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& Special Offers -
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TuffCut® X-AL

Series 137V N3 AL



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TuffCut® XT

Series MFB



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TuffCut® XR7

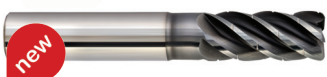
Series 180CBR



8

TuffCut® XT

Series 278CBR N3



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CYCLONE CXD

High Performance Drill Series CXDCM 15xD



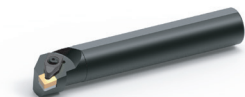
10

FORDMAX External Turning Tools



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FORDMAX Internal Boring Bars



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FORDMAX Turning Inserts



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Carbide Thread Mills Series 3TC



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MSM-AP11 Weldon Shank End Mills



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APKT1135 Helical Edge Shoulder Milling Inserts



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FORDMAX

Threading Inserts



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FORDMAX

MHF-BN06 Indexable High Feed Milling Cutter Bodies



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FORDMAX

MAHF-XD09 Screw-On Shank End Mills



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FORDMAX

MAHF-XD09 & MAHF-XD12 Bore Type Face Mills



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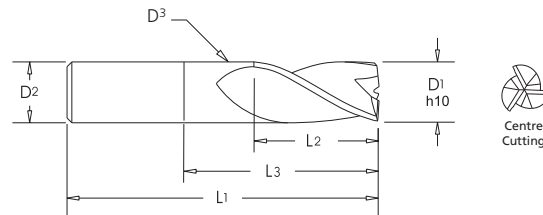
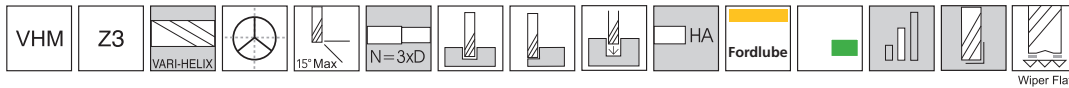
FORDMAX

TuffCut® GP Series MV4 with Small Chamfer



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TuffCut® X-AL Series 137V N3 AL



Tool Number	D1	D2	D3	L1	L2	L3
137V 03N3AL	3.0	3.0	2.8	51.0	8.0	11.0
137V 04N3AL	4.0	4.0	3.8	51.0	11.0	14.0
137V 05N3AL	5.0	5.0	4.8	57.0	13.0	17.0
137V 06N3AL	6.0	6.0	5.8	64.0	13.0	20.0
137V 08N3AL	8.0	8.0	7.8	64.0	19.0	26.0
137V 10N3AL	10.0	10.0	9.8	73.0	22.0	32.0
137V 12N3AL	12.0	12.0	11.8	84.0	26.0	38.0
137V 16N3AL	16.0	16.0	15.8	93.0	32.0	50.0
137V 20N3AL	20.0	20.0	19.8	105.0	38.0	62.0

TuffCut® X-AL Series 137V N3 AL

Recommended cutting data

Series		Type of cut		Vc	Diameter - mm				
					ø 3.0	ø 4.0	ø 5.0	ø 6.0	ø 8.0
		Ae	Ap	M/Min	fz	fz	fz	fz	fz
137V N3 AL		1 x D	0.25 x D	400-600	0.03	0.04	0.05	0.06	0.08
		1 x D	0.5 x D	400-600	0.03	0.04	0.05	0.06	0.08
		1 x D	1 x D	400-600	0.02	0.03	0.04	0.05	0.07
		0.75 x D	0.5 x D	500-700	0.045	0.06	0.075	0.09	0.12
		0.5 x D	1 x D	500-700	0.03	0.04	0.05	0.06	0.08
		0.5 x D	1.5 x D	500-700	0.03	0.04	0.05	0.06	0.08
		≤ 0.1 x D	≤ 0.9 x L ²	800-1000	0.036	0.054	0.072	0.09	0.126

Series		Type of cut		Vc	Diameter - mm			
					ø 10.0	ø 12.0	ø 16.0	ø 20.0
		Ae	Ap	M/Min	fz	fz	fz	fz
137V N3 AL		1 x D	0.25 x D	400-600	0.10	0.12	0.16	0.20
		1 x D	0.5 x D	400-600	0.10	0.12	0.16	0.20
		1 x D	1 x D	400-600	0.09	0.11	0.15	0.19
		0.75 x D	0.5 x D	500-700	0.15	0.18	0.24	0.30
		0.5 x D	1 x D	500-700	0.10	0.12	0.16	0.20
		0.5 x D	1.5 x D	500-700	0.10	0.12	0.16	0.20
		≤ 0.1 x D	≤ 0.9 x L ²	800-1000	0.162	0.2	0.27	0.342

Notes:

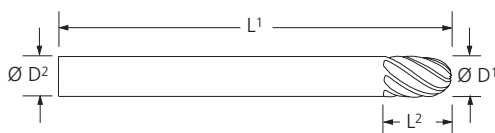
1. Plunging to 1 x D = 20% of Slotting Feed Rate.
2. Ramping (15° max) to 2 x D = 33% of Slotting Feed Rate

Fordlube Coating Properties			
Microhardness (HV)	4000	Designation	AL
Max. Service Temp.	700° C / 1292° F	Colour	Light Gold
Friction Coefficient	0.3		

TuffCut® XT Series MFB



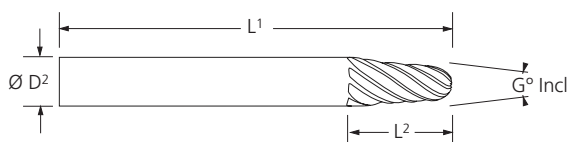
new



MFPB Series - Multi Flute Parallel Ballnose

Tool No.		Ball Radius	Ø D1	Ø D2	L1	L2	L3	G°	No. of Flutes
ALtima® Xtreme Coating	ALtima® Nano Coating								
MFPB 0601AX	MFPB 0601AN	R3	6.0	6.0	100.0	9.0	-	-	6
MFPB 0801AX	MFPB 0801AN	R4	8.0	8.0	100.0	12.0	-	-	8
MFPB 1001AX	MFPB 1001AN	R5	10.0	10.0	108.0	15.0	-	-	8
MFPB 1201AX	MFPB 1201AN	R6	12.0	12.0	108.0	18.0	-	-	8
MFPB 1601AX	MFPB 1601AN	R8	16.0	16.0	108.0	24.0	-	-	8
MFPB 2001AX	MFPB 2001AN	R10	20.0	20.0	150.0	30.0	-	-	10

