| TOLERANCES | | |
|---|---|---|
| $d$ | +.0000" –.0005" (+.0000 –.0127mm) | |
| $l_1$ | ≤ 1/8" | +.125" –.062" (+3.175 –1.588mm) |
| | > 1/8" | +.125" –.125" (+3.175 –3.175mm) |
| $l_2$ | ≤ 1/8" | +.125" –.062" (+3.175 –1.588mm) |
| | >1/8" | +.125" –.125" (+3.175 –3.175mm) |

Z=2 | 15° | 135° | 3xD | TECH PAGES 320-323

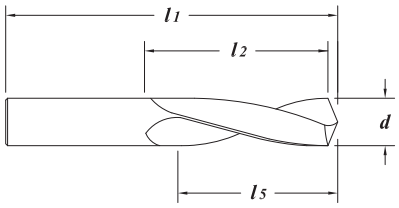
# Series 1510

.0625" - .1575"
(1.588mm - 4.000mm)

Recommended for titanium, inconel, hastelloy, waspaloy, and stainless steel

## Slow Helix

Solid submicron grain carbide drill
Heavy web for extra rigidity and added strength
Thinned point
Live tooling recommended on lathe processes
Durana Coating - page 66




| EDP# | $d$ † Diameter Decimal | Diameter | Metric | $l_1$ Overall Length | $l_2$ Flute Length | $l_5$ Max Drill Depth | 1-11 | 12-24 | 25-49 | 50-100 |
|---|---|---|---|---|---|---|---|---|---|---|
| 19070 | .0625 | 1/16" | 1.588 | 1-3/4" | 5/8" | .200" | 7.81 | 7.47 | 7.13 | 6.79 |
| 19075 | .0635 | #52 | 1.613 | 1-3/4" | 11/16" | .204" | 7.94 | 7.59 | 7.25 | 6.90 |
| 19080 | .0670 | #51 | 1.702 | 1-3/4" | 11/16" | .215" | 8.05 | 7.70 | 7.35 | 7.00 |
| 19085 | .0700 | #50 | 1.778 | 1-3/4" | 11/16" | .224" | 8.26 | 7.90 | 7.54 | 7.18 |
| 19090 | .0730 | #49 | 1.854 | 1-3/4" | 11/16" | .234" | 8.44 | 8.07 | 7.71 | 7.34 |
| 19095 | .0760 | #48 | 1.930 | 1-3/4" | 11/16" | .244" | 8.73 | 8.35 | 7.97 | 7.59 |
| 19100 | .0781 | 5/64" | 1.984 | 1-3/4" | 11/16" | .250" | 9.05 | 8.66 | 8.26 | 7.87 |
| 19105 | .0785 | #47 | 1.994 | 1-3/4" | 3/4" | .252" | 9.35 | 8.94 | 8.54 | 8.13 |
| 19115 | .0787 | | 2.000 | 45 | 19 | 6 | 9.51 | 9.10 | 8.68 | 8.27 |
| 19120 | .0810 | #46 | 2.057 | 1-3/4" | 3/4" | .260" | 9.65 | 9.23 | 8.81 | 8.39 |
| 19125 | .0820 | #45 | 2.083 | 1-3/4" | 3/4" | .263" | 9.94 | 9.50 | 9.07 | 8.64 |
| 19130 | .0860 | #44 | 2.184 | 1-3/4" | 3/4" | .276" | 10.27 | 9.82 | 9.38 | 8.93 |
| 19135 | .0890 | #43 | 2.261 | 1-3/4" | 3/4" | .285" | 10.57 | 10.11 | 9.65 | 9.19 |
| 19140 | .0935 | #42 | 2.375 | 1-3/4" | 3/4" | .300" | 10.72 | 10.25 | 9.79 | 9.32 |
| 19145 | .0938 | 3/32" | 2.383 | 1-3/4" | 3/4" | .301" | 10.97 | 10.49 | 10.02 | 9.54 |
| 19150 | .0960 | #41 | 2.438 | 1-13/16" | 13/16" | .308" | 11.05 | 10.57 | 10.09 | 9.61 |
| 19155 | .0980 | #40 | 2.489 | 1-13/16" | 13/16" | .314" | 11.20 | 10.71 | 10.23 | 9.74 |
