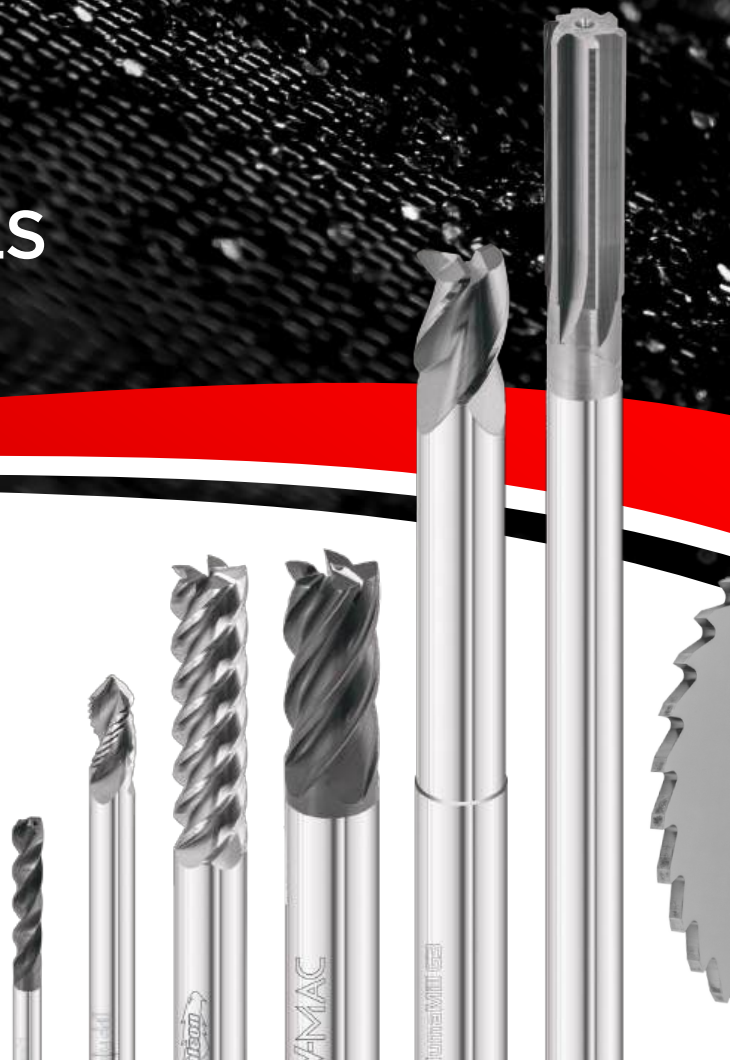
FULLERTON
TOOL COMPANY

SOLID CARBIDE TOOLS

80 YEARS
1942-2022



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Any time something is not handled to your satisfaction

Core Values

Our **PEOPLE** make the difference because we care about our customers, our community and each other.
Leading by the **PRINCIPLES** of integrity and dedication.
A **PASSION** to innovate and continuously improve.
Consistency through **PRECISION** in everything we do.
Improve **PRODUCTIVITY** through FAST.

PEOPLE | PRINCIPLES | PASSION | PRECISION | PRODUCTIVITY

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HIGH PERFORMANCE

END MILLS

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3820 The Dream
3116 TiMill
3125 V-MAC

AlumaMill™

3825 - STUB LENGTH - Square End

The AlumaMill **excels** in aggressive material removal rates in high si aluminum and plastics.



L | 2 | CENTER CUTTING | STB | UNCOATED

N N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/4	1/2	1/4	2	38226
3/8	5/8	3/8	2 1/2	38228
1/2	3/4	1/2	3	38230
3/4	1	3/4	4	38234

3825 - STANDARD LENGTH - Square End

The AlumaMill **excels** in aggressive material removal rates in high si aluminum and plastics.



L | 2 | CENTER CUTTING | SD | UNCOATED

N N-FERROUS

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/8	1/2	1/8	1 1/2	38214
3/16	5/8	3/16	2	38216
1/4	1	1/4	2 1/2	38218
3/8	1	3/8	2 1/2	38220
1/2	1 1/4	1/2	3	38200
5/8	1 5/8	5/8	3 1/2	38222
3/4	1 3/4	3/4	4	38212
1	1 3/4	1	5	38224

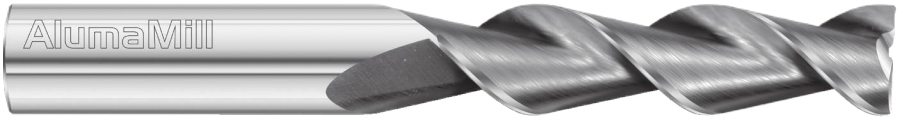
TOLERANCES	DIAMETER	SHANK	45° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

END MILLS

3825 AlumaMill - XL LENGTH - Square End

AlumaMill™

The AlumaMill **excels** in aggressive material removal rates in high si aluminum and plastics.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/4	2	1/4	4	38236
5/16	1 1/8	5/16	3	38238
3/8	2	3/8	4	38240
1/2	2	1/2	4	38242
3/4	2 1/2	3/4	5	38244

N N-FERROUS

3825 AlumaMill - LONG REACH - Square End

The AlumaMill **excels** in aggressive material removal rates in high si aluminum and plastics.



DIA	LOC	SHANK	OAL	REACH	NECK DIAMETER	EDP UNCOATED
1/8	1/4	1/8	3	3/4	0.1200	38213
3/16	5/16	3/16	3	3/4	0.1800	38211
1/4	1/2	1/4	3	1 1/8	0.2400	38210
	1/2	1/4	4	2 1/8	0.2400	38199
3/8	5/8	3/8	4	1 1/8	0.3600	38227
	5/8	3/8	6	3 1/8	0.3600	38221
1/2	3/4	1/2	4	2 1/4	0.4800	38198
	3/4	1/2	6	3 1/2	0.4800	38197
3/4	1	3/4	6	3 1/8	0.7200	38231

N N-FERROUS

TOLERANCES	DIAMETER	SHANK	45° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill™

3825 - STANDARD LENGTH - Radius End

The AlumaMill **excels** in aggressive material removal rates in high si aluminum and plastics.



N N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP UNCOATED
1/2	1 1/4	1/2	3	.0150	38608
	1 1/4	1/2	3	.1250	38614
3/4	1 3/4	3/4	4	.0200	38623
1	1 3/4	1	5	.0300	38631
	1 3/4	1	5	.1250	38635

TOLERANCES	DIAMETER	SHANK	45° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMillHV™

3802 / 3803 - STANDARD LENGTH - Radius End

The AlumaMill HV **excels** in high horsepower / RPM milling machines for maximum removal in aluminum & plastics.



OFFERED 3 WAYS

- Solid: Utilizing external flood coolant.
- Annular Coolant: Single on axis, coolant thru.
- Branch Coolant: Single feed, branch exit holes.

DURA CARB III
Submicron grain structure for optimal edge quality.

MIRROR FINISH
High polish with edge prep.

FULLY ENGINEERED BALANCED
Thru design.

h6 FULGRIP
Anti-pull out shank.

.0002 max T.I.R.
Between shank and cutting edge.

CUSTOM MARGINS & DRILL EDGE
For strength.

SINUSOIDAL & HELICAL GASHES
To engineered center gash openings.

Fullerton is excited to announce our two and three flute build series end mills, the 3802 and 3803 Solution Series. Designed specifically for today's high horsepower, high RPM, maximum metal removal milling machines, and incorporates all necessary traits to dominate in non-ferrous material removal.

The 3802/3803 series end mill is considered the true Apex Predator, dynamically separating itself from all other high velocity tools on the market today.

END MILLS

3835 - STUB LENGTH - Square End

AlumaMill™

The AlumaMill **excels** in aggressive material removal rates in high si aluminum.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/8	1/4	1/8	1 1/2	38366
3/16	5/16	3/16	2	38368
1/4	1/2	1/4	2	38370
5/16	1/2	5/16	2 1/2	38372
3/8	5/8	3/8	2 1/2	38374
1/2	3/4	1/2	3	38378
5/8	1	5/8	3 1/2	38380
3/4	1	3/4	4	38382

N N-FERROUS

3835 - STANDARD LENGTH - Square End

The AlumaMill **excels** in aggressive material removal rates in high si aluminum.



DIA	LOC	SHANK	OAL	EDP UNCOATED
1/8	1/2	1/8	1 1/2	38346
3/16	5/8	3/16	2	38348
1/4	1	1/4	2 1/2	38350
5/16	1	5/16	2 1/2	38352
3/8	1	3/8	2 1/2	38354
7/16	1	7/16	2 3/4	38356
1/2	1 1/4	1/2	3	38358
5/8	1 5/8	5/8	3 1/2	38360
3/4	1 3/4	3/4	4	38362
1	1 3/4	1	4	38364

N N-FERROUS

TOLERANCES	DIAMETER	SHANK	36° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill™

3835 - XL LENGTH - Square End

The AlumaMill **excels** in aggressive material removal rates in high si aluminum.



N N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/4	2	1/4	4	38386
3/8	2	3/8	4	38390
1/2	2	1/2	4	38394
	3 1/4	1/2	6	38395
3/4	2 1/2	3/4	5	38398
	3 1/4	3/4	6	38399
1	2 1/2	1	5	38400
	3 1/4	1	6	38402

TOLERANCES	DIAMETER	SHANK	36° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill G3™

3833 - STUB LENGTH - Square End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



N N-FERROUS

DIA	LOC	SHANK	OAL	EDP UNCOATED	EDP FC5
1/8	1/4	1/8	1 1/2	27045	27055
3/16	5/16	3/16	2	27046	27056
1/4	1/2	1/4	2	27047	27057
5/16	1/2	5/16	2 1/2	27048	
3/8	1/2	3/8	2 1/2	27049	27059
1/2	5/8	1/2	3	27108	27073
	3/4	1/2	3	27051	27061
5/8	3/4	5/8	3 1/2	27111	27076
3/4	1	3/4	4	27053	27063
1	1 1/4	1	4	27054	
METRIC					
3.00	6.00	3.00	38.00	27136	
4.00	8.00	4.00	50.00	27164	
5.00	13.00	5.00	51.00	27195	
6.00	13.00	6.00	58.00	93101	
8.00	16.00	8.00	64.00	27319	
10.00	15.00	10.00	64.00	27377	
12.00	20.00	12.00	76.00	27435	
16.00	30.00	16.00	89.00	27653	

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

END MILLS

3833 - STANDARD LENGTH - Square End

AlumaMill G3

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



HIGH PERFORMANCE

N N-FERROUS

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	FC5
1/8	1/2	1/8	2	27000	27010
	3/4	1/8	2	27100	27065
3/16	3/8	3/16	2	27101	27066
	5/8	3/16	2	27001	27011
1/4	1/2	1/4	2 1/2	27102	27067
	3/4	1/4	2 1/2	27103	27068
	1	1/4	2 1/2	27002	27012
	1 1/4	1/4	3	27104	27069
5/16	13/16	5/16	2 1/2	27106	27071
	1	5/16	2 1/2	27003	27013
	1 1/4	5/16	3	27107	
3/8	1	3/8	2 1/2	27004	27014
	1	3/8	3	27088	27089
1/2	1	1/2	3	27109	27074
	1 1/4	1/2	3	27006	27016
5/8	1 1/4	5/8	3 1/2	27112	
	1 5/8	5/8	3 1/2	27007	27017
3/4	1 3/4	3/4	4	27008	27018
1	1 3/4	1	4	27009	
METRIC					
3.00	12.00	3.00	50.00	93000	
	20.00	3.00	50.00	27146	
4.00	12.00	4.00	50.00	93100	
	16.00	4.00	50.00	93001	
5.00	20.00	5.00	64.00	93002	
6.00	25.00	6.00	64.00	93003	
7.00	15.00	7.00	64.00	27269	27270
8.00	25.00	8.00	64.00	93005	
10.00	26.00	10.00	64.00	93006	93018
12.00	30.00	12.00	84.00	93007	
16.00	41.00	16.00	89.00	93009	
20.00	44.00	20.00	100.00	93010	
25.00	45.00	25.00	100.00	93011	93023

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill G3

3833 - XL LENGTH - Square End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	FC5
1/4	2	1/4	4	27020	
5/16	1 1/4	5/16	4	27021	
3/8	1 1/2	3/8	4	27118	
	2	3/8	4	27022	27035
1/2	1 5/8	1/2	4	27952	
	2	1/2	4	27024	27037
	2 1/2	1/2	5	27110	
	3 1/4	1/2	6	27025	27038
5/8	2	5/8	5		27999
	2 1/2	5/8	5	27026	27039
	3 1/4	5/8	6	27027	27040
	3 3/4	5/8	6	27951	27954
3/4	2 1/2	3/4	5	27028	27041
	3 1/4	3/4	6	27029	27042
1	2 1/2	1	5	27030	
	3 1/4	1	6	27031	
	4 1/8	1	7	27113	
METRIC					
6.00	50.00	6.00	100.00	93038	
8.00	50.00	8.00	100.00	93039	
10.00	50.00	10.00	100.00	93040	
12.00	50.00	12.00	100.00	93041	
16.00	63.00	16.00	150.00	93043	
20.00	63.00	20.00	150.00	93044	
25.00	63.00	25.00	150.00	93045	

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

END MILLS

3833 - LONG REACH - Square End

AlumaMill G3

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



HIGH PERFORMANCE

N N-FERROUS

DIA	LOC	SHANK	OAL	REACH	NECK DIAMETER	EDP UNCOATED	EDP FC5
1/2	5/8	1/2	6	3 3/8	0.4800	27131	
3/4	1	3/4	6	2 1/4	0.7200	27132	27709
	1	3/4	6	3 3/8	0.7200	27133	27722
METRIC							
6.00	20.00	6.00	100.00	50.00	5.745	93024	
8.00	20.00	8.00	100.00	50.00	7.720	93025	
10.00	26.00	10.00	100.00	57.00	9.600	93026	
12.00	25.00	12.00	100.00	57.00	11.610	93027	
16.00	30.00	16.00	150.00	89.00	15.340	93028	
20.00	38.00	20.00	150.00	89.00	19.354	93029	

3833 - STANDARD LENGTH - Radius End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



N N-FERROUS

DIA	LOC	SHANK	OAL	RADIUS	EDP UNCOATED
1/8	1/2	1/8	2	.0150	27156
	3/4	1/8	2	.0150	27160
3/16	5/16	3/16	2	.0300	27180
	5/8	3/16	2	.0150	27189
	5/8	3/16	2	.0300	27190
1/4	1/2	1/4	2	.0150	27233
	3/4	1/4	2 1/2	.0150	27245
	3/4	1/4	2 1/2	.0300	27247
	1	1/4	2 1/2	.0300	27253
	1 1/4	1/4	3	.0300	27257
	1 1/4	1/4	3	.0150	27259
3/8	1/2	3/8	2 1/2	.0300	27345
	1/2	3/8	2 1/2	.0150	27347
	1	3/8	2 1/2	.0150	27353
	1	3/8	2 1/2	.0300	27355

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill G3

3833 - STANDARD LENGTH - Radius End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



L | 3 | CENTER CUTTING | SD | UNCOATED

N N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP UNCOATED
3/8	1	3/8	2 1/2	.0600	27357
	1	3/8	3	.0150	27361
	1	3/8	3	.0300	27363
	1	3/8	3	.0600	27365
1/2	5/8	1/2	3	.0150	27469
	5/8	1/2	3	.0300	27471
	5/8	1/2	3	.1200	27477
	3/4	1/2	3	.0150	27507
	1	1/2	3	.0150	27519
	1	1/2	3	.0300	27521
	1	1/2	3	.0600	27523
	1	1/2	3	.0900	27525
	1	1/2	3	.1200	27527
	1 1/4	1/2	3	.0150	27531
	1 1/4	1/2	3	.0150	27531
	1 1/4	1/2	3	.0300	27120
	1 1/4	1/2	3	.0600	27121
	1 1/4	1/2	3	.0900	27533
	1 1/4	1/2	3	.1200	27535
5/8	1 1/4	5/8	3 1/2	.0600	27123
	1 5/8	5/8	3 1/2	.0300	27623
3/4	1	3/4	4	.0300	27699
	1	3/4	4	.1200	27705
	1 3/4	3/4	4	.0300	27125
	1 3/4	3/4	4	.0600	27126
	1 3/4	3/4	4	.1200	27127
1	1 1/4	1	4	.0300	27851
	1 1/4	1	4	.0600	27853
	1 3/4	1	4	.0300	27887
METRIC					
3.00	12.00	3.00	50.00	1.00	27931
6.00	25.00	6.00	64.00	0.50	27221
	25.00	6.00	64.00	1.00	27933
7.00	25.00	7.00	64.00	0.50	27277
8.00	25.00	8.00	64.00	0.50	27333
	25.00	8.00	64.00	1.00	27335
10.00	26.00	10.00	64.00	0.50	27395
	26.00	10.00	64.00	1.00	27397
	26.00	10.00	64.00	1.50	27399
12.00	30.00	12.00	84.00	0.50	27453
	30.00	12.00	84.00	2.00	27941
	30.00	12.00	84.00	3.00	27943
16.00	41.00	16.00	89.00	1.00	27675
20.00	44.00	20.00	100.00	3.00	27780

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

END MILLS

3833 - XL LENGTH - Radius End

AlumaMill G3

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



HIGH PERFORMANCE

N N-FERROUS

DIA	LOC	SHANK	OAL	RADIUS	EDP UNCOATED
1/4	2	1/4	4	.0150	27263
	2	1/4	4	.0300	27265
5/16	1 1/4	5/16	4	.0300	27315
	1 1/4	5/16	4	.0150	27313
	2	3/8	4	.0300	27371
	2	3/8	4	.0600	27373
7/16	2	7/16	4	.0300	27429
1/2	2	1/2	4	.0150	27539
	2	1/2	4	.0300	27541
	2	1/2	4	.0600	27543
	2	1/2	4	.1200	27547
	2 1/2	1/2	5	.0150	27551
	2 1/2	1/2	5	.0300	27553
	2 1/2	1/2	5	.0600	27555
	2 1/2	1/2	5	.1200	27559
	3 1/4	1/2	6	.0300	27565
	3 1/4	1/2	6	.0900	27569
5/8	2 1/2	5/8	5	.0300	27633
	2 1/2	5/8	6	.0900	27637
	3 1/4	5/8	6	.0600	27645
3/4	2 1/2	3/4	5	.0300	27739
	2 1/2	3/4	5	.0900	27743
	2 1/2	3/4	5	.1200	27745
	3 1/4	3/4	6	.0600	27751
	3 1/4	3/4	6	.1200	27755
1	2 1/2	1	5	.0300	27897
	2 1/2	1	5	.0600	27899
	3 1/4	1	6	.0300	27907
	4 1/8	1	7	.0600	27920
	4 1/8	1	7	.1200	27924
METRIC					
10.00	50.00	10.00	100.00	1.00	27405
12.00	50.00	12.00	100.00	1.00	27463
14.00	57.00	14.00	125.00	1.50	27599

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill G3

3833 - LONG REACH - Radius End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



N N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	REACH	NECK DIA	RADIUS	EDP UNCOATED
1/2	5/8	1/2	4	2 1/4	.4800	.0150	27482
	5/8	1/2	4	2 1/4	.4800	.0300	27484
	5/8	1/2	4	2 1/4	.4800	.0600	27486
	5/8	1/2	4	2 1/4	.4800	.1200	27490
	5/8	1/2	6	3 3/8	.4800	.0300	27497
	5/8	1/2	6	3 3/8	.4800	.0600	27499
3/4	1	3/4	6	3 3/8	.7200	.0150	27723
	1	3/4	6	3 3/8	.7200	.0300	27725
	1	3/4	6	3 3/8	.7200	.1200	27731
	1	3/4	6	3 3/8	.7200	.0900	27729
1	1 1/4	1	6	3 3/8	.9700	.0300	27864
METRIC							
8.00	20.00	8.00	100.00	50.00	7.70	1.00	27329
10.00	26.00	10.00	100.00	57.00	9.60	0.50	27387
	26.00	10.00	100.00	57.00	9.60	1.00	27389
	26.00	10.00	100.00	57.00	9.60	1.50	27391
12.00	25.00	12.00	100.00	57.00	11.60	2.00	27958
16.00	30.00	16.00	150.00	89.00	15.34	2.00	27669
25.00	38.00	25.00	150.00	89.00	24.00	2.00	27819

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

END MILLS

3833 - STUB LENGTH - Ball End

AlumaMill G3

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



3 | CENTER CUTTING | STB | UNCOATED

HIGH PERFORMANCE

N N-FERROUS

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/8	1/4	1/8	1 1/2	27154
1/4	1/2	1/4	2	27237
3/8	1/2	3/8	2 1/2	27351
1/2	5/8	1/2	3	27479
3/4	1	3/4	4	27707
METRIC				
3.00	6.00	3.00	38.00	27140
4.00	8.00	4.00	50.00	27168

3833 - STANDARD LENGTH - Ball End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



3 | CENTER CUTTING | SD | UNCOATED

N N-FERROUS

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/8	1/2	1/8	2	27158
	3/4	1/8	2	27162
3/16	3/8	3/16	2	27187
1/4	1/2	1/4	2 1/2	27243
	3/4	1/4	2 1/2	27249
	1	1/4	2 1/2	27255
	1 1/4	1/4	3	27261
3/8	1	3/8	2 1/2	27359
	1	3/8	3	27367
1/2	1	1/2	3	27529
	1 1/4	1/2	3	27537
3/4	1 3/4	3/4	4	27737
1	1 3/4	1	4	27895
METRIC				
3.00	12.00	3.00	50.00	27144
4.00	12.00	4.00	50.00	27172
5.00	20.00	5.00	64.00	27207
6.00	25.00	6.00	64.00	27225
8.00	25.00	8.00	64.00	27337
10.00	26.00	10.00	64.00	27401
12.00	30.00	12.00	84.00	27459
16.00	41.00	16.00	89.00	27685

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

AlumaMill G3

3833 - XL LENGTH - Ball End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.



3 | CENTER CUTTING | XL | UNCOATED

N N-FERROUS

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP UNCOATED
1/4	2	1/4	4	27267
3/8	1 1/2	3/8	4	27119
	2	3/8	4	27375
1/2	2	1/2	4	27549
	2 1/2	1/2	5	27561
	3 1/4	1/2	6	27573
3/4	2 1/2	3/4	5	27747
	3 1/4	3/4	6	27757
1	2 1/2	1	5	27905
	4 1/8	1	7	27926
METRIC				
6.00	50.00	6.00	100.00	27231
8.00	50.00	8.00	100.00	27343
10.00	50.00	10.00	100.00	27409
12.00	50.00	12.00	100.00	27467
16.00	63.00	16.00	100.00	27697

AlumaMill G3 Vicor

3805 - STANDARD LENGTH - Vicor - Radius End

The AlumaMill G3 **excels** in roughing, finishing, plunging, and ramping aluminum and brass & copper.

Chip-Splitter

3 | CENTER CUTTING | SD | FC5



N N-FERROUS

DIA	LOC	SHANK	OAL	RADIUS	EDP FC5
1/8	1/2	1/8	2	.0150	38636
3/16	5/8	3/16	2	.0150	38640
1/4	1/2	1/4	2	.0150	38642
	3/4	1/4	2-1/2	.0150	38643
3/8	1	3/8	2 1/2	.0300	38490
	2	3/8	4	.0300	38661
1/2	5/8	1/2	3	.0300	38664
	1	1/2	3	.0300	38668
	1 1/4	1/2	3	.0300	38491
	2	1/2	4	.0300	38677
	2-1/2	1/2	5	.0300	38681
	3-1/4	1/2	6	.0300	38684
5/8	1 5/8	5/8	3 1/2	.0300	38492
	2-1/2	5/8	5	.0300	38687
3/4	1	3/4	4	.0300	38690
	1 3/4	3/4	4	.0300	38493
	2-1/2	3/4	5	.0300	38694
1	1-1/4	1	4	.0300	38699
	1-3/4	1	4	.0300	38701
	2-1/2	1	5	.0300	38702

TOLERANCES	DIAMETER	SHANK	37.5° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

3125 - STUB LENGTH - Square End

The 3125 has unsurpassed performance in high cutting force milling in high temp alloys, stainless steel, and Inconel.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP
				FC21
1/8	1/4	1/8	1 1/2	36400
3/16	5/16	3/16	2	36402
1/4	1/2	1/4	2 1/2	36404
3/8	1/2	3/8	2 1/2	36408
1/2	5/8	1/2	2 1/2	36410
5/8	3/4	5/8	3	36508
3/4	1	3/4	3	36491
1	1 1/4	1	4	36427

S SUPERALLOY

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.000"-.002"	h6	
	+0.000mm-0.050mm		

V-MAC

3125 - STANDARD LENGTH - Square End

The 3125 has unsurpassed performance in high cutting force milling in high temp alloys, stainless steel, and Inconel.



L | 5 | CENTER CUTTING | SD | FC21

S SUPERALLOY

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC21
1/8	1/2	1/8	2	36401
3/16	9/16	9/16	2	36403
1/4	3/4	1/4	2 1/2	36405
	1	1/4	3	36406
5/16	13/16	5/16	2 1/2	36407
3/8	1	3/8	3	36409
1/2	1	1/2	3	36411
	1 1/4	1/2	3	36412
	1 5/8	1/2	4	36502
5/8	1 1/4	5/8	3 1/2	36415
	1 5/8	5/8	3 1/2	36413
3/4	1 5/8	3/4	4	36414
1	2	1	4 1/2	36416
METRIC				
6.00	20.00	6.00	64.00	36514
8.00	22.00	8.00	64.00	36518
10.00	25.00	10.00	64.00	36522
12.00	25.00	12.00	76.00	36526
16.00	38.00	16.00	100.00	36529

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.000"-.002"	h6	
	+0.000mm-0.050mm		

3125 - STUB LENGTH - Radius End

The 3125 has unsurpassed performance in high cutting force milling in high temp alloys, stainless steel, and Inconel.



5 | CENTER CUTTING | STB | FC21

HIGH PERFORMANCE

S SUPERALLOY

DIA	LOC	SHANK	OAL	RADIUS	EDP FC21
1/8	1/4	1/8	1 1/2	.0100	36417
	1/4	1/8	1 1/2	.0150	36418
	1/4	1/8	1 1/2	.0300	36419
3/16	5/16	3/16	2	.0100	36496
	5/16	3/16	2	.0150	36424
	5/16	3/16	2	.0300	36426
1/4	1/2	1/4	2 1/2	.0150	36432
	1/2	1/4	2 1/2	.0200	36498
	1/2	1/4	2 1/2	.0300	36434
	1/2	1/4	2 1/2	.0600	36435
3/8	1/2	3/8	2 1/2	.0150	36445
	1/2	3/8	2 1/2	.0200	36501
	1/2	3/8	2 1/2	.0300	36447
	1/2	3/8	2 1/2	.0600	36489
1/2	5/8	1/2	2 1/2	.0100	36452
	5/8	1/2	2 1/2	.0150	36453
	5/8	1/2	2 1/2	.0200	36454
	5/8	1/2	2 1/2	.0300	36455
	5/8	1/2	2 1/2	.0600	36456
	5/8	1/2	2 1/2	.1200	36457
5/8	3/4	5/8	3	.0150	36509
	3/4	5/8	3	.0200	36510
	3/4	5/8	3	.0300	36486
	3/4	5/8	3	.0600	36511
	3/4	5/8	3	.1200	36512
3/4	1	3/4	3	.0150	36492
	1	3/4	3	.0300	36493
	1	3/4	3	.0600	36494
	1	3/4	3	.1200	36495
1	1 1/4	1	4	.0300	36429
	1 1/4	1	4	.0600	36431
	1 1/4	1	4	.1200	36423
	1 1/4	1	4	.1900	36482
	1 1/4	1	4	.2500	36483

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.000"-.002"	h6	
	+0.000mm-0.050mm		

V-MAC

3125 - STANDARD LENGTH - Radius End

The 3125 has unsurpassed performance in high cutting force milling in high temp alloys, stainless steel, and Inconel.



5 | CENTER CUTTING | SD | FC21

S SUPERALLOY

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC21
1/8	1/2	1/8	2	.0100	36420
	1/2	1/8	2	.0150	36421
	1/2	1/8	2	.0200	36422
3/16	9/16	3/16	2	.0100	36497
	9/16	3/16	2	.0150	36428
	9/16	3/16	2	.0300	36430
1/4	3/4	1/4	2 1/2	.0150	36436
	3/4	1/4	2 1/2	.0200	36499
	3/4	1/4	2 1/2	.0300	36438
	3/4	1/4	2 1/2	.0600	36439
5/16	13/16	5/16	2 1/2	.0150	36443
	13/16	5/16	2 1/2	.0300	36444
3/8	1	3/8	3	.0100	36448
	1	3/8	3	.0150	36449
	1	3/8	3	.0200	36450
	1	3/8	3	.0300	36451
	1	3/8	3	.0600	36490
1/2	1	1/2	3	.0100	36458
	1	1/2	3	.0150	36459
	1	1/2	3	.0200	36460
	1	1/2	3	.0300	36461
	1	1/2	3	.0600	36462
	1	1/2	3	.1200	36463
	1 1/4	1/2	3	.0100	36464
	1 1/4	1/2	3	.0150	36465
	1 1/4	1/2	3	.0200	36466
	1 1/4	1/2	3	.0300	36467
	1 1/4	1/2	3	.0600	36468
	1 1/4	1/2	3	.1200	36469
5/8	1 1/4	5/8	3 1/2	.0300	36446
	1 1/4	5/8	3 1/2	.0600	36437
	1 1/4	5/8	3 1/2	.1200	36433
	1 5/8	5/8	3 1/2	.0300	36470
	1 5/8	5/8	3 1/2	.0600	36471
	1 5/8	5/8	3 1/2	.1200	36472
3/4	1 5/8	3/4	4	.0300	36473
	1 5/8	3/4	4	.0600	36474
	1 5/8	3/4	4	.1200	36475
	2 1/4	3/4	5	.0300	36476
	2 1/4	3/4	5	.0600	36477
	2 1/4	3/4	5	.0900	36425
	2 1/4	3/4	5	.1200	36478
1	2	1	4 1/2	.0300	36479
	2	1	4 1/2	.0600	36480
	2	1	4 1/2	.1200	36481
	2	1	4 1/2	.1900	36484
	2	1	4 1/2	.2500	36485

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.000"-.002"	h6	
	+0.000mm-0.050mm		

END MILLS

3000 - STUB LENGTH - Square End

The Intimidator was designed for difficult-to-machine ferrous materials.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC18
METRIC				
3.00	6.00	3.00	38.00	93900
6.00	10.00	6.00	50.00	93903
8.00	16.00	8.00	50.00	93904
10.00	18.00	10.00	50.00	93905
12.00	20.00	12.00	63.00	34213
	20.00	12.00	63.00	93906
16.00	25.00	16.00	89.00	93907
20.00	30.00	20.00	100.00	93908

P STEEL
K CAST IRON
S SUPERALLOY
H HARDENED

3000 - STANDARD LENGTH - Square End

The Intimidator was designed for difficult-to-machine ferrous materials.



DIA	LOC	SHANK	OAL	WELDON FLAT	EDP FC18
1/8	1/4	1/8	1 1/2		34550
	1/2	1/8	1 1/2		34290
3/16	3/8	3/16	2		34551
	5/8	3/16	2		34291
1/4	3/8	1/4	2		34552
	3/4	1/4	2 1/2		34292
5/16	1/2	5/16	2 1/2		34553
	3/4	5/16	2 1/2		34503
3/8	1/2	3/8	2 1/2		34554
	7/8	3/8	2 1/2		34293
1/2	1	1/2	3	✓	34294
5/8	3/4	5/8	3 1/2		34556
	1 1/4	5/8	3 1/2	✓	34295
	1 5/8	5/8	4	✓	34288
3/4	7/8	3/4	4		34557
	1 3/4	3/4	4		34504

P STEEL
K CAST IRON
S SUPERALLOY
H HARDENED

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

INTIMIDATOR

3000 - STANDARD LENGTH - Square End

The Intimidator was designed for difficult-to-machine ferrous materials.



4 | CENTER CUTTING | SD | FC18

P STEEL
K CAST IRON
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	WELDON FLAT	EDP FC18
3/4	1 1/2	3/4	4	✓	34296
	1 5/8	3/4	4	✓	34289
1	1 1/2	1	4	✓	34297
	2	1	5		34298
METRIC					
3.00	12.00	3.00	38.00		93800
4.00	14.00	4.00	50.00		93801
6.00	20.00	6.00	64.00		93803
8.00	22.00	8.00	64.00		93804
10.00	25.00	10.00	64.00		93805
12.00	27.00	12.00	76.00		93806
16.00	38.00	16.00	100.00		93807
20.00	40.00	20.00	100.00		93808

3000 - XL LENGTH - Square End

The Intimidator was designed for difficult-to-machine ferrous materials.



4 | CENTER CUTTING | XL | FC18

P STEEL
K CAST IRON
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	WELDON FLAT	EDP FC18
1/4	1 3/4	1/4	4		34510
5/16	1 1/4	5/16	3 1/4		34511
1/2	1 1/4	1/2	3	✓	34513
	2	1/2	4		34242
	2	1/2	4	✓	34514
	3	1/2	5		34246
3/4	2 1/4	3/4	5	✓	34517
	3	3/4	6		34329
	3	3/4	6	✓	34518
1	3	1	6	✓	34519

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3000 - STUB LENGTH - Chamfer End

The Intimidator was designed for difficult-to-machine ferrous materials.



4 | CENTER CUTTING | STB | FC18

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	CHAMFER ANGLE	CHAMFER SIZE	WELDON FLAT	EDP FC18
1/8	1/4	1/8	1 1/2	45°	.0100		34350
3/16	3/8	3/16	2	45°	.0100		34371
1/4	3/8	1/4	2	45°	.0100		34351
5/16	1/2	5/16	2 1/2	45°	.0100		34352
3/8	1/2	3/8	2 1/2	45°	.0200		34353
1/2	5/8	1/2	3	45°	.0200	✓	34354
3/4	7/8	3/4	4	45°	.0200		34356

P STEEL | K CAST IRON | S SUPERALLOY | H HARDENED

3000 - STANDARD LENGTH - Chamfer End

The Intimidator was designed for difficult-to-machine ferrous materials.



4 | CENTER CUTTING | SD | FC18

DIA	LOC	SHANK	OAL	CHAMFER ANGLE	CHAMFER SIZE	WELDON FLAT	EDP FC18
1/8	1/2	1/8	1 1/2	45°	.0100		34300
3/16	5/8	3/6	2	45°	.0100		34301
1/4	3/4	1/4	2 1/2	45°	.0100		34302
5/16	3/4	5/16	2 1/2	45°	.0100		34303
3/8	7/8	3/8	2 1/2	45°	.0200		34304
1/2	1	1/2	3	45°	.0200	✓	34306
	1 1/8	1/2	3	45°	.0200	✓	34305
	1 1/4	1/2	3	45°	.0200	✓	34307
	1 1/4	1/2	3	45°	.0200		34241
	2	1/2	4	45°	.0200	✓	34308
5/8	1 1/4	5/8	3 1/2	45°	.0200	✓	34309
	1 5/8	5/8	4	45°	.0200	✓	34310
3/4	1 1/2	3/4	4	45°	.0200	✓	34311
	1 5/8	3/4	4	45°	.0200	✓	34314
	1 3/4	3/4	4	45°	.0200	✓	34312
1	1 1/2	1	4	45°	.0200	✓	34313

P STEEL | K CAST IRON | S SUPERALLOY | H HARDENED

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

INTIMIDATOR

3000 - STANDARD LENGTH - Radius End

The Intimidator was designed for difficult-to-machine ferrous materials.



4 | CENTER CUTTING | SD | FC18

P STEEL
K CAST IRON
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	WELDON FLAT	RADIUS	EDP FC18
3/16	5/8	3/16	2		.0100	34402
	5/8	3/16	2		.0200	34403
	5/8	3/16	2		.0300	34404
1/4	3/4	1/4	2 1/2		.0100	34405
	3/4	1/4	2 1/2		.0300	34407
3/8	7/8	3/8	2 1/2		.0100	34409
	7/8	3/8	2 1/2		.0200	34410
	7/8	3/8	2 1/2		.0600	34413
1/2	7/8	1/2	3		.0100	34230
	7/8	1/2	3	✓	.0100	34414
	7/8	1/2	3	✓	.0450	34417
	1	1/2	3	✓	.0300	34416
	1	1/2	3	✓	.0900	34419
	1	1/2	3	✓	.1250	34420
5/8	1 1/4	5/8	3 1/2	✓	.0300	34421
	1 1/4	5/8	3 1/2	✓	.0450	34422
	1 1/4	5/8	3 1/2	✓	.0900	34424
	1 1/4	5/8	3 1/2	✓	.1250	34425
3/4	1 3/4	3/4	4	✓	.0300	34426
	1 1/2	3/4	4		.0450	34287
	1 1/2	3/4	4	✓	.0600	34428
	1 1/2	3/4	4	✓	.0900	34429
	1 1/2	3/4	4	✓	.1250	34430
	1 3/4	3/4	4	✓	.0300	34506
	1 3/4	3/4	4	✓	.0600	34507
	1 3/4	3/4	4	✓	.0900	34508
1	1 1/2	1	4	✓	.0300	34431
	1 1/2	1	4	✓	.0600	34433
	1 1/2	1	4	✓	.0900	34434
	1 1/2	1	4	✓	.1250	34435

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3400 - STUB LENGTH - Square End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



L | 4 | CENTER CUTTING | STB | FC18

HIGH PERFORMANCE

K CAST IRON

DIA	LOC	SHANK	OAL	EDP FC18
1/8	1/4	1/8	1 1/2	34900
1/4	3/8	1/4	2	34902
3/8	1/2	3/8	2 1/2	34904
1/2	5/8	1/2	3	34906
3/4	7/8	3/4	4	34910
METRIC				
4.00	8.00	4.00	50.00	92603
5.00	10.00	5.00	51.00	92604
6.00	10.00	6.00	50.00	92418
8.00	12.00	8.00	50.00	92419
10.00	12.00	10.00	50.00	92420

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

HARMONICUT

3400 - STANDARD LENGTH - Square End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



L | 4 | CENTER CUTTING | SD | FC18

K CAST IRON

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC18
1/8	1/2	1/8	1 1/2	34001
3/16	7/16	3/16	2	34751
	5/8	3/16	2	34005
1/4	3/4	1/4	2 1/2	34009
5/16	7/8	5/16	2 1/2	34013
3/8	1	3/8	2 1/2	34017
7/16	1	7/16	2 3/4	34021
1/2	1	1/2	3	34025
	1 1/4	1/2	3	34027
5/8	1 1/2	5/8	3 1/2	34029
3/4	1 1/2	3/4	4	34033
1	1 1/2	1	4	34037
METRIC				
3.00	12.00	3.00	38.00	92410
5.00	16.00	3.00	64.00	92612
6.00	20.00	6.00	64.00	92555
	20.00	6.00	76.00	92411
8.00	22.00	8.00	64.00	92556
	22.00	8.00	76.00	92412
10.00	25.00	10.00	64.00	92557
	25.00	10.00	89.00	92413
12.00	25.00	12.00	100.00	92414
	25.00	12.00	76.00	92558
16.00	38.00	16.00	100.00	92415

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000”-.002”	h6	
	+0.00mm -0.05mm		

END MILLS

3400 - STUB LENGTH - Radius End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



4 | CENTER CUTTING | STB | FC18

HIGH PERFORMANCE

K CAST IRON

DIA	LOC	SHANK	OAL	RADIUS	EDP FC18
1/8	1/4	1/8	1 1/2	.0100	34912
METRIC					
3.00	6.00	3.00	38.00	0.20	92431
8.00	12.00	8.00	50.00	0.50	92433
10.00	12.00	10.00	50.00	0.50	92434

3400 - STANDARD LENGTH - Radius End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



4 | CENTER CUTTING | SD | FC18

K CAST IRON

DIA	LOC	SHANK	OAL	RADIUS	EDP FC18
1/8	1/4	1/8	1 1/2	.0200	34754
	1/2	1/8	1 1/2	.0100	34041
3/16	7/16	3/16	2	.0300	34757
	5/8	3/16	2	.0100	34045
1/4	3/8	1/4	2	.0100	34758
	3/4	1/4	2 1/2	.0100	34561
	3/4	1/4	2 1/2	.0200	34049
	3/4	1/4	2 1/2	.0600	34051
	3/4	1/4	2 1/2	.0900	34052
5/16	1/2	5/16	2	.0200	34762
	1/2	5/16	2	.0600	34764
	7/8	5/16	2 1/2	.0200	34053
3/8	1	3/8	2 1/2	.0200	34057
	1	3/8	2 1/2	.0300	34059
	1	3/8	2 1/2	.0600	34060
	2	3/8	4	.0200	34058
7/16	1	7/16	2 3/4	.0200	34061

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

HARMONICUT

3400 - STANDARD LENGTH - Radius End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



4 | CENTER CUTTING | SD | FC18

K CAST IRON

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC18
1/2	1	1/2	3	.0300	34065
	1	1/2	3	.0600	34170
	1	1/2	3	.1200	34172
	1 1/4	1/2	3	.0300	34067
	1 1/4	1/2	3	.0600	34173
	1 1/4	1/2	3	.1200	34175
	2	1/2	4	.0300	34068
5/8	1 1/2	5/8	3 1/2	.0350	34069
	1 1/2	5/8	3 1/2	.0600	34071
	2 1/4	5/8	5	.0350	34070
3/4	2 1/4	3/4	5	.0350	34074
1	2 1/4	1	5	.0600	34571
METRIC					
3.00	12.00	3.00	38.00	0.20	92423
4.00	14.00	4.00	50.00	0.20	92494
	14.00	4.00	50.00	0.30	92614
5.00	16.00	5.00	64.00	0.20	92495
6.00	20.00	6.00	64.00	0.20	92559
	20.00	6.00	64.00	1.00	92576
	20.00	6.00	76.00	0.30	92424
8.00	22.00	8.00	64.00	0.50	92560
	22.00	8.00	64.00	1.50	92580
	22.00	8.00	76.00	0.50	92425
10.00	25.00	10.00	64.00	0.50	92561
	25.00	10.00	89.00	0.50	92426
12.00	25.00	12.00	76.00	0.50	92562
	25.00	12.00	76.00	0.50	92562
	25.00	12.00	76.00	1.00	92588
	25.00	12.00	100.00	0.50	92427
16.00	38.00	16.00	100.00	0.50	92428

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3400 - STUB LENGTH - Ball End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



4 | CENTER CUTTING | STB | FC18

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC18
1/8	1/4	1/8	1 1/2	34924
1/4	3/8	1/4	2	34926
3/8	1/2	3/8	2 1/2	34928
1/2	5/8	1/2	3	34930

K CAST IRON

3400 - STANDARD LENGTH - Ball End

The Harmon-i-Cut **excels** in difficult-to-machine ferrous materials like cast iron.



4 | CENTER CUTTING | SD | FC18

DIA	LOC	SHANK	OAL	EDP FC18
1/8	1/2	1/8	1 1/2	34081
3/16	5/8	3/16	2	34085
1/4	3/4	1/4	2 1/2	34089
5/16	7/8	5/16	2 1/2	34093
3/8	1	3/8	2 1/2	34097
1/2	1	1/2	3	34105

K CAST IRON

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FURY

3500 - STUB LENGTH - Square End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | STB | FC20

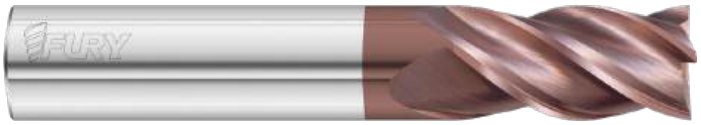
P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC20
1/8	1/4	1/8	1 1/2	35008
3/16	5/16	3/16	2	35043
1/4	3/8	1/4	2	35067
5/16	1/2	5/16	2	35081
3/8	1/2	3/8	2 1/2	35095
1/2	5/8	1/2	2 1/2	35183
5/8	3/4	5/8	3	35205
3/4	1	3/4	3	35256
1	1 1/4	1	4	35331
METRIC				
6.00	10.00	6.00	50.00	35053
16.00	20.00	16.00	89.00	35239

3500 - STANDARD LENGTH - Square End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | SD | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	EDP FC20
1/8	1/2	1/8	2	35016
3/16	9/16	3/16	2 1/2	35046
1/4	1/2	1/4	2 1/2	35071
	3/4	1/4	2 1/2	35074
5/16	3/4	5/16	2 1/2	35084
3/8	3/4	3/8	2 1/2	35098
	1	3/8	3	35101
1/2	1	1/2	3	35187
	1 1/4	1/2	3	35190
	1 5/8	1/2	4	35194
5/8	1 1/4	5/8	3 1/2	35210
	1 5/8	5/8	3 1/2	35228
3/4	1 1/2	3/4	4	35260
	2	3/4	5	35265
1	2	1	4 1/2	35334

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3500 - STANDARD LENGTH - Square End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC20
METRIC				
3.00	10.00	3.00	38.00	35005
4.00	12.00	4.00	50.00	35039
5.00	16.00	5.00	64.00	35584
6.00	12.00	6.00	64.00	35057
8.00	20.00	8.00	64.00	35091
10.00	32.00	10.00	76.00	35139
12.00	26.00	12.00	84.00	35149
	32.00	12.00	84.00	35152
16.00	40.00	16.00	89.00	35246
25.00	63.00	25.00	125.00	35309

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

3500 - XL LENGTH - Square End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



DIA	LOC	SHANK	OAL	EDP FC20
3/16	3/4	3/16	2 1/2	35050
1/4	1	1/4	3	35078
5/16	1	5/16	3	35087
3/8	1 1/4	3/8	3	35109
3/8	1 1/2	3/8	3 1/2	35114
1/2	2	1/2	4	35197
5/8	2	5/8	4	35232
3/4	2 1/4	3/4	5	35275
3/4	3 1/4	3/4	6	35279
1	3 1/4	1	6	35341
METRIC				
16.00	63.00	16.00	125.00	35253
20.00	75.00	20.00	150.00	35296

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FURY

3500 - STUB LENGTH - Radius End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | STB | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
1/8	1/4	1/8	1 1/2	.0100	35096
	1/4	1/8	1 1/2	.0200	35147
3/16	5/16	3/16	2	.0100	35102
	5/16	3/16	2	.0200	35153
	5/16	3/16	2	.0300	35198
1/4	3/8	1/4	2	.0100	35110
	3/8	1/4	2	.0200	35161
	3/8	1/4	2	.0300	35206
	3/8	1/4	2	.0600	35305
5/16	1/2	5/16	2	.0100	35115
3/8	1/2	3/8	2 1/2	.0100	35121
	1/2	3/8	2 1/2	.0200	35172
	1/2	3/8	2 1/2	.0300	35217
	1/2	3/8	2 1/2	.0600	35316
	1/2	3/8	2 1/2	.0900	35381
1/2	5/8	1/2	2 1/2	.0100	35137
	5/8	1/2	2 1/2	.0200	35188
	5/8	1/2	2 1/2	.0300	35233
	5/8	1/2	2 1/2	.0600	35332
	5/8	1/2	2 1/2	.1200	35484
5/8	3/4	5/8	3 1/2	.0300	35240
	3/4	5/8	3 1/2	.1200	35491
3/4	1	3/4	3	.0300	35254
	1	3/4	3	.1200	35505
	1	3/4	3	.2500	35533
METRIC					
3.00	6.00	3.00	38.00	0.25	35093
4.00	8.00	4.00	50.00	0.25	35099
	8.00	4.00	50.00	0.50	35150
	8.00	4.00	50.00	0.75	35195
5.00	10.00	5.00	51.00	0.25	35562
	10.00	5.00	51.00	0.50	35563
6.00	10.00	6.00	50.00	0.25	35105
	10.00	6.00	50.00	1.00	35261
8.00	12.00	8.00	50.00	0.25	35118
	12.00	8.00	50.00	0.50	35169
10.00	12.00	10.00	50.00	0.25	35126
12.00	14.00	12.00	63.00	2.00	35390

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3500 - STANDARD LENGTH - Radius End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | SD | FC20

HIGH PERFORMANCE

P STEEL | M STAINLESS | S SUPERALLOY | H HARDENED

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
1/8	1/2	1/8	2	.0100	35097
	1/2	1/8	2	.0200	35148
3/16	9/16	3/16	2 1/2	.0100	35103
	9/16	3/16	2 1/2	.0200	35154
	9/16	3/16	2 1/2	.0300	35199
1/4	1/2	1/4	2 1/2	.0100	35111
	1/2	1/4	2 1/2	.0200	35162
	1/2	1/4	2 1/2	.0300	35207
	3/4	1/4	2 1/2	.0100	35112
	3/4	1/4	2 1/2	.0200	35163
	3/4	1/4	2 1/2	.0300	35208
	3/4	1/4	2 1/2	.0600	35307
5/16	3/4	5/16	2 1/2	.0100	35116
	3/4	5/16	2 1/2	.0200	35167
	3/4	5/16	2 1/2	.0300	35212
3/8	3/4	3/8	2 1/2	.0100	35122
	3/4	3/8	2 1/2	.0200	35173
	3/4	3/8	2 1/2	.0900	35382
	1	3/8	3	.0100	35123
	1	3/8	3	.0200	35174
	1	3/8	3	.0300	35219
	1	3/8	3	.0600	35318
7/16	1	7/16	2 3/4	.0150	35998
1/2	1	1/2	3	.0100	35138
	1	1/2	3	.0200	35189
	1	1/2	3	.0300	35234
	1	1/2	3	.0600	35485
	1	1/2	3	.0900	35398
	1 1/4	1/2	3	.0100	35140
	1 1/4	1/2	3	.0200	35191
	1 1/4	1/2	3	.0300	35236
	1 1/4	1/2	3	.0600	35335
	1 1/4	1/2	3	.0900	35400
	1 1/4	1/2	3	.1200	35487
	1 5/8	1/2	4	.0100	35141
	1 5/8	1/2	4	.0200	35192
	1 5/8	1/2	4	.0300	35237
	1 5/8	1/2	4	.0600	35336
5/8	1 1/4	5/8	3 1/2	.0300	35241
	1 1/4	5/8	3 1/2	.0600	35340
	1 5/8	5/8	3 1/2	.0300	35243
3/4	1 1/2	3/4	4	.0300	35255
	1 1/2	3/4	4	.0600	35354
	1 1/2	3/4	4	.1200	35506
	2	3/4	5	.0300	35257

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FURY

3500 - STANDARD LENGTH - Radius End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | SD | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
3/4	2	3/4	5	.0600	35356
	2	3/4	5	.0900	35421
	2	3/4	5	.2500	35536
1	2	1	4 1/2	.0600	35374
	2 5/8	1	5	.0600	35376
	2 5/8	1	5	.1200	35528
METRIC					
3.00	10.00	3.00	38.00	0.25	35094
	10.00	3.00	38.00	0.50	35145
4.00	12.00	4.00	50.00	0.25	35100
	12.00	4.00	50.00	0.75	35196
5.00	16.00	5.00	64.00	0.25	35567
	16.00	5.00	64.00	1.00	35570
	16.00	5.00	64.00	1.50	35571
6.00	12.00	6.00	64.00	0.50	35157
	12.00	6.00	64.00	0.75	35202
	20.00	6.00	64.00	0.25	35107
	20.00	6.00	64.00	0.50	35158
	20.00	6.00	64.00	0.75	35203
	20.00	6.00	64.00	1.00	35263
	20.00	6.00	64.00	1.50	35302
8.00	20.00	8.00	64.00	0.25	35119
	20.00	8.00	64.00	1.00	35267
	20.00	8.00	64.00	1.50	35314
	20.00	8.00	64.00	2.00	35580
10.00	25.00	10.00	64.00	0.25	35127
	25.00	10.00	64.00	0.50	35178
	25.00	10.00	64.00	1.00	35270
	25.00	10.00	64.00	1.50	35322
	25.00	10.00	64.00	2.00	35387
	32.00	10.00	76.00	0.25	35572
12.00	26.00	12.00	84.00	0.25	35131
	26.00	12.00	84.00	0.50	35182
	26.00	12.00	84.00	0.75	35227
	26.00	12.00	84.00	1.50	35326
	26.00	12.00	84.00	2.00	35393
	26.00	12.00	84.00	2.50	35451
	26.00	12.00	84.00	1.00	35274
	32.00	12.00	84.00	0.50	35184
	32.00	12.00	84.00	1.50	35328
16.00	32.00	16.00	89.00	1.00	35281
	40.00	16.00	89.00	0.75	35250
20.00	40.00	20.00	100.00	1.00	35288
	50.00	20.00	125.00	3.00	35515

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3500 - XL LENGTH - Radius End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | XL | FC20

HIGH PERFORMANCE

P STEEL | M STAINLESS | S SUPERALLOY | H HARDENED

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
3/16	3/4	3/16	2 1/2	.0100	35104
	3/4	3/16	2 1/2	.0300	35200
1/4	1	1/4	3	.0100	35113
	1	1/4	3	.0200	35164
	1	1/4	3	.0300	35209
	1	1/4	3	.0600	35308
5/16	1	5/16	3	.0100	35117
	1	5/16	3	.0200	35168
3/8	1 1/4	3/8	3	.0100	35124
	1 1/4	3/8	3	.0200	35175
	1 1/4	3/8	3	.0300	35220
	1 1/4	3/8	3	.0600	35319
	1 1/2	3/8	3 1/2	.0200	35176
1/2	2	1/2	4	.0100	35142
	2	1/2	4	.0300	35238
	2	1/2	4	.1200	35489
5/8	2	5/8	4	.0300	35244
	2	5/8	4	.1200	35495
	2 1/2	5/8	5	.1200	35496
3/4	2 1/4	3/4	5	.0300	35258
	3 1/4	3/4	6	.0300	35259
	3 1/4	3/4	6	.2500	35538
METRIC					
6.00	24.00	6.00	76.00	0.25	35108
	24.00	6.00	76.00	1.50	35303
8.00	25.00	8.00	76.00	0.25	35120
	25.00	8.00	76.00	1.00	35268
10.00	40.00	10.00	100.00	1.00	35272
12.00	40.00	12.00	100.00	1.00	35277
	50.00	12.00	100.00	0.25	35135
	50.00	12.00	100.00	2.00	35395
16.00	50.00	16.00	89.00	0.75	35251
	63.00	16.00	125.00	0.75	35252
20.00	75.00	20.00	150.00	1.50	35365

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FURY

3500 - STUB LENGTH - Ball End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | STB | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC20
1/8	1/4	1/8	1 1/2	35003
3/16	5/16	1/8	2	35009
1/4	3/8	1/4	2	35017
3/8	1/2	3/8	2 1/2	35028
1/2	5/8	1/2	2 1/2	35044
5/8	3/4	5/8	3 1/2	35051
3/4	1	3/4	3	35065
METRIC				
3.00	6.00	3.00	38.00	35000
4.00	8.00	4.00	50.00	35006
5.00	10.00	5.00	51.00	35561
25.00	32.00	25.00	100.00	35079

3500 - STANDARD LENGTH - Ball End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | SD | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	EDP FC20
1/8	1/2	1/8	2	35004
3/16	9/16	1/8	2 1/2	35010
1/4	1/2	1/4	2 1/2	35018
	3/4	1/4	2 1/2	35019
5/16	3/4	5/16	2 1/2	35023
3/8	3/4	3/8	2 1/2	35029
	1	3/8	3	35030
1/2	1	1/2	3	35045
	1 1/4	1/2	3	35047
	1 5/8	1/2	4	35048
3/4	1 1/2	3/4	4	35066
	2	3/4	5	35068
METRIC				
3.00	10.00	3.00	38.00	35001
4.00	12.00	4.00	50.00	35007
5.00	16.00	5.00	64.00	35566
6.00	12.00	6.00	64.00	35013
	20.00	6.00	64.00	35014
8.00	20.00	8.00	64.00	35026
10.00	25.00	10.00	64.00	35034
12.00	26.00	12.00	84.00	35038
	32.00	12.00	84.00	35040

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3500 - XL LENGTH - Ball End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | XL | FC20

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC20
3/16	3/4	1/8	2 1/2	35011
1/4	1	1/4	3	35020
3/8	1 1/4	3/8	3	35031
	1 1/2	3/8	3 1/2	35032
1/2	2	1/2	4	35049
METRIC				
6.00	24.00	6.00	76.00	35015
8.00	32.00	8.00	100.00	35573
10.00	40.00	10.00	100.00	35036

P STEEL | M STAINLESS | S SUPERALLOY | H HARDENED

3505 - STANDARD LENGTH - Radius End

The Fury **excels** in hardened steels, super alloys, stainless steels, and steels.

