

ULTIMATE PERFORMANCE

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



INTRO

MILLING

SPECIALTY

HOLEMAKING

THREADING

INSERTS



FEATURES/DESCRIPTION	APPLICATION	FEATURES								
<p>Variable Helix, Unequal Index</p> <ul style="list-style-type: none"> Premium sub-micron grade carbide substrate for wear resistance Ideal for hardened steel, die steel and HRSA 4-flute variable helix design Ideal for High Efficiency Milling SafeLock® shank available upon request 		<table border="1"> <tr> <td>CARBIDE</td> <td>VAR</td> </tr> <tr> <td>4FL</td> <td>RAD</td> </tr> <tr> <td>SQ</td> <td>P176</td> </tr> <tr> <td>h6</td> <td>FX1</td> </tr> </table>	CARBIDE	VAR	4FL	RAD	SQ	P176	h6	FX1
CARBIDE	VAR									
4FL	RAD									
SQ	P176									
h6	FX1									

STEEL			STAINLESS		CAST IRON		NON-FERROUS		HRSA		HARDENED STEEL	
P1	P2	P3	M1	M2	K1	K2	N1	N2	S1	S2	H1	H2
○	●	●		○	●	●			●		●	○

● Best ○ Good

Series 1030 **HGW4 | 4FL | Square and Radius | Hurrimill**

Diameter(D ₁)	LOC(L ₁)	OAL(L)	Shank(D)	Radius(R)	EDP
1/8	1/4	1-1/2	1/8	-	120432
1/8	1/4	1-1/2	1/8	0.005	120542
1/8	1/4	1-1/2	1/8	0.015	121556
1/8	1/4	1-1/2	1/8	0.030	121557
1/8	1/2	1-1/2	1/8	-	119342
1/8	1/2	1-1/2	1/8	0.005	119333
1/8	1/2	1-1/2	1/8	0.015	121425
1/8	1/2	1-1/2	1/8	0.030	121426
3/16	5/16	2	3/16	-	120433
3/16	5/16	2	3/16	0.005	120543
3/16	5/16	2	3/16	0.015	121558
3/16	5/16	2	3/16	0.030	121559
3/16	5/8	2	3/16	-	119343
3/16	5/8	2	3/16	0.005	119334
3/16	5/8	2	3/16	0.015	121427
3/16	5/8	2	3/16	0.030	121428
3/16	3/4	2	3/16	-	120151
3/16	3/4	2	3/16	0.005	120159
3/16	3/4	2	3/16	0.015	121518
3/16	3/4	2	3/16	0.030	121519
3/16	3/4	2	3/16	0.060	120550
1/4	5/16	2	1/4	-	121555
1/4	5/16	2	1/4	0.005	121560
1/4	5/16	2	1/4	0.010	121561
1/4	5/16	2	1/4	0.015	121562
1/4	5/16	2	1/4	0.030	121563
1/4	5/16	2	1/4	0.060	121564
1/4	1/2	2	1/4	-	120434
1/4	1/2	2	1/4	0.005	121565
1/4	1/2	2	1/4	0.010	120544
1/4	1/2	2	1/4	0.015	121566
1/4	1/2	2	1/4	0.030	121567
1/4	1/2	2	1/4	0.060	121568
1/4	3/4	2-1/2	1/4	-	119344
1/4	3/4	2-1/2	1/4	0.005	121429
1/4	3/4	2-1/2	1/4	0.010	119335
1/4	3/4	2-1/2	1/4	0.015	121430
1/4	3/4	2-1/2	1/4	0.030	120697
1/4	3/4	2-1/2	1/4	0.060	120473
1/4	1-1/8	3	1/4	-	120152
1/4	1-1/8	3	1/4	0.005	121521
1/4	1-1/8	3	1/4	0.010	120160
1/4	1-1/8	3	1/4	0.015	121522
1/4	1-1/8	3	1/4	0.030	121523
1/4	1-1/8	3	1/4	0.060	121524

