

# 3833 AlumaMill G3 (Square End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



### Basic Information

- Advanced Performance
- Square End
- 3 Flutes
  - 37.5° Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, Extra Long, and Long Reach Lengths
- Standard Uncoated and FC-5 Coated
- Inch and Metric Based Tools
- Corner Radius and Chamfered End Mill Service NOT Available
- Dura Carb (Micrograin)

### Tolerance

- Shank Diameter: h6
- Cutter Diameter: +.0000" -0.0005" +0.000mm -0.013mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-5
.1250	1/8	3.18	STB	.2500	.1250	1.5000			27045	27055
.1250	1/8	3.18	SD	.5000	.1250	2.0000			27000	27010
.1250	1/8	3.18	SD	.7500	.1250	2.0000			27100	27065*
.1875	3/16	4.76	STB	.3125	.1875	2.0000			27046	27056
.1875	3/16	4.76	SD	.3750	.1875	2.0000			27101	27066
.1875	3/16	4.76	SD	.6250	.1875	2.0000			27001	27011
.2500	1/4	6.35	STB	.5000	.2500	2.0000			27047	27057*
.2500	1/4	6.35	SD	.5000	.2500	2.5000			27102	27067
.2500	1/4	6.35	SD	.7500	.2500	2.5000			27103	27068
.2500	1/4	6.35	SD	1.0000	.2500	2.5000			27002	27012
.2500	1/4	6.35	SD	1.2500	.2500	3.0000			27104	27069*
.2500	1/4	6.35	XL	2.0000	.2500	4.0000			27020	27033*
.3125	5/16	7.94	STB	.4375	.3125	2.5000			27105	27070*
.3125	5/16	7.94	STB	.5000	.3125	2.5000			27048	27058
.3125	5/16	7.94	SD	.8125	.3125	2.5000			27106	27071*
.3125	5/16	7.94	SD	1.0000	.3125	2.5000			27003	27013
.3125	5/16	7.94	SD	1.2500	.3125	3.0000			27107	27072*
.3125	5/16	7.94	XL	1.2500	.3125	4.0000			27021	27034*
.3750	3/8	9.53	STB	.5000	.3750	2.5000			27049	27059
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			27004	27014
.3750	3/8	9.53	SD	1.0000	.3750	3.0000			27088	27089
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			27022	27035*
.4375	7/16	11.11	STB	.5625	.4375	2.7500			27050	27060*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			27005	27015*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000			27023	27036*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			27108	27073*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	27130	27481*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	27131	27494*
.5000	1/2	12.70	STB	.7500	.5000	3.0000			27051	27061
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			27109	27074
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			27006	27016
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			27024	27037*

END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3833 AlumaMill G3 (Square End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-5
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			27110	27075*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			27025	27038*
.6250	5/8	15.88	STB	.7500	.6250	3.5000			27111	27076
.6250	5/8	15.88	SD	1.2500	.6250	3.5000			27112	27077
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			27007	27017*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			27026	27039*
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			27027	27040*
.6250	5/8	15.88	XL	3.7500	.6250	6.0000			27951	
.7500	3/4	19.05	STB	1.0000	.7500	4.0000			27053	27063
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	27132	27709*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	27133	27722*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			27008	27018
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			27028	27041
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			27029	27042*
1.0000	1	25.40	STB	1.2500	1.0000	4.0000			27054	27064*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	27134	27861*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	27135	27874*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			27009	27019*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			27030	27043*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			27031	27044*
1.0000	1	25.40	XL	4.1250	1.0000	7.0000			27113	27917

METRIC (Millimeter)

.1181		3.00	STB	6.00	3.00	38.00			27136	27137*
.1181		3.00	SD	12.00	3.00	50.00			93000	93012*
.1181		3.00	SD	20.00	3.00	50.00			27146	27147*
.1575		4.00	STB	8.00	4.00	50.00			27164	27165
.1575		4.00	SD	12.00	4.00	50.00			93100	93054*
.1575		4.00	SD	16.00	4.00	50.00			93001	93013*
.1969		5.00	STB	13.00	5.00	51.00			27195	27196*
.1969		5.00	SD	20.00	5.00	64.00			93002	93014*
.2362		6.00	STB	13.00	6.00	58.00			93101	93055*
.2362		6.00	LR	20.00	6.00	100.00	50.00	5.75	93024	93031*
.2362		6.00	SD	25.00	6.00	64.00			93003	93015
.2362		6.00	XL	50.00	6.00	100.00			93038	93046*
.2756		7.00	SD	15.00	7.00	64.00			27269*	27270*
.2756		7.00	SD	25.00	7.00	64.00			93004	93016*
.3150		8.00	STB	16.00	8.00	64.00			27319	27320*
.3150		8.00	LR	20.00	8.00	100.00	50.00	7.72	93025	93032*
.3150		8.00	SD	25.00	8.00	64.00			93005	93017*
.3150		8.00	XL	50.00	8.00	100.00			93039	93047*
.3937		10.00	STB	15.00	10.00	64.00			27377	27378*
.3937		10.00	SD	26.00	10.00	64.00			93006	93018*
.3937		10.00	LR	26.00	10.00	100.00	57.00	9.60	93026	93033*
.3937		10.00	XL	50.00	10.00	100.00			93040	93048*
.4724		12.00	STB	20.00	12.00	76.00			27435	27436*
.4724		12.00	LR	25.00	12.00	100.00	57.00	11.61	93027	93034*
.4724		12.00	SD	30.00	12.00	84.00			93007	93019*
.4724		12.00	XL	50.00	12.00	100.00			93041	93049*
.5512		14.00	SD	20.00	14.00	76.00			27575*	27576*
.5512		14.00	SD	30.00	14.00	84.00			93008	93020*
.5512		14.00	XL	57.00	14.00	125.00			93042	93050*
.6299		16.00	STB	30.00	16.00	89.00			27653	27654*
.6299		16.00	LR	30.00	16.00	150.00	89.00	15.34	93028	93035*

ADVANCED PERFORMANCE



\* Non Stocked

# 3833 AlumaMill G3 (Square End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-5
.6299		16.00	SD	41.00	16.00	89.00			93009	93021*
.6299		16.00	XL	63.00	16.00	150.00			93043	93051*
.7874		20.00	SD	30.00	20.00	100.00			27759	27760*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	93029	93036*
.7874		20.00	SD	44.00	20.00	100.00			93010	93022*
.7874		20.00	XL	63.00	20.00	150.00			93044	93052*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	93030	93037*
.9843		25.00	SD	45.00	25.00	100.00			93011	93023*
.9843		25.00	XL	63.00	25.00	150.00			93045	93053*

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

# 3833 AlumaMill G3 (Ball End)

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**Basic Information:**

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- Ball End
- 3 Flutes
  - 37.5° Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, Extra Long, and Long Reach Lengths
- Standard Uncoated and FC-5 Coated
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**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0000" -0.0005" +0.000mm -0.013mm

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ADVANCED PERFORMANCE



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-5
.1250	1/8	3.18	STB	.2500	.1250	1.5000			27154	27155*
.1250	1/8	3.18	SD	.5000	.1250	2.0000			27158	27159*
.1250	1/8	3.18	SD	.7500	.1250	2.0000			27162	27163*
.1875	3/16	4.76	STB	.3125	.1875	2.0000			27182*	27183*
.1875	3/16	4.76	SD	.3750	.1875	2.0000			27187	27188*
.1875	3/16	4.76	SD	.6250	.1875	2.0000			27193	27194*
.2500	1/4	6.35	STB	.5000	.2500	2.0000			27237	27238*
.2500	1/4	6.35	SD	.5000	.2500	2.5000			27243	27244*
.2500	1/4	6.35	SD	.7500	.2500	2.5000			27249	27250*
.2500	1/4	6.35	SD	1.0000	.2500	2.5000			27255	27256*
.2500	1/4	6.35	SD	1.2500	.2500	3.0000			27261	27262
.2500	1/4	6.35	XL	2.0000	.2500	4.0000			27267	27268
.3125	5/16	7.94	STB	.4375	.3125	2.5000			27287	27288*
.3125	5/16	7.94	STB	.5000	.3125	2.5000			27293*	27294*
.3125	5/16	7.94	SD	.8125	.3125	2.5000			27299	27300*
.3125	5/16	7.94	SD	1.0000	.3125	2.5000			27305*	27306
.3125	5/16	7.94	SD	1.2500	.3125	3.0000			27311	27312*
.3125	5/16	7.94	XL	1.2500	.3125	4.0000			27317	27318*
.3750	3/8	9.53	STB	.5000	.3750	2.5000			27351	27352
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			27359	27360*
.3750	3/8	9.53	SD	1.0000	.3750	3.0000			27367	27368*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			27375	27376
.4375	7/16	11.11	STB	.5625	.4375	2.7500			27417	27418*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			27425*	27426*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000			27433	27434
.5000	1/2	12.70	STB	.6250	.5000	3.0000			27479	27480
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	27492	27493*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	27505	27506*
.5000	1/2	12.70	STB	.7500	.5000	3.0000			27517	27518*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			27529	27530*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			27537	27538*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			27549	27550*
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			27561	27562
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			27573	27574
.6250	5/8	15.88	STB	.7500	.6250	3.5000			27617	27618*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000			27621	27622*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			27631	27632*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			27641*	27642*



# 3833 AlumaMill G3 (Ball End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-5
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			27651	27652*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000			27707	27708*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	27720	27721*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	27733*	27734*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			27737	27738*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			27747	27748*
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			27757*	27758*
1.0000	1	25.40	STB	1.2500	1.0000	4.0000			27859*	27860*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	27872	27873*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	27885*	27886*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			27895	27896*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			27905*	27906*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			27915	27916*
1.0000	1	25.40	XL	4.1250	1.0000	7.0000			27926*	27927*
METRIC (Millimeters)										
.1181		3.00	STB	6.00	3.00	38.00			27140	27141*
.1181		3.00	SD	12.00	3.00	50.00			27144	27145*
.1181		3.00	SD	20.00	3.00	50.00			27150	27151*
.1575		4.00	STB	8.00	4.00	50.00			27168	27169*
.1575		4.00	SD	12.00	4.00	50.00			27172	27173*
.1575		4.00	SD	16.00	4.00	50.00			27176	27177*
.1969		5.00	STB	13.00	5.00	51.00			27201	27202*
.1969		5.00	SD	20.00	5.00	64.00			27207	27208*
.2362		6.00	STB	13.00	6.00	58.00			27213	27214*
.2362		6.00	LR	20.00	6.00	100.00	50.00	5.75	27219	27220*
.2362		6.00	SD	25.00	6.00	64.00			27225	27226*
.2362		6.00	XL	50.00	6.00	100.00			27231*	27232*
.2756		7.00	SD	15.00	7.00	64.00			27275*	27276*
.2756		7.00	SD	25.00	7.00	64.00			27281*	27282*
.3150		8.00	STB	16.00	8.00	64.00			27325	27326*
.3150		8.00	LR	20.00	8.00	100.00	50.00	7.70	27331	27332*
.3150		8.00	SD	25.00	8.00	64.00			27337	27338*
.3150		8.00	XL	50.00	8.00	100.00			27343*	27344*
.3937		10.00	STB	15.00	10.00	64.00			27385	27386*
.3937		10.00	SD	26.00	10.00	64.00			27401	27402
.3937		10.00	LR	26.00	10.00	100.00	57.00	9.60	27393	27394*
.3937		10.00	XL	50.00	10.00	100.00			27409	27410*
.4724		12.00	STB	20.00	12.00	76.00			27443	27444*
.4724		12.00	LR	25.00	12.00	100.00	57.00	11.60	27451	27452*
.4724		12.00	SD	30.00	12.00	84.00			27459	27460
.4724		12.00	XL	50.00	12.00	100.00			27467*	27468*
.5512		14.00	SD	20.00	14.00	76.00			27583*	27584*
.5512		14.00	SD	30.00	14.00	84.00			27595*	27596*
.5512		14.00	XL	57.00	14.00	125.00			27607*	27608*
.6299		16.00	STB	30.00	16.00	89.00			27661*	27662
.6299		16.00	LR	30.00	16.00	150.00	89.00	15.34	27673	27674*
.6299		16.00	SD	41.00	16.00	89.00			27685	27686*
.6299		16.00	XL	63.00	16.00	150.00			27697*	27698*
.7874		20.00	SD	30.00	20.00	100.00			27767	27768*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	27779	27789*
.7874		20.00	SD	44.00	20.00	100.00			27791	27792*
.7874		20.00	XL	63.00	20.00	150.00			27803*	27804*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	27825	27826*
.9843		25.00	SD	45.00	25.00	100.00			27837*	27838*
.9843		25.00	XL	63.00	25.00	150.00			27849*	27850*

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3833 AlumaMill G3 (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 3 Flutes
  - 37.5° Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, Extra Long, and Long Reach Lengths
- Standard Uncoated and FC-5 Coated
- Metric and Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0000" -.0005" +0.000mm -0.013mm

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ADVANCED PERFORMANCE



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.1250	1/8	3.18	STB	.2500	.1250	1.5000			.0150	27152*	27153*
.1250	1/8	3.18	SD	.5000	.1250	2.0000			.0150	27156*	27157*
.1250	1/8	3.18	SD	.7500	.1250	2.0000			.0150	27160*	27161*
.1875	3/16	4.76	SD	.3125	.1875	2.0000			.0150	27178*	27179*
.1875	3/16	4.76	SD	.3125	.1875	2.0000			.0300	27180*	27181*
.1875	3/16	4.76	SD	.3750	.1875	2.0000			.0150	27950*	27184*
.1875	3/16	4.76	SD	.3750	.1875	2.0000			.0300	27185*	27186*
.1875	3/16	4.76	SD	.6250	.1875	2.0000			.0150	27189*	27191*
.1875	3/16	4.76	SD	.6250	.1875	2.0000			.0300	27190	27192*
.2500	1/4	6.35	STB	.5000	.2500	2.0000			.0150	27233*	27234*
.2500	1/4	6.35	STB	.5000	.2500	2.0000			.0300	27235	27236*
.2500	1/4	6.35	SD	.5000	.2500	2.5000			.0150	27239	27240*
.2500	1/4	6.35	SD	.5000	.2500	2.5000			.0300	27241*	27242*
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0150	27245*	27246*
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0300	27247	27248*
.2500	1/4	6.35	SD	1.0000	.2500	2.5000			.0150	27251	27252*
.2500	1/4	6.35	SD	1.0000	.2500	2.5000			.0300	27253	27254*
.2500	1/4	6.35	SD	1.2500	.2500	3.0000			.0150	27257*	27258*
.2500	1/4	6.35	SD	1.2500	.2500	3.0000			.0300	27259	27260*
.2500	1/4	6.35	XL	2.0000	.2500	4.0000			.0150	27263	27264*
.2500	1/4	6.35	XL	2.0000	.2500	4.0000			.0300	27265	27266*
.3125	5/16	7.94	SD	.4375	.3125	2.5000			.0150	27283*	27284*
.3125	5/16	7.94	SD	.4375	.3125	2.5000			.0300	27285*	27286*
.3125	5/16	7.94	SD	.5000	.3125	2.5000			.0150	27289*	27290*
.3125	5/16	7.94	SD	.5000	.3125	2.5000			.0300	27291*	27292*
.3125	5/16	7.94	SD	.8125	.3125	2.5000			.0150	27295*	27296*
.3125	5/16	7.94	SD	.8125	.3125	2.5000			.0300	27297*	27298*
.3125	5/16	7.94	SD	1.0000	.3125	2.5000			.0150	27301*	27302*
.3125	5/16	7.94	SD	1.0000	.3125	2.5000			.0300	27303*	27304*
.3125	5/16	7.94	SD	1.2500	.3125	3.0000			.0150	27307*	27308*
.3125	5/16	7.94	SD	1.2500	.3125	3.0000			.0300	27309*	27310*

# 3833 AlumaMill G3 (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.3125	5/16	7.94	XL	1.2500	.3125	4.0000			.0150	27313*	27314*
.3125	5/16	7.94	XL	1.2500	.3125	4.0000			.0300	27315*	27316*
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.0150	27345*	27346*
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.0300	27347	27348*
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.0600	27349	27350*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0150	27353	27354*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0300	27355	27356*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0600	27357	27358*
.3750	3/8	9.53	SD	1.0000	.3750	3.0000			.0150	27361*	27362*
.3750	3/8	9.53	SD	1.0000	.3750	3.0000			.0300	27363	27364*
.3750	3/8	9.53	SD	1.0000	.3750	3.0000			.0600	27365	27366*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			.0150	27369*	37370
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			.0300	27371*	27372*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			.0600	27373*	27374*
.4375	7/16	11.11	SD	.5625	.4375	2.7500			.0150	27411*	27412*
.4375	7/16	11.11	SD	.5625	.4375	2.7500			.0300	27413*	27414*
.4375	7/16	11.11	SD	.5625	.4375	2.7500			.0600	27415*	27416*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0150	27419*	27420*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0300	27421*	27422*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0600	27423	27424*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000			.0150	27427*	27428*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000			.0300	27429*	27430*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000			.0600	27431*	27432*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0150	27469	27470*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0300	27471	27472*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0600	27473	27474*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0900	27475*	27476*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.1200	27477*	27478*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0150	27482*	27483*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0300	27484	27485*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0600	27486	27487*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0900	27488	27489*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.1200	27490	27491
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0150	27495*	27496*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0300	27497	27498*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0600	27499	27500*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0900	27501	27502*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.1200	27503	27504*
.5000	1/2	12.70	SD	.7500	.5000	3.0000			.0150	27507*	27508*
.5000	1/2	12.70	SD	.7500	.5000	3.0000			.0300	27509*	27510*
.5000	1/2	12.70	SD	.7500	.5000	3.0000			.0600	27511*	27512*
.5000	1/2	12.70	SD	.7500	.5000	3.0000			.0900	27513*	27514*
.5000	1/2	12.70	SD	.7500	.5000	3.0000			.1200	27515*	27516*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0150	27519	27520*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0300	27521*	27522*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0600	27523	27524*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0900	27525	27526*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.1200	27527	27528*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0150	27531	27532
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0300	27120	27080*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0600	27121	27081*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0900	27533*	27534*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.1200	27535	27536*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			.0150	27539*	27540*

# END MILLS

ADVANCED PERFORMANCE



RADIUS



3 FLUTE



CENTER



STB STUB



SD STANDARD



XL EXTRA LONG



LR LONG REACH



FC-5 COATING



FAST QUOTE



METRIC

\* Non Stocked

END MILLS

# 3833 AlumaMill G3 (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			.0300	27541	27542
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			.0600	27543	27544*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			.0900	27545*	27546*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			.1200	27547	27548*
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			.0150	27551	27552*
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			.0300	27553*	27554*
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			.0600	27555*	27556*
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			.0900	27557	27558*
.5000	1/2	12.70	XL	2.5000	.5000	5.0000			.1200	27559*	27560*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			.0150	27563*	27564*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			.0300	27565*	27566*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			.0600	27567*	27568*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			.0900	27569*	27570*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			.1200	27571*	27572*
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.0150	27609*	27610*
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0300	27611*	27612*
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0600	27613*	27614*
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0900	27615*	27616*
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.1200	27928*	27929*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000			.0300	27122	27082*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000			.0600	27123	27083*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000			.0900	27619*	27620*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000			.1200	27124	27084*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			.0300	27623	27624*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			.0600	27625*	27626*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			.0900	27627*	27628*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			.1200	27629*	27630*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			.0300	27633*	27634*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			.0600	27635*	27636*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			.0900	27637*	27638*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			.1200	27639	27640*
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			.0300	27643*	27644*
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			.0600	27645*	27646*
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			.0900	27647*	27648*
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			.1200	27649	27650*
.7500	3/4	19.05	SD	1.0000	.7500	4.0000			.0300	27699	27700*
.7500	3/4	19.05	SD	1.0000	.7500	4.0000			.0600	27701	27702*
.7500	3/4	19.05	SD	1.0000	.7500	4.0000			.0900	27703*	27704*
.7500	3/4	19.05	SD	1.0000	.7500	4.0000			.1200	27705	27706*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	.0150	27710*	27711*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0150	27723	27724*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	.0300	27712	27713*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0300	27725	27726*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	.0600	27714*	27715*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0600	27727*	27728*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	.0900	27716*	27717*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0900	27729*	27730*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.2500	.7200	.1200	27718	27719*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.1200	27731*	27732*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			.0300	27125	27085*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			.0600	27126	27086*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			.0900	27735*	27736*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			.1200	27127	27087*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			.0300	27739	27740*

ADVANCED PERFORMANCE



\* Non Stocked

# 3833 AlumaMill G3 (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			.0600	27741*	27742*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			.0900	27743*	27744*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			.1200	27745	27746*
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			.0300	27749*	27750*
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			.0600	27751*	27752*
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			.0900	27753*	27754*
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			.1200	27755*	27756*
1.0000	1	25.40	SD	1.2500	1.0000	4.0000			.0300	27851*	27852*
1.0000	1	25.40	SD	1.2500	1.0000	4.0000			.0600	27853*	27854*
1.0000	1	25.40	SD	1.2500	1.0000	4.0000			.0900	27855*	27856*
1.0000	1	25.40	SD	1.2500	1.0000	4.0000			.1200	27857	27858*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0150	27862*	27863*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0300	27864	27865*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0600	27866*	27867*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0900	27868*	27869*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.1200	27870	27871*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	.0150	27875*	27876*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	.0300	27877*	27878*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	.0600	27879*	27880*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	.0900	27881*	27882*
1.0000	1	25.40	LR	1.2500	1.0000	7.0000	4.3750	.9700	.1200	27883*	27884*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			.0300	27887*	27888*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			.0600	27889*	27890*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			.0900	27891*	27892*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			.1200	27893*	27894*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			.0300	27897	27898*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			.0600	27899*	27900*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			.0900	27901*	27902*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			.1200	27903	27904*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			.0300	27907*	27908*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			.0600	27909*	27910*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			.0900	27911	27912*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			.1200	27913*	27914*
1.0000	1	25.40	XL	4.1250	1.0000	7.0000			.0300	27918*	27919*
1.0000	1	25.40	XL	4.1250	1.0000	7.0000			.0600	27920*	27921*
1.0000	1	25.40	XL	4.1250	1.0000	7.0000			.0900	27922*	27923*
1.0000	1	25.40	XL	4.1250	1.0000	7.0000			.1200	27924*	27925*

## METRIC (Millimeter)

.1181		3.00	SD	6.00	3.00	38.00			0.30	27138	27139*
.1181		3.00	SD	12.00	3.00	50.00			0.30	27142	27143*
.1181		3.00	SD	12.00	3.00	50.00			0.50	27930	
.1181		3.00	SD	12.00	3.00	50.00			1.00	27931	
.1181		3.00	SD	20.00	3.00	50.00			0.30	27148*	27149*
.1575		4.00	STB	8.00	4.00	50.01			0.30	27166	27167*
.1575		4.00	SD	12.00	4.00	50.00			0.50	27170	27171*
.1575		4.00	SD	12.00	4.00	50.00			1.00	27946	27947*
.1575		4.00	SD	16.00	4.00	50.00			0.50	27174*	27175*
.1969		5.00	STB	13.00	5.00	51.00			0.50	27197	27198*
.1969		5.00	STB	13.00	5.00	51.00			0.75	27199	27200*
.1969		5.00	SD	20.00	5.00	64.00			0.50	27203	27204*
.1969		5.00	SD	20.00	5.00	64.00			0.75	27205	27206*
.1969		5.00	SD	20.00	5.00	64.00			1.00	27932	
.2362		6.00	SD	13.00	6.00	58.00			0.50	27209	27210*

END MILLS

ADVANCED PERFORMANCE



RADIUS



3 FLUTE



CENTER



STUB



STANDARD



EXTRA LONG



LONG REACH



FC-5 COATING



FAST QUOTE



mm METRIC

\* Non Stocked



END MILLS

# 3833 AlumaMill G3 (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.2362		6.00	SD	13.00	6.00	58.00			0.75	27211*	27212*
.2362		6.00	LR	20.00	6.00	100.00	50.00	5.75	0.50	27215*	27216*
.2362		6.00	LR	20.00	6.00	100.00	50.00	5.75	0.75	27217*	27218*
.2362		6.00	LR	20.00	6.00	100.00	50.00	5.75	2.00	27945	
.2362		6.00	SD	25.00	6.00	64.00			0.50	27221	27222*
.2362		6.00	SD	25.00	6.00	64.00			0.75	27223	27224*
.2362		6.00	SD	25.00	6.00	64.00			1.00	27933	
.2362		6.00	SD	25.00	6.00	64.00			1.50	27934	
.2362		6.00	SD	25.00	6.00	64.00			2.00	27935	
.2362		6.00	XL	50.00	6.00	100.00			0.50	27227*	27228*
.2362		6.00	XL	50.00	6.00	100.00			0.75	27229*	27230*
.2756		7.00	SD	15.00	7.00	64.00			0.50	27271*	27272*
.2756		7.00	SD	15.00	7.00	64.00			0.75	27273*	27274*
.2756		7.00	SD	25.00	7.00	64.00			0.50	27277*	27278*
.2756		7.00	SD	25.00	7.00	64.00			0.75	27279*	27280*
.3150		8.00	SD	16.00	8.00	64.00			0.50	27321	27322*
.3150		8.00	SD	16.00	8.00	64.00			0.75	27323*	27324*
.3150		8.00	LR	20.00	8.00	100.00	50.00	7.70	0.50	27327	27328*
.3150		8.00	LR	20.00	8.00	100.00	50.00	7.70	1.00	27329	27330*
.3150		8.00	SD	25.00	8.00	64.00			0.50	27333	27334*
.3150		8.00	SD	25.00	8.00	64.00			1.00	27335	27336*
.3150		8.00	SD	25.00	8.00	64.00			1.50	27936*	
.3150		8.00	SD	25.00	8.00	64.00			2.00	27937	
.3150		8.00	XL	50.00	8.00	100.00			0.50	27339	27340*
.3150		8.00	XL	50.00	8.00	100.00			1.00	27341	27342*
.3937		10.00	STB	15.00	10.00	64.00			0.50	27379	27380*
.3937		10.00	STB	15.00	10.00	64.00			1.00	27381	27382*
.3937		10.00	STB	15.00	10.00	64.00			1.50	27383	27384*
.3937		10.00	SD	26.00	10.00	64.00			0.50	27395	27396*
.3937		10.00	SD	26.00	10.00	64.00			1.00	27397	27398*
.3937		10.00	SD	26.00	10.00	64.00			1.50	27399	27400*
.3937		10.00	LR	26.00	10.00	100.00	57.00	9.60	0.50	27387	27388*
.3937		10.00	LR	26.00	10.00	100.00	57.00	9.60	1.00	27389	27390*
.3937		10.00	LR	26.00	10.00	100.00	57.00	9.60	1.50	27391*	27392*
.3937		10.00	LR	26.00	10.00	100.00	57.00	11.61	2.00	27948	27949*
.3937		10.00	SD	27.00	10.00	64.00			2.00	27938	
.3937		10.00	SD	27.00	10.00	64.00			2.50	27939*	
.3937		10.00	SD	27.00	10.00	64.00			3.00	27940*	
.3937		10.00	XL	50.00	10.00	100.00			0.50	27403*	27404*
.3937		10.00	XL	50.00	10.00	100.00			1.00	27405*	27406*
.3937		10.00	XL	50.00	10.00	100.00			1.50	27407*	27408*
.4724		12.00	SD	20.00	12.00	76.00			0.50	27437*	27438*
.4724		12.00	SD	20.00	12.00	76.00			1.00	27439*	27440*
.4724		12.00	SD	20.00	12.00	76.00			1.50	27441*	27442*
.4724		12.00	LR	25.00	12.00	100.00	57.00	11.60	0.50	27445*	27446*
.4724		12.00	LR	25.00	12.00	100.00	57.00	11.60	1.00	27447*	27448*
.4724		12.00	LR	25.00	12.00	100.00	57.00	11.60	1.50	27449*	27450*
.4724		12.00	SD	30.00	12.00	84.00			0.50	27453	27454*
.4724		12.00	SD	30.00	12.00	84.00			1.00	27455	27456*
.4724		12.00	SD	30.00	12.00	84.00			1.50	27457	27458*
.4724		12.00	SD	30.00	12.00	84.00			2.00	27941	
.4724		12.00	SD	30.00	12.00	84.00			2.50	27942	
.4724		12.00	SD	30.00	12.00	84.00			3.00	27943	
.4724		12.00	XL	50.00	12.00	100.00			0.50	27461*	27462*

ADVANCED PERFORMANCE



\* Non Stocked



# 3833 AlumaMill G3 (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.4724		12.00	XL	50.00	12.00	100.00			1.00	27463*	27464*
.4724		12.00	XL	50.00	12.00	100.00			1.50	27465	27466*
.5512		14.00	SD	20.00	14.00	76.00			0.50	27577*	27578*
.5512		14.00	SD	20.00	14.00	76.00			1.00	27579*	27580*
.5512		14.00	SD	20.00	14.00	76.00			1.50	27581*	27582*
.5512		14.00	SD	30.00	14.00	84.00			1.00	27585*	27586*
.5512		14.00	SD	30.00	14.00	84.00			1.50	27587*	27588*
.5512		14.00	SD	30.00	14.00	84.00			2.00	27589*	27590*
.5512		14.00	SD	30.00	14.00	84.00			2.50	27591*	27592*
.5512		14.00	SD	30.00	14.00	84.00			3.00	27593*	27594*
.5512		14.00	XL	57.00	14.00	125.00			1.00	27597*	27598*
.5512		14.00	XL	57.00	14.00	125.00			1.50	27599*	27600*
.5512		14.00	XL	57.00	14.00	125.00			2.00	27601*	27602*
.5512		14.00	XL	57.00	14.00	125.00			2.50	27603*	27604*
.5512		14.00	XL	57.00	14.00	125.00			3.00	27605*	27606*
.6299		16.00	STB	30.00	16.00	89.00			0.50	27655	27656*
.6299		16.00	STB	30.00	16.00	89.00			1.00	27657	27658*
.6299		16.00	STB	30.00	16.00	89.00			1.50	27659	27660*
.6299		16.00	LR	30.00	16.00	150.00	89.00	15.34	0.50	27663*	27664*
.6299		16.00	LR	30.00	16.00	150.00	89.00	15.34	1.00	27665*	27666*
.6299		16.00	LR	30.00	16.00	150.00	89.00	15.34	1.50	27667*	27668*
.6299		16.00	LR	30.00	16.00	150.00	89.00	19.35	2.00	27669	27670*
.6299		16.00	LR	30.00	16.00	150.00	89.00	24.00	3.00	27671	27672*
.6299		16.00	SD	41.00	16.00	89.00			0.50	27944	
.6299		16.00	SD	41.00	16.00	89.00			1.00	27675	27676*
.6299		16.00	SD	41.00	16.00	89.00			1.50	27677	27678*
.6299		16.00	SD	41.00	16.00	89.00			2.00	27679	27680*
.6299		16.00	SD	41.00	16.00	89.00			2.50	27681	27682*
.6299		16.00	SD	41.00	16.00	89.00			3.00	27683	27684*
.6299		16.00	XL	63.00	16.00	150.00			1.00	27687*	27688*
.6299		16.00	XL	63.00	16.00	150.00			1.50	27689*	27690*
.6299		16.00	XL	63.00	16.00	150.00			2.00	27691*	27692*
.6299		16.00	XL	63.00	16.00	150.00			2.50	27693*	27694*
.6299		16.00	XL	63.00	16.00	150.00			3.00	27695*	27696*
.7874		20.00	SD	30.00	20.00	100.00			0.50	27761*	27762*
.7874		20.00	SD	30.00	20.00	100.00			1.00	27763*	27764*
.7874		20.00	SD	30.00	20.00	100.00			1.50	27765*	27766*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	1.00	27769*	27770*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	1.50	27771*	27772*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	2.00	27773*	27774*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	2.50	27775*	27776*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	3.00	27777	27778*
.7874		20.00	SD	44.00	20.00	100.00			1.00	27781*	27782*
.7874		20.00	SD	44.00	20.00	100.00			1.50	27783	27784*
.7874		20.00	SD	44.00	20.00	100.00			2.00	27785	27786*
.7874		20.00	SD	44.00	20.00	100.00			2.50	27787*	27788*
.7874		20.00	SD	44.00	20.00	100.00			3.00	27780	27790*
.7874		20.00	XL	63.00	20.00	150.00			1.00	27793*	27794*
.7874		20.00	XL	63.00	20.00	150.00			1.50	27795*	27796*
.7874		20.00	XL	63.00	20.00	150.00			2.00	27797*	27798*
.7874		20.00	XL	63.00	20.00	150.00			2.50	27799*	27800*
.7874		20.00	XL	63.00	20.00	150.00			3.00	27801*	27802*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	1.00	27815*	27816*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	1.50	27817*	27818*