Chip-Splitter



4 | CENTER CUTTING | SD | FC20

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
1/4	3/4	1/4	2 1/2	.0100	35600
3/8	1	3/8	3	.0200	35602
1/2	1	1/2	3	.0300	35605
1/2	1 1/4	1/2	3	.0300	35606
5/8	1 1/4	5/8	3 1/2	.0300	35607
3/4	1 1/2	3/4	4	.0300	35608
	2	3/4	5	.0600	35609
1	2 5/8	1	5	.0600	35612
METRIC					
8.00	20.00	8.00	64.00	0.50	35613
10.00	32.00	10.00	76.00	0.25	35603
12.00	26.00	12.00	84.00	0.75	35604
16.00	40.00	16.00	89.00	0.75	35614

P STEEL | M STAINLESS | S SUPERALLOY | H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FANTOM 2.0

3412 - STUB LENGTH - Square End

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



L | 5 | CENTER CUTTING | STB | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC20
1/4	3/8	1/4	2	37540
3/8	1/2	3/8	2 1/2	37576
1/2	5/8	1/2	3	37628
5/8	3/4	5/8	3 1/2	37654
3/4	7/8	3/4	4	37689
METRIC				
4.00	8.00	4.00	50.00	37510
5.00	10.00	5.00	51.00	37515
10.00	12.00	10.00	50.00	37591
12.00	16.00	12.00	63.00	37612

3412 - STANDARD LENGTH - Square End

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



L | 5 | CENTER CUTTING | SD | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	EDP FC20
1/4	3/4	1/4	2 1/2	37544
5/16	7/8	5/16	2 1/2	37549
3/8	1	3/8	2 1/2	37582
7/16	1	7/16	2 3/4	37605
1/2	1	1/2	3	37633
	1 1/4	1/2	3	37641
5/8	1 1/2	5/8	3 1/2	37660
	1 5/8	5/8	4	37666
3/4	1 1/4	3/4	4	37697
	1 1/2	3/4	4	37704
	1 5/8	3/4	4	37713
1	1 1/2	1	4	37739
	2	1	5	37747
METRIC				
3.00	12.00	3.00	38.00	37507
4.00	14.00	4.00	50.00	37512
5.00	16.00	5.00	64.00	37519
6.00	20.00	6.00	64.00	37531
	20.00	6.00	76.00	37533
8.00	22.00	8.00	64.00	37566
10.00	25.00	10.00	64.00	37597
	25.00	10.00	89.00	37599
12.00	25.00	12.00	76.00	37619
16.00	38.00	16.00	100.00	37682

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3412 - XL LENGTH - Square End

FANTOM 2.0

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC20
1/4	1 1/4	1/4	3	37548
5/16	1	5/16	3	37553
	2	5/16	4	37557
3/8	1 1/4	3/8	3	37588
	2	3/8	4	37589
1/2	1 5/8	1/2	4	37647
	2	1/2	4	37648
5/8	2 1/4	5/8	5	37672
	3 1/4	5/8	6	37674
3/4	2 1/4	3/4	5	37715
	3 1/4	3/4	6	37717
1	2 1/4	1	5	37748
	3 1/4	1	6	37756
	4 1/4	1	7	37757

P STEEL

M STAINLESS

S SUPERALLOY

H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FANTOM 2.0

3412 - STUB LENGTH - Radius End

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | STB | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
1/4	3/8	1/4	2	.0200	37541
	3/8	1/4	2	.0300	37542
	3/8	1/4	2	.0600	37543
3/8	1/2	3/8	2 1/2	.0200	37577
	1/2	3/8	2 1/2	.0300	37578
	1/2	3/8	2 1/2	.0600	37579
	1/2	3/8	2 1/2	.1200	37581
1/2	5/8	1/2	3	.0300	37629
	5/8	1/2	3	.0600	37630
	5/8	1/2	3	.1200	37632
5/8	3/4	5/8	3 1/2	.0300	37655
	3/4	5/8	3 1/2	.0350	37656
	3/4	5/8	3 1/2	.0600	37657
3/4	7/8	3/4	4	.0350	37691
	7/8	3/4	4	.1200	37694
METRIC					
8.00	12.00	8.00	50.00	0.50	37561
16.00	20.00	16.00	89.00	0.75	37677
20.00	38.00	20.00	100.00	0.75	37720

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3412 - STANDARD LENGTH - Radius End

FANTOM 2.0

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



HIGH PERFORMANCE

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
1/4	3/4	1/4	2 1/2	.0200	37545
	3/4	1/4	2 1/2	.0300	37546
	3/4	1/4	2 1/2	.0600	37547
5/16	7/8	5/16	2 1/2	.0200	37550
	7/8	5/16	2 1/2	.0300	37551
3/8	1	3/8	2 1/2	.0200	37583
	1	3/8	2 1/2	.0300	37584
	1	3/8	2 1/2	.0600	37585
	1	3/8	2 1/2	.1200	37587
	2	3/8	4	.0200	37590
7/16	1	7/16	2 3/4	.0200	37606
	1	7/16	2 3/4	.0600	37608
	1	7/16	2 3/4	.1200	37610
1/2	1	1/2	3	.0100	37634
	1	1/2	3	.0150	37635
	1	1/2	3	.0200	37636
	1	1/2	3	.0300	37637
	1	1/2	3	.0600	37638
	1	1/2	3	.0900	37639
	1	1/2	3	.1200	37640
	1 1/4	1/2	3	.0150	37642
	1 1/4	1/2	3	.0300	37643
	1 1/4	1/2	3	.0600	37644
	1 1/4	1/2	3	.0900	37645
	1 1/4	1/2	3	.1200	37646
	2	1/2	4	.0150	37649
	2	1/2	4	.0300	37650
	2	1/2	4	.0600	37651
	2	1/2	4	.0900	37652
5/8	1 1/2	5/8	3 1/2	.0300	37661
	1 1/2	5/8	3 1/2	.0350	37662
	1 1/2	5/8	3 1/2	.0600	37663
	1 5/8	5/8	4	.0300	37667
	1 5/8	5/8	4	.0600	37669
	1 5/8	5/8	4	.1200	37671
	2 1/4	5/8	5	.0350	37673
3/4	1 1/4	3/4	4	.0300	37698
	1 1/2	3/4	4	.0200	37705
	1 1/2	3/4	4	.0300	37706
	1 1/2	3/4	4	.0350	37707
	1 1/2	3/4	4	.0600	37708
	1 1/2	3/4	4	.1200	37710
	1 1/2	3/4	4	.2500	37712
	1 5/8	3/4	4	.0350	37714
	1 5/8	3/4	4	.0600	37998
	1 5/8	3/4	4	.0900	37999
	1 5/8	3/4	4	.1200	37501
	1 5/8	3/4	4	.1900	37502

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FANTOM 2.0

3412 - STANDARD LENGTH - Radius End

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | SD | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
3/4	2 1/4	3/4	5	.0600	37504
	2 1/4	3/4	5	.1200	37997
1	2 1/4	1	5	.0350	37750
METRIC					
3.00	6.00	3.00	38.00	0.20	37506
4.00	14.00	4.00	50.00	0.30	37514
5.00	16.00	5.00	64.00	0.30	37521
	16.00	5.00	64.00	0.50	37522
6.00	10.00	6.00	50.00	0.75	37528
	20.00	6.00	64.00	0.30	37532
8.00	22.00	8.00	64.00	0.50	37567
	22.00	8.00	64.00	1.00	37106
	22.00	8.00	76.00	0.30	37569
10.00	25.00	10.00	64.00	0.50	37598
	25.00	10.00	89.00	0.50	37600
	25.00	10.00	89.00	2.00	37604
12.00	25.00	12.00	76.00	0.50	37620
	25.00	12.00	100.00	0.50	37622
	25.00	12.00	100.00	1.50	37625
	25.00	12.00	100.00	2.00	37626
16.00	38.00	16.00	100.00	0.50	37683
	38.00	16.00	100.00	0.75	37684
	38.00	16.00	100.00	3.00	37688

3412 - XL LENGTH - Radius End

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | XL | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
5/16	1	5/16	3	.0200	37554
1/2	1 5/8	1/2	4	.0300	37101
	1 5/8	1/2	4	.0600	37102
	1 5/8	1/2	4	.0900	37103
	1 5/8	1/2	4	.1200	37104
3/4	2 1/4	3/4	5	.0350	37716
1	2 1/4	1	5	.0300	37749
	2 1/4	1	5	.0600	37751
	2 1/4	1	5	.1200	37753

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3412 - LONG REACH - Radius End

FANTOM 2.0

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | LR | FC20

HIGH PERFORMANCE

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

DIA	LOC	SHANK	OAL	REACH	NECK DIA	RADIUS	EDP FC20
1/8	5/32	1/8	2	1/2	.1200	.0100	37765
	5/32	1/8	2 1/2	3/4	.1200	.0100	37768
3/16	7/32	3/16	2	1/2	.1800	.0100	37770
	7/32	3/16	2 1/2	3/4	.1800	.0100	37772
	7/32	3/16	2 1/2	1 1/8	.1800	.0100	37773
	7/32	3/16	2 1/2	1 1/8	.1800	.0300	37775
1/4	3/8	1/4	4	3/4	.2400	.0300	37794
	3/8	1/4	4	3/4	.2400	.0600	37797
	3/8	1/4	4	1 1/8	.2400	.0200	37792
	3/8	1/4	4	2 1/8	.2400	.0200	37793
3/8	1/2	3/8	4	1 1/8	.3600	.0200	37808
	1/2	3/8	4	1 1/8	.3600	.0300	37810
	1/2	3/8	4	1 1/8	.3600	.0600	37812
	1/2	3/8	4	2 1/8	.3600	.0200	37809
1/2	5/8	1/2	4	1 1/2	.4800	.0300	37858
	5/8	1/2	4	1 1/2	.4800	.0600	37860
	5/8	1/2	4	2 1/4	.4800	.0300	37859
	5/8	1/2	4	2 1/4	.4800	.0600	37861
	5/8	1/2	6	3 3/8	.4800	.0300	37866
	5/8	1/2	6	4 1/8	.4800	.0300	37867
5/8	3/4	5/8	6	2 3/8	.6000	.0900	37884
3/4	1	3/4	4	2	.7200	.0300	37907
	1	3/4	4	2	.7200	.0600	37908
	1	3/4	4	2	.7200	.1200	37910
	1	3/4	6	2 1/2	.7200	.0600	37916
	1	3/4	6	2 1/2	.7200	.2500	37928
	1	3/4	6	3 3/8	.7200	.1200	37923
	1	3/4	6	4 1/8	.7200	.0300	37915
	1	3/4	6	4 1/8	.7200	.1200	37924
1	1 1/4	1	6	2 5/8	.9700	.0300	37979
	1 1/4	1	6	3 3/8	.9700	.0600	37983
METRIC							
3.00	4.00	3.00	50.00	12.00	2.87	0.25	37759
	10.00	6.00	100.00	54.00	5.75	1.50	37760
8.00	15.00	8.00	100.00	60.00	7.75	0.50	37800
	27.00	8.00	76.00	35.00	7.75	1.00	37805
10.00	12.00	10.00	150.00	79.00	9.60	0.50	37832
12.00	16.00	12.00	150.00	86.00	11.60	0.75	37849
	20.00	12.00	100.00	54.00	11.60	0.50	37857
16.00	20.00	16.00	150.00	86.00	15.00	0.75	37896

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

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FANTOM 2.0 UICOR 3415 - STANDARD LENGTH - Radius End

The Fantom 2.0 **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.

Chip-Splitter



5 | CENTER CUTTING | SD | FC20

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC20
1/2	1 1/4	1/2	3	.0300	34879
	2	1/2	4	.0200	34880
	2	1/2	4	.0300	34881
5/8	2 1/4	5/8	5	.0350	34882
3/4	1 1/2	3/4	4	.0600	34884
	2 1/4	3/4	5	.0350	34886
METRIC					
12.00	25.00	12.00	100.00	1.00	34878
16.00	38.00	16.00	100.00	3.00	34883

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3410 - STUB LENGTH - Square End

The Fantom **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | STB | FC18

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP FC18
1/4	3/8	1/4	2	34150
3/8	1/2	3/8	2 1/2	34152
1/2	5/8	1/2	3	34154

P STEEL | M STAINLESS | S SUPERALLOY | H HARDENED

3410 - STANDARD LENGTH - Square End

The Fantom **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



4 | CENTER CUTTING | SD | FC18

DIA	LOC	SHANK	OAL	EDP FC18
1/4	3/4	1/4	2 1/2	34125
3/8	1	3/8	2 1/2	34129
7/16	1	7/16	2 3/4	34131
1/2	1	1/2	3	34133
1/2	1 1/4	1/2	3	34135
5/8	1 1/2	5/8	3 1/2	34137
METRIC				
4.00	14.00	4.00	50.00	92601

P STEEL | M STAINLESS | S SUPERALLOY | H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FANTOM

3410 - XL LENGTH - Square End

The Fantom **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | XL | FC18

DIA	LOC	SHANK	OAL	EDP FC18
1/2	1 5/8	1/2	4	34733

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

3410 - STUB LENGTH - Radius End

The Fantom **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



5 | CENTER CUTTING | STB | FC18

DIA	LOC	SHANK	OAL	RADIUS	EDP FC18
1/4	3/8	1/4	2	.0200	34160
1/2	5/8	1/2	3	.0300	34164
METRIC					
12.00	16.00	12.00	63.00	1.50	91433

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3410 - STANDARD LENGTH - Radius End

The Fantom **excels** in difficult-to-machine materials like hardened steels, super alloys, stainless steels, and steels.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC18
1/4	3/4	1/4	2 1/2	.0200	34106
5/16	7/8	5/16	2 1/2	.0200	34108
3/8	1/2	3/8	2 1/2	.0300	34789
	1	3/8	2 1/2	.0200	34110
1/2	1	1/2	3	.0200	34180
	1	1/2	3	.0300	34114
	1 1/4	1/2	3	.0300	34115
	2	1/2	4	.0300	34119
5/8	1 1/2	5/8	3 1/2	.0300	34704
	1 1/2	5/8	3 1/2	.0600	34705
	1 5/8	5/8	4	.0350	34103
	2 1/4	5/8	5	.0350	34121
3/4	1 1/2	3/4	4	.0350	34118
	2 1/4	3/4	5	.0350	34122
1	2 1/4	1	5	.0350	34123
METRIC					
10.00	25.00	10.00	89.00	0.50	92454
12.00	25.00	12.00	76.00	0.50	92570

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

3845 - STUB LENGTH - Square End

The Falcon Finisher **excels** in producing superior part finishes at extraordinary rates in cast iron, super alloys, and steels.



DIA	LOC	SHANK	OAL	EDP TiAlN
1/8	1/4	1/8	1 1/2	38173
3/16	5/16	3/16	2	38175
1/4	1/2	1/4	2	38174
3/8	1/2	3/8	2 1/2	38176
1/2	5/8	1/2	3	38178
5/8	3/4	5/8	3 1/2	38177
3/4	1	3/4	4	38179

TOLERANCES	DIAMETER	SHANK	45° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

P STEEL
K CAST IRON
S SUPERALLOY

3845 - STANDARD LENGTH - Square End

The Falcon Finisher **excels** in producing superior part finishes at extraordinary rates in cast iron, super alloys, and steels.



P STEEL
K CAST IRON
S SUPERALLOY

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	EDP
				TiAlN
1/8	1/2	1/8	1 1/2	38150
5/32	9/16	5/32	2	38152
3/16	9/16	3/16	2	38154
7/32	3/4	7/32	2 1/2	38156
1/4	3/4	1/4	2 1/2	38158
5/16	13/16	5/16	2 1/2	38160
3/8	1	3/8	2 1/2	38162
1/2	1 1/4	1/2	3	38166
5/8	1 5/8	5/8	3 1/2	38168
3/4	1 5/8	3/4	4	38170
1	2	1	4	38172

3845 - XL LENGTH - Square End

The Falcon Finisher **excels** in producing superior part finishes at extraordinary rates in cast iron, super alloys, and steels.



P STEEL
K CAST IRON
S SUPERALLOY

DIA	LOC	SHANK	OAL	EDP
				TiAlN
1/4	1 1/4	1/4	4	38180
5/16	1 1/4	5/16	3	38188
3/8	2	3/8	4	38182
3/8	1 1/2	3/8	4	38183
3/8	1 1/4	3/8	3	38189
3/8	3	3/8	5	38190
1/2	2	1/2	4	38072
1/2	2	1/2	4	38184
1/2	3 1/8	1/2	6	38186
1/2	3	1/2	6	38191
5/8	2 1/2	5/8	5	38185
5/8	3	5/8	6	38192
3/4	2 1/2	3/4	5	38181
3/4	3	3/4	6	38193
1	2 1/2	1	5	38071
1	2 1/2	1	5	38187
1	3	1	6	38194
1	4	1	6	38195

TOLERANCES	DIAMETER	SHANK	45° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3600 - STANDARD LENGTH - Square End

The Force **excels** in producing excellent surface finishes and chip control in hardened steels, and super alloys.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	FLUTES	EDP FC20
1/4	1	1/4	3	5	36245
3/8	3/4	3/8	2 1/2	7	36246
1/2	1	1/2	3	7	36266
	1 1/2	1/2	4	7	36253
1	1 1/4	1	4	9	36264
METRIC					
6.00	20.00	6.00	76.00	5	36280
8.00	22.00	8.00	76.00	7	36283
	30.00	8.00	76.00	7	36290
10.00	20.00	10.00	64.00	7	36248
	30.00	10.00	76.00	7	36249
20.00	60.00	20.00	125.00	9	36261
25.00	32.00	25.00	100.00	9	36262

S SUPERALLOY

H HARDENED

3600 - XL LENGTH - Square End

The Force **excels** in producing excellent surface finishes and chip control in hardened steels, and super alloys.



DIA	LOC	SHANK	OAL	FLUTES	EDP FC20
3/8	1 1/8	3/8	3	7	36247
5/8	1 7/8	5/8	5	9	36255
3/4	2 1/4	3/4	5	9	36259
1	3	1	6	9	36265
METRIC					
12.00	36.00	12.00	100.00	7	36251
16.00	48.00	16.00	125.00	9	36257
25.00	75.00	25.00	150.00	9	36263

S SUPERALLOY

H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

FORCE

3600 - STUB LENGTH - Radius End

The Force **excels** in producing excellent surface finishes and chip control in hardened steels, and super alloys.



5 7 9 CENTER CUTTING STB FC20

S SUPERALLOY

H HARDENED

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	FLUTES	RADIUS	EDP FC20
1/4	3/8	1/4	2 1/2	5	.0150	36200
1/2	5/8	1/2	2 1/2	7	.0150	36208
	5/8	1/2	2 1/2	7	.0300	36209
	5/8	1/2	2 1/2	7	.0600	36210
5/8	3/4	5/8	3 1/2	9	.0300	36214
	3/4	5/8	3 1/2	9	.0600	36215

3600 - STANDARD LENGTH - Radius End

The Force **excels** in producing excellent surface finishes and chip control in hardened steels, and super alloys.



5 7 9 CENTER CUTTING SD FC20

S SUPERALLOY

H HARDENED

DIA	LOC	SHANK	OAL	FLUTES	RADIUS	EDP FC20
1/4	1	1/4	3	5	.0150	36201
3/8	3/4	3/8	2 1/2	7	.0150	36202
1/2	1	1/2	3	7	.0300	36268
	1 1/4	1/2	3	7	.0300	36277
	1 1/4	1/2	3	7	.0600	36278
	1 1/4	1/2	3	7	.1200	36279
	1 1/2	1/2	4	7	.0150	36211
	1 1/2	1/2	4	7	.0300	36212
3/4	1 5/8	3/4	4	9	.0150	36271
	1 5/8	3/4	4	9	.0900	36273
METRIC						
8.00	30.00	8.00	76.00	7	0.50	36291
	30.00	8.00	76.00	7	1.00	36292
	30.00	8.00	76.00	7	1.50	36293
	30.00	8.00	76.00	7	2.00	36294
10.00	20.00	10.00	64.00	7	0.50	36204
	30.00	10.00	76.00	7	0.50	36205
	30.00	10.00	76.00	7	1.00	36295
	30.00	10.00	76.00	7	1.50	36296
	30.00	10.00	76.00	7	2.00	36297

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3600 - XL LENGTH - Radius End

The Force **excels** in producing excellent surface finishes and chip control in hardened steels, and super alloys.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	FLUTES	RADIUS	EDP FC20
3/8	1 1/8	3/8	3	7	.0150	36203
5/8	1 5/8	5/8	5	9	.0300	36216
3/4	2 1/4	3/4	5	9	.0600	36223
METRIC						
12.00	36.00	12.00	100.00	7	0.50	36288
	36.00	12.00	100.00	7	1.00	36207
	36.00	12.00	100.00	7	2.50	36289
16.00	48.00	16.00	125.00	9	1.50	36219

S SUPERALLOY

H HARDENED

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3116 - STUB LENGTH - Radius End

The TiMill has unsurpassed performance in high-efficiency milling in titanium.



DIA	LOC	SHANK	OAL	RADIUS	EDP FC13
1/4	3/8	1/4	2 1/2	.0200	29100
3/8	1/2	3/8	2 1/2	.0300	29105
	1/2	3/8	2 1/2	.0200	29104
	1/2	3/8	2 1/2	.0600	29106
	1/2	3/8	2 1/2	.1200	29107
1/2	5/8	1/2	2 1/2	.0300	29112
	5/8	1/2	2 1/2	.0600	29113
5/8	3/4	5/8	3	.0300	29133
3/4	1	3/4	4	.0300	29124
	1	3/4	4	.0600	29125
	1	3/4	4	.1200	29126

S SUPERALLOY

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

TiMILL

3116 - STANDARD LENGTH - Radius End

The TiMill has unsurpassed performance in high-efficiency milling in titanium.



6 | CENTER CUTTING | SD | FC13

S SUPERALLOY

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	RADIUS	EDP FC13
1/4	3/4	1/4	2 1/2	.0200	29101
	3/4	1/4	2 1/2	.0300	29102
	3/4	1/4	2 1/2	.0600	29103
3/8	1	3/8	3	.0100	29108
	1	3/8	3	.0200	29109
	1	3/8	3	.0300	29110
	1	3/8	3	.0600	29111
1/2	1	1/2	3	.0200	29114
	1	1/2	3	.0300	29115
	1	1/2	3	.0600	29116
	1	1/2	3	.1200	29117
	1 1/4	1/2	4	.0300	29118
	1 1/4	1/2	4	.0600	29119
	1 1/4	1/2	4	.1200	29120
5/8	1 1/2	5/8	3 1/2	.0300	29121
	1 1/2	5/8	3 1/2	.0600	29122
	1 1/2	5/8	3 1/2	.1200	29123
3/4	1 5/8	3/4	4	.0300	29127
	1 5/8	3/4	4	.0600	29128
	1 5/8	3/4	4	.1200	29129
1	2	1	4 1/2	.0300	29130
	2	1	4 1/2	.0600	29131
	2	1	4 1/2	.1200	29132

3116 - STANDARD LENGTH - Square End

The TiMill has unsurpassed performance in high-efficiency milling in titanium.



6 | CENTER CUTTING | SD | FC13

S SUPERALLOY

DIA	LOC	SHANK	OAL	EDP FC13
1/4	3/4	1/4	2 1/2	29000
3/8	1	3/8	3	29001
1/2	1	1/2	3	29002
5/8	1.5	5/8	3 1/2	29003
3/4	1 5/8	3/4	4	29004
1	2	1	4 1/2	29005

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3810 - LONG REACH - Radius End

The Dream **excels** in high-speed profiling and producing superior wall finishes.



HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	FLUTES	REACH	NECK DIA	RADIUS	EDP UNCOATED
5/8	3/4	5/8	4	6	2 1/2	.0600	.0900	37499
3/4	1 1/8	3/4	4	8	2 1/2	.7200	.1200	37500

S SUPERALLOY

3820 - STANDARD LENGTH - Radius End

The Hercules **excels** in high-speed profiling and producing superior wall finishes.



DIA	LOC	SHANK	OAL	RADIUS	EDP UNCOATED	EDP FC 20
2	1 1/8	1 1/4	3	.1200	92600	92599

S SUPERALLOY

TOLERANCES	DIAMETER	SHANK	38° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

Hogger

3975 - STANDARD LENGTH - Radius End

The Hogger **excels** in high volume material removal rates in cast iron, stainless steels, and steels.

Coarse Pitch



3 | 4 | CENTER CUTTING | SD | TiAlN

P STEEL
M STAINLESS
K CAST IRON

HIGH PERFORMANCE

DIA	LOC	SHANK	OAL	FLUTES	RADIUS	EDP TiAlN
3/8	1	3/8	2 1/2	3	.0470	39602
1/2	1	1/2	3	4	.0625	39604
5/8	1 1/2	5/8	3 1/2	4	.0781	39605
3/4	1 1/2	3/4	4	4	.0938	39606

3995 - STANDARD LENGTH - Radius End

The Hogger **excels** in high volume material removal rates in cast iron and super alloys.

Fine Pitch



3 | 4 | CENTER CUTTING | SD | TiAlN

K CAST IRON
S SUPERALLOY

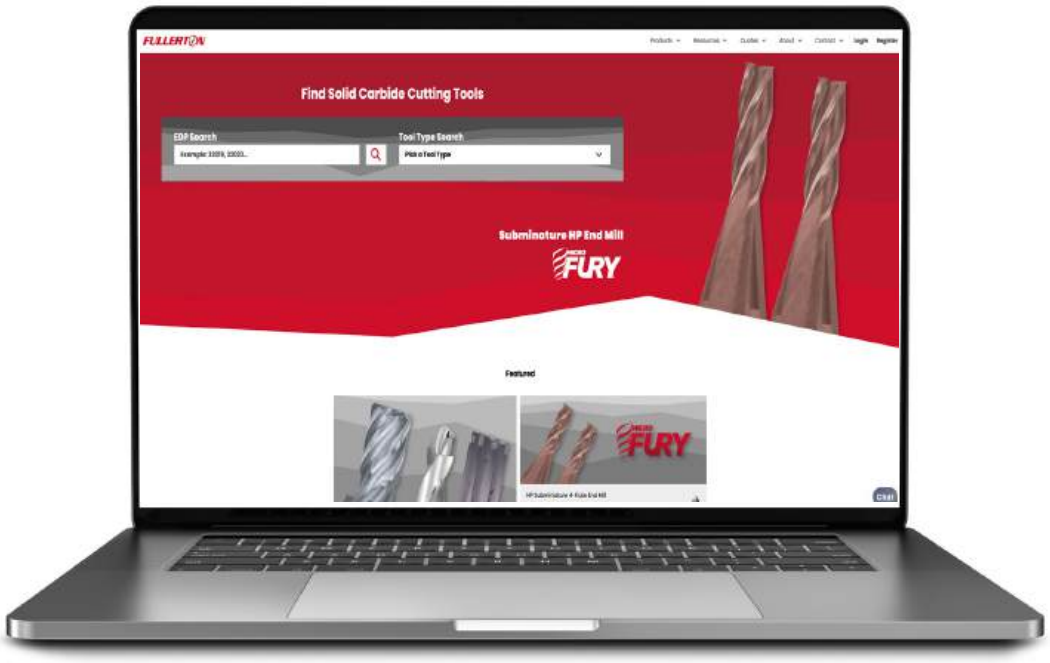
DIA	LOC	SHANK	OAL	FLUTES	RADIUS	EDP TiAlN
3/8	1	3/8	2 1/2	3	.0470	39610
1/2	1	1/2	3	4	.0625	39611
5/8	1 1/2	5/8	3 1/2	4	.0781	39612
3/4	1 1/2	3/4	4	4	.0938	39613

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.003"	h6	
	+0.00mm-0.07mm		

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GENERAL PURPOSE

END MILLS

3215 2 Flute General Purpose
3300 3 Flute General Purpose
3200 4 Flute General Purpose
3730 Chamfer Mills
Jo Engraver
1200/1215 Drill Mills
Micro End Mills

3215 2 Flute - STUB LENGTH - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/32	1/16	1/8	1 1/2	32113	32839
3/64	1/8	3/64	1 1/2	32172	32840
1/16	1/8	1/8	1 1/2	32173	32841
5/64	1/8	1/8	1 1/2	32174	32842
3/32	3/16	1/8	1 1/2	32175	32843
7/64	3/16	1/8	1 1/2	32176	32844
1/8	1/4	1/8	1 1/2	32177	32845
5/32	3/8	3/16	2	32178	32846
3/16	3/8	3/16	2	32179	32847
1/4	1/2	1/4	2	32180	32848
5/16	1/2	5/16	2 1/2	32181	32849
3/8	5/8	3/8	2 1/2	32182	32850
7/16	3/4	7/16	2 3/4	32183	32851
1/2	3/4	1/2	3	32184	32852
5/8	1	5/8	3 1/2	32185	32853
3/4	1	3/4	4	32186	32854
1	1	1	4		32855
METRIC					
1.00	2.50	3.00	38.00		92186
2.00	4.00	3.00	38.00		92187
3.00	6.00	3.00	38.00		92255
6.00	12.00	6.00	50.00		92256
8.00	12.00	8.00	50.00		92257
10.00	15.00	10.00	50.00		92258
12.00	15.00	12.00	63.00		92259

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - STANDARD LENGTH - Square End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/64	3/64	1/8	1 1/2	32058	
1/32	3/32	1/8	1 1/2	32059	30643
3/64	3/16	1/8	1 1/2	32060	30644
1/16	1/4	1/8	1 1/2	32061	30645
5/64	1/4	1/8	1 1/2	32062	30646
3/32	3/8	1/8	1 1/2	32063	30647
7/64	1/2	1/8	1 1/2	32064	30648
1/8	1/2	1/8	1 1/2	32065	30649
9/64	9/16	3/16	2	32066	30650
5/32	9/16	3/16	2	32067	30651
11/64	9/16	3/16	2	32654	30652
3/16	5/8	3/16	2	32068	30653
13/64	5/8	1/4	2 1/2	32655	30654
7/32	5/8	1/4	2 1/2	32069	30655
15/64	3/4	1/4	2 1/2		30656
1/4	3/4	1/4	2 1/2	32070	30657
17/64	7/8	5/16	2 1/2	32940	30658
9/32	7/8	5/16	2 1/2	32071	30659
19/64	7/8	5/16	2 1/2		30660
5/16	7/8	5/16	2 1/2	32072	30661
21/64	7/8	3/8	2 1/2		30662
11/32	7/8	3/8	2 1/2	32073	30663
23/64	1	3/8	2 1/2		30664
3/8	1	3/8	2 1/2	32074	30665
25/64	1	7/16	2 3/4		30666
13/32	1	7/16	2 3/4		30667
27/64	1	7/16	2 3/4		30668
7/16	1	7/16	2 3/4	32075	30669
29/64	1	1/2	3		30670
15/32	1	1/2	3		30671
31/64	1	1/2	3	32947	30672
1/2	1	1/2	3	32076	30673
9/16	1 1/4	9/16	3 1/2	32077	30674
5/8	1 1/2	5/8	3 1/2	32078	30675
11/16	1 1/2	3/4	4		30676
3/4	1 1/2	3/4	4	32080	30677
7/8	1 1/2	7/8	4	32081	30678
1	1 1/2	1	4	32082	30679

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3215 2 Flute - STANDARD LENGTH - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
METRIC					
1.00	4.00	3.00	38.00	92038	92233
1.50	6.00	3.00	38.00		92234
2.00	8.00	3.00	38.00	92039	92235
2.50	12.00	3.00	38.00	92041	92236
3.00	12.00	3.00	38.00	92042	92237
3.50	12.00	4.00	50.00		92238
4.00	14.00	4.00	50.00	92043	92239
4.50	14.00	5.00	51.00		92240
5.00	16.00	5.00	64.00	92044	92241
6.00	20.00	6.00	64.00	92045	92242
7.00	22.00	7.00	64.00		92243
8.00	22.00	8.00	64.00	92047	92244
9.00	22.00	9.00	64.00		92245
10.00	25.00	10.00	64.00	92049	92246
11.00	25.00	11.00	84.00		92247
12.00	25.00	12.00	84.00	92050	92248
14.00	32.00	14.00	84.00	92051	92249
16.00	38.00	16.00	89.00	92052	92250
18.00	40.00	18.00	100.00		92251
20.00	40.00	20.00	100.00		92252
22.00	40.00	22.00	100.00		92253
25.00	40.00	25.00	100.00		92254

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - XL LENGTH - Square End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/8	3/4	1/8	3	30233	30108
	1	1/8	3	32292	30109
3/16	1	3/16	4	30242	30111
	1 1/4	3/16	3	32293	30110
1/4	1	1/4	4	30210	30113
	1 1/8	1/4	3	32562	30112
	1 1/2	1/4	4	32294	30114
	1 1/2	1/4	6		30115
5/16	1	5/16	4		30117
	1 1/8	5/16	3		30116
	1 1/2	5/16	6		30119
	1 5/8	5/16	4		30118
3/8	1	3/8	4	30212	30121
	1 1/8	3/8	3	32580	30120
	1 1/2	3/8	4	30222	30122
	1 1/2	3/8	6	32565	30124
	2	3/8	4	32296	30123
	3	3/8	6	32297	30125
7/16	1	7/16	4		30126
	1 1/2	7/16	6		30128
	2	7/16	4		30127
	3	7/16	6		30129
1/2	1	1/2	4	30214	30130
	1 1/2	1/2	4	32584	30131
	1 1/2	1/2	6	32567	30133
	2	1/2	4	32300	30132
	3	1/2	6	32301	30134
5/8	1 1/2	5/8	6		30136
	2 1/2	5/8	5		30135
	3	5/8	6		30137
3/4	1 1/2	3/4	6	30227	30139
	2 1/2	3/4	5	32304	30138
	3	3/4	6	32305	30140
1	2	1	4 1/2	32306	30141
	2 1/2	1	5		30142
	3	1	6	32308	30143

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - STANDARD LENGTH - Radius End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN
1/8	1/2	1/8	1 1/2	.0150	33845
	1/2	1/8	1 1/2	.0200	33854
3/16	5/8	3/16	2	.0150	33846
	5/8	3/16	2	.0200	33855
	5/8	3/16	2	.0300	33863
1/4	3/4	1/4	2 1/2	.0150	33847
	3/4	1/4	2 1/2	.0200	33856
	3/4	1/4	2 1/2	.0300	33864
	3/4	1/4	2 1/2	.0450	33871
5/16	7/8	5/16	2 1/2	.0150	33848
	7/8	5/16	2 1/2	.0200	33857
	7/8	5/16	2 1/2	.0300	33865
	7/8	5/16	2 1/2	.0450	33872
3/8	1	3/8	2 1/2	.0150	33849
	1	3/8	2 1/2	.0200	33858
	1	3/8	2 1/2	.0300	33866
	1	3/8	2 1/2	.0450	33873
	1	3/8	2 1/2	.0600	33878
1/2	1	1/2	3	.0150	33850
	1	1/2	3	.0200	33859
	1	1/2	3	.0300	33867
	1	1/2	3	.0450	33874
	1	1/2	3	.0600	33879
	1	1/2	3	.0900	33883
	1	1/2	3	.1250	33887
5/8	1 1/2	5/8	3 1/2	.0150	33851
	1 1/2	5/8	3 1/2	.0200	33860
	1 1/2	5/8	3 1/2	.0300	33868
	1 1/2	5/8	3 1/2	.0450	33875
	1 1/2	5/8	3 1/2	.0600	33880
	1 1/2	5/8	3 1/2	.0900	33884
	1 1/2	5/8	3 1/2	.1250	33888
3/4	1 1/2	3/4	4	.0150	33852
	1 1/2	3/4	4	.0200	33861
	1 1/2	3/4	4	.0300	33869
	1 1/2	3/4	4	.0450	33876
	1 1/2	3/4	4	.0600	33881
	1 1/2	3/4	4	.0900	33885
	1 1/2	3/4	4	.1250	33889
1	1 1/2	1	4	.0150	33853
	1 1/2	1	4	.0200	33862
	1 1/2	1	4	.0300	33870
	1 1/2	1	4	.0450	33877
	1 1/2	1	4	.0600	33882
	1 1/2	1	4	.0900	33886
	1 1/2	1	4	.1250	33890

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - STUB LENGTH - Ball End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/32	1/16	1/8	1 1/2	32114	32881
3/64	1/8	1/8	1 1/2		32882
1/16	1/8	1/8	1 1/2	32189	32883
5/64	1/8	1/8	1 1/2	32190	32884
3/32	3/16	1/8	1 1/2	32191	32885
7/64	3/16	1/8	1 1/2		32886
1/8	1/4	1/8	1 1/2	32193	32887
5/32	3/8	3/16	2		32888
3/16	3/8	3/16	2	32195	32889
1/4	1/2	1/4	2	32196	32890
5/16	1/2	5/16	2 1/2		32891
3/8	5/8	3/8	2 1/2	32198	32892
7/16	3/4	7/16	2 3/4	32199	32893
1/2	3/4	1/2	3	32200	32894
5/8	1	5/8	3 1/2		32895
3/4	1	3/4	4		32896
1	1	1	4		32897

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3215 2 Flute - STANDARD LENGTH - Ball End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/64	3/64	1/8	1 1/2	32086	30754
1/32	3/32	1/8	1 1/2	32087	30755
3/64	3/16	1/8	1 1/2	32088	30756
1/16	1/4	1/8	1 1/2	32089	30757
5/64	1/4	1/8	1 1/2	32090	30758
3/32	3/8	1/8	1 1/2	32091	30759
7/64	1/2	1/8	1 1/2		30760
1/8	1/2	1/8	1 1/2	32093	30761
9/64	9/16	3/16	2		30762
5/32	9/16	3/16	2	32095	30763
11/64	9/16	3/16	2		30764
3/16	5/8	3/16	2	32096	30765
13/64	1/4	1/4	2 1/2		30766
7/32	5/8	1/4	2 1/2	32097	30767
15/64	3/4	1/4	2 1/2		30768
1/4	3/4	1/4	2 1/2	32098	30769
17/64	7/8	5/16	2 1/2		30770
9/32	7/8	5/16	2 1/2		30771
19/64	7/8	5/16	2 1/2		30772
5/16	7/8	5/16	2 1/2	32100	30773
21/64	7/8	3/8	2 1/2		30774
11/32	7/8	3/8	2 1/2	32101	30775
23/64	1	3/8	2 1/2		30776
3/8	1	3/8	2 1/2	32102	30777
25/64	1	7/16	2 3/4		30778
13/32	1	7/16	2 3/4		30779
27/64	1	7/16	2 3/4		30780
7/16	1	7/16	2 3/4		30781
29/64	1	1/2	3		30782
15/32	1	1/2	3		30783
31/64	1	1/2	3		30784
1/2	1	1/2	3	32104	30785
9/16	1 1/4	9/16	3 1/2		30786
5/8	1 1/2	5/8	3 1/2		30787
11/16	1 1/2	3/4	4		30788
3/4	1 1/2	3/4	4		30789
7/8	1 1/2	7/8	4		30790
1	1 1/2	1	4		30791

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - STANDARD LENGTH - Ball End



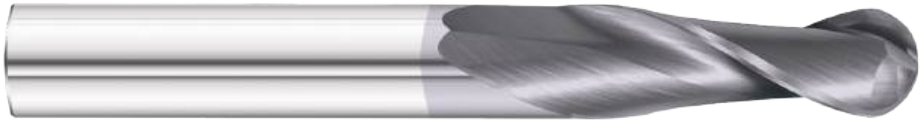
U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
METRIC					
1.00	4.00	3.00	38.00	92055	92297
1.50	6.00	3.00	38.00	92056	92298
2.00	8.00	3.00	38.00	92057	92299
3.00	12.00	3.00	38.00	92060	92301
3.50	12.00	4.00	50.00		92302
4.00	14.00	4.00	50.00	92061	92303
4.50	14.00	5.00	51.00		92304
5.00	16.00	5.00	64.00	92062	92305
6.00	20.00	6.00	64.00	92063	92306
7.00	22.00	7.00	64.00		92307
8.00	22.00	8.00	64.00		92308
9.00	22.00	9.00	64.00		92309
10.00	25.00	10.00	64.00		92310
11.00	25.00	11.00	84.00		92311
12.00	25.00	12.00	84.00		92312
14.00	32.00	14.00	84.00		92313
16.00	38.00	16.00	89.00		92314
18.00	40.00	18.00	100.00		92315
20.00	40.00	20.00	100.00		92316
22.00	40.00	22.00	100.00		92317
25.00	40.00	25.00	100.00		92318

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - XL LENGTH - Ball End



2 | CENTER CUTTING | XL | UNCOATED | TiAlN

GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/8	3/4	1/8	3	30236	30144
	1	1/8	3		30145
3/16	1	3/16	4	30244	30147
	1	3/16	3		30146
1/4	1	1/4	4	30215	30149
	1 1/8	1/4	3	32568	30148
	1 1/2	1/4	4	32311	30150
	1 1/2	1/4	6	32569	30151
5/16	1	5/16	4		30153
	1 1/8	5/16	3		30152
	1 1/2	5/16	6		30155
	1 5/8	5/16	4		30154
3/8	1	3/8	4	30217	30157
	1 1/8	3/8	3		30156
	1 1/2	3/8	4	30223	30158
	1 1/2	3/8	6	32571	30160
	2	3/8	4	32313	30159
	3	3/8	6		30161
7/16	1	7/16	4		30162
	1 1/2	7/16	6		30164
	2	7/16	4		30163
	3	7/16	6		30165
1/2	1	1/2	4	30219	30166
	1 1/2	1/2	4	32585	30167
	1 1/2	1/2	6	32573	30169
	2	1/2	4	32317	30168
	3	1/2	6	32318	30170
5/8	1 1/2	5/8	6		30172
	2 1/2	5/8	5		30171
	3	5/8	6		30173
3/4	1 1/2	3/4	6		30175
	2 1/2	3/4	5		30174
	3	3/4	6		30176
1	2	1	4 1/2		30177
	2 1/2	1	5		30178
	3	1	6		30179
METRIC					
20.00	63.00	20.00	125.00	92175	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3215 2 Flute - STUB LENGTH - Ball End Double End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP TiAlN
1/32	3/32	1/8	1 1/2	36061
3/64	1/8	1/8	1 1/2	36062
1/16	1/8	1/8	1 1/2	36063
5/64	1/8	1/8	1 1/2	36064
3/32	3/16	1/8	1 1/2	36065
7/64	3/16	1/8	1 1/2	36066
1/8	1/4	1/8	1 1/2	36067
9/64	5/16	3/16	2	36068
5/32	5/16	3/16	2	36069
11/64	5/16	3/16	2	36070
3/16	3/8	3/16	2	36071
13/64	1/2	1/4	2 1/2	36072
7/32	1/2	1/4	2 1/2	36073
15/64	1/2	1/4	2 1/2	36074
1/4	1/2	1/4	2 1/2	36075
9/32	1/2	5/16	2 1/2	36076
5/16	1/2	5/16	2 1/2	36077
3/8	9/16	3/8	2 1/2	36078
7/16	5/8	7/16	2 3/4	36079
1/2	5/8	1/2	3	36080

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3300 3 Flute - STUB LENGTH - Square End



CENTER CUTTING | STB | UNCOATED | TiAlN

GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TIALN
METRIC					
1.00	2.50	3.00	38.00	93200	93208
1.50	3.00	3.00	38.00	93201	93209
2.00	4.00	3.00	38.00	93202	93210
2.50	5.00	3.00	38.00		93211
3.00	6.00	3.00	38.00		93212
4.00	8.00	4.00	50.00		93213
5.00	10.00	5.00	51.00		93214
6.00	13.00	6.00	50.00		93215

3300 3 Flute - STANDARD LENGTH - Square End



CENTER CUTTING | SD | UNCOATED | TiAlN

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TIALN
1/32	3/32	1/8	1 1/2	33002	30680
3/64	3/16	1/8	1 1/2	33003	30681
1/16	1/4	1/8	1 1/2	33004	30682
5/64	1/4	1/8	1 1/2	33005	30683
3/32	3/8	1/8	1 1/2	33006	30684
7/64	1/2	1/8	1 1/2	33007	30685
1/8	1/2	1/8	1 1/2	33008	30686
9/64	9/16	3/16	2		30687
5/32	9/16	3/16	2	33010	30688
11/64	9/16	3/16	2		30689
3/16	5/8	3/16	2	33011	30690
13/64	5/8	1/4	2 1/2		30691
7/32	5/8	1/4	2 1/2	33012	30692
15/64	3/4	1/4	2 1/2		30693
1/4	3/4	1/4	2 1/2	33013	30694
17/64	7/8	5/16	2 1/2		30695

