

DIAMETAL®

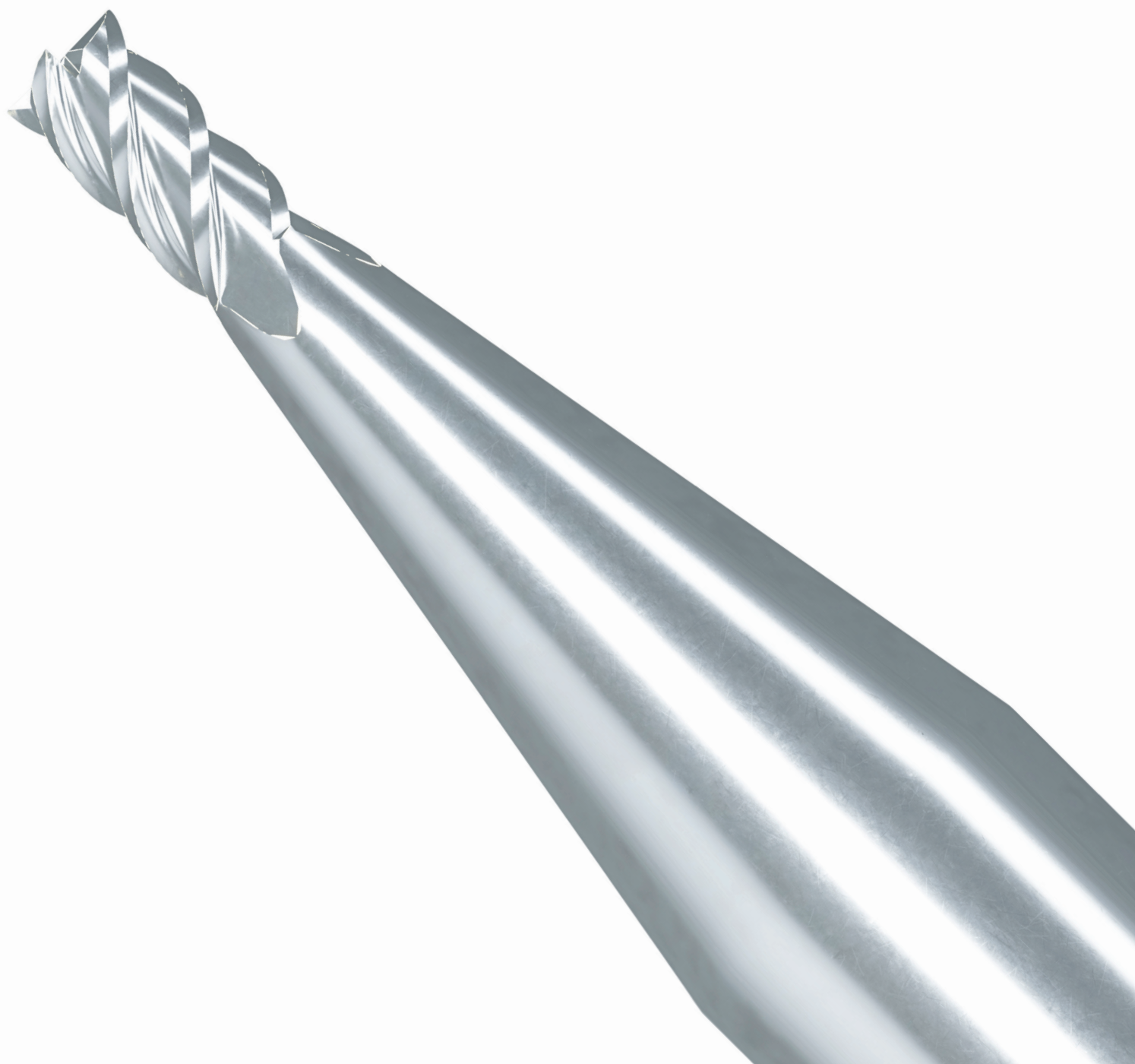
DIAmi 11

FR-IT

DIAm11

Solutions complètes
pour le fraisage

*Soluzioni complete
per le operazioni di fresatura*



DIAmill

Table des matières
Indice dei contenuti

DIAmill

Applications
Applicazioni

MI0627-NR01101

Micro fraise 1 dent rainure droite 3/4
Microfresa 1 dente a dentatura dritta 3/4

MI0110-NR01101

Micro fraise
Microfresa

MI0110-NR01102

Micro fraise de finition
Microfresa di finitura

MI0112-NR01119

Fraise en bout avec rayon Z2
Fresa cilindrica con raggio d'angolo Z2

MI0112-AR01116

Fraise en bout avec rayon Z3
Fresa cilindrica con raggio d'angolo Z3

MI0112-AR01117

Fraise en bout avec rayon Z4
Fresa cilindrica con raggio d'angolo Z4

MI0114-NR01120

Fraise en bout avec chanfrein
Fresa cilindrica con smusso d'angolo

MI0114-NR01103 / MI0115-NR01103

Fraises à haut rendement
Fresa ad alte prestazioni

MI0114-SR01104 / MI0115-SR01104

Fraises à haut rendement
Fresa ad alte prestazioni

MI0116-NR01102

Fraise en bout hémisphérique Z2
Fresa cilindrica emisférica Z2

MI0116-AR01101

Fraise en bout hémisphérique Z4
Fresa cilindrica emisférica Z4

MI0418-NR01101

Fraise à angler frontale 90°
Fresa a smussare frontale 90°

MI0418-AR01104

Fraise à angler frontale 90°
Fresa a smussare frontale 90°

24

26

30

32

36

38

40

42

44

46

48

50

52

54

56

MI0419-NR01101

Fraise à angler double 90°
Fresa a smussare doppia 90°

MI0420-NR01101

Fraise à angler sphérique
Fresa a smussare sferica

MI0112-SR04105

Micro fraises céramique
Microfresa in ceramica

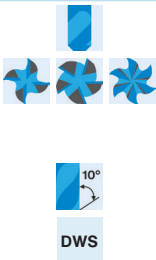
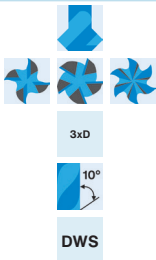
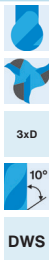
58
60
62

		Outil Utensile			
Géométrie frontale Geometria frontale					
Nombre de dents Numero di denti					
Profondeur Profondità					
Angle d'hélice Angolo dell'elica					
Revêtement Rivestimento		DWS	DWT	DWS	DWT
Codification Codifica		MI0627-NR01101	MI0627-NR01101	MI0110-NR01101	MI0110-NR01101
					
