------------------|--------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|-------------|-------------------------------------|--------------|-------------|--|--------------|-------------|------------------------------------|--------------|-------------|--------------|--------------|-------------|
| | total length | flute length | Morse taper | total length | flute length | Morse taper | total length | flute length | Morse taper | total length | flute length | Morse taper | total length | flute length | Morse taper | series 1 | | | series 2 | | |
| | | | | | | | | | | | | | | | | total length | flute length | Morse taper | total length | flute length | Morse taper |
| 2.65 | 111* | 30* | 1* | | | | | | | | | | | | | | | | | | |
| 3.00 | 114 | 33 | 1 | | | | | | | | | | | | | | | | | | |
| 3.35 | 117 | 36 | 1 | | | | | | | | | | | | | | | | | | |
| 3.75 | 120 | 39 | 1 | | | | | | | | | | | | | | | | | | |
| 4.25 | 124 | 43 | 1 | | | | 145* | 64* | 1* | | | | | | | | | | | | |
| 4.75 | 128 | 47 | 1 | | | | 150* | 69* | 1* | | | | | | | | | | | | |
| 5.30 | 133 | 52 | 1 | | | | 155 | 74 | 1 | | | | | | | | | | | | |
| 6.00 | 138 | 57 | 1 | | | | 161 | 80 | 1 | | | | | | | | | | | | |
| 6.70 | 144 | 63 | 1 | | | | 167 | 86 | 1 | | | | | | | | | | | | |
| 7.50 | 150 | 69 | 1 | | | | 174 | 93 | 1 | | | | | | | | | | | | |
| 8.50 | 156 | 75 | 1 | | | | 181 | 100 | 1 | | | | 130 | 49 | 1 | 265 | 165 | 1 | 330 | 210 | 1 |
| 9.50 | 162 | 81 | 1 | | | | 188 | 107 | 1 | | | | 134 | 53 | 1 | 275 | 175 | 1 | 345 | 220 | 1 |
| 10.60 | 168 | 87 | 1 | 185* | 87* | 2* | 197 | 116 | 1 | 214 | 116 | 2 | 138 | 57 | 1 | 285 | 185 | 1 | 360 | 235 | 1 |
| 11.80 | 175 | 94 | 1 | 192* | 94* | 2* | 206 | 125 | 1 | 223 | 125 | 2 | 142 | 61 | 1 | 300 | 195 | 1 | 375 | 250 | 1 |
| 13.20 | 182 | 101 | 1 | 199 | 101 | 2 | 215 | 134 | 1 | 232 | 134 | 2 | 147 | 66 | 1 | 310 | 205 | 1 | 395 | 260 | 1 |
| 14.00 | 189 | 108 | 1 | 206 | 108 | 2 | 223 | 142 | 1 | 240 | 142 | 2 | 168 | 70 | 2 | 325 | 220 | 1 | 410 | 275 | 1 |
| 15.00 | 212 | 114 | 2 | 235* | 114* | 3* | 245 | 147 | 2 | 268 | 147 | 3 | 172 | 74 | 2 | 340 | 220 | 2 | 425 | 275 | 2 |
| 16.00 | 218 | 120 | 2 | 241* | 120* | 3* | 251 | 153 | 2 | 274 | 153 | 3 | 176 | 78 | 2 | 355 | 230 | 2 | 445 | 295 | 2 |
| 17.00 | 223 | 125 | 2 | 246* | 125* | 3* | 257 | 159 | 2 | 280 | 159 | 3 | 179 | 81 | 2 | 355 | 230 | 2 | 445 | 295 | 2 |
| 18.00 | 228 | 130 | 2 | 251* | 130* | 3* | 263 | 165 | 2 | 286 | 165 | 3 | 183 | 85 | 2 | 370 | 245 | 2 | 465 | 310 | 2 |
| 19.00 | 233 | 135 | 2 | 256 | 135 | 3 | 269 | 171 | 2 | 292 | 171 | 3 | 186 | 88 | 2 | 370 | 245 | 2 | 465 | 310 | 2 |
| 20.00 | 238 | 140 | 2 | 261 | 140 | 3 | 275 | 177 | 2 | 298 | 177 | 3 | 212 | 91 | 3 | 385 | 260 | 2 | 490 | 325 | 2 |
| 21.20 | 243 | 145 | 2 | 266 | 145 | 3 | 282 | 184 | 2 | 305 | 184 | 3 | 216 | 95 | 3 | 385 | 260 | 3 | 490 | 325 | 3 |
| 22.40 | 248 | 150 | 2 | 271 | 150 | 3 | 289 | 191 | 2 | 312 | 191 | 3 | 219 | 98 | 3 | 405 | 270 | 3 | 515 | 345 | 3 |
| 23.02 | 253 | 155 | 2 | 276 | 155 | 3 | 296 | 198 | 2 | 319 | 198 | 3 | 222 | 101 | 3 | 405 | 270 | 3 | 515 | 345 | 3 |
| 23.60 | 276 | 155 | 3 | 304* | 155* | 4* | 319 | 198 | 3 | 347 | 198 | 4 | 222 | 101 | 3 | 425 | 270 | 3 | 535 | 345 | 3 |
| 25.00 | 281 | 160 | 3 | 309* | 160* | 4* | 327 | 206 | 3 | 355 | 206 | 4 | 225 | 104 | 3 | 440 | 290 | 3 | 555 | 365 | 3 |
| 26.50 | 286 | 165 | 3 | 314* | 165* | 4* | 335 | 214 | 3 | 363 | 214 | 4 | 256 | 107 | 4 | 440 | 290 | 3 | 555 | 365 | 3 |
| 28.00 | 291 | 170 | 3 | 319 | 170 | 4 | 343 | 222 | 3 | 371 | 222 | 4 | 259 | 110 | 4 | 460 | 305 | 3 | 580 | 385 | 3 |
| 30.00 | 296 | 175 | 3 | 324 | 175 | 4 | 351 | 230 | 3 | 379 | 230 | 4 | 263 | 114 | 4 | 460 | 305 | 3 | 580 | 385 | 3 |
| 31.50 | 301 | 180 | 3 | 329 | 180 | 4 | 360 | 239 | 3 | 388 | 239 | 4 | 266 | 117 | 4 | 480 | 320 | 3 | 610 | 410 | 3 |
| 31.75 | 306 | 185 | 3 | 334 | 185 | 4 | 369 | 248 | 3 | 397 | 248 | 4 | 269 | 120 | 4 | 480 | 320 | 3 | 610 | 410 | 3 |
| 33.50 | 334 | 185 | 4 | 372* | 185* | 5* | 397 | 248 | 4 | 435 | 248 | 5 | 269 | 120 | 4 | 505 | 320 | 4 | 635 | 410 | 4 |
| 35.50 | 339 | 190 | 4 | 377* | 190* | 5* | 406 | 257 | 4 | | | | 272 | 123 | 4 | 530 | 340 | 4 | 665 | 430 | 4 |
| 37.50 | 344 | 195 | 4 | 382* | 195* | 5* | 416 | 267 | 4 | | | | 276 | 127 | 4 | 530 | 340 | 4 | 665 | 430 | 4 |
| 40.00 | 349 | 200 | 4 | 387* | 200* | 5* | 426 | 277 | 4 | | | | 317 | 130 | 5 | 555 | 360 | 4 | 695 | 460 | 4 |
| 42.50 | 354 | 205 | 4 | 392 | 205 | 5 | 436 | 287 | 4 | | | | 320 | 133 | 5 | 555 | 360 | 4 | 695 | 460 | 4 |
| 45.00 | 359 | 210 | 4 | 397 | 210 | 5 | 447 | 298 | 4 | | | | 323 | 136 | 5 | 585 | 385 | 4 | 735 | 490 | 4 |
| 47.50 | 364 | 215 | 4 | 402 | 215 | 5 | 459 | 310 | 4 | | | | | | | 585 | 385 | 4 | 735 | 490 | 4 |
| 50.00 | 369 | 220 | 4 | 407 | 220 | 5 | 470 | 321 | 4 | | | | | | | 605 | 405 | 4 | 765 | 510 | 4 |
| 50.80 | 374 | 225 | 4 | 412 | 225 | 5 | 475* | 326* | 4* | | | | | | | | | | | | |
| 53.00 | 412 | 225 | 5 | 479* | 225* | 6* | 513* | 326* | 5* | | | | | | | | | | | | |
| 56.00 | 417 | 230 | 5 | 484* | 230* | 6* | 518* | 331* | 5* | | | | | | | | | | | | |
| 60.00 | 422 | 235 | 5 | 489* | 235* | 6* | 523* | 336* | 5* | | | | | | | | | | | | |
| 63.00 | 427 | 240 | 5 | 494* | 240* | 6* | | | | | | | | | | | | | | | |
| 67.00 | 432 | 245 | 5 | 499 | 245 | 6 | | | | | | | | | | | | | | | |
| 71.00 | 437 | 250 | 5 | 504 | 250 | 6 | | | | | | | | | | | | | | | |
| 75.00 | 442 | 255 | 5 | 509 | 255 | 6 | | | | | | | | | | | | | | | |
| 76.50 | 447 | 260 | 5 | 514 | 206 | 6 | | | | | | | | | | | | | | | |
| 80.00 | 514 | 260 | 6 | | | | | | | | | | | | | | | | | | |
| 85.00 | 519 | 265 | 6 | | | | | | | | | | | | | | | | | | |
| 90.00 | 524 | 270 | 6 | | | | | | | | | | | | | | | | | | |
| 95.00 | 529 | 275 | 6 | | | | | | | | | | | | | | | | | | |
| 100.00 | 534 | 280 | 6 | | | | | | | | | | | | | | | | | | |
| 106.00 | 539* | 285* | 6* | | | | | | | | | | | | | | | | | | |

Guhring delivers twist drills to Guhring standard up to total length of 1000 mm Guhring no. 293, 298, 299, 563, 564, 565, 566

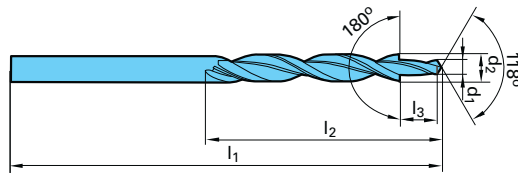
* Guhring std.

Straight shank subland drills, 90° step angle



| body Ø d2 h8 mm | step Ø d1 h9 mm | overall length l1 mm | step length l2 mm | step length l3 mm | for thread | range of application |
|---|-----------------------|----------------------------|-------------------------|-------------------------|---------------|---|
| | | | HSS DIN 8378/ | Carbide | Guhring std. | |
| 3.4 | 2.5 | 70 | 39 | 8.8 | M 3 | For tapping size holes to DIN 336 and countersinks in accordance with clearance holes to DIN-ISO 273 (old) and DIN EN 20273 »medial tolerance«. |
| 4.5 | 3.3 | 80 | 47 | 11.4 | M 4 | |
| 5.5 | 4.2 | 93 | 57 | 13.6 | M 5 | |
| 6.6 | 5.0 | 101 | 63 | 16.5 | M 6 | |
| 9.0 | 6.8 | 125 | 81 | 21.0 | M 8 | |
| 11.0 | 8.5 | 142 | 94 | 25.5 | M10 | |
| 13.5 | 10.2 | 160 | 108 | 30.0 | M12 | |
| DIN 8374 for countersinks, fine tolerance | | | | | | |
| 6.0 | 3.2 | 93 | 57 | 9.0 | M 3 | For clearance holes to DIN-ISO 273 (old). DIN EN 20273 »fine tolerance« and screwhead countersinks form A and B to DIN 74 part 1 (old) »fine tolerance« and screwhead countersinks to DIN 74 form F. For screws to DIN 963 (old) and DIN 964 (old). |
| 8.0 | 4.3 | 117 | 75 | 11.0 | M 4 | |
| 10.0 | 5.3 | 133 | 87 | 13.0 | M 5 | |
| 11.5 | 6.4 | 142 | 94 | 15.0 | M 6 | |
| 15.0 | 8.4 | 169 | 114 | 19.0 | M 8 | |
| 19.0 | 10.5 | 198 | 135 | 23.0 | M10 | |
| Guhring std. for countersinks, medial tolerance | | | | | | |
| 6.6 | 3.4 | 101 | 63 | 9.0 | M 3 | For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old). |
| 9.0 | 4.5 | 125 | 81 | 11.0 | M 4 | |
| 11.0 | 5.5 | 142 | 94 | 13.0 | M 5 | |
| 13.0 | 6.6 | 151 | 101 | 15.0 | M 6 | |
| 17.2 | 9.0 | 191 | 130 | 19.0 | M 8 | |
| DIN 8374 for countersinks, medial tolerance | | | | | | |
| 7.5 | 3.4 | 109 | 69 | 9.0 | M 3 | For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old). |
| 9.7 | 4.5 | 133 | 87 | 11.0 | M 4 | |
| 12.0 | 5.5 | 151 | 101 | 13.0 | M 5 | |
| 14.5 | 6.6 | 169 | 114 | 15.0 | M 6 | |
| 19.9 | 9.0 | 198 | 135 | 19.0 | M 8 | |

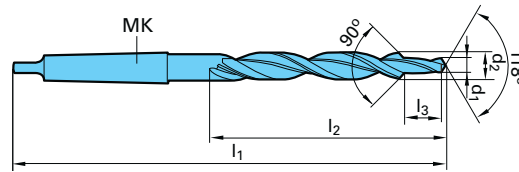
Straight shank subland drills, 180° step angle



| body Ø d2 h8 mm | step Ø d1 h9 mm | overall length l1 mm | flute length l2 mm | step length l3 mm | for thread | range of application |
|--|-----------------------|----------------------------|--------------------------|-------------------------|---------------|---|
| | | | HSS DIN 8376/ | Carbide | Guhring std. | |
| 6.0** | 3.4 | 93** | 57** | 9.0 | M 3 | For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 974-1 and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »medial tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984. |
| 6.5 | 3.4 | 101 | 63 | 9.0 | M 3 | |
| 8.0 | 4.5 | 117 | 75 | 11.0 | M 4 | |
| 10.0 | 5.5 | 133 | 87 | 13.0 | M 5 | |
| 11.0 | 6.6 | 142 | 94 | 15.0 | M 6 | |
| 15.0 | 9.0 | 169 | 114 | 19.0 | M 8 | |
| 18.0 | 11.0 | 191 | 130 | 23.0 | M10 | |
| Guhring std. | | | | | | |
| 6.0 | 3.2 | 93 | 57 | 9.0 | M 3 | For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »fine tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984. |
| 8.0 | 4.3 | 117 | 75 | 11.0 | M 4 | |
| Guhring std. for countersinks, fine tolerance (old*) | | | | | | |
| 5.9 | 3.2 | 93 | 57 | 11.0 | M 3 | For screws to DIN 84 (old), DIN 912 (old) and DIN 6912. For old type screwhead countersinks form H, J and K to DIN 75 part 2: »fine tolerance«. |
| 7.4 | 4.3 | 109 | 69 | 13.0 | M 4 | |
| 9.4 | 5.3 | 125 | 81 | 16.0 | M 5 | |
| 10.4 | 6.4 | 133 | 87 | 19.0 | M 6 | |
| 13.5 | 8.4 | 160 | 108 | 22.0 | M 8 | |
| 16.5 | 10.5 | 184 | 125 | 25.0 | M10 | |
| Guhring std. for countersinks, medial tolerance (old*) | | | | | | |
| 8.0 | 4.8 | 117 | 75 | 13.0 | M 3 | For screws to DIN 84 (old), DIN 912 (old) and DIN 6912. For old type screwhead countersinks form H, J and K to DIN 75 part 2: »medial tolerance«. |
| 10.0 | 5.8 | 133 | 87 | 16.0 | M 4 | |
| 11.0 | 7.0 | 142 | 94 | 19.0 | M 5 | |
| 14.5 | 9.5 | 169 | 114 | 22.0 | M 6 | |
| 17.5 | 11.5 | 191 | 130 | 25.0 | M 8 | |

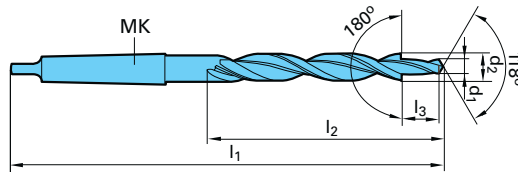
* DIN 75, part 2; ** Guhring std

Morse taper subland drills, 90° step angle



| body Ø d2 h8 mm | step Ø d1 h9 mm | overall length l1 mm | flute length l2 mm | Morse taper MK | step length l3 mm | for thread | range of application |
|-----------------------|-----------------------|----------------------------|--------------------------|----------------------|-------------------------|---------------|--|
| Guhring std. | | | | | | | |
| 11.0 | 5.5 | 175 | 94 | 1 | 13.0 | M 5 | For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 74 form F and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old). |
| 13.0 | 6.6 | 182 | 101 | 1 | 15.0 | M 6 | |
| 17.2 | 9.0 | 228 | 130 | 2 | 19.0 | M 8 | |
| 21.5 | 11.0 | 248 | 150 | 2 | 23.0 | M10 | |
| 26.0 | 14.0 | 286 | 165 | 3 | 27.0 | M12 | |
| 29.0 | 16.0 | 296 | 175 | 3 | 31.0 | M14 | |
| DIN 8375 | | | | | | | |
| 12.0 | 5.5 | 182 | 101 | 1 | 13.0 | M 5 | For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 74 form F and screwhead countersinks form A and B to DIN 74 part 1 (old) »medial tolerance«. For screws to DIN 963 (old) and DIN 964 (old). |
| 14.5 | 6.6 | --- | 108 | 1 | 15.0 | M 6 | |
| 19.0 | 9.0 | 253 | 135 | 2 | 19.0 | M 8 | |
| 23.0 | 11.0 | 248 | 155 | 2 | 23.0 | M10 | |
| Guhring std. | | | | | | | |
| 11.5 | 6.4 | 175 | 94 | 1 | 15.0 | M 6 | For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form A and B to DIN 74 part 1 (old) »fine tolerance«. For screws to DIN 963 (old) and DIN 964 (old). |
| 15.0 | 8.4 | 212 | 114 | 2 | 19.0 | M 8 | |
| 19.0 | 10.5 | 233 | 135 | 2 | 23.0 | M10 | |
| 23.0 | 13.0 | 253 | 155 | 2 | 27.0 | M12 | |
| 26.0 | 15.0 | 286 | 165 | 3 | 31.0 | M14 | |
| 30.0 | 17.0 | 296 | 175 | 3 | 35.0 | M16 | |
| DIN 8379 | | | | | | | |
| 9.0 | 6.8 | 162 | 81 | 1 | 21.0 | M 8 | For tapping size holes to DIN 336, DIN EN 20273 »medial tolerance« and countersinks in accordance with clearance holes to DIN-ISO 273 (old). |
| 11.0 | 8.5 | 175 | 94 | 1 | 25.5 | M10 | |
| 13.5 | 10.2 | 189 | 108 | 1 | 30.0 | M12 | |
| 15.5 | 12.0 | 218 | 120 | 2 | 34.5 | M14 | |
| 17.5 | 14.0 | 228 | 130 | 2 | 38.5 | M16 | |
| 20.0 | 15.5 | 238 | 140 | 2 | 43.5 | M18 | |
| 22.0 | 17.5 | 248 | 150 | 2 | 47.5 | M20 | |

Morse taper subland drills, 180° step angle



| body Ø d2 h8 mm | step Ø d1 h9 mm | overall length l1 mm | flute length l2 mm | Morse taper MK | step length l3 mm | for thread | range of application | | | | | |
|---|-----------------------|----------------------------|--------------------------|-------------------|-------------------------|---------------|---|----|--------|-------|------------|--------------------------------------|
| HSS DIN 8377/ Carbide Guhring std. | | | | | | | | | | | | |
| 10,0 | 5,5 | 168 | 87 | 1 | 13,0 | M 5 | For clearance holes to DIN-ISO 273 (old), DIN EN 20273 »medial tolerance«, screwhead countersinks to DIN 974-1 and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »medial tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984. | | | | | |
| 11,0 | 6,6 | 175 | 94 | 1 | 15,0 | M 6 | | | | | | |
| 15,0 | 9,0 | 212 | 114 | 2 | 19,0 | M 8 | | | | | | |
| 18,0 | 11,0 | 228 | 130 | 2 | 23,0 | M10 | | | | | | |
| 20,0 | 13,5 | 238 | 140 | 2 | 27,0 | M12 | | | | | | |
| 24,0 | 15,5 | 281 | 160 | 3 | 31,0 | M14 | | | | | | |
| 26,0 | 17,5 | 286 | 165 | 3 | 35,0 | M16 | | | | | | |
| 30,0 | 20,0 | 296 | 175 | 3 | 39,0 | M18 | | | | | | |
| 33,0 | 22,0 | 334 | 185 | 4 | 43,0 | M20 | | | | | | |
| Guhring std. | | | | | | | | | | | | |
| 10,0 | 5,3 | 168 | 87 | 1 | 13,0 | M 5 | For clearance holes to DIN-ISO 273 (old) and screwhead countersinks form H, J and K to DIN 74 part 2 (old): »fine tolerance«. For screws to DIN 84 (old), 912 (old), 6912, 7513 and DIN 7984. | | | | | |
| 11,0 | 6,4 | 175 | 94 | 1 | 15,0 | M 6 | | | | | | |
| 15,0 | 8,4 | 212 | 114 | 2 | 19,0 | M 8 | | | | | | |
| 18,0 | 10,5 | 228 | 130 | 2 | 23,0 | M10 | | | | | | |
| 20,0 | 13,0 | 238 | 140 | 2 | 27,0 | M12 | | | | | | |
| 24,0 | 15,0 | 281 | 160 | 3 | 31,0 | M14 | | | | | | |
| 26,0 | 17,0 | 286 | 165 | 3 | 35,0 | M16 | | | | | | |
| Werksnorm für Senkungen, Ausführung fein (alt*) | | | | | | | | | | | | |
| 9,4 | 5,3 | 162 | 81 | 1 | 16,0 | M 5 | For screws DIN 84 (old), DIN 912 (old) and DIN 6912. For old countersinks form H, J and K to DIN 75 part 2: »fine tolerance«. | | | | | |
| 10,4 | 6,4 | 168 | 87 | 1 | 19,0 | M 6 | | | | | | |
| 13,5 | 8,4 | 189 | 108 | 1 | 22,0 | M 8 | | | | | | |
| 16,5 | 10,5 | 223 | 125 | 2 | 25,0 | M10 | | | | | | |
| 19,0 | 13,0 | 233 | 135 | 2 | 28,0 | M12 | | | | | | |
| 23,0 | 15,0 | 253 | 155 | 2 | 30,0 | M14 | | | | | | |
| 25,0 | 17,0 | 281 | 160 | 3 | 33,0 | M16 | | | | | | |
| 28,0 | 19,0 | 291 | 170 | 3 | 36,0 | M18 | | | | | | |
| 31,0 | 21,0 | 301 | 180 | 3 | 39,0 | M 20 | | | | | | |
| Werksnorm für Senkungen, Ausführung mittel (alt*) | | | | | | | | | | | | |
| 10,0 | 5,8 | 168 | 87 | 1 | 16,0 | M 5 | For screws DIN 84 (old), DIN 6912. For old countersinks form H, J and K to DIN 75 part 2: »medial tolerance«. | | | | | |
| 11,0 | 7,0 | 175 | 94 | 1 | 19,0 | M 6 | | | | | | |
| 14,5 | 9,5 | 212 | 114 | 2 | 22,0 | M 8 | | | | | | |
| 17,5 | 11,5 | 228 | 130 | 2 | 25,0 | M10 | | | | | | |
| 20,0 | 14,0 | 238 | 140 | 2 | 28,0 | M12 | | | | | | |
| 24,0 | 16,0 | 281 | 160 | 3 | 30,0 | M14 | | | | | | |
| 26,0 | 18,0 | 286 | 165 | 3 | 33,0 | M16 | | | | | | |
| 29,0 | 20,0 | 296 | 175 | 3 | 36,0 | M18 | | | | | | |
| 33,0 | 23,0 | 334 | 185 | 4 | 39,0 | M20 | | | | | | |
| inches | mm | inches | mm | inches | mm | inches | mm | MK | inches | mm | for thread | range of application |
| British Standard | | | | | | | | | | | | |
| 19/32 | 15.08 | 25/64 | 9.92 | 8 5/8 | 219 | 4 3/4 | 121 | 2 | 3/4 | 19.05 | 3/8 inch | For British Standard caphead screws. |
| 21/32 | 16.67 | 29/64 | 11.51 | 8 3/4 | 222 | 4 7/8 | 124 | 2 | 7/8 | 22.22 | 7/16 inch | |
| 25/32 | 19.84 | 33/64 | 13.10 | 9 3/8 | 238 | 5 1/2 | 140 | 2 | 1 | 25.40 | 1/2 inch | |

* DIN 75, part 2

Straight shank core drills

| diameter up to incl. mm | DIN 344 | | | | |
|-------------------------|-------------------|-----------------|-------------------------|-------------------|-----------------|
| | overall length mm | flute length mm | diameter up to incl. mm | overall length mm | flute length mm |
| 4.25 | 96* | 64* | 11.70 | 173 | 125 |
| 4.75 | 102* | 69* | 13.20 | 184 | 134 |
| 5.30 | 108 | 74 | 14.00 | 194 | 142 |
| 6.00 | 116 | 80 | 15.00 | 202 | 147 |
| 6.70 | 124 | 86 | 16.00 | 211 | 153 |
| 7.50 | 133 | 93 | 17.00 | 218 | 159 |
| 8.50 | 142 | 100 | 18.00 | 226 | 165 |
| 9.50 | 151 | 107 | 19.00 | 234 | 171 |
| 10.60 | 162 | 116 | 20.00 | 242 | 177 |

Shell-core drills

| DIN 222 | | |
|-----------------------|-------------------|-------------------|
| nom. Ø up to incl. mm | overall length mm | nom. Ø of hole mm |
| 35.5 | 45 | 13 |
| 45.0 | 50 | 16 |
| 53.0 | 56 | 19 |
| 63.0 | 63 | 22 |
| 75.0 | 71 | 27 |
| 90.0 | 80 | 32 |
| 101.6 | 90 | 40 |

Taper shank core drills

| diameter up to incl. mm | DIN 343 | | | DIN 1864 | | |
|-------------------------|-------------------|-----------------|-------------|-------------------|-----------------|-------------|
| | overall length mm | flute length mm | Morse taper | overall length mm | flute length mm | Morse taper |
| 7.50 | 150* | 69* | 1* | 174* | 93* | 1* |
| 8.50 | 156* | 75* | 1* | 181* | 100* | 1* |
| 9.50 | 162 | 81 | 1 | 188 | 107 | 1 |
| 10.60 | 168 | 87 | 1 | 197 | 116 | 1 |
| 11.70 | 175 | 94 | 1 | 206 | 125 | 1 |
| 13.20 | 182 | 101 | 1 | 215 | 134 | 1 |
| 14.00 | 189 | 108 | 1 | 223 | 142 | 1 |
| 15.00 | 212 | 114 | 2 | 245 | 147 | 2 |
| 16.00 | 218 | 120 | 2 | 251 | 153 | 2 |
| 17.00 | 223 | 125 | 2 | 257 | 159 | 2 |
| 18.00 | 228 | 130 | 2 | 263 | 165 | 2 |
| 19.00 | 233 | 135 | 2 | 269 | 171 | 2 |
| 20.00 | 238 | 140 | 2 | 275 | 177 | 2 |
| 21.20 | 243 | 145 | 2 | 282 | 184 | 2 |
| 22.40 | 248 | 150 | 2 | 289 | 191 | 2 |
| 23.60 | 253 | 155 | 2 | 296 | 198 | 2 |
| 25.00 | 281 | 160 | 3 | 327 | 206 | 3 |
| 26.50 | 286 | 165 | 3 | 335 | 214 | 3 |
| 28.00 | 291 | 170 | 3 | 343 | 222 | 3 |
| 30.00 | 296 | 175 | 3 | 351 | 230 | 3 |
| 31.50 | 301 | 180 | 3 | 360 | 239 | 3 |
| 33.50 | 334 | 185 | 4 | | | |
| 35.50 | 339 | 190 | 4 | | | |
| 37.50 | 344 | 195 | 4 | | | |
| 40.00 | 349 | 200 | 4 | | | |
| 42.50 | 354 | 205 | 4 | | | |
| 45.00 | 359 | 210 | 4 | | | |
| 47.50 | 364 | 215 | 4 | | | |
| 50.00 | 369 | 220 | 4 | | | |

*Guhring std.

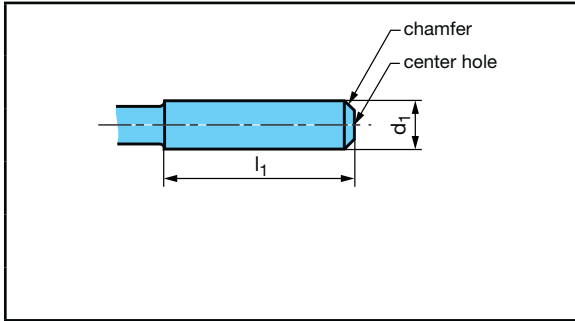
Micro-precision drills (total length 25 mm)

| DIN 1899 | | | | | |
|-------------------------|------------|-----------------|-------------------------|------------|-----------------|
| diameter up to incl. mm | shank Ø mm | flute length mm | diameter up to incl. mm | shank Ø mm | flute length mm |
| from 0.1 . . . 0.12 | 1.0 | 0.5 | 0.67 | 1.0 | 4.2 |
| 0.15 | 1.0 | 0.8 | 0.75 | 1.0 | 4.8 |
| 0.19 | 1.0 | 1.1 | 0.79 | 1.0 | 5.3 |
| 0.24 | 1.0 | 1.5 | 0.85 | 1.5 | 5.3 |
| 0.30 | 1.0 | 1.9 | 0.95 | 1.5 | 6.0 |
| 0.38 | 1.0 | 2.4 | 1.06 | 1.5 | 6.8 |
| 0.48 | 1.0 | 3.0 | 1.18 | 1.5 | 7.6 |
| 0.53 | 1.0 | 3.4 | 1.32 | 1.5 | 8.5 |
| 0.60 | 1.0 | 3.9 | 1.45 | 1.5 | 9.5 |

High speed steel straight shanks, DIN 1835-1 (extract)

Form A, plain

Dimensions in mm



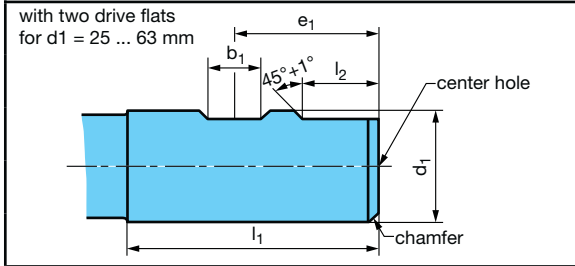
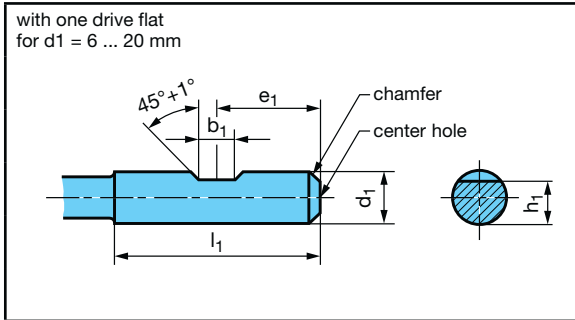
| d_1 | l_1 |
|-------|---------------------------------------|
| h8 | $\begin{matrix} +2 \\ 0 \end{matrix}$ |
| 3 | 28 |
| 4 | 28 |
| 5 | 28 |
| 6 | 36 |
| 8 | 36 |
| 10 | 40 |

| d_1 | l_1 |
|-------|---------------------------------------|
| h8 | $\begin{matrix} +2 \\ 0 \end{matrix}$ |
| 12 | 45 |
| 16 | 48 |
| 20 | 50 |
| 25 | 56 |
| 32 | 60 |
| 40 | 70 |

| d_1 | l_1 |
|-------|---------------------------------------|
| h8 | $\begin{matrix} +2 \\ 0 \end{matrix}$ |
| 50 | 80 |
| 63 | 90 |

Form B, with drive flat

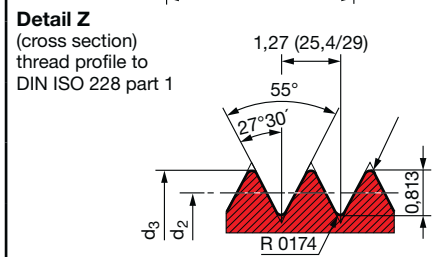
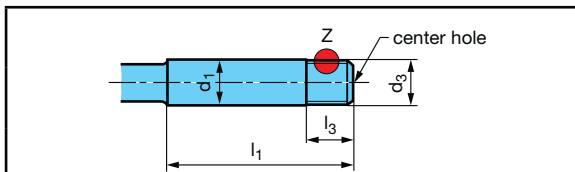
Dimensions in mm



| d_1 | b_1 | e_1 | h_1 | l_1 | l_2 | center hole form R DIN 332 sect. 1 |
|-------|--|---------------------------------------|-------|---------------------------------------|---------------------------------------|---------------------------------------|
| h6 | $\begin{matrix} +0,05 \\ 0 \end{matrix}$ | $\begin{matrix} 0 \\ -1 \end{matrix}$ | h13 | $\begin{matrix} +2 \\ 0 \end{matrix}$ | $\begin{matrix} +1 \\ 0 \end{matrix}$ | |
| 6 | 4.2 | 18 | 4.8 | 36 | - | 1.6x2.5 |
| 8 | 5.5 | 18 | 6.6 | 36 | - | 1.6x3.35 |
| 10 | 7 | 20 | 8.4 | 40 | - | 1.6x3.35 |
| 12 | 8 | 22.5 | 10.4 | 45 | - | 1.6x3.35 |
| 16 | 10 | 24 | 14.2 | 48 | - | 2.0x4.25 |
| 20 | 11 | 25 | 18.2 | 50 | - | 2.5x5.3 |
| 25 | 12 | 32 | 23 | 56 | 17 | 2.5x5.3 |
| 32 | 14 | 36 | 30 | 60 | 19 | 3.15x6.7 |
| 40 | 14 | 40 | 38 | 70 | 19 | 3.15x6.7 |
| 50 | 18 | 45 | 47.8 | 80 | 23 | 3.15x6.7 |
| 63 | 18 | 50 | 60.8 | 90 | 23 | 3.15x6.7 |

Form D, screwed shank

Dimensions in mm

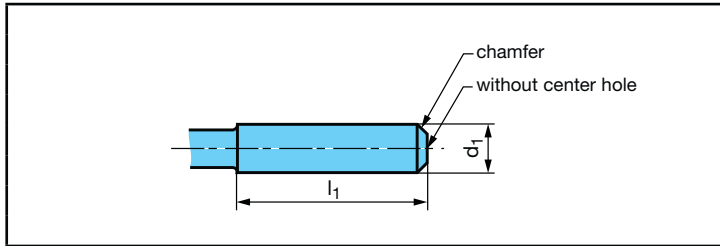


| d_1 | d_3 | tol. zone | d_2 | tol. zone | l_1 | l_3 | center hole form R DIN 332 sect. 1 |
|-------|-------|--|--------|--|---------------------------------------|---------------------------------------|---------------------------------------|
| h8 | | | | | $\begin{matrix} +2 \\ 0 \end{matrix}$ | $\begin{matrix} +2 \\ 0 \end{matrix}$ | |
| 6 | 5.9 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 5.087 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 36 | 10 | 1.6 x 2.5 |
| 10 | 9.9 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 9.087 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 40 | 10 | 1.6 x 3.35 |
| 12 | 11.9 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 11.087 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 45 | 10 | 1.6 x 3.35 |
| 16 | 15.9 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 15.087 | $\begin{matrix} 0 \\ -0.1 \end{matrix}$ | 48 | 10 | 2.0 x 4.25 |
| 20 | 19.9 | $\begin{matrix} 0 \\ -0.15 \end{matrix}$ | 19.087 | $\begin{matrix} 0 \\ -0.15 \end{matrix}$ | 50 | 15 | 2.5 x 5.3 |
| 25 | 24.9 | $\begin{matrix} 0 \\ -0.15 \end{matrix}$ | 24.087 | $\begin{matrix} 0 \\ -0.15 \end{matrix}$ | 56 | 15 | 2.5 x 5.3 |
| 32 | 31.9 | $\begin{matrix} 0 \\ -0.15 \end{matrix}$ | 31.087 | $\begin{matrix} 0 \\ -0.15 \end{matrix}$ | 60 | 15 | 3.15 x 6.7 |

Carbide straight shanks DIN 6535 for twist drills and end mills

Form HA, plain

Dimensions in mm

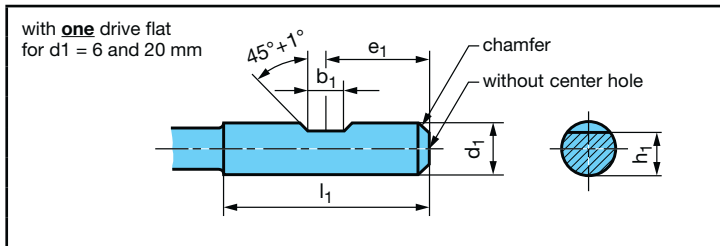


| d ₁ | l ₁ |
|----------------|----------------|
| h6 | +2 0 |
| 2 | 28 |
| 3 | 28 |
| 4 | 28 |
| 5 | 28 |
| 6 | 36 |
| 8 | 36 |
| 10 | 40 |
| 12 | 45 |

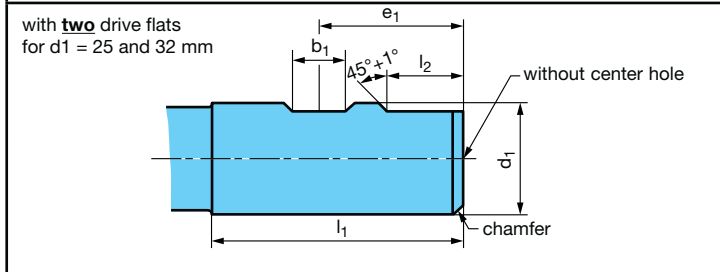
| d ₁ | l ₁ |
|----------------|----------------|
| h6 | +2 0 |
| 14 | 45 |
| 16 | 48 |
| 18 | 48 |
| 20 | 50 |
| 25 | 56 |
| 32 | 60 |

Form HB, with drive flat

Dimensions in mm



| d ₁ | b ₁ | e ₁ | h ₁ | l ₁ | l ₂ |
|----------------|----------------|----------------|----------------|----------------|----------------|
| h6 | +0,05 0 | 0 -1 | h11 | +2 0 | +1 0 |
| 6 | 4.2 | 18 | 5.1 | 36 | - |
| 8 | 5.5 | 18 | 6.9 | 36 | - |
| 10 | 7 | 20 | 8.5 | 40 | - |
| 12 | 8 | 22.5 | 10.4 | 45 | - |
| 14 | 8 | 22.5 | 12.7 | 45 | - |
| 16 | 10 | 24 | 14.2 | 48 | - |
| 18 | 10 | 24 | 16.2 | 48 | - |
| 20 | 11 | 25 | 18.2 | 50 | - |

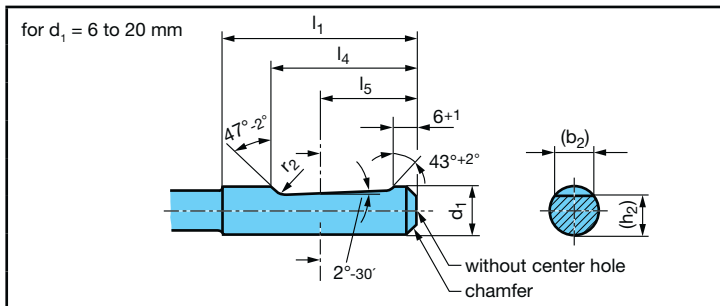


| | | | | | |
|----|----|----|----|----|----|
| 25 | 12 | 32 | 23 | 56 | 17 |
| 32 | 14 | 36 | 30 | 60 | 19 |

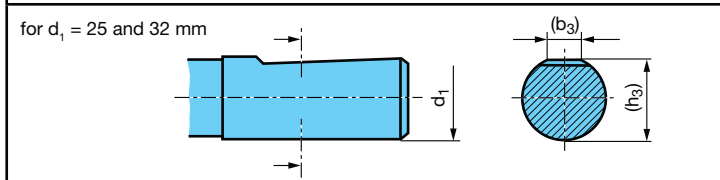
Form HE, with whistle notch flat without coolant ducts*

Dimensions in mm

* Design: Straight shanks to DIN 6335 are available with or without oil feed holes. Applications for various tools, dimensions and position of oil feed holes are fully described within the standard range sections.



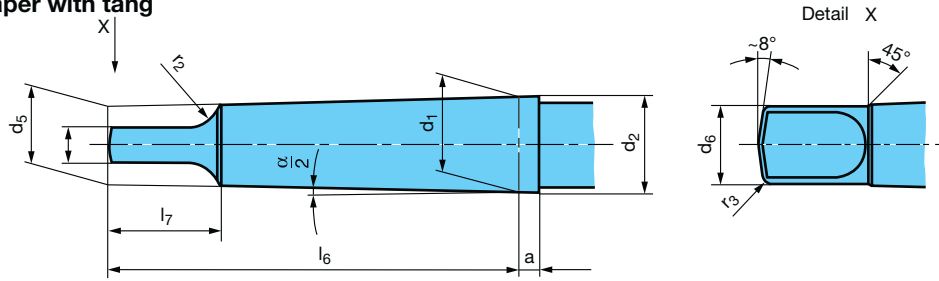
| d ₁ | (b ₂) | (b ₃) | h ₂ | (h ₃) | l ₁ | l ₄ | l ₅ | r ₂ |
|----------------|-------------------|-------------------|----------------|-------------------|----------------|----------------|----------------|----------------|
| h6 | ≈ | | h11 | | +2 0 | 0 -1 | Dim. nom. | min. |
| 6 | 4,3 | - | 5,1 | - | 36 | 25 | 18 | 1,2 |
| 8 | 5,5 | - | 6,9 | - | 36 | 25 | 18 | 1,2 |
| 10 | 7,1 | - | 8,5 | - | 40 | 28 | 20 | 1,2 |
| 12 | 8,2 | - | 10,4 | - | 45 | 33 | 22,5 | 1,2 |
| 14 | 8,1 | - | 12,7 | - | 45 | 33 | 22,5 | 1,2 |
| 16 | 10,1 | - | 14,2 | - | 48 | 36 | 24 | 1,6 |
| 18 | 10,8 | - | 16,2 | - | 48 | 36 | 24 | 1,6 |
| 20 | 11,4 | - | 18,2 | - | 50 | 38 | 25 | 1,6 |



| | | | | | | | | |
|----|------|-----|------|------|----|----|----|-----|
| 25 | 13,6 | 9,3 | 23,0 | 24,1 | 56 | 44 | 32 | 1,6 |
| 32 | 15,5 | 9,9 | 30,0 | 31,2 | 60 | 48 | 35 | 1,6 |

Morse taper shanks DIN 228 part 1 (extract)

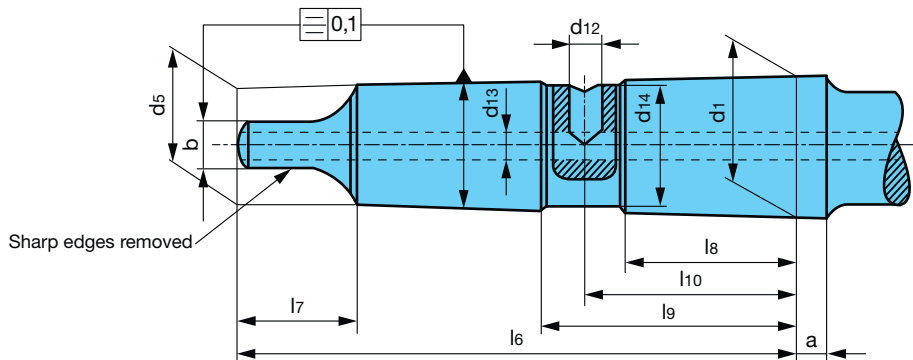
Form B, Morse taper with tang



Dimensions in mm

| Shank to DIN 228 form B Size | a | Limiting dimensions | b | d ₁ | d ₅ ≈ | d ₆ ≈ | d ₆ max. | l ₆ -1 | l ₇ max. | r ₂ max. | r ₃ ≈ | $\frac{\alpha}{2}$ |
|------------------------------|-----|---------------------|------|----------------|---------------------|---------------------|------------------------|----------------------|------------------------|------------------------|---------------------|--------------------|
| MK 1 | 3.5 | +1.4 0 | 5.2 | 12.065 | 12.2 | 9.0 | 8.7 | 62 | 13.5 | 5 | 1.2 | 1°25'43" |
| MK 2 | 5.0 | +1.4 0 | 6.3 | 17.780 | 18.0 | 14.0 | 13.5 | 75 | 16 | 6 | 1.6 | 1°25'50" |
| MK 3 | 5.0 | +1.7 0 | 7.9 | 23.825 | 24.1 | 19.1 | 18.5 | 94 | 20 | 7 | 2 | 1°26'16" |
| MK 4 | 6.5 | +1.9 0 | 11.9 | 31.267 | 31.6 | 25.2 | 24.5 | 117.5 | 24 | 8 | 2.5 | 1°29'15" |
| MK 5 | 6.5 | +1.9 0 | 15.9 | 44.399 | 44.7 | 36.5 | 35.7 | 149.5 | 29 | 10 | 3 | 1°30'26" |

Form BK, Morse taper with tang and coolant lubricant delivery



Dimensions in mm

| Shank to DIN 228 form BK Size | a | Limiting dimensions | b | d ₁ | d ₅ ≈ | d ₁₂ | d ₁₃ | d ₁₄ 0 -0.01 | l ₆ 0 -1 | l ₇ max. | l ₈ | l ₉ | l ₁₀ |
|-------------------------------|-----|---------------------|------|----------------|---------------------|-----------------|-----------------|-------------------------------|---------------------------|------------------------|----------------|----------------|-----------------|
| MK 1 | 3.5 | +1.4 0 | 5.2 | 12.065 | 9.0 | - | - | - | 62 | 13.5 | - | - | - |
| MK 2 | 5 | +1.4 0 | 6.3 | 17.780 | 14.0 | 4.2 | 4.2 | 15.0 | 75 | 16 | 20 | 34 | 27 |
| MK 3 | 5 | +1.7 0 | 7.9 | 23.825 | 19.1 | 5.0 | 5.0 | 21.0 | 94 | 20 | 29 | 43 | 36 |
| MK 4 | 6.5 | +1.9 0 | 11.9 | 31.267 | 25.2 | 6.8 | 6.8 | 28.0 | 117.5 | 24 | 39 | 55 | 47 |
| MK 5 | 6.5 | +1.9 0 | 15.9 | 44.399 | 36.5 | 8.5 | 8.5 | 40.0 | 149.5 | 29 | 51 | 69 | 60 |

Tolerances core drills

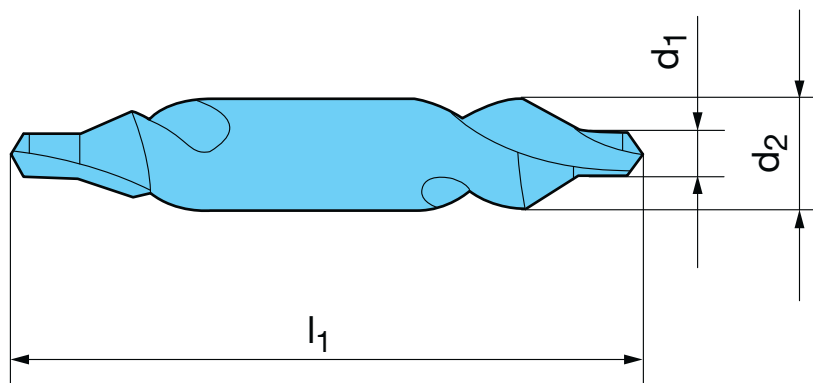
| DIN 333 | |
|---------------|----------------------------|
| Ø-range d1 mm | tolerance zones from d1 mm |
| 0,50 – 2,50 | 0 +0,14 |
| 3,15 – 5,00 | 0 +0,18 |
| 6,30 – 10,00 | 0 +0,22 |
| 12,50 | 0 +0,27 |

| for Guhring nos. 285/286 | |
|--------------------------|----------------------------|
| Ø-range d1 mm | tolerance zones from d1 mm |
| 1,00 – 1,25 | 0 +0,10 |
| 1,60 – 3,15 | 0 +0,15 |
| 3,15 – 10,00 | 0 +0,20 |

| to B.S. 328 | |
|---------------|----------------------------|
| Ø-range d1 mm | tolerance zones from d1 mm |
| 1,19 – 1,59 | 0 ±0,05 |
| 2,38 – 3,17 | 0 ±0,07 |
| 4,76 | 0 ±0,07 |
| 6,35 – 7,94 | 0 ±0,12 |

| to B.S. 328 | |
|---------------|----------------------------|
| Ø-range d1 mm | tolerance zones from d1 mm |
| 3,17 – 4,76 | -0,020 |
| 6,35 | -0,025 |
| 7,94 – 11,11 | -0,050 |
| 15,87 – 19,05 | -0,050 |

| to ASA | |
|---------------|----------------------------|
| Ø-range d1 mm | tolerance zones from d1 mm |
| all | 0 + 0,07 mm |