| 19160 | .0984 | | 2.500 | 46 | 21 | 8 | 11.28 | 10.79 | 10.30 | 9.81 |
| 19165 | .0995 | #39 | 2.527 | 1-13/16" | 13/16" | .319" | 11.33 | 10.84 | 10.34 | 9.85 |
| 19170 | .1015 | #38 | 2.578 | 1-13/16" | 13/16" | .326" | 11.43 | 10.93 | 10.44 | 9.94 |
| 19175 | .1040 | #37 | 2.642 | 1-13/16" | 13/16" | .334" | 11.53 | 11.03 | 10.53 | 10.03 |
| 19180 | .1065 | #36 | 2.705 | 1-13/16" | 13/16" | .342" | 11.62 | 11.11 | 10.61 | 10.10 |
| 19185 | .1094 | 7/64" | 2.779 | 1-13/16" | 13/16" | .351" | 11.66 | 11.15 | 10.65 | 10.14 |
| 19190 | .1100 | #35 | 2.794 | 1-7/8" | 7/8" | .353" | 11.74 | 11.23 | 10.72 | 10.21 |
| 19195 | .1110 | #34 | 2.819 | 1-7/8" | 7/8" | .356" | 11.88 | 11.36 | 10.85 | 10.33 |
| 19200 | .1130 | #33 | 2.870 | 1-7/8" | 7/8" | .362" | 11.97 | 11.45 | 10.93 | 10.41 |
| 19205 | .1160 | #32 | 2.946 | 1-7/8" | 7/8" | .372" | 12.05 | 11.53 | 11.00 | 10.48 |
| 19210 | .1181 | | 3.000 | 48 | 22 | 10 | 12.17 | 11.64 | 11.11 | 10.58 |
| 19215 | .1200 | #31 | 3.048 | 1-7/8" | 7/8" | .385" | 12.29 | 11.76 | 11.22 | 10.69 |
| 19220 | .1250 | 1/8" | 3.175 | 1-7/8" | 7/8" | .401" | 12.42 | 11.88 | 11.34 | 10.80 |
| 19225 | .1285 | #30 | 3.264 | 1-15/16" | 15/16" | .412" | 12.75 | 12.20 | 11.64 | 11.09 |
| 19230 | .1360 | #29 | 3.454 | 1-15/16" | 15/16" | .436" | 13.09 | 12.52 | 11.95 | 11.38 |
| 19235 | .1378 | | 3.500 | 49 | 24 | 11 | 13.50 | 12.91 | 12.33 | 11.74 |
| 19240 | .1405 | #28 | 3.569 | 1-15/16" | 15/16" | .451" | 13.67 | 13.08 | 12.48 | 11.89 |
| 19245 | .1406 | 9/64" | 3.571 | 1-15/16" | 15/16" | .451" | 13.82 | 13.22 | 12.62 | 12.02 |
| 19250 | .1440 | #27 | 3.658 | 2-1/16" | 1" | .462" | 15.04 | 14.39 | 13.73 | 13.08 |
| 19255 | .1470 | #26 | 3.734 | 2-1/16" | 1" | .471" | 15.20 | 14.54 | 13.88 | 13.22 |
| 19260 | .1495 | #25 | 3.797 | 2-1/16" | 1" | .479" | 15.39 | 14.72 | 14.05 | 13.38 |
| 19265 | .1520 | #24 | 3.861 | 2-1/16" | 1" | .487" | 15.42 | 14.75 | 14.08 | 13.41 |
| 19270 | .1540 | #23 | 3.912 | 2-1/16" | 1" | .494" | 15.53 | 14.85 | 14.18 | 13.50 |
| 19275 | .1562 | 5/32" | 3.967 | 2-1/16" | 1" | .501" | 15.62 | 14.94 | 14.26 | 13.58 |
| 19280 | .1570 | #22 | 3.988 | 2-1/8" | 1-1/16" | .504" | 16.58 | 15.86 | 15.14 | 14.42 |
| 19285 | .1575 | | 4.000 | 54 | 27 | 13 | 16.81 | 16.08 | 15.35 | 14.62 |

