

15 TAP DRILL SIZES - UNIFIED THREAD

| Size | Threads Per Inch | | | | Minor Diameter | | | Tap Drill Diameter (Cutting Tap) | | | | |
|------|------------------|-----|------|----|----------------|---------|---------|----------------------------------|------------|------------|------------|------------|
| | UNC | UNF | UNEF | UN | Min. 2B&3B | Max. 2B | Max. 3B | 80% Thread | 75% Thread | 70% Thread | 65% Thread | 60% Thread |
| #0 | - | 80 | - | - | .0465 | .0514 | .0514 | .0470 | .0478 | .0486 | .0494 | .0503 |
| #1 | 64 | - | - | - | .0561 | .0623 | .0623 | .0568 | .0578 | .0588 | .0598 | .0608 |
| | - | 72 | - | - | .0580 | .0635 | .0635 | .0586 | .0595 | .0604 | .0613 | .0622 |
| #2 | 56 | - | - | - | .0667 | .0737 | .0737 | .0674 | .0686 | .0698 | .0709 | .0721 |
| | - | 64 | - | - | .0691 | .0753 | .0753 | .0698 | .0708 | .0718 | .0728 | .0738 |
| #3 | 48 | - | - | - | .0764 | .0845 | .0845 | .0774 | .0787 | .0801 | .0814 | .0828 |
| | - | 56 | - | - | .0797 | .0865 | .0865 | .0804 | .0816 | .0828 | .0839 | .0851 |
| #4 | 40 | - | - | - | .0849 | .0939 | .0939 | .0860 | .0876 | .0893 | .0909 | .0925 |
| | - | 48 | - | - | .0894 | .0968 | .0968 | .0904 | .0917 | .0931 | .0944 | .0958 |
| #5 | 40 | - | - | - | .0979 | .1062 | .1062 | .0990 | .1006 | .1023 | .1039 | .1055 |
| | - | 44 | - | - | .1004 | .1079 | .1079 | .1014 | .1029 | .1043 | .1058 | .1073 |
| #6 | 32 | - | - | - | .1040 | .1140 | .1140 | .1055 | .1076 | .1096 | .1116 | .1136 |
| | - | 40 | - | - | .1110 | .1190 | .1186 | .1120 | .1136 | .1153 | .1169 | .1185 |
| #8 | 32 | - | - | - | .1300 | .1390 | .1389 | .1315 | .1336 | .1356 | .1376 | .1396 |
| | - | 36 | - | - | .1340 | .1420 | .1416 | .1351 | .1369 | .1387 | .1405 | .1424 |
| #10 | 24 | - | - | - | .1450 | .1560 | .1555 | .1467 | .1494 | .1521 | .1548 | .1575 |
| | - | 32 | - | - | .1560 | .1640 | .1641 | .1575 | .1596 | .1616 | .1636 | .1656 |
| #12 | 24 | - | - | - | .1710 | .1810 | .1807 | .1727 | .1754 | .1781 | .1808 | .1835 |
| | - | 28 | - | - | .1770 | .1860 | .1857 | .1789 | .1812 | .1835 | .1858 | .1882 |
| 1/4 | 20 | - | - | - | .1960 | .2070 | .2067 | .1980 | .2013 | .2045 | .2078 | .2110 |
| | - | 28 | - | - | .2110 | .2200 | .2190 | .2129 | .2152 | .2175 | .2198 | .2222 |
| | - | - | 32 | - | .2160 | .2240 | .2229 | .2175 | .2196 | .2216 | .2236 | .2256 |
| 5/16 | 18 | - | - | - | .2520 | .2650 | .2630 | .2548 | .2584 | .2620 | .2656 | .2692 |
| | - | - | - | 20 | .2580 | .2700 | .2680 | .2605 | .2638 | .2670 | .2703 | .2735 |
| | - | 24 | - | - | .2670 | .2770 | .2754 | .2692 | .2719 | .2746 | .2773 | .2800 |
| | - | - | - | 28 | .2740 | .2820 | .2807 | .2754 | .2777 | .2800 | .2823 | .2847 |
| | - | - | 32 | - | .2790 | .2860 | .2847 | .2800 | .2821 | .2841 | .2861 | .2881 |
| 3/8 | 16 | - | - | - | .3070 | .3210 | .3182 | .3101 | .3141 | .3182 | .3222 | .3263 |
| | - | - | - | 20 | .3210 | .3320 | .3297 | .3230 | .3263 | .3295 | .3328 | .3360 |
| | - | 24 | - | - | .3300 | .3400 | .3372 | .3317 | .3344 | .3371 | .3398 | .3425 |
| | - | - | - | 28 | .3360 | .3450 | .3426 | .3379 | .3402 | .3425 | .3448 | .3472 |
| | - | - | 32 | - | .3410 | .3490 | .3469 | .3425 | .3446 | .3466 | .3486 | .3506 |
| 7/16 | 14 | - | - | - | .3600 | .3760 | .3717 | .3633 | .3679 | .3726 | .3772 | .3818 |
| | - | - | - | 16 | .3700 | .3840 | .3800 | .3726 | .3766 | .3807 | .3847 | .3888 |
| | - | 20 | - | - | .3830 | .3950 | .3916 | .3855 | .3888 | .3920 | .3953 | .3985 |
| | - | - | 28 | - | .3990 | .4070 | .4051 | .4004 | .4027 | .4050 | .4073 | .4097 |
| | - | - | - | 32 | .4040 | .4110 | .4094 | .4050 | .4071 | .4091 | .4111 | .4131 |
| 1/2 | 13 | - | - | - | .4170 | .4340 | .4284 | .4201 | .4251 | .4301 | .4351 | .4400 |
| | - | - | - | 16 | .4320 | .4460 | .4419 | .4351 | .4391 | .4432 | .4472 | .4513 |
| | - | 20 | - | - | .4460 | .4570 | .4537 | .4480 | .4513 | .4545 | .4578 | .4610 |
| | - | - | 28 | - | .4610 | .4700 | .4676 | .4629 | .4652 | .4675 | .4698 | .4722 |
| | - | - | - | 32 | .4660 | .4740 | .4719 | .4675 | .4696 | .4716 | .4736 | .4756 |
| 9/16 | 12 | - | - | - | .4720 | .4900 | .4843 | .4759 | .4813 | .4867 | .4921 | .4976 |
| | - | - | - | 16 | .4950 | .5090 | .5040 | .4976 | .5016 | .5057 | .5097 | .5138 |
| | - | 18 | - | - | .5020 | .5150 | .5106 | .5048 | .5084 | .5120 | .5156 | .5192 |
| | - | - | - | 20 | .5080 | .5200 | .5162 | .5105 | .5138 | .5170 | .5203 | .5235 |
| | - | - | 24 | - | .5170 | .5270 | .5244 | .5192 | .5219 | .5246 | .5273 | .5300 |
| | - | - | - | 28 | .5240 | .5320 | .5301 | .5254 | .5277 | .5300 | .5323 | .5347 |
| 5/8 | 11 | - | - | - | .5290 | .5360 | .5344 | .5300 | .5321 | .5341 | .5361 | .5381 |
| 5/8 | 11 | - | - | - | .5270 | .5460 | .5391 | .5305 | .5364 | .5423 | .5482 | .5541 |



| Size | Threads Per Inch | | | | Minor Diameter | | | Tap Drill Diameter (Cutting Tap) | | | | |
|--------|------------------|-----|------|----|----------------|---------|---------|----------------------------------|------------|------------|------------|------------|
| | UNC | UNF | UNEF | UN | Min. 2B&3B | Max. 2B | Max. 3B | 80% Thread | 75% Thread | 70% Thread | 65% Thread | 60% Thread |
| 5/8 | - | - | - | 12 | .5350 | .5530 | .5463 | .5384 | .5438 | .5492 | .5546 | .5601 |
| | - | - | - | 16 | .5570 | .5710 | .5662 | .5601 | .5641 | .5682 | .5722 | .5763 |
| | - | 18 | - | - | .5650 | .5780 | .5730 | .5673 | .5709 | .5745 | .5781 | .5817 |
| | - | - | - | 20 | .5710 | .5820 | .5787 | .5730 | .5763 | .5795 | .5828 | .5860 |
| | - | - | 24 | - | .5800 | .5900 | .5869 | .5817 | .5844 | .5871 | .5898 | .5925 |
| | - | - | - | 28 | .5860 | .5950 | .5926 | .5879 | .5902 | .5925 | .5948 | .5972 |
| 11/16 | - | - | - | 32 | .5910 | .5980 | .5969 | .5925 | .5946 | .5966 | .5986 | .6006 |
| | - | - | - | 12 | .5970 | .6150 | .6085 | .6009 | .6063 | .6117 | .6171 | .6226 |
| | - | - | - | 16 | .6200 | .6340 | .6284 | .6226 | .6266 | .6307 | .6347 | .6388 |
| | - | - | - | 20 | .6330 | .6450 | .6412 | .6355 | .6388 | .6420 | .6453 | .6485 |
| | - | - | 24 | - | .6420 | .6520 | .6494 | .6442 | .6469 | .6496 | .6523 | .6550 |
| | - | - | - | 28 | .6490 | .6570 | .6551 | .6504 | .6527 | .6550 | .6573 | .6597 |
| 3/4 | - | - | - | 32 | .6540 | .6610 | .6594 | .6550 | .6571 | .6591 | .6611 | .6631 |
| | 10 | - | - | - | .6420 | .6630 | .6545 | .6461 | .6526 | .6591 | .6656 | .6721 |
| | - | - | - | 12 | .6600 | .6780 | .6707 | .6634 | .6688 | .6742 | .6796 | .6851 |
| | - | 16 | - | - | .6820 | .6960 | .6908 | .6851 | .6891 | .6932 | .6972 | .7013 |
| | - | - | 20 | - | .6960 | .7070 | .7037 | .6980 | .7013 | .7045 | .7078 | .7110 |
| | - | - | - | 28 | .7110 | .7200 | .7176 | .7129 | .7152 | .7175 | .7198 | .7222 |
| 13/16 | - | - | - | 32 | .7160 | .7240 | .7219 | .7175 | .7196 | .7216 | .7236 | .7256 |
| | - | - | - | 12 | .7220 | .7400 | .7329 | .7259 | .7313 | .7367 | .7421 | .7476 |
| | - | - | - | 16 | .7450 | .7590 | .7533 | .7476 | .7516 | .7557 | .7597 | .7638 |
| | - | - | 20 | - | .7580 | .7700 | .7662 | .7605 | .7638 | .7670 | .7703 | .7735 |
| | - | - | - | 28 | .7740 | .7820 | .7801 | .7754 | .7777 | .7800 | .7823 | .7847 |
| | - | - | - | 32 | .7790 | .7860 | .7844 | .7800 | .7821 | .7841 | .7861 | .7881 |
| 7/8 | 9 | - | - | - | .7550 | .7780 | .7681 | .7595 | .7668 | .7740 | .7812 | .7884 |
| | - | - | - | 12 | .7850 | .8030 | .7948 | .7884 | .7938 | .7992 | .8046 | .8101 |
| | - | 14 | - | - | .7980 | .8140 | .8068 | .8008 | .8054 | .8101 | .8147 | .8193 |
| | - | - | - | 16 | .8070 | .8210 | .8158 | .8101 | .8141 | .8182 | .8222 | .8263 |
| | - | - | 20 | - | .8210 | .8320 | .8287 | .8230 | .8263 | .8295 | .8328 | .8360 |
| | - | - | - | 28 | .8360 | .8450 | .8426 | .8379 | .8402 | .8425 | .8448 | .8472 |
| 15/16 | - | - | - | 32 | .8410 | .8490 | .8469 | .8425 | .8446 | .8466 | .8486 | .8506 |
| | - | - | - | 12 | .8470 | .8650 | .8575 | .8509 | .8563 | .8617 | .8671 | .8726 |
| | - | - | - | 16 | .8700 | .8840 | .8783 | .8726 | .8766 | .8807 | .8847 | .8888 |
| | - | - | 20 | - | .8830 | .8950 | .8912 | .8855 | .8888 | .8920 | .8953 | .8985 |
| | - | - | - | 28 | .8990 | .9070 | .9051 | .9004 | .9027 | .9050 | .9073 | .9097 |
| | - | - | - | 32 | .9040 | .9110 | .9094 | .9050 | .9071 | .9091 | .9111 | .9131 |
| 1 | 8 | - | - | - | .8650 | .8900 | .8797 | .8701 | .8782 | .8863 | .8945 | .9026 |
| | - | 12 | - | - | .9100 | .9280 | .9198 | .9134 | .9188 | .9242 | .9296 | .9351 |
| | - | - | - | 16 | .9320 | .9460 | .9408 | .9351 | .9391 | .9432 | .9472 | .9513 |
| | - | - | 20 | - | .9460 | .9570 | .9537 | .9480 | .9513 | .9545 | .9578 | .9610 |
| | - | - | - | 28 | .9610 | .9700 | .9676 | .9629 | .9652 | .9675 | .9698 | .9722 |
| | - | - | - | 32 | .9660 | .9740 | .9719 | .9675 | .9696 | .9716 | .9736 | .9756 |
| 1-1/16 | - | - | - | 8 | .9270 | .9520 | .9422 | .9326 | .9407 | .9488 | .9570 | .9651 |
| | - | - | - | 12 | .9720 | .9900 | .9823 | .9759 | .9813 | .9867 | .9921 | .9976 |
| | - | - | - | 16 | .9950 | 1.0090 | 1.0033 | .9976 | 1.0016 | 1.0057 | 1.0097 | 1.0138 |
| | - | - | 18 | - | 1.0020 | 1.0150 | 1.0105 | 1.0048 | 1.0084 | 1.0120 | 1.0156 | 1.0192 |
| | - | - | - | 20 | 1.0080 | 1.0200 | 1.0162 | 1.0105 | 1.0138 | 1.0170 | 1.0203 | 1.0235 |
| | - | - | - | 28 | 1.0240 | 1.0320 | 1.0301 | 1.0254 | 1.0277 | 1.0300 | 1.0323 | 1.0347 |
| 1-1/8 | 7 | - | - | - | .9700 | .9980 | .9875 | .9765 | .9858 | .9951 | 1.0044 | 1.0137 |
| | - | - | - | 8 | .9900 | 1.0150 | 1.0047 | .9951 | 1.0032 | 1.0113 | 1.0195 | 1.0276 |
| | - | 12 | - | - | 1.0350 | 1.0530 | 1.0448 | 1.0384 | 1.0438 | 1.0492 | 1.0546 | 1.0601 |
| | - | - | - | 16 | 1.0570 | 1.0710 | 1.0658 | 1.0601 | 1.0641 | 1.0682 | 1.0722 | 1.0763 |
| | - | - | 18 | - | 1.0650 | 1.0780 | 1.0730 | 1.0673 | 1.0709 | 1.0745 | 1.0781 | 1.0817 |
| | - | - | - | 20 | 1.0710 | 1.0820 | 1.0787 | 1.0730 | 1.0763 | 1.0795 | 1.0828 | 1.0860 |