UNC / UNF Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 0-80 | 0.0468 | 3/64 | | 1.189 | 81 |
| 0-80 | 0.0472 | | | 1.199 | 79 |
| 0-80 | 0.0473 | | | 1.201 | 78 |
| 0-80 | 0.0477 | | | 1.212 | 76 |
| 0-80 | 0.0478 | | | 1.214 | 75 |
| 0-80 | 0.0480 | | | 1.219 | 74 |
| 0-80 | 0.0483 | | | 1.227 | 72 |
| 0-80 | 0.0485 | | | 1.232 | 71 |
| 0-80 | 0.0488 | | | 1.240 | 69 |
| 0-80 | 0.0490 | | | 1.245 | 68 |
| 0-80 | 0.0493 | | | 1.252 | 66 |
| 0-80 | 0.0494 | | | 1.255 | 65 |
| 0-80 | 0.0499 | | | 1.267 | 62 |
| 0-80 | 0.0503 | | | 1.278 | 60 |
| 0-80 | 0.0504 | | | 1.280 | 59 |
| 1-64 | 0.0566 | | | 1.438 | 81 |
| 1-64 | 0.0570 | | | 1.448 | 79 |
| 1-64 | 0.0572 | | | 1.453 | 78 |
| 1-64 | 0.0576 | | | 1.463 | 76 |
| 1-64 | 0.0578 | | | 1.468 | 75 |
| 1-64 | 0.0580 | | | 1.473 | 74 |
| 1-64 | 0.0584 | | | 1.483 | 72 |
| 1-64 | 0.0586 | | | 1.488 | 71 |
| 1-64 | 0.0590 | | | 1.499 | 69 |
| 1-64 | 0.0592 | | | 1.504 | 68 |
| 1-64 | 0.0596 | | | 1.514 | 66 |
| 1-64 | 0.0598 | | | 1.519 | 65 |
| 1-64 | 0.0604 | | | 1.534 | 62 |
| 1-64 | 0.0608 | | | 1.544 | 60 |
| 1-64 | 0.0610 | | | 1.549 | 59 |
| 1-72 | 0.0584 | | | 1.483 | 81 |
| 1-72 | 0.0587 | | | 1.491 | 79 |
| 1-72 | 0.0589 | | | 1.496 | 78 |
| 1-72 | 0.0593 | | | 1.506 | 76 |
| 1-72 | 0.0595 | | #53 | 1.511 | 75 |
| 1-72 | 0.0596 | | | 1.514 | 74 |
| 1-72 | 0.0600 | | | 1.524 | 72 |
| 1-72 | 0.0602 | | | 1.529 | 71 |
| 1-72 | 0.0606 | | | 1.539 | 69 |
| 1-72 | 0.0607 | | | 1.542 | 68 |
| 1-72 | 0.0611 | | | 1.552 | 66 |
| 1-72 | 0.0613 | | | 1.557 | 65 |
| 1-72 | 0.0618 | | | 1.570 | 62 |
| 1-72 | 0.0622 | | | 1.580 | 60 |
| 1-72 | 0.0625 | 1/6 | | 1.588 | 59 |
| 2-56 | 0.0672 | | | 1.707 | 81 |
| 2-56 | 0.0677 | | | 1.720 | 79 |
| 2-56 | 0.0679 | | | 1.725 | 78 |
| 2-56 | 0.0684 | | | 1.737 | 76 |
| 2-56 | 0.0686 | | | 1.742 | 75 |
| 2-56 | 0.0688 | | | 1.748 | 74 |
| 2-56 | 0.0693 | | | 1.760 | 72 |
| 2-56 | 0.0695 | | | 1.765 | 71 |
| 2-56 | 0.0700 | | | 1.778 | 69 |
| 2-56 | 0.0702 | | | 1.783 | 68 |
| 2-56 | 0.0707 | | | 1.796 | 66 |
| 2-56 | 0.0709 | | | 1.801 | 65 |
| 2-56 | 0.0716 | | | 1.819 | 62 |
| 2-56 | 0.0721 | | | 1.831 | 60 |
| 2-56 | 0.0723 | | | 1.836 | 59 |
| 2-64 | 0.0696 | | | 1.768 | 81 |
| 2-64 | 0.0700 | | #50 | 1.778 | 79 |
| 2-64 | 0.0702 | | | 1.783 | 78 |
| 2-64 | 0.0706 | | | 1.793 | 76 |
| 2-64 | 0.0708 | | | 1.798 | 75 |
| 2-64 | 0.0710 | | | 1.803 | 74 |
| 2-64 | 0.0714 | | | 1.814 | 72 |
| 2-64 | 0.0716 | | | 1.819 | 71 |
| 2-64 | 0.0720 | | | 1.829 | 69 |
| 2-64 | 0.0722 | | | 1.834 | 68 |
| 2-64 | 0.0726 | | | 1.844 | 66 |
| 2-64 | 0.0728 | | | 1.849 | 65 |
| 2-64 | 0.0734 | | | 1.864 | 62 |
| 2-64 | 0.0738 | | | 1.875 | 60 |
| 2-64 | 0.0740 | | | 1.880 | 59 |
| 3-48 | 0.0772 | | | 1.960 | 81 |
| 3-48 | 0.0776 | | | 1.970 | 79 |
| 3-48 | 0.0780 | 5/64 | | 1.980 | 78 |
| 3-48 | 0.0783 | | 47 | 1.990 | 76 |
| 3-48 | 0.0787 | | | 2.000 | 75 |
| 3-48 | 0.0791 | | | 2.010 | 74 |
| 3-48 | 0.0795 | | | 2.020 | 72 |
| 3-48 | 0.0799 | | | 2.030 | 71 |
| 3-48 | 0.0803 | | | 2.040 | 69 |
| 3-48 | 0.0807 | | | 2.050 | 68 |
| 3-48 | 0.0811 | | 46 | 2.060 | 66 |
| 3-48 | 0.0815 | | | 2.070 | 65 |
| 3-48 | 0.0819 | | 45 | 2.080 | 63 |
| 3-48 | 0.0823 | | | 2.090 | 62 |
| 3-48 | 0.0827 | | | 2.100 | 60 |
| 3-48 | 0.0831 | | | 2.110 | 59 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 3-56 | 0.0803 | | | 2.040 | 81 |
| 3-56 | 0.0807 | | | 2.050 | 79 |
| 3-56 | 0.0811 | | 46 | 2.060 | 77 |
| 3-56 | 0.0815 | | | 2.070 | 75 |
| 3-56 | 0.0819 | | 45 | 2.080 | 74 |
| 3-56 | 0.0823 | | | 2.090 | 72 |
| 3-56 | 0.0827 | | | 2.100 | 70 |
| 3-56 | 0.0831 | | | 2.110 | 69 |
| 3-56 | 0.0835 | | | 2.120 | 67 |
| 3-56 | 0.0839 | | | 2.130 | 65 |
| 3-56 | 0.0843 | | | 2.140 | 63 |
| 3-56 | 0.0846 | | | 2.150 | 62 |
| 3-56 | 0.0850 | | | 2.160 | 60 |
| 3-56 | 0.0854 | | | 2.170 | 59 |
| 4-40 | 0.0858 | | 44 | 2.180 | 81 |
| 4-40 | 0.0862 | | | 2.190 | 79 |
| 4-40 | 0.0866 | | | 2.200 | 78 |
| 4-40 | 0.0870 | | | 2.210 | 77 |
| 4-40 | 0.0874 | | | 2.220 | 76 |
| 4-40 | 0.0878 | | | 2.230 | 75 |
| 4-40 | 0.0882 | | | 2.240 | 73 |
| 4-40 | 0.0886 | | | 2.250 | 72 |
| 4-40 | 0.0890 | | 43 | 2.260 | 71 |
| 4-40 | 0.0894 | | | 2.270 | 70 |
| 4-40 | 0.0898 | | | 2.280 | 68 |
| 4-40 | 0.0902 | | | 2.290 | 67 |
| 4-40 | 0.0906 | | | 2.300 | 66 |
| 4-40 | 0.0909 | | | 2.310 | 65 |
| 4-40 | 0.0913 | | | 2.320 | 64 |
| 4-40 | 0.0917 | | | 2.330 | 63 |
| 4-40 | 0.0921 | | | 2.340 | 61 |
| 4-40 | 0.0925 | | | 2.350 | 60 |
| 4-40 | 0.0929 | | | 2.360 | 59 |
| 4-48 | 0.0902 | | | 2.290 | 81 |
| 4-48 | 0.0906 | | | 2.300 | 79 |
| 4-48 | 0.0909 | | | 2.310 | 78 |
| 4-48 | 0.0913 | | | 2.320 | 76 |
| 4-48 | 0.0917 | | | 2.330 | 75 |
| 4-48 | 0.0921 | | | 2.340 | 74 |
| 4-48 | 0.0925 | | | 2.350 | 72 |
| 4-48 | 0.0929 | | | 2.360 | 71 |
| 4-48 | 0.0933 | | 42 | 2.370 | 69 |
| 4-48 | 0.0937 | 3/32 | | 2.380 | 68 |
| 4-48 | 0.0941 | | | 2.390 | 66 |
| 4-48 | 0.0945 | | | 2.400 | 65 |
| 4-48 | 0.0949 | | | 2.410 | 63 |
| 4-48 | 0.0953 | | | 2.420 | 62 |
| 4-48 | 0.0957 | | | 2.430 | 60 |
| 4-48 | 0.0961 | | 41 | 2.440 | 59 |
| 5-40 | 0.0988 | | | 2.510 | 81 |
| 5-40 | 0.0992 | | | 2.520 | 79 |
| 5-40 | 0.0996 | | 39 | 2.530 | 78 |
| 5-40 | 0.1000 | | | 2.540 | 77 |
| 5-40 | 0.1004 | | | 2.550 | 76 |
| 5-40 | 0.1008 | | | 2.560 | 75 |
| 5-40 | 0.1012 | | | 2.570 | 73 |
| 5-40 | 0.1016 | | 38 | 2.580 | 72 |
| 5-40 | 0.1020 | | | 2.590 | 71 |
| 5-40 | 0.1024 | | | 2.600 | 70 |
| 5-40 | 0.1028 | | | 2.610 | 68 |
| 5-40 | 0.1031 | | | 2.620 | 67 |
| 5-40 | 0.1035 | | | 2.630 | 66 |
| 5-40 | 0.1039 | | 37 | 2.640 | 65 |
| 5-40 | 0.1043 | | | 2.650 | 64 |
| 5-40 | 0.1047 | | | 2.660 | 63 |
| 5-40 | 0.1051 | | | 2.670 | 61 |
| 5-40 | 0.1055 | | | 2.680 | 60 |
| 5-40 | 0.1059 | | | 2.690 | 59 |
| 5-44 | 0.1012 | | | 2.570 | 81 |
| 5-44 | 0.1016 | | 38 | 2.580 | 79 |
| 5-44 | 0.1020 | | | 2.590 | 78 |
| 5-44 | 0.1024 | | | 2.600 | 77 |
| 5-44 | 0.1028 | | | 2.610 | 75 |
| 5-44 | 0.1031 | | | 2.620 | 74 |
| 5-44 | 0.1035 | | | 2.630 | 73 |
| 5-44 | 0.1039 | | 37 | 2.640 | 71 |
| 5-44 | 0.1043 | | | 2.650 | 70 |
| 5-44 | 0.1047 | | | 2.660 | 69 |
| 5-44 | 0.1051 | | | 2.670 | 67 |
| 5-44 | 0.1055 | | | 2.680 | 66 |
| 5-44 | 0.1059 | | | 2.690 | 65 |
| 5-44 | 0.1063 | | | 2.700 | 63 |
| 5-44 | 0.1067 | | 36 | 2.710 | 62 |
| 5-44 | 0.1071 | | | 2.720 | 61 |
| 5-44 | 0.1075 | | | 2.730 | 59 |
| 6-32 | 0.1051 | | | 2.670 | 81 |
| 6-32 | 0.1055 | | | 2.680 | 80 |
| 6-32 | 0.1059 | | | 2.690 | 79 |
| 6-32 | 0.1063 | | | 2.700 | 78 |
| 6-32 | 0.1067 | | 36 | 2.710 | 77 |
| 6-32 | 0.1071 | | | 2.720 | 76 |

UNC / UNF Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 6-32 | 0.1075 | | | 2.730 | 75 |
| 6-32 | 0.1079 | | | 2.740 | 74 |
| 6-32 | 0.1083 | | | 2.750 | 73 |
| 6-32 | 0.1087 | | | 2.760 | 72 |
| 6-32 | 0.1091 | | | 2.770 | 71 |
| 6-32 | 0.1094 | 7/64 | | 2.780 | 70 |
| 6-32 | 0.1098 | | 35 | 2.790 | 69 |
| 6-32 | 0.1102 | | | 2.800 | 68 |
| 6-32 | 0.1106 | | | 2.810 | 67 |
| 6-32 | 0.1110 | | 34 | 2.820 | 67 |
| 6-32 | 0.1114 | | | 2.830 | 66 |
| 6-32 | 0.1118 | | | 2.840 | 65 |
| 6-32 | 0.1122 | | | 2.850 | 64 |
| 6-32 | 0.1126 | | | 2.860 | 63 |
| 6-32 | 0.1130 | | 33 | 2.870 | 62 |
| 6-32 | 0.1134 | | | 2.880 | 61 |
| 6-32 | 0.1138 | | | 2.890 | 60 |
| 6-32 | 0.1142 | | | 2.900 | 59 |
| 6-40 | 0.1118 | | | 2.840 | 81 |
| 6-40 | 0.1122 | | | 2.850 | 79 |
| 6-40 | 0.1126 | | | 2.860 | 78 |
| 6-40 | 0.1130 | | 33 | 2.870 | 77 |
| 6-40 | 0.1134 | | | 2.880 | 76 |
| 6-40 | 0.1138 | | | 2.890 | 75 |
| 6-40 | 0.1142 | | | 2.900 | 73 |
| 6-40 | 0.1146 | | | 2.910 | 72 |
| 6-40 | 0.1150 | | | 2.920 | 71 |
| 6-40 | 0.1154 | | | 2.930 | 70 |
| 6-40 | 0.1157 | | | 2.940 | 69 |
| 6-40 | 0.1161 | | 32 | 2.950 | 67 |
| 6-40 | 0.1165 | | | 2.960 | 66 |
| 6-40 | 0.1169 | | | 2.970 | 65 |
| 6-40 | 0.1173 | | | 2.980 | 64 |
| 6-40 | 0.1177 | | | 2.990 | 63 |
| 6-40 | 0.1181 | | | 3.000 | 61 |
| 6-40 | 0.1185 | | | 3.010 | 60 |
| 6-40 | 0.1189 | | | 3.020 | 59 |
| 8-32 | 0.1311 | | | 3.330 | 81 |
| 8-32 | 0.1315 | | | 3.340 | 80 |
| 8-32 | 0.1319 | | | 3.350 | 79 |
| 8-32 | 0.1323 | | | 3.360 | 78 |
| 8-32 | 0.1327 | | | 3.370 | 77 |
| 8-32 | 0.1331 | | | 3.380 | 76 |
| 8-32 | 0.1335 | | | 3.390 | 75 |
| 8-32 | 0.1339 | | | 3.400 | 74 |
| 8-32 | 0.1343 | | | 3.410 | 73 |
| 8-32 | 0.1346 | | | 3.420 | 72 |
| 8-32 | 0.1350 | | | 3.430 | 71 |
| 8-32 | 0.1354 | | | 3.440 | 70 |
| 8-32 | 0.1358 | | 29 | 3.450 | 69 |
| 8-32 | 0.1362 | | | 3.460 | 68 |
| 8-32 | 0.1366 | | | 3.470 | 67 |
| 8-32 | 0.1370 | | | 3.480 | 67 |
| 8-32 | 0.1374 | | | 3.490 | 66 |
| 8-32 | 0.1378 | | | 3.500 | 65 |
| 8-32 | 0.1382 | | | 3.510 | 64 |
| 8-32 | 0.1386 | | | 3.520 | 63 |
| 8-32 | 0.1390 | | | 3.530 | 62 |
| 8-32 | 0.1394 | | | 3.540 | 61 |
| 8-32 | 0.1398 | | | 3.550 | 60 |
| 8-32 | 0.1402 | | | 3.560 | 59 |
| 8-36 | 0.1346 | | | 3.420 | 81 |
| 8-36 | 0.1350 | | | 3.430 | 80 |
| 8-36 | 0.1354 | | | 3.440 | 79 |
| 8-36 | 0.1358 | | 29 | 3.450 | 78 |
| 8-36 | 0.1362 | | | 3.460 | 77 |
| 8-36 | 0.1366 | | | 3.470 | 76 |
| 8-36 | 0.1370 | | | 3.480 | 75 |
| 8-36 | 0.1374 | | | 3.490 | 74 |
| 8-36 | 0.1378 | | | 3.500 | 73 |
| 8-36 | 0.1382 | | | 3.510 | 72 |
| 8-36 | 0.1386 | | | 3.520 | 70 |
| 8-36 | 0.1390 | | | 3.530 | 69 |
| 8-36 | 0.1394 | | | 3.540 | 68 |
| 8-36 | 0.1398 | | | 3.550 | 67 |
| 8-36 | 0.1402 | | | 3.560 | 66 |
| 8-36 | 0.1406 | | 9/64 | 3.570 | 65 |
| 8-36 | 0.1409 | | | 3.580 | 64 |
| 8-36 | 0.1413 | | | 3.590 | 63 |
| 8-36 | 0.1417 | | | 3.600 | 62 |
| 8-36 | 0.1421 | | | 3.610 | 61 |
| 8-36 | 0.1425 | | | 3.620 | 60 |
| 10-24 | 0.1461 | | | 3.710 | 81 |
| 10-24 | 0.1465 | | | 3.720 | 80 |
| 10-24 | 0.1469 | | 26 | 3.730 | 80 |
| 10-24 | 0.1472 | | | 3.740 | 79 |
| 10-24 | 0.1476 | | | 3.750 | 78 |
| 10-24 | 0.1480 | | | 3.760 | 78 |
| 10-24 | 0.1484 | | | 3.770 | 77 |
| 10-24 | 0.1488 | | | 3.780 | 76 |
| 10-24 | 0.1492 | | | 3.790 | 75 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 10-24 | 0.1496 | | 25 | 3.800 | 75 |
| 10-24 | 0.1500 | | | 3.810 | 74 |
| 10-24 | 0.1504 | | | 3.820 | 73 |
| 10-24 | 0.1508 | | | 3.830 | 72 |
| 10-24 | 0.1512 | | | 3.840 | 72 |
| 10-24 | 0.1516 | | | 3.850 | 71 |
| 10-24 | 0.1520 | | 24 | 3.860 | 70 |
| 10-24 | 0.1524 | | | 3.870 | 69 |
| 10-24 | 0.1528 | | | 3.880 | 69 |
| 10-24 | 0.1531 | | | 3.890 | 68 |
| 10-24 | 0.1535 | | | 3.900 | 67 |
| 10-24 | 0.1539 | | 23 | 3.910 | 67 |
| 10-24 | 0.1543 | | | 3.920 | 66 |
| 10-24 | 0.1547 | | | 3.930 | 65 |
| 10-24 | 0.1551 | | | 3.940 | 64 |
| 10-24 | 0.1555 | | | 3.950 | 64 |
| 10-24 | 0.1559 | | | 3.960 | 63 |
| 10-24 | 0.1563 | 5/32 | | 3.970 | 62 |
| 10-24 | 0.1567 | | | 3.980 | 62 |
| 10-24 | 0.1571 | | 22 | 3.990 | 61 |
| 10-24 | 0.1575 | | | 4.000 | 60 |
| 10-24 | 0.1579 | | | 4.010 | 59 |
| 10-24 | 0.1583 | | | 4.020 | 59 |
| 10-32 | 0.1571 | | 22 | 3.990 | 81 |
| 10-32 | 0.1575 | | | 4.000 | 80 |
| 10-32 | 0.1579 | | | 4.010 | 79 |
| 10-32 | 0.1583 | | | 4.020 | 78 |
| 10-32 | 0.1587 | | | 4.030 | 77 |
| 10-32 | 0.1591 | | 21 | 4.040 | 76 |
| 10-32 | 0.1594 | | | 4.050 | 75 |
| 10-32 | 0.1598 | | | 4.060 | 74 |
| 10-32 | 0.1602 | | | 4.070 | 73 |
| 10-32 | 0.1606 | | | 4.080 | 72 |
| 10-32 | 0.1610 | | 20 | 4.090 | 71 |
| 10-32 | 0.1614 | | | 4.100 | 70 |
| 10-32 | 0.1618 | | | 4.110 | 69 |
| 10-32 | 0.1622 | | | 4.120 | 68 |
| 10-32 | 0.1626 | | | 4.130 | 67 |
| 10-32 | 0.1630 | | | 4.140 | 67 |
| 10-32 | 0.1634 | | | 4.150 | 66 |
| 10-32 | 0.1638 | | | 4.160 | 65 |
| 10-32 | 0.1642 | | | 4.170 | 64 |
| 10-32 | 0.1646 | | | 4.180 | 63 |
| 10-32 | 0.1650 | | | 4.190 | 62 |
| 10-32 | 0.1654 | | | 4.200 | 61 |
| 10-32 | 0.1657 | | | 4.210 | 60 |
| 10-32 | 0.1661 | | 19 | 4.220 | 59 |
| 12-24 | 0.1720 | 11/64 | | 4.370 | 81 |
| 12-24 | 0.1724 | | | 4.380 | 81 |
| 12-24 | 0.1728 | | 17 | 4.390 | 80 |
| 12-24 | 0.1732 | | | 4.400 | 79 |
| 12-24 | 0.1736 | | | 4.410 | 78 |
| 12-24 | 0.1740 | | | 4.420 | 78 |
| 12-24 | 0.1744 | | | 4.430 | 77 |
| 12-24 | 0.1748 | | | 4.440 | 76 |
| 12-24 | 0.1752 | | | 4.450 | 75 |
| 12-24 | 0.1756 | | | 4.460 | 75 |
| 12-24 | 0.1760 | | | 4.470 | 74 |
| 12-24 | 0.1764 | | | 4.480 | 73 |
| 12-24 | 0.1768 | | | 4.490 | 72 |
| 12-24 | 0.1772 | | 16 | 4.500 | 72 |
| 12-24 | 0.1776 | | | 4.510 | 71 |
| 12-24 | 0.1780 | | | 4.520 | 70 |
| 12-24 | 0.1783 | | | 4.530 | 70 |
| 12-24 | 0.1787 | | | 4.540 | 69 |
| 12-24 | 0.1791 | | | 4.550 | 68 |
| 12-24 | 0.1795 | | | 4.560 | 67 |
| 12-24 | 0.1799 | | 15 | 4.570 | 67 |
| 12-24 | 0.1803 | | | 4.580 | 66 |
| 12-24 | 0.1807 | | | 4.590 | 65 |
| 12-24 | 0.1811 | | | 4.600 | 64 |
| 12-24 | 0.1815 | | | 4.610 | 64 |
| 12-24 | 0.1819 | | 14 | 4.620 | 63 |
| 12-24 | 0.1823 | | | 4.630 | 62 |
| 12-24 | 0.1827 | | | 4.640 | 62 |
| 12-28 | 0.1783 | | | 4.530 | 81 |
| 12-28 | 0.1787 | | | 4.540 | 80 |
| 12-28 | 0.1791 | | | 4.550 | 80 |
| 12-28 | 0.1795 | | | 4.560 | 79 |
| 12-28 | 0.1799 | | 15 | 4.570 | 78 |
| 12-28 | 0.1803 | | | 4.580 | 77 |
| 12-28 | 0.1807 | | | 4.590 | 76 |
| 12-28 | 0.1811 | | | 4.600 | 75 |
| 12-28 | 0.1815 | | | 4.610 | 74 |
| 12-28 | 0.1819 | | 14 | 4.620 | 74 |
| 12-28 | 0.1823 | | | 4.630 | 73 |
| 12-28 | 0.1827 | | | 4.640 | 72 |

UNC / UNF Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 12-28 | 0.1831 | | | 4.650 | 71 |
| 12-28 | 0.1835 | | | 4.660 | 70 |
| 12-28 | 0.1839 | | | 4.670 | 69 |
| 12-28 | 0.1843 | | | 4.680 | 68 |
| 12-28 | 0.1846 | | | 4.690 | 68 |
| 12-28 | 0.1850 | | 13 | 4.700 | 67 |
| 12-28 | 0.1854 | | | 4.710 | 66 |
| 12-28 | 0.1858 | | | 4.720 | 65 |
| 12-28 | 0.1862 | | | 4.730 | 64 |
| 12-28 | 0.1866 | | | 4.740 | 63 |
| 12-28 | 0.1870 | | | 4.750 | 63 |
| 12-28 | 0.1874 | 3/16 | | 4.760 | 62 |
| 12-28 | 0.1878 | | | 4.770 | 61 |
| 12-28 | 0.1882 | | | 4.780 | 60 |
| 12-28 | 0.1886 | | | 4.790 | 59 |
| 1/4-20 | 0.1988 | | | 5.050 | 79 |
| 1/4-20 | 0.1992 | | 8 | 5.060 | 78 |
| 1/4-20 | 0.2008 | | | 5.100 | 76 |
| 1/4-20 | 0.2012 | | 7 | 5.110 | 75 |
| 1/4-20 | 0.2028 | | | 5.150 | 73 |
| 1/4-20 | 0.2031 | 13/64 | | 5.160 | 72 |
| 1/4-20 | 0.2039 | | 6 | 5.180 | 71 |
| 1/4-20 | 0.2047 | | | 5.200 | 70 |
| 1/4-20 | 0.2055 | | 5 | 5.220 | 69 |
| 1/4-20 | 0.2067 | | | 5.250 | 67 |
| 1/4-20 | 0.2087 | | | 5.300 | 64 |
| 1/4-20 | 0.2091 | | 4 | 5.310 | 63 |
| 1/4-20 | 0.2106 | | | 5.350 | 61 |
| 1/4-28 | 0.2126 | | | 5.400 | 81 |
| 1/4-28 | 0.2130 | | 3 | 5.410 | 80 |
| 1/4-28 | 0.2146 | | | 5.450 | 76 |
| 1/4-28 | 0.2165 | | | 5.500 | 72 |
| 1/4-28 | 0.2185 | | | 5.550 | 68 |
| 1/4-28 | 0.2189 | 7/32 | | 5.560 | 67 |
| 1/4-28 | 0.2205 | | | 5.600 | 64 |
| 1/4-28 | 0.2209 | | 2 | 5.610 | 63 |
| 1/4-28 | 0.2224 | | | 5.650 | 59 |
| 5/16-18 | 0.2539 | | | 6.450 | 81 |
| 5/16-18 | 0.2559 | | | 6.500 | 78 |
| 5/16-18 | 0.2571 | | F | 6.530 | 77 |
| 5/16-18 | 0.2579 | | | 6.550 | 76 |
| 5/16-18 | 0.2598 | | | 6.600 | 73 |
| 5/16-18 | 0.2610 | | G | 6.630 | 71 |
| 5/16-18 | 0.2618 | | | 6.650 | 70 |
| 5/16-18 | 0.2638 | | | 6.700 | 67 |
| 5/16-18 | 0.2657 | 17/64 | H | 6.750 | 65 |
| 5/16-18 | 0.2677 | | | 6.800 | 62 |
| 5/16-18 | 0.2697 | | | 6.850 | 59 |
| 5/16-24 | 0.2697 | | | 6.850 | 79 |
| 5/16-24 | 0.2717 | | I | 6.900 | 75 |
| 5/16-24 | 0.2736 | | | 6.950 | 72 |
| 5/16-24 | 0.2756 | | | 7.000 | 68 |
| 5/16-24 | 0.2768 | | J | 7.030 | 66 |
| 5/16-24 | 0.2776 | | | 7.050 | 64 |
| 5/16-24 | 0.2795 | | | 7.100 | 61 |
| 3/8-16 | 0.3091 | | | 7.850 | 81 |
| 3/8-16 | 0.3110 | | | 7.900 | 79 |
| 3/8-16 | 0.3126 | 5/16 | | 7.940 | 77 |
| 3/8-16 | 0.3130 | | | 7.950 | 76 |
| 3/8-16 | 0.3150 | | | 8.000 | 74 |
| 3/8-16 | 0.3161 | | O | 8.030 | 73 |
| 3/8-16 | 0.3169 | | | 8.050 | 72 |
| 3/8-16 | 0.3189 | | | 8.100 | 69 |
| 3/8-16 | 0.3209 | | | 8.150 | 67 |
| 3/8-16 | 0.3228 | | P | 8.200 | 64 |
| 3/8-16 | 0.3248 | | | 8.250 | 62 |
| 3/8-16 | 0.3268 | | | 8.300 | 59 |
| 3/8-24 | 0.3327 | | | 8.450 | 78 |
| 3/8-24 | 0.3346 | | | 8.500 | 75 |
| 3/8-24 | 0.3366 | | | 8.550 | 71 |
| 3/8-24 | 0.3386 | | | 8.600 | 67 |
| 3/8-24 | 0.3406 | | | 8.650 | 64 |
| 3/8-24 | 0.3425 | | | 8.700 | 60 |
| 7/16-14 | 0.3622 | | | 9.200 | 81 |
| 7/16-14 | 0.3642 | | | 9.250 | 79 |
| 7/16-14 | 0.3661 | | | 9.300 | 77 |
| 7/16-14 | 0.3677 | | U | 9.340 | 75 |
| 7/16-14 | 0.3681 | | | 9.350 | 75 |
| 7/16-14 | 0.3701 | | | 9.400 | 73 |
| 7/16-14 | 0.3720 | | | 9.450 | 71 |
| 7/16-14 | 0.3740 | | | 9.500 | 68 |
| 7/16-14 | 0.3748 | 3/8 | | 9.520 | 68 |
| 7/16-14 | 0.3760 | | | 9.550 | 66 |
| 7/16-14 | 0.3772 | | V | 9.580 | 65 |
| 7/16-14 | 0.3780 | | | 9.600 | 64 |
| 7/16-14 | 0.3799 | | | 9.650 | 62 |
| 7/16-14 | 0.3819 | | | 9.700 | 60 |
| 7/16-20 | 0.3858 | | W | 9.800 | 80 |
| 7/16-20 | 0.3878 | | | 9.850 | 77 |
| 7/16-20 | 0.3898 | | | 9.900 | 73 |
| 7/16-20 | 0.3906 | 25/64 | | 9.920 | 72 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 7/16-20 | 0.3917 | | | 9.950 | 71 |
| 7/16-20 | 0.3937 | | | 10.000 | 67 |
| 7/16-20 | 0.3957 | | | 10.050 | 64 |
| 7/16-20 | 0.3969 | | X | 10.080 | 63 |
| 7/16-20 | 0.3976 | | | 10.100 | 61 |
| 1/2-13 | 0.4193 | | | 10.650 | 81 |
| 1/2-13 | 0.4213 | | | 10.700 | 79 |
| 1/2-13 | 0.4220 | 27/64 | | 10.720 | 78 |
| 1/2-13 | 0.4232 | | | 10.750 | 77 |
| 1/2-13 | 0.4252 | | | 10.800 | 75 |
| 1/2-13 | 0.4272 | | | 10.850 | 73 |
| 1/2-13 | 0.4291 | | | 10.900 | 71 |
| 1/2-13 | 0.4311 | | | 10.950 | 69 |
| 1/2-13 | 0.4331 | | | 11.000 | 67 |
| 1/2-13 | 0.4350 | | | 11.050 | 65 |
| 1/2-13 | 0.4370 | | | 11.100 | 63 |
| 1/2-13 | 0.4374 | 7/16 | | 11.110 | 63 |
| 1/2-13 | 0.4390 | | | 11.150 | 61 |
| 1/2-13 | 0.4409 | | | 11.200 | 59 |
| 1/2-20 | 0.4488 | | | 11.400 | 79 |
| 1/2-20 | 0.4508 | | | 11.450 | 76 |
| 1/2-20 | 0.4528 | | | 11.500 | 73 |
| 1/2-20 | 0.4531 | 29/64 | | 11.510 | 72 |
| 1/2-20 | 0.4547 | | | 11.550 | 70 |
| 1/2-20 | 0.4567 | | | 11.600 | 67 |
| 1/2-20 | 0.4587 | | | 11.650 | 64 |
| 1/2-20 | 0.4606 | | | 11.700 | 61 |
| 9/16-12 | 0.4744 | | | 12.050 | 81 |
| 9/16-12 | 0.4764 | | | 12.100 | 80 |
| 9/16-12 | 0.4783 | | | 12.150 | 78 |
| 9/16-12 | 0.4803 | | | 12.200 | 76 |
| 9/16-12 | 0.4823 | | | 12.250 | 74 |
| 9/16-12 | 0.4843 | 31/64 | | 12.300 | 72 |
| 9/16-12 | 0.4862 | | | 12.350 | 70 |
| 9/16-12 | 0.4882 | | | 12.400 | 69 |
| 9/16-12 | 0.4902 | | | 12.450 | 67 |
| 9/16-12 | 0.4921 | | | 12.500 | 65 |
| 9/16-12 | 0.4941 | | | 12.550 | 63 |
| 9/16-12 | 0.4961 | | | 12.600 | 61 |
| 9/16-12 | 0.4980 | | | 12.650 | 60 |
| 9/16-18 | 0.5039 | | | 12.800 | 81 |
| 9/16-18 | 0.5059 | | | 12.850 | 78 |
| 9/16-18 | 0.5079 | | | 12.900 | 76 |
| 9/16-18 | 0.5098 | | | 12.950 | 73 |
| 9/16-18 | 0.5118 | | | 13.000 | 70 |
| 9/16-18 | 0.5138 | | | 13.050 | 67 |
| 9/16-18 | 0.5157 | 33/64 | | 13.100 | 65 |
| 9/16-18 | 0.5177 | | | 13.150 | 62 |
| 9/16-18 | 0.5197 | | | 13.200 | 59 |
| 5/8-11 | 0.5295 | | | 13.450 | 81 |
| 5/8-11 | 0.5311 | 17/32 | | 13.490 | 80 |
| 5/8-11 | 0.5315 | | | 13.500 | 79 |
| 5/8-11 | 0.5335 | | | 13.550 | 77 |
| 5/8-11 | 0.5354 | | | 13.600 | 76 |
| 5/8-11 | 0.5374 | | | 13.650 | 74 |
| 5/8-11 | 0.5394 | | | 13.700 | 72 |
| 5/8-11 | 0.5413 | | | 13.750 | 71 |
| 5/8-11 | 0.5433 | | | 13.800 | 69 |
| 5/8-11 | 0.5453 | | | 13.850 | 67 |
| 5/8-11 | 0.5469 | 35/64 | | 13.890 | 66 |
| 5/8-11 | 0.5472 | | | 13.900 | 66 |
| 5/8-11 | 0.5492 | | | 13.950 | 64 |
| 5/8-11 | 0.5512 | | | 14.000 | 62 |
| 5/8-11 | 0.5531 | | | 14.050 | 61 |
| 5/8-11 | 0.5551 | | | 14.100 | 59 |
| 5/8-18 | 0.5669 | | | 14.400 | 81 |
| 5/8-18 | 0.5689 | | | 14.450 | 78 |
| 5/8-18 | 0.5709 | | | 14.500 | 75 |
| 5/8-18 | 0.5728 | | | 14.550 | 72 |
| 5/8-18 | 0.5748 | | | 14.600 | 70 |
| 5/8-18 | 0.5768 | | | 14.650 | 67 |
| 5/8-18 | 0.5780 | 37/64 | | 14.680 | 65 |
| 5/8-18 | 0.5787 | | | 14.700 | 64 |
| 5/8-18 | 0.5807 | | | 14.750 | 61 |
| 5/8-18 | 0.5827 | | | 14.800 | 59 |
| 3/4-10 | 0.6457 | | | 16.400 | 80 |
| 3/4-10 | 0.6476 | | | 16.450 | 79 |
| 3/4-10 | 0.6496 | | | 16.500 | 77 |
| 3/4-10 | 0.6516 | | | 16.550 | 76 |
| 3/4-10 | 0.6535 | | | 16.600 | 74 |
| 3/4-10 | 0.6555 | | | 16.650 | 73 |
| 3/4-10 | 0.6563 | 21/32 | | 16.670 | 72 |
| 3/4-10 | 0.6575 | | | 16.700 | 71 |
| 3/4-10 | 0.6594 | | | 16.750 | 70 |
| 3/4-10 | 0.6614 | | | 16.800 | 68 |
| 3/4-10 | 0.6634 | | | 16.850 | 67 |
| 3/4-10 | 0.6654 | | | 16.900 | 65 |
| 3/4-10 | 0.6673 | | | 16.950 | 64 |
| 3/4-10 | 0.6693 | | | 17.000 | 62 |
| 3/4-10 | 0.6713 | | | 17.050 | 61 |
| 3/4-10 | 0.6720 | 43/64 | | 17.070 | 60 |

UNC / UNF Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 3/4-10 | 0.6732 | | | 17.100 | 59 |
| 3/4-16 | 0.6850 | | | 17.400 | 80 |
| 3/4-16 | 0.6870 | | | 17.450 | 78 |
| 3/4-16 | 0.6874 | 11/16 | | 17.460 | 77 |
| 3/4-16 | 0.6890 | | | 17.500 | 75 |
| 3/4-16 | 0.6909 | | | 17.550 | 73 |
| 3/4-16 | 0.6929 | | | 17.600 | 70 |
| 3/4-16 | 0.6949 | | | 17.650 | 68 |
| 3/4-16 | 0.6969 | | | 17.700 | 65 |
| 3/4-16 | 0.6988 | | | 17.750 | 63 |
| 3/4-16 | 0.7008 | | | 17.800 | 61 |
| 7/8-9 | 0.7579 | | | 19.250 | 81 |
| 7/8-9 | 0.7598 | | | 19.300 | 80 |
| 7/8-9 | 0.7618 | | | 19.350 | 78 |
| 7/8-9 | 0.7638 | | | 19.400 | 77 |
| 7/8-9 | 0.7657 | 49/64 | | 19.450 | 76 |
| 7/8-9 | 0.7677 | | | 19.500 | 74 |
| 7/8-9 | 0.7697 | | | 19.550 | 73 |
| 7/8-9 | 0.7717 | | | 19.600 | 72 |
| 7/8-9 | 0.7736 | | | 19.650 | 70 |
| 7/8-9 | 0.7756 | | | 19.700 | 69 |
| 7/8-9 | 0.7776 | | | 19.750 | 67 |
| 7/8-9 | 0.7795 | | | 19.800 | 66 |
| 7/8-9 | 0.7811 | 25/32 | | 19.840 | 65 |
| 7/8-9 | 0.7815 | | | 19.850 | 65 |
| 7/8-9 | 0.7835 | | | 19.900 | 63 |
| 7/8-9 | 0.7854 | | | 19.950 | 62 |
| 7/8-9 | 0.7874 | | | 20.000 | 61 |
| 7/8-9 | 0.7894 | | | 20.050 | 59 |
| 7/8-14 | 0.8012 | | | 20.350 | 80 |
| 7/8-14 | 0.8031 | | | 20.400 | 77 |
| 7/8-14 | 0.8051 | | | 20.450 | 75 |
| 7/8-14 | 0.8071 | | | 20.500 | 73 |
| 7/8-14 | 0.8091 | | | 20.550 | 71 |
| 7/8-14 | 0.8110 | | | 20.600 | 69 |
| 7/8-14 | 0.8126 | 13/16 | | 20.640 | 67 |
| 7/8-14 | 0.8130 | | | 20.650 | 67 |
| 7/8-14 | 0.8150 | | | 20.700 | 65 |
| 7/8-14 | 0.8169 | | | 20.750 | 63 |
| 7/8-14 | 0.8189 | | | 20.800 | 60 |
| 1-8 | 0.8681 | | | 22.050 | 81 |
| 1-8 | 0.8701 | | | 22.100 | 80 |
| 1-8 | 0.8720 | | | 22.150 | 79 |
| 1-8 | 0.8740 | | | 22.200 | 78 |
| 1-8 | 0.8748 | 7/8 | | 22.220 | 77 |
| 1-8 | 0.8760 | | | 22.250 | 76 |
| 1-8 | 0.8780 | | | 22.300 | 75 |
| 1-8 | 0.8799 | | | 22.350 | 74 |
| 1-8 | 0.8819 | | | 22.400 | 73 |
| 1-8 | 0.8839 | | | 22.450 | 72 |
| 1-8 | 0.8858 | | | 22.500 | 70 |
| 1-8 | 0.8878 | | | 22.550 | 69 |
| 1-8 | 0.8898 | | | 22.600 | 68 |
| 1-8 | 0.8906 | 57/64 | | 22.620 | 67 |
| 1-8 | 0.8917 | | | 22.650 | 67 |
| 1-8 | 0.8937 | | | 22.700 | 65 |
| 1-8 | 0.8957 | | | 22.750 | 64 |
| 1-8 | 0.8976 | | | 22.800 | 63 |
| 1-8 | 0.8996 | | | 22.850 | 62 |
| 1-8 | 0.9016 | | | 22.900 | 61 |
| 1-8 | 0.9035 | | | 22.950 | 59 |
| 1-12 | 0.9134 | | | 23.200 | 80 |
| 1-12 | 0.9154 | | | 23.250 | 78 |
| 1-12 | 0.9173 | | | 23.300 | 76 |
| 1-12 | 0.9193 | | | 23.350 | 75 |
| 1-12 | 0.9213 | | | 23.400 | 73 |
| 1-12 | 0.9220 | 59/64 | | 23.420 | 72 |
| 1-12 | 0.9232 | | | 23.450 | 71 |
| 1-12 | 0.9252 | | | 23.500 | 69 |
| 1-12 | 0.9272 | | | 23.550 | 67 |
| 1-12 | 0.9291 | | | 23.600 | 65 |
| 1-12 | 0.9311 | | | 23.650 | 64 |
| 1-12 | 0.9331 | | | 23.700 | 62 |
| 1-12 | 0.9350 | | | 23.750 | 60 |
| 1-12 | 0.9370 | | | 23.800 | 58 |
| 1 1/8-7 | 0.9689 | 31/32 | | 24.610 | 84 |
| 1 1/8-7 | 0.9724 | | | 24.700 | 82 |
| 1 1/8-7 | 0.9764 | | | 24.800 | 80 |
| 1 1/8-7 | 0.9803 | | | 24.900 | 78 |
| 1 1/8-7 | 0.9843 | 63/64 | | 25.000 | 76 |
| 1 1/8-7 | 0.9882 | | | 25.100 | 74 |
| 1 1/8-7 | 0.9921 | | | 25.200 | 72 |
| 1 1/8-7 | 0.9961 | | | 25.300 | 69 |
| 1 1/8-7 | 1.0000 | 1 | | 25.400 | 67 |
| 1 1/8-7 | 1.0039 | | | 25.500 | 65 |
| 1 1/8-7 | 1.0079 | | | 25.600 | 63 |
| 1 1/8-7 | 1.0118 | | | 25.700 | 61 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|---------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 1 1/8-7 | 1.0157 | 1 1/64 | | 25.800 | 59 |
| 1 1/8-7 | 1.0197 | | | 25.900 | 57 |
| 1 1/8-7 | 1.0236 | | | 26.000 | 55 |
| 1 1/8-12 | 1.0394 | | | 26.400 | 79 |
| 1 1/8-12 | 1.0433 | | | 26.500 | 75 |
| 1 1/8-12 | 1.0469 | 1 3/64 | | 26.590 | 72 |
| 1 1/8-12 | 1.0472 | | | 26.600 | 72 |
| 1 1/8-12 | 1.0512 | | | 26.700 | 68 |
| 1 1/8-12 | 1.0551 | | | 26.800 | 65 |
| 1 1/8-12 | 1.0591 | | | 26.900 | 61 |
| 1 1/8-12 | 1.0626 | 1 1/16 | | 26.990 | 58 |
| 1 1/8-12 | 1.0630 | | | 27.000 | 57 |
| 1 1/4-7 | 1.0937 | 1 3/32 | | 27.780 | 84 |
| 1 1/4-7 | 1.1024 | | | 28.000 | 80 |
| 1 1/4-7 | 1.1063 | | | 28.100 | 77 |
| 1 1/4-7 | 1.1094 | 1 7/64 | | 28.180 | 76 |
| 1 1/4-7 | 1.1102 | | | 28.200 | 75 |
| 1 1/4-7 | 1.1142 | | | 28.300 | 73 |
| 1 1/4-7 | 1.1181 | | | 28.400 | 71 |
| 1 1/4-7 | 1.1220 | | | 28.500 | 69 |
| 1 1/4-7 | 1.1248 | 1 1/8 | | 28.570 | 67 |
| 1 1/4-7 | 1.1260 | | | 28.600 | 67 |
| 1 1/4-7 | 1.1299 | | | 28.700 | 65 |
| 1 1/4-7 | 1.1339 | | | 28.800 | 63 |
| 1 1/4-7 | 1.1378 | | | 28.900 | 60 |
| 1 1/4-7 | 1.1406 | 1 9/64 | | 28.970 | 59 |
| 1 1/4-12 | 1.1614 | | | 29.500 | 82 |
| 1 1/4-12 | 1.1654 | | | 29.600 | 78 |
| 1 1/4-12 | 1.1693 | | | 29.700 | 75 |
| 1 1/4-12 | 1.1720 | 1 11/64 | | 29.770 | 72 |
| 1 1/4-12 | 1.1732 | | | 29.800 | 71 |
| 1 1/4-12 | 1.1772 | | | 29.900 | 67 |
| 1 1/4-12 | 1.1811 | | | 30.000 | 64 |
| 1 1/4-12 | 1.1850 | | | 30.100 | 60 |
| 1 3/8-6 | 1.1969 | | | 30.400 | 82 |
| 1 3/8-6 | 1.2008 | | | 30.500 | 80 |
| 1 3/8-6 | 1.2031 | 1 13/64 | | 30.560 | 79 |
| 1 3/8-6 | 1.2047 | | | 30.600 | 79 |
| 1 3/8-6 | 1.2087 | | | 30.700 | 77 |
| 1 3/8-6 | 1.2126 | | | 30.800 | 75 |
| 1 3/8-6 | 1.2165 | | | 30.900 | 73 |
| 1 3/8-6 | 1.2189 | 1 7/32 | | 30.960 | 72 |
| 1 3/8-6 | 1.2205 | | | 31.000 | 71 |
| 1 3/8-6 | 1.2244 | | | 31.100 | 70 |
| 1 3/8-6 | 1.2283 | | | 31.200 | 68 |
| 1 3/8-6 | 1.2323 | | | 31.300 | 66 |
| 1 3/8-6 | 1.2343 | | | 31.350 | 65 |
| 1 3/8-6 | 1.2362 | | | 31.400 | 64 |
| 1 3/8-6 | 1.2402 | | | 31.500 | 62 |
| 1 3/8-6 | 1.2441 | | | 31.600 | 60 |
| 1 3/8-6 | 1.2480 | | | 31.700 | 59 |
| 1 3/8-12 | 1.2874 | | | 32.700 | 81 |
| 1 3/8-12 | 1.2913 | | | 32.800 | 77 |
| 1 3/8-12 | 1.2953 | | | 32.900 | 74 |
| 1 3/8-12 | 1.2969 | 1 19/64 | | 32.940 | 72 |
| 1 3/8-12 | 1.2992 | | | 33.000 | 70 |
| 1 3/8-12 | 1.3031 | | | 33.100 | 66 |
| 1 3/8-12 | 1.3071 | | | 33.200 | 63 |
| 1 3/8-12 | 1.3110 | | | 33.300 | 59 |
| 1 1/2-6 | 1.3228 | | | 33.600 | 82 |
| 1 1/2-6 | 1.3268 | | | 33.700 | 80 |
| 1 1/2-6 | 1.3280 | 1 21/64 | | 33.730 | 79 |
| 1 1/2-6 | 1.3307 | | | 33.800 | 78 |
| 1 1/2-6 | 1.3346 | | | 33.900 | 76 |
| 1 1/2-6 | 1.3386 | | | 34.000 | 75 |
| 1 1/2-6 | 1.3425 | | | 34.100 | 73 |
| 1 1/2-6 | 1.3437 | | | 34.130 | 72 |
| 1 1/2-6 | 1.3465 | | | 34.200 | 71 |
| 1 1/2-6 | 1.3504 | | | 34.300 | 69 |
| 1 1/2-6 | 1.3543 | | | 34.400 | 67 |
| 1 1/2-6 | 1.3583 | | | 34.500 | 65 |
| 1 1/2-6 | 1.3594 | | | 34.530 | 65 |
| 1 1/2-6 | 1.3622 | | | 34.600 | 64 |
| 1 1/2-6 | 1.3661 | | | 34.700 | 62 |
| 1 1/2-6 | 1.3701 | | | 34.800 | 60 |
| 1 1/2-6 | 1.3740 | | | 34.900 | 58 |
| 1 1/2-6 | 1.3748 | 1 3/8 | | 34.920 | 58 |
| 1 1/2-12 | 1.4134 | | | 35.900 | 80 |
| 1 1/2-12 | 1.4173 | | | 36.000 | 76 |
| 1 1/2-12 | 1.4213 | | | 36.100 | 73 |
| 1 1/2-12 | 1.4220 | 1 27/64 | | 36.120 | 72 |
| 1 1/2-12 | 1.4252 | | | 36.200 | 69 |
| 1 1/2-12 | 1.4291 | | | 36.300 | 65 |
| 1 1/2-12 | 1.4331 | | | 36.400 | 62 |
| 1 1/2-12 | 1.4370 | | | 36.500 | 58 |
| 1 1/2-12 | 1.4374 | 1 7/16 | | 36.510 | 58 |