*continued* →

## Series 1510 *(continued)*

.1590" - .3346"
(4.039mm - 8.500mm)

| EDP# | *d* † Diameter Decimal | Diameter | Metric | *l1* Overall Length | *l2* Flute Length | *l5* Max Drill Depth | 1-11 | 12-24 | 25-49 | 50-100 |
|---|---|---|---|---|---|---|---|---|---|---|
| 19290 | .1590 | #21 | 4.039 | 2-1/8" | 1-1/16" | .510" | 17.02 | 16.28 | 15.54 | 14.80 |
| 19295 | .1610 | #20 | 4.089 | 2-1/8" | 1-1/16" | .516" | 17.15 | 16.40 | 15.66 | 14.91 |
| 19300 | .1660 | #19 | 4.216 | 2-1/8" | 1-1/16" | .532" | 17.85 | 17.07 | 16.30 | 15.52 |
| 19305 | .1695 | #18 | 4.305 | 2-1/8" | 1-1/16" | .544" | 18.06 | 17.27 | 16.49 | 15.70 |
| 19310 | .1719 | 11/64" | 4.366 | 2-1/8" | 1-1/16" | .551" | 18.41 | 17.61 | 16.81 | 16.01 |
| 19315 | .1730 | #17 | 4.394 | 2-3/16" | 1-1/8" | .555" | 18.68 | 17.86 | 17.05 | 16.24 |
| 19320 | .1770 | #16 | 4.496 | 2-3/16" | 1-1/8" | .568" | 18.88 | 18.06 | 17.24 | 16.42 |
| 19325 | .1772 |  | 4.500 | 56 | 29 | 14 | 19.00 | 18.17 | 17.35 | 16.52 |
| 19330 | .1800 | #15 | 4.572 | 2-3/16" | 1-1/8" | .577" | 19.08 | 18.25 | 17.42 | 16.59 |
| 19335 | .1820 | #14 | 4.623 | 2-3/16" | 1-1/8" | .584" | 19.50 | 18.66 | 17.81 | 16.96 |
| 19340 | .1850 | #13 | 4.700 | 2-3/16" | 1-1/8" | .593" | 19.65 | 18.80 | 17.94 | 17.09 |
| 19345 | .1875 | 3/16" | 4.763 | 2-3/16" | 1-1/8" | .601" | 19.73 | 18.88 | 18.02 | 17.16 |
| 19350 | .1890 | #12 | 4.801 | 2-1/4" | 1-3/16" | .606" | 20.38 | 19.49 | 18.61 | 17.72 |
| 19355 | .1910 | #11 | 4.851 | 2-1/4" | 1-3/16" | .613" | 20.62 | 19.72 | 18.83 | 17.93 |
| 19360 | .1935 | #10 | 4.915 | 2-1/4" | 1-3/16" | .621" | 21.56 | 20.63 | 19.69 | 18.75 |
| 19365 | .1960 | #9 | 4.978 | 2-1/4" | 1-3/16" | .629" | 22.13 | 21.16 | 20.20 | 19.24 |
| 19370 | .1969 |  | 5.000 | 57 | 30 | 16 | 22.24 | 21.27 | 20.31 | 19.34 |
| 19375 | .1990 | #8 | 5.055 | 2-1/4" | 1-3/16" | .638" | 22.41 | 21.44 | 20.46 | 19.49 |
| 19380 | .2010 | #7 | 5.105 | 2-1/4" | 1-3/16" | .645" | 23.07 | 22.07 | 21.06 | 20.06 |
| 19385 | .2031 | 13/64" | 5.159 | 2-1/4" | 1-3/16" | .651" | 23.24 | 22.23 | 21.22 | 20.21 |
| 19390 | .2040 | #6 | 5.182 | 2-3/8" | 1-1/4" | .654" | 23.70 | 22.67 | 21.64 | 20.61 |
| 19395 | .2055 | #5 | 5.220 | 2-3/8" | 1-1/4" | .659" | 24.18 | 23.13 | 22.08 | 21.03 |
| 19400 | .2090 | #4 | 5.309 | 2-3/8" | 1-1/4" | .670" | 24.63 | 23.56 | 22.49 | 21.42 |
| 19405 | .2130 | #3 | 5.410 | 2-3/8" | 1-1/4" | .683" | 25.07 | 23.98 | 22.89 | 21.80 |
| 19410 | .2165 |  | 5.500 | 60 | 32 | 18 | 25.24 | 24.15 | 23.05 | 21.95 |
| 19415 | .2188 | 7/32" | 5.558 | 2-3/8" | 1-1/4" | .702" | 25.44 | 24.33 | 23.23 | 22.12 |
| 19420 | .2210 | #2 | 5.613 | 2-7/16" | 1-5/16" | .709" | 26.04 | 24.90 | 23.77 | 22.64 |