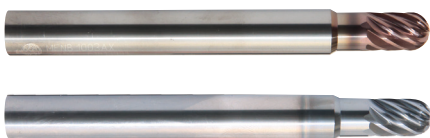
new



MFTB Series - Multi Flute Tapered Ballnose

Tool No.		Ball Radius	Ø D1	Ø D2	L1	L2	L3	G°	No. of Flutes
ALtima® Xtreme Coating	ALtima® Nano Coating								
MFTB 0402AX	MFTB 0402AN	R2	-	6.0	100.0	24.0	-	5°	6
MFTB 0502AX	MFTB 0502AN	R2.5	-	6.0	100.0	13.0	-	5°	6
MFTB 0602AX	MFTB 0602AN	R3	-	8.0	100.0	25.0	-	5°	6
MFTB 0802AX	MFTB 0802AN	R4	-	10.0	100.0	26.0	-	5°	8
MFTB 1002AX	MFTB 1002AN	R5	-	12.0	108.0	27.0	-	5°	8
MFTB 1202AX	MFTB 1202AN	R6	-	16.0	108.0	51.0	-	5°	8
MFTB 1602AX	MFTB 1602AN	R8	-	20.0	108.0	53.0	-	5°	8

new



MFNB Series - Multi Flute Necked Ballnose

Tool No.		Ball Radius	Ø D1	Ø D2	L1	L2	L3	G°	No. of Flutes
ALtima® Xtreme Coating	ALtima® Nano Coating								
MFNB 0403AX	MFNB 0403AN	R2	4.0	6.0	100.0	6.0	8.0	-	6
MFNB 0503AX	MFNB 0503AN	R2.5	5.0	6.0	100.0	7.5	10.0	-	6
MFNB 0603AX	MFNB 0603AN	R3	6.0	8.0	100.0	9.0	12.0	-	6
MFNB 0803AX	MFNB 0803AN	R4	8.0	10.0	100.0	12.0	16.0	-	8
MFNB 1003AX	MFNB 1003AN	R5	10.0	12.0	108.0	15.0	23.0	-	8
MFNB 1203AX	MFNB 1203AN	R6	12.0	16.0	108.0	18.0	24.0	-	8
MFNB 1603AX	MFNB 1603AN	R8	16.0	20.0	108.0	24.0	32.0	-	8

TuffCut® XT Series MFB

Recommended cutting data

Recommended Speeds by Material Group						Finishing	Semi-Finishing
Workpiece Material Group		Material Type	Ap			0.01-0.03 x D	0.05-0.1 x D
			Ae			0.02-0.03 x D	0.05-0.1 x D
			Coolant			Vc-M/Min	
			Max	Air	MMS		
Steels	P	Low Carbon	●	●	●	450	350
		Medium Carbon	●	●	●	345	275
		Alloy Steels	●	●	●	315	255
		Die/Tool Steels	●	●	●	275	220
Stainless Steels	M	Free Machining	●	X	○	205	165
		Austenitic	●	X	○	160	130
		Difficult Stainless	●	X	○	125	100
		PH Stainless	●	X	○	160	130
		Cobalt Chrome Alloys	●	X	○	125	100
		Duplex (22%)	●	X	○	75	60
		Super Duplex (25%)	●	X	○	75	60
Special Alloys	S	High Temp Alloys	●	X	X	55	45
		Titanium Alloys	●	X	X	115	105
Cast Irons	K	Gray Cast Iron	●	○	○	495	395
		Ductile Cast Iron	●	○	○	320	280
		Malleable Iron	●	○	○	205	165
Hardened Steels	H	Hardened Steels 45 - 50 Rc	●	○	○	150	125
		Hardened Steels 50 - 55 Rc	●	○	○	100	95

● Preferred ○ Possible X Not Possible

TuffCut® XT Series MFB

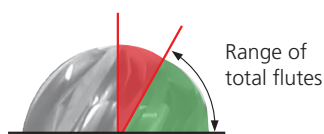
Recommended cutting data

Recommended Feeds by Material Group			Tool Diameter & Radius															
Workpiece Material Group		Material Type	4		5		6		8		10		12		16		20	
			2		2.5		3		4		5		6		8		10	
			Semi Finish	Finish	Semi Finish	Finish	Semi Finish	Finish	Semi Finish	Finish	Semi Finish	Finish	Semi Finish	Finish	Semi Finish	Finish	Semi Finish	Finish
			Fz - mm/tooth															
Steels	P	Low Carbon	0.12	0.06	0.15	0.075	0.18	0.09	0.24	0.12	0.3	0.15	0.36	0.18	0.48	0.24	0.6	0.3
		Medium Carbon	0.12	0.06	0.15	0.075	0.18	0.09	0.24	0.12	0.3	0.15	0.36	0.18	0.48	0.24	0.6	0.3
		Alloy Steels	0.12	0.06	0.15	0.075	0.18	0.09	0.24	0.12	0.3	0.15	0.36	0.18	0.48	0.24	0.6	0.3
		Die/Tool Steels	0.08	0.06	0.1	0.075	0.12	0.09	0.16	0.12	0.2	0.15	0.24	0.18	0.32	0.24	0.4	0.3
Stainless Steels	M	Free Machining	0.08	0.06	0.1	0.075	0.12	0.09	0.16	0.12	0.2	0.15	0.24	0.18	0.32	0.24	0.4	0.3
		Austenitic	0.08	0.06	0.1	0.075	0.12	0.09	0.16	0.12	0.2	0.15	0.24	0.18	0.32	0.24	0.4	0.3
		Difficult Stainless	0.08	0.06	0.1	0.075	0.12	0.09	0.16	0.12	0.2	0.15	0.24	0.18	0.32	0.24	0.4	0.3
		PH Stainless	0.08	0.06	0.1	0.075	0.12	0.09	0.16	0.12	0.2	0.15	0.24	0.18	0.32	0.24	0.4	0.3
		Cobalt Chrome Alloys	0.072	0.048	0.09	0.06	0.108	0.072	0.144	0.096	0.18	0.12	0.216	0.144	0.288	0.192	0.36	0.24
		Duplex (22%)	0.072	0.048	0.09	0.06	0.108	0.072	0.144	0.096	0.18	0.12	0.216	0.144	0.288	0.192	0.36	0.24
		Super Duplex (25%)	0.068	0.044	0.085	0.055	0.102	0.066	0.136	0.088	0.17	0.11	0.204	0.132	0.272	0.176	0.34	0.22
Special Alloys	S	High Temp Alloys	0.06	0.04	0.075	0.05	0.09	0.06	0.12	0.08	0.15	0.1	0.18	0.12	0.24	0.16	0.3	0.2
		Titanium Alloys	0.06	0.04	0.075	0.05	0.09	0.06	0.12	0.08	0.15	0.1	0.18	0.12	0.24	0.16	0.3	0.2
Cast Irons	K	Gray Cast Iron	0.12	0.08	0.15	0.1	0.18	0.12	0.24	0.16	0.3	0.2	0.36	0.24	0.48	0.32	0.6	0.4
		Ductile Cast Iron	0.1	0.08	0.125	0.1	0.15	0.12	0.2	0.16	0.25	0.2	0.3	0.24	0.4	0.32	0.5	0.4
		Malleable Iron	0.08	0.06	0.1	0.075	0.12	0.09	0.16	0.12	0.2	0.15	0.24	0.18	0.32	0.24	0.4	0.3
Hardened Steels	H	Hardened Steels HRC45-50	0.06	0.056	0.075	0.07	0.09	0.084	0.12	0.112	0.15	0.14	0.18	0.168	0.24	0.224	0.3	0.28
		Hardened Steels HRC50-55	0.05	0.056	0.063	0.07	0.075	0.084	0.1	0.112	0.125	0.14	0.15	0.168	0.2	0.224	0.25	0.28