# END MILLS

ADVANCED PERFORMANCE



RADIUS



\* Non Stocked

END MILLS

# 3833 AlumaMill G3 (Radius End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number	
Inch	Fractional	Millimeter								UC	FC-5
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	2.00	27819*	27820*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	2.50	27821*	27822*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	3.00	27823*	27824*
.9843		25.00	SD	45.00	25.00	100.00			1.00	27827*	27828*
.9843		25.00	SD	45.00	25.00	100.00			1.50	27829*	27830*
.9843		25.00	SD	45.00	25.00	100.00			2.00	27831*	27832*
.9843		25.00	SD	45.00	25.00	100.00			2.50	27833*	27834*
.9843		25.00	SD	45.00	25.00	100.00			3.00	27835*	27836*
.9843		25.00	XL	63.00	25.00	150.00			1.00	27839*	27840*
.9843		25.00	XL	63.00	25.00	150.00			1.50	27841*	27842*
.9843		25.00	XL	63.00	25.00	150.00			2.00	27843*	27844*
.9843		25.00	XL	63.00	25.00	150.00			2.50	27845*	27846*
.9843		25.00	XL	63.00	25.00	150.00			3.00	27847*	27848*

ADVANCED PERFORMANCE



\* Non Stocked

# 3825 AlumaMill (Square End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



**Basic Information:**

- Advanced Performance
- Square End
- 2 Flutes
  - 45° High Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, Extra Long, and Long Reach Lengths
- Standard Uncoated and FC-19 Coating
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0000" -.0005" +0.000mm -0.013mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-19
.1250	1/8	3.18	LR	.2500	.1250	3.0000	.7500	.1200	38213	
.1250	1/8	3.18	SD	.5000	.1250	1.5000			38214	38095
.1875	3/16	4.76	LR	.3125	.1875	3.0000	.7500	.1800	38211	
.1875	3/16	4.76	SD	.6250	.1875	2.0000			38216	38096*
.2500	1/4	6.35	STB	.5000	.2500	2.0000			38226	38103*
.2500	1/4	6.35	LR	.5000	.2500	3.0000	1.1250	.2400	38210	
.2500	1/4	6.35	LR	.5000	.2500	4.0000	2.1250	.2400	38199	
.2500	1/4	6.35	SD	1.0000	.2500	2.5000			38218	38097
.2500	1/4	6.35	XL	2.0000	.2500	4.0000			38236	38108*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000			38238	38109*
.3750	3/8	9.53	STB	.6250	.3750	2.5000			38228	38104*
.3750	3/8	9.53	LR	.6250	.3750	4.0000	1.1250	.3600	38227	
.3750	3/8	9.53	LR	.6250	.3750	6.0000	3.1250	.3600	38221	
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			38220	38098
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			38240	38110*
.5000	1/2	12.70	STB	.7500	.5000	3.0000			38230	38105*
.5000	1/2	12.70	LR	.7500	.5000	4.0000	2.2500	.4800	38198	
.5000	1/2	12.70	LR	.7500	.5000	6.0000	3.5000	.4800	38197	
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			38200	38099
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			38242	38111*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000			38232	38106*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			38222	38100*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000			38234	38107*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.2500	.7200	38229	
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.1250	.7200	38231	
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			38212	38101*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			38244	38112*
1.0000	1	25.40	LR	1.2500	1.0000	5.0000	2.5000	.9700	38223	
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	38225	
1.0000	1	25.40	SD	1.7500	1.0000	5.0000			38224	38102*

END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3825 AlumaMill (Ball End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



**Basic Information:**

- Advanced Performance
- Ball End
- 2 Flutes
  - 45° High Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated and FC-19 Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0000"    -.0005"  
+0.000mm    -0.013mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

ADVANCED PERFORMANCE



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number	
Inch	Fractional	Millimeter					UC	FC-19
.1250	1/8	3.18	SD	.5000	.1250	1.5000	38510	38113
.1875	3/16	4.76	SD	.6250	.1875	2.0000	38512	38114*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	38526	38121*
.2500	1/4	6.35	SD	1.0000	.2500	2.5000	38514	38115*
.2500	1/4	6.35	XL	2.0000	.2500	4.0000	38536	38126*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	38538	38127*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	38528	38122*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	38516	38116*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	38540	38128*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	38530	38123*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	38518	38117*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	38542	38129*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	38532	38124*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	38520	38118*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	38534	38125*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	38522	38119*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	38544	38130*
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	38524	38120*

METRIC (Millimeter)								
.1181		3.00	SD	12.00	3.00	38.00	92800	
.1575		4.00	SD	16.00	4.00	50.00	92801	
.1969		5.00	SD	16.00	5.00	50.00	92802	
.2362		6.00	SD	16.00	6.00	64.00	92803	
.3150		8.00	SD	20.00	8.00	64.00	92804	
.3937		10.00	SD	25.00	10.00	64.00	92805	
.4724		12.00	SD	32.00	12.00	84.00	92806	

# 3825 AlumaMill (Radius End)

Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 2 Flutes
  - 45° High Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch Based Tools
- Center Cutting
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0000" -0.005" +0.000mm -0.013mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number
Inch	Fractional	Millimeter						UC
.2500	1/4	6.35	SD	1.0000	.2500	2.5000	.0150	38600
.2500	1/4	6.35	SD	1.0000	.2500	2.5000	.0200	38601
.2500	1/4	6.35	SD	1.0000	.2500	2.5000	.0300	38602
.2500	1/4	6.35	SD	1.0000	.2500	2.5000	.0450	38603
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0150	38604
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0200	38605
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0300	38606
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0450	38607
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0150	38608
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0200	38609
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0300	38610
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0450	38611
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0600	38612
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0900	38613
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.1250	38614
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0150	38615*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0200	38616*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0300	38617
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0450	38618
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0600	38619
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0900	38620
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.1250	38621
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0150	38622
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0200	38623
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0300	38624
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0450	38625
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0600	38626
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0900	38627
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.1250	38628
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.0150	38629
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.0200	38630*
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.0300	38631
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.0450	38632
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.0600	38633
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.0900	38634
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	.1250	38635

END MILLS

ADVANCED PERFORMANCE



RADIUS



2 FLUTE



CENTER CUTTING



SD STANDARD

\* Non Stocked

END MILLS

# 3815 AlumaMill (Chamfer End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



**Basic Information:**

- Advanced Performance
- Chamfer End
- 2 Flutes
  - 45° High Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard and Extra Long Lengths
- Standard Uncoated
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:    +.0000"    -.0005"  
                                  +0.000mm    -0.013mm

ADVANCED PERFORMANCE



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Chamfer Angle	Chamfer Size	EDP Number
Inch	Fractional	Millimeter							UC
.1250	1/8	3.18	SD	.5000	.1250	1.5000	45°	.0075	38040
.1875	3/16	4.76	SD	.6250	.1875	2.0000	45°	.0075	38042
.2500	1/4	6.35	SD	1.0000	.2500	2.5000	45°	.0075	38030
.2500	1/4	6.35	XL	2.0000	.2500	4.0000	45°	.0075	38031
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	45°	.0125	38032
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	45°	.0125	38033
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	45°	.0125	38034
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	45°	.0125	38035
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	45°	.0125	38036
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	45°	.0175	38037
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	45°	.0175	38038
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	45°	.0175	38048
1.0000	1	25.40	SD	1.7500	1.0000	5.0000	45°	.0225	38039



# 3835 AlumaMill (Square End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



**Basic Information:**

- Advanced Performance
- Square End
- 3 Flutes
  - 36° High Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, Extra Long, and Long Reach Lengths
- Standard Uncoated and FC-19 Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:
 

+0.0000"	-0.0005"
+0.0000mm	-0.013mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-19
.1250	1/8	3.18	STB	.2500	.1250	1.5000			38366	38141
.1250	1/8	3.18	SD	.5000	.1250	1.5000			38346	38131
.1875	3/16	4.76	STB	.3125	.1875	2.0000			38368	38142*
.1875	3/16	4.76	SD	.6250	.1875	2.0000			38348	38132
.2500	1/4	6.35	STB	.5000	.2500	2.0000			38370	38143*
.2500	1/4	6.35	SD	1.0000	.2500	2.5000			38350	38133
.2500	1/4	6.35	XL	2.0000	.2500	4.0000			38386	38153*
.3125	5/16	7.94	STB	.5000	.3125	2.5000			38372	38144*
.3125	5/16	7.94	SD	1.0000	.3125	2.5000			38352	38134*
.3125	5/16	7.94	XL	1.2500	.3125	4.0000			38388	38155*
.3750	3/8	9.53	STB	.6250	.3750	2.5000			38374	38145*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			38354	38135
.3750	3/8	9.53	XL	2.0000	.3750	4.0000			38390	38157*
.4375	7/16	11.11	STB	.6250	.4375	2.7500			38376	38146*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			38356	38136*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000			38392	38159*
.5000	1/2	12.70	STB	.7500	.5000	3.0000			38378	38147
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			38358	38137
.5000	1/2	12.70	XL	2.0000	.5000	4.0000			38394	38161*
.5000	1/2	12.70	XL	3.2500	.5000	6.0000			38395	38163*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000			38380	38148*
.6250	5/8	15.88	SD	1.6250	.6250	3.5000			38360	38138*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000			38396	38165*
.6250	5/8	15.88	XL	3.2500	.6250	6.0000			38397	38167*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000			38382	38149*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000			38362	38139
.7500	3/4	19.05	XL	2.5000	.7500	5.0000			38398	38169*
.7500	3/4	19.05	XL	3.2500	.7500	6.0000			38399	38171*
1.0000	1	25.40	STB	1.2500	1.0000	4.0000			38384	38151*
1.0000	1	25.40	SD	1.7500	1.0000	4.0000			38364	38140*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000			38400	38215
1.0000	1	25.40	XL	3.2500	1.0000	6.0000			38402	38217*

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3835 AlumaMill (Square End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	EDP Number	
Inch	Fractional	Millimeter							UC	FC-19
<b>METRIC (Millimeter)</b>										
.1181		3.00	SD	12.00	3.00	38.00			92467	92528*
.1575		4.00	SD	16.00	4.00	50.00			92468	92529*
.1969		5.00	SD	16.00	5.00	64.00			92469	92530*
.2362		6.00	LR	20.00	6.00	100.00	50.00	5.75	92487	92548*
.2362		6.00	SD	25.00	6.00	64.00			92470	92531*
.2362		6.00	XL	50.00	6.00	100.00			92479	92540*
.2756		7.00	SD	25.00	7.00	64.00			92471	92532*
.3150		8.00	LR	20.00	8.00	100.00	50.00	7.70	92488	92549*
.3150		8.00	SD	25.00	8.00	64.00			92472	92533*
.3150		8.00	XL	50.00	8.00	100.00			92480	92541*
.3937		10.00	SD	25.00	10.00	64.00			92473	92534*
.3937		10.00	LR	25.00	10.00	100.00	57.00	9.60	92489	92550*
.3937		10.00	XL	50.00	10.00	100.00			92481	92542*
.4724		12.00	LR	25.00	12.00	100.00	57.00	11.60	92490	92551*
.4724		12.00	SD	30.00	12.00	84.00			92474	92535*
.4724		12.00	XL	50.00	12.00	100.00			92482	92543*
.5512		14.00	SD	30.00	14.00	84.00			92475	92536*
.5512		14.00	XL	57.00	14.00	125.00			92483	92544*
.6299		16.00	LR	30.00	16.00	150.00	89.00	15.34	92491	92552*
.6299		16.00	SD	41.00	16.00	89.00			92476	92537*
.6299		16.00	XL	63.00	16.00	150.00			92484	92545*
.7874		20.00	LR	38.00	20.00	150.00	89.00	19.35	92492	92553*
.7874		20.00	SD	44.00	20.00	100.00			92477	92538*
.7874		20.00	XL	63.00	20.00	150.00			92485	92546*
.9843		25.00	LR	38.00	25.00	150.00	89.00	24.00	92493	92554*
.9843		25.00	SD	44.00	25.00	100.00			92478	92539*
.9843		25.00	XL	63.00	25.00	150.00			92486	92547*

ADVANCED PERFORMANCE



\* Non Stocked

# 3805 AlumaMill G3 Vicor (Radius End)

Brass & Copper    High Si Al >10%    Low Si Al <10%    Composites    Plastics    General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 3 Flutes
  - 37.5° High Helix
  - Chip Breakers
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard FC-5 Coating
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:    +.0000"    -.0005"  
                                  +0.000mm    -0.013mm

Now based on AlumaMill G3 Design

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number
Inch	Fractional	Millimeter						FC-5
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0300	38490
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0300	38491
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0300	38492
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0300	38493

In addition to our standard **Vicor** AlumaMills, Vicor style chip breakers are available on the rest of our AlumaMill line for an additional charge.

END MILLS

ADVANCED PERFORMANCE



RADIUS



3 FLUTE

CENTER CUTTING



SD STANDARD

FC-5 COATING

END MILLS

# 3500 Fury (Radius End)

Titanium Super Alloys Stainless Steels



**NEW TOOL SERIES**

**Basic Information:**

- Advanced Performance
- Corner Radius
- 4 Flutes
  - Variable Helix
  - Variable Index
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub and Standard Lengths
- Standard FC-20 Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

# RELEASE THE FURY™

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" / +0.00mm -0.05mm

ADVANCED PERFORMANCE



RADIUS



mm METRIC

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number
Inch	Fractional	Millimeter						
.1875	3/16	4.76	STB	.3125	.1875	2.0000	.0300	35198
.2500	1/4	6.35	STB	.3750	.2500	2.0000	.0200	35161
.2500	1/4	6.35	STB	.3750	.2500	2.0000	.0600	35305
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0100	35112
.3750	3/8	9.53	STB	.5000	.3750	2.5000	.0200	35172
.3750	3/8	9.53	SD	.7500	.3750	2.5000	.0200	35173
.3750	3/8	9.53	SD	1.0000	.3750	3.0000	.0200	35174
.5000	1/2	12.70	STB	.6250	.5000	2.5000	.0100	35137
.5000	1/2	12.70	STB	.6250	.5000	2.5000	.0300	35233
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0300	35234
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0300	35236
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.0300	35241
.7500	3/4	19.05	STB	1.0000	.7500	3.0000	.0600	35353
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0300	35255
.7500	3/4	19.05	SD	2.0000	.7500	5.0000	.0600	35356

**METRIC (Millimeter)**

.1181		3.00	STB	6.00	3.00	38.00	0.25	35093
.1575		4.00	SD	12.00	4.00	50.00	0.25	35100
.1969		5.00	SD	16.00	5.30	64.00	0.25	35567
.2362		6.00	SD	20.00	6.00	64.00	0.25	35107
.3150		8.00	STB	12.00	8.00	50.00	0.50	35169
.3937		10.00	STB	12.00	10.00	50.00	0.25	35126
.3937		10.00	SD	32.00	10.00	64.00	0.25	35128
.4724		12.00	STB	14.00	12.00	63.00	0.50	35181
.4724		12.00	SD	26.00	12.00	84.00	0.75	35227
.6299		16.00	STB	20.00	16.00	89.00	1.00	35280
.6299		16.00	SD	40.00	16.00	89.00	1.00	35283
.7874		20.00	STB	25.00	20.00	100.00	2.00	35425
.7874		20.00	SD	60.00	20.00	125.00	1.50	35364

# 3400 Harmon-i-Cut (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



**Basic Information:**

- Advanced Performance
- Square End
- 4 Individually Designed Flutes
  - Variable Helix
  - Variable Index
  - Variable Rake
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard and Extra Long Lengths
- Standard FC-18 Coating
- Inch and Metric Based Tools
- Superior Core Strength
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" / +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number
Inch	Fractional	Millimeter						
.1250	1/8	3.18	STB	.2500	.1250	1.5000		34900
.1250	1/8	3.18	SD	.5000	.1250	1.5000		34001
.1875	3/16	4.76	SD	.4375	.1875	2.0000		34751
.1875	3/16	4.76	SD	.6250	.1875	2.0000		34005
.2500	1/4	6.35	STB	.3750	.2500	2.0000		34902
.2500	1/4	6.35	SD	.7500	.2500	2.5000		34009
.3125	5/16	7.94	SD	.5000	.3125	2.0000		34752
.3125	5/16	7.94	SD	.8750	.3125	2.5000		34013
.3750	3/8	9.53	STB	.5000	.3750	2.5000		34904
.3750	3/8	9.53	SD	1.0000	.3750	2.5000		34017
.4375	7/16	11.11	SD	1.0000	.4375	2.7500		34021
.5000	1/2	12.70	STB	.6250	.5000	3.0000		34906
.5000	1/2	12.70	STB	.6250	.5000	3.0000	.	34906W
.5000	1/2	12.70	SD	1.0000	.5000	3.0000		34025
.5000	1/2	12.70	SD	1.2500	.5000	3.0000		34027
.6250	5/8	15.88	STB	.7500	.6250	3.5000		34908
.6250	5/8	15.88	SD	1.5000	.6250	3.5000		34029
.7500	3/4	19.05	STB	.8750	.7500	4.0000		34910
.7500	3/4	19.05	SD	1.5000	.7500	4.0000		34033
1.0000	1	25.40	SD	1.5000	1.0000	4.0000		34037
1.0000	1	25.40	SD	2.2500	1.0000	5.0000		34753*
METRIC (Millimeter)								
.1181		3.00	STB	6.00	3.00	38.00		92417
.1181		3.00	SD	12.00	3.00	38.00		92410
.1575		4.00	STB	8.00	4.00	50.00		92603
.1575		4.00	SD	14.00	4.00	50.00		92611
.1969		5.00	STB	10.00	5.00	51.00		92604
.1969		5.00	SD	16.00	5.00	64.00		92612
.2362		6.00	STB	10.00	6.00	50.00		92418
.2362		6.00	SD	20.00	6.00	64.00		92555
.2362		6.00	SD	20.00	6.00	76.00		92411

END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3400 Harmon-i-Cut (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number
Inch	Fractional	Millimeter						
.3150		8.00	STB	12.00	8.00	50.00		92419
.3150		8.00	SD	22.00	8.00	64.00		92556
.3150		8.00	SD	22.00	8.00	76.00		92412
.3937		10.00	STB	12.00	10.00	50.00		92420
.3937		10.00	SD	25.00	10.00	64.00		92557
.3937		10.00	SD	25.00	10.00	89.00		92413
.4724		12.00	STB	16.00	12.00	63.00		92421
.4724		12.00	SD	25.00	12.00	76.00		92558
.4724		12.00	SD	25.00	12.00	100.00		92414
.6299		16.00	STB	20.00	16.00	89.00		92422
.6299		16.00	SD	38.00	16.00	100.00		92415
.7874		20.00	SD	38.00	20.00	100.00		92416
.7874		20.00	XL	63.00	20.00	125.00		92630*
.9843		25.00	SD	38.00	25.00	100.00		92613*

ADVANCED PERFORMANCE



\* Non Stocked



# 3400 Harmon-i-Cut (Ball End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



**Basic Information:**

- Advanced Performance
- Ball End
- 4 Individually Designed Flutes
  - Variable Helix
  - Variable Index
  - Variable Rake
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub and Standard Lengths
- Standard FC-18 Coating
- Inch Based Tools
- Superior Core Strength
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002"  
+0.00mm -0.05mm

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					
.1250	1/8	3.18	STB	.2500	.1250	1.5000	34924
.1250	1/8	3.18	SD	.5000	.1250	1.5000	34081
.1875	3/16	4.76	SD	.6250	.1875	2.0000	34085
.2500	1/4	6.35	STB	.3750	.2500	2.0000	34926
.2500	1/4	6.35	SD	.7500	.2500	2.5000	34089
.3125	5/16	7.94	SD	.8750	.3125	2.5000	34093
.3750	3/8	9.53	STB	.5000	.3750	2.5000	34928
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	34097
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	34101
.5000	1/2	12.70	STB	.6250	.5000	3.0000	34930
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	34105
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	34107
.6250	5/8	15.88	STB	.7500	.6250	3.5000	34932
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	34109
.7500	3/4	19.05	STB	.8750	.7500	4.0000	34934
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	34113
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	34117

# END MILLS

ADVANCED PERFORMANCE



**FC-18**  
COATING

**FAST**  
Quote

END MILLS

# 3400 Harmon-i-Cut (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 4 Individually Designed Flutes
  - Variable Helix
  - Variable Index
  - Variable Rake
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Long Reach Lengths
- Standard FC-18 Coating
- Inch and Metric Based Tools
- Superior Core Strength
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"    -.002"  
                                  +0.00mm    -0.05mm

*\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.*

ADVANCED PERFORMANCE



METRIC  
\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter									FC-18
.1250	1/8	3.18	STB	.2500	.1250	1.5000			.0100		34912
.1250	1/8	3.18	SD	.2500	.1250	1.5000			.0200		34754*
.1250	1/8	3.18	SD	.5000	.1250	1.5000			.0100		34041
.1250	1/8	3.18	SD	.5000	.1250	1.5000			.0100		34041W
.1250	1/8	3.18	SD	.5000	.1250	1.5000			.0200		34558*
.1875	3/16	4.76	SD	.4375	.1875	2.0000			.0100		34755*
.1875	3/16	4.76	SD	.4375	.1875	2.0000			.0200		34756*
.1875	3/16	4.76	SD	.4375	.1875	2.0000			.0300		34757
.1875	3/16	4.76	SD	.6250	.1875	2.0000			.0100		34045
.1875	3/16	4.76	SD	.6250	.1875	2.0000			.0200		34559*
.1875	3/16	4.76	SD	.6250	.1875	2.0000			.0300		34560*
.2500	1/4	6.35	SD	.3750	.2500	2.0000			.0100		34758*
.2500	1/4	6.35	STB	.3750	.2500	2.0000			.0200		34914
.2500	1/4	6.35	SD	.3750	.2500	2.0000			.0300		34759
.2500	1/4	6.35	SD	.3750	.2500	2.0000			.0600		34760*
.2500	1/4	6.35	SD	.3750	.2500	2.0000			.0900		34761*
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0100		34561*
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0200		34049
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0300		34050
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0600		34051
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0900		34052
.2500	1/4	6.35	LR	.7500	.2500	3.0000	1.7500	.2200	.0200		34198
.2500	1/4	6.35	LR	.7500	.2500	4.0000	2.2500	.2350	.0200		34192
.3125	5/16	7.94	SD	.5000	.3125	2.0000			.0200		34762
.3125	5/16	7.94	SD	.5000	.3125	2.0000			.0300		34763*
.3125	5/16	7.94	SD	.5000	.3125	2.0000			.0600		34764*
.3125	5/16	7.94	SD	.5000	.3125	2.0000			.0900		34765*
.3125	5/16	7.94	LR	.7500	.3125	4.0000	2.2500	.2980	.0200		34196

# 3400 Harmon-i-Cut (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	Weldon Flat	EDP Number FC-18
Inch	Fractional	Millimeter									
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0200		34053
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0300		34054
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0600		34055
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0900		34562*
.3750	3/8	9.53	STB	.5000	.3750	2.5000			.0200		34916
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.0300		34766*
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.0600		34767*
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.0900		34768*
.3750	3/8	9.53	SD	.5000	.3750	2.5000			.1200		34769*
.3750	3/8	9.53	LR	.7500	.3750	4.0000	2.2500	.3600	.0200		34200
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0200		34057
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0300		34059
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0600		34060
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.1200		34563
.3750	3/8	9.53	SD	1.0000	.3750	3.0000			.0900		34169
.3750	3/8	9.53	SD	2.0000	.3750	4.0000			.0200		34058
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0200		34061
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0300		34564*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0600		34565*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0900		34566*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.1200		34567*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0300		34918
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0300		34918W
.5000	1/2	12.70	SD	.6250	.5000	3.0000			.0600		34770*
.5000	1/2	12.70	SD	.6250	.5000	3.0000			.0900		34771*
.5000	1/2	12.70	SD	.6250	.5000	3.0000			.1200		34772*
.5000	1/2	12.70	LR	.7500	.5000	4.0000	1.1250	.4800	.0300		34204
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0300		34065
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0300		34065W
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0600		34170
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0900		34171*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.1200		34172
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0300		34067
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0600		34173
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0900		34174*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.1200		34175
.5000	1/2	12.70	SD	2.0000	.5000	4.0000			.0300		34068
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0300		34773*
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.0350		34920
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.0350		34920W
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0600		34774*
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0900		34775*
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.1200		34776*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	3.5000	.6000	.0350		34208
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0300		34568*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0350		34069
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0350		34069W
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0600		34071*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0900		34072*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.1200		34190
.6250	5/8	15.88	SD	2.2500	.6250	5.0000			.0350		34070
.7500	3/4	19.05	LR	.7500	.7500	6.0000	3.5000	.7200	.0350		34212
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.0200		34923
.7500	3/4	19.05	SD	.8750	.7500	4.0000			.0300		34777*

# END MILLS

ADVANCED PERFORMANCE



RADIUS



FC-18 COATING

FAST Quote

mm METRIC

\* Non Stocked

END MILLS

# 3400 Harmon-i-Cut (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter									
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.0350		34922
.7500	3/4	19.05	SD	.8750	.7500	4.0000			.0600		34778*
.7500	3/4	19.05	SD	.8750	.7500	4.0000			.0900		34779*
.7500	3/4	19.05	SD	.8750	.7500	4.0000			.1200		34780*
.7500	3/4	19.05	SD	.8750	.7500	4.0000			.2500		34781*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0300		34075
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0350		34073
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0350	.	34073W
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0600		34076*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0900		34191*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.1200		34193*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.2500		34569*
.7500	3/4	19.05	SD	2.2500	.7500	5.0000			.0350		34074
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0300		34782*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0350		34077
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0350	.	34077W
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0600		34783*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0900		34784*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.1200		34785*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.2500		34786*
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.0300		34570*
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.0350		34078
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.0600		34571
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.0900		34572*
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.1200		34079
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.2500		34573*

METRIC (Millimeter)

.1181		3.00	STB	6.00	3.00	38.00			0.20		92431
.1181		3.00	SD	12.00	3.00	38.00			0.20		92423
.1575		4.00	SD	8.00	4.00	50.00			0.20		92791
.1575		4.00	STB	8.00	4.00	50.00			0.30		92605
.1575		4.00	SD	14.00	4.00	50.00			0.20		92494
.1575		4.00	SD	14.00	4.00	50.00			0.30		92614
.1969		5.00	SD	10.00	5.00	51.00			0.20		92792
.1969		5.00	STB	10.00	5.00	51.00			0.30		92606
.1969		5.00	SD	10.00	5.00	51.00			0.50		92793*
.1969		5.00	SD	16.00	5.00	64.00			0.20		92495
.1969		5.00	SD	16.00	5.00	64.00			0.30		92615*
.1969		5.00	SD	16.00	5.00	64.00			0.50		92498
.2362		6.00	STB	10.00	6.00	50.00			0.30		92432
.2362		6.00	SD	10.00	6.00	50.00			0.40		92794
.2362		6.00	SD	10.00	6.00	50.00			0.50		92795
.2362		6.00	SD	10.00	6.00	50.00			0.75		92796*
.2362		6.00	SD	10.00	6.00	50.00			1.00		92797
.2362		6.00	SD	10.00	6.00	50.00			1.50		92798*
.2362		6.00	SD	20.00	6.00	64.00			0.30		92559
.2362		6.00	SD	20.00	6.00	64.00			0.40		92616*
.2362		6.00	SD	20.00	6.00	64.00			0.50		92617
.2362		6.00	SD	20.00	6.00	64.00			0.75		92575
.2362		6.00	SD	20.00	6.00	64.00			1.00		92576
.2362		6.00	SD	20.00	6.00	64.00			1.50		92577
.2362		6.00	SD	20.00	6.00	76.00			0.30		92424
.3150		8.00	SD	12.00	8.00	50.00			0.30		91391

ADVANCED PERFORMANCE



\* Non Stocked

# 3400 Harmon-i-Cut (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	Weldon Flat	EDP Number FC-18
Inch	Fractional	Millimeter									
.3150		8.00	SD	12.00	8.00	50.00			0.40		91392*
.3150		8.00	STB	12.00	8.00	50.00			0.50		92433
.3150		8.00	SD	12.00	8.00	50.00			0.75		91393*
.3150		8.00	SD	12.00	8.00	50.00			1.00		91394*
.3150		8.00	SD	12.00	8.00	50.00			1.50		91395*
.3150		8.00	SD	12.00	8.00	50.00			2.00		91396*
.3150		8.00	SD	22.00	8.00	64.00			0.30		92618*
.3150		8.00	SD	22.00	8.00	64.00			0.40		92619*
.3150		8.00	SD	22.00	8.00	64.00			0.50		92560
.3150		8.00	SD	22.00	8.00	64.00			0.75		92578*
.3150		8.00	SD	22.00	8.00	64.00			1.00		92579
.3150		8.00	SD	22.00	8.00	64.00			1.50		92580
.3150		8.00	SD	22.00	8.00	64.00			2.00		92581
.3150		8.00	SD	22.00	8.00	76.00			0.50		92425
.3937		10.00	STB	12.00	10.00	50.00			0.50		92434
.3937		10.00	SD	12.00	10.00	50.00			0.75		91397*
.3937		10.00	SD	12.00	10.00	50.00			1.00		91398*
.3937		10.00	SD	12.00	10.00	50.00			1.50		91399*
.3937		10.00	SD	12.00	10.00	50.00			2.00		91400*
.3937		10.00	LR	20.00	10.00	100.00	54.00	9.60	0.50		92437
.3937		10.00	SD	25.00	10.00	64.00			0.50		92561
.3937		10.00	SD	25.00	10.00	64.00			0.75		92582*
.3937		10.00	SD	25.00	10.00	64.00			1.00		92583
.3937		10.00	SD	25.00	10.00	64.00			1.50		92584
.3937		10.00	SD	25.00	10.00	64.00			2.00		92585
.3937		10.00	SD	25.00	10.00	64.00			3.00		92586
.3937		10.00	SD	25.00	10.00	89.00			0.50		92426
.4724		12.00	STB	16.00	12.00	63.00			0.50		92435
.4724		12.00	SD	16.00	12.00	63.00			0.75		91401*
.4724		12.00	SD	16.00	12.00	63.00			1.00		91402*
.4724		12.00	SD	16.00	12.00	63.00			1.50		91403*
.4724		12.00	SD	16.00	12.00	63.00			2.00		91404*
.4724		12.00	SD	16.00	12.00	63.00			3.00		91405*
.4724		12.00	LR	20.00	12.00	100.00	54.00	11.60	0.50		92438
.4724		12.00	SD	25.00	12.00	76.00			0.50		92562
.4724		12.00	SD	25.00	12.00	76.00			0.75		92587*
.4724		12.00	SD	25.00	12.00	76.00			1.00		92588
.4724		12.00	SD	25.00	12.00	76.00			1.50		92589*
.4724		12.00	SD	25.00	12.00	76.00			2.00		92590*
.4724		12.00	SD	25.00	12.00	76.00			3.00		92591
.4724		12.00	SD	25.00	12.00	100.00			0.50		92427
.6299		16.00	STB	20.00	16.00	89.00			0.50		92436
.6299		16.00	SD	20.00	16.00	89.00			0.75		91406*
.6299		16.00	SD	20.00	16.00	89.00			1.00		91407*
.6299		16.00	SD	20.00	16.00	89.00			1.50		91408*
.6299		16.00	SD	20.00	16.00	89.00			2.00		91409*
.6299		16.00	SD	20.00	16.00	89.00			3.00		91410*
.6299		16.00	LR	20.00	16.00	150.00	89.00	15.35	0.50		92439
.6299		16.00	SD	38.00	16.00	100.00			0.75		92592*
.6299		16.00	SD	38.00	16.00	100.00			1.00		92593
.6299		16.00	SD	38.00	16.00	100.00			1.50		92594
.6299		16.00	SD	38.00	16.00	100.00			2.00		92595
.6299		16.00	SD	38.00	16.00	100.00			3.00		92596
.6299		16.00	SD	38.00	16.00	100.00			0.50		92428

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3400 Harmon-i-Cut (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter									
.7874		20.00	LR	20.00	20.00	150.00	89.00	19.35	1.00		92440
.7874		20.00	SD	38.00	20.00	100.00			0.50		92620*
.7874		20.00	SD	38.00	20.00	100.00			0.75		92621*
.7874		20.00	SD	38.00	20.00	100.00			1.00		92429
.7874		20.00	SD	38.00	20.00	100.00			1.50		92622*
.7874		20.00	SD	38.00	20.00	100.00			2.00		92623*
.7874		20.00	SD	38.00	20.00	100.00			3.00		92624*
.9843		25.00	SD	38.00	25.00	100.00			0.50		92625*
.9843		25.00	SD	38.00	25.00	100.00			0.75		92626*
.9843		25.00	SD	38.00	25.00	100.00			1.00		92430
.9843		25.00	SD	38.00	25.00	100.00			1.50		92627*
.9843		25.00	SD	38.00	25.00	100.00			2.00		92628*
.9843		25.00	SD	38.00	25.00	100.00			3.00		92629*

