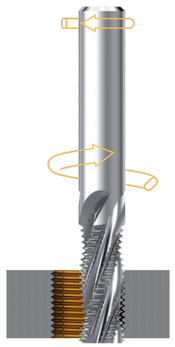
# DIXI 7920

$$n\ [rpm] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

| | | VDI 3323 | CARBIDE Vc [m/min] | TiAlN Vc [m/min] |
|---|---|---|---|---|
| P | Unalloyed steel, leaded steel | 1 - 5 | 85 | 100 |
| P | Low alloyed steel < 800 N/mm² | 6 - 9 | | 80 |
| P | High-alloy steel > 800 N/mm², stainless steel ferr.- marten. | 10 - 13 | | 50 |
| M | Austenitic stainless steel < 700 N/mm² | 14.1-14.2 | | 80 |
| M | Nickel-free stainless steel/DUPLEX >700 N/mm² | 14.3-14.4 | | 50 |
| K | Grey cast iron < 250 HB | 15 - 16 | 85 | 100 |
| K | Ductile, malleable, nodular cast iron > 250 HB | 17 - 20 | 55 | 80 |
| N | Wrought aluminium alloy < 12% Si | 21 - 22 | 220 | 285 |
| N | Cast aluminium alloy >12% Si | 23 - 25 | 150 | 220 |
| N | Copper alloy good machinability with Pb | 26 | 150 | 210 |
| N | Copper alloy with difficult machinability | 27 - 28 | 130 | 180 |
| N | Plastic, wood | 29 - 30 | 250 | 320 |
| N | Gold, silver | - | 150 | 210 |
| | Titanium, titanium alloy | 36 - 37 | 40 | 50 |




$$Vf\ center = \frac{n \times fz \times Z \times (M\text{-}D_1)}{M}$$

Feed per tooth fz [mm]

| Ø $D_1$ 0.90 - 2.00 | Ø $D_1$ 2.00 - 3.00 | Ø $D_1$ 3.00 - 4.00 | Ø $D_1$ 4.00 - 6.00 | Ø $D_1$ 6.00 - 10.00 | Ø $D_1$ 10.00 - 16.00 |
|---|---|---|---|---|---|
| 0.005 - 0.012 | 0.012 - 0.018 | 0.018 - 0.024 | 0.024 - 0.035 | 0.035 - 0.060 | 0.060 - 0.100 |
| 0.005 - 0.011 | 0.011 - 0.0165 | 0.017 - 0.022 | 0.022 - 0.035 | 0.035 - 0.060 | 0.060 - 0.090 |
| 0.005 - 0.010 | 0.010 - 0.015 | 0.015 - 0.02 | 0.020 - 0.030 | 0.030 - 0.050 | 0.050 - 0.080 |
| 0.005 - 0.010 | 0.010 - 0.015 | 0.015 - 0.02 | 0.020 - 0.030 | 0.030 - 0.050 | 0.050 - 0.080 |
| 0.004 - 0.009 | 0.009 - 0.014 | 0.014 - 0.018 | 0.018 - 0.025 | 0.025 - 0.050 | 0.050 - 0.070 |
| 0.006 - 0.014 | 0.014 - 0.021 | 0.021 - 0.028 | 0.028 - 0.040 | 0.040 - 0.070 | 0.070 - 0.110 |
| 0.005 - 0.012 | 0.012 - 0.018 | 0.018 - 0.024 | 0.024 - 0.035 | 0.035 - 0.060 | 0.060 - 0.100 |
| 0.007 - 0.015 | 0.015 - 0.023 | 0.023 - 0.03 | 0.030 - 0.045 | 0.045 - 0.080 | 0.080 - 0.120 |
| 0.008 - 0.017 | 0.017 - 0.026 | 0.026 - 0.034 | 0.034 - 0.050 | 0.050 - 0.090 | 0.090 - 0.140 |
| 0.006 - 0.014 | 0.014 - 0.021 | 0.021 - 0.028 | 0.028 - 0.040 | 0.040 - 0.070 | 0.070 - 0.110 |
| 0.009 - 0.020 | 0.020 - 0.030 | 0.030 - 0.04 | 0.040 - 0.060 | 0.060 - 0.100 | 0.100 - 0.160 |
| 0.005 - 0.012 | 0.012 - 0.018 | 0.018 - 0.024 | 0.024 - 0.035 | 0.035 - 0.060 | 0.060 - 0.100 |
| 0.005 - 0.012 | 0.012 - 0.018 | 0.018 - 0.024 | 0.024 - 0.035 | 0.035 - 0.060 | 0.060 - 0.100 |
| 0.007 - 0.010 | 0.010 - 0.013 | 0.013 - 0.029 | 0.030 - 0.034 | 0.034 - 0.055 | 0.055 - 0.070 |

Values based on use of cutting oil and oil in emulsion.The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !