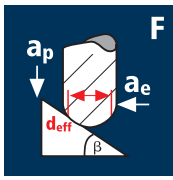


Application



Material

Hardened tool steel
42 - 48 HRC

Hardened tool steel
48 - 52 HRC

Hardened tool steel
52 - 56 HRC

Titanium alloys
> 300 HB
[Ti6Al4V]

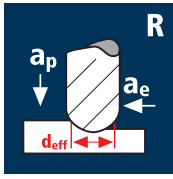
| d1 [mm] | z | vc [m/min] | f _s [mm] | a _s [mm] | a _e [mm] | d _{eff} [mm] | n [min ⁻¹] | vc [mm/min] | β [°] |
|---------|---|------------|---------------------|---------------------|---------------------|-----------------------|------------------------|-------------|-------|
| 1.00 | 2 | 120 | 0.026 | 0.030 | 0.090 | 0.91 | 41975 | 2185 | 45° |
| 2.00 | 2 | 220 | 0.038 | 0.030 | 0.120 | 1.72 | 40715 | 3095 | 45° |
| 3.00 | 2 | 270 | 0.058 | 0.050 | 0.150 | 2.59 | 33185 | 3850 | 45° |
| 4.00 | 2 | 270 | 0.074 | 0.050 | 0.180 | 3.39 | 25350 | 3750 | 45° |
| 5.00 | 2 | 270 | 0.084 | 0.050 | 0.210 | 4.17 | 20610 | 3460 | 45° |
| 6.00 | 2 | 270 | 0.090 | 0.050 | 0.230 | 4.94 | 17400 | 3130 | 45° |
| 8.00 | 2 | 270 | 0.098 | 0.080 | 0.280 | 6.67 | 12885 | 2525 | 45° |
| 10.00 | 2 | 270 | 0.106 | 0.080 | 0.310 | 8.22 | 10455 | 2215 | 45° |
| 12.00 | 2 | 270 | 0.116 | 0.100 | 0.340 | 9.89 | 8690 | 2015 | 45° |

| | | | | | | | | | |
|-------|---|-----|-------|-------|-------|------|-------|------|-----|
| 1.00 | 2 | 120 | 0.018 | 0.030 | 0.090 | 0.91 | 41975 | 1510 | 45° |
| 2.00 | 2 | 180 | 0.028 | 0.030 | 0.120 | 1.72 | 33310 | 1865 | 45° |
| 3.00 | 2 | 230 | 0.042 | 0.050 | 0.150 | 2.59 | 28265 | 2375 | 45° |
| 4.00 | 2 | 230 | 0.052 | 0.050 | 0.180 | 3.39 | 21595 | 2245 | 45° |
| 5.00 | 2 | 230 | 0.058 | 0.050 | 0.210 | 4.17 | 17555 | 2035 | 45° |
| 6.00 | 2 | 230 | 0.064 | 0.050 | 0.230 | 4.94 | 14820 | 1895 | 45° |
| 8.00 | 2 | 230 | 0.068 | 0.080 | 0.280 | 6.67 | 10975 | 1495 | 45° |
| 10.00 | 2 | 230 | 0.074 | 0.080 | 0.310 | 8.22 | 8905 | 1320 | 45° |
| 12.00 | 2 | 230 | 0.082 | 0.100 | 0.340 | 9.89 | 7405 | 1215 | 45° |