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3300 3 Flute - STANDARD LENGTH - Square End



L | 3 | CENTER CUTTING | SD | UNCOATED | TiAlN

U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TIALN
9/32	7/8	5/16	2 1/2	33014	30696
19/64	7/8	5/16	2 1/2		30697
5/16	7/8	5/16	2 1/2	33015	30698
21/64	7/8	3/8	2 1/2		30699
11/32	7/8	3/8	2 1/2	33016	30700
23/64	1	3/8	2 1/2		30701
3/8	1	3/8	2 1/2	33017	30702
25/64	1	7/16	2 3/4		30703
13/32	1	7/16	2 3/4	32902	30704
27/64	1	7/16	2 3/4		30705
7/16	1	7/16	2 3/4		30706
29/64	1	1/2	3		30707
15/32	1	1/2	3		30708
31/64	1	1/2	3		30709
1/2	1	1/2	3	33019	30710
9/16	1 1/4	9/16	3 1/2		30711
5/8	1 1/2	5/8	3 1/2		30712
11/16	1 1/2	3/4	4		30713
3/4	1 1/2	3/4	4	33023	30714
7/8	1 1/2	7/8	4	33024	30715
1	1 1/2	1	4	33025	30716
METRIC					
1.00	4.00	1.00	38.00	92330	92350
1.50	6.00	1.50	38.00	92331	92351
2.00	9.00	2.00	38.00	92332	92352
2.50	12.00	2.50	38.00	92333	92353
3.00	12.00	3.00	38.00	92334	92354
3.50	12.00	3.50	50.00	92335	92355
4.00	14.00	4.00	50.00	92336	92356
4.50	14.00	4.50	51.00		92357
5.00	16.00	5.00	64.00	92338	92358
6.00	20.00	6.00	64.00	92339	92359
7.00	22.00	7.00	64.00		92360
8.00	22.00	8.00	64.00	92341	92361
9.00	22.00	9.00	64.00		92362
10.00	25.00	10.00	64.00		92363
10.00	28.00	10.00	73.00		92497
12.00	25.00	12.00	84.00	92344	92364
14.00	32.00	14.00	84.00		92365
16.00	38.00	16.00	89.00	92346	92366
18.00	40.00	18.00	100.00		92367
20.00	40.00	20.00	100.00	92348	92368
25.00	40.00	25.00	100.00		92369

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3300 3 Flute - XL LENGTH - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TIALN
1/8	3/4	1/8	3	30234	30011
	1	1/8	3	33059	30180
3/16	1	3/16	4	30246	30182
	1 1/4	3/16	3	33060	30181
1/4	1 1/2	1/4	4	33061	30183
5/16	1 5/8	5/16	4	33062	30184
3/8	2	3/8	4	33063	30185
	3	3/8	6	33064	30186
7/16	2	7/16	4		30187
	3	7/16	6		30188
1/2	1 1/4	1/2	3	30247	30189
	1 1/2	1/2	4	32598	30190
	2	1/2	4	33067	30191
	3	1/2	6	33068	30192
5/8	2 1/2	5/8	5	33079	30193
3/4	2 1/2	3/4	5	33080	30194

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - STUB LENGTH - Square End



L | 4 | CENTER CUTTING | STB | UNCOATED | TiAlN

U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/32	1/16	1/8	1 1/2	32139	32822
3/64	1/8	1/8	1 1/2	32140	32823
1/16	1/8	1/8	1 1/2	32141	32824
5/64	1/8	1/8	1 1/2	32142	32825
3/32	3/16	1/8	1 1/2	32143	32826
7/64	3/16	1/8	1 1/2	32144	32827
1/8	1/4	1/8	1 1/2	32145	32828
5/32	3/8	3/16	2	32146	32829
3/16	3/8	3/16	2	32147	32830
1/4	1/2	1/4	2	32148	32831
5/16	1/2	5/16	2 1/2	32149	32832
3/8	5/8	3/8	2 1/2	32150	32833
7/16	3/4	7/16	2 3/4	32151	32834
1/2	3/4	1/2	3	32152	32835
5/8	1	5/8	3 1/2	32153	32836
3/4	1	3/4	4	32154	32837
1	1	1	4	32155	32838
METRIC					
1.00	2.50	1.00	38.00	92093	92180
1.50	3.00	3.00	38.00		92195
2.00	4.00	3.00	38.00		92181
3.00	6.00	3.00	38.00		92223
4.00	8.00	4.00	50.00		92101
5.00	10.00	5.00	51.00	91321	92103
6.00	12.00	6.00	50.00	92102	92224
8.00	12.00	8.00	50.00	92104	92225
10.00	15.00	10.00	50.00	92106	92226
12.00	15.00	12.00	63.00	92108	92227

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - STANDARD LENGTH - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP				
				UNCOATED	TiAlN	TiCN	TiN	FC20
1/64	3/64	1/8	1 1/2	32001	30604	33098	33097	33500
1/32	3/32	1/8	1 1/2	32002	30605	32727	33100	33501
3/64	3/16	1/8	1 1/2	32003	30606	32728	33101	33502
1/16	1/4	1/8	1 1/2	32004	30607	32729	32326	33503
5/64	1/4	1/8	1 1/2	32005	30608	32730	33102	33504
3/32	3/8	1/8	1 1/2	32006	30609	32731	32327	33505
7/64	1/2	1/8	1 1/2	32007	30610	32732	33103	33506
1/8	1/2	1/8	1 1/2	32008	30611	32733	32328	33507
9/64	9/16	3/16	2	32009	30612	32734	33104	
5/32	9/16	3/16	2	32010	30613	32735	33105	
11/64	9/16	3/16	2	32650	30614	32736	33106	
3/16	5/8	3/16	2	32011	30615	32737	32329	33508
13/64	5/8	1/4	2 1/2	32667	30616	32738	33107	
7/32	5/8	1/4	2 1/2	32012	30617	32739	33108	
15/64	3/4	1/4	2 1/2	32666	30618	32740	33109	
1/4	3/4	1/4	2 1/2	32013	30619	32741	32330	33509
17/64	7/8	5/16	2 1/2	32918	30620	32742	33110	
9/32	7/8	5/16	2 1/2	32014	30621	32743	33111	
19/64	7/8	5/16	2 1/2	32919	30622	32744	33112	
5/16	7/8	5/16	2 1/2	32015	30623	32745	32331	33510
21/64	7/8	3/8	2 1/2	32920	30624	32746	33113	
11/32	7/8	3/8	2 1/2	32016	30625	32747	33114	
23/64	1	3/8	2 1/2	32921	30626	32748	33115	
3/8	1	3/8	2 1/2	32017	30627	32749	32332	33511
25/64	1	7/16	2 3/4	32922	30628	32750	33116	
13/32	1	7/16	2 3/4	32900	30629	32751	33117	
27/64	1	7/16	2 3/4	32923	30630	32752	33118	
7/16	1	7/16	2 3/4	32018	30631	32753	32333	33512
29/64	1	1/2	3	32924	30632	32754	33119	
15/32	1	1/2	3	32910	30633	32755	33120	
31/64	1	1/2	3	32925	30634	32756	33121	
1/2	1	1/2	3	32019	30635	32757	32334	33513
9/16	1 1/4	9/16	3 1/2	32020	30636	32758	32335	33514
5/8	1 1/2	5/8	3 1/2	32021	30637	32759	32336	33515
11/16	1 1/2	3/4	4	32022	30638	32760	33122	
3/4	1 1/2	3/4	4	32023	30639	32761	32337	33516
7/8	1 1/2	7/8	4	32024	30640	32762	33123	33517
1	1 1/2	1	4	32025	30641	32763	32338	33518
1 1/8	2	1	4 1/2	32026				
1 1/4	2	1 1/4	4 1/2	32027				
1 3/8	2	1 1/4	4 1/2	32028				
1 1/2	2	1 1/4	4 1/2	32029				

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - STANDARD LENGTH - Square End



U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP				
				UNCOATED	TiAlN	TiCN	TiN	FC20
METRIC								
1.00	4.00	1.00	38.00	92001	92201			
1.50	6.00	1.50	38.00	92002	92202			
2.00	8.00	2.00	38.00	92003	92203			
2.50	6.00	2.50	38.00	91319	91388			
2.50	12.00	2.50	38.00	92005	92204			
3.00	12.00	3.00	38.00	92006	92205			
3.50	12.00	3.50	50.00	92073	92206			
4.00	14.00	4.00	50.00	92007	92207			
4.50	14.00	4.50	51.00	92075	92208			
5.00	16.00	5.00	64.00	92008	92209			
6.00	20.00	6.00	64.00	92009	92210			
7.00	22.00	7.00	64.00	92010	92211			
8.00	22.00	**8.00**	64.00	92011	92212			
9.00	22.00	**9.00**	64.00	92012	92213			
10.00	25.00	**10.00**	64.00	92013	92214			
11.00	25.00	**11.00**	84.00	92077	92215			
12.00	25.00	**12.00**	84.00	92014	92216			
14.00	32.00	**14.00**	84.00	92015	92217			
16.00	30.00	**16.00**	89.00	91322	91389			
	38.00	**16.00**	89.00	92016	92218			
18.00	40.00	**18.00**	100.00	92017	92219			
20.00	30.00	**20.00**	100.00		91390			
	40.00	**20.00**	100.00	92018	92220			
22.00	40.00	**22.00**	100.00		92221			
25.00	40.00	**25.00**	100.00	92081	92222			

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - XL LENGTH - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAIN
1/8	3/4	1/8	3	30232	30030
	1	1/8	3	32252	30031
3/16	1	3/16	4	30238	30033
	1 1/4	3/16	3	32253	30032
1/4	1	1/4	4	30200	30035
	1 1/8	1/4	3	32550	30034
	1 1/2	1/4	4	32254	30036
	1 1/2	1/4	6	32551	30037
5/16	1	5/16	4	30201	30039
	1 1/8	5/16	3	32574	30038
	1 1/2	5/16	6	32552	30041
	1 5/8	5/16	4	32255	30040
3/8	1	3/8	4	30202	30043
	1 1/8	3/8	3	32578	30042
	1 1/2	3/8	4	30220	30044
	1 1/2	3/8	6	32553	30046
	2	3/8	4	32256	30045
	3	3/8	6	32257	30047
7/16	1	7/16	4	30203	30048
	1 1/2	7/16	6	32554	30050
	2	7/16	4	32258	30049
	3	7/16	6	32259	30051
1/2	1	1/2	4	30204	30053
	1 1/4	1/2	3	30239	30052
	1 1/2	1/2	4	32582	30054
	1 1/2	1/2	6	32555	30056
	2	1/2	4	32260	30055
	3	1/2	6	32261	30057
5/8	1 1/2	5/8	6	30224	30059
	2 1/2	5/8	5	32262	30058
	3	5/8	6	32263	30060
3/4	1 1/2	3/4	6	30226	30062
	2	3/4	5	32250	30024
	2 1/2	3/4	5	32264	30061
	3	3/4	6	32265	30063
	4	3/4	7	32266	30064
1	2	1	4 1/2	32267	30065
	2 1/2	1	5	32268	30066
	3	1	6	32269	30067
	4	1	7	32270	30068
1 1/4	3	1 1/4	6	32271	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Square End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
METRIC					
3.00	25.00	**3.00**	76.00	92120	92228
4.00	25.00	**4.00**	64.00	91251	91317
5.00	25.00	**5.00**	76.00	91252	91318
6.00	29.00	**6.00**	76.00	92122	92229
8.00	29.00	**8.00**	76.00	92124	92230
10.00	45.00	**10.00**	100.00	92126	92231
12.00	50.00	**12.00**	100.00	92128	92232
12.00	76.00	**12.00**	150.00		92137
16.00	63.00	**16.00**	125.00	92129	92182
16.00	76.00	**16.00**	150.00	92133	92147
20.00	63.00	**20.00**	125.00	92131	92183
20.00	76.00	**20.00**	150.00		92149

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - STUB LENGTH - Radius End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN
3/32	3/16	3/32	1 1/2	.0300	31509
1/8	1/4	1/8	1 1/2	.0050	31954
	1/4	1/8	1 1/2	.0100	31955
	1/4	1/8	1 1/2	.0150	31956
	1/4	1/8	1 1/2	.0200	31957
	1/4	1/8	1 1/2	.0300	31511
3/16	3/8	3/16	2	.0050	31958
	3/8	3/16	2	.0100	31959
	3/8	3/16	2	.0150	31960
	3/8	3/16	2	.0200	31961
	3/8	3/16	2	.0300	31519
	3/8	3/16	2	.0600	31520
1/4	1/2	1/4	2	.0150	31962
	1/2	1/4	2	.0200	31963
	1/2	1/4	2	.0300	31528
	1/2	1/4	2	.0600	31529
	1/2	1/4	2	.0900	31530
5/16	1/2	5/16	2 1/2	.0150	31964
	1/2	5/16	2 1/2	.0200	31965
	1/2	5/16	2 1/2	.0300	31544
	1/2	5/16	2 1/2	.0600	31545
	1/2	5/16	2 1/2	.0900	31546
	1/2	5/16	2 1/2	.1200	31547
3/8	5/8	3/8	2 1/2	.0150	31966
	5/8	3/8	2 1/2	.0200	31967
	5/8	3/8	2 1/2	.0300	31556
	5/8	3/8	2 1/2	.0600	31557
	5/8	3/8	2 1/2	.0900	31558
	5/8	3/8	2 1/2	.1200	31559
1/2	3/4	1/2	3	.0150	31968
	3/4	1/2	3	.0200	31969
	3/4	1/2	3	.0300	31584
	3/4	1/2	3	.0600	31585
	3/4	1/2	3	.0900	31586
	3/4	1/2	3	.1200	31587
5/8	1	5/8	3 1/2	.0150	31970
	1	5/8	3 1/2	.0200	31971
	1	5/8	3 1/2	.0300	31600
	1	5/8	3 1/2	.0600	31601
	1	5/8	3 1/2	.0900	31602
	1	5/8	3 1/2	.1200	31603
3/4	1	3/4	4	.0150	31972
	1	3/4	4	.0200	31973
	1	3/4	4	.0300	31612
	1	3/4	4	.0600	31613
	1	3/4	4	.0900	31614
	1	3/4	4	.1200	31615
	1	3/4	4	.2500	31974

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - STANDARD LENGTH - Radius End



UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	RADIUS	EDP	
					TiAIN	FC20
3/32	3/16	1/8	1 1/2	.0300	31509	
	3/8	1/8	1 1/2	.0300	31510	
7/64	1/2	1/8	1 1/2	.0300	31500	
1/8	1/2	1/8	1 1/2	.0050	31710	
	1/2	1/8	1 1/2	.0100	31711	
	1/2	1/8	1 1/2	.0150	33804	
	1/2	1/8	1 1/2	.0200	33813	
	1/2	1/8	1 1/2	.0300	31712	
5/32	9/16	3/16	2	.0050	31713	
	9/16	3/16	2	.0100	31714	
	9/16	3/16	2	.0150	31715	
	9/16	3/16	2	.0200	31716	
	9/16	3/16	2	.0300	31517	
	9/16	3/16	2	.0600	31518	
3/16	5/8	3/16	2	.0050	31717	
	5/8	3/16	2	.0100	31718	
	5/8	3/16	2	.0150	33805	
	5/8	3/16	2	.0200	33814	
	5/8	3/16	2	.0300	33822	
	5/8	3/16	2	.0600	31719	
7/32	5/8	1/4	2 1/2	.0150	31720	
	5/8	1/4	2 1/2	.0200	31721	
	5/8	1/4	2 1/2	.0300	31525	
	5/8	1/4	2 1/2	.0600	31526	
	5/8	1/4	2 1/2	.0900	31527	
1/4	3/4	1/4	2 1/2	.0150	33806	
	3/4	1/4	2 1/2	.0200	33815	
	3/4	1/4	2 1/2	.0300	33790	
	3/4	1/4	2 1/2	.0450	33827	
	3/4	1/4	2 1/2	.0600	30970	
	3/4	1/4	2 1/2	.0900	30976	
5/16	7/8	5/16	2 1/2	.0150	33807	
	7/8	5/16	2 1/2	.0200	33816	
	7/8	5/16	2 1/2	.0300	33823	
	7/8	5/16	2 1/2	.0450	33828	
	7/8	5/16	2 1/2	.0600	30977	
	7/8	5/16	2 1/2	.0900	30978	
	7/8	5/16	2 1/2	.1200	31633	
3/8	1	3/8	2 1/2	.0150	33808	33519
	1	3/8	2 1/2	.0200	33817	
	1	3/8	2 1/2	.0300	33791	
	1	3/8	2 1/2	.0450	33829	
	1	3/8	2 1/2	.0600	33792	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - STANDARD LENGTH - Radius End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	RADIUS	EDP	
					TiAlN	FC20
3/8	1	3/8	2 1/2	.0900	30971	
	1	3/8	2 1/2	.1200	30972	
7/16	1	7/16	2 3/4	.0150	31722	
	1	7/16	2 3/4	.0200	31723	
	1	7/16	2 3/4	.0300	31572	
	1	7/16	2 3/4	.0600	31573	
	1	7/16	2 3/4	.0900	31574	
	1	7/16	2 3/4	.1200	31575	
1/2	1	1/2	3	.0150	33809	
	1	1/2	3	.0200	33818	
	1	1/2	3	.0300	33793	33520
	1	1/2	3	.0450	33830	
	1	1/2	3	.0600	33794	
	1	1/2	3	.0900	33837	
	1	1/2	3	.1200	30973	
	1	1/2	3	.1250	33841	
5/8	1 1/2	5/8	3 1/2	.0150	33810	
	1 1/2	5/8	3 1/2	.0200	33819	
	1 1/2	5/8	3 1/2	.0300	33824	33521
	1 1/2	5/8	3 1/2	.0450	33831	
	1 1/2	5/8	3 1/2	.0600	33834	
	1 1/2	5/8	3 1/2	.0900	33838	
	1 1/2	5/8	3 1/2	.1200	30974	
	1 1/2	5/8	3 1/2	.1250	33842	
3/4	1 1/2	3/4	4	.0150	33811	
	1 1/2	3/4	4	.0200	33820	
	1 1/2	3/4	4	.0300	33825	33522
	1 1/2	3/4	4	.0450	33832	
	1 1/2	3/4	4	.0600	33835	
	1 1/2	3/4	4	.0900	33839	
	1 1/2	3/4	4	.1200	30975	
	1 1/2	3/4	4	.1250	33843	
	1 1/2	3/4	4	.2500	31724	
1	1 1/2	1	4	.0150	33812	
	1 1/2	1	4	.0200	33821	
	1 1/2	1	4	.0300	33826	
	1 1/2	1	4	.0450	33833	
	1 1/2	1	4	.0600	33836	
	1 1/2	1	4	.0900	33840	
	1 1/2	1	4	.1200	31725	
	1 1/2	1	4	.1250	33844	
	1 1/2	1	4	.2500	31726	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - STANDARD LENGTH - Radius End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	RADIUS	EDP	
					TiAlN	FC20
METRIC						
3.00	8.00	3.00	38.00	0.20	91356	
	8.00	3.00	38.00	0.50	91357	
	8.00	3.00	38.00	1.00	91358	
	12.00	3.00	38.00	0.20	91953	
	12.00	3.00	38.00	0.50	91954	
	12.00	3.00	38.00	1.00	91955	
4.00	14.00	4.00	50.00	0.20	91956	
	14.00	4.00	50.00	0.50	91957	
	14.00	4.00	50.00	1.00	91958	
4.50	14.00	5.00	51.00	0.20	91959	
	14.00	5.00	51.00	0.50	91960	
	14.00	5.00	51.00	1.00	91961	
5.00	16.00	5.00	64.00	0.20	91962	
	16.00	5.00	64.00	0.50	91963	
	16.00	5.00	64.00	1.00	91964	
6.00	12.00	6.00	50.00	0.20	91359	
	12.00	6.00	50.00	0.50	91360	
	12.00	6.00	50.00	1.00	91361	
	12.00	6.00	50.00	1.50	91362	
	20.00	6.00	64.00	0.20	91965	
	20.00	6.00	64.00	0.50	91905	
	20.00	6.00	64.00	1.00	91906	
8.00	12.00	8.00	50.00	0.50	91363	
	12.00	8.00	50.00	1.00	91364	
	12.00	8.00	50.00	1.50	91365	
	12.00	8.00	50.00	2.00	91366	
	22.00	8.00	64.00	0.50	91910	
	22.00	8.00	64.00	1.00	91911	
	22.00	8.00	64.00	1.50	91912	
	22.00	8.00	64.00	2.00	91913	
10.00	15.00	10.00	50.00	0.50	91367	
	15.00	10.00	50.00	1.00	91368	
	15.00	10.00	50.00	1.50	91369	
	15.00	10.00	50.00	2.00	91370	
	25.00	10.00	64.00	0.50	91916	
	25.00	10.00	64.00	1.00	91917	
	25.00	10.00	64.00	1.50	91918	
	25.00	10.00	64.00	2.00	91874	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - STANDARD LENGTH - Radius End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN	EDP FC20
METRIC						
12.00	15.00	12.00	63.00	0.50	91371	
	15.00	12.00	63.00	1.00	91372	
	15.00	12.00	63.00	1.50	91373	
	15.00	12.00	63.00	2.00	91374	
	15.00	12.00	63.00	2.50	92814	
	25.00	12.00	84.00	0.50	91922	
	25.00	12.00	84.00	1.00	91923	
	25.00	12.00	84.00	1.50	91924	
	25.00	12.00	84.00	2.00	91925	
	25.00	12.00	84.00	2.50	91926	
16.00	30.00	16.00	89.00	0.50	91376	
	30.00	16.00	89.00	1.00	91377	
	30.00	16.00	89.00	1.50	91378	
	30.00	16.00	89.00	2.00	91379	
	30.00	16.00	89.00	2.50	91380	
	30.00	16.00	89.00	3.00	91381	
	38.00	16.00	89.00	0.50	91928	
	38.00	16.00	89.00	1.00	91929	
	38.00	16.00	89.00	1.50	91930	
	38.00	16.00	89.00	2.00	91931	
	38.00	16.00	89.00	2.50	91932	
	38.00	16.00	89.00	3.00	91933	
20.00	30.00	20.00	100.00	0.50	91382	
	30.00	20.00	100.00	1.00	91383	
	30.00	20.00	100.00	1.50	91384	
	30.00	20.00	100.00	2.00	91385	
	30.00	20.00	100.00	2.50	91386	
	30.00	20.00	100.00	3.00	91387	
	40.00	20.00	100.00	0.50	91966	
	40.00	20.00	100.00	1.00	91967	
	40.00	20.00	100.00	1.50	91968	
	40.00	20.00	100.00	2.00	91969	
	40.00	20.00	100.00	2.50	91970	
	40.00	20.00	100.00	3.00	91971	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Radius End



UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN
1/8	3/4	1/8	3	.0050	31856
	3/4	1/8	3	.0100	31857
	3/4	1/8	3	.0150	31858
	3/4	1/8	3	.0200	31859
	3/4	1/8	3	.0300	31513
	1	1/8	3	.0050	31852
	1	1/8	3	.0100	31853
	1	1/8	3	.0150	31854
	1	1/8	3	.0200	31855
	1	1/8	3	.0300	31515
3/16	1	3/16	4	.0050	31866
	1	3/16	4	.0100	31867
	1	3/16	4	.0150	31868
	1	3/16	4	.0200	31869
	1	3/16	4	.0300	31522
	1	3/16	4	.0600	31523
	1 1/4	3/16	3	.0050	31860
	1 1/4	3/16	3	.0100	31861
	1 1/4	3/16	3	.0150	31862
	1 1/4	3/16	3	.0200	31863
	1 1/4	3/16	3	.0300	31864
	1 1/4	3/16	3	.0600	31865
1/4	1 1/8	1/4	3	.0150	31872
	1 1/8	1/4	3	.0200	31873
	1 1/8	1/4	3	.0300	31532
	1 1/8	1/4	3	.0600	31533
	1 1/8	1/4	3	.0900	31534
	1 1/2	1/4	4	.0150	31870
	1 1/2	1/4	4	.0200	31871
	1 1/2	1/4	4	.0300	31540
	1 1/2	1/4	4	.0600	31541
	1 1/2	1/4	4	.0900	31542
5/16	1 1/8	5/16	3	.0150	31874
	1 1/8	5/16	3	.0200	31875
	1 1/8	5/16	3	.0300	31548
	1 1/8	5/16	3	.0600	31549
	1 1/8	5/16	3	.0900	31550
	1 1/8	5/16	3	.1200	31551
	1 5/8	5/16	4	.0150	31876
	1 5/8	5/16	4	.0200	31877
	1 5/8	5/16	4	.0300	31552

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Radius End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN
5/16	1 5/8	5/16	4	.0600	31553
	1 5/8	5/16	4	.0900	31554
	1 5/8	5/16	4	.1200	31555
3/8	1 1/8	3/8	3	.0150	31880
	1 1/8	3/8	3	.0200	31881
	1 1/8	3/8	3	.0300	31560
	1 1/8	3/8	3	.0600	31561
	1 1/8	3/8	3	.0900	31562
	1 1/8	3/8	3	.1200	31563
	1 1/2	3/8	4	.0150	31878
	1 1/2	3/8	4	.0200	31879
	1 1/2	3/8	4	.0300	31564
	1 1/2	3/8	4	.0600	31565
	1 1/2	3/8	4	.0900	31566
	1 1/2	3/8	4	.1200	31567
	2	3/8	4	.0150	31882
	2	3/8	4	.0200	31883
	2	3/8	4	.0300	31568
	2	3/8	4	.0600	31569
	2	3/8	4	.0900	31570
	2	3/8	4	.1200	31571
7/16	2	7/16	4	.0150	31884
	2	7/16	4	.0200	31885
	2	7/16	4	.0300	31576
	2	7/16	4	.0600	31577
	2	7/16	4	.0900	31578
	2	7/16	4	.1200	31579
	3	7/16	6	.0150	31886
	3	7/16	6	.0200	31887
	3	7/16	6	.0300	31580
	3	7/16	6	.0600	31581
	3	7/16	6	.0900	31582
	3	7/16	6	.1200	31583
1/2	1 1/2	1/2	4	.0150	31888
	1 1/2	1/2	4	.0200	31889
	1 1/2	1/2	4	.0300	31588
	1 1/2	1/2	4	.0600	31589
	1 1/2	1/2	4	.0900	31590
	1 1/2	1/2	4	.1200	31591
	2	1/2	4	.0150	31890
	2	1/2	4	.0200	31891

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Radius End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN
1/2	2	1/2	4	.0300	31592
	2	1/2	4	.0600	31593
	2	1/2	4	.0900	31594
	2	1/2	4	.1200	31595
	3	1/2	6	.0150	31892
	3	1/2	6	.0200	31893
	3	1/2	6	.0300	31596
	3	1/2	6	.0600	31597
	3	1/2	6	.0900	31598
	3	1/2	6	.1200	31599
5/8	2 1/2	5/8	5	.0150	31894
	2 1/2	5/8	5	.0200	31895
	2 1/2	5/8	5	.0300	31604
	2 1/2	5/8	5	.0600	31605
	2 1/2	5/8	5	.0900	31606
	2 1/2	5/8	5	.1200	31607
	3	5/8	6	.0150	31896
	3	5/8	6	.0200	31897
	3	5/8	6	.0300	31608
	3	5/8	6	.0600	31609
	3	5/8	6	.0900	31610
	3	5/8	6	.1200	31611
3/4	2 1/2	3/4	5	.0150	31898
	2 1/2	3/4	5	.0200	31899
	2 1/2	3/4	5	.0300	31616
	2 1/2	3/4	5	.0600	31617
	2 1/2	3/4	5	.0900	31618
	2 1/2	3/4	5	.1200	31619
	2 1/2	3/4	5	.2500	31900
	3	3/4	6	.0150	31901
	3	3/4	6	.0200	31902
	3	3/4	6	.0300	31620
	3	3/4	6	.0600	31621
	3	3/4	6	.0900	31622
	3	3/4	6	.1200	31623
	3	3/4	6	.2500	31903
1	2	1	4 1/2	.0600	31647
	2	1	4 1/2	.0900	31648
	2	1	4 1/2	.1200	31649
	2 1/2	1	5	.0600	31643
	2 1/2	1	5	.1200	31645

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Radius End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	RADIUS	EDP TiAlN
1	3	1	6	.0150	31904
	3	1	6	.0200	31905
	3	1	6	.0300	31501
	3	1	6	.0600	31502
	3	1	6	.0900	31503
	3	1	6	.1200	31504
	3	1	6	.2500	31906
METRIC					
3.00	25.00	3.00	76.00	0.20	91285
	25.00	3.00	76.00	0.50	91286
	25.00	3.00	76.00	1.00	91287
6.00	29.00	6.00	76.00	0.20	91288
	29.00	6.00	76.00	0.50	91289
	29.00	6.00	76.00	1.00	91290
	29.00	6.00	76.00	1.50	91291
8.00	29.00	8.00	76.00	0.50	91292
	29.00	8.00	76.00	1.00	91293
	29.00	8.00	76.00	1.50	91294
	29.00	8.00	76.00	2.00	91295
10.00	45.00	10.00	100.00	0.50	91296
	45.00	10.00	100.00	1.00	91297
	45.00	10.00	100.00	1.50	91298
	45.00	10.00	100.00	2.00	91299
12.00	50.00	12.00	100.00	0.50	91300
	50.00	12.00	100.00	1.00	91301
	50.00	12.00	100.00	1.50	91302
	50.00	12.00	100.00	2.00	91303
	50.00	12.00	100.00	2.50	91304
16.00	63.00	16.00	125.00	1.00	91306
	63.00	16.00	125.00	1.50	91307
	63.00	16.00	125.00	2.00	91308
	63.00	16.00	125.00	2.50	91309
	63.00	16.00	125.00	3.00	91310
20.00	63.00	20.00	125.00	0.50	91311
	63.00	20.00	125.00	1.00	91312
	63.00	20.00	125.00	1.50	91313
	63.00	20.00	125.00	2.00	91314
	63.00	20.00	125.00	2.50	91315
	63.00	20.00	125.00	3.00	91316

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - STUB LENGTH - Ball End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/32	1/16	1/8	1 1/2	32112	32864
3/64	1/8	1/8	1 1/2	32156	32865
1/16	1/8	1/8	1 1/2	32157	32866
5/64	1/8	1/8	1 1/2		32867
3/32	3/16	1/8	1 1/2	32159	32868
7/64	3/16	1/8	1 1/2		32869
1/8	1/4	1/8	1 1/2	32161	32870
5/32	3/8	3/16	2	32162	32871
3/16	3/8	3/16	2		32872
1/4	1/2	1/4	2	32164	32873
5/16	1/2	5/16	2 1/2		32874
3/8	5/8	3/8	2 1/2		32875
7/16	3/4	7/16	2 3/4		32876
1/2	3/4	1/2	3		32877
5/8	1	9/16	3 1/2	32169	32878
3/4	1	3/4	4	32170	32879
1	1	1	4	32171	32880
METRIC					
3.00	6.00	3.00	38.00	92110	92287
6.00	12.00	6.00	50.00		92288
8.00	12.00	8.00	50.00		92289
10.00	15.00	10.00	50.00		92290
12.00	15.00	12.00	63.00		92291

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - STANDARD LENGTH - Ball End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/32	3/32	1/8	1 1/2	32030	30717
3/64	3/16	1/8	1 1/2	32031	30718
1/16	0/4	1/8	1 1/2	32032	30719
5/64	1/4	1/8	1 1/2	32033	30720
3/32	3/8	1/8	1 1/2	32034	30721
7/64	1/2	1/8	1 1/2		30722
1/8	1/2	1/8	1 1/2	32036	30723
9/64	9/16	3/16	2	32037	30724
5/32	9/16	3/16	2	32038	30725
11/64	9/16	3/16	2		30726
3/16	5/8	3/16	2	32039	30727
13/64	5/8	1/4	2 1/2	32652	30728
7/32	5/8	1/4	2 1/2	32040	30729
15/64	3/4	1/4	2 1/2		30730
1/4	3/4	1/4	2 1/2	32041	30731
17/64	7/8	5/16	2 1/2		30732
9/32	7/8	5/16	2 1/2	32042	30733
19/64	7/8	5/16	2 1/2		30734
5/16	7/8	5/16	2 1/2	32043	30735
21/64	7/8	3/8	2 1/2	32932	30736
11/32	7/8	3/8	2 1/2	32044	30737
23/64	1	3/8	2 1/2		30738
3/8	1	3/8	2 1/2	32045	30739
25/64	1	7/16	2 3/4		30740
13/32	1	7/16	2 3/4		30741
27/64	1	7/16	2 3/4		30742
7/16	1	7/16	2 3/4	32046	30743
29/64	1	1/2	3		30744
15/32	1	1/2	3		30745
31/64	1	1/2	3		30746
1/2	1	1/2	3	32047	30747
9/16	1 1/4	9/16	3 1/2	32048	30748
5/8	1 1/2	9/16	3 1/2	32049	30749
11/16	1 1/2	3/4	4		30750
3/4	1 1/2	3/4	4	32051	30751
7/8	1 1/2	7/8	4	32052	30752
1	1 1/2	1	4	32053	30753
1 1/8	2	1	4 1/2	32054	
1 1/4	2	1 1/4	4 1/2	32055	
1 3/8	2	1 1/4	4 1/2	32056	
1 1/2	2	1 1/4	4 1/2	32057	

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - STANDARD LENGTH - Ball End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
METRIC					
1.00	4.00	3.00	38.00	92019	92265
1.50	6.00	3.00	38.00		92266
2.00	4.00	3.00	38.00		92329
2.00	8.00	3.00	38.00	92021	92267
2.50	12.00	3.00	38.00	92023	92268
3.00	12.00	3.00	38.00	92024	92269
3.50	12.00	4.00	50.00		92270
4.00	14.00	4.00	50.00	92025	92271
4.50	14.00	5.00	51.00		92272
5.00	16.00	5.00	64.00	92026	92273
6.00	20.00	6.00	64.00	92027	92274
7.00	22.00	7.00	64.00		92275
8.00	22.00	8.00	64.00		92276
9.00	22.00	9.00	64.00		92277
10.00	25.00	10.00	64.00	92031	92278
11.00	25.00	11.00	84.00		92279
12.00	25.00	12.00	84.00		92280
14.00	32.00	14.00	84.00		92281
16.00	38.00	16.00	89.00	92034	92282
18.00	40.00	18.00	100.00		92283
20.00	40.00	20.00	100.00		92284
22.00	40.00	22.00	100.00		92285
25.00	40.00	25.00	100.00	92082	92286

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Ball End



4 | CENTER CUTTING | XL | UNCOATED | TiAlN

GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/8	3/4	1/8	3	30235	30069
	1	1/8	3	32272	30070
3/16	1	3/16	4	30240	30072
	1 1/4	3/16	3	32273	30071
1/4	1	1/4	4	30205	30074
	1 1/8	1/4	3	32556	30073
	1 1/2	1/4	4	32274	30075
	1 1/2	1/4	6	32557	30076
5/16	1	5/16	4	30206	30078
	1 1/8	5/16	3	32575	30077
	1 1/2	5/16	6		30080
	1 5/8	5/16	4	32275	30079
3/8	1	3/8	4	30207	30082
	1 1/8	3/8	3		30081
	1 1/2	3/8	4	30221	30083
	1 1/2	3/8	6	32559	30085
	2	3/8	4	32276	30084
	3	3/8	6	32277	30086
7/16	1	7/16	4		30087
	1 1/2	7/16	6		30089
	2	7/16	4		30088
	3	7/16	6		30090
1/2	1	1/2	4	30209	30092
	1 1/4	1/2	3	30241	30091
	1 1/2	1/2	4	32583	30093
	1 1/2	1/2	6	32561	30095
	2	1/2	4	32280	30094
	3	1/2	6	32281	30096

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

3200 4 Flute - XL LENGTH - Ball End



CENTER CUTTING | XL | UNCOATED | TiAlN

U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
9/16	3	9/16	6		32251
5/8	1 1/2	9/16	6		30098
	2 1/2	9/16	5	32282	30097
	3	9/16	6		30099
3/4	1 1/2	3/4	6	30230	30101
	2 1/2	3/4	5	32284	30100
	3	3/4	6	32285	30102
	4	3/4	7	32286	30103
1	2	1	4 1/2	32287	30104
	2 1/2	1	5		30105
	3	1	6	32289	30106
	4	1	7	32290	30107
1 1/4	3	1 1/4	6	32291	
METRIC					
3.00	25.00	3.00	76.00	92130	92292
6.00	29.00	6.00	76.00		
8.00	29.00	8.00	76.00		92294
10.00	45.00	10.00	100.00		92295
12.00	50.00	12.00	100.00	92138	92296
16.00	63.00	16.00	125.00		92184
20.00	63.00	20.00	125.00		92185

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3200 4 Flute - STUB LENGTH - Square End
Double End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/32	3/32	1/8	1 1/2	32439	36001
3/64	1/8	1/8	1 1/2	32440	36002
1/16	1/8	1/8	1 1/2	32441	36003
5/64	1/8	1/8	1 1/2	32519	36004
3/32	3/16	1/8	1 1/2	32442	36005
7/64	3/16	1/8	1 1/2	32530	36006
1/8	1/4	1/8	1 1/2	32443	36007
9/64	5/16	3/16	2	32537	36008
5/32	5/16	3/16	2	32444	36009
11/64	5/16	3/16	2	32538	36010
3/16	3/8	3/16	2	32445	36011
13/64	1/2	1/4	2 1/2	32539	36012
7/32	1/2	1/4	2 1/2	32446	36013
15/64	1/2	1/4	2 1/2	32545	36014
1/4	1/2	1/4	2 1/2	32447	36015
9/32	1/2	5/16	2 1/2	32594	36016
5/16	1/2	5/16	2 1/2	32448	36017
3/8	9/16	3/8	2 1/2	32449	36018
7/16	5/8	7/16	2 3/4	32450	36019
1/2	5/8	1/2	3	32451	36020

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

JO ENGRAVER



All-in-One Engraving Tool

DIA	LOC	SHANK	OAL	RADIUS	EDP	
					UNCOATED	TiAlN
1/8	1/8	1/8	2	.021	12113	12109

TOLERANCES	SHANK
	h6

3200 4 Flute - STANDARD LENGTH - Square End Double End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	EDP	
				UNCOATED	TiAlN
1/16	3/16	1/8	2	32387	12387
3/32	3/8	1/8	2	32388	12388
1/8	3/8	1/8	2	32389	12389
5/32	7/16	3/16	3		12390
3/16	1/2	3/16	3	32391	12391
7/32	9/16	1/4	3		12392
1/4	5/8	1/4	3	32393	12393
5/16	3/4	5/16	3	32395	12395
3/8	3/4	3/8	3 1/2	32397	12397
7/16	7/8	7/16	4		12398
1/2	1	1/2	4	32399	12399

3200 4 Flute - STANDARD LENGTH - Square End Double End - 3/8" Shank



DIA	LOC	SHANK	OAL	WELDON FLAT	EDP	
					UNCOATED	TiAlN
1/8	3/8	3/8	3 1/2	✓	32491	37001
5/32	7/16	3/8	3 1/2	✓	32492	37002
3/16	1/2	3/8	3 1/2	✓	32493	37003
7/32	9/16	3/8	3 1/2	✓	32494	37004
1/4	5/8	3/8	3 1/2	✓	32495	37005
9/32	11/16	3/8	3 1/2	✓	32496	37006
5/16	3/4	3/8	3 1/2	✓	32497	37007

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

END MILLS

3730 - STANDARD LENGTH - Chamfer Mills

60° 2 SD UNCOATED TiAlN



DIA	LOC	SHANK	OAL	NON CUTTING TIP	FLUTES	CHAMFER ANGLE	EDP	
							UNCOATED	TiAlN
1/8	.1080	1/8	1 1/2	.0200	2	60°	36156	36157
3/16	.1620	3/16	2	.0200	2	60°	36165	36166
1/4	.2160	1/4	2 1/2	.0250	2	60°	36141	36083
3/8	.3240	3/8	2 1/2	.0300	2	60°	36143	36085
1/2	.4330	1/2	3	.0350	2	60°	36145	36087
3/4	.6490	3/4	4	.0450	2	60°	36169	36170

90° 2 SD UNCOATED TiAlN



DIA	LOC	SHANK	OAL	NON CUTTING TIP	FLUTES	CHAMFER ANGLE	EDP	
							UNCOATED	TiAlN
1/8	.0625	1/8	1 1/2	.0200	2	90°	36160	36161
3/16	.0938	3/16	2	.0200	2	90°	36173	36174
1/4	.1250	1/4	2 1/2	.0250	2	90°	36147	36089
3/8	.1870	3/8	2 1/2	.0300	2	90°	36149	36091
1/2	.2500	1/2	3	.0350	2	90°	36151	36093
3/4	.3750	3/4	4	.0450	2	90°	36177	36178

60° 4 SD UNCOATED TiAlN



DIA	LOC	SHANK	OAL	NON CUTTING TIP	FLUTES	CHAMFER ANGLE	EDP	
							UNCOATED	TiAlN
1/8	.1080	1/8	1 1/2	.0200	4	60°	36154	36155
3/16	.1620	3/16	2	.0200	4	60°	36163	36164
1/4	.2160	1/4	2 1/2	.0250	4	60°	36140	36082
3/8	.3240	3/8	2 1/2	.0300	4	60°	36142	36084
1/2	.4330	1/2	3	.0350	4	60°	36144	36086
3/4	.6490	3/4	4	.0450	4	60°	36167	36168

90° 4 SD UNCOATED TiAlN



DIA	LOC	SHANK	OAL	NON CUTTING TIP	FLUTES	CHAMFER ANGLE	EDP	
							UNCOATED	TiAlN
1/8	.0625	1/8	1 1/2	.0200	4	90°	36158	36159
3/16	.0938	3/16	2	.0200	4	90°	36171	36172
1/4	.1250	1/4	2 1/2	.0250	4	90°	36146	36088
3/8	.1870	3/8	2 1/2	.0300	4	90°	36148	36090
1/2	.2500	1/2	3	.0350	4	90°	36150	36092
3/4	.3750	3/4	4	.0450	4	90°	36175	36176
METRIC								
3.00	1.50	3.00	38.00	0.40	4	90°	92522	92850
4.00	2.00	4.00	50.00	0.50	4	90°	92523	92851
6.00	3.00	6.00	64.00	0.50	4	90°	92524	92852
8.00	4.00	8.00	64.00	0.65	4	90°	92525	92853
10.00	5.00	10.00	64.00	0.75	4	90°	92526	92854
12.00	6.00	12.00	76.00	0.90	4	90°	92527	92855

TOLERANCES	SHANK
	h6

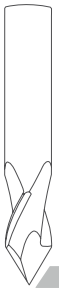
1215 2 Flute



90 | 2 | FC20 | U UNIVERSAL

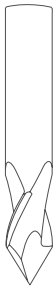
DIA	LOC	SHANK	OAL	DEGREE	EDP FC20
1/32	1/8	1/8	1-1/2	90	12600
1/16	3/16	1/8	1-1/2	90	12601
3/32	3/8	1/8	1-1/2	90	12602
1/8	1/2	1/8	1-1/2	90	12603
3/16	5/8	3/16	2	90	12604
1/4	3/4	1/4	2-1/2	90	12605
5/16	13/16	5/16	2-1/2	90	12606
3/8	1	3/8	2-1/2	90	12607
7/16	1	7/16	2-3/4	90	12608
1/2	1	1/2	3	90	12609
5/8	1-1/4	5/8	3-1/2	90	12610
3/4	1-1/2	3/4	4	90	12611

DRILL MILL USES



CHAMFERING

Use general milling speeds and feeds. Use tool diameter at top of part to determine chip load. (i.e.; if using 1/4" diameter, 90° point and depth is 1/8", calculate the chip load based on 1/8" diameter.) For finer finishes and improved ascetics, increase SFM and reduce feed rate.



SIDE MILLING

Use general milling speeds and feeds. All the benefits of our 3215 series end mills with additional reduction in machine carousel requirements. Designed for all tool room applications limiting tool changes and increasing productivity.

GENERAL PURPOSE

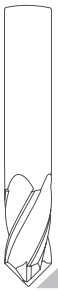
1200 4 Flute



90 | 4 | FC20 | U UNIVERSAL

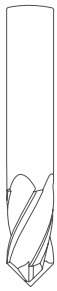
DIA	LOC	SHANK	OAL	DEGREE	EDP FC20
1/32	1/8	1/8	1-1/2	90	12700
1/16	3/16	1/8	1-1/2	90	12701
3/32	3/8	1/8	1-1/2	90	12702
1/8	1/2	1/8	1-1/2	90	12703
3/16	5/8	3/16	2	90	12704
1/4	3/4	1/4	2-1/2	90	12705
5/16	13/16	5/16	2-1/2	90	12706
3/8	1	3/8	2-1/2	90	12707
7/16	1	7/16	2-3/4	90	12708
1/2	1	1/2	3	90	12709
5/8	1-1/4	5/8	3-1/2	90	12710
3/4	1-1/2	3/4	4	90	12711

DRILL MILL USES



CHAMFERING

Use general milling speeds and feeds. Use tool diameter at top of part to determine chip load. (i.e.; if using 1/4" diameter, 90° point and depth is 1/8", calculate the chip load based on 1/8" diameter.) For finer finishes and improved ascetics, increase SFM and reduce feed rate.



SIDE MILLING

Use general milling speeds and feeds. All the benefits of our 3200 series end mills with additional reduction in machine carousel requirements. Designed for all tool room applications limiting tool changes and increasing productivity.

RECOMMENDED USES			90° INCLUDED ANGLE
	Chamfering	Yes	
	Side Milling	Yes	
	Drilling	Non-Ferrous Only	
	Spotting	Limited	

3500SM - SUB-MINIATURE - Square End

The Micro Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



HIGH PERFORMANCE

P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

1.5xD

DIA		LOC		OAL	SHANK	EDP FC20
	.0100	STB (1.5 x D)	.0150	1 1/2	1/8	35961
	.0150	STB (1.5 x D)	.0225	1 1/2	1/8	35962
1/64	.0156	STB (1.5 x D)	.0234	1 1/2	1/8	35900
	.0200	STB (1.5 x D)	.0300	1 1/2	1/8	35963
	.0250	STB (1.5 x D)	.0375	1 1/2	1/8	35932
1/32	.0312	STB (1.5 x D)	.0468	1 1/2	1/8	35904
	.0350	STB (1.5 x D)	.0525	1 1/2	1/8	35933
	.0400	STB (1.5 x D)	.0600	1 1/2	1/8	35934
3/64	.0469	STB (1.5 x D)	.0703	1 1/2	1/8	35908
	.0500	STB (1.5 x D)	.0750	1 1/2	1/8	35935
	.0550	STB (1.5 x D)	.0825	1 1/2	1/8	35936
	.0600	STB (1.5 x D)	.0900	1 1/2	1/8	35937
1/16	.0625	STB (1.5 x D)	.0938	1 1/2	1/8	35911
	.0650	STB (1.5 x D)	.0975	1 1/2	1/8	35938
	.0700	STB (1.5 x D)	.1050	1 1/2	1/8	35939
	.0750	STB (1.5 x D)	.1125	1 1/2	1/8	35940
5/64	.0781	STB (1.5 x D)	.1172	1 1/2	1/8	35915
	.0800	STB (1.5 x D)	.1200	1 1/2	1/8	35941
	.0850	STB (1.5 x D)	.1275	1 1/2	1/8	35942
3/32	.0938	STB (1.5 x D)	.1406	1 1/2	1/8	35919
	.0950	STB (1.5 x D)	.1425	1 1/2	1/8	35943
	.1000	STB (1.5 x D)	.1500	1 1/2	1/8	35944
7/64	.1094	STB (1.5 x D)	.1641	1 1/2	1/8	35923
1/8	.1250	STB (1.5 x D)	.1875	1 1/2	1/8	35927

3xD

DIA		LOC		OAL	SHANK	EDP FC20
	.0100	SD (3 x D)	.0300	1 1/2	1/8	35945
	.0150	SD (3 x D)	.0450	1 1/2	1/8	35946
1/64	.0156	SD (3 x D)	.0469	1 1/2	1/8	35901
	.0200	SD (3 x D)	.0600	1 1/2	1/8	35947
	.0250	SD (3 x D)	.0750	1 1/2	1/8	35948
1/32	.0312	SD (3 x D)	.0936	1 1/2	1/8	35905
	.0350	SD (3 x D)	.1050	1 1/2	1/8	35949
	.0400	SD (3 x D)	.1200	1 1/2	1/8	35950
3/64	.0469	SD (3 x D)	.1406	1 1/2	1/8	35909
	.0500	SD (3 x D)	.1500	1 1/2	1/8	35951
	.0550	SD (3 x D)	.1650	1 1/2	1/8	35952
	.0600	SD (3 x D)	.1800	1 1/2	1/8	35953
1/16	.0625	SD (3 x D)	.1875	1 1/2	1/8	35912
	.0650	SD (3 x D)	.1950	1 1/2	1/8	35954
	.0700	SD (3 x D)	.2100	1 1/2	1/8	35955
	.0750	SD (3 x D)	.2250	1 1/2	1/8	35956
5/64	.0781	SD (3 x D)	.2344	1 1/2	1/8	35916
	.0800	SD (3 x D)	.2400	1 1/2	1/8	35957
	.0850	SD (3 x D)	.2550	1 1/2	1/8	35958
3/32	.0938	SD (3 x D)	.2813	1 1/2	1/8	35920
	.0950	SD (3 x D)	.2850	1 1/2	1/8	35959
	.1000	SD (3 x D)	.3000	1 1/2	1/8	35960
7/64	.1094	SD (3 x D)	.3281	1 1/2	1/8	35924
1/8	.1250	SD (3 x D)	.3750	1 1/2	1/8	35928

MICRO SERIES

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0003"-.0003"	h6	
	+0.007mm -0.007mm		

MICRO FURY

3500SM - SUB-MINIATURE - Radius End

The Micro Fury **excels** in hardened steels, super alloys, stainless steels, and steels.