ADVANCED PERFORMANCE



\* Non Stocked



# 3000 Intimidator (Square End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Square End
- 4 Flutes
  - Unequally Spaced Index
  - Specially Designed Relief
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard FC-18 Coating
- Inch and Metric Based Tools
- Chatter-Free Machining
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"    -.002"  
                          +0.00mm    -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number
Inch	Fractional	Millimeter						
.1250	1/8	3.18	STB	.2500	.1250	1.5000		34550*
.1250	1/8	3.18	SD	.5000	.1250	1.5000		34290
.1875	3/16	4.76	STB	.3750	.1875	2.0000		34551
.1875	3/16	4.76	SD	.6250	.1875	2.0000		34291
.2500	1/4	6.35	STB	.3750	.2500	2.0000		34552
.2500	1/4	6.35	SD	.7500	.2500	2.5000		34292
.2500	1/4	6.35	XL	1.7500	.2500	4.0000		34510
.3125	5/16	7.94	STB	.5000	.3125	2.5000		34553
.3125	5/16	7.94	SD	.7500	.3125	2.5000		34503
.3125	5/16	7.94	XL	1.2500	.3125	3.2500		34511
.3750	3/8	9.53	STB	.5000	.3750	2.5000		34554
.3750	3/8	9.53	SD	.8750	.3750	2.5000		34293
.3750	3/8	9.53	XL	2.0000	.3750	4.0000		34512*
.5000	1/2	12.70	STB	.6250	.5000	3.0000	•	34555
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	•	34294
.5000	1/2	12.70	XL	1.2500	.5000	3.0000	•	34513
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	•	34514*
.5000	1/2	12.70	XL	3.0000	.5000	5.0000	•	34515*
.6250	5/8	15.88	STB	.7500	.6250	3.5000	•	34556
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	•	34295
.6250	5/8	15.88	SD	1.6250	.6250	4.0000	•	34288
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	•	34516
.7500	3/4	19.05	STB	.8750	.7500	4.0000	•	34557
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	•	34296
.7500	3/4	19.05	SD	1.6250	.7500	4.0000	•	34289
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	•	34504*
.7500	3/4	19.05	XL	2.2500	.7500	5.0000	•	34517*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	•	34518
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	•	34297
1.0000	1	25.40	SD	2.0000	1.0000	5.0000	•	34298
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	•	34519

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3000 Intimidator (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number
Inch	Fractional	Millimeter						
<b>METRIC (Millimeter)</b>								
.1181		3.00	STB	6.00	3.00	38.00		93900
.1181		3.00	SD	12.00	3.00	38.00		93800
.1575		4.00	STB	8.00	4.00	50.00		93901
.1575		4.00	SD	14.00	4.00	50.00		93801
.1969		5.00	STB	10.00	5.00	51.00		93902*
.1969		5.00	SD	16.00	5.00	64.00		93802
.2362		6.00	STB	10.00	6.00	50.00		93903
.2362		6.00	SD	20.00	6.00	64.00		93803
.3150		8.00	STB	16.00	8.00	50.00		93904
.3150		8.00	SD	22.00	8.00	64.00		93804
.3937		10.00	STB	18.00	10.00	50.00		93905
.3937		10.00	SD	25.00	10.00	64.00		93805
.4724		12.00	STB	20.00	12.00	63.00	•	93906
.4724		12.00	SD	27.00	12.00	76.00	•	93806
.6299		16.00	STB	25.00	16.00	89.00	•	93907*
.6299		16.00	SD	38.00	16.00	100.00	•	93807*
.7874		20.00	STB	30.00	20.00	100.00	•	93908*
.7874		20.00	SD	40.00	20.00	100.00	•	93808*

ADVANCED PERFORMANCE



\* Non Stocked

# 3000 Intimidator (Chamfer End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Chamfer End
- 4 Flutes
  - Unequally Spaced Index
  - Specially Designed Relief
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard FC-18 Coating
- Inch Based Tools
- Chatter-Free Machining
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" / +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Chamfer Angle	Chamfer Size	Weldon Flat	EDP Number
Inch	Fractional	Millimeter								
.1250	1/8	3.18	STB	.2500	.1250	1.5000	45°	.0100		34350
.1250	1/8	3.18	SD	.5000	.1250	1.5000	45°	.0100		34300
.1875	3/16	4.76	STB	.3750	.1875	2.0000	45°	.0100		34371
.1875	3/16	4.76	SD	.6250	.1875	2.0000	45°	.0100		34301
.2500	1/4	6.35	STB	.3750	.2500	2.0000	45°	.0100		34351
.2500	1/4	6.35	SD	.7500	.2500	2.5000	45°	.0100		34302
.2500	1/4	6.35	XL	1.7500	.2500	4.0000	45°	.0100		34520*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	45°	.0100		34352
.3125	5/16	7.94	SD	.7500	.3125	2.5000	45°	.0100		34303
.3125	5/16	7.94	XL	1.2500	.3125	3.2500	45°	.0100		34521*
.3750	3/8	9.53	STB	.5000	.3750	2.5000	45°	.0200		34353
.3750	3/8	9.53	SD	.8750	.3750	2.5000	45°	.0200		34304
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	45°	.0200		34522*
.5000	1/2	12.70	STB	.6250	.5000	3.0000	45°	.0200	•	34354
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	45°	.0200	•	34306
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	45°	.0200	•	34307
.5000	1/2	12.70	SD	2.0000	.5000	4.0000	45°	.0200	•	34308
.5000	1/2	12.70	XL	3.0000	.5000	5.0000	45°	.0200	•	34523*
.6250	5/8	15.88	STB	.7500	.6250	3.5000	45°	.0200	•	34355
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	45°	.0200	•	34309
.6250	5/8	15.88	SD	1.6250	.6250	4.0000	45°	.0200	•	34310
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	45°	.0200	•	34524*
.7500	3/4	19.05	STB	.8750	.7500	4.0000	45°	.0200	•	34356
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	45°	.0200	•	34311
.7500	3/4	19.05	SD	1.6250	.7500	4.0000	45°	.0200	•	34314
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	45°	.0200	•	34312
.7500	3/4	19.05	XL	2.2500	.7500	5.0000	45°	.0200	•	34525*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	45°	.0200	•	34526*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	45°	.0200	•	34313
1.0000	1	25.40	SD	2.0000	1.0000	5.0000	45°	.0200	•	34315
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	45°	.0200	•	34527*

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3000 Intimidator (Radius End)

Titanium Super Alloys Hardened Steels Stainless Steels Steels Cast Iron General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 4 Flutes
  - Unequally Spaced Index
  - Specially Designed Relief
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard FC-18 Coating
- Inch and Metric Based Tools
- Chatter-Free Machining
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:  $\begin{matrix} +.000" & -.002" \\ +0.00mm & -0.05mm \end{matrix}$

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

ADVANCED PERFORMANCE



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter							
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0100		34400
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0200		34401
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0300		34364
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0100		34402
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0200		34403
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0300		34404
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0100		34405
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0200		34406
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0300		34407
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0450		34408
.2500	1/4	6.35	XL	1.7500	.2500	4.0000	.0100		34528*
.2500	1/4	6.35	XL	1.7500	.2500	4.0000	.0200		34529
.2500	1/4	6.35	XL	1.7500	.2500	4.0000	.0300		34530*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.0300		34366
.3125	5/16	7.94	XL	1.2500	.3125	3.2500	.0300		34531*
.3750	3/8	9.53	SD	.8750	.3750	2.5000	.0100		34409
.3750	3/8	9.53	SD	.8750	.3750	2.5000	.0200		34410
.3750	3/8	9.53	SD	.8750	.3750	2.5000	.0300		34411
.3750	3/8	9.53	SD	.8750	.3750	2.5000	.0450		34412
.3750	3/8	9.53	SD	.8750	.3750	2.5000	.0600		34413
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0300		34532*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0600		34533*
.5000	1/2	12.70	SD	.8750	.5000	3.0000	.0100	•	34414
.5000	1/2	12.70	SD	.8750	.5000	3.0000	.0200	•	34415
.5000	1/2	12.70	SD	.8750	.5000	3.0000	.0450	•	34417
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0300	•	34416
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0600	•	34418
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0900	•	34419
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.1250	•	34420
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.0200	•	34500
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.1200	•	34502
.5000	1/2	12.70	XL	3.0000	.5000	5.0000	.0300	•	34534*
.5000	1/2	12.70	XL	3.0000	.5000	5.0000	.0600	•	34535*

# 3000 Intimidator (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter							FC-18
.5000	1/2	12.70	XL	3.0000	.5000	5.0000	.0900	•	34536*
.5000	1/2	12.70	XL	3.0000	.5000	5.0000	.1200	•	34537*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.0300	•	34421
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.0450	•	34422
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.0600	•	34423
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.0900	•	34424
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.1200	•	34505*
.6250	5/8	15.88	SD	1.2500	.6250	3.5000	.1250	•	34425
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	.0300	•	34538*
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	.0600	•	34539*
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	.0900	•	34540*
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	.1200	•	34541*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0300	•	34426
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0450	•	34427*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0600	•	34428
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0900	•	34429
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.1250	•	34430
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0300	•	34506
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0600	•	34507*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.0900	•	34508*
.7500	3/4	19.05	SD	1.7500	.7500	4.0000	.1200	•	34509*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0300	•	34542*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0600	•	34543*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0900	•	34544*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.1200	•	34545*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0300	•	34431
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0450	•	34432*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0600	•	34433
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0900	•	34434
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.1250	•	34435
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0300	•	34546*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0600	•	34547*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0900	•	34548
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.1200	•	34549*
METRIC (Millimeter)									
.1181		3.00	STB	6.00	3.00	38.00	0.30		93909*
.1181		3.00	SD	12.00	3.00	38.00	0.30		93809*
.1575		4.00	STB	8.00	4.00	50.00	0.30		93910*
.1575		4.00	STB	8.00	4.00	50.00	0.50		93911
.1575		4.00	SD	14.00	4.00	50.00	0.30		93810*
.1575		4.00	SD	14.00	4.00	50.00	0.50		93811
.1969		5.00	STB	10.00	5.00	51.00	0.30		93912
.1969		5.00	STB	10.00	5.00	51.00	0.50		93913*
.1969		5.00	SD	16.00	5.00	64.00	0.30		93812*
.1969		5.00	SD	16.00	5.00	64.00	0.50		93813*
.2362		6.00	STB	10.00	6.00	50.00	0.50		93914*
.2362		6.00	STB	10.00	6.00	50.00	0.75		93915*
.2362		6.00	STB	10.00	6.00	50.00	1.00		93916*
.2362		6.00	SD	20.00	6.00	64.00	0.50		93814
.2362		6.00	SD	20.00	6.00	64.00	0.75		93815*
.2362		6.00	SD	20.00	6.00	64.00	1.00		93816
.3150		8.00	STB	16.00	8.00	50.00	0.50		93917*
.3150		8.00	STB	16.00	8.00	50.00	0.75		93918*

# END MILLS

ADVANCED PERFORMANCE



RADIUS



\* Non Stocked

END MILLS

# 3000 Intimidator (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter							
.3150		8.00	STB	16.00	8.00	50.00	1.00		93919*
.3150		8.00	STB	16.00	8.00	50.00	1.50		93920*
.3150		8.00	SD	22.00	8.00	64.00	0.50		93817
.3150		8.00	SD	22.00	8.00	64.00	0.75		93818*
.3150		8.00	SD	22.00	8.00	64.00	1.00		93819*
.3150		8.00	SD	22.00	8.00	64.00	1.50		93820*
.3937		10.00	STB	18.00	10.00	50.00	0.50		93921*
.3937		10.00	STB	18.00	10.00	50.00	0.75		93922*
.3937		10.00	STB	18.00	10.00	50.00	1.00		93923*
.3937		10.00	STB	18.00	10.00	50.00	1.50		93924*
.3937		10.00	STB	18.00	10.00	50.00	2.00		93925*
.3937		10.00	SD	25.00	10.00	64.00	0.50		93821
.3937		10.00	SD	25.00	10.00	64.00	0.75		93822*
.3937		10.00	SD	25.00	10.00	64.00	1.00		93823*
.3937		10.00	SD	25.00	10.00	64.00	1.50		93824*
.3937		10.00	SD	25.00	10.00	64.00	2.00		93825*
.4724		12.00	STB	20.00	12.00	63.00	0.50	•	93926*
.4724		12.00	STB	20.00	12.00	63.00	0.75	•	93927*
.4724		12.00	STB	20.00	12.00	63.00	1.00	•	93928*
.4724		12.00	STB	20.00	12.00	63.00	1.50	•	93929*
.4724		12.00	STB	20.00	12.00	63.00	2.00	•	93930*
.4724		12.00	STB	20.00	12.00	63.00	3.00	•	93931*
.4724		12.00	SD	26.01	12.00	84.00	0.75	•	90168
.4724		12.00	SD	27.00	12.00	76.00	0.50	•	93826*
.4724		12.00	SD	27.00	12.00	76.00	0.75	•	93827
.4724		12.00	SD	27.00	12.00	76.00	1.00	•	93828*
.4724		12.00	SD	27.00	12.00	76.00	1.50	•	93829*
.4724		12.00	SD	27.00	12.00	76.00	2.00	•	93830*
.4724		12.00	SD	27.00	12.00	76.00	3.00	•	93831*
.6299		16.00	STB	25.00	16.00	89.00	0.75	•	93932*
.6299		16.00	STB	25.00	16.00	89.00	1.00	•	93933
.6299		16.00	STB	25.00	16.00	89.00	1.50	•	93934
.6299		16.00	STB	25.00	16.00	89.00	2.00	•	93935
.6299		16.00	STB	25.00	16.00	89.00	3.00	•	93936
.6299		16.00	SD	38.00	16.00	100.00	0.75	•	93832
.6299		16.00	SD	38.00	16.00	100.00	1.00	•	93833*
.6299		16.00	SD	38.00	16.00	100.00	1.50	•	93834*
.6299		16.00	SD	38.00	16.00	100.00	2.00	•	93835*
.6299		16.00	SD	38.00	16.00	100.00	3.00	•	93836*
.7874		20.00	STB	30.00	20.00	100.00	1.00	•	93937
.7874		20.00	STB	30.00	20.00	100.00	1.50	•	93938
.7874		20.00	STB	30.00	20.00	100.00	2.00	•	93939
.7874		20.00	STB	30.00	20.00	100.00	3.00	•	93940
.7874		20.00	SD	40.00	20.00	100.00	1.00	•	93837*
.7874		20.00	SD	40.00	20.00	100.00	1.50	•	93838*
.7874		20.00	SD	40.00	20.00	100.00	2.00	•	93839*
.7874		20.00	SD	40.00	20.00	100.00	3.00	•	93840*

ADVANCED PERFORMANCE



RADIUS



\* Non Stocked



# 3410 Phantom (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



### Basic Information:

- Advanced Performance
- Square End
- 5 Individually Designed Flutes
  - Eccentric Relief
  - Variable Index
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard FC-18 Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

### Tolerance:

- Shank Diameter: h6
- Cutter Diameter: +.000"      -.002"  
                                 +0.00mm      -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					FC-18
.2500	1/4	6.35	STB	.3750	.2500	2.0000	34150
.2500	1/4	6.35	SD	.7500	.2500	2.5000	34125
.2500	1/4	6.35	XL	1.2500	.2500	3.0000	34727
.3125	5/16	7.94	STB	.8750	.3125	2.5000	34127
.3125	5/16	7.94	SD	1.0000	.3125	3.0000	34728
.3125	5/16	7.94	XL	2.0000	.3125	4.0000	34729
.3750	3/8	9.53	STB	.5000	.3750	2.5000	34152
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	34129
.3750	3/8	9.53	XL	1.2500	.3750	3.0000	34730
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	34731*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	34131
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	34732*
.5000	1/2	12.70	STB	.6250	.5000	3.0000	34154
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	34133
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	34135
.5000	1/2	12.70	XL	1.6250	.5000	4.0000	34733
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	34734
.6250	5/8	15.88	STB	.7500	.6250	3.5000	34156
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	34137
.6250	5/8	15.88	SD	1.6250	.6250	4.0000	34138
.6250	5/8	15.88	XL	2.2500	.6250	5.0000	34735
.6250	5/8	15.88	XL	3.2500	.6250	6.0000	34736
.7500	3/4	19.05	STB	.8750	.7500	4.0000	34158
.7500	3/4	19.05	SD	1.2500	.7500	4.0000	34574*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	34139
.7500	3/4	19.05	SD	1.6250	.7500	4.0000	34140
.7500	3/4	19.05	XL	2.2500	.7500	5.0000	34737
.7500	3/4	19.05	XL	3.2500	.7500	6.0000	34738
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	34141
1.0000	1	25.40	SD	2.0000	1.0000	5.0000	34142
1.0000	1	25.40	XL	2.2500	1.0000	5.0000	34739*
1.0000	1	25.40	XL	3.2500	1.0000	6.0000	34740
1.0000	1	25.40	XL	4.2500	1.0000	7.0000	34741

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3410 Phantom (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					
<b>METRIC (Millimeter)</b>							
.1181		3.00	SD	6.00	3.00	38.00	91411*
.1181		3.00	SD	12.00	3.00	38.00	92631
.1575		4.00	STB	8.00	4.00	50.00	92607
.1575		4.00	SD	14.00	4.00	50.00	92601
.1969		5.00	STB	10.00	5.00	51.00	92608
.1969		5.00	SD	16.00	5.00	64.00	92602
.2362		6.00	STB	10.00	6.00	50.00	92447
.2362		6.00	SD	20.00	6.00	64.00	92563
.2362		6.00	SD	20.00	6.00	76.00	92441
.3150		8.00	STB	12.00	8.00	50.00	92448
.3150		8.00	SD	22.00	8.00	64.00	92564
.3150		8.00	SD	22.00	8.00	76.00	92442
.3937		10.00	STB	12.00	10.00	50.00	92449
.3937		10.00	SD	25.00	10.00	64.00	92565
.3937		10.00	SD	25.00	10.00	89.00	92443
.4724		12.00	STB	16.00	12.00	63.00	92450
.4724		12.00	SD	25.00	12.00	76.00	92566
.4724		12.00	SD	25.00	12.00	100.00	92444
.6299		16.00	STB	20.00	16.00	89.00	92451
.6299		16.00	SD	38.00	16.00	100.00	92445
.7874		20.00	SD	38.00	20.00	100.00	92446
.7874		20.00	SD	63.00	20.00	125.00	92764
.9843		25.00	SD	38.00	25.00	100.00	92632*

ADVANCED PERFORMANCE



\* Non Stocked

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 5 Individually Designed Flutes
  - Eccentric Relief
  - Variable Index
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, Extra Long, and Long Reach Lengths
- Standard FC-18 Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"      -.002"  
   +0.00mm      -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
.1250	1/8	3.18	LR	.1562	.1250	2.0000	.3750	.1200	.0100	34575
.1250	1/8	3.18	LR	.1562	.1250	2.0000	.3750	.1200	.0300	34576*
.1250	1/8	3.18	LR	.1562	.1250	2.0000	.5000	.1200	.0100	34577*
.1250	1/8	3.18	LR	.1562	.1250	2.0000	.5000	.1200	.0300	34578
.1250	1/8	3.18	LR	.1562	.1250	2.5000	.7500	.1200	.0100	34579*
.1250	1/8	3.18	LR	.1562	.1250	2.5000	.7500	.1200	.0300	34580*
.1875	3/16	4.76	LR	.2188	.1875	2.0000	.5000	.1800	.0100	34581*
.1875	3/16	4.76	LR	.2188	.1875	2.0000	.5000	.1800	.0300	34582*
.1875	3/16	4.76	LR	.2188	.1875	2.5000	.7500	.1800	.0100	34583*
.1875	3/16	4.76	LR	.2188	.1875	2.5000	.7500	.1800	.0300	34584*
.1875	3/16	4.76	LR	.2188	.1875	2.5000	1.1250	.1800	.0100	34585*
.1875	3/16	4.76	LR	.2188	.1875	2.5000	1.1250	.1800	.0300	34586*
.2500	1/4	6.35	STB	.3750	.2500	2.0000			.0200	34160
.2500	1/4	6.35	STB	.3750	.2500	2.0000			.0300	34787
.2500	1/4	6.35	STB	.3750	.2500	2.0000			.0600	34788*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	.7500	.2400	.0200	34587*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	.7500	.2400	.0300	34588
.2500	1/4	6.35	LR	.3750	.2500	4.0000	.7500	.2400	.0600	34589
.2500	1/4	6.35	LR	.3750	.2500	4.0000	1.1250	.2400	.0200	34590*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	1.1250	.2400	.0300	34591*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	1.1250	.2400	.0600	34592*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	2.1250	.2400	.0200	34593*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	2.1250	.2400	.0300	34594*
.2500	1/4	6.35	LR	.3750	.2500	4.0000	2.1250	.2400	.0600	34595*

END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0200	34106
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0300	34692
.2500	1/4	6.35	SD	.7500	.2500	2.5000			.0600	34176
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0200	34108
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0300	34693*
.3125	5/16	7.94	SD	.8750	.3125	2.5000			.0600	34694
.3125	5/16	7.94	XL	1.0000	.3125	3.0000			.0200	34742*
.3125	5/16	7.94	XL	1.0000	.3125	3.0000			.0300	34743*
.3125	5/16	7.94	XL	1.0000	.3125	3.0000			.0600	34744*
.3750	3/8	9.53	STB	.5000	.3750	2.5000			.0200	34162
.3750	3/8	9.53	STB	.5000	.3750	2.5000			.0300	34789
.3750	3/8	9.53	STB	.5000	.3750	2.5000			.0600	34790
.3750	3/8	9.53	STB	.5000	.3750	2.5000			.0900	34791
.3750	3/8	9.53	STB	.5000	.3750	2.5000			.1200	34792*
.3750	3/8	9.53	LR	.5000	.3750	4.0000	1.1250	.3600	.0200	34596
.3750	3/8	9.53	LR	.5000	.3750	4.0000	1.1250	.3600	.0300	34597
.3750	3/8	9.53	LR	.5000	.3750	4.0000	1.1250	.3600	.0600	34598
.3750	3/8	9.53	LR	.5000	.3750	4.0000	1.1250	.3600	.0900	34599*
.3750	3/8	9.53	LR	.5000	.3750	4.0000	2.1250	.3600	.0200	34600*
.3750	3/8	9.53	LR	.5000	.3750	4.0000	2.1250	.3600	.0300	34601
.3750	3/8	9.53	LR	.5000	.3750	4.0000	2.1250	.3600	.0600	34602
.3750	3/8	9.53	LR	.5000	.3750	4.0000	2.1250	.3600	.0900	34603*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	3.1250	.3600	.0200	34604
.3750	3/8	9.53	LR	.5000	.3750	6.0000	3.1250	.3600	.0300	34605*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	3.1250	.3600	.0600	34606*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	3.1250	.3600	.0900	34607*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	4.1250	.3600	.0200	34608*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	4.1250	.3600	.0300	34609*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	4.1250	.3600	.0600	34610*
.3750	3/8	9.53	LR	.5000	.3750	6.0000	4.1250	.3600	.0900	34611*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0200	34110
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0300	34695
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0600	34177
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.0900	34178
.3750	3/8	9.53	SD	1.0000	.3750	2.5000			.1200	34179
.3750	3/8	9.53	SD	2.0000	.3750	4.0000			.0200	34111
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0200	34696
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0300	34112
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0600	34697*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.0900	34698*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500			.1200	34699*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0300	34164
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0600	34793*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.0900	34794*
.5000	1/2	12.70	STB	.6250	.5000	3.0000			.1200	34795
.5000	1/2	12.70	LR	.6250	.5000	4.0000	1.5000	.4800	.0300	34612*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	1.5000	.4800	.0600	34613*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	1.5000	.4800	.0900	34614*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	1.5000	.4800	.1200	34615*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0300	34616
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0600	34617
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.0900	34618*
.5000	1/2	12.70	LR	.6250	.5000	4.0000	2.2500	.4800	.1200	34619
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0300	34620*

ADVANCED PERFORMANCE



RADIUS



FLUTE

CENTERING



STUB

STANDARD



EXTRA LONG

LONG REACH



FC-18 COATING



FAST Quote



mm METRIC

\* Non Stocked

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0600	34621*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.0900	34622*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	3.3750	.4800	.1200	34623*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	4.1250	.4800	.0300	34624*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	4.1250	.4800	.0600	34625*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	4.1250	.4800	.0900	34626*
.5000	1/2	12.70	LR	.6250	.5000	6.0000	4.1250	.4800	.1200	34627*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0100	34143
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0150	34144
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0200	34180
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0300	34114
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0600	34181
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.0900	34182
.5000	1/2	12.70	SD	1.0000	.5000	3.0000			.1200	34703*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0150	34183
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0300	34115
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0600	34700
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.0900	34701*
.5000	1/2	12.70	SD	1.2500	.5000	3.0000			.1200	34702
.5000	1/2	12.70	SD	2.0000	.5000	4.0000			.0200	34184
.5000	1/2	12.70	SD	2.0000	.5000	4.0000			.0300	34119
.5000	1/2	12.70	SD	2.0000	.5000	4.0000			.1200	34185
.6250	5/8	15.88	SD	.7500	.6250	3.5000			.0300	34796
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.0350	34166
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.0600	34797
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.0900	34798*
.6250	5/8	15.88	STB	.7500	.6250	3.5000			.1200	34799
.6250	5/8	15.88	LR	.7500	.6250	4.0000	1.6250	.6000	.0300	34628
.6250	5/8	15.88	LR	.7500	.6250	4.0000	1.6250	.6000	.0600	34629*
.6250	5/8	15.88	LR	.7500	.6250	4.0000	1.6250	.6000	.0900	34630*
.6250	5/8	15.88	LR	.7500	.6250	4.0000	1.6250	.6000	.1200	34631*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	2.3750	.6000	.0300	34632*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	2.3750	.6000	.0600	34633*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	2.3750	.6000	.0900	34634*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	2.3750	.6000	.1200	34635*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	3.3750	.6000	.0300	34636*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	3.3750	.6000	.0600	34637*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	3.3750	.6000	.0900	34638*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	3.3750	.6000	.1200	34639*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	4.1250	.6000	.0300	34640*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	4.1250	.6000	.0600	34641*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	4.1250	.6000	.0900	34642*
.6250	5/8	15.88	LR	.7500	.6250	6.0000	4.1250	.6000	.1200	34643*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0300	34704
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0350	34116
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0600	34705*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.0900	34706*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000			.1200	34707*
.6250	5/8	15.88	SD	1.6250	.6250	4.0000			.0300	34708*
.6250	5/8	15.88	SD	1.6250	.6250	4.0000			.0350	34103
.6250	5/8	15.88	SD	1.6250	.6250	4.0000			.0600	34709*
.6250	5/8	15.88	SD	1.6250	.6250	4.0000			.0900	34710*
.6250	5/8	15.88	SD	1.6250	.6250	4.0000			.1200	34711
.6250	5/8	15.88	SD	2.2500	.6250	5.0000			.0350	34121

# END MILLS

ADVANCED PERFORMANCE



RADIUS



FC-18 COATING

FAST QUOTE

mm METRIC

\* Non Stocked

END MILLS

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
.7500	3/4	19.05	SD	.8750	.7500	4.0000			.0300	34800
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.0350	34168
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.0600	34801*
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.0900	34802*
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.1200	34803
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.1900	34804*
.7500	3/4	19.05	STB	.8750	.7500	4.0000			.2500	34805*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.0000	.7200	.0300	34644*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.0000	.7200	.0600	34645*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.0000	.7200	.0900	34646*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.0000	.7200	.1200	34647*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.0000	.7200	.1900	34648*
.7500	3/4	19.05	LR	1.0000	.7500	4.0000	2.0000	.7200	.2500	34649*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.5000	.7200	.0300	34650
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.5000	.7200	.0600	34651*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.5000	.7200	.0900	34652*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.5000	.7200	.1200	34653*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.5000	.7200	.1900	34654*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	2.5000	.7200	.2500	34655*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0300	34656
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0600	34657*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.0900	34658*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.1200	34659
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.1900	34660*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	3.3750	.7200	.2500	34661*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	4.1250	.7200	.0300	34662*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	4.1250	.7200	.0600	34663*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	4.1250	.7200	.0900	34664*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	4.1250	.7200	.1200	34665*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	4.1250	.7200	.1900	34666*
.7500	3/4	19.05	LR	1.0000	.7500	6.0000	4.1250	.7200	.2500	34667*
.7500	3/4	19.05	SD	1.2500	.7500	4.0000			.0300	34715*
.7500	3/4	19.05	LR	1.2500	.7500	4.0000	2.5000	.7200	.1200	34124
.7500	3/4	19.05	SD	1.2500	.7500	4.0000			.0600	34716*
.7500	3/4	19.05	SD	1.2500	.7500	4.0000			.0900	34717*
.7500	3/4	19.05	SD	1.2500	.7500	4.0000			.1200	34718*
.7500	3/4	19.05	SD	1.2500	.7500	4.0000			.1900	34719*
.7500	3/4	19.05	SD	1.2500	.7500	4.0000			.2500	34720*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0200	34186
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0300	34712*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0350	34118
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0350	34118W
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0600	34187
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.0900	34188
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.1200	34189
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.1900	34713*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000			.2500	34714
.7500	3/4	19.05	SD	1.6250	.7500	4.0000			.0350	34104
.7500	3/4	19.05	SD	2.2500	.7500	5.0000			.0350	34122
.7500	3/4	19.05	SD	2.2500	.7500	5.0000			.0350	34122W
1.0000	1	25.40	LR	1.2500	1.0000	4.0000	2.2500	.9700	.0300	34668*
1.0000	1	25.40	LR	1.2500	1.0000	4.0000	2.2500	.9700	.0600	34669*
1.0000	1	25.40	LR	1.2500	1.0000	4.0000	2.2500	.9700	.0900	34670*
1.0000	1	25.40	LR	1.2500	1.0000	4.0000	2.2500	.9700	.1200	34671*

ADVANCED PERFORMANCE



\* Non Stocked  
W = Weldon Flat



# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



# END MILLS

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
1.0000	1	25.40	LR	1.2500	1.0000	4.0000	2.2500	.9700	.1900	34672*
1.0000	1	25.40	LR	1.2500	1.0000	4.0000	2.2500	.9700	.2500	34673*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	2.6250	.9700	.0300	34674*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	2.6250	.9700	.0600	34675*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	2.6250	.9700	.0900	34676*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	2.6250	.9700	.1200	34677*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	2.6250	.9700	.1900	34678*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	2.6250	.9700	.2500	34679*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0300	34680*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0600	34681*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.0900	34682*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.1200	34683*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.1900	34684*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	3.3750	.9700	.2500	34685*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	4.1250	.9700	.0300	34686*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	4.1250	.9700	.0600	34687*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	4.1250	.9700	.0900	34688*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	4.1250	.9700	.1200	34689*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	4.1250	.9700	.1900	34690*
1.0000	1	25.40	LR	1.2500	1.0000	6.0000	4.1250	.9700	.2500	34691*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0300	34721*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0350	34720
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0600	34722
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.0900	34723*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.1200	34724*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.1900	34725*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000			.2500	34726*
1.0000	1	25.40	XL	2.2500	1.0000	5.0000			.0300	34745*
1.0000	1	25.40	SD	2.2500	1.0000	5.0000			.0350	34123
1.0000	1	25.40	XL	2.2500	1.0000	5.0000			.0600	34746
1.0000	1	25.40	XL	2.2500	1.0000	5.0000			.0900	34747*
1.0000	1	25.40	XL	2.2500	1.0000	5.0000			.1200	34748*
1.0000	1	25.40	XL	2.2500	1.0000	5.0000			.1900	34749*
1.0000	1	25.40	XL	2.2500	1.0000	5.0000			.2500	34750*

### METRIC (Millimeter)

.1181		3.00	LR	4.00	3.00	50.00	10.00	2.87	0.25	92633
.1181		3.00	LR	4.00	3.00	50.00	10.00	2.87	0.75	92634*
.1181		3.00	LR	4.00	3.00	50.00	12.00	2.87	0.25	92635
.1181		3.00	LR	4.00	3.00	50.00	12.00	2.87	0.75	92636*
.1181		3.00	LR	4.00	3.00	64.00	20.00	2.87	0.25	92637*
.1181		3.00	LR	4.00	3.00	64.00	20.00	2.87	0.75	92638*
.1181		3.00	SD	6.00	3.00	38.00			0.20	91412*
.1181		3.00	SD	12.00	3.00	38.00			0.20	92742
.1575		4.00	SD	8.00	4.00	50.00			0.20	91413
.1575		4.00	STB	8.00	4.00	50.00			0.30	92609
.1575		4.00	SD	14.00	4.00	50.00			0.20	92743*
.1575		4.00	SD	14.00	4.00	50.00			0.30	92744
.1969		5.00	LR	6.00	5.00	50.00	12.00	4.75	0.25	92639*
.1969		5.00	LR	6.00	5.00	50.00	12.00	4.75	0.75	92640*
.1969		5.00	LR	6.00	5.00	64.00	20.00	4.75	0.25	92641*
.1969		5.00	LR	6.00	5.00	64.00	20.00	4.75	0.75	92642*
.1969		5.00	LR	6.00	5.00	64.00	30.00	4.75	0.25	92643*