| | | | | | | | | | |
|-------|---|-----|-------|-------|-------|------|-------|------|-----|
| 1.00 | 2 | 120 | 0.018 | 0.030 | 0.090 | 0.91 | 41975 | 1510 | 45° |
| 2.00 | 2 | 140 | 0.028 | 0.030 | 0.120 | 1.72 | 25910 | 1450 | 45° |
| 3.00 | 2 | 180 | 0.042 | 0.050 | 0.150 | 2.59 | 22120 | 1860 | 45° |
| 4.00 | 2 | 180 | 0.052 | 0.050 | 0.180 | 3.39 | 16900 | 1760 | 45° |
| 5.00 | 2 | 180 | 0.058 | 0.050 | 0.210 | 4.17 | 13740 | 1595 | 45° |
| 6.00 | 2 | 180 | 0.064 | 0.050 | 0.230 | 4.94 | 11600 | 1485 | 45° |
| 8.00 | 2 | 180 | 0.068 | 0.080 | 0.280 | 6.67 | 8590 | 1170 | 45° |
| 10.00 | 2 | 180 | 0.074 | 0.080 | 0.310 | 8.22 | 6970 | 1030 | 45° |
| 12.00 | 2 | 180 | 0.082 | 0.100 | 0.340 | 9.89 | 5795 | 950 | 45° |

| | | | | | | | | | |
|-------|---|-----|-------|-------|-------|------|-------|------|-----|
| 1.00 | 2 | 110 | 0.026 | 0.030 | 0.090 | 0.91 | 38475 | 2000 | 45° |
| 2.00 | 2 | 110 | 0.038 | 0.030 | 0.120 | 1.72 | 20355 | 1545 | 45° |
| 3.00 | 2 | 140 | 0.058 | 0.050 | 0.150 | 2.59 | 17205 | 1995 | 45° |
| 4.00 | 2 | 140 | 0.074 | 0.050 | 0.180 | 3.39 | 13145 | 1945 | 45° |
| 5.00 | 2 | 140 | 0.084 | 0.050 | 0.210 | 4.17 | 10685 | 1795 | 45° |
| 6.00 | 2 | 140 | 0.090 | 0.050 | 0.230 | 4.94 | 9020 | 1625 | 45° |
| 8.00 | 2 | 140 | 0.098 | 0.080 | 0.280 | 6.67 | 6680 | 1310 | 45° |
| 10.00 | 2 | 140 | 0.106 | 0.080 | 0.310 | 8.22 | 5420 | 1150 | 45° |
| 12.00 | 2 | 140 | 0.116 | 0.100 | 0.340 | 9.89 | 4505 | 1045 | 45° |

Application



Material

Hardened tool steel
42 - 48 HRC

Hardened tool steel
48 - 52 HRC

Hardened tool steel
52 - 56 HRC

Titanium alloys
> 300 HB
[Ti6Al4V]

| d1 [mm] | z | vc [m/min] | f _s [mm] | a _s [mm] | a _e [mm] | d _{eff} [mm] | n [min ⁻¹] | vc [mm/min] | Q [mm ³ /min] |
|---------|---|------------|---------------------|---------------------|---------------------|-----------------------|------------------------|-------------|--------------------------|
| 1.00 | 2 | 100 | 0.034 | 0.180 | 0.200 | 0.77 | 41340 | 2810 | 101.2 |
| 2.00 | 2 | 153 | 0.058 | 0.280 | 0.400 | 1.39 | 35035 | 4065 | 455.2 |
| 3.00 | 2 | 153 | 0.073 | 0.360 | 0.600 | 1.95 | 24975 | 3645 | 787.6 |
| 4.00 | 2 | 153 | 0.087 | 0.480 | 0.800 | 2.60 | 18730 | 3260 | 1251.6 |
| 5.00 | 2 | 153 | 0.097 | 0.600 | 1.000 | 3.25 | 14985 | 2905 | 1744.3 |
| 6.00 | 2 | 153 | 0.105 | 0.720 | 1.200 | 3.90 | 12490 | 2620 | 2265.7 |
| 8.00 | 2 | 153 | 0.128 | 0.960 | 1.600 | 5.20 | 9365 | 2400 | 3682.7 |
| 10.00 | 2 | 153 | 0.145 | 1.200 | 2.000 | 6.50 | 7495 | 2175 | 5214.8 |
| 12.00 | 2 | 153 | 0.151 | 1.440 | 2.400 | 7.80 | 6245 | 1885 | 6516.7 |