P STEEL
M STAINLESS
S SUPERALLOY
H HARDENED

HIGH PERFORMANCE

1.5xD

DIA		LOC		OAL	SHANK	0.003	0.005	0.010	0.015	0.020	0.030	0.040
	.0100	STB (1.5 x D)	.0150	1 1/2	1/8	35964						
	.0150	STB (1.5 x D)	.0225	1 1/2	1/8	35966						
1/64	.0156	STB (1.5 x D)	.0234	1 1/2	1/8	35968						
	.0200	STB (1.5 x D)	.0300	1 1/2	1/8	35970	35971					
	.0250	STB (1.5 x D)	.0375	1 1/2	1/8	35974	35975					
1/32	.0312	STB (1.5 x D)	.0468	1 1/2	1/8	35978	35979	35980				
	.0350	STB (1.5 x D)	.0525	1 1/2	1/8		35984	35985				
	.0400	STB (1.5 x D)	.0600	1 1/2	1/8		35988	35989				
3/64	.0469	STB (1.5 x D)	.0703	1 1/2	1/8		35992	35993	35994			
	.0500	STB (1.5 x D)	.0750	1 1/2	1/8		35898	35897	35896			
	.0550	STB (1.5 x D)	.0825	1 1/2	1/8		35892	35891	35890			
	.0600	STB (1.5 x D)	.0900	1 1/2	1/8		35886	35885	35884			
1/16	.0625	STB (1.5 x D)	.0938	1 1/2	1/8		35880	35879	35878	35877		
	.0650	STB (1.5 x D)	.0975	1 1/2	1/8		35872	35871				
	.0700	STB (1.5 x D)	.1050	1 1/2	1/8		35867	35866		35868		
	.0750	STB (1.5 x D)	.1125	1 1/2	1/8		35860	35859				
5/64	.0781	STB (1.5 x D)	.1172	1 1/2	1/8		35856	35855	35854	35853		
	.0800	STB (1.5 x D)	.1200	1 1/2	1/8		35848	35847				
	.0850	STB (1.5 x D)	.1275	1 1/2	1/8		35844	35843				
3/32	.0938	STB (1.5 x D)	.1406	1 1/2	1/8		35839	35838	35837	35836		
	.0950	STB (1.5 x D)	.1425	1 1/2	1/8		35831	35830				
	.1000	STB (1.5 x D)	.1500	1 1/2	1/8		35827	35826	35825	35824	35823	
7/64	.1094	STB (1.5 x D)	.1641	1 1/2	1/8		35817	35816	35815	35814	35813	
1/8	.1250	STB (1.5 x D)	.1875	1 1/2	1/8		35807	35806	35805	35804	35803	35802

3xD

DIA		LOC		OAL	SHANK	0.003	0.005	0.010	0.015	0.020	0.030	0.040
	.0100	SD (3 x D)	.0300	1 1/2	1/8	35965						
	.0150	SD (3 x D)	.0450	1 1/2	1/8	35967						
1/64	.0156	SD (3 x D)	.0469	1 1/2	1/8	35969						
	.0200	SD (3 x D)	.0600	1 1/2	1/8	35972	35973					
	.0250	SD (3 x D)	.0750	1 1/2	1/8	35976	35977					
1/32	.0312	SD (3 x D)	.0936	1 1/2	1/8	35981	35982	35983				
	.0350	SD (3 x D)	.1050	1 1/2	1/8		35986	35987				
	.0400	SD (3 x D)	.1200	1 1/2	1/8		35990	35991				
3/64	.0469	SD (3 x D)	.1406	1 1/2	1/8		35995	35996	35899			
	.0500	SD (3 x D)	.1500	1 1/2	1/8		35895	35894	35893			
	.0550	SD (3 x D)	.1650	1 1/2	1/8		35889	35888	35887			
	.0600	SD (3 x D)	.1800	1 1/2	1/8		35883	35882	35881			
1/16	.0625	SD (3 x D)	.1875	1 1/2	1/8		35876	35875	35874	35873		
	.0650	SD (3 x D)	.1950	1 1/2	1/8		35870	35869		35868		
	.0700	SD (3 x D)	.2100	1 1/2	1/8		35864	35863	35862	35861		
	.0750	SD (3 x D)	.2250	1 1/2	1/8		35858	35857				
5/64	.0781	SD (3 x D)	.2344	1 1/2	1/8		35852	35851	35850	35849		
	.0800	SD (3 x D)	.2400	1 1/2	1/8		35846	35845				
	.0850	SD (3 x D)	.2550	1 1/2	1/8		35842	35841	35840			
3/32	.0938	SD (3 x D)	.2813	1 1/2	1/8		35835	35834	35833	35832		
	.0950	SD (3 x D)	.2850	1 1/2	1/8		35829	35828				
	.1000	SD (3 x D)	.3000	1 1/2	1/8		35822	35821	35820	35819	35818	
7/64	.1094	SD (3 x D)	.3281	1 1/2	1/8		35812	35811	35810	35809	35808	
1/8	.1250	SD (3 x D)	.3750	1 1/2	1/8		35801	35800	35799	35798	35797	35796

TOLERANCES	DIAMETER	SHANK	VARIABLE HELIX
	+.0003"-.0003"	h6	
	+0.007mm -0.007mm		

MICRO SERIES

END MILLS

3215SMS - SUB-MINIATURE - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	1.5xD EDP UNCOATED
.0050	.0075	1/8	1 1/2	32540
.0060	.0090	1/8	1 1/2	32541
.0070	.0105	1/8	1 1/2	32542
.0080	.0120	1/8	1 1/2	32543
.0090	.0135	1/8	1 1/2	32544
.0100	.0150	1/8	1 1/2	32352
.0110	.0165	1/8	1 1/2	32353
.0120	.0180	1/8	1 1/2	32354
.0130	.0195	1/8	1 1/2	32355
.0140	.0210	1/8	1 1/2	32356
.0150	.0225	1/8	1 1/2	32357
.0160	.0240	1/8	1 1/2	32358
.0170	.0255	1/8	1 1/2	32359
.0180	.0270	1/8	1 1/2	32360
.0190	.0285	1/8	1 1/2	32361
.0200	.0300	1/8	1 1/2	32362
.0210	.0315	1/8	1 1/2	32363
.0220	.0330	1/8	1 1/2	32364
.0230	.0345	1/8	1 1/2	32365
.0240	.0360	1/8	1 1/2	32366
.0250	.0375	1/8	1 1/2	32367
.0260	.0390	1/8	1 1/2	32368
.0270	.0405	1/8	1 1/2	32369
.0280	.0420	1/8	1 1/2	32370
.0290	.0435	1/8	1 1/2	32371
.0300	.0450	1/8	1 1/2	32372

MICRO SERIES

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0005"-.0005"	h6	
	+0.02mm -0.02mm		

3215SM - SUB-MINIATURE - Square End



DIA	LOC	SHANK	OAL	3xD EDP UNCOATED
.0100	.0300	1/8	1 1/2	30900
.0110	.0330	1/8	1 1/2	30901
.0120	.0360	1/8	1 1/2	30902
.0130	.0390	1/8	1 1/2	30903
.0140	.0420	1/8	1 1/2	30904
.0150	.0450	1/8	1 1/2	30905
.0160	.0480	1/8	1 1/2	30906
.0170	.0510	1/8	1 1/2	30907
.0180	.0540	1/8	1 1/2	30908
.0190	.0570	1/8	1 1/2	30909
.0200	.0600	1/8	1 1/2	30910
.0210	.0630	1/8	1 1/2	30911
.0220	.0660	1/8	1 1/2	30912
.0230	.0690	1/8	1 1/2	30913
.0240	.0720	1/8	1 1/2	30914
.0250	.0750	1/8	1 1/2	30915
.0260	.0780	1/8	1 1/2	30916
.0270	.0810	1/8	1 1/2	30917
.0280	.0840	1/8	1 1/2	30918
.0290	.0870	1/8	1 1/2	30919
.0300	.0900	1/8	1 1/2	30920
.0310	.0930	1/8	1 1/2	30921
.0350	.1050	1/8	1 1/2	30922
.0400	.1200	1/8	1 1/2	30923
.0470	.1410	1/8	1 1/2	30924
.0500	.1500	1/8	1 1/2	30925
.0550	.1650	1/8	1 1/2	30926
.0600	.1800	1/8	1 1/2	30927

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0005"-.0005"	h6	
	+0.02mm -0.02mm		

MICRO SERIES

END MILLS

3215SMS - SUB-MINIATURE - Ball End



GENERAL PURPOSE

U UNIVERSAL

				1.5xD
DIA	LOC	SHANK	OAL	EDP UNCOATED
.0050	.0075	1/8	1 1/2	32609
.0060	.0090	1/8	1 1/2	32668
.0070	.0105	1/8	1 1/2	32669
.0080	.0120	1/8	1 1/2	32698
.0090	.0135	1/8	1 1/2	32699
.0100	.0150	1/8	1 1/2	32670
.0110	.0165	1/8	1 1/2	32671
.0120	.0180	1/8	1 1/2	32672
.0130	.0195	1/8	1 1/2	32673
.0140	.0210	1/8	1 1/2	32674
.0150	.0225	1/8	1 1/2	32675
.0160	.0240	1/8	1 1/2	32676
.0170	.0255	1/8	1 1/2	32677
.0180	.0270	1/8	1 1/2	32678
.0190	.0285	1/8	1 1/2	32679
.0200	.0300	1/8	1 1/2	32680
.0210	.0315	1/8	1 1/2	32681
.0220	.0330	1/8	1 1/2	32697
.0230	.0345	1/8	1 1/2	32682
.0240	.0360	1/8	1 1/2	32683
.0250	.0375	1/8	1 1/2	32684
.0260	.0390	1/8	1 1/2	32685
.0280	.0420	1/8	1 1/2	32687
.0290	.0435	1/8	1 1/2	32688
.0300	.0450	1/8	1 1/2	32689

MICRO SERIES

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0005"-.0005"	h6	
	+0.02mm -0.02mm		

3215SM - SUB-MINIATURE - Ball End



U UNIVERSAL

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	3xD EDP UNCOATED
.0100	.0300	1/8	1 1/2	30935
.0110	.0330	1/8	1 1/2	30936
.0120	.0360	1/8	1 1/2	30937
.0130	.0390	1/8	1 1/2	30938
.0140	.0420	1/8	1 1/2	30939
.0150	.0450	1/8	1 1/2	30940
.0160	.0480	1/8	1 1/2	30941
.0170	.0510	1/8	1 1/2	30942
.0180	.0540	1/8	1 1/2	30943
.0190	.0570	1/8	1 1/2	30944
.0200	.0600	1/8	1 1/2	30945
.0210	.0630	1/8	1 1/2	30946
.0220	.0660	1/8	1 1/2	30947
.0230	.0690	1/8	1 1/2	30948
.0240	.0720	1/8	1 1/2	30949
.0250	.0750	1/8	1 1/2	30950
.0260	.0780	1/8	1 1/2	30951
.0270	.0810	1/8	1 1/2	30952
.0280	.0840	1/8	1 1/2	30953
.0290	.0870	1/8	1 1/2	30954
.0300	.0900	1/8	1 1/2	30955
.0310	.0930	1/8	1 1/2	30956
.0350	.1050	1/8	1 1/2	30957
.0400	.1200	1/8	1 1/2	30958
.0470	.1410	1/8	1 1/2	30959
.0500	.1500	1/8	1 1/2	30960
.0550	.1650	1/8	1 1/2	30961
.0600	.1800	1/8	1 1/2	30962

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0005"-.0005"	h6	
	+0.02mm -0.02mm		

MICRO SERIES

3200SM - SUB-MINIATURE - Square End



GENERAL PURPOSE

U UNIVERSAL

DIA	LOC	SHANK	OAL	3xD EDP UNCOATED
.0310	.0930	1/8	1 1/2	30928
.0350	.1050	1/8	1 1/2	30929
.0400	.1200	1/8	1 1/2	30930
.0470	.1410	1/8	1 1/2	30931
.0500	.1500	1/8	1 1/2	30932
.0550	.1650	1/8	1 1/2	30933
.0600	.1800	1/8	1 1/2	30934

MICRO SERIES

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0005"-.0005"	h6	
	+0.02mm -0.02mm		

3200SM - SUB-MINIATURE - Ball End



U UNIVERSAL

4 | CENTER CUTTING | UNCOATED

GENERAL PURPOSE

DIA	LOC	SHANK	OAL	3xD EDP UNCOATED
.0310	.0930	1/8	1 1/2	30963
.0350	.1050	1/8	1 1/2	30964
.0400	.1200	1/8	1 1/2	30965
.0470	.1410	1/8	1 1/2	30966
.0500	.1500	1/8	1 1/2	30967
.0550	.1650	1/8	1 1/2	30968
.0600	.1800	1/8	1 1/2	30969

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.002"	h6	
	+0.00mm -0.05mm		

MICRO SERIES



DRILLS

1500 Drill
1505 Dominator
1510 Drill
1535 NC Spotting Drill
1565 AlumaDrill
1566/5566 Poly Drill
2305 Center Drill

DOMINATOR™

1505



144° | 2 | FC7

DIA		FLUTE LENGTH	CLEARED LENGTH	SHANK	OAL	COOLANT THROUGH	EDP FC7
36	.1065	9/16	15/32	.1250	2		15003
3.00	.1181	38.00	30.00	3.00	76.00	✓	15710
1/8	.1250	5/8	1/2	.1250	2		15006
3.30	.1299	38.00	30.00	6.00	76.00		15180
4.00	.1575	38.00	30.00	4.00	76.00	✓	15711
21	.1590	13/16	21/32	.1875	3		15251
4.20	.1654	38.00	30.00	6.00	76.00		15181
16	.1770	7/8	23/32	.1875	3		15252
3/16	.1875	15/16	3/4	.1875	3		15257
	.1875	1 5/16	1 41/64	.1875	3 1/4	✓	15329
5.00	.1969	38.00	30.00	5.00	76.00	✓	15712
	.1969	38.00	30.00	6.00	76.00		15613
7	.2010	1 1/2	1 1/8	.2500	3		15615
13/64	.2031	1 1/2	1 1/8	.2500	3		15653
5	.2055	1	13/16	.2500	3		15259
3	.2130	1 3/32	29/32	.2500	3		15260
7/32	.2188	1 3/32	7/8	.2500	3		15263
2	.2210	1 3/32	7/8	.2500	3		15330
6.00	.2362	38.00	30.00	6.00	76.00		15610
	.2362	50.00	42.00	6.00	101.00	✓	15713
1/4	.2500	1 1/2	1 1/8	.2500	3		15614
	.2500	2 3/8	2	.2500	4	✓	15636
6.50	.2559	32.00	26.19	8.00	76.00		15264
	.2570	1 1/2	1 1/8	.2500	3		15616
F	.2570	1 1/2	1 1/8	.3125	3		15529
	.2570	2 3/8	2	.2500	4	✓	15638
17/64	.2656	1 1/2	1 1/8	.2500	3		15617
6.80	.2677	38.00	30.00	8.00	76.00		15619
I	.2720	1 1/2	1 1/8	.3125	3		15618
	.2720	2 3/8	2	.2500	4	✓	15640
9/32	.2812	1 1/2	1 1/8	.3125	3		15621
	.2812	2	1 23/32	.3125	4	✓	15339
19/64	.2969	1 1/2	1 1/8	.3125	3		15623
5/16	.3125	1 1/2	1 1/8	.3125	3		15620
	.3125	2 3/8	2	.3125	4	✓	15642
8.00	.3150	38.00	30.00	8.00	76.00		15612
	.3150	63.00	54.00	8.00	101.00	✓	15715
P	.3230	2	1 1/2	.3750	4		15651
21/64	.3281	2	1 1/2	.3750	4		15625
11/32	.3438	2	1 1/2	.3750	4		15629

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

DRILLS

1505

DOMINATOR



144° | 2 | FC7

DIA		FLUTE LENGTH	CLEARED LENGTH	SHANK	OAL	COOLANT THROUGH	EDP FC7
23/64	.3594	2	1 1/2	.3750	4		15630
	.3594	2 1/2	2	.3750	4	✓	15349
U	.3680	2	1 1/2	.3750	4		15175
	.3680	2 1/2	2	.3750	4	✓	15378
3/8	.3750	2	1 1/2	.3750	4		15622
	.3750	2 1/2	2	.3750	4	✓	15644
25/64	.3906	2 1/4	1 3/4	.4375	4		15631
	.3906	2 3/4	2 3/8	.4375	4 1/2	✓	15380
10.00	.3937	57.00	45.00	10.00	100.00		15637
10.20	.4015	57.00	45.00	12.00	125.00		15632
13/32	.4062	2 1/4	1 3/4	.4375	4		15633
	.4062	2 3/4	2 3/8	.4375	4 1/2	✓	15382
27/64	.4219	2 1/4	1 3/4	.4375	4		15624
	.4219	2 1/2	2	.4375	4	✓	15646
7/16	.4375	2 1/4	1 3/4	.4375	4		15626
	.4375	2 1/2	2	.4375	4	✓	15648
29/64	.4531	2 1/2	2	.5000	4 1/2		15635
15/32	.4688	2 1/2	2	.5000	4 1/2		15679
	.4688	3 1/4	2 25/32	.5000	5	✓	15388
12.00	.4724	63.00	50.00	12.00	125.00		15680
31/64	.4844	2 1/2	2	.5000	4 1/2		15681
	.4844	3 3/8	2 7/8	.5000	5	✓	15389
1/2	.5000	2 1/2	2	.5000	4 1/2		15628
	.5000	3 1/2	3	.5000	6	✓	15650
17/32	.5312	4	3 1/2	.6250	6		15176
	.5312	4	3 1/2	.6250	6	✓	15393
9/16	.5625	4	3 1/2	.5625	6		15693
	.5625	4	3 1/2	.5625	6	✓	15652
37/64	.5781	4	3 1/2	.6250	6	✓	15398
15.00	.5906	101.00	88.00	16.00	150.00	✓	15718
5/8	.6250	4	3 1/2	.6250	6		15685
	.6250	4	3 1/2	.6250	6	✓	15654
16.00	.6299	101.00	88.00	16.00	150.00	✓	15719
21/32	.6562	4	3 1/2	.7500	6		15177
11/16	.6875	4	3 1/2	.7500	6		15686
	.6875	4	3 1/2	.7500	6	✓	15649
3/4	.7500	4	3 1/2	.7500	6		15687
	.7500	4	3 1/2	.7500	6	✓	15656
49/64	.7656	4	3 1/2	.8750	6		15178
7/8	.8750	4	3 1/2	.8750	6		15179

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	h6	
	+0.000mm-0.013mm		

HIGH PERFORMANCE

AlumaDrill™

1565



130° | 3 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
1/16	.0625	3/4	.0625	1 1/2	15424
51	.0670	3/4	.0670	1 1/2	19000
49	.0730	7/8	.0730	1 3/4	19001
5/64	.0781	7/8	.0781	1 3/4	15425
2.00	.0787	25.00	3.00	50.00	19002
45	.0820	7/8	.0820	1 3/4	19003
43	.0890	1	.0890	2	15445
2.30	.0906	25.00	3.00	50.00	19004
3/32	.0938	1	.0938	2	15426
40	.0980	1 1/4	.0980	2 1/4	15600
2.50	.0984	16.00	3.00	50.00	19059
2.60	.1024	32.00	3.00	57.00	19005
36	.1065	1 1/4	.1065	2 1/4	15601
7/64	.1094	1 1/4	.1094	2 1/4	15427
33	.1130	1 1/4	.1130	2 1/4	15602
2.90	.1142	32.00	3.00	57.00	19006
3.00	.1181	22.00	3.00	38.00	19007
	.1181	32.00	3.00	57.00	15675
1/8	.1250	7/8	.1250	1 1/2	19008
	.1250	1 1/4	.1250	2 1/4	15428
30	.1285	1 3/8	.1285	2 1/2	15603
3.30	.1299	35.00	6.00	64.00	15231
29	.1360	1 3/8	.1360	2 1/2	15604
9/64	.1406	1 3/8	.1406	2 1/2	15429
3.70	.1457	35.00	6.00	64.00	19009
25	.1495	1 3/8	.1495	2 1/2	15605
24	.1520	1 3/8	.1520	2 1/2	19010
5/32	.1562	1 3/8	.1562	2 1/2	15430
22	.1570	1 3/8	.1570	2 1/2	15606
4.00	.1575	23.00	6.00	50.00	19011
	.1575	35.00	6.00	64.00	15677
21	.1590	1 3/8	.1590	2 1/2	19012
4.20	.1654	45.00	6.00	76.00	15232
4.30	.1693	45.00	6.00	76.00	19013
11/64	.1719	1 5/8	.1719	2 3/4	15431
17	.1730	1 5/8	.1730	2 3/4	19014
16	.1770	1 5/8	.1770	2 3/4	19015
15	.1800	1 5/8	.1800	2 3/4	19016
4.60	.1811	45.00	6.00	76.00	19017
4.70	.1850	45.00	6.00	76.00	19060
3/16	.1875	1	.1875	2	19018
3/16	.1875	1 5/8	.1875	2 3/4	15432
9	.1960	1 3/4	.1960	3	19019
5.00	.1969	45.00	6.00	76.00	15683
8	.1990	1 3/4	.1990	3	19020
7	.2010	1 3/4	.2010	3	15226
13/64	.2031	1 3/4	.2031	3	15433

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0000"-.0005"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

HIGH PERFORMANCE

DRILLS

1565

AlumaDrill™



130° | 3 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
5.20	.2047	50.00	6.00	82.00	19021
3	.2130	1 3/4	.2130	3	15607
7/32	.2188	1 3/4	.2188	3	15434
5.60	.2205	50.00	6.00	82.00	19061
1	.2280	1 3/4	.2280	3	19022
15/64	.2344	2	.2344	3 1/4	15435
6.00	.2362	32.00	6.00	64.00	19023
	.2362	50.00	6.00	82.00	15688
1/4	.2500	1 1/4	.2500	2 1/2	19024
	.2500	2	.2500	3 1/4	15436
F	.2570	2 1/8	.2570	3 1/2	15608
6.80	.2677	54.00	8.00	100.00	15233
I	.2720	2 1/8	.2720	3 1/2	15609
7.00	.2756	36.00	8.00	76.00	19025
	.2756	54.00	8.00	100.00	15689
9/32	.2812	2 1/8	.2812	3 1/2	15437
7.30	.2874	54.00	8.00	100.00	19026
7.40	.2913	54.00	8.00	100.00	19027
7.50	.2953	54.00	8.00	100.00	19028
7.80	.3071	60.00	8.00	100.00	15234
5/16	.3125	1 5/8	.3125	3	19029
	.3125	2 3/8	.3125	4	15438
8.00	.3150	40.00	8.00	76.00	19030
	.3150	60.00	8.00	100.00	15690
Q	.3320	2 1/2	.3320	4	19031
8.50	.3346	63.00	10.00	100.00	15235
11/32	.3438	2 1/2	.3438	4	15439
9.00	.3543	63.00	10.00	100.00	19032
9.30	.3611	63.00	10.00	100.00	19062
U	.3680	2 1/2	.3680	4	15227
9.50	.3740	63.00	10.00	100.00	15236
3/8	.3750	1 3/4	.3750	3	19033
	.3750	2 1/2	.3750	4	15440
25/64	.3906	2 7/8	.3906	4 1/2	19034
10.00	.3937	44.00	10.00	76.00	19035
	.3937	63.00	10.00	100.00	15691
10.20	.4015	73.00	12.00	125.00	15237
13/32	.4062	2 7/8	.4062	4 1/2	15441
10.60	.4173	73.00	12.00	125.00	19036
27/64	.4219	2 7/8	.4219	4 1/2	15228
11.00	.4330	73.00	12.00	125.00	15242
7/16	.4375	2 7/8	.4375	4 1/2	15442
11.30	.4448	73.00	12.00	125.00	19037
29/64	.4531	3	.4531	4 3/4	15446
15/32	.4688	3	.4688	4 3/4	15443
12.00	.4724	50.00	12.00	100.00	19038
	.4724	76.00	12.00	125.00	15692

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0000"-.0005"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

HIGH PERFORMANCE

AlumaDrill™

1565



130° | 3 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
12.10	.4763	76.00	14.00	125.00	19039
31/64	.4844	3	.4844	4 3/4	15229
12.50	.4921	76.00	14.00	125.00	19040
1/2	.5000	2	.5000	4	19058
	.5000	3	.5000	4 3/4	15444
	.5000	4	.5000	6	15489
12.80	.5039	76.00	14.00	125.00	19042
13.00	.5118	76.00	14.00	125.00	15244
33/64	.5156	3 1/4	.5156	5	19043
13.20	.5196	76.00	14.00	125.00	19044
17/32	.5312	4	.5312	6	15490
13.60	.5354	76.00	14.00	125.00	19045
14.00	.5512	101.00	14.00	150.00	15238
9/16	.5625	4	.5625	6	15491
14.50	.5709	101.00	16.00	150.00	19046
37/64	.5781	4	.5781	6	19047
14.80	.5826	101.00	16.00	150.00	19048
15.00	.5906	101.00	16.00	150.00	15694
19/32	.5938	4	.5938	6	15492
15.20	.5984	101.00	16.00	150.00	19049
15.50	.6102	101.00	16.00	150.00	15239
5/8	.6250	2 5/8	.6250	4 1/2	19050
	.6250	4	.6250	6	15493
16.00	.6299	67.00	16.00	112.50	19051
	.6299	101.00	16.00	150.00	15695
16.50	.6496	101.00	18.00	150.00	15696
21/32	.6562	4	.6562	6	15494
17.00	.6693	101.00	18.00	150.00	15697
11/16	.6875	4	.6875	6	15495
17.50	.6890	101.00	18.00	150.00	15240
17.90	.7047	101.00	20.00	150.00	19052
23/32	.7188	4	.7188	6	15496
18.40	.7244	101.00	20.00	150.00	19053
18.50	.7283	101.00	20.00	150.00	19054
3/4	.7500	2 5/8	.7500	4 1/2	19055
	.7500	4	.7500	6	15497
19.20	.7559	101.00	20.00	150.00	19056
49/64	.7656	4	.7656	6	15230
20.00	.8071	67.00	20.00	125.00	19057
	.8071	101.00	20.00	150.00	15698
7/8	.8750	4	.8750	6	15498
1	1.0000	4	1.0000	6	15499

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0000"-.0005"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

HIGH PERFORMANCE

1566

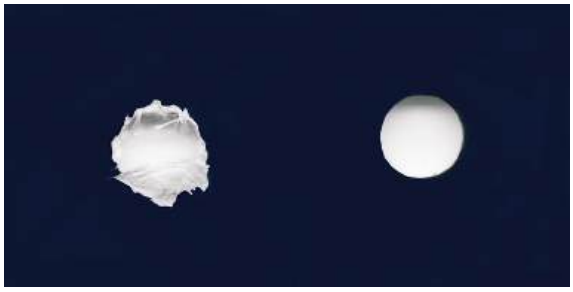
poly drill



90° 3 TiAlN

DIA		LOC	SHANK	OAL	EDP
					TiAlN
5.00	.1969	32.00	5.00	100.00	15660
6.00	.2362	32.00	6.00	100.00	15662
1/4	.2500	1 1/2	0.2500	4	15676
6.50	.2559	38.00	6.50	105.00	15663
7.00	.2756	38.00	7.00	105.00	15664
7.50	.2953	38.00	7.50	110.00	15665
8.00	.3150	38.00	8.00	115.00	15666
8.50	.3346	38.00	8.50	120.00	15667
9.00	.3543	38.00	9.00	125.00	15668
9.50	.3740	38.00	9.50	125.00	15669
V	.3770	1 1/2	.3770	5	15659
10.00	.3937	38.00	10.00	130.00	15670
10.50	.4134	38.00	10.50	137.00	15671
11.00	.4331	38.00	11.00	140.00	15672
11.50	.4528	38.00	11.50	143.00	15673
12.00	.4724	38.00	12.00	150.00	15674
1/2	.5000	1 1/2	0.5000	6	15678

HIGH PERFORMANCE



The **Poly Drill** is a patented tool that produces a clean burr-free hole with no breakout, thereby eliminating a secondary operation of sanding or deburring. It works well in fiber reinforced thermoplastics and composite materials commonly found in the automotive, aerospace, appliance, and recreation industries. **Patent #5636948**

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.001"	+.0000"-.0005"	
	+0.00mm-0.025mm	+0.000mm-0.013mm	

MATRX

5566



90° 3 UNCOATED FCI FC1 = Diamond Coating

DIA		LOC	SHANK	OAL	EDP	
					UNCOATED	FC1
11	.1910	1	.2500	4	25319	25300
5.00	.1969	32.00	5.00	100.00	25320	25301
6.00	.2362	32.00	6.00	100.00	25321	25302
1/4	.2500	1 1/2	.2500	4	25322	25303
	.2520	1 1/2	.2520	4	25323	25304
6.50	.2559	38.00	6.50	105.00	25324	25305
17/64	.2656	1 1/2	.2656	4	25338	25339
7.00	.2756	38.00	7.00	105.00	25325	25306
9/32	.2812	1 1/2	.2812	4	25340	25341
7.50	.2953	38.00	7.50	110.00	25326	25307
5/16	.3125	1 1/2	.3125	4 1/2	25327	25308
8.00	.3150	38.00	8.00	115.00	25328	25309
8.50	.3346	38.00	8.50	120.00	25329	25310
9.00	.3543	38.00	9.00	125.00	25330	25311
9.50	.3740	38.00	9.50	125.00	25331	25312
3/8	.3750	1 1/2	.3750	5	25342	25343
25/64	.3906	1 1/2	.3906	5	25344	25345
10.00	.3937	38.00	10.00	130.00	25332	25313
10.50	.4134	38.00	10.50	137.00	25333	25314
11.00	.4331	38.00	11.00	140.00	25334	25315
7/16	.4375	1 1/2	.4375	6	25346	25347
11.50	.4528	38.00	11.50	143.00	25335	25316
12.00	.4724	38.00	12.00	150.00	25336	25317
1/2	.5000	1 1/2	.5000	6	25337	25318
33/64	.5156	1 1/2	.5156	6	25348	25349

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.001"	+.0000"-.0005"	
	+0.00mm-0.025mm	+0.000mm-0.013mm	

1500 - SCREW MACHINE LENGTH



135° | 2 | FC7

DIA		LOC	SHANK	OAL	EDP FC 7
1.00	.0394	9.50	1.00	38.00	13200
60	.0400	3/8	.0400	1 1/2	13201
59	.0410	3/8	.0410	1 1/2	13202
58	.0420	3/8	.0420	1 1/2	13203
57	.0430	3/8	.0430	1 1/2	13204
56	.0465	3/8	.0465	1 1/2	13205
3/64	.0469	3/8	.0469	1 1/2	13206
55	.0520	3/8	.0520	1 1/2	13207
54	.0550	3/8	.0550	1 1/2	13208
1.50	.0591	9.50	1.50	38.00	13209
53	.0595	3/8	.0595	1 1/2	13210
1/16	.0625	3/8	.0625	1 1/2	13211
52	.0635	3/8	.0635	1 1/2	13212
51	.0670	3/8	.0670	1 1/2	13213
50	.0700	3/8	.0700	1 1/2	13214
49	.0730	3/8	.0730	1 1/2	13215
48	.0760	3/8	.0760	1 1/2	13216
5/64	.0781	3/8	.0781	1 1/2	13217
47	.0785	3/8	.0785	1 1/2	13218
2.00	.0787	9.50	2.00	38.00	13219
46	.0810	3/8	.0810	1 1/2	13220
45	.0820	3/8	.0820	1 1/2	13221
44	.0860	1/2	.0860	2	13222
43	.0890	1/2	.0890	2	13223
42	.0935	1/2	.0935	2	13224
3/32	.0938	1/2	.0938	2	13225
41	.0960	1/2	.0960	2	13226
40	.0980	5/8	.0980	2	13227
2.50	.0984	16.00	2.50	51.00	13228
39	.0995	5/8	.0995	2	13229
38	.1015	5/8	.1015	2	13230
37	.1040	5/8	.1040	2	13231
36	.1065	5/8	.1065	2	13232
7/64	.1094	5/8	.1094	2	13233
35	.1100	5/8	.1100	2	13234
34	.1110	5/8	.1110	2	13235
33	.1130	5/8	.1130	2	13236
32	.1160	5/8	.1160	2	13237
3.00	.1181	16.00	3.00	51.00	13238
31	.1200	5/8	.1200	2	13239
1/8	.1250	5/8	.1250	2	13240
30	.1285	5/8	.1285	2	13241
29	.1360	5/8	.1360	2	13242
3.50	.1378	16.00	3.50	51.00	13243

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

GENERAL PURPOSE

1500 - SCREW MACHINE LENGTH





DIA		LOC	SHANK	OAL	EDP FC 7
28	.1405	5/8	.1405	2	13244
9/64	.1406	5/8	.1406	2	13245
27	.1440	3/4	.1440	2 1/2	13255
26	.1470	3/4	.1470	2 1/2	13256
25	.1495	3/4	.1495	2 1/2	13257
24	.1520	3/4	.1520	2 1/2	13258
23	.1540	3/4	.1540	2 1/2	13259
5/32	.1562	3/4	.1562	2 1/2	13260
22	.1570	3/4	.1570	2 1/2	13261
4.00	.1575	19.00	4.00	63.00	13262
21	.1590	3/4	.1590	2 1/2	13263
20	.1610	3/4	.1610	2 1/2	13264
19	.1660	3/4	.1660	2 1/2	13265
18	.1695	3/4	.1695	2 1/2	13266
11/64	.1719	3/4	.1719	2 1/2	13267
17	.1730	3/4	.1730	2 1/2	13268
16	.1770	3/4	.1770	2 1/2	13269
4.50	.1772	19.00	4.50	63.00	13270
15	.1800	3/4	.1800	2 1/2	13271
14	.1820	3/4	.1820	2 1/2	13272
13	.1850	3/4	.1850	2 1/2	13273
3/16	.1875	3/4	.1875	2 1/2	13274
12	.1890	3/4	.1890	2 1/2	13275
11	.1910	3/4	.1910	2 1/2	13276
10	.1935	3/4	.1935	2 1/2	13277
9	.1960	3/4	.1960	2 1/2	13278
5.00	.1969	19.00	5.00	63.00	13279
8	.1990	3/4	.1990	2 1/2	13280
7	.2010	3/4	.2010	2 1/2	13281
13/64	.2031	3/4	.2031	2 1/2	13282
6	.2040	1	.2040	2 1/2	13283
5	.2055	1	.2055	2 1/2	13284
4	.2090	1	.2090	2 1/2	13285
3	.2130	1	.2130	2 1/2	13286
5.50	.2165	25.00	5.50	63.00	13287
7/32	.2188	1	.2188	2 1/2	13288
2	.2210	1	.2210	2 1/2	13289
1	.2280	1	.2280	2 1/2	13290
A	.2340	1	.2340	2 1/2	13291
15/64	.2344	1	.2344	2 1/2	13292
6.00	.2362	25.00	6.00	63.00	13293
B	.2380	1	.2380	2 1/2	13294
C	.2420	1	.2420	2 1/2	13295
D	.2460	1	.2460	2 1/2	13296

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

GENERAL PURPOSE

1500 - SCREW MACHINE LENGTH



118° | 2 | UNCOATED

DIA		LOC	SHANK	OAL	EDP
					FC 7
1/4	.2500	1	.2500	2 1/2	13297
6.50	.2559	25.00	6.50	63.00	13298
F	.2570	1	.2570	2 1/2	13299
G	.2610	1	.2610	2 1/2	13300
17/64	.2656	1	.2656	2 1/2	13301
H	.2660	1	.2660	2 1/2	13302
I	.2720	1	.2720	2 1/2	13303
7.00	.2756	25.00	7.00	63.00	13304
J	.2770	1	.2770	2 1/2	13305
K	.2810	1	.2810	2 1/2	13306
9/32	.2812	1	.2812	2 1/2	13307
L	.2900	1 1/4	.2900	2 3/4	13308
M	.2950	1 1/4	.2950	2 3/4	13309
7.50	.2953	32.00	7.50	70.00	13310
19/64	.2969	1 1/4	.2969	2 3/4	13311
N	.3020	1 1/4	.3020	2 3/4	13312
5/16	.3125	1 1/4	.3125	2 3/4	13313
8.00	.3150	32.00	8.00	70.00	13314
O	.3160	1 1/4	.3160	2 3/4	13315
P	.3230	1 1/4	.3230	2 3/4	13316
21/64	.3281	1 1/4	.3281	2 3/4	13317
Q	.3320	1 1/4	.3320	3	13318
8.50	.3346	32.00	8.50	76.00	13319
R	.3390	1 1/4	.3390	3	13320
11/32	.3438	1 1/4	.3438	3	13321
S	.3480	1 1/4	.3480	3	13322
9.00	.3543	32.00	9.00	76.00	13323
T	.3580	1 1/4	.3580	3	13324
23/64	.3594	1 1/4	.3594	3	13325
U	.3680	1 1/4	.3680	3	13326
9.50	.3740	32.00	9.50	76.00	13327
3/8	.3750	1 1/4	.3750	3	13328
V	.3770	1 1/4	.3770	3	13329
W	.3860	1 1/4	.3860	3	13330
25/64	.3906	1 1/4	.3906	3	13331
10.00	.3937	32.00	10.00	76.00	13332
X	.3970	1 1/4	.3970	3	13333
Y	.4040	1 1/4	.4040	3	13334
13/32	.4062	1 1/4	.4062	3	13335
Z	.4130	1 1/4	.4130	3	13336
10.50	.4134	32.00	10.50	76.00	13337
27/64	.4219	1 1/4	.4219	3	13338

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1500 - SCREW MACHINE LENGTH





DIA		LOC	SHANK	OAL	EDP
					FC 7
11.00	.4331	32.00	11.00	76.00	13339
7/16	.4375	1 1/4	.4375	3	13340
11.50	.4528	32.00	11.50	76.00	13341
29/64	.4531	1 1/4	.4531	3	13342
15/32	.4688	1 1/4	.4688	3	13343
12.00	.4724	32.00	12.00	76.00	13344
31/64	.4844	1 1/4	.4844	3	13345
12.50	.4921	32.00	12.50	76.00	13346
1/2	.5000	1 1/4	.5000	3	13347
13.00	.5118	32.00	13.00	89.00	13358
17/32	.5312	1 1/4	.5312	3 1/2	13348
9/16	.5625	1 1/4	.5625	3 1/2	13349
19/32	.5938	1 1/2	.5938	3 1/2	13350
5/8	.6250	1 1/2	.6250	3 1/2	13351
21/32	.6562	1 1/2	.6562	3 1/2	13352
11/16	.6875	1 1/2	.6875	4	13353
23/32	.7188	1 1/2	.7188	4	13354
3/4	.7500	1 1/2	.7500	4	13355
7/8	.8750	1 1/2	.8750	4	13356
1	1.0000	1 1/2	1.0000	4	13357

GENERAL PURPOSE

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1500 - STANDARD LENGTH



135° | 2 | FC7

DIA		LOC	SHANK	OAL	EDP
					FC 7
70	.0280	5/16	.0280	1 1/4	13000
69	.0292	5/16	.0292	1 1/4	13001
68	.0310	5/16	.0310	1 1/4	13002
1/32	.0312	5/16	.0312	1 1/4	13003
67	.0320	5/16	.0320	1 1/4	13004
66	.0330	5/16	.0330	1 1/4	13005
65	.0350	5/8	.0350	1 1/2	13006
64	.0360	5/8	.0360	1 1/2	13007
63	.0370	5/8	.0370	1 1/2	13008
62	.0380	5/8	.0380	1 1/2	13009
61	.0390	5/8	.0390	1 1/2	13010
1.00	.0394	16.00	1.00	38.00	13011
60	.0400	3/4	.0400	1 1/2	13012
59	.0410	3/4	.0410	1 1/2	13013
58	.0420	3/4	.0420	1 1/2	13014
57	.0430	3/4	.0430	1 1/2	13015
56	.0465	3/4	.0465	1 1/2	13016
3/64	.0469	3/4	.0469	1 1/2	13017
55	.0520	3/4	.0520	1 1/2	13018
54	.0550	3/4	.0550	1 1/2	13019
1.50	.0591	19.00	1.50	38.00	13020
53	.0595	3/4	.0595	1 1/2	13021
1/16	.0625	3/4	.0625	1 1/2	13022
52	.0635	3/4	.0635	1 1/2	13023
51	.0670	3/4	.0670	1 1/2	13024
50	.0700	7/8	.0700	1 3/4	13025
49	.0730	7/8	.0730	1 3/4	13026
48	.0760	7/8	.0760	1 3/4	13027
5/64	.0781	7/8	.0781	1 3/4	13028
47	.0785	7/8	.0785	1 3/4	13029
2.00	.0787	22.00	2.00	44.00	13030
46	.0810	7/8	.0810	1 3/4	13031
45	.0820	7/8	.0820	1 3/4	13032
44	.0860	1	.0860	2	13033
43	.0890	1	.0890	2	13034
42	.0935	1	.0935	2	13035
3/32	.0938	1	.0938	2	13036
41	.0960	1	.0960	2	13037
40	.0980	1	.0980	2	13038
2.50	.0984	25.00	2.50	51.00	13039
39	.0995	1 1/4	.0995	2 1/4	13040
38	.1015	1 1/4	.1015	2 1/4	13041
37	.1040	1 1/4	.1040	2 1/4	13042
36	.1065	1 1/4	.1065	2 1/4	13043
7/64	.1094	1 1/4	.1094	2 1/4	13044
35	.1100	1 1/4	.1100	2 1/4	13045

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

GENERAL PURPOSE

1500 - STANDARD LENGTH





DIA		LOC	SHANK	OAL	EDP
					FC 7
34	.1110	1 1/4	.1110	2 1/4	13046
33	.1130	1 1/4	.1130	2 1/4	13047
32	.1160	1 1/4	.1160	2 1/4	13048
3.00	.1181	32.00	3.00	57.00	13049
31	.1200	1 1/4	.1200	2 1/4	13050
1/8	.1250	1 1/4	.1250	2 1/4	13051
30	.1285	1 3/8	.1285	2 1/2	13052
29	.1360	1 3/8	.1360	2 1/2	13053
3.50	.1378	35.00	3.50	63.00	13054
28	.1405	1 3/8	.1405	2 1/2	13055
9/64	.1406	1 3/8	.1406	2 1/2	13056
27	.1440	1 3/8	.1440	2 1/2	13057
26	.1470	1 3/8	.1470	2 1/2	13058
25	.1495	1 3/8	.1495	2 1/2	13059
24	.1520	1 3/8	.1520	2 1/2	13060
23	.1540	1 3/8	.1540	2 1/2	13061
5/32	.1562	1 3/8	.1562	2 1/2	13062
22	.1570	1 3/8	.1570	2 1/2	13063
4.00	.1575	35.00	4.00	63.00	13064
21	.1590	1 3/8	.1590	2 1/2	13065
20	.1610	1 3/8	.1610	2 1/2	13066
19	.1660	1 5/8	.1660	2 3/4	13067
18	.1695	1 5/8	.1695	2 3/4	13068
11/64	.1719	1 5/8	.1719	2 3/4	13069
17	.1730	1 5/8	.1730	2 3/4	13070
16	.1770	1 5/8	.1770	2 3/4	13071
4.50	.1772	41.00	4.50	70.00	13072
15	.1800	1 5/8	.1800	2 3/4	13073
14	.1820	1 5/8	.1820	2 3/4	13074
13	.1850	1 5/8	.1850	2 3/4	13075
3/16	.1875	1 5/8	.1875	2 3/4	13076
12	.1890	1 5/8	.1890	2 3/4	13077
11	.1910	1 5/8	.1910	2 3/4	13078
10	.1935	1 5/8	.1935	2 3/4	13079
9	.1960	1 3/4	.1960	3	13080
5.00	.1969	44.00	5.00	76.00	13081
8	.1990	1 3/4	.1990	3	13082
7	.2010	1 3/4	.2010	3	13083
13/64	.2031	1 3/4	.2031	3	13084
6	.2040	1 3/4	.2040	3	13085
5	.2055	1 3/4	.2055	3	13086
4	.2090	1 3/4	.2090	3	13087
3	.2130	1 3/4	.2130	3	13088
5.50	.2165	44.00	5.50	76.00	13089
7/32	.2188	1 3/4	.2188	3	13090
2	.2210	1 3/4	.2210	3	13091

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1500 - STANDARD LENGTH





DIA		LOC	SHANK	OAL	EDP FC7
1	.2280	1 3/4	.2280	3	13092
A	.2340	2	.2340	3 1/4	13093
15/64	.2344	2	.2344	3 1/4	13094
6.00	.2362	51.00	6.00	83.00	13095
B	.2380	2	.2380	3 1/4	13096
C	.2420	2	.2420	3 1/4	13097
D	.2460	2	.2460	3 1/4	13098
1/4	.2500	2	.2500	3 1/4	13099
6.50	.2559	51.00	6.50	83.00	13100
F	.2570	2	.2570	3 1/4	13101
G	.2610	2 1/8	.2610	3 1/2	13102
17/64	.2656	2 1/8	.2656	3 1/2	13103
H	.2660	2 1/8	.2660	3 1/2	13104
I	.2720	2 1/8	.2720	3 1/2	13105
7.00	.2756	54.00	7.00	89.00	13106
J	.2770	2 1/8	.2770	3 1/2	13107
K	.2810	2 1/8	.2810	3 1/2	13108
9/32	.2812	2 1/8	.2812	3 1/2	13109
L	.2900	2 1/8	.2900	3 1/2	13110
M	.2950	2 3/8	.2950	4	13111
7.50	.2953	60.00	7.50	102.00	13112
19/64	.2969	2 3/8	.2969	4	13113
N	.3020	2 3/8	.3020	4	13114
5/16	.3125	2 3/8	.3125	4	13115
8.00	.3150	60.00	8.00	102.00	13116
O	.3160	2 3/8	.3160	4	13117
P	.3230	2 3/8	.3230	4	13118
21/64	.3281	2 1/2	.3281	4	13119
Q	.3320	2 1/2	.3320	4	13120
8.50	.3346	63.00	8.50	102.00	13121
R	.3390	2 1/2	.3390	4	13122
11/32	.3438	2 1/2	.3438	4	13123
S	.3480	2 1/2	.3480	4	13124
9.00	.3543	70.00	9.00	108.00	13125
T	.3580	2 3/4	.3580	4 1/4	13126
23/64	.3594	2 3/4	.3594	4 1/4	13127
U	.3680	2 3/4	.3680	4 1/4	13128
9.50	.3740	70.00	9.50	108.00	13129
3/8	.3750	2 3/4	.3750	4 1/4	13130
V	.3770	2 3/4	.3770	4 1/4	13131
W	.3860	2 7/8	.3860	4 1/2	13132
25/64	.3906	2 7/8	.3906	4 1/2	13133
10.00	.3937	73.00	10.00	114.00	13134
X	.3970	2 7/8	.3970	4 1/2	13135
Y	.4040	2 7/8	.4040	4 1/2	13136
13/32	.4062	2 7/8	.4062	4 1/2	13137

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1500 - STANDARD LENGTH



135° | 2 | FC7

DIA		LOC	SHANK	OAL	EDP FC 7
Z	.4130	2 7/8	.4130	4 1/2	13138
10.50	.4134	73.00	10.50	114.00	13139
27/64	.4219	2 7/8	.4219	4 1/2	13140
11.00	.4331	73.00	11.00	114.00	13141
7/16	.4375	2 7/8	.4375	4 1/2	13142
11.50	.4528	76.00	11.50	121.00	13143
29/64	.4531	3	.4531	4 3/4	13144
15/32	.4688	3	.4688	4 3/4	13145
12.00	.4724	76.00	12.00	121.00	13146
31/64	.4844	3	.4844	4 3/4	13147
12.50	.4921	76.00	12.50	121.00	13148
1/2	.5000	3	.5000	4 3/4	13149
17/32	.5312	4	.5312	6	13150
9/16	.5625	4	.5625	6	13151
19/32	.5938	4	.5938	6	13152
5/8	.6250	4	.6250	6	13153
21/32	.6562	4	.6562	6	13154
11/16	.6875	4	.6875	6	13155
23/32	.7188	4	.7188	6	13156
3/4	.7500	4	.7500	6	13157
7/8	.8750	4	.8750	6	13158
1	1.0000	4	1.0000	6	13159

GENERAL PURPOSE

TOLERANCES	DIAMETER	SHANK	30° HELIX
	+.0000”-.0005”	+.0”-.001”	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1510 - SCREW MACHINE LENGTH





DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
1.00	.0394	9.50	1.00	38.00	16001
60	.0400	3/8	.0400	1 1/2	16002
59	.0410	3/8	.0410	1 1/2	16003
58	.0420	3/8	.0420	1 1/2	16004
57	.0430	3/8	.0430	1 1/2	16005
56	.0465	3/8	.0465	1 1/2	16006
3/64	.0469	3/8	.0469	1 1/2	16007
55	.0520	3/8	.0520	1 1/2	16008
54	.0550	3/8	.0550	1 1/2	16009
1.50	.0591	9.50	1.50	38.00	16010
53	.0595	3/8	.0595	1 1/2	16011
1/16	.0625	3/8	.0625	1 1/2	16012
52	.0635	3/8	.0635	1 1/2	16013
51	.0670	3/8	.0670	1 1/2	16014
50	.0700	3/8	.0700	1 1/2	16015
49	.0730	3/8	.0730	1 1/2	16016
48	.0760	3/8	.0760	1 1/2	16017
5/64	.0781	3/8	.0781	1 1/2	16018
47	.0785	3/8	.0785	1 1/2	16019
2.00	.0787	9.50	2.00	38.00	16020
46	.0810	3/8	.0810	1 1/2	16021
45	.0820	3/8	.0820	1 1/2	16022
44	.0860	1/2	.0860	2	16023
43	.0890	1/2	.0890	2	16024
42	.0935	1/2	.0935	2	16025
3/32	.0938	1/2	.0938	2	16026
41	.0960	1/2	.0960	2	16027
40	.0980	5/8	.0980	2	16028
2.50	.0984	16.00	2.50	51.00	16029
39	.0995	5/8	.0995	2	16030
38	.1015	5/8	.1015	2	16031
37	.1040	5/8	.1040	2	16032
36	.1065	5/8	.1065	2	15276
7/64	.1094	5/8	.1094	2	16033
35	.1100	5/8	.1100	2	16034
34	.1110	5/8	.1110	2	16035
33	.1130	5/8	.1130	2	15277
32	.1160	5/8	.1160	2	16036
3.00	.1181	16.00	3.00	51.00	16037
31	.1200	5/8	.1200	2	16038
1/8	.1250	5/8	.1250	2	15201
30	.1285	5/8	.1285	2	16039
29	.1360	5/8	.1360	2	15278
3.50	.1378	16.00	3.50	51.00	16040
28	.1405	5/8	.1405	2	16041
9/64	.1406	5/8	.1406	2	15202
27	.1440	3/4	.1440	2 1/2	16042

