



performances

Recommendations
Recomendación
Suggerimento

N° 1

N° 2

Autres
Others
Otro
Altre
soluzioni

Vc = vitesse speed velocidad velocità: m/min.

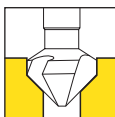
Vf = avance feed avance avanzamento: mm/min.

$Vc \times 1000$ Tours par min. Rev. / min.
 $\pi \times \emptyset$ Giri / min. revoluciones por minuto.

Ébavurage • Chanfreinage Deburring • Countersinking

Desbarbado • Avellanado

Svasatura • Sbavatura



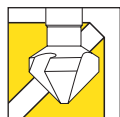
Matière Material Materiale			HSS-Co	HSS-Co + TiN	HSS 8% Co	HSS 8% Co + Red'X	Carbure Carbide Metallo Duro	Carbure Carbide + Hard'X	HSS-Co	HSS-Co + TiN	HSS-Co	HSS-Co + TiN
Pages	Páginas	Page	54 ~ 65		51 ~ 58		50 ~ 64		68 ~ 69		70 ~ 71	
P	Aciers / Steels Aceros / Acciai ≤ 500 N/mm²	Vc	17~22	17~22	35~45	35~45	40~80	40~80	35~45	35~45	35~45	35~45
		Ø 10	85	85	165	165	250	250	165	165	165	165
		Ø 20	45	45	85	85	125	125	85	85	85	85
	Aciers / Steels Aceros / Acciai 500 ~ 800 N/mm²	Vc	10~15	10~15	20~30	20~30	30~60	30~60	20~30	20~30	20~30	20~30
		Ø 10	60	60	110	110	170	170	110	110	110	110
		Ø 20	30	30	55	55	85	85	55	55	55	55
	Aciers / Steels Aceros / Acciai 800 ~ 1000 N/mm²	Vc	8~12	8~12	16~20	16~20	20~40	20~40	15~20	15~20	15~20	15~20
		Ø 10	35	35	55	55	100	100	55	55	55	55
		Ø 20	25	25	35	35	60	60	35	35	35	35
M	Inox / Stainless steel Aceros Inoxidables 1000 ~ 1300 N/mm²	Vc	6~10	6~10	12~15	12~15	20~40	20~40	12~15	12~15	12~15	12~15
		Ø 10	30	30	45	45	100	100	45	45	45	45
		Ø 20	15	15	25	25	60	60	25	25	25	25
H	Acier anti-abrasion / Abrasive tough Steel Acero resistente a la abrasión < 420 HB	Vc				12~15	15~20	15~20				
		Ø 10				40	55	55				
		Ø 20				30	35	35				
S	Bronze dur Inconel, Nimonic Hard bronze Bronze / Bronzo duro	Vc			4~6	4~6	10~12	10~12				
		Ø 10			16	16	30	30				
		Ø 20			8	8	16	16				
H	Acier traité / Treated steel Acero tratado / Acciai trattati ≥ 60 HRC	Vc					8~10	10~12				
		Ø 10					20	30				
		Ø 20					10	16				
K	Fonte / Cast iron Fundición / Ghisa	Vc	15~25	15~25	20~40	20~40	40~80	40~80	20~40	20~40	20~40	20~40
		Ø 10	70	70	125	125	250	250	125	125	125	125
		Ø 20	40	40	75	75	150	150	75	75	75	75
N	Aluminium Alluminio	Vc	35~45	35~45	50~60	50~60	40~100	40~100	50~60	50~60	50~60	50~60
		Ø 10	200	200	255	255	350	350	255	255	255	255
		Ø 20	130	130	180	180	230	230	180	180	180	180
	Laiton / Brass Latón / Ottone Bronze / Bronze Bronze / Bronzo	Vc	20~30	20~30	30~40	30~40			30~40	30~40	30~40	30~40
		Ø 10	120	120	150	150			150	150	150	150
		Ø 20	85	85	110	110			110	110	110	110
	Cuivre / Copper Cobre / Rame	Vc	15~25	15~25	20~30	20~30	50~80	50~80	20~30	20~30	20~30	20~30
		Ø 10	95	95	120	120	300	300	120	120	120	120
		Ø 20	60	60	80	80	200	200	80	80	80	80
	Stratifié / Laminated Laminados / Laminati	Vc	35~70	35~70	35~70	35~70			50~100	50~100	50~100	50~100
		Ø 10	300	300	300	300			400	400	400	400
		Ø 20	200	200	200	200			300	300	300	300
	Nylon PVC / Plastics Plásticos / Plastiche	Vc	35~70	35~70	35~70	35~70			50~100	50~100	50~100	50~100
		Ø 10	400	400	400	400			450	450	450	450
		Ø 20	300	300	300	300			350	350	350	350
		Vc	35~70	35~70	35~70	35~70			50~100	50~100	50~100	50~100
		Ø 30	250	250	250	250			300	300	300	300



magafor *Le choix! The choice! La elección! La scelta!*

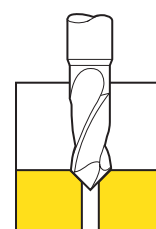
Contournage Contouring

Contorneado
Scontornatura



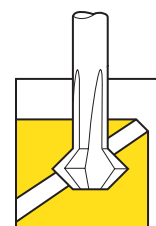
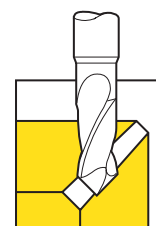
Autres solutions Other solutions