ADVANCED PERFORMANCE



RADIUS



FC-18 COATING

FAST QUOTE

mm METRIC

\* Non Stocked W = Weldon Flat

END MILLS

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
.1969		5.00	LR	6.00	5.00	64.00	30.00	4.75	0.75	92644*
.1969		5.00	SD	10.00	5.00	51.00			0.20	91414*
.1969		5.00	STB	10.00	5.00	51.00			0.30	92610
.1969		5.00	STB	10.00	5.00	51.00			0.50	91415*
.1969		5.00	SD	16.00	5.00	64.00			0.20	92745*
.1969		5.00	SD	16.00	5.00	64.00			0.30	92746
.1969		5.00	SD	16.00	5.00	64.00			0.50	92747*
.2362		6.00	STB	10.00	6.00	50.00			0.25	92499
.2362		6.00	STB	10.00	6.00	50.00			0.30	92458
.2362		6.00	SD	10.00	6.00	50.00			0.40	91416*
.2362		6.00	SD	10.00	6.00	50.00			0.50	91417*
.2362		6.00	SD	10.00	6.00	50.00			0.75	91418*
.2362		6.00	SD	10.00	6.00	50.00			1.00	91419*
.2362		6.00	SD	10.00	6.00	50.00			1.50	91420*
.2362		6.00	LR	10.00	6.00	100.00	20.00	5.75	0.50	92645*
.2362		6.00	LR	10.00	6.00	100.00	20.00	5.75	0.75	92646*
.2362		6.00	LR	10.00	6.00	100.00	20.00	5.75	1.50	92647*
.2362		6.00	LR	10.00	6.00	100.00	30.00	5.75	0.50	92648*
.2362		6.00	LR	10.00	6.00	100.00	30.00	5.75	0.75	92649*
.2362		6.00	LR	10.00	6.00	100.00	30.00	5.75	1.50	92650*
.2362		6.00	LR	10.00	6.00	100.00	54.00	5.75	0.50	92651*
.2362		6.00	LR	10.00	6.00	100.00	54.00	5.75	0.75	92652*
.2362		6.00	LR	10.00	6.00	100.00	54.00	5.75	1.50	92653*
.2362		6.00	SD	20.00	6.00	64.00			0.30	92567
.2362		6.00	SD	20.00	6.00	76.00			0.30	92452
.2362		6.00	SD	20.00	6.00	76.00			0.40	92765*
.2362		6.00	SD	20.00	6.00	76.00			0.50	92766*
.2362		6.00	SD	20.00	6.00	76.00			0.75	92767*
.2362		6.00	SD	20.00	6.00	76.00			1.00	92768*
.2362		6.00	SD	20.00	6.00	76.00			1.50	92769*
.3150		8.00	SD	12.00	8.00	50.00			0.30	91421*
.3150		8.00	SD	12.00	8.00	50.00			0.40	91422*
.3150		8.00	STB	12.00	8.00	50.00			0.50	92459
.3150		8.00	STB	12.00	8.00	50.00			0.75	91423*
.3150		8.00	STB	12.00	8.00	50.00			1.00	91424*
.3150		8.00	STB	12.00	8.00	50.00			1.50	91425*
.3150		8.00	STB	12.00	8.00	50.00			2.00	91426*
.3150		8.00	LR	15.00	8.00	100.00	60.00	7.75	0.50	34853*
.3150		8.00	LR	15.00	8.00	100.00	60.00	7.75	1.00	34854*
.3150		8.00	LR	15.00	8.00	100.00	60.00	7.75	1.50	34855*
.3150		8.00	LR	15.00	8.00	100.00	60.00	7.75	2.00	34856*
.3150		8.00	SD	22.00	8.00	64.00			0.50	92568
.3150		8.00	SD	22.00	8.00	76.00			0.30	92770*
.3150		8.00	SD	22.00	8.00	76.00			0.40	92771*
.3150		8.00	SD	22.00	8.00	76.00			0.50	92453
.3150		8.00	SD	22.00	8.00	76.00			0.75	92772*
.3150		8.00	SD	22.00	8.00	76.00			1.00	92773
.3150		8.00	SD	22.00	8.00	76.00			1.50	92774*
.3150		8.00	SD	22.00	8.00	76.00			2.00	92775*
.3150		8.00	LR	27.00	8.00	76.00	35.00	7.75	0.50	34857*
.3150		8.00	LR	27.00	8.00	76.00	35.00	7.75	1.00	34858*
.3150		8.00	LR	27.00	8.00	76.00	35.00	7.75	1.50	34859*
.3150		8.00	LR	27.00	8.00	76.00	35.00	7.75	2.00	34860*
.3937		10.00	STB	12.00	10.00	50.00			0.50	92460

ADVANCED PERFORMANCE



FC-18 COATING

FAST Quote

mm

METRIC

\* Non Stocked

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								
.3937		10.00	STB	12.00	10.00	50.00			0.75	91427*
.3937		10.00	STB	12.00	10.00	50.00			1.00	91428*
.3937		10.00	STB	12.00	10.00	50.00			1.50	91429*
.3937		10.00	STB	12.00	10.00	50.00			2.00	91430*
.3937		10.00	LR	12.00	10.00	100.00	30.00	9.60	0.50	92654*
.3937		10.00	LR	12.00	10.00	100.00	30.00	9.60	0.75	92655*
.3937		10.00	LR	12.00	10.00	100.00	30.00	9.60	1.50	92656*
.3937		10.00	LR	12.00	10.00	100.00	30.00	9.60	2.25	92657*
.3937		10.00	LR	12.00	10.00	100.00	54.00	9.60	0.50	92658*
.3937		10.00	LR	12.00	10.00	100.00	54.00	9.60	0.75	92659*
.3937		10.00	LR	12.00	10.00	100.00	54.00	9.60	1.50	92660*
.3937		10.00	LR	12.00	10.00	100.00	54.00	9.60	2.25	92661*
.3937		10.00	LR	12.00	10.00	150.00	79.00	9.60	0.50	92662*
.3937		10.00	LR	12.00	10.00	150.00	79.00	9.60	0.75	92663*
.3937		10.00	LR	12.00	10.00	150.00	79.00	9.60	1.50	92664*
.3937		10.00	LR	12.00	10.00	150.00	79.00	9.60	2.25	92665*
.3937		10.00	LR	12.00	10.00	150.00	105.00	9.60	0.50	92666*
.3937		10.00	LR	12.00	10.00	150.00	105.00	9.60	0.75	92667*
.3937		10.00	LR	12.00	10.00	150.00	105.00	9.60	1.50	92668*
.3937		10.00	LR	12.00	10.00	150.00	105.00	9.60	2.25	92669*
.3937		10.00	LR	20.00	10.00	100.00	54.00	9.60	0.50	92463
.3937		10.00	SD	25.00	10.00	64.00			0.50	92569
.3937		10.00	SD	25.00	10.00	89.00			0.50	92454
.3937		10.00	SD	25.00	10.00	89.00			0.75	92776*
.3937		10.00	SD	25.00	10.00	89.00			1.00	92777
.3937		10.00	SD	25.00	10.00	89.00			1.50	92778*
.3937		10.00	SD	25.00	10.00	89.00			2.00	92779
.4724		12.00	STB	16.00	12.00	63.00			0.50	92461
.4724		12.00	SD	16.00	12.00	63.00			0.75	91431*
.4724		12.00	SD	16.00	12.00	63.00			1.00	91432
.4724		12.00	SD	16.00	12.00	63.00			1.50	91433
.4724		12.00	SD	16.00	12.00	63.00			2.00	91434*
.4724		12.00	SD	16.00	12.00	63.00			3.00	91435*
.4724		12.00	LR	16.00	12.00	100.00	50.00	11.60	0.75	92670*
.4724		12.00	LR	16.00	12.00	100.00	50.00	11.60	1.50	92671*
.4724		12.00	LR	16.00	12.00	100.00	50.00	11.60	2.25	92672*
.4724		12.00	LR	16.00	12.00	100.00	50.00	11.60	3.00	92673*
.4724		12.00	LR	16.00	12.00	100.00	57.00	11.60	0.75	92674*
.4724		12.00	LR	16.00	12.00	100.00	57.00	11.60	1.50	92675*
.4724		12.00	LR	16.00	12.00	100.00	57.00	11.60	2.25	92676*
.4724		12.00	LR	16.00	12.00	100.00	57.00	11.60	3.00	92677*
.4724		12.00	LR	16.00	12.00	150.00	86.00	11.60	0.75	92678*
.4724		12.00	LR	16.00	12.00	150.00	86.00	11.60	1.50	92679*
.4724		12.00	LR	16.00	12.00	150.00	86.00	11.60	2.25	92680*
.4724		12.00	LR	16.00	12.00	150.00	86.00	11.60	3.00	92681*
.4724		12.00	LR	16.00	12.00	150.00	105.00	11.60	0.75	92682*
.4724		12.00	LR	16.00	12.00	150.00	105.00	11.60	1.50	92683*
.4724		12.00	LR	16.00	12.00	150.00	105.00	11.60	2.25	92684*
.4724		12.00	LR	16.00	12.00	150.00	105.00	11.60	3.00	92685*
.4724		12.00	LR	20.00	12.00	100.00	54.00	11.60	0.50	92464
.4724		12.00	SD	25.00	12.00	76.00			0.50	92570
.4724		12.00	SD	25.00	12.00	100.00			0.50	92455
.4724		12.00	SD	25.00	12.00	100.00			0.75	92780*
.4724		12.00	SD	25.00	12.00	100.00			1.00	92781

# END MILLS

ADVANCED PERFORMANCE



RADIUS



FC-18 COATING

FAST QUOTE

mm

METRIC

\* Non Stocked

END MILLS

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								FC-18
.4724		12.00	SD	25.00	12.00	100.00			1.50	92782*
.4724		12.00	SD	25.00	12.00	100.00			2.00	92783*
.4724		12.00	SD	25.00	12.00	100.00			3.00	92784*
.6299		16.00	STB	20.00	16.00	89.00			0.50	92462
.6299		16.00	SD	20.00	16.00	89.00			0.75	91436*
.6299		16.00	SD	20.00	16.00	89.00			1.00	91437*
.6299		16.00	SD	20.00	16.00	89.00			1.50	91438*
.6299		16.00	SD	20.00	16.00	89.00			2.00	91439*
.6299		16.00	SD	20.00	16.00	89.00			3.00	91440*
.6299		16.00	LR	20.00	16.00	100.00	41.00	15.34	0.75	92686*
.6299		16.00	LR	20.00	16.00	100.00	41.00	15.34	1.50	92687*
.6299		16.00	LR	20.00	16.00	100.00	41.00	15.34	2.25	92688*
.6299		16.00	LR	20.00	16.00	100.00	41.00	15.34	3.00	92689*
.6299		16.00	LR	20.00	16.00	150.00	70.00	15.34	0.75	92690*
.6299		16.00	LR	20.00	16.00	150.00	70.00	15.34	1.50	92691*
.6299		16.00	LR	20.00	16.00	150.00	70.00	15.34	2.25	92692*
.6299		16.00	LR	20.00	16.00	150.00	70.00	15.34	3.00	92693*
.6299		16.00	LR	20.00	16.00	150.00	86.00	15.34	0.75	92694*
.6299		16.00	LR	20.00	16.00	150.00	86.00	15.34	1.50	92695*
.6299		16.00	LR	20.00	16.00	150.00	86.00	15.34	2.25	92696*
.6299		16.00	LR	20.00	16.00	150.00	86.00	15.34	3.00	92697*
.6299		16.00	LR	20.00	16.00	150.00	89.00	15.35	0.50	92465*
.6299		16.00	LR	20.00	16.00	150.00	105.00	15.34	0.75	92698*
.6299		16.00	LR	20.00	16.00	150.00	105.00	15.34	1.50	92699*
.6299		16.00	LR	20.00	16.00	150.00	105.00	15.34	2.25	92700*
.6299		16.00	LR	20.00	16.00	150.00	105.00	15.34	3.00	92701*
.6299		16.00	SD	38.00	16.00	100.00			0.50	92456
.6299		16.00	SD	38.00	16.00	100.00			0.75	92748*
.6299		16.00	SD	38.00	16.00	100.00			1.00	92749*
.6299		16.00	SD	38.00	16.00	100.00			1.50	92750*
.6299		16.00	SD	38.00	16.00	100.00			2.00	92751*
.6299		16.00	SD	38.00	16.00	100.00			3.00	92752
.7874		20.00	LR	20.00	20.00	150.00	89.00	19.35	1.00	92466*
.7874		20.00	LR	25.00	20.00	100.00	50.00	19.35	0.75	92702*
.7874		20.00	LR	25.00	20.00	100.00	50.00	19.35	1.50	92703*
.7874		20.00	LR	25.00	20.00	100.00	50.00	19.35	2.25	92704*
.7874		20.00	LR	25.00	20.00	100.00	50.00	19.35	3.00	92705*
.7874		20.00	LR	25.00	20.00	100.00	50.00	19.35	6.00	92706*
.7874		20.00	LR	25.00	20.00	150.00	64.00	19.35	0.75	92707*
.7874		20.00	LR	25.00	20.00	150.00	64.00	19.35	1.50	92708*
.7874		20.00	LR	25.00	20.00	150.00	64.00	19.35	2.25	92709*
.7874		20.00	LR	25.00	20.00	150.00	64.00	19.35	3.00	92710*
.7874		20.00	LR	25.00	20.00	150.00	64.00	19.35	6.00	92711*
.7874		20.00	LR	25.00	20.00	150.00	86.00	19.35	0.75	92712*
.7874		20.00	LR	25.00	20.00	150.00	86.00	19.35	1.50	92713*
.7874		20.00	LR	25.00	20.00	150.00	86.00	19.35	2.25	92714*
.7874		20.00	LR	25.00	20.00	150.00	86.00	19.35	3.00	92715*
.7874		20.00	LR	25.00	20.00	150.00	86.00	19.35	6.00	92716*
.7874		20.00	LR	25.00	20.00	150.00	105.00	19.35	0.75	92717*
.7874		20.00	LR	25.00	20.00	150.00	105.00	19.35	1.50	92718*
.7874		20.00	LR	25.00	20.00	150.00	105.00	19.35	2.25	92719*
.7874		20.00	LR	25.00	20.00	150.00	105.00	19.35	3.00	92720*
.7874		20.00	LR	25.00	20.00	150.00	105.00	19.35	6.00	92721*
.7874		20.00	SD	38.00	20.00	100.00			0.50	92753*

ADVANCED PERFORMANCE



\* Non Stocked

# 3410 Phantom (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	EDP Number
Inch	Fractional	Millimeter								FC-18
.7874		20.00	SD	38.00	20.00	100.00			0.75	92754*
.7874		20.00	SD	38.00	20.00	100.00			1.00	92457
.7874		20.00	SD	38.00	20.00	100.00			1.50	92755*
.7874		20.00	SD	38.00	20.00	100.00			2.00	92756*
.7874		20.00	SD	38.00	20.00	100.00			3.00	92757*
.7874		20.00	SD	63.00	20.00	125.00			0.50	92785*
.7874		20.00	SD	63.00	20.00	125.00			0.75	92786
.7874		20.00	SD	63.00	20.00	125.00			1.00	92787*
.7874		20.00	SD	63.00	20.00	125.00			1.50	92788*
.7874		20.00	SD	63.00	20.00	125.00			2.00	92789*
.7874		20.00	SD	63.00	20.00	125.00			3.00	92790*
.9843		25.00	LR	32.00	25.00	100.00	57.00	24.00	0.75	92722*
.9843		25.00	LR	32.00	25.00	100.00	57.00	24.00	1.50	92723*
.9843		25.00	LR	32.00	25.00	100.00	57.00	24.00	2.25	92724*
.9843		25.00	LR	32.00	25.00	100.00	57.00	24.00	3.00	92725*
.9843		25.00	LR	32.00	25.00	100.00	57.00	24.00	6.00	92726*
.9843		25.00	LR	32.00	25.00	150.00	67.00	24.00	0.75	92727*
.9843		25.00	LR	32.00	25.00	150.00	67.00	24.00	1.50	92728*
.9843		25.00	LR	32.00	25.00	150.00	67.00	24.00	2.25	92729*
.9843		25.00	LR	32.00	25.00	150.00	67.00	24.00	3.00	92730*
.9843		25.00	LR	32.00	25.00	150.00	67.00	24.00	6.00	92731*
.9843		25.00	LR	32.00	25.00	150.00	86.00	24.00	0.75	92732*
.9843		25.00	LR	32.00	25.00	150.00	86.00	24.00	1.50	92733*
.9843		25.00	LR	32.00	25.00	150.00	86.00	24.00	2.25	92734*
.9843		25.00	LR	32.00	25.00	150.00	86.00	24.00	3.00	92735*
.9843		25.00	LR	32.00	25.00	150.00	86.00	24.00	6.00	92736*
.9843		25.00	LR	32.00	25.00	150.00	105.00	24.00	0.75	92737*
.9843		25.00	LR	32.00	25.00	150.00	105.00	24.00	1.50	92738*
.9843		25.00	LR	32.00	25.00	150.00	105.00	24.00	2.25	92739*
.9843		25.00	LR	32.00	25.00	150.00	105.00	24.00	3.00	92740*
.9843		25.00	LR	32.00	25.00	150.00	105.00	24.00	6.00	92741*
.9843		25.00	SD	38.00	25.00	100.00			0.50	92758*
.9843		25.00	SD	38.00	25.00	100.00			0.75	92759*
.9843		25.00	SD	38.00	25.00	100.00			1.00	92760*
.9843		25.00	SD	38.00	25.00	100.00			1.50	92761*
.9843		25.00	SD	38.00	25.00	100.00			2.00	92762*
.9843		25.00	SD	38.00	25.00	100.00			3.00	92763*

# END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

# 3810 The Dream (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Standard Aerospace Corner Radius
- Flute Count Varies by Diameter
  - Eccentric Relief
  - Right Hand Spiral
  - Right Hand Cut
- Long Reach Length
- Standard Uncoated
- Inch and Metric Based Tools
- Necked Down
- Profiling Tool
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:  $+0.000''$   $-.002''$   
 $+0.00mm$   $-0.05mm$

*\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.*

ADVANCED PERFORMANCE



NUMBER OF FLUTES VARY BY DIAMETER



mm METRIC

\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Reach	Neck Diameter	Corner Radius	Number of Flutes	EDP Number
Inch	Fractional	Millimeter									UC
.5000	1/2	12.70	LR	.7500	.5000	4.0000	2.5000	.4800	.0600	6	37498
.6250	5/8	15.88	LR	.7500	.6250	4.0000	2.5000	.6000	.0900	6	37499*
.7500	3/4	19.05	LR	1.1250	.7500	4.0000	2.5000	.7200	.1200	8	37500
1.0000	1	25.40	LR	1.1250	1.0000	4.5000	3.0000	.9600	.1200	10	38562
METRIC (Millimeter)											
.7874		20.00	LR	28.00	20.00	100.00	63.00	19.22	3.00	8	38565*
.9843		25.00	LR	28.00	25.00	114.00	76.00	24.00	3.00	10	38567



# 3820 Hercules (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Brass & Copper High StAl >10% Low StAl <10% General Purpose



**Basic Information:**

- Advanced Performance
- Standard Aerospace Corner Radius
- 20 Flutes
  - Eccentric Relief
  - Right Hand Spiral
  - Right Hand Cut
- Standard Length
- Standard Uncoated
- Inch Based Tools
- Profiling Tool
- Hollow Design
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" +0.00mm -0.05mm

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Shank Length	Overall Length	Corner Radius	EDP Number
Inch	Fractional	Millimeter							UC
2.0000	2	50.80	SD	1.1250	1.2500	1.7500	3.0000	.1200	92600

END MILLS

ADVANCED PERFORMANCE



RADIUS



20 FLUTE SD STANDARD

END MILLS

# 3800 Twister (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Brass & Copper



**Basic Information:**

- Advanced Performance
- Square End
- 3 Flutes
  - 60° Helix
  - Eccentric Relief for Increased Edge Strength
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated, TiCN, and TiAlN Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.

ADVANCED PERFORMANCE



TiCN COATING

TiAlN COATING

mm METRIC

\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Fractional	Millimeter					UC	TiCN	TiAlN
.1250	1/8	3.18	SD	.5000	.1250	1.5000	38001	38201	38500
.1875	3/16	4.76	SD	.6250	.1875	2.0000	38002	38202*	38501
.2500	1/4	6.35	SD	.7500	.2500	2.5000	38003	38203	38502
.3125	5/16	7.94	SD	.8125	.3125	2.5000	38004	38204*	38503
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	38005	38205*	38504
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	38006		38506
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	38007	38207	38507
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	38008	38208*	38508
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	38009	38209*	38509*
METRIC (Millimeter)									
.1181		3.00	SD	12.00	3.00	38.00			92516
.2362		6.00	SD	20.00	6.00	64.00			92517
.3150		8.00	SD	22.00	8.00	64.00			92518
.3937		10.00	SD	25.00	10.00	64.00			92519
.4724		12.00	SD	25.00	12.00	76.00			92520
.6299		16.00	SD	38.00	16.00	89.00			92521

# 3990 Hogger (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 3 Flutes
  - 40° Helix
  - Sinusoidal Geometry (Corn Cob Cutters)
  - Form Relieved
  - Coarse Pitch
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch and Metric Based Tools
- Weldon Flat Standard
- Dura Carb II (Advanced Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"      -.003"  
                                  +0.00mm      -0.07mm

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter							
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0310	•	39908
.3125	5/16	7.94	SD	.8125	.3125	2.5000	.0390	•	39910
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0470	•	39912
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0625	•	39913
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0781	•	39914
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0938	•	39916
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.1250	•	39918
METRIC (Millimeter)									
.2362		6.00	SD	20.00	6.00	64.00	0.75	•	92501
.3150		8.00	SD	20.00	8.00	64.00	1.00	•	92502
.3937		10.00	SD	25.00	10.00	73.00	1.25	•	92503
.4724		12.00	SD	25.00	12.00	84.00	1.50	•	92504
.5512		14.00	SD	30.00	14.00	84.00	1.75	•	92505
.6299		16.00	SD	30.00	16.00	89.00	2.00	•	92506
.7874		20.00	SD	38.00	20.00	100.00	2.50	•	92507

END MILLS

ADVANCED PERFORMANCE



RADIUS



3 FLUTE CENTER



SD STANDARD

mm METRIC

END MILLS

# 3995 Hogger (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- Flute Count Varies by Diameter
  - 30° Helix
  - Sinusoidal Geometry (Corn Cob Cutters)
  - Fine Pitch
  - Form Relieved
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard TiAlN Coating
- Inch and Metric Based Tools
- Weldon Flat Standard
- Dura Carb II (Advanced Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" - .003" +0.00mm -0.07mm

ADVANCED PERFORMANCE



NUMBER OF FLUTES VARY BY DIAMETER



TiAlN COATING

mm METRIC

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Number of Flutes	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter								
.2500	1/4	6.35	SD	.7500	.2500	2.5000	3	.0310	•	39608
.3125	5/16	7.94	SD	.8125	.3125	2.5000	3	.0390	•	39609
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	3	.0470	•	39610
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	4	.0625	•	39611
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	4	.0781	•	39612
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	4	.0938	•	39613
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	5	.1250	•	39614
METRIC (Millimeter)										
.2362		6.00	SD	20.00	6.00	64.00	3	0.75	•	92508
.3150		8.00	SD	20.00	8.00	64.00	3	1.00	•	92509
.3937		10.00	SD	25.00	10.00	73.00	3	1.25	•	92510
.4724		12.00	SD	25.00	12.00	84.00	4	1.50	•	92512
.5512		14.00	SD	30.00	14.00	84.00	4	1.75	•	92513
.6299		16.00	SD	30.00	16.00	89.00	4	2.00	•	92514
.7874		20.00	SD	38.00	20.00	100.00	4	2.50	•	92515

# 3975 Hogger (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- Flute Count Varies by Diameter
  - 30° Helix
  - Sinusoidal Geometry (Corn Cob Cutters)
  - Form Relief
  - Coarse Pitch
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard TiAlN Coating
- Inch Based Tools
- Weldon Flat Standard
- Dura Carb II (Advanced Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:  $\begin{matrix} +.000'' & -.003'' \\ +0.00\text{mm} & -0.07\text{mm} \end{matrix}$

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Number of Flutes	Corner Radius	Weldon Flat	EDP Number
Inch	Fractional	Millimeter								TiAlN
.2500	1/4	6.35	SD	.7500	.2500	2.5000	3	.0310	•	39600
.3125	5/16	7.94	SD	.8125	.3125	2.5000	3	.0390	•	39601
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	3	.0470	•	39602
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	4	.0625	•	39604
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	4	.0781	•	39605
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	4	.0938	•	39606
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	5	.1250	•	39607

END MILLS

ADVANCED PERFORMANCE



NUMBER OF FLUTES VARY BY DIAMETER



TiAlN COATING

# 3335 Alloy Steel Rougher (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Graphite Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics Wood General Purpose



**Basic Information:**

- Advanced Performance
- Corner Radius
- 3 Flutes
  - 35° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub and Standard Lengths
- Standard TiAlN Coating
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" - .002" / +0.00mm - 0.05mm

ADVANCED PERFORMANCE



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number
Inch	Fractional	Millimeter						
.1250	1/8	3.18	STB	.2500	.1250	1.5000	.0080	33400
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0080	33450
.1875	3/16	4.76	STB	.3125	.1875	2.0000	.0080	33404
.1875	3/16	4.76	SD	.5625	.1875	2.0000	.0080	33454
.2500	1/4	6.35	STB	.3750	.2500	2.0000	.0150	33408
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0150	33458
.3125	5/16	7.94	STB	.4375	.3125	2.5000	.0150	33412
.3125	5/16	7.94	SD	.8125	.3125	2.5000	.0150	33462
.3750	3/8	9.53	STB	.5000	.3750	2.5000	.0150	33416
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0150	33466
.4375	7/16	11.11	STB	.5625	.4375	2.7500	.0150	33418
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.0150	33468
.5000	1/2	12.70	STB	.6250	.5000	3.0000	.0300	33420
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	.0300	33470
.6250	5/8	15.88	STB	.7500	.6250	3.5000	.0300	33422
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	.0300	33472
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.0300	33424
.7500	3/4	19.05	SD	1.6250	.7500	4.0000	.0300	33474
1.0000	1	25.40	STB	1.2500	1.0000	4.0000	.0300	33426
1.0000	1	25.40	SD	2.0000	1.0000	4.0000	.0300	33476



# 3845 Falcon Finisher (Square End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



**Basic Information:**

- Advanced Performance
- Square End
- 5 flutes
  - 45° Helix
  - Eccentric Relief
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated and TiAlN Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -.002"

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number	
Inch	Fractional	Millimeter					UC	TiAlN
.1250	1/8	3.18	STB	.2500	.1250	1.5000	38080	38173
.1250	1/8	3.18	SD	.5000	.1250	1.5000	38050	38150
.1562	5/32	3.97	SD	.5625	.1875	2.0000	38052	38152
.1875	3/16	4.76	STB	.3125	.1875	2.0000	38081	38175
.1875	3/16	4.76	SD	.5625	.1875	2.0000	38054	38154
.2188	7/32	5.56	SD	.7500	.2500	2.5000	38056	38156
.2500	1/4	6.35	STB	.5000	.2500	2.0000	38057	38174
.2500	1/4	6.35	SD	.7500	.2500	2.5000	38058	38158
.2500	1/4	6.35	XL	1.2500	.2500	4.0000	38060	38180
.3125	5/16	7.94	SD	.8125	.3125	2.5000	38062	38160
.3125	5/16	7.94	XL	1.2500	.3125	3.0000		38188
.3750	3/8	9.53	STB	.5000	.3750	2.5000	38063	38176
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	38064	38162
.3750	3/8	9.53	XL	1.2500	.3750	3.0000		38189
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	38067	38183
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	38066	38182
.3750	3/8	9.53	XL	3.0000	.3750	5.0000		38190
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	38068	38164
.5000	1/2	12.70	STB	.6250	.5000	3.0000	38069	38178
.5000	1/2	12.70	SD	1.2500	.5000	3.0000	38070	38166
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	38072	38184
.5000	1/2	12.70	XL	3.0000	.5000	6.0000		38191
.5000	1/2	12.70	XL	3.1250	.5000	6.0000		38186
.6250	5/8	15.88	STB	.7500	.6250	3.5000	38082	38177
.6250	5/8	15.88	SD	1.6250	.6250	3.5000	38074	38168
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	38073	38185
.6250	5/8	15.88	XL	3.0000	.6250	6.0000		38192
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	38083	38179
.7500	3/4	19.05	SD	1.6250	.7500	4.0000	38076	38170
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	38061	38181
.7500	3/4	19.05	XL	3.0000	.7500	6.0000		38193
1.0000	1	25.40	STB	1.2500	1.0000	4.0000		38196
1.0000	1	25.40	SD	2.0000	1.0000	4.0000	38078	38172

END MILLS

ADVANCED PERFORMANCE



\* Non Stocked

END MILLS

# 3845 Falcon Finisher (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number	
Inch	Fractional	Millimeter					UC	TiAlN
1.0000	1	25.40	XL	2.5000	1.0000	5.0000	38071	38187
1.0000	1	25.40	XL	3.0000	1.0000	6.0000		38194
1.0000	1	25.40	XL	4.0000	1.0000	6.0000		38195
METRIC (Millimeter)								
.6299		16.00	XL	76.00	16.00	150.00	93700	
.7874		20.00	STB	28.00	20.00	105.00	38084*	
.7874		20.00	XL	76.00	20.00	150.00	93702	
.9843		25.00	SD	28.00	25.00	121.00	38079*	

ADVANCED PERFORMANCE



\* Non Stocked

# 3730 Chamfer Mills

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Graphite Brass & Copper High Si Al >10% Low Si Al <10% Composites Plastics Wood General Purpose



**Basic Information:**

- 60°, 90°, 120° Degree Included Angle
- 2 and 4 Flutes
  - Straight Flutes
  - Right Hand Cut
- Standard Uncoated and TiAIN Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Number of Flutes	Chamfer Angle	Non-Cutting Tip Diameter	Double End	EDP Number	
Inch	Fractional	Millimeter									UC	TiAIN
.1250	1/8	3.18	SD	.0625	.1250	1.5000	2	90°	.0200		36160	36161
.1250	1/8	3.18	SD	.0625	.1250	1.5000	4	90°	.0200		36158	36159
.1250	1/8	3.18	SD	.1080	.1250	1.5000	2	60°	.0200		36156	36157
.1250	1/8	3.18	SD	.1080	.1250	1.5000	4	60°	.0200		36154	36155
.1875	3/16	4.76	SD	.0938	.1875	2.0000	2	90°	.0200		36173	36174
.1875	3/16	4.76	SD	.0938	.1875	2.0000	4	90°	.0200		36171	36172
.1875	3/16	4.76	SD	.1620	.1875	2.0000	2	60°	.0200		36165	36166
.1875	3/16	4.76	SD	.1620	.1875	2.0000	4	60°	.0200		36163	36164
.2500	1/4	6.35	SD	.0781	.2500	2.5000	2	120°	.0250	•		36101
.2500	1/4	6.35	SD	.1250	.2500	2.5000	2	90°	.0250	•		36094
.2500	1/4	6.35	SD	.1250	.2500	2.5000	2	90°	.0250		36147	36089
.2500	1/4	6.35	SD	.1250	.2500	2.5000	4	90°	.0250		36146	36088
.2500	1/4	6.35	SD	.2160	.2500	2.5000	2	60°	.0250		36141	36083
.2500	1/4	6.35	SD	.2160	.2500	2.5000	4	60°	.0250		36140	36082
.2500	1/4	6.35	SD	.2188	.2500	2.5000	2	60°	.0250	•		36097
.3750	3/8	9.53	SD	.1094	.3750	2.5000	2	120°	.0300	•		36102
.3750	3/8	9.53	SD	.1870	.3750	2.5000	2	90°	.0300		36149	36091
.3750	3/8	9.53	SD	.1870	.3750	2.5000	4	90°	.0300		36148	36090
.3750	3/8	9.53	SD	.1875	.3750	2.5000	2	90°	.0300	•		36095
.3750	3/8	9.53	SD	.3240	.3750	2.5000	2	60°	.0300		36143	36085
.3750	3/8	9.53	SD	.3240	.3750	2.5000	4	60°	.0300		36142	36084
.3750	3/8	9.53	SD	.3280	.3750	2.5000	2	60°	.0300	•		36098
.5000	1/2	12.70	SD	.1406	.5000	3.0000	2	120°	.0350	•		36103
.5000	1/2	12.70	SD	.2500	.5000	3.0000	2	90°	.0350	•		36096
.5000	1/2	12.70	SD	.2500	.5000	3.0000	2	90°	.0350		36151	36093
.5000	1/2	12.70	SD	.2500	.5000	3.0000	4	90°	.0350		36150	36092
.5000	1/2	12.70	SD	.4330	.5000	3.0000	2	60°	.0350		36145	36087
.5000	1/2	12.70	SD	.4330	.5000	3.0000	4	60°	.0350		36144	36086
.5000	1/2	12.70	SD	.4375	.5000	3.0000	2	60°	.0350	•		36099
.7500	3/4	19.05	SD	.3750	.7500	4.0000	2	90°	.0450		36177	36178
.7500	3/4	19.05	SD	.3750	.7500	4.0000	4	90°	.0450		36175	36176
.7500	3/4	19.05	SD	.6490	.7500	4.0000	2	60°	.0450		36169	36170
.7500	3/4	19.05	SD	.6490	.7500	4.0000	4	60°	.0450		36167	36168

METRIC (Millimeter)												
.1181		3.00	SD	1.50	3.00	38.00	4	90°	0.40		92522	92850*
.1575		4.00	SD	2.00	4.00	50.00	4	90°	0.50		92523	92851
.2362		6.00	SD	3.00	6.00	64.00	4	90°	0.50		92524	92852*
.3150		8.00	SD	4.00	8.00	64.00	4	90°	0.65		92525	92853*
.3937		10.00	SD	5.00	10.00	64.00	4	90°	0.75		92526	92854*
.4724		12.00	SD	6.00	12.00	76.00	4	90°	0.90		92527	92855*

END MILLS

60°

90°

120°

2  
FLUTE

4  
FLUTE

SD  
STANDARD

TiAIN  
COATING

mm  
METRIC

\* Non Stocked

# 2351 Form Relieved Radius Mill

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- 4 Straight Flutes
  - Right Hand Cut
  - Non-Cutting Pilot
- Standard Length
- Standard Uncoated
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Radius: +.0005" -.0005"