Pages Pagina		30	30	32	32
ISO	Matières à usiner Materiali da lavorare	Ø 0.20 - 6.00	Ø 0.20 - 6.00	Ø 0.20 - 6.00	Ø 0.30 - 6.00
P1	Aciers de décolletage Acciai automatici	▶ ▶ ▶		▶ ▶ ▶	
P2	Aciers de décolletage sans plomb Acciai automatici senza piombo	▶ ▶ ▶		▶ ▶ ▶	
P3	Aciers non alliés (Rm < 800 N/mm²) Acciai non legati (Rm < 800 N/mm²)	▶ ▶ ▶		▶ ▶ ▶	
P4	Aciers faiblement alliés (Rm < 900 N/mm²) Acciai debolmente legati (Rm < 900 N/mm²)	▶ ▶ ▶		▶ ▶ ▶	
P5	Aciers fortement alliés (Rm < 1200 N/mm²) Acciai fortemente legati (Rm < 1200 N/mm²)	▶ ▶		▶ ▶	
M1	Aciers inoxydables ferritiques Acciai inossidabili ferritici	▶ ▶ ▶		▶ ▶ ▶	
M2	Aciers inoxydables martensitiques Acciai inossidabili martensitici	▶ ▶ ▶		▶ ▶ ▶	
M3	Aciers inoxydables austénitiques Acciai inossidabili austenitici	▶ ▶ ▶		▶ ▶ ▶	
K1	Fontes Ghise	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶
N1	Fontes d'aluminium Fusioni d'alluminio	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N2	Alliages d'aluminium Leghe d'alluminio	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N3	Laiton. Bronze Ottone. Bronzo	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N4	Laiton sans plomb Ottone senza piombo	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N5	Cuivre Rame	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N6	Métaux précieux Metalli preziosi	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N7	Platine. Palladium Platino. Palladio	▶	▶ ▶ ▶	▶	▶ ▶ ▶
N8	Matières plastiques Materiali plastici	▶	▶ ▶ ▶	▶	▶ ▶ ▶
S1	Titane pur Titanio puro	▶ ▶ ▶		▶ ▶ ▶	
S2	Alliages de titane Leghe di titanio	▶ ▶ ▶		▶ ▶ ▶	
S3	Superalliages (Cr. Co. Ni) Superleghe (Cr. Co. Ni)	▶ ▶ ▶		▶ ▶ ▶	
H1	Aciers trempés (< 55 HRC) Acciai temprati (< 55 HRC)	▶		▶	
H2	Aciers trempés (> 55 HRC) Acciai temprati (> 55 HRC)				

Micro fraise Microfresa					
90°  2xD  DWS	90°  2xD  DWT	R  1.5xD 3xD  DWS	R  2.5xD  DWX	R  2.5xD  DWX	45°  2.5xD  DWS
MI0110-NR01102	MI0110-NR01102	MI0112-NR01119	MI0112-AR01116	MI0112-AR01117	MI0114-NR01120
					
36	36	38	40	42	44
Ø 0.50 - 6.00	Ø 0.50 - 6.00	Ø 0.20 - 3.00	Ø 0.50 - 6.00	Ø 1.00 - 6.00	Ø 0.30 - 6.00
▶ ▶ ▶		▶ ▶ ▶			▶ ▶ ▶
▶ ▶ ▶		▶ ▶ ▶			▶ ▶ ▶
▶ ▶ ▶		▶ ▶ ▶			▶ ▶ ▶
▶ ▶ ▶		▶ ▶ ▶			▶ ▶ ▶
▶ ▶		▶ ▶			▶ ▶
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶
▶ ▶ ▶	▶	▶ ▶ ▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶	▶ ▶ ▶	▶ ▶			▶ ▶
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶
▶		▶			▶ ▶

Valeurs indicatives
Valori indicativi

		Micro fraise Microfresa			
Outil Utensile					
Géométrie frontale Geometria frontale					
Nombre de dents Numero di denti					
Profondeur Profondità				1.5xD 3xD	
Angle d'hélice Angolo dell'elica					
Revêtement Rivestimento		DWS	DWT	DWS	DWX
Codification Codifica		MI0114-NR01103 MI0115-NR01103	MI0114-SR01104 MI0115-SR01104	MI0116-NR01102	MI0116-AR01101
					
Pages Pagine		46	48	50	52
ISO	Matières à usiner Materiali da lavorare	Ø 3.00 - 6.00	Ø 3.00 - 6.00	Ø 0.20 - 6.00	Ø 1.00 - 6.00
P1	Aciers de décolletage Acciai automatici	▶ ▶ ▶		▶ ▶ ▶	
P2	Aciers de décolletage sans plomb Acciai automatici senza piombo	▶ ▶ ▶		▶ ▶ ▶	
P3	Aciers non alliés (Rm < 800 N/mm²) Acciai non legati (Rm < 800 N/mm²)	▶ ▶ ▶		▶ ▶ ▶	
P4	Aciers faiblement alliés (Rm < 900 N/mm²) Acciai debolmente legati (Rm < 900 N/mm²)	▶ ▶ ▶		▶ ▶ ▶	
P5	Aciers fortement alliés (Rm < 1200 N/mm²) Acciai fortemente legati (Rm < 1200 N/mm²)	▶ ▶ ▶		▶ ▶	
M1	Aciers inoxydables ferritiques Acciai inossidabili ferritici	▶ ▶ ▶		▶ ▶	▶ ▶ ▶
M2	Aciers inoxydables martensitiques Acciai inossidabili martensitici	▶ ▶ ▶		▶ ▶	▶ ▶ ▶
M3	Aciers inoxydables austénitiques Acciai inossidabili austenitici	▶ ▶ ▶		▶ ▶	▶ ▶ ▶
K1	Fontes Ghise	▶ ▶	▶	▶ ▶ ▶	▶ ▶
N1	Fontes d'aluminium Fusioni d'alluminio	▶	▶ ▶ ▶	▶ ▶	
N2	Alliages d'aluminium Leghe d'alluminio	▶	▶ ▶ ▶	▶ ▶	
N3	Laiton. Bronze Ottone. Bronzo	▶	▶ ▶ ▶	▶ ▶	
N4	Laiton sans plomb Ottone senza piombo	▶	▶ ▶ ▶	▶ ▶	
N5	Cuivre Rame	▶	▶ ▶ ▶	▶ ▶	
N6	Métaux précieux Metalli preziosi	▶	▶ ▶ ▶	▶ ▶	
N7	Platine. Palladium Platino. Palladio	▶	▶ ▶ ▶	▶ ▶	
N8	Matières plastiques Materiali plastici	▶	▶ ▶ ▶	▶ ▶	
S1	Titane pur Titanio puro	▶ ▶ ▶		▶ ▶	▶ ▶ ▶
S2	Alliages de titane Leghe di titanio	▶ ▶ ▶		▶ ▶	▶ ▶ ▶
S3	Superalliages (Cr. Co. Ni) Superleghe (Cr. Co. Ni)	▶ ▶ ▶		▶ ▶	▶ ▶ ▶
H1	Aciers trempés (< 55 HRC) Acciai temprati (< 55 HRC)	▶ ▶		▶	
H2	Aciers trempés (> 55 HRC) Acciai temprati (> 55 HRC)				

		Fraises à chanfreiner Frese per smussature			Microfraises en céramique Microfrese in ceramica
					
MI0418-NR01101		MI0418-AR01104	MI0419-NR01101	MI0420-NR01101	MI0112-SR04105
					
54		56	58	60	62
Ø 1.00 - 6.00		Ø 0.30 - 6.00	Ø 0.90 - 5.70	Ø 1.00 - 6.00	Ø 0.50 - 6.00
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶	▶ ▶ ▶	▶ ▶ ▶	▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶		▶	▶ ▶	▶ ▶	▶ ▶ ▶
▶ ▶ ▶		▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶ ▶		▶ ▶ ▶	▶ ▶ ▶	▶ ▶ ▶	
▶ ▶		▶	▶ ▶	▶ ▶	

Valeurs indicatives
Valori indicativi

MI0627-NR01101

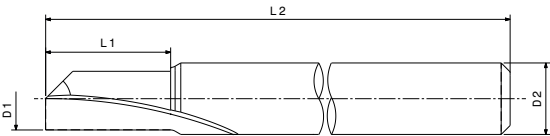
Micro fraise 1 dent rainure droite 3/4
Microfresa 1 dente a dentatura dritta 3/4



DWS	P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
	N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

DWT									K1	N1	N2
	N3	N4	N5	N6	N7	N8					

VHM												
	h5	0°	2xD	90°								

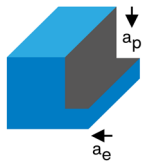
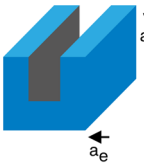