| | | | | | | | | | |
|-------|---|-----|-------|-------|-------|------|-------|------|--------|
| 1.00 | 2 | 100 | 0.031 | 0.180 | 0.200 | 0.77 | 41340 | 2565 | 92.3 |
| 2.00 | 2 | 122 | 0.053 | 0.280 | 0.400 | 1.39 | 27940 | 2960 | 331.7 |
| 3.00 | 2 | 122 | 0.066 | 0.360 | 0.600 | 1.95 | 19915 | 2630 | 567.8 |
| 4.00 | 2 | 122 | 0.079 | 0.480 | 0.800 | 2.60 | 14935 | 2360 | 906.2 |
| 5.00 | 2 | 122 | 0.088 | 0.600 | 1.000 | 3.25 | 11950 | 2105 | 1261.8 |
| 6.00 | 2 | 122 | 0.095 | 0.720 | 1.200 | 3.90 | 9955 | 1890 | 1634.6 |
| 8.00 | 2 | 122 | 0.116 | 0.960 | 1.600 | 5.20 | 7470 | 1735 | 2661.3 |
| 10.00 | 2 | 122 | 0.132 | 1.200 | 2.000 | 6.50 | 5975 | 1575 | 3785.4 |
| 12.00 | 2 | 122 | 0.137 | 1.440 | 2.400 | 7.80 | 4980 | 1365 | 4714.5 |

| | | | | | | | | | |
|-------|---|-----|-------|-------|-------|------|-------|------|--------|
| 1.00 | 2 | 100 | 0.028 | 0.180 | 0.200 | 0.77 | 41340 | 2315 | 83.3 |
| 2.00 | 2 | 100 | 0.048 | 0.280 | 0.400 | 1.39 | 22900 | 2200 | 246.2 |
| 3.00 | 2 | 100 | 0.060 | 0.360 | 0.600 | 1.95 | 16325 | 1960 | 423.1 |
| 4.00 | 2 | 100 | 0.072 | 0.480 | 0.800 | 2.60 | 12245 | 1765 | 677.0 |
| 5.00 | 2 | 100 | 0.080 | 0.600 | 1.000 | 3.25 | 9795 | 1565 | 940.2 |
| 6.00 | 2 | 100 | 0.086 | 0.720 | 1.200 | 3.90 | 8160 | 1405 | 1212.9 |
| 8.00 | 2 | 100 | 0.106 | 0.960 | 1.600 | 5.20 | 6120 | 1300 | 1993.3 |
| 10.00 | 2 | 100 | 0.120 | 1.200 | 2.000 | 6.50 | 4895 | 1175 | 2820.7 |
| 12.00 | 2 | 100 | 0.125 | 1.440 | 2.400 | 7.80 | 4080 | 1020 | 3525.9 |

| | | | | | | | | | |
|-------|---|----|-------|-------|-------|------|-------|------|--------|
| 1.00 | 2 | 77 | 0.031 | 0.180 | 0.200 | 0.77 | 31830 | 1975 | 71.0 |
| 2.00 | 2 | 77 | 0.053 | 0.280 | 0.400 | 1.39 | 17635 | 1870 | 209.3 |
| 3.00 | 2 | 77 | 0.066 | 0.360 | 0.600 | 1.95 | 12570 | 1660 | 358.4 |
| 4.00 | 2 | 77 | 0.079 | 0.480 | 0.800 | 2.60 | 9425 | 1490 | 571.9 |
| 5.00 | 2 | 77 | 0.088 | 0.600 | 1.000 | 3.25 | 7540 | 1325 | 796.4 |
| 6.00 | 2 | 77 | 0.095 | 0.720 | 1.200 | 3.90 | 6285 | 1195 | 1031.7 |
| 8.00 | 2 | 77 | 0.116 | 0.960 | 1.600 | 5.20 | 4715 | 1095 | 1679.6 |
| 10.00 | 2 | 77 | 0.132 | 1.200 | 2.000 | 6.50 | 3770 | 995 | 2389.1 |
| 12.00 | 2 | 77 | 0.137 | 1.440 | 2.400 | 7.80 | 3140 | 860 | 2975.6 |