TuffCut® XT Series MFB

Recommended cutting data

Tool Ø	Effective Diameter at 30°						
	Axial Depth of Cut (mm) AP						
	0.2	0.4	0.6	0.8	1	1.5	2
4	3.31	3.68	3.87	3.97	-	-	-
5	4.00	4.45	4.71	4.87	4.96	-	-
6	4.66	5.16	5.52	5.73	5.87	-	-
8	5.96	6.62	7.05	7.36	7.60	7.91	-
10	7.22	8.00	8.51	8.90	9.20	9.68	9.93
12	8.46	9.33	9.94	10.38	10.74	11.37	11.75
16	10.88	11.92	12.66	13.24	13.71	14.58	15.16
20	13.25	14.44	15.30	15.98	16.55	17.62	18.40



R	Tilt Angle	No. of Flutes
2	+31°	6
2.5	+33°	6
3	+33°	6
4	+25°	8
5	+22°	8
6	+24°	8
8	+25°	8
10	+25°	10

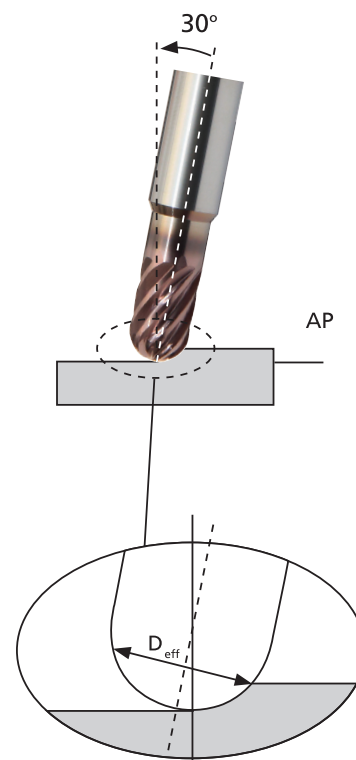
Tool Ø	Effective Teeth		
	Tilt Angle		
	20°	25°	33°
4	2	4	6
5	2	4	6
6	2	4	6
8	2	8	8
10	2	8	8
12	6	8	8
16	6	8	8
20	6	10	10

Red Area:

Does not have complete effective number of flutes to centre of tool.

Green Area:

Programming at the listed tilt angle will utilise the full effective number of flutes.



ALtima® Xtreme Coating Properties	
Microhardness (HV)	3800
Max. Service Temp.	1100° C / 2012° F
Friction Coefficient	0.3 - 0.5
Designation	AX
Colour	Copper

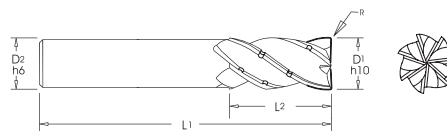
ALtima® Nano Coating Properties	
Microhardness (HV)	3875
Max. Service Temp.	1100° C / 2012° F
Friction Coefficient	0.3
Designation	AN
Colour	Grey

TuffCut® XR7 Series 180CBR



Close up of chipbreaker grind

new



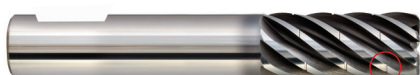
Cylindrical Shank (HA)

Tool Number	D1	D2	L1	L2	R
180CB 1000-1.0RB	10.0	10.0	72.0	22.0	1.0
180CB 1200-1.0RB	12.0	12.0	84.0	32.0	1.0
180CB 1600-1.0RB	16.0	16.0	92.0	42.0	1.0



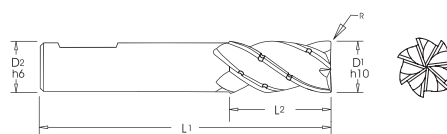
For technical data see page 59 of the main catalogue

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Close up of chipbreaker grind

new



Weldon Shank (HB)

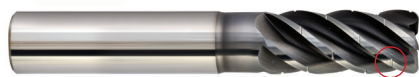
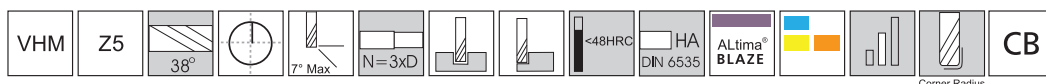
Tool Number	D1	D2	L1	L2	R
180CB 1000-1.0RBW	10.0	10.0	72.0	22.0	1.0
180CB 1200-1.0RBW	12.0	12.0	84.0	32.0	1.0
180CB 1600-1.0RBW	16.0	16.0	92.0	42.0	1.0



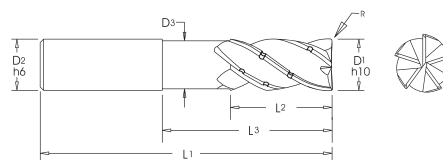
For technical data see page 59 of the main catalogue

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TuffCut® XT Series 278CBR N3



Close up of
chipbreaker grind



new

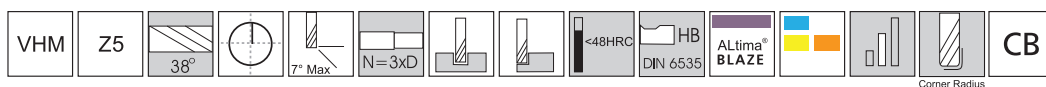
Cylindrical Shank (HA)