| Size | Threads Per Inch | | | | Minor Diameter | | | Tap Drill Diameter (Cutting Tap) | | | | |
|---------|------------------|-----|------|--------|----------------|---------|---------|----------------------------------|------------|------------|------------|------------|
| | UNC | UNF | UNEF | UN | Min. 2B&3B | Max. 2B | Max. 3B | 80% Thread | 75% Thread | 70% Thread | 65% Thread | 60% Thread |
| 1-1/8 | - | - | - | 28 | 1.0860 | 1.0950 | 1.0926 | 1.0879 | 1.0902 | 1.0925 | 1.0948 | 1.0972 |
| 1-3/16 | - | - | - | 8 | 1.0520 | 1.0770 | 1.0672 | 1.0576 | 1.0657 | 1.0738 | 1.0820 | 1.0901 |
| | - | - | - | 12 | 1.0970 | 1.1150 | 1.1073 | 1.1009 | 1.1063 | 1.1117 | 1.1171 | 1.1226 |
| | - | - | - | 16 | 1.1200 | 1.1340 | 1.1283 | 1.1226 | 1.1266 | 1.1307 | 1.1347 | 1.1388 |
| | - | - | 18 | - | 1.1270 | 1.1400 | 1.1355 | 1.1298 | 1.1334 | 1.1370 | 1.1406 | 1.1442 |
| | - | - | - | 20 | 1.1330 | 1.1450 | 1.1412 | 1.1355 | 1.1388 | 1.1420 | 1.1453 | 1.1485 |
| | - | - | - | 28 | 1.1490 | 1.1570 | 1.1551 | 1.1504 | 1.1527 | 1.1550 | 1.1573 | 1.1597 |
| 1-1/4 | 7 | - | - | - | 1.0950 | 1.1230 | 1.1125 | 1.1015 | 1.1108 | 1.1201 | 1.1294 | 1.1387 |
| | - | - | - | 8 | 1.1150 | 1.1400 | 1.1297 | 1.1201 | 1.1282 | 1.1363 | 1.1445 | 1.1526 |
| | - | 12 | - | - | 1.1600 | 1.1780 | 1.1698 | 1.1634 | 1.1688 | 1.1742 | 1.1796 | 1.1851 |
| | - | - | - | 16 | 1.1820 | 1.1960 | 1.1908 | 1.1851 | 1.1891 | 1.1932 | 1.1972 | 1.2013 |
| | - | - | 18 | - | 1.1900 | 1.2030 | 1.1980 | 1.1923 | 1.1959 | 1.1995 | 1.2031 | 1.2067 |
| | - | - | - | 20 | 1.1960 | 1.2070 | 1.2037 | 1.1980 | 1.2013 | 1.2045 | 1.2078 | 1.2110 |
| 1-5/16 | - | - | - | 28 | 1.2110 | 1.2200 | 1.2176 | 1.2129 | 1.2152 | 1.2175 | 1.2198 | 1.2222 |
| | - | - | - | 8 | 1.1770 | 1.2020 | 1.2176 | 1.1826 | 1.1907 | 1.1988 | 1.2070 | 1.2151 |
| | - | - | - | 12 | 1.2220 | 1.2400 | 1.2323 | 1.2259 | 1.2313 | 1.2367 | 1.2421 | 1.2476 |
| | - | - | - | 16 | 1.2450 | 1.2590 | 1.2533 | 1.2476 | 1.2516 | 1.2557 | 1.2597 | 1.2638 |
| | - | - | 18 | - | 1.2520 | 1.2650 | 1.2605 | 1.2548 | 1.2584 | 1.2620 | 1.2656 | 1.2692 |
| | - | - | - | 20 | 1.2580 | 1.2700 | 1.2662 | 1.2605 | 1.2638 | 1.2670 | 1.2703 | 1.2735 |
| 1-3/8 | - | - | - | 28 | 1.2740 | 1.2820 | 1.2801 | 1.2754 | 1.2777 | 1.2800 | 1.2823 | 1.2847 |
| | 6 | - | - | - | 1.1950 | 1.2250 | 1.2146 | 1.2018 | 1.2126 | 1.2235 | 1.2343 | 1.2451 |
| | - | - | - | 8 | 1.2400 | 1.2650 | 1.2547 | 1.2451 | 1.2532 | 1.2613 | 1.2695 | 1.2776 |
| | - | 12 | - | - | 1.2850 | 1.3030 | 1.2948 | 1.2884 | 1.2938 | 1.2992 | 1.3046 | 1.3101 |
| | - | - | - | 16 | 1.3070 | 1.3210 | 1.3158 | 1.3101 | 1.3141 | 1.3182 | 1.3222 | 1.3263 |
| | - | - | 18 | - | 1.3150 | 1.3280 | 1.3230 | 1.3173 | 1.3209 | 1.3245 | 1.3281 | 1.3317 |
| 1-7/16 | - | - | - | 20 | 1.3210 | 1.3320 | 1.3287 | 1.3230 | 1.3263 | 1.3295 | 1.3328 | 1.3360 |
| | - | - | - | 28 | 1.3360 | 1.3450 | 1.3426 | 1.3379 | 1.3402 | 1.3425 | 1.3448 | 1.3472 |
| | - | - | - | 6 | 1.2570 | 1.2880 | 1.2770 | 1.2643 | 1.2751 | 1.2860 | 1.2968 | 1.3076 |
| | - | - | - | 8 | 1.3020 | 1.3270 | 1.3172 | 1.3076 | 1.3157 | 1.3238 | 1.3320 | 1.3401 |
| | - | - | - | 12 | 1.3470 | 1.3650 | 1.3573 | 1.3509 | 1.3563 | 1.3617 | 1.3671 | 1.3726 |
| | - | - | - | 16 | 1.3700 | 1.3840 | 1.3783 | 1.3726 | 1.3766 | 1.3807 | 1.3847 | 1.3888 |
| 1-1/2 | - | - | 18 | - | 1.3770 | 1.3900 | 1.3855 | 1.3798 | 1.3834 | 1.3870 | 1.3906 | 1.3942 |
| | - | - | - | 20 | 1.3830 | 1.3950 | 1.3912 | 1.3855 | 1.3888 | 1.3920 | 1.3953 | 1.3985 |
| | - | - | - | 28 | 1.3990 | 1.4070 | 1.4051 | 1.4004 | 1.4027 | 1.4050 | 1.4073 | 1.4097 |
| | 6 | - | - | - | 1.3200 | 1.3500 | 1.3396 | 1.3268 | 1.3376 | 1.3485 | 1.3593 | 1.3701 |
| | - | - | - | 8 | 1.3650 | 1.3900 | 1.3797 | 1.3701 | 1.3782 | 1.3863 | 1.3945 | 1.4026 |
| | - | 12 | - | - | 1.4100 | 1.4280 | 1.4198 | 1.4134 | 1.4188 | 1.4242 | 1.4296 | 1.4351 |
| 1-9/16 | - | - | - | 16 | 1.4320 | 1.4460 | 1.4408 | 1.4351 | 1.4391 | 1.4432 | 1.4472 | 1.4513 |
| | - | - | 18 | - | 1.4400 | 1.4520 | 1.4480 | 1.4423 | 1.4459 | 1.4495 | 1.4531 | 1.4567 |
| | - | - | - | 20 | 1.4460 | 1.4570 | 1.4537 | 1.4480 | 1.4513 | 1.4545 | 1.4578 | 1.4610 |
| | - | - | - | 28 | 1.4610 | 1.4700 | 1.4676 | 1.4629 | 1.4652 | 1.4675 | 1.4698 | 1.4722 |
| | - | - | - | 6 | 1.3820 | 1.4130 | 1.4021 | 1.3893 | 1.4001 | 1.4110 | 1.4218 | 1.4326 |
| | - | - | - | 8 | 1.4270 | 1.4520 | 1.4422 | 1.4326 | 1.4407 | 1.4488 | 1.4570 | 1.4651 |
| 1-5/8 | - | - | - | 12 | 1.4720 | 1.4900 | 1.4823 | 1.4759 | 1.4813 | 1.4867 | 1.4921 | 1.4976 |
| | - | - | - | 16 | 1.4950 | 1.5090 | 1.5033 | 1.4976 | 1.5016 | 1.5057 | 1.5097 | 1.5138 |
| | - | - | 18 | - | 1.5020 | 1.5150 | 1.5105 | 1.5048 | 1.5084 | 1.5120 | 1.5156 | 1.5192 |
| | - | - | - | 20 | 1.5080 | 1.5200 | 1.5162 | 1.5105 | 1.5138 | 1.5170 | 1.5203 | 1.5235 |
| | - | - | - | 6 | 1.4450 | 1.4750 | 1.4646 | 1.4518 | 1.4626 | 1.4735 | 1.4843 | 1.4951 |
| | - | - | - | 8 | 1.4900 | 1.5150 | 1.5047 | 1.4951 | 1.5032 | 1.5113 | 1.5195 | 1.5276 |
| 1-11/16 | - | - | - | 12 | 1.5350 | 1.5530 | 1.5448 | 1.5384 | 1.5438 | 1.5492 | 1.5546 | 1.5601 |
| | - | - | - | 16 | 1.5570 | 1.5710 | 1.5658 | 1.5601 | 1.5641 | 1.5682 | 1.5722 | 1.5763 |
| | - | - | 18 | - | 1.5650 | 1.5780 | 1.5730 | 1.5673 | 1.5709 | 1.5745 | 1.5781 | 1.5817 |
| | - | - | - | 20 | 1.5710 | 1.5820 | 1.5787 | 1.5730 | 1.5763 | 1.5795 | 1.5828 | 1.5860 |
| 1-11/16 | - | - | 6 | 1.5070 | 1.5380 | 1.5271 | 1.5143 | 1.5251 | 1.5360 | 1.5468 | 1.5576 | |



