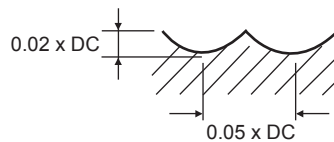


CUTTING DATA

| 100550, 104350, 105350, 112350 (2 Flute B/N) | | | | | | | | | | | | | |
|--|--------------------|------------------------------|---------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| VDI MATERIAL GROUP | MATERIAL | HRc | | Size (mm) | | | | | | | | | |
| | | | | 0.4 | 0.5 | 0.6 | 0.8 | 1.0 | 1.2 | 1.5 | 2.0 | 3.0 | |
| P | 10-11 | High alloy Steel, Tool Steel | 35-45 | v_c (m/min) | 65 | 80 | 95 | 125 | 155 | 180 | 225 | 300 | 300 |
| | | | | n | 51750 | 50955 | 50425 | 49760 | 49360 | 47770 | 47770 | 47770 | 31845 |
| | | | | f_z | 0.017 | 0.021 | 0.025 | 0.033 | 0.042 | 0.045 | 0.047 | 0.05 | 0.083 |
| | | | | f (mm/min) | 1760 | 2140 | 2520 | 3280 | 4145 | 4295 | 4490 | 4775 | 5285 |
| H | 38 | Hardened Steel | 40-50 | v_c (m/min) | 65 | 80 | 95 | 125 | 155 | 180 | 225 | 300 | 300 |
| | | | | n | 51750 | 50955 | 50425 | 49760 | 49360 | 47770 | 47770 | 47770 | 31845 |
| | | | | f_z | 0.017 | 0.021 | 0.025 | 0.033 | 0.042 | 0.045 | 0.047 | 0.05 | 0.083 |
| | | | | f (mm/min) | 1760 | 2140 | 2520 | 3280 | 4145 | 4295 | 4490 | 4775 | 5285 |
| | | Hardened Steel | 50-55 | v_c (m/min) | 55 | 70 | 85 | 115 | 140 | 160 | 205 | 250 | 250 |
| | | | | n | 43790 | 44585 | 45115 | 45780 | 44585 | 42460 | 43520 | 39805 | 26535 |
| | | | | f_z | 0.017 | 0.021 | 0.024 | 0.033 | 0.042 | 0.045 | 0.047 | 0.05 | 0.075 |
| | | | | f (mm/min) | 1485 | 1870 | 2165 | 3020 | 3745 | 3820 | 4090 | 3980 | 3980 |
| | | Hardened Steel | 55-65 | v_c (m/min) | 50 | 65 | 75 | 100 | 125 | 145 | 175 | 220 | 220 |
| | | | | n | 39805 | 41400 | 39805 | 39805 | 39805 | 38480 | 37155 | 35030 | 23355 |
| | | | | f_z | 0.015 | 0.019 | 0.023 | 0.03 | 0.038 | 0.039 | 0.042 | 0.045 | 0.067 |
| | | | | f (mm/min) | 1190 | 1570 | 1830 | 2385 | 3025 | 3000 | 3120 | 3150 | 3130 |
| | Hardened Steel | 65-70 | v_c (m/min) | 40 | 50 | 60 | 80 | 110 | 115 | 140 | 180 | 180 | |
| | | | n | 31845 | 31845 | 31845 | 31845 | 35030 | 30520 | 29720 | 28660 | 19105 | |
| | | | f_z | 0.014 | 0.017 | 0.022 | 0.029 | 0.033 | 0.038 | 0.039 | 0.04 | 0.061 | |
| | | | f (mm/min) | 890 | 1080 | 1400 | 1845 | 2310 | 2320 | 2315 | 2290 | 2330 | |
| | 40 | Chilled Cast Iron | v_c (m/min) | 65 | 80 | 95 | 125 | 155 | 190 | 235 | 310 | 310 | |
| | | | n | 51750 | 50955 | 50425 | 49760 | 49360 | 50425 | 49890 | 49360 | 32905 | |
| | | | f_z | 0.019 | 0.024 | 0.029 | 0.039 | 0.048 | 0.051 | 0.054 | 0.057 | 0.091 | |
| | | | f (mm/min) | 1965 | 2445 | 2925 | 3880 | 4735 | 5140 | 5385 | 5625 | 5985 | |
| 41 | Hardened Cast Iron | v_c (m/min) | 65 | 80 | 95 | 125 | 155 | 180 | 225 | 300 | 300 | | |
| | | n | 51750 | 50955 | 50425 | 49760 | 49360 | 47770 | 47770 | 47770 | 31845 | | |
| | | f_z | 0.017 | 0.021 | 0.025 | 0.033 | 0.042 | 0.045 | 0.047 | 0.05 | 0.083 | | |
| | | f (mm/min) | 1760 | 2140 | 2520 | 3280 | 4145 | 4295 | 4490 | 4775 | 5285 | | |