Tool No.	D1	D2	D3	L1	L2	L3	R
278CB 10N3-1.0RB	10.0	10.0	9.8	72.0	22.0	31.0	1.0
278CB 12N3-1.0RB	12.0	12.0	11.4	84.0	26.0	38.0	1.0
278CB 16N3-1.0RB	16.0	16.0	15.2	100.0	35.0	50.0	1.0

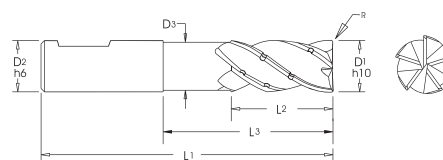


For technical data see page 61 of the main catalogue

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Close up of
chipbreaker grind



new

Weldon Shank (HB)

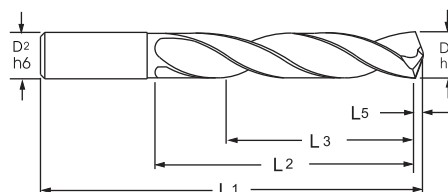
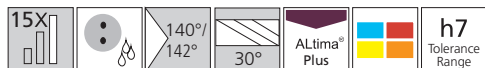
Tool No.	D1	D2	D3	L1	L2	L3	R
278CB 10N3-1.0RBW	10.0	10.0	9.8	72.0	22.0	31.0	1.0
278CB 12N3-1.0RBW	12.0	12.0	11.4	84.0	26.0	38.0	1.0
278CB 16N3-1.0RBW	16.0	16.0	15.2	100.0	35.0	50.0	1.0



For technical data see page 61 of the main catalogue

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CYCLONE CXD High Performance Drill - Series CXDCEM 15xD



Tool Number	D1 (m7)	D2 (h6)	L1	L2 (Max.)	L3	L5
CXDCEM0300AP	3.0	3	105	56	45	0.46
CXDCEM0350AP	3.5	4	120	66	53	0.54
CXDCEM0400AP	4.0	4	120	75	60	0.62
CXDCEM0420AP	4.2	5	143	79	63	0.65
CXDCEM0430AP	4.3	5	143	81	65	0.67
CXDCEM0440AP	4.4	5	143	83	66	0.68
CXDCEM0450AP	4.5	5	143	84	68	0.7
CXDCEM0480AP	4.8	5	143	90	72	0.74
CXDCEM0490AP	4.9	5	143	92	74	0.76
CXDCEM0500AP	5.0	5	143	94	75	0.77
CXDCEM0520AP	5.2	6	162	98	78	0.81
CXDCEM0540AP	5.4	6	162	101	81	0.84
CXDCEM0550AP	5.5	6	162	103	83	0.85
CXDCEM0560AP	5.6	6	162	105	84	0.86
CXDCEM0580AP	5.8	6	162	109	87	0.9
CXDCEM0600AP	6.0	6	162	113	90	0.93
CXDCEM0610AP	6.1	8	200	114	92	0.95
CXDCEM0620AP	6.2	8	200	116	93	0.96
CXDCEM0630AP	6.3	8	200	118	95	0.98
CXDCEM0650AP	6.5	8	200	122	98	1.01
CXDCEM0680AP	6.8	8	200	128	102	1.05
CXDCEM0700AP	7.0	8	200	131	105	1.08
CXDCEM0740AP	7.4	8	200	139	111	1.15
CXDCEM0750AP	7.5	8	200	141	113	1.16
CXDCEM0760AP	7.6	8	200	143	114	1.18
CXDCEM0780AP	7.8	8	200	146	117	1.21
CXDCEM0800AP	8.0	8	200	150	120	1.24
CXDCEM0820AP	8.2	10	240	154	123	1.27
CXDCEM0830AP	8.3	10	240	156	125	1.29
CXDCEM0840AP	8.4	10	240	158	126	1.3
CXDCEM0850AP	8.5	10	240	159	128	1.32
CXDCEM0870AP	8.7	10	240	163	131	1.35
CXDCEM0900AP	9.0	10	240	169	135	1.39
CXDCEM0940AP	9.4	10	240	176	141	1.46
CXDCEM0980AP	9.8	10	240	184	147	1.52
CXDCEM1000AP	10.0	10	240	188	150	1.55
CXDCEM1020AP	10.2	12	283	191	153	1.58
CXDCEM1030AP	10.3	12	283	193	155	1.6
CXDCEM1050AP	10.5	12	283	197	158	1.63
CXDCEM1080AP	10.8	12	283	203	162	1.67
CXDCEM1100AP	11.0	12	283	206	165	1.7
CXDCEM1150AP	11.5	12	283	216	173	1.78
CXDCEM1180AP	11.8	12	283	221	177	1.83
CXDCEM1200AP	12.0	12	283	225	180	1.86

CYCLONE CXD High Performance Drill - Series CXDCEM 15xD

Recommended cutting data

Workpiece Material Group	ISO	Hardness	TYPE	DEPTH	vc-m/min.	Drill Diameter (mm)								
						3	4	5	6	7	8	9	10	12
						f - mm/Rev								
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc		15X	105	.053	.070	.088	.106	.127	.193	.215	.238	.254
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 35 Rc		15X	80	.053	.070	.088	.106	.127	.193	.215	.238	.254
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 35 Rc		15X	80	.053	.070	.088	.106	.127	.193	.215	.238	.254
Hardened Steels	H	35-45 Rc		15X	35	.012	.016	.020	.022	.027	.046	.053	.060	.066
Hardened Steels		45-55 Rc			25									
Stainless Steel - Easy to Machine 430F, 301, 303, 410, 416 Annealed, 420F, 430	M	up to 28 Rc		15X	90	.053	.070	.090	.105	.127	.193	.215	.238	.254
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc		15X	55	.053	.070	.090	.105	.127	.193	.215	.238	.254
Stainless Steel - Difficult to Machine 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	M	over 28 Rc		15X	40	.053	.070	.090	.105	.127	.193	.215	.238	.254
High Temp Alloys Nimonic, Inconel, Monel, Hastelloy	S	up to 42 Rc		15X	20-25	.015	.020	.030	.035	.048	.051	.071	.078	.085
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2 Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	S	up to 42 Rc		15X	45	.025	.033	.050	.060	.071	.098	.127	.140	.152
Cast Iron - Gray CGI ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB		15X	120	.053	.070	.100	.120	.140	.200	.215	.240	.254
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB		15X	80	.053	.070	.100	.120	.140	.200	.215	.240	.254

Safety Note

Always wear the appropriate personal protective equipment such as safety glasses and protective clothing when using solid carbide or HSS cutting tools. Machines should be fully guarded.