† Solid Carbide Head on Steel Shank

**Specials Available**

Cutting Diameter			Tool Length Style	Pilot Diameter	Shank Diameter	Overall Length	Radius	EDP Number
Inch	Fractional	Millimeter						UC
.2500	1/4	6.35	SD	.1250	.2500	2.5000	.0625	23250
.3750	3/8	9.53	SD	.1875	.3750	2.5000	.0938	23375
.5000	1/2	12.70	SD	.2500	.5000	3.0000	.1250	23500
.7500	3/4	19.05	SD	.3750	.3750	2.7500	.1875	23750†
1.0000	1	25.40	SD	.5000	.5000	3.0000	.2500	23752†

RADIUS

4 FLUTE

SD STANDARD

† Steel Shank

# Jo-Engraver



**Basic Information:**

- All-in-One Engraving Tool
- 60° Included Angle
- Single Flute
- Standard Length
- Standard Uncoated and TiAIN Coating
- Inch Based Tools
- .021 Radius
- Double End
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number	
Inch	Fractional	Millimeter					UC	TiAIN
.1250	1/8	3.18	SD	.1250	.1250	2.0000	12113	12109

END MILLS



# 3200 4-Flute (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Square End
- 4 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated, TiN, TiCN, and TiAlN Coatings
- Inch and Metric Based Tools
- Single and Double Ends Available
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"     -.002"  
                          +.00mm     -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.0156	1/64	0.40	SD	.0469	.1250	1.5000		32001	33097*	33098*	30604
.0312	1/32	0.79	STB	.0625	.1250	1.5000		32139			32822
.0312	1/32	0.79	SD	.0938	.1250	1.5000		32002	33100	32727	30605
.0469	3/64	1.19	STB	.1250	.1250	1.5000		32140			32823
.0469	3/64	1.19	SD	.1875	.1250	1.5000		32003	33101	32728	30606
.0625	1/16	1.59	STB	.1250	.1250	1.5000		32141			32824
.0625	1/16	1.59	SD	.2500	.1250	1.5000		32004	32326	32729	30607
.0781	5/64	1.98	STB	.1250	.1250	1.5000		32142			32825
.0781	5/64	1.98	SD	.2500	.1250	1.5000		32005	33102	32730	30608
.0938	3/32	2.38	STB	.1875	.1250	1.5000		32143			32826
.0938	3/32	2.38	SD	.3750	.1250	1.5000		32006	32327	32731	30609
.1094	7/64	2.78	STB	.1875	.1250	1.5000		32144			32827
.1094	7/64	2.78	SD	.5000	.1250	1.5000		32007	33103	32732	30610
.1250	1/8	3.18	STB	.2500	.1250	1.5000		32145			32828
.1250	1/8	3.18	SD	.5000	.1250	1.5000		32008	32328	32733	30611
.1250	1/8	3.18	XL	.7500	.1250	3.0000		30232			30030
.1250	1/8	3.18	XL	1.0000	.1250	3.0000		32252			30031
.1406	9/64	3.57	SD	.5625	.1875	2.0000		32009	33104	32734	30612
.1562	5/32	3.97	STB	.3750	.1875	2.0000		32146			32829
.1562	5/32	3.97	SD	.5625	.1875	2.0000		32010	33105	32735	30613
.1719	11/64	4.37	SD	.5625	.1875	2.0000		32650	33106*	32736	30614
.1875	3/16	4.76	STB	.3750	.1875	2.0000		32147			32830
.1875	3/16	4.76	SD	.6250	.1875	2.0000		32011	32329	32737	30615
.1875	3/16	4.76	XL	1.0000	.1875	4.0000		30238			30033
.1875	3/16	4.76	XL	1.2500	.1875	3.0000		32253			30032
.2031	13/64	5.16	SD	.6250	.2500	2.5000		32667	33107	32738*	30616
.2188	7/32	5.56	SD	.6250	.2500	2.5000		32012	33108	32739	30617
.2344	15/64	5.95	SD	.7500	.2500	2.5000		32666	33109	32740	30618
.2500	1/4	6.35	STB	.5000	.2500	2.0000		32148			32831
.2500	1/4	6.35	SD	.7500	.2500	2.5000		32013	32330	32741	30619



# 3200 4-Flute (Square End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.2500	1/4	6.35	XL	1.0000	.2500	4.0000		30200			30035
.2500	1/4	6.35	XL	1.1250	.2500	3.0000		32550			30034
.2500	1/4	6.35	XL	1.5000	.2500	4.0000		32254			30036
.2500	1/4	6.35	XL	1.5000	.2500	6.0000		32551			30037
.2656	17/64	6.75	SD	.8750	.3125	2.5000		32918	33110	32742	30620
.2812	9/32	7.14	SD	.8750	.3125	2.5000		32014	33111	32743	30621
.2969	19/64	7.54	SD	.8750	.3125	2.5000		32919	33112*	32744	30622
.3125	5/16	7.94	STB	.5000	.3125	2.5000		32149			32832
.3125	5/16	7.94	SD	.8750	.3125	2.5000		32015	32331	32745	30623
.3125	5/16	7.94	XL	1.0000	.3125	4.0000		30201			30039
.3125	5/16	7.94	XL	1.1250	.3125	3.0000		32574			30038
.3125	5/16	7.94	XL	1.5000	.3125	6.0000		32552			30041
.3125	5/16	7.94	XL	1.6250	.3125	4.0000		32255			30040
.3281	21/64	8.33	SD	.8750	.3750	2.5000		32920	33113	32746	30624
.3438	11/32	8.73	SD	.8750	.3750	2.5000		32016	33114	32747*	30625
.3594	23/64	9.13	SD	1.0000	.3750	2.5000		32921	33115*	32748*	30626
.3750	3/8	9.53	STB	.6250	.3750	2.5000		32150			32833
.3750	3/8	9.53	SD	1.0000	.3750	2.5000		32017	32332	32749	30627
.3750	3/8	9.53	XL	1.0000	.3750	4.0000		30202			30043
.3750	3/8	9.53	XL	1.1250	.3750	3.0000		32578			30042
.3750	3/8	9.53	XL	1.5000	.3750	4.0000		30220			30044
.3750	3/8	9.53	XL	1.5000	.3750	6.0000		32553			30046
.3750	3/8	9.53	XL	2.0000	.3750	4.0000		32256			30045
.3750	3/8	9.53	XL	3.0000	.3750	6.0000		32257			30047
.3906	25/64	9.92	SD	1.0000	.4375	2.7500		32922	33116*	32750*	30628
.4062	13/32	10.32	SD	1.0000	.4375	2.7500		32900	33117	32751	30629
.4219	27/64	10.72	SD	1.0000	.4375	2.7500		32923	33118	32752*	30630
.4375	7/16	11.11	STB	.7500	.4375	2.7500		32151			32834
.4375	7/16	11.11	SD	1.0000	.4375	2.7500		32018	32333	32753	30631
.4375	7/16	11.11	XL	1.0000	.4375	4.0000		30203			30048
.4375	7/16	11.11	XL	1.5000	.4375	6.0000		32554			30050
.4375	7/16	11.11	XL	2.0000	.4375	4.0000		32258			30049
.4375	7/16	11.11	XL	3.0000	.4375	6.0000		32259			30051
.4531	29/64	11.51	SD	1.0000	.5000	3.0000		32924	33119*	32754*	30632
.4688	15/32	11.91	SD	1.0000	.5000	3.0000		32910	33120*	32755*	30633
.4844	31/64	12.30	SD	1.0000	.5000	3.0000		32925	33121*	32756*	30634
.5000	1/2	12.70	STB	.7500	.5000	3.0000		32152			32835
.5000	1/2	12.70	SD	1.0000	.5000	3.0000		32019	32334	32757	30635
.5000	1/2	12.70	XL	1.0000	.5000	4.0000		30204			30053
.5000	1/2	12.70	XL	1.2500	.5000	3.0000		30239			30052
.5000	1/2	12.70	XL	1.5000	.5000	4.0000		32582			30054
.5000	1/2	12.70	XL	1.5000	.5000	6.0000		32555			30056
.5000	1/2	12.70	XL	2.0000	.5000	4.0000		32260			30055
.5000	1/2	12.70	XL	3.0000	.5000	6.0000		32261			30057
.5625	9/16	14.29	SD	1.2500	.5625	3.5000		32020	32335	32758	30636
.6250	5/8	15.88	STB	1.0000	.6250	3.5000		32153			32836
.6250	5/8	15.88	SD	1.5000	.6250	3.5000		32021	32336	32759	30637
.6250	5/8	15.88	XL	1.5000	.6250	6.0000		30224			30059
.6250	5/8	15.88	XL	2.5000	.6250	5.0000		32262			30058
.6250	5/8	15.88	XL	3.0000	.6250	6.0000		32263			30060
.6875	11/16	17.46	SD	1.5000	.7500	4.0000		32022	33122	32760	30638
.7500	3/4	19.05	STB	1.0000	.7500	4.0000		32154			32837
.7500	3/4	19.05	SD	1.5000	.7500	4.0000		32023	32337	32761	30639
.7500	3/4	19.05	XL	1.5000	.7500	6.0000		30226			30062

# END MILLS



SQUARE



**TiN** COATING

**TiCN** COATING

**TiAlN** COATING

**Quote**

**mm**  
**METRIC**

\* Non Stocked

END MILLS

# 3200 4-Flute (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.7500	3/4	19.05	XL	2.0000	.7500	5.0000		32250			
.7500	3/4	19.05	XL	2.5000	.7500	5.0000		32264			30061
.7500	3/4	19.05	XL	3.0000	.7500	6.0000		32265			30063
.7500	3/4	19.05	XL	4.0000	.7500	7.0000		32266			30064
.8750	7/8	22.23	SD	1.5000	.8750	4.0000		32024	33123*	32762	30640
1.0000	1	25.40	STB	1.0000	1.0000	4.0000		32155			32838
1.0000	1	25.40	SD	1.5000	1.0000	4.0000		32025	32338	32763	30641
1.0000	1	25.40	XL	2.0000	1.0000	4.5000		32267			30065
1.0000	1	25.40	XL	2.5000	1.0000	5.0000		32268			30066
1.0000	1	25.40	XL	3.0000	1.0000	6.0000		32269			30067
1.0000	1	25.40	XL	4.0000	1.0000	7.0000		32270			30068
1.1250	1-1/8	28.58	SD	2.0000	1.0000	4.5000		32026			
1.2500	1-1/4	31.75	SD	2.0000	1.2500	4.5000		32027			
1.2500	1-1/4	31.75	XL	3.0000	1.2500	6.0000		32271			
1.3750	1-3/8	34.93	SD	2.0000	1.2500	4.5000		32028			
1.5000	1-1/2	38.10	SD	2.0000	1.2500	4.5000		32029			

## DOUBLE END (Inch)

.0312	1/32	0.79	STB	.0938	.1250	1.5000		32439	32700		36001
.0469	3/64	1.19	STB	.1250	.1250	1.5000		32440	32701		36002
.0625	1/16	1.59	STB	.1250	.1250	1.5000		32441	32702		36003
.0625	1/16	1.59	SD	.1875	.1250	2.0000		32387			12387
.0781	5/64	1.98	STB	.1250	.1250	1.5000		32519	32860		36004
.0938	3/32	2.38	STB	.1875	.1250	1.5000		32442	32703		36005
.0938	3/32	2.38	SD	.3750	.1250	2.0000		32388			12388
.1094	7/64	2.78	STB	.1875	.1250	1.5000		32530	32861*		36006
.1250	1/8	3.18	STB	.2500	.1250	1.5000		32443	32704		36007
.1250	1/8	3.18	SD	.3750	.1250	2.0000		32389			12389
.1250	1/8	3.18	SD	.3750	.3750	3.5000	•	32491			37001
.1406	9/64	3.57	STB	.3125	.1875	2.0000		32537			36008
.1562	5/32	3.97	STB	.3125	.1875	2.0000		32444	32705		36009
.1562	5/32	3.97	SD	.4375	.1875	3.0000		32390			12390*
.1562	5/32	3.97	SD	.4375	.3750	3.5000	•	32492			37002
.1719	11/64	4.37	STB	.3125	.1875	2.0000		32538			36010
.1875	3/16	4.76	STB	.3750	.1875	2.0000		32445	32706	32621	36011
.1875	3/16	4.76	SD	.5000	.1875	3.0000		32391			12391
.1875	3/16	4.76	SD	.5000	.3750	3.5000	•	32493			37003
.2031	13/64	5.16	STB	.5000	.2500	2.5000		32539			36012
.2188	7/32	5.56	STB	.5000	.2500	2.5000		32446	32707		36013
.2188	7/32	5.56	SD	.5625	.2500	3.0000		32392			12392
.2188	7/32	5.56	SD	.5625	.3750	3.5000	•	32494			37004*
.2344	15/64	5.95	STB	.5000	.2500	2.5000		32545			36014
.2500	1/4	6.35	STB	.5000	.2500	2.5000		32447	32708	32624	36015
.2500	1/4	6.35	SD	.6250	.2500	3.0000		32393			12393
.2500	1/4	6.35	SD	.6250	.3750	3.5000	•	32495			37005
.2812	9/32	7.14	STB	.5000	.3125	2.5000		32594			36016
.2812	9/32	7.14	SD	.6875	.3750	3.5000	•	32496			37006
.3125	5/16	7.94	STB	.5000	.3125	2.5000		32448	32709	32626	36017
.3125	5/16	7.94	SD	.7500	.3125	3.0000		32395			12395
.3125	5/16	7.94	SD	.7500	.3750	3.5000	•	32497			37007
.3750	3/8	9.53	STB	.5625	.3750	2.5000		32449	32710	32627*	36018
.3750	3/8	9.53	SD	.7500	.3750	3.5000		32397			12397
.4375	7/16	11.11	STB	.6250	.4375	2.7500		32450	32711*		36019
.4375	7/16	11.11	SD	.8750	.4375	4.0000		32398			12398

\* Non Stocked



SQUARE



# 3200 4-Flute (Square End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.5000	1/2	12.70	STB	.6250	.5000	3.0000		32451	32712		36020
.5000	1/2	12.70	SD	1.0000	.5000	4.0000		32399			12399
METRIC (Millimeter)											
.0394		1.00	STB	2.50	3.00	38.00		92093			92180
.0394		1.00	SD	4.00	3.00	38.00		92001			92201
.0591		1.50	STB	3.00	3.00	38.00		92194			92195
.0591		1.50	SD	6.00	3.00	38.00		92002			92202
.0787		2.00	STB	4.00	3.00	38.00		92094			92181
.0787		2.00	SD	8.00	3.00	38.00		92003			92203
.0984		2.50	SD	6.00	3.00	38.00		91319			91388*
.0984		2.50	SD	12.00	3.00	38.00		92005			92204
.1181		3.00	STB	6.00	3.00	38.00		92100			92223
.1181		3.00	SD	12.00	3.00	38.00		92006			92205
.1181		3.00	XL	25.00	3.00	76.00		92120			92228
.1378		3.50	SD	12.00	4.00	50.00		92073			92206
.1575		4.00	STB	8.00	4.00	50.00		91320*			92101
.1575		4.00	SD	14.00	4.00	50.00		92007			92207
.1575		4.00	XL	25.00	4.00	64.00		91251			91317*
.1772		4.50	SD	14.00	5.00	51.00		92075			92208
.1969		5.00	STB	10.00	5.00	51.00		91321*			92103
.1969		5.00	SD	16.00	5.00	64.00		92008			92209
.1969		5.00	XL	25.00	5.00	76.00		91252			91318*
.2362		6.00	STB	12.00	6.00	50.00		92102			92224
.2362		6.00	SD	20.00	6.00	64.00		92009			92210
.2362		6.00	XL	29.00	6.00	76.00		92122			92229
.2756		7.00	SD	22.00	7.00	64.00		92010			92211
.3150		8.00	STB	12.00	8.00	50.00		92104			92225
.3150		8.00	SD	22.00	8.00	64.00		92011			92212
.3150		8.00	XL	29.00	8.00	76.00		92124			92230
.3543		9.00	SD	22.00	9.00	64.00		92012			92213
.3937		10.00	STB	15.00	10.00	50.00		92106			92226
.3937		10.00	SD	25.00	10.00	64.00		92013			92214
.3937		10.00	XL	45.00	10.00	100.00		92126			92231
.4331		11.00	SD	25.00	11.00	84.00		92077			92215
.4724		12.00	STB	15.00	12.00	63.00		92108			92227
.4724		12.00	SD	25.00	12.00	84.00		92014			92216
.4724		12.00	XL	50.00	12.00	100.00		92128			92232
.5512		14.00	SD	32.00	14.00	84.00		92015			92217
.6299		16.00	SD	30.00	16.00	89.00		91322			91389*
.6299		16.00	SD	38.00	16.00	89.00		92016			92218
.6299		16.00	XL	63.00	16.00	125.00		92129			92182
.7087		18.00	SD	40.00	18.00	100.00		92017			92219
.7874		20.00	SD	30.00	20.00	100.00		91323*			91390*
.7874		20.00	SD	40.00	20.00	100.00		92018			92220
.7874		20.00	XL	63.00	20.00	125.00		92131			92183
.8661		22.00	SD	40.00	22.00	100.00		92079			92221*
.9843		25.00	SD	40.00	25.00	100.00		92081			92222

# END MILLS



SQUARE



TiN COATING

TiCN COATING

TiAlN COATING

FAST QUOTE

mm METRIC

\* Non Stocked

# END MILLS

## 3200 4-Flute (Ball End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Ball End
- 4 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard and Extra Long Lengths
- Standard Uncoated, TiN, TiCN, and TiAlN Coatings
- Inch and Metric Based Tools
- Single and Double Ends Available
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"    -.002"  
                          +0.00mm    -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.



BALL



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.0312	1/32	0.79	STB	.0625	.1250	1.5000		32112*			32864
.0312	1/32	0.79	SD	.0938	.1250	1.5000		32030	30490	30339	30717
.0469	3/64	1.19	STB	.1250	.1250	1.5000		32156			32865
.0469	3/64	1.19	SD	.1875	.1250	1.5000		32031	30491	30340	30718
.0625	1/16	1.59	STB	.1250	.1250	1.5000		32157			32866
.0625	1/16	1.59	SD	.2500	.1250	1.5000		32032	30492	30341	30719
.0781	5/64	1.98	STB	.1250	.1250	1.5000		32158			32867
.0781	5/64	1.98	SD	.2500	.1250	1.5000		32033	30493	30342	30720
.0938	3/32	2.38	STB	.1875	.1250	1.5000		32159			32868
.0938	3/32	2.38	SD	.3750	.1250	1.5000		32034	30494	30343	30721
.1094	7/64	2.78	STB	.1875	.1250	1.5000		32160*			32869*
.1094	7/64	2.78	SD	.5000	.1250	1.5000		32035	30495	30344	30722
.1250	1/8	3.18	STB	.2500	.1250	1.5000		32161			32870
.1250	1/8	3.18	SD	.5000	.1250	1.5000		32036	30496	30345	30723
.1250	1/8	3.18	XL	.7500	.1250	3.0000		30235			30069
.1250	1/8	3.18	XL	1.0000	.1250	3.0000		32272			30070
.1406	9/64	3.57	SD	.5625	.1875	2.0000		32037	30497*	30346*	30724
.1562	5/32	3.97	STB	.3750	.1875	2.0000		32162			32871
.1562	5/32	3.97	SD	.5625	.1875	2.0000		32038	30498	30347	30725
.1719	11/64	4.37	SD	.5625	.1875	2.0000		32651	30499*	30348*	30726
.1875	3/16	4.76	STB	.3750	.1875	2.0000		32163			32872
.1875	3/16	4.76	SD	.6250	.1875	2.0000		32039	30500	30349	30727
.1875	3/16	4.76	XL	1.0000	.1875	4.0000		30240			30072
.1875	3/16	4.76	XL	1.2500	.1875	3.0000		32273			30071
.2031	13/64	5.16	SD	.6250	.2500	2.5000		32652	30501*	30350*	30728*
.2188	7/32	5.56	SD	.6250	.2500	2.5000		32040	30502*	30351*	30729
.2344	15/64	5.95	SD	.7500	.2500	2.5000		32653	30503*	30352*	30730
.2500	1/4	6.35	STB	.5000	.2500	2.0000		32164			32873
.2500	1/4	6.35	SD	.7500	.2500	2.5000		32041	30504	30353	30731
.2500	1/4	6.35	XL	1.0000	.2500	4.0000		30205			30074

# 3200 4-Flute (Ball End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.2500	1/4	6.35	XL	1.1250	.2500	3.0000		32556			30073
.2500	1/4	6.35	XL	1.5000	.2500	4.0000		32274			30075
.2500	1/4	6.35	XL	1.5000	.2500	6.0000		32557			30076
.2656	17/64	6.75	SD	.8750	.3125	2.5000		32930	30505	30354*	30732*
.2812	9/32	7.14	SD	.8750	.3125	2.5000		32042	30506	30355	30733*
.2969	19/64	7.54	SD	.8750	.3125	2.5000		32931	30507*	30356*	30734
.3125	5/16	7.94	STB	.5000	.3125	2.5000		32165			32874
.3125	5/16	7.94	SD	.8750	.3125	2.5000		32043	30508	30357	30735
.3125	5/16	7.94	XL	1.0000	.3125	4.0000		30206			30078
.3125	5/16	7.94	XL	1.1250	.3125	3.0000		32575			30077
.3125	5/16	7.94	XL	1.5000	.3125	6.0000		32558			30080
.3125	5/16	7.94	XL	1.6250	.3125	4.0000		32275			30079
.3281	21/64	8.33	SD	.8750	.3750	2.5000		32932	30509*	30358*	30736
.3438	11/32	8.73	SD	.8750	.3750	2.5000		32044	30510	30359*	30737
.3594	23/64	9.13	SD	1.0000	.3750	2.5000		32933	30511*	30360*	30738
.3750	3/8	9.53	STB	.6250	.3750	2.5000		32166			32875
.3750	3/8	9.53	SD	1.0000	.3750	2.5000		32045	30512	30361	30739
.3750	3/8	9.53	XL	1.0000	.3750	4.0000		32027			30082
.3750	3/8	9.53	XL	1.1250	.3750	3.0000		32579			30081
.3750	3/8	9.53	XL	1.5000	.3750	4.0000		30221			30083
.3750	3/8	9.53	XL	1.5000	.3750	6.0000		32559			30085
.3750	3/8	9.53	XL	2.0000	.3750	4.0000		32276			30084
.3750	3/8	9.53	XL	3.0000	.3750	6.0000		32277			30086
.3906	25/64	9.92	SD	1.0000	.4375	2.7500		32934*	30513*	30362*	30740*
.4062	13/32	10.32	SD	1.0000	.4375	2.7500		32904	30514*	30363*	30741
.4219	27/64	10.72	SD	1.0000	.4375	2.7500		32935*	30515*	30364*	30742*
.4375	7/16	11.11	STB	.7500	.4375	2.7500		32167			32876
.4375	7/16	11.11	SD	1.0000	.4375	2.7500		32046	30516*	30365	30743
.4375	7/16	11.11	XL	1.0000	.4375	4.0000		32028			30087*
.4375	7/16	11.11	XL	1.5000	.4375	6.0000		32560			30089*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000		32278			30088*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000		32279			30090*
.4531	29/64	11.51	SD	1.0000	.5000	3.0000		32936	30517*	30366*	30744*
.4688	15/32	11.91	SD	1.0000	.5000	3.0000		32914	30518*	30367*	30745
.4844	31/64	12.30	SD	1.0000	.5000	3.0000		32937	30519*	30368*	30746
.5000	1/2	12.70	STB	.7500	.5000	3.0000		32168			32877
.5000	1/2	12.70	SD	1.0000	.5000	3.0000		32047	30520	30369	30747
.5000	1/2	12.70	XL	1.0000	.5000	4.0000		32029			30092
.5000	1/2	12.70	XL	1.2500	.5000	3.0000		32041			30091
.5000	1/2	12.70	XL	1.5000	.5000	4.0000		32583			30093
.5000	1/2	12.70	XL	1.5000	.5000	6.0000		32561			30095
.5000	1/2	12.70	XL	2.0000	.5000	4.0000		32280			30094
.5000	1/2	12.70	XL	3.0000	.5000	6.0000		32281			30096
.5625	9/16	14.29	SD	1.2500	.5625	3.5000		32048	30521*	30370*	30748
.6250	5/8	15.88	STB	1.0000	.6250	3.5000		32169			32878
.6250	5/8	15.88	SD	1.5000	.6250	3.5000		32049	30522	30371	30749
.6250	5/8	15.88	XL	1.5000	.6250	6.0000		30228			30098*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000		32282			30097*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000		32283			30099
.6875	11/16	17.46	SD	1.5000	.7500	4.0000		32050	30523*	30372*	30750*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000		32170			32879
.7500	3/4	19.05	SD	1.5000	.7500	4.0000		32051	30524	30373	30751
.7500	3/4	19.05	XL	1.5000	.7500	6.0000		30230			30101*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000		32284			30100

# END MILLS



BALL



**TiN** COATING

**TiCN** COATING

**TiAlN** COATING

**FAST** Quote

**mm** METRIC

\* Non Stocked



END MILLS

# 3200 4-Flute (Ball End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
.7500	3/4	19.05	XL	3.0000	.7500	6.0000		32285			30102
.7500	3/4	19.05	XL	4.0000	.7500	7.0000		32286			30103
.8750	7/8	22.23	SD	1.5000	.8750	4.0000		32052	30525*	30374*	30752
1.0000	1	25.40	STB	1.0000	1.0000	4.0000		32171			32880*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000		32053	30526*	30375	30753
1.0000	1	25.40	XL	2.0000	1.0000	4.5000		32287			30104*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000		32288			30105*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000		32289			30106*
1.0000	1	25.40	XL	4.0000	1.0000	7.0000		32290			30107
1.1250	1-1/8	28.58	SD	2.0000	1.0000	4.5000		32054			
1.2500	1-1/4	31.75	SD	2.0000	1.2500	4.5000		32055*			
1.2500	1-1/4	31.75	XL	3.0000	1.2500	6.0000		32291*			
1.3750	1-3/8	34.93	SD	2.0000	1.2500	4.5000		32056*			
1.5000	1-1/2	38.10	SD	2.0000	1.2500	4.5000		32057			
DOUBLE END (Inch)											
.0312	1/32	0.79	STB	.0938	.1250	1.5000		32452			36041
.0469	3/64	1.19	STB	.1250	.1250	1.5000		32453			36042
.0625	1/16	1.59	STB	.1250	.1250	1.5000		32454			36043
.0625	1/16	1.59	SD	.1875	.1250	2.0000		32400			12400
.0781	5/64	1.98	STB	.1250	.1250	1.5000		32531			36044
.0938	3/32	2.38	STB	.1875	.1250	1.5000		32455			36045
.0938	3/32	2.38	SD	.3750	.1250	2.0000		32401			12401*
.1094	7/64	2.78	STB	.1875	.1250	1.5000		32532			36046
.1250	1/8	3.18	STB	.2500	.1250	1.5000		32456			36047
.1250	1/8	3.18	SD	.3750	.1250	2.0000		32402			12402
.1250	1/8	3.18	SD	.3750	.3750	3.5000	•	32498			37008
.1406	9/64	3.57	STB	.3125	.1875	2.0000		32546			36048
.1562	5/32	3.97	STB	.3125	.1875	2.0000		32457			36049
.1562	5/32	3.97	SD	.4375	.1875	3.0000		32403			12403*
.1562	5/32	3.97	SD	.4375	.3750	3.5000	•	32499			37009*
.1719	11/64	4.37	STB	.3125	.1875	2.0000		32547			36050
.1875	3/16	4.76	STB	.3750	.1875	2.0000		32458			36051
.1875	3/16	4.76	SD	.5000	.1875	3.0000		32404			12404*
.1875	3/16	4.76	SD	.5000	.3750	3.5000	•	32500			37010*
.2031	13/64	5.16	STB	.5000	.2500	2.5000		32548			36052
.2188	7/32	5.56	STB	.5000	.2500	2.5000		32459			36053
.2188	7/32	5.56	SD	.5625	.2500	3.0000		32405*			12405*
.2188	7/32	5.56	SD	.5625	.3750	3.5000	•	32501			37011*
.2344	15/64	5.95	STB	.5000	.2500	2.5000		32549			36054*
.2500	1/4	6.35	STB	.5000	.2500	2.5000		32460			36055
.2500	1/4	6.35	SD	.6250	.2500	3.0000		32406			12406*
.2500	1/4	6.35	SD	.6250	.3750	3.5000	•	32502			37012*
.2812	9/32	7.14	STB	.5000	.3125	2.5000		32596*			36056*
.2812	9/32	7.14	SD	.6875	.3750	3.5000	•	32503*			37013*
.3125	5/16	7.94	STB	.5000	.3125	2.5000		32461			36057
.3125	5/16	7.94	SD	.7500	.3125	3.0000		32408			12408*
.3125	5/16	7.94	SD	.7500	.3750	3.5000	•	32504			37014*
.3750	3/8	9.53	STB	.5625	.3750	2.5000		32462			36058
.3750	3/8	9.53	SD	.7500	.3750	3.5000		32410*			12410*
.4375	7/16	11.11	STB	.6250	.4375	2.7500		32463*			36059*
.4375	7/16	11.11	SD	.8750	.4375	4.0000		32411			12411*
.5000	1/2	12.70	STB	.6250	.5000	3.0000		32464			36060
.5000	1/2	12.70	SD	1.0000	.5000	4.0000		32412			12412



\* Non Stocked



# 3200 4-Flute (Ball End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Weldon Flat	EDP Number			
Inch	Fractional	Millimeter						UC	TiN	TiCN	TiAlN
<b>METRIC (Millimeter)</b>											
.0394		1.00	SD	4.00	3.00	38.00		92019			92265
.0591		1.50	SD	6.00	3.00	38.00		92020			92266
.0787		2.00	SD	4.00	3.00	38.00		92109*			92329
.0787		2.00	SD	8.00	3.00	38.00		92021			92267
.0984		2.50	SD	12.00	3.00	38.00		92023			92268
.1181		3.00	STB	6.00	3.00	38.00		92110			92287*
.1181		3.00	SD	12.00	3.00	38.00		92024			92269
.1181		3.00	XL	25.00	3.00	76.00		92130			92292
.1378		3.50	SD	12.00	4.00	50.00		92074			92270
.1575		4.00	SD	14.00	4.00	50.00		92025			92271
.1772		4.50	SD	14.00	5.00	51.00		92076			92272
.1969		5.00	SD	16.00	5.00	64.00		92026			92273
.2362		6.00	STB	12.00	6.00	50.00		92112*			92288
.2362		6.00	SD	20.00	6.00	64.00		92027			92274
.2362		6.00	XL	29.00	6.00	76.00		92132			92293
.2756		7.00	SD	22.00	7.00	64.00		92028			92275
.3150		8.00	STB	12.00	8.00	50.00		92114			92289
.3150		8.00	SD	22.00	8.00	64.00		92029			92276
.3150		8.00	XL	29.00	8.00	76.00		92134*			92294*
.3543		9.00	SD	22.00	9.00	64.00		92030			92277
.3937		10.00	STB	15.00	10.00	50.00		92116			92290
.3937		10.00	SD	25.00	10.00	64.00		92031			92278
.3937		10.00	XL	45.00	10.00	100.00		92136			92295
.4331		11.00	SD	25.00	11.00	84.00		92078			92279*
.4724		12.00	STB	15.00	12.00	63.00		92118			92291
.4724		12.00	SD	25.00	12.00	84.00		92032			92280
.4724		12.00	XL	50.00	12.00	100.00		92138			92296*
.5512		14.00	SD	32.00	14.00	84.00		92033			92281
.6299		16.00	SD	38.00	16.00	89.00		92034			92282
.6299		16.00	XL	63.00	16.00	125.00		92139*			92184*
.7087		18.00	SD	40.00	18.00	100.00		92035			92283
.7874		20.00	SD	40.00	20.00	100.00		92036			92284
.7874		20.00	XL	63.00	20.00	125.00		92141*			92185*
.8661		22.00	SD	40.00	22.00	100.00		92080			92285*
.9843		25.00	SD	40.00	25.00	100.00		92082			92286*

# END MILLS



BALL



\* Non Stocked

END MILLS

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Radius End
- 4 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated and TiAlN Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.