D1 +0.005 / -0.01	L1	D2	L2	Z	DWS Art. N°	DWT Art. N°
0.20	0.40	3	39	1	452673	452708
0.30	0.60	3	39	1	452674	452709
0.40	0.80	3	39	1	452675	452710
0.50	1.00	3	39	1	452676	452711
0.60	1.20	3	39	1	452677	452712
0.70	1.40	3	39	1	452678	452713
0.80	1.60	3	39	1	452679	452714
0.90	1.80	3	39	1	452680	452715
1.00	2.00	3	39	1	452681	452716
1.10	2.20	3	39	1	452682	452717
1.20	2.40	3	39	1	452683	452718
1.30	2.60	3	39	1	452684	452719
1.40	2.80	3	39	1	452685	452720
1.50	3.00	3	39	1	452686	452721
1.60	3.20	3	39	1	452687	452722
1.70	3.40	3	39	1	452688	452723
1.80	3.60	3	39	1	452689	452724
1.90	3.80	3	39	1	452690	452725
2.00	4.00	3	39	1	452691	452726
2.10	4.20	3	39	1	452692	452727
2.20	4.40	3	39	1	452693	452728
2.30	4.60	3	39	1	452694	452729
2.40	4.80	3	39	1	452695	452730
2.50	5.00	3	39	1	452696	452731
2.60	5.20	3	39	1	452697	452732
2.70	5.40	3	39	1	452698	452733
2.80	5.60	3	39	1	452699	452734
2.90	5.80	3	39	1	452700	452735
3.00	6.00	4	40	1	452701	452736
3.50	7.00	4	40	1	452702	452737
4.00	8.00	6	51	1	452703	452738
4.50	9.00	6	51	1	452704	452739
5.00	10.00	6	51	1	452705	452740
5.50	11.00	6	51	1	452706	452741
6.00	12.00	8	59	1	452707	452742

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0627-NR01101

Paramètres de coupe
Parametri di taglio

Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava
Fonction Funzione		
	$a_p \leq 1 \times D_1$	$a_p \leq 0.5 \times D_1$
	$a_e \leq 0.4 \times D_1$	$a_e 1 \times D_1$
	$V_c \times 1$	$V_c \times 0.7$
	$f_z \times 1$	$f_z \times 0.6$

ISO	V_c [m/min]	f_z [mm]			
		Ø 0.20 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1	60 - 90	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P2	60 - 90	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P3	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P4	30 - 50	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P5	30 - 50	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1	90 - 120	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N3	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N4	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N5	110 - 160	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N6	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N7	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1	25 - 35	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.008
H2					

Valeurs indicatives
Valori indicativi

MIO110-NR01101

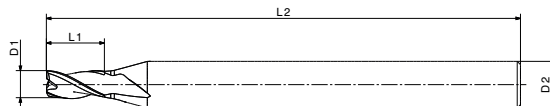
Micro fraise
Microfresa



DWS	P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
	N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

DWT									K1	N1	N2
	N3	N4	N5	N6	N7	N8					

VHM		h5		30°	2xD	90°
-----	--	----	--	-----	-----	-----



D1 +0.005 / -0.01	L1	D2 h5	L2	Z	DWS Art. N°	DWT Art. N°
0.30	0.60	3	39	3	443445	443479
0.40	0.80	3	39	3	443446	443480
0.50	1.00	3	39	3	443447	443481
0.60	1.20	3	39	3	443448	443482
0.70	1.40	3	39	3	443449	443484
0.75	1.50	3	39	3	443450	443485
0.80	1.60	3	39	3	443451	443486
0.90	1.80	3	39	3	443452	443487
1.00	2.00	3	39	3	443453	443488
1.10	2.20	3	39	3	443454	443489
1.20	2.40	3	39	3	443455	443490
1.30	2.60	3	39	3	443456	443491
1.40	2.80	3	39	3	443457	443492
1.50	3.00	3	39	3	443458	443493
1.60	3.20	3	39	3	443459	443494
1.70	3.40	3	39	3	443460	443495
1.80	3.60	3	39	3	443461	443496
1.90	3.80	3	39	3	443462	443497
2.00	4.00	3	39	3	443463	443499
2.10	4.20	3	39	3	443464	443500
2.20	4.40	3	39	3	443465	443501
2.30	4.60	3	39	3	443466	443502
2.40	4.80	3	39	3	443467	443503
2.50	5.00	3	39	3	443468	443504
2.60	5.20	3	39	3	443469	443505
2.70	5.40	3	39	3	443470	443506
2.80	5.60	3	39	3	443471	443507
2.90	5.80	3	39	3	443472	443508
3.00	6.00	5	51	3	443475	443509
4.00	8.00	5	51	3	443476	443510
5.00	10.00	6	58	3	443477	443511
6.00	12.00	6	58	3	443478	443512

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0110-NR01101

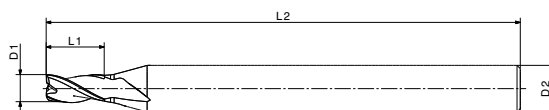
Micro fraise
Microfresa



DWS	P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
	N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

DWT									K1	N1	N2
	N3	N4	N5	N6	N7	N8					

VHM						
-----	--	--	--	--	--	--

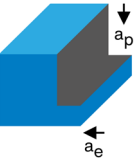
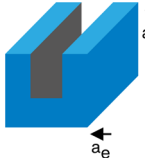
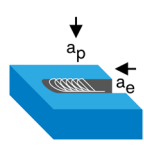
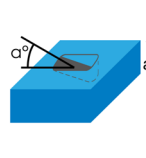
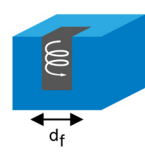


D1 +0.005 / -0.01	L1	D2	L2	Z	DWS Art. N°	DWT Art. N°
0.30	0.90	3	39	3	443516	443573
0.40	1.20	3	39	3	443517	443574
0.50	1.50	3	39	3	443518	443575
0.60	1.80	3	39	3	443519	443576
0.70	2.10	3	39	3	443520	443577
0.75	2.30	3	39	3	443521	443578
0.80	2.40	3	39	3	443522	443579
0.90	2.70	3	39	3	443523	443580
1.00	3.00	3	39	3	443524	443581
1.10	3.30	3	39	3	443525	443582
1.20	3.60	3	39	3	443526	443583
1.30	3.90	3	39	3	443539	443584
1.40	4.20	3	39	3	443540	443585
1.50	4.50	3	39	3	443541	443586
1.60	4.80	3	39	3	443542	443587
1.70	5.10	3	39	3	443543	443588
1.80	5.40	3	39	3	443544	443589
1.90	5.70	3	39	3	443545	443590
2.00	6.00	3	39	3	443546	443591
2.10	6.30	3	39	3	443547	443592
2.20	6.60	3	39	3	443548	443593
2.30	6.90	3	39	3	443549	443594
2.40	7.20	3	39	3	443550	443595
2.50	7.50	3	39	3	443551	443596
2.60	7.80	3	39	3	443552	443597
2.70	8.10	3	39	3	443553	443598
2.80	8.40	3	39	3	443554	443599
2.90	8.70	3	39	3	443555	443600
3.00	9.00	5	51	3	443556	443601
4.00	12.00	5	51	3	443557	443602
5.00	15.00	6	58	3	443558	443603
6.00	18.00	6	58	3	443559	443604