*bold numbers are EDPs for ordering

ULTIMATE PERFORMANCE

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



INTRO

MILLING

SPECIALTY

HOLEMAKING

THREADING

INSERTS

Series 1030		HGW4 4FL Square and Radius Hurrimill			
Diameter(D ₁)	LOC(L ₁)	OAL(L)	Shank(D)	Radius(R)	EDP
5/16	1/2	2	5/16	-	120435
5/16	1/2	2	5/16	0.010	120545
5/16	1/2	2	5/16	0.015	121569
5/16	1/2	2	5/16	0.030	121570
5/16	1/2	2	5/16	0.060	121571
5/16	13/16	2-1/2	5/16	-	119345
5/16	13/16	2-1/2	5/16	0.010	119336
5/16	13/16	2-1/2	5/16	0.015	121432
5/16	13/16	2-1/2	5/16	0.030	121433
5/16	13/16	2-1/2	5/16	0.060	121434
5/16	1-1/8	3	5/16	-	120153
5/16	1-1/8	3	5/16	0.010	120161
5/16	1-1/8	3	5/16	0.015	121525
5/16	1-1/8	3	5/16	0.030	121526
5/16	1-1/8	3	5/16	0.060	121527
3/8	7/16	2	3/8	-	122483
3/8	7/16	2	3/8	0.015	121572
3/8	7/16	2	3/8	0.030	121573
3/8	7/16	2	3/8	0.060	121574
3/8	5/8	2	3/8	-	120436
3/8	5/8	2	3/8	0.015	120546
3/8	5/8	2	3/8	0.030	121575
3/8	5/8	2	3/8	0.060	121576
3/8	7/8	2-1/2	3/8	-	119346
3/8	7/8	2-1/2	3/8	0.010	119315
3/8	7/8	2-1/2	3/8	0.015	119337
3/8	7/8	2-1/2	3/8	0.030	121435
3/8	7/8	2-1/2	3/8	0.060	121488
3/8	1-1/8	3	3/8	-	120154
3/8	1-1/8	3	3/8	0.010	120162
3/8	1-1/8	3	3/8	0.015	121528
3/8	1-1/8	3	3/8	0.030	121529
3/8	1-1/8	3	3/8	0.060	121530
3/8	1-1/8	3	3/8	0.090	121531
3/8	1-1/8	3	3/8	0.120	121532
1/2	5/8	2-1/2	1/2	-	120437
1/2	5/8	2-1/2	1/2	0.015	120547
1/2	5/8	2-1/2	1/2	0.030	120551
1/2	5/8	2-1/2	1/2	0.060	121577
1/2	5/8	2-1/2	1/2	0.090	121578
1/2	5/8	2-1/2	1/2	0.120	121579
1/2	1	3	1/2	-	119347
1/2	1	3	1/2	0.015	119338
1/2	1	3	1/2	0.020	121516
1/2	1	3	1/2	0.030	119546
1/2	1	3	1/2	0.060	120076
1/2	1	3	1/2	0.090	121489
1/2	1	3	1/2	0.120	121490
1/2	1-1/4	3	1/2	-	121515
1/2	1-1/4	3	1/2	0.015	121491
1/2	1-1/4	3	1/2	0.030	121492
1/2	1-1/4	3	1/2	0.060	121493
1/2	1-1/4	3	1/2	0.090	121494
1/2	1-1/4	3	1/2	0.120	121495
1/2	1-1/2	3	1/2	-	122282
1/2	1-1/2	3	1/2	0.015	121496
1/2	1-1/2	3	1/2	0.030	121497
1/2	1-1/2	3	1/2	0.060	121498
1/2	1-1/2	3	1/2	0.090	121499
1/2	1-1/2	3	1/2	0.120	121500
1/2	1-3/4	4	1/2	-	121517
1/2	1-3/4	4	1/2	0.015	121533
1/2	1-3/4	4	1/2	0.030	121534
1/2	1-3/4	4	1/2	0.060	121535
1/2	1-3/4	4	1/2	0.090	121536
1/2	1-3/4	4	1/2	0.120	121537
1/2	2	4	1/2	-	120155
1/2	2	4	1/2	0.015	120163
1/2	2	4	1/2	0.030	121538
1/2	2	4	1/2	0.060	121539
1/2	2	4	1/2	0.090	121540
1/2	2	4	1/2	0.120	121541
5/8	3/4	3	5/8	-	120438
5/8	3/4	3	5/8	0.015	121580
5/8	3/4	3	5/8	0.020	120548
5/8	3/4	3	5/8	0.030	121581

