

CONDITIONS DE COUPE

Matières à usiner		CARBURE		TiN		DICUT - TiAIN	
		Vc [m/min]		Vc [m/min]		Vc [m/min]	
<b>P</b>	Acier non allié / faiblement allié	< 600 N/mm <sup>2</sup>	40 60	50 70		50 70	
<b>P</b>	Acier de décolletage au plomb		60 90				
<b>P</b>	Acier fortement allié	700 – 1500 N/mm <sup>2</sup>		40 60		40 60	
<b>M</b>	Acier inoxydable	400 – 700 N/mm <sup>2</sup>	40 60	50 70		50 70	
<b>M</b>	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm <sup>2</sup>	20 40	30 50		30 50	
<b>K</b>	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	50 80	60 80		60 80	
<b>K</b>	Fonte à graphite sphéroïdal ferritique / Fonte malléable		30 50	40 60		40 60	
<b>S</b>	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	15 25	20 40		20 40	
<b>S</b>	Titane, alliage de titane		35 55				
<b>N</b>	Alliage de cuivre / bonne usinabilité (laiton – bronze)		80 100				
<b>N</b>	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	40 70	60 90		60 90	
<b>N</b>	Alliage d'aluminium	Si < 8%	80 100			90 130	
<b>N</b>	Plastique		30 60				
<b>N</b>	Or, argent		50 80				

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

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

Avance par tour **f [mm]**

Ø D <sub>1</sub> 0.20 - 0.40	Ø D <sub>1</sub> 0.40 - 0.60	Ø D <sub>1</sub> 0.60 - 0.80	Ø D <sub>1</sub> 0.80 - 1.00	Ø D <sub>1</sub> 1.00 - 1.20	Ø D <sub>1</sub> 1.20 - 1.40	Ø D <sub>1</sub> 1.40 - 1.60	Ø D <sub>1</sub> 1.60 - 1.80	Ø D <sub>1</sub> 1.80 - 2.00	Ø D <sub>1</sub> 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
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**D<sub>1</sub> < 1mm ⇒ Vc - 30 %**