



Bass Tool & Supply, Inc.

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PROMOTIONS 2025

PROMOTION VALID TILL 03/31/2025



SAVE
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TAPS



SAVE 55% on
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THREAD
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MultiDRILL™

- Advanced flute profile designed to enhance chip evacuation of varying materials.
- Radius cutting edge for high shearing action
- Self centering
- Unique TiAlN-T63 tool coating for heat and wear resistance
- Double margin
- Coolant holes
- m7 Tolerance on cutting diameter
- h6 Tolerance on shank diameter



3xD **5xD** **8xD**

COOLANT FED - TIALN-T63 COATING

DEC.	Size (D)		d	3xD						5xD						8xD					
	INCH	mm		I1 mm	I2 mm	Part #	I1 mm	I2 mm	Part #	I1 mm	I2 mm	Part #	I1 mm	I2 mm	Part #	I1 mm	I2 mm	Part #			
0.1181		3.000	6	62	20	TA219744.0300	66	28	TA219744.0300	78	38	TA229744.0300									
0.1220		3.100	6	62	20	TA219744.0310	66	28	TA219744.0310	78	38	TA229744.0310									
0.1240		3.150	6	62	20	TA219744.0315	66	28	TA219744.0315	78	38	TA229744.0315									
0.1250	1/8"	3.175	6	62	20	TA219744.0318	66	28	TA219744.0318	78	38	TA229744.0318									
0.1260		3.200	6	62	20	TA219744.0320	66	28	TA219744.0320	78	38	TA229744.0320									
0.1288		3.220	6	62	20	TA219744.0322	66	28	TA219744.0322	78	38	TA229744.0322									
0.1280		3.250	6	62	20	TA219744.0325	66	28	TA219744.0325	78	38	TA229744.0325									
0.1299		3.300	6	62	20	TA219744.0330	66	28	TA219744.0330	78	38	TA229744.0330									
0.1319		3.350	6	62	20	TA219744.0335	66	28	TA219744.0335	78	38	TA229744.0335									
0.1331		3.380	6	62	20	TA219744.0338	66	28	TA219744.0338	78	38	TA229744.0338									
0.1339		3.400	6	62	20	TA219744.0340	66	28	TA219744.0340	78	38	TA229744.0340									
0.1378		3.500	6	62	20	TA219744.0350	66	28	TA219744.0350	78	38	TA229744.0350									
0.1406	9/64"	3.571	6	62	20	TA219744.0357	66	28	TA219744.0357	78	38	TA229744.0357									
0.1417		3.600	6	62	20	TA219744.0360	66	28	TA219744.0360	78	38	TA229744.0360									
0.1437		3.650	6	62	20	TA219744.0365	66	28	TA219744.0365	78	38	TA229744.0365									
0.1457		3.700	6	62	20	TA219744.0370	66	28	TA219744.0370	78	38	TA229744.0370									
0.1496	#25	3.800	6	66	24	TA219744.0380	74	36	TA219744.0380	88	48	TA229744.0380									
0.1516		3.850	6	66	24	TA219744.0385	74	36	TA219744.0385	88	48	TA229744.0385									
0.1528		3.880	6	66	24	TA219744.0388	74	36	TA219744.0388	88	48	TA229744.0388									
0.1535		3.900	6	66	24	TA219744.0390	74	36	TA219744.0390	88	48	TA229744.0390									
0.1563	5/32"	3.970	6	66	24	TA219744.0397	74	36	TA219744.0397	88	48	TA229744.0397									
0.1575		4.000	6	66	24	TA219744.0400	74	36	TA219744.0400	88	48	TA229744.0400									
0.1590	#21	4.038	6	66	24	TA219744.0404	74	36	TA219744.0404	88	48	TA229744.0404									
0.1614		4.100	6	66	24	TA219744.0410	74	36	TA219744.0410	88	48	TA229744.0410									
0.1634		4.150	6	66	24	TA219744.0415	74	36	TA219744.0415	88	48	TA229744.0415									
0.1654		4.200	6	66	24	TA219744.0420	74	36	TA219744.0420	88	48	TA229744.0420									
0.1693	#18	4.300	6	66	24	TA219744.0430	74	36	TA219744.0430	88	48	TA229744.0430									
0.1713		4.350	6	66	24	TA219744.0435	74	36	TA219744.0435	88	48	TA229744.0435									
0.1719	11/64"	4.366	6	66	24	TA219744.0437	74	36	TA219744.0437	88	48	TA229744.0437									
0.1732		4.400	6	66	24	TA219744.0440	74	36	TA219744.0440	88	48	TA229744.0440									
0.1752		4.450	6	66	24	TA219744.0445	74	36	TA219744.0445	88	48	TA229744.0445									
0.1772		4.500	6	66	24	TA219744.0450	74	36	TA219744.0450	88	48	TA229744.0450									
0.1811		4.600	6	66	24	TA219744.0460	74	36	TA219744.0460	88	48	TA229744.0460									
0.1831		4.650	6	66	24	TA219744.0465	74	36	TA219744.0465	88	48	TA229744.0465									
0.1850	#13	4.700	6	66	24	TA219744.0470	74	36	TA219744.0470	88	48	TA229744.0470									
0.1875	3/16"	4.763	6	66	28	TA219744.0476	82	44	TA219744.0476	97	60	TA229744.0476									
0.1890	#12	4.800	6	66	28	TA219744.0480	82	44	TA219744.0480	97	60	TA229744.0480									
0.1929		4.900	6	66	28	TA219744.0490	82	44	TA219744.0490	97	60	TA229744.0490									
0.1969		5.000	6	66	28	TA219744.0500	82	44	TA219744.0500	97	60	TA229744.0500									
0.2008		5.100	6	66	28	TA219744.0510	82	44	TA219744.0510	97	60	TA229744.0510									
0.2010	#7	5.106	6	66	28	TA219744.0511	82	44	TA219744.0511	97	60	TA229744.0511									
0.2031	13/64"	5.159	6	66	28	TA219744.0516	82	44	TA219744.0516	97	60	TA229744.0516									
0.2047		5.200	6	66	28	TA219744.0520	82	44	TA219744.0520	97	60	TA229744.0520									
0.2087		5.300	6	66	28	TA219744.0530	82	44	TA219744.0530	97	60	TA229744.0530									
0.2126		5.400	6	66	28	TA219744.0540	82	44	TA219744.0540	97	60	TA229744.0540									
0.2130	#3	5.410	6	66	28	TA219744.0541	82	44	TA219744.0541	97	60	TA229744.0541									
0.2165		5.500	6	66	28	TA219744.0550	82	44	TA219744.0550	97	60	TA229744.0550									
0.2187	7/32"	5.566	6	66	28	TA219744.0556	82	44	TA219744.0556	97	60	TA229744.0556									
0.2205		5.600	6	66	28	TA219744.0560	82	44	TA219744.0560	97	60	TA229744.0560									
0.2244		5.700	6	66	28	TA219744.0570	82	44	TA219744.0570	97	60	TA229744.0570									
0.2284		5.800	6	66	28	TA219744.0575	82	44	TA219744.0575	97	60	TA229744.0575									
0.2353		5.750	6	66	28	TA219744.0580	82	44	TA219744.0580	97	60	TA229744.0580									
0.2323		5.900	6	66	28	TA219744.0590	82	44	TA219744.0590	97	60	TA229744.0590									
0.2344	15/64"	5.954	6	66	28	TA219744.0595	82	44	TA219744.0595	97	60	TA229744.0595									
0.2362		6.000	6	66	28	TA219744.0600	82	44	TA219744.0600	97	60	TA229744.0600									
0.2402		6.100	8	79	34	TA219744.0610	91	53	TA219744.0610	107	70	TA229744.0610									
0.2441		6.200	8	79	34	TA219744.0620	91	53	TA219744.0620	107	70	TA229744.0620									
0.2480		6.300	8	79	34	TA219744.0630	91	53	TA219744.0630	107	70	TA229744.0630									
0.2500	1/4", E	6.350	8	79	34	TA219744.0635	91	53	TA219744.0635	107	70	TA229744.0635									
0.2520		6.400	8	79	34	TA219744.0640	91	53	TA219744.0640	107	70	TA229744.0640									
0.2559		6.500	8	79	34	TA219744.0650	91	53	TA219744.0650	107	70	TA229744.0650									
0.2570	F	6.528	8	79	34	TA219744.0653	91	53	TA219744.0653	107	70	TA229744.0653									
0.2598		6.600	8	79	34	TA219744.0660	91	53	TA219744.0660	107	70	TA229744.0660									
0.2638		6.700	8	79	34	TA219744.0670	91	53	TA219744.0670	107	70	TA229744.0670									
0.2656	17/64"	6.746	8	79	34	TA219744.0675	91	53	TA219744.0675	107	70	TA229744.0675									
0.2677		6.800	8	79	34	TA219744.0680	91	53	TA219744.0680	107	70	TA229744.0680									
0.2717		6.900	8	79	34	TA219744.0690	91	53	TA219744.0690	107	70	TA229744.0690									
0.2756		7.000	8	79	34	TA219744.0700	91	53	TA219744.0700	107	70	TA229744.0700									
0.2795		7.100	8	79	41	TA219744.0710	91	53	TA219744.0710	117	80	TA229744.0710									
0.2813	9/32", K	7.145	8	79	41	TA219744.0715	91	53	TA219744.0715	117	80	TA229744.0715									
0.2835		7.200	8	79	41	TA219744.0720	91	53	TA219744.0720	117	80	TA229744.0720									
0.2854		7.250	8	79	41	TA219744.0725	91	53	TA219744.0725	117	80	TA229744.0725									
0.2874		7.300	8	79	41	TA219744.0730	91	53	TA219744.0730	117	80	TA229744.0730									
0.2913		7.400	8	79	41	TA219744.0740	91	53	TA219744.0740	117	80	TA229744.07									