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MIO110-NR01101

Paramètres de coupe
Parametri di taglio

Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava	Trochoidale Fresatura trocoidale	Rampe Fresatura in rampa	Interpolation hélicoïdal Interpolazione elicoidale				
Fonction Funzione									
a _p	≤1xD ₁	a _p	≤0.5xD ₁	a _p	≤1.5xD ₁	Angle	8°	Angle	8°
a _e	≤0.4xD ₁	a _e	1xD ₁	a _e	≤0.2xD ₁	a _p	≤1xD ₁	D _f	1.7xD ₁
V _c	x1	V _c	x0.7	V _c	x1.2	f _z	x0.7		
f _z	x1	f _z	x0.6	f _z	x1.2				

		f _z [mm]			
ISO	V _c [m/min]	Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1	60 - 90	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P2	60 - 90	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P3	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P4	30 - 50	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P5	30 - 50	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1	90 - 120	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N3	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N4	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N5	110 - 160	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N6	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N7	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1	25 - 35	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.008
H2					

Valeurs indicatives
Valori indicativi



MI0110-NR01102

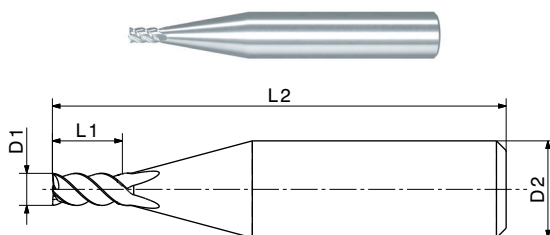
Micro fraise de finition
Microfresa di finitura



DWS	P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
	N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

DWT											
	N3	N4	N5	N6	N7	N8					

VHM					
-----	--	--	--	--	--

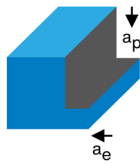
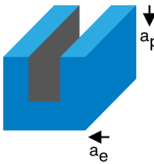
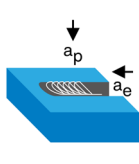
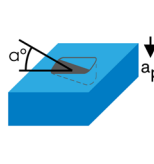
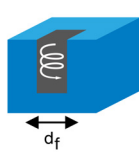


D1 h10	L1	D2	L2	Z	DWS Art. N°	DWT Art. N°
0.50	1.00	6	40	4	452743	452774
0.60	1.20	6	40	4	452744	452775
0.70	1.40	6	40	4	452745	452776
0.80	1.60	6	40	4	452746	452777
0.90	1.80	6	40	4	452747	452778
1.00	2.00	6	40	4	452748	452779
1.10	2.20	6	40	4	452749	452780
1.20	2.40	6	40	4	452750	452781
1.30	2.60	6	40	4	452751	452782
1.40	2.80	6	40	4	452752	452783
1.50	3.00	6	40	4	452753	452784
1.60	3.20	6	40	4	452754	452785
1.70	3.40	6	40	4	452755	452786
1.80	3.60	6	40	4	452756	452787
1.90	3.80	6	40	4	452757	452788
2.00	4.00	6	40	4	452758	452789
2.10	4.20	6	40	4	452759	452790
2.20	4.40	6	40	4	452760	452791
2.30	4.60	6	40	4	452761	452792
2.40	4.80	6	40	4	452762	452793
2.50	5.00	6	40	4	452763	452794
2.60	5.20	6	40	4	452764	452795
2.70	5.40	6	40	4	452765	452796
2.80	5.60	6	40	4	452766	452797
2.90	5.80	6	40	4	452767	452798
3.00	6.00	6	40	4	452768	452799
3.50	7.00	6	40	4	452769	452800
4.00	8.00	6	40	4	452770	452801
4.50	9.00	6	40	4	452771	452802
5.00	10.00	6	40	4	452772	452803
6.00	12.00	6	40	4	452773	452804

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0110-NR01102

Paramètres de coupe
Parametri di taglio

Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava	Trochoïdale Fresatura trocoidale	Rampe Fresatura in rampa	Interpolation hélicoïdale Interpolazione elicoidale
Fonction Funzione					
	ap	ap	ap	Angle	Angle
	≤1xD1	≤0.5xD1	≤1.5xD1	8°	8°
	ae	ae	ae	ap	df
	≤0.4xD1	1xD1	≤0.2xD1	≤1xD1	≤1xD1
	Vc	Vc	Vc	fz	
	x1	x0.7	x1.2	x0.7	
	fz	fz	fz		
	x1	x0.6	x1.2		

		fz [mm]			
ISO	Vc [m/min]	Ø 0.50 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1	60 - 90	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P2	60 - 90	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P3	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P4	30 - 50	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P5	30 - 50	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1	90 - 120	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N3	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N4	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N5	110 - 160	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N6	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N7	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1	25 - 35	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.008
H2					

Valeurs indicatives
Valori indicativi

MI0112-NR01119

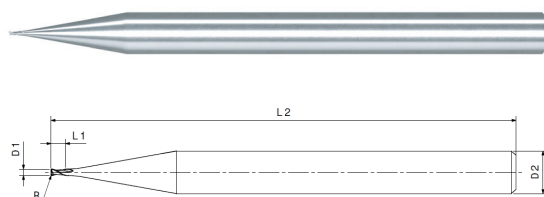
Fraise en bout avec rayon Z2

Fresa cilindrada con raggio d'angolo Z2



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

VHM		h5		30°	1.5xD	3xD	R
-----	--	----	--	-----	-------	-----	---

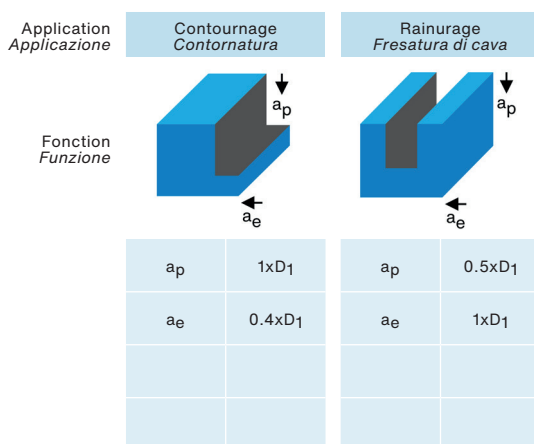


D1	L1	D2	L2	Z	R	DWS Art. N°
0.20	0.30	3	39	2	0.02	460371
0.20	0.60	3	39	2	0.02	460372
0.25	0.38	3	39	2	0.02	460373
0.25	0.75	3	39	2	0.02	460374
0.30	0.45	3	39	2	0.03	460375
0.30	0.90	3	39	2	0.03	460376
0.35	0.53	3	39	2	0.03	460377
0.35	1.05	3	39	2	0.03	460378
0.40	0.60	3	39	2	0.05	460379
0.40	1.20	3	39	2	0.05	460380
0.45	0.68	3	39	2	0.05	460381
0.45	1.35	3	39	2	0.05	460382
0.50	0.75	3	39	2	0.05	460383
0.50	1.50	3	39	2	0.05	460384
0.60	0.90	3	39	2	0.10	460385
0.60	1.80	3	39	2	0.10	460386
0.70	1.05	3	39	2	0.10	460387
0.70	2.10	3	39	2	0.10	460388
0.80	1.20	3	39	2	0.15	460389
0.80	2.40	3	39	2	0.15	460390
0.90	1.35	3	39	2	0.20	460391
0.90	2.70	3	39	2	0.20	460392
1.00	1.50	3	39	2	0.20	460393
1.00	3.00	3	39	2	0.20	460394
1.10	1.65	3	39	2	0.20	460395
1.10	3.30	3	39	2	0.20	460396
1.20	1.80	3	39	2	0.10	460397
1.20	3.60	3	39	2	0.10	460398
1.20	3.60	3	39	2	0.20	460399
1.30	2.60	3	39	2	0.20	460400
1.30	3.90	3	39	2	0.20	460401
1.40	2.80	3	39	2	0.20	460402
1.50	2.25	3	39	2	0.20	460403
1.50	4.50	3	39	2	0.50	460404
1.60	3.20	3	39	2	0.50	460405
1.70	3.70	3	39	2	0.50	460406
1.80	3.60	3	39	2	0.50	460407
1.90	3.80	3	39	2	0.50	460408
2.00	3.00	3	39	2	0.20	460409
2.00	6.00	3	39	2	0.50	460410
2.50	3.75	3	39	2	0.20	460411
2.50	7.50	3	39	2	0.50	460412
2.80	4.50	3	39	2	0.50	460413
3.00	4.50	3	39	2	0.50	460414
3.00	9.00	3	39	2	1.00	460415
3.00	8.00	3	39	2	0.30	460416
3.00	8.00	3	39	2	0.50	460417

