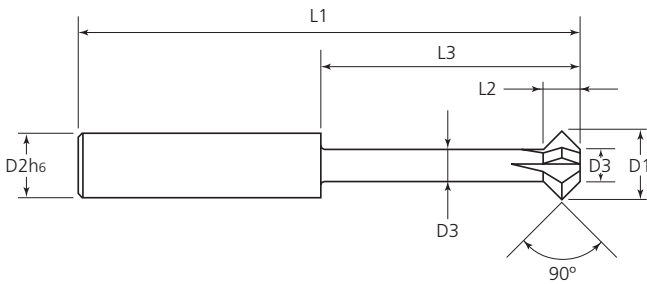


TuffCut® GP Series FBCM Front & Back Chamfer Mills



Features

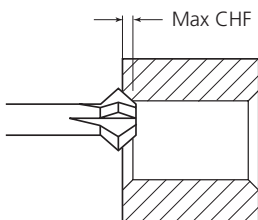
- Multi flutes
- Dual angled cutting edges

Benefits

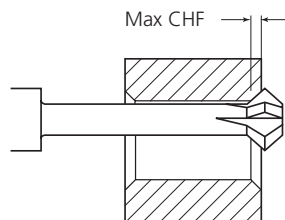
- Increased feed and improved surface finish
- Deburrs and chamfers front and back of surfaces

Tool Number	D1	D2	D3	L1	L2	L3	Z	Max CHF	GBP
FBCM 03N3H	3.0	4.0	1.5	50.0	1.5	11.5	3	0.6	£32.80
FBCM 04N3H	4.0	4.0	2.0	50.0	2.0	15.0	3	0.9	£36.50
FBCM 05N3H	5.0	6.0	2.5	57.0	2.5	18.5	3	1.1	£42.63
FBCM 06N3H	6.0	6.0	3.0	64.0	3.0	22.0	3	1.4	£46.30
FBCM 08N3H	8.0	8.0	4.0	63.0	4.0	29.0	4	1.8	£50.67
FBCM 10N3H	10.0	10.0	5.0	72.0	5.0	36.0	5	2.3	£62.17
FBCM 12N3H	12.0	12.0	6.0	83.0	6.0	43.0	5	2.8	£74.07

Front chamfer



Back chamfer



TuffCut® GP Series FBCM Front & Back Chamfer Mills

Recommended Speeds by Material Group

Workpiece Material Group		Material Type	Coolant			Deburr	Chamfer
			Max	Air	MMS	Vc-m/min	
Steels	P	Low Carbon Steels	●	●	●	230	220
		Medium Carbon Steels	●	●	●	200	185
		Alloy Tool Steels	●	●	●	175	165
		Die/Tool Steels	●	●	●	145	130
Stainless Steels	M	Free Machining Stainless	●	X	○	120	110
		Austenitic Stainless	●	X	○	110	100
		Difficult Stainless	●	X	○	75	65
		PH Stainless	●	X	○	110	100
		Cobalt Chrome Alloys	●	X	○	75	65
		Duplex (22%)	●	X	○	75	65
		Super Duplex (25%)	●	X	○	55	45
Special Alloys	S	High Temp Alloys	●	X	X	35	28
		Titanium Alloys	●	X	X	75	66
Cast Irons	K	Grey Cast Iron	●	○	○	200	175
		Ductile Cast Iron	●	○	○	185	165
Hardened Steels	H	Hardened Steels 45 - 50HRC	○	●	○	60	50
		Hardened Steels 50 - 55HRC	○	●	○	50	45
Non Ferrous	N	Aluminium Alloys	●	X	○	300	250
		Brass / Bronze / Copper	●	X	○	180	170

Please note:

● Preferred ○ Possible X Not Possible

Use the following formula to calculate the effective cutting diameter:
(Major diameter D1 + minor diameter D3) / 2.

Alternatively, estimate the actual diameter that is in contact with the workpiece.

Recommended Feed per Tooth by Material Group

Workpiece Material Group		Type of Machining	Tool Diameter						
			3mm	4mm	5mm	6mm	8mm	10mm	12mm
			fz-mm/tooth						
Steels	P	Deburr	0.015	0.020	0.025	0.030	0.040	0.050	0.060
		Chamfer	0.008	0.010	0.013	0.015	0.020	0.025	0.030
Stainless Steels	M	Deburr	0.015	0.020	0.025	0.030	0.040	0.050	0.060
		Chamfer	0.008	0.010	0.013	0.015	0.020	0.025	0.030
High Temp Alloys	S	Deburr	0.004	0.006	0.007	0.016	0.019	0.022	0.026
		Chamfer	0.002	0.003	0.004	0.008	0.010	0.011	0.013
Titanium	S	Deburr	0.015	0.020	0.025	0.030	0.040	0.050	0.060
		Chamfer	0.008	0.010	0.013	0.015	0.020	0.025	0.030
Cast Irons	K	Deburr	0.015	0.020	0.025	0.030	0.040	0.050	0.060
		Chamfer	0.008	0.010	0.013	0.015	0.020	0.025	0.030
Hardened Steels 45 - 50HRC	H	Deburr	0.010	0.013	0.015	0.025	0.035	0.045	0.054
		Chamfer	0.005	0.007	0.008	0.013	0.018	0.023	0.027
Hardened Steels 50 - 55HRC	H	Deburr	0.008	0.010	0.011	0.020	0.030	0.040	0.050
		Chamfer	0.004	0.005	0.006	0.010	0.015	0.020	0.025
Non Ferrous	N	Deburr	0.015	0.020	0.025	0.030	0.040	0.050	0.050
		Chamfer	0.008	0.010	0.013	0.015	0.020	0.025	0.025

Please note: These are recommended starting conditions. However, please adjust the feed to suit the surface finish requirements.