COBALT HIGH PERFORMANCE TAPS (FOR USE IN ALL MATERIALS)

- STAINLESS STEEL
- CARBON STEEL
- ALLOYED STEEL
- ALUMINUM
- COPPER, BRASS & BRONZE
- CAST IRON



- Inch Taps Handle 2B & 3B Class
- Metric Taps Handle 6H Class
- All taps are made with Emuge's trademark long shanks- DIN length for extra reach
- HSS-E (Proprietary to Emuge)
- Nitrided with NE2 Surface Treatment (Steam Oxide) or TiCN Coated

SPIRAL POINT - DIN LENGTH FOR THRU HOLES



INCH SIZES - DIN LENGTH - ANSI SHANK

- Inch taps handle 2B and 3B classes of fit
- CHAMFER: 4-5 threads (Plug)

SIZE	OAL (mm)	SHANK DIA.	Ne2 COATED	TiCN COATED
4-40	56	0.141	BU4973005003	BU4993005003
4-48			BU4973005037	BU4993005037
5-40			BU4973005004	BU4993005004
5-44			BU4973005038	BU4993005038
6-32			BU4973005005	BU4993005005
6-40			BU4973005039	BU4993005039
8-32	63	0.168	BU4973005006	BU4993005006
8-36			BU4973005040	BU4993005040
10-24	70	0.194	BU4973005007	BU4993005007
10-32			BU4973005041	BU4993005041
12-24	80	0.220	BU4973005008	BU4993005008
12-28			BU4973005042	BU4993005042
1/4-20		0.255	BU4973005009	BU4993005009
1/4-28			BU4973005043	BU4993005043
5/16-18	90	0.318	BU4973005010	BU4993005010
5/16-24			BU4973005044	BU4993005044
3/8-16	0.381	0.381	BU4973005011	BU4993005011
3/8-24			BU4973005045	BU4993005045
7/16-14	0.323	0.323	CU4993005012	CU4993005012
7/16-20			CU4993005046	CU4993005046
1/2-13	100	0.367	CU4973005013	CU4993005013
1/2-20			CU4973005047	CU4993005047
9/16-12		0.429	CU4973005014	CU4993005014
9/16-18			CU4973005048	CU4993005048
5/8-11	0.480	0.480	CU4973005015	CU4993005015
5/8-18			CU4973005049	CU4993005049
3/4-10	110	0.590	CU4973005016	CU4993005016
3/4-16			CU4973005050	CU4993005050
7/8-9	125	0.697	CU4973005017	CU4993005017
7/8-14			CU4973005051	CU4993005051
1"-8	140	0.800	CU4973005018	CU4993005018
1"-12			CU4973005052	CU4993005052

METRIC SIZES - DIN LENGTH - DIN SHANK

- Metric taps handle 6H class of fit
- CHAMFER: 4-5 THREADS (Plug)

SIZE	OAL (mm)	SHANK DIA.	Ne2 COATED	TiCN COATED
M4X0.7	63	4.5	B15773000040	B15793000040
M5X0.8	70	6.0	B15773000050	B15793000050
M6X1.0	80	6.0	B15773000060	B15793000060
M8X1.25	90	8.0	B15773000080	B15793000080
M10X1.5	100	10.0	B15773000100	B15793000100
M12X1.75	110	9.0	C15773000112	C15793000112
M16X2.0	110	12.0	C15773000116	C15793000116
M18X2.5	125	14.0	C15773000118	C15793000118
M20X2.5	140	16.0	C15773000120	C15793000120
M24X3.0	160	18.0	C15773000124	C15793000124

METRIC SIZES - DIN LENGTH - ANSI SHANK

- Metric taps handle 6H class of fit
- CHAMFER: 4-5 THREADS (Plug)

SIZE	OAL (mm)	SHANK DIA.	Ne2 COATED	TiCN COATED
M4X0.7	63	0.168	BU4973000040	BU4993000040
M5X0.8	70	0.194	BU4973000050	BU4993000050
M6X1.0	80	0.255	BU4973000060	BU4993000060
M8X1.25	90	0.318	BU4973000080	BU4993000080
M10X1.5	100	0.381	BU4973000100	BU4993000100
M12X1.75	110	0.367	CU4973000112	CU4993000112
M16X2.0	110	0.480	CU4973000116	CU4993000116
M18X2.5	125	0.542	CU4973000118	CU4993000118
M20X2.5	140	0.652	CU4973000120	CU4993000120
M24X3.0	160	0.760	CU4973000124	CU4993000124

SPIRAL FLUTE - DIN LENGTH FOR BOTTOMING HOLES



INCH SIZES - DIN LENGTH - ANSI SHANK

- Inch taps handle 2B and 3B classes of fit
- CHAMFER: 2-3 threads (Modified Bottoming)

SIZE	OAL (mm)	SHANK DIA.	Ne2 COATED	TiCN COATED
4-40	56	0.141	BU5332005003	BU5393005003
4-48			BU5332005037	BU5393005037
5-40			BU5332005004	BU5393005004
5-44			BU5332005038	BU5393005038
6-32			BU5332005005	BU5393005005
6-40			BU5332005039	BU5393005039
8-32	63	0.168	BU5332005006	BU5393005006
8-36			BU5332005040	BU5393005040
10-24	70	0.194	BU5332005007	BU5393005007
10-32			BU5332005041	BU5393005041
12-24	80	0.220	BU5332005008	BU5393005008
12-28			BU5332005042	BU5393005042
1/4-20		0.255	BU5332005009	BU5393005009
1/4-28			BU5332005043	BU5393005043
5/16-18	90	0.318	BU5332005010	BU5393005010
5/16-24			BU5332005044	BU5393005044
3/8-16	0.381	0.381	BU5332005011	BU5393005011
3/8-24			BU5332005045	BU5393005045
7/16-14	0.323	0.323	CU5332005012	CU5393005012
7/16-20			CU5332005046	CU5393005046
1/2-13	100	0.367	CU5332005013	CU5393005013
1/2-20			CU5332005047	CU5393005047
9/16-12		0.429	CU5332005014	CU5393005014
9/16-18			CU5332005048	CU5393005048
5/8-11	0.480	0.480	CU5332005015	CU5393005015
5/8-18			CU5332005049	CU5393005049
3/4-10	110	0.590	CU5332005016	CU5393005016
3/4-16			CU5332005050	CU5393005050
7/8-9	125	0.697	CU5332005017	CU5393005017
7/8-14			CU5332005051	CU5393005051
1"-8	140	0.800	CU5332005018	CU5393005018
1"-12			CU5332005052	CU5393005052

METRIC SIZES - DIN LENGTH - DIN SHANK

- Metric taps handle 6H class of fit
- CHAMFER: 2-3 THREADS (Modified Bottoming)

SIZE	OAL (mm)	SHANK DIA.	Ne2 COATED	TiCN COATED
M4x0.7	63	4.5	B49332000040	B49393000040
M5x0.8	70	6.0	B49332000050	B49393000050
M6x1.0	80	6.0	B49332000060	B49393000060
M8x1.25	90	8.0	B49332000080	B49393000080
M10x1.5	100	10.0	B49332000100	B49393000100
M12x1.75	110	9.0	C49332000112	C49393000112
M16x2.0	110	12.0	C49332000116	C49393000116
M18x2.5	125	14.0	C49332000118	C49393000118
M20x2.5	140	16.0	C49332000120	C49393000120
M24x3.0	160	18.0	C49332000124	C49393000124

METRIC SIZES - DIN LENGTH - ANSI SHANK

- Metric taps handle 6H class of fit
- CHAMFER: 2-3 THREADS (Modified Bottoming)

SIZE	OAL (mm)	SHANK DIA.	Ne2 COATED	TiCN COATED
M4x0.7	63	0.168	BU5332000040	BU5393000040
M5x0.8	70	0.194	BU5332000050	BU5393000050
M6x1.0	80	0.255	BU5332000060	BU5393000060
M8x1.25	90	0.318	BU5332000080	BU5393000080
M10x1.5	100	0.381	BU5332000100	BU5393000100
M12x1.75	110	0.367	CU5332000112	CU5393000112
M16x2.0	110	0.480	CU5332000116	CU5393000116
M18x2.5	125	0.542	CU5332000118	CU5393000118
M20x2.5	140	0.652	CU5332000120	CU5393000120
M24x3.0	160	0.760	CU5332000124	CU5393000124

MultiTAP-Form

FORM (FLUTELESS) TAPS FOR USE IN ALL MATERIALS

MultiTAP-Form lasted 3x longer than regular form taps

- TiN coated (For TiCN coated, see next page)
- Constructed of a proprietary grade of Cobalt and TiN coated for exceptionally long life and versatility
- Short chamfer lead of 1.5-2 pitch, ideal for bottom tapping
- Lubrication grooves allow coolant flow-to-form action, ideal for holes with long thread length
- **Form both 2B and 3B threads with the same tap**, eliminating the guesswork of calculating H-limits
- All taps made with Emuge's trademark long shanks-DIN length for extra reach. UNC and UNF metric taps are DIN length-DIN shanks



INCH SIZES

SIZE	OAL (mm)	SHANK DIA.	TIN PART #
4-40	56	0.141	BU5914105003
4-48			BU5914105037
5-40			BU5914105004
5-44			BU5914105038
6-32			BU5914105005
6-40			BU5914105039
8-32	63	0.168	BU5914105006
8-36			BU5914105040
10-24	70	0.194	BU5914105007
10-32			BU5914105041
12-24	80	0.220	BU5914105008
12-28			BU5914105042
1/4-20		0.255	BU5914105009
1/4-28			BU5914105043
5/16-18	90	0.318	BU5914105010
5/16-24			BU5914105044
3/8-16	100	0.381	BU5914105011
3/8-24			BU5914105045
7/16-14	0.323	0.323	CU0314105012
7/16-20			CU0314105046
1/2-13	110	0.367	CU0314105013
1/2-20			CU0314105047

METRIC SIZES

SIZE	OAL (mm)	SHANK DIA.	TIN PART #
M2X0.4	45	0.110	B59914000020
M3X0.5	56	0.138	B59914000030
M4X0.7	63	0.168	B59914000040
M5X0.8	70	0.194	B59914000050
M6X1.0	80	0.255	B59914000060
M8X1.25	90	0.318	B59914000080
M10X1.5	100	0.381	B59914000100



IS GUARANTEED!