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0112-NR01119

Paramètres de coupe
Parametri di taglio

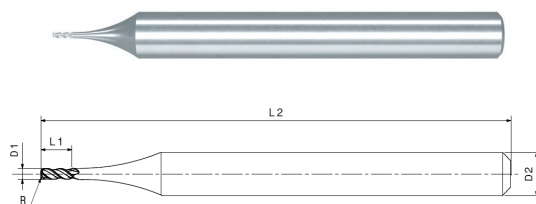
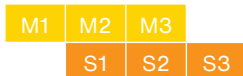


		f_z [mm]		
ISO	V_c [m/min]	Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90
P1	110 - 130	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P2	100 - 120	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P3	100 - 120	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P4	80 - 110	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P5	60 - 80	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
K1	140 - 170	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N3	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N4	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N5	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N6	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N7	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
H1	30 - 50	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006
H2				

Valeurs indicatives
Valori indicativi

MI0112-AR01116

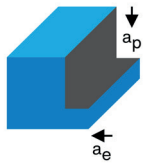
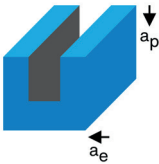
Fraise en bout avec rayon Z3
Fresa cilindrica con raggio d'angolo Z3



D1	L1	D2	L2	Z	R	DWX Art. N°
0.5	1.25	4	40	3	0.05	460341
0.6	1.50	4	40	3	0.05	460342
0.7	1.75	4	40	3	0.05	460343
0.8	2.00	4	40	3	0.05	460344
1.0	2.50	4	40	3	0.10	460345
1.2	3.00	4	40	3	0.10	460346
1.5	3.75	4	40	3	0.10	460347
1.8	4.50	4	40	3	0.10	460348
2.0	5.00	4	40	3	0.20	460349
2.5	6.25	6	51	3	0.20	460350
3.0	7.50	6	51	3	0.20	460351
3.5	8.75	6	51	3	0.20	460352
4.0	10.00	6	51	3	0.30	460353
4.5	11.25	8	59	3	0.30	460354
5.0	12.50	8	59	3	0.30	460355
5.5	13.75	8	59	3	0.30	460356
6.0	15.00	8	59	3	0.40	460357

MI0112-AR01116

Paramètres de coupe
Parametri di taglio

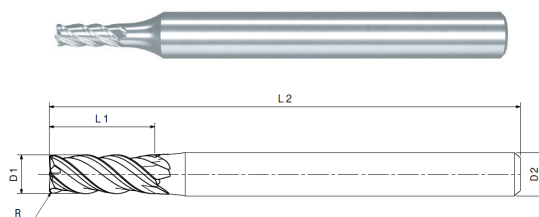
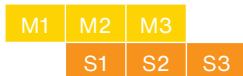
Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava
Fonction Funzione		
	a _p 1xD ₁	a _p 0.5xD ₁
	a _e 0.4xD ₁	a _e 1xD ₁

		f _z [mm]			
ISO	V _c [m/min]	Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1					
P2					
P3					
P4					
P5					
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1					
N1					
N2					
N3					
N4					
N5					
N6					
N7					
N8					
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1					
H2					

Valeurs indicatives
Valori indicativi

MI0112-AR01117

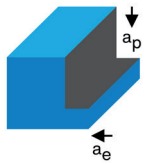
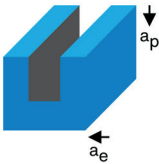
Fraise en bout avec rayon Z4
Fresa cilindrca con raggio d'angolo Z4



D1	L1	D2	L2	Z	R	DWX Art. N°
1.0	2.50	4	40	4	0.10	460358
1.2	3.00	4	40	4	0.10	460359
1.5	3.75	4	40	4	0.10	460360
1.8	4.50	4	40	4	0.10	460361
2.0	5.00	4	40	4	0.20	460362
2.5	6.25	6	51	4	0.20	460363
3.0	7.50	6	51	4	0.20	460364
3.5	8.75	6	51	4	0.20	460365
4.0	10.00	6	51	4	0.30	460366
4.5	11.25	8	59	4	0.30	460367
5.0	12.50	8	59	4	0.30	460368
5.5	13.75	8	59	4	0.30	460369
6.0	15.00	8	59	4	0.40	460370

MI0112-AR01117

Paramètres de coupe
Parametri di taglio

Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava
Fonction Funzione		
	a _p 1xD ₁	a _p 0.5xD ₁
	a _e 0.4xD ₁	a _e 1xD ₁

		f _z [mm]			
ISO	V _c [m/min]	Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1					
P2					
P3					
P4					
P5					
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1					
N1					
N2					
N3					
N4					
N5					
N6					
N7					
N8					
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1					
H2					

Valeurs indicatives
Valori indicativi

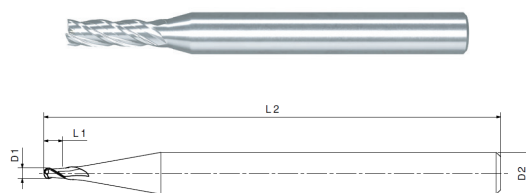
MI0114-NR01120

Fraise en bout avec chanfrein
Fresa cilíndrica con smusso d'angolo



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

VHM		h5			2.5xD	45°
-----	--	----	--	--	-------	-----

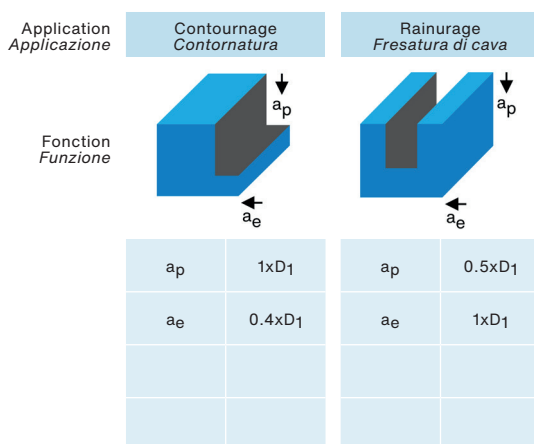


D1	L1	D2	L2	Z	C	DWS Art. N°
0.3	0.75	3	39	3	0.01x45°	460501
0.4	1.00	3	39	4	0.01x45°	460502
0.5	1.25	3	39	4	0.01x45°	460503
0.6	1.50	3	39	4	0.01x45°	460504
0.8	2.00	3	39	4	0.01x45°	460505
1.0	2.50	3	39	4	0.01x45°	460506
1.5	3.75	3	39	4	0.01x45°	460507
2.0	5.00	3	39	4	0.01x45°	460508
2.5	6.25	3	39	4	0.01x45°	460509
3.0	7.50	4	51	4	0.01x45°	460510
3.5	8.75	4	51	4	0.02x45°	460511
4.0	10.00	5	51	4	0.02x45°	460512
4.5	11.25	5	51	4	0.02x45°	460513
5.0	12.50	6	58	4	0.02x45°	460514
5.5	13.75	6	58	4	0.02x45°	460515
6.0	15.00	8	64	4	0.02x45°	460516