| 19425 | .2280 | #1 | 5.791 | 2-7/16" | 1-5/16" | .731" | 26.22 | 25.08 | 23.94 | 22.80 |
| 19430 | .2340 | A | 5.944 | 2-7/16" | 1-5/16" | .750" | 26.28 | 25.14 | 23.99 | 22.85 |
| 19435 | .2344 | 15/64" | 5.954 | 2-7/16" | 1-5/16" | .752" | 26.32 | 25.18 | 24.03 | 22.89 |
| 19440 | .2362 |  | 6.000 | 64 | 35 | 19 | 26.39 | 25.25 | 24.10 | 22.95 |
| 19445 | .2380 | B | 6.045 | 2-1/2" | 1-3/8" | .763" | 26.52 | 25.37 | 24.21 | 23.06 |
| 19450 | .2420 | C | 6.147 | 2-1/2" | 1-3/8" | .776" | 26.69 | 25.53 | 24.37 | 23.21 |
| 19455 | .2460 | D | 6.248 | 2-1/2" | 1-3/8" | .789" | 26.92 | 25.75 | 24.58 | 23.41 |
| 19460 | .2500 | 1/4" / E | 6.350 | 2-1/2" | 1-3/8" | .802" | 27.08 | 25.91 | 24.73 | 23.55 |
| 19465 | .2559 |  | 6.500 | 67 | 37 | 21 | 27.74 | 26.53 | 25.33 | 24.12 |
| 19470 | .2570 | F | 6.528 | 2-5/8" | 1-7/16" | .824" | 28.32 | 27.09 | 25.86 | 24.63 |
| 19475 | .2610 | G | 6.629 | 2-5/8" | 1-7/16" | .837" | 28.90 | 27.64 | 26.39 | 25.13 |
| 19480 | .2656 | 17/64" | 6.746 | 2-5/8" | 1-7/16" | .852" | 29.49 | 28.20 | 26.92 | 25.64 |
| 19485 | .2660 | H | 6.756 | 2-11/16" | 1-1/2" | .853" | 30.33 | 29.01 | 27.69 | 26.37 |
| 19490 | .2720 | I | 6.909 | 2-11/16" | 1-1/2" | .872" | 30.68 | 29.35 | 28.01 | 26.68 |
| 19495 | .2756 |  | 7.000 | 68 | 38 | 22 | 30.92 | 29.58 | 28.23 | 26.89 |
| 19500 | .2770 | J | 7.036 | 2-11/16" | 1-1/2" | .888" | 31.20 | 29.84 | 28.49 | 27.13 |
| 19505 | .2810 | K | 7.137 | 2-11/16" | 1-1/2" | .901" | 31.48 | 30.11 | 28.74 | 27.37 |
| 19510 | .2812 | 9/32" | 7.142 | 2-11/16" | 1-1/2" | .902" | 31.65 | 30.27 | 28.90 | 27.52 |
| 19515 | .2900 | L | 7.366 | 2-3/4" | 1-9/16" | .930" | 32.82 | 31.39 | 29.97 | 28.54 |
| 19520 | .2950 | M | 7.493 | 2-3/4" | 1-9/16" | .946" | 35.12 | 33.59 | 32.07 | 30.54 |
| 19525 | .2953 |  | 7.500 | 70 | 40 | 24 | 35.12 | 33.59 | 32.07 | 30.54 |
| 19530 | .2969 | 19/64" | 7.541 | 2-3/4" | 1-9/16" | .952" | 35.32 | 33.78 | 32.25 | 30.71 |
| 19535 | .3020 | N | 7.671 | 2-15/16" | 1-5/8" | .969" | 37.19 | 35.57 | 33.96 | 32.34 |
| 19540 | .3125 | 5/16" | 7.938 | 2-15/16" | 1-5/8" | 1.002" | 37.34 | 35.72 | 34.09 | 32.47 |
| 19545 | .3150 |  | 8.000 | 75 | 43 | 26 | 40.07 | 38.32 | 36.58 | 34.84 |
| 19550 | .3160 | O | 8.026 | 2-15/16" | 1-11/16" | 1.013" | 40.07 | 38.32 | 36.58 | 34.84 |
| 19555 | .3230 | P | 8.204 | 2-15/16" | 1-11/16" | 1.036" | 40.41 | 38.65 | 36.90 | 35.14 |
| 19560 | .3281 | 21/64" | 8.334 | 2-15/16" | 1-11/16" | 1.052" | 40.65 | 38.89 | 37.12 | 35.35 |
| 19565 | .3320 | Q | 8.433 | 3" | 1-11/16" | 1.065" | 41.60 | 39.79 | 37.98 | 36.17 |
| 19570 | .3346 |  | 8.500 | 76 | 43 | 27 | 41.99 | 40.16 | 38.34 | 36.51 |