PUT IT TO THE TEST YOURSELF:

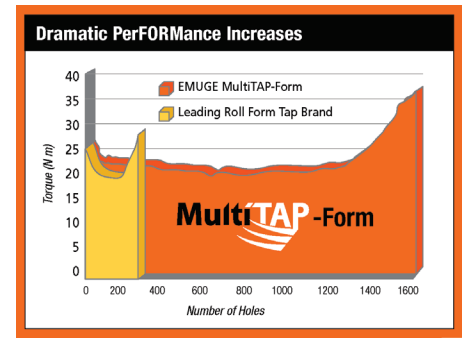
If MultiTAP doesn't outperform your current taps in a range of common materials, Emuge will refund your money.

See MultiTAP in action online at: www.emuge.com/multitap

MultiTAP		
Main Group	Sub-Group	Example
Aluminum	Casting	356T6, 380, 390, 6061, 7075
		Grey Iron G10,GG25,GG30
Cast Iron	High Strength	Nodular, Ductile
		Carbon, all grades 1010, 1018, 1045
Steel	Free Cutting	1214, 1215
		Constructural A36, T1 plate
	Alloyed	4140, 4130, 8620
		Cast, or forged
Tool/ Mold/ Die	D2, S7, P20, H13	
		Austenitic 303,304,316
Stainless Steel	Ferritic	405,409,430
		Martensitic 416,420,440
Copper	Zinc Alloy	Brass
		Tin Alloy

MultiTAP-Form*		
Main Group	Sub-Group	Example
Aluminum	Casting	356T6, 380, 390, 6061, 7075
		Carbon, all grades 1010, 1018, 1045
Steel	Free Cutting	1214, 1215
		Constructural A36, T1 plate
	Alloyed	4140, 4130, 8620
		Cast, or forged
Tool/ Mold/ Die	D2, S7, P20, H13	
		Austenitic 303,304,316
Stainless Steel	Ferritic	405,409,430
		Martensitic 416,420,440
Copper	Zinc Alloy	Brass
		Tin Alloy

*Also ideal in a wide range of plastics and composites





COBALT HIGH PERFORMANCE TAPS (FOR USE IN ALL MATERIALS)

- STAINLESS STEEL
- CARBON STEEL
- ALLOYED STEEL
- ALUMINUM
- COPPER, BRASS & BRONZE
- CAST IRON



- Inch Taps Handle 2B & 3B Class
- Metric Taps Handle 6H Class
- All taps are made with Emuge's trademark long shanks- DIN length for extra reach
- HSS-E (Proprietary to Emuge)
- Nitrided with NE2 Surface Treatment (Steam Oxide) or TiCN Coated

EXTENDED LENGTH - STEAM OXIDE

$l_2 \approx 10 \times P$



SPIRAL POINT PLUG TAPS

UNC - PLUG STYLE - 2B/3B Class of Fit			PART #	
SIZE	OAL (in)	SHANK DIA. (in)	NT2 Coated	TiCN Coated
#6-32	4.409	0.141	BU7973005005	BU7993005005
#8-32	4.921	0.168	BU7973005006	BU7993005006
#10-24	5.512	0.194	BU7973005007	BU7993005007
1/4-20	6.299	0.255	BU7973005009	BU7993005009
5/16-18	7.087	0.318	BU7973005010	BU7993005010
3/8-16	7.874	0.381	BU7973005011	BU7993005011
7/16-14	7.874	0.323	CU7973005012	CU7993005012
1/2-13	8.819	0.367	CU7973005013	CU7993005013
5/8-11	8.819	0.480	CU7973005015	CU7993005015

UNF - PLUG STYLE - 2B/3B Class of Fit			PART #	
SIZE	OAL (in)	SHANK DIA. (in)	NT2 Coated	TiCN Coated
#6-40	4.409	0.141	BU7973005039	BU7993005039
#8-36	4.921	0.168	BU7973005040	BU7993005040
#10-32	5.512	0.194	BU7973005041	BU7993005041
1/4-28	6.299	0.255	BU7973005043	BU7993005043
5/16-24	7.087	0.318	BU7973005044	BU7993005044
3/8-24	7.087	0.381	BU7973005045	BU7993005045
7/16-20	7.874	0.323	CU7973005046	CU7993005046
1/2-20	7.874	0.367	CU7973005047	CU7993005047
5/8-18	7.874	0.480	CU7973005049	CU7993005049

METRIC COARSE - PLUG STYLE - 6H Class of Fit			PART #	
SIZE	OAL (mm)	SHANK DIA. (mm)	NT2 Coated	TiCN Coated
M3 x 0.5	100	3.5	B16673000030	B16693000030
M4 x 0.7	125	4.5	B16673000040	B16693000040
M5 x 0.8	140	6.0	B16673000050	B16693000050
M6 x 1.0	160	6.0	B16673000060	B16693000060
M8 x 1.25	180	8.0	B16673000080	B16693000080
M10 x 1.5	200	7.0	C16673000100	C16693000100
M12 x 1.75	224	9.0	C16673000112	C16693000112
M14 x 2.0	224	11.0	C16673000114	C16693000114
M16 x 2.0	224	12.0	C16673000116	C16693000116
M18 x 2.5	250	14.0	C16673000118	C16693000118
M20 x 2.5	280	16.0	C16673000120	C16693000120

SPIRAL FLUTE - SEMI BOTTOMING (2-3 T. CHAMFER)

UNC - SEMI-BOTTOMING - 2B/3B Class of Fit			PART #	
SIZE	OAL (in)	SHANK DIA. (in)	Ne2 Coated	TiCN Coated
#6-32	4.409	0.141	BU7832005005	BU7893005005
#8-32	4.921	0.168	BU7832005006	BU7893005006
#10-24	5.512	0.194	BU7832005007	BU7893005007
1/4-20	6.299	0.255	BU7832005009	BU7893005009
5/16-18	7.087	0.318	BU7832005010	BU7893005010
3/8-16	7.087	0.381	BU7832005011	BU7893005011
7/16-14	7.874	0.323	CU7832005012	CU7893005012
1/2-13	8.819	0.367	CU7832005013	CU7893005013
5/8-11	8.819	0.480	CU7832005015	CU7893005015

UNF - SEMI-BOTTOMING - 2B/3B Class of Fit			PART #	
SIZE	OAL (in)	SHANK DIA. (in)	Ne2 Coated	TiCN Coated
#6-40	4.409	0.141	BU7832005039	BU7893005039
#8-36	4.921	0.168	BU7832005040	BU7893005040
#10-32	5.512	0.194	BU7832005041	BU7893005041
1/4-28	6.299	0.255	BU7832005043	BU7893005043
5/16-24	7.087	0.318	BU7832005044	BU7893005044
3/8-24	7.087	0.381	BU7832005045	BU7893005045
7/16-20	7.874	0.323	CU7832005046	CU7893005046
1/2-20	7.874	0.367	CU7832005047	CU7893005047
5/8-18	7.874	0.480	CU7832005049	CU7893005049

METRIC COARSE - SEMI-BOTTOMING - 6H Class of Fit			PART #	
SIZE	OAL (mm)	SHANK DIA. (mm)	Ne2 Coated	TiCN Coated
M3 x 0.5	100	3.5	B58632000030	B58693000030
M4 x 0.7	125	4.5	B58632000040	B58693000040
M5 x 0.8	140	6.0	B58632000050	B58693000050
M6 x 1.0	160	6.0	B58632000060	B58693000060
M8 x 1.25	180	8.0	B58632000080	B58693000080
M10 x 1.5	200	7.0	C58632000100	C58693000100
M12 x 1.75	224	9.0	C58632000112	C58693000112
M14 x 2.0	224	11.0	C58632000114	C58693000114
M16 x 2.0	224	12.0	C58632000116	C58693000116
M18 x 2.5	250	14.0	C58632000118	C58693000118
M20 x 2.5	280	16.0	C58632000120	C58693000120

ROLL FORM (FLUTELESS) TAPS

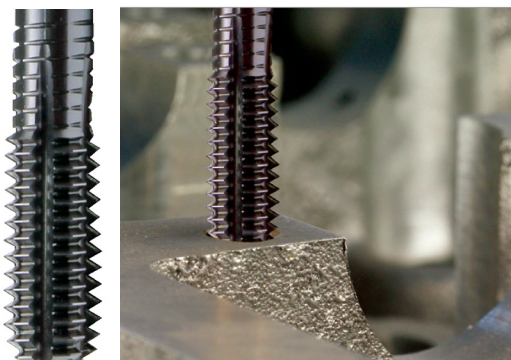
- TiCN COATED



Making threads without chips has advantages:

