# 5xD Ratio drills

Series no. **5511**

5xD Cutting depth | RT 100 U Type | 140° Point angle | m7 Tolerance on Ø | Internal coolant | HA Shank form | R Cutting direction

Tool material **Solid Carbide**

Surface **F**

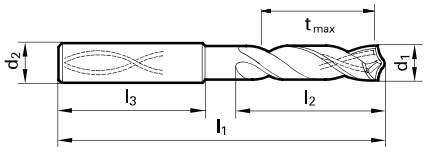
| | | |
|---|---|---|
| P | Steel | ● |
| M | Stainless steel | ○ |
| K | Cast iron | ● |
| N | Aluminum | ○ |
| S | Titanium alloys | ○ |
| H | Hardened steel | ○ |

●=Optimal
○=Limited

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

$t_{max} = l_2-(1.5 \times d_1)$




*Speeds and feeds information on pg. 550*

| Diameter (d1) inch | wire/ltr | mm | d2 mm | l1 mm | $t_{max}$ mm | l2 mm | EDP # |
|---|---|---|---|---|---|---|---|
| 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) inch | wire/ltr | mm | d2 mm | l1 mm | $t_{max}$ mm | l2 mm | EDP # |
|---|---|---|---|---|---|---|---|
| 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 |

# 5xD Ratio drills

Series no. **5511**

| Diameter (d1) inch | wire/ltr | mm | d2 mm | l1 mm | $t_{max}$ mm | l2 mm | EDP # |
|---|---|---|---|---|---|---|---|
| 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) inch | wire/ltr | mm | d2 mm | l1 mm | $t_{max}$ mm | l2 mm | EDP # |
|---|---|---|---|---|---|---|---|
| 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** |

## Series # 5510

| Material group | Hardness HRc | Hardness Bhn | SFM | Feed Rate - IPR 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 | 0.0160 | 0.0180 | | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 560 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| | ≤ 32 | ≤ 301 | 475 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| | ≤ 25 | ≤ 255 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 43 | ≤ 402 | 345 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 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 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 43 | ≤ 402 | 280 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 360 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 43 | ≤ 402 | 345 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Tool steels | ≤ 25 | ≤ 255 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 43 | ≤ 402 | 215 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 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 | ≤ 460 | 180 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | | | |
| | ≤ 66 | - | 115 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 195 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| austenitic | ≤ 36 | ≤ 337 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| martensitic | ≤ 46 | ≤ 435 | 165 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | | | |
| Cast iron | ≤ 23 | ≤ 242 | 690 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | | | |
| | ≤ 38 | ≤ 354 | 525 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 460 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | | | |
| | ≤ 38 | ≤ 354 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 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 | 115 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 150 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 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 | - | ≤ 180 | 855 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | | | |
| ≤ 24 % Si | - | ≤ 180 | 720 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 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 | - | ≤ 180 | 1065 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | | | |
| long-chipping | - | ≤ 180 | 720 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| Bronze, short-chipping | - | ≤ 180 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | | | |
| | ≤ 25 | ≤ 255 | 345 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Bronze, long-chipping | ≤ 25 | ≤ 255 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |

## Series # 5511

| Material group | Hardness HRc | Hardness Bhn | SFM | Feed Rate - IPR 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 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Free-cutting steels | ≤ 25 | ≤ 255 | 560 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| | ≤ 32 | ≤ 301 | 475 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| Unalloyed heat-treatable steels | ≤ 20 | ≤ 220 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| | ≤ 25 | ≤ 255 | 410 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| Alloyed heat-treatable steels | ≤ 32 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 43 | ≤ 402 | 345 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 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 | ≤ 301 | 395 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 43 | ≤ 402 | 280 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Nitriding steels | ≤ 32 | ≤ 301 | 350 | | 0.0065 | 0.0100 | 0.0125 | 0.0160 | 0.0160 | 0.0180 | 0.0200 | | |
| | ≤ 43 | ≤ 402 | 330 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Tool steels | ≤ 25 | ≤ 255 | 240 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 43 | ≤ 402 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 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 | ≤ 460 | 180 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| | ≤ 66 | - | 115 | | 0.0020 | 0.0030 | 0.0040 | 0.0050 | 0.0050 | 0.0055 | 0.0065 | | |
| Stainless steels, sulphured | ≤ 28 | ≤ 273 | 195 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| austenitic | ≤ 36 | ≤ 337 | 180 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| martensitic | ≤ 46 | ≤ 435 | 165 | | 0.0040 | 0.0065 | 0.0080 | 0.0100 | 0.0100 | 0.0110 | 0.0125 | | |
| Cast iron | ≤ 23 | ≤ 242 | 690 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | 0.0290 | | |
| | ≤ 38 | ≤ 354 | 525 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | 0.0290 | | |
| Spheroidal graphite iron and malleable cast iron | ≤ 23 | ≤ 242 | 450 | | 0.0100 | 0.0160 | 0.0200 | 0.0245 | 0.0245 | 0.0265 | 0.0290 | | |
| | ≤ 38 | ≤ 354 | 425 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| Chilled cast iron | ≤ 38 | ≤ 354 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 0.0080 | | |
| 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 | 0.0080 | 0.0090 | 0.0100 | | |
| Ti and Ti-alloys | ≤ 25 | ≤ 255 | 150 | | 0.0030 | 0.0050 | 0.0065 | 0.0080 | 0.0080 | 0.0090 | 0.0100 | | |
| | ≤ 43 | ≤ 402 | 130 | | 0.0025 | 0.0040 | 0.0050 | 0.0065 | 0.0065 | 0.0070 | 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 | - | ≤ 180 | 855 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| ≤ 24 % Si | - | ≤ 180 | 720 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 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 | - | ≤ 180 | 1065 | | 0.0080 | 0.0125 | 0.0160 | 0.0200 | 0.0200 | 0.0220 | 0.0245 | | |
| long-chipping | - | ≤ 180 | 720 | | 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 | 295 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| | ≤ 32 | ≤ 301 | 260 | | 0.0050 | 0.0080 | 0.0100 | 0.0125 | 0.0125 | 0.0140 | 0.0160 | | |
| Duroplastics | | | | | | | | | | | | | |
| Thermoplastics | | | | | | | | | | | | | |
| Reinforced plastics - Kevlar | | | | | | | | | | | | | |
| Reinforced plastics - GFK / CFK | | | | | | | | | | | | | |