8-Pitch Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|---------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 1 1/8-8 | 0.9935 | | | 25.25 | 81 |
| 1 1/8-8 | 0.9967 | | | 25.30 | 79 |
| 1 1/8-8 | 1.0000 | 1 | | 25.40 | 77 |
| 1 1/8-8 | 1.0032 | | | 25.50 | 75 |
| 1 1/8-8 | 1.0081 | | | 25.60 | 72 |
| 1 1/8-8 | 1.0130 | | | 25.70 | 69 |
| 1 1/8-8 | 1.0162 | 1 1/64 | | 25.80 | 67 |
| 1 1/8-8 | 1.0195 | | | 25.90 | 65 |
| 1 1/8-8 | 1.0227 | | | 26.00 | 63 |
| 1 1/8-8 | 1.0276 | | | 26.10 | 60 |
| 1 1/4-8 | 1.1185 | | | 28.40 | 81 |
| 1 1/4-8 | 1.1217 | | | 28.50 | 79 |
| 1 1/4-8 | 1.1250 | 1 1/8 | | 28.570 | 77 |
| 1 1/4-8 | 1.1298 | | | 28.70 | 74 |
| 1 1/4-8 | 1.1315 | | | 28.75 | 73 |
| 1 1/4-8 | 1.1331 | | | 28.80 | 72 |
| 1 1/4-8 | 1.1380 | | | 28.90 | 69 |
| 1 1/4-8 | 1.1412 | | | 29.00 | 67 |
| 1 1/4-8 | 1.1461 | | | 29.10 | 64 |
| 1 1/4-8 | 1.1493 | | | 29.20 | 62 |
| 1 1/4-8 | 1.1542 | | | 29.30 | 59 |
| 1 3/8-8 | 1.2451 | | | 31.60 | 80 |
| 1 3/8-8 | 1.2483 | | | 31.70 | 78 |
| 1 3/8-8 | 1.2500 | 1 1/4 | | 31.75 | 77 |
| 1 3/8-8 | 1.2516 | | | 31.80 | 76 |
| 1 3/8-8 | 1.2548 | | | 31.90 | 74 |
| 1 3/8-8 | 1.2581 | | | 32.00 | 72 |
| 1 3/8-8 | 1.2630 | | | 32.10 | 69 |
| 1 3/8-8 | 1.2662 | 1 17/64 | | 32.15 | 67 |
| 1 3/8-8 | 1.2678 | | | 32.20 | 66 |
| 1 3/8-8 | 1.2695 | | | 32.25 | 65 |
| 1 3/8-8 | 1.2711 | | | 32.30 | 64 |
| 1 3/8-8 | 1.2760 | | | 32.40 | 61 |
| 1 3/8-8 | 1.2792 | | | 32.50 | 59 |
| 1 1/2-8 | 1.3701 | | | 34.80 | 80 |
| 1 1/2-8 | 1.3733 | | | 34.90 | 78 |
| 1 1/2-8 | 1.3750 | 1 3/8 | | 34.92 | 77 |
| 1 1/2-8 | 1.3766 | | | 35.00 | 76 |
| 1 1/2-8 | 1.3815 | | | 35.10 | 73 |
| 1 1/2-8 | 1.3863 | | | 35.20 | 70 |
| 1 1/2-8 | 1.3896 | | | 35.30 | 68 |
| 1 1/2-8 | 1.3928 | | | 35.40 | 66 |
| 1 1/2-8 | 1.3977 | | | 35.50 | 63 |
| 1 1/2-8 | 1.4026 | | | 35.60 | 60 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| 1 5/8-8 | 1.4951 | | | 38.00 | 80 |
| 1 5/8-8 | 1.5000 | 1 1/2 | | 38.10 | 77 |
| 1 5/8-8 | 1.5032 | | | 38.20 | 75 |
| 1 5/8-8 | 1.5081 | | | 38.30 | 72 |
| 1 5/8-8 | 1.5130 | | | 38.40 | 69 |
| 1 5/8-8 | 1.5162 | | | 38.50 | 67 |
| 1 5/8-8 | 1.5195 | | | 38.60 | 65 |
| 1 5/8-8 | 1.5243 | | | 38.70 | 62 |
| 1 5/8-8 | 1.5276 | | | 38.80 | 60 |
| 1 3/4-8 | 1.6217 | | | 41.20 | 79 |
| 1 3/4-8 | 1.6266 | | | 41.30 | 76 |
| 1 3/4-8 | 1.6298 | | | 41.40 | 74 |
| 1 3/4-8 | 1.6331 | | | 41.50 | 72 |
| 1 3/4-8 | 1.6380 | | | 41.60 | 69 |
| 1 3/4-8 | 1.6412 | | | 41.70 | 67 |
| 1 3/4-8 | 1.6461 | | | 41.80 | 64 |
| 1 3/4-8 | 1.6493 | | | 41.90 | 62 |
| 1 3/4-8 | 1.6526 | | | 42.00 | 60 |
| 2-8 | 1.8701 | | | 47.50 | 80 |
| 2-8 | 1.8733 | | | 47.60 | 78 |
| 2-8 | 1.8782 | | | 47.70 | 75 |
| 2-8 | 1.8815 | | | 47.80 | 73 |
| 2-8 | 1.8863 | | | 47.90 | 70 |
| 2-8 | 1.8896 | | | 48.00 | 68 |
| 2-8 | 1.8928 | | | 48.10 | 66 |
| 2-8 | 1.8977 | | | 48.20 | 63 |
| 2-8 | 1.9026 | | | 48.30 | 60 |
| 2 1/4-8 | 2.1217 | | | 53.90 | 79 |
| 2 1/4-8 | 2.1266 | | | 54.00 | 76 |
| 2 1/4-8 | 2.1298 | | | 54.10 | 74 |
| 2 1/4-8 | 2.1331 | | | 54.20 | 72 |
| 2 1/4-8 | 2.1380 | | | 54.30 | 69 |
| 2 1/4-8 | 2.1412 | | | 54.40 | 67 |
| 2 1/4-8 | 2.1461 | | | 54.50 | 64 |
| 2 1/4-8 | 2.1493 | | | 54.60 | 62 |
| 2 1/4-8 | 2.1542 | | | 54.70 | 59 |



Metric Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M3 x 0.35 | 0.1035 | | | 2.630 | 81 |
| M3 x 0.35 | 0.1039 | | 37 | 2.640 | 79 |
| M3 x 0.35 | 0.1043 | | | 2.650 | 77 |
| M3 x 0.35 | 0.1047 | | | 2.660 | 75 |
| M3 x 0.35 | 0.1051 | | | 2.670 | 73 |
| M3 x 0.35 | 0.1055 | | | 2.680 | 70 |
| M3 x 0.35 | 0.1059 | | | 2.690 | 68 |
| M3 x 0.35 | 0.1063 | | | 2.700 | 66 |
| M3 x 0.35 | 0.1067 | | 36 | 2.710 | 64 |
| M3 x 0.35 | 0.1071 | | | 2.720 | 62 |
| M3 x 0.35 | 0.1075 | | | 2.730 | 59 |
| M3 x 0.50 | 0.0976 | | | 2.480 | 80 |
| M3 x 0.50 | 0.0980 | | 40 | 2.490 | 79 |
| M3 x 0.50 | 0.0984 | | | 2.500 | 77 |
| M3 x 0.50 | 0.0988 | | | 2.510 | 75 |
| M3 x 0.50 | 0.0992 | | | 2.520 | 74 |
| M3 x 0.50 | 0.0996 | | 39 | 2.530 | 72 |
| M3 x 0.50 | 0.1000 | | | 2.540 | 71 |
| M3 x 0.50 | 0.1004 | | | 2.550 | 69 |
| M3 x 0.50 | 0.1008 | | | 2.560 | 68 |
| M3 x 0.50 | 0.1012 | | | 2.570 | 66 |
| M3 x 0.50 | 0.1016 | | 38 | 2.580 | 65 |
| M3 x 0.50 | 0.1020 | | | 2.590 | 63 |
| M3 x 0.50 | 0.1024 | | | 2.600 | 62 |
| M3 x 0.50 | 0.1028 | | | 2.610 | 60 |
| M3 x 0.50 | 0.1031 | | | 2.620 | 59 |
| M3.5 x 0.60 | 0.1130 | | 33 | 2.870 | 81 |
| M3.5 x 0.60 | 0.1134 | | | 2.880 | 80 |
| M3.5 x 0.60 | 0.1138 | | | 2.890 | 78 |
| M3.5 x 0.60 | 0.1142 | | | 2.900 | 77 |
| M3.5 x 0.60 | 0.1146 | | | 2.910 | 76 |
| M3.5 x 0.60 | 0.1150 | | | 2.920 | 74 |
| M3.5 x 0.60 | 0.1154 | | | 2.930 | 73 |
| M3.5 x 0.60 | 0.1157 | | | 2.940 | 72 |
| M3.5 x 0.60 | 0.1161 | | 32 | 2.950 | 71 |
| M3.5 x 0.60 | 0.1165 | | | 2.960 | 69 |
| M3.5 x 0.60 | 0.1169 | | | 2.970 | 68 |
| M3.5 x 0.60 | 0.1173 | | | 2.980 | 67 |
| M3.5 x 0.60 | 0.1177 | | | 2.990 | 65 |
| M3.5 x 0.60 | 0.1181 | | | 3.000 | 64 |
| M3.5 x 0.60 | 0.1185 | | | 3.010 | 63 |
| M3.5 x 0.60 | 0.1189 | | | 3.020 | 62 |
| M3.5 x 0.60 | 0.1193 | | | 3.030 | 60 |
| M3.5 x 0.60 | 0.1197 | | | 3.040 | 59 |
| M4 x 0.50 | 0.1370 | | | 3.480 | 80 |
| M4 x 0.50 | 0.1374 | | | 3.490 | 79 |
| M4 x 0.50 | 0.1378 | | | 3.500 | 77 |
| M4 x 0.50 | 0.1382 | | | 3.510 | 75 |
| M4 x 0.50 | 0.1386 | | | 3.520 | 74 |
| M4 x 0.50 | 0.1390 | | | 3.530 | 72 |
| M4 x 0.50 | 0.1394 | | | 3.540 | 71 |
| M4 x 0.50 | 0.1398 | | | 3.550 | 69 |
| M4 x 0.50 | 0.1402 | | | 3.560 | 68 |
| M4 x 0.50 | 0.1406 | 9/64 | 28 | 3.570 | 66 |
| M4 x 0.50 | 0.1409 | | | 3.580 | 65 |
| M4 x 0.50 | 0.1413 | | | 3.590 | 63 |
| M4 x 0.50 | 0.1417 | | | 3.600 | 62 |
| M4 x 0.50 | 0.1421 | | | 3.610 | 60 |
| M4 x 0.50 | 0.1425 | | | 3.620 | 59 |
| M4 x 0.70 | 0.1283 | | 30 | 3.260 | 81 |
| M4 x 0.70 | 0.1287 | | | 3.270 | 80 |
| M4 x 0.70 | 0.1291 | | | 3.280 | 79 |
| M4 x 0.70 | 0.1295 | | | 3.290 | 78 |
| M4 x 0.70 | 0.1299 | | | 3.300 | 77 |
| M4 x 0.70 | 0.1303 | | | 3.310 | 76 |
| M4 x 0.70 | 0.1307 | | | 3.320 | 75 |
| M4 x 0.70 | 0.1311 | | | 3.330 | 74 |
| M4 x 0.70 | 0.1315 | | | 3.340 | 73 |
| M4 x 0.70 | 0.1319 | | | 3.350 | 71 |
| M4 x 0.70 | 0.1323 | | | 3.360 | 70 |
| M4 x 0.70 | 0.1327 | | | 3.370 | 69 |
| M4 x 0.70 | 0.1331 | | | 3.380 | 68 |
| M4 x 0.70 | 0.1335 | | | 3.390 | 67 |
| M4 x 0.70 | 0.1339 | | | 3.400 | 66 |
| M4 x 0.70 | 0.1343 | | | 3.410 | 65 |
| M4 x 0.70 | 0.1346 | | | 3.420 | 64 |
| M4 x 0.70 | 0.1350 | | | 3.430 | 63 |
| M4 x 0.70 | 0.1354 | | | 3.440 | 62 |
| M4 x 0.70 | 0.1358 | | 29 | 3.450 | 60 |
| M4 x 0.70 | 0.1362 | | | 3.460 | 59 |
| M5 x 0.50 | 0.1764 | | | 4.480 | 80 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|-------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M5 x 0.50 | 0.1768 | | | 4.490 | 79 |
| M5 x 0.50 | 0.1772 | | 16 | 4.500 | 77 |
| M5 x 0.50 | 0.1776 | | | 4.510 | 75 |
| M5 x 0.50 | 0.1780 | | | 4.520 | 74 |
| M5 x 0.50 | 0.1783 | | | 4.530 | 72 |
| M5 x 0.50 | 0.1787 | | | 4.540 | 71 |
| M5 x 0.50 | 0.1791 | | | 4.550 | 69 |
| M5 x 0.50 | 0.1795 | | | 4.560 | 68 |
| M5 x 0.50 | 0.1799 | | 15 | 4.570 | 66 |
| M5 x 0.50 | 0.1803 | | | 4.580 | 65 |
| M5 x 0.50 | 0.1807 | | | 4.590 | 63 |
| M5 x 0.50 | 0.1811 | | | 4.600 | 62 |
| M5 x 0.50 | 0.1815 | | | 4.610 | 60 |
| M5 x 0.50 | 0.1819 | | 14 | 4.620 | 59 |
| M5 x 0.80 | 0.1638 | | | 4.160 | 81 |
| M5 x 0.80 | 0.1642 | | | 4.170 | 80 |
| M5 x 0.80 | 0.1646 | | | 4.180 | 79 |
| M5 x 0.80 | 0.1650 | | | 4.190 | 78 |
| M5 x 0.80 | 0.1654 | | | 4.200 | 77 |
| M5 x 0.80 | 0.1657 | | | 4.210 | 76 |
| M5 x 0.80 | 0.1661 | | 19 | 4.220 | 75 |
| M5 x 0.80 | 0.1665 | | | 4.230 | 74 |
| M5 x 0.80 | 0.1669 | | | 4.240 | 73 |
| M5 x 0.80 | 0.1673 | | | 4.250 | 72 |
| M5 x 0.80 | 0.1677 | | | 4.260 | 71 |
| M5 x 0.80 | 0.1681 | | | 4.270 | 70 |
| M5 x 0.80 | 0.1685 | | | 4.280 | 69 |
| M5 x 0.80 | 0.1689 | | | 4.290 | 68 |
| M5 x 0.80 | 0.1693 | | 18 | 4.300 | 67 |
| M5 x 0.80 | 0.1697 | | | 4.310 | 66 |
| M5 x 0.80 | 0.1701 | | | 4.320 | 65 |
| M5 x 0.80 | 0.1705 | | | 4.330 | 64 |
| M5 x 0.80 | 0.1709 | | | 4.340 | 64 |
| M5 x 0.80 | 0.1713 | | | 4.350 | 63 |
| M5 x 0.80 | 0.1717 | | | 4.360 | 62 |
| M5 x 0.80 | 0.1720 | 11/64 | | 4.370 | 61 |
| M5 x 0.80 | 0.1724 | | | 4.380 | 60 |
| M5 x 0.80 | 0.1728 | | 17 | 4.390 | 59 |
| M6 x 0.50 | 0.2165 | | | 5.500 | 77 |
| M6 x 0.50 | 0.2185 | | | 5.550 | 69 |
| M6 x 0.50 | 0.2189 | 7/32 | | 5.560 | 68 |
| M6 x 0.50 | 0.2205 | | | 5.600 | 62 |
| M6 x 0.50 | 0.2209 | | 2 | 5.610 | 60 |
| M6 x 0.75 | 0.2055 | | 5 | 5.220 | 80 |
| M6 x 0.75 | 0.2067 | | | 5.250 | 77 |
| M6 x 0.75 | 0.2087 | | | 5.300 | 72 |
| M6 x 0.75 | 0.2091 | | 4 | 5.310 | 71 |
| M6 x 0.75 | 0.2106 | | | 5.350 | 67 |
| M6 x 0.75 | 0.2126 | | | 5.400 | 62 |
| M6 x 0.75 | 0.2130 | | 3 | 5.410 | 61 |
| M6 x 1.00 | 0.1949 | | | 4.950 | 81 |
| M6 x 1.00 | 0.1953 | | | 4.960 | 80 |
| M6 x 1.00 | 0.1957 | | | 4.970 | 79 |
| M6 x 1.00 | 0.1961 | | 9 | 4.980 | 79 |
| M6 x 1.00 | 0.1965 | | | 4.990 | 78 |
| M6 x 1.00 | 0.1969 | | | 5.000 | 77 |
| M6 x 1.00 | 0.1988 | | | 5.050 | 73 |
| M6 x 1.00 | 0.1992 | | 8 | 5.060 | 72 |
| M6 x 1.00 | 0.2008 | | | 5.100 | 69 |
| M6 x 1.00 | 0.2012 | | 7 | 5.110 | 69 |
| M6 x 1.00 | 0.2028 | | | 5.150 | 65 |
| M6 x 1.00 | 0.2031 | 13/64 | | 5.160 | 65 |
| M6 x 1.00 | 0.2039 | | 6 | 5.180 | 63 |
| M6 x 1.00 | 0.2047 | | | 5.200 | 62 |
| M6 x 1.00 | 0.2055 | | 5 | 5.220 | 60 |
| M7 x 0.75 | 0.2461 | | D | 6.250 | 77 |
| M7 x 0.75 | 0.2480 | | | 6.300 | 72 |
| M7 x 0.75 | 0.2500 | 1/4 | E | 6.350 | 67 |
| M7 x 0.75 | 0.2520 | | | 6.400 | 62 |
| M7 x 1.00 | 0.2343 | 15/64 | | 5.950 | 81 |
| M7 x 1.00 | 0.2362 | | | 6.000 | 77 |
| M7 x 1.00 | 0.2378 | | B | 6.040 | 74 |
| M7 x 1.00 | 0.2382 | | | 6.050 | 73 |
| M7 x 1.00 | 0.2402 | | | 6.100 | 69 |
| M7 x 1.00 | 0.2421 | | C | 6.150 | 65 |
| M7 x 1.00 | 0.2441 | | | 6.200 | 62 |
| M8 x 0.50 | 0.2949 | | M | 7.490 | 79 |
| M8 x 0.50 | 0.2953 | | | 7.500 | 77 |
| M8 x 0.50 | 0.2969 | 19/64 | | 7.540 | 71 |
| M8 x 0.50 | 0.2972 | | | 7.550 | 69 |
| M8 x 0.50 | 0.2992 | | | 7.600 | 62 |

Metric Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M8 x 0.75 | 0.2854 | | | 7.250 | 77 |
| M8 x 0.75 | 0.2874 | | | 7.300 | 72 |
| M8 x 0.75 | 0.2894 | | | 7.350 | 67 |
| M8 x 0.75 | 0.2902 | | L | 7.370 | 65 |
| M8 x 0.75 | 0.2913 | | | 7.400 | 62 |
| M8 x 1.00 | 0.2736 | | | 6.950 | 81 |
| M8 x 1.00 | 0.2756 | | | 7.000 | 77 |
| M8 x 1.00 | 0.2768 | | J | 7.030 | 75 |
| M8 x 1.00 | 0.2776 | | | 7.050 | 73 |
| M8 x 1.00 | 0.2795 | | | 7.100 | 69 |
| M8 x 1.00 | 0.2811 | 9/32 | K | 7.140 | 66 |
| M8 x 1.00 | 0.2815 | | | 7.150 | 65 |
| M8 x 1.00 | 0.2835 | | | 7.200 | 62 |
| M8 x 1.25 | 0.2638 | | | 6.700 | 80 |
| M8 x 1.25 | 0.2657 | 17/64 | H | 6.750 | 77 |
| M8 x 1.25 | 0.2677 | | | 6.800 | 74 |
| M8 x 1.25 | 0.2697 | | | 6.850 | 71 |
| M8 x 1.25 | 0.2717 | | I | 6.900 | 68 |
| M8 x 1.25 | 0.2736 | | | 6.950 | 65 |
| M8 x 1.25 | 0.2756 | | | 7.000 | 62 |
| M8 x 1.25 | 0.2768 | | J | 7.030 | 60 |
| M8 x 1.25 | 0.2776 | | | 7.050 | 59 |
| M9 x 1.00 | 0.3130 | | | 7.950 | 81 |
| M9 x 1.00 | 0.3150 | | | 8.000 | 77 |
| M9 x 1.00 | 0.3161 | | O | 8.030 | 75 |
| M9 x 1.00 | 0.3169 | | | 8.050 | 73 |
| M9 x 1.00 | 0.3189 | | | 8.100 | 69 |
| M9 x 1.00 | 0.3209 | | | 8.150 | 65 |
| M9 x 1.00 | 0.3228 | | P | 8.200 | 62 |
| M10 x 0.75 | 0.3642 | | | 9.250 | 77 |
| M10 x 0.75 | 0.3661 | | | 9.300 | 72 |
| M10 x 0.75 | 0.3677 | | U | 9.340 | 68 |
| M10 x 0.75 | 0.3681 | | | 9.350 | 67 |
| M10 x 0.75 | 0.3701 | | | 9.400 | 62 |
| M10 x 1.00 | 0.3524 | | | 8.950 | 81 |
| M10 x 1.00 | 0.3543 | | | 9.000 | 77 |
| M10 x 1.00 | 0.3563 | | | 9.050 | 73 |
| M10 x 1.00 | 0.3579 | | T | 9.090 | 70 |
| M10 x 1.00 | 0.3583 | | | 9.100 | 69 |
| M10 x 1.00 | 0.3594 | 23/64 | | 9.130 | 67 |
| M10 x 1.00 | 0.3602 | | | 9.150 | 65 |
| M10 x 1.00 | 0.3622 | | | 9.200 | 62 |
| M10 x 1.25 | 0.3425 | | | 8.700 | 80 |
| M10 x 1.25 | 0.3437 | 11/32 | | 8.730 | 78 |
| M10 x 1.25 | 0.3445 | | | 8.750 | 77 |
| M10 x 1.25 | 0.3465 | | | 8.800 | 74 |
| M10 x 1.25 | 0.3480 | | S | 8.840 | 71 |
| M10 x 1.25 | 0.3484 | | | 8.850 | 71 |
| M10 x 1.25 | 0.3504 | | | 8.900 | 68 |
| M10 x 1.25 | 0.3524 | | | 8.950 | 65 |
| M10 x 1.25 | 0.3543 | | | 9.000 | 62 |
| M10 x 1.25 | 0.3563 | | | 9.050 | 59 |
| M10 x 1.50 | 0.3319 | | Q | 8.430 | 81 |
| M10 x 1.50 | 0.3327 | | | 8.450 | 80 |
| M10 x 1.50 | 0.3346 | | | 8.500 | 77 |
| M10 x 1.50 | 0.3366 | | | 8.550 | 74 |
| M10 x 1.50 | 0.3386 | | | 8.600 | 72 |
| M10 x 1.50 | 0.3390 | | R | 8.610 | 71 |
| M10 x 1.50 | 0.3406 | | | 8.650 | 69 |
| M10 x 1.50 | 0.3425 | | | 8.700 | 67 |
| M10 x 1.50 | 0.3437 | 11/32 | | 8.730 | 65 |
| M10 x 1.50 | 0.3445 | | | 8.750 | 64 |
| M10 x 1.50 | 0.3465 | | | 8.800 | 62 |
| M10 x 1.50 | 0.3480 | | S | 8.840 | 60 |
| M10 x 1.50 | 0.3484 | | | 8.850 | 59 |
| M11 x 1.00 | 0.3917 | | | 9.950 | 81 |
| M11 x 1.00 | 0.3937 | | | 10.000 | 77 |
| M11 x 1.00 | 0.3957 | | | 10.050 | 73 |
| M11 x 1.00 | 0.3969 | | X | 10.080 | 71 |
| M11 x 1.00 | 0.3976 | | | 10.100 | 69 |
| M11 x 1.00 | 0.3996 | | | 10.150 | 65 |
| M11 x 1.00 | 0.4016 | | | 10.200 | 62 |
| M12 x 1.00 | 0.4311 | | | 10.950 | 81 |
| M12 x 1.00 | 0.4331 | | | 11.000 | 77 |
| M12 x 1.00 | 0.4350 | | | 11.050 | 73 |
| M12 x 1.00 | 0.4370 | | | 11.100 | 69 |
| M12 x 1.00 | 0.4374 | 7/16 | | 11.110 | 69 |
| M12 x 1.00 | 0.4390 | | | 11.150 | 65 |
| M12 x 1.00 | 0.4409 | | | 11.200 | 62 |
| M12 x 1.25 | 0.4213 | | | 10.700 | 80 |
| M12 x 1.25 | 0.4220 | 27/64 | | 10.720 | 79 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M12 x 1.25 | 0.4232 | | | 10.750 | 77 |
| M12 x 1.25 | 0.4252 | | | 10.800 | 74 |
| M12 x 1.25 | 0.4272 | | | 10.850 | 71 |
| M12 x 1.25 | 0.4291 | | | 10.900 | 68 |
| M12 x 1.25 | 0.4311 | | | 10.950 | 65 |
| M12 x 1.25 | 0.4331 | | | 11.000 | 62 |
| M12 x 1.25 | 0.4350 | | | 11.050 | 59 |
| M12 x 1.50 | 0.4114 | | | 10.450 | 80 |
| M12 x 1.50 | 0.4130 | | Z | 10.490 | 77 |
| M12 x 1.50 | 0.4134 | | | 10.500 | 77 |
| M12 x 1.50 | 0.4154 | | | 10.550 | 74 |
| M12 x 1.50 | 0.4173 | | | 10.600 | 72 |
| M12 x 1.50 | 0.4193 | | | 10.650 | 69 |
| M12 x 1.50 | 0.4213 | | | 10.700 | 67 |
| M12 x 1.50 | 0.4220 | 27/64 | | 10.720 | 66 |
| M12 x 1.50 | 0.4232 | | | 10.750 | 64 |
| M12 x 1.50 | 0.4252 | | | 10.800 | 62 |
| M12 x 1.50 | 0.4272 | | | 10.850 | 59 |
| M12 x 1.75 | 0.3996 | | | 10.150 | 81 |
| M12 x 1.75 | 0.4016 | | | 10.200 | 79 |
| M12 x 1.75 | 0.4035 | | | 10.250 | 77 |
| M12 x 1.75 | 0.4039 | | Y | 10.260 | 77 |
| M12 x 1.75 | 0.4055 | | | 10.300 | 75 |
| M12 x 1.75 | 0.4063 | 13/32 | | 10.320 | 74 |
| M12 x 1.75 | 0.4075 | | | 10.350 | 73 |
| M12 x 1.75 | 0.4094 | | | 10.400 | 70 |
| M12 x 1.75 | 0.4114 | | | 10.450 | 68 |
| M12 x 1.75 | 0.4130 | | Z | 10.490 | 66 |
| M12 x 1.75 | 0.4134 | | | 10.500 | 66 |
| M12 x 1.75 | 0.4154 | | | 10.550 | 64 |
| M12 x 1.75 | 0.4173 | | | 10.600 | 62 |
| M12 x 1.75 | 0.4193 | | | 10.650 | 59 |
| M14 x 1.00 | 0.5098 | | | 12.950 | 81 |
| M14 x 1.00 | 0.5118 | | | 13.000 | 77 |
| M14 x 1.00 | 0.5138 | | | 13.050 | 73 |
| M14 x 1.00 | 0.5157 | 33/64 | | 13.100 | 69 |
| M14 x 1.00 | 0.5177 | | | 13.150 | 65 |
| M14 x 1.00 | 0.5197 | | | 13.200 | 62 |
| M14 x 1.25 | 0.5000 | 1/2 | | 12.700 | 80 |
| M14 x 1.25 | 0.5020 | | | 12.750 | 77 |
| M14 x 1.25 | 0.5039 | | | 12.800 | 74 |
| M14 x 1.25 | 0.5059 | | | 12.850 | 71 |
| M14 x 1.25 | 0.5079 | | | 12.900 | 68 |
| M14 x 1.25 | 0.5098 | | | 12.950 | 65 |
| M14 x 1.25 | 0.5118 | | | 13.000 | 62 |
| M14 x 1.25 | 0.5138 | | | 13.050 | 59 |
| M14 x 1.50 | 0.4902 | | | 12.450 | 80 |
| M14 x 1.50 | 0.4921 | | | 12.500 | 77 |
| M14 x 1.50 | 0.4941 | | | 12.550 | 74 |
| M14 x 1.50 | 0.4961 | | | 12.600 | 72 |
| M14 x 1.50 | 0.4980 | | | 12.650 | 69 |
| M14 x 1.50 | 0.5000 | 1/2 | | 12.700 | 67 |
| M14 x 1.50 | 0.5020 | | | 12.750 | 64 |
| M14 x 1.50 | 0.5039 | | | 12.800 | 62 |
| M14 x 1.50 | 0.5059 | | | 12.850 | 59 |
| M14 x 2.00 | 0.4685 | | | 11.900 | 81 |
| M14 x 2.00 | 0.4689 | 15/32 | | 11.910 | 80 |
| M14 x 2.00 | 0.4705 | | | 11.950 | 79 |
| M14 x 2.00 | 0.4724 | | | 12.000 | 77 |
| M14 x 2.00 | 0.4744 | | | 12.050 | 75 |
| M14 x 2.00 | 0.4764 | | | 12.100 | 73 |
| M14 x 2.00 | 0.4783 | | | 12.150 | 71 |
| M14 x 2.00 | 0.4803 | | | 12.200 | 69 |
| M14 x 2.00 | 0.4823 | | | 12.250 | 67 |
| M14 x 2.00 | 0.4843 | 31/64 | | 12.300 | 65 |
| M14 x 2.00 | 0.4862 | | | 12.350 | 64 |
| M14 x 2.00 | 0.4882 | | | 12.400 | 62 |
| M14 x 2.00 | 0.4902 | | | 12.450 | 60 |
| M15 x 1.00 | 0.5492 | | | 13.950 | 81 |
| M15 x 1.00 | 0.5512 | | | 14.000 | 77 |
| M15 x 1.00 | 0.5531 | | | 14.050 | 73 |
| M15 x 1.00 | 0.5551 | | | 14.100 | 69 |
| M15 x 1.00 | 0.5571 | | | 14.150 | 65 |
| M15 x 1.00 | 0.5591 | | | 14.200 | 62 |
| M15 x 1.50 | 0.5295 | | | 13.450 | 80 |
| M15 x 1.50 | 0.5311 | 17/32 | | 13.490 | 77 |
| M15 x 1.50 | 0.5315 | | | 13.500 | 77 |
| M15 x 1.50 | 0.5335 | | | 13.550 | 74 |
| M15 x 1.50 | 0.5354 | | | 13.600 | 72 |
| M15 x 1.50 | 0.5374 | | | 13.650 | 69 |
| M15 x 1.50 | 0.5394 | | | 13.700 | 67 |

Metric Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M15 x 1.50 | 0.5413 | | | 13.750 | 64 |
| M15 x 1.50 | 0.5433 | | | 13.800 | 62 |
| M15 x 1.50 | 0.5453 | | | 13.850 | 59 |
| M16 x 1.00 | 0.5886 | | | 14.950 | 81 |
| M16 x 1.00 | 0.5906 | | | 15.000 | 77 |
| M16 x 1.00 | 0.5925 | | | 15.050 | 73 |
| M16 x 1.00 | 0.5937 | 19/32 | | 15.080 | 71 |
| M16 x 1.00 | 0.5945 | | | 15.100 | 69 |
| M16 x 1.00 | 0.5965 | | | 15.150 | 65 |
| M16 x 1.00 | 0.5984 | | | 15.200 | 62 |
| M16 x 1.50 | 0.5689 | | | 14.450 | 80 |
| M16 x 1.50 | 0.5709 | | | 14.500 | 77 |
| M16 x 1.50 | 0.5728 | | | 14.550 | 74 |
| M16 x 1.50 | 0.5748 | | | 14.600 | 72 |
| M16 x 1.50 | 0.5768 | | | 14.650 | 69 |
| M16 x 1.50 | 0.5787 | | | 14.700 | 67 |
| M16 x 1.50 | 0.5807 | | | 14.750 | 64 |
| M16 x 1.50 | 0.5827 | | | 14.800 | 62 |
| M16 x 1.50 | 0.5846 | | | 14.850 | 59 |
| M16 x 2.00 | 0.5469 | 35/64 | | 13.890 | 81 |
| M16 x 2.00 | 0.5472 | | | 13.900 | 81 |
| M16 x 2.00 | 0.5492 | | | 13.950 | 79 |
| M16 x 2.00 | 0.5512 | | | 14.000 | 77 |
| M16 x 2.00 | 0.5531 | | | 14.050 | 75 |
| M16 x 2.00 | 0.5551 | | | 14.100 | 73 |
| M16 x 2.00 | 0.5571 | | | 14.150 | 71 |
| M16 x 2.00 | 0.5591 | | | 14.200 | 69 |
| M16 x 2.00 | 0.5610 | | | 14.250 | 67 |
| M16 x 2.00 | 0.5626 | 9/16 | | 14.290 | 66 |
| M16 x 2.00 | 0.5630 | | | 14.300 | 65 |
| M16 x 2.00 | 0.5650 | | | 14.350 | 64 |
| M16 x 2.00 | 0.5669 | | | 14.400 | 62 |
| M16 x 2.00 | 0.5689 | | | 14.450 | 60 |
| M18 x 1.00 | 0.6673 | | | 16.950 | 81 |
| M18 x 1.00 | 0.6693 | | | 17.000 | 77 |
| M18 x 1.00 | 0.6713 | | | 17.050 | 73 |
| M18 x 1.00 | 0.6720 | 43/64 | | 17.070 | 72 |
| M18 x 1.00 | 0.6732 | | | 17.100 | 69 |
| M18 x 1.00 | 0.6752 | | | 17.150 | 65 |
| M18 x 1.00 | 0.6772 | | | 17.200 | 62 |
| M18 x 1.50 | 0.6476 | | | 16.450 | 80 |
| M18 x 1.50 | 0.6496 | | | 16.500 | 77 |
| M18 x 1.50 | 0.6516 | | | 16.550 | 74 |
| M18 x 1.50 | 0.6535 | | | 16.600 | 72 |
| M18 x 1.50 | 0.6555 | | | 16.650 | 69 |
| M18 x 1.50 | 0.6563 | 21/32 | | 16.670 | 68 |
| M18 x 1.50 | 0.6575 | | | 16.700 | 67 |
| M18 x 1.50 | 0.6594 | | | 16.750 | 64 |
| M18 x 1.50 | 0.6614 | | | 16.800 | 62 |
| M18 x 1.50 | 0.6634 | | | 16.850 | 59 |
| M18 x 2.00 | 0.6260 | | | 15.900 | 81 |
| M18 x 2.00 | 0.6280 | | | 15.950 | 79 |
| M18 x 2.00 | 0.6299 | | | 16.000 | 77 |
| M18 x 2.00 | 0.6319 | | | 16.050 | 75 |
| M18 x 2.00 | 0.6339 | | | 16.100 | 73 |
| M18 x 2.00 | 0.6358 | | | 16.150 | 71 |
| M18 x 2.00 | 0.6378 | | | 16.200 | 69 |
| M18 x 2.00 | 0.6398 | | | 16.250 | 67 |
| M18 x 2.00 | 0.6406 | 41/64 | | 16.270 | 67 |
| M18 x 2.00 | 0.6417 | | | 16.300 | 65 |
| M18 x 2.00 | 0.6437 | | | 16.350 | 64 |
| M18 x 2.00 | 0.6457 | | | 16.400 | 62 |
| M18 x 2.00 | 0.6476 | | | 16.450 | 60 |
| M18 x 2.50 | 0.6063 | | | 15.400 | 80 |
| M18 x 2.50 | 0.6083 | | | 15.450 | 79 |
| M18 x 2.50 | 0.6094 | 39/64 | | 15.480 | 78 |
| M18 x 2.50 | 0.6102 | | | 15.500 | 77 |
| M18 x 2.50 | 0.6122 | | | 15.550 | 75 |
| M18 x 2.50 | 0.6142 | | | 15.600 | 74 |
| M18 x 2.50 | 0.6161 | | | 15.650 | 72 |
| M18 x 2.50 | 0.6181 | | | 15.700 | 71 |
| M18 x 2.50 | 0.6201 | | | 15.750 | 69 |
| M18 x 2.50 | 0.6220 | | | 15.800 | 68 |
| M18 x 2.50 | 0.6240 | | | 15.850 | 66 |
| M18 x 2.50 | 0.6248 | 5/8 | | 15.870 | 66 |
| M18 x 2.50 | 0.6260 | | | 15.900 | 65 |
| M18 x 2.50 | 0.6280 | | | 15.950 | 63 |
| M18 x 2.50 | 0.6299 | | | 16.000 | 62 |
| M18 x 2.50 | 0.6319 | | | 16.050 | 60 |
| M18 x 2.50 | 0.6339 | | | 16.100 | 59 |
| M20 x 1.50 | 0.7264 | | | 18.450 | 80 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M20 x 1.50 | 0.7283 | | | 18.500 | 77 |
| M20 x 1.50 | 0.7303 | | | 18.550 | 74 |
| M20 x 1.50 | 0.7323 | | | 18.600 | 72 |
| M20 x 1.50 | 0.7343 | 47/64 | | 18.650 | 69 |
| M20 x 1.50 | 0.7362 | | | 18.700 | 67 |
| M20 x 1.50 | 0.7382 | | | 18.750 | 64 |
| M20 x 1.50 | 0.7402 | | | 18.800 | 62 |
| M20 x 1.50 | 0.7421 | | | 18.850 | 59 |
| M20 x 2.00 | 0.7047 | | | 17.900 | 81 |
| M20 x 2.00 | 0.7067 | | | 17.950 | 79 |
| M20 x 2.00 | 0.7087 | | | 18.000 | 77 |
| M20 x 2.00 | 0.7106 | | | 18.050 | 75 |
| M20 x 2.00 | 0.7126 | | | 18.100 | 73 |
| M20 x 2.00 | 0.7146 | | | 18.150 | 71 |
| M20 x 2.00 | 0.7165 | | | 18.200 | 69 |
| M20 x 2.00 | 0.7185 | | | 18.250 | 67 |
| M20 x 2.00 | 0.7189 | 23/32 | | 18.260 | 67 |
| M20 x 2.00 | 0.7205 | | | 18.300 | 65 |
| M20 x 2.00 | 0.7224 | | | 18.350 | 64 |
| M20 x 2.00 | 0.7244 | | | 18.400 | 62 |
| M20 x 2.00 | 0.7264 | | | 18.450 | 60 |
| M20 x 2.50 | 0.6850 | | | 17.400 | 80 |
| M20 x 2.50 | 0.6870 | | | 17.450 | 79 |
| M20 x 2.50 | 0.6874 | 11/16 | | 17.460 | 78 |
| M20 x 2.50 | 0.6890 | | | 17.500 | 77 |
| M20 x 2.50 | 0.6909 | | | 17.550 | 75 |
| M20 x 2.50 | 0.6929 | | | 17.600 | 74 |
| M20 x 2.50 | 0.6949 | | | 17.650 | 72 |
| M20 x 2.50 | 0.6969 | | | 17.700 | 71 |
| M20 x 2.50 | 0.6988 | | | 17.750 | 69 |
| M20 x 2.50 | 0.7008 | | | 17.800 | 68 |
| M20 x 2.50 | 0.7028 | | | 17.850 | 66 |
| M20 x 2.50 | 0.7031 | 45/64 | | 17.860 | 66 |
| M20 x 2.50 | 0.7047 | | | 17.900 | 65 |
| M20 x 2.50 | 0.7067 | | | 17.950 | 63 |
| M20 x 2.50 | 0.7087 | | | 18.000 | 62 |
| M20 x 2.50 | 0.7106 | | | 18.050 | 60 |
| M20 x 2.50 | 0.7126 | | | 18.100 | 59 |
| M22 x 1.00 | 0.8248 | | | 20.950 | 81 |
| M22 x 1.00 | 0.8268 | | | 21.000 | 77 |
| M22 x 1.00 | 0.8280 | 53/64 | | 21.030 | 75 |
| M22 x 1.00 | 0.8287 | | | 21.050 | 73 |
| M22 x 1.00 | 0.8307 | | | 21.100 | 69 |
| M22 x 1.00 | 0.8327 | | | 21.150 | 65 |
| M22 x 1.00 | 0.8346 | | | 21.200 | 62 |
| M22 x 1.50 | 0.8051 | | | 20.450 | 80 |
| M22 x 1.50 | 0.8071 | | | 20.500 | 77 |
| M22 x 1.50 | 0.8091 | | | 20.550 | 74 |
| M22 x 1.50 | 0.8110 | | | 20.600 | 72 |
| M22 x 1.50 | 0.8126 | 13/16 | | 20.640 | 70 |
| M22 x 1.50 | 0.8130 | | | 20.650 | 69 |
| M22 x 1.50 | 0.8150 | | | 20.700 | 67 |
| M22 x 1.50 | 0.8169 | | | 20.750 | 64 |
| M22 x 1.50 | 0.8189 | | | 20.800 | 62 |
| M22 x 1.50 | 0.8209 | | | 20.850 | 59 |
| M22 x 2.00 | 0.7835 | | | 19.900 | 81 |
| M22 x 2.00 | 0.7854 | | | 19.950 | 79 |
| M22 x 2.00 | 0.7874 | | | 20.000 | 77 |
| M22 x 2.00 | 0.7894 | | | 20.050 | 75 |
| M22 x 2.00 | 0.7913 | | | 20.100 | 73 |
| M22 x 2.00 | 0.7933 | | | 20.150 | 71 |
| M22 x 2.00 | 0.7953 | | | 20.200 | 69 |
| M22 x 2.00 | 0.7969 | 51/64 | | 20.240 | 68 |
| M22 x 2.00 | 0.7972 | | | 20.250 | 67 |
| M22 x 2.00 | 0.7992 | | | 20.300 | 65 |
| M22 x 2.00 | 0.8012 | | | 20.350 | 64 |
| M22 x 2.00 | 0.8031 | | | 20.400 | 62 |
| M22 x 2.00 | 0.8051 | | | 20.450 | 60 |
| M22 x 2.50 | 0.7638 | | | 19.400 | 80 |
| M22 x 2.50 | 0.7657 | 49/64 | | 19.450 | 79 |
| M22 x 2.50 | 0.7677 | | | 19.500 | 77 |
| M22 x 2.50 | 0.7697 | | | 19.550 | 75 |
| M22 x 2.50 | 0.7717 | | | 19.600 | 74 |
| M22 x 2.50 | 0.7736 | | | 19.650 | 72 |
| M22 x 2.50 | 0.7756 | | | 19.700 | 71 |
| M22 x 2.50 | 0.7776 | | | 19.750 | 69 |
| M22 x 2.50 | 0.7795 | | | 19.800 | 68 |
| M22 x 2.50 | 0.7811 | 25/32 | | 19.840 | 67 |
| M22 x 2.50 | 0.7815 | | | 19.850 | 66 |
| M22 x 2.50 | 0.7835 | | | 19.900 | 65 |
| M22 x 2.50 | 0.7854 | | | 19.950 | 63 |

