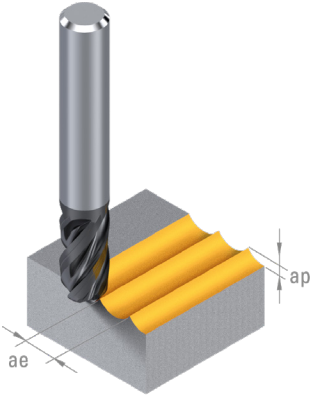


		VDI 3323		CARBIDE Vc [m/min]	DICUT Vc [m/min]	TiAIN Vc [m/min]	DIAMANT Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5				175		<0.50×ØD1	<0.15×ØD1
	Low alloyed steel < 800 N/mm²	6 - 9				150		<0.50×ØD1	<0.12×ØD1
	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13				125		<0.50×ØD1	<0.10×ØD1
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2				110		<0.50×ØD1	<0.10×ØD1
	Nickel-free stainless steel/ DUPLEX >700 N/mm²	14.3-14.4				100		<0.50×ØD1	<0.08×ØD1
K	Grey cast iron < 250 HB	15 - 16		225		250		<0.50× ØD1	<0.20×ØD1
	Ductile, malleable, nodular cast iron>250HB	17 - 20		185		205		<0.50×ØD1	<0.15×ØD1
N	Wrought aluminium alloy < 12% Si	21 - 22		325				<0.50×ØD1	<0.20×ØD1
	Cast aluminium alloy >12% Si	23 - 25		275				<0.50×ØD1	<0.18×ØD1
	Copper alloy good machinability with Pb	26		325	300			<0.50×ØD1	<0.20×ØD1
	Copper alloy with difficult machinability	27 - 28		185	300			<0.50×ØD1	<0.15×ØD1
	Plastic, wood	29 - 30		250				<0.50× ØD1	<0.25×ØD1
	Graphite	-					250	<0.50×ØD1	<0.25×ØD1
	Gold, silver	-		200				<0.50×ØD1	<0.10×ØD1
S	Refractory alloy, Fe, Ni, Co base	31- 35				55		<0.25×ØD1	<0.05×ØD1
	Titanium, titanium alloy	36 - 37		70		75		<0.50×ØD1	<0.12×ØD1

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

$$V_f \text{ [mm/min]} = n \text{ [rpm]} \times f_z \text{ [mm]} \times Z$$

Feed per tooth fz [mm]							
Ø D ₁ 0.06 - 0.20	Ø D ₁ 0.30 - 0.60	Ø D ₁ 0.70 - 1.50	Ø D ₁ 1.60 - 2.50	Ø D ₁ 3.00 - 6.00	Ø D ₁ 7.00 - 10.00	Ø D ₁ 12.00 - 20.00	
0.0005 - 0.0020	0.003 - 0.006	0.007 - 0.015	0.016 - 0.025	0.030 - 0.060	0.070 - 0.100	0.120 - 0.200	
0.0004 - 0.0018	0.003 - 0.005	0.006 - 0.014	0.014 - 0.023	0.028 - 0.055	0.060 - 0.090	0.110 - 0.180	
0.0004 - 0.0016	0.002 - 0.005	0.006 - 0.012	0.013 - 0.020	0.024 - 0.050	0.060 - 0.080	0.100 - 0.160	
0.0004 - 0.0016	0.002 - 0.005	0.006 - 0.012	0.013 - 0.020	0.024 - 0.050	0.060 - 0.080	0.100 - 0.160	
0.0003 - 0.0014	0.002 - 0.004	0.005 - 0.011	0.011 - 0.018	0.022 - 0.040	0.050 - 0.070	0.080 - 0.140	
0.0006 - 0.0024	0.004 - 0.007	0.008 - 0.018	0.019 - 0.030	0.036 - 0.070	0.080 - 0.120	0.140 - 0.240	
0.0005 - 0.0020	0.003 - 0.006	0.007 - 0.015	0.016 - 0.025	0.030 - 0.060	0.070 - 0.100	0.120 - 0.200	
0.0007 - 0.0030	0.005 - 0.009	0.011 - 0.023	0.024 - 0.038	0.046 - 0.090	0.110 - 0.150	0.180 - 0.300	
0.0006 - 0.0026	0.004 - 0.008	0.009 - 0.020	0.021 - 0.033	0.040 - 0.080	0.090 - 0.130	0.160 - 0.260	
0.0007 - 0.0030	0.005 - 0.009	0.011 - 0.023	0.024 - 0.038	0.046 - 0.090	0.110 - 0.150	0.180 - 0.300	
0.0006 - 0.0024	0.004 - 0.007	0.008 - 0.018	0.019 - 0.030	0.036 - 0.070	0.080 - 0.120	0.140 - 0.240	
0.0007 - 0.0030	0.005 - 0.009	0.011 - 0.023	0.024 - 0.038	0.046 - 0.090	0.110 - 0.150	0.180 - 0.300	
0.0010 - 0.0040	0.006 - 0.012	0.014 - 0.030	0.032 - 0.050	0.060 - 0.120	0.140 - 0.200	0.240 - 0.400	
0.0006 - 0.0026	0.004 - 0.008	0.009 - 0.020	0.021 - 0.033	0.040 - 0.080	0.090 - 0.130	0.160 - 0.260	
0.0002 - 0.0010	0.002 - 0.003	0.004 - 0.008	0.008 - 0.013	0.016 - 0.030	0.040 - 0.050	0.060 - 0.100	
0.0005 - 0.0020	0.003 - 0.006	0.007 - 0.015	0.016 - 0.025	0.030 - 0.060	0.070 - 0.100	0.120 - 0.200	

Values based on cutting oil use. 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 !