**RADIUS**

**4 FLUTE**

**STB** STUB

**SD** STANDARD

**XL** EXTRA LONG

**TiAlN COATING**

**FAST Quote**

**mm METRIC**

\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.1094	7/64	2.78	SD	.5000	.1250	1.5000	.0300		31500
.1250	1/8	3.18	STB	.2500	.1250	1.5000	.0050	31907*	31954*
.1250	1/8	3.18	STB	.2500	.1250	1.5000	.0100	31908*	31955*
.1250	1/8	3.18	STB	.2500	.1250	1.5000	.0150	31909*	31956*
.1250	1/8	3.18	STB	.2500	.1250	1.5000	.0200	31910	31957*
.1250	1/8	3.18	STB	.2500	.1250	1.5000	.0300	31911*	31511
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0050	31674*	31710*
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0100	31675	31711*
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0150	33700	33804
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0200	33709	33813
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0300	31676	31712*
.1250	1/8	3.18	XL	.7500	.1250	3.0000	.0050	31732*	31856*
.1250	1/8	3.18	XL	.7500	.1250	3.0000	.0100	31733*	31857*
.1250	1/8	3.18	XL	.7500	.1250	3.0000	.0150	31734*	31858*
.1250	1/8	3.18	XL	.7500	.1250	3.0000	.0200	31735*	31859*
.1250	1/8	3.18	XL	.7500	.1250	3.0000	.0300	31736*	31513
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	.0050	31727*	31852*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	.0100	31728*	31853*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	.0150	31729*	31854*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	.0200	31730*	31855*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	.0300	31731*	31515*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	.0050	31677*	31713*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	.0100	31678*	31714*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	.0150	31679*	31715*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	.0200	31680*	31716*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	.0300	31681*	31517*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	.0600	31682*	31518
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0050	31912*	31958*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0100	31913*	31959*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0150	31914*	31960*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0200	31915*	31961*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0300	31916*	31519*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	.0600	31917*	31520*
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0050	31683	31717*
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0100	31684	31718*

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0150	33701	33805
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0200	33710	33814
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0300	33718	33822
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0600	31685	31719
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	.0050	31743*	31866*
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	.0100	31744*	31867*
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	.0150	31745*	31868*
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	.0200	31746*	31869*
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	.0300	31747*	31522
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	.0600	31748*	31523*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	.0050	31737*	31860*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	.0100	31738*	31861*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	.0150	31739*	31862*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	.0200	31740*	31863*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	.0300	31741*	31864*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	.0600	31742*	31865*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	.0150	31686*	31720*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	.0200	31687*	31721*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	.0300	31688*	31525*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	.0600	31689*	31526*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	.0900	31690*	31527*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	.0150	31918*	31962*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	.0200	31919*	31963
.2500	1/4	6.35	STB	.5000	.2500	2.0000	.0300	31920*	31528*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	.0600	31921*	31529*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	.0900	31922*	31530*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0150	33702	33806
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0200	33711	33815
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0300	33719	33790
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0450	33726	33827
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0600	31691	30970*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0900	31692	30976
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	.0150	31754*	31872*
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	.0200	31755*	31873*
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	.0300	31756*	31532
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	.0600	31757	31533*
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	.0900	31758*	31534*
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	.0150	31749*	31870*
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	.0200	31750*	31871*
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	.0300	31751*	31540*
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	.0600	31752*	31541*
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	.0900	31753*	31542*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.0150	31923*	31964*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.0200	31924*	31965*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.0300	31925*	31544*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.0600	31926*	31545*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.0900	31927*	31546*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	.1200	31928*	31547*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0150	33703	33807
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0200	33712	33816
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0300	33720	33823
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0450	33727	33828
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0600	31693	30977*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0900	31694*	30978*

END MILLS

**RADIUS**

**4 FLUTE**

**CENTER CUTTING**

**STB STUB**

**SD STANDARD**

**XL EXTRA LONG**

**TiAlN COATING**

**FAST QUOTE**

**METRIC**

\* Non Stocked

END MILLS

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.1200	31695*	31633*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	.0150	31759*	31874*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	.0200	31760*	31875*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	.0300	31761*	31548*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	.0600	31762*	31549*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	.0900	31763*	31550*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	.1200	31764*	31551*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	.0150	31765*	31876*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	.0200	31766*	31877*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	.0300	31767*	31552*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	.0600	31768*	31553*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	.0900	31769*	31554*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	.1200	31770*	31555*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	.0150	31929*	31966*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	.0200	31930*	31967*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	.0300	31931	31556*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	.0600	31932*	31557*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	.0900	31933*	31558*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	.1200	31934*	31559*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0150	33704	33808
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0200	33713	33817
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0300	33721	33791
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0450	33728	33829
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0600	33733	33792
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0900	31696*	30971
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.1200	31697	30972*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	.0150	31777*	31880*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	.0200	31778*	31881*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	.0300	31779*	31560*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	.0600	31780*	31561*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	.0900	31781*	31562*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	.1200	31782*	31563*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	.0150	31771*	31878*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	.0200	31772*	31879*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	.0300	31773*	31564*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	.0600	31774*	31565*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	.0900	31775*	31566*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	.1200	31776*	31567*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0150	31783*	31882*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0200	31784*	31883*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0300	31785*	31568*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0600	31786*	31569*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.0900	31787*	31570*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	.1200	31788*	31571*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.0150	31698*	31722*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.0200	31699*	31723*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.0300	31700*	31572*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.0600	31701*	31573*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.0900	31702*	31574*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	.1200	31703*	31575*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	.0150	31789*	31884*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	.0200	31790*	31885*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	.0300	31791*	31576*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	.0600	31792*	31577*

RADIUS

4 FLUTE

CENTER CUTTING

STUB

STANDARD

EXTRA LONG

TiAlN COATING

FAST QUOTE

mm METRIC

\* Non Stocked

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	.0900	31793*	31578*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	.1200	31794*	31579*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	.0150	31795*	31886*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	.0200	31796*	31887*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	.0300	31797*	31580*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	.0600	31798*	31581*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	.0900	31799*	31582*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	.1200	31800*	31583*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	.0150	31935*	31968*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	.0200	31936*	31969*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	.0300	31937*	31584*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	.0600	31938*	31585*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	.0900	31939*	31586*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	.1200	31940*	31587*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0150	33705	33809
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0200	33714	33818
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0300	33722	33793
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0450	33729	33830
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0600	33734	33794
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0900	33738	33837
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.1200	31704	30973
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.1250	33742	33841
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	.0150	31801*	31888*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	.0200	31802*	31889*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	.0300	31803*	31588*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	.0600	31804*	31589*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	.0900	31805*	31590*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	.1200	31806*	31591*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.0150	31807*	31890*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.0200	31808*	31891*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.0300	31809*	31592*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.0600	31810*	31593*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.0900	31811*	31594*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	.1200	31812*	31595*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	.0150	31813*	31892*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	.0200	31814*	31893*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	.0300	31815*	31596*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	.0600	31816*	31597*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	.0900	31817*	31598*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	.1200	31818*	31599*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	.0150	31941*	31970*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	.0200	31942*	31971*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	.0300	31943*	31600*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	.0600	31944*	31601*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	.0900	31945*	31602*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	.1200	31946*	31603*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0150	33706	33810
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0200	33715	33819
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0300	33723	33824
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0450	33730	33831
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0600	33735	33834
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0900	33739	33838
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.1200	31705*	30974
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.1250	33802	33842

END MILLS

**RADIUS**

**4 FLUTE**

**CENTER CUTTING**

**STB STUB**

**SD STANDARD**

**XL EXTRA LONG**

**TiAlN COATING**

**FAST QUOTE**

**mm METRIC**

*\* Non Stocked*



END MILLS

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAIN
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	.0150	31819*	31894*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	.0200	31820*	31895*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	.0300	31821*	31604*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	.0600	31822*	31605*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	.0900	31823*	31606*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	.1200	31824*	31607*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	.0150	31825*	31896*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	.0200	31826*	31897*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	.0300	31827*	31608*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	.0600	31828*	31609*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	.0900	31829*	31610*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	.1200	31830*	31611*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.0150	31947*	31972*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.0200	31948*	31973*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.0300	31949*	31612
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.0600	31950*	31613
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.0900	31951*	31614*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	.1200	31952*	31615
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.2500	31953*	31974*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0150	33707	33811
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0200	33716	33820
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0300	33724	33825
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0450	33731	33832
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0600	33736	33835
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0900	33740	33839
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.1200	31706	30975
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.1250	33743	33843
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.2500	31707	31724*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.0150	31831*	31898*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.0200	31832*	31899*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.0300	31833*	31616*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.0600	31834*	31617*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.0900	31835*	31618*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.1200	31836*	31619
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	.2500	31837*	31900*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0150	31838*	31901*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0200	31839*	31902*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0300	31840*	31620*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0600	31841*	31621*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.0900	31842*	31622*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.1200	31843*	31623*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	.2500	31844	31903*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0150	33708	33812*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0200	33717	33821
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0300	33725	33826
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0450	33732	33833
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0600	33737	33836
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0900	33741	33840
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.1200	31708*	31725*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.1250	33744	33844
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.2500	31709	31726
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0150	31845	31904*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0200	31846*	31905*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0300	31847*	31501



RADIUS



\* Non Stocked



# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0600	31848*	31502
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.0900	31849*	31503*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.1200	31850*	31504
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	.2500	31851*	31906*
METRIC (Millimeter)									
.1181		3.00	SD	8.00	3.00	38.00	0.20	91324*	91356*
.1181		3.00	SD	8.00	3.00	38.00	0.50	91325*	91357*
.1181		3.00	SD	8.00	3.00	38.00	1.00	91326*	91358*
.1181		3.00	SD	12.00	3.00	38.00	0.20	91934*	91953*
.1181		3.00	SD	12.00	3.00	38.00	0.50	91935*	91954*
.1181		3.00	SD	12.00	3.00	38.00	1.00	91936*	91955*
.1181		3.00	XL	25.00	3.00	76.00	0.20	91253*	91285*
.1181		3.00	XL	25.00	3.00	76.00	0.50	91254*	91286*
.1181		3.00	XL	25.00	3.00	76.00	1.00	91255*	91287*
.1575		4.00	SD	14.00	4.00	50.00	0.20	91937*	91956*
.1575		4.00	SD	14.00	4.00	50.00	0.50	91938*	91957*
.1575		4.00	SD	14.00	4.00	50.00	1.00	91939	91958*
.1772		4.50	SD	14.00	5.00	51.00	0.20	91940*	91959*
.1772		4.50	SD	14.00	5.00	51.00	0.50	91941*	91960*
.1772		4.50	SD	14.00	5.00	51.00	1.00	91942*	91961*
.1969		5.00	SD	16.00	5.00	64.00	0.20	91943	91962*
.1969		5.00	SD	16.00	5.00	64.00	0.50	91944*	91963*
.1969		5.00	SD	16.00	5.00	64.00	1.00	91945*	91964*
.2362		6.00	SD	12.00	6.00	50.00	0.20	91327*	91359*
.2362		6.00	SD	12.00	6.00	50.00	0.50	91328*	91360*
.2362		6.00	SD	12.00	6.00	50.00	1.00	91329*	91361*
.2362		6.00	SD	12.00	6.00	50.00	1.50	91330*	91362*
.2362		6.00	SD	20.00	6.00	64.00	0.20	91946*	91965*
.2362		6.00	SD	20.00	6.00	64.00	0.50	91876	91905
.2362		6.00	SD	20.00	6.00	64.00	1.00	91877	91906*
.2362		6.00	SD	20.00	6.00	64.00	1.50	91878*	
.2362		6.00	SD	20.00	6.00	64.00	2.00	91879*	
.2362		6.00	SD	20.00	6.00	64.00	2.50	91880*	
.2362		6.00	XL	29.00	6.00	76.00	0.20	91256*	91288*
.2362		6.00	XL	29.00	6.00	76.00	0.50	91257*	91289*
.2362		6.00	XL	29.00	6.00	76.00	1.00	91258*	91290*
.2362		6.00	XL	29.00	6.00	76.00	1.50	91259*	91291*
.3150		8.00	SD	12.00	8.00	50.00	0.50	91331*	91363*
.3150		8.00	SD	12.00	8.00	50.00	1.00	91332*	91364*
.3150		8.00	SD	12.00	8.00	50.00	1.50	91333*	91365*
.3150		8.00	SD	12.00	8.00	50.00	2.00	91334*	91366*
.3150		8.00	SD	22.00	8.00	64.00	0.50	91881	91910
.3150		8.00	SD	22.00	8.00	64.00	1.00	91882	91911
.3150		8.00	SD	22.00	8.00	64.00	1.50	91883*	91912*
.3150		8.00	SD	22.00	8.00	64.00	2.00	91884*	91913
.3150		8.00	SD	22.00	8.00	64.00	2.50	91885*	
.3150		8.00	SD	22.00	8.00	64.00	3.00	91886*	
.3150		8.00	XL	29.00	8.00	76.00	0.50	91260*	91292*
.3150		8.00	XL	29.00	8.00	76.00	1.00	91261*	91293*
.3150		8.00	XL	29.00	8.00	76.00	1.50	91262*	91294*
.3150		8.00	XL	29.00	8.00	76.00	2.00	91263*	91295*
.3937		10.00	SD	15.00	10.00	50.00	0.50	91335*	91367*
.3937		10.00	SD	15.00	10.00	50.00	1.00	91336*	91368*

# END MILLS



RADIUS



\* Non Stocked

END MILLS

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.3937		10.00	SD	15.00	10.00	50.00	1.50	91337*	91369*
.3937		10.00	SD	15.00	10.00	50.00	2.00	91338*	91370*
.3937		10.00	SD	25.00	10.00	64.00	0.50	91887*	91916
.3937		10.00	SD	25.00	10.00	64.00	1.00	91888	91917
.3937		10.00	SD	25.00	10.00	64.00	1.50	91889	91918*
.3937		10.00	SD	25.00	10.00	64.00	2.00	91890*	91874
.3937		10.00	SD	25.00	10.00	64.00	2.50	91891*	
.3937		10.00	SD	25.00	10.00	64.00	3.00	91892*	
.3937		10.00	XL	45.00	10.00	100.00	0.50	91264*	91296*
.3937		10.00	XL	45.00	10.00	100.00	1.00	91265*	91297*
.3937		10.00	XL	45.00	10.00	100.00	1.50	91266*	91298*
.3937		10.00	XL	45.00	10.00	100.00	2.00	91267*	91299*
.4724		12.00	SD	15.00	12.00	63.00	0.50	91339*	91371*
.4724		12.00	SD	15.00	12.00	63.00	1.00	91340*	91372*
.4724		12.00	SD	15.00	12.00	63.00	1.50	91341*	91373*
.4724		12.00	SD	15.00	12.00	63.00	2.00	91342*	91374*
.4724		12.00	SD	15.00	12.00	63.00	2.50	91343*	91375*
.4724		12.00	SD	25.00	12.00	84.00	0.50	91893*	91922
.4724		12.00	SD	25.00	12.00	84.00	1.00	91894*	91923
.4724		12.00	SD	25.00	12.00	84.00	1.50	91895*	91924
.4724		12.00	SD	25.00	12.00	84.00	2.00	91896*	91925*
.4724		12.00	SD	25.00	12.00	84.00	2.50	91897*	91926*
.4724		12.00	SD	25.00	12.00	84.00	3.00	91898*	
.4724		12.00	XL	50.00	12.00	100.00	0.50	91268*	91300*
.4724		12.00	XL	50.00	12.00	100.00	1.00	91269*	91301*
.4724		12.00	XL	50.00	12.00	100.00	1.50	91270*	91302*
.4724		12.00	XL	50.00	12.00	100.00	2.00	91271*	91303*
.4724		12.00	XL	50.00	12.00	100.00	2.50	91272*	91304*
.6299		16.00	SD	30.00	16.00	89.00	0.50	91344*	91376*
.6299		16.00	SD	30.00	16.00	89.00	1.00	91345*	91377*
.6299		16.00	SD	30.00	16.00	89.00	1.50	91346*	91378*
.6299		16.00	SD	30.00	16.00	89.00	2.00	91347*	91379*
.6299		16.00	SD	30.00	16.00	89.00	2.50	91348*	91380*
.6299		16.00	SD	30.00	16.00	89.00	3.00	91349*	91381*
.6299		16.00	SD	38.00	16.00	89.00	0.50	91899*	91928
.6299		16.00	SD	38.00	16.00	89.00	1.00	91900*	91929
.6299		16.00	SD	38.00	16.00	89.00	1.50	91901*	91930*
.6299		16.00	SD	38.00	16.00	89.00	2.00	91902	91931
.6299		16.00	SD	38.00	16.00	89.00	2.50	91903*	91932*
.6299		16.00	SD	38.00	16.00	89.00	3.00	91904	91933*
.6299		16.00	XL	63.00	16.00	125.00	0.50	91273*	91305*
.6299		16.00	XL	63.00	16.00	125.00	1.00	91274*	91306*
.6299		16.00	XL	63.00	16.00	125.00	1.50	91275*	91307*
.6299		16.00	XL	63.00	16.00	125.00	2.00	91276*	91308*
.6299		16.00	XL	63.00	16.00	125.00	2.50	91277*	91309*
.6299		16.00	XL	63.00	16.00	125.00	3.00	91278*	91310*
.7874		20.00	SD	30.00	20.00	100.00	0.50	91350*	91382*
.7874		20.00	SD	30.00	20.00	100.00	1.00	91351*	91383*
.7874		20.00	SD	30.00	20.00	100.00	1.50	91352*	91384*
.7874		20.00	SD	30.00	20.00	100.00	2.00	91353*	91385*
.7874		20.00	SD	30.00	20.00	100.00	2.50	91354*	91386*
.7874		20.00	SD	30.00	20.00	100.00	3.00	91355*	91387*
.7874		20.00	SD	40.00	20.00	100.00	0.50	91947*	91966*
.7874		20.00	SD	40.00	20.00	100.00	1.00	91948*	91967*

RADIUS

4 FLUTE

CENTER CUTTING

STUB

STANDARD

EXTRA LONG

TiAlN COATING

FAST QUOTE

mm METRIC

\* Non Stocked

# 3200 4-Flute (Radius End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.7874		20.00	SD	40.00	20.00	100.00	1.50	91949*	91968*
.7874		20.00	SD	40.00	20.00	100.00	2.00	91950*	91969*
.7874		20.00	SD	40.00	20.00	100.00	2.50	91951*	91970*
.7874		20.00	SD	40.00	20.00	100.00	3.00	91952*	91971*
.7874		20.00	XL	63.00	20.00	125.00	0.50	91279*	91311*
.7874		20.00	XL	63.00	20.00	125.00	1.00	91280*	91312*
.7874		20.00	XL	63.00	20.00	125.00	1.50	91281*	91313*
.7874		20.00	XL	63.00	20.00	125.00	2.00	91282*	91314*
.7874		20.00	XL	63.00	20.00	125.00	2.50	91283*	91315*
.7874		20.00	XL	63.00	20.00	125.00	3.00	91284*	91316*

# END MILLS



RADIUS



\* Non Stocked

END MILLS

# 2004 JIT 4-Flute (Square/Radius/Ball End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Just in Time**  
**48-Hour JIT Delivery**  
 Decimal-Sized End Mills

12

**PIECES OR LESS**

5:00 P.M. EST Order Deadline

**Basic Information:**



- JIT Service 12 Pieces or less in 48-Hours
- See JIT Pricing Guide for Quantity Break Pricing
- Square End
  - **Standard Base Price**
- Radius End
  - **+15% to Base Price (Specify Radius Size when Ordering)**
- Ball End (Full Radius)
  - **+20% to Base Price**
- Weldon Flats and Coatings Available (Additional Charges May Apply)
- 4 Flutes 3200 Series Design
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- \* *Specify Tolerance if not Standard (Additional Charges May Apply)*
- Shank Diameter: h6
- Cutter Diameter:   +.000"           -.002"  
                           +0.00mm       -0.05mm

SQUARE

RADIUS

BALL

4  
FLUTE

CENTER  
CUTTING

mm

METRIC

Size Range		Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Millimeter					SQUARE	RADIUS	BALL
.1200 — .1406	3.05 — 3.57	SD	.5625	.1875	2.0000	20426S	20426R	20426B
.1407 — .1562	3.58 — 3.97	SD	.5625	.1875	2.0000	20428S	20428R	20428B
.1563 — .1719	3.98 — 4.36	SD	.5625	.1875	2.0000	20430S	20430R	20430B
.1720 — .1875	4.37 — 4.76	SD	.6250	.1875	2.0000	20432S	20432R	20432B
.1876 — .2031	4.77 — 5.16	SD	.6250	.2500	2.5000	20434S	20434R	20434B
.2032 — .2188	5.17 — 5.56	SD	.6250	.2500	2.5000	20436S	20436R	20436B
.2189 — .2344	5.57 — 5.95	SD	.7500	.2500	2.5000	20438S	20438R	20438B
.2345 — .2500	5.96 — 6.35	SD	.7500	.2500	2.5000	20440S	20440R	20440B
.2501 — .2656	6.36 — 6.74	SD	.8750	.3125	2.5000	20442S	20442R	20442B
.2657 — .2812	6.75 — 7.14	SD	.8750	.3125	2.5000	20444S	20444R	20444B
.2813 — .2969	7.15 — 7.54	SD	.8750	.3125	2.5000	20446S	20446R	20446B
.2970 — .3125	7.55 — 7.94	SD	.8750	.3125	2.5000	20448S	20448R	20448B
.3126 — .3281	7.95 — 8.33	SD	.8750	.3750	2.5000	20450S	20450R	20450B
.3282 — .3438	8.34 — 8.73	SD	.8750	.3750	2.5000	20452S	20452R	20452B
.3439 — .3594	8.74 — 9.13	SD	1.0000	.3750	2.5000	20454S	20454R	20454B
.3595 — .3750	9.14 — 9.52	SD	1.0000	.3750	2.5000	20456S	20456R	20456B
.3751 — .3906	9.53 — 9.92	SD	1.0000	.4375	2.7500	20458S	20458R	20458B
.3907 — .4062	9.93 — 10.32	SD	1.0000	.4375	2.7500	20460S	20460R	20460B
.4063 — .4219	10.33 — 10.71	SD	1.0000	.4375	2.7500	20462S	20462R	20462B
.4220 — .4375	10.72 — 11.11	SD	1.0000	.4375	2.7500	20464S	20464R	20464B
.4376 — .4531	11.12 — 11.51	SD	1.0000	.5000	3.0000	20466S	20466R	20466B
.4532 — .4688	11.52 — 11.91	SD	1.0000	.5000	3.0000	20468S	20468R	20468B
.4689 — .4844	11.92 — 12.30	SD	1.0000	.5000	3.0000	20470S	20470R	20470B
.4845 — .5000	12.31 — 12.70	SD	1.0000	.5000	3.0000	20472S	20472R	20472B

# 2004 JIT 4-Flute (Square/Radius/Ball End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Size Range				Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Millimeter		SQUARE					RADIUS	BALL	
.5001 — .5625	12.71	—	14.29	SD	1.2500	.5625	3.5000	20474S	20474R	20474B
.5626 — .6250	14.30	—	15.87	SD	1.5000	.6250	3.5000	20476S	20476R	20476B
.6251 — .6875	15.88	—	17.46	SD	1.5000	.7500	4.0000	20478S	20478R	20478B
.6876 — .7500	17.47	—	19.05	SD	1.5000	.7500	4.0000	20480S	20480R	20480B
.7501 — .8125	19.06	—	20.64	SD	1.5000	.8750	4.0000	20482S	20482R	20482B
.8126 — .8750	20.65	—	22.22	SD	1.5000	.8750	4.0000	20484S	20484R	20484B
.8751 — .9375	22.23	—	23.81	SD	1.5000	1.0000	4.0000	20486S	20486R	20486B
.9376 — 1.0000	23.82	—	25.40	SD	1.5000	1.0000	4.0000	20488S	20488R	20488B
METRIC (Millimeter)										
.1181 — .1378	3.00	—	3.50	SD	14.00	5.00	51.00	90413S	90413R	90413B
.1379 — .1575	3.51	—	4.00	SD	14.00	5.00	51.00	90414S	90414R	90414B
.1576 — .1772	4.01	—	4.50	SD	14.00	5.00	51.00	90415S	90415R	90415B
.1773 — .1969	4.51	—	5.00	SD	16.00	5.00	51.00	90416S	90416R	90416B
.1970 — .2165	5.01	—	5.50	SD	16.00	6.00	64.00	90417S	90417R	90417B
.2166 — .2362	5.51	—	6.00	SD	20.00	6.00	64.00	90418S	90418R	90418B
.2363 — .2559	6.01	—	6.50	SD	22.00	8.00	64.00	90419S	90419R	90419B
.2560 — .2756	6.51	—	7.00	SD	22.00	8.00	64.00	90420S	90420R	90420B
.2757 — .2953	7.01	—	7.50	SD	22.00	8.00	64.00	90421S	90421R	90421B
.2954 — .3150	7.51	—	8.00	SD	22.00	8.00	64.00	90422S	90422R	90422B
.3151 — .3346	8.01	—	8.50	SD	22.00	10.00	64.00	90423S	90423R	90423B
.3347 — .3543	8.51	—	9.00	SD	22.00	10.00	64.00	90424S	90424R	90424B
.3544 — .3740	9.01	—	9.50	SD	25.00	10.00	64.00	90425S	90425R	90425B
.3741 — .3937	9.51	—	10.00	SD	25.00	10.00	64.00	90426S	90426R	90426B
.3938 — .4134	10.01	—	10.50	SD	25.00	11.00	71.00	90427S	90427R	90427B
.4135 — .4331	10.51	—	11.00	SD	25.00	11.00	71.00	90428S	90428R	90428B
.4332 — .4528	11.01	—	11.50	SD	25.00	12.00	76.00	90429S	90429R	90429B
.4529 — .4724	11.51	—	12.00	SD	25.00	12.00	76.00	90430S	90430R	90430B
.4725 — .5118	12.01	—	13.00	SD	32.00	14.00	84.00	90431S	90431R	90431B
.5119 — .5512	13.01	—	14.00	SD	32.00	14.00	84.00	90432S	90432R	90432B
.5513 — .5906	14.01	—	15.00	SD	38.00	16.00	89.00	90433S	90433R	90433B
.5907 — .6299	15.01	—	16.00	SD	38.00	16.00	89.00	90434S	90434R	90434B
.6300 — .6693	16.01	—	17.00	SD	38.00	20.00	100.00	90435S	90435R	90435B
.6694 — .7087	17.01	—	18.00	SD	38.00	20.00	100.00	90436S	90436R	90436B
.7088 — .7480	18.01	—	19.00	SD	38.00	20.00	100.00	90437S	90437R	90437B
.7481 — .7874	19.01	—	20.00	SD	38.00	20.00	100.00	90438S	90438R	90438B
.7875 — .8268	20.01	—	21.00	SD	38.00	22.00	100.00	90439S	90439R	90439B
.8269 — .8661	21.01	—	22.00	SD	38.00	22.00	100.00	90440S	90440R	90440B
.8662 — .9055	22.01	—	23.00	SD	38.00	25.00	100.00	90441S	90441R	90441B
.9056 — .9449	23.01	—	24.00	SD	38.00	25.00	100.00	90442S	90442R	90442B
.9450 — .9843	24.01	—	25.00	SD	38.00	25.00	100.00	90443S	90443R	90443B

END MILLS



SQUARE



RADIUS



BALL




FLUTE CENTER



SD STANDARD

mm

METRIC

# 3215 2-Flute (Square End)

Titanium   Super Alloys   Stainless Steels   Steels   Cast Iron   Brass & Copper   High Si Al >10%   Low Si Al <10%   General Purpose



**Basic Information:**

- Square End
- 2 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated, TiN, TiCN, and TiAlN Coating
- Inch and Metric Based Tools
- Single and Double Ends Available
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:     +.000"       -.002"  
                                  +0.00mm     -0.05mm

*\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.*

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.0156	1/64	0.40	SD	.0469	.1250	1.5000	32058	33124*	32764*	30642
.0312	1/32	0.79	STB	.0625	.1250	1.5000	32113			32839
.0312	1/32	0.79	SD	.0938	.1250	1.5000	32059	33125	32765	30643
.0469	3/64	1.19	SD	.1250	.1250	1.5000	32172	33126		32840
.0469	3/64	1.19	SD	.1875	.1250	1.5000	32060		32766	30644*
.0625	1/16	1.59	STB	.1250	.1250	1.5000	32173			32841
.0625	1/16	1.59	SD	.2500	.1250	1.5000	32061	32339	32767	30645
.0781	5/64	1.98	STB	.1250	.1250	1.5000	32174			32842
.0781	5/64	1.98	SD	.2500	.1250	1.5000	32062	33127*	32768	30646
.0938	3/32	2.38	STB	.1875	.1250	1.5000	32175			32843
.0938	3/32	2.38	SD	.3750	.1250	1.5000	32063	32340	32769	30647
.1094	7/64	2.78	STB	.1875	.1250	1.5000	32176			32844*
.1094	7/64	2.78	SD	.5000	.1250	1.5000	32064	33128*	32770	30648
.1250	1/8	3.18	STB	.2500	.1250	1.5000	32177			32845
.1250	1/8	3.18	SD	.5000	.1250	1.5000	32065	32341	32771	30649
.1250	1/8	3.18	XL	.7500	.1250	3.0000	30233			30108*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	32292			30109
.1406	9/64	3.57	SD	.5625	.1875	2.0000	32066	33129*	32772	30650*
.1562	5/32	3.97	STB	.3750	.1875	2.0000	32178			32846*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	32067	33130	32773	30651
.1719	11/64	4.37	SD	.5625	.1875	2.0000	32654	33131*	32774*	30652*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	32179			32847
.1875	3/16	4.76	SD	.6250	.1875	2.0000	32068	32342	32775	30653
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	30242			30111*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	32293			30110*
.2031	13/64	5.16	SD	.6250	.2500	2.5000	32655	33132*	32776*	30654*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	32069	33133*	32777*	30655
.2344	15/64	5.95	SD	.7500	.2500	2.5000	32656	33134*	32778*	30656*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	32180			32848
.2500	1/4	6.35	SD	.7500	.2500	2.5000	32070	32343	32779	30657
.2500	1/4	6.35	XL	1.0000	.2500	4.0000	30210			30113*

# END MILLS



\* Non Stocked



# 3215 2-Flute (Square End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	32562			30112*
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	32294			30114
.2500	1/4	6.35	XL	1.5000	.2500	6.0000	32563			30115*
.2656	17/64	6.75	SD	.8750	.3125	2.5000	32940	33135*	32780*	30658*
.2812	9/32	7.14	SD	.8750	.3125	2.5000	32071	33136*	32781*	30659*
.2969	19/64	7.54	SD	.8750	.3125	2.5000	32941	33137	32782*	30660*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	32181			32849*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	32072	32344	32783	30661
.3125	5/16	7.94	XL	1.0000	.3125	4.0000	30211			30117*
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	32576			30116*
.3125	5/16	7.94	XL	1.5000	.3125	6.0000	32564			30119*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	32295			30118*
.3281	21/64	8.33	SD	.8750	.3750	2.5000	32942	33138*	32784*	30662*
.3438	11/32	8.73	SD	.8750	.3750	2.5000	32073	33139	32785*	30663*
.3594	23/64	9.13	SD	1.0000	.3750	2.5000	32943	33140	32786*	30664*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	32182			32850*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	32074	32345	32787	30665
.3750	3/8	9.53	XL	1.0000	.3750	4.0000	30212			30121*
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	32580			30120
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	30222			30122*
.3750	3/8	9.53	XL	1.5000	.3750	6.0000	32565			30124*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	32296			30123*
.3750	3/8	9.53	XL	3.0000	.3750	6.0000	32297			30125*
.3906	25/64	9.92	SD	1.0000	.4375	2.7500	32944	33141*	32788*	30666*
.4062	13/32	10.32	SD	1.0000	.4375	2.7500	32901	33142*	32789*	30667*
.4219	27/64	10.72	SD	1.0000	.4375	2.7500	32945	33143*	32790*	30668*
.4375	7/16	11.11	STB	.7500	.4375	2.7500	32183			32851*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	32075	32346*	32791*	30669*
.4375	7/16	11.11	XL	1.0000	.4375	4.0000	30213			30126*
.4375	7/16	11.11	XL	1.5000	.4375	6.0000	32566			30128*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	32298			30127*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	32299			30129*
.4531	29/64	11.51	SD	1.0000	.5000	3.0000	32946	33144*	32792*	30670*
.4688	15/32	11.91	SD	1.0000	.5000	3.0000	32911	33145*	32793*	30671*
.4844	31/64	12.30	SD	1.0000	.5000	3.0000	32947	33146*	32794*	30672*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	32184			32852*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	32076	32347	32795	30673
.5000	1/2	12.70	XL	1.0000	.5000	4.0000	30214			30130*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	32584			30131
.5000	1/2	12.70	XL	1.5000	.5000	6.0000	32567			30133*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	32300			30132
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	32301			30134*
.5625	9/16	14.29	SD	1.2500	.5625	3.5000	32077	32348	32796*	30674*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	32185			32853*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	32078	32349*	32797*	30675*
.6250	5/8	15.88	XL	1.5000	.6250	6.0000	30225			30136*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	32302			30135*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	32303			30137*
.6875	11/16	17.46	SD	1.5000	.7500	4.0000	32079	33147*	32798*	30676*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	32186			32854*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	32080	32350*	32799*	30677
.7500	3/4	19.05	XL	1.5000	.7500	6.0000	30227			30139*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	32304			30138*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	32305			30140*

END MILLS



**SQUARE**



**2 FLUTE**



**CENTER CUTTING**



**STB**  
STUB



**SD**  
STANDARD



**XL**  
EXTRA LONG

**TiN COATING**

**TiCN COATING**

**TiAlN COATING**

**Quote**

**mm METRIC**

\* Non Stocked

END MILLS

# 3215 2-Flute (Square End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.8750	7/8	22.23	SD	1.5000	.8750	4.0000	32081	33148*	32800*	30678*
1.0000	1	25.40	STB	1.0000	1.0000	4.0000	32187			32855*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	32082	32351*	32801*	30679*
1.0000	1	25.40	XL	2.0000	1.0000	4.5000	32306			30141*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000	32307			30142*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	32308			30143*