- Excellent thread surface quality
- No risk of poor threads due to axial "miscutting"
- Increased static and dynamic strength of thread
- Elevated tapping speeds are possible

MultiTAP-Form - NEW TiCN COATED - 2B/3B class of fit							
DIN/ANSI			TiCN COATED	DIN/ANSI			TiCN COATED
SIZE	OAL (in)	SHANK DIA. (in)	PART #	SIZE	OAL (in)	SHANK DIA (in)	PART #
#4-40 UNC	2.205	0.141	BU5990105003	#12-28 UNF	3.150	0.220	BU5990105042
#5-40 UNC	2.205	0.141	BU5990105004	1/4-28 UNF	3.150	0.255	BU5990105043
#6-32 UNC	2.205	0.141	BU5990105005	5/16-24 UNF	3.543	0.318	BU5990105044
#8-32 UNC	2.480	0.168	BU5990105006	3/8-24 UNF	3.937	0.381	BU5990105045
#10-24 UNC	2.756	0.194	BU5990105007	7/16-20 UNF	3.937	0.323	CU0390105046
#12-24 UNC	3.150	0.220	BU5990105008	1/2-20 UNF	4.330	0.367	CU0390105047
1/4-20 UNC	3.150	0.255	BU5990105009	METRIC - DIN/DIN - TiCN COATED - 6H class of fit			
5/16-18 UNC	3.543	0.318	BU5990105010	SIZE	OAL (mm)	SHANK DIA. (mm)	PART #
3/8-16 UNC	3.937	0.381	BU5990105011	M2X0.4	45	2.8	B59990000020
7/16-14 UNC	3.937	0.323	CU0390105012	M3X0.5	56	3.5	B59990000030
1/2-13 UNC	4.330	0.367	CU0390105013	M4X0.7	63	4.5	B59990000040
#4-48 UNF	2.205	0.141	BU5914105037	M5X0.8	70	6.0	B59990000050
#5-44 UNF	2.205	0.141	BU5914105038	M6X1.0	80	6.0	B59990000060
#6-40 UNF	2.205	0.141	BU5914105039	M8X1.25	90	8.0	B59990000080
#8-36 UNF	2.480	0.168	BU5914105040	M10X1.5	100	10.0	B59990000100
#10-32 UNF	2.756	0.194	BU5914105041				





PIPE TAPS - COBALT HIGH PERFORMANCE

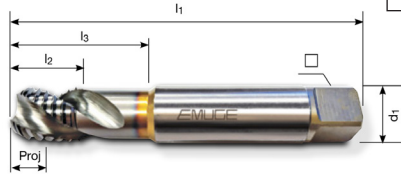
(FOR USE IN ALL MATERIALS)

WITH INTERRUPTED THREAD

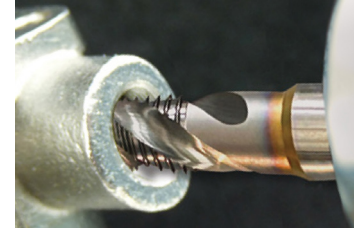
TAPERED PIPE TAPS

• INTERRUPTED THREAD

- Semi-Bottoming Chamfer • TiCN Coated



- Interrupted thread profile helps reduce cutting forces
- EMUGE standard thread length is optimized to reduce cycle time and increase tool life
- Premium HSSE base tool substrate
- EMUGE's own TiCN-PVD coating for extended tool life
- C-style semi-bottoming chamfer length of 2-3 teeth
- Optimized flute helix angle to meet the needs of NPT and NPTF thread profiles
- Right Hand 35° helix for NPT pipe taps
- Right Hand 15° helix for NPTF pipe taps

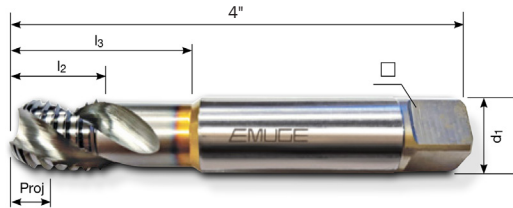


SIZE	# FLUTES	OVERALL LENGTH (in)	THREAD LENGTH (in)	NECK LENGTH (in)	SHANK DIA. (in)	SQUARE WIDTH	PROJECTION LENGTH (Proj)	PROJECTION LENGTH (Proj)	NPT	NPTF
		l_1	l_2	l_3	d_1		NPT	NPTF	PART #	PART #
1/16-27	3	3.543	0.512	0.984	0.3125	0.234	0.1943	0.2258	BU8793005763	BU8493005782
1/8-27 (small shank)	3	3.543	0.512	-	0.3125	0.234	0.1968	0.2243	CU8793005764	CU8493005783
1/8-27 (large shank)	3	3.543	0.512	1.024	0.4375	0.328	0.1968	0.2243	BU8793005764	BU8493005783
1/4-18	3	3.937	0.770	1.479	0.5625	0.421	0.2919	0.3352	BU8793005765	BU8493005784
3/8-18	3	3.937	0.770	1.479	0.7000	0.531	0.2915	0.3348	BU8793005766	BU8493005785
1/2-14	5	4.921	0.980	-	0.6875	0.515	0.3729	0.4280	CU8793005767	CU8493005786
3/4-14	5	5.511	1.020	-	0.9063	0.679	0.3736	0.4287	CU8793005768	CU8493005787
1" -11.1/2	5	6.299	1.260	-	1.1250	0.843	0.4543	0.5213	CU8793005769	CU8493005788

TAPERED PIPE TAPS - OVERALL LENGTH 4"

4" LONG

- INTERRUPTED THREAD
- Semi-Bottoming Chamfer • TiCN Coated



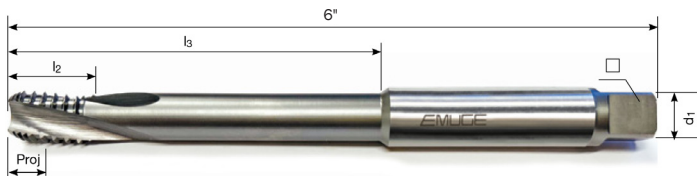
SIZE	# FLUTES	THREAD LENGTH (in)	NECK LENGTH (in)	SHANK DIA. (in)	SQUARE WIDTH	NPT	NPTF
		l_2	l_3	d_1		PART #	PART #
1/16-27	3	0.512	1.457	0.3125	0.234	BU8893005763	BU8593005782
1/8-27 *	3	0.512	-	0.3125	0.234	CU8893005764	CU8593005783
1/8-27 **	3	0.512	1.142	0.4375	0.328	BU8893005764	BU8593005783
1/4-18	3	0.770	1.557	0.5625	0.421	BU8893005765	BU8593005784
3/8-18	3	0.770	1.557	0.7000	0.531	BU8893005766	BU8593005785
1/2-14	5	0.980	-	0.6875	0.515	CU8893005767	CU8593005786
3/4-14	5	1.020	-	0.9063	0.679	CU8893005768	CU8593005787
1" -11.1/2	5	1.260	-	1.1250	0.843	CU8893005769	CU8593005788

* SMALL SHANK ** LARGE SHANK

TAPERED PIPE TAPS - OVERALL LENGTH 6"

6" LONG

- INTERRUPTED THREAD
- Semi-Bottoming Chamfer • TiCN Coated



SIZE	# FLUTES	THREAD LENGTH (in)	NECK LENGTH (in)	SHANK DIA. (in)	SQUARE WIDTH	NPT	NPTF
		l_2	l_3	d_1		PART #	PART #
1/16-27	3	0.512	3.465	0.3125	0.234	BU8893005763	BU8693005782
1/8-27 *	3	0.512	-	0.3125	0.234	CU8893005764	CU8693005783
1/8-27 **	3	0.512	3.268	0.4375	0.328	BU8893005764	BU8693005783
1/4-18	3	0.770	3.526	0.5625	0.421	BU8893005765	BU8693005784
3/8-18	3	0.770	3.329	0.7000	0.531	BU8893005766	BU8693005785
1/2-14	5	0.980	-	0.6875	0.515	CU8893005767	CU8693005786
3/4-14	5	1.020	-	0.9063	0.679	CU8893005768	CU8693005787
1" -11.1/2	5	1.260	-	1.1250	0.843	CU8893005769	CU8693005788

* SMALL SHANK ** LARGE SHANK

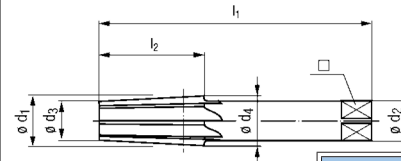
EMUGE NPT/NPTF TAPERED REAMERS



For the preparation of tapered holes

- For tapered pipe threads NPT, NPTF, taper 1:16
- Tapered conical end mills also available (see Part#s 3914A...)