Metric Cut Tap Drill Sizes

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|-------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M22 x 2.50 | 0.7874 | | | 20.000 | 62 |
| M22 x 2.50 | 0.7894 | | | 20.050 | 60 |
| M22 x 2.50 | 0.7913 | | | 20.100 | 59 |
| M24 x 1.00 | 0.9035 | | | 22.950 | 81 |
| M24 x 1.00 | 0.9055 | | | 23.000 | 77 |
| M24 x 1.00 | 0.9063 | 29/32 | | 23.020 | 75 |
| M24 x 1.00 | 0.9075 | | | 23.050 | 73 |
| M24 x 1.00 | 0.9094 | | | 23.100 | 69 |
| M24 x 1.00 | 0.9114 | | | 23.150 | 65 |
| M24 x 1.00 | 0.9134 | | | 23.200 | 62 |
| M24 x 1.50 | 0.8839 | | | 22.450 | 80 |
| M24 x 1.50 | 0.8858 | | | 22.500 | 77 |
| M24 x 1.50 | 0.8878 | | | 22.550 | 74 |
| M24 x 1.50 | 0.8898 | | | 22.600 | 72 |
| M24 x 1.50 | 0.8917 | | | 22.650 | 69 |
| M24 x 1.50 | 0.8937 | | | 22.700 | 67 |
| M24 x 1.50 | 0.8957 | | | 22.750 | 64 |
| M24 x 1.50 | 0.8976 | | | 22.800 | 62 |
| M24 x 1.50 | 0.8996 | | | 22.850 | 59 |
| M24 x 2.00 | 0.8622 | | | 21.900 | 81 |
| M24 x 2.00 | 0.8642 | | | 21.950 | 79 |
| M24 x 2.00 | 0.8661 | | | 22.000 | 77 |
| M24 x 2.00 | 0.8681 | | | 22.050 | 75 |
| M24 x 2.00 | 0.8701 | | | 22.100 | 73 |
| M24 x 2.00 | 0.8720 | | | 22.150 | 71 |
| M24 x 2.00 | 0.8740 | | | 22.200 | 69 |
| M24 x 2.00 | 0.8748 | 7/8 | | 22.220 | 69 |
| M24 x 2.00 | 0.8760 | | | 22.250 | 67 |
| M24 x 2.00 | 0.8780 | | | 22.300 | 65 |
| M24 x 2.00 | 0.8799 | | | 22.350 | 64 |
| M24 x 2.00 | 0.8819 | | | 22.400 | 62 |
| M24 x 2.00 | 0.8839 | | | 22.450 | 60 |
| M24 x 3.00 | 0.8209 | | | 20.850 | 81 |
| M24 x 3.00 | 0.8228 | | | 20.900 | 80 |
| M24 x 3.00 | 0.8248 | | | 20.950 | 78 |
| M24 x 3.00 | 0.8268 | | | 21.000 | 77 |
| M24 x 3.00 | 0.8280 | 53/64 | | 21.030 | 76 |
| M24 x 3.00 | 0.8287 | | | 21.050 | 76 |
| M24 x 3.00 | 0.8307 | | | 21.100 | 74 |
| M24 x 3.00 | 0.8327 | | | 21.150 | 73 |
| M24 x 3.00 | 0.8346 | | | 21.200 | 72 |
| M24 x 3.00 | 0.8366 | | | 21.250 | 71 |
| M24 x 3.00 | 0.8386 | | | 21.300 | 69 |
| M24 x 3.00 | 0.8406 | | | 21.350 | 68 |
| M24 x 3.00 | 0.8425 | | | 21.400 | 67 |
| M24 x 3.00 | 0.8437 | 27/32 | | 21.430 | 66 |
| M24 x 3.00 | 0.8445 | | | 21.450 | 65 |
| M24 x 3.00 | 0.8465 | | | 21.500 | 64 |
| M24 x 3.00 | 0.8484 | | | 21.550 | 63 |
| M24 x 3.00 | 0.8504 | | | 21.600 | 62 |
| M24 x 3.00 | 0.8524 | | | 21.650 | 60 |
| M24 x 3.00 | 0.8543 | | | 21.700 | 59 |
| M27 x 3.00 | 0.9370 | | | 23.800 | 82 |
| M27 x 3.00 | 0.9374 | 15/16 | | 23.810 | 82 |
| M27 x 3.00 | 0.9409 | | | 23.900 | 80 |
| M27 x 3.00 | 0.9449 | | | 24.000 | 77 |
| M27 x 3.00 | 0.9488 | | | 24.100 | 74 |
| M27 x 3.00 | 0.9528 | | | 24.200 | 72 |
| M27 x 3.00 | 0.9531 | 61/64 | | 24.210 | 72 |
| M27 x 3.00 | 0.9567 | | | 24.300 | 69 |
| M27 x 3.00 | 0.9606 | | | 24.400 | 67 |
| M27 x 3.00 | 0.9646 | | | 24.500 | 64 |
| M27 x 3.00 | 0.9685 | | | 24.600 | 62 |
| M27 x 3.00 | 0.9689 | 31/32 | | 24.610 | 61 |
| M27 x 3.00 | 0.9724 | | | 24.700 | 59 |
| M27 x 2.00 | 0.9803 | | | 24.900 | 81 |
| M27 x 2.00 | 0.9843 | 63/64 | | 25.000 | 77 |
| M27 x 2.00 | 0.9882 | | | 25.100 | 73 |
| M27 x 2.00 | 0.9921 | | | 25.200 | 69 |
| M27 x 2.00 | 0.9961 | | | 25.300 | 65 |
| M27 x 2.00 | 1.0000 | 1 | | 25.400 | 62 |

| 81-59% Theoretical Percentage of Thread | | | | | |
|---|--------|---------|----------|--------|---------|
| Tap Size | dec | Fract | Wire/Let | mm | Theor % |
| M30 x 3.50 | 1.0354 | | | 26.300 | 83 |
| M30 x 3.50 | 1.0394 | | | 26.400 | 79 |
| M30 x 3.50 | 1.0433 | | | 26.500 | 77 |
| M30 x 3.50 | 1.0469 | 1 3/64 | | 26.590 | 75 |
| M30 x 3.50 | 1.0472 | | | 26.600 | 75 |
| M30 x 3.50 | 1.0512 | | | 26.700 | 73 |
| M30 x 3.50 | 1.0551 | | | 26.800 | 70 |
| M30 x 3.50 | 1.0591 | | | 26.900 | 68 |
| M30 x 3.50 | 1.0626 | 1 1/16 | | 26.990 | 66 |
| M30 x 3.50 | 1.0630 | | | 27.000 | 66 |
| M30 x 3.50 | 1.0669 | | | 27.100 | 64 |
| M30 x 3.50 | 1.0709 | | | 27.200 | 62 |
| M30 x 3.50 | 1.0748 | | | 27.300 | 59 |
| M30 x 2.00 | 1.0984 | | | 27.900 | 81 |
| M30 x 2.00 | 1.1024 | | | 28.000 | 77 |
| M30 x 2.00 | 1.1063 | | | 28.100 | 73 |
| M30 x 2.00 | 1.1094 | 1 7/64 | | 28.180 | 70 |
| M30 x 2.00 | 1.1102 | | | 28.200 | 69 |
| M30 x 2.00 | 1.1142 | | | 28.300 | 65 |
| M30 x 2.00 | 1.1181 | | | 28.400 | 62 |
| M30 x 2.00 | 1.1220 | | | 28.500 | 58 |
| M33 x 3.50 | 1.1535 | | | 29.300 | 81 |
| M33 x 3.50 | 1.1563 | 1 5/32 | | 29.370 | 80 |
| M33 x 3.50 | 1.1575 | | | 29.400 | 79 |
| M33 x 3.50 | 1.1614 | | | 29.500 | 77 |
| M33 x 3.50 | 1.1654 | | | 29.600 | 75 |
| M33 x 3.50 | 1.1693 | 1 11/64 | | 29.770 | 71 |
| M33 x 3.50 | 1.1732 | | | 29.800 | 70 |
| M33 x 3.50 | 1.1772 | | | 29.900 | 68 |
| M33 x 3.50 | 1.1811 | | | 30.000 | 66 |
| M33 x 3.50 | 1.1850 | | | 30.100 | 64 |
| M33 x 3.50 | 1.1874 | 1 3/16 | | 30.160 | 62 |
| M33 x 3.50 | 1.1890 | | | 30.200 | 62 |
| M33 x 3.50 | 1.1929 | | | 30.300 | 59 |
| M33 x 2.00 | 1.2165 | | | 30.900 | 81 |
| M33 x 2.00 | 1.2189 | 1 7/32 | | 30.960 | 79 |
| M33 x 2.00 | 1.2205 | | | 31.000 | 77 |
| M33 x 2.00 | 1.2244 | | | 31.100 | 73 |
| M33 x 2.00 | 1.2283 | | | 31.200 | 69 |
| M33 x 2.00 | 1.2323 | | | 31.300 | 65 |
| M33 x 2.00 | 1.2343 | 1 15/64 | | 31.350 | 64 |
| M33 x 2.00 | 1.2362 | | | 31.400 | 62 |
| M33 x 2.00 | 1.2402 | | | 31.500 | 58 |
| M36 x 4.00 | 1.2500 | 1 1/4 | | 31.750 | 82 |
| M36 x 4.00 | 1.2520 | | | 31.800 | 81 |
| M36 x 4.00 | 1.2559 | | | 31.900 | 79 |
| M36 x 4.00 | 1.2598 | | | 32.000 | 77 |
| M36 x 4.00 | 1.2638 | | | 32.100 | 75 |
| M36 x 4.00 | 1.2657 | 1 17/64 | | 32.150 | 74 |
| M36 x 4.00 | 1.2677 | | | 32.200 | 73 |
| M36 x 4.00 | 1.2717 | | | 32.300 | 71 |
| M36 x 4.00 | 1.2756 | | | 32.400 | 69 |
| M36 x 4.00 | 1.2795 | | | 32.500 | 67 |
| M36 x 4.00 | 1.2811 | 1 9/32 | | 32.540 | 67 |
| M36 x 4.00 | 1.2835 | | | 32.600 | 65 |
| M36 x 4.00 | 1.2874 | | | 32.700 | 64 |
| M36 x 4.00 | 1.2913 | | | 32.800 | 62 |
| M36 x 4.00 | 1.2953 | | | 32.900 | 60 |
| M36 x 4.00 | 1.2969 | 1 19/64 | | 32.940 | 59 |
| M36 x 3.00 | 1.2913 | | | 32.800 | 82 |
| M36 x 3.00 | 1.2953 | | | 32.900 | 80 |
| M36 x 3.00 | 1.2969 | 1 19/64 | | 32.940 | 79 |
| M36 x 3.00 | 1.2992 | | | 33.000 | 77 |
| M36 x 3.00 | 1.3031 | | | 33.100 | 74 |
| M36 x 3.00 | 1.3071 | | | 33.200 | 72 |
| M36 x 3.00 | 1.3110 | | | 33.300 | 69 |
| M36 x 3.00 | 1.3126 | 1 5/16 | | 33.340 | 68 |
| M36 x 3.00 | 1.3150 | | | 33.400 | 67 |
| M36 x 3.00 | 1.3189 | | | 33.500 | 64 |
| M36 x 3.00 | 1.3228 | | | 33.600 | 62 |
| M36 x 3.00 | 1.3268 | | | 33.700 | 59 |

DRILL SIZE FOR THREAD FORMING @ 55% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.91 | M 10 | 0.75 | 9.72 | 2 | 56 | 2.01 |
| M 1.1 | 0.25 | 1.01 | M 10 | 1.00 | 9.63 | 2 | 64 | 2.04 |
| M 1.2 | 0.25 | 1.11 | M 10 | 1.25 | 9.53 | 3 | 48 | 2.32 |
| M 1.4 | 0.30 | 1.29 | M 10 | 1.50 | 9.44 | 3 | 56 | 2.34 |
| M 1.6 | 0.35 | 1.47 | M 11 | 0.75 | 10.72 | 4 | 40 | 2.61 |
| M 1.7 | 0.35 | 1.57 | M 11 | 1.00 | 10.63 | 4 | 48 | 2.65 |
| M 1.8 | 0.35 | 1.67 | M 11 | 1.50 | 10.44 | 5 | 40 | 2.94 |
| M 2 | 0.40 | 1.85 | M 12 | 1.00 | 11.63 | 5 | 44 | 2.96 |
| M 2.2 | 0.45 | 2.03 | M 12 | 1.25 | 11.53 | 6 | 32 | 3.21 |
| M 2.3 | 0.40 | 2.15 | M 12 | 1.50 | 11.44 | 6 | 40 | 3.27 |
| M 2.5 | 0.45 | 2.33 | M 12 | 1.75 | 11.35 | 8 | 32 | 3.87 |
| M 2.6 | 0.45 | 2.43 | M 14 | 1.00 | 13.63 | 8 | 36 | 3.90 |
| M 3 | 0.50 | 2.81 | M 14 | 1.25 | 13.53 | 10 | 24 | 4.43 |
| M 3.5 | 0.60 | 3.28 | M 14 | 1.50 | 13.44 | 10 | 32 | 4.53 |
| M 4 | 0.70 | 3.74 | M 14 | 2.00 | 13.25 | 12 | 24 | 5.09 |
| M 4.5 | 0.75 | 4.22 | M 15 | 1.00 | 14.63 | 12 | 28 | 5.15 |
| M 5 | 0.50 | 4.81 | M 15 | 1.50 | 14.44 | 1/4 | 20 | 5.88 |
| M 5 | 0.80 | 4.70 | M 16 | 1.00 | 15.63 | 1/4 | 28 | 6.01 |
| M 5.5 | 0.50 | 5.31 | M 16 | 1.50 | 15.44 | 5/16 | 18 | 7.41 |
| M 6 | 0.75 | 5.72 | M 16 | 2.00 | 15.25 | 5/16 | 24 | 7.54 |
| M 6 | 1.00 | 5.63 | M 17 | 1.00 | 16.63 | 3/8 | 16 | 8.93 |
| M 7 | 0.75 | 6.72 | M 17 | 1.50 | 16.44 | 3/8 | 24 | 9.13 |
| M 7 | 1.00 | 6.63 | M 18 | 1.00 | 17.63 | 7/16 | 14 | 10.43 |
| M 8 | 0.75 | 7.72 | M 18 | 1.50 | 17.44 | 7/16 | 20 | 10.64 |
| M 8 | 1.00 | 7.63 | M 18 | 2.00 | 17.25 | 1/2 | 13 | 11.97 |
| M 8 | 1.25 | 7.53 | M 18 | 2.50 | 17.07 | 1/2 | 20 | 12.23 |
| M 9 | 0.75 | 8.72 | M 20 | 1.00 | 19.63 | 9/16 | 12 | 13.50 |
| M 9 | 1.00 | 8.63 | M 20 | 2.50 | 19.07 | 9/16 | 18 | 13.76 |
| M 9 | 1.25 | 8.53 | | | | 5/8 | 11 | 15.01 |
| | | | | | | 5/8 | 18 | 15.35 |
| | | | | | | 3/4 | 10 | 18.10 |
| | | | | | | 3/4 | 16 | 18.46 |
| | | | | | | 7/8 | 9 | 21.17 |
| | | | | | | 7/8 | 14 | 21.55 |
| | | | | | | 1 | 8 | 24.21 |
| | | | | | | 1 | 12 | 24.61 |

DRILL SIZE FOR THREAD FORMING @ 57.5% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.90 | M 10 | 0.75 | 9.71 | 2 | 56 | 2.01 |
| M 1.1 | 0.25 | 1.00 | M 10 | 1.00 | 9.61 | 2 | 64 | 2.03 |
| M 1.2 | 0.25 | 1.10 | M 10 | 1.25 | 9.51 | 3 | 48 | 2.31 |
| M 1.4 | 0.30 | 1.28 | M 10 | 1.50 | 9.41 | 3 | 56 | 2.34 |
| M 1.6 | 0.35 | 1.46 | M 11 | 0.75 | 10.71 | 4 | 40 | 2.60 |
| M 1.7 | 0.35 | 1.56 | M 11 | 1.00 | 10.61 | 4 | 48 | 2.64 |
| M 1.8 | 0.35 | 1.66 | M 11 | 1.50 | 10.41 | 5 | 40 | 2.93 |
| M 2 | 0.40 | 1.84 | M 12 | 1.00 | 11.61 | 5 | 44 | 2.95 |
| M 2.2 | 0.45 | 2.02 | M 12 | 1.25 | 11.51 | 6 | 32 | 3.19 |
| M 2.3 | 0.40 | 2.14 | M 12 | 1.50 | 11.41 | 6 | 40 | 3.26 |
| M 2.5 | 0.45 | 2.32 | M 12 | 1.75 | 11.32 | 8 | 32 | 3.86 |
| M 2.6 | 0.45 | 2.42 | M 14 | 1.00 | 13.61 | 8 | 36 | 3.89 |
| M 3 | 0.50 | 2.80 | M 14 | 1.25 | 13.51 | 10 | 24 | 4.41 |
| M 3.5 | 0.60 | 3.27 | M 14 | 1.50 | 13.41 | 10 | 32 | 4.52 |
| M 4 | 0.70 | 3.73 | M 14 | 2.00 | 13.22 | 12 | 24 | 5.07 |
| M 4.5 | 0.75 | 4.21 | M 15 | 1.00 | 14.61 | 12 | 28 | 5.13 |
| M 5 | 0.50 | 4.80 | M 15 | 1.50 | 14.41 | 1/4 | 20 | 5.85 |
| M 5 | 0.80 | 4.69 | M 16 | 1.00 | 15.61 | 1/4 | 28 | 6.00 |
| M 5.5 | 0.50 | 5.30 | M 16 | 1.50 | 15.41 | 5/16 | 18 | 7.39 |
| M 6 | 0.75 | 5.71 | M 16 | 2.00 | 15.22 | 5/16 | 24 | 7.52 |
| M 6 | 1.00 | 5.61 | M 17 | 1.00 | 16.61 | 3/8 | 16 | 8.90 |
| M 7 | 0.75 | 6.71 | M 17 | 1.50 | 16.41 | 3/8 | 24 | 9.11 |
| M 7 | 1.00 | 6.61 | M 18 | 1.00 | 17.61 | 7/16 | 14 | 10.40 |
| M 8 | 0.75 | 7.71 | M 18 | 1.50 | 17.41 | 7/16 | 20 | 10.62 |
| M 8 | 1.00 | 7.61 | M 18 | 2.00 | 17.22 | 1/2 | 13 | 11.94 |
| M 8 | 1.25 | 7.51 | M 18 | 2.50 | 17.02 | 1/2 | 20 | 12.20 |
| M 9 | 0.75 | 8.71 | M 20 | 1.00 | 19.61 | 9/16 | 12 | 13.46 |
| M 9 | 1.00 | 8.61 | M 20 | 2.50 | 19.02 | 9/16 | 18 | 13.74 |
| M 9 | 1.25 | 8.51 | | | | 5/8 | 11 | 14.97 |
| | | | | | | 5/8 | 18 | 15.32 |
| | | | | | | 3/4 | 10 | 18.06 |
| | | | | | | 3/4 | 16 | 18.43 |
| | | | | | | 7/8 | 9 | 21.12 |
| | | | | | | 7/8 | 14 | 21.52 |
| | | | | | | 1 | 8 | 24.16 |
| | | | | | | 1 | 12 | 24.57 |

DRILL SIZE FOR THREAD FORMING @ 60% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.90 | M 10 | 0.75 | 9.69 | 2 | 56 | 2.00 |
| M 1.1 | 0.25 | 1.00 | M 10 | 1.00 | 9.59 | 2 | 64 | 2.02 |
| M 1.2 | 0.25 | 1.10 | M 10 | 1.25 | 9.49 | 3 | 48 | 2.30 |
| M 1.4 | 0.30 | 1.28 | M 10 | 1.50 | 9.39 | 3 | 56 | 2.33 |
| M 1.6 | 0.35 | 1.46 | M 11 | 0.75 | 10.69 | 4 | 40 | 2.59 |
| M 1.7 | 0.35 | 1.56 | M 11 | 1.00 | 10.59 | 4 | 48 | 2.63 |
| M 1.8 | 0.35 | 1.66 | M 11 | 1.50 | 10.39 | 5 | 40 | 2.92 |
| M 2 | 0.40 | 1.84 | M 12 | 1.00 | 11.59 | 5 | 44 | 2.94 |
| M 2.2 | 0.45 | 2.02 | M 12 | 1.25 | 11.49 | 6 | 32 | 3.18 |
| M 2.3 | 0.40 | 2.14 | M 12 | 1.50 | 11.39 | 6 | 40 | 3.25 |
| M 2.5 | 0.45 | 2.32 | M 12 | 1.75 | 11.29 | 8 | 32 | 3.84 |
| M 2.6 | 0.45 | 2.42 | M 14 | 1.00 | 13.59 | 8 | 36 | 3.88 |
| M 3 | 0.50 | 2.80 | M 14 | 1.25 | 13.49 | 10 | 24 | 4.39 |
| M 3.5 | 0.60 | 3.26 | M 14 | 1.50 | 13.39 | 10 | 32 | 4.50 |
| M 4 | 0.70 | 3.71 | M 14 | 2.00 | 13.18 | 12 | 24 | 5.05 |
| M 4.5 | 0.75 | 4.19 | M 15 | 1.00 | 14.59 | 12 | 28 | 5.12 |
| M 5 | 0.50 | 4.80 | M 15 | 1.50 | 14.39 | 1/4 | 20 | 5.83 |
| M 5 | 0.80 | 4.67 | M 16 | 1.00 | 15.59 | 1/4 | 28 | 5.98 |
| M 5.5 | 0.50 | 5.30 | M 16 | 1.50 | 15.39 | 5/16 | 18 | 7.36 |
| M 6 | 0.75 | 5.69 | M 16 | 2.00 | 15.18 | 5/16 | 24 | 7.51 |
| M 6 | 1.00 | 5.59 | M 17 | 1.00 | 16.59 | 3/8 | 16 | 8.88 |
| M 7 | 0.75 | 6.69 | M 17 | 1.50 | 16.39 | 3/8 | 24 | 9.09 |
| M 7 | 1.00 | 6.59 | M 18 | 1.00 | 17.59 | 7/16 | 14 | 10.37 |
| M 8 | 0.75 | 7.69 | M 18 | 1.50 | 17.39 | 7/16 | 20 | 10.59 |
| M 8 | 1.00 | 7.59 | M 18 | 2.00 | 17.18 | 1/2 | 13 | 11.90 |
| M 8 | 1.25 | 7.49 | M 18 | 2.50 | 16.98 | 1/2 | 20 | 12.18 |
| M 9 | 0.75 | 8.69 | M 20 | 1.00 | 19.59 | 9/16 | 12 | 13.42 |
| M 9 | 1.00 | 8.59 | M 20 | 2.50 | 18.98 | 9/16 | 18 | 13.71 |
| M 9 | 1.25 | 8.49 | | | | 5/8 | 11 | 14.93 |
| | | | | | | 5/8 | 18 | 15.30 |
| | | | | | | 3/4 | 10 | 18.01 |
| | | | | | | 3/4 | 16 | 18.40 |
| | | | | | | 7/8 | 9 | 21.07 |
| | | | | | | 7/8 | 14 | 21.48 |
| | | | | | | 1 | 8 | 24.10 |
| | | | | | | 1 | 12 | 24.54 |

DRILL SIZE FOR THREAD FORMING @ 62.5% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.89 | M 10 | 0.75 | 9.68 | 2 | 56 | 1.99 |
| M 1.1 | 0.25 | 0.99 | M 10 | 1.00 | 9.58 | 2 | 64 | 2.02 |
| M 1.2 | 0.25 | 1.09 | M 10 | 1.25 | 9.47 | 3 | 48 | 2.29 |
| M 1.4 | 0.30 | 1.27 | M 10 | 1.50 | 9.36 | 3 | 56 | 2.32 |
| M 1.6 | 0.35 | 1.45 | M 11 | 0.75 | 10.68 | 4 | 40 | 2.57 |
| M 1.7 | 0.35 | 1.55 | M 11 | 1.00 | 10.58 | 4 | 48 | 2.62 |
| M 1.8 | 0.35 | 1.65 | M 11 | 1.50 | 10.36 | 5 | 40 | 2.91 |
| M 2 | 0.40 | 1.83 | M 12 | 1.00 | 11.58 | 5 | 44 | 2.93 |
| M 2.2 | 0.45 | 2.01 | M 12 | 1.25 | 11.47 | 6 | 32 | 3.17 |
| M 2.3 | 0.40 | 2.13 | M 12 | 1.50 | 11.36 | 6 | 40 | 3.24 |
| M 2.5 | 0.45 | 2.31 | M 12 | 1.75 | 11.26 | 8 | 32 | 3.83 |
| M 2.6 | 0.45 | 2.41 | M 14 | 1.00 | 13.58 | 8 | 36 | 3.87 |
| M 3 | 0.50 | 2.79 | M 14 | 1.25 | 13.47 | 10 | 24 | 4.38 |
| M 3.5 | 0.60 | 3.25 | M 14 | 1.50 | 13.36 | 10 | 32 | 4.49 |
| M 4 | 0.70 | 3.70 | M 14 | 2.00 | 13.15 | 12 | 24 | 5.04 |
| M 4.5 | 0.75 | 4.18 | M 15 | 1.00 | 14.58 | 12 | 28 | 5.10 |
| M 5 | 0.50 | 4.79 | M 15 | 1.50 | 14.36 | 1/4 | 20 | 5.81 |
| M 5 | 0.80 | 4.66 | M 16 | 1.00 | 15.58 | 1/4 | 28 | 5.96 |
| M 5.5 | 0.50 | 5.29 | M 16 | 1.50 | 15.36 | 5/16 | 18 | 7.34 |
| M 6 | 0.75 | 5.68 | M 16 | 2.00 | 15.15 | 5/16 | 24 | 7.49 |
| M 6 | 1.00 | 5.58 | M 17 | 1.00 | 16.58 | 3/8 | 16 | 8.85 |
| M 7 | 0.75 | 6.68 | M 17 | 1.50 | 16.36 | 3/8 | 24 | 9.08 |
| M 7 | 1.00 | 6.58 | M 18 | 1.00 | 17.58 | 7/16 | 14 | 10.34 |
| M 8 | 0.75 | 7.68 | M 18 | 1.50 | 17.36 | 7/16 | 20 | 10.57 |
| M 8 | 1.00 | 7.58 | M 18 | 2.00 | 17.15 | 1/2 | 13 | 11.87 |
| M 8 | 1.25 | 7.47 | M 18 | 2.50 | 16.94 | 1/2 | 20 | 12.16 |
| M 9 | 0.75 | 8.68 | M 20 | 1.00 | 19.58 | 9/16 | 12 | 13.39 |
| M 9 | 1.00 | 8.58 | M 20 | 2.50 | 18.94 | 9/16 | 18 | 13.69 |
| M 9 | 1.25 | 8.47 | | | | 5/8 | 11 | 14.89 |
| | | | | | | 5/8 | 18 | 15.28 |
| | | | | | | 3/4 | 10 | 17.97 |
| | | | | | | 3/4 | 16 | 18.38 |
| | | | | | | 7/8 | 9 | 21.03 |
| | | | | | | 7/8 | 14 | 21.45 |
| | | | | | | 1 | 8 | 24.05 |
| | | | | | | 1 | 12 | 24.50 |

DRILL SIZE FOR THREAD FORMING @ 65% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.89 | M 10 | 0.75 | 9.67 | 2 | 56 | 1.98 |
| M 1.1 | 0.25 | 0.99 | M 10 | 1.00 | 9.56 | 2 | 64 | 2.01 |
| M 1.2 | 0.25 | 1.09 | M 10 | 1.25 | 9.45 | 3 | 48 | 2.28 |
| M 1.4 | 0.30 | 1.27 | M 10 | 1.50 | 9.34 | 3 | 56 | 2.31 |
| M 1.6 | 0.35 | 1.45 | M 11 | 0.75 | 10.67 | 4 | 40 | 2.56 |
| M 1.7 | 0.35 | 1.55 | M 11 | 1.00 | 10.56 | 4 | 48 | 2.61 |
| M 1.8 | 0.35 | 1.65 | M 11 | 1.50 | 10.34 | 5 | 40 | 2.89 |
| M 2 | 0.40 | 1.82 | M 12 | 1.00 | 11.56 | 5 | 44 | 2.92 |
| M 2.2 | 0.45 | 2.00 | M 12 | 1.25 | 11.45 | 6 | 32 | 3.15 |
| M 2.3 | 0.40 | 2.12 | M 12 | 1.50 | 11.34 | 6 | 40 | 3.22 |
| M 2.5 | 0.45 | 2.30 | M 12 | 1.75 | 11.23 | 8 | 32 | 3.81 |
| M 2.6 | 0.45 | 2.40 | M 14 | 1.00 | 13.56 | 8 | 36 | 3.85 |
| M 3 | 0.50 | 2.78 | M 14 | 1.25 | 13.45 | 10 | 24 | 4.36 |
| M 3.5 | 0.60 | 3.23 | M 14 | 1.50 | 13.34 | 10 | 32 | 4.48 |
| M 4 | 0.70 | 3.69 | M 14 | 2.00 | 13.12 | 12 | 24 | 5.02 |
| M 4.5 | 0.75 | 4.17 | M 15 | 1.00 | 14.56 | 12 | 28 | 5.09 |
| M 5 | 0.50 | 4.78 | M 15 | 1.50 | 14.34 | 1/4 | 20 | 5.79 |
| M 5 | 0.80 | 4.65 | M 16 | 1.00 | 15.56 | 1/4 | 28 | 5.95 |
| M 5.5 | 0.50 | 5.28 | M 16 | 1.50 | 15.34 | 5/16 | 18 | 7.31 |
| M 6 | 0.75 | 5.67 | M 16 | 2.00 | 15.12 | 5/16 | 24 | 7.47 |
| M 6 | 1.00 | 5.56 | M 17 | 1.00 | 16.56 | 3/8 | 16 | 8.82 |
| M 7 | 0.75 | 6.67 | M 17 | 1.50 | 16.34 | 3/8 | 24 | 9.06 |
| M 7 | 1.00 | 6.56 | M 18 | 1.00 | 17.56 | 7/16 | 14 | 10.31 |
| M 8 | 0.75 | 7.67 | M 18 | 1.50 | 17.34 | 7/16 | 20 | 10.55 |
| M 8 | 1.00 | 7.56 | M 18 | 2.00 | 17.12 | 1/2 | 13 | 11.84 |
| M 8 | 1.25 | 7.45 | M 18 | 2.50 | 16.90 | 1/2 | 20 | 12.14 |
| M 9 | 0.75 | 8.67 | M 20 | 1.00 | 19.56 | 9/16 | 12 | 13.35 |
| M 9 | 1.00 | 8.56 | M 20 | 2.50 | 18.90 | 9/16 | 18 | 13.66 |
| M 9 | 1.25 | 8.45 | | | | 5/8 | 11 | 14.85 |
| | | | | | | 5/8 | 18 | 15.25 |
| | | | | | | 3/4 | 10 | 17.93 |
| | | | | | | 3/4 | 16 | 18.35 |
| | | | | | | 7/8 | 9 | 20.98 |
| | | | | | | 7/8 | 14 | 21.42 |
| | | | | | | 1 | 8 | 24.00 |
| | | | | | | 1 | 12 | 24.46 |

DRILL SIZE FOR THREAD FORMING @ 67.5% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.89 | M 10 | 0.75 | 9.66 | 2 | 56 | 1.98 |
| M 1.1 | 0.25 | 0.99 | M 10 | 1.00 | 9.54 | 2 | 64 | 2.00 |
| M 1.2 | 0.25 | 1.09 | M 10 | 1.25 | 9.43 | 3 | 48 | 2.27 |
| M 1.4 | 0.30 | 1.26 | M 10 | 1.50 | 9.31 | 3 | 56 | 2.31 |
| M 1.6 | 0.35 | 1.44 | M 11 | 0.75 | 10.66 | 4 | 40 | 2.55 |
| M 1.7 | 0.35 | 1.54 | M 11 | 1.00 | 10.54 | 4 | 48 | 2.60 |
| M 1.8 | 0.35 | 1.64 | M 11 | 1.50 | 10.31 | 5 | 40 | 2.88 |
| M 2 | 0.40 | 1.82 | M 12 | 1.00 | 11.54 | 5 | 44 | 2.91 |
| M 2.2 | 0.45 | 1.99 | M 12 | 1.25 | 11.43 | 6 | 32 | 3.14 |
| M 2.3 | 0.40 | 2.12 | M 12 | 1.50 | 11.31 | 6 | 40 | 3.21 |
| M 2.5 | 0.45 | 2.29 | M 12 | 1.75 | 11.20 | 8 | 32 | 3.80 |
| M 2.6 | 0.45 | 2.39 | M 14 | 1.00 | 13.54 | 8 | 36 | 3.84 |
| M 3 | 0.50 | 2.77 | M 14 | 1.25 | 13.43 | 10 | 24 | 4.34 |
| M 3.5 | 0.60 | 3.22 | M 14 | 1.50 | 13.31 | 10 | 32 | 4.46 |
| M 4 | 0.70 | 3.68 | M 14 | 2.00 | 13.08 | 12 | 24 | 5.00 |
| M 4.5 | 0.75 | 4.16 | M 15 | 1.00 | 14.54 | 12 | 28 | 5.07 |
| M 5 | 0.50 | 4.77 | M 15 | 1.50 | 14.31 | 1/4 | 20 | 5.77 |
| M 5 | 0.80 | 4.63 | M 16 | 1.00 | 15.54 | 1/4 | 28 | 5.93 |
| M 5.5 | 0.50 | 5.27 | M 16 | 1.50 | 15.31 | 5/16 | 18 | 7.29 |
| M 6 | 0.75 | 5.66 | M 16 | 2.00 | 15.08 | 5/16 | 24 | 7.45 |
| M 6 | 1.00 | 5.54 | M 17 | 1.00 | 16.54 | 3/8 | 16 | 8.80 |
| M 7 | 0.75 | 6.66 | M 17 | 1.50 | 16.31 | 3/8 | 24 | 9.04 |
| M 7 | 1.00 | 6.54 | M 18 | 1.00 | 17.54 | 7/16 | 14 | 10.28 |
| M 8 | 0.75 | 7.66 | M 18 | 1.50 | 17.31 | 7/16 | 20 | 10.53 |
| M 8 | 1.00 | 7.54 | M 18 | 2.00 | 17.08 | 1/2 | 13 | 11.80 |
| M 8 | 1.25 | 7.43 | M 18 | 2.50 | 16.85 | 1/2 | 20 | 12.12 |
| M 9 | 0.75 | 8.66 | M 20 | 1.00 | 19.54 | 9/16 | 12 | 13.32 |
| M 9 | 1.00 | 8.54 | M 20 | 2.50 | 18.85 | 9/16 | 18 | 13.64 |
| M 9 | 1.25 | 8.43 | | | | 5/8 | 11 | 14.82 |
| | | | | | | 5/8 | 18 | 15.23 |
| | | | | | | 3/4 | 10 | 17.88 |
| | | | | | | 3/4 | 16 | 18.32 |
| | | | | | | 7/8 | 9 | 20.93 |
| | | | | | | 7/8 | 14 | 21.39 |
| | | | | | | 1 | 8 | 23.94 |
| | | | | | | 1 | 12 | 24.43 |

DRILL SIZE FOR THREAD FORMING @ 70% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.88 | M 10 | 0.75 | 9.64 | 2 | 56 | 1.97 |
| M 1.1 | 0.25 | 0.98 | M 10 | 1.00 | 9.52 | 2 | 64 | 2.00 |
| M 1.2 | 0.25 | 1.08 | M 10 | 1.25 | 9.41 | 3 | 48 | 2.26 |
| M 1.4 | 0.30 | 1.26 | M 10 | 1.50 | 9.29 | 3 | 56 | 2.30 |
| M 1.6 | 0.35 | 1.43 | M 11 | 0.75 | 10.64 | 4 | 40 | 2.54 |
| M 1.7 | 0.35 | 1.53 | M 11 | 1.00 | 10.52 | 4 | 48 | 2.59 |
| M 1.8 | 0.35 | 1.63 | M 11 | 1.50 | 10.29 | 5 | 40 | 2.87 |
| M 2 | 0.40 | 1.81 | M 12 | 1.00 | 11.52 | 5 | 44 | 2.90 |
| M 2.2 | 0.45 | 1.99 | M 12 | 1.25 | 11.41 | 6 | 32 | 3.13 |
| M 2.3 | 0.40 | 2.11 | M 12 | 1.50 | 11.29 | 6 | 40 | 3.20 |
| M 2.5 | 0.45 | 2.29 | M 12 | 1.75 | 11.17 | 8 | 32 | 3.79 |
| M 2.6 | 0.45 | 2.39 | M 14 | 1.00 | 13.52 | 8 | 36 | 3.83 |
| M 3 | 0.50 | 2.76 | M 14 | 1.25 | 13.41 | 10 | 24 | 4.32 |
| M 3.5 | 0.60 | 3.21 | M 14 | 1.50 | 13.29 | 10 | 32 | 4.45 |
| M 4 | 0.70 | 3.67 | M 14 | 2.00 | 13.05 | 12 | 24 | 4.98 |
| M 4.5 | 0.75 | 4.14 | M 15 | 1.00 | 14.52 | 12 | 28 | 5.05 |
| M 5 | 0.50 | 4.76 | M 15 | 1.50 | 14.29 | 1/4 | 20 | 5.75 |
| M 5 | 0.80 | 4.62 | M 16 | 1.00 | 15.52 | 1/4 | 28 | 5.92 |
| M 5.5 | 0.50 | 5.26 | M 16 | 1.50 | 15.29 | 5/16 | 18 | 7.27 |
| M 6 | 0.75 | 5.64 | M 16 | 2.00 | 15.05 | 5/16 | 24 | 7.43 |
| M 6 | 1.00 | 5.52 | M 17 | 1.00 | 16.52 | 3/8 | 16 | 8.77 |
| M 7 | 0.75 | 6.64 | M 17 | 1.50 | 16.29 | 3/8 | 24 | 9.02 |
| M 7 | 1.00 | 6.52 | M 18 | 1.00 | 17.52 | 7/16 | 14 | 10.25 |
| M 8 | 0.75 | 7.64 | M 18 | 1.50 | 17.29 | 7/16 | 20 | 10.51 |
| M 8 | 1.00 | 7.52 | M 18 | 2.00 | 17.05 | 1/2 | 13 | 11.77 |
| M 8 | 1.25 | 7.41 | M 18 | 2.50 | 16.81 | 1/2 | 20 | 12.10 |
| M 9 | 0.75 | 8.64 | M 20 | 1.00 | 19.52 | 9/16 | 12 | 13.28 |
| M 9 | 1.00 | 8.52 | M 20 | 2.50 | 18.81 | 9/16 | 18 | 13.62 |
| M 9 | 1.25 | 8.41 | | | | 5/8 | 11 | 14.78 |
| | | | | | | 5/8 | 18 | 15.20 |
| | | | | | | 3/4 | 10 | 17.84 |
| | | | | | | 3/4 | 16 | 18.29 |
| | | | | | | 7/8 | 9 | 20.88 |
| | | | | | | 7/8 | 14 | 21.36 |
| | | | | | | 1 | 8 | 23.89 |
| | | | | | | 1 | 12 | 24.39 |

DRILL SIZE FOR THREAD FORMING @ 72.5% THREAD

| Metric Threads | | | Metric Threads | | | UNC / UNF Threads | | |
|----------------|----------|---------------|----------------|----------|---------------|-------------------|-----|---------------|
| Tap Dia. | Pitch mm | Drill size mm | Tap Dia. | Pitch mm | Drill size mm | Tap Size | TPI | Drill size mm |
| M 1 | 0.25 | 0.88 | M 10 | 0.75 | 9.63 | 2 | 56 | 1.96 |
| M 1.1 | 0.25 | 0.98 | M 10 | 1.00 | 9.51 | 2 | 64 | 1.99 |
| M 1.2 | 0.25 | 1.08 | M 10 | 1.25 | 9.38 | 3 | 48 | 2.25 |
| M 1.4 | 0.30 | 1.25 | M 10 | 1.50 | 9.26 | 3 | 56 | 2.29 |
| M 1.6 | 0.35 | 1.43 | M 11 | 0.75 | 10.63 | 4 | 40 | 2.53 |
| M 1.7 | 0.35 | 1.53 | M 11 | 1.00 | 10.51 | 4 | 48 | 2.58 |
| M 1.8 | 0.35 | 1.63 | M 11 | 1.50 | 10.26 | 5 | 40 | 2.86 |
| M 2 | 0.40 | 1.80 | M 12 | 1.00 | 11.51 | 5 | 44 | 2.89 |
| M 2.2 | 0.45 | 1.98 | M 12 | 1.25 | 11.38 | 6 | 32 | 3.11 |
| M 2.3 | 0.40 | 2.10 | M 12 | 1.50 | 11.26 | 6 | 40 | 3.19 |
| M 2.5 | 0.45 | 2.28 | M 12 | 1.75 | 11.14 | 8 | 32 | 3.77 |
| M 2.6 | 0.45 | 2.38 | M 14 | 1.00 | 13.51 | 8 | 36 | 3.82 |
| M 3 | 0.50 | 2.75 | M 14 | 1.25 | 13.38 | 10 | 24 | 4.30 |
| M 3.5 | 0.60 | 3.20 | M 14 | 1.50 | 13.26 | 10 | 32 | 4.43 |
| M 4 | 0.70 | 3.65 | M 14 | 2.00 | 13.01 | 12 | 24 | 4.96 |
| M 4.5 | 0.75 | 4.13 | M 15 | 1.00 | 14.51 | 12 | 28 | 5.04 |
| M 5 | 0.50 | 4.75 | M 15 | 1.50 | 14.26 | 1/4 | 20 | 5.72 |
| M 5 | 0.80 | 4.61 | M 16 | 1.00 | 15.51 | 1/4 | 28 | 5.90 |
| M 5.5 | 0.50 | 5.25 | M 16 | 1.50 | 15.26 | 5/16 | 18 | 7.24 |
| M 6 | 0.75 | 5.63 | M 16 | 2.00 | 15.01 | 5/16 | 24 | 7.42 |
| M 6 | 1.00 | 5.51 | M 17 | 1.00 | 16.51 | 3/8 | 16 | 8.74 |
| M 7 | 0.75 | 6.63 | M 17 | 1.50 | 16.26 | 3/8 | 24 | 9.00 |
| M 7 | 1.00 | 6.51 | M 18 | 1.00 | 17.51 | 7/16 | 14 | 10.22 |
| M 8 | 0.75 | 7.63 | M 18 | 1.50 | 17.26 | 7/16 | 20 | 10.49 |
| M 8 | 1.00 | 7.51 | M 18 | 2.00 | 17.01 | 1/2 | 13 | 11.74 |
| M 8 | 1.25 | 7.38 | M 18 | 2.50 | 16.77 | 1/2 | 20 | 12.07 |
| M 9 | 0.75 | 8.63 | M 20 | 1.00 | 19.51 | 9/16 | 12 | 13.24 |
| M 9 | 1.00 | 8.51 | M 20 | 2.50 | 18.77 | 9/16 | 18 | 13.59 |
| M 9 | 1.25 | 8.38 | | | | 5/8 | 11 | 14.74 |
| | | | | | | 5/8 | 18 | 15.18 |
| | | | | | | 3/4 | 10 | 17.80 |
| | | | | | | 3/4 | 16 | 18.27 |
| | | | | | | 7/8 | 9 | 20.83 |
| | | | | | | 7/8 | 14 | 21.33 |
| | | | | | | 1 | 8 | 23.84 |
| | | | | | | 1 | 12 | 24.36 |

From 1/64 to 11 63/64

| Size (inch) | mm | Part of inch (decimal) | Size (inch) | mm | Part of inch (decimal) | Size (inch) | mm | Part of inch (decimal) | Size (inch) | mm | Part of inch (decimal) |
|-------------|------|------------------------|-------------|------|------------------------|-------------|-------|------------------------|-------------|-------|------------------------|
| - | 0.10 | 0.0039 | | | | 11 | 4.85 | 0.191 | 27/64 | 10.72 | 0.4219 |
| 97 | 0.15 | 0.0059 | 1/16 | 1.59 | 0.0625 | 10 | 4.91 | 0.1935 | - | 11.00 | 0.4331 |
| 96 | 0.16 | 0.0063 | | 1.60 | 0.0630 | 9 | 4.98 | 0.196 | 7/16 | 11.11 | 0.4375 |
| 95 | 0.17 | 0.0067 | 52 | 1.61 | 0.0635 | - | 5.00 | 0.1968 | | 11.50 | 0.4528 |
| 94 | 0.18 | 0.0071 | | 1.65 | 0.0650 | 8 | 5.05 | 0.199 | 29/64 | 11.51 | 0.4531 |
| 93 | 0.19 | 0.0075 | 51 | 1.70 | 0.0670 | 7 | 5.11 | 0.2010 | 15/32 | 11.91 | 0.4688 |
| 92 | 0.20 | 0.0079 | | 1.75 | 0.0689 | 13/64 | 5.16 | 0.2031 | - | 12.00 | 0.4724 |
| 91 | 0.21 | 0.0083 | | 1.78 | 0.0700 | 6 | 5.18 | 0.2040 | 31/64 | 12.30 | 0.4844 |
| 90 | 0.22 | 0.0087 | 50 | 1.80 | 0.0709 | 5 | 5.22 | 0.2055 | | 12.50 | 0.4921 |
| 89 | 0.23 | 0.0091 | | 1.85 | 0.0730 | | 5.25 | 0.2067 | 1/2 | 12.70 | 0.50 |
| 88 | 0.24 | 0.0095 | 49 | 1.90 | 0.0748 | 4 | 5.31 | 0.2090 | - | 13.00 | 0.5118 |
| - | 0.25 | 0.0098 | | 1.93 | 0.0760 | 3 | 5.41 | 0.213 | 33/64 | 13.10 | 0.5156 |
| 87 | 0.25 | 0.0100 | 48 | 1.95 | 0.0768 | | 5.50 | 0.2165 | 17/32 | 13.49 | 0.5312 |
| | 0.26 | 0.0102 | | 1.98 | 0.0781 | 7/32 | 5.56 | 0.2188 | | 13.50 | 0.5315 |
| 86 | 0.27 | 0.0105 | 47 | 1.99 | 0.0785 | 2 | 5.61 | 0.221 | 35/64 | 13.89 | 0.5469 |
| | 0.27 | 0.0106 | - | 2.00 | 0.0787 | 1 | 5.79 | 0.228 | - | 14.00 | 0.5512 |
| 85 | 0.28 | 0.0110 | | 2.05 | 0.0807 | A | 5.94 | 0.234 | 9/16 | 14.29 | 0.5625 |
| | 0.29 | 0.0114 | 46 | 2.06 | 0.0810 | 15/64 | 5.95 | 0.2344 | | 14.50 | 0.5709 |
| 84 | 0.29 | 0.0115 | 45 | 2.08 | 0.0820 | - | 6.00 | 0.2362 | 37/64 | 14.68 | 0.5781 |
| - | 0.30 | 0.0118 | | 2.15 | 0.0846 | B | 6.05 | 0.238 | - | 15.00 | 0.5906 |
| 83 | 0.30 | 0.0120 | 44 | 2.18 | 0.0860 | C | 6.15 | 0.242 | 19/32 | 15.08 | 0.5938 |
| 82 | 0.32 | 0.0125 | 43 | 2.26 | 0.0890 | D | 6.25 | 0.246 | 39/64 | 15.48 | 0.6094 |
| | 0.32 | 0.0126 | 42 | 2.37 | 0.0935 | | 6.35 | 0.25 | | 15.50 | 0.6102 |
| 81 | 0.33 | 0.0130 | 3/32 | 2.38 | 0.0938 | 1/4 | 6.35 | 0.25 | 5/8 | 15.88 | 0.625 |
| 80 | 0.34 | 0.0135 | 41 | 2.44 | 0.0960 | | 6.50 | 0.2559 | - | 16.00 | 0.6299 |
| 79 | 0.37 | 0.0145 | 40 | 2.50 | 0.0980 | F | 6.53 | 0.257 | 41/64 | 16.27 | 0.6406 |
| 1/64 | 0.40 | 0.0156 | 39 | 2.53 | 0.0995 | G | 6.63 | 0.261 | | 16.50 | 0.6496 |
| 78 | 0.41 | 0.0160 | 38 | 2.58 | 0.1015 | 17/64 | 6.75 | 0.2656 | 21/32 | 16.67 | 0.6562 |
| 77 | 0.46 | 0.0180 | 37 | 2.64 | 0.1040 | | 6.75 | 0.2657 | - | 17.00 | 0.6693 |
| - | 0.50 | 0.0197 | 36 | 2.71 | 0.1065 | H | 6.76 | 0.266 | 43/64 | 17.07 | 0.6719 |
| 76 | 0.51 | 0.0200 | 7/64 | 2.78 | 0.1094 | I | 6.91 | 0.272 | 11/16 | 17.46 | 0.6875 |
| 75 | 0.53 | 0.0210 | 35 | 2.79 | 0.11 | - | 7.00 | 0.2756 | | 17.50 | 0.689 |
| 74 | 0.57 | 0.0225 | 34 | 2.82 | 0.111 | J | 7.04 | 0.2772 | 45/64 | 17.86 | 0.7031 |
| - | 0.60 | 0.0236 | 33 | 2.87 | 0.113 | K | 7.14 | 0.281 | - | 18.00 | 0.7087 |
| 73 | 0.61 | 0.0240 | | 2.90 | 0.1142 | 9/32 | 7.14 | 0.2812 | 23/32 | 18.26 | 0.7188 |
| 72 | 0.64 | 0.0250 | 32 | 2.95 | 0.116 | L | 7.37 | 0.29 | | 18.50 | 0.7283 |
| 71 | 0.66 | 0.0260 | - | 3.00 | 0.1181 | M | 7.49 | 0.2949 | 47/64 | 18.65 | 0.7344 |
| - | 0.70 | 0.0276 | 31 | 3.05 | 0.12 | | 7.50 | 0.2953 | - | 19.00 | 0.748 |
| 70 | 0.71 | 0.0280 | 1/8 | 3.18 | 0.125 | 19/64 | 7.54 | 0.2969 | 3/4 | 19.05 | 0.75 |
| 69 | 0.74 | 0.0292 | 30 | 3.26 | 0.1285 | N | 7.67 | 0.3020 | 49/64 | 19.45 | 0.7656 |
| - | 0.75 | 0.0295 | | 3.30 | 0.1299 | | 7.75 | 0.3051 | | 19.50 | 0.7677 |
| 68 | 0.79 | 0.0310 | 29 | 3.45 | 0.136 | 5/16 | 7.94 | 0.3125 | 25/32 | 19.84 | 0.7812 |
| 1/32 | 0.79 | 0.0313 | | 3.50 | 0.1378 | - | 8.00 | 0.315 | - | 20.00 | 0.7874 |
| - | 0.80 | 0.0315 | 28 | 3.57 | 0.1405 | O | 8.03 | 0.316 | 51/64 | 20.24 | 0.7969 |
| 67 | 0.81 | 0.0320 | 9/64 | 3.57 | 0.1406 | P | 8.20 | 0.323 | | 20.50 | 0.8071 |
| 66 | 0.84 | 0.0330 | 27 | 3.66 | 0.144 | 21/64 | 8.33 | 0.3281 | 13/16 | 20.64 | 0.8125 |
| 65 | 0.89 | 0.0350 | 26 | 3.73 | 0.147 | Q | 8.43 | 0.332 | - | 21.00 | 0.8268 |
| - | 0.90 | 0.0354 | | 3.75 | 0.1476 | | 8.50 | 0.3346 | 53/64 | 21.03 | 0.8281 |
| 64 | 0.91 | 0.0360 | 25 | 3.80 | 0.1495 | R | 8.61 | 0.339 | 27/32 | 21.43 | 0.8438 |
| 63 | 0.94 | 0.0370 | 24 | 3.86 | 0.152 | 11/32 | 8.73 | 0.3438 | | 21.50 | 0.8465 |
| 62 | 0.97 | 0.0380 | 23 | 3.91 | 0.154 | | 8.75 | 0.3445 | 55/64 | 21.84 | 0.8594 |
| 61 | 0.99 | 0.0390 | 5/32 | 3.97 | 0.1562 | S | 8.84 | 0.348 | - | 22.00 | 0.8661 |
| - | 1.00 | 0.0394 | 22 | 3.99 | 0.157 | - | 9.00 | 0.3543 | 7/8 | 22.23 | 0.875 |
| 60 | 1.02 | 0.0400 | - | 4.00 | 0.1575 | T | 9.09 | 0.358 | | 22.50 | 0.8858 |
| 59 | 1.04 | 0.0410 | 21 | 4.04 | 0.159 | 23/64 | 9.13 | 0.3594 | 57/64 | 22.62 | 0.8906 |
| 58 | 1.07 | 0.0420 | 20 | 4.09 | 0.161 | U | 9.35 | 0.368 | - | 23.00 | 0.9055 |
| 57 | 1.09 | 0.0430 | | 4.20 | 0.1654 | | 9.50 | 0.374 | 29/32 | 23.02 | 0.9062 |
| 56 | 1.18 | 0.0465 | 19 | 4.22 | 0.166 | 3/8 | 9.53 | 0.375 | 59/64 | 23.42 | 0.9219 |
| 3/64 | 1.19 | 0.0469 | 18 | 4.31 | 0.1695 | V | 9.56 | 0.377 | | 23.50 | 0.9252 |
| | 1.20 | 0.0472 | 11/64 | 4.37 | 0.1719 | W | 9.80 | 0.386 | 15/16 | 23.81 | 0.9375 |
| | 1.25 | 0.0492 | 17 | 4.39 | 0.173 | 25/64 | 9.92 | 0.3906 | - | 24.00 | 0.9449 |
| | 1.30 | 0.0512 | 16 | 4.50 | 0.177 | - | 10.00 | 0.3937 | 61/64 | 24.21 | 0.9531 |
| 55 | 1.32 | 0.0520 | 15 | 4.57 | 0.18 | X | 10.08 | 0.397 | | 24.50 | 0.9646 |
| 54 | 1.40 | 0.0550 | 14 | 4.62 | 0.182 | Y | 10.26 | 0.4040 | 31/32 | 24.61 | 0.9688 |
| | 1.45 | 0.0571 | 13 | 4.70 | 0.185 | 13/32 | 10.32 | 0.4062 | - | 25.00 | 0.9843 |
| | 1.50 | 0.0591 | 3/16 | 4.76 | 0.1875 | Z | 10.49 | 0.413 | 63/64 | 25.00 | 0.9844 |
| 53 | 1.51 | 0.0595 | 12 | 4.80 | 0.189 | | 10.50 | 0.4134 | 1 | 25.40 | 1.00 |