### DOUBLE END (Inch)

.0312	1/32	0.79	STB	.0938	.1250	1.5000	32465	32713		36021*
.0469	3/64	1.19	STB	.1250	.1250	1.5000	32466	32714*		36022*
.0625	1/16	1.59	STB	.1250	.1250	1.5000	32467	32715*		36023
.0625	1/16	1.59	SD	.1875	.1250	2.0000	32413			
.0781	5/64	1.98	STB	.1250	.1250	1.5000	32533	32862*		36024*
.0938	3/32	2.38	STB	.1875	.1250	1.5000	32468	32716*		36025*
.0938	3/32	2.38	SD	.3750	.1250	2.0000	32414			
.1094	7/64	2.78	STB	.1875	.1250	1.5000	32534	32863*		36026*
.1250	1/8	3.18	STB	.2500	.1250	1.5000	32469	32717*		36027*
.1250	1/8	3.18	SD	.3750	.1250	2.0000	32415			
.1406	9/64	3.57	STB	.3125	.1875	2.0000	32586			36028
.1562	5/32	3.97	STB	.3125	.1875	2.0000	32470	32718*		36029*
.1562	5/32	3.97	SD	.4375	.1875	3.0000	32416			
.1719	11/64	4.37	STB	.3125	.1875	2.0000	32587			36030
.1875	3/16	4.76	STB	.3750	.1875	2.0000	32471	32719*		36031*
.1875	3/16	4.76	SD	.5000	.1875	3.0000	32417			
.2031	13/64	5.16	STB	.5000	.2500	2.5000	32588			36032*
.2188	7/32	5.56	STB	.5000	.2500	2.5000	32472	32720		36033*
.2188	7/32	5.56	SD	.5625	.2500	3.0000	32418			
.2344	15/64	5.95	STB	.5000	.2500	2.5000	32589			36034*
.2500	1/4	6.35	STB	.5000	.2500	2.5000	32473			36035*
.2500	1/4	6.35	SD	.6250	.2500	3.0000	32419			
.2812	9/32	7.14	STB	.5000	.3125	2.5000	32595			36036*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	32474	32722*		36037*
.3125	5/16	7.94	SD	.7500	.3125	3.0000	32421			
.3750	3/8	9.53	STB	.5625	.3750	2.5000	32475	32723*		36038*
.3750	3/8	9.53	SD	.7500	.3750	3.5000	32423			
.4375	7/16	11.11	STB	.6250	.4375	2.7500	32476	32724		36039*
.4375	7/16	11.11	SD	.8750	.4375	4.0000	32424			
.5000	1/2	12.70	STB	.6250	.5000	3.0000	32477	32725*		36040*
.5000	1/2	12.70	SD	1.0000	.5000	4.0000	32425			

### METRIC (Millimeter)

.0394		1.00	STB	2.50	3.00	38.00	92143			92186*
.0394		1.00	SD	4.00	3.00	38.00	92037			92233
.0591		1.50	SD	6.00	3.00	38.00	92038			92234*
.0787		2.00	STB	4.00	3.00	38.00	92145			92187*
.0787		2.00	SD	8.00	3.00	38.00	92039			92235*
.0984		2.50	SD	12.00	3.00	38.00	92041			92236
.1181		3.00	STB	6.00	3.00	38.00	92140			92255
.1181		3.00	SD	12.00	3.00	38.00	92042			92237*
.1181		3.00	XL	25.00	3.00	76.00	92160			
.1378		3.50	SD	12.00	4.00	50.00	92083			92238*
.1575		4.00	SD	14.00	4.00	50.00	92043			92239
.1772		4.50	SD	14.00	5.00	51.00	92085			92240*
.1969		5.00	SD	16.00	5.00	64.00	92044			92241*

\* Non Stocked



SQUARE



TiN COATING

TiCN COATING

TiAlN COATING

FAST QUOTE

mm

METRIC

# 3215 2-Flute (Square End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.2362		6.00	STB	12.00	6.00	50.00	92142			92256*
.2362		6.00	SD	20.00	6.00	64.00	92045			92242
.2362		6.00	XL	29.00	6.00	76.00	92162			
.2756		7.00	SD	22.00	7.00	64.00	92046			92243*
.3150		8.00	STB	12.00	8.00	50.00	92144			92257*
.3150		8.00	SD	22.00	8.00	64.00	92047			92244*
.3150		8.00	XL	29.00	8.00	76.00	92164			
.3543		9.00	SD	22.00	9.00	64.00	92048			92245*
.3937		10.00	STB	15.00	10.00	50.00	92146			92258*
.3937		10.00	SD	25.00	10.00	64.00	92049			92246*
.3937		10.00	XL	45.00	10.00	100.00	92166			
.4331		11.00	SD	25.00	11.00	84.00	92087			92247*
.4724		12.00	STB	15.00	12.00	63.00	92148			92259*
.4724		12.00	SD	25.00	12.00	84.00	92050			92248*
.4724		12.00	XL	50.00	12.00	100.00	92168			
.5512		14.00	SD	32.00	14.00	84.00	92051			92249*
.6299		16.00	SD	38.00	16.00	89.00	92052			92250*
.6299		16.00	XL	63.00	16.00	125.00	92165			
.7087		18.00	SD	40.00	18.00	100.00	92053			92251*
.7874		20.00	SD	40.00	20.00	100.00	92054			92252*
.7874		20.00	XL	63.00	20.00	125.00	92167			
.8661		22.00	SD	40.00	22.00	100.00	92089			92253*
.9843		25.00	SD	40.00	25.00	100.00	92091			92254*

# END MILLS



SQUARE



2 FLUTE



CENTER CUTTING



STUB



STANDARD



EXTRA LONG

**TiN** COATING

**TiCN** COATING

**TiAlN** COATING

**Quote**

mm

METRIC

\* Non Stocked

END MILLS

# 3215 2-Flute (Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Ball End
- 2 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated, TiN, TiCN, and TiAlN Coatings
- Inch and Metric Based Tools
- Single and Double Ends Available
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" - .002" +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.



BALL



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.0156	1/64	0.40	SD	.0469	.1250	1.5000	32086	30527*	30376*	30754
.0312	1/32	0.79	STB	.0625	.1250	1.5000	32114			32881*
.0312	1/32	0.79	SD	.0938	.1250	1.5000	32087	30528*	30377*	30755
.0469	3/64	1.19	STB	.1250	.1250	1.5000	32188			32882*
.0469	3/64	1.19	SD	.1875	.1250	1.5000	32088	30529	30378*	30756
.0625	1/16	1.59	STB	.1250	.1250	1.5000	32189			32883
.0625	1/16	1.59	SD	.2500	.1250	1.5000	32089	30530	30379	30757
.0781	5/64	1.98	STB	.1250	.1250	1.5000	32190*			32884*
.0781	5/64	1.98	SD	.2500	.1250	1.5000	32090	30531*	30380	30758
.0938	3/32	2.38	STB	.1875	.1250	1.5000	32191			32885
.0938	3/32	2.38	SD	.3750	.1250	1.5000	32091	30532*	30381*	30759
.1094	7/64	2.78	STB	.1875	.1250	1.5000	32192*			32886*
.1094	7/64	2.78	SD	.5000	.1250	1.5000	32092*	30533*	30382*	30760
.1250	1/8	3.18	STB	.2500	.1250	1.5000	32193			32887
.1250	1/8	3.18	SD	.5000	.1250	1.5000	32093	30534	30383	30761
.1250	1/8	3.18	XL	.7500	.1250	3.0000	30236			30144*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	32309			30145*
.1406	9/64	3.57	SD	.5625	.1875	2.0000	32094*	30535*	30384*	30762*
.1562	5/32	3.97	STB	.3750	.1875	2.0000	32194*			32888*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	32095	30536*	30385*	30763*
.1719	11/64	4.37	SD	.5625	.1875	2.0000	32657*	30537*	30386*	30764*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	32195*			32889
.1875	3/16	4.76	SD	.6250	.1875	2.0000	32096	30538	30387	30765
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	32310			30146
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	30244*			30147*
.2031	13/64	5.16	SD	.6250	.2500	2.5000	32658*	30539*	30388*	30766*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	32097*	30540*	30389*	30767*
.2344	15/64	5.95	SD	.7500	.2500	2.5000	32659*	30541*	30390*	30768*
.2500	1/4	6.35	STB	.5000	.2500	2.0000	32196			32890
.2500	1/4	6.35	SD	.7500	.2500	2.5000	32098	30542	30391	30769
.2500	1/4	6.35	XL	1.1250	.2500	3.0000	32568			30148*

# 3215 2-Flute (Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.2500	1/4	6.35	XL	1.0000	.2500	4.0000	30215			30149
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	32311			30150*
.2500	1/4	6.35	XL	1.5000	.2500	6.0000	32569			30151*
.2656	17/64	6.75	SD	.8750	.3125	2.5000	32950*	30543*	30392*	30770*
.2812	9/32	7.14	SD	.8750	.3125	2.5000	32099*	30544*	30393*	30771*
.2969	19/64	7.54	SD	.8750	.3125	2.5000	32951*	30545*	30394*	30772*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	32197*			32891
.3125	5/16	7.94	SD	.8750	.3125	2.5000	32100	30546*	30395*	30773
.3125	5/16	7.94	XL	1.1250	.3125	3.0000	32577*			30152*
.3125	5/16	7.94	XL	1.0000	.3125	4.0000	30216*			30153*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	32312*			30154*
.3125	5/16	7.94	XL	1.5000	.3125	6.0000	32570*			30155*
.3281	21/64	8.33	SD	.8750	.3750	2.5000	32952*	30547*	30396*	30774*
.3438	11/32	8.73	SD	.8750	.3750	2.5000	32101	30548*	30397*	30775
.3594	23/64	9.13	SD	1.0000	.3750	2.5000	32953*	30549*	30398*	30776*
.3750	3/8	9.53	STB	.6250	.3750	2.5000	32198			32892
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	32102	30550	30399*	30777
.3750	3/8	9.53	XL	1.1250	.3750	3.0000	32581*			30156*
.3750	3/8	9.53	XL	1.0000	.3750	4.0000	30217			30157*
.3750	3/8	9.53	XL	1.5000	.3750	4.0000	30223			30158*
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	32313			30159*
.3750	3/8	9.53	XL	1.5000	.3750	6.0000	32571			30160*
.3750	3/8	9.53	XL	3.0000	.3750	6.0000	32314			30161*
.3906	25/64	9.92	SD	1.0000	.4375	2.7500	32954*	30551*	30400*	30778*
.4062	13/32	10.32	SD	1.0000	.4375	2.7500	32905*	30552*	30401*	30779*
.4219	27/64	10.72	SD	1.0000	.4375	2.7500	32955*	30553*	30402*	30780*
.4375	7/16	11.11	STB	.7500	.4375	2.7500	32199*			32893*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	32103	30554*	30403*	30781*
.4375	7/16	11.11	XL	1.0000	.4375	4.0000	30218*			30162*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	32315*			30163*
.4375	7/16	11.11	XL	1.5000	.4375	6.0000	32572*			30164*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	32316*			30165*
.4531	29/64	11.51	SD	1.0000	.5000	3.0000	32956*	30555*	30404*	30782*
.4688	15/32	11.91	SD	1.0000	.5000	3.0000	32915*	30556*	30405*	30783*
.4844	31/64	12.30	SD	1.0000	.5000	3.0000	32957*	30557*	30406*	30784*
.5000	1/2	12.70	STB	.7500	.5000	3.0000	32200*			32894
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	32104	30558*	30407*	30785
.5000	1/2	12.70	XL	1.0000	.5000	4.0000	30219			30166
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	32585			30167*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	32317			30168*
.5000	1/2	12.70	XL	1.5000	.5000	6.0000	32573			30169
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	32318			30170*
.5625	9/16	14.29	SD	1.2500	.5625	3.5000	32105*	30559*	30408*	30786*
.6250	5/8	15.88	STB	1.0000	.6250	3.5000	32201			32895*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	32106	30560*	30409*	30787
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	32319*			30171*
.6250	5/8	15.88	XL	1.5000	.6250	6.0000	30229*			30172*
.6250	5/8	15.88	XL	3.0000	.6250	6.0000	32320*			30173*
.6875	11/16	17.46	SD	1.5000	.7500	4.0000	32107*	30561*	30410*	30788*
.7500	3/4	19.05	STB	1.0000	.7500	4.0000	32202*			32896*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	32108	30562*	30411*	30789*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	32321*			30174*
.7500	3/4	19.05	XL	1.5000	.7500	6.0000	30231			30175*
.7500	3/4	19.05	XL	3.0000	.7500	6.0000	32322			30176*

END MILLS



**BALL**



**2 FLUTE**



**CENTER CUTTING**



**STB STUB**



**SD STANDARD**



**XL EXTRALONG**

**TiN COATING**

**TiCN COATING**

**TiAlN COATING**

**Quote**

**mm METRIC**

\* Non Stocked

END MILLS

# 3215 2-Flute (Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.8750	7/8	22.23	SD	1.5000	.8750	4.0000	32109*	30563*	30412*	30790*
1.0000	1	25.40	STB	1.0000	1.0000	4.0000	32203*			32897*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	32110	30564*	30413*	30791*
1.0000	1	25.40	XL	2.0000	1.0000	4.5000	32323*			30177*
1.0000	1	25.40	XL	2.5000	1.0000	5.0000	32324*			30178*
1.0000	1	25.40	XL	3.0000	1.0000	6.0000	32325*			30179*

### DOUBLE END (Inch)

.0312	1/32	0.79	STB	.0938	.1250	1.5000	32478*			36061*
.0469	3/64	1.19	STB	.1250	.1250	1.5000	32479*			36062*
.0625	1/16	1.59	STB	.1250	.1250	1.5000	32480			36063*
.0625	1/16	1.59	SD	.1875	.1250	2.0000	32426			
.0781	5/64	1.98	STB	.1250	.1250	1.5000	32535*			36064*
.0938	3/32	2.38	STB	.1875	.1250	1.5000	32481*			36065*
.0938	3/32	2.38	SD	.3750	.1250	2.0000	32427			
.1094	7/64	2.78	STB	.1875	.1250	1.5000	32536*			36066*
.1250	1/8	3.18	STB	.2500	.1250	1.5000	32482*			36067*
.1250	1/8	3.18	SD	.3750	.1250	2.0000	32428			
.1406	9/64	3.57	STB	.3125	.1875	2.0000	32590*			36068*
.1562	5/32	3.97	STB	.3125	.1875	2.0000	32483*			36069*
.1562	5/32	3.97	SD	.4375	.1875	3.0000	32429			
.1719	11/64	4.37	STB	.3125	.1875	2.0000	32591*			36070*
.1875	3/16	4.76	STB	.3750	.1875	2.0000	32484*			36071*
.1875	3/16	4.76	SD	.5000	.1875	3.0000	32430			
.2031	13/64	5.16	STB	.5000	.2500	2.5000	32592*			36072*
.2188	7/32	5.56	STB	.5000	.2500	2.5000	32485*			36073*
.2188	7/32	5.56	SD	.5625	.2500	3.0000	32431			
.2344	15/64	5.95	STB	.5000	.2500	2.5000	32593*			36074*
.2500	1/4	6.35	STB	.5000	.2500	2.5000	32486*			36075*
.2500	1/4	6.35	SD	.6250	.2500	3.0000	32432			
.2812	9/32	7.14	STB	.5000	.3125	2.5000	32597*			36076*
.3125	5/16	7.94	STB	.5000	.3125	2.5000	32487*			36077*
.3125	5/16	7.94	SD	.7500	.3125	3.0000	32434*			
.3750	3/8	9.53	STB	.5625	.3750	2.5000	32488*			36078*
.3750	3/8	9.53	SD	.7500	.3750	3.5000	32436			
.4375	7/16	11.11	STB	.6250	.4375	2.7500	32489*			36079*
.4375	7/16	11.11	SD	.8750	.4375	4.0000	32437			
.5000	1/2	12.70	STB	.6250	.5000	3.0000	32490*			36080*
.5000	1/2	12.70	SD	1.0000	.5000	4.0000	32438			

### METRIC (Millimeter)

.0394		1.00	SD	4.00	3.00	38.00	92055			92297
.0591		1.50	SD	6.00	3.00	38.00	92056*			92298*
.0787		2.00	SD	8.00	3.00	38.00	92057			92299
.0984		2.50	SD	12.00	3.00	38.00	92059			92300*
.1181		3.00	STB	6.00	3.00	38.00	92150*			
.1181		3.00	SD	12.00	3.00	38.00	92060			92301*
.1181		3.00	XL	25.00	3.00	76.00	92170			
.1378		3.50	SD	12.00	4.00	50.00	92084*			92302*
.1575		4.00	SD	14.00	4.00	50.00	92061*			92303*
.1772		4.50	SD	14.00	5.00	51.00	92086*			92304*
.1969		5.00	SD	16.00	5.00	64.00	92062*			92305*
.2362		6.00	STB	12.00	6.00	50.00	92152*			
.2362		6.00	SD	20.00	6.00	64.00	92063*			92306

\* Non Stocked



BALL



2 FLUTE



CENTER CUTTING



STB



SD STANDARD



XL EXTRA LONG

TiN COATING

TiCN COATING

TiAlN COATING

FAST QUOTE

mm METRIC



# 3215 2-Flute (Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.2362		6.00	XL	29.00	6.00	76.00	92172			
.2756		7.00	SD	22.00	7.00	64.00	92064*			92307*
.3150		8.00	STB	12.00	8.00	50.00	92154			
.3150		8.00	SD	22.00	8.00	64.00	92065*			92308*
.3150		8.00	XL	29.00	8.00	76.00	92174			
.3543		9.00	SD	22.00	9.00	64.00	92066*			92309*
.3937		10.00	STB	15.00	10.00	50.00	92156			
.3937		10.00	SD	25.00	10.00	64.00	92067			92310*
.3937		10.00	XL	45.00	10.00	100.00	92176			
.4331		11.00	SD	25.00	11.00	84.00	92088*			92311*
.4724		12.00	STB	15.00	12.00	63.00	92158			
.4724		12.00	SD	25.00	12.00	84.00	92068*			92312*
.4724		12.00	XL	50.00	12.00	100.00	92178*			
.5512		14.00	SD	32.00	14.00	84.00	92069*			92313*
.6299		16.00	SD	38.00	16.00	89.00	92070*			92314*
.6299		16.00	XL	63.00	16.00	125.00	92173*			
.7087		18.00	SD	40.00	18.00	100.00	92071*			92315*
.7874		20.00	SD	40.00	20.00	100.00	92072*			92316*
.7874		20.00	XL	63.00	20.00	125.00	92175*			
.8661		22.00	SD	40.00	22.00	100.00	92090*			92317*
.9843		25.00	SD	40.00	25.00	100.00	92092*			92318*

# END MILLS



BALL



\* Non Stocked

END MILLS

# 3215 2-Flute (Radius End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Corner Radius
- 2 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated and TiAlN Coating
- Inch and Metric Based Tools
- Center Cutting
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.



RADIUS



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0150	33745*	33845*
.1250	1/8	3.18	SD	.5000	.1250	1.5000	.0200	33754*	33854*
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0150	33746*	33846*
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0200	33755*	33855*
.1875	3/16	4.76	SD	.6250	.1875	2.0000	.0300	33763*	33863*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0150	33747	33847*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0200	33756*	33856*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0300	33764*	33864*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	.0450	33771*	33871*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0150	33748*	33848*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0200	33757*	33857*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0300	33765*	33865*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	.0450	33772*	33872*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0150	33749*	33849*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0200	33758*	33858*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0300	33766*	33866*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0450	33773*	33873*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	.0600	33778*	33878*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0150	33750*	33850*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0200	33759*	33859*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0300	33767	33867*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0450	33774*	33874*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0600	33779*	33879*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.0900	33783*	33883*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	.1250	33787	33887*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0150	33751*	33851*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0200	33760*	33860*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0300	33768*	33868*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0450	33775	33875
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0600	33780*	33880*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.0900	33784*	33884*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	.1250	33803*	33888*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0150	33752*	33852*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0200	33761*	33861*

# 3215 2-Flute (Radius End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Corner Radius	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0300	33769*	33869*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0450	33776*	33876*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0600	33781*	33881*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.0900	33785*	33885*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	.1250	33788*	33889*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0150	33753*	33853*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0200	33762*	33862*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0300	33770*	33870*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0450	33777*	33877*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0600	33782*	33882*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.0900	33786*	33886*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	.1250	33789*	33890*

END MILLS



RADIUS



2 FLUTE



CENTER CUTTING



SD STANDARD



TiAlN COATING



FAST Quote

\* Non Stocked

END MILLS

# 2002 JIT 2-Flute (Square/Radius/Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**5:00 P.M. EST**  
Order Deadline

**Just in Time**  
**48-Hour JIT Delivery**  
Decimal-Sized End Mills

**12**  
PIECES  
OR LESS

**Basic Information:**



- JIT Service 12 Pieces or less in 48-Hours
- See JIT Pricing Guide for Quantity Break Pricing
- Square End
  - **Standard Base Price**
- Radius End
  - **+15% to Base Price (Specify Radius Size when Ordering)**
- Ball End (Full Radius)
  - **+20% to Base Price**
- Weldon Flats and Coatings Available (Additional Charges May Apply)
- 2 Flutes 3215 Series Design
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- \* *Specify Tolerance if not Standard (Additional Charges May Apply)*
- Shank Diameter: h6
- Cutter Diameter:   +.000"           -.002"  
                          +.00mm        -0.05mm

**SQUARE**

**RADIUS**

**BALL**

2

FLUTE    CENTER CUTTING

SD STANDARD

mm

METRIC

Size Range		Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Millimeter					SQUARE	RADIUS	BALL
.1200 — .1406	3.05 — 3.57	SD	.5625	.1875	2.0000	20226S	20226R	20226B
.1407 — .1562	3.58 — 3.97	SD	.5625	.1875	2.0000	20228S	20228R	20228B
.1563 — .1719	3.98 — 4.36	SD	.5625	.1875	2.0000	20230S	20230R	20230B
.1720 — .1875	4.37 — 4.76	SD	.6250	.1875	2.0000	20232S	20232R	20232B
.1876 — .2031	4.77 — 5.16	SD	.6250	.2500	2.5000	20234S	20234R	20234B
.2032 — .2188	5.17 — 5.56	SD	.6250	.2500	2.5000	20236S	20236R	20236B
.2189 — .2344	5.57 — 5.95	SD	.7500	.2500	2.5000	20238S	20238R	20238B
.2345 — .2500	5.96 — 6.35	SD	.7500	.2500	2.5000	20240S	20240R	20240B
.2501 — .2656	6.36 — 6.74	SD	.8750	.3125	2.5000	20242S	20242R	20242B
.2657 — .2812	6.75 — 7.14	SD	.8750	.3125	2.5000	20244S	20244R	20244B
.2813 — .2969	7.15 — 7.54	SD	.8750	.3125	2.5000	20246S	20246R	20246B
.2970 — .3125	7.55 — 7.94	SD	.8750	.3125	2.5000	20248S	20248R	20248B
.3126 — .3281	7.95 — 8.33	SD	.8750	.3750	2.5000	20250S	20250R	20250B
.3282 — .3438	8.34 — 8.73	SD	.8750	.3750	2.5000	20252S	20252R	20252B
.3439 — .3594	8.74 — 9.13	SD	1.0000	.3750	2.5000	20254S	20254R	20254B
.3595 — .3750	9.14 — 9.52	SD	1.0000	.3750	2.5000	20256S	20256R	20256B
.3751 — .3906	9.53 — 9.92	SD	1.0000	.4375	2.7500	20258S	20258R	20258B
.3907 — .4062	9.93 — 10.32	SD	1.0000	.4375	2.7500	20260S	20260R	20260B
.4063 — .4219	10.33 — 10.71	SD	1.0000	.4375	2.7500	20262S	20262R	20262B
.4220 — .4375	10.72 — 11.11	SD	1.0000	.4375	2.7500	20264S	20264R	20264B
.4376 — .4531	11.12 — 11.51	SD	1.0000	.5000	3.0000	20266S	20266R	20266B
.4532 — .4688	11.52 — 11.91	SD	1.0000	.5000	3.0000	20268S	20268R	20268B
.4689 — .4844	11.92 — 12.30	SD	1.0000	.5000	3.0000	20270S	20270R	20270B
.4845 — .5000	12.31 — 12.70	SD	1.0000	.5000	3.0000	20272S	20272R	20272B

# 2002 JIT 2-Flute (Square/Radius/Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Size Range				Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Millimeter							SQUARE	RADIUS	BALL
.5001 — .5625	12.71 — 14.29	SD	1.2500	.5625	3.5000	20274S	20274R	20274B		
.5626 — .6250	14.30 — 15.87	SD	1.5000	.6250	3.5000	20276S	20276R	20276B		
.6251 — .6875	15.88 — 17.46	SD	1.5000	.7500	4.0000	20278S	20278R	20278B		
.6876 — .7500	17.47 — 19.05	SD	1.5000	.7500	4.0000	20280S	20280R	20280B		
.7501 — .8125	19.06 — 20.64	SD	1.5000	.8750	4.0000	20282S	20282R	20282B		
.8126 — .8750	20.65 — 22.22	SD	1.5000	.8750	4.0000	20284S	20284R	20284B		
.8751 — .9375	22.23 — 23.81	SD	1.5000	1.0000	4.0000	20286S	20286R	20286B		
.9376 — 1.0000	23.82 — 25.40	SD	1.5000	1.0000	4.0000	20288S	20288R	20288B		
METRIC (Millimeter)										
.1181 — .1378	3.00 — 3.50	SD	14.00	5.00	51.00	90213S	90213R	90213B		
.1379 — .1575	3.51 — 4.00	SD	14.00	5.00	51.00	90214S	90214R	90214B		
.1576 — .1772	4.01 — 4.50	SD	14.00	5.00	51.00	90215S	90215R	90215B		
.1773 — .1969	4.51 — 5.00	SD	16.00	5.00	51.00	90216S	90216R	90216B		
.1970 — .2165	5.01 — 5.50	SD	16.00	6.00	64.00	90217S	90217R	90217B		
.2166 — .2362	5.51 — 6.00	SD	20.00	6.00	64.00	90218S	90218R	90218B		
.2363 — .2559	6.01 — 6.50	SD	22.00	8.00	64.00	90219S	90219R	90219B		
.2560 — .2756	6.51 — 7.00	SD	22.00	8.00	64.00	90220S	90220R	90220B		
.2757 — .2953	7.01 — 7.50	SD	22.00	8.00	64.00	90221S	90221R	90221B		
.2954 — .3150	7.51 — 8.00	SD	22.00	8.00	64.00	90222S	90222R	90222B		
.3151 — .3346	8.01 — 8.50	SD	22.00	10.00	64.00	90223S	90223R	90223B		
.3347 — .3543	8.51 — 9.00	SD	22.00	10.00	64.00	90224S	90224R	90224B		
.3544 — .3740	9.01 — 9.50	SD	25.00	10.00	64.00	90225S	90225R	90225B		
.3741 — .3937	9.51 — 10.00	SD	25.00	10.00	64.00	90226S	90226R	90226B		
.3938 — .4134	10.01 — 10.50	SD	25.00	11.00	71.00	90227S	90227R	90227B		
.4135 — .4331	10.51 — 11.00	SD	25.00	11.00	71.00	90228S	90228R	90228B		
.4332 — .4528	11.01 — 11.50	SD	25.00	12.00	76.00	90229S	90229R	90229B		
.4529 — .4724	11.51 — 12.00	SD	25.00	12.00	76.00	90230S	90230R	90230B		
.4725 — .5118	12.01 — 13.00	SD	32.00	14.00	84.00	90231S	90231R	90231B		
.5119 — .5512	13.01 — 14.00	SD	32.00	14.00	84.00	90232S	90232R	90232B		
.5513 — .5906	14.01 — 15.00	SD	38.00	16.00	89.00	90233S	90233R	90233B		
.5907 — .6299	15.01 — 16.00	SD	38.00	16.00	89.00	90234S	90234R	90234B		
.6300 — .6693	16.01 — 17.00	SD	38.00	20.00	100.00	90235S	90235R	90235B		
.6694 — .7087	17.01 — 18.00	SD	38.00	20.00	100.00	90236S	90236R	90236B		
.7088 — .7480	18.01 — 19.00	SD	38.00	20.00	100.00	90237S	90237R	90237B		
.7481 — .7874	19.01 — 20.00	SD	38.00	20.00	100.00	90238S	90238R	90238B		
.7875 — .8268	20.01 — 21.00	SD	38.00	22.00	100.00	90239S	90239R	90239B		
.8269 — .8661	21.01 — 22.00	SD	38.00	22.00	100.00	90240S	90240R	90240B		
.8662 — .9055	22.01 — 23.00	SD	38.00	25.00	100.00	90241S	90241R	90241B		
.9056 — .9449	23.01 — 24.00	SD	38.00	25.00	100.00	90242S	90242R	90242B		
.9450 — .9843	24.01 — 25.00	SD	38.00	25.00	100.00	90243S	90243R	90243B		

END MILLS



SQUARE



RADIUS



BALL



2 FLUTE



CENTER



SD STANDARD

mm METRIC

END MILLS

# 3300 3-Flute (Square End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Square End
- 3 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Stub, Standard, and Extra Long Lengths
- Standard Uncoated, TiN, TiCN, and TiAlN Coating
- Inch and Metric Based Tools
- Center Cutting
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.0312	1/32	0.79	SD	.0938	.1250	1.5000	33002	30452	30301*	30680
.0469	3/64	1.19	SD	.1875	.1250	1.5000	33003	30453*	30302*	30681
.0625	1/16	1.59	SD	.2500	.1250	1.5000	33004	30454	30303	30682
.0781	5/64	1.98	SD	.2500	.1250	1.5000	33005	30455*	30304*	30683*
.0938	3/32	2.38	SD	.3750	.1250	1.5000	33006	30456	30305	30684
.1094	7/64	2.78	SD	.5000	.1250	1.5000	33007	30457*	30306	30685
.1250	1/8	3.18	SD	.5000	.1250	1.5000	33008		30307	30686
.1250	1/8	3.18	XL	.7500	.1250	3.0000	30234			30011*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	33059			30180*
.1406	9/64	3.57	SD	.5625	.1875	2.0000	33009	30459	30308*	30687
.1562	5/32	3.97	SD	.5625	.1875	2.0000	33010	30460*	30309	30688
.1719	11/64	4.37	SD	.5625	.1875	2.0000	32660	30461*	30310*	30689
.1875	3/16	4.76	SD	.6250	.1875	2.0000	33011		30311	30690
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	30246			30182*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	33060			30181*
.2031	13/64	5.16	SD	.6250	.2500	2.5000	32661	30463*	30312*	30691*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	33012	30464*	30313	30692
.2344	15/64	5.95	SD	.7500	.2500	2.5000	32662	30465*	30314*	30693
.2500	1/4	6.35	SD	.7500	.2500	2.5000	33013		30315	30694
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	33061			30183*
.2656	17/64	6.75	SD	.8750	.3125	2.5000	32960	30467*	30316*	30695*
.2812	9/32	7.14	SD	.8750	.3125	2.5000	33014	30468*	30317	30696*
.2969	19/64	7.54	SD	.8750	.3125	2.5000	32961	30469*	30318*	30697*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	33015	30470*	30319	30698*
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	33062			30184*
.3281	21/64	8.33	SD	.8750	.3750	2.5000	32962	30471*	30320	30699*
.3438	11/32	8.73	SD	.8750	.3750	2.5000	33016	30472*	30321*	30700*
.3594	23/64	9.13	SD	1.0000	.3750	2.5000	32963	30473*	30322	30701*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	33017	30474*	30323	30702
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	33063			30185*
.3750	3/8	9.53	XL	3.0000	.3750	6.0000	33064			30186*
.3906	25/64	9.92	SD	1.0000	.4375	2.7500	32964	30475*	30324*	30703*
.4062	13/32	10.32	SD	1.0000	.4375	2.7500	32902	30476*	30325*	30704*
.4219	27/64	10.72	SD	1.0000	.4375	2.7500	32965	30477*	30326*	30705*



# 3300 3-Flute (Square End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.4375	7/16	11.11	SD	1.000	.4375	2.750	33018	30478*	30327*	30706
.4375	7/16	11.11	XL	2.000	.4375	4.000	33065			30187*
.4375	7/16	11.11	XL	3.000	.4375	6.000	33066			30188*
.4531	29/64	11.51	SD	1.000	.5000	3.000	32966	30479*	30328	30707
.4688	15/32	11.91	SD	1.000	.5000	3.000	32912	30480*	30329*	30708*
.4844	31/64	12.30	SD	1.000	.5000	3.000	32967	30481*	30330*	30709*
.5000	1/2	12.70	SD	1.000	.5000	3.000	33019	30482	30331	30710
.5000	1/2	12.70	XL	1.250	.5000	3.000	30247			30189
.5000	1/2	12.70	XL	1.500	.5000	4.000	32598			30190*
.5000	1/2	12.70	XL	2.000	.5000	4.000	33067			30191*
.5000	1/2	12.70	XL	3.000	.5000	6.000	33068			30192*
.5625	9/16	14.29	SD	1.250	.5625	3.500	33020	30483*	30332*	30711*
.6250	5/8	15.88	SD	1.500	.6250	3.500	33021	30484*	30333*	30712*
.6250	5/8	15.88	XL	2.500	.6250	5.000	33079			30193*
.6875	11/16	17.46	SD	1.500	.7500	4.000	33022	30485*	30334*	30713*
.7500	3/4	19.05	SD	1.500	.7500	4.000	33023	30486*	30335*	30714
.7500	3/4	19.05	XL	2.500	.7500	5.000	33080			30194*
.8750	7/8	22.23	SD	1.500	.8750	4.000	33024	30487*	30336*	30715*
1.0000	1	25.40	SD	1.500	1.0000	4.000	33025	30488*	30337*	30716*
METRIC (Millimeter)										
.0394		1.00	STB	2.50	3.00	38.00	93200			
.0394		1.00	SD	4.00	3.00	38.00	92330			92350
.0591		1.50	STB	3.00	3.00	38.00	93201			
.0591		1.50	SD	6.00	3.00	38.00	92331			92351*
.0787		2.00	STB	4.00	3.00	38.00	93202			
.0787		2.00	SD	9.00	3.00	38.00	92332			92352
.0984		2.50	STB	5.00	3.00	38.00	93203			
.0984		2.50	SD	12.00	3.00	38.00	92333			92353*
.1181		3.00	STB	6.00	3.00	38.00	93204			
.1181		3.00	SD	12.00	3.00	38.00	92334			92354
.1378		3.50	SD	12.00	4.00	50.00	92335			92355
.1575		4.00	STB	8.00	4.00	50.00	93205			
.1575		4.00	SD	14.00	4.00	50.00	92336			92356*
.1772		4.50	SD	14.00	5.00	51.00	92337			92357*
.1969		5.00	STB	10.00	5.00	51.00	93206			
.1969		5.00	SD	16.00	5.00	64.00	92338			92358*
.2362		6.00	STB	13.00	6.00	50.00	93207			
.2362		6.00	SD	20.00	6.00	64.00	92339			92359
.2756		7.00	SD	22.00	7.00	64.00	92340			92360*
.3150		8.00	SD	22.00	8.00	64.00	92341			92361*
.3543		9.00	SD	22.00	9.00	64.00	92342			92362*
.3937		10.00	SD	25.00	10.00	64.00	92343			92363*
.3937		10.00	SD	28.00	10.00	73.00	92496			92497*
.4724		12.00	SD	25.00	12.00	84.00	92344			92364*
.5512		14.00	SD	32.00	14.00	84.00	92345			92365*
.6299		16.00	SD	38.00	16.00	89.00	92346			92366*
.7087		18.00	SD	40.00	18.00	100.00	92347			92367*
.7874		20.00	SD	40.00	20.00	100.00	92348			92368*
.9843		25.00	SD	40.00	25.00	100.00	92349			92369*

# END MILLS



SQUARE



3 FLUTE



CENTER CUTTING



STB STANDARD

SD



XL EXTRA LONG



TiAlN COATING



TiCN COATING



TiN COATING



\* Non Stocked

END MILLS

# 3300 3-Flute (Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Ball End
- 3 Flutes
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard and Extra Long Lengths
- Standard Uncoated, TiN, TiCN, and TiAlN Coating
- Inch and Metric Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000" -0.002" / +0.00mm -0.05mm

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item that you need us to stock, please contact us and we will work with you.