Please note: If needed, the reamers can be fitted to the required hole depth by shortening the cutting part



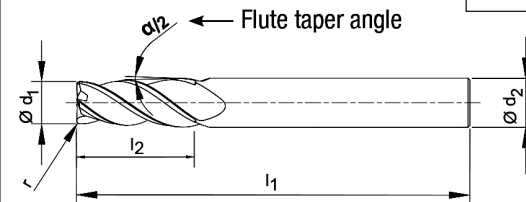
Nominal Size ϕd_1	mm				# Flutes	Flute Characteristics	Part #	Part #
	l_1	l_2	ϕd_2	\square		Left 7°	PART #	PART #
1/16	70	17	6	4.9	6	HSS Extra	G00371755763	G00371655763
1/8	70	17	7	5.5	6	HSS Extra	G00371755764	G00371655764
1/4	80	27	11	9	6		G00371755765	G00371655765
3/8	85	27	12	9	8		G00371755766	G00371655766
1/2	95	35	16	12	8		G00371755767	G00371655767
3/4	105	35	20	16	10		G00371755768	G00371655768
1	130	43	25	20	10		G00371755769	G00371655769
1.1/4	140	44	32	24	12		G00371755770	G00371655770
1.1/2	150	45	36	29	12		G00371755771	G00371655771
2	160	46	45	35	14		G00371755772	G00371655772

NPT/NPTF TAPERED CARBIDE END MILLS

- Premium micro-grain carbide substrate
- Corner radius prevents wear or chipping while prolonging functional tool life
- For internal tapered threads, right-hand (RH)

COATING
TiAlN-T21

SAVE 35%



$d_1/2$	ϕd_2	ϕd_1	l_1	l_2	r	# Flutes	Part #
1° 47'	3/8	0.322	3	7/8	0.020	4	3914A037020
	1/2	0.430	3	1.1/8	0.020	4	3914A050020
	3/4	0.645	4	1.23/32	0.030	4	3914A075030



MultiTHREAD™
MILL

SUB-MICRO GRAIN CARBIDE THREAD MILLS

EMUGE-FRANKEN MultiTHREAD MILL is a cost effective universal thread milling solution for job shop manufacturers.

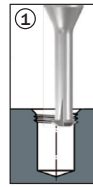
Ideal for job shops where part applications and materials frequently change, MultiTHREAD™ provides a versatile solution for many threading requirements, enabling shops to boost their production and save on costs, as fewer types of thread mills need to be stocked in the tool crib.

MultiTHREAD features a proprietary TIN T21 coating developed by EMUGE and is offered in a complete size and thread style range in either Full Form or Single Plane types.



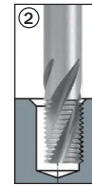
AVAILABLE IN 2 STYLES

- ① SINGLE PLANE (1 TOOTH)
- ② FULL FORM



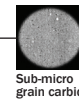
Single Plane

- One tool produces multiple thread sizes
- Pitch diameter can be controlled



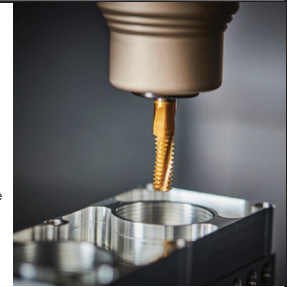
Full Form

- Rigid core diameter reduces deflection
- One cutting rotation saves time



Sub-micro grain carbide

- Superior edge prep process



TIN T21 Coating Reduces chip welding and improves chip evacuation

• FULL FORM - 15° HELIX - TIN 21 COATED - 2xD WITHOUT COOLANT HOLE



SIZE	THREAD SIZE			CUTTER DIA.	CUT LENGTH	# FL	OAL	SHANK DIA.	PART #	
	UNC	UNF	M							
INCH	10	10-24	-	0.136	0.395	3	2.12"	1/4"	GFR151055007	
	1/4	1/4-20	-	0.185	0.524	3	2.12"	1/4"	GFR151055009	
	5/16	5/16-18	-	0.242	0.637	3	2.12"	1/4"	GFR151055010	
	3/8	3/8-16	-	0.301	0.780	3	2.12"	5/16"	GFR151055011	
	7/16	7/16-14	-	0.354	0.891	3	3"	3/8"	GFR151055012	
	1/2	1/2-13	-	0.371	1.036	3	3"	3/8"	GFR151055013	
	5/8	5/8-11	-	0.496	1.316	4	3.34"	1/2"	GFR151055015	
	3/4	3/4-10	-	0.621	1.548	4	4.14"	5/8"	GFR151055016	
	7/8	7/8-9	-	0.621	1.829	4	4.14"	5/8"	GFR151055017	
	1"-8 & 1.1/8-8	1"-8 & 1.1/8-8	-	0.746	2.058	4	4.34"	3/4"	GFR151055018	
METRIC	10	-	10-32	0.150	0.390	3	2.12"	1/4"	GFR151055041	
	1/4	-	1/4-28	0.203	0.517	3	2.12"	1/4"	GFR151055043	
	5/16	-	5/16-24	0.246	0.644	3	2.12"	1/4"	GFR151055044	
	3/8	-	3/8-24	0.309	0.769	3	2.12"	5/16"	GFR151055045	
	7/16	-	7/16-20	0.371	0.874	3	3"	3/8"	GFR151055047	
	1/2	-	1/2-20	0.371	1.023	3	3"	3/8"	GFR151055047	
	3/4	-	3/4-16	0.621	1.530	4	4.14"	5/8"	GFR151055050	
	6	-	-	M6	0.189	0.491	3	2.12"	1/4"	GFR351055060
	8	-	-	M8	0.246	0.663	3	2.12"	1/4"	GFR351055080
	10	-	-	M10	0.309	0.796	3	2.12"	5/16"	GFR351055100
12	-	-	M12	0.371	0.997	3	3"	3/8"	GFR351055112	

• FULL FORM - 15° HELIX - TIN 21 COATED - 2xD WITH COOLANT HOLE



SIZE	THREAD SIZE			CUTTER DIA.	CUT LENGTH	# FL	OAL	SHANK DIA.	PART #	
	UNC	UNF	M							
INCH	1/4	1/4-20	-	0.185	0.524	3	2.12"	1/4"	GFR351055009	
	5/16	5/16-18	-	0.242	0.637	3	2.12"	1/4"	GFR351055010	
	3/8	3/8-16	-	0.301	0.780	3	2.12"	5/16"	GFR351055011	
	7/16	7/16-14	-	0.354	0.891	3	3"	3/8"	GFR351055012	
	1/2	1/2-13	-	0.371	1.036	3	3"	3/8"	GFR351055013	
	5/8	5/8-11	-	0.496	1.316	4	3.34"	1/2"	GFR351055015	
	3/4	3/4-10	-	0.621	1.548	4	4.14"	5/8"	GFR351055016	
	7/8	7/8-9	-	0.621	1.829	4	4.14"	5/8"	GFR351055017	
	1"-8 & 1.1/8-8	1"-8 & 1.1/8-8	-	0.746	2.058	4	4.34"	3/4"	GFR351055018	
	10	-	10-32	0.150	0.390	3	2.12"	1/4"	GFR351055041	
METRIC	6	-	-	M6	0.189	0.491	3	2.12"	1/4"	GFR351055060
	8	-	-	M8	0.246	0.663	3	2.12"	1/4"	GFR351055080
	10	-	-	M10	0.309	0.796	3	2.12"	5/16"	GFR351055100
	12	-	-	M12	0.371	0.997	3	3"	3/8"	GFR351055112
	14	-	-	M14	0.457	1.140	4	3.34"	1/2"	GFR351055116
	16	-	-	M16	0.496	1.280	4	3.34"	1/2"	GFR351055116
	20	-	-	M20	0.621	1.595	4	4.14"	5/8"	GFR351055120



- SINGLE PLANE (1-TOOTH)
- 0° HELIX • TIN 21 COATED
- FULL BOTTOM TREADING TO 1 PITCH



2xD

TOOL SIZE	THREAD SIZE										CUTTER DIA.	CUT LENGTH	# FL	OAL	SHANK DIA.	SHANK TYPE	COOLANT HOLE	PART #
	UNC	UNF	STI UNC	STI UNF	UNEF	UNJC	UNJF	M	MJ									
0	-	0-80	-	-	-	-	0-80	1.6 x .35	1.6 x .35	0.045	0.125	1	1.5/8"	1/8"	HA	NO	GFS137055033	
1	1-64	1-72	-	-	-	1-64	1-72	2 x .4	2 x .4	0.056	0.146	3	1.5/8"	1/8"	HA	NO	GFS237055000	
2	2-56	2-64	1-64	-	-	2-56	2-64	2.5 x .45	2.5 x .45	0.064	0.172	3	1.5/8"	1/8"	HA	NO	GFS237055001	
4	4-40	4-48	2-56	-	-	4-40	4-48	-	-	0.081	0.224	3	1.5/8"	1/8"	HA	NO	GFS237055003	
STI 4	-	4-40	4-48	-	-	-	-	-	-	0.117	0.295	3	1.5/8"	1/8"	HA	NO	GFS237055011	
5	5-40	5-44	-	-	-	5-40	5-44	3 x .5	3 x .5	0.095	0.250	3	1.5/8"	1/8"	HA	NO	GFS237055004	
6	6-32	6-40	-	-	-	6-32	6-40	-	-	0.100	0.276	3	1.5/8"	1/8"	HA	NO	GFS237055005	
STI 6	-	6-32	6-40	-	-	-	-	5 x .8	5 x .8	0.143	0.364	3	2.1/2"	1/4"	HB	NO	GFS231055613	
8	8-32	8-36	-	-	-	8-32	8-36	4 x .7	4 x .7	0.124	0.328	3	1.5/8"	1/8"	HA	NO	GFS237055006	
STI 8	-	8-32	8-36	1/4-32	-	-	-	-	-	0.167	0.415	3	2.1/2"	1/4"	HB	NO	GFS231055614	
10	10-24	10-32	10-24	10-32	-	10-24	10-32	-	-	0.136	0.380	3	2.1/2"	1/4"	HB	NO	GFS231055007	
1/4	1/4-20	1/4-28	1/4-20	1/4-28	5/16-32	1/4-20	1/4-28	6 x 1	6 x 1	0.185	0.500	3	2.1/2"	1/4"	HB	NO	GFS231055009	
5/16	5/16-18	5/16-24	5/16-18	5/16-24	3/8-32	5/16-18	5/16-24	8 x 1.25	8 x 1.25	0.242	0.625	4	2.1/2"	1/4"	HB	YES	GFS331055010	
3/8	3/8-16	3/8-24	3/8-16	3/8-24	7/16-28	3/8-16	3/8-24	10 x 1.5	10 x 1.5	0.301	0.750	5	2.1/2"	5/16"	HB	YES	GFS331055011	
7/16	7/16-14	7/16-20	7/16-14	7/16-20	1/2-28	7/16-14	7/16-20	12 x 1.75	12 x 1.75	0.354	0.875	5	3"	3/8"	HB	YES	GFS331055012	
1/2	1/2-13	1/2-20	1/2-13	1/2-20	5/8-24	1/2-13	1/2-20	14 x 2	14 x 2	0.407	1.000	5	3.3/4"	1/2"	HB	YES	GFS331055013	
5/8	5/8-11	5/8-18	5/8-11	5/8-18	3/4-20	5/8-11	5/8-18	16 x 2	16 x 2	0.512	1.250	5	3.3/4"	1/2"	HB	YES	GFS331055015	
3/4	3/4-10	3/4-16	3/4-10	3/4-16	7/8-20	3/4-10	3/4-16	20 x 2.5	20 x 2.5	0.630	1.500	6	4.1/4"	5/8"	HB	YES	GFS331055016	