1 inch = 25.400 0 mm, see DIN 4890 (issue 2/75)

The new material abbreviations (selection)

| mat. nos. | abbreviation old | abbreviation new |
|-----------|-------------------|------------------|
| 0.6010 | GG10 | EN-GJL-100 |
| 0.6020 | GG20 | EN-GJL-200 |
| 0.6025 | GG25 | EN-GJL-250 |
| 0.6035 | GG35 | EN-GJL-350 |
| 0.7050 | GGG50 | EN-GJS-500-7 |
| 0.7070 | GGG70 | EN-GJS-700-2 |
| 0.8035 | GTW35 | EN-GJMW-350-4 |
| 0.8155 | GT55 | EN-GJMB-550-4 |
| 0.8170 | GTS70 | EN-GJMB-700-2 |
| 1.0022 | St 01Z | - |
| 1.0035 | St 33 | S185 |
| 1.0039 | St 37 -2 | S235JRH |
| 1.0044 | St 44 -2 | S275JR |
| 1.0050 | St 50 -2 | E295 |
| 1.0060 | St 60 -2 | E335 |
| 1.0070 | St 70 -2 | E360 |
| 1.0114 | St 37 -3U | S235JU |
| 1.0226 | St 02Z | DX51D |
| 1.0242 | StE 250 -2Z | S250GD |
| 1.0244 | StE 280 -2Z | S280GD |
| 1.0250 | StE 320 -3Z | S320GD |
| 1.0301 | C 10 | - |
| 1.0302 | C 10 Pb | - |
| 1.0306 | St 06 Z | DX54D |
| 1.0312 | St 15 | DC05 [Fe P05] |
| 1.0319 | RRStE 210.7 | L210GA |
| 1.0322 | - | DX56D |
| 1.0330 | St 12 [St 2] | DC01 [Fe P01] |
| 1.0333 | Ust 13 | - |
| 1.0338 | St 14 [St 4] | DC04 [Fe P04] |
| 1.0345 | H I | P235GH |
| 1.0347 | RRSt 13 [RRSt 3] | DC03 [Fe P03] |
| 1.0348 | UH I | P195GH |
| 1.0350 | St 03Z | DX52D |
| 1.0355 | St 05Z | DX53D |
| 1.0356 | TTSt 35 N | P215NL |
| 1.0358 | St 05 Z | - |
| 1.0401 | C 15 | - |
| 1.0402 | C 22 | C22 |
| 1.0403 | C 15 Pb | - |
| 1.0406 | C 25 | C25 |
| 1.0419 | St 52.0 | L355 |
| 1.0424 | St 45.8 (ersetzt) | P265 |
| 1.0424 | St 42.8 (ersetzt) | P265 |
| 1.0425 | H2 | P265GH |
| 1.0429 | StE 290.7 TM | L290MB |
| 1.0457 | StE 240.7 | L245NB |
| 1.0459 | RRStE 240.7 | L245GA |
| 1.0461 | StE 255 | S255N |
| 1.0473 | 19 Mn 6 | P355GH |
| 1.0481 | 17 Mn 4 | P295GH |
| 1.0484 | StE 290.7 | L290NB |
| 1.0486 | StE 285 | P275N |
| 1.0501 | C 35 | C35 |
| 1.0503 | C 45 | C45 |
| 1.0505 | StE 315 | P315N |
| 1.0511 | C 40 | C40 |
| 1.0528 | C 30 | C30 |
| 1.0529 | StE 350 -3Z | S350GD |
| 1.0535 | C 55 | C55 |
| 1.0539 | StE 355N | S355NH |
| 1.0540 | C 50 | C50 |
| 1.0547 | St 52 -3U | S355JOH |
| 1.0582 | StE 360 | L360NB |
| 1.0601 | C 60 | C60 |
| 1.0710 | 15 S 10 | - |
| 1.0715 | 9 SMn 28 | 11SMn30 |
| 1.0718 | 9 SMnPb 28 | 11SMnPb30 |
| 1.0721 | 10 S 20 | 10S20 |
| 1.0722 | 10 S Pb 20 | 10SPb20 |
| 1.0726 | 35 S 20 | 35S20 |

| mat. nos. | abbreviation old | abbreviation new |
|-----------|------------------|------------------|
| 1.0727 | 45 S 20 | 46S20 |
| 1.0728 | 60 S 20 | - |
| 1.0736 | 9 SMn 36 | 11SMn37 |
| 1.0737 | 9 SMnPb 36 | 11SMnPb37 |
| 1.0756 | 35 SPb 20 | 35SPb20 |
| 1.0757 | 45 SPb 20 | 46SPb20 |
| 1.0760 | - | 38SMn26 |
| 1.0761 | - | 38SMnPb26 |
| 1.0762 | - | 44SMn28 |
| 1.0763 | - | 44SMnPb28 |
| 1.0873 | - | DC06 [Fe P06] |
| 1.1103 | ESiE 255 | S255NL1 |
| 1.1105 | ESiE 315 | S315NL1 |
| 1.1121 | Ck 10 | C10E |
| 1.1141 | Ck15 | C15E |
| 1.1151 | Ck 22 | C22E |
| 1.1158 | Ck 25 | C25E |
| 1.1170 | 28 Mn 6 | 28Mn6 |
| 1.1178 | Ck 30 | C30E |
| 1.1181 | Ck 35 | C35E |
| 1.1186 | Ck 40 | C40E |
| 1.1191 | Ck 45 | C45E |
| 1.1203 | Ck 55 | C55E |
| 1.1206 | Ck 50 | C50E |
| 1.1221 | Ck 60 | C60E |
| 1.1241 | Cm 50 | C50R |
| 1.1750 | C 75 W | C75W |
| 1.2067 | 102 Cr 6 | 102Cr6 |
| 1.2080 | - | X210Cr12 |
| 1.2083 | - | X42Cr13 |
| 1.2419 | - | 105WCr6 |
| 1.2767 | - | X45NiCrMo4 |
| 1.3243 | S6-5-2-5 | S 6-5-2-5 |
| 1.3343 | S6-5-2 | S 6-5-2 |
| 1.3344 | S6-5-3 | S 6-5-3 |
| 1.4000 | X6Cr 13 | X6Cr13 |
| 1.4002 | X6CrAl 13 | X6CrAl13 |
| 1.4003 | X2Cr 11 | X2CrNi12 |
| 1.4005 | - | X12CrS13 |
| 1.4006 | X10Cr 13 | X12Cr13 |
| 1.4016 | X6Cr 17 | X6Cr17 |
| 1.4021 | X20Cr 13 | X20Cr13 |
| 1.4028 | X30Cr 13 | X30Cr13 |
| 1.4031 | X38Cr 13 | X38Cr13 |
| 1.4034 | X46Cr 13 | X46Cr13 |
| 1.4037 | X65Cr13 | X65Cr13 |
| 1.4057 | X20CrNi 17 2 | X17CrNi16-2 |
| 1.4104 | X12CrMoS 17 | X14CrMoS17 |
| 1.4105 | X4CrMoS 18 | X6CrMoS17 |
| 1.4109 | X65CrMo 14 | X70CrMo15 |
| 1.4110 | X55CrMo 14 | X55CrMo14 |
| 1.4112 | X90CrMoV 18 | X90CrMoV18 |
| 1.4113 | X6CrMo 17 1 | X6CrMo17-1 |
| 1.4116 | X45CrMoV 15 | X50CrMoV15 |
| 1.4120 | X20CrMo 13 | X20CrMo13 |
| 1.4122 | X35CrMo 17 | X39CrMo17-1 |
| 1.4125 | X105CrMo 17 | X105CrMo17 |
| 1.4301 | X5CrNi 18 10 | X5CrNi18-10 |
| 1.4303 | X5CrNi 18 12 | X4CrNi18-12 |
| 1.4305 | X10CrNiS 18 9 | X8CrNiS18-9 |
| 1.4306 | X2CrNi 19 11 | X2CrNi19-11 |
| 1.4310 | X12CrNi 17 7 | X10CrNi18-8 |
| 1.4311 | X2CrNiN 18 10 | X2CrNiN18-10 |
| 1.4313 | X4CrNi 13 4 | X3CrNiMo13-4 |
| 1.4318 | X2CrNiN 18 7 | X2CrNiN18-7 |
| 1.4335 | X1CrNi 25 21 | X1CrNi25-21 |
| 1.4361 | X1CrNiSi 18 15 | X1CrNiSi18-15-4 |
| 1.4362 | X2CrNiN 23 4 | X2CrNiN23-4 |
| 1.4401 | X5CrNiMo17122 | X5CrNiMo17-12-2 |
| 1.4404 | X2CrNiMo17132 | X2CrNiMo17-12-2 |
| 1.4410 | X10CrNiMo 18 9 | X2CrNiMoN25-7-4 |

| mat. nos. | abbreviation old | abbreviation new |
|-----------|------------------|-------------------|
| 1.4418 | X4CrNiMo 16 5 | X4CrNiMo16-5-1 |
| 1.4435 | X2CrNiMo18143 | X2CrNiMo18-14-3 |
| 1.4436 | X5CrNiMo17133 | X3CrNiMo17-13-3 |
| 1.4438 | X2CrNiMo18164 | X2CrNiMo18-15-4 |
| 1.4460 | X4CrNiMo2752 | X3CrNiMoN27-5-2 |
| 1.4462 | X2CrNiMoN2253 | X2CrNiMoN22-5-3 |
| 1.4509 | X6CrTiNb 18 | X2CrTiNb18 |
| 1.4510 | X6CrTi 17 | X3CrTi17 |
| 1.4511 | X6CrNb 17 | X3CrNb17 |
| 1.4512 | X6CrTi 12 | X2CrTi12 |
| 1.4520 | X1CrTi 15 | X2CrTi17 |
| 1.4521 | X2CrMoTi 18 2 | X2CrMoTi18-2 |
| 1.4522 | X2CrMoNb 18 2 | X2CrMoNb18-2 |
| 1.4532 | X7CrNiMoAl 15 7 | X8CrNiMoAl15-7-2 |
| 1.4541 | X6CrNiTi18 10 | X6CrNiTi18-10 |
| 1.4542 | X5CrNiCuNb 17 4 | X5CrNiCuNb16-4 |
| 1.4550 | X6CrNiNb 18 10 | X6CrNiNb18-10 |
| 1.4558 | X2NiCrAlTi 32 20 | X2NiCrAlTi32-20 |
| 1.4567 | X3CrNiCu 18 9 X | X3CrNiCu18-9-4 |
| 1.4568 | X7CrNiAl 17 7 | X7CrNiAl17-7 |
| 1.4571 | - | X6CrNiMoTi17-12-2 |
| 1.4577 | X3CrNiMoTi 25 25 | X3CrNiMoTi25-25 |
| 1.4592 | X1CrMoTi 29 4 | X2CrMoTi29-4 |
| 1.4713 | X10CrAl 7 | X10CrAlSi7 |
| 1.4724 | X10CrAl 13 | X10CrAlSi13 |
| 1.4742 | X10CrAl 18 | X10CrAlSi18 |
| 1.4762 | X10CrAl 24 | X10CrAlSi25 |
| 1.4821 | X20CrNiSi 25 4 | X20CrNiSi25-4 |
| 1.4828 | X15CrNiSi 20 12 | X15CrNiSi20-12 |
| 1.4833 | X7CrNi 23 14 | X7CrNi23-12 |
| 1.4841 | X15CrNiSi 25 20 | X15CrNiSi25-21 |
| 1.4845 | X12CrNi 25 21 | X12CrNi25-21 |
| 1.4864 | X12NiCrSi 36 16 | X12NiCrSi35-16 |
| 1.4878 | X12CrNiTi18 9 | X10CrNiTi18-10 |
| 1.4903 | - | X10CrMoVNb9-1 |
| 1.5026 | 55 Si 7 | 55Si7 |
| 1.5131 | 50 MnSi 4 | 50MnSi4 |
| 1.5415 | 15 Mo 3 | 16Mo3 |
| 1.5530 | 21 MnB 5 | 20MnB5 |
| 1.5531 | 30 MnB 5 | 30MnB5 |
| 1.5532 | 38 MnB 5 | 38MnB5 |
| 1.5637 | 10 Ni 14 | 12Ni14 |
| 1.5662 | - | X11CrMo5+1 |
| 1.5680 | - | X12Ni5 |
| 1.5710 | 36 NiCr 6 | 36NiCr6 |
| 1.5715 | - | 16NiCrS4 |
| 1.5752 | 14 NiCr 14 | 15NiCr13 |
| 1.6210 | 15 MnNi 6 3 | 15MnNi6-3 |
| 1.6211 | 16 MnNi 6 3 | 16MnNi6-3 |
| 1.6310 | 20 MnMoNi 5 5 | 20MnMoNi5-5 |
| 1.6311 | 20 MnMoNi 4 5 | 20MnMoNi4-5 |
| 1.6341 | 11 NiMoV 5 3 | 11NiMoV5-3 |
| 1.6368 | 15 NiCuMoNb 5 | 15NiCuMoNb5 |
| 1.6511 | 36 CrNiMo 4 | 36CrNiMo4 |
| 1.6523 | 21 NiCrMo 2 | 21NiCrMo2-2 |
| 1.6526 | 21 NiCrMoS 2 | 21NiCrMoS2-2 |
| 1.6580 | 30 CrNiMo 8 | 30CrNiMo8 |
| 1.6582 | 34 CrNiMo 6 | 34CrNiMo6 |
| 1.6587 | 17 CrNiMo 6 | 18CrNiMo7-6 |
| 1.7003 | 38 Cr 2 | 38Cr2 |
| 1.7006 | 46 Cr 2 | 46Cr2 |
| 1.7016 | 17 Cr 3 | 17Cr3 |
| 1.7023 | 38 CrS 2 | 38CrS2 |
| 1.7025 | 46 CrS 2 | 46CrS2 |
| 1.7030 | 28 Cr 4 | 28Cr4 |
| 1.7033 | 34 Cr 4 | 34Cr4 |
| 1.7034 | 37 Cr 4 | 37Cr4 |
| 1.7035 | 41 Cr 4 | 41Cr4 |
| 1.7036 | 28 CrS 4 | 28CrS4 |
| 1.7037 | 34 CrS 4 | 34CrS4 |
| 1.7038 | 37 CrS 4 | 37CrS4 |

| mat. nos. | abbreviation old | abbreviation new |
|-----------|------------------|------------------|
| 1.7039 | 41 CrS 4 | 41CrS4 |
| 1.7131 | 16 MnCr 5 | 16MnCr5 |
| 1.7139 | 16 MnCrS 5 | 16MnCrS5 |
| 1.7043 | - | 38Cr4 |
| 1.7147 | 20 MnCr 5 | 20MnCr5 |
| 1.7149 | 20 MnCrS 5 | 20MnCrS5 |
| 1.7176 | 55 Cr 3 | 55Cr3 |
| 1.7182 | 27 MnCrB 5 2 | 27MnCrB5-2 |
| 1.7185 | 33 MnCrB 5 2 | 33MnCrB5-2 |
| 1.7189 | 39 MnCrB 6 2 | 39MnCrB6-2 |
| 1.7213 | 25 CrMoS 4 | 25CrMoS4 |
| 1.7218 | 25 CrMo 4 | 25CrMo4 |
| 1.7219 | - | 22CrMo4-2 |
| 1.7220 | 34 CrMo 4 | 34CrMo4 |
| 1.7225 | 42 CrMo 4 | 42CrMo4 |
| 1.7226 | 34 CrMoS 4 | 34CrMoS4 |
| 1.7227 | 42 CrMoS 4 | 42CrMoS4 |
| 1.7228 | 50 CrMo 4 | 50CrMo4 |
| 1.7264 | 20 CrMo 5 | 20CrMo5 |
| 1.7321 | 20 MoCr 4 | 20MoCr4 |
| 1.7323 | 20 MoCrS 4 | 20MoCrS4 |
| 1.7333 | 22 CrMoS 3 5 | 22CrMoS3-5 |
| 1.7335 | 13 CrMo 4 4 | 13CrMo4-5 |
| 1.7362 | 12 CrMo 19 5 | 12CrMo19-5 |
| 1.7380 | 10 CrMo 9 10 | 10CrMo9-10 |
| 1.7383 | - | 11CrMo9-10 |
| 1.7779 | - | 20CrMoV13-5-5 |
| 1.8159 | 50 CrV 4 | 51CrV4 |
| 1.8504 | 34 CrAl 6 | 34CrAl6 |
| 1.8519 | 31 CrMoV 9 | 31CrMoV9 |
| 1.8550 | 34 CrAlNi 7 | 34CrAlNi7 |
| 1.8807 | 13 MnNiMoV 5 4 | 13MnNiMoV5-4 |
| 1.8812 | 18 MnMoV 5 2 | 18MnMoV5-2 |
| 1.8815 | 18 MnMoV 6 3 | 18MnMoV6-3 |
| 1.8821 | StE 355 TM | P355M |
| 1.8824 | StE 420 TM | P420M |
| 1.8826 | StE 460 TM | P460M |
| 1.8828 | ESiE 420 TM | P420ML2 |
| 1.8831 | ESiE 460 TM | P460ML2 |
| 1.8832 | TSiE 355 TM | P355ML1 |
| 1.8835 | TSiE 420 TM | P420ML1 |
| 1.8837 | TSiE 460 TM | P460ML1 |
| 1.8879 | StE ... | P690Q |
| 1.8880 | WStE ... | P690QH |
| 1.8881 | TSiE ... | P690QL1 |
| 1.8882 | 10 MnTi 3 | 10MnTi3 |
| 1.8888 | ESiE ... | P690QL2 |
| 1.8900 | StE 380 | S380N |
| 1.8901 | StE 460 | S460N |
| 1.8902 | StE 420 | S420N |
| 1.8903 | TSiE 460 | S460NL |
| 1.8905 | StE 460 | P460N |
| 1.8907 | StE 500 | S500N |
| 1.8910 | TSiE 380 | S380NL |
| 1.8911 | ESiE 380 | S380NL1 |
| 1.8912 | TSiE 420 | S420NL |
| 1.8913 | ESiE 420 | S420NL1 |
| 1.8915 | TSiE 460 | P460NL1 |
| 1.8917 | WStE 500 | S500NL |
| 1.8918 | ESiE 460 | P460NL2 |
| 1.8919 | ESiE 500 | S500NL1 |
| 1.8930 | WStE 380 | P380NH |
| 1.8932 | WStE 420 | P420NH |
| 1.8935 | WStE 460 | P460NH |
| 1.8937 | TSiE 500 | P500NH |
| 1.8972 | StE 415.7 | L415NB |
| 1.8973 | StE 415.7 TM | L415MB |
| 1.8975 | StE 445.7 TM | L450MB |
| 1.8977 | StE 480.7 TM | L485MB |
| 1.8978 | StE 550.7 TM | L555MB |

Drilling Formulas

SPEEDS & FEEDS (inch)

$$\text{RPM} = \text{SFM} \times 3.82 \div D$$

$$\text{SFM} = \text{RPM} \times D \div 3.82$$

$$\text{IPM} = \text{IPR} \times \text{RPM}$$

$$\text{IPR} = \text{IPM} \div \text{RPM}$$

$$\text{Tim in Cut (sec.)} = \text{Hole Depth (inch)} \div \text{IPM} \times 60$$

METRIC TO INCH CONVERSION

$$\text{SFM} = \text{m/min} \times 3.28$$

$$\text{m/min} = \text{SFM} \div 3.28$$

$$\text{IPM} = \text{mm/min} \div 25.4$$

$$\text{mm/min} = \text{IPM} \times 25.4$$

$$\text{IPR} = \text{mm/rev} \div 25.4$$

$$\text{mm/rev} = \text{IPR} \times 25.4$$

$$\text{mm} = \text{inch} \times 25.4$$

$$\text{inch} = \text{mm} \div 25.4$$

$$\text{bar} = \text{psi} \div 14.5$$

$$\text{psi} = \text{bar} \times 14.5$$

$$\text{gal} = \text{L} \times 3.79$$

$$\text{L} = \text{gal} \div 3.79$$

LEGEND

RPM = revolutions per minute (spindle speed)

SFM = surface feet per minute (cutting speed)

IPM = inches per minute (feed rate)

IPR = inches per revolution (feed per revolution)

m/min (vc) = meters per minute (cutting speed)

mm/min (vf) = millimeters per minute (feed rate)

mm/rev (f) = millimeters per revolution (feed per revolution)

D = tool diameter

Pionex

FROM
GUHRING

NEW GENERATION THREADING TOOLS

- High-performance machining
- higher cutting speeds
- outstanding tool life
- universal application in a wide variety of materials



Series # 205

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|----------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0017 | 0.005 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.004 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.005 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.004 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 100 | 0.0015 | 0.004 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 25 | ≤ 255 | 80 | 0.0015 | 0.004 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 65 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 205 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | - | ≤ 180 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Copper, low-alloyed | - | ≤ 150 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | 205 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | - | ≤ 180 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 50 80 | 0.0012 0.0015 | 0.0030 0.0040 | 0.0050 0.0065 | 0.0065 0.0080 | 0.0080 0.0100 | 0.0080 0.0100 | 0.0090 0.0110 | | | |

Series # 206

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|----------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al wrought alloys | - | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 205 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | 205 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 50 80 | 0.0012 0.0015 | 0.0030 0.0040 | 0.0050 0.0065 | 0.0065 0.0080 | 0.0080 0.0100 | 0.0080 0.0100 | 0.0090 0.0110 | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al wrought alloys | - | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 205 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 100 | 0.0015 | 0.004 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 80 | 0.0015 | 0.00400 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 25 | ≤ 255 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.008 | 0.0100 | 0.0125 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 65 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 205 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping | - | ≤ 180 | 205 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| long-chipping | - | ≤ 180 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 217

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|----------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 38 | ≤ 354 | 70 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 70 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 38 | ≤ 354 | 55 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 180 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | - | ≤ 180 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Magnesium alloys | - | ≤ 120 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Copper, low-alloyed | - | ≤ 150 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 110 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Bronze, short-chipping | - | ≤ 180 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 25 | ≤ 255 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 45 70 | 0.0012 0.0015 | 0.0030 0.0040 | 0.0050 0.0065 | 0.0065 0.0080 | 0.0080 0.0100 | 0.0080 0.0100 | 0.0090 0.0110 | 0.0100 0.0125 | | |

Series # 219

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al wrought alloys | - | ≤ 200 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 180 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al wrought alloys | - | ≤ 200 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 180 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 90 | 0.0015 | 0.004 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0180 | | |
| Al wrought alloys | - | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0180 | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 205 | 0.002 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0180 | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 295 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Thermoplastics | | | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 225

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Al wrought alloys | - | ≤ 200 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 226

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.008 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.008 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.008 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 75 | 0.0017 | 0.0050 | 0.008 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Magnesium alloys | - | ≤ 120 | 295 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 25 | ≤ 255 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 25 | 0.001 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 38 | ≤ 354 | 55 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 65 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 38 | ≤ 354 | 45 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Magnesium alloys | - | ≤ 120 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Brass, short-chipping | - | ≤ 180 | 145 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| long-chipping | - | ≤ 180 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 25 | ≤ 255 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 32 | ≤ 301 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Duroplastics | | | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Thermoplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 100 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 32 | ≤ 301 | 80 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 32 | ≤ 301 | 80 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 100 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 25 | ≤ 255 | 80 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 100 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 38 | ≤ 354 | 80 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 90 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 38 | ≤ 354 | 65 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 205 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | 0.0245 | 0.0290 |
| ≤ 24 % Si | - | ≤ 180 | 160 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Magnesium alloys | - | ≤ 120 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Copper, low-alloyed | - | ≤ 150 | 100 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 130 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, short-chipping | - | ≤ 180 | 100 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 25 | ≤ 255 | 90 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 50 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| Thermoplastics | | | 80 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |

Series # 257

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 90 | | | | 0.0100 | 0.0125 | 0.0125 | 0.014 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 32 | ≤ 301 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.011 | 0.0125 | 0.0160 | 0.0200 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 90 | | | | 0.0100 | 0.0125 | 0.0125 | 0.014 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 32 | ≤ 301 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.011 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 90 | | | | 0.0080 | 0.0100 | 0.0100 | 0.011 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 25 | ≤ 255 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.011 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 90 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 45 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 90 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 38 | ≤ 354 | 70 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 70 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| | ≤ 38 | ≤ 354 | 55 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 180 | | | | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | 0.0245 | 0.0290 |
| ≤ 24 % Si | - | ≤ 180 | 145 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Magnesium alloys | - | ≤ 120 | 225 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | 0.0245 |
| Copper, low-alloyed | - | ≤ 150 | 90 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 110 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, short-chipping | - | ≤ 180 | 90 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 25 | ≤ 255 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 45 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | 0.0160 |
| Thermoplastics | | | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 266

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| | ≤ 32 | ≤ 301 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| | ≤ 32 | ≤ 301 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 25 | ≤ 255 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| | ≤ 43 | ≤ 402 | 15 | | | | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | 0.0080 | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.010 | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| | ≤ 38 | ≤ 354 | 55 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 65 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| | ≤ 38 | ≤ 354 | 45 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 145 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| ≤ 24 % Si | - | ≤ 180 | 115 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Magnesium alloys | - | ≤ 120 | 180 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Copper, low-alloyed | - | ≤ 150 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Brass, short-chipping | - | ≤ 180 | 145 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| long-chipping | - | ≤ 180 | 90 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Bronze, short-chipping | - | ≤ 180 | 70 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| | ≤ 25 | ≤ 255 | 65 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 55 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| | ≤ 32 | ≤ 301 | 45 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| Duroplastics | | | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | 0.0100 | |
| Thermoplastics | | | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | - | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | - | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| | | | | | | | | | | | | |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Stainless steels, martensitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 25 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| | | | | | | | | | | | | |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Stainless steels, martensitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 25 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|---|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | | | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|---|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0. | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | - | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials GGV | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | | | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | - | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials GGV | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0 | | | | | | | | |

Series # 294

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | - | - | - | - | - | - | - | - | - | - |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | - | - | - | - | - | - | - | - | - | - |
| New cast materials GGV | ≤ 20 | ≤ 220 | - | - | - | - | - | - | - | - | - | - |
| New cast materials ADI | ≤ 32 | ≤ 301 | - | - | - | - | - | - | - | - | - | - |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | - | - | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | - | - | - | - | - | - | - | - | - | - | - | - |
| Reinforced plastics - GFK / CFK | - | - | - | - | - | - | - | - | - | - | - | - |

Series # 301

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | | | |
|--|----------|-------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--|--|
| | HRC | BHN | | .0039 in. .10 mm | .0063 in. .16 mm | .0098 in. .25 mm | .0118 in. .30 mm | .0197 in. .50 mm | .0248 in. .63 mm | .0315 in. .8 mm | .0394 in. 1.0 mm | .0591 in. 1.5 mm | .0787 in. 2.0 mm | | |
| Common structural steels | - | ≤ 150 | 70 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| Free-cutting steels | ≤ 32 | ≤ 301 | 60 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 | | |
| Unalloyed heat-treatable steels | ≤ 25 | ≤ 255 | 60 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 | | |
| Unalloyed case hardened steels | ≤ 20 | ≤ 220 | 65 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 | | |
| Alloyed case hardened steels | ≤ 25 | ≤ 255 | 60 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| Tool steels | ≤ 32 | ≤ 301 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| High speed steels | ≤ 43 | ≤ 402 | 45 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0005 | 0.0009 | 0.0014 | 0.0018 | | |
| Hardened steels | ≤ 48 | ≤ 460 | - | - | - | - | - | - | - | - | - | - | - | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| austenitic | ≤ 36 | ≤ 337 | 45 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 | | |
| martensitic | ≤ 46 | ≤ 435 | 50 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 | | |
| Cast iron | ≤ 23 | ≤ 242 | 85 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 38 | ≤ 354 | 70 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 70 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | - | - | - | - | - | - | - | - | - | - | - | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | - | - | - | - | - | - | - | - | - | - | - | | |
| Special alloys | ≤ 54 | ≤ 549 | - | - | - | - | - | - | - | - | - | - | - | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | - | - | - | - | - | - | - | - | - | - | - | | |
| Aluminium and Al-alloys | - | ≤ 120 | - | - | - | - | - | - | - | - | - | - | - | | |
| Al wrought alloys | - | ≤ 200 | - | - | - | - | - | - | - | - | - | - | - | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 85 | 0.0004 | 0.0005 | 0.0006 | 0.0007 | 0.0009 | 0.0013 | 0.0015 | 0.0024 | 0.0027 | 0.0037 | | |
| ≤ 24 % Si | - | ≤ 180 | 60 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| Magnesium alloys | - | ≤ 120 | 245 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 | | |
| Copper, low-alloyed | - | ≤ 150 | 140 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 | | |
| Brass, short-chipping | - | ≤ 180 | - | - | - | - | - | - | - | - | - | - | - | | |
| long-chipping | - | ≤ 180 | 70 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| Thermoplastics | - | - | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 | | |
| Reinforced plastics - Kevlar | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Reinforced plastics - GFK / CFK | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|
| | HRC | BHN | | .0039 in. .10 mm | .0063 in. .16 mm | .0098 in. .25 mm | .0118 in. .30 mm | .0197 in. .50 mm | .0248 in. .63 mm | .0315 in. .8 mm | .0394 in. 1.0 mm | .0591 in. 1.5 mm | .0787 in. 2.0 mm |
| Common structural steels | - | ≤ 150 | 70 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 60 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 65 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 60 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Tool steels | ≤ 25 | ≤ 255 | 50 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| High speed steels | ≤ 43 | ≤ 402 | 45 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0005 | 0.0009 | 0.0014 | 0.0018 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Stainless steels, sulphured martensitic | ≤ 36 | ≤ 337 | 45 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 |
| Cast iron | ≤ 23 | ≤ 242 | 85 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 60 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 70 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 85 | 0.0004 | 0.0005 | 0.0006 | 0.0007 | 0.0009 | 0.0013 | 0.0015 | 0.0024 | 0.0027 | 0.0037 |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 60 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Magnesium alloys | - | ≤ 120 | 245 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Copper, low-alloyed | - | ≤ 150 | 140 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Brass, long-chipping | - | ≤ 180 | 70 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 |
| Bronze, short-chipping | - | ≤ 180 | 70 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Duroplastics | | | 50 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Thermoplastics | | | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Stainless steels, sulphured martensitic | ≤ 36 | ≤ 337 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 95 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 70 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Brass, long-chipping | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Tool steels | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| austenitic | ≤ 36 | ≤ 337 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| martensitic | ≤ 46 | ≤ 435 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 95 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 70 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 25 | ≤ 255 | 95 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Duroplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 75 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 75 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| High speed steels | ≤ 43 | ≤ 402 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| martensitic | ≤ 46 | ≤ 435 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Cast iron | ≤ 23 | ≤ 242 | 95 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 75 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 75 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 65 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | 0.0045 | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 95 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 120 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Bronze, short-chipping | - | ≤ 180 | 95 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 25 | ≤ 255 | 75 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 75 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0 | | | | |

Series # 345

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------------------|-------------------------|-----------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | < 25 < 32 | < 150 < 301 | | | | | | | | | | | |
| Free-cutting steels | < 25 < 32 | < 255 < 301 | 90 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Unalloyed heat-treatable steels | < 20 < 25 < 32 | < 220 < 255 < 301 | 90 45 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Alloyed heat-treatable steels | < 32 < 43 | < 301 < 402 | 55 45 | | | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0090 0.0070 | 0.0100 0.0080 | | |
| Unalloyed case hardened steels | < 25 | < 255 | | | | | | | | | | | |
| Alloyed case hardened steels | < 32 < 43 | < 301 < 402 | 50 35 | | | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0090 0.0070 | 0.0100 0.0080 | | |
| Nitriding steels | < 32 < 43 | < 301 < 402 | 45 30 | | | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0090 0.0070 | 0.0100 0.0080 | | |
| Tool steels | < 25 < 43 | < 255 < 402 | 55 30 | | | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0090 0.0070 | 0.0100 0.0080 | | |
| High speed steels | < 43 | < 402 | 30 | | | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Spring steels | < 38 | < 354 | 25 | | | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Hardened steels | < 48 < 66 | < 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | < 28 < 36 | < 273 < 337 | 45 30 | | | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0090 0.0070 | 0.0100 0.0080 | | |
| Stainless steels, sulphured martensitic | < 46 | < 435 | 35 | | | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Cast iron | < 23 < 38 | < 242 < 354 | 115 90 | | | 0.0080 0.0080 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0125 0.0125 | 0.0140 0.0140 | 0.0160 0.0160 | | |
| Spheroidal graphite iron and malleable cast iron | < 23 < 38 | < 242 < 354 | 95 70 | | | 0.0080 0.0080 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0125 0.0125 | 0.0140 0.0140 | 0.0160 0.0160 | | |
| Chilled cast iron | < 38 | < 354 | 25 | | | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| New cast materials GGV | < 20 < 32 | < 220 < 301 | | | | | | | | | | | |
| New cast materials ADI | < 32 < 43 | < 301 < 402 | | | | | | | | | | | |
| Special alloys | < 54 | < 549 | | | | | | | | | | | |
| Ti and Ti-alloys | < 25 < 43 | < 255 < 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | < 120 | | | | | | | | | | | |
| Al wrought alloys | - | < 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | < 180 | | | | | | | | | | | |
| Al cast alloys ≤ 24 % Si | - | < 180 | | | | | | | | | | | |
| Magnesium alloys | - | < 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | < 150 | 115 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Brass, short-chipping | - | < 180 | | | | | | | | | | | |
| Brass, long-chipping | - | < 180 | 145 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Bronze, short-chipping | - | < 180 | 115 | | | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Bronze, long-chipping | < 25 < 32 | < 255 < 301 | 95 70 | | | 0.0050 0.0050 | 0.0065 0.0065 | 0.0080 0.0080 | 0.0080 0.0080 | 0.0090 0.0090 | 0.0100 0.0100 | | |
| Duroplastics | | | 55 | | | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 381

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------------------|-------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm | |
| Common structural steels | < 32 | < 150 < 301 | 115 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | < 25 < 32 | < 255 < 301 | 115 115 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | < 20 < 25 < 32 | < 220 < 255 < 301 | 100 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | < 32 < 43 | < 301 < 402 | 55 35 | 0.0003 | 0.0006 0.0005 | 0.0016 0.0013 | 0.0020 0.0016 | 0.0025 0.0020 | 0.0031 0.0025 | 0.0031 0.0025 | 0.0031 0.0025 | 0.0039 0.0031 | 0.0049 0.0039 |
| Unalloyed case hardened steels | < 25 | < 255 | 100 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | < 32 < 43 | < 301 < 402 | 60 35 | 0.0003 0.0003 | 0.0006 0.0005 | 0.0016 0.0013 | 0.0020 0.0016 | 0.0025 0.0020 | 0.0031 0.0025 | 0.0031 0.0025 | 0.0031 0.0025 | 0.0039 0.0031 | 0.0049 0.0039 |
| Nitriding steels | < 32 < 43 | < 301 < 402 | 45 35 | 0.0003 0.0003 | 0.0006 0.0005 | 0.0016 0.0013 | 0.0020 0.0016 | 0.0025 0.0020 | 0.0031 0.0025 | 0.0031 0.0025 | 0.0031 0.0025 | 0.0039 0.0031 | 0.0049 0.0039 |
| Tool steels | < 25 < 43 | < 255 < 402 | 45 25 | 0.0003 0.0003 | 0.0005 0.0005 | 0.0013 0.0013 | 0.0016 0.0016 | 0.0020 0.0020 | 0.0025 0.0025 | 0.0025 0.0025 | 0.0025 0.0025 | 0.0031 0.0031 | 0.0039 0.0039 |
| High speed steels | < 43 | < 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | < 38 | < 354 | 25 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | < 48 < 66 | < 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | < 28 < 36 | < 273 < 337 | 50 35 | 0.0003 0.0003 | 0.0005 0.0005 | 0.0013 0.0013 | 0.0016 0.0016 | 0.0020 0.0020 | 0.0025 0.0025 | 0.0025 0.0025 | 0.0025 0.0025 | 0.0031 0.0031 | 0.0039 0.0039 |
| Stainless steels, sulphured martensitic | < 46 | < 435 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | < 23 < 38 | < 242 < 354 | 80 80 | 0.0005 0.0004 | 0.0007 0.0006 | 0.0025 0.0020 | 0.0031 0.0025 | 0.0039 0.0031 | 0.0049 0.0039 | 0.0049 0.0039 | 0.0049 0.0039 | 0.0063 0.0049 | 0.0079 0.0063 |
| Spheroidal graphite iron and malleable cast iron | < 23 < 38 | < 242 < 354 | 100 80 | 0.0005 0.0004 | 0.0007 0.0006 | 0.0025 0.0020 | 0.0031 0.0025 | 0.0039 0.0031 | 0.0049 0.0039 | 0.0049 0.0039 | 0.0049 0.0039 | 0.0063 0.0049 | 0.0079 0.0063 |
| Chilled cast iron | < 38 | < 354 | | | | | | | | | | | |
| New cast materials GGV | < 20 < 32 | < 220 < 301 | | | | | | | | | | | |
| New cast materials ADI | < 32 < 43 | < 301 < 402 | | | | | | | | | | | |
| Special alloys | < 54 | < 549 | 20 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | < 25 < 43 | < 255 < 402 | 20 15 | 0.0002 0.0002 | 0.0003 0.0003 | 0.0010 0.0010 | 0.0013 0.0013 | 0.0016 0.0016 | 0.0020 0.0020 | 0.0020 0.0020 | 0.0020 0.0020 | 0.0025 0.0025 | 0.0031 0.0031 |
| Aluminium and Al-alloys | - | < 120 | 260 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | < 200 | 260 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 165 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Al cast alloys ≤ 24 % Si | - | < 180 | 165 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | < 120 | 230 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | < 150 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | < 180 | 230 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, long-chipping | - | < 180 | 150 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | < 180 | 115 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | < 25 < 32 | < 255 < 301 | 100 65 | 0.0003 0.0003 | 0.0006 0.0006 | 0.0016 0.0016 | 0.0020 0.0020 | 0.0025 0.0025 | 0.0031 0.0031 | 0.0031 0.0031 | 0.0031 0.0031 | 0.0039 0.0039 | 0.0049 0.0049 |
| Duroplastics | | | 60 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 100 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 130 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 95 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 130 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 95 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 25 | ≤ 255 | 95 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 32 | ≤ 301 | 70 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 65 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 55 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 65 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 20 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 10 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| | ≤ 66 | - | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 45 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| austenitic | ≤ 36 | ≤ 337 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| martensitic | ≤ 46 | ≤ 435 | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 130 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 95 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 110 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 80 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 20 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| | ≤ 43 | ≤ 402 | 15 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 245 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| ≤ 24 % Si | - | ≤ 180 | 195 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 130 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 160 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 110 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 95 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 32 | ≤ 301 | 80 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics | | | 95 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| austenitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| martensitic | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al wrought alloys | - | ≤ 200 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Copper, low-alloyed | - | ≤ 150 | 130 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 502

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 38 | ≤ 354 | 55 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 65 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 38 | ≤ 354 | 45 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Special alloys | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| | - | ≤ 200 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 180 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | - | ≤ 180 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 120 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | - | ≤ 150 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Magnesium alloys | - | ≤ 120 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 25 | ≤ 255 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Thermoplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 503

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 38 | ≤ 354 | 55 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 65 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 38 | ≤ 354 | 45 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Special alloys | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| | - | ≤ 200 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 180 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | - | ≤ 180 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 120 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | - | ≤ 150 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Magnesium alloys | - | ≤ 120 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Copper, low-alloyed | - | ≤ 150 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 25 | ≤ 255 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Thermoplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 70 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 70 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 25 | ≤ 255 | 55 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 25 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 25 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 70 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 38 | ≤ 354 | 55 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 65 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 38 | ≤ 354 | 45 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 145 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 115 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Magnesium alloys | - | ≤ 120 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 70 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 90 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 25 | ≤ 255 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 55 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Thermoplastics | | | 55 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 195 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 25 | ≤ 255 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 35 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 36 | ≤ 337 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 46 | ≤ 435 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 40 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| ≤ 24 % Si | - | ≤ 180 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 524

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| Free-cutting steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Tool steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Spring steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Hardened steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| Stainless steels, sulphured martensitic | ≤ 66 | - | | | | | | | | | | | |
| Cast iron | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Chilled cast iron | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| New cast materials GGV | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| New cast materials ADI | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Special alloys | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Aluminium and Al-alloys | ≤ 38 | ≤ 354 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Al wrought alloys | ≤ 20 | ≤ 200 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 105 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Brass, long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Duroplastics | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 526

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Free-cutting steels | ≤ 32 | ≤ 301 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Unalloyed heat-treatable steels | ≤ 25 | ≤ 255 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Nitriding steels | ≤ 43 | ≤ 402 | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Tool steels | ≤ 32 | ≤ 301 | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | | | | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Spring steels | ≤ 25 | ≤ 255 | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Hardened steels | ≤ 43 | ≤ 402 | 15 | | | | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Stainless steels, sulphured austenitic | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Stainless steels, sulphured martensitic | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| Cast iron | ≤ 66 | - | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 28 | ≤ 273 | | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Chilled cast iron | ≤ 36 | ≤ 337 | | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| New cast materials GGV | ≤ 46 | ≤ 435 | | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| New cast materials ADI | ≤ 23 | ≤ 242 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Special alloys | ≤ 38 | ≤ 354 | 65 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Ti and Ti-alloys | ≤ 38 | ≤ 354 | 45 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Aluminium and Al-alloys | ≤ 20 | ≤ 200 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 180 | 145 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 115 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Magnesium alloys | - | ≤ 120 | 180 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Copper, low-alloyed | - | ≤ 150 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Brass, short-chipping | - | ≤ 180 | | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Brass, long-chipping | - | ≤ 180 | 90 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 65 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Duroplastics | ≤ 25 | ≤ 255 | 55 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Thermoplastics | ≤ 32 | ≤ 301 | | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Reinforced plastics - Kevlar | | | | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Reinforced plastics - GFK / CFK | | | | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 32 | ≤ 301 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 32 | ≤ 301 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 25 | ≤ 255 | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 30 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 43 | ≤ 402 | 15 | | | | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| High speed steels | ≤ 43 | ≤ 402 | 15 | | | | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 25 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 70 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 38 | ≤ 354 | 55 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 65 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 38 | ≤ 354 | 45 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 145 | | | | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | - | ≤ 180 | 115 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Magnesium alloys | - | ≤ 120 | 180 | | | | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Copper, low-alloyed | - | ≤ 150 | 70 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 90 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Bronze, short-chipping | - | ≤ 180 | 70 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 25 | ≤ 255 | 65 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 55 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics | | | 35 | | | | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Reinforced plastics - Kevlar | | | 55 | | | | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 195 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 25 | ≤ 255 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 35 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 36 | ≤ 337 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 46 | ≤ 435 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 40 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | - | ≤ 180 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|-----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 25 | ≤ 255 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 65 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al wrought alloys | - | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 205 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | ≤ 24 % Si | ≤ 180 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Copper, low-alloyed | - | ≤ 150 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|-----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 25 | ≤ 255 | 80 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 65 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al wrought alloys | - | ≤ 200 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 205 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | ≤ 24 % Si | ≤ 180 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Copper, low-alloyed | - | ≤ 150 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |

Series # 551

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 90 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 70 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 90 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 70 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 90 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 25 | ≤ 255 | 90 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 90 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 45 | | | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 90 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 38 | ≤ 354 | 70 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 70 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 38 | ≤ 354 | 55 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 180 | | | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | - | ≤ 180 | 145 | | | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 90 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 110 | | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 70 | | | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 45 | | | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |

Series # 552

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 75 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al wrought alloys | - | ≤ 200 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | - | ≤ 180 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Magnesium alloys | - | ≤ 120 | 295 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | - | ≤ 255 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0110 | | |
| | | | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 75 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Al wrought alloys | - | ≤ 200 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | - | ≤ 180 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Magnesium alloys | - | ≤ 120 | 295 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 25 | ≤ 255 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 100 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| | ≤ 32 | ≤ 301 | 80 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 105 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| | ≤ 32 | ≤ 301 | 100 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| | ≤ 25 | ≤ 255 | 80 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| | ≤ 32 | ≤ 301 | 65 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| | ≤ 43 | ≤ 402 | 40 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 50 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 35 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| | ≤ 36 | ≤ 337 | 20 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| | ≤ 46 | ≤ 435 | 25 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| Cast iron | ≤ 23 | ≤ 242 | 100 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| | ≤ 38 | ≤ 354 | 100 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| | ≤ 38 | ≤ 354 | 65 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al wrought alloys | - | ≤ 200 | 230 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 165 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| | - | ≤ 180 | 165 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Magnesium alloys | - | ≤ 120 | 230 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Copper, low-alloyed | - | ≤ 150 | 195 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | 195 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| | - | ≤ 180 | 130 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Bronze, short-chipping | - | ≤ 180 | 100 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| | ≤ 25 | ≤ 255 | 80 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 50 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| | ≤ 32 | ≤ 301 | 40 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Duroplastics | | | 60 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Thermoplastics | | | 90 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 557

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------------------|-------------------------|----------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 100 80 | | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 105 100 | | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 80 80 65 | | 0.0031 0.0031 0.0025 | 0.0049 0.0049 0.0039 | 0.0079 0.0079 0.0063 | 0.0079 0.0079 0.0063 | 0.0098 0.0098 0.0079 | 0.0124 0.0124 0.0098 | 0.0157 0.0157 0.0124 | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 50 40 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0098 | 0.0197 0.0098 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 50 25 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0098 | 0.0197 0.0098 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 50 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 35 20 25 | | 0.0020 0.0020 0.0020 | 0.0031 0.0031 0.0031 | 0.0049 0.0049 0.0049 | 0.0049 0.0049 0.0049 | 0.0063 0.0063 0.0063 | 0.0079 0.0079 0.0079 | 0.0098 0.0098 0.0098 | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 100 100 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 80 65 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al wrought alloys | - | ≤ 200 | 230 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 165 165 | | 0.0049 0.0039 | 0.0079 0.0063 | 0.0124 0.0098 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | 0.0248 0.0197 | | |
| Magnesium alloys | - | ≤ 120 | 230 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Copper, low-alloyed | - | ≤ 150 | 195 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 195 130 | | 0.0031 0.0031 | 0.0049 0.0049 | 0.0079 0.0079 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | | |
| Bronze, short-chipping | - | ≤ 180 | 100 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 80 40 | | 0.0025 0.0025 | 0.0039 0.0039 | 0.0063 0.0063 | 0.0063 0.0063 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | | |
| Duroplastics | | | 60 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Thermoplastics | | | 90 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 559

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------------------|-------------------------|----------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 100 80 | | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 105 100 | | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 80 80 65 | | 0.0031 0.0031 0.0025 | 0.0049 0.0049 0.0039 | 0.0079 0.0079 0.0063 | 0.0079 0.0079 0.0063 | 0.0098 0.0098 0.0079 | 0.0124 0.0124 0.0098 | 0.0157 0.0157 0.0124 | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 50 40 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0098 | 0.0197 0.0098 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 50 25 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0098 | 0.0197 0.0098 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 50 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 35 20 25 | | 0.0020 0.0020 0.0020 | 0.0031 0.0031 0.0031 | 0.0049 0.0049 0.0049 | 0.0049 0.0049 0.0049 | 0.0063 0.0063 0.0063 | 0.0079 0.0079 0.0079 | 0.0098 0.0098 0.0098 | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 100 100 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 80 65 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al wrought alloys | - | ≤ 200 | 230 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 165 165 | | 0.0049 0.0039 | 0.0079 0.0063 | 0.0124 0.0098 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | 0.0248 0.0197 | | |
| Magnesium alloys | - | ≤ 120 | 230 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Copper, low-alloyed | - | ≤ 150 | 195 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 195 130 | | 0.0031 0.0031 | 0.0049 0.0049 | 0.0079 0.0079 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | | |
| Bronze, short-chipping | - | ≤ 180 | 100 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 80 40 | | 0.0025 0.0025 | 0.0039 0.0039 | 0.0063 0.0063 | 0.0063 0.0063 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | | |
| Duroplastics | | | 60 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Thermoplastics | | | 90 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | - | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | - | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | | | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | - | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials GGV | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| long-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | | | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| Common structural steels | - | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | - | - | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| martensitic | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | ≤ 20 | ≤ 220 | | | | | | | | | | |
| New cast materials GGV | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0 | | | | | | | | |

Series # 595

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|--------------------------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| | Common structural steels | - | | ≤ 150 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Tool steels | ≤ 25 | ≤ 255 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 20 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | - | - | - | - | - | - | - | - | - | - |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Stainless steels, martensitic | ≤ 36 | ≤ 337 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Spheroidal graphite iron and malleable cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 65 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| New cast materials GGV | ≤ 20 | ≤ 220 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| New cast materials ADI | ≤ 32 | ≤ 301 | 35 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Special alloys | ≤ 54 | ≤ 549 | 10 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | ≤ 32 | ≤ 301 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | - | - | - | - | - | - | - | - | - | - | - | - |
| Reinforced plastics - GFK / CFK | - | - | - | - | - | - | - | - | - | - | - | - |