Oltre soluzioni
Altre soluzioni



1 = MULTI-V®
10 operations

> p. 90 ~ 95

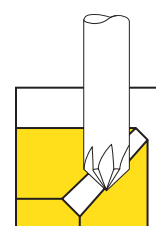
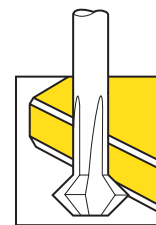


Bi-face

Fraises à chanfreiner
avant et arrière
Front and back
chamfering

Avellanadores
frontal y trasero
Frese per sbavare
in spinta ed in trazione

> p. 100



Fraises à angler
multident
Multi-flutes
conical cutters

Fresas cónicas multilabio
Frese multi-denti per
smussatura

> p. 61

Matière Material Materiale			HSS-Co	HSS-Co + TiN	HSS 8% Co	HSS 8% Co + Red'X	Carbure Carbide Metallo Duro	Carbure Carbide + Hard'X
Pages	Páginas	Pagine	54 ~ 65		51 ~ 58		50 ~ 64	
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		Ø 10 Vf	85	85	165	165	250	250
		Ø 20	45	45	85	85	125	125
		Ø 30	30	30	55	55	85	85
	Aciers / Steels Aceros / Acciai 500 ~ 800 N/mm²	Vc	10~15	10~15	20~30	20~30	30~60	30~60
		Ø 10 Vf	60	60	110	110	170	170
		Ø 20	30	30	55	55	85	85
		Ø 30	20	20	35	35	60	60
	Aciers / Steels Aceros / Acciai 800 ~ 1000 N/mm²	Vc	8~12	8~12	16~20	16~20	20~40	20~40
		Ø 10 Vf	35	35	55	55	100	100
		Ø 20	25	25	35	35	60	60
		Ø 30	15	15	25	25	45	45
M	Inox / Stainless steel Aceros Inoxidables 1000 ~ 1300 N/mm²	Vc	6~10	6~10	12~15	12~15	20~40	20~40
		Ø 10 Vf	30	30	45	45	100	100
		Ø 20	15	15	25	25	60	60
		Ø 30	10	10	20	20	40	40
H	Acier anti-abrasion / Abrasive tough Steel Acero resistente a la abrasión < 420 HB	Vc				12~15	15~20	15~20
		Ø 10 Vf				40	55	55
		Ø 20				30	35	35
		Ø 30				20	25	25
S	Bronze dur Inconel, Nimonic Hard bronze Bronze / Bronzo duro	Vc			4~6	4~6	10~12	10~12
		Ø 10 Vf			16	16	30	30
		Ø 20			8	8	16	16
		Ø 30			6	6	10	10
H	Acier traité / Treated steel Acero tratado / Acciai trattati ≥ 60 HRC	Vc					8~10	10~12
		Ø 10 Vf					20	30
		Ø 20					10	16
		Ø 30					8	10
K	Fonte / Cast iron Fundición / Ghisa	Vc	15~25	15~25	20~40	20~40	40~80	40~80
		Ø 10 Vf	70	70	125	125	250	250
		Ø 20	40	40	75	75	150	150
		Ø 30	30	30	50	50	100	100
N	Aluminium Alluminio	Vc	35~45	35~45	50~60	50~60	40~100	40~100
		Ø 10 Vf	200	200	255	255	350	350
		Ø 20	130	130	180	180	230	230
		Ø 30	110	110	150	150	200	200
	Laiton / Brass Latón / Ottone Bronze / Bronzo	Vc	20~30	20~30	30~40	30~40		
		Ø 10 Vf	120	120	150	150		
		Ø 20	85	85	110	110		
		Ø 30	70	70	90	90		
	Cuivre / Copper Cobre / Rame	Vc	15~25	15~25	20~30	20~30	50~80	50~80
		Ø 10 Vf	95	95	120	120	300	300
		Ø 20	60	60	80	80	200	200
		Ø 30	45	45	65	65	175	175
	Stratifié / Laminated Laminados / Laminati	Vc	35~70	35~70	35~70	35~70		
		Ø 10 Vf	300	300	300	300		
		Ø 20	200	200	200	200		
		Ø 30	150	150	150	150		
	Nylon PVC / Plastics Plásticos / Plastiche	Vc	35~70	35~70	35~70	35~70		
		Ø 10 Vf	400	400	400	400		
		Ø 20	300	300	300	300		
		Ø 30	250	250	250	250		



Chanfreinage • Lamage / Contersinking • Counterboring
Avelanado • Refrentado / Sbavatura • Svatsatura