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1510 - SCREW MACHINE LENGTH



118° | 2 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
26	.1470	3/4	.1470	2 1/2	16043
25	.1495	3/4	.1495	2 1/2	15279
24	.1520	3/4	.1520	2 1/2	16044
23	.1540	3/4	.1540	2 1/2	16045
5/32	.1562	3/4	.1562	2 1/2	15203
22	.1570	3/4	.1570	2 1/2	15280
4.00	.1575	19.00	4.00	63.00	16046
21	.1590	3/4	.1590	2 1/2	16047
20	.1610	3/4	.1610	2 1/2	16048
19	.1660	3/4	.1660	2 1/2	16049
18	.1695	3/4	.1695	2 1/2	16050
11/64	.1719	3/4	.1719	2 1/2	15204
17	.1730	3/4	.1730	2 1/2	16051
16	.1770	3/4	.1770	2 1/2	16052
4.50	.1772	19.00	4.50	63.00	16053
15	.1800	3/4	.1800	2 1/2	16054
14	.1820	3/4	.1820	2 1/2	16055
13	.1850	3/4	.1850	2 1/2	16056
3/16	.1875	3/4	.1875	2 1/2	15205
12	.1890	3/4	.1890	2 1/2	16057
11	.1910	3/4	.1910	2 1/2	16058
10	.1935	3/4	.1935	2 1/2	16059
9	.1960	3/4	.1960	2 1/2	16060
5.00	.1969	19.00	5.00	63.00	16061
8	.1990	3/4	.1990	2 1/2	16062
7	.2010	3/4	.2010	2 1/2	16063
13/64	.2031	3/4	.2031	2 1/2	15206
6	.2040	1	.2040	2 1/2	16064
5	.2055	1	.2055	2 1/2	16065
4	.2090	1	.2090	2 1/2	16066
3	.2130	1	.2130	2 1/2	15281
5.50	.2165	25.00	5.50	63.00	16067
7/32	.2188	1	.2188	2 1/2	15207
2	.2210	1	.2210	2 1/2	16068
1	.2280	1	.2280	2 1/2	16069
A	.2340	1	.2340	2 1/2	16070
15/64	.2344	1	.2344	2 1/2	15208
6.00	.2362	25.00	6.00	63.00	16071
B	.2380	1	.2380	2 1/2	16072
C	.2420	1	.2420	2 1/2	16073
D	.2460	1	.2460	2 1/2	16074
1/4	.2500	1	.2500	2 1/2	15209
6.50	.2559	25.00	6.50	63.00	16075
F	.2570	1	.2570	2 1/2	15282
G	.2610	1	.2610	2 1/2	16076
17/64	.2656	1	.2656	2 1/2	15210
H	.2660	1	.2660	2 1/2	16078

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

GENERAL PURPOSE

1510 - SCREW MACHINE LENGTH



118° | 2 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
I	.2720	1	.2720	2 1/2	15283
7.00	.2756	25.00	7.00	63.00	16079
J	.2770	1	.2770	2 1/2	16080
K	.2810	1	.2810	2 1/2	16081
9/32	.2812	1	.2812	2 1/2	15211
L	.2900	1 1/4	.2900	2 3/4	16082
M	.2950	1 1/4	.2950	2 3/4	16083
7.50	.2953	32.00	7.50	70.00	16084
19/64	.2969	1 1/4	.2969	2 3/4	15212
N	.3020	1 1/4	.3020	2 3/4	16085
5/16	.3125	1 1/4	.3125	2 3/4	15213
8.00	.3150	32.00	8.00	70.00	16086
O	.3160	1 1/4	.3160	2 3/4	16087
P	.3230	1 1/4	.3230	2 3/4	16088
21/64	.3281	1 1/4	.3281	2 3/4	15214
Q	.3320	1 1/4	.3320	3	16089
8.50	.3346	32.00	8.50	76.00	16090
R	.3390	1 1/4	.3390	3	16091
11/32	.3438	1 1/4	.3438	3	15215
S	.3480	1 1/4	.3480	3	16092
9.00	.3543	32.00	9.00	76.00	16093
T	.3580	1 1/4	.3580	3	16094
23/64	.3594	1 1/4	.3594	3	15216
U	.3680	1 1/4	.3680	3	16095
9.50	.3740	32.00	9.50	76.00	16096
3/8	.3750	1 1/4	.3750	3	15217
V	.3770	1 1/4	.3770	3	16097
W	.3860	1 1/4	.3860	3	16098
25/64	.3906	1 1/4	.3906	3	15218
10.00	.3937	32.00	10.00	76.00	16099
X	.3970	1 1/4	.3970	3	16100
Y	.4040	1 1/4	.4040	3	16101
13/32	.4062	1 1/4	.4062	3	15219
Z	.4130	1 1/4	.4130	3	16102
10.50	.4134	32.00	10.50	76.00	16103
27/64	.4219	1 1/4	.4219	3	15220
11.00	.4331	32.00	11.00	76.00	16104
7/16	.4375	1 1/4	.4375	3	15221
11.50	.4528	32.00	11.50	76.00	16105
29/64	.4531	1 1/4	.4531	3	15222
15/32	.4688	1 1/4	.4688	3	15223
12.00	.4724	32.00	12.00	76.00	16106
31/64	.4844	1 1/4	.4844	3	15224
12.50	.4921	32.00	12.50	76.00	16107
1/2	.5000	1 1/4	.5000	3	15225
17/32	.5312	1 1/4	.5312	3 1/2	16108
9/16	.5625	1 1/2	.5625	3 1/2	15256

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

GENERAL PURPOSE

1510 - SCREW MACHINE LENGTH





DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
19/32	.5938	1 1/2	.5938	3 1/2	16109
5/8	.6250	1 1/2	.6250	3 1/2	15262
21/32	.6562	1 1/2	.6562	3 1/2	16110
11/16	.6875	1 1/2	.6875	4	16111
23/32	.7188	1 1/2	.7188	4	16112
3/4	.7500	1 1/2	.7500	4	15275
7/8	.8750	1 1/2	.8750	4	16113
1	1.0000	1 1/2	1.0000	4	16114

GENERAL PURPOSE

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1510 - STANDARD LENGTH



118° | 2 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP UNCOATED
70	.0280	5/16	.0280	1 1/4	15012
69	.0292	5/16	.0292	1 1/4	15013
68	.0310	5/16	.0310	1 1/4	15014
1/32	.0312	5/16	.0312	1 1/4	15015
67	.0320	5/16	.0320	1 1/4	15016
66	.0330	5/16	.0330	1 1/4	15017
65	.0350	5/8	.0350	1 1/2	15018
64	.0360	5/8	.0360	1 1/2	15019
63	.0370	5/8	.0370	1 1/2	15020
62	.0380	5/8	.0380	1 1/2	15021
61	.0390	5/8	.0390	1 1/2	15022
1.00	.0394	16.00	1.00	38.00	15023
60	.0400	3/4	.0400	1 1/2	15024
59	.0410	3/4	.0410	1 1/2	15025
58	.0420	3/4	.0420	1 1/2	15026
57	.0430	3/4	.0430	1 1/2	15027
56	.0465	3/4	.0465	1 1/2	15028
3/64	.0469	3/4	.0469	1 1/2	15029
55	.0520	3/4	.0520	1 1/2	15030
54	.0550	3/4	.0550	1 1/2	15031
1.50	.0591	19.00	1.50	38.00	15032
53	.0595	3/4	.0595	1 1/2	15033
1/16	.0625	3/4	.0625	1 1/2	15034
52	.0635	3/4	.0635	1 1/2	15035
51	.0670	3/4	.0670	1 1/2	15036
50	.0700	7/8	.0700	1 3/4	15037
49	.0730	7/8	.0730	1 3/4	15038
48	.0760	7/8	.0760	1 3/4	15039
5/64	.0781	7/8	.0781	1 3/4	15040
47	.0785	7/8	.0785	1 3/4	15041
2.00	.0787	22.00	2.00	44.00	15042
46	.0810	7/8	.0810	1 3/4	15043
45	.0820	7/8	.0820	1 3/4	15044
44	.0860	1	.0860	2	15045
43	.0890	1	.0890	2	15046
2.30	.0906	25.00	2.30	51.00	15196
42	.0935	1	.0935	2	15047
3/32	.0938	1	.0938	2	15048
41	.0960	1	.0960	2	15049
40	.0980	1	.0980	2	15050
2.50	.0984	25.00	2.50	51.00	15051
39	.0995	1 1/4	.0995	2 1/4	15052
38	.1015	1 1/4	.1015	2 1/4	15053
2.60	.1024	25.00	2.60	51.00	15186

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

GENERAL PURPOSE

1510 - STANDARD LENGTH



118° | 2 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
37	.1040	1 1/4	.1040	2 1/4	15054
36	.1065	1 1/4	.1065	2 1/4	15055
7/64	.1094	1 1/4	.1094	2 1/4	15056
35	.1100	1 1/4	.1100	2 1/4	15057
34	.1110	1 1/4	.1110	2 1/4	15058
33	.1130	1 1/4	.1130	2 1/4	15059
2.90	.1142	32.00	2.90	57.00	15187
32	.1160	1 1/4	.1160	2 1/4	15060
3.00	.1181	32.00	3.00	57.00	15061
31	.1200	1 1/4	.1200	2 1/4	15062
1/8	.1250	1 1/4	.1250	2 1/4	15063
3.20	.1260	32.00	3.20	57.00	15245
30	.1285	1 3/8	.1285	2 1/2	15064
29	.1360	1 3/8	.1360	2 1/2	15065
3.50	.1378	35.00	3.50	63.00	15066
28	.1405	1 3/8	.1405	2 1/2	15067
9/64	.1406	1 3/8	.1406	2 1/2	15068
27	.1440	1 3/8	.1440	2 1/2	15069
26	.1470	1 3/8	.1470	2 1/2	15070
25	.1495	1 3/8	.1495	2 1/2	15071
24	.1520	1 3/8	.1520	2 1/2	15072
3.90	.1535	35.00	3.90	63.00	15246
23	.1540	1 3/8	.1540	2 1/2	15073
5/32	.1562	1 3/8	.1562	2 1/2	15074
22	.1570	1 3/8	.1570	2 1/2	15075
4.00	.1575	35.00	4.00	63.00	15076
21	.1590	1 3/8	.1590	2 1/2	15077
20	.1610	1 3/8	.1610	2 1/2	15078
4.20	.1654	41.00	4.20	70.00	15188
19	.1660	1 5/8	.1660	2 3/4	15079
4.30	.1693	41.00	4.30	70.00	15189
18	.1695	1 5/8	.1695	2 3/4	15080
11/64	.1719	1 5/8	.1719	2 3/4	15081
17	.1730	1 5/8	.1730	2 3/4	15082
16	.1770	1 5/8	.1770	2 3/4	15083
4.50	.1772	41.00	4.50	70.00	15084
15	.1800	1 5/8	.1800	2 3/4	15085
14	.1820	1 5/8	.1820	2 3/4	15086
13	.1850	1 5/8	.1850	2 3/4	15087
3/16	.1875	1 5/8	.1875	2 3/4	15088
12	.1890	1 5/8	.1890	2 3/4	15089
11	.1910	1 5/8	.1910	2 3/4	15090
10	.1935	1 5/8	.1935	2 3/4	15091
9	.1960	1 3/4	.1960	3	15092

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1510 - STANDARD LENGTH





DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
5.00	.1969	44.00	5.00	76.00	15093
8	.1990	1 3/4	.1990	3	15094
7	.2010	1 3/4	.2010	3	15095
16/64	.2031	1 3/4	.2031	3	15096
6	.2040	1 3/4	.2040	3	15097
5	.2055	1 3/4	.2055	3	15098
4	.2090	1 3/4	.2090	3	15099
3	.2130	1 3/4	.2130	3	15100
5.50	.2165	44.00	5.50	76.00	15101
7/32	.2188	1 3/4	.2188	3	15102
2	.2210	1 3/4	.2210	3	15103
1	.2280	1 3/4	.2280	3	15104
5.80	.2283	44.00	5.80	76.00	15190
A	.2340	2	.2340	3 1/4	15105
15/64	.2344	2	.2344	3 1/4	15106
6.00	.2362	51.00	6.00	83.00	15107
B	.2380	2	.2380	3 1/4	15108
C	.2420	2	.2420	3 1/4	15109
6.20	.2441	51.00	6.20	83.00	15191
D	.2460	2	.2460	3 1/4	15110
1/4	.2500	2	.2500	3 1/4	15112
6.40	.2520	51.00	6.40	83.00	15194
6.50	.2559	51.00	6.50	83.00	15113
F	.2570	2	.2570	3 1/4	15114
6.60	.2598	51.00	6.60	83.00	15195
G	.2610	2 1/8	.2610	3 1/2	15115
17/64	.2656	2 1/8	.2656	3 1/2	15116
H	.2660	2 1/8	.2660	3 1/2	15117
6.90	.2717	54.00	6.90	89.00	15247
I	.2720	2 1/8	.2720	3 1/2	15118
7.00	.2756	54.00	7.00	89.00	15119
J	.2770	2 1/8	.2770	3 1/2	15120
K	.2810	2 1/8	.2810	3 1/2	15121
9/32	.2812	2 1/8	.2812	3 1/2	15122
L	.2900	2 1/8	.2900	3 1/2	15123
M	.2950	2 3/8	.2950	4	15124
7.50	.2953	60.00	7.50	102.00	15125
19/64	.2969	2 3/8	.2969	4	15126
N	.3020	2 3/8	.3020	4	15127
5/16	.3125	2 3/8	.3125	4	15128
8.00	.3150	60.00	8.00	102.00	15129
O	.3160	2 3/8	.3160	4	15130
P	.3230	2 3/8	.3230	4	15131
8.30	.3268	63.00	8.30	102.00	15192
21/64	.3281	2 1/2	.3281	4	15132
8.40	.3307	63.00	8.40	102.00	15197

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1510 - STANDARD LENGTH



118° | 2 | UNCOATED

DIA		FLUTE LENGTH	SHANK	OAL	EDP
					UNCOATED
Q	.3320	2 1/2	.3320	4	15133
8.50	.3346	63.00	8.50	102.00	15173
R	.3390	2 1/2	.3390	4	15135
11/32	.3438	2 1/2	.3438	4	15136
S	.3480	2 1/2	.3480	4	15137
8.90	.3504	70.00	8.90	108.00	15198
9.00	.3543	70.00	9.00	108.00	15134
T	.3580	2 3/4	.3580	4 1/4	15139
23/64	.3594	2 3/4	.3594	4 1/4	15140
U	.3680	2 3/4	.3680	4 1/4	15141
9.50	.3740	70.00	9.50	108.00	15142
3/8	.3750	2 3/4	.3750	4 1/4	15143
V	.3770	2 3/4	.3770	4 1/4	15144
9.60	.3780	70.00	9.60	108.00	15193
W	.3860	2 7/8	.3860	4 1/2	15145
25/64	.3906	2 7/8	.3906	4 1/2	15146
10.00	.3937	73.00	10.00	114.00	15147
X	.3970	2 7/8	.3970	4 1/2	15148
Y	.4040	2 7/8	.4040	4 1/2	15149
13/32	.4062	2 7/8	.4062	4 1/2	15150
Z	.4130	2 7/8	.4130	4 1/2	15170
10.50	.4134	73.00	10.50	114.00	15151
27/64	.4219	2 7/8	.4219	4 1/2	15152
11.00	.4331	73.00	11.00	114.00	15153
7/16	.4375	2 7/8	.4375	4 1/2	15154
11.50	.4528	76.00	11.50	121.00	15155
29/64	.4531	3	.4531	4 3/4	15156
15/32	.4688	3	.4688	4 3/4	15157
12.00	.4724	76.00	12.00	121.00	15158
31/64	.4844	3	.4844	4 3/4	15159
12.50	.4921	76.00	12.50	121.00	15160
1/2	.5000	3	.5000	4 3/4	15161
17/32	.5312	4	.5312	6	15162
9/16	.5625	4	.5625	6	15163
19/32	.5938	4	.5938	6	15164
5/8	.6250	4	.6250	6	15165
21/32	.6562	4	.6562	6	15166
11/16	.6875	4	.6875	6	15167
23/32	.7188	4	.7188	6	15171
3/4	.7500	4	.7500	6	15168
7/8	.8750	4	.8750	6	15169
1	1.0000	4	1.0000	6	15174

GENERAL PURPOSE

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0"-.001"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

1535



90° 120° 150° 2 UNCOATED FC7

DIA		FLUTE LENGTH	SHANK	OAL	POINT ANGLE	EDP	
						UNCOATED	FC7
3.00	.1181	10.00	3.00	64.00	90°	15454	15457
		10.00	3.00	64.00	120°	15354	15357
1/8	.1250	5/8	.1250	2 1/2	90°	15450	15451
		5/8	.1250	2 1/2	120°	15350	
		5/8	.1250	2 1/2	150°	15736	
4.00	.1575	12.00	4.00	64.00	90°	15455	15458
		12.00	4.00	64.00	120°	15355	
		12.00	4.00	64.00	150°	15704	
3/16	.1875	3/4	.1875	2 1/2	90°	15453	15452
		3/4	.1875	2 1/2	120°	15353	
		3/4	.1875	2 1/2	150°	15758	
5.00	.1969	25.00	5.00	64.00	90°	15456	15460
		25.00	5.00	64.00	150°		15759
6.00	.2362	25.00	6.00	64.00	90°	15459	15461
1/4	.2500	1	.2500	2 1/2	90°	15462	15463
		1	.2500	2 1/2	120°	15362	15363
		1	.2500	2 1/2	150°	15774	15749
5/16	.3125	1	.3125	2 1/2	90°	15464	15466
		1	.3125	2 1/2	120°	15364	15367
		1	.3125	2 1/2	150°	15778	15750
8.00	.3150	25.00	8.00	64.00	90°	15465	15467
		25.00	8.00	64.00	150°		15761
3/8	.3750	1 1/4	.3750	3	90°	15468	15469
		1 1/4	.3750	3	120°	15368	15369
		1 1/4	.3750	3	150°	15782	15751
10.00	.3937	32.00	10.00	76.00	90°	15471	15470
12.00	.4724	32.00	12.00	76.00	90°	15474	15472
1/2	.5000	1 1/4	.5000	3	90°	15477	15473
		1 1/4	.5000	3	120°	15377	15373
		1 1/4	.5000	3	150°	15790	15752
3/4	.7500	1 1/2	.7500	4	90°	15708	15475
		1 1/2	.7500	4	120°	15709	15375
		1 1/2	.7500	4	150°	15707	15753

GENERAL PURPOSE

TOLERANCES	DIAMETER	SHANK	25° HELIX
	+.0000"-.0005"	+.0000"-.0005"	
	+0.000mm-0.013mm	+0.000mm-0.013mm	

2305



118° | 2 | TiAIN | UNCOATED | 60° | 90°

TOOL NUMBER	PILOT DIA	BODY DIA	OAL	EDP		
				UNCOATED 60°	TiAIN 60°	UNCOATED 90°
000	.0200	.1250	1 1/2	23000	23109	23004
00	.0250	.1250	1 1/2	23001	23110	23005
0	1/32	.1250	1 1/2	23100	23111	23300
1	3/64	.1250	1 1/2	23101	23112	23301
2	5/64	.1875	2	23102	23113	23302
3	7/64	.2500	2	23103	23114	23303
4	1/8	.3125	2 1/8	23104	23115	23304
5	3/16	.4375	2 3/4	23105	23116	23305
6	7/32	.5000	3	23106	23117	23306
7	1/4	.6250	3 1/4	23107	23118	23307
8	5/16	.7500	3 1/2	23108	23119	23308

GENERAL PURPOSE



118° | 2 | UNCOATED | TiAIN | 60°

TOOL NUMBER	PILOT DIA	BODY DIA	OAL	EDP	
				UNCOATED 60°	TiAIN 60°
1	3/64	.1250	4	23120	23121
2	5/64	.1875	4	23122	23123
3	7/64	.2500	4	23124	23125
4	1/8	.3125	6	23126	23127
5	3/16	.4375	6	23128	23129
6	7/32	.5000	6	23130	23131
7	1/4	.6250	6	23132	23133
8	5/16	.7500	6	23134	23135

TOLERANCES	DIAMETER	SHANK
	+.0000"-.0005"	+.0000"-.0005"
	+0.000mm-0.013mm	+0.000mm-0.013mm

InovaTools®
GERMAN TOOLS GROUP



SOLID CARBIDE
DRILLS

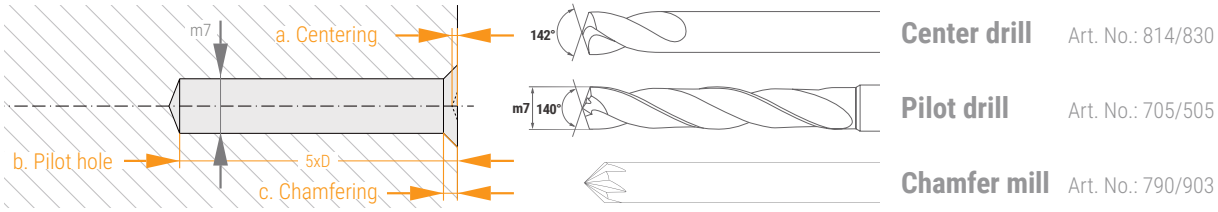
752
753
708
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908
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911

Guidelines for deep hole drilling

When it comes to deep hole drilling, there are certain procedures and factors that are particularly important for ensuring reliable machining. The Deepmax is tailored to our 5xD **207 Series** standard drills, which are the ideal pilot drills.

1. Pilot hole

- **Uneven surfaces must be faced or face milled prior to drilling the pilot hole. We also recommend centering the workpiece.**
- **Use a two flute drilling tool with a 140° point angle and an m7 tolerance range. Should you be using a third-party product as your pilot drill, please make sure pilot drill diameter is M7 tolerance.**
- **The pilot hole should ideally have a depth of 5xD or at least 1.5xD.**
- **Centering and subsequent chamfering is absolutely essential for horizontal machining.**
- **Any chips must be removed from the pilot hole prior to drilling the deep hole.**



Center drill Art. No.: 814/830

Pilot drill Art. No.: 705/505

Chamfer mill Art. No.: 790/903

2. Deep hole

2.1. Entering the deep hole drill into the pilot hole

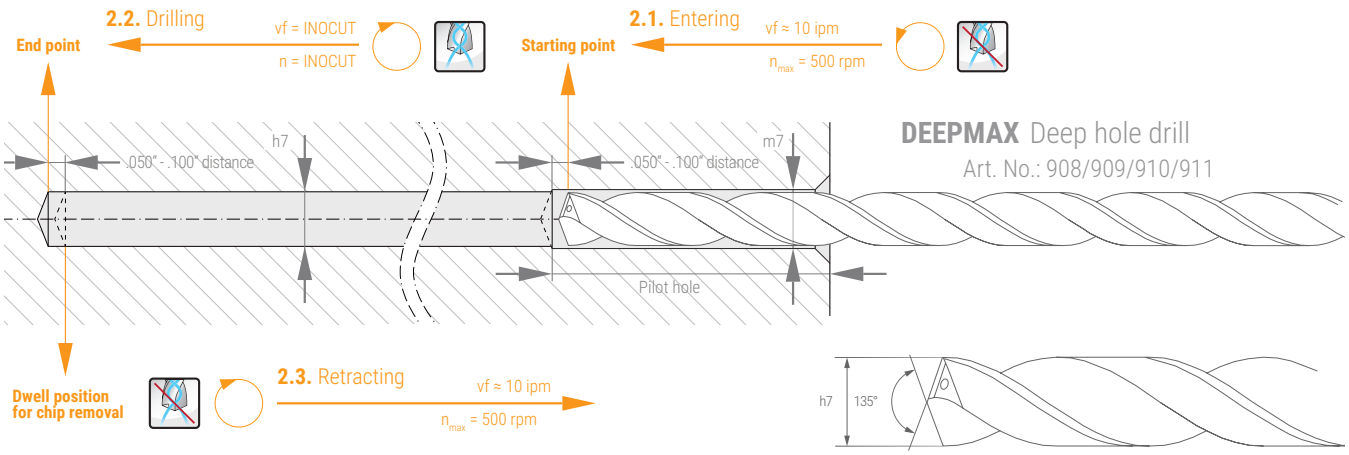
- The internal coolant must be turned off for this procedure.
- Set a maximum rotation speed of 500 rpm, preferably with anti-clockwise rotation, and a feed rate of around 10 ipm.
- Enter the drill to .050"-.100" short of the bottom of the pilot hole.

2.2. Deep hole drilling

- Please make sure you allow enough dwell time for the spindle to start and the internal coolant to build up pressure.
- We recommend using our INOCUT cutting data without chip evacuation (pecking). It should not be necessary to retract the drill for holes up to 30xD. Should additional chip removal be required, we recommend retracting the drill to 3xD. When reaching intersecting holes or making through holes, reduce the feed rate by 50% prior to breakout.

2.3. Retracting the deep hole drill

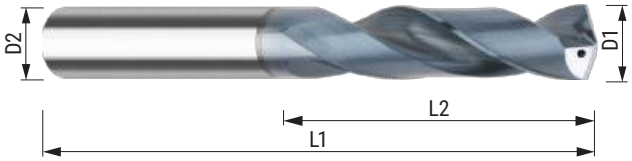
- After reaching the maximum depth, retract the deep hole drill by 050"-.100" (depending on the diameter) for chip removal. If the coolant pressure is too low, you might need to program some dwell time.
- Then reduce the rotation speed to a maximum of 500 rpm.
- Retract the drill out of the hole at a programmed feed rate of around 40 ipm max (not in rapid traverse).

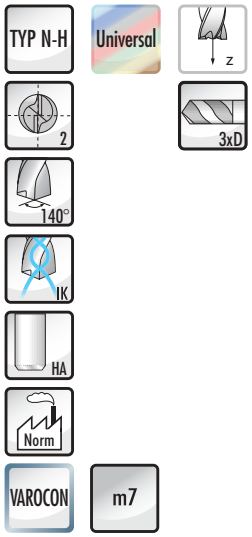


DEEPMAX Deep hole drill
Art. No.: 908/909/910/911

Article-No. **752...**

Solid carbide drill 3xD



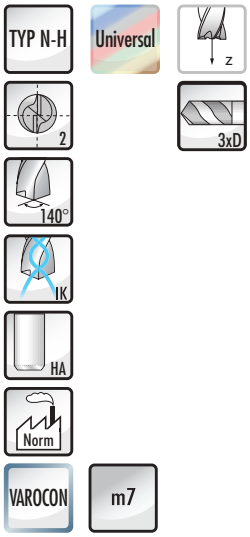


D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
3,000		0,1181	6,00	20	62	752.030.00
3,100		0,1220	6,00	20	62	752.031.00
3,175	1/8	0,1250	6,00	20	62	752.3175.00
3,200		0,1260	6,00	20	62	752.032.00
3,250		0,1280	6,00	20	62	752.325.00
3,300		0,1299	6,00	20	62	752.033.00
3,400		0,1339	6,00	20	62	752.034.00
3,500		0,1378	6,00	20	62	752.035.00
3,572	9/64	0,1406	6,00	20	62	752.3572.00
3,600		0,1417	6,00	20	62	752.036.00
3,700		0,1457	6,00	20	62	752.037.00
3,800		0,1496	6,00	24	66	752.038.00
3,900		0,1535	6,00	24	66	752.039.00
3,969	5/32	0,1563	6,00	24	66	752.3969.00
4,000		0,1575	6,00	24	66	752.040.00
4,100		0,1614	6,00	24	66	752.041.00
4,200		0,1654	6,00	24	66	752.042.00
4,300		0,1693	6,00	24	66	752.043.00
4,366	11/64	0,1719	6,00	24	66	752.4366.00
4,400		0,1732	6,00	24	66	752.044.00
4,500		0,1772	6,00	24	66	752.045.00
4,600		0,1811	6,00	24	66	752.046.00
4,650		0,1831	6,00	24	66	752.465.00
4,700		0,1850	6,00	24	66	752.047.00
4,763	3/16	0,1875	6,00	28	66	752.4763.00
4,800		0,1890	6,00	28	66	752.048.00
4,900		0,1929	6,00	28	66	752.049.00
5,000		0,1969	6,00	28	66	752.050.00
5,100		0,2008	6,00	28	66	752.051.00
5,159	13/64	0,2031	6,00	28	66	752.5159.00
5,200		0,2047	6,00	28	66	752.052.00
5,300		0,2087	6,00	28	66	752.053.00
5,400		0,2126	6,00	28	66	752.054.00
5,500		0,2165	6,00	28	66	752.055.00
5,550		0,2185	6,00	28	66	752.555.00
5,556	7/32	0,2187	6,00	28	66	752.5556.00
5,600		0,2205	6,00	28	66	752.056.00
5,700		0,2244	6,00	28	66	752.057.00
5,800		0,2283	6,00	28	66	752.058.00
5,900		0,2323	6,00	28	66	752.059.00
6,000		0,2362	6,00	28	66	752.060.00
6,100		0,2402	8,00	34	79	752.061.00
6,200		0,2441	8,00	34	79	752.062.00
6,300		0,2480	8,00	34	79	752.063.00
6,350	1/4	0,2500	8,00	34	79	752.6350.00

D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
6,400		0,2520	8,00	34	79	752.064.00
6,500		0,2559	8,00	34	79	752.065.00
6,600		0,2598	8,00	34	79	752.066.00
6,700		0,2638	8,00	34	79	752.067.00
6,747	17/64	0,2656	8,00	34	79	752.6747.00
6,800		0,2677	8,00	34	79	752.068.00
6,900		0,2717	8,00	34	79	752.069.00
7,000		0,2756	8,00	34	79	752.070.00
7,100		0,2795	8,00	41	79	752.071.00
7,144	9/32	0,2813	8,00	41	79	752.7144.00
7,200		0,2835	8,00	41	79	752.072.00
7,300		0,2874	8,00	41	79	752.073.00
7,400		0,2913	8,00	41	79	752.074.00
7,500		0,2953	8,00	41	79	752.075.00
7,541	19/64	0,2969	8,00	41	79	752.7541.00
7,600		0,2992	8,00	41	79	752.076.00
7,700		0,3031	8,00	41	79	752.077.00
7,800		0,3071	8,00	41	79	752.078.00
7,900		0,3110	8,00	41	79	752.079.00
7,938	5/16	0,3125	8,00	41	79	752.7938.00
8,000		0,3150	8,00	41	79	752.080.00
8,100		0,3189	10,00	47	89	752.081.00
8,200		0,3228	10,00	47	89	752.082.00
8,300		0,3268	10,00	47	89	752.083.00
8,400		0,3307	10,00	47	89	752.084.00
8,500		0,3346	10,00	47	89	752.085.00
8,600		0,3386	10,00	47	89	752.086.00
8,700		0,3425	10,00	47	89	752.087.00
8,731	11/32	0,3437	10,00	47	89	752.8731.00
8,800		0,3465	10,00	47	89	752.088.00

Article-No. **752...**

Solid carbide drill 3xD

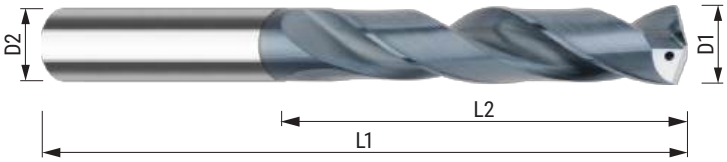


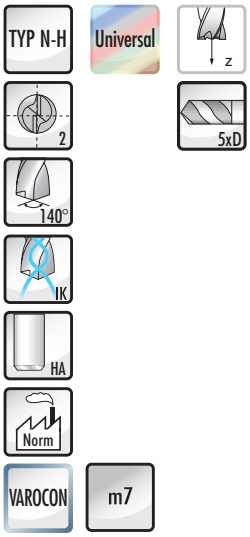
D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
8,900		0,3504	10,00	47	89	752.089.00
9,000		0,3543	10,00	47	89	752.090.00
9,100		0,3583	10,00	47	89	752.091.00
9,128	23/64	0,3594	10,00	47	89	752.9128.00
9,200		0,3622	10,00	47	89	752.092.00
9,300		0,3661	10,00	47	89	752.093.00
9,400		0,3701	10,00	47	89	752.094.00
9,500		0,3740	10,00	47	89	752.095.00
9,525	3/8	0,3750	10,00	47	89	752.9525.00
9,600		0,3780	10,00	47	89	752.096.00
9,700		0,3819	10,00	47	89	752.097.00
9,800		0,3858	10,00	47	89	752.098.00
9,900		0,3898	10,00	47	89	752.099.00
9,922	25/64	0,3906	10,00	47	89	752.9922.00
10,000		0,3937	10,00	47	89	752.100.00
10,100		0,3976	12,00	55	102	752.101.00
10,200		0,4016	12,00	55	102	752.102.00
10,300		0,4055	12,00	55	102	752.103.00
10,319	13/32	0,4063	12,00	55	102	752.10319.00
10,400		0,4094	12,00	55	102	752.104.00
10,500		0,4134	12,00	55	102	752.105.00
10,600		0,4173	12,00	55	102	752.106.00
10,700		0,4213	12,00	55	102	752.107.00
10,716	27/64	0,4219	12,00	55	102	752.10716.00
10,800		0,4252	12,00	55	102	752.108.00
10,900		0,4291	12,00	55	102	752.109.00
11,000		0,4331	12,00	55	102	752.110.00
11,100		0,4370	12,00	55	102	752.111.00
11,113	7/16	0,4375	12,00	55	102	752.11113.00
11,200		0,4409	12,00	55	102	752.112.00
11,300		0,4449	12,00	55	102	752.113.00
11,400		0,4488	12,00	55	102	752.114.00
11,500		0,4528	12,00	55	102	752.115.00
11,509	29/64	0,4531	12,00	55	102	752.11509.00
11,600		0,4567	12,00	55	102	752.116.00
11,700		0,4606	12,00	55	102	752.117.00
11,800		0,4646	12,00	55	102	752.118.00
11,900		0,4685	12,00	55	102	752.119.00
11,906	15/32	0,4687	12,00	55	102	752.11906.00
12,000		0,4724	12,00	55	102	752.120.00
12,200		0,4803	14,00	60	107	752.122.00
12,300		0,4843	14,00	60	107	752.123.00
12,303	31/64	0,4844	14,00	60	107	752.12303.00
12,500		0,4921	14,00	60	107	752.125.00
12,700	1/2	0,5000	14,00	60	107	752.12700.00
12,800		0,5039	14,00	60	107	752.128.00
13,000		0,5118	14,00	60	107	752.130.00
13,494	17/32	0,5313	14,00	60	107	752.13494.00

D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
13,500		0,5315	14,00	60	107	752.135.00
13,800		0,5433	14,00	60	107	752.138.00
14,000		0,5512	14,00	60	107	752.140.00
14,200		0,5591	16,00	65	115	752.142.00
14,288	9/16	0,5625	16,00	65	115	752.14288.00
14,500		0,5709	16,00	65	115	752.145.00
14,800		0,5827	16,00	65	115	752.148.00
15,000		0,5906	16,00	65	115	752.150.00
15,100		0,5945	16,00	65	115	752.151.00
15,200		0,5984	16,00	65	115	752.152.00
15,500		0,6102	16,00	65	115	752.155.00
15,800		0,6220	16,00	65	115	752.158.00
15,875	5/8	0,6250	16,00	65	115	752.15875.00
16,000		0,6299	16,00	65	115	752.160.00
16,500		0,6496	18,00	73	123	752.165.00
16,800		0,6614	18,00	73	123	752.168.00
17,000		0,6693	18,00	73	123	752.170.00
17,300		0,6811	18,00	73	123	752.173.00
17,500		0,6890	18,00	73	123	752.175.00
17,700		0,6969	18,00	73	123	752.177.00
17,800		0,7008	18,00	73	123	752.178.00
18,000		0,7087	18,00	73	123	752.180.00
18,500		0,7283	20,00	79	131	752.185.00
19,000		0,7480	20,00	79	131	752.190.00
19,500		0,7677	20,00	79	131	206.193.00
19,500		0,7677	20,00	79	131	206.195.00
19,800		0,7795	20,00	79	131	206.198.00
20,000		0,7874	20,00	79	131	206.200.00

Article-No. **753...**

Solid carbide drill 5xD





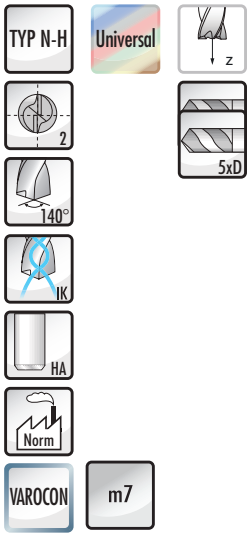
D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
1,000		0,0394	3,00	10	55	753.010.00
1,100		0,0433	3,00	12	55	753.011.00
1,200		0,0472	3,00	12	55	753.012.00
1,300		0,0512	3,00	12	55	753.013.00
1,400		0,0551	3,00	12	55	753.014.00
1,500		0,0591	3,00	12	55	753.015.00
1,600		0,0630	3,00	16	55	753.016.00
1,700		0,0669	3,00	16	55	753.017.00
1,800		0,0709	3,00	16	55	753.018.00
1,900		0,0748	3,00	16	55	753.019.00
2,000		0,0787	3,00	16	57	753.020.00
2,100		0,0827	3,00	21	57	753.021.00
2,200		0,0866	3,00	21	57	753.022.00
2,300		0,0906	3,00	21	57	753.023.00
2,400		0,0945	3,00	21	57	753.024.00
2,500		0,0984	3,00	21	57	753.025.00
2,600		0,1024	3,00	21	57	753.026.00
2,700		0,1063	3,00	21	57	753.027.00
2,800		0,1102	3,00	21	57	753.028.00
2,900		0,1142	3,00	21	57	753.029.00
3,000		0,1181	6,00	28	66	753.030.00
3,100		0,1220	6,00	28	66	753.031.00
3,175	1/8	0,1250	6,00	28	66	753.3175.00
3,200		0,1260	6,00	28	66	753.032.00
3,250		0,1280	6,00	28	66	753.325.00
3,300		0,1299	6,00	28	66	753.033.00
3,400		0,1339	6,00	28	66	753.034.00
3,500		0,1378	6,00	28	66	753.035.00
3,572	9/64	0,1406	6,00	28	66	753.3572.00
3,600		0,1417	6,00	28	66	753.036.00
3,650		0,1437	6,00	28	66	753.365.00
3,700		0,1457	6,00	28	66	753.037.00
3,800		0,1496	6,00	36	74	753.038.00
3,900		0,1535	6,00	36	74	753.039.00
3,969	5/32	0,1563	6,00	36	74	753.3969.00
4,100		0,1614	6,00	36	74	753.041.00
4,200		0,1654	6,00	36	74	753.042.00
4,300		0,1693	6,00	36	74	753.043.00
4,366	11/64	0,1719	6,00	36	74	753.4366.00
4,400		0,1732	6,00	36	74	753.044.00
4,500		0,1772	6,00	36	74	753.045.00
4,600		0,1811	6,00	36	74	753.046.00
4,650		0,1831	6,00	36	74	753.465.00
4,700		0,1850	6,00	36	74	753.047.00
4,763	3/16	0,1875	6,00	44	82	753.4763.00

D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
4,800		0,1890	6,00	44	82	753.048.00
4,900		0,1929	6,00	44	82	753.049.00
5,000		0,1969	6,00	44	82	753.050.00
5,100		0,2008	6,00	44	82	753.051.00
5,159	13/64	0,2031	6,00	44	82	753.5159.00
5,200		0,2047	6,00	44	82	753.052.00
5,250		0,2067	6,00	44	82	753.5250.00
5,300		0,2087	6,00	44	82	753.053.00
5,400		0,2126	6,00	44	82	753.054.00
5,500		0,2165	6,00	44	82	753.055.00
5,550		0,2185	6,00	44	82	753.555.00
5,556	7/32	0,2187	6,00	44	82	753.5556.00
5,600		0,2205	6,00	44	82	753.056.00
5,700		0,2244	6,00	44	82	753.057.00
5,800		0,2283	6,00	44	82	753.058.00
5,900		0,2323	6,00	44	82	753.059.00
6,000		0,2362	6,00	44	82	753.060.00
6,100		0,2402	8,00	53	91	753.061.00
6,200		0,2441	8,00	53	91	753.062.00
6,300		0,2480	8,00	53	91	753.063.00
6,350	1/4	0,2500	8,00	53	91	753.6350.00
6,400		0,2520	8,00	53	91	753.064.00
6,500		0,2559	8,00	53	91	753.065.00
6,600		0,2598	8,00	53	91	753.066.00
6,700		0,2638	8,00	53	91	753.067.00
6,747	17/64	0,2656	8,00	53	91	753.6747.00
6,800		0,2677	8,00	53	91	753.068.00
6,900		0,2717	8,00	53	91	753.069.00
7,000		0,2756	8,00	53	91	753.070.00
7,100		0,2795	8,00	53	91	753.071.00
7,144	9/32	0,2813	8,00	53	91	753.7144.00
7,200		0,2835	8,00	53	91	753.072.00
7,300		0,2874	8,00	53	91	753.073.00
7,400		0,2913	8,00	53	91	753.074.00
7,500		0,2953	8,00	53	91	753.075.00

Article-No. **753...**

D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
7,541	19/64	0,2969	8,00	53	91	753.7541.00
7,600		0,2992	8,00	53	91	753.076.00
7,700		0,3031	8,00	53	91	753.077.00
7,800		0,3071	8,00	53	91	753.078.00
7,900		0,3110	8,00	53	91	753.079.00
7,938	5/16	0,3125	8,00	53	91	753.7938.00
8,000		0,3150	8,00	53	91	753.080.00
8,100		0,3189	10,00	61	103	753.081.00
8,200		0,3228	10,00	61	103	753.082.00
8,300		0,3268	10,00	61	103	753.083.00
8,400		0,3307	10,00	61	103	753.084.00
8,500		0,3346	10,00	61	103	753.085.00
8,600		0,3386	10,00	61	103	753.086.00
8,700		0,3425	10,00	61	103	753.087.00
8,731	11/32	0,3437	10,00	61	103	753.8731.00
8,800		0,3465	10,00	61	103	753.088.00
8,900		0,3504	10,00	61	103	753.089.00
9,000		0,3543	10,00	61	103	753.090.00
9,100		0,3583	10,00	61	103	753.091.00
9,128	23/64	0,3594	10,00	61	103	753.9128.00
9,200		0,3622	10,00	61	103	753.092.00
9,300		0,3661	10,00	61	103	753.093.00
9,400		0,3701	10,00	61	103	753.094.00
9,500		0,3740	10,00	61	103	753.095.00
9,525	3/8	0,3750	10,00	61	103	753.9525.00
9,600		0,3780	10,00	61	103	753.096.00
9,700		0,3819	10,00	61	103	753.097.00
9,800		0,3858	10,00	61	103	753.098.00
9,900		0,3898	10,00	61	103	753.099.00
9,922	25/64	0,3906	10,00	61	103	753.9922.00
10,000		0,3937	10,00	61	103	753.100.00
10,100		0,3976	12,00	71	118	753.101.00
10,200		0,4016	12,00	71	118	753.102.00
10,300		0,4055	12,00	71	118	753.103.00
10,319	13/32	0,4063	12,00	71	118	753.10319.00
10,400		0,4094	12,00	71	118	753.104.00
10,500		0,4134	12,00	71	118	753.105.00
10,600		0,4173	12,00	71	118	753.106.00
10,700		0,4213	12,00	71	118	753.107.00
10,716	27/64	0,4219	12,00	71	118	753.10716.00
10,800		0,4252	12,00	71	118	753.108.00
10,900		0,4291	12,00	71	118	753.109.00
11,000		0,4331	12,00	71	118	753.110.00
11,100		0,4370	12,00	71	118	753.111.00
11,113	7/16	0,4375	12,00	71	118	753.11113.00
11,200		0,4409	12,00	71	118	753.112.00
11,300		0,4449	12,00	71	118	753.113.00
11,400		0,4488	12,00	71	118	753.114.00
11,500		0,4528	12,00	71	118	753.115.00
11,509	29/64	0,4531	12,00	71	118	753.11509.00
11,550		0,4547	12,00	71	118	753.1155.00
11,600		0,4567	12,00	71	118	753.116.00

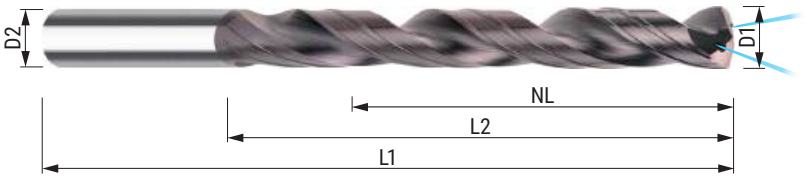
Solid carbide drill 5xD

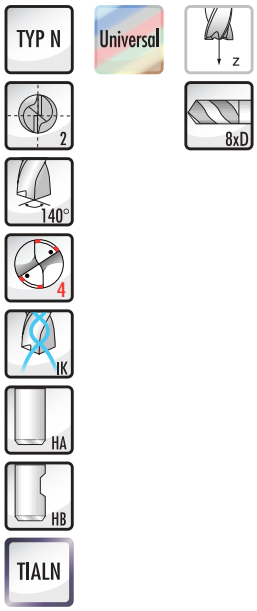


D1 m7	Inch	Decimal Equivalent	D2 h6	L2	L1	Article-No.
11,700		0,4606	12,00	71	118	753.117.00
11,800		0,4646	12,00	71	118	753.118.00
11,900		0,4685	12,00	71	118	753.119.00
11,906	15/32	0,4687	12,00	71	118	753.11906.00
12,000		0,4724	12,00	71	118	753.120.00
12,200		0,4803	14,00	77	124	753.122.00
12,300		0,4843	14,00	77	124	753.123.00
12,303	31/64	0,4844	14,00	77	124	753.12303.00
12,500		0,4921	14,00	77	124	753.125.00
12,700	1/2	0,5000	14,00	77	124	753.12700.00
12,800		0,5039	14,00	77	124	753.128.00
13,000		0,5118	14,00	77	124	753.130.00
13,494	17/32	0,5313	14,00	77	124	753.13494.00
13,500		0,5315	14,00	77	124	753.135.00
13,800		0,5433	14,00	77	124	753.138.00
14,000		0,5512	14,00	77	124	753.140.00
14,200		0,5591	14,00	83	133	753.142.00
14,288	9/16	0,5625	16,00	83	133	753.14288.00
14,500		0,5709	16,00	83	133	753.145.00
15,000		0,5906	16,00	83	133	753.150.00
15,500		0,6102	16,00	83	133	753.152.00
15,500		0,6102	16,00	83	133	753.15210
15,500		0,6102	16,00	83	133	753.155.00
15,800		0,6220	16,00	83	133	753.158.00
15,875	5/8	0,6250	16,00	83	133	753.15875.00
16,000		0,6299	16,00	83	133	753.160.00
16,500		0,6496	18,00	93	143	753.165.00
16,800		0,6614	18,00	93	143	753.168.00
17,000		0,6693	18,00	93	143	753.170.00
17,500		0,6890	18,00	93	143	753.175.00
17,800		0,7008	18,00	93	143	753.178.00
18,000		0,7087	18,00	93	143	753.180.00
18,500		0,7283	18,00	101	153	753.185.00
19,000		0,7480	20,00	101	153	753.190.00
19,500		0,7677	20,00	101	153	207.195.00
20,000		0,7874	20,00	101	153	207.200.00

Article-No. **708...**

Solid carbide drill with internal coolant hole 8xD



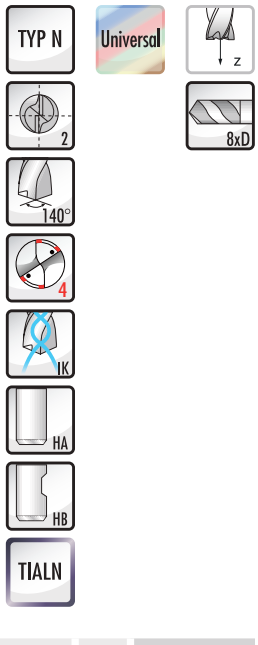


.00 HA Schaft/Shank
.10 HB Schaft/Shank
.20 HE Schaft/Shank

D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
1,000		0,0394	3,00	11	55	9,0	708.010
1,100		0,0433	3,00	17	55	13,5	708.011
1,200		0,0472	3,00	17	55	13,5	708.012
1,300		0,0512	3,00	17	55	13,5	708.013
1,400		0,0551	3,00	17	55	13,5	708.014
1,500		0,0591	3,00	22	65	17,5	708.015
1,600		0,0630	3,00	22	65	17,5	708.016
1,700		0,0669	3,00	22	65	17,5	708.017
1,800		0,0709	3,00	22	65	17,5	708.018
1,900		0,0748	3,00	22	65	17,5	708.019
2,000		0,0787	3,00	28	74	22,5	708.020
2,100		0,0827	3,00	28	74	22,5	708.021
2,200		0,0866	3,00	28	74	22,5	708.022
2,300		0,0906	3,00	28	74	22,5	708.023
2,400		0,0945	3,00	28	74	22,5	708.024
2,500		0,0984	3,00	28	81	22,5	708.025
2,600		0,1024	3,00	32	81	22,5	708.026
2,700		0,1063	3,00	32	81	22,5	708.027
2,800		0,1102	3,00	32	81	22,5	708.028
2,900		0,1142	3,00	32	81	22,5	708.029
3,000		0,1181	6,00	34	72	27,0	708.030
3,100		0,1220	6,00	34	72	27,0	708.031
3,175	1/8	0,1250	6,00	34	72	27,0	708.3175
3,200		0,1260	6,00	34	72	27,0	708.032
3,300		0,1299	6,00	34	72	27,0	708.033
3,400		0,1339	6,00	34	72	27,0	708.034
3,500		0,1378	6,00	34	72	27,0	708.035
3,572	9/64	0,1406	6,00	34	72	27,0	708.3572
3,600		0,1417	6,00	34	72	27,0	708.036
3,700		0,1457	6,00	34	72	27,0	708.037
3,800		0,1496	6,00	43	86	35,0	708.038
3,900		0,1535	6,00	43	86	35,0	708.039
3,969	5/32	0,1563	6,00	43	86	35,0	708.3969
4,000		0,1575	6,00	43	86	35,0	708.040
4,100		0,1614	6,00	43	86	35,0	708.041
4,200		0,1654	6,00	43	86	35,0	708.042
4,300		0,1693	6,00	43	86	35,0	708.043
4,366	11/64	0,1719	6,00	43	86	35,0	708.4366
4,400		0,1732	6,00	43	86	35,0	708.044
4,500		0,1772	6,00	43	86	35,0	708.045
4,600		0,1811	6,00	43	86	35,0	708.046
4,700		0,1850	6,00	57	95	45,0	708.047
4,763	3/16	0,1875	6,00	57	95	45,0	708.4763
4,800		0,1890	6,00	57	95	45,0	708.048
4,900		0,1929	6,00	57	95	45,0	708.049
5,000		0,1969	6,00	57	95	45,0	708.050
5,100		0,2008	6,00	57	95	45,0	708.051
5,159	13/64	0,2031	6,00	57	95	45,0	708.5159
5,200		0,2047	6,00	57	95	45,0	708.052
5,300		0,2087	6,00	57	95	45,0	708.053
5,400		0,2126	6,00	57	95	45,0	708.054
5,500		0,2165	6,00	57	95	45,0	708.055
5,556	7/32	0,2187	6,00	57	95	45,0	708.5556
5,600		0,2205	6,00	57	95	45,0	708.056
5,700		0,2244	6,00	57	95	45,0	708.057
5,800		0,2283	6,00	57	95	45,0	708.058
5,900		0,2323	6,00	57	95	45,0	708.059
6,000		0,2362	6,00	57	95	45,0	708.060
6,100		0,2402	8,00	76	114	52,0	708.061
6,200		0,2441	8,00	76	114	52,0	708.062
6,300		0,2480	8,00	76	114	52,0	708.063
6,350	1/4	0,2500	8,00	76	114	52,0	708.6350
6,400		0,2520	8,00	76	114	52,0	708.064
6,500		0,2559	8,00	76	114	52,0	708.065
6,600		0,2598	8,00	76	114	52,0	708.066
6,700		0,2638	8,00	76	114	52,0	708.067
6,747	17/64	0,2656	8,00	76	114	52,0	708.6747
6,800		0,2677	8,00	76	114	52,0	708.068
6,900		0,2717	8,00	76	114	52,0	708.069
7,000		0,2756	8,00	76	114	52,0	708.070
7,100		0,2795	8,00	76	114	52,0	708.071
7,144	9/32	0,2813	8,00	76	114	52,0	708.7144
7,200		0,2835	8,00	76	114	52,0	708.072
7,300		0,2874	8,00	76	114	52,0	708.073
7,400		0,2913	8,00	76	114	52,0	708.074