Series # 605

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|--------------------------|-------|-----|-----------------|---------|---------|---------|---------|---------|---------|--------|-----------|-----------|
| | HRC | BHN | | 1/16 in. | 1/8 in. | 1/4 in. | 3/8 in. | 1/2 in. | 5/8 in. | 3/4 in. | 1 in. | 1 1/4 in. | 1 1/2 in. |
| | Common structural steels | - | | ≤ 150 | | | | | | | | | |
| Free-cutting steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Nitriding steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Tool steels | ≤ 25 | ≤ 255 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | | | |
| Hardened steels | ≤ 48 | ≤ 460 | - | - | - | - | - | - | - | - | - | - | - |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Stainless steels, martensitic | ≤ 36 | ≤ 337 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Cast iron | ≤ 23 | ≤ 242 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 38 | ≤ 354 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Chilled cast iron | ≤ 23 | ≤ 242 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| New cast materials GGV | ≤ 38 | ≤ 354 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| New cast materials ADI | ≤ 20 | ≤ 220 | 80 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Special alloys | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Ti and Ti-alloys | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | |
| Al wrought alloys | - | ≤ 200 | 230 | 0.0006 | 0.0008 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 130 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | |
| Magnesium alloys | - | ≤ 120 | 195 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | |
| Copper, low-alloyed | - | ≤ 150 | 165 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | |
| Brass, short-chipping | - | ≤ 180 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | |
| Brass, long-chipping | - | ≤ 180 | 130 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | |
| Bronze, short-chipping | - | ≤ 180 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 | |
| Duroplastics | ≤ 32 | ≤ 301 | 50 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 | |
| Thermoplastics | ≤ 32 | ≤ 301 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | |
| Reinforced plastics - Kevlar | - | - | - | - | - | - | - | - | - | - | - | - | |
| Reinforced plastics - GFK / CFK | - | - | - | - | - | - | - | - | - | - | - | - | |

Series # 614

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-------|-----|-----------------|--------|--------|--------|---------|--------|--------|--------|--------|
| | HRC | BHN | | .5 mm | 1.0 mm | 2.0 mm | 2.5 mm | 3.15 mm | 4.0 mm | 5.0 mm | 6.3 mm | 8 mm |
| | | | | | | | | | | | | |
| Common structural steels | - | ≤ 150 | 115 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 115 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 115 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 25 | ≤ 255 | 80 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 70 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 55 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 100 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 60 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 43 | ≤ 402 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Tool steels | ≤ 25 | ≤ 255 | 45 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| High speed steels | ≤ 43 | ≤ 402 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 50 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 36 | ≤ 337 | 35 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| | ≤ 46 | ≤ 435 | 25 | 0.0003 | 0.0005 | 0.0013 | 0.0016 | 0.0020 | 0.0025 | 0.0025 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 | ≤ 242 | 80 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 100 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| | ≤ 38 | ≤ 354 | 80 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 20 | 0.0002 | 0.0002 | 0.0008 | 0.0010 | 0.0013 | 0.0016 | 0.0016 | 0.0020 | 0.0025 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 20 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| | ≤ 43 | ≤ 402 | 15 | 0.0002 | 0.0003 | 0.0010 | 0.0013 | 0.0016 | 0.0020 | 0.0020 | 0.0025 | 0.0031 |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 165 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Magnesium alloys | - | ≤ 120 | 230 | 0.0005 | 0.0007 | 0.0025 | 0.0031 | 0.0039 | 0.0049 | 0.0049 | 0.0063 | 0.0079 |
| Copper, low-alloyed | - | ≤ 150 | 195 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Brass, short-chipping | - | ≤ 180 | 230 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| | - | ≤ 180 | 150 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | - | ≤ 255 | 100 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| | ≤ 32 | ≤ 301 | 60 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Duroplastics | | | 65 | 0.0003 | 0.0006 | 0.0016 | 0.0020 | 0.0025 | 0.0031 | 0.0031 | 0.0039 | 0.0049 |
| Thermoplastics | | | 100 | 0.0004 | 0.0006 | 0.0020 | 0.0025 | 0.0031 | 0.0039 | 0.0039 | 0.0049 | 0.0063 |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

Series # 617

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|-----------------|---------|---------|---------|---------|---------|---------|-------|-----------|-----------|
| | HRC | BHN | | 1/16 in. | 1/8 in. | 1/4 in. | 3/8 in. | 1/2 in. | 5/8 in. | 3/4 in. | 1 in. | 1 1/4 in. | 1 1/2 in. |
| | | | | | | | | | | | | | |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 35 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 36 | ≤ 337 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 46 | ≤ 435 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 65 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 5 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| austenitic | ≤ 36 | ≤ 337 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| martensitic | ≤ 46 | ≤ 435 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 65 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 50 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 25 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 160 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 130 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 75 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 95 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 32 | ≤ 301 | 50 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Duroplastics | | | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 65 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 35 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 5 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 30 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| austenitic | ≤ 36 | ≤ 337 | 25 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| martensitic | ≤ 46 | ≤ 435 | 30 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 65 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 50 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 25 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 160 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 130 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 75 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 95 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 32 | ≤ 301 | 50 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Duroplastics | | | 45 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 95 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 70 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | - | ≤ 180 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 25 | ≤ 255 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | - | ≤ 180 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Magnesium alloys | - | ≤ 120 | 325 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Copper, low-alloyed | - | ≤ 150 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 160 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Bronze, short-chipping | - | ≤ 180 | 130 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 25 | ≤ 255 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | | | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 25 | ≤ 255 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | - | ≤ 180 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 160 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| | ≤ 32 | ≤ 301 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| | ≤ 32 | ≤ 301 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| | ≤ 25 | ≤ 255 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| | ≤ 38 | ≤ 354 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 295 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | 0.0245 | |
| | - | ≤ 180 | 260 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | 0.0200 | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 180 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |
| Bronze, short-chipping | - | ≤ 180 | 145 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 25 | ≤ 255 | 130 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 110 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | ≤ 32 | ≤ 301 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | 0.0125 | |
| | | | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | 0.0160 | |

Series # 654

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|-----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 130 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 100 | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 130 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 100 | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 100 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 50 | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 65 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 55 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 65 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 130 | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 100 | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 115 | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 80 | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 260 | | | | | | | | | | |
| | ≤ 24 % Si | ≤ 180 | 225 | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 325 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 130 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 160 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 130 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 115 | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 100 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 80 | | | | | | | | | | |
| Duroplastics | | | 65 | | | | | | | | | | |
| Thermoplastics | | | 100 | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 657

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|-----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 45 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 40 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 40 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 40 | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 30 | | | | | | | | | | |
| | ≤ 48 | ≤ 460 | 10 | | | | | | | | | | |
| | ≤ 66 | - | | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 55 | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | 40 | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | 45 | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 30 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 25 | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 40 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 25 | | | | | | | | | | |
| | | ≤ 120 | | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Aluminium and Al-alloys | - | ≤ 200 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 180 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 24 % Si | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 275 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | - | ≤ 180 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics | | | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 43 | ≤ 402 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 35 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 15 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 36 | ≤ 337 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| | ≤ 46 | ≤ 435 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 160 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 145 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 38 | ≤ 354 | 100 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 30 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 45 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 255 | 145 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 130 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|
| | HRC | BHN | | .0039 in. .10 mm | .0063 in. .16 mm | .0098 in. .25 mm | .0118 in. .30 mm | .0197 in. .50 mm | .0248 in. .63 mm | .0315 in. .8 mm | .0394 in. 1.0 mm | .0591 in. 1.5 mm | .0787 in. 2.0 mm |
| Common structural steels | - | ≤ 150 | 90 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 75 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 85 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 75 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Nitriding steels | ≤ 32 | ≤ 301 | 60 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Tool steels | ≤ 25 | ≤ 255 | 65 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| High speed steels | ≤ 43 | ≤ 402 | 60 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 |
| Spring steels | ≤ 38 | ≤ 354 | 35 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0005 | 0.0009 | 0.0014 | 0.0018 |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 65 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Stainless steels, sulphured martensitic | ≤ 36 | ≤ 337 | 50 | 0.0001 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0006 | 0.0011 | 0.0016 | 0.0021 |
| Cast iron | ≤ 23 | ≤ 242 | 110 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 75 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 90 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0007 | 0.0010 | 0.0012 | 0.0020 | 0.0024 | 0.0031 |
| Copper, low-alloyed | - | ≤ 150 | 175 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Brass, long-chipping | - | ≤ 180 | 90 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0009 | 0.0016 | 0.0020 | 0.0028 |
| Bronze, short-chipping | - | ≤ 180 | 90 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 50 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Duroplastics | ≤ 32 | ≤ 301 | 45 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Thermoplastics | | | 65 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Reinforced plastics - Kevlar | | | 75 | 0.0002 | 0.0002 | 0.0003 | 0.0004 | 0.0004 | 0.0006 | 0.0008 | 0.0014 | 0.0018 | 0.0024 |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed heat-treatable steels | ≤ 25 | ≤ 255 | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 50 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| Stainless steels, sulphured martensitic | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 80 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 260 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 225 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Magnesium alloys | - | ≤ 120 | 325 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Copper, low-alloyed | - | ≤ 150 | 130 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Brass, long-chipping | - | ≤ 180 | 160 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Bronze, short-chipping | - | ≤ 180 | 130 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 115 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics | ≤ 32 | ≤ 301 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Thermoplastics | | | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Reinforced plastics - Kevlar | | | 100 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 25 | ≤ 255 | 90 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 35 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 115 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 90 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 38 | ≤ 354 | 70 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 225 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | - | ≤ 180 | 180 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 115 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | 145 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 90 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | 70 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 55 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 5 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 36 | ≤ 337 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 30 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 | | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 723

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | < 150 | 245 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Free-cutting steels | < 25 | < 255 | 260 | 0.0031 | 0.0039 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Unalloyed heat-treatable steels | < 20 | < 220 | 260 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Alloyed heat-treatable steels | < 32 | < 301 | 195 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Unalloyed case hardened steels | < 25 | < 255 | 260 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Alloyed case hardened steels | < 32 | < 301 | 195 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Nitriding steels | < 32 | < 301 | 165 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Tool steels | < 25 | < 255 | 165 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | 0.0098 | | |
| High speed steels | < 43 | < 402 | 130 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | 0.0079 | | |
| Spring steels | < 38 | < 354 | 80 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | 0.0079 | | |
| Hardened steels | < 48 | < 460 | 65 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | | |
| Stainless steels, sulphured austenitic | < 28 | < 273 | 80 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| martensitic | < 36 | < 337 | 80 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | 0.0098 | | |
| Cast iron | < 23 | < 242 | 295 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Spheroidal graphite iron and malleable cast iron | < 23 | < 242 | 260 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Chilled cast iron | < 38 | < 354 | | | | | | | | | | | |
| New cast materials GGV | < 20 | < 220 | | | | | | | | | | | |
| New cast materials ADI | < 32 | < 301 | | | | | | | | | | | |
| Special alloys | < 54 | < 549 | 50 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | | | |
| Ti and Ti-alloys | < 25 | < 255 | 65 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | | |
| Aluminium and Al-alloys | - | < 120 | 655 | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | | |
| Al wrought alloys | - | < 200 | 655 | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | < 180 | 490 | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | | |
| Magnesium alloys | - | < 120 | 590 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Copper, low-alloyed | - | < 150 | 260 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Brass, short-chipping | - | < 180 | 590 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| long-chipping | - | < 180 | 590 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Bronze, short-chipping | - | < 180 | 395 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| long-chipping | - | < 180 | 395 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Bronze, long-chipping | < 25 | < 255 | 230 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Duroplastics | < 32 | < 301 | 165 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | 0.0098 | | |
| Thermoplastics | | | 130 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 724

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | < 150 | 245 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Free-cutting steels | < 25 | < 255 | 260 | 0.0031 | 0.0039 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Unalloyed heat-treatable steels | < 20 | < 220 | 260 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Alloyed heat-treatable steels | < 32 | < 301 | 195 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Unalloyed case hardened steels | < 25 | < 255 | 260 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Alloyed case hardened steels | < 32 | < 301 | 195 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Nitriding steels | < 32 | < 301 | 165 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Tool steels | < 25 | < 255 | 165 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | 0.0098 | | |
| High speed steels | < 43 | < 402 | 130 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | 0.0079 | | |
| Spring steels | < 38 | < 354 | 80 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | 0.0079 | | |
| Hardened steels | < 48 | < 460 | 65 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | | |
| Stainless steels, sulphured austenitic | < 28 | < 273 | 80 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| martensitic | < 36 | < 337 | 80 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | 0.0098 | | |
| Cast iron | < 23 | < 242 | 295 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Spheroidal graphite iron and malleable cast iron | < 23 | < 242 | 260 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Chilled cast iron | < 38 | < 354 | | | | | | | | | | | |
| New cast materials GGV | < 20 | < 220 | | | | | | | | | | | |
| New cast materials ADI | < 32 | < 301 | | | | | | | | | | | |
| Special alloys | < 54 | < 549 | 50 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | | | |
| Ti and Ti-alloys | < 25 | < 255 | 65 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | | |
| Aluminium and Al-alloys | - | < 120 | 655 | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | | |
| Al wrought alloys | - | < 200 | 655 | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | < 180 | 490 | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | | |
| Magnesium alloys | - | < 120 | 590 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Copper, low-alloyed | - | < 150 | 260 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Brass, short-chipping | - | < 180 | 590 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| long-chipping | - | < 180 | 590 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Bronze, short-chipping | - | < 180 | 395 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| long-chipping | - | < 180 | 395 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | | |
| Bronze, long-chipping | < 25 | < 255 | 230 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | 0.0124 | | |
| Duroplastics | < 32 | < 301 | 165 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | 0.0098 | | |
| Thermoplastics | | | 130 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|--|--|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm | | |
| Common structural steels | - | ≤ 150 | 260 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 260 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 260 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 195 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 260 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 195 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 160 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 160 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 80 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 36 | ≤ 337 | 80 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 46 | ≤ 435 | 80 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 295 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 38 | ≤ 354 | 260 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Chilled cast iron | ≤ 23 | ≤ 242 | 225 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| New cast materials GGV | ≤ 38 | ≤ 354 | 260 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| New cast materials ADI | ≤ 20 | ≤ 220 | | | | | | | | | | | | | |
| Special alloys | ≤ 32 | ≤ 301 | | | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 43 | ≤ 402 | 45 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 655 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | | | |
| Al wrought alloys | - | ≤ 200 | 655 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 490 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 390 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | | | |
| Magnesium alloys | - | ≤ 120 | 590 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 260 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 590 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Brass, long-chipping | - | ≤ 180 | 590 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 390 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 390 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Duroplastics | ≤ 32 | ≤ 301 | 225 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Thermoplastics | | | 160 | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | 130 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Reinforced plastics - GFK / CFK | | | 260 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|--|--|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm | | |
| Common structural steels | - | ≤ 150 | 260 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 190 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Unalloyed heat-treatable steels | ≤ 32 | ≤ 301 | 185 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Alloyed heat-treatable steels | ≤ 20 | ≤ 220 | 230 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 185 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 120 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Tool steels | ≤ 43 | ≤ 402 | 90 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| High speed steels | ≤ 25 | ≤ 255 | 260 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Spring steels | ≤ 43 | ≤ 402 | | | | | | | | | | | | | |
| Hardened steels | ≤ 38 | ≤ 354 | 80 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 48 | ≤ 460 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 66 | - | | | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 36 | ≤ 337 | 80 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 46 | ≤ 435 | 80 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 235 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 38 | ≤ 354 | 185 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Chilled cast iron | ≤ 23 | ≤ 242 | 200 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| New cast materials GGV | ≤ 38 | ≤ 354 | 145 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| New cast materials ADI | ≤ 20 | ≤ 220 | 50 | 0.0020 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | | | |
| Special alloys | ≤ 32 | ≤ 301 | | | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 43 | ≤ 402 | 45 | 0.0020 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | | | |
| Aluminium and Al-alloys | ≤ 25 | ≤ 255 | 50 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |
| Al wrought alloys | ≤ 43 | ≤ 402 | 40 | 0.0020 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 120 | 460 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 200 | 360 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Magnesium alloys | - | ≤ 180 | 460 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | | | |
| Copper, low-alloyed | - | ≤ 180 | 360 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Brass, short-chipping | - | ≤ 120 | 390 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Brass, long-chipping | - | ≤ 150 | 260 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 300 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Bronze, long-chipping | - | ≤ 180 | 295 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Duroplastics | - | ≤ 180 | 290 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Thermoplastics | - | ≤ 255 | 280 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | | |
| Reinforced plastics - Kevlar | ≤ 25 | ≤ 255 | 225 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | | | |
| Reinforced plastics - GFK / CFK | ≤ 32 | ≤ 301 | 160 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 330 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 38 | ≤ 354 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0055 | 0.0065 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1345 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| Al wrought alloys | - | ≤ 200 | 1345 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 1245 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| ≤ 24 % Si | - | ≤ 180 | 1080 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 920 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 25 | ≤ 255 | 260 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | 0.0125 | | | |
| | ≤ 38 | ≤ 354 | 330 | | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | 0.0125 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 295 | | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | 0.0125 | | | |
| | ≤ 38 | ≤ 354 | 260 | | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | 0.0125 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0013 | 0.0020 | 0.0025 | 0.0030 | 0.0040 | 0.0050 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1345 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Al wrought alloys | - | ≤ 200 | 1345 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 1245 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| ≤ 24 % Si | - | ≤ 180 | 1080 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 920 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | 0.0125 | | | |
| | ≤ 25 | ≤ 255 | 260 | | 0.0025 | 0.0040 | 0.0050 | 0.0060 | 0.0080 | 0.0100 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 1018

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | |
|--|----------------------|-------------------------|-------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 1/64 in. .5 mm | 1/16 in. 1.59 mm | 1/8 in. 3.17 mm | 1/4 in. 6.35 mm | 3/8 in. 9.52 mm | 1/2 in. 12.70 mm | 5/8 in. 15.87 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 115 100 | 0.0005 0.0004 | 0.0007 0.0006 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 130 130 | 0.0005 0.0004 | 0.0007 0.0006 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 130 130 115 | 0.0004 0.0004 0.0003 | 0.0006 0.0006 0.0006 | 0.0031 0.0031 0.0025 | 0.0049 0.0049 0.0039 | 0.0079 0.0079 0.0063 | 0.0079 0.0079 0.0063 | 0.0098 0.0098 0.0079 |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 65 50 | 0.0003 0.0003 | 0.0006 0.0005 | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 120 | 0.0005 | 0.0007 | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 65 50 | 0.0003 0.0003 | 0.0005 0.0005 | 0.0020 0.0020 | 0.0031 0.0031 | 0.0049 0.0049 | 0.0049 0.0049 | 0.0063 0.0063 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 50 40 | 0.0003 0.0003 | 0.0006 0.0005 | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 50 40 | 0.0003 0.0003 | 0.0005 0.0005 | 0.0020 0.0020 | 0.0031 0.0031 | 0.0049 0.0049 | 0.0049 0.0049 | 0.0063 0.0063 |
| High speed steels | ≤ 43 | ≤ 402 | 50 | 0.0003 | 0.0005 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0002 | 0.0003 | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 60 45 50 | 0.0003 0.0003 0.0003 | 0.0005 0.0005 0.0005 | 0.0020 0.0020 0.0020 | 0.0031 0.0031 0.0031 | 0.0049 0.0049 0.0049 | 0.0049 0.0049 0.0049 | 0.0063 0.0063 0.0063 |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | 15 | 0.0002 | 0.0002 | 0.0013 | 0.0020 | 0.0031 | 0.0031 | 0.0039 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 115 100 | 0.0005 0.0005 | 0.0007 0.0007 | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 100 90 | 0.0005 0.0005 | 0.0007 0.0007 | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 35 | 0.0003 | 0.0005 | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | - | - | - | - | - | - | - | - |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | - | - | - | - | - | - | - | - |
| Special alloys | ≤ 54 | ≤ 549 | 25 | 0.0002 | 0.0002 | 0.0013 | 0.0020 | 0.0031 | 0.0031 | 0.0039 |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 35 20 | 0.0002 0.0002 | 0.0003 0.0003 | 0.0016 0.0016 | 0.0025 0.0025 | 0.0039 0.0039 | 0.0039 0.0039 | 0.0049 0.0049 |
| Aluminium and Al-alloys | - | ≤ 120 | 295 | 0.0006 | 0.0008 | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 |
| Al wrought alloys | - | ≤ 200 | 295 | 0.0006 | 0.0008 | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 260 230 | 0.0006 0.0005 | 0.0008 0.0007 | 0.0049 0.0039 | 0.0079 0.0063 | 0.0124 0.0098 | 0.0124 0.0098 | 0.0157 0.0124 |
| Magnesium alloys | - | ≤ 120 | 230 | 0.0005 | 0.0007 | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 |
| Copper, low-alloyed | - | ≤ 150 | 230 | 0.0004 | 0.0006 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 195 130 | 0.0004 0.0004 | 0.0006 0.0006 | 0.0031 0.0031 | 0.0049 0.0049 | 0.0079 0.0079 | 0.0079 0.0079 | 0.0098 0.0098 |
| Bronze, short-chipping | - | ≤ 180 | 115 | 0.0003 | 0.0006 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 110 65 50 | 0.0003 0.0003 0.0003 | 0.0006 0.0006 0.0006 | 0.0025 0.0025 0.0025 | 0.0039 0.0039 0.0039 | 0.0063 0.0063 0.0063 | 0.0063 0.0063 0.0063 | 0.0079 0.0079 0.0079 |
| Duroplastics | - | - | 65 | 0.0003 | 0.0006 | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 |
| Thermoplastics | - | - | 100 | 0.0004 | 0.0006 | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 |

Insert 1047 - Body 5242

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------------------|-------------------------|-------------------|----------------------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 330 280 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0250 0.0200 |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 330 280 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0200 0.0160 | 0.0250 0.0200 | 0.0315 0.0250 |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 330 315 280 | 0.0100 0.0100 0.0080 | 0.0125 0.0125 0.0100 | 0.0160 0.0160 0.0125 | 0.0160 0.0160 0.0125 | 0.0200 0.0200 0.0160 | 0.0250 0.0250 0.0200 |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 280 230 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0250 0.0200 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 330 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 280 185 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0160 0.0100 | 0.0160 0.0100 | 0.0200 0.0125 | 0.0250 0.0160 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 265 185 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 135 115 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 |
| High speed steels | ≤ 43 | ≤ 402 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Spring steels | ≤ 38 | ≤ 354 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | 70 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 135 100 85 | 0.0050 0.0050 0.0050 | 0.0065 0.0065 0.0065 | 0.0080 0.0080 0.0080 | 0.0080 0.0080 0.0080 | 0.0100 0.0100 0.0100 | 0.0125 0.0125 0.0125 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 520 390 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0200 0.0200 | 0.0250 0.0250 | 0.0315 0.0315 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 390 325 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0200 0.0160 | 0.0250 0.0200 | 0.0315 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Special alloys | ≤ 54 | ≤ 549 | 70 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 100 85 | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 |
| Aluminium and Al-alloys | - | ≤ 120 | 725 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al wrought alloys | - | ≤ 200 | 660 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 590 490 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0200 0.0200 | 0.0250 0.0250 | 0.0315 0.0315 |
| Magnesium alloys | - | ≤ 120 | 655 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | ≤ 150 | 260 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 685 455 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0200 0.0160 | 0.0250 0.0200 | 0.0315 0.0250 |
| Bronze, short-chipping | - | ≤ 180 | 260 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 210 130 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0250 0.0200 |
| Duroplastics | - | - | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Thermoplastics | - | - | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | - | - | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - GFK / CFK | - | - | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - | ≤ 150 | 315 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 265 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 315 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 32 | ≤ 301 | 265 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 315 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 300 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 265 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 265 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 43 | ≤ 402 | 215 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 315 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 265 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 43 | ≤ 402 | 185 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Nitriding steels | ≤ 32 | ≤ 301 | 265 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 185 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Tool steels | ≤ 25 | ≤ 255 | 135 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 115 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| High speed steels | ≤ 43 | ≤ 402 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Spring steels | ≤ 38 | ≤ 354 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Hardened steels | ≤ 48 | ≤ 460 | 70 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| | ≤ 66 | - | - | - | - | - | - | - | - |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| austenitic | ≤ 36 | ≤ 337 | 100 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| martensitic | ≤ 46 | ≤ 435 | 85 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Cast iron | ≤ 23 | ≤ 242 | 490 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 360 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 360 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 295 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Special alloys | ≤ 54 | ≤ 549 | 70 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 100 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| | ≤ 43 | ≤ 402 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Aluminium and Al-alloys | - | ≤ 120 | 660 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al wrought alloys | - | ≤ 200 | 660 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 555 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| ≤ 24 % Si | - | ≤ 180 | 455 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Magnesium alloys | - | ≤ 120 | 655 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | ≤ 150 | 260 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Brass, short-chipping | - | ≤ 180 | 685 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| long-chipping | - | ≤ 180 | 455 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, short-chipping | - | ≤ 180 | 260 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 210 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 160 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 130 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Duroplastics | | | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Thermoplastics | | | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | | | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - GFK / CFK | | | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - | ≤ 150 | 300 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 32 | ≤ 301 | 265 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 300 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 265 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 300 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 25 | ≤ 255 | 280 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 32 | ≤ 301 | 250 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 250 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 215 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 300 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 250 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 185 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Nitriding steels | ≤ 32 | ≤ 301 | 265 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 43 | ≤ 402 | 185 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Tool steels | ≤ 25 | ≤ 255 | 135 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| | ≤ 43 | ≤ 402 | 115 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| High speed steels | ≤ 43 | ≤ 402 | 135 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Spring steels | ≤ 38 | ≤ 354 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Hardened steels | ≤ 48 | ≤ 460 | 70 | 0.0035 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| | ≤ 66 | - | - | - | - | - | - | - | - |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 135 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| austenitic | ≤ 36 | ≤ 337 | 100 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| martensitic | ≤ 46 | ≤ 435 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Cast iron | ≤ 23 | ≤ 242 | 490 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 38 | ≤ 354 | 360 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 360 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 38 | ≤ 354 | 295 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Special alloys | ≤ 54 | ≤ 549 | 70 | 0.0035 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 100 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| | ≤ 43 | ≤ 402 | 85 | 0.0035 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Aluminium and Al-alloys | - | ≤ 120 | 660 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Al wrought alloys | - | ≤ 200 | 660 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 555 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| ≤ 24 % Si | - | ≤ 180 | 455 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Magnesium alloys | - | ≤ 120 | 655 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Copper, low-alloyed | - | ≤ 150 | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Brass, short-chipping | - | ≤ 180 | 685 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| long-chipping | - | ≤ 180 | 455 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, short-chipping | - | ≤ 180 | 260 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 25 | ≤ 255 | 210 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 160 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 32 | ≤ 301 | 130 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Duroplastics | | | 260 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Thermoplastics | | | 260 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Reinforced plastics - Kevlar | | | 260 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Reinforced plastics - GFK / CFK | | | 260 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |

Series # 1135

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------------------|-------------------------|-------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 140 120 | | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 155 140 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 145 145 130 | | 0.0039 0.0039 0.0031 | 0.0063 0.0063 0.0049 | 0.0098 0.0098 0.0079 | 0.0098 0.0098 0.0079 | 0.0124 0.0124 0.0098 | 0.0157 0.0157 0.0124 | 0.0197 0.0197 0.0157 | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 90 70 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 120 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 70 60 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 60 50 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 70 50 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| High speed steels | ≤ 43 | ≤ 402 | 40 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| Spring steels | ≤ 38 | ≤ 354 | 35 | | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 125 115 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 110 90 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 25 | | 0.0013 | 0.0020 | 0.0031 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 35 25 | | 0.0016 0.0016 | 0.0025 0.0025 | 0.0039 0.0039 | 0.0039 0.0039 | 0.0049 0.0049 | 0.0063 0.0063 | 0.0079 0.0079 | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | 280 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 215 215 | | 0.0049 0.0039 | 0.0079 0.0063 | 0.0124 0.0098 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | 0.0248 0.0197 | | |
| Magnesium alloys | - | ≤ 120 | 260 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Copper, low-alloyed | - | ≤ 150 | 230 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 245 165 | | 0.0031 0.0031 | 0.0049 0.0049 | 0.0079 0.0079 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | | |
| Bronze, short-chipping | - | ≤ 180 | 150 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 130 80 65 | | 0.0025 0.0025 0.0025 | 0.0039 0.0039 0.0039 | 0.0063 0.0063 0.0063 | 0.0063 0.0063 0.0063 | 0.0079 0.0079 0.0079 | 0.0098 0.0098 0.0098 | 0.0124 0.0124 0.0124 | | |
| Duroplastics | | | 80 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Thermoplastics | | | 130 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 1136

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------------------|-------------------------|-------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 115 100 | | 0.0039 0.0031 | 0.0063 0.0049 | 0.0098 0.0079 | 0.0098 0.0079 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 130 130 | | 0.0031 0.0031 | 0.0049 0.0049 | 0.0079 0.0079 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 115 115 100 | | 0.0031 0.0031 0.0025 | 0.0049 0.0049 0.0039 | 0.0079 0.0079 0.0063 | 0.0079 0.0079 0.0063 | 0.0098 0.0098 0.0079 | 0.0124 0.0124 0.0098 | 0.0157 0.0157 0.0124 | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 70 55 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 110 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 65 50 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 45 40 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 60 40 | | 0.0025 0.0020 | 0.0039 0.0031 | 0.0063 0.0049 | 0.0063 0.0049 | 0.0079 0.0063 | 0.0098 0.0079 | 0.0124 0.0098 | | |
| High speed steels | ≤ 43 | ≤ 402 | 25 | | 0.0020 | 0.0031 | 0.0049 | 0.0049 | 0.0063 | 0.0079 | 0.0098 | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | | 0.0016 | 0.0025 | 0.0039 | 0.0039 | 0.0049 | 0.0063 | 0.0079 | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 40 35 35 | | 0.0020 0.0020 0.0020 | 0.0031 0.0031 0.0031 | 0.0049 0.0049 0.0049 | 0.0049 0.0049 0.0049 | 0.0063 0.0063 0.0063 | 0.0079 0.0079 0.0079 | 0.0098 0.0098 0.0098 | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 110 110 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 100 80 | | 0.0039 0.0039 | 0.0063 0.0063 | 0.0098 0.0098 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | 0.0197 0.0197 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 20 | | 0.0013 | 0.0020 | 0.0031 | 0.0031 | 0.0039 | 0.0049 | 0.0063 | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 25 20 | | 0.0016 0.0016 | 0.0025 0.0025 | 0.0039 0.0039 | 0.0039 0.0039 | 0.0049 0.0049 | 0.0063 0.0063 | 0.0079 0.0079 | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al wrought alloys | - | ≤ 200 | 260 | | 0.0049 | 0.0079 | 0.0124 | 0.0124 | 0.0157 | 0.0197 | 0.0248 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 195 195 | | 0.0049 0.0039 | 0.0079 0.0063 | 0.0124 0.0098 | 0.0124 0.0098 | 0.0157 0.0124 | 0.0197 0.0157 | 0.0248 0.0197 | | |
| Magnesium alloys | - | ≤ 120 | 230 | | 0.0039 | 0.0063 | 0.0098 | 0.0098 | 0.0124 | 0.0157 | 0.0197 | | |
| Copper, low-alloyed | - | ≤ 150 | 215 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 230 150 | | 0.0031 0.0031 | 0.0049 0.0049 | 0.0079 0.0079 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | 0.0157 0.0157 | | |
| Bronze, short-chipping | - | ≤ 180 | 115 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 65 50 | | 0.0025 0.0025 | 0.0039 0.0039 | 0.0063 0.0063 | 0.0063 0.0063 | 0.0079 0.0079 | 0.0098 0.0098 | 0.0124 0.0124 | | |
| Duroplastics | | | 70 | | 0.0025 | 0.0039 | 0.0063 | 0.0063 | 0.0079 | 0.0098 | 0.0124 | | |
| Thermoplastics | | | 120 | | 0.0031 | 0.0049 | 0.0079 | 0.0079 | 0.0098 | 0.0124 | 0.0157 | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 360 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 295 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 425 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 32 | ≤ 301 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 325 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 25 | ≤ 255 | 310 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 43 | ≤ 402 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 43 | ≤ 402 | 210 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 43 | ≤ 402 | 245 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Tool steels | ≤ 25 | ≤ 255 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| High speed steels | ≤ 43 | ≤ 402 | 145 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| Spring steels | ≤ 38 | ≤ 354 | 145 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 145 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| austenitic | ≤ 36 | ≤ 337 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| martensitic | ≤ 46 | ≤ 435 | 110 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Cast iron | ≤ 23 | ≤ 242 | 620 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| | ≤ 38 | ≤ 354 | 360 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 360 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| | ≤ 38 | ≤ 354 | 310 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 785 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| Al wrought alloys | - | ≤ 200 | 785 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| ≤ 24 % Si | - | ≤ 180 | 555 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 330 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 32 | ≤ 301 | 280 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| | ≤ 32 | ≤ 301 | 280 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 25 | ≤ 255 | 280 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 43 | ≤ 402 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 330 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 43 | ≤ 402 | 215 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | | |
| | ≤ 43 | ≤ 402 | 230 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | | |
| Tool steels | ≤ 25 | ≤ 255 | 165 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 115 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0055 | 0.0065 | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 95 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | | | |
| austenitic | ≤ 36 | ≤ 337 | 90 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | | | |
| martensitic | ≤ 46 | ≤ 435 | 90 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0065 | | | |
| Cast iron | ≤ 23 | ≤ 242 | 525 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| | ≤ 38 | ≤ 354 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| | ≤ 38 | ≤ 354 | 310 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| Al wrought alloys | - | ≤ 200 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 560 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | | |
| ≤ 24 % Si | - | ≤ 180 | 460 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------------------|-------------------------|----------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 130 | 0.0017 | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 70 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 85 65 | 0.0015 0.0012 | 0.0040 0.0030 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 180 | 0.0020 | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 70 55 | 0.0015 0.0012 | 0.0040 0.0030 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | | | | | |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 65 45 | 0.0015 0.0012 | 0.0040 0.0030 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | | | | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 85 45 | 0.0015 0.0012 | 0.0040 0.0030 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 65 | 0.0015 | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------------------|-------------------------|------------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 130 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 180 130 | | 0.0065 0.0065 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0160 0.0160 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 120 100 | | 0.0065 0.0065 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0160 0.0160 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 345 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Al wrought alloys | - | ≤ 200 | 260 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 ≤ 180 | 340 260 | | 0.0065 0.0065 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0160 0.0160 | | | | | |
| Magnesium alloys | - | ≤ 120 | 345 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 180 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 130 100 | | 0.0040 0.0040 | 0.0065 0.0065 | 0.0080 0.0080 | 0.0100 0.0100 | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 85 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-----------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm |
| Common structural steels | - | ≤ 150 | 330 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 280 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 32 | ≤ 301 | 280 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 25 | ≤ 255 | 280 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 330 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 215 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 43 | ≤ 402 | 230 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | |
| Tool steels | ≤ 25 | ≤ 255 | 165 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 115 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0055 | 0.0065 | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 95 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | | |
| | ≤ 36 | ≤ 337 | 90 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | | |
| | ≤ 46 | ≤ 435 | 90 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0065 | | |
| Cast iron | ≤ 23 | ≤ 242 | 525 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 38 | ≤ 354 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 38 | ≤ 354 | 310 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | |
| Al wrought alloys | - | ≤ 200 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 560 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | |
| | - | ≤ 24 % Si | 460 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|--|----------|-----------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm |
| Common structural steels | - | ≤ 150 | 330 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 280 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 32 | ≤ 301 | 280 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 25 | ≤ 255 | 280 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 330 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 215 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 43 | ≤ 402 | 230 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | |
| Tool steels | ≤ 25 | ≤ 255 | 165 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0090 | 0.0100 | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 115 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0055 | 0.0065 | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 95 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | | |
| | ≤ 36 | ≤ 337 | 90 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | | |
| | ≤ 46 | ≤ 435 | 90 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0065 | | |
| Cast iron | ≤ 23 | ≤ 242 | 525 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 38 | ≤ 354 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 38 | ≤ 354 | 310 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0140 | 0.0160 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | |
| Al wrought alloys | - | ≤ 200 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 560 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0220 | 0.0245 | | |
| | - | ≤ 24 % Si | 460 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | |
| | - | ≤ 180 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 325 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 275 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | ≤ 32 | ≤ 301 | 275 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 25 | ≤ 255 | 275 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 43 | ≤ 402 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 325 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| | ≤ 43 | ≤ 402 | 210 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 245 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 43 | ≤ 402 | 225 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 160 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 110 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 110 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| | ≤ 66 | - | 65 | | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 115 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| austenitic | ≤ 36 | ≤ 337 | 110 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| martensitic | ≤ 46 | ≤ 435 | 110 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 520 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | ≤ 38 | ≤ 354 | 390 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 390 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| | ≤ 38 | ≤ 354 | 310 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 80 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 95 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| | ≤ 43 | ≤ 402 | 80 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | | | | |
| Al wrought alloys | - | ≤ 200 | 655 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 555 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | | | | |
| ≤ 24 % Si | - | ≤ 180 | 455 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Magnesium alloys | - | ≤ 120 | 655 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| Copper, low-alloyed | - | ≤ 150 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Brass, short-chipping | - | ≤ 180 | 685 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | | | | |
| long-chipping | - | ≤ 180 | 455 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | | | | |
| Bronze, short-chipping | - | ≤ 180 | 260 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| | ≤ 25 | ≤ 255 | 210 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 195 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| | ≤ 32 | ≤ 301 | 145 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 75 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 55 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 40 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 20 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 75 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| austenitic | ≤ 36 | ≤ 337 | 60 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| martensitic | ≤ 46 | ≤ 435 | 65 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 30 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | 0.0040 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 50 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 100 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| | | | | | | | | | |
| Common structural steels | - | ≤ 150 | 430 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 365 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 430 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 32 | ≤ 301 | 365 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 430 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 410 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 365 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 365 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 43 | ≤ 402 | 300 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 430 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 365 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 43 | ≤ 402 | 230 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Nitriding steels | ≤ 32 | ≤ 301 | 345 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 230 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Tool steels | ≤ 25 | ≤ 255 | 185 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 165 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| High speed steels | ≤ 43 | ≤ 402 | 185 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Spring steels | ≤ 38 | ≤ 354 | 165 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Hardened steels | ≤ 48 | ≤ 460 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 185 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| austenitic | ≤ 36 | ≤ 337 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| martensitic | ≤ 46 | ≤ 435 | 115 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Cast iron | ≤ 23 | ≤ 242 | 685 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 505 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 505 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 425 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Special alloys | ≤ 54 | ≤ 549 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| | ≤ 43 | ≤ 402 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Aluminium and Al-alloys | - | ≤ 120 | 955 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al wrought alloys | - | ≤ 200 | 855 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 770 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| ≤ 24 % Si | - | ≤ 180 | 635 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Magnesium alloys | - | ≤ 120 | 850 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | ≤ 150 | 340 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Brass, short-chipping | - | ≤ 180 | 885 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| long-chipping | - | ≤ 180 | 590 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, short-chipping | - | ≤ 180 | 340 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 275 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 210 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 180 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Duroplastics | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Thermoplastics | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - GFK / CFK | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| | | | | | | | | | |
| Common structural steels | - | ≤ 150 | 410 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 345 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Free-cutting steels | ≤ 25 | ≤ 255 | 410 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 32 | ≤ 301 | 345 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 410 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 395 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 345 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 345 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 43 | ≤ 402 | 280 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 410 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 345 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 43 | ≤ 402 | 230 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Nitriding steels | ≤ 32 | ≤ 301 | 345 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 230 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Tool steels | ≤ 25 | ≤ 255 | 185 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 43 | ≤ 402 | 165 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| High speed steels | ≤ 43 | ≤ 402 | 185 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Spring steels | ≤ 38 | ≤ 354 | 165 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Hardened steels | ≤ 48 | ≤ 460 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 185 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| austenitic | ≤ 36 | ≤ 337 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| martensitic | ≤ 46 | ≤ 435 | 115 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Cast iron | ≤ 23 | ≤ 242 | 635 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 475 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 475 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 390 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Special alloys | ≤ 54 | ≤ 549 | 85 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 135 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| | ≤ 43 | ≤ 402 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Aluminium and Al-alloys | - | ≤ 120 | 855 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al wrought alloys | - | ≤ 200 | 855 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 720 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| ≤ 24 % Si | - | ≤ 180 | 590 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Magnesium alloys | - | ≤ 120 | 850 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | ≤ 150 | 340 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Brass, short-chipping | - | ≤ 180 | 885 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| long-chipping | - | ≤ 180 | 590 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, short-chipping | - | ≤ 180 | 340 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 275 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 210 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 180 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Duroplastics | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Thermoplastics | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - GFK / CFK | | | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|---|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - | ≤ 150 | 395 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 32 | ≤ 301 | 345 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Free-cutting steels | < 25 | ≤ 255 | 395 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | < 32 | ≤ 301 | 345 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Unalloyed heat-treatable steels | < 20 | ≤ 220 | 395 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 25 | ≤ 255 | 365 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 32 | ≤ 301 | 330 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Alloyed heat-treatable steels | < 32 | ≤ 301 | 330 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 43 | ≤ 402 | 280 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Unalloyed case hardened steels | < 25 | ≤ 255 | 395 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Alloyed case hardened steels | < 32 | ≤ 301 | 330 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 43 | ≤ 402 | 230 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Nitriding steels | < 32 | ≤ 301 | 345 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| | < 43 | ≤ 402 | 230 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| Tool steels | < 25 | ≤ 255 | 185 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| | < 43 | ≤ 402 | 165 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 | 0.0125 |
| High speed steels | < 43 | ≤ 402 | 185 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Spring steels | < 38 | ≤ 354 | 165 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Hardened steels | < 48 | ≤ 460 | 85 | 0.0035 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Stainless steels, sulphured austenitic | < 28 | ≤ 273 | 185 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| | < 36 | ≤ 337 | 135 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| | < 46 | ≤ 435 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Cast iron | < 23 | ≤ 242 | 635 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | < 38 | ≤ 354 | 475 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Spheroidal graphite iron and malleable cast iron | < 23 | ≤ 242 | 475 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | < 38 | ≤ 354 | 390 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Chilled cast iron | < 38 | ≤ 354 | 115 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| Special alloys | < 54 | ≤ 549 | 85 | 0.0035 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Ti and Ti-alloys | < 25 | ≤ 255 | 135 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| | < 43 | ≤ 402 | 115 | 0.0035 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Aluminium and Al-alloys | - | < 120 | 855 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Al wrought alloys | - | < 200 | 855 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 720 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| ≤ 24 % Si | - | < 180 | 590 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Magnesium alloys | - | < 120 | 850 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Copper, low-alloyed | - | < 150 | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Brass, short-chipping | - | < 180 | 885 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | - | < 180 | 590 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, short-chipping | - | < 180 | 340 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 25 | ≤ 255 | 275 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, long-chipping | < 25 | ≤ 255 | 210 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | < 32 | ≤ 301 | 180 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Duroplastics | | | 340 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Thermoplastics | | | 340 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Reinforced plastics - Kevlar | | | 340 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Reinforced plastics - GFK / CFK | | | 340 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |

Note: When drilling from solid with #5248 holder, spot drilling (>140° point angle to a depth

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | < 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | < 25 | ≤ 255 | | | | | | | | | | | |
| | < 32 | ≤ 301 | 185 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | < 20 | ≤ 220 | | | | | | | | | | | |
| | < 25 | ≤ 255 | 185 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | < 32 | ≤ 301 | 100 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Alloyed heat-treatable steels | < 32 | ≤ 301 | 120 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | ≤ 402 | 90 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Unalloyed case hardened steels | < 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | < 32 | ≤ 301 | 105 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | ≤ 402 | 80 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Nitriding steels | < 32 | ≤ 301 | 90 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | ≤ 402 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Tool steels | < 25 | ≤ 255 | 120 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | ≤ 402 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | < 43 | ≤ 402 | 65 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | < 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | < 48 | ≤ 460 | | | | | | | | | | | |
| | < 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | < 28 | ≤ 273 | 90 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 36 | ≤ 337 | | | | | | | | | | | |
| | < 46 | ≤ 435 | 80 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | < 23 | ≤ 242 | 235 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | < 38 | ≤ 354 | 185 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | < 23 | ≤ 242 | 200 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | < 38 | ≤ 354 | 145 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | < 38 | ≤ 354 | 50 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | < 20 | ≤ 220 | | | | | | | | | | | |
| | < 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | < 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | < 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | < 25 | ≤ 255 | | | | | | | | | | | |
| | < 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | < 120 | | | | | | | | | | | |
| Al wrought alloys | - | < 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | < 180 | 460 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| ≤ 24 % Si | - | < 180 | 360 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Magnesium alloys | - | < 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | < 150 | 235 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping | - | < 180 | | | | | | | | | | | |
| | - | < 180 | 295 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Bronze, short-chipping | - | < 180 | | | | | | | | | | | |
| | < 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | < 25 | ≤ 255 | 185 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 32 | ≤ 301 | 145 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics | | | 120 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | < 150 | | | | | | | | | | | |
| | < 32 | < 301 | | | | | | | | | | | |
| Free-cutting steels | < 25 | < 255 | | | | | | | | | | | |
| | < 32 | < 301 | 235 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Unalloyed heat-treatable steels | < 20 | < 220 | | | | | | | | | | | |
| | < 25 | < 255 | 210 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | < 32 | < 301 | 120 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Alloyed heat-treatable steels | < 32 | < 301 | 145 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | < 402 | 120 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Unalloyed case hardened steels | < 25 | < 255 | | | | | | | | | | | |
| Alloyed case hardened steels | < 32 | < 301 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | < 402 | 100 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Nitriding steels | < 32 | < 301 | 120 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | < 402 | 85 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Tool steels | < 25 | < 255 | 145 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 43 | < 402 | 85 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | < 43 | < 402 | 85 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | < 38 | < 354 | | | | | | | | | | | |
| Hardened steels | < 48 | < 460 | | | | | | | | | | | |
| | < 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | < 28 | < 273 | 120 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 36 | < 337 | | | | | | | | | | | |
| | < 46 | < 435 | 100 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | < 23 | < 242 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | < 38 | < 354 | 235 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Spheroidal graphite iron and malleable cast iron | < 23 | < 242 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | < 38 | < 354 | 185 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Chilled cast iron | < 38 | < 354 | 60 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | < 20 | < 220 | | | | | | | | | | | |
| | < 32 | < 301 | | | | | | | | | | | |
| New cast materials ADI | < 32 | < 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Special alloys | < 54 | < 549 | | | | | | | | | | | |
| Ti and Ti-alloys | < 25 | < 255 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | < 120 | | | | | | | | | | | |
| Al wrought alloys | - | < 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | < 180 | 560 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | - | < 180 | 460 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Magnesium alloys | - | < 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | < 150 | 295 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Brass, short-chipping | - | < 180 | | | | | | | | | | | |
| | - | < 180 | 340 | | 0.0065 | 0.0080 | 0.0100 | 0.0100 | | | | | |
| Bronze, short-chipping | - | < 180 | | | | | | | | | | | |
| | < 25 | < 255 | | | | | | | | | | | |
| Bronze, long-chipping | < 25 | < 255 | 235 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | < 32 | < 301 | 185 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics | | | 145 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - | < 150 | | | | | | | |
| | < 32 | < 301 | | | | | | | |
| Free-cutting steels | < 25 | < 255 | | | | | | | |
| | < 32 | < 301 | | | | | | | |
| Unalloyed heat-treatable steels | < 20 | < 220 | | | | | | | |
| | < 25 | < 255 | | | | | | | |
| | < 32 | < 301 | | | | | | | |
| Alloyed heat-treatable steels | < 32 | < 301 | | | | | | | |
| | < 43 | < 402 | | | | | | | |
| Unalloyed case hardened steels | < 25 | < 255 | | | | | | | |
| Alloyed case hardened steels | < 32 | < 301 | | | | | | | |
| | < 43 | < 402 | | | | | | | |
| Nitriding steels | < 32 | < 301 | | | | | | | |
| | < 43 | < 402 | | | | | | | |
| Tool steels | < 25 | < 255 | | | | | | | |
| | < 43 | < 402 | | | | | | | |
| High speed steels | < 43 | < 402 | | | | | | | |
| Spring steels | < 38 | < 354 | | | | | | | |
| Cast iron | < 23 | < 242 | 325 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | < 38 | < 354 | 260 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Spheroidal graphite iron and malleable cast iron | < 23 | < 242 | 260 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | < 38 | < 354 | 230 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Chilled cast iron | < 38 | < 354 | 35 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| New cast materials GGV | < 20 | < 220 | | | | | | | |
| | < 32 | < 301 | | | | | | | |
| New cast materials ADI | < 32 | < 301 | | | | | | | |
| | < 43 | < 402 | | | | | | | |
| Special alloys | < 54 | < 549 | | | | | | | |
| Ti and Ti-alloys | < 25 | < 255 | | | | | | | |
| | < 43 | < 402 | | | | | | | |
| Aluminium and Al-alloys | - | < 120 | 660 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al wrought alloys | - | < 200 | 595 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 490 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | - | < 180 | 390 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Magnesium alloys | - | < 120 | 590 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | < 150 | 225 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Brass, short-chipping | - | < 180 | 585 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | - | < 180 | 390 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, short-chipping | - | < 180 | 230 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | < 25 | < 255 | 160 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, long-chipping | < 25 | < 255 | 145 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | < 32 | < 301 | 115 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Duroplastics | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Thermoplastics | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - GFK / CFK | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - | ≤ 150 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 295 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 230 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 230 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 195 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 35 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 595 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al wrought alloys | - | ≤ 200 | 595 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 455 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| ≤ 24 % Si | - | ≤ 180 | 355 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Magnesium alloys | - | ≤ 120 | 590 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | ≤ 150 | 230 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Brass, short-chipping | - | ≤ 180 | 585 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0250 | 0.0315 |
| long-chipping | - | ≤ 180 | 390 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, short-chipping | - | ≤ 180 | 230 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 25 | ≤ 255 | 160 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 145 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 32 | ≤ 301 | 115 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Duroplastics | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Thermoplastics | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - Kevlar | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Reinforced plastics - GFK / CFK | | | 165 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | |
|--|----------|-------|-----|-----------------|---|---|---|--|---|
| | HRC | BHN | | ≤16.000 mm | 41/64 - 25/32 in. 16.001 - 20.000 mm | 51/64 - 31/32 in. 20.001 - 25.000 mm | 63/64 - 1 17/64 in. 25.001 - 31.500 mm | 1 1/4 - 1 9/16 in. 31.501 - 40.000 mm | 1 37/64 - 1 61/64 in. 40.001 - 50.000 mm |
| Common structural steels | - | ≤ 150 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 295 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 38 | ≤ 354 | 230 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 230 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| | ≤ 38 | ≤ 354 | 195 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Chilled cast iron | ≤ 38 | ≤ 354 | 35 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 | 0.0100 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 595 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Al wrought alloys | - | ≤ 200 | 595 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 455 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| ≤ 24 % Si | - | ≤ 180 | 355 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Magnesium alloys | - | ≤ 120 | 590 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| Copper, low-alloyed | - | ≤ 150 | 230 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Brass, short-chipping | - | ≤ 180 | 585 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0200 | 0.0250 |
| long-chipping | - | ≤ 180 | 390 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, short-chipping | - | ≤ 180 | 230 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 25 | ≤ 255 | 160 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 145 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0160 | 0.0200 |
| | ≤ 32 | ≤ 301 | 115 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Duroplastics | | | 165 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Thermoplastics | | | 165 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Reinforced plastics - Kevlar | | | 165 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |
| Reinforced plastics - GFK / CFK | | | 165 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 | 0.0160 |