Please use corresponding diameter CXD drill for creating 1.5 to 3 x diameter pilot hole, prior to deep hole drilling with the CXDCEM drill.

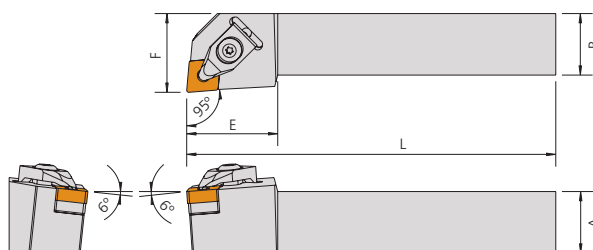
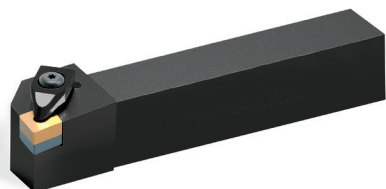


Combination Set Offer

Turning Tool or Internal Boring Bar + 10 Inserts

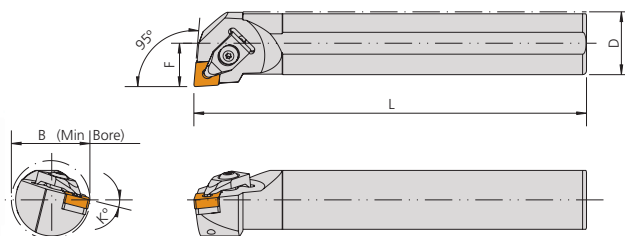
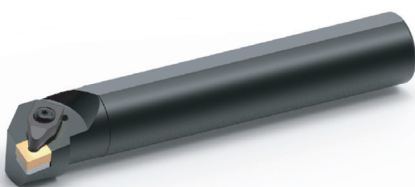
SPECIAL OFFER

External Turning Tools



EDP	Part Number	Insert	Dimensions					Set Price Including 10 Inserts
			A	B	L	E	F	
FE1035	DCLNR-2020-K12 SET-1	CNMG1204	20	20	125	32	25	£55.00
FE1036	DCLNR-2525-M12 SET-1		25	25	150	32	32	£55.00
FE1041	DWLNR-2020-K08 SET-1	WNMG0804	20	20	125	32	25	£55.00
FE1042	DWLNR-2525-M08 SET-1		25	25	150	32	32	£55.00
FE1037	DDJNR-2020-K15 SET-1	DNMG1506	20	20	125	38	25	£66.00
FE1038	DDJNR-2525-M15 SET-1		25	25	150	38	32	£66.00
FE1040	DTJNR-2525-M16 SET-1	TNMG1604	25	25	150	28	32	£55.00
FE1039	DSSNR-2525-M12 SET-1	SNMG1204	25	25	150	34	32	£55.00

Internal Boring Bars



EDP	Part Number	Insert	Dimensions					Set Price Including 10 Inserts
			D	F	L	B	K°	
FE1043	S08K-SCLCR-06 SET-1	CCMT0602	8	7	125	10	13°	£37.00
FE1044	S10K-SCLCR-06 SET-1		10	5.5	125	13	12°	£37.00
FE1046	S12M-SCLCR-09 SET-1	CCMT09T3	12	9	150	16	12°	£43.00
FE1048	S16Q-SCLCR-09 SET-1		16	11	180	20	10°	£43.00
FE1050	S20R-SCLCR-09 SET-1		20	13	200	25	8°	£43.00
FE1053	S25S-SCLCR-09 SET-1		25	17	250	31	6°	£47.00
FE1045	S10K-SDUCR-07 SET-1	DCMT0702	10	8	125	15	10°	£37.00
FE1047	S12M-SDUCR-07 SET-1		12	9	150	17	8°	£43.00
FE1049	S16Q-SDUCR-07 SET-1		16	11	180	22	6°	£43.00
FE1051	S20R-SDUCR-11 SET-1	DCMT11T3	20	13	200	25	6°	£43.00
FE1054	S25S-SDUCR-11 SET-1		25	17	250	32	4°	£47.00
FE1052	S25S-DCLNR-12 SET-1	CNMG1204	25	20	250	32	12°	£59.00
FE1055	S32T-DCLNR-12 SET-1		32	25	300	40	17°	£69.00
FE1056	S40T-DCLNR-12 SET-1		40	32	300	50	15°	£89.00

NOTE: Please select radius, chipbreaker and grade for your application

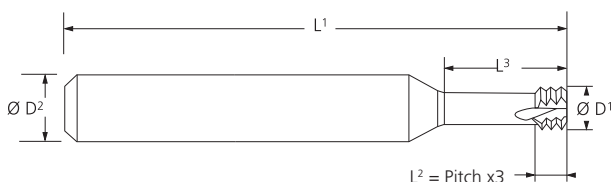
Turning Inserts

Geometry / Grade Selection

Workpiece material	Geometry		Application range		Working Condition			
								
	F (mm/rev)	DOC (mm)	Finishing	Continuous	Light Interrupted	Interrupted		
		QF	0.08-0.35	0.3-2.0	FP1005/ FP1015	FP1005/FP1015/ FP90TF/FP90TM	FP1015/FP1020/ FP1125/FP90TM	FP1020/FP1125
		QM	0.15-0.4	1.0-4.0	-	FP1005/FP1015/ FP90TF/FP90TM	FP1015/FP1020/ FP1125/FP90TM	FP1020/FP1125
		TP	0.05-0.3	0.5-3.0	FP90TF	FP30TM/FP90TM	FP90TM	-
		QR	0.25-0.6	2.0-6.5	-	FP1005/FP1015	FP1125	FP1035
		QH	0.18-1.1	3.0-12.0	-	FP1005/FP1015	FP1125	FP1035
		SF	0.05-0.3	0.5-2.0	FS3015	-	-	-
		LM	0.08-0.4	0.8-3.5	-	FM1015/FM3115	FM1025/FM3115	-
		LR	0.15-0.5	1.5-5.0	-	FM1015	FM1025/FM3115	FM3125
		UK	0.1-0.4	0.5-3.5	FK1015	FK1015	FK1015/FK1020	FK1025/FK1030
		HK	0.15-0.6	1.0-5.5	-	FK1015	FK1015/FK1020	FK1025/FK1030
		Flat	0.25-0.65	2.5-6.5	-	FK1015	FK1015/FK1020	FK1025/FK1030