Article-No. **708...**

Solid carbide drill with internal coolant hole 8xD

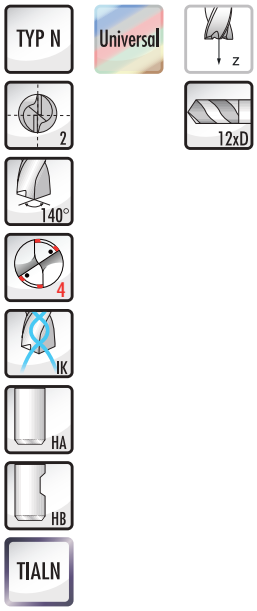


D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
7,500		0,2953	8,00	76	114	52,0	708.075
7,541	19/64	0,2969	8,00	76	114	52,0	708.7541
7,600		0,2992	8,00	76	114	52,0	708.076
7,700		0,3031	8,00	76	114	52,0	708.077
7,800		0,3071	8,00	76	114	52,0	708.078
7,900		0,3110	8,00	76	114	52,0	708.079
7,938	5/16	0,3125	10,00	76	114	52,0	708.7938
8,000		0,3150	10,00	76	114	52,0	708.080
8,100		0,3189	10,00	95	142	76,0	708.081
8,200		0,3228	10,00	95	142	76,0	708.082
8,300		0,3268	10,00	95	142	76,0	708.083
8,400		0,3307	10,00	95	142	76,0	708.084
8,500		0,3346	10,00	95	142	76,0	708.085
8,600		0,3386	10,00	95	142	76,0	708.086
8,700		0,3425	10,00	95	142	76,0	708.087
8,731	11/32	0,3437	10,00	95	142	76,0	708.8731
8,800		0,3465	10,00	95	142	76,0	708.088
8,900		0,3504	10,00	95	142	76,0	708.089
9,000		0,3543	10,00	95	142	76,0	708.090
9,100		0,3583	10,00	95	142	76,0	708.091
9,128	23/64	0,3594	10,00	95	142	76,0	708.9128
9,200		0,3622	10,00	95	142	76,0	708.092
9,300		0,3661	10,00	95	142	76,0	708.093
9,400		0,3701	10,00	95	142	76,0	708.094
9,500		0,3740	10,00	95	142	76,0	708.095
9,525	3/8	0,3750	10,00	95	142	76,0	708.9525
9,600		0,3780	10,00	95	142	76,0	708.096
9,700		0,3819	10,00	95	142	76,0	708.097
9,800		0,3858	10,00	95	142	76,0	708.098
9,900		0,3898	10,00	95	142	76,0	708.099
9,922	25/64	0,3906	10,00	95	142	76,0	708.9922
10,000		0,3937	10,00	95	142	76,0	708.100
10,100		0,3976	12,00	114	162	90,0	708.101
10,200		0,4016	12,00	114	162	90,0	708.102
10,300		0,4055	12,00	114	162	90,0	708.103
10,319	13/32	0,4063	12,00	114	162	90,0	708.10319
10,400		0,4094	12,00	114	162	90,0	708.104
10,500		0,4134	12,00	114	162	90,0	708.105
10,600		0,4173	12,00	114	162	90,0	708.106
10,700		0,4213	12,00	114	162	90,0	708.107
10,716	27/64	0,4219	12,00	114	162	90,0	708.10716
10,800		0,4252	12,00	114	162	90,0	708.108
10,900		0,4291	12,00	114	162	90,0	708.109
11,000		0,4331	12,00	114	162	90,0	708.110
11,100		0,4370	12,00	114	162	90,0	708.111
11,113	7/16	0,4375	12,00	114	162	90,0	708.11113
11,200		0,4409	12,00	114	162	90,0	708.112
11,300		0,4449	12,00	114	162	90,0	708.113
11,400		0,4488	12,00	114	162	90,0	708.114
11,500		0,4528	12,00	114	162	90,0	708.115
11,509	29/64	0,4531	12,00	114	162	90,0	708.11509
11,600		0,4567	12,00	114	162	90,0	708.116
11,700		0,4606	12,00	114	162	90,0	708.117
11,800		0,4646	12,00	114	162	90,0	708.118
11,900		0,4685	12,00	114	162	90,0	708.119
11,906	15/32	0,4687	12,00	114	162	90,0	708.11906
12,000		0,4724	12,00	114	162	90,0	708.120
12,200		0,4803	14,00	133	184	106,0	708.122
12,303	31/64	0,4844	14,00	133	184	106,0	708.12303
12,500		0,4921	14,00	133	184	106,0	708.125
12,700	1/2	0,5000	14,00	133	184	106,0	708.12700
12,800		0,5039	14,00	133	184	106,0	708.128
13,000		0,5118	14,00	133	184	106,0	708.130
13,494	17/32	0,5313	14,00	133	184	106,0	708.13494
13,500		0,5315	14,00	133	184	106,0	708.135
14,000		0,5512	14,00	133	184	106,0	708.140
14,288	9/16	0,5625	16,00	152	203	122,0	708.14288
14,500		0,5709	16,00	152	203	122,0	708.145
15,000		0,5906	16,00	152	203	122,0	708.150
15,500		0,6102	16,00	152	203	122,0	708.155
15,800		0,6102	16,00	152	203	122,0	708.158
15,875	5/8	0,6250	16,00	152	203	122,0	708.15875
16,000		0,6299	16,00	152	203	122,0	708.160
16,500		0,6496	18,00	171	222	150,0	708.165
17,000		0,6693	18,00	171	222	150,0	708.170
17,500		0,6890	18,00	171	222	150,0	708.175
18,000		0,7087	18,00	171	222	150,0	708.180
18,500		0,7283	20,00	190	243	170,0	708.185
19,000		0,7480	20,00	190	243	170,0	708.190
20,000		0,7874	20,00	190	243	170,0	708.200

Article-No. **710...**

Solid carbide drill with internal coolant hole 12xD



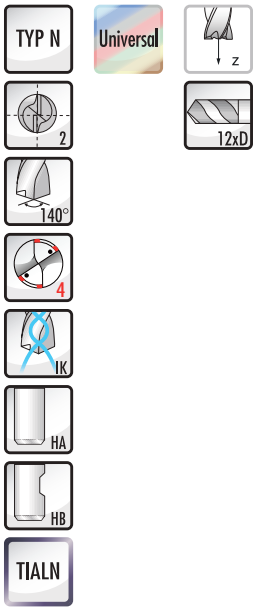


.00 HA Schaft/Shank
.10 HB Schaft/Shank
.20 HE Schaft/Shank

D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
1,00		0,0394	3,00	15	55	12,0	710.010..00
1,10		0,0433	3,00	23	55	18,5	710.011.00
1,20		0,0472	3,00	23	55	18,5	710.012.00
1,30		0,0512	3,00	23	55	18,5	710.013.00
1,40		0,0551	3,00	23	55	18,5	710.014.00
1,50		0,0591	3,00	30	65	24,0	710.015.00
1,60		0,0630	3,00	30	65	24,0	710.016.00
1,70		0,0669	3,00	30	65	24,0	710.017.00
1,80		0,0709	3,00	30	65	24,0	710.018.00
1,90		0,0748	3,00	30	65	24,0	710.019.00
2,00		0,0787	3,00	38	74	30,5	710.020..00
2,10		0,0827	3,00	38	74	30,5	710.021.00
2,20		0,0866	3,00	38	74	30,5	710.022.00
2,30		0,0906	3,00	38	74	30,5	710.023.00
2,40		0,0945	3,00	38	74	30,5	710.024.00
2,50		0,0984	3,00	44	81	30,5	710.025.00
2,60		0,1024	3,00	44	81	30,5	710.026.00
2,70		0,1063	3,00	44	81	30,5	710.027.00
2,80		0,1102	3,00	44	81	30,5	710.028.00
2,90		0,1142	3,00	44	81	30,5	710.029.00
3,00		0,1181	6,00	54	92	48,0	710.030...
3,10		0,1220	6,00	54	92	48,0	710.031...
3,175	1/8	0,1250	6,00	54	92	48,0	710.3175...
3,200		0,1260	6,00	54	92	48,0	710.032...
3,300		0,1299	6,00	54	92	48,0	710.033...
3,400		0,1339	6,00	54	92	48,0	710.034...
3,500		0,1378	6,00	54	92	48,0	710.035...
3,572	9/64	0,1406	6,00	54	92	48,0	710.3572...
3,600		0,1417	6,00	54	92	48,0	710.036...
3,700		0,1457	6,00	54	92	48,0	710.037...
3,800		0,1496	6,00	64	102	58,0	710.038...
3,900		0,1535	6,00	64	102	58,0	710.039...
3,969	5/32	0,1563	6,00	64	102	58,0	710.3969...
4,000		0,1575	6,00	64	102	58,0	710.040...
4,100		0,1614	6,00	64	102	58,0	710.041...
4,200		0,1654	6,00	64	102	58,0	710.042...
4,300		0,1693	6,00	64	102	58,0	710.043...
4,366	11/64	0,1719	6,00	64	102	58,0	710.4366...
4,400		0,1732	6,00	64	102	58,0	710.044...
4,500		0,1772	6,00	64	102	58,0	710.045...
4,600		0,1811	6,00	64	102	58,0	710.046...
4,700		0,1850	6,00	64	102	58,0	710.047...
4,763	3/16	0,1875	6,00	78	118	70,0	710.4763...
4,800		0,1890	6,00	78	118	70,0	710.048...
4,900		0,1929	6,00	78	118	70,0	710.049...
5,000		0,1969	6,00	78	118	70,0	710.050...
5,100		0,2008	6,00	78	118	70,0	710.051...
5,159	13/64	0,2031	6,00	78	118	70,0	710.5159...
5,200		0,2047	6,00	78	118	70,0	710.052...
5,300		0,2087	6,00	78	118	70,0	710.053...
5,400		0,2126	6,00	78	118	70,0	710.054...
5,500		0,2165	6,00	78	118	70,0	710.055...
5,556	7/32	0,2187	6,00	78	118	70,0	710.5556...
5,600		0,2205	6,00	78	118	70,0	710.056...
5,700		0,2244	6,00	78	118	70,0	710.057...
5,800		0,2283	6,00	78	118	70,0	710.058...
5,900		0,2323	6,00	78	118	70,0	710.059...
6,000		0,2362	6,00	78	118	70,0	710.060...
6,100		0,2402	8,00	108	146	94,0	710.061...
6,200		0,2441	8,00	108	146	94,0	710.062...
6,300		0,2480	8,00	108	146	94,0	710.063...
6,350	1/4	0,2500	8,00	108	146	94,0	710.6350...
6,400		0,2520	8,00	108	146	94,0	710.064...
6,500		0,2559	8,00	108	146	94,0	710.065...
6,600		0,2598	8,00	108	146	94,0	710.066...
6,700		0,2638	8,00	108	146	94,0	710.067...
6,747	17/64	0,2656	8,00	108	146	94,0	710.6747...
6,800		0,2677	8,00	108	146	94,0	710.068...
6,900		0,2717	8,00	108	146	94,0	710.069...
7,000		0,2756	8,00	108	146	94,0	710.070...
7,100		0,2795	8,00	108	146	94,0	710.071...
7,144	9/32	0,2813	8,00	108	146	94,0	710.7144...
7,200		0,2835	8,00	108	146	94,0	710.072...
7,300		0,2874	8,00	108	146	94,0	710.073...
7,400		0,2913	8,00	108	146	94,0	710.074...
7,500		0,2953	8,00	108	146	94,0	710.075...
7,541	19/64	0,2969	8,00	108	146	94,0	710.7541...

Article-No. **710...**

Solid carbide drill with internal coolant hole 12xD

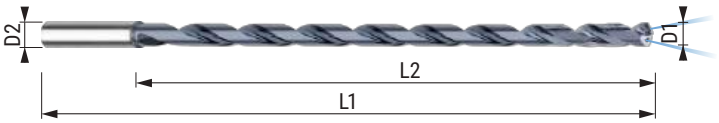


D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
7,600		0,2992	8,00	108	146	94,0	710.076...
7,700		0,3031	8,00	108	146	94,0	710.077...
7,800		0,3071	8,00	108	146	94,0	710.078...
7,900		0,3110	8,00	108	146	94,0	710.079...
7,938	5/16	0,3125	8,00	108	146	94,0	710.7938...
8,000		0,3150	8,00	108	146	94,0	710.080...
8,100		0,3189	10,00	120	162	110,0	710.081...
8,200		0,3228	10,00	120	162	110,0	710.082...
8,300		0,3268	10,00	120	162	110,0	710.083...
8,400		0,3307	10,00	120	162	110,0	710.084...
8,500		0,3346	10,00	120	162	110,0	710.085...
8,600		0,3386	10,00	120	162	110,0	710.086...
8,700		0,3425	10,00	120	162	110,0	710.087...
8,731	11/32	0,3437	10,00	120	162	110,0	710.8731...
8,800		0,3465	10,00	120	162	110,0	710.088...
8,900		0,3504	10,00	120	162	110,0	710.089...
9,000		0,3543	10,00	120	162	110,0	710.090...
9,100		0,3583	10,00	120	162	110,0	710.091...
9,128	23/64	0,3594	10,00	120	162	110,0	710.9128...
9,200		0,3622	10,00	120	162	110,0	710.092...
9,300		0,3661	10,00	120	162	110,0	710.093...
9,400		0,3701	10,00	120	162	110,0	710.094...
9,500		0,3740	10,00	120	162	110,0	710.095...
9,525	3/8	0,3750	10,00	120	162	110,0	710.9525...
9,600		0,3780	10,00	120	162	110,0	710.096...
9,700		0,3819	10,00	120	162	110,0	710.097...
9,800		0,3858	10,00	120	162	110,0	710.098...
9,900		0,3898	10,00	120	162	110,0	710.099...
9,922	25/64	0,3906	10,00	120	162	110,0	710.9922...
10,000		0,3937	10,00	120	162	110,0	710.1.....
10,100		0,3976	12,00	156	204	142,0	710.101...
10,200		0,4016	12,00	156	204	142,0	710.102...
10,300		0,4055	12,00	156	204	142,0	710.103...
10,319	13/32	0,4063	12,00	156	204	142,0	710.10319...
10,400		0,4094	12,00	156	204	142,0	710.104...
10,500		0,4134	12,00	156	204	142,0	710.105...
10,600		0,4173	12,00	156	204	142,0	710.106...
10,700		0,4213	12,00	156	204	142,0	710.107...
10,716	27/64	0,4219	12,00	156	204	142,0	710.10716...
10,800		0,4252	12,00	156	204	142,0	710.108...
10,900		0,4291	12,00	156	204	142,0	710.109...
11,000		0,4331	12,00	156	204	142,0	710.110...
11,100		0,4370	12,00	156	204	142,0	710.111...
11,113	7/16	0,4375	12,00	156	204	142,0	710.11113...
11,200		0,4409	12,00	156	204	142,0	710.112...
11,300		0,4449	12,00	156	204	142,0	710.113...
11,400		0,4488	12,00	156	204	142,0	710.114...
11,500		0,4528	12,00	156	204	142,0	710.115...
11,509	29/64	0,4531	12,00	156	204	142,0	710.11509...
11,600		0,4567	12,00	156	204	142,0	710.116...
11,700		0,4606	12,00	156	204	142,0	710.117...
11,800		0,4646	12,00	156	204	142,0	710.118...
11,900		0,4685	12,00	156	204	142,0	710.119...
11,906	15/32	0,4687	12,00	156	204	142,0	710.11906...
12,000		0,4724	12,00	156	204	142,0	710.120...
12,303	31/64	0,4844	14,00	182	230	166,0	710.12303...
12,500		0,4921	14,00	182	230	166,0	710.125...
12,700	1/2	0,5000	14,00	182	230	166,0	710.127.....
12,800		0,5039	14,00	182	230	166,0	710.128...
13,000		0,5118	14,00	182	230	166,0	710.130...
13,494	17/32	0,5313	14,00	182	230	166,0	710.13494...
13,500		0,5315	14,00	182	230	166,0	710.135...
13,800		0,5433	14,00	182	230	166,0	710.138...
14,000		0,5512	14,00	182	230	166,0	710.140...
14,288	9/16	0,5625	16,00	208	260	192,0	710.14288...
14,500		0,5709	16,00	208	260	192,0	710.145...
14,800		0,5827	16,00	208	260	192,0	710.148...
15,000		0,5906	16,00	208	260	192,0	710.150...
15,500		0,6102	16,00	208	260	192,0	710.155...
15,800		0,6220	16,00	208	260	192,0	710.158...
15,875	5/8	0,6250	16,00	208	260	192,0	710.15875...
16,000		0,6299	16,00	208	260	192,0	710.160...
16,500		0,6496	18,00	234	285	216,0	710.165...
16,800		0,6614	18,00	234	285	216,0	710.168...
17,000		0,6693	18,00	234	285	216,0	710.170...
17,500		0,6890	18,00	234	285	216,0	710.175...
17,800		0,7008	18,00	234	285	216,0	710.178...
18,000		0,7087	18,00	234	285	216,0	710.180...
18,500		0,7283	20,00	258	310	238,0	710.185...
18,800		0,7402	20,00	258	310	238,0	710.188...
19,000		0,7480	20,00	258	310	238,0	710.190...
19,500		0,7677	20,00	258	310	238,0	710.195...
19,800		0,7795	20,00	258	310	238,0	710.198...
20,000		0,7874	20,00	258	310	238,0	710.200...

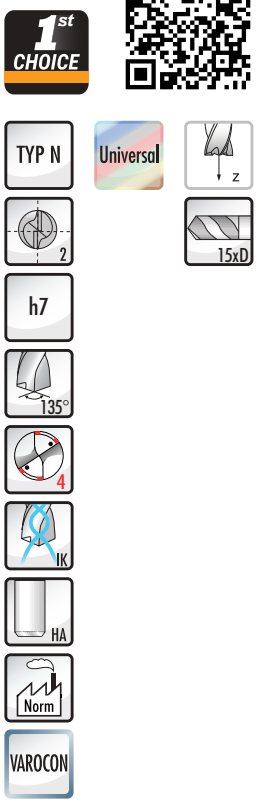
Solid carbide deep hole drills

Article-No. **908...**

Solid carbide deep hole drill **DEEPMAX 15xD**



D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
1,000		0,0394	3,00	18,2	60	18	908.010.00
1,100		0,0433	3,00	20,2	60	20	908.011.00
1,200		0,0472	3,00	24,2	60	24	908.012.00
1,300		0,0512	3,00	24,2	60	24	908.013.00
1,400		0,0551	3,00	27,2	60	27	908.014.00
1,500		0,0591	3,00	27,2	60	27	908.015.00
1,600		0,0630	3,00	30,2	65	30	908.016.00
1,700		0,0669	3,00	30,2	65	30	908.017.00
1,800		0,0709	3,00	35,2	65	35	908.018.00
1,900		0,0748	3,00	35,2	65	35	908.019.00
2,000		0,0787	4,00	35,5	65	35	908.020.00
2,100		0,0827	4,00	40,5	75	40	908.021.00
2,200		0,0866	4,00	40,5	75	40	908.022.00
2,300		0,0906	4,00	40,5	75	40	908.023.00
2,400		0,0945	4,00	45,5	75	45	908.024.00
2,500		0,0984	4,00	45,5	75	45	908.025.00
2,600		0,1024	4,00	48,5	80	48	908.026.00
2,700		0,1063	4,00	48,5	80	48	908.027.00
2,800		0,1102	4,00	50,5	80	50	908.028.00
2,900		0,1142	4,00	50,5	80	50	908.029.00
3,000		0,1181	6,00	55,5	100	55	908.030.00
3,100		0,1220	6,00	55,5	100	55	908.031.00
3,175	1/8	0,1250	6,00	60,5	100	60	908.3175.00
3,200		0,1260	6,00	60,5	100	60	908.032.00
3,300		0,1299	6,00	60,5	100	60	908.033.00
3,400		0,1339	6,00	60,5	100	60	908.034.00
3,500		0,1378	6,00	65,5	100	65	908.035.00
3,572	9/64	0,1406	6,00	65,5	100	65	908.3572.00
3,600		0,1417	6,00	65,5	108	65	908.036.00
3,700		0,1457	6,00	70,5	108	70	908.037.00
3,800		0,1496	6,00	70,5	108	70	908.038.00
3,900		0,1535	6,00	70,5	108	70	908.039.00
3,969	5/32	0,1563	6,00	75,5	115	75	908.3969.00
4,000		0,1575	6,00	75,5	115	75	908.040.00
4,100		0,1614	6,00	75,5	115	75	908.041.00
4,200		0,1654	6,00	75,5	115	75	908.042.00
4,300		0,1693	6,00	80,5	115	80	908.043.00
4,400		0,1732	6,00	80,5	115	80	908.044.00
4,500		0,1772	6,00	80,5	115	80	908.045.00
4,600		0,1811	6,00	80,5	130	85	908.046.00
4,700		0,1850	6,00	80,5	130	85	908.047.00
4,763	3/16	0,1875	6,00	90,5	130	90	908.4763.00
4,800		0,1890	6,00	90,5	130	90	908.048.00
4,900		0,1929	6,00	90,5	130	90	908.049.00



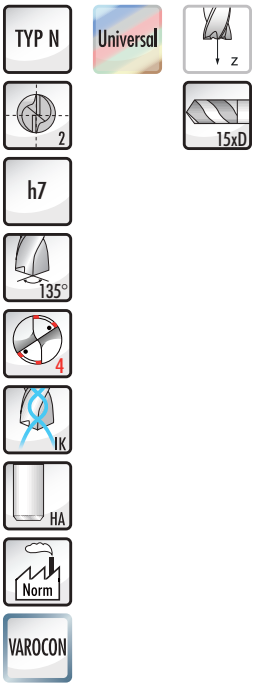
Recommendation:

Maximum drilling depth: Flute length (see table) minus 1.5 x nominal diameter

Article-No. **908...**

Solid carbide deep hole drill **DEEPMAX 15xD**





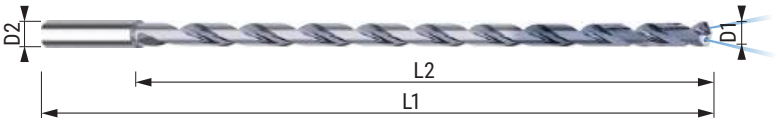
D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
5,000		0,1969	6,00	90,5	130	90	908.050.00
5,100		0,2008	6,00	95,5	130	95	908.051.00
5,200		0,2047	6,00	95,5	130	95	908.052.00
5,300		0,2087	6,00	95,5	130	95	908.053.00
5,400		0,2126	6,00	95,5	130	95	908.054.00
5,500		0,2165	6,00	100,5	145	100	908.055.00
5,556	7/32	0,2187	6,00	100,5	145	100	908.5556.00
5,600		0,2205	6,00	100,5	145	100	908.056.00
5,700		0,2244	6,00	100,5	145	100	908.057.00
5,800		0,2283	6,00	100,5	145	100	908.058.00
5,900		0,2323	6,00	100,5	145	100	908.059.00
6,000		0,2362	6,00	100.5	145	100	908.060.00
6,100		0,2402	8,00	107,0	145	104	908.061.00
6,200		0,2441	8,00	107,0	145	104	908.062.00
6,300		0,2480	8,00	107,0	145	104	908.063.00
6,350	1/4	0,2500	8,00	107,0	145	104	908.6350.00
6,400		0,2520	8,00	107,0	145	104	908.064.00
6,500		0,2559	8,00	121,0	160	118	908.065.00
6,600		0,2598	8,00	121,0	160	118	908.066.00
6,700		0,2638	8,00	131,0	170	128	908.067.00
6,800		0,2677	8,00	131,0	170	128	908.068.00
6,900		0,2717	8,00	131,0	170	128	908.069.00
7,000		0,2756	8,00	131,0	170	128	908.070.00
7,144	9/32	0,2813	8,00	131,0	170	128	908.7144.00
7,500		0,2953	8,00	131,0	170	128	908.075.00
7,800		0,3071	8,00	141,0	180	138	908.078.00
7,938	5/16	0,3125	8,00	141,0	180	138	908.7938.00
8,000		0,3150	8,00	141,0	180	138	908.080.00
8,500		0,3346	10,00	155,0	198	152	908.085.00
8,731	11/32	0,3437	10,00	165,0	208	162	908.8731.00
8,800		0,3465	10,00	165,0	208	162	908.088.00
9,000		0,3543	10,00	165,0	208	162	908.090.00
9,500		0,3740	10,00	165,0	208	162	908.095.00
9,525	3/8	0,3750	10,00	165,0	208	162	908.9525.00
9,800		0,3858	10,00	165,0	208	162	908.098.00
10,000		0,3937	10,00	175,0	218	172	908.1.00.00
10,200		0,4016	12,00	187,0	235	184	908.102.00
10,319	13/32	0,4063	12,00	187,0	235	184	908.10319.00
10,500		0,4134	12,00	197,0	245	194	908.105.00
10,800		0,4252	12,00	197,0	245	194	908.108.00
11,000		0,4331	12,00	197,0	245	194	908.110.00
11,113	7/16	0,4375	12,00	197,0	245	194	908.11113.00
11,200		0,4409	12,00	197,0	245	194	908.112.00
11,500		0,4528	12,00	197,0	245	194	908.115.00
11,800		0,4646	12,00	207,0	255	204	908.118.00
11,906	15/32	0,4687	12,00	207,0	255	204	908.11906.00
12,000		0,4724	12,00	207,0	255	204	908.120.00

Recommendation:

Maximum drilling depth: Flute length (see table) minus 1.5 x nominal diameter

Article-No. **909...**

Solid carbide deep hole drill **DEEPMAX 20xD**



D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
2,000		0,0787	4,00	45,50	95	45	909.020.00
2,100		0,0827	4,00	50,50	95	50	909.021.00
2,200		0,0866	4,00	50,50	95	50	909.022.00
2,300		0,0906	4,00	55,50	95	55	909.023.00
2,400		0,0945	4,00	55,50	95	55	909.024.00
2,500		0,0984	4,00	60,50	108	60	909.025.00
2,600		0,1024	4,00	60,50	108	60	909.026.00
2,700		0,1063	4,00	65,50	108	65	909.027.00
2,800		0,1102	4,00	65,50	108	65	909.028.00
2,900		0,1142	4,00	68,50	112	68	909.029.00
3,000		0,1181	6,00	68,50	112	68	909.030.00
3,175	1/8	0,1250	6,00	75,50	120	75	909.3175.00
3,200		0,1260	6,00	75,50	120	75	909.032.00
3,300		0,1299	6,00	75,50	120	75	909.033.00
3,500		0,1378	6,00	80,50	130	80	909.035.00
3,572	9/64	0,1406	6,00	80,50	130	80	909.3572.00
3,800		0,1496	6,00	90,50	140	90	909.038.00
3,969	5/32	0,1563	6,00	95,50	140	95	909.3969.00
4,000		0,1575	6,00	95,50	140	95	909.040.00
4,200		0,1654	6,00	95,50	140	95	909.042.00
4,500		0,1772	6,00	110,50	160	110	909.045.00
4,600		0,1811	6,00	110,50	160	110	909.046.00
4,763	3/16	0,1875	6,00	115,50	160	115	909.4763.00
4,800		0,1890	6,00	115,50	160	115	909.048.00
5,000		0,1969	6,00	115,50	160	115	909.050.00
5,500		0,2165	6,00	140,50	185	140	909.055.00
5,556	7/32	0,2187	6,00	140,50	185	140	909.5556.00
5,800		0,2283	6,00	140,50	185	140	909.058.00
6,000		0,2362	6,00	140,50	185	140	909.060.00
6,350	1/4	0,2500	8,00	150,00	190	147	909.6350.00
6,500		0,2559	8,00	150,00	190	147	909.065.00
6,800		0,2677	8,00	160,00	200	157	909.068.00
7,000		0,2756	8,00	170,00	210	167	909.070.00
7,144	9/32	0,2813	8,00	170,00	210	167	909.7144.00
7,500		0,2953	8,00	170,00	210	167	909.075.00
7,800		0,3071	8,00	190,00	230	187	909.078.00
7,938	5/16	0,3125	8,00	190,00	230	187	909.7938.00
8,000		0,3150	8,00	190,00	230	187	909.080.00
8,500		0,3346	10,00	196,00	240	193	909.085.00
8,731	11/32	0,3437	10,00	216,00	260	213	909.8731.00
8,800		0,3465	10,00	216,00	260	213	909.088.00
9,000		0,3543	10,00	216,00	260	213	909.090.00
9,525	3/8	0,3750	10,00	236,00	280	233	909.9525.00
9,800		0,3858	10,00	236,00	280	233	909.098.00
10,000		0,3937	10,00	236,00	280	233	909.1.00.00
10,200		0,4016	12,00	241,00	290	238	909.102.00
10,319	13/32	0,4063	12,00	241,00	290	238	909.10319.00
10,800		0,4252	12,00	266,00	315	263	909.108.00
11,113	7/16	0,4375	12,00	266,00	315	263	909.11113.00
11,800		0,4646	12,00	266,00	315	263	909.118.00
11,906	15/32	0,4687	12,00	266,00	315	263	909.11906.00
12,000		0,4724	12,00	266,00	315	263	909.120.00

1st CHOICE

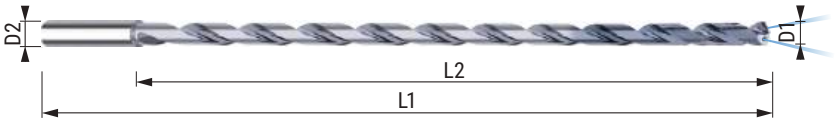
TYP N | Universal | z | 20xD | 2 | h7 | 135° | 4 | IK | HA | Norm | VAROCON

Recommendation:

Maximum drilling depth: Flute length (see table) minus 1.5 x nominal diameter

Article-No. **910...**

Solid carbide deep hole drill **DEEPMAX 25xD**



1st CHOICE

TYP N | Universal | z | 2 | 25xD | h7 | 135° | 4 | IK | HA | Norm | VAROCON

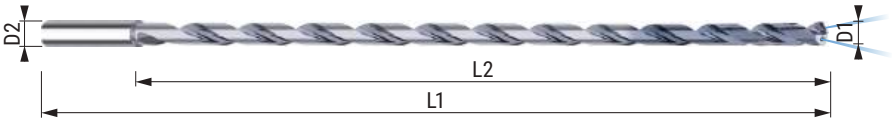
D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
3,000		0,1181	6,00	85,5	130	85	910.030.00
3,175	1/8	0,1250	6,00	95,5	140	95	910.3175.00
3,200		0,1260	6,00	95,5	140	95	910.032.00
3,300		0,1299	6,00	95,5	140	95	910.033.00
3,500		0,1378	6,00	100,5	150	100	910.035.00
3,572	9/64	0,1406	6,00	100,5	150	100	910.3572.00
3,800		0,1496	6,00	105,5	150	105	910.038.00
3,969	5/32	0,1563	6,00	110,5	160	110	910.3969.00
4,000		0,1575	6,00	110,5	160	110	910.040.00
4,200		0,1654	6,00	120,5	170	120	910.042.00
4,500		0,1772	6,00	130,5	180	130	910.045.00
4,763	3/16	0,1875	6,00	140,5	190	140	910.4763.00
4,800		0,1890	6,00	140,5	190	140	910.048.00
5,000		0,1969	6,00	140,5	190	140	910.050.00
5,500		0,2165	6,00	160,5	210	160	910.055.00
5,556	7/32	0,2187	6,00	160,5	210	160	910.5556.00
5,800		0,2283	6,00	160,5	210	160	910.058.00
6,000		0,2362	6,00	170,5	220	170	910.060.00
6,350	1/4	0,2500	8,00	191,0	230	188	910.6350.00
6,500		0,2559	8,00	191,0	230	188	910.065.00
6,800		0,2677	8,00	191,0	230	188	910.068.00
7,000		0,2756	8,00	201,0	240	198	910.070.00
7,144	9/32	0,2813	8,00	201,0	240	198	910.7144.00
7,500		0,2953	8,00	214,0	250	211	910.075.00
7,800		0,3071	8,00	224,0	260	221	910.078.00
7,938	5/16	0,3125	8,00	224,0	260	221	910.7938.00
8,000		0,3150	8,00	224,0	260	221	910.080.00
8,500		0,3346	10,00	237,0	280	234	910.085.00
8,731	11/32	0,3437	10,00	247,0	290	244	910.8731.00
8,800		0,3465	10,00	247,0	290	244	910.088.00
9,000		0,3543	10,00	247,0	290	244	910.090.00
9,500		0,3740	10,00	267,0	310	264	910.095.00
9,525	3/8	0,3750	10,00	267,0	310	264	910.9525.00
9,800		0,3858	10,00	267,0	310	264	910.098.00
10,000		0,3937	10,00	267,0	310	264	910.100.00
10,200		0,4016	12,00	292,0	340	289	910.102.00
10,319	13/32	0,4063	12,00	292,0	340	289	910.10319.00
10,800		0,4252	12,00	302,0	350	299	910.108.00
11,113	7/16	0,4375	12,00	302,0	350	299	910.11113.00
11,800		0,4646	12,00	327,0	375	324	910.118.00
11,906	15/32	0,4687	12,00	327,0	375	324	910.11906.00
12,000		0,4724	12,00	327,0	375	324	910.120.00

Recommendation:

Maximum drilling depth: Flute length (see table) minus 1.5 x nominal diameter

Article-No. **911...**

Solid carbide deep hole drill **DEEPMAX 30xD**



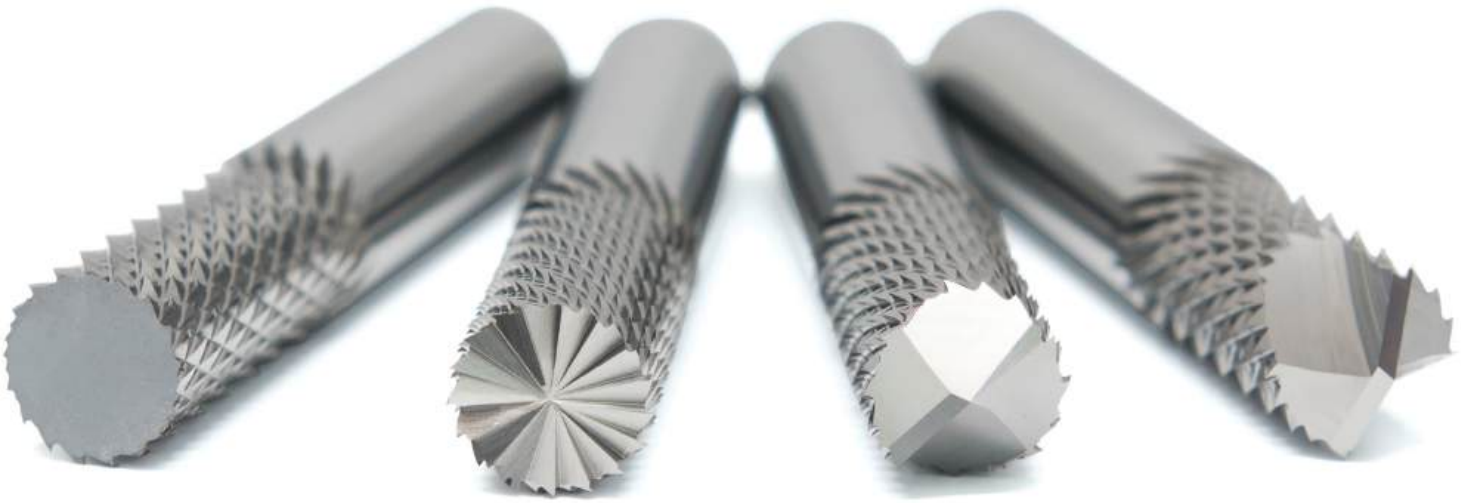
D1 h7	Inch	Decimal Equivalent	D2 h6	L2	L1	NL	Article-No.
2,000		0,0787	4,00	65,5	105	65	911.020.00
2,200		0,0866	4,00	75,5	115	75	911.022.00
2,300		0,0906	4,00	75,5	115	75	911.023.00
2,400		0,0945	4,00	85,5	130	85	911.024.00
2,500		0,0984	4,00	85,5	130	85	911.025.00
2,700		0,1063	4,00	95,5	140	95	911.027.00
2,800		0,1102	4,00	95,5	140	95	911.028.00
2,900		0,1142	4,00	95,5	140	95	911.029.00
3,000		0,1181	6,00	105,5	150	105	911.030.00
3,175	1/8	0,1250	6,00	105,5	150	105	991.3175.00
3,200		0,1260	6,00	105,5	150	105	911.032.00
3,300		0,1299	6,00	115,5	160	115	911.033.00
3,500		0,1378	6,00	115,5	160	115	911.035.00
3,572	9/64	0,1406	6,00	115,5	160	115	911.3572.00
3,800		0,1496	6,00	125,.5	175	125	911.038.00
3,969	5/32	0,1563	6,00	135,5	185	135	911.3969.00
4,000		0,1575	6,00	135,5	185	135	911.040.00
4,200		0,1654	6,00	135,5	185	135	911.042.00
4,500		0,1772	6,00	145,5	195	145	911.045.00
4,600		0,1811	6,00	155,5	205	155	911.046.00
4,763	3/16	0,1875	6,00	165,5	210	165	911.4763.00
4,800		0,1890	6,00	165,5	210	165	911.048.00
5,000		0,1969	6,00	165,5	210	165	911.050.00
5,500		0,2165	6,00	180,5	240	180	911.055.00
5,556	7/32	0,2187	6,00	180,5	240	180	911.5556.00
5,800		0,2283	6,00	190,5	240	190	911.058.00
6,000		0,2362	6,00	190,5	240	190	911.060.00
6,350	1/4	0,2500	6,00	190,5	240	190	911.6350.00
6,500		0,2559	8,00	222,0	260	219	911.065.00
6,800		0,2677	8,00	222,0	260	219	911.068.00
7,000		0,2756	8,00	232,0	270	229	911.070.00
7,144	9/32	0,2813	8,00	232,0	270	229	911.7144.00
7,500		0,2953	8,00	252,0	290	249	911.075.00
7,800		0,3071	8,00	262,0	300	259	911.078.00
7,938	5/16	0,3125	8,00	267,0	305	265	911.7938.00
8,000		0,3150	8,00	267,0	305	265	911.080.00
8,500		0,3346	10,00	278,0	320	276	911.085.00
8,731	11/32	0,3437	10,00	298,0	340	296	911.8731.00
8,800		0,3465	10,00	298,0	340	296	911.088.00
9,000		0,3543	10,00	298,0	340	296	911.090.00
9,500		0,3740	10,00	318,0	360	316	911.095.00
9,525	3/8	0,3750	10,00	318,0	360	316	911.9525.00
9,800		0,3858	10,00	338,0	380	336	911.098.00
10,000		0,3937	10,00	338,0	380	336	911.100.00

1st CHOICE

TYP N | Universal | z | 2 | 30xD | h7 | 135° | 4 | IK | HA | Norm | VAROCON

Recommendation:

Maximum drilling depth: Flute length (see table) minus 1.5 x nominal diameter



ROUTERS

5500 MATRX
2600/5600 MATRX Router

5500 - STANDARD LENGTH - Radius End

MATRX

The MATRX **excels** in material removal in composites, graphite, and plastics.



FC1 = Diamond Coating

DIA	LOC	SHANK	OAL	RADIUS	EDP	
					UNCOATED	FC1
1/8	1/2	1/8	1 1/2	.0100	25000	25025
	1	1/8	3	.0100	25001	25026
1/4	3/4	1/4	2 1/2	.0200	25002	25027
	1-1/2	1/4	4	.0200	25003	25028
3/8	1	3/8	2 1/2	.0300	25004	25029
	2	3/8	4	.0300	25005	25030
1/2	1-1/4	1/2	3 1/2	.0300	25006	25031
	2-3/8	1/2	5	.0300	25007	25032

F FIBER

0 OTHER

TOLERANCES	DIAMETER	SHANK	35° HELIX
	+.0000"-.003"	h6	
	+0.00mm-0.0762mm		

2600 constructed from Dura Carb and 5600 constructed from Dura Carb 3D wear-resistant carbide.

2600/5600

A — No End Cut
Recommended for edge work where the end of the router is not in contact with the work piece.



B — Burr Style End Cut
Recommended for bottom cutting to produce an even, smooth surface with square corners



C — End Mill End Cut
Recommended for bottom cutting where smooth surface and square corners are required.



D — 135° Drill Point
Recommended for plunging through the work piece before routing operations begin.




A- NO END CUT


B- BURR END CUT


C- END MILL END CUT


D- DRILL POINT

UNCOATED

FCI

FC1 = Diamond Coating

DIA	LOC	SHANK	OAL	EDP		
				2600 UC	5600 UC	5600 FC 1
Style A - No End Cut						
1/8	1/2	1/8	1 1/2	26125	25200	25250
3/16	5/8	3/16	2	26187	25201	25251
1/4	3/4	1/4	2 1/2	26250	25202	25252
	1	1/4	3	26260	25203	25253
3/8	1	3/8	2 1/2	26375	25204	25254
1/2	1	1/2	3	26500	25205	25255
Style B - Burr Style End Cut						
1/8	1/2	1/8	1 1/2	26126	25206	25256
3/16	5/8	3/16	2	26188	25207	25257
1/4	3/4	1/4	2 1/2	26251	25208	25258
	1	1/4	3	26261	25209	25259
3/8	1	3/8	2 1/2	26376	25210	25260
1/2	1	1/2	3	26501	25211	25261
Style C - End Mill End Cut						
1/8	1/2	1/8	1 1/2	26127	25212	25262
3/16	5/8	3/16	2	26189	25213	25263
1/4	3/4	1/4	2 1/2	26252	25214	25264
	1	1/4	3	26262	25215	25265
3/8	1	3/8	2 1/2	26377	25216	25266
1/2	1	1/2	3	26502	25217	25267
Style D - 135° Drill Point						
1/8	1/2	1/8	1 1/2	26128	25218	25268
3/16	5/8	3/16	2	26190	25219	25269
1/4	3/4	1/4	2 1/2	26253	25220	25270
	1	1/4	3	26263	25221	25271
3/8	1	3/8	2 1/2	26378	25222	25272
1/2	1	1/2	3	26503	25223	25273

TOLERANCES	DIAMETER	SHANK
	+.0000"-.0050"	h6
	+0.00mm-0.10mm	



REAMERS

1450 General Purpose Reamer
1400 General Purpose Reamer
1410 JIT Reamer
1450 JIT Reamer

1450 General Purpose Reamers



DIA		LOC	SHANK	OAL	FLUTES	STEEL SHANK	EDP UNCOATED
1/8	.1250	7/8	.1094	3 1/2	4		14511
9/64	.1406	7/8	.1250	3 1/2	4		14512
5/32	.1562	1	.1406	4	4		14513
11/64	.1719	1	.1562	4	4		14514
3/16	.1875	1 1/4	.1719	4 1/2	4		14515
13/64	.2031	1 1/4	.1875	5	6		14516
7/32	.2188	1 1/4	.1875	5	6		14517
15/64	.2344	1 1/4	.2188	6	6		14518
1/4	.2500	1 1/2	.2188	6	6		14519
17/64	.2656	1 1/2	.2500	6	6		14520
9/32	.2812	1 1/2	.2500	6	6		14521
19/64	.2969	1 5/8	.2812	6	6		14522
5/16	.3125	1 5/8	.2812	6	6		14523
21/54	.3281	1 5/8	.3125	6	6		14524
11/32	.3438	1 5/8	.3125	6	6		14525
23/64	.3594	1 3/4	.3438	7	6	✓	14526
3/8	.3750	1 3/4	.3438	7	6	✓	14527
25/64	.3906	1 3/4	.3750	7	6	✓	14528
13/32	.4062	1 3/4	.3750	7	6	✓	14529
27/64	.4219	1 3/4	.4062	7	6	✓	14530
7/16	.4375	1 3/4	.4062	7	6	✓	14531
29/64	.4531	1 3/4	.4375	8	6	✓	14532
15/32	.4688	1 3/4	.4375	8	6	✓	14533
31/64	.4844	1 3/4	.4688	8	6	✓	14534
1/2	.5000	1 3/4	.4688	8	6	✓	14535
9/16	.5625	1 7/8	.5000	9	6	✓	14536
5/8	.6250	1 7/8	.5625	9	6	✓	14537
11/16	.6875	2	.6250	9 1/2	6	✓	14538
3/4	.7500	2	.6875	9 1/2	6	✓	14539
7/8	.8750	2	.8438	10	8	✓	14540
1	1.0000	2	.9688	10	8	✓	14541

TOLERANCES	DIAMETER		SHANK
	UP TO 1.010"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.010"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.654mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

REAMERS

1450 JIT Decimal Size Reamers

24/HR
Just-in-time delivery.

12 pieces or less ALL STYLES

ORDER DEADLINE 3:00pm est

Straight Flutes — For all types of general reaming applications.

RH Spiral Flutes — For blind holes and abrasive, ductile materials. Do not use for holes with interruptions unless material is reasonably soft.

LH Spiral Flutes — Produces better finishes on hard materials such as heat-treated steels. Shear action is excellent for holes with interruptions; i.e., keyways, elongated slots, etc.



AVAILABLE ON FAST QUOTES

Quote JIT reamers online with FAST quotes!

Straight Flute Standard Sizes available in 1400 Series Standard Available with Coatings at Tolerances as Low as .0001" (Additional Charges May Apply)
Steel Shanks on items with Cutting Diameter .3485" and over
Female Centers
45˚ Lead Angle
Speeds and Feeds, see fullertontool.com

Due to temperatures reached in the coating process, Fullerton Tool cannot guarantee concentricity on reamers with Cutting Diameter .3485" and over.

SAME DAY SHIPMENT IF ORDERED BY 11AM EST. ADD 20% TO PRICE.

	DIAMETER		SHANK
TOLERANCES	UP TO 1.0100"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.0100"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.655mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

1450 JIT Decimal Size Reamers



SIZE RANGE	FLUTE LENGTH	SHANK	OAL	FLUTES	STEEL SHANK	EDP		
						ST	RH	LH
.1105 - .1284	7/8	.1094	3 1/2	4		1450S01	1450R01	1450L01
.1285 - .1444	7/8	.1250	3 1/2	4		1450S02	1450R02	1450L02
.1445 - .1594	1	.1406	4	4		1450S03	1450R03	1450L03
.1595 - .1744	1	.1562	4	4		1450S04	1450R04	1450L04
.1745 - .1914	1 1/8	.1719	4 1/2	4		1450S05	1450R05	1450L05
.1915 - .2234	1 1/4	.1875	5	6		1450S06	1450R06	1450L06
.2235 - .2544	1 1/2	.2188	6	6		1450S07	1450R07	1450L07
.2545 - .2844	1 1/2	.2500	6	6		1450S08	1450R08	1450L08
.2845 - .3164	1 5/8	.2812	6	6		1450S09	1450R09	1450L09
.3165 - .3484	1 5/8	.3125	6	6		1450S10	1450R10	1450L10
.3485 - .3794	1 3/4	.3438	7	6	✓	1450S11	1450R11	1450L11
.3795 - .4104	1 3/4	.3750	7	6	✓	1450S12	1450R12	1450L12
.4105 - .4414	1 3/4	.4062	7	6	✓	1450S13	1450R13	1450L13
.4415 - .4724	1 3/4	.4375	8	6	✓	1450S14	1450R14	1450L14
.4725 - .5054	1 3/4	.4688	8	6	✓	1450S15	1450R15	1450L15
.5055 - .5360	1 7/8	.5000	9	6	✓	1450S16	1450R16	1450L16
.5361 - .5670	1 7/8	.5000	9	6	✓	1450S16B	1450R16B	1450L16B
.5671 - .5990	1 7/8	.5625	9	6	✓	1450S17	1450R17	1450L17
.5991 - .6300	1 7/8	.5625	9	6	✓	1450S17B	1450R17B	1450L17B
.6301 - .6630	2	.6250	9 1/2	6	✓	1450S18	1450R18	1450L18
.6631 - .6930	2	.6250	9 1/2	6	✓	1450S18B	1450R18B	1450L18B
.6931 - .7250	2	.6875	9 1/2	6	✓	1450S19	1450R19	1450L19
.7251 - .7560	2	.6875	9 1/2	6	✓	1450S19B	1450R19B	1450L19B
.7561 - .7870	2	.7500	10	8	✓	1450S20	1450R20	1450L20
.7871 - .8190	2	.7812	10	8	✓	1450S21	1450R21	1450L21
.8191 - .8500	2	.8125	10	8	✓	1450S22	1450R22	1450L22
.8501 - .8820	2	.8438	10	8	✓	1450S23	1450R23	1450L23
.8821 - .9120	2	.8750	10	8	✓	1450S24	1450R24	1450L24
.9121 - .9440	2	.9062	10	8	✓	1450S25	1450R25	1450L25
.9441 - .9760	2	.9375	10	8	✓	1450S26	1450R26	1450L26
.9761 - 1.0100	2	.9688	10	8	✓	1450S27	1450R27	1450L27

TOLERANCES	DIAMETER		SHANK
	UP TO 1.0100"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.0100"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.655mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

1400 General Purpose Reamers



Manufactured Using Female and Male Centers for Improved Concentricity
Male Centers on items up to .1124" (2.86mm)
Speeds and Feeds, see fullertontool.com

Due to temperatures reached in the coating process, Fullerton Tool cannot guarantee concentricity on reamers with Cutting Diameter .3485" and over.