TECHNICAL DATA

THREAD MILLS

COMBO TAPS

SPIRAL FLUTE TAPS

SPIRAL POINT TAPS

STRAIGHT FLUTE TAPS

FORMING TAPS

SCREW THREAD INSERT TAPS

PIPE TAPS

TECHNICAL DATA

| Size | Threads Per Inch | | | | Minor Diameter | | | Tap Drill Diameter (Cutting Tap) | | | | |
|---------|------------------|-----|------|----|----------------|---------|---------|----------------------------------|------------|------------|------------|------------|
| | UNC | UNF | UNEF | UN | Min. 2B&3B | Max. 2B | Max. 3B | 80% Thread | 75% Thread | 70% Thread | 65% Thread | 60% Thread |
| 1-11/16 | - | - | - | 8 | 1.5520 | 1.5770 | 1.5672 | 1.5576 | 1.5657 | 1.5738 | 1.5820 | 1.5901 |
| | - | - | - | 12 | 1.5970 | 1.6150 | 1.6073 | 1.6009 | 1.6063 | 1.6117 | 1.6171 | 1.6226 |
| | - | - | - | 16 | 1.6200 | 1.6340 | 1.6283 | 1.6226 | 1.6266 | 1.6307 | 1.6347 | 1.6388 |
| | - | - | 18 | - | 1.6270 | 1.6400 | 1.6355 | 1.6298 | 1.6334 | 1.6370 | 1.6406 | 1.6442 |
| | - | - | - | 20 | 1.6330 | 1.6450 | 1.6412 | 1.6355 | 1.6388 | 1.6420 | 1.6453 | 1.6485 |
| 1-3/4 | 5 | - | - | - | 1.5340 | 1.5680 | 1.5575 | 1.5422 | 1.5552 | 1.5681 | 1.5811 | 1.5941 |
| | - | - | - | 6 | 1.5700 | 1.6000 | 1.5896 | 1.5768 | 1.5876 | 1.5985 | 1.6093 | 1.6201 |
| | - | - | - | 8 | 1.6150 | 1.6400 | 1.6297 | 1.6201 | 1.6282 | 1.6363 | 1.6445 | 1.6526 |
| | - | - | - | 12 | 1.6600 | 1.6780 | 1.6698 | 1.6634 | 1.6688 | 1.6742 | 1.6796 | 1.6851 |
| | - | - | - | 16 | 1.6820 | 1.6960 | 1.6908 | 1.6851 | 1.6891 | 1.6932 | 1.6972 | 1.7013 |
| 1-13/16 | - | - | - | 20 | 1.6960 | 1.7070 | 1.7037 | 1.6980 | 1.7013 | 1.7045 | 1.7078 | 1.7110 |
| | - | - | - | 6 | 1.6320 | 1.6630 | 1.6521 | 1.6393 | 1.6501 | 1.6610 | 1.6718 | 1.6826 |
| | - | - | - | 8 | 1.6770 | 1.7020 | 1.6922 | 1.6826 | 1.6907 | 1.6988 | 1.7070 | 1.7151 |
| | - | - | - | 12 | 1.7220 | 1.7400 | 1.7323 | 1.7259 | 1.7313 | 1.7367 | 1.7421 | 1.7476 |
| | - | - | - | 16 | 1.7450 | 1.7590 | 1.7533 | 1.7476 | 1.7516 | 1.7557 | 1.7597 | 1.7638 |
| 1-7/8 | - | - | - | 20 | 1.7580 | 1.7700 | 1.7662 | 1.7605 | 1.7638 | 1.7670 | 1.7703 | 1.7735 |
| | - | - | - | 6 | 1.6950 | 1.7250 | 1.7146 | 1.7018 | 1.7126 | 1.7235 | 1.7343 | 1.7451 |
| | - | - | - | 8 | 1.7400 | 1.7650 | 1.7547 | 1.7451 | 1.7532 | 1.7613 | 1.7695 | 1.7776 |
| | - | - | - | 12 | 1.7850 | 1.8030 | 1.7948 | 1.7884 | 1.7938 | 1.7992 | 1.8046 | 1.8101 |
| | - | - | - | 16 | 1.8070 | 1.8210 | 1.8158 | 1.8101 | 1.8141 | 1.8182 | 1.8222 | 1.8263 |
| 1-15/16 | - | - | - | 20 | 1.8210 | 1.8320 | 1.8287 | 1.8230 | 1.8263 | 1.8295 | 1.8328 | 1.8360 |
| | - | - | - | 6 | 1.7570 | 1.7880 | 1.7771 | 1.7643 | 1.7751 | 1.7860 | 1.7968 | 1.8076 |
| | - | - | - | 8 | 1.8020 | 1.8270 | 1.8172 | 1.8076 | 1.8157 | 1.8238 | 1.8320 | 1.8401 |
| | - | - | - | 12 | 1.8470 | 1.8650 | 1.8573 | 1.8509 | 1.8563 | 1.8617 | 1.8671 | 1.8726 |
| | - | - | - | 16 | 1.8700 | 1.8840 | 1.8783 | 1.8726 | 1.8766 | 1.8807 | 1.8847 | 1.8888 |
| 2 | - | - | - | 20 | 1.8830 | 1.8950 | 1.8912 | 1.8855 | 1.8888 | 1.8920 | 1.8953 | 1.8985 |
| | 4 1/2 | - | - | - | 1.7590 | 1.7950 | 1.7861 | 1.7691 | 1.7835 | 1.7979 | 1.8124 | 1.8268 |
| | - | - | - | 6 | 1.8200 | 1.8500 | 1.8396 | 1.8268 | 1.8376 | 1.8485 | 1.8593 | 1.8701 |
| | - | - | - | 8 | 1.8650 | 1.8900 | 1.8797 | 1.8701 | 1.8782 | 1.8863 | 1.8945 | 1.9026 |
| | - | - | - | 12 | 1.9100 | 1.9280 | 1.9198 | 1.9134 | 1.9188 | 1.9242 | 1.9296 | 1.9351 |
| 2-1/8 | - | - | - | 16 | 1.9320 | 1.9460 | 1.9408 | 1.9351 | 1.9391 | 1.9432 | 1.9472 | 1.9513 |
| | - | - | - | 20 | 1.9460 | 1.9570 | 1.9537 | 1.9480 | 1.9513 | 1.9545 | 1.9578 | 1.9610 |
| | - | - | - | 6 | 1.9450 | 1.9750 | 1.9646 | 1.9518 | 1.9626 | 1.9735 | 1.9843 | 1.9951 |
| | - | - | - | 8 | 1.9900 | 2.0150 | 2.0047 | 1.9951 | 2.0032 | 2.0113 | 2.0195 | 2.0276 |
| | - | - | - | 12 | 2.0350 | 2.0530 | 2.0448 | 2.0384 | 2.0438 | 2.0492 | 2.0546 | 2.0601 |
| 2-1/4 | - | - | - | 16 | 2.0570 | 2.0710 | 2.0658 | 2.0601 | 2.0641 | 2.0682 | 2.0722 | 2.0763 |
| | - | - | - | 20 | 2.0710 | 2.0820 | 2.0787 | 2.0730 | 2.0763 | 2.0795 | 2.0828 | 2.0860 |
| | 4 1/2 | - | - | - | 2.0090 | 2.0450 | 2.0361 | 2.0191 | 2.0335 | 2.0479 | 2.0624 | 2.0768 |
| | - | - | - | 6 | 2.0700 | 2.1000 | 2.0896 | 2.0768 | 2.0876 | 2.0985 | 2.1093 | 2.1201 |
| | - | - | - | 8 | 2.1150 | 2.1400 | 2.1297 | 2.1201 | 2.1282 | 2.1363 | 2.1445 | 2.1526 |
| 2-3/8 | - | - | - | 12 | 2.1600 | 2.1780 | 2.1698 | 2.1634 | 2.1688 | 2.1742 | 2.1796 | 2.1851 |
| | - | - | - | 16 | 2.1820 | 2.1960 | 2.1908 | 2.1851 | 2.1891 | 2.1932 | 2.1972 | 2.2013 |
| | - | - | - | 20 | 2.1960 | 2.2070 | 2.2037 | 2.1980 | 2.2013 | 2.2045 | 2.2078 | 2.2110 |
| | - | - | - | 6 | 2.1950 | 2.2260 | 2.2146 | 2.2018 | 2.2126 | 2.2235 | 2.2343 | 2.2451 |
| | - | - | - | 8 | 2.2400 | 2.2650 | 2.2547 | 2.2451 | 2.2532 | 2.2613 | 2.2695 | 2.2776 |
| 2-1/2 | - | - | - | 12 | 2.2850 | 2.3030 | 2.2948 | 2.2884 | 2.2938 | 2.2992 | 2.3046 | 2.3101 |
| | - | - | - | 16 | 2.3070 | 2.3210 | 2.3158 | 2.3101 | 2.3141 | 2.3182 | 2.3222 | 2.3263 |
| | - | - | - | 20 | 2.3210 | 2.3320 | 2.3287 | 2.3230 | 2.3263 | 2.3295 | 2.3328 | 2.3360 |
| | 4 | - | - | - | 2.2290 | 2.2670 | 2.2594 | 2.2402 | 2.2564 | 2.2727 | 2.2889 | 2.3052 |
| | - | - | - | 6 | 2.3200 | 2.3500 | 2.3396 | 2.3268 | 2.3376 | 2.3485 | 2.3593 | 2.3701 |
| 2-1/2 | - | - | - | 8 | 2.3650 | 2.3900 | 2.3797 | 2.3701 | 2.3782 | 2.3863 | 2.3945 | 2.4026 |
| | - | - | - | 12 | 2.4100 | 2.4280 | 2.4198 | 2.4134 | 2.4188 | 2.4242 | 2.4296 | 2.4351 |
| | - | - | - | 16 | 2.4320 | 2.4460 | 2.4408 | 2.4351 | 2.4391 | 2.4432 | 2.4472 | 2.4513 |
| | - | - | - | 20 | 2.4460 | 2.4570 | 2.4537 | 2.4480 | 2.4513 | 2.4545 | 2.4578 | 2.4610 |

16 TAP DRILL SIZES - METRIC THREAD

| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|------|------------|---------|--------------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|
| | M | MF | Min. 6H | Max. 6H | 80% Thread | | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M1 | 0.25 | - | .729 | .798 | 0.74 | .0291 | 0.76 | .0298 | 0.77 | .0304 | 0.79 | .0311 | 0.81 | .0317 |
| | - | 0.2 | .783 | .841 | 0.79 | .0312 | 0.81 | .0317 | 0.82 | .0322 | 0.83 | .0327 | 0.84 | .0332 |
| M1.1 | 0.25 | - | .829 | .898 | 0.84 | .0331 | 0.86 | .0337 | 0.87 | .0344 | 0.89 | .0350 | 0.91 | .0356 |
| | - | 0.2 | .883 | .941 | 0.89 | .0351 | 0.91 | .0356 | 0.92 | .0361 | 0.93 | .0367 | 0.94 | .0372 |
| M1.2 | 0.25 | - | .929 | .998 | 0.94 | .0370 | 0.96 | .0377 | 0.97 | .0383 | 0.99 | .0389 | 1.01 | .0396 |
| | - | 0.2 | .983 | 1.041 | 0.99 | .0391 | 1.01 | .0396 | 1.02 | .0401 | 1.03 | .0406 | 1.04 | .0411 |
| M1.4 | 0.3 | - | 1.075 | 1.159 | 1.09 | .0428 | 1.11 | .0436 | 1.13 | .0444 | 1.15 | .0451 | 1.17 | .0459 |
| | - | 0.2 | 1.183 | 1.241 | 1.19 | .0469 | 1.21 | .0474 | 1.22 | .0480 | 1.23 | .0485 | 1.24 | .0490 |
| M1.6 | 0.35 | - | 1.221 | 1.321 | 1.24 | .0487 | 1.26 | .0496 | 1.28 | .0505 | 1.30 | .0514 | 1.33 | .0523 |
| | - | 0.2 | 1.383 | 1.441 | 1.39 | .0548 | 1.41 | .0553 | 1.42 | .0558 | 1.43 | .0563 | 1.44 | .0569 |
| M1.7 | 0.35 | - | 1.321 | 1.421 | 1.34 | .0526 | 1.36 | .0535 | 1.38 | .0544 | 1.40 | .0553 | 1.43 | .0562 |
| | - | 0.3 | 1.375 | 1.459 | 1.39 | .0547 | 1.41 | .0554 | 1.43 | .0562 | 1.45 | .0570 | 1.47 | .0577 |
| | - | 0.25 | 1.429 | 1.498 | 1.44 | .0567 | 1.46 | .0573 | 1.47 | .0580 | 1.49 | .0586 | 1.51 | .0593 |
| | - | 0.2 | 1.483 | 1.541 | 1.49 | .0587 | 1.51 | .0593 | 1.52 | .0598 | 1.53 | .0603 | 1.54 | .0608 |
| M1.8 | 0.35 | - | 1.421 | 1.521 | 1.44 | .0565 | 1.46 | .0574 | 1.48 | .0583 | 1.50 | .0592 | 1.53 | .0601 |
| | - | 0.2 | 1.583 | 1.641 | 1.59 | .0627 | 1.61 | .0632 | 1.62 | .0637 | 1.63 | .0642 | 1.64 | .0647 |
| M2 | 0.4 | - | 1.567 | 1.679 | 1.58 | .0624 | 1.61 | .0634 | 1.64 | .0644 | 1.66 | .0654 | 1.69 | .0665 |
| | - | 0.25 | 1.729 | 1.798 | 1.74 | .0685 | 1.76 | .0692 | 1.77 | .0698 | 1.79 | .0704 | 1.81 | .0711 |
| M2.2 | 0.45 | - | 1.713 | 1.838 | 1.73 | .0682 | 1.76 | .0694 | 1.79 | .0705 | 1.82 | .0717 | 1.85 | .0728 |
| | - | 0.25 | 1.929 | 1.998 | 1.94 | .0764 | 1.96 | .0770 | 1.97 | .0777 | 1.99 | .0783 | 2.01 | .0789 |
| M2.3 | 0.4 | - | 1.867 | 1.979 | 1.88 | .0742 | 1.91 | .0752 | 1.94 | .0762 | 1.96 | .0773 | 1.99 | .0783 |
| | - | 0.35 | 1.921 | 2.021 | 1.94 | .0762 | 1.96 | .0771 | 1.98 | .0780 | 2.00 | .0789 | 2.03 | .0798 |
| M2.5 | 0.45 | - | 2.013 | 2.138 | 2.03 | .0800 | 2.06 | .0812 | 2.09 | .0823 | 2.12 | .0835 | 2.15 | .0846 |
| | - | 0.35 | 2.121 | 2.221 | 2.14 | .0841 | 2.16 | .0850 | 2.18 | .0859 | 2.20 | .0868 | 2.23 | .0877 |
| M2.6 | 0.45 | - | 2.113 | 2.238 | 2.13 | .0840 | 2.16 | .0851 | 2.19 | .0863 | 2.22 | .0874 | 2.25 | .0886 |
| | - | 0.35 | 2.221 | 2.321 | 2.24 | .0880 | 2.26 | .0889 | 2.28 | .0898 | 2.30 | .0907 | 2.33 | .0916 |
| M3 | 0.5 | - | 2.459 | 2.599 | 2.48 | .0977 | 2.51 | .0989 | 2.55 | .1002 | 2.58 | .1015 | 2.61 | .1028 |
| | - | 0.35 | 2.621 | 2.721 | 2.64 | .1038 | 2.66 | .1047 | 2.68 | .1056 | 2.70 | .1065 | 2.73 | .1074 |
| M3.5 | 0.6 | - | 2.850 | 3.010 | 2.88 | .1132 | 2.92 | .1148 | 2.95 | .1163 | 2.99 | .1178 | 3.03 | .1194 |
| | - | 0.35 | 3.121 | 3.221 | 3.14 | .1235 | 3.16 | .1244 | 3.18 | .1253 | 3.20 | .1262 | 3.23 | .1271 |
| M4 | 0.7 | - | 3.242 | 3.422 | 3.27 | .1288 | 3.32 | .1306 | 3.36 | .1324 | 3.41 | .1342 | 3.45 | .1360 |
| | - | 0.5 | 3.459 | 3.599 | 3.48 | .1370 | 3.51 | .1383 | 3.55 | .1396 | 3.58 | .1409 | 3.61 | .1421 |
| M4.5 | 0.75 | - | 3.688 | 3.878 | 3.72 | .1465 | 3.77 | .1484 | 3.82 | .1503 | 3.87 | .1522 | 3.92 | .1542 |
| | - | 0.5 | 3.959 | 4.099 | 3.98 | .1567 | 4.01 | .1580 | 4.05 | .1593 | 4.08 | .1605 | 4.11 | .1618 |
| M5 | 0.9 | - | 4.026 | 4.226 | 4.06 | .1600 | 4.12 | .1623 | 4.18 | .1646 | 4.24 | .1669 | 4.30 | .1692 |
| | 0.8 | - | 4.134 | 4.334 | 4.17 | .1641 | 4.22 | .1662 | 4.27 | .1682 | 4.32 | .1703 | 4.38 | .1723 |
| M5.5 | - | 0.5 | 4.459 | 4.599 | 4.48 | .1764 | 4.51 | .1777 | 4.55 | .1790 | 4.58 | .1802 | 4.61 | .1815 |
| | - | 0.9 | 4.526 | 4.726 | 4.56 | .1797 | 4.62 | .1820 | 4.68 | .1843 | 4.74 | .1866 | 4.80 | .1889 |
| | - | 0.75 | 4.688 | 4.878 | 4.72 | .1858 | 4.77 | .1878 | 4.82 | .1897 | 4.87 | .1916 | 4.92 | .1935 |
| | - | 0.5 | 4.959 | 5.099 | 4.98 | .1961 | 5.01 | .1974 | 5.05 | .1986 | 5.08 | .1999 | 5.11 | .2012 |
| M6 | 1 | - | 4.917 | 5.153 | 4.96 | .1953 | 5.03 | .1979 | 5.09 | .2004 | 5.16 | .2030 | 5.22 | .2055 |
| | - | 0.75 | 5.188 | 5.378 | 5.22 | .2055 | 5.27 | .2075 | 5.32 | .2094 | 5.37 | .2113 | 5.42 | .2132 |
| | - | 0.5 | 5.459 | 5.599 | 5.48 | .2158 | 5.51 | .2170 | 5.55 | .2183 | 5.58 | .2196 | 5.61 | .2209 |
| M7 | 1 | - | 5.917 | 6.153 | 5.96 | .2347 | 6.03 | .2372 | 6.09 | .2398 | 6.16 | .2423 | 6.22 | .2449 |
| | - | 0.75 | 6.188 | 6.378 | 6.22 | .2449 | 6.27 | .2468 | 6.32 | .2487 | 6.37 | .2507 | 6.42 | .2526 |
| | - | 0.5 | 6.459 | 6.599 | 6.48 | .2551 | 6.51 | .2564 | 6.55 | .2577 | 6.58 | .2590 | 6.61 | .2602 |
| M8 | 1.25 | - | 6.647 | 6.912 | 6.70 | .2638 | 6.78 | .2670 | 6.86 | .2702 | 6.94 | .2734 | 7.03 | .2766 |
| | - | 1 | 6.917 | 7.153 | 6.96 | .2740 | 7.03 | .2766 | 7.09 | .2792 | 7.16 | .2817 | 7.22 | .2843 |
| | - | 0.75 | 7.188 | 7.378 | 7.22 | .2843 | 7.27 | .2862 | 7.32 | .2881 | 7.37 | .2900 | 7.42 | .2919 |
| | - | 0.5 | 7.459 | 7.599 | 7.48 | .2945 | 7.51 | .2958 | 7.55 | .2971 | 7.58 | .2983 | 7.61 | .2996 |