*bold numbers are EDPs for ordering

ULTIMATE PERFORMANCE

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



Series 1030 HGW4 | 4FL | Square and Radius | Hurrimill

Diameter(D ₁)	LOC(L ₁)	OAL(L)	Shank(D)	Radius(R)	EDP
5/8	3/4	3	5/8	0.060	121582
5/8	3/4	3	5/8	0.090	121583
5/8	3/4	3	5/8	0.120	121584
5/8	1-1/4	3-1/2	5/8	-	119348
5/8	1-1/4	3-1/2	5/8	0.015	121502
5/8	1-1/4	3-1/2	5/8	0.020	119339
5/8	1-1/4	3-1/2	5/8	0.030	121503
5/8	1-1/4	3-1/2	5/8	0.060	121504
5/8	1-1/4	3-1/2	5/8	0.090	121505
5/8	1-1/4	3-1/2	5/8	0.120	121506
5/8	2-1/4	5	5/8	-	120156
5/8	2-1/4	5	5/8	0.015	121542
5/8	2-1/4	5	5/8	0.020	120164
5/8	2-1/4	5	5/8	0.030	121543
5/8	2-1/4	5	5/8	0.060	121544
5/8	2-1/4	5	5/8	0.090	121545
5/8	2-1/4	5	5/8	0.120	121546
3/4	7/8	3	3/4	-	120439
3/4	7/8	3	3/4	0.015	121585
3/4	7/8	3	3/4	0.030	120486
3/4	7/8	3	3/4	0.060	121586
3/4	7/8	3	3/4	0.090	121587
3/4	7/8	3	3/4	0.120	121588
3/4	1-1/2	4	3/4	-	119349
3/4	1-1/2	4	3/4	0.015	121507
3/4	1-1/2	4	3/4	0.030	119340
3/4	1-1/2	4	3/4	0.060	121508
3/4	1-1/2	4	3/4	0.090	121509
3/4	1-1/2	4	3/4	0.120	121510
3/4	2-1/4	5	3/4	-	119722
3/4	2-1/4	5	3/4	0.015	121547
3/4	2-1/4	5	3/4	0.030	119723
3/4	2-1/4	5	3/4	0.060	121548
3/4	2-1/4	5	3/4	0.090	121549
3/4	2-1/4	5	3/4	0.120	121550
1	1	4	1	-	120440
1	1	4	1	0.015	121589
1	1	4	1	0.030	120549
1	1	4	1	0.060	121590
1	1	4	1	0.090	121591
1	1	4	1	0.120	121592
1	1-1/2	4	1	-	119350
1	1-1/2	4	1	0.015	121511
1	1-1/2	4	1	0.030	119341
1	1-1/2	4	1	0.060	121512
1	1-1/2	4	1	0.090	121513
1	1-1/2	4	1	0.120	121514
1	2-1/4	5	1	-	120158
1	2-1/4	5	1	0.015	121551
1	2-1/4	5	1	0.030	120166
1	2-1/4	5	1	0.060	121552
1	2-1/4	5	1	0.090	121553
1	2-1/4	5	1	0.120	121554

*bold numbers are EDPs for ordering

INTRO

MILLING

SPECIALTY

HOLEMAKING

THREADING

INSERTS

Series 1030, 1032

HGW4 | 4 FL | SQ, CR, BN | 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, 417	.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, 17-6	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
S	High Temp Alloys Inconel 718, Hastalloy, A286, Waspalloy, 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