Carbide Thread Mills Series 3TC

VHM	Z3 Z4	HA	ALtimate Xtreme	60°	M	MF	UNC	UNF	2xD	RH Cutting
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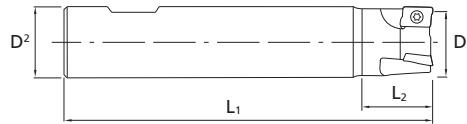
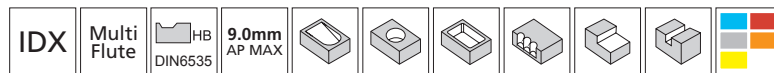


EDP	Tool Number	Thread		Tool Dimensions						Price
		M Coarse	M Fine	Pitch (mm)	D ¹	D ²	L ¹	L ³	Flutes	
FT1323	3TCM 0154D2-040AX	M2x0.4	-	0.4	1.54	4	50	4.4	3	£59.75
FT1324	3TCM 0196D2-045AX	M2.5x0.45	-	0.45	1.96	4	50	5.2	3	£59.75
FT1325	3TCM 0240D2-050AX	M3x0.5	M3.5x0.5	0.5	2.4	4	50	6.4	3	£59.75
FT1326	3TCM 0315D2-070AX	M4x0.7	-	0.7	3.15	4	50	8.6	3	£59.75
FT1327	3TCM 0400D2-080AX	M5x0.8	-	0.8	4.0	6	50	12.0	3	£76.45
FT1328	3TCM 0475D2-100AX	M6x1.0	M8x1.0	1	4.75	6	50	13.0	3	£76.45
FT1329	3TCM 0600D2-125AX	M8x1.25	-	1.25	6.0	6	60	17.3	3	£86.05
FT1330	3TCM 0800D2-150AX	M10x1.5	M12x1.5	1.5	8.0	8	62	21.8	4	£100.7
FT1331	3TCM 1000D2-175AX	M12x1.75	-	1.75	10.0	10	75	21.8	4	£111.97
FT1332	3TCM 1200D2-200AX	M16x2.0	-	2	12.0	12	75	27.0	4	£139.29



EDP	Tool Number	Thread		Tool Dimensions						Price
		UNC	UNF	Pitch (TPI)	D ¹	D ²	L ¹	L ³	Flutes	
FT1333	3TCU 0140D2-64AX	1-64	2-64	64	1.4	4	50	4.2	3	£65.69
FT1334	3TCU 0145D2-72AX	-	1-72	72	1.45	4	50	3.9	3	£65.69
FT1335	3TCU 0165D2-56AX	2-56	3-56	56	1.65	4	50	5.0	3	£65.69
FT1336	3TCU 0190D2-48AX	3-48	4-48	48	1.9	4	50	6.0	3	£65.69
FT1337	3TCU 0210D2-40AX	4-40	6-40	40	2.1	4	50	6.0	3	£65.69
FT1338	3TCU 0245D2-40AX	5-40	6-40	40	2.45	4	50	7.2	3	£65.69
FT1339	3TCU 0255D2-32AX	6-32	10-32	32	2.55	4	50	7.4	3	£65.69
FT1340	3TCU 0320D2-32AX	8-32	10-32	32	3.2	4	50	10.0	3	£65.69
FT1341	3TCU 0330D2-36AX	-	8-36	36	3.3	4	50	8.7	3	£65.69
FT1342	3TCU 0358D2-24AX	10-24	5/16-24	24	3.58	4	50	10.2	3	£65.69
FT1343	3TCU 0488D2-20AX	1/4-20	7/16-20	20	4.88	6	60	13.2	3	£86.05
FT1344	3TCU 0525D2-28AX	-	1/4-28	28	5.25	6	60	13.2	3	£86.05
FT1345	3TCU 0668D2-24AX	-	5/16-24	24	6.68	8	62	16.5	4	£105.13
FT1346	3TCU 0670D2-16AX	3/8-16	-	16	6.7	8	62	19.1	4	£105.13
FT1347	3TCU 0900D2-14AX	7/16-14	-	14	9.0	10	75	23.3	4	£114.71
FT1348	3TCU 0955D2-20AX	-	7/16-20	20	9.55	10	75	23.0	4	£114.71

Combination Set Offer Weldon Shank Cutter + 10 APKT Inserts



**SPECIAL
OFFER**

MSM-AP11 Weldon Shank End Mills

EDP	Tool Number	Dimensions (mm)					Coolant	Insert	Set Price Including 10 Inserts
		D1	D2	L1	L2	Flutes			
FE1057	MSMW-1602-AP11-16	16	16	130	25	2	×	APKT 1135	£65.00
FE1058	MSMW-2003-AP11-20	20	20	130	25	3	●	APKT 1135	£70.00
FE1059	MSMW-2503-AP11-25	25	25	130	30	3	●	APKT 1135	£78.00

NOTE: When ordering please use EDP and specify which insert type and grade is required.

Inserts

Insert Number	Grades								Price
	FA6225	FA6230	FP6115	FP6125	FM6140	FS6030	FK6015	FK6125	
	EDP								
APKT113504-MS	FW1316	FW1317	FW4056	FW1418	FW1320	FW1321	FW1318	FW1319	£6.88
APKT113504-MM	FW1327	FW1328	FW4057	FW1420	FW1331	FW1332	FW1329	FW1330	£6.88
APKT113508-MS	FW1310	FW1311	FW4054	FW1419	FW1314	FW1315	FW1312	FW1313	£6.88
APKT113508-MM	FW1322	FW1323	FW4055	FW1425	FW4053	FW1326	FW1324	FW1325	£6.88
APKT113516-MH	FW1333	FW1334	-	FW1421	FW1336	FW1337	-	FW1335	£6.88
APKT113532-MM	FW1339	FW1340	FW4058	FW1422	FW1343	FW1344	FW1341	FW1342	£6.88

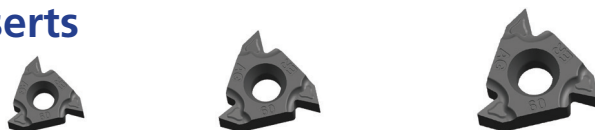
Insert Geometry

MS	MM	MH
Sharp edge with low cutting force, for finishing and long reach applications	Medium edge prep for general applications, and first choice in semi-finishing or roughing	Large edge prep for heavy roughing and interrupted applications