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MIO114-NR01120

Paramètres de coupe
Parametri di taglio



		f _z [mm]			
ISO	V _c [m/min]	Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1	140 - 170	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P2	140 - 170	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P3	140 - 170	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P4	120 - 150	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P5	90 - 120	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1	140 - 170	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N1	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N2	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N3	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N4	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N5	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N6	200 - 300	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N7	200 - 300	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N8	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1	30 - 50	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.008
H2					

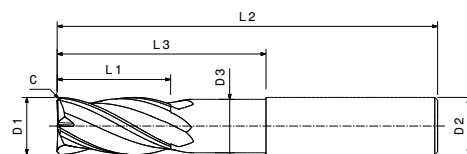
Valeurs indicatives
Valori indicativi

MI0114-NR01103

Fraises à haut rendement
Fresa ad alte prestazioni



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1 h10	L1	D2 h6	L2	D3	L3	C	Z	DWS Art. N°
3.00	8.00	6	58	-	-	0.05x45°	4	443702
4.00	11.00	6	58	-	-	0.05x45°	4	443704
5.00	13.00	6	58	-	-	0.05x45°	4	443706

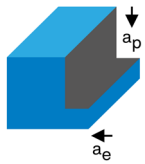
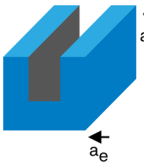
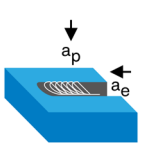
MI0115-NR01103

D1 h10	L1	D2 h6	L2	D3	L3	C	Z	DWS Art. N°
4.00	11.00	4	51	3.80	16.00	0.05x45°	4	443703
5.00	13.00	5	51	4.80	18.00	0.05x45°	4	443705
6.00	13.00	6	58	5.70	20.00	0.05x45°	4	443707

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0114-NR01103 / MI0115-NR01103

Paramètres de coupe
Parametri di taglio

Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava	Trochoidale Fresatura trocoidale
Fonction Funzione			
	$a_p \leq 2 \times D_1$	$a_p \leq 1.5 \times D_1$	$a_p \leq 2 \times D_1$
	$a_e \leq 0.5 \times D_1$	$a_e 1 \times D_1$	$a_e \leq 0.1 \times D_1$
	$V_c \times 1$	$V_c \times 0.9$	$V_c \times 1.2$
	$f_z \times 1$	$f_z \times 0.8$	$f_z \times 1.2$

		f_z [mm]			
ISO	V_c [m/min]	Ø 3.00	Ø 4.00	Ø 5.00	Ø 6.00
P1	140 - 170	0.015	0.020	0.030	0.045
P2	140 - 170	0.015	0.020	0.030	0.045
P3	140 - 170	0.015	0.020	0.030	0.045
P4	120 - 150	0.015	0.020	0.030	0.045
P5	90 - 120	0.010	0.020	0.030	0.040
M1	50 - 70	0.010	0.020	0.030	0.040
M2	40 - 60	0.010	0.020	0.030	0.040
M3	40 - 60	0.010	0.020	0.030	0.040
K1	140 - 170	0.015	0.020	0.030	0.045
N1	600 - 800	0.015	0.020	0.035	0.050
N2	600 - 800	0.015	0.020	0.035	0.050
N3	400 - 500	0.015	0.020	0.035	0.050
N4	400 - 500	0.015	0.020	0.035	0.050
N5	350 - 450	0.015	0.020	0.035	0.050
N6	200 - 300	0.015	0.020	0.035	0.050
N7	200 - 300	0.015	0.020	0.035	0.050
N8	500 - 600	0.015	0.020	0.035	0.050
S1	30 - 50	0.010	0.012	0.015	0.020
S2	30 - 50	0.010	0.012	0.015	0.020
S3	30 - 50	0.010	0.012	0.015	0.020
H1	30 - 50	0.010	0.012	0.015	0.020
H2					

Valeurs indicatives
Valori indicativi

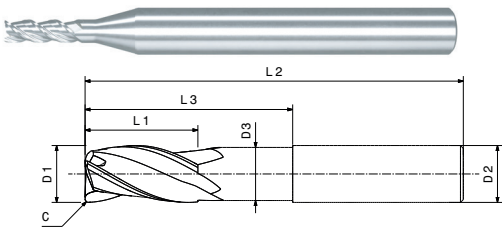
MI0114-SR01104

Fraises à haut rendement
Fresa ad alte prestazioni



K1 N1 N2

N3 N4 N5 N6 N7 N8



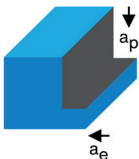
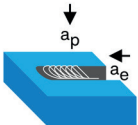
D1 h10	L1	D2 h6	L2	D3	L3	C	Z	DWT Art. N°
3.00	8.00	6	58	-	-	0.05x45°	3	443708
4.00	11.00	6	58	-	-	0.05x45°	3	443709
5.00	13.00	6	58	-	-	0.10X45°	3	443710

MI0115-SR01104

D1 h10	L1	D2 h6	L2	D3	L3	C	Z	DWT Art. N°
6.00	13.00	6	58	5.70	20.00	0.10X45°	3	443711

MI0114-SR01104 / MI0115-SR01104

Paramètres de coupe
Parametri di taglio

Application Applicazione	Contournage Contornatura	Rainurage Fresatura di cava	Trochoidale Fresatura trocoidale		
Fonction Funzione					
a _p	≤1.5xD ₁	a _p	≤1xD ₁	a _p	≤1.5xD ₁
a _e	≤0.25xD ₁	a _e	1xD ₁	a _e	≤0.25xD ₁
V _C	x1	V _C	x0.8	V _C	x1
f _z	x1	f _z	x1	f _z	x1

		f _z [mm]			
ISO	V _c [m/min]	Ø 3.00	Ø 4.00	Ø 5.00	Ø 6.00
P1					
P2					
P3					
P4					
P5					
M1					
M2					
M3					
K1	140 - 170	0.015	0.020	0.030	0.045
N1	600 - 800	0.015	0.020	0.035	0.050
N2	600 - 800	0.015	0.020	0.035	0.050
N3	400 - 500	0.015	0.020	0.035	0.050
N4	400 - 500	0.015	0.020	0.035	0.050
N5	350 - 450	0.015	0.020	0.035	0.050
N6	200 - 300	0.015	0.020	0.035	0.050
N7	200 - 300	0.015	0.020	0.035	0.050
N8	500 - 600	0.015	0.020	0.035	0.050
S1					
S2					
S3					
H1					
H2					