DIA		LOC	SHANK	OAL	FLUTES	EDP
						UNCOATED
70	.0280	3/8	.0280	1 1/2	4	14001
69	.0292	3/8	.0292	1 1/2	4	14002
68	.0310	3/8	.0310	1 1/2	4	14003
1/32	.0312	3/8	.0312	1 1/2	4	14004
67	.0320	3/8	.0312	1 1/2	4	14005
66	.0330	3/8	.0312	1 1/2	4	14006
65	.0350	3/8	.0312	1 1/2	4	14007
64	.0360	3/8	.0312	1 1/2	4	14008
63	.0370	3/8	.0312	1 1/2	4	14009
62	.0380	3/8	.0312	1 1/2	4	14010
61	.0390	3/8	.0312	1 1/2	4	14011
60	.0400	3/8	.0312	1 1/2	4	14013
59	.0410	3/8	.0312	1 1/2	4	14014
58	.0420	3/8	.0312	1 1/2	4	14015
57	.0430	3/8	.0312	1 1/2	4	14016
56	.0465	3/8	.0312	1 1/2	4	14017
3/64	.0469	3/8	.0312	1 1/2	4	14018
55	.0520	3/8	.0469	1 1/2	4	14019
54	.0550	3/8	.0469	1 1/2	4	14020
53	.0595	3/8	.0469	1 1/2	4	14023
1/16	.0625	3/8	.0469	1 1/2	4	14024
52	.0635	3/8	.0469	1 1/2	4	14025
51	.0670	1/2	.0625	2	4	14026
50	.0700	1/2	.0625	2	4	14027
49	.0730	1/2	.0625	2	4	14028
48	.0760	1/2	.0625	2	4	14029
5/64	.0781	1/2	.0625	2	4	14030
47	.0785	1/2	.0625	2	4	14031
46	.0810	1/2	.0781	2	4	14033
45	.0820	1/2	.0781	2	4	14034
44	.0860	1/2	.0781	2	4	14035
43	.0890	1/2	.0781	2	4	14036
42	.0935	1/2	.0781	2	4	14037

TOLERANCES	DIAMETER		SHANK
	UP TO 1.010"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.010"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.654mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

1400 General Purpose Reamers



DIA		LOC	SHANK	OAL	FLUTES	EDP
						UNCOATED
3/32	.0938	1/2	.0781	2	4	14038
41	.0960	1/2	.0781	2	4	14039
40	.0980	5/8	.0938	2 1/4	4	14040
39	.0995	5/8	.0938	2 1/4	4	14042
38	.1015	5/8	.0938	2 1/4	4	14043
37	.1040	5/8	.0938	2 1/4	4	14044
36	.1065	5/8	.0938	2 1/4	4	14045
7/64	.1094	5/8	.0938	2 1/4	4	14046
35	.1100	5/8	.0938	2 1/4	4	14047
34	.1110	5/8	.0938	2 1/4	4	14048
33	.1130	5/8	.1094	2 1/4	4	14049
32	.1160	5/8	.1094	2 1/4	4	14050
31	.1200	5/8	.1094	2 1/4	4	14052
	.1240	5/8	.1094	2 1/4	4	14150
	.1245	5/8	.1094	2 1/4	4	14151
1/8	.1250	5/8	.1094	2 1/4	4	14053
	.1255	5/8	.1094	2 1/4	4	14153
	.1260	5/8	.1094	2 1/4	4	14154
30	.1285	3/4	.1250	2 1/2	4	14054
29	.1360	3/4	.1250	2 1/2	4	14055
28	.1405	3/4	.1250	2 1/2	4	14057
9/64	.1406	3/4	.1250	2 1/2	4	14058
27	.1440	3/4	.1250	2 1/2	4	14059
26	.1470	3/4	.1406	2 1/2	4	14060
25	.1495	3/4	.1406	2 1/2	4	14061
24	.1520	3/4	.1406	2 1/2	4	14062
23	.1540	3/4	.1406	2 1/2	4	14063
5/32	.1562	3/4	.1406	2 1/2	4	14064
22	.1570	3/4	.1406	2 1/2	4	14065
21	.1590	3/4	.1406	2 1/2	4	14067
20	.1610	7/8	.1562	2 3/4	4	14068
19	.1660	7/8	.1562	2 3/4	4	14069
18	.1695	7/8	.1562	2 3/4	4	14070
11/64	.1719	7/8	.1562	2 3/4	4	14071
17	.1730	7/8	.1562	2 3/4	4	14072
16	.1770	7/8	.1719	2 3/4	4	14073
15	.1800	7/8	.1719	2 3/4	4	14075
14	.1820	7/8	.1719	2 3/4	4	14076
13	.1850	7/8	.1719	2 3/4	4	14077
	.1865	7/8	.1719	2 3/4	4	14155
	.1870	7/8	.1719	2 3/4	4	14156
	.1872	7/8	.1719	2 3/4	4	14157

TOLERANCES	DIAMETER		SHANK
	UP TO 1.010"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.010"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.654mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

1400 General Purpose Reamers



DIA		LOC	SHANK	OAL	FLUTES	EDP
						UNCOATED
3/16	.1875	7/8	.1719	2 3/4	4	14078
	.1880	7/8	.1719	2 3/4	4	14158
	.1885	7/8	.1719	2 3/4	4	14159
12	.1890	7/8	.1719	2 3/4	4	14079
11	.1910	7/8	.1719	2 3/4	4	14080
10	.1935	1	.1875	3	6	14081
9	.1960	1	.1875	3	6	14082
8	.1990	1	.1875	3	6	14084
7	.2010	1	.1875	3	6	14085
13/64	.2031	1	.1875	3	6	14086
6	.2040	1	.1875	3	6	14087
5	.2055	1	.1875	3	6	14088
4	.2090	1	.1875	3	6	14089
3	.2130	1	.1875	3	6	14090
7/32	.2188	1	.1875	3	6	14092
2	.2210	1	.1875	3	6	14093
1	.2280	1	.2188	3	6	14094
15/64	.2344	1	.2188	3	6	14096
	.2490	1	.2188	3	6	14160
	.2495	1	.2188	3	6	14161
	.2497	1	.2188	3	6	14162
1/4	.2500	1	.2188	3	6	14098
	.2505	1	.2188	3	6	14163
	.2510	1	.2188	3	6	14164
17/64	.2656	1 1/8	.2500	3 1/4	6	14100
9/32	.2812	1 1/8	.2500	3 1/4	6	14102
19/64	.2969	1 1/8	.2812	3 1/4	6	14104
	.3115	1 1/8	.2812	3 1/4	6	14165
	.3120	1 1/8	.2812	3 1/4	6	14166
5/16	.3125	1 1/8	.2812	3 1/4	6	14105
	.3130	1 1/8	.2812	3 1/4	6	14167
	.3135	1 1/8	.2812	3 1/4	6	14168
21/64	.3281	1 1/4	.3125	3 1/2	6	14107
11/32	.3438	1 1/4	.3125	3 1/2	6	14109
23/64	.3594	1 1/4	.3438	3 1/2	6	14111
	.3740	1 1/4	.3438	3 1/2	6	14169
	.3745	1 1/4	.3438	3 1/2	6	14170
3/8	.3750	1 1/4	.3438	3 1/2	6	14113
	.3755	1 1/4	.3438	3 1/2	6	14171
	.3760	1 1/4	.3438	3 1/2	6	14172
25/64	.3906	1 1/2	.3750	4	6	14114
13/32	.4062	1 1/2	.3750	4	6	14116

	DIAMETER		SHANK
TOLERANCES	UP TO 1.010"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.010"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.654mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

1400 General Purpose Reamers



VARY BY DIAMETER | CENTER CUTTING | STB | UNCOATED

DIA		LOC	SHANK	OAL	FLUTES	EDP
						UNCOATED
27/64	.4219	1 1/2	.4062	4	6	14118
	.4365	1 1/2	.4062	4	6	14173
	.4370	1 1/2	.4062	4	6	14180
7/16	.4375	1 1/2	.4062	4	6	14120
	.4380	1 1/2	.4062	4	6	14181
	.4385	1 1/2	.4062	4	6	14174
29/64	.4531	1 1/2	.4375	4	6	14122
15/32	.4688	1 1/2	.4375	4	6	14123
31/64	.4844	1 1/2	.4688	4	6	14125
	.4990	1 1/2	.4688	4	6	14175
	.4995	1 1/2	.4688	4	6	14182
1/2	.5000	1 1/2	.4688	4	6	14127
	.5005	1 1/2	.4688	4	6	14183
	.5010	1 1/2	.4688	4	6	14176
METRIC						
1.00	.0394	10.00	0.79	38.00	4	14012
1.50	.0591	10.00	1.19	38.00	4	14022
2.00	.0787	12.00	1.59	50.00	4	14032
2.50	.0984	16.00	2.38	57.00	4	14041
3.00	.1181	16.00	2.78	57.00	4	14051
3.50	.1378	20.00	3.18	63.00	4	14056
4.00	.1575	20.00	3.57	63.00	4	14066
4.50	.1772	22.00	4.37	70.00	4	14074
5.00	.1969	25.00	4.76	76.00	6	14083
5.50	.2165	25.00	4.76	76.00	6	14091
6.00	.2362	25.00	5.56	76.00	6	14097
6.50	.2559	28.00	6.35	83.00	6	14099
7.00	.2756	28.00	6.35	83.00	6	14101
7.50	.2953	28.00	7.14	83.00	6	14103
8.00	.3150	28.00	7.14	83.00	6	14106
8.50	.3346	32.00	7.94	89.00	6	14108
9.00	.3543	32.00	8.73	89.00	6	14110
9.50	.3740	32.00	8.73	89.00	6	14112
10.00	.3937	38.00	9.53	101.00	6	14115
10.50	.4134	38.00	10.32	101.00	6	14117
11.00	.4331	38.00	10.32	101.00	6	14119
11.50	.4528	38.00	11.11	101.00	6	14121
12.00	.4724	38.00	11.11	101.00	6	14124
12.50	.4921	38.00	11.91	101.00	6	14126

TOLERANCES	DIAMETER		SHANK
	UP TO 1.010"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.010"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.654mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

REAMERS

1410 JIT Decimal Size Reamers
Solid Carbide

24/HR
Just-in-time delivery.

12 pieces or less ALL STYLES

ORDER DEADLINE 3:00pm est

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RH Spiral Flutes — For blind holes and abrasive, ductile materials. Do not use for holes with interruptions unless material is reasonably soft.

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AVAILABLE ON FAST QUOTES

Quote JIT reamers online with FAST quotes!

Straight Flute Standard Sizes available in 1400 Series Stub
Coatings at Tolerances as Low as .0001" (Additional Charges May Apply)
Manufactured using Female and Male Centers for improved concentricity
Male Centers on items up to .1124" (2.86mm)
45° Lead Angle
Speeds and Feeds, see fullertontool.com

SAME DAY SHIPMENT IF ORDERED BY 11AM EST. ADD 20% TO PRICE.

	DIAMETER		SHANK
TOLERANCES	UP TO 1.0100"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.0100"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.655mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

1410 JIT Decimal Size Reamers
Solid Carbide





SIZE RANGE	FLUTE LENGTH	SHANK	OAL	FLUTES	EDP		
					ST	RH	LH
.0312 - .0394	3/8	.0312	1 1/2	4	1410S01	1410R01	1410L01
.0395 - .0484	3/8	.0312	1 1/2	4	1410S02	1410R02	1410L02
.0485 - .0574	3/8	.0469	1 1/2	4	1410S03	1410R03	1410L03
.0575 - .0654	3/8	.0469	1 1/2	4	1410S04	1410R04	1410L04
.0655 - .0804	1/2	.0625	2	4	1410S05	1410R05	1410L05
.0805 - .0964	1/2	.0781	2	4	1410S06	1410R06	1410L06
.0965 - .1124	5/8	.0938	2 1/4	4	1410S07	1410R07	1410L07
.1125 - .1284	5/8	.1094	2 1/4	4	1410S08	1410R08	1410L08
.1285 - .1444	3/4	.1250	2 1/2	4	1410S09	1410R09	1410L09
.1445 - .1594	3/4	.1406	2 1/2	4	1410S10	1410R10	1410L10
.1595 - .1744	7/8	.1562	2 3/4	4	1410S11	1410R11	1410L11
.1745 - .1914	7/8	.1719	2 3/4	4	1410S12	1410R12	1410L12
.1915 - .2234	1	.1875	3	6	1410S13	1410R13	1410L13
.2235 - .2544	1	.2188	3	6	1410S14	1410R14	1410L14
.2545 - .2844	1 1/8	.2500	3 1/4	6	1410S15	1410R15	1410L15
.2845 - .3164	1 1/8	.2812	3 1/4	6	1410S16	1410R16	1410L16
.3165 - .3484	1 1/4	.3125	3 1/2	6	1410S17	1410R17	1410L17
.3485 - .3794	1 1/4	.3438	3 1/2	6	1410S18	1410R18	1410L18
.3795 - .4104	1 1/2	.3750	4	6	1410S19	1410R19	1410L19
.4105 - .4414	1 1/2	.4062	4	6	1410S20	1410R20	1410L20
.4415 - .4724	1 1/2	.4375	4	6	1410S21	1410R21	1410L21
.4725 - .5054	1 1/2	.4688	4	6	1410S22	1410R22	1410L22

TOLERANCES	DIAMETER		SHANK
	UP TO 1.0100"	+.0002"-.0000"	+.0005"-.0005"
	OVER 1.0100"	+.0003"-.0000"	+0.013mm-0.013mm
	UP TO 25.654mm	+0.005mm-0.000mm	
	OVER 25.655mm	+0.008mm-0.000mm	
	.0001" Tolerances Available (+20%)		

Click. Quote. Done.

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Instant Quote

Altered End Mills

Select almost any standard end mill part number, make slight modifications, and generate instant pricing and lead times.

Start Altered End Mill Quote →



Instant Quote

Special End Mills

Build a custom end mill by selecting a series and choosing your tooling specifications with pricing and lead times instantly.

Start Special End Mill Quote →



Instant Quote

JIT Reamers

Build a 24-Hour JIT Reamer by selecting your tooling specifications and generate pricing and lead times instantly.

Start JIT Reamer Quote →



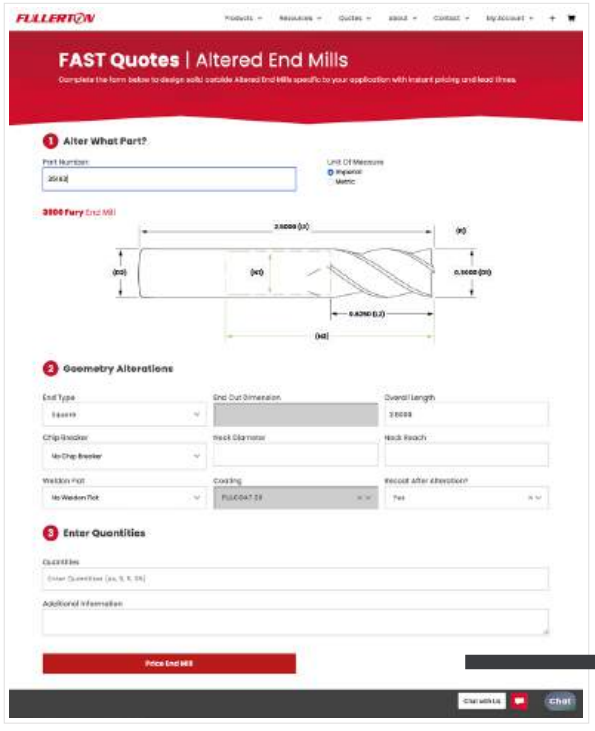
Instant Quote

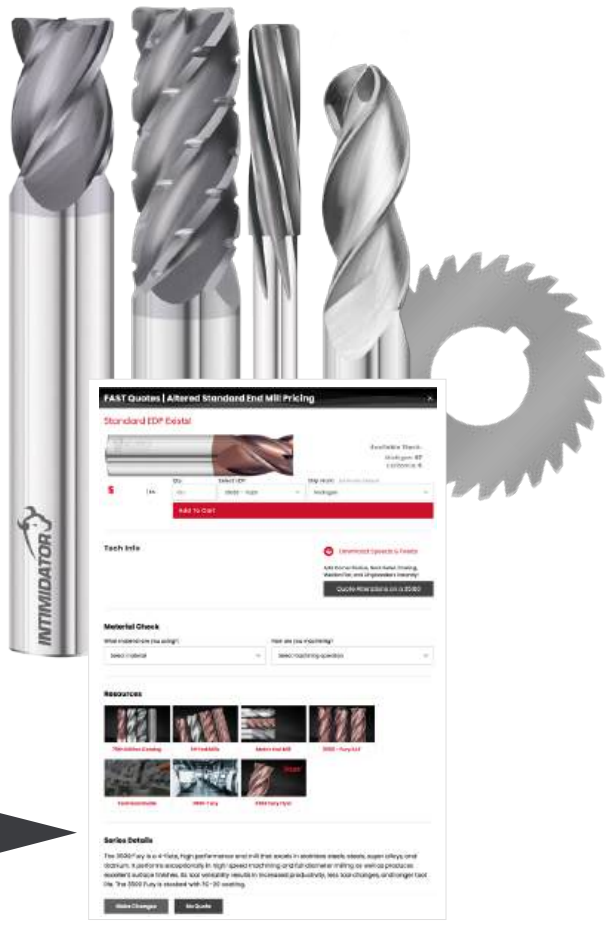
JIT Saws

Build a 24-Hour JIT Reamer by selecting your tooling specifications and generate pricing and lead times instantly.

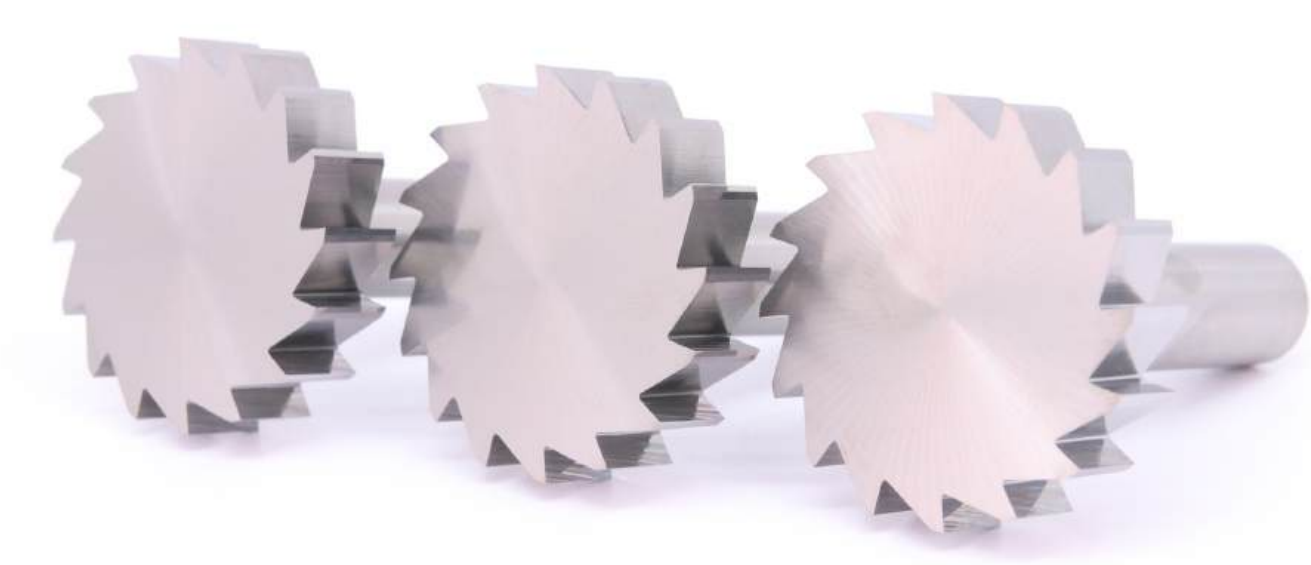
Start JIT Saw Quote →

DESIGN YOUR TOOL ONLINE WITH FAST QUOTES!





Log in to **fullertontool.com** to create a tool to fit your needs. Available for Special End Mills, Altered Standard End Mills JIT Reamers and JIT Saws. Put in your parameters and hit quote, you will receive **INSTANT** pricing! You will then have the ability to send the quote directly to your email.



KEYSEAT CUTTERS

4375 - Keyseat Cutter
4375E - JIT Keyseat Cutter

KEYSEAT CUTTERS

4375



STRAIGHT FLUTES
1/2" Diameter Steel Shank
1 1/8" - 1 1/2" Cutter Diameter are Solid Carbide

DIA	AMERICAN STANDARDS NUMBER	FACE WIDTH	NECK DIA	SHANK	OAL	FLUTES	SOLID CARBIDE SHANK	EDP UNCOATED
		1/32	.2030	1/2	2 1/32	8		43900
		3/64	.2030	1/2	2 3/64	8		43901
3/8	203	1/16	.2030	1/2	2 1/16	8		43302
	303	3/32	.2030	1/2	2 3/32	8		43303
	403	1/8	.2030	1/2	2 1/8	8		43403
		1/32	.2500	1/2	2 1/32	10		43902
		3/64	.2500	1/2	2 3/64	10		43903
	204	1/16	.2500	1/2	2 1/16	10		43240
1/2		5/64	.2500	1/2	2 5/64	10		43904
	304	3/32	.2500	1/2	2 3/32	10		43304
		7/64	.2500	1/2	2 7/64	10		43905
	404	1/8	.2500	1/2	2 1/8	10		43404
		1/32	.2810	1/2	2 1/32	10		43906
		3/64	.2810	1/2	2 3/64	10		43907
		1/16	.2810	1/2	2 1/16	10		43908
		5/64	.2810	1/2	2 5/64	10		43909
5/8	305	3/32	.2810	1/2	2 3/32	10		43305
		7/64	.2810	1/2	2 7/64	10		43910
	405	1/8	.2810	1/2	2 1/8	10		43405
		9/64	.2810	1/2	2 9/64	10		43911
	505	5/32	.2810	1/2	2 5/32	10		43505
	605	3/16	.2810	1/2	2 3/16	10		43605
		1/32	.2810	1/2	2 1/32	10		43912
		3/64	.2810	1/2	2 3/64	10		43913
		1/16	.2810	1/2	2 1/16	10		43914
		5/64	.2810	1/2	2 5/64	10		43915
		3/32	.2810	1/2	2 3/32	10		43916
		7/64	.2810	1/2	2 7/64	10		43917
3/4	406	1/8	.2810	1/2	2 1/8	10		43406
		9/64	.2810	1/2	2 9/64	10		43918
	506	5/32	.2810	1/2	2 5/32	10		43506
	606	3/16	.2810	1/2	2 3/16	10		43606
		13/64	.2810	1/2	2 13/64	10		43919
		7/32	.2810	1/2	2 7/32	10		43920
		15/64	.2810	1/2	2 15/64	10		43921
	806	1/4	.2810	1/2	2 1/4	10		43806

TOLERANCES	3/8"-3/4" DIAMETER	7/8"- 1 1/2" DIAMETER	SHANK DIAMETER	FACE WIDTH	NECK LENGTH
	+.010" +.015"	+.012" +.017"	+.0000"-.0005"	+.0000"-.0005"	.250"
	+0.254mm-0.381mm	+0.304mm-0.431mm	+0.0mm-0.013mm	+0.0mm-0.013mm	6.35mm

KEYSEAT CUTTERS

4375

DIA	AMERICAN STANDARDS NUMBER	FACE WIDTH	NECK DIA	SHANK	OAL	FLUTES	SOLID CARBIDE SHANK	EDP UNCOATED
7/8		1/16	.2810	1/2	2 1/16	12		43922
		1/8	.2810	1/2	2 1/8	12		43923
	507	5/32	.2810	1/2	2 5/32	12		43507
	607	3/16	.2810	1/2	2 3/16	12		43607
	707	7/32	.2810	1/2	2 7/32	12		43707
	807	1/4	.2810	1/2	2 1/4	12		43807
1		1/32	.2810	1/2	2 1/32	12		43924
		3/64	.2810	1/2	2 3/64	12		43925
		1/16	.2810	1/2	2 1/16	12		43926
		5/64	.2810	1/2	2 5/64	12		43927
		3/32	.2810	1/2	2 3/32	12		43928
		1/8	.2810	1/2	2 1/8	12		43929
		5/32	.2810	1/2	2 5/32	12		43930
	608	3/16	.2810	1/2	2 3/16	12		43608
	708	7/32	.2810	1/2	2 7/32	12		43708
	808	1/4	.2810	1/2	2 1/4	12		43808
1 1/8		1/8	.2810	1/2	2 1/8	14	✓	43931
	609	3/16	.2810	1/2	2 3/16	14	✓	43609
	709	7/32	.2810	1/2	2 7/32	14	✓	43709
	809	1/4	.2810	1/2	2 1/4	14	✓	43809
1 1/4		1/32	.2810	1/2	2 1/32	14	✓	43932
		1/16	.2810	1/2	2 1/16	14	✓	43933
		3/32	.2810	1/2	2 3/32	14	✓	43934
		1/8	.2810	1/2	2 1/8	14	✓	43935
		5/32	.2810	1/2	2 5/32	14	✓	43936
	610	3/16	.2810	1/2	2 3/16	14	✓	43610
	710	7/32	.2810	1/2	2 7/32	14	✓	43710
	810	1/4	.2810	1/2	2 1/4	14	✓	43810
1 1/2		1/32	.3750	1/2	2 1/32	16	✓	43937
		1/16	.3750	1/2	2 1/16	16	✓	43938
		3/32	.3750	1/2	2 3/32	16	✓	43939
		1/8	.3750	1/2	2 1/8	16	✓	43940
		3/16	.3750	1/2	2 3/16	16	✓	43941
	812	1/4	.3750	1/2	2 1/4	16	✓	43812
	1012	5/16	.3750	1/2	2 5/16	16	✓	43000
	1212	3/8	.3750	1/2	2 3/8	16	✓	43212

4375E JIT Keyseat Cutters

24/HR
Just-in-time delivery.

12 pieces or less ALL STYLES

ORDER DEADLINE 3:00pm est

Need a different face width? Check out our 24 hour Keyseat Cutters!

Must be thinner than standard face widths.

TOLERANCES	3/8"-3/4" DIAMETER	7/8"- 1 1/2" DIAMETER	SHANK DIAMETER	FACE WIDTH	NECK LENGTH
	+.010" +.015"	+.012" +.017"	+.0000"-.0005"	+.0000"-.0005"	.250"
	+0.254mm-0.381mm	+0.304mm-0.431mm	+0.0mm-0.013mm	+0.0mm-0.013mm	6.35mm



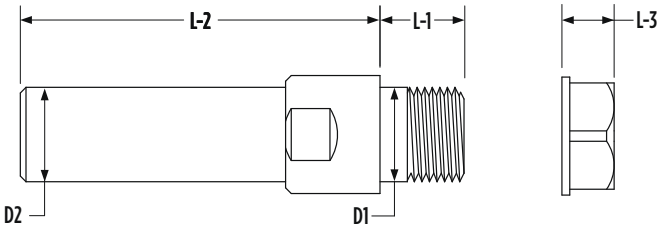
SAWS

2450 JIT Saw
2455 JIT Saw
Saw Arbors

Standard Duty Saw Arbor

Stainless Steel



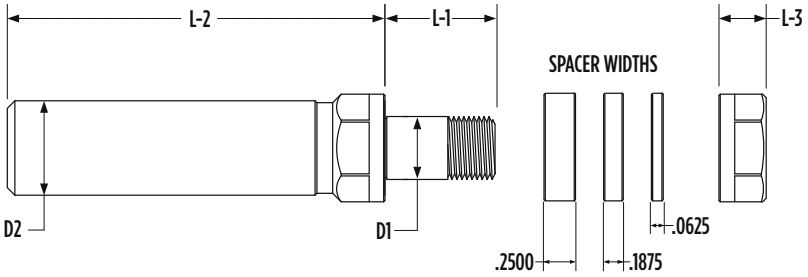


ARBOR SIZE	SHANK	L-1	L-2	L-3	HUB DIA	SPACERS WITH EACH ARBOR	EDP
1/8	1/8	0.0300	1.540	0.1850	0.1970	Not Required	24125
3/16	3/16	0.0500	1.900	0.2500	0.3150	Not Required	24187
1/4	1/4	0.0500	1.900	0.2500	0.3940	Not Required	24251
5/16	5/16	0.0500	1.900	0.2500	0.4500	Not Required	24312
3/8	3/8	0.0500	1.900	0.2760	0.5000	Not Required	24376
1/2	1/2	0.0500	1.900	0.2760	0.6250	Not Required	24501

Heavy Duty Saw Arbor

Steel - Black Oxide





ARBOR SIZE	SHANK	L-1	L-2	L-3	HUB DIA	SPACERS WITH EACH ARBOR	EDP
1/2	3/4	.5000	3.0000	.3250	.8550	.0625 / .1875 / .2500	24500
5/8	7/8	.5000	3.1500	.3900	1.0750	.0625 / .1875 / .2500	24625
1	1	.5000	3.5000	.4400	1.7100	.0625 / .1875 / .2500	24100

2450 JIT Solid Carbide Saws

The 2450 JIT Saws **excels** in cast iron, steels, stainless steels, alloys, composites, and hardened steels.

24/HR
Just-in-time delivery.

UP TO 12 PIECES OR LESS
ALL STYLES

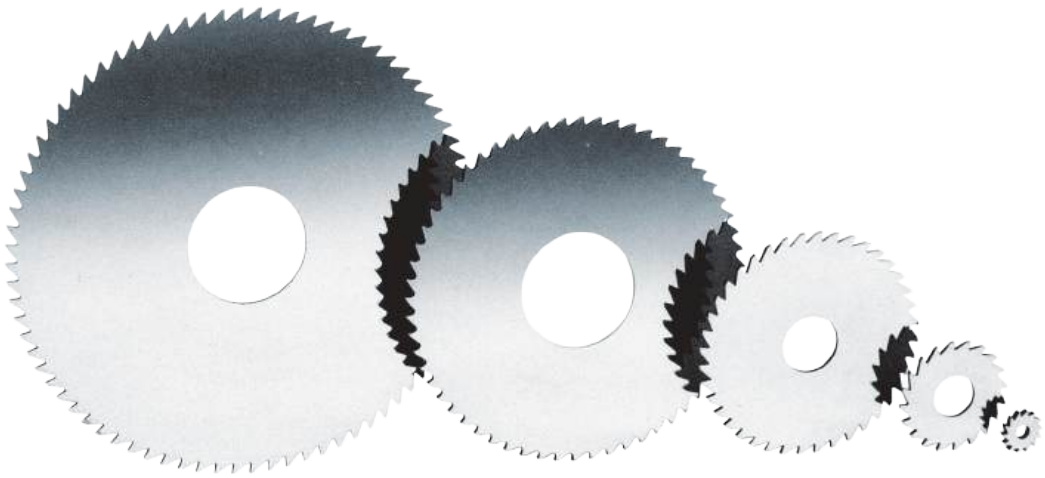
ORDER DEADLINE
3:00pm EST

FOR SIZE RANGES: .25 - 3”
1-12 pieces, **24-Hours**
13-25 pieces, **48-Hours**
26-49 pieces, **5 Working Days**
50+ pieces, Contact Fullerton Tool

FOR SIZE RANGES: > 3”
1-6 pieces, **24-Hours**
7-12 pieces, **48-Hours**
13-25 pieces, **5 Working Days**
26-49 pieces, **10 Working Days**
50+ pieces, Contact Fullerton Tool

3/4 - 6” Outside Diameters (OD) Available
1/8 - 1” Inside Diameter Available Depending on OD Size
.0060 - .2500” Thickness Available Depending on OD Size
.0005” Concavity per Inch of Diameter for Clearance

SAME DAY SHIPMENT IF ORDERED BY 11AM EST. ADD 20% TO PRICE.



UNCOATED

	DIAMETER	HOLE DIAMETER	THICKNESS
TOLERANCES	+.005”-.000”	+.0005”+.0001”	+.00025”-.00025”
	+0.127mm-0.00mm	+0.0127mm-0.00254mm	+0.0063mm-0.0063mm

2450 JIT Solid Carbide Saws

The 2450 JIT Saws **excels** in cast iron, steels, stainless steels, alloys, composites, and hardened steels.

DIA	ARBOR DIA	TEETH	SIZE RANGE	OLD EDP	EDP
1/4	1/8	12	.0100 -0.0350	2450001	SWD25-D12-12-xxxx
5/16	1/8	12	.0100 - .0350	2450002	SWD31-D12-12-xxxx
3/8	1/8	14	.0060 - .0259	2450003	SWD37-D12-14-xxxx
			.0260 - .0630	2450004	
1/2	.1875	14	.0060 - .0349	2450005	SWD50-D18-14-xxxx
			.0350 - .0630	2450006	
5/8	1/4	16	.0060 - .0149	2450007	SWD62-D25-16-xxxx
			.0150 - .0409	2450008	
			.0410 - .0630	2450009	
3/4	1/4	18	.0060 - .0149	2450010	SWD75-D25-18-xxxx
			.0150 - .0409	2450011	
			.0410 - .0639	2450012	
			.0640 - .0949	2450013	
			.0950 - .1300	2450014	
1	1/4	20	.0100 - .0199	2450015	SW100-D25-20-xxxx
			.0200 - .0409	2450018	
			.0410 -0.0639	2450021	
			.0640 - .0949	2450024	
			.0950 - .1300	2450027	
1	5/16	20	.0100 - .0199	2450016	SW100-D31-20-xxxx
			.0200 - .0409	2450019	
			.0410 - .0639	2450022	
			.0640 - .0949	2450025	
			.0950 - .1300	2450028	
1	3/8	20	.0100 - .0199	2450017	SW100-D37-20-xxxx
			.0200 - .0409	2450020	
			.0410 - .0639	2450023	
			.0640 - .0949	2450026	
			.0950 - .1300	2450029	
1-1/4	5/16	24	.0100 - .0199	2450031	SW125-D31-24-xxxx
			.0200 - .0459	2450034	
			.0460 - .0639	2450037	
			.0640 - .0949	2450040	
			.0950 - .1300	2450043	
1-1/4	3/8	24	.0100 - .0199	2450030	SW125-D37-24-xxxx
			.0200 - .0459	2450033	
			.0460 - .0639	2450036	
			.0640 - .0949	2450039	
			.0950 - .1300	2450042	
1-1/4	1/2	24	.0100 - .0199	2450032	SW125-D50-24-xxxx
			.0200 - .0459	2450035	
			.0460 - .0639	2450038	
			.0640 - .0949	2450041	
			.0950 - .1300	2450044	
1-1/2	1/2	36	.0100 - .0199	2450045	SW150-D50-36-xxxx
			.0200 - .0459	2450046	
			.0460 - .0639	2450047	
			.0640 - .0949	2450048	
			.0950 - .1300	2450049	
1-3/4	1/2	38	.0100 - .0199	2450050	SW175-D50-38-xxxx
			.0200 - .0459	2450051	
			.0460 - .0639	2450052	
			.0640 - .0949	2450053	
			.0950 - .1300	2450054	

DIA	ARBOR DIA	TEETH	SIZE RANGE	OLD EDP	EDP
2	1/2	40	.0100 - .0199	2450055	SW200-D50-40-xxxx
			.0200 - .0459	2450057	
			.0460 - .0639	2450059	
			.0640 - .0949	2450061	
			.0950 - .1300	2450063	
2	1	40	.0100 - .0199	2450056	SW200-100-40-xxxx
			.0200 - .0459	24500058	
			.0460 - .0639	2450060	
			.0640 - .0949	2450062	
			.0950 - .1300	2450064	
2-1/4	5/8	44	.0100 - .0199	2450065	SW225-D62-44-xxxx
			.0200 - .0459	2450067	
			.0460 - .0639	2450069	
			.0640 - .0949	2450071	
			.0950 - .1300	2450073	
2-1/4	1	44	.0100 - .0199	2450066	SW225-100-44-xxxx
			.0200 -.0459	2450068	
			.0460 - .0639	2450070	
			.0640 - .0949	2450072	
			.0950 - .1300	2450074	
2-1/2	1	48	.0100 - .0199	2450075	SW250-100-48-xxxx
			.0200 - .0459	2450076	
			.0460 - .0639	2450077	
			.0640 - .0949	2450078	
			.0950 - .1300	2450079	
2-3/4	1	60	.0100 - .0199	2450080	SW275-100-60-xxxx
			.0200 - .0459	2450081	
			.0460 - .0639	2450082	
			.0640 - .0949	2450083	
			.0950 - .1300	2450084	
3	1	72	.0100 - .0199	2450085	SW300-100-72-xxxx
			.0200 - .0459	2450086	
			.0460 - .0639	2450087	
			.0640 - .0949	2450088	
			.0950 - .1259	2450089	
			.1260 - .1889	2450090	
			.1890 - .2500	2450091	
3-1/2	1	76	.0200 - .0399	2450092	SW350-100-76-xxxx
			.0400 - .0649	2450093	
			.0650 - .0949	2450094	
			.0950 - .1300	2450095	
4	1	80	.0200 - .0399	2450096	SW400-100-80-xxxx
			.0400 - .0639	2450097	
			.0640 - .0949	2450098	
			.0950 - .1259	2450099	
			.1260 - .1889	2450100	
			.1890 - .2500	2450101	
5	1	100	.0450 - .0639	2450102	SW500-100-100-xxxx
			.0640 - .0940	2450103	
			.0941 -.1300	2450104	
6	1	120	.0451 - .0639	2450105	SW600-100-120-xxxx
			.0640 -.0940	2450106	
			.0941 - .1300	2450107	

2455 JIT Solid Carbide Saws

The 2455 JIT Saw **excels** in Aluminum, Magnesium, Brass, Copper, Composites, Plastics, and Wood.

24/HR
Just-in-time delivery.

UP TO 12 PIECES OR LESS
ALL STYLES

ORDER DEADLINE
3:00pm EST

FOR SIZE RANGES: .25 - 3”
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13-25 pieces, **48-Hours**
26-49 pieces, **5 Working Days**
50+ pieces, Contact Fullerton Tool

FOR SIZE RANGES: > 3”
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26-49 pieces, **10 Working Days**
50+ pieces, Contact Fullerton Tool

3/4 - 4” Outside Diameters (OD) Available
1/8 - 1” Inside Diameter Available Depending on OD Size
.0060 - .1300” Thickness Available Depending on OD Size
.0008” Concavity per Inch of Diameter for Clearance

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UNCOATED

	DIAMETER	HOLE DIAMETER	THICKNESS
TOLERANCES	+.005”-.000”	+.0005”+.0001”	+.00025”-.00025”
	+0.127mm-0.00mm	+0.0127mm-0.00254mm	+0.0063mm-0.0063mm

2455 JIT Solid Carbide Saws

The 2455 JIT Saw **excels** in Aluminum, Magnesium, Brass, Copper, Composites, Plastics, and Wood.

DIA	ARBOR DIA	TEETH	SIZE RANGE	EDP
3/4	1/4	10	.0060 - .0149 .0150 - .0409 .0410 - .0639 .0640 - .0949 .0950 - .1300	SWD75-D25-10-xxxx
1	1/4	12	.0100 - .0199 .0200 - .0409 .0410 - .0639 .0640 - .0949 .0950 - .1300	SW100-D25-12-xxxx
1	5/16	12	.0100 - .0199 .0200 - .0409 .0410 - .0639 .0640 - .0949 .0950 - .1300	SW100-D31-12-xxxx
1	3/8	12	.0100 - .0199 .0200 - .0409 .0410 - .0639 .0640 - .0949 .0950 - .1300	SW100-D37-12-xxxx
1-1/4	1/2	16	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW125-D50-16-xxxx
1-1/2	1/2	16	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW150-D50-16-xxxx
1-3/4	1/2	24	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW175-D50-24-xxxx
1-3/4	5/8		.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW175-D62-24-xxxx
1-3/4	7/8	24	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW175-D87-24-xxxx

DIA	ARBOR DIA	TEETH	SIZE RANGE	EDP
2	1/2	24	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW200-D50-24-xxxx
2	1	24	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW200-100-24-xxxx
2-1/4	5/8	28	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW225-D62-28-xxxx
2-1/4	1	28	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW225-100-28-xxxx
2-1/2	1	28	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW250-100-28-xxxx
2-3/4	1	30	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW275-100-30-xxxx
3	1	30	.0100 - .0199 .0200 - .0459 .0460 - .0639 .0640 - .0949 .0950 - .1300	SW300-100-30-xxxx
4	1	36	.0200 - .0399 .0400 - .0639 .0640 - .0949 .0950 - .1300	SW400-100-36-xxxx



BURRS

1/4” Shank Burrs
1/8” Shank Burrs
3/16” Shank Burrs
Rotary File Sets

BURRS/ROTARY FILES

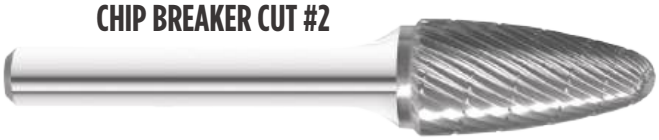
WHEN ORDERING, SPECIFY TOOL # OR EDP # AND SPECIFIC CUT REQUIRED

SINGLE CUT #1



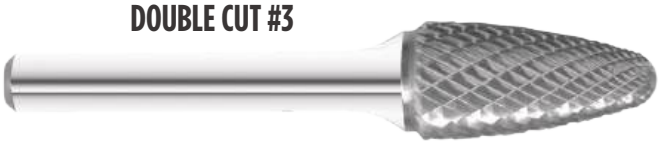
Single cut is a general purpose tool designed for cast iron, steel, some copper and brass, and other ferrous materials. It will give good material removal and good workpiece finish.

CHIP BREAKER CUT #2



The addition of a chip breaker will reduce sliver size and improve operator control at a slightly reduced surface finish.
Available on Quote Only

DOUBLE CUT #3



The double cut allows for rapid stock removal in harder materials. The addition of the left hand flutes reduces the pulling action, which allows for better operator control. It reduces the size of the chips, and it can be used at slower than normal speeds.

DIAMOND CUT #4



The diamond cut is very effective in heat treated and tough alloy steels, producing extremely small chips. It offers very good operator control with good stock removal at the sacrifice of finish. The diamond grind will reduce tool life, however.
Available on all Burrs - Add 20% to List Price of #1 Cut

FAST MILL CUT #5



For use on non-ferrous and non-metallic materials. It is designed for rapid stock removal with minimum chip loading.
Standard items listed on pages 188-194

NOTE: CHIP BREAKER, COARSE, AND FINE CUTS ARE ONLY AVAILABLE ON QUOTE

RECOMMENDATIONS:
For maximum control and to prevent whipping and chatter, insert the shank into the chuck as far as possible.

Avoid excessive pressure, which slows the spindle speed and damages the cutting edge. Avoid operating the burr beyond normal resharpening, otherwise resultant heat and pressure will cause excessive chipping and possible braze failure.

BURR SA/SB

1/4" Shank Diameter

SA

Cylindrical



DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/8	5/8	2	SA-12	41007	41009	
3/16	5/8	2	SA-14	41014	41016	
1/4	5/8	2	SA-1	41000	41002	41004
	1	2	SA-1A	41035	41037	
5/16	3/4	2 1/2	SA-2	41049	41051	
3/8	3/4	2 1/2	SA-3	41063	41065	41067
	1	2 3/4	SA-3A	41070	41072	
	1 1/2	3 1/4	SA-3B	41077	41079	
7/16	1	2 3/4	SA-4	41091	41093	
1/2	1	2 3/4	SA-5	41098	41100	41102
5/8	1	2 3/4	SA-6	41112	41114	41116
3/4	1/2	2 1/2	SA-15	41021	41023	
	3/4	2 1/2	SA-16	41028	41030	
	1	2 3/4	SA-7	41119	41121	41123
1	1	2 3/4	SA-9	41126	41128	
Extended Shank						
1/4	1/2	6 1/2	SA-1X6	41042	41044	
3/8	3/4	6 3/4	SA-3X6	41084	41086	
1/2	1	7	SA-5X6	41105	41107	

SB

Cylindrical End Cut



DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/8	5/8	2	SB-12	40100	40102	
3/16	5/8	2	SB-14	40107	40109	
1/4	5/8	2	SB-1	40142	40144	40104
	1	2	SB-1A	40135	40137	
5/16	3/4	2 1/2	SB-2	40149	40151	
	1	2 3/4	SB-2A	40156	40158	
3/8	3/4	2 1/2	SB-3	40163	40165	40167
	1	2 3/4	SB-3A	40170	40172	
	1 1/2	3 1/4	SB-3B	40177	40179	
7/16	1	2 3/4	SB-4	40191	40193	
1/2	1	2 3/4	SB-5	40198	40200	40202
5/8	1	2 3/4	SB-6	40212	40214	40216
3/4	1/2	2 1/2	SB-15	40121	40123	
	3/4	2 1/2	SB-16	40128	40130	
	1	2 3/4	SB-7	40219	40221	40223
1	1	2 3/4	SB-9	40226	40228	
Extended Shank						
1/4	1/2	6 1/2	SB-1X6	40114	40116	
3/8	3/4	6 3/4	SB-3X6	40184	40186	
1/2	1	7	SB-5X6	40205	40207	

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURR SC/SD
1/4" Shank Diameter

SC
Cylindrical Ball Nose



DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/8	5/8	2	SC-12	42132	42134	
3/16	5/8	2	SC-14	42139	42141	
1/4	5/8	2	SC-1	42125	42127	42129
	1	2	SC-1A	42146	42148	
5/16	3/4	2 1/2	SC-2	42160	42162	
	1	2 3/4	SC-2A	42189	42191	
3/8	3/4	2 1/2	SC-3	42197	42199	42201
	1	2 3/4	SC-3A	42204	42206	
	1 1/2	3 1/4	SC-3B	42211	42213	
7/16	1	2 3/4	SC-4	42225	42227	
1/2	1	2 3/4	SC-5	42232	42234	42236
5/8	1	2 3/4	SC-6	42171	42173	42175
3/4	1	2 3/4	SC-7	42178	42180	42182
Extended Shank						
1/4	1/2	6 1/2	SC-1X6	42153	42155	
3/8	3/4	6 3/4	SC-3X6	42218	42220	
1/2	1	7	SC-5X6	42164	42166	

SD
Ball Shape



DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/8	1/8	2	SD-12	43132	43134	
3/16	3/16	2	SD-14	43139	43141	
1/4	1/4	2	SD-1	43125	43127	43129
5/16	5/16	2 1/4	SD-2	43153	43155	
3/8	3/8	2 1/8	SD-3	43160	43162	43164
7/16	7/16	2 1/8	SD-4	43174	43176	
1/2	1/2	2 1/4	SD-5	43181	43183	43185
5/8	5/8	2 1/4	SD-6	43195	43197	43199
3/4	3/4	2 1/2	SD-7	43202	43204	
1	1	2 3/4	SD-9	43100	43102	
Extended Shank						
1/4	1/4	6 1/4	SD-1X6	43146	43148	
3/8	3/8	6 3/8	SD-3x6	43167	43169	
1/2	1/2	6 1/2	SD-5X6	43188	43190	

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURR SE/SF

1/4" Shank Diameter

SE



Egg Shape

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
3/16	5/16	2	SE-11	44194	44196	
1/4	3/8	2	SE-1	44187	44189	44191
3/8	5/8	2 3/8	SE-3	44208	44210	44212
1/2	7/8	2 5/8	SE-5	44222	44224	44226
5/8	1	2 3/4	SE-6	44236	44238	
3/4	1	2 3/4	SE-7	44243	44245	
Extended Shank						
1/4	3/8	6 3/8	SE-1X6	44201	44203	
3/8	5/8	6 5/8	SE-3X6	44215	44217	
1/2	7/8	6 7/8	SE-5X6	44229	44231	

SF



Round Tree Cut

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SF-1	45256	45258	45260
3/8	3/4	2 1/2	SF-3	45291	45339	45294
7/16	1	2 3/4	SF-4	45304	45306	
1/2	3/4	2 1/2	SF-13	45263	45265	
	1	2 3/4	SF-5	45311	45313	45315
5/8	1	2 3/4	SF-6	45325	45327	45329
3/4	1	3	SF-7	45332	45334	
	1 1/4	3	SF-14	45270	45272	
	1 1/2	3 1/4	SF-15	45277	45279	
Extended Shank						
1/4	1/2	6 1/2	SF-1x6	45284	45286	
3/8	3/4	6 3/4	SF-3x6	45297	45299	
1/2	1	7	SF-5x6	45318	45320	

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURR SG/SM
1/4" Shank Diameter

SG



Pointed Tree Shape

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SG-1	46100	46102	46104
5/16	3/4	2 1/2	SG-2	46128	46129	
3/8	3/4	2 1/2	SG-3	46135	46137	46139
1/2	3/4	2 1/2	SG-13	46107	46109	
	1	2 3/4	SG-5	46149	46151	46153
5/8	1	2 3/4	SG-6	46163	46165	46167
3/4	1	2 3/4	SG-7	46170	46172	
	1 1/2	3 1/4	SG-15	46114	46116	
Extended Shank						
1/4	1/2	6 1/2	SG-1X6	46121	46123	
3/8	3/4	6 3/4	SG-3X6	46142	46144	
1/2	1	7	SG-5X6	46156	46158	

SM



Cone Shape

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP	
				#1 Cut	#3 Cut
1/4	1/2	2	SM-1	47250	47252
	3/4	2	SM-2	47257	47259
	1	2 1/2	SM-3	47264	47266
	1 1/4	2 1/2	SM-3A	47271	47273
3/8	5/8	2 1/2	SM-4	47278	47280
1/2	7/8	2 3/4	SM-5	47285	47287
5/8	1	3	SM-6	47292	47294

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURRS/ROTARY FILES

BURR SL/SH
1/4" Shank Diameter

SL
14° Included Angle



DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SL-1	48250	48252	
5/16	7/8	2 3/4	SL-2	48257	48259	
3/8	11/16	3	SL-3	48271	48273	48275
1/2	11/8	3	SL-4	48285	48287	48289
5/8	15/16	3 1/4	SL-6	48299	48301	
3/4	11/2	3 1/4	SL-7	48306	48308	
Extended Shank						
5/16	7/8	7	SL-2X6	48264	48266	
3/8	11/16	7 1/8	SL-3X6	48278	48280	
1/2	11/8	7 1/4	SL-4X6	48292	48294	

SH
Flame Shape



DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SH-1	49250	49252	
5/16	3/4	2 1/2	SH-2	49257	49259	49261
1/2	11/4	3	SH-5	49271	49273	
5/8	17/16	3 1/4	SH-6	49285	49287	
3/4	15/8	3 1/2	SH-7	49292	49294	
Extended Shank						
5/16	3/4	6 3/4	SH-2X6	49264	49266	
1/2	11/4	7 1/4	SH-5X6	49278	49280	

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURR SK/SJ
1/4" Shank Diameter

SK



90 ° Included Angle

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP	
				#1 Cut	#3 Cut
1/4	1/8	2	SK-1	50250	50252
3/8	3/16	2 1/8	SK-3	50264	50266
1/2	1/4	2 1/8	SK-5	50271	50273
5/8	5/16	2 1/4	SK-6	50278	50280
3/4	3/8	2 3/8	SK-7	50285	50287
7/8	7/16	2 1/2	SK-8	50292	50294
1	1/2	2 1/2	SK-9	50299	50301

SJ



60 ° Included Angle

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP		
				#1 Cut	#3 Cut	#5 Cut
1/4	3/16	2	SJ-1	51001	51003	
5/16	1/4	2 1/4	SJ-2	51008	51010	
3/8	5/16	2 1/4	SJ-3	51015	51017	51019
1/2	7/16	2 3/8	SJ-5	51022	51024	
5/8	1/2	2 1/2	SJ-6	51029	51031	
3/4	5/8	2 5/8	SJ-7	51036	51038	
7/8	3/4	2 3/4	SJ-8	51043	51045	
1	7/8	2 3/4	SJ-9	51050	51052	

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURR SN/SNE

1/4" Shank Diameter

SN



Inverted Cone

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP	
				#1 Cut	#3 Cut
1/4	5/16	2	SN-1	52250	52252
3/8	3/8	2 1/8	SN-2	52257	52259
1/2	1/2	2 1/4	SN-3	52264	52266
5/8	3/4	2 1/2	SN-6	52271	52273
3/4	5/8	2 3/8	SN-7	52278	52280

SNE



Inverted Cone - End Cut

DIA	LOC	Approx. OAL	TOOL NUMBER	EDP	
				#1 Cut	#3 Cut
1/4	5/16	2	SN-1E	53250	53252
3/8	3/8	2 1/8	SN-2E	53257	53259
1/2	1/2	2 1/4	SN-3E	53264	53266
5/8	3/4	2 1/2	SN-6E	53271	53273
3/4	5/8	2 3/8	SN-7E	53278	53280

All above Burrs available with #4 Diamond Cut. Add 20% to list price of #1 Cut.
All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

BURR

1/16" - 1/8" Head Diameter, 1/8" Shank Diameter

CUTTING HEAD	1/16" x 1/4"	3/32" x 7/16"	1/8" x 9/16"	1/8" x 1/8"	1/8" x 9/16"	3/32" x 7/16"	1/8" x 9/16"	3/32" x 3/32"	1/8" x 1/8"	1/8" x 1/4"	1/8" x 1/4"	1/8" x 1/4"
Style	SA-41	SA-42	SA-43	SB-41	SB-43	SC-41	SC-42	SD-41	SD-42	SE-41	SH-41	SG-41
1 1/2" Approx. Overall Length												
#1 Cut	59100	59102	59104	59106	40160	59108	59110	59112	59114	59116	59128	59122
#3 Cut	59101	59103	59105	59107		59109	59111	59113	59115	59117	59129	59123
2" Approx. Overall Length												
#1 Cut			59000				59002		59004	59006	59012	
#3 Cut			59026				59028		59030	59032	59038	
3" Approx. Overall Length												
#1 Cut			59001	59050			59003	59055	59005	59007	59013	
#3 Cut			59027				59029		59031	59033	59039	

CUTTING HEAD	1/8" x 3/8"	1/8" x 1/2"	1/8" x 1/4"	1/8" x 1/2"	1/8" x 11/32"	1/8" x 7/16"	1/8" x 5/8"	1/8" x 3/8"	1/8" x 1/2"	1/8" x 7/64"	1/8" x 1/16"	3/32" x 1/8"	1/8" x 3/16"
Style	SG-43	SG-44	SF-41	SF-42	SM-41 12° Incl.	SM-42 14° Incl.	SM-43 7° Incl.	SL-41 8° Incl.	SL-42 8° Incl.	SJ-42 60° Incl.	SK-42 90° Incl.	SN-41 10° Incl.	SN-42 10° Incl.
1 1/2" Approx. Overall Length													
#1 Cut	59124	59126	59118	59120	59137	59139	59141	59134	59135	59130	59132	59143	59145
#3 Cut	59125	59127	59119	59121	59138	59140	59142	59147	59136	59131	59133	59144	59146
2" Approx. Overall Length													
#1 Cut		59010		59008		59016			59014				
#3 Cut		59036		59034		59042			59040				
3" Approx. Overall Length													
#1 Cut		59011		59009		59017			59015				
#3 Cut		59037		59035		59043			59041				

All Burrs available with #4 Diamond Cut, add 20% to list price of #1 Cut.

