

ULTIMATE PERFORMANCE

Solid Carbide Roughing End Mills For Alloy Steels, HRSA, Hardened Steel



FEATURES/DESCRIPTION	APPLICATION	FEATURES																																							
Roughing - Premium sub-micron grade carbide substrate for wear resistance - Ideal for hardened steel, die steel and HRSA - Roughing serrations break chips and reduce cutting forces - SafeLock® shank available upon request		CARBIDE VAR 4FL SQ P179 h6 FX1																																							
<table border="1"> <thead> <tr> <th colspan="3">STEEL</th> <th colspan="2">STAINLESS</th> <th colspan="2">CAST IRON</th> <th colspan="2">NON-FERROUS</th> <th colspan="2">HRSA</th> <th colspan="2">HARDENED STEEL</th> </tr> <tr> <th>P1</th> <th>P2</th> <th>P3</th> <th>M1</th> <th>M2</th> <th>K1</th> <th>K2</th> <th>N1</th> <th>N2</th> <th>S1</th> <th>S2</th> <th>H1</th> <th>H2</th> </tr> </thead> <tbody> <tr> <td>○</td> <td>●</td> <td>●</td> <td></td> <td>○</td> <td>●</td> <td>●</td> <td></td> <td></td> <td>●</td> <td></td> <td>●</td> <td>○</td> </tr> </tbody> </table> ● Best ○ Good			STEEL			STAINLESS		CAST IRON		NON-FERROUS		HRSA		HARDENED STEEL		P1	P2	P3	M1	M2	K1	K2	N1	N2	S1	S2	H1	H2	○	●	●		○	●	●			●		●	○
STEEL			STAINLESS		CAST IRON		NON-FERROUS		HRSA		HARDENED STEEL																														
P1	P2	P3	M1	M2	K1	K2	N1	N2	S1	S2	H1	H2																													
○	●	●		○	●	●			●		●	○																													

Series 1031 SRF4 4FL Square Chamfer					
Diameter(D ₁)	LOC(L ₁)	OAL(L)	Shank(D)	Chamfer(D)	EDP
1/8	1/4	1-1/2	1/8	0.007	107988
1/8	1/2	1-1/2	1/8	0.007	111235
3/16	5/16	2	3/16	0.007	111252
3/16	5/8	2	3/16	0.007	111236
1/4	1/2	2	1/4	0.010	107794
1/4	3/4	2-1/2	1/4	0.010	111237
1/4	1-1/8	3	1/4	0.010	111244
5/16	1/2	2	5/16	0.010	107990
5/16	13/16	2-1/2	5/16	0.010	111238
5/16	1-1/8	3	5/16	0.010	111245
3/8	5/8	2	3/8	0.010	111253
3/8	7/8	2-1/2	3/8	0.010	111239
3/8	1-1/8	3	3/8	0.010	111246
1/2	5/8	2-1/2	1/2	0.010	107904
1/2	1	3	1/2	0.015	107905
1/2	2	4	1/2	0.015	111247
5/8	3/4	3	5/8	0.015	107992
5/8	1-1/4	3-1/2	5/8	0.015	111277
5/8	2-1/4	5	5/8	0.015	111248
3/4	7/8	3	3/4	0.020	107919
3/4	1-1/2	4	3/4	0.020	111242
3/4	2-1/4	5	3/4	0.020	111249
1	1	4	1	0.020	107997
1	1-1/2	4	1	0.020	111243
1	2-1/4	5	1	0.020	111250

*bold numbers are EDPs for ordering

Series 1031

SRF4 | 4 FL | Square | Chip Breaker | Hurrimill

Material	Axial ↓	Radial →	SFM	1/8		1/4		3/8		1/2		5/8		3/4	
				RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM
P	Carbon Steel 10XX, 11XX, 12XX, 13XX	1 x D	1 x D	220	6723 13	3362 13	2241 16	1681 17	1345 16	1121 15					
		1.25 x D	.3 x D	264	8068 19	4034 19	2689 23	2017 24	1614 23	1345 21					
		1.5 X D	.1 x D	343	10488 42	5244 42	3496 50	2622 53	2098 51	1748 47					
	Alloy Steel 4140, 8620	1 x D	1 x D	180	5501 21	2750 16	1834 13	1375 13	1100 13	917 12					
		1.25 x D	.3 x D	225	6876 31	3438 24	2292 19	1719 20	1375 19	1146 17					
		1.5 X D	.1 x D	270	8251 63	4126 47	2750 38	2063 40	1650 38	1375 35					
	Tool Steel A2 ,A3, D2, H11, H13	1 x D	.5 x D	180	5501 10	2750 10	1834 13	1375 13	1100 13	917 12					
		1.25 x D	.3 x D	225	6876 16	3438 16	2292 19	1719 20	1375 19	1146 17					
		1.5 X D	.1 x D	270	8251 31	4126 31	2750 38	2063 40	1650 38	1375 35					
M	SS 300 & 400 Series 303, 304, 316, 420, 416	.75 x D	1 x D	140	4278 7	2139 7	1426 8	1070 9	856 8	713 8					
		1.25 x D	.3 x D	185	5654 11	2827 11	1885 13	1413 14	1131 13	942 12					
		1.5 x D	.1 x D	230	7039 23	3519 23	2346 28	1760 29	1408 28	1173 25					
	Precipitation SS 15-5, 16-6, 17-4, 17-5	2 X D	0.07 X D	393 - 800	12000 50	10696 107	7131 107	5348 107	4270 107	4075 107					
		1.5 X D	0.15 X D	393 - 800	12000 55	10696 118	7131 118	5348 118	4270 118	4075 118					
		1.0 X D	0.25 X D	393 - 800	12000 62	10696 132	7131 132	5348 132	4270 132	4075 132					
K	Cast Iron- Grey, GG-10, GG-40	1 x D	1 x D	100	3056 6	1528 6	1019 7	764 7	611 7	509 6					
		1.25 x D	.3 x D	125	3820 8	1910 8	1273 10	955 10	764 10	637 9					
		1.5 X D	.1 x D	163	4966 18	2483 18	1655 22	1242 23	993 22	828 20					
	Cast Iron- Ductile GGG-40, GGG-70	.75 x D	1 x D	155	4737 8	2368 8	1579 10	1184 10	947 10	789 9					
		1.25 x D	.3 x D	180	5501 11	2750 11	1834 14	1375 14	1100 14	917 13					
		1.5 x D	.1 x D	216	6601 23	3300 23	2200 27	1650 29	1320 27	1100 25					
S	High Temp Alloys Inconel 718, Hastalloy, A286, CoCr	2 X D	0.1 X D	93 - 125	3820 8	1910 8	1273 5	955 8	764 8	477 6					
		1.5 X D	0.15	84 - 112	3438 6	1719 6	1146 4	860 6	688 6	429 5					
		1.0 X D	0.25	70-90	2865 5	1433 5	955 3	716 5	573 5	358 4					