† *Metric equivalents are for reference only*

| EDP# | *d* † Diameter Decimal | Diameter | Metric | *l1* Overall Length | *l2* Flute Length | *l5* Max Drill Depth | 1-11 | 12-24 | 25-49 | 50-100 |
|---|---|---|---|---|---|---|---|---|---|---|
| 19575 | .3390 | R | 8.611 | 3" | 1-11/16" | 1.087" | 43.30 | 41.42 | 39.53 | 37.65 |
| 19580 | .3438 | 11/32" | 8.733 | 3" | 1-11/16" | 1.103" | 45.06 | 43.10 | 41.14 | 39.18 |
| 19585 | .3480 | S | 8.839 | 3-1/16" | 1-3/4" | 1.116" | 45.68 | 43.69 | 41.71 | 39.72 |
| 19590 | .3543 | | 9.000 | 78 | 44 | 29 | 45.95 | 43.96 | 41.96 | 39.96 |
| 19595 | .3580 | T | 9.093 | 3-1/16" | 1-3/4" | 1.148" | 46.13 | 44.12 | 42.12 | 40.11 |
| 19600 | .3594 | 23/64" | 9.129 | 3-1/16" | 1-3/4" | 1.153" | 46.44 | 44.42 | 42.40 | 40.38 |
| 19605 | .3680 | U | 9.347 | 3-1/8" | 1-13/16" | 1.180" | 50.86 | 48.65 | 46.44 | 44.23 |
| 19615 | .3750 | 3/8" | 9.525 | 3-1/8" | 1-13/16" | 1.203" | 51.74 | 49.49 | 47.24 | 44.99 |
| 19620 | .3770 | V | 9.576 | 3-1/4" | 1-7/8" | 1.209" | 52.74 | 50.45 | 48.15 | 45.86 |
| 19625 | .3860 | W | 9.804 | 3-1/4" | 1-7/8" | 1.238" | 53.84 | 51.50 | 49.16 | 46.82 |
| 19630 | .3906 | 25/64" | 9.921 | 3-1/4" | 1-7/8" | 1.253" | 54.67 | 52.29 | 49.92 | 47.54 |
| 19635 | .3937 | | 10.000 | 84 | 49 | 32 | 56.61 | 54.15 | 51.69 | 49.23 |
| 19640 | .3970 | X | 10.084 | 3-5/16" | 1-15/16" | 1.273" | 58.27 | 55.74 | 53.20 | 50.67 |
| 19645 | .4040 | Y | 10.262 | 3-5/16" | 1-15/16" | 1.296" | 58.73 | 56.18 | 53.62 | 51.07 |
| 19650 | .4062 | 13/32" | 10.317 | 3-5/16" | 1-15/16" | 1.303" | 60.87 | 58.22 | 55.58 | 52.93 |
| 19655 | .4130 | Z | 10.490 | 3-3/8" | 2" | 1.325" | 61.53 | 58.85 | 56.18 | 53.50 |
| 19660 | .4134 | | 10.500 | 86 | 51 | 34 | 61.53 | 58.85 | 56.18 | 53.50 |
| 19665 | .4219 | 27/64" | 10.716 | 3-3/8" | 2" | 1.353" | 62.20 | 59.50 | 56.79 | 54.09 |