3xD

TOOL SIZE	THREAD SIZE					CUTTER DIA.	CUT LENGTH	# FL	OAL	SHANK DIA.	SHANK TYPE	COOLANT HOLE	PART #
	UNC	UNF	STI UNC	STI UNF	M								
2	2-56	2-64	2-56	2-64	M2.2	0.067	0.258	3	1.625	1/8"	HA	NO	GFS837055001
4	4-40	4-48	4-40	4-48	M3	0.085	0.336	3	1.625	1/8"	HA	NO	GFS837055003
6	6-32	6-40	6-32	6-40	M3.5	0.106	0.414	3	1.625	1/8"	HA	NO	GFS837055005
8	8-32	8-36	8-32	8-36	-	0.132	0.492	3	1.750	3/16"	HA	NO	GFS837055006
10	10-24	-	10-24	-	M5	0.146	0.570	3	1.875	3/16"	HA	NO	GFS837055007
1/4	1/4-20	-	1/4-20	-	M6	0.154	0.570	4	1.875	3/16"	HA	NO	GFS837055041
5/16	5/16-18	-	5/16-18	-	M8	0.195	0.750	4	2.375	1/4"	HB	NO	GFS831055009
3/8	3/8-16	-	3/8-16	-	M10	0.207	0.750	4	2.375	1/4"	HB	NO	GFS831055043
7/16	7/16-14	-	7/16-14	-	M12	0.248	0.937	4	2.563	5/16"	HB	YES	GFS831055010
1/2	1/2-13	-	1/2-13	-	M10	0.260	0.937	5	2.563	5/16"	HB	YES	GFS831055044
5/8	5/8-11	-	5/8-11	-	M10	0.303	1.125	5	2.750	5/16"	HB	YES	GFS831055011
3/4	3/4-10	-	3/4-10	-	M12	0.323	1.125	5	2.875	3/8"	HB	YES	GFS831055045
7/8	7/8-9	-	7/8-9	-	M12	0.354	1.312	5	3.125	3/8"	HB	YES	GFS831055012
1	1-8	-	1-8	-	M16	0.376	1.312	5	3.060	3/8"	HB	YES	GFS831055046
1 1/8	1 1/8-8	-	1 1/8-8	-	M16	0.409	1.500	5	3.625	1/2"	HB	YES	GFS831055013
1 1/4	1 1/4-8	-	1 1/4-8	-	M16	0.514	1.875	5	4.125	5/8"	HB	YES	GFS831055015
1 1/2	1 1/2-8	-	1 1/2-8	-	M16	0.630	2.250	6	4.500	5/8"	HB	YES	GFS831055016

MultiTHREAD NPT/NPTF THREAD

NPT/NPTF Full Profile

- NPT / NPTF American Taper Pipe Threads
- 15° left-hand spiral flute geometry for blind and through hole applications in most materials
- HA - Straight shank design
- h6 Tolerance ground shank



SOLID CARBIDE THREAD MILLS

THREADS-ALL™ / AERO

For Aerospace and Exotic Materials



- 10X higher tool life and cycle time reductions than conventional tools!
- TiAlN-T46 coating resists heat and wear, extending tool life
- Internal coolant tools starting at 1/4" size
- Left-hand helix flute design with left-hand spindle rotation greatly enhances stability and performance

INCH 2xD-UNC / UNF (1/4" & UP HAVE COOLANT HOLES)

THREAD SIZE		DIA. (in)	L.O.C. (in)	OAL (in)	SHANK DIA. (mm)	# FLUTES	PART #
UNC	UNF						
#2-56	-	0.067	0.181	1.535	3	3	GF26A7295001
#4-40	-	0.085	0.234	1.535	3	3	GF26A7295003
#6-32	-	0.106	0.287	1.535	3	3	GF26A7295005
#10-24	-	0.146	0.398	1.653	4	4	GF26A7295007
	#10-32	0.154	0.392	1.653	4	4	GF26A7295041
1/4-20	-	0.195	0.520	2.165	6*	3	GF26A7295009
	1/4-28	0.207	0.516	2.165	6*	3	GF26A7295043
5/16-18	-	0.248	0.648	2.283	8*	4	GF26A7295010
	5/16-24 & 3/8-24	0.260	0.642	2.283	8*	5	GF26A7295044
3/8-16	-	0.303	0.856	2.440	8*	4	GF26A7295011
	7/16-20 & 1/2-20	0.376	0.895	2.913	10*	6	GF26A7295046

*With internal coolant

INCH 3xD-UNC / UNF (1/4" & UP HAVE COOLANT HOLES)

THREAD SIZE		DIA. (in)	L.O.C. (in)	OAL (in)	SHANK DIA. (mm)	# FLUTES	PART #
UNC	UNF						
#4-40	-	0.085	0.350	1.614	3	3	GF26A7295003
#6-32	-	0.106	0.429	1.693	3	3	GF26A7295005
#10-24	-	0.146	0.590	1.890	4	4	GF26A7295007
	#10-32	0.154	0.587	1.811	4	4	GF26A7295041
1/4-20	-	0.195	0.776	2.402	6*	3	GF26A7295009
	1/4-28	0.207	0.768	2.362	6*	3	GF26A7295043
5/16-18	-	0.248	0.965	2.638	8*	4	GF26A7295010
	5/16-24 & 3/8-24	0.260	0.960	2.598	8*	5	GF26A7295044
3/8-16	-	0.303	1.157	2.795	8*	4	GF26A7295011
	7/16-20 & 1/2-20	0.376	1.339	3.110	10*	6	GF26A7295046

*With internal coolant

METRIC 2xD

THREAD SIZE	DIA. (mm)	L.O.C. (mm)	OAL (mm)	SHANK DIA. (mm)	# FLUTES	PART #
M3 x 0.5	2.40	6.20	39	3	4	GF26A7290030
M3.5 x 0.6	2.78	7.30	39	3	4	GF26A7290035
M4 x 0.7	3.15	8.30	42	4	4	GF26A7290040
M5 x 0.8	4.04	10.30	52	6*	4	GF26A7290050
M6 x 1.0	4.80	12.43	55	6*	4	GF26A7290060
M8 x 1.25	6.50	16.70	60	8*	4	GF26A7290080
M10 x 1.5	8.20	20.70	70	10*	5	GF26A7290100
M12 x 1.75	9.90	24.90	74	10*	5	GF26A7290112
M14 x 2.0	11.60	29.00	80	12*	5	GF26A7290114
M16 x 2.0	13.60	33.00	85	14*	6	GF26A7290116

*With internal coolant

METRIC 3xD

THREAD SIZE	DIA. (mm)	L.O.C. (mm)	OAL (mm)	SHANK DIA. (mm)	# FLUTES	PART #
M3 x 0.5	2.40	9.30	41	3	4	GF26A7290030
M4 x 0.7	3.15	12.40	44	4	4	GF26A7290040
M5 x 0.8	4.04	15.40	57	6*	4	GF26A7290050
M6 x 1.0	4.80	18.50	60	6*	4	GF26A7290060
M8 x 1.25	6.50	24.60	67	8*	4	GF26A7290080
M10 x 1.5	8.20	30.80	78	10*	5	GF26A7290100
M12 x 1.75	9.90	36.90	83	10*	5	GF26A7290112
M14 x 2.0	11.60	43.00	95	12*	5	GF26A7290114
M16 x 2.0	13.60	49.00	101	14*	6	GF26A7290116

*With internal coolant

THREADS-ALL™ / AERO SELF-LOCK

SIMILAR TO SPIRALOCK®

- Self-Lock is a unique thread form that locks a mating bolt into place
- Eliminates the need for secondary adhesives



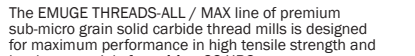
SELF-LOCK 2xD-LK-UNC / LK-UNF - TiAlN-T46 COATING

SIZE	THREAD	CUTTING DIA. (IN)	OAL (IN)	SHANK DIA. (mm)	# FLUTES	PART #
#2-56	LK-UNC	0.067	1.535	3	4	GF26A7295654
		0.085	1.535	3	4	GF26A7295686
		0.106	1.535	3	4	GF26A7295658
		0.132	1.654	4	4	GF26A7295659
#6-32	LK-UNC	0.146	1.654	4	4	GF26A7295660
		0.195	2.165	6*	4	GF26A7295662
		0.248	2.283	8*	5	GF26A7295663
		0.303	2.441	8*	5	GF26A7295664
7/16-14	LK-UNC	0.354	2.913	10*	5	GF26A7295665
		0.409	3.150	12*	5	GF26A7295666
		0.154	1.654	4*	5	GF26A7295711
		0.207	2.165	6*	6	GF26A7295713
5/16-24	LK-UNF	0.260	2.283	8*	6	GF26A7295714
		0.323	2.667	10*	7	GF26A7295715
		0.376	2.913	10*	7	GF26A7295716
		0.437	3.150	12*	9	GF26A7295717

*With internal coolant

THREADS-ALL™ / MAX

For High Tensile Strength Materials



The EMUGE THREADS-ALL / MAX line of premium sub-micro grain solid carbide thread mills is designed for maximum performance in high tensile strength and hardened materials from 44 to 66 HRC.