Note: When drilling from solid with #5248 holder, spot drilling (>140° point angle to a depth

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | | |
|--|----------|-------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| | HRC | BHN | | .0039 in. .10 mm | .0063 in. .16 mm | .0098 in. .25 mm | .0118 in. .30 mm | .0197 in. .50 mm | .0248 in. .63 mm | .0315 in. .8 mm | .0394 in. 1.0 mm | .0591 in. 1.5 mm | .0787 in. 2.0 mm | .1181 in. 3.0 mm |
| Common structural steels | - | ≤ 150 | 330 | 0.0003 | 0.0005 | 0.0008 | 0.0009 | 0.0016 | 0.0024 | 0.0031 | 0.0047 | 0.0063 | 0.0079 | 0.0094 |
| Free-cutting steels | ≤ 32 | ≤ 301 | 330 | 0.0003 | 0.0005 | 0.0008 | 0.0009 | 0.0016 | 0.0024 | 0.0031 | 0.0047 | 0.0063 | 0.0079 | 0.0094 |
| Unalloyed heat-treatable steels | ≤ 25 | ≤ 255 | 330 | 0.0003 | 0.0005 | 0.0008 | 0.0009 | 0.0016 | 0.0024 | 0.0031 | 0.0047 | 0.0063 | 0.0079 | 0.0094 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 295 | 0.0003 | 0.0004 | 0.0007 | 0.0008 | 0.0014 | 0.0020 | 0.0028 | 0.0039 | 0.0055 | 0.0067 | 0.0083 |
| Unalloyed case hardened steels | ≤ 20 | ≤ 220 | 295 | 0.0003 | 0.0005 | 0.0008 | 0.0009 | 0.0016 | 0.0024 | 0.0031 | 0.0047 | 0.0063 | 0.0079 | 0.0094 |
| Alloyed case hardened steels | ≤ 25 | ≤ 255 | 295 | 0.0003 | 0.0005 | 0.0008 | 0.0009 | 0.0016 | 0.0024 | 0.0031 | 0.0047 | 0.0063 | 0.0079 | 0.0094 |
| Nitriding steels | ≤ 32 | ≤ 301 | 295 | 0.0003 | 0.0004 | 0.0007 | 0.0008 | 0.0014 | 0.0020 | 0.0028 | 0.0039 | 0.0055 | 0.0067 | 0.0083 |
| Tool steels | ≤ 43 | ≤ 402 | 230 | 0.0002 | 0.0004 | 0.0006 | 0.0007 | 0.0012 | 0.0016 | 0.0016 | 0.0035 | 0.0047 | 0.0059 | 0.0071 |
| High speed steels | ≤ 43 | ≤ 402 | 195 | 0.0002 | 0.0004 | 0.0006 | 0.0007 | 0.0012 | 0.0016 | 0.0016 | 0.0035 | 0.0047 | 0.0059 | 0.0071 |
| Spring steels | ≤ 48 | ≤ 460 | | | | | | | | | | | | |
| Hardened steels | ≤ 66 | - | | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | | | | | | | | | | | | |
| Cast iron | ≤ 36 | ≤ 337 | | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 46 | ≤ 435 | | | | | | | | | | | | |
| Chilled cast iron | ≤ 23 | ≤ 242 | 425 | 0.0004 | 0.0007 | 0.0011 | 0.0013 | 0.0022 | 0.0031 | 0.0043 | 0.0063 | 0.0087 | 0.0106 | 0.0130 |
| New cast materials GGV | ≤ 38 | ≤ 354 | 425 | 0.0004 | 0.0007 | 0.0011 | 0.0013 | 0.0022 | 0.0031 | 0.0043 | 0.0063 | 0.0087 | 0.0106 | 0.0130 |
| New cast materials ADI | ≤ 23 | ≤ 242 | 425 | 0.0004 | 0.0007 | 0.0011 | 0.0013 | 0.0022 | 0.0031 | 0.0043 | 0.0063 | 0.0087 | 0.0106 | 0.0130 |
| Special alloys | ≤ 38 | ≤ 354 | 395 | 0.0004 | 0.0006 | 0.0010 | 0.0020 | 0.0020 | 0.0031 | 0.0039 | 0.0059 | 0.0083 | 0.0102 | 0.0122 |
| Ti and Ti-alloys | ≤ 43 | ≤ 402 | | | | | | | | | | | | |
| Aluminium and Al-alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | | |
| Al wrought alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | ≤ 43 | ≤ 402 | | | | | | | | | | | | |
| Magnesium alloys | ≤ 180 | ≤ 180 | | | | | | | | | | | | |
| Copper, low-alloyed | ≤ 180 | ≤ 180 | | | | | | | | | | | | |
| Brass, short-chipping | ≤ 180 | ≤ 180 | | | | | | | | | | | | |
| Bronze, short-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 32 | ≤ 301 | | | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 425 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Free-cutting steels | ≤ 32 | ≤ 301 | 360 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Unalloyed heat-treatable steels | ≤ 25 | ≤ 255 | 425 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 360 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Unalloyed case hardened steels | ≤ 20 | ≤ 220 | 425 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Alloyed case hardened steels | ≤ 25 | ≤ 255 | 410 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Nitriding steels | ≤ 32 | ≤ 301 | 360 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Tool steels | ≤ 43 | ≤ 402 | 230 | | | | 0.0065 | 0.0065 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0155 |
| High speed steels | ≤ 25 | ≤ 255 | 195 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Spring steels | ≤ 43 | ≤ 402 | 180 | | | | 0.0065 | 0.0065 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0155 |
| Hardened steels | ≤ 48 | ≤ 460 | 80 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Stainless steels, sulphured austenitic martensitic | ≤ 66 | - | | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Cast iron | ≤ 28 | ≤ 273 | 180 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| Spheroidal graphite iron and malleable cast iron | ≤ 36 | ≤ 337 | 130 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| Chilled cast iron | ≤ 46 | ≤ 435 | 115 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| New cast materials GGV | ≤ 23 | ≤ 242 | 330 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| New cast materials ADI | ≤ 38 | ≤ 354 | 295 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Special alloys | ≤ 23 | ≤ 242 | 395 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Ti and Ti-alloys | ≤ 38 | ≤ 354 | 330 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Aluminium and Al-alloys | ≤ 38 | ≤ 354 | 295 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al wrought alloys | ≤ 20 | ≤ 220 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Al cast alloys ≤ 10 % Si | ≤ 32 | ≤ 301 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Magnesium alloys | ≤ 32 | ≤ 301 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Copper, low-alloyed | ≤ 43 | ≤ 402 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Brass, short-chipping | ≤ 54 | ≤ 549 | 80 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Brass, long-chipping | ≤ 25 | ≤ 255 | 130 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| Bronze, short-chipping | ≤ 43 | ≤ 402 | 115 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Aluminum and Al-alloys | ≤ 120 | ≤ 120 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al wrought alloys | ≤ 180 | ≤ 180 | 490 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | ≤ 180 | ≤ 180 | 395 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Magnesium alloys | ≤ 120 | ≤ 120 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Copper, low-alloyed | ≤ 150 | ≤ 150 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Brass, short-chipping | ≤ 180 | ≤ 180 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Brass, long-chipping | ≤ 180 | ≤ 180 | 395 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Bronze, short-chipping | ≤ 25 | ≤ 255 | 165 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Bronze, long-chipping | ≤ 32 | ≤ 301 | 115 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |

Speeds & Feeds - Insert 4112

Body 4105 through 4107

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------------------|-------------------------|-------------------|----------------------|---------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - < 32 | < 150 < 301 | 425 360 | | | | 0.0100 0.0080 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0195 0.0155 | 0.0250 0.0195 |
| Free-cutting steels | < 25 < 32 | < 255 < 301 | 425 360 | | | | 0.0125 0.0100 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0250 0.0195 | 0.0250 0.0195 | 0.0315 0.0250 |
| Unalloyed heat-treatable steels | < 20 < 25 < 32 | < 220 < 255 < 301 | 425 410 360 | | | | 0.0100 0.0100 0.0080 | 0.0100 0.0100 0.0080 | 0.0125 0.0125 0.0100 | 0.0155 0.0155 0.0125 | 0.0195 0.0195 0.0155 | 0.0195 0.0195 0.0155 | 0.0250 0.0250 0.0195 |
| Alloyed heat-treatable steels | < 32 < 43 | < 301 < 402 | 360 295 | | | | 0.0100 0.0080 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0195 0.0155 | 0.0250 0.0195 |
| Unalloyed case hardened steels | < 25 | < 255 | 425 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Alloyed case hardened steels | < 32 < 43 | < 301 < 402 | 360 230 | | | | 0.0100 0.0065 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0155 0.0100 | 0.0195 0.0125 | 0.0195 0.0125 | 0.0250 0.0155 |
| Nitriding steels | < 32 < 43 | < 301 < 402 | 345 230 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Tool steels | < 25 < 43 | < 255 < 402 | 195 180 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| High speed steels | < 43 | < 402 | 180 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| Spring steels | < 38 | < 354 | 165 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |

Body 4108

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------------------|-------------------------|-------------------|----------------------|---------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - < 32 | < 150 < 301 | 410 345 | | | | 0.0100 0.0080 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0195 0.0155 | 0.0250 0.0195 |
| Free-cutting steels | < 25 < 32 | < 255 < 301 | 410 345 | | | | 0.0125 0.0100 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0250 0.0195 | 0.0250 0.0195 | 0.0315 0.0250 |
| Unalloyed heat-treatable steels | < 20 < 25 < 32 | < 220 < 255 < 301 | 410 395 345 | | | | 0.0100 0.0100 0.0080 | 0.0100 0.0100 0.0080 | 0.0125 0.0125 0.0100 | 0.0155 0.0155 0.0125 | 0.0195 0.0195 0.0155 | 0.0195 0.0195 0.0155 | 0.0250 0.0250 0.0195 |
| Alloyed heat-treatable steels | < 32 < 43 | < 301 < 402 | 345 280 | | | | 0.0100 0.0080 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0195 0.0155 | 0.0250 0.0195 |
| Unalloyed case hardened steels | < 25 | < 255 | 410 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Alloyed case hardened steels | < 32 < 43 | < 301 < 402 | 345 230 | | | | 0.0100 0.0065 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0155 0.0100 | 0.0195 0.0125 | 0.0195 0.0125 | 0.0250 0.0155 |
| Nitriding steels | < 32 < 43 | < 301 < 402 | 345 230 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Tool steels | < 25 < 43 | < 255 < 402 | 180 165 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| High speed steels | < 43 | < 402 | 180 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| Spring steels | < 38 | < 354 | 165 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |

Body 4109

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------------------|-------------------------|-------------------|----------------------|---------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - < 32 | < 150 < 301 | 395 345 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Free-cutting steels | < 25 < 32 | < 255 < 301 | 395 345 | | | | 0.0100 0.0080 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0195 0.0155 | 0.0250 0.0195 |
| Unalloyed heat-treatable steels | < 20 < 25 < 32 | < 220 < 255 < 301 | 395 360 330 | | | | 0.0080 0.0080 0.0065 | 0.0080 0.0080 0.0065 | 0.0100 0.0100 0.0080 | 0.0125 0.0125 0.0100 | 0.0155 0.0155 0.0125 | 0.0155 0.0155 0.0125 | 0.0195 0.0195 0.0155 |
| Alloyed heat-treatable steels | < 32 < 43 | < 301 < 402 | 330 280 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Unalloyed case hardened steels | < 25 | < 255 | 395 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Alloyed case hardened steels | < 32 < 43 | < 301 < 402 | 330 230 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Nitriding steels | < 32 < 43 | < 301 < 402 | 345 230 | | | | 0.0065 0.0050 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0155 0.0125 |
| Tool steels | < 25 < 43 | < 255 < 402 | 180 165 | | | | 0.0065 0.0050 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0155 0.0125 |
| High speed steels | < 43 | < 402 | 180 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Spring steels | < 38 | < 354 | 165 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |

Body 4110

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------------------|-------------------------|-------------------|----------------------|---------------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - < 32 | < 150 < 301 | 360 310 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Free-cutting steels | < 25 < 32 | < 255 < 301 | 330 310 | | | | 0.0100 0.0080 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0195 0.0155 | 0.0195 0.0155 | 0.0250 0.0195 |
| Unalloyed heat-treatable steels | < 20 < 25 < 32 | < 220 < 255 < 301 | 330 310 295 | | | | 0.0080 0.0080 0.0065 | 0.0080 0.0080 0.0065 | 0.0100 0.0100 0.0080 | 0.0125 0.0125 0.0100 | 0.0155 0.0155 0.0125 | 0.0155 0.0155 0.0125 | 0.0195 0.0195 0.0155 |
| Alloyed heat-treatable steels | < 32 < 43 | < 301 < 402 | 295 280 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Unalloyed case hardened steels | < 25 | < 255 | 330 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Alloyed case hardened steels | < 32 < 43 | < 301 < 402 | 295 230 | | | | 0.0080 0.0065 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0155 0.0125 | 0.0155 0.0125 | 0.0195 0.0155 |
| Nitriding steels | < 32 < 43 | < 301 < 402 | 310 230 | | | | 0.0065 0.0050 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0155 0.0125 |
| Tool steels | < 25 < 43 | < 255 < 402 | 180 165 | | | | 0.0065 0.0050 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0155 0.0125 |
| High speed steels | < 43 | < 402 | 180 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Spring steels | < 38 | < 354 | 165 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |

Speeds & Feeds - Insert 4113

Body 4105 through 4108

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Cast iron | ≤ 23 | ≤ 242 | 330 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| | ≤ 38 | ≤ 354 | 295 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 395 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 330 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | ≤ 32 | ≤ 301 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| New cast materials ADI | ≤ 32 | ≤ 301 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | ≤ 43 | ≤ 402 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |

Body 4109 & 4110

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Cast iron | ≤ 23 | ≤ 242 | 260 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| | ≤ 38 | ≤ 354 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 330 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| | ≤ 38 | ≤ 354 | 260 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | 195 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | ≤ 32 | ≤ 301 | 195 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| New cast materials ADI | ≤ 32 | ≤ 301 | 195 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | ≤ 43 | ≤ 402 | 195 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |

Speeds & Feeds - Insert 4114

Body 4105 through 4107

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Aluminum and Al-alloys | - | < 120 | 655 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al wrought alloys | - | < 200 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 490 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 24 % Si | - | < 180 | 395 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Magnesium alloys | - | < 120 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | < 150 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Brass, short-chipping | - | ≤ 180 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Brass, long-chipping | - | < 180 | 395 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Bronze, short-chipping | - | < 180 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Bronze, long-chipping | ≤ 25 | < 255 | 165 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| | ≤ 25 | < 255 | 150 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| | < 32 | < 301 | 115 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |

Body 4108

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Aluminum and Al-alloys | - | < 120 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al wrought alloys | - | < 200 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 460 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Al cast alloys ≤ 24 % Si | - | < 180 | 360 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Magnesium alloys | - | < 120 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Copper, low-alloyed | - | < 150 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Brass, short-chipping | - | ≤ 180 | 590 | | | | 0.0125 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | 0.0315 |
| Brass, long-chipping | - | < 180 | 395 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Bronze, short-chipping | - | < 180 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Bronze, long-chipping | ≤ 25 | < 255 | 165 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| | ≤ 25 | < 255 | 150 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| | < 32 | < 301 | 115 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |

Body 4109

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Aluminum and Al-alloys | - | < 120 | 590 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al wrought alloys | - | < 200 | 590 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 460 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al cast alloys ≤ 24 % Si | - | < 180 | 360 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Magnesium alloys | - | < 120 | 590 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Copper, low-alloyed | - | < 150 | 230 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Brass, short-chipping | - | ≤ 180 | 590 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Brass, long-chipping | - | < 180 | 395 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Bronze, short-chipping | - | < 180 | 230 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Bronze, long-chipping | ≤ 25 | < 255 | 165 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | ≤ 25 | < 255 | 150 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | < 32 | < 301 | 115 | | | | 0.0065 | 0.0065 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0155 |

Body 4110

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Aluminum and Al-alloys | - | < 120 | 490 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al wrought alloys | - | < 200 | 490 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al cast alloys ≤ 10 % Si | - | < 180 | 425 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Al cast alloys ≤ 24 % Si | - | < 180 | 345 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Magnesium alloys | - | < 120 | 490 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Copper, low-alloyed | - | < 150 | 230 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Brass, short-chipping | - | ≤ 180 | 490 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| Brass, long-chipping | - | < 180 | 360 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Bronze, short-chipping | - | < 180 | 230 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Bronze, long-chipping | ≤ 25 | < 255 | 165 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | ≤ 25 | < 255 | 150 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | < 32 | < 301 | 115 | | | | 0.0065 | 0.0065 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0155 |

Speeds & Feeds - Insert 4115

Body 4105 through 4108

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|--------------|----------------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | 80 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 180 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| | ≤ 36 | ≤ 337 | 130 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| | ≤ 46 | ≤ 435 | 115 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 295 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 80 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 130 | | | | 0.0050 | 0.0050 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0125 |
| | ≤ 43 | ≤ 402 | 115 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |

Body 4109 & 4110

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|--------------|----------------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | 80 | | | | 0.0030 | 0.0030 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 180 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| | ≤ 36 | ≤ 337 | 130 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| | ≤ 46 | ≤ 435 | 115 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 230 | | | | 0.0100 | 0.0100 | 0.0125 | 0.0155 | 0.0195 | 0.0195 | 0.0250 |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 80 | | | | 0.0030 | 0.0030 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 130 | | | | 0.0040 | 0.0040 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0100 |
| | ≤ 43 | ≤ 402 | 115 | | | | 0.0030 | 0.0030 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0080 |

Speeds & Feeds - Insert 4229

Body 4107 through 4109

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 330 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| | < 32 | < 301 | 260 | | | | 0.0080 | 0.0080 | 0.0100 | 0.0125 | 0.0155 | 0.0155 | 0.0195 |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | < 32 | < 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | < 25 | < 255 | | | | | | | | | | | |
| | < 32 | < 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |

Body 4110

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 280 | | | | 0.0065 | 0.0065 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0155 |
| | < 32 | < 301 | 230 | | | | 0.0065 | 0.0065 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0155 |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | < 32 | < 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | < 25 | < 255 | | | | | | | | | | | |
| | < 32 | < 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | < 43 | < 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|--|----------------------|-------------------------|-------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 330 280 | 0.0003 0.0003 | 0.0006 0.0006 | 0.0009 0.0009 | 0.0015 0.0015 | | | | | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 295 260 | 0.0003 0.0003 | 0.0006 0.0006 | 0.0009 0.0009 | 0.0015 0.0015 | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 295 260 245 | 0.0002 0.0002 0.0002 | 0.0004 0.0004 0.0004 | 0.0005 0.0005 0.0005 | 0.0010 0.0010 0.0010 | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 245 215 | 0.0002 0.0002 | 0.0004 0.0004 | 0.0005 0.0005 | 0.0010 0.0010 | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 260 | 0.0003 | 0.0006 | 0.0009 | 0.0015 | | | | | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 245 215 | 0.0002 0.0002 | 0.0004 0.0004 | 0.0005 0.0005 | 0.0010 0.0010 | | | | | | |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 245 215 | 0.0002 0.0002 | 0.0004 0.0004 | 0.0005 0.0005 | 0.0010 0.0010 | | | | | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 245 215 | 0.0002 0.0002 | 0.0003 0.0003 | 0.0004 0.0004 | 0.0006 0.0006 | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 180 | 0.0001 | 0.0002 | 0.0003 | 0.0004 | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 215 | 0.0002 | 0.0003 | 0.0004 | 0.0006 | | | | | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | 100 80 | 0.0002 0.0001 | 0.0003 0.0002 | 0.0004 0.0003 | 0.0006 0.0004 | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 180 150 115 | 0.0002 0.0002 0.0002 | 0.0004 0.0004 0.0004 | 0.0005 0.0005 0.0005 | 0.0010 0.0010 0.0010 | | | | | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 280 260 | 0.0005 0.0005 | 0.0009 0.0009 | 0.0014 0.0014 | 0.0020 0.0020 | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 260 230 | 0.0003 0.0003 | 0.0006 0.0006 | 0.0009 0.0009 | 0.0015 0.0015 | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 180 | 0.0002 | 0.0004 | 0.0005 | 0.0010 | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 115 | 0.0001 | 0.0002 | 0.0003 | 0.0004 | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 115 100 | 0.0001 0.0001 | 0.0002 0.0002 | 0.0003 0.0003 | 0.0004 0.0004 | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 490 | 0.0008 | 0.0016 | 0.0024 | 0.0028 | | | | | | |
| Al wrought alloys | - | ≤ 200 | 395 | 0.0008 | 0.0016 | 0.0024 | 0.0028 | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 490 | 0.0013 | 0.0024 | 0.0033 | 0.0047 | | | | | | |
| Al cast alloys ≤ 24 % Si | - | ≤ 180 | 425 | 0.0013 | 0.0024 | 0.0033 | 0.0047 | | | | | | |
| Magnesium alloys | - | ≤ 120 | 360 | 0.0008 | 0.0016 | 0.0024 | 0.0028 | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 245 | 0.0003 | 0.0006 | 0.0009 | 0.0015 | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 395 | 0.0013 | 0.0024 | 0.0033 | 0.0047 | | | | | | |
| Brass, long-chipping | - | ≤ 180 | 295 | 0.0013 | 0.0024 | 0.0033 | 0.0047 | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 310 | 0.0008 | 0.0016 | 0.0024 | 0.0028 | | | | | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 310 230 | 0.0008 0.0008 | 0.0016 0.0016 | 0.0024 0.0024 | 0.0028 0.0028 | | | | | | |
| Duroplastics | | | 245 | 0.0003 | 0.0006 | 0.0009 | 0.0015 | | | | | | |
| Thermoplastics | | | 230 | 0.0003 | 0.0006 | 0.0009 | 0.0015 | | | | | | |
| Reinforced plastics - Kevlar | | | 195 | 0.0002 | 0.0004 | 0.0005 | 0.0010 | | | | | | |
| Reinforced plastics - GFK / CFK | | | 165 | 0.0002 | 0.0004 | 0.0005 | 0.0010 | | | | | | |

Table with columns: Material group, Hardness (HRC, BHN), SFM, and Feed Rate - IPR (6.30 mm, 8.00 mm, 10.00 mm, 12.50 mm, 16.00 mm, 20.00 mm, 25.00 mm, 31.50 mm). Rows include various steel grades, cast irons, alloys, and plastics.

Table with columns: Material group, Hardness (HRC, BHN), SFM, and Feed Rate - IPR (6.30 mm, 8.00 mm, 10.00 mm, 12.50 mm, 16.00 mm, 20.00 mm, 25.00 mm, 31.50 mm). Rows include various steel grades, cast irons, alloys, and plastics.

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 460 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 550 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 32 | ≤ 301 | 480 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 415 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 25 | ≤ 255 | 400 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 335 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 465 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 270 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 340 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 325 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Tool steels | ≤ 25 | ≤ 255 | 230 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| | ≤ 43 | ≤ 402 | 175 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| High speed steels | ≤ 43 | ≤ 402 | 195 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Spring steels | ≤ 38 | ≤ 354 | 195 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Hardened steels | ≤ 48 | ≤ 460 | 175 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| | ≤ 66 | - | 110 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 | ≤ 273 | 195 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 36 | ≤ 337 | 175 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 46 | ≤ 435 | 155 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| Cast iron | ≤ 23 | ≤ 242 | 640 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| | ≤ 38 | ≤ 354 | 525 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 435 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| | ≤ 38 | ≤ 354 | 415 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 110 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 140 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1000 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| Al wrought alloys | - | ≤ 200 | 1000 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 845 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| | - | ≤ 180 | 710 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| Magnesium alloys | - | ≤ 120 | 900 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Copper, low-alloyed | - | ≤ 150 | 400 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Brass, short-chipping | - | ≤ 180 | 1050 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| long-chipping | - | ≤ 180 | 710 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Bronze, short-chipping | - | ≤ 180 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 25 | ≤ 255 | 345 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 285 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 250 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 38 | ≤ 354 | 330 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 295 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 38 | ≤ 354 | 260 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0055 | 0.0065 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1345 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| Al wrought alloys | - | ≤ 200 | 1345 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | 1245 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| | - | ≤ 180 | 1080 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0180 | 0.0200 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 920 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| | ≤ 25 | ≤ 255 | 260 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Note: Pilot holes (depth >1xD) are recommended when drilling depths greater than 7xD. The pilot hole can be produced with a short, rigid drill. The diameter should be 0.01 - 0.02 mm larger than the diameter of the finish drill. Ratio drills can produce their own pilot hole by reducing speed and feed rates by 30-40%.

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 260 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 210 | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 295 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 245 | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 225 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 210 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 195 | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 195 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 160 | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 260 | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 195 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 160 | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 180 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 160 | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 145 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 110 | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 95 | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 325 | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 260 | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 260 | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 225 | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 590 | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | 520 | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 490 | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 390 | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 590 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 590 | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 160 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 130 | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 195 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 160 | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 160 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 130 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 80 | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 70 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 45 | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 130 | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 65 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 45 | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 55 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 45 | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 70 | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | 40 | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 40 | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 65 | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | 45 | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | 55 | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 145 | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 115 | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 130 | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | 100 | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 225 | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | 225 | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 295 | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 260 | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 260 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 100 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 205 | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 130 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 160 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 95 | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 130 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 95 | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | 80 | | | | | | | | | | |
| | | | 80 | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 35 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 35 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| austenitic | ≤ 36 | ≤ 337 | 25 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| martensitic | ≤ 46 | ≤ 435 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| malleable cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | 65 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 45 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 25 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 5 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 45 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| austenitic | ≤ 36 | ≤ 337 | 30 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| martensitic | ≤ 46 | ≤ 435 | 40 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| malleable cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 15 | 0.0010 | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 15 | 0.0005 | 0.0015 | 0.0025 | 0.0030 | 0.0040 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 30 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| | ≤ 43 | ≤ 402 | 15 | 0.0007 | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 80 | 0.0012 | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------------------|-------------------------|-------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - < 32 | ≤ 150 < 301 | 425 360 | | 0.0065 0.0050 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | | | | | |
| Free-cutting steels | ≤ 25 < 32 | ≤ 255 < 301 | 475 360 | | 0.0080 0.0065 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 < 32 | ≤ 220 ≤ 255 < 301 | 395 360 345 | | 0.0065 0.0065 0.0065 | 0.0100 0.0100 0.0100 | 0.0125 0.0125 0.0125 | 0.0160 0.0160 0.0160 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 < 43 | ≤ 301 < 402 | 345 330 | | 0.0065 0.0050 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Alloyed case hardened steels | ≤ 32 < 43 | ≤ 301 < 402 | 395 280 | | 0.0065 0.0040 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0160 0.0100 | | | | | |
| Nitriding steels | ≤ 32 < 43 | ≤ 301 < 402 | 330 295 | | 0.0050 0.0040 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | | | | | |
| Tool steels | ≤ 25 < 43 | ≤ 255 < 402 | 215 180 | | 0.0050 0.0040 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 150 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 150 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Hardened steels | ≤ 48 < 66 | ≤ 460 - | 150 80 | | 0.0025 0.0020 | 0.0040 0.0030 | 0.0050 0.0040 | 0.0065 0.0050 | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 < 46 | ≤ 273 ≤ 337 < 435 | 180 150 150 | | 0.0030 0.0030 0.0025 | 0.0050 0.0050 0.0040 | 0.0065 0.0065 0.0050 | 0.0080 0.0080 0.0065 | | | | | |
| Cast iron | ≤ 23 < 38 | ≤ 242 < 354 | 690 510 | | 0.0080 0.0080 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0200 0.0200 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 < 38 | ≤ 242 < 354 | 510 410 | | 0.0065 0.0065 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0160 0.0160 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 115 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 < 32 | ≤ 220 < 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 < 43 | ≤ 301 < 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 80 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Ti and Ti-alloys | ≤ 25 < 43 | ≤ 255 < 402 | 130 115 | | 0.0030 0.0025 | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | | | | | |
| Aluminium and Al-alloys | - | < 120 | 855 | | | | | | | | | | |
| Al wrought alloys | - | < 200 | 855 | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | < 180 | 720 | | | | | | | | | | |
| ≤ 24 % Si | - | < 180 | 590 | | | | | | | | | | |
| Magnesium alloys | - | < 120 | 855 | | | | | | | | | | |
| Copper, low-alloyed | - | < 150 | 360 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 885 | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 590 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | | | | | | | | | |
| long-chipping | ≤ 25 < 32 | ≤ 255 < 301 | 240 215 | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 475 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 560 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| | ≤ 32 | ≤ 301 | 475 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| | ≤ 25 | ≤ 255 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 43 | ≤ 402 | 345 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 475 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 43 | ≤ 402 | 280 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 350 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 43 | ≤ 402 | 330 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 240 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 43 | ≤ 402 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 195 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 195 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 180 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| | ≤ 66 | - | 115 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 195 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| austenitic | ≤ 36 | ≤ 337 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| martensitic | ≤ 46 | ≤ 435 | 165 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 690 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | | | | | |
| | ≤ 38 | ≤ 354 | 525 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | | | | | |
| Spheroidal graphite iron and | ≤ 23 | ≤ 242 | 450 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | | | | | |
| malleable cast iron | ≤ 38 | ≤ 354 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 115 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 150 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1015 | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | 1015 | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 855 | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 720 | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 920 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 410 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 1065 | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 720 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 410 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 345 | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 295 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 260 | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---------------------------------|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 460 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 550 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 32 | ≤ 301 | 480 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 415 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| | ≤ 25 | ≤ 255 | 400 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 43 | ≤ 402 | 335 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 465 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 43 | ≤ 402 | 270 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 340 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | | | | | |
| | ≤ 43 | ≤ 402 | 325 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 230 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | | | | | |
| | ≤ 43 | ≤ 402 | 175 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 195 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 195 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 175 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| | ≤ 66 | - | 110 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 195 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| austenitic | ≤ 36 | ≤ 337 | 175 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| martensitic | ≤ 46 | ≤ 435 | 155 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 640 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| | ≤ 38 | ≤ 354 | 525 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| Spheroidal graphite iron and | ≤ 23 | ≤ 242 | 435 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | | | | | |
| malleable cast iron | ≤ 38 | ≤ 354 | 415 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 110 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 140 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1000 | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | 1000 | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 845 | | | | | | | | | | |
| ≤ 24 % Si | - | ≤ 180 | 710 | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | 900 | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 400 | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 1050 | | | | | | | | | | |
| long-chipping | - | ≤ 180 | 710 | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 410 | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | 345 | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 285 | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | 250 | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | | | | | | | | | | | |
| | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1150 | | 0.0065 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | | | |
| Al wrought alloys | - | ≤ 200 | 1150 | | 0.0065 | 0.0125 | 0.0155 | 0.0195 | 0.0250 | 0.0250 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 1050 | | 0.0065 | 0.0100 | 0.0155 | 0.0155 | 0.0195 | 0.0250 | | | |
| ≤ 24 % Si | - | ≤ 180 | 920 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0155 | 0.0195 | | | |
| Magnesium alloys | - | ≤ 120 | 1050 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0155 | 0.0195 | | | |
| Copper, low-alloyed | - | ≤ 150 | 625 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0155 | 0.0195 | | | |
| Brass, short-chipping | - | ≤ 180 | 525 | | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | 0.0155 | | | |
| long-chipping | - | ≤ 180 | 525 | | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | 0.0155 | | | |
| Bronze, short-chipping | - | ≤ 180 | 525 | | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | 0.0155 | | | |
| | ≤ 25 | ≤ 255 | 525 | | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | 0.0155 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 490 | | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | 0.0155 | | | |
| | ≤ 32 | ≤ 301 | 490 | | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | 0.0155 | | | |
| Duroplastics | | | 330 | | 0.0020 | 0.0030 | 0.0050 | 0.0050 | 0.0065 | 0.0080 | | | |
| Thermoplastics | | | 330 | | 0.0020 | 0.0030 | 0.0050 | 0.0050 | 0.0065 | 0.0080 | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | 330 | | 0.0015 | 0.0025 | 0.0040 | 0.0040 | 0.0050 | 0.0065 | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| | ≤ 38 | ≤ 354 | 330 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 295 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| | ≤ 38 | ≤ 354 | 260 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0016 | 0.0025 | 0.0035 | 0.0040 | 0.0050 | 0.0060 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1345 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0160 | 0.0200 | | | |
| Al wrought alloys | - | ≤ 200 | 1345 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0160 | 0.0200 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 1245 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0160 | 0.0200 | | | |
| ≤ 24 % Si | - | ≤ 180 | 1080 | | 0.0050 | 0.0080 | 0.0125 | 0.0125 | 0.0160 | 0.0200 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 920 | | 0.0060 | 0.0125 | 0.0160 | 0.0200 | 0.0250 | 0.0250 | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | 0.0040 | 0.0060 | 0.0100 | 0.0100 | 0.0120 | 0.0160 | | | |
| | ≤ 25 | ≤ 255 | 260 | | 0.0030 | 0.0050 | 0.0080 | 0.0080 | 0.0100 | 0.0125 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

Series # 6069

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | | | | | | | | | | | |
| | ≤ 66 | - | | | | | | | | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | | | | | | | | | | | |
| | ≤ 36 | ≤ 337 | | | | | | | | | | | |
| | ≤ 46 | ≤ 435 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| | ≤ 38 | ≤ 354 | 330 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 295 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| | ≤ 38 | ≤ 354 | 260 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0016 | 0.0025 | 0.0035 | 0.0040 | 0.0050 | 0.0060 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1345 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Al wrought alloys | - | ≤ 200 | 1345 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 1245 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| ≤ 24 % Si | - | ≤ 180 | 1080 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 920 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | 0.0040 | 0.0060 | 0.0095 | 0.0100 | 0.0125 | 0.0160 | | | |
| | ≤ 25 | ≤ 255 | 260 | | 0.0030 | 0.0050 | 0.0075 | 0.0080 | 0.0100 | 0.0125 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | . | . | . | . | . | . | . | . | . | . | . |
| | ≤ 32 | ≤ 301 | . | . | . | . | . | . | . | . | . | . | . |
| Duroplastics | | | . | . | . | . | . | . | . | . | . | . | . |
| Thermoplastics | | | . | . | . | . | . | . | . | . | . | . | . |
| Reinforced plastics - Kevlar | | | . | . | . | . | . | . | . | . | . | . | . |
| Reinforced plastics - GFK / CFK | | | . | . | . | . | . | . | . | . | . | . | . |

Series # 6070

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Tool steels | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| | ≤ 38 | ≤ 354 | 330 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 295 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| | ≤ 38 | ≤ 354 | 260 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0013 | 0.0020 | 0.0025 | 0.0030 | 0.0040 | 0.0050 | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | | | | | | | | | | | |
| | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| | ≤ 43 | ≤ 402 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1345 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| Al wrought alloys | - | ≤ 200 | 1345 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 1245 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| ≤ 24 % Si | - | ≤ 180 | 1080 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | |
| Brass, short-chipping | - | ≤ 180 | 920 | | 0.0050 | 0.0080 | 0.0120 | 0.0125 | 0.0160 | 0.0200 | | | |
| long-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | 360 | | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0125 | 0.0160 | | | |
| | ≤ 25 | ≤ 255 | 260 | | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | 0.0125 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | . | . | . | . | . | . | . | . | . | . | . |
| | ≤ 32 | ≤ 301 | . | . | . | . | . | . | . | . | . | . | . |
| Duroplastics | | | . | . | . | . | . | . | . | . | . | . | . |
| Thermoplastics | | | . | . | . | . | . | . | . | . | . | . | . |
| Reinforced plastics - Kevlar | | | . | . | . | . | . | . | . | . | . | . | . |
| Reinforced plastics - GFK / CFK | | | . | . | . | . | . | . | . | . | . | . | . |

Note: Pilot holes (depth >1xD) are recommended when drilling depths greater than 7xD. The pilot hole can be produced with a short, rigid drill. The diameter should be 0.01 - 0.02 mm larger than the diameter of the finish drill. Ratio drills can produce their own pilot hole by reducing speed and feed rates by 30-40%.

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | |
|---|----------------------|-------------------------|-------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 0,0197 in. 0.5 mm | 0,0315 in. 0.8 mm | 0,0394 in. 1.0 mm | 0,0591 in. 1.5 mm | 0,0787 in. 2.0 mm | 0,0984 in. 2.5 mm | 0,1181 in. 3.0 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 345 330 | | | 0.0031 0.0031 | 0.0047 0.0047 | 0.0063 0.0063 | 0.0079 0.0079 | 0.0094 0.0094 |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 345 295 | | | 0.0031 0.0028 | 0.0047 0.0039 | 0.0063 0.0055 | 0.0079 0.0067 | 0.0094 0.0083 |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 310 310 295 | | | 0.0031 0.0031 0.0028 | 0.0047 0.0047 0.0039 | 0.0063 0.0063 0.0055 | 0.0079 0.0079 0.0067 | 0.0094 0.0094 0.0083 |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 295 230 | | | 0.0028 0.0016 | 0.0039 0.0035 | 0.0055 0.0047 | 0.0067 0.0059 | 0.0083 0.0071 |
| Unalloyed case hardened steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 301 | 330 280 | | | 0.0028 0.0016 | 0.0039 0.0035 | 0.0055 0.0047 | 0.0067 0.0059 | 0.0083 0.0071 |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 280 230 | | | 0.0028 0.0016 | 0.0039 0.0035 | 0.0055 0.0047 | 0.0067 0.0059 | 0.0083 0.0071 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 230 195 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 165 165 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| High speed steels | ≤ 43 | ≤ 402 | 165 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Spring steels | ≤ 38 | ≤ 354 | 165 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | - | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 230 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| austenitic | ≤ 36 | ≤ 337 | 195 | | | 0.0005 | 0.0008 | 0.0013 | 0.0018 | 0.0024 |
| martensitic | ≤ 46 | ≤ 435 | 230 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 490 460 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 460 425 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Chilled cast iron | ≤ 38 | ≤ 354 | - | | | - | - | - | - | - |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | 115 | | | 0.0005 | 0.0008 | 0.0013 | 0.0018 | 0.0024 |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | - | | | - | - | - | - | - |
| Special alloys | ≤ 54 | ≤ 549 | - | | | - | - | - | - | - |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 80 115 | | | 0.0005 0.0005 | 0.0008 0.0008 | 0.0013 0.0013 | 0.0018 0.0018 | 0.0024 0.0024 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | | | 0.0047 | 0.0071 | 0.0094 | 0.0118 | 0.0142 |
| Al wrought alloys | - | ≤ 200 | 230 | | | 0.0047 | 0.0071 | 0.0094 | 0.0118 | 0.0142 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 445 | | | 0.0017 | 0.0026 | 0.0036 | 0.0047 | 0.0059 |
| ≤ 24 % Si | - | ≤ 180 | 445 | | | 0.0017 | 0.0026 | 0.0036 | 0.0047 | 0.0059 |
| Magnesium alloys | - | ≤ 120 | - | | | - | - | - | - | - |
| Copper, low-alloyed | - | ≤ 150 | - | | | - | - | - | - | - |
| Brass, short-chipping | - | ≤ 180 | - | | | - | - | - | - | - |
| long-chipping | - | ≤ 180 | - | | | - | - | - | - | - |
| Bronze, short-chipping | - | ≤ 180 | - | | | - | - | - | - | - |
| long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | - | | | - | - | - | - | - |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | - | - | - | | | - | - | - | - | - |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | |
|---|----------------------|-------------------------|-------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 0,0197 in. 0.5 mm | 0,0315 in. 0.8 mm | 0,0394 in. 1.0 mm | 0,0591 in. 1.5 mm | 0,0787 in. 2.0 mm | 0,0984 in. 2.5 mm | 0,1181 in. 3.0 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 345 330 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 345 295 | | | 0.0017 0.0017 | 0.0026 0.0026 | 0.0036 0.0036 | 0.0047 0.0047 | 0.0059 0.0059 |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 310 310 295 | | | 0.0013 0.0013 0.0013 | 0.0020 0.0020 0.0020 | 0.0028 0.0028 0.0028 | 0.0037 0.0037 0.0037 | 0.0047 0.0047 0.0047 |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 295 230 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| Unalloyed case hardened steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 301 | 330 280 | | | 0.0009 0.0013 | 0.0014 0.0020 | 0.0020 0.0028 | 0.0028 0.0037 | 0.0035 0.0047 |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 280 230 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 230 195 | | | 0.0009 0.0009 | 0.0014 0.0014 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0035 0.0035 |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 165 165 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| High speed steels | ≤ 43 | ≤ 402 | 165 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Spring steels | ≤ 38 | ≤ 354 | 165 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | - | | | | | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 230 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| austenitic | ≤ 36 | ≤ 337 | 195 | | | 0.0005 | 0.0008 | 0.0013 | 0.0018 | 0.0024 |
| martensitic | ≤ 46 | ≤ 435 | 230 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 490 460 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 460 425 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Chilled cast iron | ≤ 38 | ≤ 354 | - | | | - | - | - | - | - |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | 115 | | | 0.0005 | 0.0008 | 0.0013 | 0.0018 | 0.0024 |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | - | | | - | - | - | - | - |
| Special alloys | ≤ 54 | ≤ 549 | - | | | - | - | - | - | - |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 80 115 | | | 0.0005 0.0005 | 0.0008 0.0008 | 0.0013 0.0013 | 0.0018 0.0018 | 0.0024 0.0024 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | | | 0.0047 | 0.0071 | 0.0094 | 0.0118 | 0.0142 |
| Al wrought alloys | - | ≤ 200 | 230 | | | 0.0047 | 0.0071 | 0.0094 | 0.0118 | 0.0142 |
| Al cast alloys ≤ 10 % Si | - | ≤ 180 | 445 | | | 0.0017 | 0.0026 | 0.0036 | 0.0047 | 0.0059 |
| ≤ 24 % Si | - | ≤ 180 | 445 | | | 0.0017 | 0.0026 | 0.0036 | 0.0047 | 0.0059 |
| Magnesium alloys | - | ≤ 120 | - | | | - | - | - | - | - |
| Copper, low-alloyed | - | ≤ 150 | - | | | - | - | - | - | - |
| Brass, short-chipping | - | ≤ 180 | - | | | - | - | - | - | - |
| long-chipping | - | ≤ 180 | - | | | - | - | - | - | - |
| Bronze, short-chipping | - | ≤ 180 | - | | | - | - | - | - | - |
| long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | - | | | - | - | - | - | - |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | - | - | - | | | - | - | - | - | - |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | |
|---|----------------------|-------------------------|-------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | HRC | BHN | | 0.0197 in. 0.5 mm | 0.0315 in. 0.8 mm | 0.0394 in. 1.0 mm | 0.0591 in. 1.5 mm | 0.0787 in. 2.0 mm | 0.0984 in. 2.5 mm | 0.1181 in. 3.0 mm |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | 345 330 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 345 295 | | | 0.0017 0.0017 | 0.0026 0.0026 | 0.0036 0.0036 | 0.0047 0.0047 | 0.0059 0.0059 |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | 310 310 295 | | | 0.0013 0.0013 0.0013 | 0.0020 0.0020 0.0020 | 0.0028 0.0028 0.0028 | 0.0037 0.0037 0.0037 | 0.0047 0.0047 0.0047 |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 295 230 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 330 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 280 230 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 230 195 | | | 0.0009 0.0009 | 0.0014 0.0014 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0035 0.0035 |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 165 165 | | | 0.0013 0.0013 | 0.0020 0.0020 | 0.0028 0.0028 | 0.0037 0.0037 | 0.0047 0.0047 |
| High speed steels | ≤ 43 | ≤ 402 | 165 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Spring steels | ≤ 38 | ≤ 354 | 165 | | | 0.0009 | 0.0014 | 0.0020 | 0.0028 | 0.0035 |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 230 195 230 | | | 0.0009 0.0005 0.0009 | 0.0014 0.0008 0.0014 | 0.0020 0.0013 0.0020 | 0.0028 0.0018 0.0028 | 0.0035 0.0024 0.0035 |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 490 460 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 460 425 | | | 0.0016 0.0016 | 0.0035 0.0035 | 0.0047 0.0047 | 0.0059 0.0059 | 0.0071 0.0071 |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | 115 | | | 0.0005 | 0.0008 | 0.0013 | 0.0018 | 0.0024 |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 80 115 | | | 0.0005 0.0005 | 0.0008 0.0008 | 0.0013 0.0013 | 0.0018 0.0018 | 0.0024 0.0024 |
| Aluminium and Al-alloys | - | ≤ 120 | 230 | | | 0.0047 | 0.0071 | 0.0094 | 0.0118 | 0.0142 |
| Al wrought alloys | - | ≤ 200 | 230 | | | 0.0047 | 0.0071 | 0.0094 | 0.0118 | 0.0142 |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 ≤ 180 | 445 445 | | | 0.0017 0.0017 | 0.0026 0.0026 | 0.0036 0.0036 | 0.0047 0.0047 | 0.0059 0.0059 |
| Magnesium alloys | - | ≤ 120 | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 ≤ 180 | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | | |
|---|----------------------|-------------------------|------------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|--|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm | |
| Common structural steels | - ≤ 32 | ≤ 150 ≤ 301 | | | | | | | | | | | | |
| Free-cutting steels | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | | | | | | | | | | | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 ≤ 32 | ≤ 220 ≤ 255 ≤ 301 | | | | | | | | | | | | |
| Alloyed heat-treatable steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | | | | | | | | | | | | |
| Alloyed case hardened steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | | |
| Nitriding steels | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | | | |
| Tool steels | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | | | | | | | | | | | | |
| High speed steels | ≤ 43 | ≤ 402 | | | | | | | | | | | | |
| Spring steels | ≤ 38 | ≤ 354 | | | | | | | | | | | | |
| Hardened steels | ≤ 48 ≤ 66 | ≤ 460 - | | | | | | | | | | | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | | | | | | | | | | | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 685 520 | 0.0060 | 0.0125 | 0.0160 | 0.0200 | 0.0250 | 0.0250 | | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 520 425 | 0.0060 | 0.0125 | 0.0160 | 0.0200 | 0.0250 | 0.0250 | | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | | | | | | | | | | | | |
| New cast materials GGV | ≤ 20 ≤ 32 | ≤ 220 ≤ 301 | 425 330 | 0.0010 | 0.0065 | 0.0100 | 0.0155 | 0.0195 | 0.0250 | 0.0315 | 0.0315 | 0.0395 | 0.0395 | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | 260 195 | 0.0010 | 0.0065 | 0.0100 | 0.0155 | 0.0195 | 0.0250 | 0.0315 | 0.0315 | 0.0395 | 0.0395 | |
| Special alloys | ≤ 54 | ≤ 549 | | | | | | | | | | | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 425 325 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | 0.0250 | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | 260 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | 0.0250 | | | | | |
| Al wrought alloys | - | ≤ 200 | 195 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | 0.0250 | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 ≤ 180 | | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | | | | | | | | | | | | |
| Brass, short-chipping long-chipping | - | ≤ 180 ≤ 180 | | | | | | | | | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | | | | | | | | | | | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 260 | 0.0030 | 0.0050 | 0.0080 | 0.0120 | 0.0120 | 0.0160 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 360 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 360 | 0.0030 | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0120 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 260 | 0.0030 | 0.0050 | 0.0080 | 0.0120 | 0.0120 | 0.0160 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 260 | 0.0030 | 0.0050 | 0.0080 | 0.0120 | 0.0120 | 0.0160 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 260 | 0.0030 | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0120 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 260 | 0.0020 | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 260 | 0.0030 | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0120 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 165 | 0.0020 | 0.0020 | 0.0040 | 0.0060 | 0.0060 | 0.0080 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 165 | 0.0020 | 0.0020 | 0.0040 | 0.0060 | 0.0060 | 0.0080 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 165 | 0.0020 | 0.0020 | 0.0040 | 0.0060 | 0.0060 | 0.0080 | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 260 | 0.0020 | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | | | | |
| Stainless steels, sulphured martensitic | ≤ 36 | ≤ 337 | 230 | 0.0010 | 0.0020 | 0.0030 | 0.0050 | 0.0050 | 0.0060 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 395 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 260 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | 260 | 0.0005 | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | 230 | 0.0010 | 0.0065 | 0.0100 | 0.0155 | 0.0155 | 0.0195 | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 100 | 0.0010 | 0.0020 | 0.0020 | 0.0040 | 0.0040 | 0.0050 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 395 | 0.0010 | 0.0010 | 0.0020 | 0.0040 | 0.0030 | 0.0040 | | | | |
| Brass, short-chipping | - | ≤ 180 | 330 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Duroplastics | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | | |
|---|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm | 1 1/2 in. 38.100 mm |
| Common structural steels | - | ≤ 150 | 260 | 0.0030 | 0.0050 | 0.0080 | 0.0120 | 0.0120 | 0.0160 | | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 330 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 360 | 0.0030 | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0120 | | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 260 | 0.0030 | 0.0050 | 0.0080 | 0.0120 | 0.0120 | 0.0160 | | | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 260 | 0.0030 | 0.0050 | 0.0080 | 0.0120 | 0.0120 | 0.0160 | | | | |
| Alloyed case hardened steels | ≤ 32 | ≤ 301 | 260 | 0.0030 | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0120 | | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 260 | 0.0020 | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | | | | |
| Tool steels | ≤ 25 | ≤ 255 | 260 | 0.0030 | 0.0040 | 0.0060 | 0.0090 | 0.0100 | 0.0120 | | | | |
| High speed steels | ≤ 43 | ≤ 402 | 165 | 0.0020 | 0.0020 | 0.0040 | 0.0060 | 0.0060 | 0.0080 | | | | |
| Spring steels | ≤ 38 | ≤ 354 | 165 | 0.0020 | 0.0020 | 0.0040 | 0.0060 | 0.0060 | 0.0080 | | | | |
| Hardened steels | ≤ 48 | ≤ 460 | 165 | 0.0020 | 0.0020 | 0.0040 | 0.0060 | 0.0060 | 0.0080 | | | | |
| Stainless steels, sulphured austenitic | ≤ 28 | ≤ 273 | 260 | 0.0020 | 0.0030 | 0.0050 | 0.0070 | 0.0080 | 0.0100 | | | | |
| Stainless steels, sulphured martensitic | ≤ 36 | ≤ 337 | 230 | 0.0010 | 0.0020 | 0.0030 | 0.0050 | 0.0050 | 0.0060 | | | | |
| Cast iron | ≤ 23 | ≤ 242 | 395 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 395 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 260 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| New cast materials GGV | ≤ 20 | ≤ 220 | 260 | 0.0005 | 0.0040 | 0.0065 | 0.0100 | 0.0100 | 0.0125 | | | | |
| New cast materials ADI | ≤ 32 | ≤ 301 | 230 | 0.0010 | 0.0065 | 0.0100 | 0.0155 | 0.0155 | 0.0195 | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 100 | 0.0010 | 0.0020 | 0.0020 | 0.0040 | 0.0040 | 0.0050 | | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Aluminium and Al-alloys | - | ≤ 120 | | | | | | | | | | | |
| Al wrought alloys | - | ≤ 200 | | | | | | | | | | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - | ≤ 180 | | | | | | | | | | | |
| Magnesium alloys | - | ≤ 120 | | | | | | | | | | | |
| Copper, low-alloyed | - | ≤ 150 | 395 | 0.0010 | 0.0010 | 0.0020 | 0.0040 | 0.0030 | 0.0040 | | | | |
| Brass, short-chipping | - | ≤ 180 | 330 | 0.0040 | 0.0060 | 0.0100 | 0.0150 | 0.0160 | 0.0200 | | | | |
| Bronze, short-chipping | - | ≤ 180 | | | | | | | | | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | | | | | | | | | | | |
| Duroplastics | ≤ 32 | ≤ 301 | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|---|----------------------|-------------------------|-------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm |
| Common structural steels | - < 32 | ≤ 150 ≤ 301 | 475 395 | | 0.0065 0.0050 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0160 0.0125 | 0.0160 0.0140 | | |
| Free-cutting steels | ≤ 25 < 32 | ≤ 255 ≤ 301 | 560 475 | | 0.0080 0.0080 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0200 0.0200 | 0.0220 0.0220 | | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 < 32 | ≤ 220 ≤ 255 ≤ 301 | 425 410 395 | | 0.0080 0.0065 0.0065 | 0.0125 0.0100 0.0100 | 0.0160 0.0125 0.0125 | 0.0200 0.0160 0.0160 | 0.0200 0.0160 0.0160 | 0.0220 0.0180 0.0180 | | |
| Alloyed heat-treatable steels | ≤ 32 < 43 | ≤ 301 ≤ 402 | 395 345 | | 0.0065 0.0065 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0160 0.0160 | 0.0180 0.0180 | | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 475 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | |
| Alloyed case hardened steels | ≤ 32 < 43 | ≤ 301 ≤ 402 | 395 280 | | 0.0065 0.0040 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0160 0.0100 | 0.0160 0.0100 | 0.0180 0.0110 | | |
| Nitriding steels | ≤ 32 < 43 | ≤ 301 ≤ 402 | 360 345 | | 0.0065 0.0040 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0160 0.0100 | 0.0160 0.0100 | 0.0180 0.0110 | | |
| Tool steels | ≤ 25 < 43 | ≤ 255 ≤ 402 | 260 215 | | 0.0050 0.0040 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0140 0.0110 | | |
| High speed steels | ≤ 43 | ≤ 402 | 195 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | |
| Spring steels | ≤ 38 | ≤ 354 | 195 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | |
| Hardened steels | ≤ 48 < 66 | ≤ 460 - | 180 115 | | 0.0025 0.0020 | 0.0040 0.0030 | 0.0050 0.0040 | 0.0065 0.0050 | 0.0065 0.0050 | 0.0070 0.0055 | | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 195 180 165 | | 0.0040 0.0040 0.0040 | 0.0065 0.0065 0.0065 | 0.0080 0.0080 0.0080 | 0.0100 0.0100 0.0100 | 0.0100 0.0100 0.0100 | 0.0110 0.0110 0.0110 | | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 690 525 | | 0.0100 0.0100 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0245 0.0245 | 0.0245 0.0245 | 0.0265 0.0265 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 460 425 | | 0.0100 0.0080 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0245 0.0200 | 0.0245 0.0200 | 0.0265 0.0220 | | |
| Chilled cast iron New cast materials GGV | ≤ 38 ≤ 20 ≤ 32 | ≤ 354 ≤ 220 ≤ 301 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 115 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 150 130 | | 0.0030 0.0030 | 0.0050 0.0050 | 0.0065 0.0065 | 0.0080 0.0080 | 0.0080 0.0080 | 0.0090 0.0090 | | |
| Aluminium and Al-alloys | - | ≤ 120 | 1015 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | | |
| Al wrought alloys | - | ≤ 200 | 1015 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 855 720 | | 0.0100 0.0100 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0245 0.0245 | 0.0245 0.0245 | 0.0265 0.0265 | | |
| Magnesium alloys | - | ≤ 120 | 920 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | |
| Copper, low-alloyed | - | ≤ 150 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 1065 720 | | 0.0080 0.0065 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0200 0.0160 | 0.0220 0.0180 | | |
| Bronze, short-chipping | - | ≤ 180 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 345 260 | | 0.0050 0.0050 | 0.0080 0.0080 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0125 0.0125 | 0.0140 0.0140 | | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | |

| Material group | Hardness | | SFM | Feed Rate - IPR | | | | | | | | |
|---|----------------------|-------------------------|-------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|
| | HRC | BHN | | 1/16 in. 1.590 mm | 1/8 in. 3.170 mm | 1/4 in. 6.350 mm | 3/8 in. 9.520 mm | 1/2 in. 12.700 mm | 5/8 in. 15.870 mm | 3/4 in. 19.050 mm | 1 in. 25.400 mm | 1 1/4 in. 31.750 mm |
| Common structural steels | - < 32 | ≤ 150 ≤ 301 | 475 395 | | 0.0065 0.0050 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0160 0.0125 | 0.0180 0.0140 | 0.0200 0.0160 | |
| Free-cutting steels | ≤ 25 < 32 | ≤ 255 ≤ 301 | 560 475 | | 0.0080 0.0080 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0200 0.0200 | 0.0220 0.0220 | 0.0245 0.0245 | |
| Unalloyed heat-treatable steels | ≤ 20 ≤ 25 < 32 | ≤ 220 ≤ 255 ≤ 301 | 425 410 395 | | 0.0080 0.0065 0.0065 | 0.0125 0.0100 0.0100 | 0.0160 0.0125 0.0160 | 0.0200 0.0160 0.0160 | 0.0200 0.0160 0.0180 | 0.0245 0.0200 0.0200 | | |
| Alloyed heat-treatable steels | ≤ 32 < 43 | ≤ 301 ≤ 402 | 395 345 | | 0.0065 0.0065 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0160 0.0160 | 0.0180 0.0180 | 0.0200 0.0200 | |
| Unalloyed case hardened steels | ≤ 25 | ≤ 255 | 475 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | |
| Alloyed case hardened steels | ≤ 32 < 43 | ≤ 301 ≤ 402 | 395 280 | | 0.0065 0.0040 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0160 0.0100 | 0.0160 0.0100 | 0.0180 0.0110 | 0.0200 0.0125 | |
| Nitriding steels | ≤ 32 < 43 | ≤ 301 ≤ 402 | 350 330 | | 0.0065 0.0040 | 0.0100 0.0065 | 0.0125 0.0080 | 0.0160 0.0100 | 0.0160 0.0100 | 0.0180 0.0110 | 0.0200 0.0125 | |
| Tool steels | ≤ 25 < 43 | ≤ 255 ≤ 402 | 240 180 | | 0.0050 0.0040 | 0.0080 0.0065 | 0.0100 0.0080 | 0.0125 0.0100 | 0.0125 0.0100 | 0.0140 0.0110 | 0.0160 0.0125 | |
| High speed steels | ≤ 43 | ≤ 402 | 195 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | |
| Spring steels | ≤ 38 | ≤ 354 | 195 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | |
| Hardened steels | ≤ 48 < 66 | ≤ 460 - | 180 115 | | 0.0025 0.0020 | 0.0040 0.0030 | 0.0050 0.0040 | 0.0065 0.0050 | 0.0065 0.0050 | 0.0070 0.0055 | 0.0080 0.0065 | |
| Stainless steels, sulphured austenitic martensitic | ≤ 28 ≤ 36 ≤ 46 | ≤ 273 ≤ 337 ≤ 435 | 195 180 165 | | 0.0040 0.0040 0.0040 | 0.0065 0.0065 0.0065 | 0.0080 0.0080 0.0080 | 0.0100 0.0100 0.0100 | 0.0100 0.0100 0.0100 | 0.0110 0.0110 0.0110 | 0.0125 0.0125 0.0125 | |
| Cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 690 525 | | 0.0100 0.0100 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0245 0.0245 | 0.0245 0.0245 | 0.0265 0.0265 | 0.0290 0.0290 | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 ≤ 38 | ≤ 242 ≤ 354 | 450 425 | | 0.0100 0.0080 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0245 0.0200 | 0.0245 0.0200 | 0.0265 0.0220 | 0.0290 0.0245 | |
| Chilled cast iron New cast materials GGV | ≤ 38 ≤ 20 ≤ 32 | ≤ 354 ≤ 220 ≤ 301 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | |
| New cast materials ADI | ≤ 32 ≤ 43 | ≤ 301 ≤ 402 | | | | | | | | | | |
| Special alloys | ≤ 54 | ≤ 549 | 115 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | |
| Ti and Ti-alloys | ≤ 25 ≤ 43 | ≤ 255 ≤ 402 | 150 130 | | 0.0030 0.0025 | 0.0050 0.0040 | 0.0065 0.0050 | 0.0080 0.0065 | 0.0080 0.0065 | 0.0090 0.0070 | 0.0100 0.0080 | |
| Aluminium and Al-alloys | - | ≤ 120 | 1015 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | |
| Al wrought alloys | - | ≤ 200 | 1015 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | |
| Al cast alloys ≤ 10 % Si ≤ 24 % Si | - - | ≤ 180 ≤ 180 | 855 720 | | 0.0080 0.0080 | 0.0125 0.0125 | 0.0160 0.0160 | 0.0200 0.0200 | 0.0200 0.0200 | 0.0220 0.0220 | 0.0245 0.0245 | |
| Magnesium alloys | - | ≤ 120 | 920 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | |
| Copper, low-alloyed | - | ≤ 150 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | |
| Brass, short-chipping long-chipping | - - | ≤ 180 ≤ 180 | 1065 720 | | 0.0080 0.0065 | 0.0125 0.0100 | 0.0160 0.0125 | 0.0200 0.0160 | 0.0200 0.0160 | 0.0220 0.0180 | 0.0245 0.0200 | |
| Bronze, short-chipping | - | ≤ 180 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | |
| Bronze, long-chipping | ≤ 25 ≤ 32 | ≤ 255 ≤ 301 | 345 260 | | 0.0050 0.0050 | 0.0080 0.0080 | 0.0100 0.0100 | 0.0125 0.0125 | 0.0125 0.0125 | 0.0140 0.0140 | 0.0160 0.0160 | |
| Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK | | | | | | | | | | | | |



ELIHT

SERIES NO. INDEX

BRINING
GULF

| Series no. | Page | Feeds & Speeds | Description | Tool Material | Finish |
|------------|------|----------------|--|---------------|-----------------------|
| 205 | 128 | 496 | General purpose (Type N), jobber length, 118° point, standard straight shank | HSS | bright/steam oxide |
| 206 | 143 | 496 | Low Helix (Type H), jobber length, 118° point, standard straight shank | HSS | bright finish |
| 207 | 146 | 497 | High Helix (Type W), jobber length, 130° point, standard straight shank | HSS | bright finish |
| 208 | 134 | 497 | General purpose (Type N), jobber length, 118° point, standard straight shank | HSS | bright/steam oxide |
| 217 | 193 | 498 | General purpose (Type N), taper length, 118° point, standard straight shank | HSS | bright/steam oxide |
| 219 | 198 | 498 | High Helix (Type W), taper length, 130° point, standard straight shank | HSS | bright finish |
| 223 | 94 | 499 | General purpose (Type N), stub length, 118° point, standard straight shank | HSS | bright/steam oxide |
| 224 | 104 | 499 | Low Helix (Type H), stub length, 118° point, standard straight shank | HSS | bright finish |
| 225 | 106 | 500 | High Helix (Type W), stub length, 130° point, standard straight shank | HSS | bright finish |
| 226 | 98 | 500 | General purpose (Type N), stub length, 118° point, standard straight shank, LH | HSS | bright/steam oxide |
| 235 | 222 | 501 | General purpose (Type N), extra length #1, 118° point, standard straight shank | HSS | bright/steam oxide |
| 245 | 236 | 501 | General purpose (Type N), Standard (MTS), 118° point, Morse Taper shank | HSS | bright/steam oxide |
| 257 | 243 | 502 | General purpose (Type N), Bushing (MTS), 118° point, Morse Taper shank | HSS | surface treated |
| 266 | 246 | 502 | General purpose (Type N), extra length #1, 118° point, Morse Taper shank | HSS | surface treated |
| 280 | 47 | 503 | Form A center drill, Extra long, 60°, non-flatted body, bright finish | HSS | bright finish |
| 281 | 44 | 503 | Form A center drill, 60°, non-flatted body, bright finish | HSS | bright finish |
| 282 | 45 | 504 | Form A center drill, 60°, non-flatted body, bright finish, LH | HSS | bright finish |
| 283 | 51 | 504 | Form R center drill, Radiused. 60°, non-flatted body, bright finish | HSS | bright finish |
| 284 | 52 | 505 | Form R center drill, Radiused, 60°, non-flatted body, bright finish, LH | HSS | bright finish |
| 285 | 60 | 505 | Form B center drill, 60°/120° double angle, non-flatted body, bright finish | HSS | bright finish |
| 287 | 54 | 506 | Form A center drill, 60°, Flatted body, bright finish | HSS | bright finish |
| 288 | 56 | 506 | Form R center drill, Radiused, 60°, Flatted body, bright finish | HSS | bright finish |
| 289 | 63 | 507 | Form B center drill, 60°/120° double angle, Flatted body, bright finish | HSS | bright finish |
| 292 | 42 | 507 | Form A center drill, 60°, non-flatted body, bright finish | HSS | bright finish |
| 294 | 43 | 508 | Form A center drill, 60°, non-flatted body, bright finish, LH | HSS | bright finish |
| 301 | 86 | 508 | Micro-Precision (Type N), 118° point, reinforced straight shank | HSS-E-PM | bright finish |
| 303 | 88 | 509 | Micro-Precision (Type N), 118° point, reinforced straight shank, LH | HSS-E-PM | bright finish |
| 305 | 157 | 509 | General purpose (Type N), jobber length, 118° point, standard straight shank | Cobalt | bright/steam oxide |
| 308 | 161 | 510 | General purpose (Type N), jobber length, 118° point, straight shank, LH | Cobalt | bright/steam oxide |
| 317 | 209 | 510 | General purpose (Type N), taper length, 118° point, standard straight shank | HSCO | bright/steam oxide |
| 329 | 113 | 511 | Heavy Duty (Type GV120), stub length, 130° point, standard straight shank | HSCO | bright/steam oxide |
| 336 | 214 | 511 | GT 100 deep hole, taper length, 130° point, standard straight shank | HSCO | bright/nitrided lands |
| 345 | 241 | 512 | General purpose (Type N), Standard (MTS), 118° point, Morse Taper shank | HSCO | surface treated |
| 381 | 40 | 512 | Form A center drill, 60°, non-flatted body, bright finish | HSCO | bright finish |
| 390 | 208 | 513 | GT 100 IC deep hole, taper length, 130° point, standard straight shank | HSS | bright finish |
| 501 | 200 | 513 | GT 50 deep hole, taper length, 130° point, standard straight shank | HSS | bright finish |

| Series no. | Page | Feeds & Speeds | Description | Tool Material | Finish |
|------------|------|----------------|--|---------------|-----------------------------|
| 502 | 225 | 514 | General purpose (Type N), extra length #1, 130° point, standard straight shank | HSS | bright/nitrided lands |
| 503 | 229 | 514 | GT 100 deep hole, extra length #2, 130° point, standard straight shank | HSS | bright/nitrided lands |
| 504 | 232 | 515 | GT 100 deep hole, extra length #3, 130° point, standard straight shank | HSS | nitrided lands |
| 515 | 124 | 515 | GT 500 DZ high performance, stub length, 130° cone-relief point | HSS-E-PM | FIREX® |
| 524 | 224 | 516 | GT 50 deep hole, extra length #1, 130° point, standard straight shank | HSS | bright finish |
| 526 | 247 | 516 | GT 100 deep hole, extra length #1, 118° point, Morse Taper shank | HSS | nitrided lands/steam oxide |
| 527 | 248 | 517 | GT 100 deep hole, extra length #2, 130° point, Morse Taper shank | HSS | nitrided lands/steam oxide |
| 530 | 188 | 517 | GT 500 DZ high performance, jobber length, 130° cone relief point | HSS-E-PM | FIREX® |
| 535 | 203 | 518 | GT 100 deep hole, taper length, 130° point, standard straight shank | HSS | bright/nitrided lands |
| 546 | 75 | 518 | NC Spot • Short, NC Spot, 142° point, standard straight shank | Carbide | bright finish |
| 549 | 149 | 519 | GT 100 deep hole, jobber length, 130° point, standard straight shank | HSS | bright/nitrided lands |
| 550 | 152 | 519 | GT 100 deep hole, jobber length, 130° point, standard straight shank, LH | HSS | bright/nitrided lands |
| 551 | 245 | 520 | GT 100 deep hole, Bushing (MTS), 130° point, Morse Taper shank | HSS | nitrided lands/steam oxide |
| 552 | 108 | 520 | GT 80 deep hole, stub length, 130° point, standard straight shank | HSS | bright/nitrided lands/steam |
| 553 | 111 | 521 | GT 80 deep hole, stub length, 130° point, standard straight shank, LH | HSS | bright/nitrided lands/steam |
| 556 | 70 | 521 | NC Spot • Short, NC Spot, 120° point, standard straight shank | HSS | bright finish |
| 557 | 64 | 522 | NC Spot • Short, NC Spot, 90° point, standard straight shank | HSS | bright finish |
| 559 | 66 | 522 | NC Spot • Long, NC Spot, 90° point, standard straight shank | HSS | bright finish |
| 567 | 71 | 523 | NC Spot • Short, NC Spot, 120° point, standard straight shank | HSS | TiN |
| 568 | 65 | 523 | NC Spot • Short, NC Spot, 90° point, standard straight shank | HSS | TiN |
| 581 | 36 | 524 | Form A center drill, 60°, non-flatted body, bright finish | HSS | bright finish |
| 582 | 38 | 524 | Form A center drill, 60°, non-flatted body, bright finish, LH | HSS | bright finish |
| 583 | 48 | 525 | Form R center drill, Radiused, 60°, non-flatted body, bright finish | HSS | bright finish |
| 584 | 50 | 525 | Form R center drill, Radiused, 60°, non-flatted body, bright finish, LH | HSS | bright finish |
| 585 | 57 | 526 | Form B center drill, 60°/120° double angle, non-flatted body, bright finish | HSS | bright finish |
| 586 | 58 | 526 | Form B center drill, 60°, non-flatted body, bright finish, LH | HSS | bright finish |
| 587 | 53 | 527 | Form A center drill, 60°, Flatted body, bright finish | HSS | bright finish |
| 588 | 55 | 527 | Form R center drill, Radiused, 60°, Flatted body, bright finish | HSS | bright finish |
| 589 | 62 | 528 | Form B center drill, 60°/120° double angle, Flatted body, bright finish, | HSS | bright finish |
| 590 | 39 | 528 | Form A center drill, Reinforced neck, 60°, non-flatted body, bright finish, | HSS | bright finish |
| 591 | 59 | 529 | Form B center drill, Reinforced neck, 60°/120° double angle, non-flatted body, bright finish, | HSS | bright finish |
| 594 | 41 | 529 | Form A center drill, 60°, non-flatted body, bright finish, | HSS | bright finish |
| 595 | 61 | 530 | Form B center drill, 60°/120° double angle, non-flatted body, bright finish, | HSS | bright finish |
| 605 | 163 | 530 | Heavy Duty Split Point (Type Ti), jobber length, self-centering 130° split point, standard str shank | Cobalt | bright finish |
| 609 | 326 | 531 | GS 200 U three-flute high precision, 5xD, self-centering 150° point, standard straight shank | Carbide | TiN |
| 613 | 37 | 531 | Form A center drill, 60°, non-flatted body, TiN coated, | HSS | TiN |

| Series no. | Page | Feeds & Speeds | Description | Tool Material | Finish |
|------------|------|----------------|--|---------------|-----------------------|
| 614 | 49 | 532 | Form R center drill, 60°, non-flatted body, TiN coated, | HSS | TiN |
| 617 | 211 | 532 | Heavy Duty Split Point (Type Ti), taper length, self-centering 130° split point, standard str shank | HSCO | bright finish |
| 618 | 228 | 533 | GT 100 deep hole, extra length #1, 130° point, standard straight shank | HSCO | nitrided lands |
| 619 | 231 | 533 | GT 100 deep hole, extra length #2, 130° point, standard straight shank | HSCO | nitrided lands |
| 622 | 172 | 534 | GT 100 deep hole, jobber length, 130° point, standard straight shank | HSCO | bright/nitrided lands |
| 651 | 137 | 534 | General purpose (Type N), jobber length, 118° point, standard straight shank | HSS | TiN |
| 652 | 154 | 535 | GT 100 deep hole, jobber length, 130° point, standard straight shank | HSS | TiN |
| 653 | 101 | 535 | General purpose (Type N), stub length, 118° point, standard straight shank | HSS | TiN |
| 654 | 239 | 536 | General purpose (Type N), Standard (MTS), 118° point, Morse Taper shank | HSS | TiN |
| 657 | 166 | 536 | Heavy Duty Split Point (Type Ti), jobber length, self-centering 130° split point, standard str shank | Cobalt | TiN |
| 658 | 175 | 537 | GT 100 deep hole, jobber length, 130° point, standard straight shank | Cobalt | TiN |
| 659 | 116 | 537 | Heavy Duty (Type GV120), stub length, 130° point, standard straight shank | HSCO | TiN |
| 660 | 90 | 538 | Micro-Precision (Type N), micro-precision, 118° point, reinforced straight shank | HSS-E-PM | TiN |
| 664 | 141 | 538 | General purpose (Type N), jobber length, 118° point, standard straight shank, LH | HSS | TiN |
| 666 | 192 | 539 | General purpose (Type N), Bushing length, 118° point, standard straight (tang >3mm) shank | HSS | TiN |
| 667 | 196 | 539 | General purpose (Type N), taper length, 118° point, standard straight shank | HSS | TiN |
| 668 | 206 | 540 | GT 100 deep hole, taper length, 130° point, standard straight shank | HSS | TiN |
| 669 | 213 | 540 | Heavy Duty Split Point (Type Ti), taper length, self-centering 130° split point, standard str shank | HSCO | TiN |
| 670 | 227 | 541 | GT 100 deep hole, extra length #1, 130° point, standard straight shank | HSS | TiN |
| 671 | 230 | 541 | GT 100 deep hole, extra length #2, 130° point, standard straight shank | HSS | TiN |
| 723 | 69 | 542 | NC Spot • Short, NC Spot, 90° point, standard straight shank | Carbide | bright finish |
| 724 | 74 | 542 | NC Spot • Short, NC Spot, 120° point, standard straight shank | Carbide | bright finish |
| 730 | 262 | 543 | General purpose (Type N), stub length, 118° point, standard straight shank | Carbide | bright finish |
| 732 | 268 | 543 | General purpose (Type N), jobber length, 118° point, standard straight shank | Carbide | bright finish |
| 736 | 46 | 544 | Form A center drill, 60°, non-flatted body, bright finish, | Carbide | bright finish |
| 768 | 348 | 544 | RT 150 GG straight flute high penetration, 4xD, 120° point, reinforced straight shank | Carbide | bright finish |
| 769 | 352 | 545 | RT 150 GG straight flute high penetration, 7xD, 120° point, reinforced straight shank | Carbide | bright finish |
| 773 | 356 | 545 | RT 150 GG straight flute high penetration, 15xD, 120° point, reinforced straight shank | Carbide | bright finish |
| 1018 | 184 | 546 | AeroX, jobber length, 135° NAS 907 split point, standard straight shank | M42 Cobalt | bronze oxide |
| 1047 | 419 | 546 | RT 800 WP Indexable insert, self-centering 140° SF point, | Carbide | TiN |
| 1131 | 170 | 548 | GT 80 IC deep hole, jobber length, 130° point, reinforced straight shank | HSCO | bright finish |
| 1132 | 171 | 548 | GT 80 IC deep hole, jobber length, 130° point, reinforced straight shank | HSCO | bright finish |
| 1133 | 68 | 549 | NC Spot Drill - 90° point angle | HSCO | nano-FIREX® |
| 1134 | 72 | 549 | NC Spot Drill - 120° point angle | HSCO | bright finish |
| 1135 | 73 | 550 | NC Spot Drill - 120° point angle | HSCO | nano-FIREX® |
| 1136 | 67 | 550 | NC Spot Drill - 90° point angle | HSCO | bright finish |

| Series no. | Page | Feeds & Speeds | Description | Tool Material | Finish |
|------------|------|----------------|--|---------------|---------------|
| 1183 | 306 | 551 | RT 100 U high penetration, 5xD, self-centering 140° SU point, reinforced str shank w/whistle notch | Carbide | TiN |
| 1184 | 282 | 551 | RT 100 U high penetration, 3xD, self-centering 140° SU point, reinforced str shank w/whistle notch | Carbide | FIREX® |
| 1221 | 177 | 552 | GT 100 deep hole, jobber length, 130° point, standard straight shank | HSCO | TiCN |
| 1223 | 178 | 552 | GT 100 deep hole, jobber length, 130° point, standard straight shank | HSCO | TiAlN |
| 1242 | 280 | 553 | RT 100 U high penetration, 3xD, self-centering 140° SU point, standard straight shank | Carbide | TiN |
| 1243 | 300 | 553 | RT 100 U high penetration, 5xD, self-centering 140° SU point, standard straight shank | Carbide | TiN |
| 1452 | 324 | 554 | GS 200 U three-flute high precision, 5xD, self-centering 150° point, standard straight shank | Carbide | bright finish |
| 1662 | 304 | 554 | RT 100 F high penetration, 5xD, self-centering 140° SF point, reinforced straight shank | Carbide | TiN |
| 1702 | 278 | 555 | RT 100 U high penetration, 3xD, self-centering 140° SU point, standard straight shank | Carbide | TiN |
| 2458 | 168 | 555 | Heavy Duty Split Point (Type Ti), jobber length, self-centering 130° split point, standard str shank | HSCO | FIREX® |
| 2463 | 264 | 556 | General purpose (Type N), stub length, 118° point, standard straight shank | Carbide | FIREX® |
| 2464 | 270 | 556 | General purpose (Type N), jobber length, 118° point, standard straight shank | Carbide | FIREX® |
| 2485 | 421 | 557 | RT 800 WP Indexable insert, self-centering 140° SF point, | Carbide | FIREX® |
| 2601 | 272 | 558 | GT 100 deep hole, jobber length, 130° point, standard straight shank | Carbide | bright finish |
| 2602 | 274 | 559 | GT 100 deep hole, jobber length, 130° point, standard straight shank | Carbide | TiN |
| 2747 | 423 | 559 | RT 800 WP Indexable insert, self-centering 140° SF point, | Carbide | bright finish |
| 3899 | 252 | 561 | Carbide, Micro Drill, 135° 4-facet ground hone point (Type N), reinforced straight shank | Carbide | TiAlN |
| 4105 | 384 | -- | HT 800 WP body, coolant through, 1xD w/countersink, straight shank w/whistle notch | HSS | Nickel |
| 4106 | 385 | -- | HT 800 WP body, coolant through, 1.5xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 4107 | 387 | -- | HT 800 WP body, coolant through, 3xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 4108 | 389 | -- | HT 800 WP body, coolant through, 5xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 4109 | 391 | -- | HT 800 WP body, coolant through, 7xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 4110 | 393 | -- | HT 800 WP body, coolant through, 10xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 4111 | 395 | 561 | HT 800 WP indexable insert, self-centering 145° SF point, | Carbide | nano-A® |
| 4112 | 404 | 562 | HT 800 WP indexable insert, self-centering 140° SF point | Carbide | nano-FIREX® |
| 4113 | 398 | 563 | HT 800 WP indexable insert, self-centering 140° SF point | Carbide | FIREX® |
| 4114 | 401 | 564 | HT 800 WP indexable insert, self-centering 140° SF point | Carbide | bright finish |
| 4115 | 407 | 565 | HT 800 WP indexable insert, self-centering 140° SF point | Carbide | nano-A® |
| 4229 | 410 | 566 | HT 800 WP indexable insert, self-centering 140° SF point | Carbide | FIREX® |
| 5020 | 372 | 567 | EB 100 straight-flute gun drills, 80mm flute length, type G point, reinforced straight shank | Carbide | bright finish |
| 5021 | 374 | 567 | EB 100 straight-flute gun drills, 160mm flute length, type G point, reinforced straight shank | Carbide | bright finish |
| 5024 | 371 | 567 | EB 100 straight-flute gun drills, 45mm flute length, type G point, reinforced straight shank | Carbide | bright finish |
| 5026 | 373 | 567 | EB 100 straight-flute gun drills, 120mm flute length, type G point, reinforced straight shank | Carbide | bright finish |
| 5242 | 416 | -- | RT 800 WP body, coolant through, 3xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 5243 | 417 | -- | RT 800 WP body, coolant through, 5xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |
| 5248 | 418 | -- | RT 800 WP body, coolant through, 7xD full-helical flute, straight shank w/whistle notch | HSS | Nickel |

| Series no. | Page | Feeds & Speeds | Description | Tool Material | Finish |
|------------|------|----------------|--|---------------|---------------|
| 5498 | 312 | 568 | RT 100 XF arbide drill, 7xD, 140 degree point, coolant fed, FIREX coating | Carbide | FIREX® |
| 5499 | 341 | 568 | RT 100 XF arbide drill, 5xD, 140 degree point, coolant fed, FIREX coating | Carbide | FIREX® |
| 5500 | 76 | 569 | 90° Countersinks, SpyroTec | HSCO | TiAIN |
| 5501 | 77 | 569 | 90° Countersinks, SpyroTec | HSCO | TiAIN |
| 5503 | 78 | 569 | 90° Countersinks, SpyroTec | HSCO | TiAIN |
| 5510 | 290 | 570 | RT 100 U high penetration, 3xD, self-centering140° SU point, reinforced straight shank | Carbide | FIREX® |
| 5511 | 308 | 570 | RT 100 U high penetration, 5xD, self-centering140° SU point, reinforced straight shank | Carbide | FIREX® |
| 5512 | 332 | 571 | RT 100 U high penetration, 7xD, self-centering140° SU point, reinforced straight shank | Carbide | FIREX® |
| 5513 | 354 | 571 | RT 150 GG straight flute high penetration, 10xD, 120° point, reinforced straight shank | Carbide | bright finish |
| 5514 | 284 | 572 | RT 100 U high penetration, 3xD, self-centering 140° SU point, reinforced straight shank | Carbide | FIREX® |
| 5515 | 302 | 572 | RT 100 U high penetration, 5xD, self-centering140° SU point, reinforced straight shank | Carbide | FIREX® |
| 5518 | 328 | 573 | GS 200 G three-flute high precision, 5xD, self-centering130° point, reinforced straight shank | Carbide | bright finish |
| 5519 | 182 | 573 | GU 500 DZ universal, jobber length, 118° 4-facet split point, standard straight shank | HSCO | TiN |
| 5520 | 120 | 574 | GU 500 DZ universal, stub length, 118° 4-facet split point, standard straight shank | HSCO | TiN |
| 5521 | 122 | 574 | GT 500 DZ high performance, stub length, 130° cone-relief point, standard straight shank | HSS-E-PM | TiN |
| 5522 | 186 | 575 | GT 500 DZ high performance, jobber length, 130° cone relief point, standard straight shank | PM-Cobalt | TiN |
| 5523 | 180 | 575 | GU 500 DZ universal, jobber length, 118° 4-facet split point, standard straight shank | HSCO | bright finish |
| 5524 | 118 | 576 | GU 500 DZ universal, stub length, 118° 4-facet split point, standard straight shank | HSCO | bright finish |
| 5525 | 343 | 576 | RT 100 C high penetration, 12xD, self-centering 135°, double margins point, reinforced str shank | Carbide | FIREX® |
| 5536 | 216 | 577 | GU 500 DZ universal, 10xD, 118° 4-facet split point, standard straight shank | HSCO | bright finish |
| 5537 | 218 | 577 | GU 500 DZ universal, 10xD, 118° 4-facet split point, standard straight shank | HSCO | TiN |
| 5538 | 79 | -- | 90° Countersink sets (Series 5500), SpyroTec | HSCO | TiAIN |
| 5539 | 80 | -- | 90° Countersink sets (Series 5501), SpyroTec | HSCO | TiAIN |
| 5610 | 292 | 569 | RT 100 U high penetration, 3xD, self-centering 140° SU point, reinforced shank w/whistle notch | Carbide | FIREX® |
| 5611 | 310 | 569 | RT 100 U high penetration, 5xD, self-centering 140° SU point, reinforced shank w/whistle notch | Carbide | FIREX® |
| 5612 | 334 | 579 | RT 100 U high penetration, 7xD, self-centering 140° SU point, reinforced shank w/whistle notch | Carbide | FIREX® |
| 5641 | 375 | 579 | EB 80, Single flute gun drill, 40xD, type G point, standard driver, reinforced straight shank | Carbide | TiCN |
| 5642 | 376 | 580 | EB 80, Single flute gun drill, 80xD, type G point, standard driver, reinforced straight shank | Carbide | TiCN |
| 5646 | 368 | 567 | EB 100, Single flute gun drill, 25xD, type G point, standard driver, reinforced straight shank | Carbide | nano-A™ |
| 5647 | 369 | 567 | EB 100, Single flute gun drill, 50xD, type G point, standard driver, reinforced straight shank | Carbide | nano-A™ |
| 5648 | 370 | 567 | EB 100, Single flute gun drill, 75xD, type G point, standard driver, reinforced straight shank | Carbide | nano-A™ |
| 5670 | 81 | 580 | SpyroTec 60 degree countersink, cyl. shank | HSS | TiAIN |
| 5671 | 82 | 580 | SpyroTec 60 degree countersink, tri-flat shank | HSS | TiAIN |
| 5741 | 286 | 581 | RT 100 US high penetration, 3xD, self-centering 140° SU point, reinforced straight shank | Carbide | nano-A™ |
| 5744 | 316 | 582 | RT 100 US high penetration, 5xD, self-centering 140° SU point, reinforced straight shank | Carbide | nano-A™ |
| 5746 | 336 | 582 | RT 100 US high penetration, 7xD, self-centering 140° SU point, reinforced straight shank | Carbide | nano-A™ |

| Series no. | Page | Feeds & Speeds | Description | Tool Material | Finish |
|------------|------|----------------|--|---------------|---------------|
| 5768 | 314 | 583 | RT 100 Al coolant fed drill for aluminum, 5xD, 140° point with facet point grind | Carbide | bright finish |
| 6068 | 350 | 583 | RT 150 GG straight flute high penetration, 4xD, 130° point, reinforced straight shank | Carbide | bright finish |
| 6069 | 353 | 584 | RT 150 GG straight flute high penetration, 7xD, 130° point, reinforced straight shank | Carbide | bright finish |
| 6070 | 355 | 584 | RT 150 GG straight flute high penetration, 10xD, 130° point, reinforced straight shank | Carbide | bright finish |
| 6400 | 254 | 585 | Exclusive Line Micro Drills, 4xD, 140° 4-facet ground hone point, reinforced straight shank | Carbide | Super-ATM |
| 6401 | 256 | 585 | Exclusive Line Micro Drills, 7xD, 140° 4-facet ground hone point, reinforced straight shank | Carbide | Super-ATM |
| 6405 | 255 | 586 | Exclusive Line Micro Drills, 5xD, 135° 4-facet ground hone point, reinforced straight shank | Carbide | TiAlN |
| 6408 | 257 | 586 | Exclusive Line Micro Drills, 8xD, 135° 4-facet ground hone point, reinforced straight shank | Carbide | TiAlN |
| 6412 | 258 | 587 | Exclusive Line Micro Drills, 15xD, 135° 4-facet ground hone point, reinforced straight shank | Carbide | TiAlN |
| 6501 | 322 | 587 | RT 100 R high penetration, 5xD, radius point, reinforced straight shank | Carbide | FIREX® |
| 6502 | 339 | 588 | RT 100 R high penetration, 7xD, radius point, reinforced straight shank | Carbide | FIREX® |
| 6509 | 360 | 588 | RT 100 T high penetration, extra length, 135° point, standard straight shank | Carbide | TiAlN tipped |
| 6511 | 361 | 589 | RT 100 T high penetration, 20xD, 135° point, standard straight shank | Carbide | TiAlN tipped |
| 6512 | 362 | 589 | RT 100 T high penetration, 25xD, 135° point, standard straight shank | Carbide | TiAlN tipped |
| 6513 | 363 | 590 | RT 100 T high penetration, 30xD, 135° point, standard straight shank | Carbide | TiAlN tipped |
| 6514 | 364 | 590 | RT 100 T high penetration, 40xD, 135° point, standard straight shank | Carbide | TiAlN tipped |
| 7632 | 413 | -- | Countersinking insert HT 800 | Carbide | TiAlN |
| 7635 | 411 | -- | Countersinking insert HT 800 | Carbide | bright finish |
| 7645 | 412 | -- | Countersinking insert HT 800 | Carbide | TiN |
| 8510 | 294 | 591 | RT 100 VA high penetration, 3xD, self-centering 140° VA point, reinforced straight shank | Carbide | nano-ATM |
| 8511 | 318 | 591 | RT 100 VA high penetration, 5xD, self-centering 140° VA point, reinforced straight shank | Carbide | nano-ATM |
| 8520 | 296 | 592 | RT 100 HF high penetration, 3xD, self-centering 140° HF point, reinforced straight shank | Carbide | nano-Si™ |
| 8521 | 320 | 592 | RT 100 HF high penetration, 5xD, self-centering 140° HF point, reinforced straight shank | Carbide | nano-Si™ |
| 8522 | 338 | 593 | RT 100 HF high penetration, 7xD, self-centering 140° HF point, reinforced straight shank | Carbide | nano-Si™ |
| 8524 | 288 | 593 | RT 100 HF high penetration, 3xD, self-centering 140° HF point, reinforced straight shank | Carbide | nano-Si™ |

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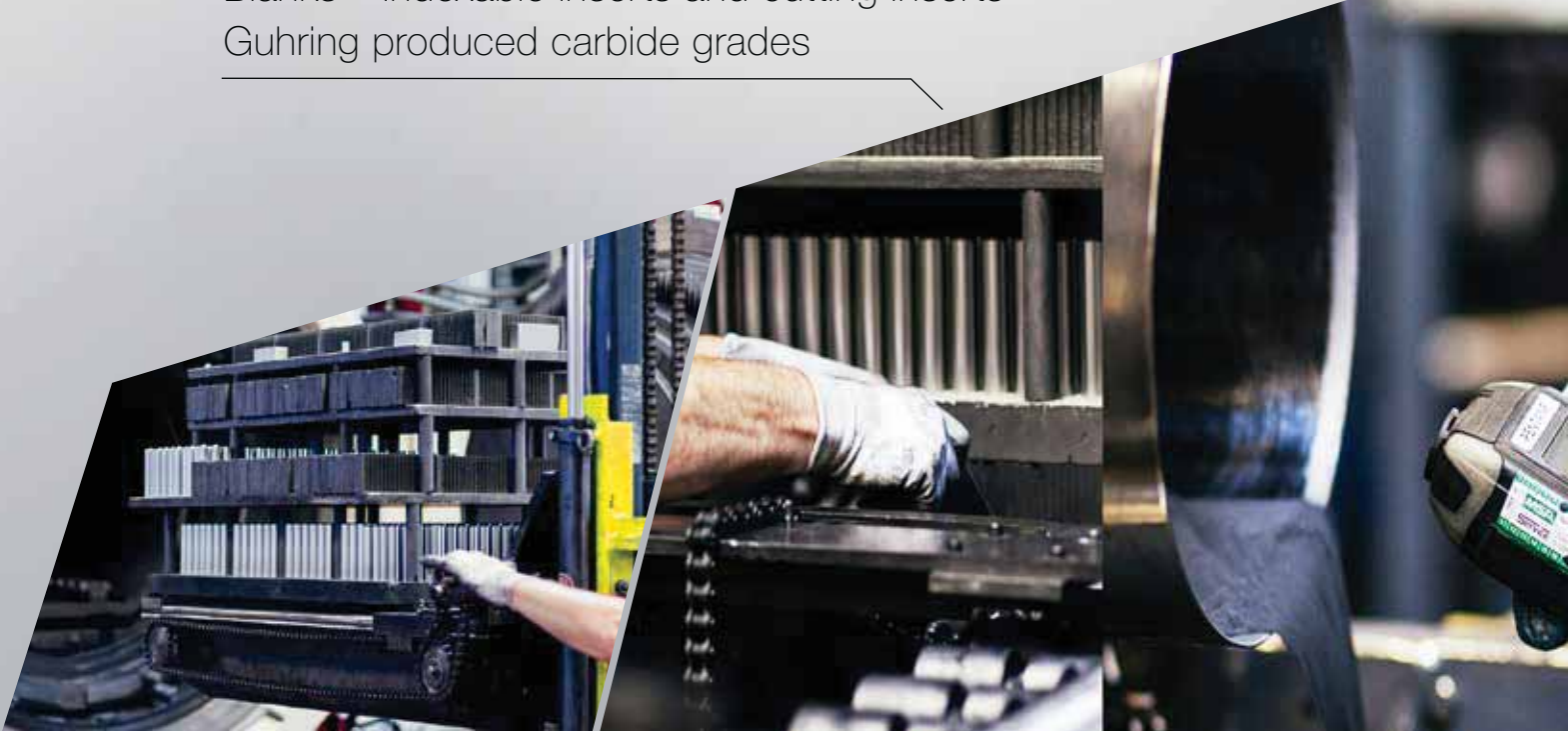


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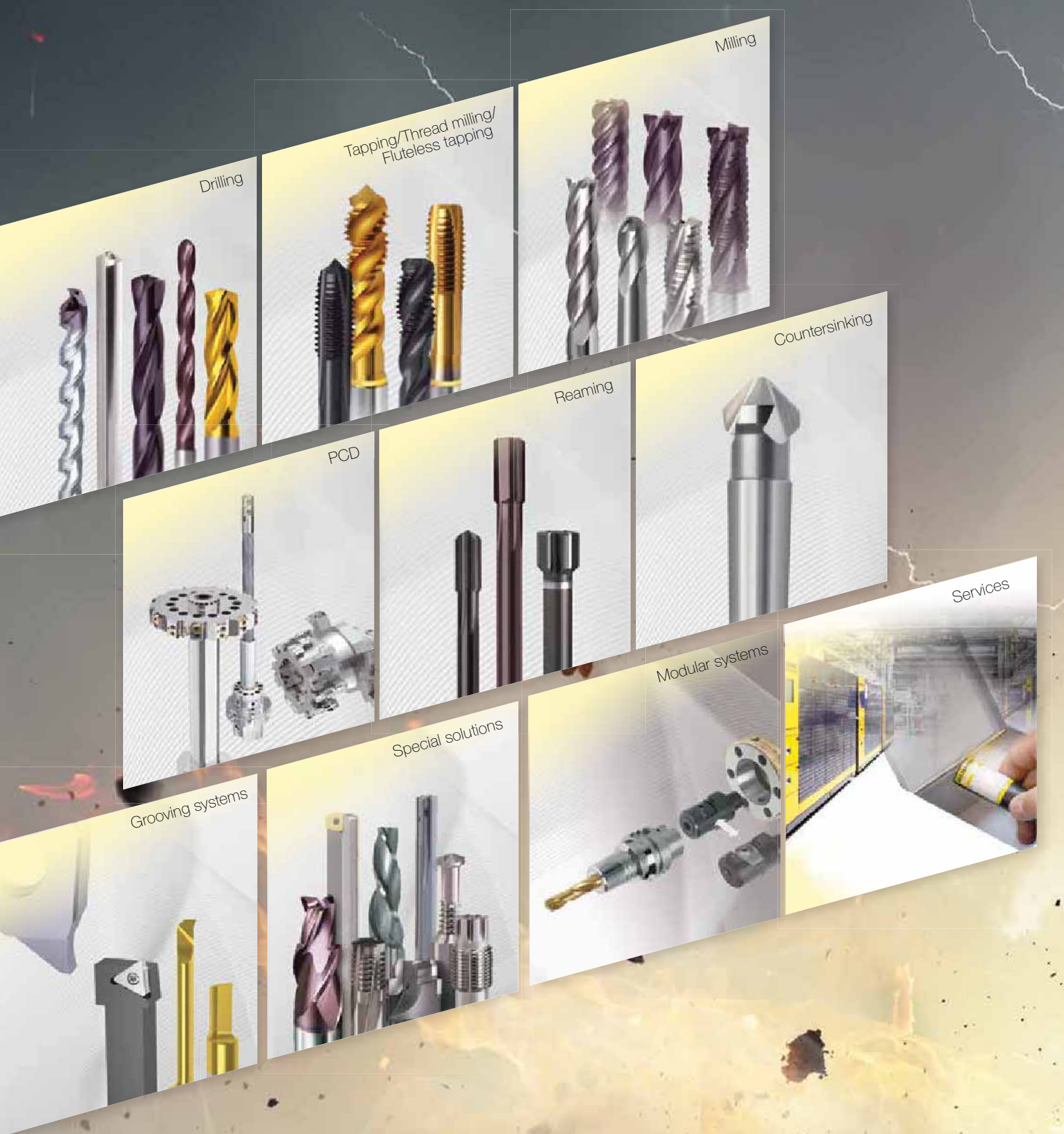


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