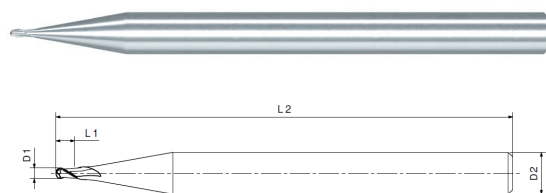
Valeurs indicatives
Valori indicativi

MI0116-NR01102

Fraise en bout hémisphérique Z2
Fresa cilíndrica emisférica Z2



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1	L1	D2	L2	Z	DWS Art. N°
0.20	0.30	3	39	2	460418
0.20	0.60	3	39	2	460419
0.25	0.38	3	39	2	460420
0.25	0.75	3	39	2	460421
0.30	0.45	3	39	2	460422
0.30	0.90	3	39	2	460423
0.35	0.53	3	39	2	460424
0.35	1.05	3	39	2	460425
0.40	0.60	3	39	2	460426
0.40	1.20	3	39	2	460427
0.45	0.68	3	39	2	460428
0.45	1.35	3	39	2	460429
0.50	0.75	3	39	2	460430
0.50	1.50	3	39	2	460431
0.60	0.90	3	39	2	460432
0.60	1.80	3	39	2	460433
0.70	1.05	3	39	2	460434
0.70	2.10	3	39	2	460435
0.80	1.20	3	39	2	460436
0.80	2.40	3	39	2	460437
0.90	1.35	3	39	2	460438
0.90	2.70	3	39	2	460439
1.00	1.50	3	39	2	460440
1.00	3.00	3	39	2	460441
1.10	1.65	3	39	2	460442
1.10	3.30	3	39	2	460443
1.20	1.80	3	39	2	460444
1.20	3.60	3	39	2	460445
1.30	1.95	3	39	2	460446
1.30	3.90	3	39	2	460447
1.40	2.10	3	39	2	460448
1.40	4.20	3	39	2	460449
1.50	2.25	3	39	2	460450
1.50	4.50	3	39	2	460451
1.60	2.40	3	39	2	460452
1.60	4.80	3	39	2	460453
1.70	2.50	3	39	2	460454
1.70	5.10	3	39	2	460455
1.80	2.70	3	39	2	460456
1.80	5.40	3	39	2	460457
1.90	2.85	3	39	2	460458
1.90	5.70	3	39	2	460459
2.00	3.00	3	39	2	460460
2.00	6.00	3	39	2	460461
2.50	3.75	3	39	2	460462
2.50	7.50	3	39	2	460463
3.00	4.50	3	39	2	460464
3.00	9.00	3	39	2	460465

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

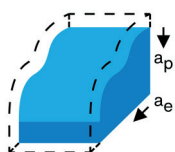
MI0116-NR01102

Paramètres de coupe
Parametri di taglio

Application
Applicazione

Copiage 3D
Copiatura 3D

Fonction
Funzione



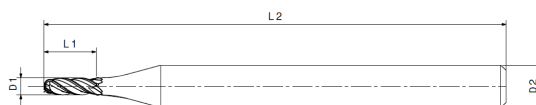
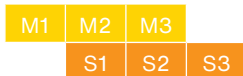
a_p	$0.1 \times D_1$
a_e	$0.3 \times D_1$

ISO	V_c [m/min]	f_z [mm]		
		$\varnothing 0.30 - 0.80$	$\varnothing 0.90 - 1.20$	$\varnothing 1.30 - 3.00$
P1	70 - 100	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P2	70 - 100	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P3	50 - 70	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P4	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P5	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
K1	90 - 120	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N3	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N4	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N5	110 - 160	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N6	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N7	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
H1	25 - 35	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006
H2				

Valeurs indicatives
Valori indicativi

MI0116-AR01101

Fraise en bout hémisphérique Z4
Fresa cilíndrica emisférica Z4



D1	L1	D2	L2	Z	DWX Art. N°
1.00	3.00	3	51	4	460488
1.50	4.50	3	51	4	460489
2.00	6.00	3	51	4	460490
2.50	7.00	3	51	4	460491
3.00	8.00	6	58	4	460492
4.00	9.00	6	58	4	460493
5.00	11.00	6	58	4	460494
6.00	13.00	6	58	4	460495

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

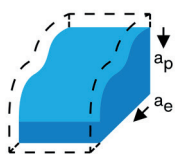
MI0116-AR01101

Paramètres de coupe
Parametri di taglio

Application
Applicazione

Copiage 3D
Copiatura 3D

Fonction
Funzione



a_p	$0.1 \times D_1$
a_e	$0.3 \times D_1$

ISO	V_c [m/min]	f_z [mm]			
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.50	Ø 3.00 - 6.00
P1					
P2					
P3					
P4					
P5					
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.025 - 0.040
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.025 - 0.040
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.025 - 0.040
K1					
N1					
N2					
N3					
N4					
N5					
N6					
N7					
N8					
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.040
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.040
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.040
H1					
H2					

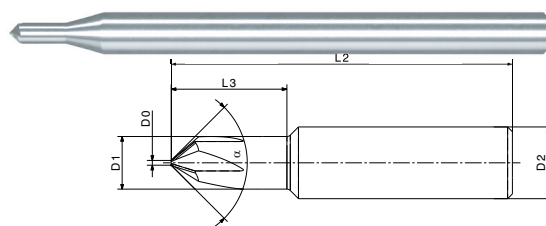
Valeurs indicatives
Valori indicativi

MI0418-NR01101

Fraise à angler frontale 90°
Fresa a smussare frontale 90°



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1 ±0.02	L3	D2	L2	D0	α	Z	DWS Art. N°
1.00	3.00	3	39	0.30	90°	4	452045
2.00	6.00	3	39	0.60	90°	4	452046
3.00	-	3	51	1.00	90°	5	452047
4.00	-	4	51	1.50	90°	6	452048
6.00	-	6	51	2.00	90°	6	452049

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0418-NR01101

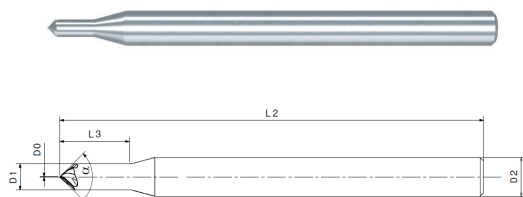
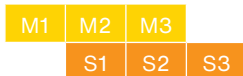
Paramètres de coupe
Parametri di taglio

ISO	V _c [m/min]	f _z [mm]	
		Ø 1.00 - 2.00	Ø 3.00 - 6.00
P1	120	0.010 - 0.040	0.030 - 0.050
P2	120	0.010 - 0.040	0.030 - 0.050
P3	120	0.010 - 0.040	0.030 - 0.050
P4	100	0.010 - 0.030	0.020 - 0.040
P5	80	0.010 - 0.020	0.010 - 0.020
M1	50	0.010 - 0.020	0.020 - 0.030
M2	80	0.010 - 0.020	0.010 - 0.030
M3	50	0.010 - 0.020	0.020 - 0.030
K1	60	0.010 - 0.020	0.010 - 0.030
N1	200	0.020 - 0.050	0.030 - 0.070
N2	200	0.020 - 0.050	0.030 - 0.070
N3	200	0.020 - 0.050	0.020 - 0.030
N4	40	0.010 - 0.020	0.030 - 0.070
N5	40	0.010 - 0.020	0.020 - 0.030
N6	200	0.020 - 0.050	0.030 - 0.070
N7	200	0.020 - 0.050	0.030 - 0.070
N8	200	0.020 - 0.050	0.030 - 0.070
S1	40	0.010 - 0.020	0.020 - 0.030
S2	40	0.010 - 0.020	0.020 - 0.030
S3	50	0.010 - 0.020	0.020 - 0.030
H1	60	0.010 - 0.020	0.010 - 0.030
H2			

Valeurs indicatives
Valori indicativi

MI0418-AR01104

Fraise à angler frontale 90°
Fresa a smussare frontale 90°



D1	L3	D2	L2	L0	α	Z	DWX Art. N°
0.30	0.60	3	39	0.05	90°	4	460330
0.50	1.00	3	39	0.05	90°	4	460331
0.80	1.60	3	39	0.05	90°	4	460332
1.00	2.00	3	39	0.05	90°	4	460333
1.50	3.00	3	39	0.05	90°	4	460334
2.00	4.00	3	39	0.05	90°	4	460335
2.50	5.00	3	39	0.05	90°	4	460336
3.00		3	39	0.05	90°	4	460337
3.00		3	39	0.45	90°	5	460338
4.00		4	51	0.60	90°	5	460339
6.00		6	58	0.90	90°	5	460340

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MIO418-AR01104

Paramètres de coupe
Parametri di taglio

ISO	V _c [m/min]	f _z [mm]				
		Ø 0.30 - 0.49	Ø 0.50 - 0.99	Ø 1.00 - 2.00	Ø 2.10 - 2.50	Ø 3.00 - 6.00
P1						
P2						
P3						
P4						
P5						
M1	40 - 60	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
M2	60 - 80	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
M3	40 - 60	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
K1						
N1						
N2						
N3						
N4						
N5						
N6						
N7						
N8						
S1	40 - 50	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
S2	40 - 50	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
S3	40 - 50	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
H1						
H2						