BURR

5/32" - 3/16" Head Diameter, 1/8" Shank Diameter

CUTTING HEAD	5/32" x 1/2"	3/16" x 1/2"	5/32" x 1/2"	3/16" x 1/2"	3/16" x 3/16"	3/16" x 1/2"	3/16" x 1/2"	3/16" x 3/8"	3/16" x 9/32"	3/16" x 1/4"	3/16" x 1/2"	3/16" x 1/2"
Style	SA-52	SA-53	SC-52	SC-53	SD-53	SG-53	SF-53	SH-53	SE-53	SN-53 10 ° Incl.	SM-53 10 ° Incl.	SL-53 14 ° Incl.



1 1/2" Approx. Overall Length												
#1 Cut	71101	71103	71105	71108	71110	71115	71113	71116	71112	71120	71119	71117
#3 Cut	71102	71104	71106	71109	71111	71130	71114	71135	71140	71121	71145	71118

All Burrs available with #4 Diamond Cut, add 20% to list price of #1 Cut.

BURR

1/4" Head Diameter, 1/8" Steel Shank Diameter

CUTTING HEAD	1/2"	3/16"	1/4"	1/2"	1/2"	1/2"	1/2"	3/8"	1/4"
Style	SA-51	SB-51	SD-51	SC-51	SF-51	SG-51	SM-51 22° Incl.	SE-51	SN-51 10° Incl.



2" Max Overall Length									
#1 Cut	70101	70103	70107	70105	70111	70113	70115	70109	70117
#3 Cut	70102	70104	70108	70106	70112	70114	70116	70110	70118

BURR

3/16" Head Diameter, 3/16" Steel Shank Diameter

CUTTING HEAD	5/8"	5/8"	3/16"	1/2"	1/2"	7/16"	9/32"	1/4"	3/32"	5/32"
Style	SA-81	SC-81	SD-81	SF-81	SG-81	SL-81 14° Incl.	SE-81	SN-81 10° Incl.	SK-81 90° Incl.	SJ-81 60° Incl.



2" Approx. Overall Length										
#1 Cut	72101	72102	72103	72105	72106	72110	72104	72111	72108	72109
#3 Cut	72121	72122	72123	72124	72125	72126	72127	72128	72129	72130

All Burrs available with #4 Diamond Cut, add 20% to list price of #1 Cut.

BURRS/ROTARY FILES

BURR Sets

OFFERED IN BOTH SINGLE AND DOUBLE CUT VERSIONS.

Each set is conveniently packaged in a wooden box.



BURR Set #1

10 Tools • 3/8" - 1/2" Diameter Head, 1/4" Shank

CUT	EDP
#1 Single Cut	60001
#3 Double Cut	60003

CUTTING HEAD	1/2" x 1"	1/2" x 1"	3/8" x 3/4"	1/2" x 1"	3/8" x 3/4"	1/2" x 1"	3/8" x 3/4"	3/8" x 5/8"	1/2" x 1 1/8"	1/2" x 1/2"
Style	SA-5	SC-5	SC-3	SF-5	SF-3	SG-5	SG-3	SE-3	SL-4 14° Incl.	SD-5



BURR Set #2

12 Tools • 3/32" - 1/8" Diameter Head, 1/8" Shank

CUT	EDP
#1 Single Cut	60004
#3 Double Cut	60006

CUTTING HEAD	1/8" x 9/16"	3/32" x 7/16"	1/8" x 9/16"	3/32" x 7/16"	1/8" x 1/8"	1/8" x 1/4"	1/8" x 1/4"	1/8" x 3/8"	1/8" x 1/2"	1/8" x 7/16"	1/8" x 1/2"	1/8" x 3/16"
Style	SA-43	SA-42	SC-42	SC-41	SD- 42	SE-41	SH-41	SG-43	SF-42	SM-42 14° Incl.	SL-42 8° Incl.	SN-42 10° Incl.



BURR Set #3

9 Tools • 1/4" Diameter Head, 1/8" Shank

CUT	EDP
#1 Single Cut	60007
#3 Double Cut	60009

CUTTING HEAD	1/2"	3/16"	1/4"	1/2"	1/2"	1/2"	1/2"	3/8"	1/4"
Style	SA- 51	SB-51	SD-51	SC-51	SF-51	SG-51	SM-51 22° Incl.	SE-51	SN-51 10° Incl.



BURR Set #4

12 Tools • 5/32" - 3/16" Diameter Head, 1/8" Steel Shank

CUT	EDP
#1 Single Cut	60010
#3 Double Cut	60012

CUTTING HEAD	3/16" x 1/2"	5/32" x 1/2"	3/16" x 1/2"	5/32" x 1/2"	3/8" x 3/16"	3/16" x 1/2"	3/16" x 1/2"	3/16" x 3/8"	3/16" x 9/32"	3/16" x 1/4"	3/16" x 1/2"	3/16" x 1/2"
Style	SA-53	SA-52	SC-53	SC-52	SD-53	SG-53	SF-53	SH-53	SE-53	SN-53 10˚ Incl Taper	SM-53 16˚ Incl Taper	SL-53 14˚ Incl Taper



BURR Set #5

10 Tools • 1/8" - 1/4" Diameter Head, 1/4" Shank

CUT	EDP
#1 Single Cut	60013
#3 Double Cut	60015

CUTTING HEAD	1/4" x 5/8"	3/16" x 5/8"	1/4" x 5/8"	1/8" x 5/8"	1/4 x 5/8"	1/4" x 5/8"	1/4" x 3/8"	1/4" x 3/4"	1/4" x 5/8"	1/4" x 5/16"
Style	SA-1	SA-14	SC-1	SC-12	SF-1	SG-1	SE-1	SM-2 14˚ Incl.	SL-1 14˚ Incl.	SN-1 10˚ Incl.



COUNTERSINKS

1835 Countersink



CHATTERLESS DESIGN FOR HARD MATERIALS
Steel Shank on 3/8" and Above Cutting Diameters



DIA	SHANK	OAL	STEEL SHANK	EDP 90°
1/4	1/4	2		18925
3/8	1/4	2 3/4	✓	18937
1/2	1/4	3	✓	18950
5/8	3/8	2 3/4	✓	18962
3/4	3/8	3	✓	18975

1847 Countersink



FOR MILD STEELS AS WELL AS OTHER NON-FERROUS MATERIALS
Steel Shank on 3/8" and Above Cutting Diameters



DIA	SHANK	OAL	STEEL SHANK	EDP 90°
1/4	1/4	2		18259
3/8	1/4	2 3/4	✓	18379
1/2	1/4	3	✓	18509
5/8	3/8	2 3/4	✓	18629
3/4	3/8	3	✓	18759

TOLERANCES	SHANK
	+.0000"-.002"
	+0.00mm-0.050mm

2400 Boring Bar



1 UNCOATED

TOOL NUMBER	DIA	DEPTH OF HOLE	SHANK DIAMETER	OAL	EDP UNCOATED
F-002	.0600	3/16	.1250	1 1/2	24012
F-00	.0800	3/8	.1250	1 1/2	24010
F-0	.0900	1/2	.1250	1 1/2	24000
F-1	.1200	5/8	.1250	1 1/2	24001
F-2	.1500	3/4	.1875	2	24002
F-3	.1800	1	.1875	2	24003
F-4	.2100	1 1/4	.2500	2 1/2	24004
F-5	.2400	1 1/4	.2500	2 1/2	24005
F-6	.2700	1 1/4	.3125	2 1/2	24006
F-7	.3000	1 1/4	.3125	2 1/2	24007
F-8	.3300	1 1/2	.3750	2 1/2	24008
F-9	.3600	1 1/2	.3750	2 1/2	24009

TOLERANCES	DIAMETER	SHANK
	+.0000"-.004"	h6
	+0.00mm -0.101mm	

Weldon Flats

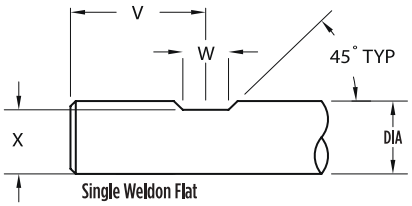
JITSERVICES
48/HR
Just-in-time delivery.

12 pieces or less ALL STYLES
ORDER DEADLINE 3:00pm est

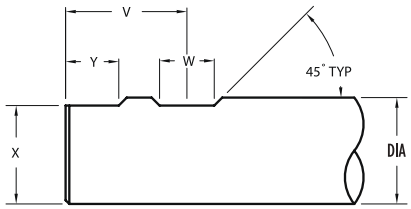
The Advanced Performance Weldon Flat (AF) and the Standard Weldon Flat (WF) are essentially the same, but the length of the Weldon Flat to the cutting end of the tool is different. The AF is measured from the flute washout to the flat. This guarantees that the flute or flute washout will not be inside of the holder. If the flute or flute washout is inside the tool holder, the chips can pack into the holder and can cause the tool to break.

Standard Weldon Flat (WF)

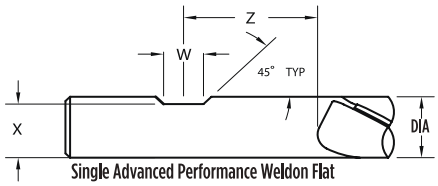
SHANK DIAMETER	V ±.015	W ±.001	X ±.004	Y ±.031
1/8	.5000	.1560	.1050	-
3/16	.6875	.1560	.1500	-
1/4	.7812	.1870	.2150	-
5/16	.7812	.2500	.2750	-
3/8	.7812	.2810	.3200	-
7/16	.7812	.3310	.3780	-
1/2	.8906	.3310	.4350	-
9/16	.9200	.3310	.5000	-
5/8	.9531	.4010	.5550	-
3/4	1.0156	.4560	.6700	-
7/8	1.0156	.4560	.8050	.5000
1	1.1406	.5160	.9200	.5000
1 1/4	1.1406	.5160	1.1510	.5000



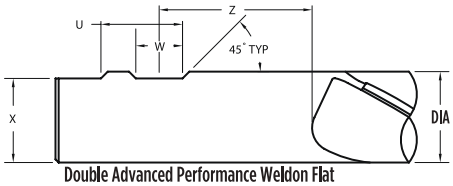
Single Weldon Flat



Double Weldon Flat



Single Advanced Performance Weldon Flat



Double Advanced Performance Weldon Flat

Advanced Performance Weldon Flat (AF)

SHANK DIAMETER	Z ±.015	W ±.001	X ±.004	U ±.031
3/8	.8310	.2810	.3200	-
7/16	.8310	.3310	.3780	-
1/2	.9400	.3310	.4350	-
5/8	1.1580	.4010	.5550	-
3/4	1.0500	.4560	.6700	-
7/8	1.0500	.4560	.8050	-
1	1.1700	.5160	.9200	.9000
1 1/4	1.1700	.5160	1.1510	.9000
1 1/2	1.1700	.5160	1.4010	.9000

For new applications, we recommend the AF. For existing applications using our WF, we recommend staying with our WF unless issues have occurred.

*We cannot guarantee or accept the return of any End Mill with a Flat put on by the customer.

48-HOUR Chip Breaker Service

48-HOUR Chip Breaker Service

JITSERVICES
48/HR
Just-in-time delivery.

12 pieces or less
ALL STYLES
ORDER DEADLINE
3:00pm est



Most End Mills can be supplied with chip breakers and shipped within 48-hours. When ordering, please specify the EDP number for the End Mill you wish to add chip breakers to.

CORNER RADIUS AND CHAMFERED END MILL SERVICE

JITSERVICES
48/HR
Just-in-time delivery.

12 pieces or less
ALL STYLES
ORDER DEADLINE
3:00pm est



Most End Mills can be supplied with a corner radius and shipped within 48-hours. When ordering, please specify the specific End Mill and the radius required.

Visit fullertontool.com for FAST Quote - Altered End Mills.

AVAILABLE ON FAST QUOTES

Dura Carb Carbide Substrates

We make our tools with the finest grades of carbide found in the industry. Our uniquely designed Dura Carb family of carbide grades improves performance and increases productivity. Listed below are our most popular Dura Carb carbide grades.

Popular Dura Carb Grades

DURA CARB GRADE	DURA CARB DESCRIPTION	IMAGE
Dura Carb	With its premium micrograin structure, Dura Carb is a versatile grade that can be applied in a wide range of applications.	
Dura Carb II	Super strong substrate designed to handle high shock resistance. It contains a larger percentage of cobalt which increases its resistance to shock. We recommend Dura Carb II in roughing applications and to add coatings to improve tool life.	
Dura Carb III	This superior wear grade is excellent for low impact tooling. It is a long-lasting substrate for ideal machining conditions.	
Dura Carb III-D	Superior wear grade which is diamond coatable. Excellent for low impact tooling. It is a long-lasting substrate for ideal machining conditions.	
Dura Carb IV	Special ultra fine carbide grade for machining hard materials > 60RC.	
Dura Carb IV-M	Special ultra fine carbide grade for machining hard materials > 60RC. Ideal for high performance micro tooling.	
Dura Carb V	Special submicron grade for high-performance machining of steel, stainless steel and difficult to machine materials, like titanium. It has optimum toughness combined with very good wear resistance.	

h6 Tolerancing

Fullerton uses the industry preferred h6 tolerance on all of its solid carbide cutting tool shanks, with noted exceptions. The h6 tolerance is generally considered the industry standard with regards to shrink fit holders, and it requires manufacturers to be consistent in their processes to adhere to this tolerance.

INCH			METRIC		
DIAMETER RANGE	TOLERANCE		DIAMETER RANGE	TOLERANCE	
.0236–.0374	+.0000	-.00019	0.600–0.950	+0.000	-0.005
.0375–.1181	+.0000	-.00023	0.951–3.000	+0.000	-0.006
.1182–.2362	+.0000	-.00031	3.001–6.000	+0.000	-0.008
.2363–.3937	+.0000	-.00035	6.001–10.000	+0.000	-0.009
.3938–.7086	+.0000	-.00043	10.001–18.000	+0.000	-0.011
.7087–1.1811	+.0000	-.00051	18.001–30.000	+0.000	-0.013
1.1812–1.9685	+.0000	-.00062	30.001–50.000	+0.000	-0.016

Find out more about our Dura Carb Grades.

Contact us at sales@fullertontool.com or 800.248.8315 for edge prep recommendations.

Fullerton's tools are available with a variety of standard and niche process specific coatings. We have over 20 coatings available. Listed below are some of our most popular coatings.

Popular Coatings

COATING	RECOMMENDED USAGE	IMAGE
TiN	A good general purpose coating that is excellent for iron-based materials and low and medium strength steels. It has excellent wear resistance, thermal stability, and a low coefficient of friction that improves thermal transfer of heat away from the cutting edge.	
TiCN	This coating has a higher hardness and is recommended for cast irons, high silicon aluminum alloys, copper, and other abrasive materials. Coolant must be applied to control temperature at the cutting edge.	
TiAlN	Excellent for high strength steels, hard die steels, high temperature alloys, and titanium alloys. Possible for dry machining, which eliminates thermal shocks created by flood coolants.	
FC-1	Thin film CVD Diamond is ideal in graphite, green ceramic, carbon fiber reinforced plastics (CFRP), (HiSilicon) fiberglass, metal matrix composites, and cast aluminum alloys. Possible dry machine capabilities.	
FC-2	Advance wear with increased lubricity. Diamond Like Carbon (DLC) works well in machining of non-ferrous metals (especially aluminum with <9% Si), composite material, and plastics.	
FC-5	Special purpose single layer coating reduces built-up edge when machining aluminum and titanium alloys.	
FC-6	High Performance Coating for High Speed Machining of Cast Iron, Tool Steel, High-Nickel based Super Alloys, Titanium, Inconel, and Aerospace Alloys. (AlTiN, 60% > Aluminum)	
FC-7	Good, hot hardness and high oxidation resistance with outstanding frictional properties. Ideal in deep hole application.	
FC-13	Extremely high hardness, toughness and heat resistance. Applicable: Steels, Hardened Steels and AlloyedSteels (Superalloys)	
FC-14	High scratch & heat resistance for tough difficult to cut materials. Steels, AlloyedSteels (Superalloys), Cast Iron and Aluminium > 12% Si	
FC-18	Terrific for levels of oxidation resistance and hot hardness. Exemplary wear resistance. Excellent in high-speed machining parameters for milling, stainless steels, alloy steels, titanium, and hardened steels.	
FC-19	Outstanding self-lubricating properties. Extremely smooth, droplet-free surfaces ensure "frictionless" chip removal. Ideal for machining aluminum (silicon content <10%) and titanium alloys.	
FC-20	High hardness and elasticity, low friction, and high oxidation resistance. Excellent for stainless steel and nickel-based high temperature alloys.	
FC-21	Extremely high hardness, toughness and heat resistance. Applicable: Steels, Hardened Steels and AlloyedSteels (Superalloys). Can be used in a wide range of applications	

Need a different coating?

Our Customer Service department can help at sales@fullertontool.com or 800.248.8315.

FulGrip

Fullerton's proprietary FulGrip shank treatment will increase shank retention up to **62%**, with no degradation to shank or long-term effects on holders.

Fulgrip is perfect for those Ultra aggressive metal removal rates that pull competitor tools out of holders.



Edge Preps

Fullerton's tools are available with a variety of standardized edge preps to provide the best cutting tools for your use and application. Check out our most popular edge preps below.

Popular Edge Preps

POLISH TYPE	POLISH DESCRIPTION
MP02 Polish	High polish with light edge prep, great for non-ferrous materials, particularly aluminum.
MH02 Edge Prep	Light edge prep often used in Steels.
MH04 Edge Prep	Medium edge prep often used in Titanium.
MH06 Edge Prep	Medium edge prep often used in Cast Iron.
MH08 Edge Prep	Larger edge prep used in special applications and larger tools.
PP02 Post Coating Polish	Droplet removal polish.

Contact us for additional Edge Preps!

Contact us at sales@fullertontool.com or 800.248.8315 for edge prep recommendations.

FULLERTON
REGRIND PROGRAM

SAVE MONEY with Fullerton's complete regrind program. Most standard and custom tooling can be reground to like-new condition while maintaining precise geometries, edge preps, and coatings at a fraction of the cost of new tooling.

CUSTOM PROGRAMS AVAILABLE
Contact our Regrind Department for more info.

- Save **30%-60%** with tooling reground to like-new condition.
- Reduce inventory on hand.
- Available for standard and custom tooling.
- Precise geometries and edge preps generate **100%** performance compared to new tooling.
- Custom etching on regrinds ensures operator has correct tooling.
- Recoated in-house with Fullerton premium coatings.
- Fullerton grinds and finishes applied to tooling, regardless of manufacturer.

* Tools 1/4" and smaller do not qualify for regrind.



Regrind Parameters:

SHANK DIAMETER MINIMUM	SHANK DIAMETER MAXIMUM	PIECE MINIMUM
.2500	.3750	20
.3751	.5000	12
.5001	.7500	8
.7501	-	5

- Tools must be .2500" and larger
- Contact Customer Service for minimum order amount.
- **Contact Fullerton to up-to-date pricing.**

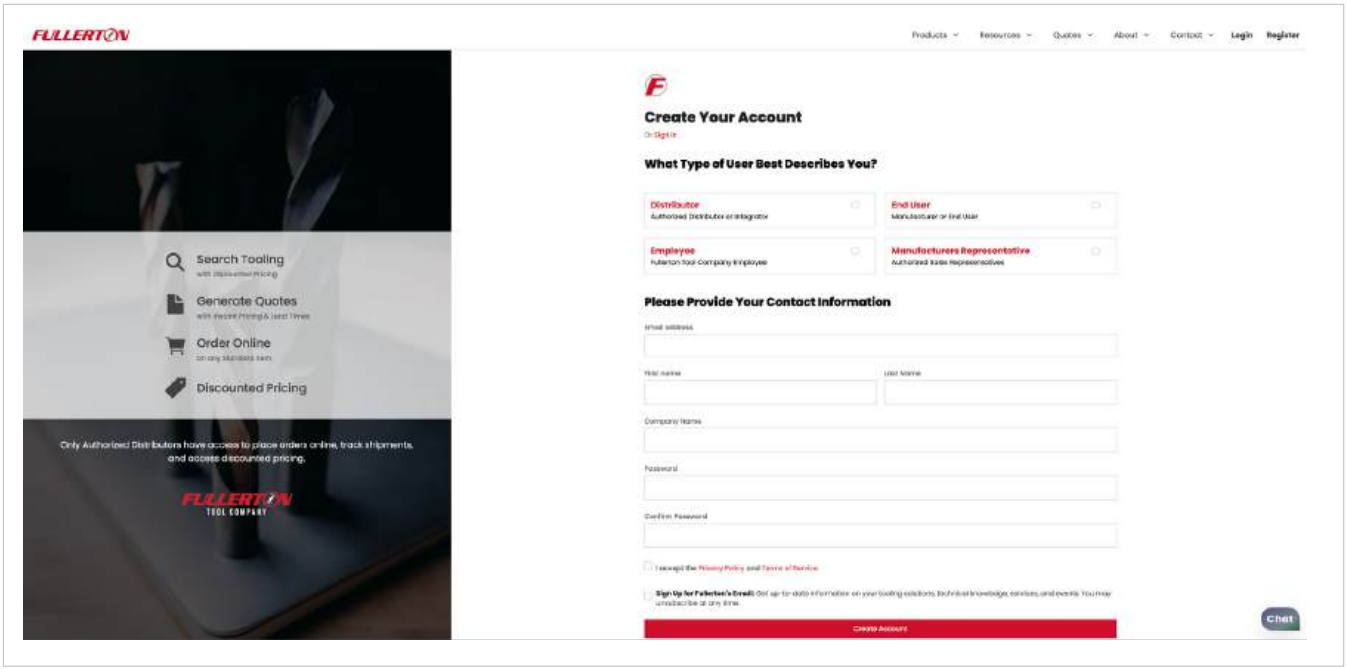
Expand your tool life with our Regrind Service!

Contact our Regrind department at regrinds@fullertontool.com or 800.248.8315.

Register For Our Website

BENEFITS OF SIGNING UP:

- **SEARCH** by tool specs, material you're machining in, series, or part number for discounted pricing and stock availability.
- Utilize **FAST Quotes** to generate instant pricing and lead times on altered and custom end mills, JIT Reamers,
- and JIT Saws.
- **ORDER** any standard, off-the-shelf product, in a matter of a few clicks.
- View and track **OPEN ORDERS** and **SHIPMENTS**.
- **LIVE CHAT** with our Customer Service, Quoting, and Engineering teams.
- Many more useful features!



HOW TO SIGN UP:

1. Go to fullertontool.com/register
2. Fill out applicable information
3. Click Create Account
4. Verify Email
5. Receive confirmation email and begin exploring!

(confirmation email for some users may take up to 24 hours to receive)

Click. Quote. Done.

INSTANT PRICING AND LEAD TIMES



Instant Quote

Altered End Mills

Select almost any standard end mill part number, make slight modifications, and generate instant pricing and lead times.

Start Altered End Mill Quote →



Instant Quote

Special End Mills

Build a custom end mill by selecting a series and choosing your tooling specifications with pricing and lead times instantly.

Start Special End Mill Quote →



Instant Quote

JIT Reamers

Build a 24-Hour JIT Reamer by selecting your tooling specifications and generate pricing and lead times instantly.

Start JIT Reamer Quote →



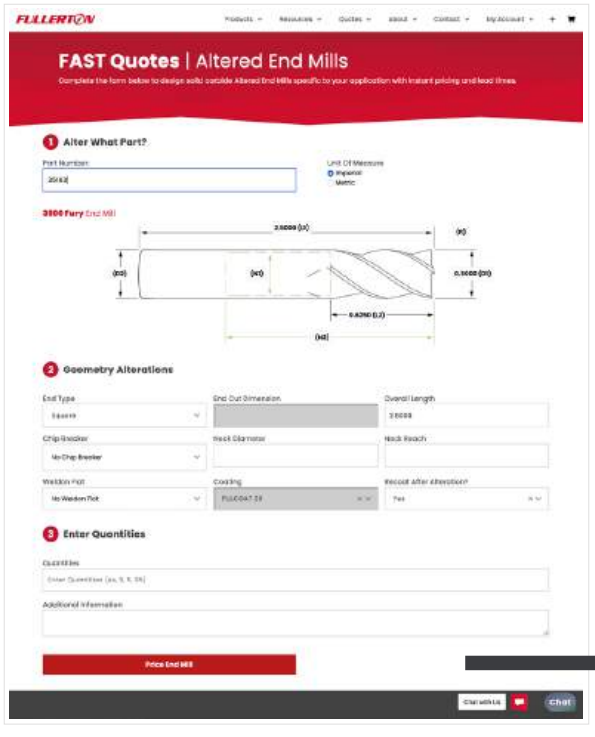
Instant Quote

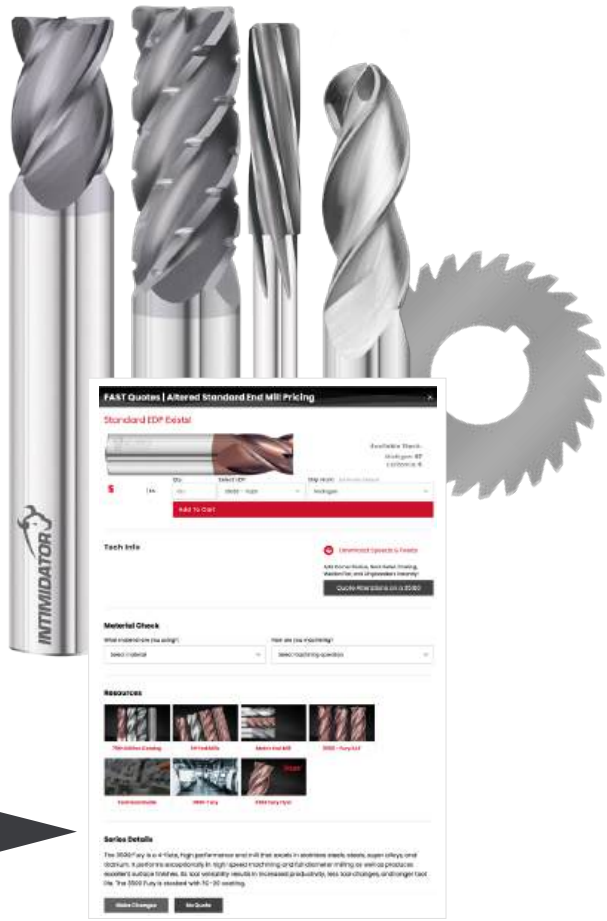
JIT Saws

Build a 24-Hour JIT Reamer by selecting your tooling specifications and generate pricing and lead times instantly.

Start JIT Saw Quote →

DESIGN YOUR TOOL ONLINE WITH FAST QUOTES!

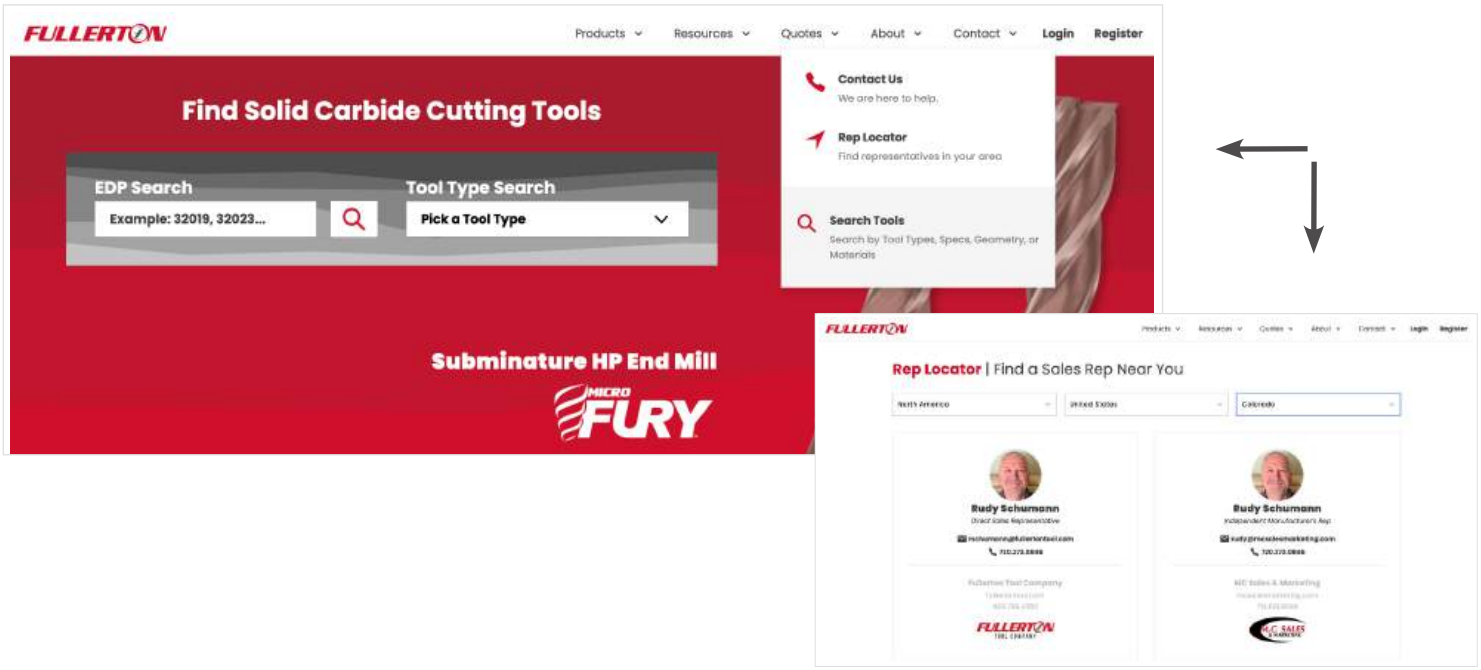




Log in to **fullertontool.com** to create a tool to fit your needs. Available for Special End Mills, Altered Standard End Mills JIT Reamers and JIT Saws. Put in your parameters and hit quote, you will receive **INSTANT** pricing! You will then have the ability to send the quote directly to your email.

Factory Sales Representatives

To locate a Representative in your area, visit the Rep Locator page from the Contact dropdown at **fullertontool.com**!



Fullerton's cutting tools ship from locations around the country to get to our customers **F.A.S.T.** We maintain inventory of standard catalog items at both our **Michigan** and **California** locations.

We also offer **Regrinds, Corner Radius, Chip Breakers and Neck Reliefs** at our Headquarters in Saginaw, Michigan and our Regional Service Center in Huntington Beach, California.

HEADQUARTERS

Michigan-East

121 Perry St., Saginaw, MI 48602

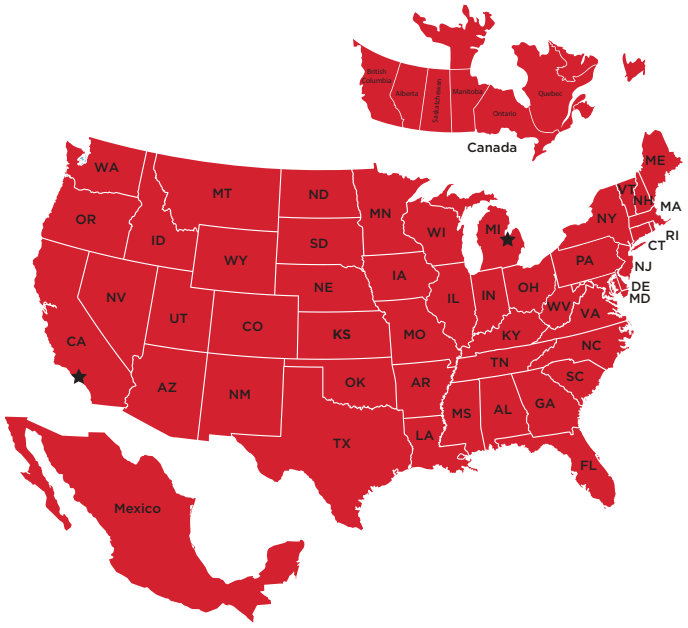
M-F 8:00am - 5:30pm Eastern Time

REGIONAL SERVICE CENTER

California

15581 Computer Ln., Huntington Beach CA 92649

M-F 8:00am - 5:30pm Pacific Time



SAFE-LOCK®

THE NEW STANDARD FOR ROUGHING APPLICATIONS

Fullerton's end mills are now available with the **HAIMER Safe-Lock System®** to help improve your productivity and profits. The unique Safe-Lock design in cutting tools and tool holders combines high precision shrink fit clamping with a positive form locking mechanism. This prevents round cutting tools from being rotated or completely pulled out from tool holders during heavy machining.



On the safe side with Safe-Lock ™

- For High Performance Cutting (HPC) and for trochoidal (dynamic) milling
- Highly accurate clamping thanks to shrink fit or collet chuck technology
- High torque due to form closed clamping
- No loss of accuracy
- No pull out of the tool
- No spinning of the
- No damage of the work piece or machine

HAIMER
Quality Wins.



SAFE-LOCK®:
The patented seat belt
for your cutting tools

Improve productivity and profits with the Haimer Safe-Lock System®.

Contact our Customer Service department at sales@fullertontool.com or 800.248.8315.

Custom Tooling



Complex machining often requires custom tooling.

We provide custom tooling solutions that increase efficiency and reduce costs, specific to your complex machining applications. Fullerton can assess your machining needs through a collaboration with your machinists and product development teams and our engineering and technical support teams. This allows us to better understand your struggles and overall goals, which helps us design and manufacture the right tooling for you.

Sometimes that means making a slight alteration to one of our standard tools, while at other times we create innovative, custom tooling specific for your application.

Regardless of how simple or complex your machining needs are, we manufacture every tool with precision and concise parameters that produces tooling with exceptional performance.

Find out more about our Custom Tooling!

Contact our Customer Service department at sales@fullertontool.com or 800.248.8315.



CUSTOM
TOOLING SOLUTIONS

- 6-FLUTE STEP FORM END MILL
- FULL RADIUS KEYSEAT CUTTER
- DRILL / BACK CHAMFER TOOL
- MULTI-STEP COOLANT REAMER
- COMPOSITE ROUTER
- MULTI-STEP COOLANT DRILL
- MULTI-STEP POLY DRILL
- AEROSPACE DRILL

ISO Material Color Guide

To help in the selection of a tool appropriate for your need, we have included recommended materials for each tool series based on the ISO Material Color Guide. You can find recommended materials on every tool series page.

Steel Sub-Groups:
Carbon Steel Free-Cut Steel, Low Alloy Steel & High Alloy Steel (Tool Steel).

Stainless Steel Sub-Groups:
Austenitic Stainless Steel, Martensitic / Ferritic Stainless Steel & Duplex Stainless Steel.

Cast Iron Sub-Groups:
Grey Cast Iron, Nodular Cast Iron & Malleable Cast Iron.

Non Ferrous Sub-Groups:
Copper / Brass , Aluminum & Plastics

Super Alloys (HRSA) Sub-Groups:
Nickel (Ni) Based Superalloys, Iron-Based Superalloys, Cobalt-Based Superalloys & Titanium-Based Superalloys.

Hardened Steel:
Alloy steel and cast iron heat-treated to 45-65 HRC.

Universal: This is a non-ISO category, but it addresses a need in that identifies items that fill a niche of tools that perform well in multiple material categories and applications.

Fiber: GFRP (Glass Fiber Reinforced Polymer/Plastic), CFRP (Carbon Fiber Reinforced Plastic), carbon fiber composites & aramid fiber reinforced plastic.

Other: Thermoplastics, thermosets, hard rubber, graphite, wood

ISO Certification

We have been making high quality carbide cutting tools since we opened our doors in 1942 and we are going to keep that high quality for years to come as we are now an ISO-9001:2015 certified company for the manufacturing and distribution of carbide and PCD cutting tools.

SALES TERMS & CONDITIONS

We support the value-added services of our partners in industrial distribution. Our products are exclusively sold through selected, authorized industrial distributors that meet our high standards of business ethics and customer service capabilities.

CANCELLATIONS

Cancellations of orders for "standard catalog product" can be made at no charge, providing the tools have not been shipped and we have not incurred labor expense to finish to a specific size or altered standard markings or packaging and the order quantity was not unusually large compared to Fullerton's average sales for that particular item. A cancellation fee will be charged in proportion to the amount of the cost accumulated on the order prior to cancellation.

CUSTOMER ALTERATIONS

Fullerton cannot be responsible for the performance of or compliance to specifications, nor can we accept, for return, any tool that has been altered in any way by our customers. This includes, but not limited to, surface treatments, coatings, flats, tangs, markings, or any geometry alterations.

OVER, UNDER, AND EXACT SHIPMENTS

Unless your order specifies no over shipments, no under shipments, or exact quantities required, Fullerton's policy follows standard industry practice on altered standard and special orders which is to start +10% over the quantity ordered. On quantities from 1 piece to 9 pieces, our standard shipping tolerance is plus or minus 1 piece. Orders for special tooling that specify "no over and no under shipments" (exact quantities) are subject to a premium charge. Orders for special tooling that specify "no over shipments" can ship as much as 20% below the order quantity and if less than 10 pieces, up to 2 below the order quantity. Orders for special tooling that specify "no under shipments" can ship as much as 20% above the order quantity and if less than 10 pieces, up to 2 above the order quantity.

PRODUCT WARRANTY

We guarantee our products will conform to the specifications listed on custom blueprints, orders, and quotation requests. Dimensions, specifications, and tolerances not listed will be furnished to the current Fullerton Tool Company manufacturing standards. Our warranty is limited to the repair, replacement, or full credit for the tools found not to be within specifications, at our option.

RETURNED GOODS

Always contact our customer service department to obtain a "returned goods authorization number" (RGA) prior to returning any material. Fullerton will allow a single return of a customer's "slow moving inventory" of standard catalog product once per year. When the return is accompanied by stock replacement order of equal or greater value, we will issue full credit for the returned product. If the returned product is not accompanied by a stock replacement order, a 20% restocking charge will apply. All products returned must be within 1 year of manufacturing date, in clean resalable condition, and in original packaging. We cannot accept any product that has been discontinued or in quantities that are unusually large compared to Fullerton's average sales for any particular item, or any decimal size end mills, reamer, and saws.

Decimal Conversion Chart

SIZE	DECIMAL
80	.0135
.35mm	.0138
79	.0145
1/64	.0156
.4mm	.0157
78	.0160
.45mm	.0177
77	.0180
.5mm	.0197
76	.0200
75	.0210
.55mm	.0217
74	.0225
.6mm	.0236
73	.0240
72	.0250
.65mm	.0256
71	.0260
.7mm	.0276
70	.0280
69	.0292
.75mm	.0295
68	.0310
1/32	.0312
.8mm	.0315
67	.0320
66	.0330
.85mm	.0335
65	.0350
.9mm	.0354
64	.0360
63	.0370
.95mm	.0374
62	.0380
61	.0390
1mm	.0394
60	.0400
59	.0410
1.05mm	.0413
58	.0420
57	.0430
1.1mm	.0433
1.15mm	.0453
56	.0465
3/64	.0469
1.2mm	.0472
1.25mm	.0492
1.3mm	.0512
55	.0520
1.35mm	.0531
54	.0550
1.4mm	.0551
1.45mm	.0571
1.5mm	.0591
53	.0595
1.55mm	.0610

SIZE	DECIMAL
1/16	.0625
1.6mm	.0630
52	.0635
1.65mm	.0650
1.7mm	.0669
51	.0670
1.75mm	.0689
50	.0700
1.8mm	.0709
1.85mm	.0728
49	.0730
1.9mm	.0748
48	.0760
1.95mm	.0768
5/64	.0781
47	.0785
2mm	.0787
2.05mm	.0807
46	.0810
45	.0820
2.1mm	.0827
2.15mm	.0846
44	.0860
2.2mm	.0866
2.25mm	.0886
43	.0890
2.3mm	.0906
2.35mm	.0925
42	.0935
3/32	.0938
2.4mm	.0945
41	.0960
2.45mm	.0965
40	.0980
2.5mm	.0984
39	.0995
38	.1015
2.6mm	.1024
37	.1040
2.7mm	.1063
36	.1065
2.75mm	.1083
7/64	.1094
35	.1100
2.8mm	.1102
34	.1110
33	.1130
2.9mm	.1142
32	.1160
3mm	.1181
31	.1200
3.1mm	.1220
1/8	.1250
3.2mm	.1260
3.25mm	.1280
30	.1285

SIZE	DECIMAL
3.3mm	.1299
3.4mm	.1339
29	.1360
3.5mm	.1378
28	.1405
9/64	.1406
3.6mm	.1417
27	.1440
3.7mm	.1457
26	.1470
3.75mm	.1476
25	.1495
3.8mm	.1496
24	.1520
3.9mm	.1535
23	.1540
5/32	.1562
22	.1570
4mm	.1575
21	.1590
20	.1610
4.1mm	.1614
4.2mm	.1654
19	.1660
4.25mm	.1673
4.3mm	.1693
18	.1695
11/64	.1719
17	.1730
4.4mm	.1732
16	.1770
4.5mm	.1772
15	.1800
4.6mm	.1811
14	.1820
13	.1850
4.7mm	.1850
4.75mm	.1870
3/16	.1875
4.8mm	.1890
12	.1890
11	.1910
4.9mm	.1929
10	.1935
9	.1960
5mm	.1969
8	.1990
5.1mm	.2008
7	.2010
13/64	.2031
6	.2040
5.2mm	.2047
5	.2055
5.25mm	.2067
5.3mm	.2087
4	.2090

SIZE	DECIMAL
5.4mm	.2126
3	.2130
5.5mm	.2165
7/32	.2188
5.6mm	.2205
2	.2210
5.7mm	.2244
5.75mm	.2264
1	.2280
5.8mm	.2283
5.9mm	.2323
A	.2340
15/64	.2344
6mm	.2362
B	.2380
6.1mm	.2402
C	.2420
6.2mm	.2441
D	.2460
6.25mm	.2461
6.3mm	.2480
E	.2500
1/4	.2500
6.4mm	.2520
6.5mm	.2559
F	.2570
6.6mm	.2598
G	.2610
6.7mm	.2638
17/64	.2656
6.75mm	.2657
H	.2660
6.8mm	.2677
6.9mm	.2717
I	.2720
7mm	.2756
J	.2770
7.1mm	.2795
K	.2810
9/32	.2812
7.2mm	.2835
7.25mm	.2854
7.3mm	.2874
L	.2900
7.4mm	.2913
M	.2950
7.5mm	.2953
19/64	.2969
7.6mm	.2992
N	.3020
7.7mm	.3031
7.75mm	.3051
7.8mm	.3071
7.9mm	.3110
5/16	.3125
8mm	.3150

SIZE	DECIMAL
0	.3160
8.1mm	.3189
8.2mm	.3228
P	.3230
8.25mm	.3248
8.3mm	.3268
21/64	.3281
8.4mm	.3307
Q	.3320
8.5mm	.3346
8.6mm	.3386
R	.3390
8.7mm	.3425
11/32	.3438
8.75mm	.3445
8.8mm	.3465
S	.3480
8.9mm	.3504
9mm	.3543
T	.3580
9.1mm	.3583
23/64	.3594
9.2mm	.3622
9.25mm	.3642
9.3mm	.3661
U	.3680
9.4mm	.3701
9.5mm	.3740
3/8	.3750
V	.3770
9.6mm	.3780
9.7mm	.3819
9.75mm	.3839
9.8mm	.3858
W	.3860
9.9mm	.3898
25/64	.3906
10mm	.3937
X	.3970
Y	.4040
13/32	.4062
Z	.4130
10.5mm	.4134
27/64	.4219
11mm	.4331
7/16	.4375
11.5mm	.4528
29/64	.4531
15/32	.4688
12mm	.4724
31/64	.4844
12.5mm	.4921
1/2	.5000
13mm	.5118
33/64	.5156
17/32	.5312

SIZE	DECIMAL
13.5mm	.5315
35/64	.5469
14mm	.5512
9/16	.5625
14.5mm	.5709
37/64	.5781
15mm	.5906
19/32	.5938
39/64	.6094
15.5mm	.6102
5/8	.6250
16mm	.6299
41/64	.6406
16.5mm	.6496
21/32	.6562
17mm	.6693
43/64	.6719
11/16	.6875
17.5mm	.6890
45/64	.7031
18mm	.7087
23/32	.7188
18.5mm	.7283
47/64	.7344
19mm	.7480
3/4	.7500
49/64	.7656
19.5mm	.7677
25/32	.7812
20mm	.7874
51/64	.7969
20.5mm	.8071
13/16	.8125
21mm	.8268
53/64	.8281
27/32	.8438
21.5mm	.8465
55/64	.8594
22mm	.8661
7/8	.8750
22.5mm	.8858
57/64	.8906
23mm	.9055
29/32	.9062
59/64	.9219
23.5mm	.9252
15/16	.9375
24mm	.9449
61/64	.9531
24.5mm	.9646
31/32	.9688
25mm	.9843
63/64	.9844
1	1.0000

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