| 19670 | .4331 | | 11.000 | 87 | 52 | 35 | 67.56 | 64.63 | 61.69 | 58.75 |
| 19675 | .4375 | 7/16" | 11.113 | 3-7/16" | 2-1/16" | 1.403" | 67.56 | 64.63 | 61.69 | 58.75 |
| 19685 | .4531 | 29/64" | 11.509 | 3-9/16" | 2-1/8" | 1.453" | 73.27 | 70.08 | 66.90 | 63.71 |
| 19690 | .4688 | 15/32" | 11.908 | 3-5/8" | 2-1/8" | 1.503" | 77.50 | 74.13 | 70.76 | 67.39 |
| 19695 | .4724 | | 12.000 | 94 | 56 | 38 | 77.77 | 74.39 | 71.01 | 67.63 |
| 19700 | .4844 | 31/64" | 12.304 | 3-11/16" | 2-3/16" | 1.554" | 78.38 | 74.98 | 71.57 | 68.16 |
| 19705 | .4921 | | 12.500 | 95 | 56 | 40 | 79.26 | 75.81 | 72.37 | 68.92 |
| 19710 | .5000 | 1/2" | 12.700 | 3-3/4" | 2-1/4" | 1.604" | 79.83 | 76.36 | 72.89 | 69.42 |
| 19720 | .5156 | 33/64" | 13.096 | 4-1/4" | 2-3/8" | 1.654" | 107.28 | 102.62 | 97.95 | 93.29 |
| 19725 | .5312 | 17/32" | 13.492 | 4-1/4" | 2-3/8" | 1.704" | 110.07 | 105.28 | 100.50 | 95.71 |
| 19730 | .5315 | | 13.500 | 107 | 60 | 43 | 112.91 | 108.00 | 103.09 | 98.18 |
| 19735 | .5469 | 35/64" | 13.891 | 4-1/4" | 2-3/8" | 1.754" | 115.69 | 110.66 | 105.63 | 100.60 |
| 19740 | .5512 | | 14.000 | 107 | 60 | 45 | 118.51 | 113.36 | 108.20 | 103.05 |
| 19745 | .5625 | 9/16" | 14.287 | 4-1/2" | 2-1/2" | 1.804" | 129.23 | 123.61 | 117.99 | 112.37 |
| 19755 | .5781 | 37/64" | 14.683 | 4-1/2" | 2-1/2" | 1.854" | 134.62 | 128.77 | 122.91 | 117.06 |
| 19760 | .5906 | | 15.000 | 115 | 65 | 48 | 137.36 | 131.38 | 125.41 | 119.44 |
| 19765 | .5938 | 19/32" | 15.082 | 4-1/2" | 2-1/2" | 1.904" | 138.15 | 132.14 | 126.14 | 120.13 |
| 19770 | .6094 | 39/64" | 15.478 | 4-1/2" | 2-1/2" | 1.954" | 138.92 | 132.88 | 126.84 | 120.80 |
| 19780 | .6250 | 5/8" | 15.875 | 4-1/2" | 2-1/2" | 2.004" | 140.48 | 134.38 | 128.27 | 122.16 |
| 19785 | .6299 | | 16.000 | 115 | 65 | 51 | 144.22 | 137.95 | 131.68 | 125.41 |