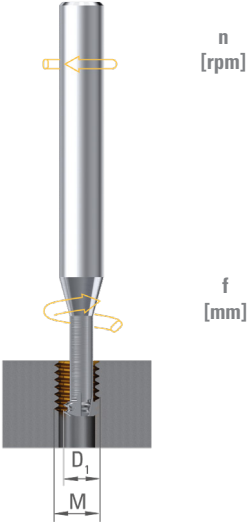


		VDI 3323		CARBIDE Vc[m/min]	TiAIN Vc [m/min]	CUTINOX Vc[m/min]
P	Unalloyed steel, leaded steel	1 - 5		70	115	135
	Low alloyed steel < 800 N/mm²	6 - 9			105	115
	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13			90	100
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2			85	95
	Nickel-free stainless steel/DUPLEX >700 N/mm²	14.3-14.4			80	80
K	Grey cast iron < 250 HB	15 - 16		135		180
	Ductile, malleable, nodular cast iron > 250 HB	17 - 20		70		105
N	Wrought aluminium alloy < 12% Si	21 - 22		150		
	Cast aluminium alloy >12% Si	23 - 25		115		
	Copper alloy good machinability with Pb	26		140		
	Copper alloy with difficult machinability	27 - 28		110		
	Plastic, wood	29 - 30		115		
	Gold, silver	-		140		
S	Refractory alloy, Fe, Ni, Co base	31 - 35		35		45
	Titanium, titanium alloy	36 - 37		75		70

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

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

Feed per tooth fz [mm]							
Ø D ₁ 0.20 - 0.40	Ø D ₁ 0.40 - 0.60	Ø D ₁ 0.60 - 1.10	Ø D ₁ 1.10 - 1.60	Ø D ₁ 1.60 - 2.40	Ø D ₁ 2.40 - 5.00	Ø D ₁ 5.00 - 8.00	
0.0018 - 0.0040	0.004 - 0.007	0.007 - 0.012	0.012 - 0.018	0.018 - 0.026	0.026 - 0.056	0.055 - 0.080	
0.0016 - 0.0036	0.004 - 0.006	0.006 - 0.011	0.011 - 0.016	0.016 - 0.024	0.024 - 0.050	0.050 - 0.080	
0.0014 - 0.0032	0.004 - 0.005	0.005 - 0.010	0.010 - 0.014	0.014 - 0.022	0.022 - 0.046	0.045 - 0.070	
0.0014 - 0.0032	0.004 - 0.005	0.005 - 0.010	0.010 - 0.014	0.014 - 0.022	0.022 - 0.046	0.045 - 0.070	
0.0013 - 0.0029	0.003 - 0.005	0.005 - 0.009	0.009 - 0.013	0.013 - 0.019	0.019 - 0.040	0.040 - 0.060	
0.0022 - 0.0050	0.006 - 0.008	0.008 - 0.015	0.015 - 0.022	0.022 - 0.034	0.034 - 0.070	0.070 - 0.110	
0.0016 - 0.0036	0.004 - 0.006	0.006 - 0.011	0.011 - 0.016	0.016 - 0.024	0.024 - 0.050	0.050 - 0.080	
0.0027 - 0.0061	0.007 - 0.010	0.010 - 0.019	0.019 - 0.027	0.027 - 0.041	0.041 - 0.086	0.085 - 0.130	
0.0022 - 0.0050	0.006 - 0.008	0.008 - 0.015	0.015 - 0.022	0.022 - 0.034	0.034 - 0.070	0.070 - 0.110	
0.0027 - 0.0061	0.007 - 0.010	0.010 - 0.019	0.019 - 0.027	0.027 - 0.041	0.041 - 0.086	0.085 - 0.130	
0.0022 - 0.0050	0.006 - 0.008	0.008 - 0.015	0.015 - 0.022	0.022 - 0.034	0.034 - 0.070	0.070 - 0.110	
0.0032 - 0.0072	0.008 - 0.012	0.012 - 0.022	0.022 - 0.032	0.032 - 0.048	0.048 - 0.100	0.100 - 0.150	
0.0024 - 0.0054	0.006 - 0.009	0.009 - 0.017	0.017 - 0.024	0.024 - 0.036	0.036 - 0.076	0.075 - 0.110	
0.0008 - 0.0018	0.002 - 0.003	0.003 - 0.006	0.006 - 0.008	0.008 - 0.012	0.012 - 0.026	0.025 - 0.040	
0.0019 - 0.0043	0.005 - 0.007	0.007 - 0.013	0.013 - 0.019	0.019 - 0.029	0.029 - 0.060	0.060 - 0.090	

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 !