- 10X higher tool life and cycle time reductions than conventional tools!

- TiAlN-T46 coating resists heat and wear, extending tool life
- Internal coolant options starting at 1/4" / M5
- THREADS-ALL / MAX has a straight flute, neutral to negative helix for easier penetration in hard metals
- Left-hand cutting edge for left-hand spindle rotation

INCH 2xD-UNC (1/4" & UP HAVE COOLANT HOLES)

THREAD SIZE	DIA. (in)	L.O.C. (in)	OAL (in)	SHANK DIA. (mm)	# FLUTES	PART #
#2-56	0.067	0.197	1.535	3	3	GF2837295001
#4-40	0.085	0.260	1.535	3	3	GF2837295003
#6-32	0.106	0.323	1.535	3	3	GF2837295005
#8-32	0.126	0.374	1.654	4	3	GF2837295006
#10-24	0.146	0.441	1.654	4	3	GF2837295007
1/4-20	0.195	0.575	2.165	6*	3	GF2837295009
5/16-18	0.248	0.709	2.283	8*	4	GF2837295010
3/8-16	0.301	0.843	2.441	8*	4	GF2837295011
7/16-14	0.354	0.980	2.756	10*	4	GF2837295012
1/2-13	0.409	1.114	3.150	12*	4	GF2837295013
9/16-12	0.465	1.252	3.228	12*	5	GF2837295014
5/8-11	0.512	1.386	3.415	14*	5	GF2837295015
3/4-10	0.626	1.646	3.740	16*	5	GF2837295016

*With internal coolant

INCH 2xD-UNF (1/4" & UP HAVE COOLANT HOLES)

THREAD SIZE	DIA. (in)	L.O.C. (in)	OAL (in)	SHANK DIA. (mm)	# FLUTES	PART #
#10-32	0.154	0.425	1.654	4	4	GF2837295041
1/4-28	0.207	0.556	2.165	6*	5	GF2837295043
5/16-24	0.260	0.689	2.230	8*	5	GF2837295044
3/8-24	0.311	0.811	2.362	8*	6	GF2837295045
7/16-20	0.360	0.949	2.756	10*	6	GF2837295046
1/2-20	0.437	1.075	3.071	12*	7	GF2837295047
9/16-18	0.492	1.209	3.228	12*	7	GF2837295048
5/8-18	0.547	1.335	3.346	14*	8	GF2837295049
3/4-16	0.659	1.594	3.740	18*	8	GF2837295050

*With internal coolant

METRIC 2xD (M5 & UP HAVE COOLANT HOLES)

THREAD SIZE	DIA. (mm)	L.O.C. (mm)	OAL (mm)	SHANK DIA. (mm)	# FLUTES	PART #
M3 x 0.5	2.40	6.25	51	6	4	GF2837290030
M4 x 0.7	3.15	8.35	51	6	4	GF2837290040
M5 x 0.8	4.04	10.40	52	6*	4	GF2837290050
M6 x 1	4.80	12.50	55	6*	4	GF2837290060
M8 x 1.25	6.50	16.60	60	8*	4	GF2837290080
M10 x 1.5	8.20	20.70	70	10*	5	GF2837290100
M12 x 1.75	9.90	24.85	74	10*	5	GF2837290112
M14 x 2	11.60	29.00	85	12*	5	GF2837290114
M16 x 2	13.60	33.00	90	14*	5	GF2837290116
M20 x 2.5	17.00	41.25	102	18*	6	GF2837290120

*With internal coolant

THRILLER-AERO

For Aerospace and Nickel Alloy Materials

- Thread can be circularly machined with a 120° chamfer

Thriller-AERO & Thriller-MAX



2xD • ALCR-89 coating for heat and wear resistance

THREAD	THREAD SIZE	DIA. (in)	L.O.C. (in)	OAL (in)	SHANK DIA. (mm)	# FLUTES	PART #
INCH UNC	#6-32	0.096	0.323	1.535	3	3	GF78682B5005
	#8-32	0.122	0.374	1.575	4	3	GF78682B5006
	#10-24	0.133	0.441	1.654	4	3	GF78682B5007
	1/4-20	0.180	0.575	2.165	6*	3	GF78682B5009
INCH UNF	5/16-18	0.232	0.709	2.283	8*	4	GF78682B5010
	3/8-16	0.284	0.843	2.441	8*	4	GF78682B5011
	7/16-14	0.334	0.980	2.756	10*	4	GF78682B5012
	1/2-13	0.387	1.114	3.150	12*	4	GF78682B5013
INCH UNF	#10-32	0.146	0.425	1.654	4	4	GF78682B5041
	1/4-28	0.199	0.555	2.165	6*	5	GF78682B5043
	5/16-24	0.251	0.689	2.283	8*	5	GF78682B5044
	3/8-24	0.314	0.811	2.441	8*	6	GF78682B5045
INCH UNF	7/16-20	0.365	0.949	2.756	10*	6	GF78682B5046
	1/2-20	0.428	1.075	3.150	12*	7	GF78682B5047
	M3 x 0.5	2.250	6.000	39.000	3	4	GF78682B0030
	M4 x 0.7	2.950	9.100	42.000	4	4	GF78682B0040
METRIC (DIMENSIONS IN MM)	M5 x 0.8	3.800	11.20	52.000	6*	4	GF78682B0050
	M6 x 1	4.500	13.50	55.000	6*	4	GF78682B0060
	M8 x 1.25	6.125	17.90	60.000	8*	4	GF78682B0080



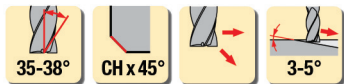
HIGH PERFORMANCE TOP-CUT CARBIDE END-MILLS

- Variable Helix
- ALCR PVD Coated

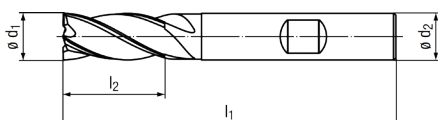
4 FLUTE



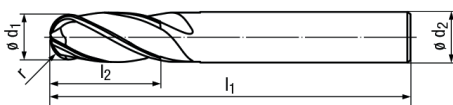
- Ideal for most materials
- Suitable for roughing and finishing operations
- Chamfer to stabilize the cutting edge
- Center cutting



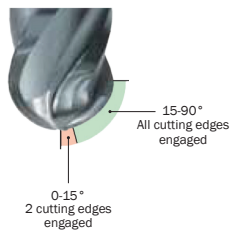
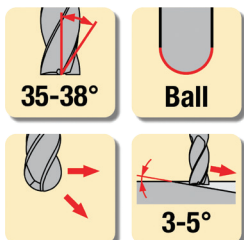
Up to 2.5xD



d1	d2	l1	l2	Chamfer	PART #	
					Cylindrical Shank	Weldon Shank
1/16	1/8	1.1/2	1/8	0.002	2992L-00625	-
3/32	1/8	1.1/2	3/16	0.003	2992L-009375	-
1/8	1/8	1.1/2	1/4	0.003	2992L-0125	-
1/8	1/8	1.1/2	3/8	0.003	2994L-0125	-
1/8	1/8	2.1/4	3/4	0.003	2996L-0125	-
5/32	3/16	2	5/16	0.003	2992L-015625	-
3/16	3/16	2	3/8	0.005	2992L-01875	-
3/16	3/16	2	7/16	0.005	2994L-01875	-
3/16	3/16	2.1/2	3/4	0.005	2996L-01875	-
1/4	1/4	2	7/16	0.005	2992L-021875	2993L-021875
1/4	1/4	2	1/2	0.005	2992L-0250	2993L-0250
1/4	1/4	2.1/2	1/2	0.005	2994L-0250	2995L-0250
1/4	1/4	2.1/2	3/4	0.005	2994L-A250	2995L-A250
1/4	1/4	3	1.1/8	0.005	2996L-0250	2997L-0250
5/16	5/16	2	1/2	0.005	2992L-03125	2993L-03125
5/16	5/16	2.1/4	9/16	0.005	2992L-A3125	2993L-A3125
5/16	5/16	2.1/2	13/16	0.005	2994L-03125	2995L-03125
5/16	5/16	3	1.1/8	0.005	2996L-03125	2997L-03125
3/8	3/8	2	5/8	0.008	2992L-0375	2993L-0375
3/8	3/8	2.1/2	5/8	0.008	2992L-A375	2993L-A375
3/8	3/8	2.1/2	7/8	0.008	2994L-0375	2995L-0375
3/8	3/8	2.3/4	7/8	0.008	2994L-A375	2995L-A375
3/8	3/8	3	1.1/8	0.008	2996L-0375	2997L-0375
7/16	7/16	2.1/2	5/8	0.008	2992L-04375	-
7/16	7/16	2.3/4	1	0.008	2994L-04375	-
7/16	7/16	4	2	0.008	2994L-A4375	-
7/16	7/16	4.1/2	2	0.008	2996L-04375	-
1/2	1/2	2.1/2	5/8	0.008	2992L-0500	2993L-0500
1/2	1/2	2.3/4	3/4	0.008	2992L-A500	2993L-A500
1/2	1/2	3	1.1/4	0.008	2994L-0500	2995L-0500
1/2	1/2	3.1/4	1.1/4	0.008	2994L-A500	2995L-A500
1/2	1/2	4.1/2	2	0.008	2996L-0500	2997L-0500
5/8	5/8	3	3/4	0.008	2992L-0625	2993L-0625
5/8	5/8	3.1/2	1.1/4	0.008	2994L-0625	2995L-0625
5/8	5/8	4	1.7/8	0.008	2994L-A625	2995L-A625
5/8	5/8	4.3/4	2.1/4	0.008	2994L-B625	2995L-B625
5/8	5/8	5	2.1/4	0.008	2996L-0625	2997L-0625
3/4	3/4	3	1	0.012	2992L-0750	2993L-0750
3/4	3/4	3.1/2	1	0.012	2992L-A750	2993L-A750
3/4	3/4	4	1.1/2	0.012	2994L-0750	2995L-0750
3/4	3/4	4.1/2	2.1/4	0.012	2994L-0750	2995L-0750
1	1	4	1	0.012	2992L-1000	2993L-1000
1	1	4	1.1/2	0.012	2994L-1000	2995L-1000
1	1	5	2	0.012	2994L-A000	2995L-A000
1	1	5	2.1/4	0.012	2996L-1000	2997L-1000
1	1	6	3	0.012	2996L-A000	2997L-A000