BALL



\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.0312	1/32	0.79	SD	.0938	.1250	1.5000	33030	30565*	30414*	30792*
.0469	3/64	1.19	SD	.1875	.1250	1.5000	33031	30566*	30415*	30793*
.0625	1/16	1.59	SD	.2500	.1250	1.5000	33032	30567*		30794
.0781	5/64	1.98	SD	.2500	.1250	1.5000	33033		30417*	30795
.0938	3/32	2.38	SD	.3750	.1250	1.5000	33034		30418*	30796
.1094	7/64	2.78	SD	.5000	.1250	1.5000	33035*	30570*	30419*	30797*
.1250	1/8	3.18	SD	.5000	.1250	1.5000	33036		30420	30798
.1250	1/8	3.18	XL	.7500	.1250	3.0000	30237*			30195*
.1250	1/8	3.18	XL	1.0000	.1250	3.0000	33069			30196*
.1406	9/64	3.57	SD	.5625	.1875	2.0000	33037*	30572*	30421*	30799*
.1562	5/32	3.97	SD	.5625	.1875	2.0000	33038*	30573*	30422*	30800
.1719	11/64	4.37	SD	.5625	.1875	2.0000	32663*	30574*	30423*	30801*
.1875	3/16	4.76	SD	.6250	.1875	2.0000	33039	30575	30424	30802
.1875	3/16	4.76	XL	1.0000	.1875	4.0000	30248*			30198*
.1875	3/16	4.76	XL	1.2500	.1875	3.0000	33070			30197*
.2031	13/64	5.16	SD	.6250	.2500	2.5000	32664*	30576*	30425*	30803*
.2188	7/32	5.56	SD	.6250	.2500	2.5000	33040	30577*	30426*	30804*
.2344	15/64	5.95	SD	.7500	.2500	2.5000	32665*	30578*	30427*	30805*
.2500	1/4	6.35	SD	.7500	.2500	2.5000	33041	30579*	30428*	30806
.2500	1/4	6.35	XL	1.5000	.2500	4.0000	33071			30199*
.2656	17/64	6.75	SD	.8750	.3125	2.5000	32970*	30580*	30429*	30807*
.2812	9/32	7.14	SD	.8750	.3125	2.5000	33042*	30581*	30430*	30808*
.2969	19/64	7.54	SD	.8750	.3125	2.5000	32971*	30582*	30431*	30809*
.3125	5/16	7.94	SD	.8750	.3125	2.5000	33043	30583*	30432*	30810
.3125	5/16	7.94	XL	1.6250	.3125	4.0000	33072*			30000*
.3281	21/64	8.33	SD	.8750	.3750	2.5000	32972*	30584*		30811*
.3438	11/32	8.73	SD	.8750	.3750	2.5000	33044*	30585*	30434*	30812*
.3594	23/64	9.13	SD	1.0000	.3750	2.5000	32973*	30586*	30435*	30813*
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	33045			30814
.3750	3/8	9.53	XL	2.0000	.3750	4.0000	33073			30001*
.3750	3/8	9.53	XL	3.0000	.3750	6.0000	33074*			30002*

# 3300 3-Flute (Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number			
Inch	Fractional	Millimeter					UC	TiN	TiCN	TiAlN
.3906	25/64	9.92	SD	1.0000	.4375	2.7500	32974*	30588*	30437*	30815*
.4062	13/32	10.32	SD	1.0000	.4375	2.7500	32906*	30589*	30438*	30816*
.4219	27/64	10.72	SD	1.0000	.4375	2.7500	32975*	30590*	30439*	30817*
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	33046*	30591*	30440*	30818*
.4375	7/16	11.11	XL	2.0000	.4375	4.0000	33075*			30003*
.4375	7/16	11.11	XL	3.0000	.4375	6.0000	33076*			30004*
.4531	29/64	11.51	SD	1.0000	.5000	3.0000	32976*	30592*	30441*	30819*
.4688	15/32	11.91	SD	1.0000	.5000	3.0000	32916*	30593*	30442*	30820*
.4844	31/64	12.30	SD	1.0000	.5000	3.0000	32977*	30594*	30443*	30821*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	33047	30595*	30444	30822*
.5000	1/2	12.70	XL	1.2500	.5000	3.0000	30249*			30005*
.5000	1/2	12.70	XL	1.5000	.5000	4.0000	32599			30006*
.5000	1/2	12.70	XL	2.0000	.5000	4.0000	33077			30007*
.5000	1/2	12.70	XL	3.0000	.5000	6.0000	33078*			30008*
.5625	9/16	14.29	SD	1.2500	.5625	3.5000	33048*	30596*	30445*	30823*
.6250	5/8	15.88	SD	1.5000	.6250	3.5000	33049	30597*	30446	30824*
.6250	5/8	15.88	XL	2.5000	.6250	5.0000	33089*			30009*
.6875	11/16	17.46	SD	1.5000	.7500	4.0000	33050*	30598*	30447*	30825*
.7500	3/4	19.05	SD	1.5000	.7500	4.0000	33051	30599*	30448	30826*
.7500	3/4	19.05	XL	2.5000	.7500	5.0000	33090*			30012*
.8750	7/8	22.23	SD	1.5000	.8750	4.0000	33052*	30600*	30449*	30827*
1.0000	1	25.40	SD	1.5000	1.0000	4.0000	33053*	30601*	30450*	30828*
METRIC (Millimeter)										
.0394		1.00	SD	4.00	3.00	38.00	92370			92390*
.0591		1.50	SD	6.00	3.00	38.00	92371			92391*
.0787		2.00	SD	9.00	3.00	38.00	92372			92392*
.0984		2.50	SD	12.00	3.00	38.00	92373*			92393*
.1181		3.00	SD	12.00	3.00	38.00	92374*			92394*
.1378		3.50	SD	12.00	4.00	50.00	92375*			92395*
.1575		4.00	SD	14.00	4.00	50.00	92376			92396*
.1772		4.50	SD	14.00	5.00	51.00	92377			92397
.1969		5.00	SD	16.00	5.00	64.00	92378*			92398*
.2362		6.00	SD	20.00	6.00	64.00	92379			92399*
.2756		7.00	SD	22.00	7.00	64.00	92380			92400*
.3150		8.00	SD	22.00	8.00	64.00	92381			92401*
.3543		9.00	SD	22.00	9.00	64.00	92382			92402*
.3937		10.00	SD	25.00	10.00	64.00	92383			92403*
.4724		12.00	SD	25.00	12.00	84.00	92384*			92404*
.5512		14.00	SD	32.00	14.00	84.00	92385			92405*
.6299		16.00	SD	38.00	16.00	89.00	92386			92406*
.7087		18.00	SD	40.00	18.00	100.00	92387*			92407*
.7874		20.00	SD	40.00	20.00	100.00	92388*			92408*
.9843		25.00	SD	40.00	25.00	100.00	92389*			92409*

# END MILLS



BALL



3 FLUTE



CENTER CUTTING



SD STANDARD



XL EXTRA LONG



TiAlN COATING



TiCN COATING



TiN COATING



FAST Quote



mm METRIC

\* Non Stocked

END MILLS

# 2003 JIT 3-Flute (Square/Radius/Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Just in Time**  
**48-Hour JIT Delivery**  
 Decimal-Sized End Mills

12

5:00 P.M. EST  
Order Deadline

PIECES  
OR LESS

**Basic Information:**

- JIT Service 12 Pieces or less in 48-Hours
- See JIT Pricing Guide for Quantity Break Pricing
- Square End
  - **Standard Base Price**
- Radius End
  - **+15% to Base Price (Specify Radius Size when Ordering)**
- Ball End (Full Radius)
  - **+20% to Base Price**
- Weldon Flats and Coatings Available (Additional Charges May Apply)
- 3 Flutes 3300 Series Design
  - 30° Helix
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch and Metric Based Tools
- Dura Carb (Micrograin)



**Tolerance:**

- \* *Specify Tolerance if not Standard (Additional Charges May Apply)*
- Shank Diameter: h6
- Cutter Diameter:   +.000"       -.002"  
                           +0.00mm     -0.05mm

**SQUARE**

**RADIUS**

**BALL**

3

**FLUTE    CENTER CUTTING**

SD

**STANDARD**

mm

**METRIC**

Size Range		Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Millimeter					SQUARE	RADIUS	BALL
.1200 — .1406	3.05 — 3.57	SD	.5625	.1875	2.0000	20326S	20326R	20326B
.1407 — .1562	3.58 — 3.97	SD	.5625	.1875	2.0000	20328S	20328R	20328B
.1563 — .1719	3.98 — 4.36	SD	.5625	.1875	2.0000	20330S	20330R	20330B
.1720 — .1875	4.37 — 4.76	SD	.6250	.1875	2.0000	20332S	20332R	20332B
.1876 — .2031	4.77 — 5.16	SD	.6250	.2500	2.5000	20334S	20334R	20334B
.2032 — .2188	5.17 — 5.56	SD	.6250	.2500	2.5000	20336S	20336R	20336B
.2189 — .2344	5.57 — 5.95	SD	.7500	.2500	2.5000	20338S	20338R	20338B
.2345 — .2500	5.96 — 6.35	SD	.7500	.2500	2.5000	20340S	20340R	20340B
.2501 — .2656	6.36 — 6.74	SD	.8750	.3125	2.5000	20342S	20342R	20342B
.2657 — .2812	6.75 — 7.14	SD	.8750	.3125	2.5000	20344S	20344R	20344B
.2813 — .2969	7.15 — 7.54	SD	.8750	.3125	2.5000	20346S	20346R	20346B
.2970 — .3125	7.55 — 7.94	SD	.8750	.3125	2.5000	20348S	20348R	20348B
.3126 — .3281	7.95 — 8.33	SD	.8750	.3750	2.5000	20350S	20350R	20350B
.3282 — .3438	8.34 — 8.73	SD	.8750	.3750	2.5000	20352S	20352R	20352B
.3439 — .3594	8.74 — 9.13	SD	1.0000	.3750	2.5000	20354S	20354R	20354B
.3595 — .3750	9.14 — 9.52	SD	1.0000	.3750	2.5000	20356S	20356R	20356B
.3751 — .3906	9.53 — 9.92	SD	1.0000	.4375	2.7500	20358S	20358R	20358B
.3907 — .4062	9.93 — 10.32	SD	1.0000	.4375	2.7500	20360S	20360R	20360B
.4063 — .4219	10.33 — 10.71	SD	1.0000	.4375	2.7500	20362S	20362R	20362B
.4220 — .4375	10.72 — 11.11	SD	1.0000	.4375	2.7500	20364S	20364R	20364B
.4376 — .4531	11.12 — 11.51	SD	1.0000	.5000	3.0000	20366S	20366R	20366B
.4532 — .4688	11.52 — 11.91	SD	1.0000	.5000	3.0000	20368S	20368R	20368B
.4689 — .4844	11.92 — 12.30	SD	1.0000	.5000	3.0000	20370S	20370R	20370B
.4845 — .5000	12.31 — 12.70	SD	1.0000	.5000	3.0000	20372S	20372R	20372B

# 2003 JIT 3-Flute (Square/Radius/Ball End)

Titanium Super Alloys Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Size Range				Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number		
Inch	Millimeter		SQUARE					RADIUS	BALL	
.5001 — .5625	12.71	—	14.29	SD	1.2500	.5625	3.5000	20374S	20374R	20374B
.5626 — .6250	14.30	—	15.87	SD	1.5000	.6250	3.5000	20376S	20376R	20376B
.6251 — .6875	15.88	—	17.46	SD	1.5000	.7500	4.0000	20378S	20378R	20378B
.6876 — .7500	17.47	—	19.05	SD	1.5000	.7500	4.0000	20380S	20380R	20380B
.7501 — .8125	19.06	—	20.64	SD	1.5000	.8750	4.0000	20382S	20382R	20382B
.8126 — .8750	20.65	—	22.22	SD	1.5000	.8750	4.0000	20384S	20384R	20384B
.8751 — .9375	22.23	—	23.81	SD	1.5000	1.0000	4.0000	20386S	20386R	20386B
.9376 — 1.0000	23.82	—	25.40	SD	1.5000	1.0000	4.0000	20388S	20388R	20388B
METRIC (Millimeter)										
.1181 — .1378	3.00	—	3.50	SD	14.00	5.00	51.00	90313S	90313R	90313B
.1379 — .1575	3.51	—	4.00	SD	14.00	5.00	51.00	90314S	90314R	90314B
.1576 — .1772	4.01	—	4.50	SD	14.00	5.00	51.00	90315S	90315R	90315B
.1773 — .1969	4.51	—	5.00	SD	16.00	5.00	51.00	90316S	90316R	90316B
.1970 — .2165	5.01	—	5.50	SD	16.00	6.00	64.00	90317S	90317R	90317B
.2166 — .2362	5.51	—	6.00	SD	20.00	6.00	64.00	90318S	90318R	90318B
.2363 — .2559	6.01	—	6.50	SD	22.00	8.00	64.00	90319S	90319R	90319B
.2560 — .2756	6.51	—	7.00	SD	22.00	8.00	64.00	90320S	90320R	90320B
.2757 — .2953	7.01	—	7.50	SD	22.00	8.00	64.00	90321S	90321R	90321B
.2954 — .3150	7.51	—	8.00	SD	22.00	8.00	64.00	90322S	90322R	90322B
.3151 — .3346	8.01	—	8.50	SD	22.00	10.00	64.00	90323S	90323R	90323B
.3347 — .3543	8.51	—	9.00	SD	22.00	10.00	64.00	90324S	90324R	90324B
.3544 — .3740	9.01	—	9.50	SD	25.00	10.00	64.00	90325S	90325R	90325B
.3741 — .3937	9.51	—	10.00	SD	25.00	10.00	64.00	90326S	90326R	90326B
.3938 — .4134	10.01	—	10.50	SD	25.00	11.00	71.00	90327S	90327R	90327B
.4135 — .4331	10.51	—	11.00	SD	25.00	11.00	71.00	90328S	90328R	90328B
.4332 — .4528	11.01	—	11.50	SD	25.00	12.00	76.00	90329S	90329R	90329B
.4529 — .4724	11.51	—	12.00	SD	25.00	12.00	76.00	90330S	90330R	90330B
.4725 — .5118	12.01	—	13.00	SD	32.00	14.00	84.00	90331S	90331R	90331B
.5119 — .5512	13.01	—	14.00	SD	32.00	14.00	84.00	90332S	90332R	90332B
.5513 — .5906	14.01	—	15.00	SD	38.00	16.00	89.00	90333S	90333R	90333B
.5907 — .6299	15.01	—	16.00	SD	38.00	16.00	89.00	90334S	90334R	90334B
.6300 — .6693	16.01	—	17.00	SD	38.00	20.00	100.00	90335S	90335R	90335B
.6694 — .7087	17.01	—	18.00	SD	38.00	20.00	100.00	90336S	90336R	90336B
.7088 — .7480	18.01	—	19.00	SD	38.00	20.00	100.00	90337S	90337R	90337B
.7481 — .7874	19.01	—	20.00	SD	38.00	20.00	100.00	90338S	90338R	90338B
.7875 — .8268	20.01	—	21.00	SD	38.00	22.00	100.00	90339S	90339R	90339B
.8269 — .8661	21.01	—	22.00	SD	38.00	22.00	100.00	90340S	90340R	90340B
.8662 — .9055	22.01	—	23.00	SD	38.00	25.00	100.00	90341S	90341R	90341B
.9056 — .9449	23.01	—	24.00	SD	38.00	25.00	100.00	90342S	90342R	90342B
.9450 — .9843	24.01	—	25.00	SD	38.00	25.00	100.00	90343S	90343R	90343B

END MILLS



SQUARE



RADIUS



BALL






mm

METRIC

# 3215SM Sub-Miniature (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Square End
- 2 Flutes
  - 30° Helix
  - 1.5x (SMS) and 3x (SM) Diameter Flute Lengths
- Right Hand Spiral
- Right Hand Cut
- Center Cutting
- Sub-Miniature Stub (SMS) and Sub-Miniature(SM) Lengths
- Standard Uncoated
- Inch Based Tools
- Dura Carb II for Enhanced Shock Resistance

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0005"    -.0005"  
                                  +0.02mm    -0.02mm

**Special Sub-Miniature Design**

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0050		0.13	SMS	.0075	.1250	1.5000	32540
.0060		0.15	SMS	.0090	.1250	1.5000	32541
.0070		0.18	SMS	.0105	.1250	1.5000	32542
.0080		0.20	SMS	.0120	.1250	1.5000	32543
.0090		0.23	SMS	.0135	.1250	1.5000	32544*
.0100		0.25	SMS	.0150	.1250	1.5000	32352
.0100		0.25	SM	.0300	.1250	1.5000	30900
.0110		0.28	SMS	.0165	.1250	1.5000	32353*
.0110		0.28	SM	.0330	.1250	1.5000	30901
.0120		0.30	SMS	.0180	.1250	1.5000	32354
.0120		0.30	SM	.0360	.1250	1.5000	30902
.0130		0.33	SMS	.0195	.1250	1.5000	32355*
.0130		0.33	SM	.0390	.1250	1.5000	30903
.0140		0.36	SMS	.0210	.1250	1.5000	32356*
.0140		0.36	SM	.0420	.1250	1.5000	30904
.0150		0.38	SMS	.0225	.1250	1.5000	32357
.0150		0.38	SM	.0450	.1250	1.5000	30905
.0160		0.41	SMS	.0240	.1250	1.5000	32358*
.0160		0.41	SM	.0480	.1250	1.5000	30906
.0170		0.43	SMS	.0255	.1250	1.5000	32359*
.0170		0.43	SM	.0510	.1250	1.5000	30907*
.0180		0.46	SMS	.0270	.1250	1.5000	32360*
.0180		0.46	SM	.0540	.1250	1.5000	30908*
.0190		0.48	SMS	.0285	.1250	1.5000	32361*
.0190		0.48	SM	.0570	.1250	1.5000	30909*
.0200		0.51	SMS	.0300	.1250	1.5000	32362
.0200		0.51	SM	.0600	.1250	1.5000	30910
.0210		0.53	SMS	.0315	.1250	1.5000	32363*
.0210		0.53	SM	.0630	.1250	1.5000	30911*
.0220		0.56	SMS	.0330	.1250	1.5000	32364*
.0220		0.56	SM	.0660	.1250	1.5000	30912
.0230		0.58	SMS	.0345	.1250	1.5000	32365*
.0230		0.58	SM	.0690	.1250	1.5000	30913*



# 3215SM Sub-Miniature (Square End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0240		0.61	SMS	.0360	.1250	1.5000	32366*
.0240		0.61	SM	.0720	.1250	1.5000	30914*
.0250		0.64	SMS	.0375	.1250	1.5000	32367
.0250		0.64	SM	.0750	.1250	1.5000	30915
.0260		0.66	SMS	.0390	.1250	1.5000	32368
.0260		0.66	SM	.0780	.1250	1.5000	30916*
.0270		0.69	SMS	.0405	.1250	1.5000	32369*
.0270		0.69	SM	.0810	.1250	1.5000	30917*
.0280		0.71	SMS	.0420	.1250	1.5000	32370*
.0280		0.71	SM	.0840	.1250	1.5000	30918*
.0290		0.74	SMS	.0435	.1250	1.5000	32371*
.0290		0.74	SM	.0870	.1250	1.5000	30919*
.0300		0.76	SMS	.0450	.1250	1.5000	32372
.0300		0.76	SM	.0900	.1250	1.5000	30920
.0310		0.79	SM	.0930	.1250	1.5000	30921
.0350		0.89	SM	.1050	.1250	1.5000	30922
.0400		1.02	SM	.1200	.1250	1.5000	30923
.0470		1.19	SM	.1410	.1250	1.5000	30924*
.0500		1.27	SM	.1500	.1250	1.5000	30925
.0550		1.40	SM	.1650	.1250	1.5000	30926*
.0600		1.52	SM	.1800	.1250	1.5000	30927

# END MILLS



SQUARE



2 FLUTE



CENTER CUTTING



SMS 1.5x



SM 3.0x

\* Non Stocked

# 3215SM Sub-Miniature (Ball End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Ball End
- 2 Flutes
  - 30° Helix
  - 1.5x (SMS) and 3x (SM) Diameter Flute Lengths
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Sub-Miniature Stub (SMS) and Sub-Miniature (SM) Length
- Standard Uncoated
- Inch Based Tools
- Dura Carb II for Enhanced Shock Resistance

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0005"     -.0005"  
                                  +0.02mm     -0.02mm

**Special Sub-Miniature Design**

\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.

\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0050		0.13	SMS	.0075	.1250	1.5000	32609
.0060		0.15	SMS	.0090	.1250	1.5000	32668
.0070		0.18	SMS	.0105	.1250	1.5000	32669
.0080		0.20	SMS	.0120	.1250	1.5000	32698*
.0090		0.23	SMS	.0135	.1250	1.5000	32699*
.0100		0.25	SMS	.0150	.1250	1.5000	32670
.0100		0.25	SM	.0300	.1250	1.5000	30935
.0110		0.28	SMS	.0165	.1250	1.5000	32671*
.0110		0.28	SM	.0330	.1250	1.5000	30936*
.0120		0.30	SMS	.0180	.1250	1.5000	32672*
.0120		0.30	SM	.0360	.1250	1.5000	30937*
.0130		0.33	SMS	.0195	.1250	1.5000	32673*
.0130		0.33	SM	.0390	.1250	1.5000	30938*
.0140		0.36	SMS	.0210	.1250	1.5000	32674*
.0140		0.36	SM	.0420	.1250	1.5000	30939*
.0150		0.38	SMS	.0225	.1250	1.5000	32675
.0150		0.38	SM	.0450	.1250	1.5000	30940
.0160		0.41	SMS	.0240	.1250	1.5000	32676*
.0160		0.41	SM	.0480	.1250	1.5000	30941*
.0170		0.43	SMS	.0255	.1250	1.5000	32677*
.0170		0.43	SM	.0510	.1250	1.5000	30942*
.0180		0.46	SMS	.0270	.1250	1.5000	32678*
.0180		0.46	SM	.0540	.1250	1.5000	30943*
.0190		0.48	SMS	.0285	.1250	1.5000	32679*
.0190		0.48	SM	.0570	.1250	1.5000	30944*
.0200		0.51	SMS	.0300	.1250	1.5000	32680
.0200		0.51	SM	.0600	.1250	1.5000	30945
.0210		0.53	SMS	.0315	.1250	1.5000	32681*
.0210		0.53	SM	.0630	.1250	1.5000	30946*
.0220		0.56	SMS	.0330	.1250	1.5000	32697*
.0220		0.56	SM	.0660	.1250	1.5000	30947*
.0230		0.58	SMS	.0345	.1250	1.5000	32682
.0230		0.58	SM	.0690	.1250	1.5000	30948*

# 3215SM Sub-Miniature (Ball End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0240		0.61	SMS	.0360	.1250	1.5000	32683*
.0240		0.61	SM	.0720	.1250	1.5000	30949*
.0250		0.64	SMS	.0375	.1250	1.5000	32684*
.0250		0.64	SM	.0750	.1250	1.5000	30950
.0260		0.66	SMS	.0390	.1250	1.5000	32685*
.0260		0.66	SM	.0780	.1250	1.5000	30951*
.0270		0.69	SMS	.0405	.1250	1.5000	32686*
.0270		0.69	SM	.0810	.1250	1.5000	30952*
.0280		0.71	SMS	.0420	.1250	1.5000	32687*
.0280		0.71	SM	.0840	.1250	1.5000	30953*
.0290		0.74	SMS	.0435	.1250	1.5000	32688*
.0290		0.74	SM	.0870	.1250	1.5000	30954*
.0300		0.76	SMS	.0450	.1250	1.5000	32689*
.0300		0.76	SM	.0900	.1250	1.5000	30955*
.0310		0.79	SM	.0930	.1250	1.5000	30956*
.0350		0.89	SM	.1050	.1250	1.5000	30957*
.0400		1.02	SM	.1200	.1250	1.5000	30958
.0470		1.19	SM	.1410	.1250	1.5000	30959*
.0500		1.27	SM	.1500	.1250	1.5000	30960*
.0550		1.40	SM	.1650	.1250	1.5000	30961*
.0600		1.52	SM	.1800	.1250	1.5000	30962*

# END MILLS



BALL



2 FLUTE



CENTER CUTTING



SMS 1.5x

SM 3.0x

\* Non Stocked

END MILLS

# 3200SM Sub-Miniature (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Square End
- 4 Flutes
  - 30° Helix
  - 3x (SM) Diameter Flute Length
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Sub-Miniature (SM)Length
- Standard Uncoated
- Inch Based Tools
- Dura Carb II for Enhanced Shock Resistance

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0005"    -.0005"  
                                  +0.02mm    -0.02mm

**Special Sub-Miniature Design**

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0310		0.79	SM	.0930	.1250	1.5000	30928
.0350		0.89	SM	.1050	.1250	1.5000	30929
.0400		1.02	SM	.1200	.1250	1.5000	30930
.0470		1.19	SM	.1410	.1250	1.5000	30931
.0500		1.27	SM	.1500	.1250	1.5000	30932
.0550		1.40	SM	.1650	.1250	1.5000	30933
.0600		1.52	SM	.1800	.1250	1.5000	30934



# 3200SM Sub-Miniature (Ball End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si/Al >10% Low Si/Al <10% General Purpose



**Basic Information:**

- Ball End
- 4 Flutes
  - 30° Helix
  - 3x (SM) Diameter Flute Length
  - Right Hand Spiral
  - Right Hand Cut
- Center Cutting
- Sub-Miniature (SM) Length
- Standard Uncoated
- Inch Based Tools
- Dura Carb II for Enhanced Shock Resistance

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.0005" -0.0005"  
+0.02mm -0.02mm

**Special Sub-Miniature Design**

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0310		0.79	SM	.0930	.1250	1.5000	30963
.0350		0.89	SM	.1050	.1250	1.5000	30964
.0400		1.02	SM	.1200	.1250	1.5000	30965
.0470		1.19	SM	.1410	.1250	1.5000	30966
.0500		1.27	SM	.1500	.1250	1.5000	30967
.0550		1.40	SM	.1650	.1250	1.5000	30968
.0600		1.52	SM	.1800	.1250	1.5000	30969

END MILLS



# 3230 (Square End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Square End
- 4 Straight Flutes
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:   +.000"       -.002"  
                              +0.00mm      -0.05mm

*\* Items are made to order and not planned as a normal stocked item. Contact us for current stock status or for lead time at time of order. If you have an \* item you need us to stock, please contact us and we will work with you.*

SQUARE

4 FLUTE

CENTER CUTTING

\* Non Stocked

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0625	1/16	1.59	SD	.1875	.1250	1.5000	12110
.0938	3/32	2.38	SD	.3750	.1250	1.5000	12111
.1250	1/8	3.18	SD	.5000	.1250	1.5000	12112
.1875	3/16	4.76	SD	.6250	.1875	2.0000	12114
.2500	1/4	6.35	SD	.7500	.2500	2.5000	12116
.3125	5/16	7.94	SD	.8125	.3125	2.5000	12118
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	12120
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	12121*
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	12122



# 3242 (Square End)

Titanium Super Alloys Hardened Steels >48RC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Square End
- 2 Straight Flutes
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter: +.000"      -.002"  
+0.00mm      -0.05mm

Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	EDP Number
Inch	Fractional	Millimeter					UC
.0625	1/16	1.59	SD	.1875	.1250	1.5000	12136
.0938	3/32	2.38	SD	.3750	.1250	1.5000	12137
.1250	1/8	3.18	SD	.5000	.1250	1.5000	12138
.1875	3/16	4.76	SD	.6250	.1875	2.0000	12140
.2500	1/4	6.35	SD	.7500	.2500	2.5000	12142
.3125	5/16	7.94	SD	.8125	.3125	2.5000	12144
.3750	3/8	9.53	SD	1.0000	.3750	2.5000	12146
.4375	7/16	11.11	SD	1.0000	.4375	2.7500	12147
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	12148

# END MILLS



SQUARE



FLUTE

CENTER CUTTING



# 3261 Tapered Mill (Ball End)

Titanium Super Alloys Hardened Steels >48HRC Stainless Steels Steels Cast Iron Brass & Copper High Si Al >10% Low Si Al <10% General Purpose



**Basic Information:**

- Ball End
- 2 Straight Flutes
  - Right Hand Cut
- Center Cutting
- Standard Length
- Standard Uncoated and TiAlN Coating
- Inch Based Tools
- Dura Carb (Micrograin)

**Tolerance:**

- Shank Diameter: h6
- Cutter Diameter:
 

+.0005"	-.0005"	<i>on Nose Radius</i>
+0.02mm	-0.02mm	<i>on Nose Radius</i>



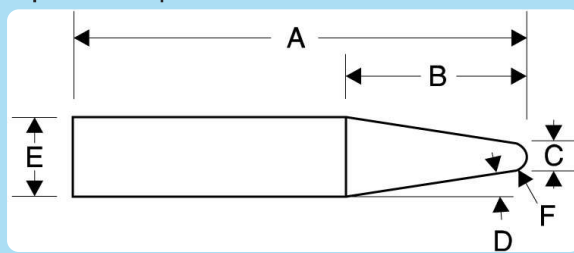
BALL



Cutting Diameter			Tool Length Style	Cutting Length	Shank Diameter	Overall Length	Included Angle	EDP Number	
Inch	Fractional	Millimeter						UC	TiAlN
.1250	1/8	3.18	SD	.3125	.1250	1.5000	14°	32600	38772
.1562	5/32	3.97	SD	.3125	.1562	2.0000	14°	32601	38773
.1875	3/16	4.76	SD	.3750	.1875	2.0000	14°	32602	38774
.2500	1/4	6.35	SD	.5000	.2500	2.5000	14°	32603	38775
.3125	5/16	7.94	SD	.6250	.3125	2.5000	14°	32604	38776
.3750	3/8	9.53	SD	.7500	.3750	2.5000	14°	32605	38777
.4375	7/16	11.11	SD	.8750	.4375	2.7500	14°	32606	38778
.5000	1/2	12.70	SD	1.0000	.5000	3.0000	14°	32607	38779

**SPECIAL TAPERED END MILLS**

Special cutters are available for quote. Use this diagram for your specific requirements.



- A—Overall Length
  - B—Approximate Flute Length
  - C—Nose Diameter
  - D—Center Line Angle
  - E—Shank Diameter
  - F—Square or Nose Radius
- Include Style of Flute