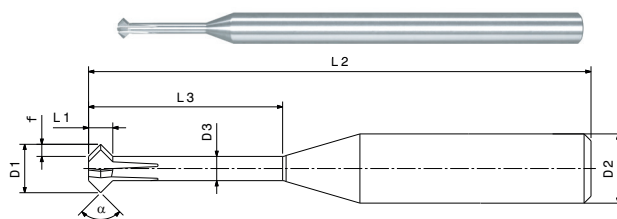
Valeurs indicatives
Valori indicativi

MIO419-NR01101

Fraise à angler double 90°
Fresa a smussare doppia 90°



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1	L1	D2	L2	D3	L3	f	α	Z	DWS Art. N°
0.90	0.45	4	51	0.45	3.15	0.23	90°	4	452064
1.40	0.70	4	51	0.70	4.90	0.35	90°	5	452065
1.80	0.90	4	55	0.90	6.30	0.45	90°	5	452066
2.80	1.40	4	60	1.40	9.80	0.70	90°	5	452067
3.70	1.85	4	60	1.85	12.95	0.93	90°	5	452068
4.70	2.35	6	70	2.35	16.45	1.18	90°	5	452069
5.70	2.85	6	70	2.85	19.95	1.43	90°	6	452070

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MIO419-NR01101

Paramètres de coupe
Parametri di taglio

ISO	V _c [m/min]	f _z [mm]	
		Ø 0.90 - 1.20	Ø 2.80 - 5.70
P1	120	0.030	0.040
P2	120	0.030	0.040
P3	120	0.030	0.040
P4	100	0.020	0.030
P5	80	0.050	0.030
M1	50	0.010	0.030
M2	80	0.015	0.030
M3	50	0.015	0.030
K1	60	0.015	0.030
N1	200	0.030	0.040
N2	200	0.030	0.040
N3	200	0.030	0.040
N4	40	0.020	0.040
N5	40	0.020	0.030
N6	200	0.030	0.040
N7	200	0.030	0.040
N8	200	0.030	0.040
S1	40	0.020	0.030
S2	40	0.020	0.030
S3	50	0.015	0.030
H1	60	0.015	0.020
H2			

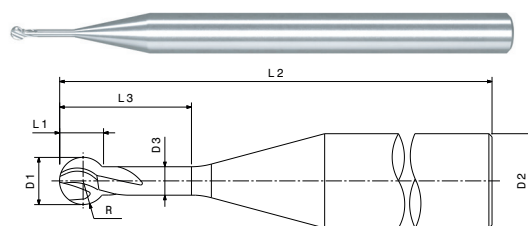
Valeurs indicatives
Valori indicativi

MIO420-NR01101

Fraise à angler sphérique
Fresa a smussare sferica



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1	L1	D2	L2	D3	L3	R	Z	DWS Art. N°
1.00	1.00	4	50	0.50	4.00	0.50	3	452085
1.50	1.50	4	50	0.75	6.00	0.75	3	452086
2.00	2.00	4	60	1.00	8.00	1.00	3	452087
2.50	2.50	4	60	1.25	10.00	1.25	3	452088
3.00	3.00	4	60	1.50	12.00	1.50	3	452089
4.00	4.00	6	70	2.00	16.00	2.00	3	452090
6.00	6.00	6	70	3.00	24.00	3.00	3	452091

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MIO420-NR01101

Paramètres de coupe
Parametri di taglio

ISO	V _c [m/min]	f _z [mm]	
		Ø 1.00 - 2.00	Ø 2.50 - 6.00
P1	120	0.030	0.040
P2	120	0.030	0.040
P3	120	0.030	0.040
P4	100	0.020	0.030
P5	80	0.050	0.030
M1	50	0.010	0.030
M2	80	0.015	0.030
M3	50	0.015	0.030
K1	60	0.015	0.030
N1	200	0.030	0.040
N2	200	0.030	0.040
N3	200	0.030	0.040
N4	40	0.020	0.040
N5	40	0.020	0.030
N6	200	0.030	0.040
N7	200	0.030	0.040
N8	200	0.030	0.040
S1	40	0.020	0.030
S2	40	0.020	0.030
S3	50	0.015	0.030
H1	60	0.015	0.020
H2			

Valeurs indicatives
Valori indicativi

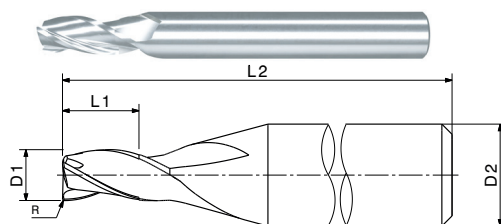
MI0112-SR04105

Microfraises en céramique
Microfresa in ceramica



K1 N1 N2

N3 N4 N5 N6 N7 N8



D1 ±0.01	L1	D2	L2	R	Z	CER Art. N°
1.00	2.00	3	39	0.03	3	443856
1.50	3.00	3	39	0.04	3	443857
2.00	4.00	3	39	0.05	3	443858
3.00	6.00	5	39	0.08	3	443859
4.00	8.00	5	51	0.10	3	443860
5.00	10.00	6	51	0.13	3	443861
6.00	12.00	6	51	0.15	3	443862

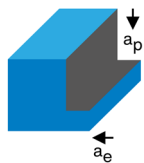
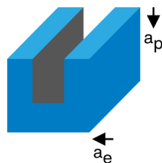
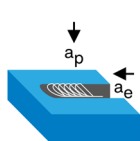
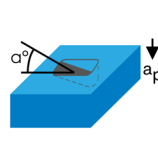
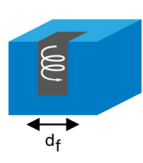


D1 ±0.01	L1	D2	L2	R	Z	CER Art. N°
0.50	0.75	3	39	0.02	3	443850
0.80	1.20	3	39	0.02	3	443851
1.00	1.50	3	39	0.03	3	443852
1.50	2.25	3	39	0.04	3	443853
2.00	3.00	3	39	0.05	3	443854
3.00	4.50	5	51	0.08	3	443855

Autres dimensions et revêtements sur demande
Altre dimensioni e rivestimenti su richiesta

MI0112-SR04105

Paramètres de coupe
Parametri di taglio

Application Applicazione		Contournage Contornatura		Rainurage Fresatura di cava		Trochoïdale Fresadura trocoidale		Rampe Fresatura in rampa		Interpolation hélicoïdal Interpolazione elicoidale	
Fonction Funzione											
		ap	≤1xD1	ap	≤0.5xD1	ap	≤1.5xD1	Angle	8°	Angle	8°
		ae	≤0.15xD1	ae	1xD1	ae	≤0.1xD1	ap	≤1xD1	Df	≤1xD1
		Vc	x1	Vc	x0.7	Vc	x1.2	fz	x0.7	fz	x0.7
		fz	x1	fz	x0.6	fz	x1.2				
fz [mm]											
ISO	Vc [m/min]	Ø 0.30 - 0.80		Ø 0.90 - 1.20		Ø 1.30 - 2.90		Ø 3.00 - 6.00			
P1											
P2											
P3											
P4											
P5											
M1											
M2											
M3											
K1	90 - 120	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N1	220 - 270	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N2	220 - 270	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N3	160 - 200	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N4	160 - 200	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N5	160 - 200	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N6	160 - 200	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N7	160 - 200	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
N8	250 - 300	0.004 - 0.009		0.008 - 0.025		0.020 - 0.040		0.030 - 0.060			
S1											
S2											
S3											
H1											
H2											

Valeurs indicatives
Valori indicativi



www.diametal.com