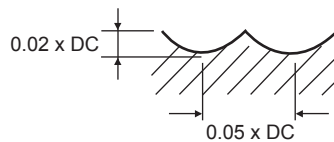


Recommended cutting depths are **maximum** depths, and **speeds and feeds are a starting point** based on these depths.
 All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up.
For long series and long necked tools it may be necessary to reduce feed rate by up to 50%.

v_c - cutting speed (m/min)
 n - RPM (rev/min)
 f_z - feed per tooth (mm)
 f - feed rate (mm/min)
 a_p - axial depth of cut
 a_e - radial depth of cut

CUTTING DATA

| 100550, 104350, 105350, 112350 (2 Flute B/N) | | | | | | | | | | | | | |
|--|----------------|------------------------------|----------------|---------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| VDI MATERIAL GROUP | MATERIAL | HRc | | Size (mm) | | | | | | | | | |
| | | | | 4.0 | 5.0 | 6.0 | 8.0 | 10.0 | 12.0 | 16.0 | 20.0 | | |
| P | 10-11 | High alloy Steel, Tool Steel | 35-45 | v_c (m/min) | 300 | 280 | 255 | 270 | 280 | 250 | 270 | 270 | |
| | | | | n | 23885 | 17830 | 13535 | 10745 | 8915 | 6635 | 5370 | 4295 | |
| | | | | f_z | 0.111 | 0.138 | 0.153 | 0.164 | 0.174 | 0.187 | 0.206 | 0.227 | |
| | | | | f (mm/min) | 5300 | 4920 | 4140 | 3525 | 3100 | 2480 | 2210 | 1950 | |
| H | 38 | Hardened Steel | 40-50 | v_c (m/min) | 300 | 280 | 255 | 270 | 280 | 250 | 270 | 270 | |
| | | | | n | 23885 | 17830 | 13535 | 10745 | 8915 | 6635 | 5370 | 4295 | |
| | | | | f_z | 0.111 | 0.138 | 0.153 | 0.164 | 0.174 | 0.187 | 0.206 | 0.227 | |
| | | | | f (mm/min) | 5300 | 4920 | 4140 | 3525 | 3100 | 2480 | 2210 | 1950 | |
| | | Hardened Steel | 50-55 | v_c (m/min) | 250 | 235 | 205 | 225 | 235 | 210 | 225 | 225 | |
| | | | | n | 19900 | 14965 | 10880 | 8955 | 7480 | 5570 | 4475 | 3580 | |
| | | | | f_z | 0.1 | 0.125 | 0.141 | 0.15 | 0.16 | 0.17 | 0.189 | 0.208 | |
| | | | | f (mm/min) | 3980 | 3740 | 3065 | 2685 | 2395 | 1895 | 1690 | 1490 | |
| | | 39 | Hardened Steel | 55-65 | v_c (m/min) | 220 | 210 | 190 | 200 | 205 | 190 | 200 | 200 |
| | | | | | n | 17515 | 13375 | 10085 | 7960 | 6525 | 5040 | 3980 | 3185 |
| | | | | | f_z | 0.09 | 0.113 | 0.125 | 0.134 | 0.144 | 0.155 | 0.169 | 0.188 |
| | | | | | f (mm/min) | 3150 | 3020 | 2520 | 2130 | 1880 | 1560 | 1345 | 1195 |
| | Hardened Steel | | 65-70 | v_c (m/min) | 180 | 165 | 150 | 165 | 165 | 150 | 160 | 160 | |
| | | | | n | 14330 | 10510 | 7960 | 6565 | 5255 | 3980 | 3185 | 2545 | |
| | | | | f_z | 0.079 | 0.1 | 0.109 | 0.119 | 0.13 | 0.131 | 0.133 | 0.129 | |
| | | | | f (mm/min) | 2260 | 2100 | 1735 | 1560 | 1365 | 1040 | 845 | 655 | |
| | 40 | Chilled Cast Iron | v_c (m/min) | 315 | 290 | 260 | 280 | 290 | 260 | 280 | 280 | | |
| | | | n | 25080 | 18470 | 13800 | 11145 | 9235 | 6900 | 5570 | 4455 | | |
| | | | f_z | 0.12 | 0.156 | 0.174 | 0.189 | 0.199 | 0.212 | 0.238 | 0.264 | | |
| | | | f (mm/min) | 6015 | 5760 | 4800 | 4210 | 3675 | 2925 | 2650 | 2350 | | |
| | 41 | Hardened Cast Iron | v_c (m/min) | 65 | 80 | 95 | 125 | 155 | 180 | 225 | 300 | | |
| | | | n | 51750 | 50955 | 50425 | 49760 | 49360 | 47770 | 47770 | 47770 | | |
| | | | f_z | 0.017 | 0.021 | 0.025 | 0.033 | 0.042 | 0.045 | 0.047 | 0.05 | | |
| | | | f (mm/min) | 1760 | 2140 | 2520 | 3280 | 4145 | 4295 | 4490 | 4775 | | |



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