TECHNICAL DATA

THREAD MILLS

COMBO TAPS

SPIRAL FLUTE TAPS

SPIRAL POINT TAPS

STRAIGHT FLUTE TAPS

FORMING TAPS

SCREW THREAD INSERT TAPS

PIPE TAPS

TECHNICAL DATA

| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|------|------------|---------|--------------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|
| | M | MF | Min. 6H | Max. 6H | 80% Thread | | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M9 | 1.25 | - | 7.647 | 7.912 | 7.70 | .3032 | 7.78 | .3064 | 7.86 | .3096 | 7.94 | .3128 | 8.03 | .3160 |
| | - | 1 | 7.917 | 8.153 | 7.96 | .3134 | 8.03 | .3160 | 8.09 | .3185 | 8.16 | .3211 | 8.22 | .3236 |
| | - | 0.75 | 8.188 | 8.378 | 8.22 | .3236 | 8.27 | .3256 | 8.32 | .3275 | 8.37 | .3294 | 8.42 | .3313 |
| | - | 0.5 | 8.459 | 8.599 | 8.48 | .3339 | 8.51 | .3352 | 8.55 | .3364 | 8.58 | .3377 | 8.61 | .3390 |
| M10 | 1.5 | - | 8.376 | 8.676 | 8.44 | .3323 | 8.54 | .3362 | 8.64 | .3400 | 8.73 | .3438 | 8.83 | .3477 |
| | - | 1.25 | 8.647 | 8.912 | 8.70 | .3426 | 8.78 | .3458 | 8.86 | .3490 | 8.94 | .3521 | 9.03 | .3553 |
| | - | 1 | 8.917 | 9.153 | 8.96 | .3528 | 9.03 | .3553 | 9.09 | .3579 | 9.16 | .3605 | 9.22 | .3630 |
| | - | 0.75 | 9.188 | 9.378 | 9.22 | .3630 | 9.27 | .3649 | 9.32 | .3669 | 9.37 | .3688 | 9.42 | .3707 |
| M11 | - | 0.5 | 9.459 | 9.599 | 9.48 | .3732 | 9.51 | .3745 | 9.55 | .3758 | 9.58 | .3771 | 9.61 | .3784 |
| | 1.5 | - | 9.376 | 9.676 | 9.44 | .3717 | 9.54 | .3755 | 9.64 | .3794 | 9.73 | .3832 | 9.83 | .3870 |
| | - | 1 | 9.917 | 10.153 | 9.96 | .3922 | 10.03 | .3947 | 10.09 | .3973 | 10.16 | .3998 | 10.22 | .4024 |
| | - | 0.75 | 10.188 | 10.378 | 10.22 | .4024 | 10.27 | .4043 | 10.32 | .4062 | 10.37 | .4081 | 10.42 | .4101 |
| M12 | - | 0.5 | 10.459 | 10.599 | 10.48 | .4126 | 10.51 | .4139 | 10.55 | .4152 | 10.58 | .4164 | 10.61 | .4177 |
| | 1.75 | - | 10.106 | 10.441 | 10.18 | .4008 | 10.30 | .4053 | 10.41 | .4098 | 10.52 | .4143 | 10.64 | .4187 |
| | - | 1.5 | 10.376 | 10.676 | 10.44 | .4111 | 10.54 | .4149 | 10.64 | .4187 | 10.73 | .4226 | 10.83 | .4264 |
| | - | 1.25 | 10.647 | 10.912 | 10.70 | .4213 | 10.78 | .4245 | 10.86 | .4277 | 10.94 | .4309 | 11.03 | .4341 |
| M13 | - | 1 | 10.917 | 11.153 | 10.96 | .4315 | 11.03 | .4341 | 11.09 | .4366 | 11.16 | .4392 | 11.22 | .4418 |
| | - | 0.75 | 11.188 | 11.378 | 11.22 | .4418 | 11.27 | .4437 | 11.32 | .4456 | 11.37 | .4475 | 11.42 | .4494 |
| | - | 0.5 | 11.459 | 11.599 | 11.48 | .4520 | 11.51 | .4533 | 11.55 | .4545 | 11.58 | .4558 | 11.61 | .4571 |
| | - | 1.75 | 11.106 | 11.441 | 11.18 | .4402 | 11.30 | .4447 | 11.41 | .4492 | 11.52 | .4536 | 11.64 | .4581 |
| M14 | - | 1.5 | 11.376 | 11.676 | 11.44 | .4504 | 11.54 | .4543 | 11.64 | .4581 | 11.73 | .4619 | 11.83 | .4658 |
| | - | 1.25 | 11.647 | 11.912 | 11.70 | .4607 | 11.78 | .4639 | 11.86 | .4671 | 11.94 | .4703 | 12.03 | .4735 |
| | - | 1 | 11.917 | 12.153 | 11.96 | .4709 | 12.03 | .4735 | 12.09 | .4760 | 12.16 | .4786 | 12.22 | .4811 |
| | - | 0.75 | 12.188 | 12.378 | 12.22 | .4811 | 12.27 | .4830 | 12.32 | .4850 | 12.37 | .4869 | 12.42 | .4888 |
| M15 | - | 0.5 | 12.459 | 12.599 | 12.48 | .4914 | 12.51 | .4926 | 12.55 | .4939 | 12.58 | .4952 | 12.61 | .4965 |
| | 2 | - | 11.835 | 12.210 | 11.92 | .4694 | 12.05 | .4745 | 12.18 | .4796 | 12.31 | .4847 | 12.44 | .4898 |
| | - | 1.5 | 12.376 | 12.676 | 12.44 | .4898 | 12.54 | .4936 | 12.64 | .4975 | 12.73 | .5013 | 12.83 | .5052 |
| | - | 1.25 | 12.647 | 12.912 | 12.70 | .5000 | 12.78 | .5032 | 12.86 | .5064 | 12.94 | .5096 | 13.03 | .5128 |
| M16 | - | 1 | 12.917 | 13.153 | 12.96 | .5103 | 13.03 | .5128 | 13.09 | .5154 | 13.16 | .5179 | 13.22 | .5205 |
| | - | 0.75 | 13.188 | 13.378 | 13.22 | .5205 | 13.27 | .5224 | 13.32 | .5243 | 13.37 | .5262 | 13.42 | .5282 |
| | - | 0.5 | 13.459 | 13.599 | 13.48 | .5307 | 13.51 | .5320 | 13.55 | .5333 | 13.58 | .5346 | 13.61 | .5358 |
| | - | 2 | 12.835 | 13.210 | 12.92 | .5087 | 13.05 | .5138 | 13.18 | .5190 | 13.31 | .5241 | 13.44 | .5292 |
| M17 | - | 1.5 | 13.376 | 13.676 | 13.44 | .5292 | 13.54 | .5330 | 13.64 | .5369 | 13.73 | .5407 | 13.83 | .5445 |
| | - | 1.25 | 13.647 | 13.912 | 13.70 | .5394 | 13.78 | .5426 | 13.86 | .5458 | 13.94 | .5490 | 14.03 | .5522 |
| | - | 1 | 13.917 | 14.153 | 13.96 | .5496 | 14.03 | .5522 | 14.09 | .5548 | 14.16 | .5573 | 14.22 | .5599 |
| | - | 0.75 | 14.188 | 14.378 | 14.22 | .5599 | 14.27 | .5618 | 14.32 | .5637 | 14.37 | .5656 | 14.42 | .5675 |
| M18 | - | 0.5 | 14.459 | 14.599 | 14.48 | .5701 | 14.51 | .5714 | 14.55 | .5727 | 14.58 | .5739 | 14.61 | .5752 |
| | 2 | - | 13.835 | 14.210 | 13.92 | .5481 | 14.05 | .5532 | 14.18 | .5583 | 14.31 | .5634 | 14.44 | .5685 |
| | - | 1.5 | 14.376 | 14.676 | 14.44 | .5685 | 14.54 | .5724 | 14.64 | .5762 | 14.73 | .5801 | 14.83 | .5839 |
| | - | 1 | 14.917 | 15.153 | 14.96 | .5890 | 15.03 | .5916 | 15.09 | .5941 | 15.16 | .5967 | 15.22 | .5992 |
| M19 | - | 2 | 14.835 | 15.210 | 14.92 | .5875 | 15.05 | .5926 | 15.18 | .5977 | 15.31 | .6028 | 15.44 | .6079 |
| | - | 1.5 | 15.376 | 15.676 | 15.44 | .6079 | 15.54 | .6118 | 15.64 | .6156 | 15.73 | .6194 | 15.83 | .6233 |
| | - | 1.25 | 15.647 | 15.912 | 15.70 | .6181 | 15.78 | .6213 | 15.86 | .6245 | 15.94 | .6277 | 16.03 | .6309 |
| | - | 1 | 15.917 | 16.153 | 15.96 | .6284 | 16.03 | .6309 | 16.09 | .6335 | 16.16 | .6360 | 16.22 | .6386 |
| M20 | - | 0.75 | 16.188 | 16.378 | 16.22 | .6386 | 16.27 | .6405 | 16.32 | .6424 | 16.37 | .6444 | 16.42 | .6463 |
| | - | 0.5 | 16.459 | 16.599 | 16.48 | .6488 | 16.51 | .6501 | 16.55 | .6514 | 16.58 | .6527 | 16.61 | .6539 |
| | 2.5 | - | 15.294 | 15.744 | 15.40 | .6064 | 15.56 | .6128 | 15.73 | .6192 | 15.89 | .6256 | 16.05 | .6319 |
| | - | 2 | 15.835 | 16.210 | 15.92 | .6268 | 16.05 | .6319 | 16.18 | .6371 | 16.31 | .6422 | 16.44 | .6473 |
| M21 | - | 1.5 | 16.376 | 16.676 | 16.44 | .6473 | 16.54 | .6511 | 16.64 | .6550 | 16.73 | .6588 | 16.83 | .6626 |
| | - | 1 | 16.917 | 17.153 | 16.96 | .6677 | 17.03 | .6703 | 17.09 | .6729 | 17.16 | .6754 | 17.22 | .6780 |
| | - | 2.5 | 16.294 | 16.744 | 16.40 | .6457 | 16.56 | .6521 | 16.73 | .6585 | 16.89 | .6649 | 17.05 | .6713 |
| | - | 2 | 16.835 | 17.210 | 16.92 | .6662 | 17.05 | .6713 | 17.18 | .6764 | 17.31 | .6815 | 17.44 | .6867 |

| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|------|------------|---------|--------------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | M | MF | Min. 6H | Max. 6H | 80% Thread | | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M19 | - | 1.5 | 17.376 | 17.676 | 17.44 | .6867 | 17.54 | .6905 | 17.64 | .6943 | 17.73 | .6982 | 17.83 | .7020 |
| | - | 1.25 | 17.647 | 17.912 | 17.70 | .6969 | 17.78 | .7001 | 17.86 | .7033 | 17.94 | .7065 | 18.03 | .7097 |
| | - | 1 | 17.917 | 18.153 | 17.96 | .7071 | 18.03 | .7097 | 18.09 | .7122 | 18.16 | .7148 | 18.22 | .7173 |
| | - | 0.75 | 18.188 | 18.378 | 18.22 | .7173 | 18.27 | .7193 | 18.32 | .7212 | 18.37 | .7231 | 18.42 | .7250 |
| | - | 0.5 | 18.459 | 18.599 | 18.48 | .7276 | 18.51 | .7289 | 18.55 | .7301 | 18.58 | .7314 | 18.61 | .7327 |
| M20 | 2.5 | - | 17.294 | 17.744 | 17.40 | .6851 | 17.56 | .6915 | 17.73 | .6979 | 17.89 | .7043 | 18.05 | .7107 |
| | - | 2 | 17.835 | 18.210 | 17.92 | .7056 | 18.05 | .7107 | 18.18 | .7158 | 18.31 | .7209 | 18.44 | .7260 |
| | - | 1.5 | 18.376 | 18.676 | 18.44 | .7260 | 18.54 | .7299 | 18.64 | .7337 | 18.73 | .7375 | 18.83 | .7414 |
| | - | 1 | 18.917 | 19.153 | 18.96 | .7465 | 19.03 | .7490 | 19.09 | .7516 | 19.16 | .7542 | 19.22 | .7567 |
| M21 | - | 2.5 | 18.294 | 18.744 | 18.40 | .7245 | 18.56 | .7309 | 18.73 | .7373 | 18.89 | .7437 | 19.05 | .7501 |
| | - | 1.5 | 19.376 | 19.676 | 19.44 | .7654 | 19.54 | .7692 | 19.64 | .7731 | 19.73 | .7769 | 19.83 | .7807 |
| | - | 1 | 19.917 | 20.153 | 19.96 | .7859 | 20.03 | .7884 | 20.09 | .7910 | 20.16 | .7935 | 20.22 | .7961 |
| M22 | 2.5 | - | 19.294 | 19.744 | 19.40 | .7639 | 19.56 | .7702 | 19.73 | .7766 | 19.89 | .7830 | 20.05 | .7894 |
| | - | 2 | 19.835 | 20.210 | 19.92 | .7843 | 20.05 | .7894 | 20.18 | .7945 | 20.31 | .7997 | 20.44 | .8048 |
| | - | 1.5 | 20.376 | 20.676 | 20.44 | .8048 | 20.54 | .8086 | 20.64 | .8124 | 20.73 | .8163 | 20.83 | .8201 |
| M23 | - | 1 | 20.917 | 21.153 | 20.96 | .8252 | 21.03 | .8278 | 21.09 | .8303 | 21.16 | .8329 | 21.22 | .8355 |
| | - | 2.5 | 20.294 | 20.744 | 20.40 | .8032 | 20.56 | .8096 | 20.73 | .8160 | 20.89 | .8224 | 21.05 | .8288 |
| | - | 2 | 20.835 | 21.210 | 20.92 | .8237 | 21.05 | .8288 | 21.18 | .8339 | 21.31 | .8390 | 21.44 | .8441 |
| | - | 1.5 | 21.376 | 21.676 | 21.44 | .8441 | 21.54 | .8480 | 21.64 | .8518 | 21.73 | .8556 | 21.83 | .8595 |
| M24 | - | 1 | 21.917 | 22.153 | 21.96 | .8646 | 22.03 | .8672 | 22.09 | .8697 | 22.16 | .8723 | 22.22 | .8748 |
| | 3 | - | 20.752 | 21.252 | 20.88 | .8221 | 21.08 | .8298 | 21.27 | .8375 | 21.47 | .8452 | 21.66 | .8528 |
| | - | 2 | 21.835 | 22.210 | 21.92 | .8631 | 22.05 | .8682 | 22.18 | .8733 | 22.31 | .8784 | 22.44 | .8835 |
| | - | 1.5 | 22.376 | 22.676 | 22.44 | .8835 | 22.54 | .8873 | 22.64 | .8912 | 22.73 | .8950 | 22.83 | .8989 |
| M25 | - | 1 | 22.917 | 23.153 | 22.96 | .9040 | 23.03 | .9065 | 23.09 | .9091 | 23.16 | .9116 | 23.22 | .9142 |
| | - | 3 | 21.752 | 22.252 | 21.88 | .8615 | 22.08 | .8692 | 22.27 | .8769 | 22.47 | .8845 | 22.66 | .8922 |
| | - | 2 | 22.835 | 23.210 | 22.92 | .9024 | 23.05 | .9075 | 23.18 | .9127 | 23.31 | .9178 | 23.44 | .9229 |
| | - | 1.5 | 23.376 | 23.676 | 23.44 | .9229 | 23.54 | .9267 | 23.64 | .9306 | 23.73 | .9344 | 23.83 | .9382 |
| M26 | - | 1 | 23.917 | 24.153 | 23.96 | .9433 | 24.03 | .9459 | 24.09 | .9485 | 24.16 | .9510 | 24.22 | .9536 |
| | - | 3 | 22.752 | 23.252 | 22.88 | .9009 | 23.08 | .9085 | 23.27 | .9162 | 23.47 | .9239 | 23.66 | .9316 |
| | - | 2 | 23.835 | 24.210 | 23.92 | .9418 | 24.05 | .9469 | 24.18 | .9520 | 24.31 | .9571 | 24.44 | .9623 |
| | - | 1.5 | 24.376 | 24.676 | 24.44 | .9623 | 24.54 | .9661 | 24.64 | .9699 | 24.73 | .9738 | 24.83 | .9776 |
| M27 | 3 | - | 23.752 | 24.252 | 23.88 | .9402 | 24.08 | .9479 | 24.27 | .9556 | 24.47 | .9633 | 24.66 | .9709 |
| | - | 2.5 | 24.294 | 24.744 | 24.40 | .9607 | 24.56 | .9671 | 24.73 | .9735 | 24.89 | .9799 | 25.05 | .9863 |
| | - | 2 | 24.835 | 25.210 | 24.92 | .9812 | 25.05 | .9863 | 25.18 | .9914 | 25.31 | .9965 | 25.44 | 1.0016 |
| | - | 1.5 | 25.376 | 25.676 | 25.44 | 1.0016 | 25.54 | 1.0055 | 25.64 | 1.0093 | 25.73 | 1.0131 | 25.83 | 1.0170 |
| M28 | - | 1 | 25.917 | 26.153 | 25.96 | 1.0221 | 26.03 | 1.0246 | 26.09 | 1.0272 | 26.16 | 1.0297 | 26.22 | 1.0323 |
| | - | 3 | 24.752 | 25.252 | 24.88 | .9796 | 25.08 | .9873 | 25.27 | .9950 | 25.47 | 1.0026 | 25.66 | 1.0103 |
| | - | 2 | 25.835 | 26.210 | 25.92 | 1.0205 | 26.05 | 1.0256 | 26.18 | 1.0308 | 26.31 | 1.0359 | 26.44 | 1.0410 |
| | - | 1.5 | 26.376 | 26.676 | 26.44 | 1.0410 | 26.54 | 1.0448 | 26.64 | 1.0487 | 26.73 | 1.0525 | 26.83 | 1.0563 |
| M30 | - | 1 | 26.917 | 27.153 | 26.96 | 1.0614 | 27.03 | 1.0640 | 27.09 | 1.0666 | 27.16 | 1.0691 | 27.22 | 1.0717 |
| | 3.5 | - | 26.211 | 26.771 | 26.36 | 1.0379 | 26.59 | 1.0469 | 26.82 | 1.0558 | 27.04 | 1.0648 | 27.27 | 1.0737 |
| | - | 3 | 26.752 | 27.252 | 26.88 | 1.0584 | 27.08 | 1.0660 | 27.27 | 1.0737 | 27.47 | 1.0814 | 27.66 | 1.0890 |
| | - | 2 | 27.835 | 28.210 | 27.92 | 1.0993 | 28.05 | 1.1044 | 28.18 | 1.1095 | 28.31 | 1.1146 | 28.44 | 1.1197 |
| | - | 1.5 | 28.376 | 28.676 | 28.44 | 1.1197 | 28.54 | 1.1236 | 28.64 | 1.1274 | 28.73 | 1.1312 | 28.83 | 1.1351 |
| M32 | - | 1 | 28.917 | 29.153 | 28.96 | 1.1402 | 29.03 | 1.1427 | 29.09 | 1.1453 | 29.16 | 1.1479 | 29.22 | 1.1504 |
| | - | 3 | 28.752 | 29.252 | 28.88 | 1.1371 | 29.08 | 1.1448 | 29.27 | 1.1524 | 29.47 | 1.1601 | 29.66 | 1.1678 |
| | - | 2 | 29.835 | 30.210 | 29.92 | 1.1780 | 30.05 | 1.1831 | 30.18 | 1.1882 | 30.31 | 1.1934 | 30.44 | 1.1985 |
| | - | 1.5 | 30.376 | 30.676 | 30.44 | 1.1985 | 30.54 | 1.2023 | 30.64 | 1.2061 | 30.73 | 1.2100 | 30.83 | 1.2138 |
| M33 | 3.5 | - | 29.211 | 29.771 | 29.36 | 1.1560 | 29.59 | 1.1650 | 29.82 | 1.1739 | 30.04 | 1.1829 | 30.27 | 1.1918 |
| | - | 3 | 29.752 | 30.252 | 29.88 | 1.1765 | 30.08 | 1.1841 | 30.27 | 1.1918 | 30.47 | 1.1995 | 30.66 | 1.2072 |
| | - | 2 | 30.835 | 31.210 | 30.92 | 1.2174 | 31.05 | 1.2225 | 31.18 | 1.2276 | 31.31 | 1.2327 | 31.44 | 1.2378 |
| | - | 1.5 | 31.376 | 31.676 | 31.44 | 1.2378 | 31.54 | 1.2417 | 31.64 | 1.2455 | 31.73 | 1.2493 | 31.83 | 1.2532 |
| | - | 1 | 31.917 | 32.153 | 31.96 | 1.2583 | 32.03 | 1.2609 | 32.09 | 1.2634 | 32.16 | 1.2660 | 32.22 | 1.2685 |



| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|--------|------------|------------|--------------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | M | MF | Min. 6H | Max. 6H | 80% Thread | | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M34 | - | 3 | 30.752 | 31.252 | 30.88 | 1.2158 | 31.08 | 1.2235 | 31.27 | 1.2312 | 31.47 | 1.2389 | 31.66 | 1.2465 |
| | - | 2 | 31.835 | 32.210 | 31.92 | 1.2568 | 32.05 | 1.2619 | 32.18 | 1.2670 | 32.31 | 1.2721 | 32.44 | 1.2772 |
| | - | 1.5 | 32.376 | 32.676 | 32.44 | 1.2772 | 32.54 | 1.2810 | 32.64 | 1.2849 | 32.73 | 1.2887 | 32.83 | 1.2926 |
| | - | 1 | 32.917 | 33.153 | 32.96 | 1.2977 | 33.03 | 1.3002 | 33.09 | 1.3028 | 33.16 | 1.3053 | 33.22 | 1.3079 |
| M35 | - | 3 | 31.752 | 32.252 | 31.88 | 1.2552 | 32.08 | 1.2629 | 32.27 | 1.2706 | 32.47 | 1.2782 | 32.66 | 1.2859 |
| | - | 1.5 | 33.376 | 33.676 | 33.44 | 1.3166 | 33.54 | 1.3204 | 33.64 | 1.3243 | 33.73 | 1.3281 | 33.83 | 1.3319 |
| | - | 1 | 33.917 | 34.153 | 33.96 | 1.3370 | 34.03 | 1.3396 | 34.09 | 1.3422 | 34.16 | 1.3447 | 34.22 | 1.3473 |
| M36 | 4 | - | 31.670 | 32.270 | 31.84 | 1.2537 | 32.10 | 1.2639 | 32.36 | 1.2741 | 32.62 | 1.2844 | 32.88 | 1.2946 |
| | - | 3 | 32.752 | 33.252 | 32.88 | 1.2946 | 33.08 | 1.3023 | 33.27 | 1.3099 | 33.47 | 1.3176 | 33.66 | 1.3253 |
| | - | 2 | 33.835 | 34.210 | 33.92 | 1.3355 | 34.05 | 1.3406 | 34.18 | 1.3457 | 34.31 | 1.3508 | 34.44 | 1.3560 |
| | - | 1.5 | 34.376 | 34.676 | 34.44 | 1.3560 | 34.54 | 1.3598 | 34.64 | 1.3636 | 34.73 | 1.3675 | 34.83 | 1.3713 |
| M37 | - | 1 | 34.917 | 35.153 | 34.96 | 1.3764 | 35.03 | 1.3790 | 35.09 | 1.3815 | 35.16 | 1.3841 | 35.22 | 1.3866 |
| | - | 1.5 | 35.376 | 35.676 | 35.44 | 1.3953 | 35.54 | 1.3992 | 35.64 | 1.4030 | 35.73 | 1.4068 | 35.83 | 1.4107 |
| | - | 1 | 35.917 | 36.153 | 35.96 | 1.4158 | 36.03 | 1.4183 | 36.09 | 1.4209 | 36.16 | 1.4234 | 36.22 | 1.4260 |
| M38 | - | 4 | 33.670 | 34.270 | 33.84 | 1.3324 | 34.10 | 1.3426 | 34.36 | 1.3529 | 34.62 | 1.3631 | 34.88 | 1.3733 |
| | - | 3 | 34.752 | 35.252 | 34.88 | 1.3733 | 35.08 | 1.3810 | 35.27 | 1.3887 | 35.47 | 1.3963 | 35.66 | 1.4040 |
| | - | 2 | 35.835 | 36.210 | 35.92 | 1.4142 | 36.05 | 1.4193 | 36.18 | 1.4245 | 36.31 | 1.4296 | 36.44 | 1.4347 |
| | - | 1.5 | 36.376 | 36.676 | 36.44 | 1.4347 | 36.54 | 1.4385 | 36.64 | 1.4424 | 36.73 | 1.4462 | 36.83 | 1.4500 |
| M39 | 4 | - | 34.670 | 35.270 | 34.84 | 1.3718 | 35.10 | 1.3820 | 35.36 | 1.3922 | 35.62 | 1.4025 | 35.88 | 1.4127 |
| | - | 3 | 35.752 | 36.252 | 35.88 | 1.4127 | 36.08 | 1.4204 | 36.27 | 1.4280 | 36.47 | 1.4357 | 36.66 | 1.4434 |
| | - | 2 | 36.835 | 37.210 | 36.92 | 1.4536 | 37.05 | 1.4587 | 37.18 | 1.4638 | 37.31 | 1.4689 | 37.44 | 1.4741 |
| | - | 1.5 | 37.376 | 37.676 | 37.44 | 1.4741 | 37.54 | 1.4779 | 37.64 | 1.4817 | 37.73 | 1.4856 | 37.83 | 1.4894 |
| | - | 1 | 37.917 | 38.153 | 37.96 | 1.4945 | 38.03 | 1.4971 | 38.09 | 1.4996 | 38.16 | 1.5022 | 38.22 | 1.5047 |
| M40 | - | 4 | 35.670 | 36.270 | 35.84 | 1.4111 | 36.10 | 1.4214 | 36.36 | 1.4316 | 36.62 | 1.4418 | 36.88 | 1.4521 |
| | - | 3 | 36.752 | 37.252 | 36.88 | 1.4521 | 37.08 | 1.4597 | 37.27 | 1.4674 | 37.47 | 1.4751 | 37.66 | 1.4827 |
| | - | 2 | 37.835 | 38.210 | 37.92 | 1.4930 | 38.05 | 1.4981 | 38.18 | 1.5032 | 38.31 | 1.5083 | 38.44 | 1.5134 |
| | - | 1.5 | 38.376 | 38.676 | 38.44 | 1.5134 | 38.54 | 1.5173 | 38.64 | 1.5211 | 38.73 | 1.5249 | 38.83 | 1.5288 |
| | - | 1 | 38.917 | 39.153 | 38.96 | 1.5339 | 39.03 | 1.5364 | 39.09 | 1.5390 | 39.16 | 1.5416 | 39.22 | 1.5441 |
| M42 | 4.5 | - | 37.129 | 37.799 | 37.32 | 1.4694 | 37.62 | 1.4809 | 37.91 | 1.4924 | 38.20 | 1.5039 | 38.49 | 1.5155 |
| | - | 4 | 37.670 | 38.270 | 37.84 | 1.4899 | 38.10 | 1.5001 | 38.36 | 1.5103 | 38.62 | 1.5206 | 38.88 | 1.5308 |
| | - | 3 | 38.752 | 39.252 | 38.88 | 1.5308 | 39.08 | 1.5385 | 39.27 | 1.5461 | 39.47 | 1.5538 | 39.66 | 1.5615 |
| | - | 2 | 39.835 | 40.210 | 39.92 | 1.5717 | 40.05 | 1.5768 | 40.18 | 1.5819 | 40.31 | 1.5871 | 40.44 | 1.5922 |
| | - | 1.5 | 40.376 | 40.676 | 40.44 | 1.5922 | 40.54 | 1.5960 | 40.64 | 1.5998 | 40.73 | 1.6037 | 40.83 | 1.6075 |
| M45 | 4.5 | - | 40.129 | 40.799 | 40.32 | 1.5875 | 40.62 | 1.5990 | 40.91 | 1.6106 | 41.20 | 1.6221 | 45.00 | 1.7717 |
| | - | 4 | 40.670 | 41.270 | 40.84 | 1.6080 | 41.10 | 1.6182 | 41.36 | 1.6285 | 41.62 | 1.6387 | 41.88 | 1.6489 |
| | - | 3 | 41.752 | 42.252 | 41.88 | 1.6489 | 42.08 | 1.6566 | 42.27 | 1.6643 | 42.47 | 1.6719 | 42.66 | 1.6796 |
| | - | 2 | 42.835 | 43.210 | 42.92 | 1.6898 | 43.05 | 1.6949 | 43.18 | 1.7001 | 43.31 | 1.7052 | 43.44 | 1.7103 |
| | - | 1.5 | 43.376 | 43.676 | 43.44 | 1.7103 | 43.54 | 1.7141 | 43.64 | 1.7180 | 43.73 | 1.7218 | 43.83 | 1.7256 |
| M46 | - | 1 | 43.917 | 44.153 | 43.96 | 1.7307 | 44.03 | 1.7333 | 44.09 | 1.7359 | 44.16 | 1.7384 | 44.22 | 1.7410 |
| | - | 1.5 | 44.376 | 44.676 | 44.44 | 1.7497 | 44.54 | 1.7535 | 44.64 | 1.7573 | 44.73 | 1.7612 | 44.83 | 1.7650 |
| | - | 5 | 42.587 | 43.297 | 42.80 | 1.6852 | 43.13 | 1.6980 | 43.45 | 1.7108 | 43.78 | 1.7235 | 44.10 | 1.7363 |
| | - | 4 | 43.670 | 44.270 | 43.84 | 1.7261 | 44.10 | 1.7363 | 44.36 | 1.7466 | 44.62 | 1.7568 | 44.88 | 1.7670 |
| M48 | - | 3 | 44.752 | 45.252 | 44.88 | 1.7670 | 45.08 | 1.7747 | 45.27 | 1.7824 | 45.47 | 1.7900 | 45.66 | 1.7977 |
| | - | 2 | 45.835 | 46.210 | 45.92 | 1.8079 | 46.05 | 1.8130 | 46.18 | 1.8182 | 46.31 | 1.8233 | 46.44 | 1.8284 |
| | - | 1.5 | 46.376 | 46.676 | 46.44 | 1.8284 | 46.54 | 1.8322 | 46.64 | 1.8361 | 46.73 | 1.8399 | 46.83 | 1.8437 |
| | - | 1 | 46.917 | 47.153 | 46.96 | 1.8488 | 47.03 | 1.8514 | 47.09 | 1.8540 | 47.16 | 1.8565 | 47.22 | 1.8591 |
| M50 | - | 5 | 44.587 | 45.297 | 44.80 | 1.7639 | 45.13 | 1.7767 | 45.45 | 1.7895 | 45.78 | 1.8023 | 46.10 | 1.8151 |
| | - | 3 | 46.752 | 47.252 | 46.88 | 1.8458 | 47.08 | 1.8534 | 47.27 | 1.8611 | 47.47 | 1.8688 | 47.66 | 1.8764 |
| | - | 2 | 47.835 | 48.210 | 47.92 | 1.8867 | 48.05 | 1.8918 | 48.18 | 1.8969 | 48.31 | 1.9020 | 48.44 | 1.9071 |
| | - | 1.5 | 48.376 | 48.676 | 48.44 | 1.9071 | 48.54 | 1.9110 | 48.64 | 1.9148 | 48.73 | 1.9186 | 48.83 | 1.9225 |
| - | 1 | 48.917 | 49.153 | 48.96 | 1.9276 | 49.03 | 1.9301 | 49.09 | 1.9327 | 49.16 | 1.9353 | 49.22 | 1.9378 | |

| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|-----|------------|---------|--------------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | M | MF | Min. 6H | Max. 6H | 80% Thread | | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M52 | 5 | - | 46.587 | 47.297 | 46.80 | 1.8427 | 47.13 | 1.8555 | 47.45 | 1.8682 | 47.78 | 1.8810 | 48.10 | 1.8938 |
| | - | 4 | 47.670 | 48.270 | 47.84 | 1.8836 | 48.10 | 1.8938 | 48.36 | 1.9040 | 48.62 | 1.9143 | 48.88 | 1.9245 |
| | - | 3 | 48.752 | 49.252 | 48.88 | 1.9245 | 49.08 | 1.9322 | 49.27 | 1.9398 | 49.47 | 1.9475 | 49.66 | 1.9552 |
| | - | 2 | 49.835 | 50.210 | 49.92 | 1.9654 | 50.05 | 1.9705 | 50.18 | 1.9756 | 50.31 | 1.9808 | 50.44 | 1.9859 |
| | - | 1.5 | 50.376 | 50.676 | 50.44 | 1.9859 | 50.54 | 1.9897 | 50.64 | 1.9935 | 50.73 | 1.9974 | 50.83 | 2.0012 |
| M55 | - | 4 | 50.670 | 51.270 | 50.84 | 2.0017 | 51.10 | 2.0119 | 51.36 | 2.0222 | 51.62 | 2.0324 | 51.88 | 2.0426 |
| | - | 3 | 51.752 | 52.252 | 51.88 | 2.0426 | 52.08 | 2.0503 | 52.27 | 2.0580 | 52.47 | 2.0656 | 52.66 | 2.0733 |
| | - | 2 | 52.835 | 53.210 | 52.92 | 2.0835 | 53.05 | 2.0886 | 53.18 | 2.0938 | 53.31 | 2.0989 | 53.44 | 2.1040 |
| | - | 1.5 | 53.376 | 53.676 | 53.44 | 2.1040 | 53.54 | 2.1078 | 53.64 | 2.1117 | 53.73 | 2.1155 | 53.83 | 2.1193 |
| M56 | 5.5 | - | 50.046 | 50.796 | 50.28 | 1.9797 | 50.64 | 1.9938 | 51.00 | 2.0078 | 51.36 | 2.0219 | 51.71 | 2.0360 |
| | - | 4 | 51.670 | 52.270 | 51.84 | 2.0411 | 52.10 | 2.0513 | 52.36 | 2.0615 | 52.62 | 2.0718 | 52.88 | 2.0820 |
| | - | 3 | 52.752 | 53.252 | 52.88 | 2.0820 | 53.08 | 2.0897 | 53.27 | 2.0973 | 53.47 | 2.1050 | 53.66 | 2.1127 |
| | - | 2 | 53.835 | 54.210 | 53.92 | 2.1229 | 54.05 | 2.1280 | 54.18 | 2.1331 | 54.31 | 2.1382 | 54.44 | 2.1434 |
| | - | 1.5 | 54.376 | 54.676 | 54.44 | 2.1434 | 54.54 | 2.1472 | 54.64 | 2.1510 | 54.73 | 2.1549 | 54.83 | 2.1587 |
| M58 | - | 4 | 53.670 | 54.270 | 53.84 | 2.1198 | 54.10 | 2.1300 | 54.36 | 2.1403 | 54.62 | 2.1505 | 54.88 | 2.1607 |
| | - | 3 | 54.752 | 55.252 | 54.88 | 2.1607 | 55.08 | 2.1684 | 55.27 | 2.1761 | 55.47 | 2.1837 | 55.66 | 2.1914 |
| | - | 2 | 55.835 | 56.210 | 55.92 | 2.2016 | 56.05 | 2.2067 | 56.18 | 2.2119 | 56.31 | 2.2170 | 56.44 | 2.2221 |
| | - | 1.5 | 56.376 | 56.676 | 56.44 | 2.2221 | 56.54 | 2.2259 | 56.64 | 2.2298 | 56.73 | 2.2336 | 56.83 | 2.2374 |
| M60 | 5.5 | - | 54.046 | 54.796 | 54.28 | 2.1372 | 54.64 | 2.1512 | 55.00 | 2.1653 | 55.36 | 2.1794 | 55.71 | 2.1934 |
| | - | 4 | 55.670 | 56.270 | 55.84 | 2.1985 | 56.10 | 2.2088 | 56.36 | 2.2190 | 56.62 | 2.2292 | 56.88 | 2.2395 |
| | - | 3 | 56.752 | 57.252 | 56.88 | 2.2395 | 57.08 | 2.2471 | 57.27 | 2.2548 | 57.47 | 2.2625 | 57.66 | 2.2701 |
| | - | 2 | 57.835 | 58.210 | 57.92 | 2.2804 | 58.05 | 2.2855 | 58.18 | 2.2906 | 58.31 | 2.2957 | 58.44 | 2.3008 |
| | - | 1.5 | 58.376 | 58.676 | 58.44 | 2.3008 | 58.54 | 2.3047 | 58.64 | 2.3085 | 58.73 | 2.3123 | 58.83 | 2.3162 |
| M62 | - | 4 | 57.670 | 58.270 | 57.84 | 2.2773 | 58.10 | 2.2875 | 58.36 | 2.2977 | 58.62 | 2.3080 | 58.88 | 2.3182 |
| | - | 3 | 58.752 | 59.252 | 58.88 | 2.3182 | 59.08 | 2.3259 | 59.27 | 2.3335 | 59.47 | 2.3412 | 59.66 | 2.3489 |
| | - | 1 | 60.917 | 61.153 | 60.96 | 2.4000 | 61.03 | 2.4026 | 61.09 | 2.4051 | 61.16 | 2.4077 | 61.22 | 2.4103 |
| | - | 1.5 | 60.376 | 60.676 | 60.44 | 2.3796 | 60.54 | 2.3834 | 60.64 | 2.3872 | 60.73 | 2.3911 | 60.83 | 2.3949 |
| M64 | 6 | - | 57.505 | 58.305 | 57.76 | 2.2742 | 58.15 | 2.2895 | 58.54 | 2.3049 | 58.93 | 2.3202 | 59.32 | 2.3356 |
| | - | 4 | 59.670 | 60.270 | 59.84 | 2.3560 | 60.10 | 2.3663 | 60.36 | 2.3765 | 60.62 | 2.3867 | 60.88 | 2.3969 |
| | - | 3 | 60.752 | 61.252 | 60.88 | 2.3969 | 61.08 | 2.4046 | 61.27 | 2.4123 | 61.47 | 2.4200 | 61.66 | 2.4276 |
| | - | 2 | 61.835 | 62.210 | 61.92 | 2.4379 | 62.05 | 2.4430 | 62.18 | 2.4481 | 62.31 | 2.4532 | 62.44 | 2.4583 |
| | - | 1.5 | 62.376 | 62.676 | 62.44 | 2.4583 | 62.54 | 2.4621 | 62.64 | 2.4660 | 62.73 | 2.4698 | 62.83 | 2.4737 |
| M65 | - | 4 | 60.670 | 61.270 | 60.84 | 2.3954 | 61.10 | 2.4056 | 61.36 | 2.4159 | 61.62 | 2.4261 | 61.88 | 2.4363 |
| | - | 3 | 61.752 | 62.252 | 61.88 | 2.4363 | 62.08 | 2.4440 | 62.27 | 2.4517 | 62.47 | 2.4593 | 62.66 | 2.4670 |
| | - | 2 | 62.835 | 63.210 | 62.92 | 2.4772 | 63.05 | 2.4823 | 63.18 | 2.4875 | 63.31 | 2.4926 | 63.44 | 2.4977 |
| | - | 1.5 | 63.376 | 63.676 | 63.44 | 2.4977 | 63.54 | 2.5015 | 63.64 | 2.5054 | 63.73 | 2.5092 | 63.83 | 2.5130 |



TAP DRILL SIZES - UNIFIED THREAD / FORMING TAPS

| Size | Threads Per Inch | | | Minor Diameter | | | Tap Drill Diameter (Cutting Tap) | | | | |
|------|------------------|-----|------|----------------|------------|------------|----------------------------------|---------------|---------------|---------------|---------------|
| | UNC | UNF | UNEF | Min. 2B&3B | Max. 2B | Max. 3B | 75% Thread | 70% Thread | 65% Thread | 60% Thread | 55% Thread |
| #0 | - | 80 | - | .0465 | .0514 | .0514 | .0536 | .0541 | .0545 | .0549 | .0553 |
| #1 | 64 | - | - | .0561 | .0623 | .0623 | .0650 | .0656 | .0661 | .0666 | .0672 |
| | - | 72 | - | .0580 | .0635 | .0635 | .0659 | .0664 | .0669 | .0673 | .0678 |
| #2 | 56 | - | - | .0667 | .0737 | .0737 | .0769 | .0775 | .0781 | .0787 | .0793 |
| | - | 64 | - | .0691 | .0753 | .0753 | .0780 | .0786 | .0791 | .0796 | .0802 |
| #3 | 48 | - | - | .0764 | .0845 | .0845 | .0884 | .0891 | .0898 | .0905 | .0912 |
| | - | 56 | - | .0797 | .0865 | .0865 | .0899 | .0905 | .0911 | .0917 | .0923 |
| #4 | 40 | - | - | .0849 | .0939 | .0939 | .0993 | .1001 | .1010 | .1018 | .1027 |
| | - | 48 | - | .0894 | .0968 | .0968 | .1014 | .1021 | .1028 | .1035 | .1042 |
| #5 | 40 | - | - | .0979 | .1062 | .1062 | .1123 | .1131 | .1140 | .1148 | .1157 |
| | - | 44 | - | .1004 | .1079 | .1079 | .1134 | .1142 | .1150 | .1157 | .1165 |
| #6 | 32 | - | - | .1040 | .1140 | .1140 | .1221 | .1231 | .1242 | .1253 | .1263 |
| | - | 40 | - | .1110 | .1190 | .1186 | .1253 | .1261 | .1270 | .1278 | .1287 |
| #8 | 32 | - | - | .1300 | .1390 | .1389 | .1481 | .1491 | .1502 | .1513 | .1523 |
| | - | 36 | - | .1340 | .1420 | .1416 | .1498 | .1508 | .1517 | .1527 | .1536 |
| #10 | 24 | - | - | .1450 | .1560 | .1555 | .1688 | .1702 | .1716 | .1730 | .1744 |
| | - | 32 | - | .1560 | .1640 | .1641 | .1741 | .1751 | .1762 | .1773 | .1783 |
| #12 | 24 | - | - | .1710 | .1810 | .1807 | .1948 | .1962 | .1976 | .1990 | .2004 |
| | - | 28 | - | .1770 | .1860 | .1857 | .1978 | .1990 | .2002 | .2014 | .2026 |
| 1/4 | - | - | 32 | .1820 | .1900 | .1895 | .2001 | .2011 | .2022 | .2033 | .2043 |
| | 20 | - | - | .1960 | .2070 | .2067 | .2245 | .2262 | .2279 | .2296 | .2313 |
| | - | 28 | - | .2110 | .2200 | .2190 | .2318 | .2330 | .2342 | .2354 | .2366 |
| 5/16 | - | - | 32 | .2160 | .2240 | .2229 | .2341 | .2351 | .2362 | .2373 | .2383 |
| | 18 | - | - | .2520 | .2650 | .2630 | .2842 | .2861 | .2879 | .2898 | .2917 |
| | - | 24 | - | .2670 | .2770 | .2754 | .2913 | .2927 | .2941 | .2955 | .2969 |
| | - | - | - | .2740 | .2820 | .2807 | .2943 | .2955 | .2967 | .2979 | .2991 |
| 3/8 | - | - | 32 | .2790 | .2860 | .2847 | .2966 | .2976 | .2987 | .2998 | .3008 |
| | 16 | - | - | .3070 | .3210 | .3182 | .3431 | .3453 | .3474 | .3495 | .3516 |
| | - | 24 | - | .3300 | .3400 | .3372 | .3538 | .3552 | .3566 | .3580 | .3594 |
| 7/16 | - | - | - | .3360 | .3450 | .3426 | .3568 | .3580 | .3592 | .3604 | .3616 |
| | - | - | 32 | .3410 | .3490 | .3469 | .3591 | .3601 | .3612 | .3623 | .3633 |
| | 14 | - | - | .3600 | .3760 | .3717 | .4011 | .4035 | .4059 | .4084 | .4108 |
| | - | 20 | - | .3830 | .3950 | .3916 | .4120 | .4137 | .4154 | .4171 | .4188 |
| 1/2 | - | - | 28 | .3990 | .4070 | .4051 | .4193 | .4205 | .4217 | .4229 | .4241 |
| | 13 | - | - | .4170 | .4340 | .4284 | .4608 | .4634 | .4660 | .4686 | .4712 |
| | - | 20 | - | .4460 | .4570 | .4537 | .4745 | .4762 | .4779 | .4796 | .4813 |
| 9/16 | - | - | 28 | .4610 | .4700 | .4676 | .4818 | .4830 | .4842 | .4854 | .4866 |
| | 12 | - | - | .4720 | .4900 | .4843 | .5200 | .5228 | .5257 | .5285 | .5313 |
| | - | 18 | - | .5020 | .5150 | .5106 | .5342 | .5361 | .5379 | .5398 | .5417 |
| | - | - | 24 | .5170 | .5270 | .5244 | .5413 | .5427 | .5441 | .5455 | .5469 |
| 5/8 | 11 | - | - | .5270 | .5460 | .5391 | .5786 | .5817 | .5848 | .5879 | .5910 |
| | - | - | - | .5570 | .5710 | .5662 | .5931 | .5953 | .5974 | .5995 | .6016 |
| | - | 18 | - | .5650 | .5780 | .5730 | .5967 | .5986 | .6004 | .6023 | .6042 |
| | - | - | 24 | .5800 | .5900 | .5869 | .6038 | .6052 | .6066 | .6080 | .6094 |
| 3/4 | 10 | - | - | .6420 | .6630 | .6545 | .6990 | .7024 | .7058 | .7092 | .7126 |
| | - | 16 | - | .6820 | .6960 | .6908 | .7181 | .7203 | .7224 | .7245 | .7266 |
| | - | - | 20 | .6960 | .7070 | .7037 | .7245 | .7262 | .7279 | .7296 | .7313 |

