CUTTING CONDITIONS

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

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

	Materials to be machined		CARBIDE Vc [m/min]		TiN Vc [m/min]		DICUT - TiAlN Vc [m/min]	
P	Unalloyed steel / Low alloyed steel	< 600 N/mm²	**40**	60	**50**	70	**50**	70
P	Lead alloyed cutting steel		**60**	90				
P	High alloyed steel	700 – 1500 N/mm²	**15**	30	**20**	40	**20**	40
M	Stainless steel	400 – 700 N/mm²	**35**	50	**40**	60	**40**	60
K	Grey cast iron / Nodular pearlitic iron	< 250 HB	**50**	80	**60**	80	**60**	80
K	Nodular ferritic cast iron / Malleable cast iron		**30**	50	**40**	60	**40**	60
S	Titanium, titanium alloys		**30**	50				
N	Copper alloys - easy to machine (brass - bronze)		**80**	100				
N	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	**40**	70	**50**	80	**50**	80
N	Aluminium alloys	Si < 8%	**80**	100			**90**	110
N	Plastic		**30**	60				
N	Gold, silver		**50**	80				

Feed per revolution f [mm]

Ø D_1 0.20 - 0.40	Ø D_1 0.40 - 0.60	Ø D_1 0.60 - 0.80	Ø D_1 0.80 - 1.00	Ø D_1 1.00 - 1.20	Ø D_1 1.20 - 1.40	Ø D_1 1.40 - 1.60	Ø D_1 1.60 - 1.80	Ø D_1 1.80 - 2.00	Ø D_1 2.00 - 2.50
0.005 - 0.013	**0.010** - 0.018	**0.014** - 0.04	**0.02** - 0.05	**0.04** - 0.06	**0.04** - 0.09	**0.06** - 0.10	**0.08** - 0.11		
0.005 - 0.013	**0.010** - 0.018	**0.014** - 0.04	**0.02** - 0.05	**0.04** - 0.06	**0.04** - 0.09	**0.06** - 0.10	**0.08** - 0.11		
0.003 - 0.009	**0.007** - 0.013	**0.010** - 0.03	**0.02** - 0.05	**0.03** - 0.04	**0.03** - 0.06	**0.04** - 0.07	**0.06** - 0.08		
0.005 - 0.010	**0.008** - 0.014	**0.012** - 0.03	**0.02** - 0.035	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.08		
0.004 - 0.010	**0.008** - 0.014	**0.012** - 0.03	**0.02** - 0.035	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.08		
0.004 - 0.010	**0.008** - 0.014	**0.012** - 0.03	**0.02** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.08		
0.003 - 0.009	**0.007** - 0.013	**0.010** - 0.03	**0.02** - 0.04	**0.03** - 0.04	**0.03** - 0.06	**0.04** - 0.07	**0.06** - 0.08		
0.006 - 0.020	**0.013** - 0.028	**0.018** - 0.05	**0.03** - 0.06	**0.05** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.10** - 0.17		
0.005 - 0.013	**0.010** - 0.018	**0.014** - 0.04	**0.02** - 0.05	**0.04** - 0.06	**0.04** - 0.09	**0.06** - 0.10	**0.08** - 0.11		
0.006 - 0.020	**0.013** - 0.028	**0.018** - 0.05	**0.03** - 0.06	**0.05** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.10** - 0.17		
0.008 - 0.028	**0.018** - 0.040	**0.025** - 0.08	**0.04** - 0.08	**0.07** - 0.13	**0.08** - 0.19	**0.10** - 0.22	**0.14** - 0.24		
0.006 - 0.020	**0.013** - 0.028	**0.018** - 0.05	**0.03** - 0.06	**0.05** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.10** - 0.17		

D_1 < 1mm ⇒ Vc - 30 %