Grades

Grade	Type	Coating	Application
FA6225	PVD	AlCrN	Medium to low speed roughing and semi-finishing of steels and cast irons
FA6230	PVD	TiAlN	Multi application grade that can work in wide range of materials
FP6115	CVD	MT-TiCN+Al2O3	High speed grade for semi-finishing and finishing in steel
FP6125	PVD	AlCrN+TiN	Medium to low speed roughing and semi-finishing of steels with improved wear resistance
FM6140	CVD	MT-TiCN+Al2O3	Roughing of stainless and high temperature alloys
FS6030	PVD	TiAlN	Medium to roughing applications in titanium and high temperature alloys
FK6015	CVD	MT-TiCN+Al2O3	Medium and high speed semi-finishing and finishing of cast irons
FK6125	PVD	TiAlN	Medium to rough cutting of cast iron and sg irons in stable conditions

Threading Inserts



	Size 11	Size 16		Size 22	
	IR	IR	ER	IR	ER
Partial Profile					
A60	FW4157	FW4232	FW4195	-	-
AG60		FW4234	FW4197	-	-
A55	FW4156	FW4231	FW4194	-	-
AG55	-	-	-		
N60	-	-	-	FW4248	FW4242
N55	-	-	-	FW4247	FW4241
Metric					
1.00 ISO	FW4146	FW4200	FW4159	-	-
1.25 ISO	FW4147	FW4201	FW4160	-	-
1.50 ISO	FW4148	FW4202	FW4161	-	-
1.75 ISO	FW4149	FW4203	FW4162	-	-
2.00 ISO	FW4154	FW4220	FW4181	-	-
2.50 ISO	-	FW4221	FW4182	-	-
3.00 ISO	-	FW4226	FW4188	-	-
3.50 ISO	-	-	-	FW4243	FW4237
4.00 ISO	-	-	-	FW4244	FW4238
4.50 ISO	-	-	-	FW4245	FW4239
5.00 ISO	-	-	-	FW4246	FW4240
UN					
24	-	FW4223	FW4184	-	-
20	FW4155	FW4222	FW4183	-	-
18	FW4152	FW4216	FW4177	-	-
16	-	FW4213	FW4174	-	-
14	-	FW4211	FW4172	-	-
12	-	FW4207	FW4168	-	-
10	-	-	FW4163	-	-
8	-	FW4230	FW4193	-	-
Whitworth					
19	-	FW4219	FW4180	-	-
14	-	FW4212	FW4173	-	-
11	-	FW4205	FW4166	-	-
BSPT					
28	-	FW4225	FW4186	-	-
19	FW4153	FW4218	FW4179	-	-
14	FW4150	FW4209	FW4170	-	-
11	-	FW4204	FW4165	-	-
NPT					
27	-	FW4224	FW4185	-	-
18	FW4151	FW4215	FW4176	-	-
14	-	FW4210	FW4171	-	-
11.5	-	FW4206	FW4167	-	-
8	-	FW4228	FW4191	-	-
Round					
8	-	FW4229	FW4192	-	-
6	-	FW4227	FW4190	-	-

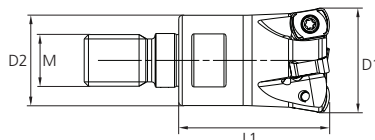
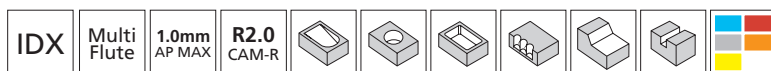
Grade
FT325M
Type
PVD
Coating
TiAlN
Application
Micro-grain carbide substrate with high wear resistance, which is suitable for threading of general materials including stainless steels

Price	
Size 11	£5.40
Size 16	£5.68
Size 22	£8.23

MHF-BN06 Indexable High Feed Milling Cutter Bodies

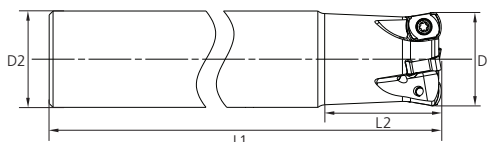
Combination Set Offer

Cutter Body +
30 BNMT Inserts

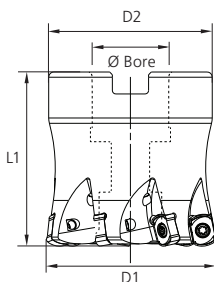


**SPECIAL
OFFER**

Screw-On Modular Shank End Mill		Dimensions (mm)					Set Price Including 30 Inserts
EDP	Tool Number	D1	D2	Flutes	L1	M	
FE1001	MHFBM-1602-06-M08	16	13	2	25	M8	£225.00
FE1002	MHFBM-2003-06-M10	20	18	3	30	M10	£240.00
FE1003	MHFBM-2504-06-M12	25	21	4	35	M12	£260.00
FE1004	MHFBM-3205-06-M16	32	29	5	40	M16	£280.00
FE1005	MHFBM-3505-06-M16	35	29	5	43	M16	£285.00
FE1006	MHFBM-4006-06-M16	40	29	6	43	M16	£300.00



Cylindrical Shank End Mill		Dimensions (mm)					Set Price Including 30 Inserts
EDP	Tool Number	D1	D2	Flutes	L1	M	
FE1007	MHFBC-1602-06-16	16	16	2	130	30	£230.00
FE1008	MHFBC-2003-06-20	20	20	3	140	32	£245.00
FE1009	MHFBC-2504-06-25	25	25	4	150	32	£265.00



Cylindrical Shank End Mill		Dimensions (mm)					Set Price Including 30 Inserts
EDP	Tool Number	D1	D2	Flutes	L1	M	
FE1010	MHFB-5007-06-22	50	47	7	50	22	£335.00
FE1011	MHFB-5207-06-22	52	47	7	50	22	£350.00

NOTE: When ordering please use EDP and specify which insert geometry and grade is required.

Inserts



MM Geometry



MR Geometry

Geometries

MM

First choice for cutting stainless steels and high temperature alloys when a stronger edge is required.

MR

First choice for rough milling of alloy steels and tool steels. Also first choice for interrupted cutting.

Grades

FS5030

Wide range of applications and materials with excellent properties in wear and impact resistance. Suited for multiple applications in steels, stainless steels and cast irons. First choice for tool-steels applications HRC40-48. TiSiN coated.

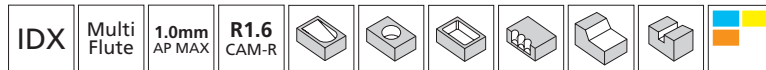
FS5040

Tougher grade for interrupted cutting or unstable work-pieces. Suitable for steels, stainless steels and cast irons. TiSiN coated.

*At least 35% saving on items if purchased separately



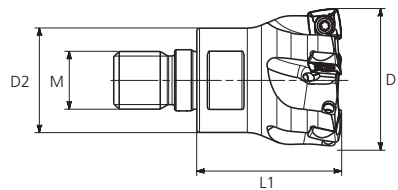
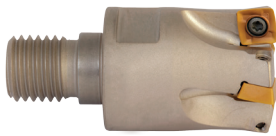
MAHF-XD09 Screw-On Shank End Mills



Combination Set Offer

Cutter Body +
30 XDMT Inserts

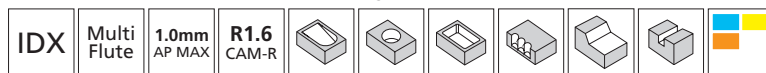
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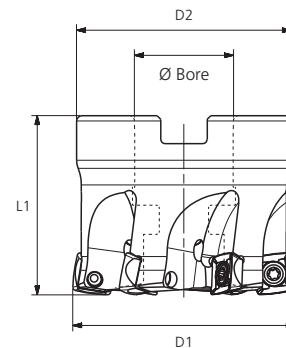
SPECIAL
OFFER

EDP	Tool Number	Dimensions (mm)					Insert	Set Price Including 30 Inserts
		D1	D2	Z	L1	M		
FE1060	MAHFM-2503-XD09-M12	25	21	3	35	M12	XDMT09-SM	£265.00
FE1061	MAHFM-3204-XD09-M16	32	29	4	40	M16	XDMT09-SM	£285.00
FE1062	MAHFM-3505-XD09-M16	35	29	5	40	M16	XDMT09-SM	£295.00
FE1063	MAHFM-4005-XD09-M16	40	29	5	40	M16	XDMT09-SM	£295.00

MAHF-XD09 Bore Type Face Mills

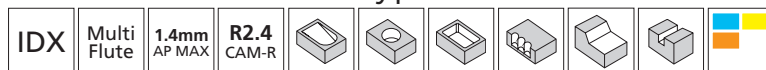


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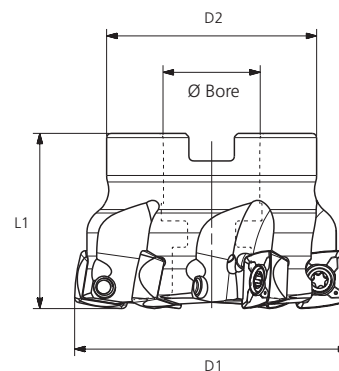


EDP	Tool Number	Dimensions (mm)					Insert	Set Price Including 30 Inserts
		D1	D2	Flutes	L1	Ø Bore		
FE1064	MAHFB-5006-XD09-22	50	48	6	40	22	XDMT09-SM	£320.00
FE1065	MAHFB-6308-XD09-22	63	48	8	40	22	XDMT09-SM	£370.00

MAHF-XD12 Bore Type Face Mills



new

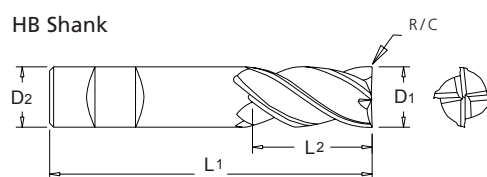
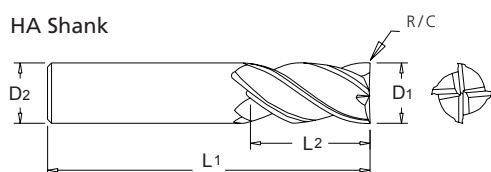
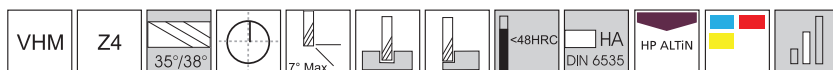


EDP	Tool Number	Dimensions (mm)					Insert	Set Price Including 30 Inserts
		D1	D2	Flutes	L1	Ø Bore		
FE1066	MAHFB-5005-XD12-22	50	48	5	40	22	XDMT12-SM	£340.00
FE1067	MAHFB-5205-XD12-22	52	48	5	40	22	XDMT12-SM	£340.00
FE1068	MAHFB-6306-XD12-22	63	48	6	40	22	XDMT12-SM	£380.00
FE1069	MAHFB-8006-XD12-27	80	58	6	50	27	XDMT12-SM	£390.00

Inserts

	Insert Number	Grades				SM
		FA6230	FM6140	FM6235	FS6030	
		EDP				
MAHF-XD09	XDMT09T307-SM	FW4319	FW1426	FW1427	FW1428	
MAHF-XD12	XDMT120512-SM	FW4320	FW1429	FW1430	FW1431	

TuffCut® GP Series MV4 with Small Chamfer



Series MV4	Tool Dimensions							Price
Tool No.	Ø D ¹	Ø D ²	L ¹	L ²	R	C x 45°	Shank	
MV4 03HX	3.0	6.0	64.0	6.0	-	0.1	HA	£12.50
MV4 04HX	4.0	6.0	64.0	11.0	-	0.1	HA	£12.70
MV4 05HX	5.0	6.0	64.0	12.0	-	0.1	HA	£13.54
MV4 06HX	6.0	6.0	64.0	15.0	-	0.1	HA	£12.50
MV4 08HX	8.0	8.0	64.0	22.0	-	0.1	HA	£14.55
MV4 08HXW	8.0	8.0	64.0	22.0	-	0.15	HB	£14.55
MV4 10HX	10.0	10.0	72.0	22.0	-	0.15	HA	£23.15
MV4 10HXW	10.0	10.0	72.0	22.0	-	0.15	HB	£23.15
MV4 12HX	12.0	12.0	73.0	27.0	-	0.15	HA	£28.18
MV4 12HXW	12.0	12.0	73.0	27.0	-	0.15	HB	£28.18
MV4 16HX	16.0	16.0	92.0	33.0	-	0.3	HA	£55.57
MV4 16HXW	16.0	16.0	92.0	33.0	-	0.3	HB	£55.57

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