| Size | Threads Per Inch | | | Minor Diameter | | | Tap Drill Diameter (Cutting Tap) | | | | |
|-------|------------------|-----|------|----------------|---------|---------|----------------------------------|------------|------------|------------|------------|
| | UNC | UNF | UNEF | Min. 2B&3B | Max. 2B | Max. 3B | 75% Thread | 70% Thread | 65% Thread | 60% Thread | 55% Thread |
| 7/8 | 9 | - | - | .7550 | .7780 | .7681 | .8183 | .8221 | .8259 | .8297 | .8334 |
| | - | 14 | - | .7980 | .8140 | .8068 | .8386 | .8410 | .8434 | .8459 | .8483 |
| | - | - | 20 | .8210 | .8320 | .8287 | .8495 | .8512 | .8529 | .8546 | .8563 |
| 1 | 8 | - | - | .8650 | .8900 | .8797 | .9363 | .9405 | .9448 | .9490 | .9533 |
| | - | 12 | - | .9100 | .9280 | .9198 | .9575 | .9603 | .9632 | .9660 | .9688 |
| | - | - | 20 | .9460 | .9570 | .9537 | .9745 | .9762 | .9779 | .9796 | .9813 |
| 1-1/8 | 7 | - | - | .9700 | .9980 | .9875 | 1.0521 | 1.0570 | 1.0619 | 1.0667 | 1.0716 |
| | - | 12 | - | 1.0350 | 1.0530 | 1.0448 | 1.0825 | 1.0853 | 1.0882 | 1.0910 | 1.0938 |
| | - | - | 18 | 1.0650 | 1.0780 | 1.0730 | 1.0967 | 1.0986 | 1.1004 | 1.1023 | 1.1042 |
| 1-1/4 | 7 | - | - | 1.0950 | 1.1230 | 1.1125 | 1.1771 | 1.1820 | 1.1869 | 1.1917 | 1.1966 |
| | - | 12 | - | 1.1600 | 1.1780 | 1.1698 | 1.2075 | 1.2103 | 1.2132 | 1.2160 | 1.2188 |
| | - | - | 18 | 1.1900 | 1.2030 | 1.1980 | 1.2217 | 1.2236 | 1.2254 | 1.2273 | 1.2292 |



TAP DRILL SIZES - METRIC THREAD / FORMING TAPS

| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|-------|------------|------------|--------------------|-------|------------|-------|------------|-------|------------|-------|------------|--------|
| | M | MF | Min. 6H | Max. 6H | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | | 55% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M1 | 0.25 | - | 0.729 | 0.798 | 0.87 | .0344 | 0.88 | .0347 | 0.89 | .0350 | 0.90 | .0354 | 0.91 | .03569 |
| | - | 0.2 | 0.783 | 0.841 | 0.90 | .0354 | 0.90 | .0356 | 0.91 | .0359 | 0.92 | .0362 | 0.93 | .03643 |
| M1.1 | 0.25 | - | 0.829 | 0.898 | 0.97 | .0383 | 0.98 | .0386 | 0.99 | .0390 | 1.00 | .0393 | 1.01 | .03963 |
| | - | 0.2 | 0.883 | 0.941 | 1.00 | .0393 | 1.00 | .0396 | 1.01 | .0398 | 1.02 | .0401 | 1.03 | .04036 |
| M1.2 | 0.25 | - | 0.929 | 0.998 | 1.07 | .0422 | 1.08 | .0426 | 1.09 | .0429 | 1.10 | .0432 | 1.11 | .04356 |
| | - | 0.2 | 0.983 | 1.041 | 1.10 | .0432 | 1.10 | .0435 | 1.11 | .0438 | 1.12 | .0440 | 1.13 | .04430 |
| M1.4 | 0.3 | - | 1.075 | 1.159 | 1.25 | .0491 | 1.26 | .0495 | 1.27 | .0499 | 1.28 | .0503 | 1.29 | .05070 |
| | - | 0.2 | 1.183 | 1.241 | 1.30 | .0511 | 1.30 | .0514 | 1.31 | .0516 | 1.32 | .0519 | 1.33 | .05217 |
| M1.6 | 0.35 | - | 1.221 | 1.321 | 1.42 | .0560 | 1.43 | .0564 | 1.45 | .0569 | 1.46 | .0574 | 1.47 | .05784 |
| | - | 0.2 | 1.383 | 1.441 | 1.50 | .0590 | 1.50 | .0592 | 1.51 | .0595 | 1.52 | .0598 | 1.53 | .06005 |
| M1.7 | 0.35 | - | 1.321 | 1.421 | 1.52 | .0599 | 1.53 | .0604 | 1.55 | .0608 | 1.56 | .0613 | 1.57 | .06178 |
| | - | 0.3 | 1.375 | 1.459 | 1.55 | .0609 | 1.56 | .0613 | 1.57 | .0617 | 1.58 | .0621 | 1.59 | .06251 |
| | - | 0.25 | 1.429 | 1.498 | 1.57 | .0619 | 1.58 | .0622 | 1.59 | .0626 | 1.60 | .0629 | 1.61 | .06325 |
| | - | 0.2 | 1.483 | 1.541 | 1.60 | .0629 | 1.60 | .0632 | 1.61 | .0634 | 1.62 | .0637 | 1.63 | .06398 |
| M1.8 | 0.35 | - | 1.421 | 1.521 | 1.62 | .0638 | 1.63 | .0643 | 1.65 | .0648 | 1.66 | .0652 | 1.67 | .06571 |
| | - | 0.2 | 1.583 | 1.641 | 1.70 | .0669 | 1.70 | .0671 | 1.71 | .0674 | 1.72 | .0677 | 1.73 | .06792 |
| M2 | 0.4 | - | 1.567 | 1.679 | 1.80 | .0707 | 1.81 | .0712 | 1.82 | .0718 | 1.84 | .0723 | 1.85 | .07285 |
| | - | 0.25 | 1.729 | 1.798 | 1.87 | .0737 | 1.88 | .0741 | 1.89 | .0744 | 1.90 | .0747 | 1.91 | .07506 |
| M2.2 | 0.45 | - | 1.713 | 1.838 | 1.97 | .0776 | 1.99 | .0782 | 2.00 | .0788 | 2.02 | .0794 | 2.03 | .07999 |
| | - | 0.25 | 1.929 | 1.998 | 2.07 | .0816 | 2.08 | .0819 | 2.09 | .0823 | 2.10 | .0826 | 2.11 | .08293 |
| M2.3 | 0.4 | - | 1.867 | 1.979 | 2.10 | .0825 | 2.11 | .0831 | 2.12 | .0836 | 2.14 | .0841 | 2.15 | .08466 |
| | - | 0.35 | 1.921 | 2.021 | 2.12 | .0835 | 2.13 | .0840 | 2.15 | .0845 | 2.16 | .0849 | 2.17 | .08540 |
| | - | 0.25 | 2.029 | 2.098 | 2.17 | .0855 | 2.18 | .0859 | 2.19 | .0862 | 2.20 | .0865 | 2.21 | .08687 |
| M2.5 | 0.45 | - | 2.013 | 2.138 | 2.27 | .0894 | 2.29 | .0900 | 2.30 | .0906 | 2.32 | .0912 | 2.33 | .09180 |
| | - | 0.35 | 2.121 | 2.221 | 2.32 | .0914 | 2.33 | .0919 | 2.35 | .0923 | 2.36 | .0928 | 2.37 | .09327 |
| M2.6 | 0.45 | - | 2.113 | 2.238 | 2.37 | .0933 | 2.39 | .0939 | 2.40 | .0945 | 2.42 | .0951 | 2.43 | .09574 |
| | - | 0.35 | 2.221 | 2.321 | 2.42 | .0953 | 2.43 | .0958 | 2.45 | .0963 | 2.46 | .0967 | 2.47 | .09721 |
| M3 | 0.5 | - | 2.459 | 2.599 | 2.75 | .1081 | 2.76 | .1087 | 2.78 | .1094 | 2.80 | .1101 | 2.81 | .11075 |
| | - | 0.35 | 2.621 | 2.721 | 2.82 | .1111 | 2.83 | .1116 | 2.85 | .1120 | 2.86 | .1125 | 2.87 | .11296 |
| M3.5 | 0.6 | - | 2.850 | 3.010 | 3.19 | .1257 | 3.21 | .1266 | 3.23 | .1274 | 3.26 | .1282 | 3.28 | .12896 |
| | - | 0.35 | 3.121 | 3.221 | 3.32 | .1308 | 3.33 | .1312 | 3.35 | .1317 | 3.36 | .1322 | 3.37 | .13264 |
| M4 | 0.7 | - | 3.242 | 3.422 | 3.64 | .1434 | 3.67 | .1444 | 3.69 | .1453 | 3.71 | .1462 | 3.74 | .14717 |
| | - | 0.5 | 3.459 | 3.599 | 3.75 | .1474 | 3.76 | .1481 | 3.78 | .1488 | 3.80 | .1494 | 3.81 | .15012 |
| M4.5 | 0.75 | - | 3.688 | 3.878 | 4.12 | .1621 | 4.14 | .1631 | 4.17 | .1641 | 4.19 | .1651 | 4.22 | .16612 |
| | - | 0.5 | 3.959 | 4.099 | 4.25 | .1671 | 4.26 | .1678 | 4.28 | .1685 | 4.30 | .1691 | 4.31 | .16980 |
| M5 | 0.9 | - | 4.026 | 4.226 | 4.54 | .1788 | 4.57 | .1800 | 4.60 | .1812 | 4.63 | .1824 | 4.66 | .18360 |
| | 0.8 | - | 4.134 | 4.334 | 4.59 | .1808 | 4.62 | .1819 | 4.65 | .1829 | 4.67 | .1840 | 4.70 | .18507 |
| | - | 0.5 | 4.459 | 4.599 | 4.75 | .1868 | 4.76 | .1875 | 4.78 | .1881 | 4.80 | .1888 | 4.81 | .18949 |
| M6 | 1 | - | 4.917 | 5.153 | 5.49 | .2161 | 5.52 | .2175 | 5.56 | .2188 | 5.59 | .2202 | 5.63 | .22150 |
| | - | 0.75 | 5.188 | 5.378 | 5.62 | .2212 | 5.64 | .2222 | 5.67 | .2232 | 5.69 | .2242 | 5.72 | .22518 |
| M7 | - | 0.5 | 5.459 | 5.599 | 5.75 | .2262 | 5.76 | .2269 | 5.78 | .2275 | 5.80 | .2282 | 5.81 | .22886 |
| | 1 | - | 5.917 | 6.153 | 6.49 | .2555 | 6.52 | .2569 | 6.56 | .2582 | 6.59 | .2595 | 6.63 | .26087 |
| | - | 0.75 | 6.188 | 6.378 | 6.62 | .2605 | 6.64 | .2615 | 6.67 | .2625 | 6.69 | .2635 | 6.72 | .26455 |
| M8 | - | 0.5 | 6.459 | 6.599 | 6.75 | .2656 | 6.76 | .2662 | 6.78 | .2669 | 6.80 | .2676 | 6.81 | .26823 |
| | 1.25 | - | 6.647 | 6.912 | 7.36 | .2899 | 7.41 | .2915 | 7.45 | .2932 | 7.49 | .2949 | 7.53 | .29656 |
| | - | 1 | 6.917 | 7.153 | 7.49 | .2949 | 7.52 | .2962 | 7.56 | .2976 | 7.59 | .2989 | 7.63 | .30024 |
| | - | 0.75 | 7.188 | 7.378 | 7.62 | .2999 | 7.64 | .3009 | 7.67 | .3019 | 7.69 | .3029 | 7.72 | .30392 |
| M9 | - | 0.5 | 7.459 | 7.599 | 7.75 | .3049 | 7.76 | .3056 | 7.78 | .3063 | 7.80 | .3069 | 7.81 | .30760 |
| | 1.25 | - | 7.647 | 7.912 | 8.36 | .3292 | 8.41 | .3309 | 8.45 | .3326 | 8.49 | .3343 | 8.53 | .33593 |
| | - | 1 | 7.917 | 8.153 | 8.49 | .3343 | 8.52 | .3356 | 8.56 | .3369 | 8.59 | .3383 | 8.63 | .33961 |
| | - | 0.75 | 8.188 | 8.378 | 8.62 | .3393 | 8.64 | .3403 | 8.67 | .3413 | 8.69 | .3423 | 8.72 | .34329 |
| - | 0.5 | 8.459 | 8.599 | 8.75 | .3443 | 8.76 | .3450 | 8.78 | .3456 | 8.80 | .3463 | 8.81 | .34697 | |

