DIXI 1132 - 1134 - 1135 - 1138

CUTTING CONDITIONS

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

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

Feed per revolution   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			40	60	40	60
M	Stainless steel	400 – 700 N/mm²	40	60	50	70	50	70
M	DUPLEX stainless steel	> 800 N/mm²	20	40	30	50	30	50
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	Special alloys / Heat resistant stainless steel	Inconel Nimonic Hastelloy	15	25	20	40	20	40
S	Titanium, titanium alloys		35	55				
N	Copper alloys - easy to machine (brass - bronze)		80	100				
N	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	40	70	60	90	60	90
N	Aluminium alloys	Si < 8%	80	100			90	130
N	Plastic		30	60				
N	Gold, silver		50	80				

Ø D₁ 0.20 - 0.40	Ø D₁ 0.40 - 0.60	Ø D₁ 0.60 - 0.80	Ø D₁ 0.80 - 1.00	Ø D₁ 1.00 - 1.20	Ø D₁ 1.20 - 1.40	Ø D₁ 1.40 - 1.60	Ø D₁ 1.60 - 1.80	Ø D₁ 1.80 - 2.00	Ø D₁ 2.00 - 2.50
0.003 - 0.010	0.008 - 0.015	0.012 - 0.018	0.015 - 0.020	0.018 - 0.025	0.022 - 0.030	0.026 - 0.035	0.030 - 0.045	0.034 - 0.055	0.038 - 0.070
0.003 - 0.010	0.008 - 0.015	0.012 - 0.018	0.015 - 0.020	0.018 - 0.025	0.022 - 0.030	0.026 - 0.035	0.030 - 0.045	0.034 - 0.055	0.038 - 0.070
0.003 - 0.010	0.008 - 0.015	0.012 - 0.018	0.015 - 0.020	0.018 - 0.025	0.022 - 0.030	0.026 - 0.035	0.030 - 0.045	0.034 - 0.055	0.038 - 0.070
0.003 - 0.010	0.008 - 0.015	0.012 - 0.018	0.015 - 0.020	0.018 - 0.025	0.022 - 0.030	0.026 - 0.035	0.030 - 0.045	0.034 - 0.055	0.038 - 0.070
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D_1 < 1mm $\Rightarrow$ Vc - 30 %