| Size | Pitch | | Minor dia. | | Tap Drill Diameter | | | | | | | | | |
|------|-------|------|------------|---------|--------------------|--------|------------|--------|------------|--------|------------|--------|------------|---------|
| | M | MF | Min. 6H | Max. 6H | 75% Thread | | 70% Thread | | 65% Thread | | 60% Thread | | 55% Thread | |
| | | | | | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch |
| M10 | 1.5 | - | 8.376 | 8.676 | 9.24 | .3636 | 9.29 | .3656 | 9.34 | .3676 | 9.39 | .3696 | 9.44 | .37161 |
| | - | 1.25 | 8.647 | 8.912 | 9.36 | .3686 | 9.41 | .3703 | 9.45 | .3719 | 9.49 | .3736 | 9.53 | .37530 |
| | - | 1 | 8.917 | 9.153 | 9.49 | .3736 | 9.52 | .3750 | 9.56 | .3763 | 9.59 | .3776 | 9.63 | .37898 |
| | - | 0.75 | 9.188 | 9.378 | 9.62 | .3786 | 9.64 | .3796 | 9.67 | .3806 | 9.69 | .3817 | 9.72 | .38266 |
| | - | 0.5 | 9.459 | 9.599 | 9.75 | .3837 | 9.76 | .3843 | 9.78 | .3850 | 9.80 | .3857 | 9.81 | .38634 |
| M12 | 1.75 | - | 10.106 | 10.441 | 11.11 | .4373 | 11.17 | .4396 | 11.23 | .4420 | 11.29 | .4443 | 11.35 | .44667 |
| | - | 1.5 | 10.376 | 10.676 | 11.24 | .4423 | 11.29 | .4443 | 11.34 | .4463 | 11.39 | .4483 | 11.44 | .45035 |
| | - | 1.25 | 10.647 | 10.912 | 11.36 | .4473 | 11.41 | .4490 | 11.45 | .4507 | 11.49 | .4524 | 11.53 | .45404 |
| | - | 1 | 10.917 | 11.153 | 11.49 | .4524 | 11.52 | .4537 | 11.56 | .4550 | 11.59 | .4564 | 11.63 | .45772 |
| | - | 0.75 | 11.188 | 11.378 | 11.62 | .4574 | 11.64 | .4584 | 11.67 | .4594 | 11.69 | .4604 | 11.72 | .46140 |
| M14 | - | 0.5 | 11.459 | 11.599 | 11.75 | .4624 | 11.76 | .4631 | 11.78 | .4637 | 11.80 | .4644 | 11.81 | .46508 |
| | 2 | - | 11.835 | 12.210 | 12.98 | .5110 | 13.05 | .5137 | 13.12 | .5164 | 13.18 | .5191 | 13.25 | .52173 |
| | - | 1.5 | 12.376 | 12.676 | 13.24 | .5211 | 13.29 | .5231 | 13.34 | .5251 | 13.39 | .5271 | 13.44 | .52909 |
| | - | 1.25 | 12.647 | 12.912 | 13.36 | .5261 | 13.41 | .5278 | 13.45 | .5294 | 13.49 | .5311 | 13.53 | .53278 |
| | - | 1 | 12.917 | 13.153 | 13.49 | .5311 | 13.52 | .5324 | 13.56 | .5338 | 13.59 | .5351 | 13.63 | .53646 |
| M16 | - | 0.75 | 13.188 | 13.378 | 13.62 | .5361 | 13.64 | .5371 | 13.67 | .5381 | 13.69 | .5391 | 13.72 | .54014 |
| | - | 0.5 | 13.459 | 13.599 | 13.75 | .5411 | 13.76 | .5418 | 13.78 | .5425 | 13.80 | .5431 | 13.81 | .54382 |
| | 2 | - | 13.835 | 14.210 | 14.98 | .5898 | 15.05 | .5924 | 15.12 | .5951 | 15.18 | .5978 | 15.25 | .60047 |
| | - | 1.5 | 14.376 | 14.676 | 15.24 | .5998 | 15.29 | .6018 | 15.34 | .6038 | 15.39 | .6058 | 15.44 | .60783 |
| | - | 1 | 14.917 | 15.153 | 15.49 | .6098 | 15.52 | .6112 | 15.56 | .6125 | 15.59 | .6139 | 15.63 | .61520 |
| M18 | 2.5 | - | 15.294 | 15.744 | 16.73 | .6585 | 16.81 | .6618 | 16.90 | .6652 | 16.98 | .6685 | 17.07 | .67185 |
| | - | 2 | 15.835 | 16.210 | 16.98 | .6685 | 17.05 | .6712 | 17.12 | .6739 | 17.18 | .6765 | 17.25 | .67921 |
| | - | 1.5 | 16.376 | 16.676 | 17.24 | .6785 | 17.29 | .6806 | 17.34 | .6826 | 17.39 | .6846 | 17.44 | .68657 |
| | - | 1 | 16.917 | 17.153 | 17.49 | .6886 | 17.52 | .6899 | 17.56 | .6913 | 17.59 | .6926 | 17.63 | .69394 |
| M20 | 2.5 | - | 17.294 | 17.744 | 18.73 | .7372 | 18.81 | .7406 | 18.90 | .7439 | 18.98 | .7472 | 19.07 | .75059 |
| | - | 2 | 17.835 | 18.210 | 18.98 | .7472 | 19.05 | .7499 | 19.12 | .7526 | 19.18 | .7553 | 19.25 | .75795 |
| | - | 1.5 | 18.376 | 18.676 | 19.24 | .7573 | 19.29 | .7593 | 19.34 | .7613 | 19.39 | .7633 | 19.44 | .76531 |
| | - | 1 | 18.917 | 19.153 | 19.49 | .7673 | 19.52 | .7687 | 19.56 | .7700 | 19.59 | .7713 | 19.63 | .77268 |
| M22 | 2.5 | - | 19.294 | 19.744 | 20.73 | .8159 | 20.81 | .8193 | 20.90 | .8226 | 20.98 | .8260 | 21.07 | .82933 |
| | - | 2 | 19.835 | 20.210 | 20.98 | .8260 | 21.05 | .8287 | 21.12 | .8313 | 21.18 | .8340 | 21.25 | .83669 |
| | - | 1.5 | 20.376 | 20.676 | 21.24 | .8360 | 21.29 | .8380 | 21.34 | .8400 | 21.39 | .8420 | 21.44 | .84406 |
| | - | 1 | 20.917 | 21.153 | 21.49 | .8461 | 21.52 | .8474 | 21.56 | .8487 | 21.59 | .8501 | 21.63 | .85142 |
| M24 | 3 | - | 20.752 | 21.252 | 22.47 | .8846 | 22.57 | .8887 | 22.67 | .8927 | 22.78 | .8967 | 22.88 | .90071 |
| | - | 2 | 21.835 | 22.210 | 22.98 | .9047 | 23.05 | .9074 | 23.12 | .9101 | 23.18 | .9128 | 23.25 | .91543 |
| | - | 1.5 | 22.376 | 22.676 | 23.24 | .9148 | 23.29 | .9168 | 23.34 | .9188 | 23.39 | .9208 | 23.44 | .92280 |
| | - | 1 | 22.917 | 23.153 | 23.49 | .9248 | 23.52 | .9261 | 23.56 | .9275 | 23.59 | .9288 | 23.63 | .93016 |
| M26 | - | 3 | 22.752 | 23.252 | 24.47 | .9634 | 24.57 | .9674 | 24.67 | .9714 | 24.78 | .9754 | 24.88 | .97945 |
| | - | 2 | 23.835 | 24.210 | 24.98 | .9835 | 25.05 | .9861 | 25.12 | .9888 | 25.18 | .9915 | 25.25 | .99417 |
| | - | 1.5 | 24.376 | 24.676 | 25.24 | .9935 | 25.29 | .9955 | 25.34 | .9975 | 25.39 | .9995 | 25.44 | 1.00154 |
| M27 | 3 | - | 23.752 | 24.252 | 25.47 | 1.0028 | 25.57 | 1.0068 | 25.67 | 1.0108 | 25.78 | 1.0148 | 25.88 | 1.01882 |
| | - | 2.5 | 24.294 | 24.744 | 25.73 | 1.0128 | 25.81 | 1.0161 | 25.90 | 1.0195 | 25.98 | 1.0228 | 26.07 | 1.02618 |
| | - | 2 | 24.835 | 25.210 | 25.98 | 1.0228 | 26.05 | 1.0255 | 26.12 | 1.0282 | 26.18 | 1.0309 | 26.25 | 1.03354 |
| | - | 1.5 | 25.376 | 25.676 | 26.24 | 1.0329 | 26.29 | 1.0349 | 26.34 | 1.0369 | 26.39 | 1.0389 | 26.44 | 1.04091 |
| | - | 1 | 25.917 | 26.153 | 26.49 | 1.0429 | 26.52 | 1.0443 | 26.56 | 1.0456 | 26.59 | 1.0469 | 26.63 | 1.04827 |
| M30 | 3.5 | - | 26.211 | 26.771 | 28.22 | 1.1108 | 28.33 | 1.1155 | 28.45 | 1.1202 | 28.57 | 1.1249 | 28.69 | 1.12957 |
| | - | 3 | 26.752 | 27.252 | 28.47 | 1.1209 | 28.57 | 1.1249 | 28.67 | 1.1289 | 28.78 | 1.1329 | 28.88 | 1.13693 |
| | - | 2 | 27.835 | 28.210 | 28.98 | 1.1409 | 29.05 | 1.1436 | 29.12 | 1.1463 | 29.18 | 1.1490 | 29.25 | 1.15165 |
| | - | 1.5 | 28.376 | 28.676 | 29.24 | 1.1510 | 29.29 | 1.1530 | 29.34 | 1.1550 | 29.39 | 1.1570 | 29.44 | 1.15902 |
| | - | 1 | 28.917 | 29.153 | 29.49 | 1.1610 | 29.52 | 1.1624 | 29.56 | 1.1637 | 29.59 | 1.1650 | 29.63 | 1.16638 |



TAP DRILL SIZES - METRIC THREAD / FORMING TAPS

| Metric | RECOMMENDATION | | Unified | RECOMMENDATION | | | |
|-------------|----------------|------------|----------------|----------------|-------------|------|-------------|
| | Size | Drill Size | | Size | Drill Size | | |
| | | Inch | | | metric (mm) | Inch | metric (mm) |
| M2 × 0.4 | .0827 | 2.10 | #2 - 56 UNC | .0906 | 2.30 | | |
| M2.2 × 0.45 | .0906 | 2.30 | #3 - 48 UNC | .1063 | 2.70 | | |
| M2.5 × 0.45 | .1024 | 2.60 | #3 - 56 UNF | .1043 | 2.65 | | |
| M3 × 0.5 | .1240 | 3.15 | #4 - 40 UNC | .1181 | 3.00 | | |
| M3.5 × 0.6 | .1457 | 3.70 | #4 - 48 UNF | .1181 | 3.00 | | |
| M4 × 0.7 | .1654 | 4.20 | #5 - 40 UNC | .1339 | 3.40 | | |
| M5 × 0.8 | .2047 | 5.20 | #5 - 44 UNF | .1299 | 3.30 | | |
| M6 × 1.0 | .2480 | 6.30 | #6 - 32 UNC | .1457 | 3.70 | | |
| M7 × 1.0 | .2874 | 7.30 | #6 - 40 UNF | .1457 | 3.70 | | |
| M8 × 1.0 | .3268 | 8.30 | #8 - 32 UNC | .1732 | 4.40 | | |
| M8 × 1.25 | .3307 | 8.40 | #8 - 36 UNF | .1732 | 4.40 | | |
| M9 × 1.25 | .3701 | 9.40 | #10 - 24 UNC | .2008 | 5.10 | | |
| M10 × 1.25 | .4094 | 10.40 | #10 - 32 UNF | .2008 | 5.10 | | |
| M10 × 1.5 | .4134 | 10.50 | #12 - 24 UNC | .2283 | 5.80 | | |
| M11 × 1.5 | .4528 | 11.50 | 1/4 - 20 UNC | .2638 | 6.70 | | |
| M12 × 1.25 | .4882 | 12.40 | 1/4 - 28 UNF | .2598 | 6.60 | | |
| M12 × 1.5 | .4921 | 12.50 | 5/16 - 18 UNC | .3307 | 8.40 | | |
| M12 × 1.75 | .4921 | 12.50 | 5/16 - 24 UNF | .3228 | 8.20 | | |
| M14 × 1.5 | .5709 | 14.50 | 3/8 - 16 UNC | .3937 | 10.00 | | |
| M14 × 2.0 | .5709 | 14.50 | 3/8 - 24 UNF | .3858 | 9.80 | | |
| M16 × 1.5 | .6496 | 16.50 | 7/16 - 14 UNC | .4528 | 11.50 | | |
| M16 × 2.0 | .6496 | 16.50 | 7/16 - 20 UNF | .4528 | 11.50 | | |
| M18 × .5 | .7283 | 18.50 | 1/2 - 13 UNC | .5236 | 13.30 | | |
| M18 × 2.0 | .7283 | 18.50 | 1/2 - 20 UNF | .5157 | 13.10 | | |
| M18 × 2.5 | .7382 | 18.75 | 9/16 - 12 UNC | .5866 | 14.90 | | |
| M20 × 1.5 | .8071 | 20.50 | 9/16 - 18 UNF | .5787 | 14.70 | | |
| M20 × 2.0 | .8071 | 20.50 | 5/8 - 11 UNC | .6496 | 16.50 | | |
| M20 × 2.5 | .8169 | 20.75 | 5/8 - 18 UNF | .6417 | 16.30 | | |
| M22 × 1.5 | .8858 | 22.50 | 3/4 - 10 UNC | .7795 | 19.80 | | |
| M22 × 2.0 | .8858 | 22.50 | 3/4 - 16 UNF | .7677 | 19.50 | | |
| M22 × 2.5 | .8957 | 22.75 | 7/8 - 9 UNC | .9055 | 23.00 | | |
| M24 × 2.0 | .9646 | 24.50 | 7/8 - 14 UNF | .8858 | 22.50 | | |
| M24 × 3.0 | .9843 | 25.00 | 1 - 8 UNC | 1.0433 | 26.50 | | |
| M27 × 3.0 | 1.1024 | 28.00 | 1 - 12 UNF | 1.0236 | 26.00 | | |
| M30 × 3.5 | 1.2205 | 31.00 | 1-1/8 - 7 UNC | 1.1713 | 29.75 | | |
| | | | 1-1/8 - 8 UN | 1.1417 | 29.00 | | |
| | | | 1-1/8 - 12 UNF | 1.1516 | 29.25 | | |
| | | | 1-1/4 - 7 UNC | 1.2992 | 33.00 | | |
| | | | 1-1/4 - 8 UN | 1.2795 | 32.50 | | |
| | | | 1-1/4 - 12 UNF | 1.2795 | 32.50 | | |
| | | | 1-3/8 - 6 UNC | 1.4173 | 36.00 | | |
| | | | 1-3/8 - 8 UN | 1.3976 | 35.50 | | |
| | | | 1-3/8 - 12 UNF | 1.4173 | 36.00 | | |
| | | | 1-1/2 - 6 UNC | 1.5354 | 39.00 | | |
| | | | 1-1/2 - 8 UN | 1.5354 | 39.00 | | |
| | | | 1-1/2 - 12 UNF | 1.5354 | 39.00 | | |