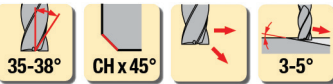
- Ideal for most materials
- Suitable for high speed cutting and finishing
- Variable helix flutes
- Vibration dampening
- ALCR PVD coating
- Sub-micro grain carbide
- 2 center cutting edges



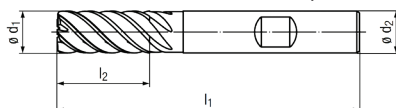
5 FLUTE



- Well-suited for most materials including aerospace alloys
- Suitable for finishing and light roughing
- Suitable for trochoidal style machining strategies
- Chamfer to stabilize corner
- Center cutting



Up to 2.5xD



d1	d2	l1	l2	Chamfer	PART #	
					Cylindrical Shank	Weldon Shank
1/8	1/8	1.1/2	3/8	0.003	2946L-0125	-
3/16	3/16	2	9/16	0.003	2946L-01875	-
1/4	1/4	2	1/2	0.005	3920L-0250	-
1/4	1/4	2.1/2	3/4	0.005	2946L-0250	-
1/4	1/4	3	1.1/8	0.005	3922L-0250	-
5/16	5/16	2.1/4	9/16	0.005	3920L-03125	-
5/16	5/16	2.1/2	13/16	0.005	2946L-03125	-
5/16	5/16	3	1.1/8	0.005	3922L-03125	-
3/8	3/8	2.1/2	5/8	0.008	3920L-0375	-
3/8	3/8	2.3/4	7/8	0.008	2946L-0375	-
3/8	3/8	3	1.1/8	0.008	3922L-0375	-
7/16	7/16	2.1/2	5/8	0.008	3920L-04375	-
7/16	7/16	3	1	0.008	2946L-04375	-
7/16	7/16	4	2	0.008	3922L-04375	-
1/2	1/2	2.3/4	5/8	0.008	3920L-0500	3921L-0500
1/2	1/2	3	1	0.008	2946L-A500	2920L-0500
1/2	1/2	3.1/4	1.1/4	0.008	2946L-A500	2920L-A500
1/2	1/2	4.1/2	2	0.008	3922L-0500	3923L-0500
5/8	5/8	3	3/4	0.008	3920L-0625	3921L-0625
5/8	5/8	3.1/2	1.1/4	0.008	2946L-0625	2920L-0625
5/8	5/8	4	1.7/8	0.008	2946L-A625	2920L-A625
5/8	5/8	4.3/4	2.1/4	0.008	3922L-0625	3923L-0625
3/4	3/4	3.1/2	1	0.012	3920L-0750	3921L-0750
3/4	3/4	4	1.1/2	0.012	2946L-0750	2920L-0750
3/4	3/4	5	2.1/4	0.012	3922L-0750	3923L-0750
1	1	4	1	0.012	3920L-1000	3921L-1000
1	1	5	2	0.012	2946L-1000	2920L-1000
1	1	6	3	0.012	3922L-1000	3923L-1000

4&5 FLUTE Ball Nose



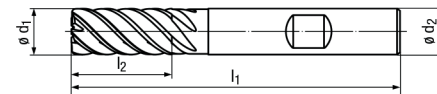
SEE DRAWING ON THE LEFT

d1	Ød2	l1	l2	PART #	
				4 FLUTE	5 FLUTE
1/8	1/8	1.1/2	1/4	2919L-0125	3949L-0125
1/8	1/8	1.1/2	3/8	2974L-0125	-
1/8	1/8	2	3/8	2974L-A125	3950L-0125
1/8	1/8	2.1/4	3/4	3900L-0125	3951L-0125
3/16	3/16	2	3/8	2919L-01875	3949L-01875
3/16	3/16	2	7/16	2974L-01875	-
3/16	3/16	2	9/16	2974L-A1875	3950L-01875
3/16	3/16	2.1/2	3/4	3900L-01875	3951L-01875
1/4	1/4	2	1/2	2919L-0250	3949L-0250
1/4	1/4	2.1/2	1/2	2974L-0250	-
1/4	1/4	2.1/2	3/4	2974L-A250	3950L-0250
1/4	1/4	3	1.1/8	3900L-0250	3951L-0250
5/16	5/16	2.1/4	1/2	2919L-03125	-
5/16	5/16	2.1/4	9/16	-	3949L-03125
5/16	5/16	2.1/2	13/16	2974L-03125	3950L-03125
5/16	5/16	3	1.1/8	3900L-03125	3951L-03125
3/8	3/8	2.1/2	5/8	2919L-0375	3949L-0375
3/8	3/8	2.1/2	7/8	2974L-0375	-
3/8	3/8	2.3/4	7/8	2974L-A375	3950L-0375
3/8	3/8	3	1.1/8	3900L-0375	3951L-0375
7/16	7/16	2.1/2	5/8	2919L-04375	-
7/16	7/16	2.3/4	1	2974L-04375	-
7/16	7/16	4	2	3900L-04375	-
1/2	1/2	2.3/4	5/8	2919L-0500	3949L-0500
1/2	1/2	3	1	2974L-0500	3950L-0500
1/2	1/2	3	1.1/4	2974L-A500	-
1/2	1/2	3.1/4	1.1/4	2974L-B500	3950L-A500
1/2	1/2	4.1/2	2	3900L-0500	3951L-0500
5/8	5/8	3	3/4	2919L-0625	3949L-0625
5/8	5/8	3.1/2	1.1/4	2974L-0625	3950L-0625
5/8	5/8	4	1.7/8	2974L-A625	3950L-A625
5/8	5/8	4.3/4	2.1/4	3900L-0625	3951L-0625
3/4	3/4	3.1/2	1	2919L-0750	3949L-0750
3/4	3/4	4	1.1/2	2974L-0750	3950L-0750
3/4	3/4	4	2.1/4	3900L-0750	3951L-0750
1	1	4	1	2919L-1000	3949L-1000
1	1	5	2	2974L-1000	3950L-1000
1	1	6	3	3900L-1000	3951L-1000

6 FLUTE



- Well suited for most materials including aerospace alloys
- Suitable for finishing and light roughing
- Suitable for trochoidal style machining strategies



- Chamfer to stabilize corner
- High feed

d1	d2	l1	l2	Chamfer	PART #	
					Cylindrical Shank	Weldon Shank
1/4	1/4	2	1/2	0.005	3924L-0250	-
1/4	1/4	2.1/2	3/4	0.005	2948L-0250	-
1/4	1/4	3	1.1/8	0.005	3926L-0250	-
5/16	5/16	2.1/4	9/16	0.005	3924L-03125	-
5/16	5/16	2.1/2	13/16	0.005	2948L-03125	-
5/16	5/16	3	1.1/8	0.005	3926L-03125	-
3/8	3/8	2.1/2	5/8	0.008	3924L-0375	-
3/8	3/8	2.3/4	7/8	0.008	2948L-0375	-
3/8	3/8	3	1.1/8	0.008	3926L-0375	-
7/16	7/16	2.1/2	5/8	0.008	3924L-04375	-
7/16	7/16	3	1	0.008	2948L-04375	-
7/16	7/16	4	2	0.008	3926L-04375	-
1/2	1/2	2.3/4	5/8	0.008	3924L-0500	3925L-0500
1/2	1/2	3	1	0.008	2948L-0500	3908L-0500
1/2	1/2	3.1/4	1.1/4	0.008	2948L-A500	3908L-A500
1/2	1/2	4.1/2	2	0.008	3926L-0500	3927L-0500
5/8	5/8	3	3/4	0.008	3924L-0625	3925L-0625
5/8	5/8	3.1/2	1.1/4	0.008	2948L-0625	3908L-0625
5/8	5/8	4	1.7/8	0.008	2948L-A625	3908L-A625
5/8	5/8	4.3/4	2.1/4	0.008	3926L-0625	3927L-0625
3/4	3/4	3.1/2	1	0.012	3924L-0750	3925L-0750
3/4	3/4	4	1.1/2	0.012	2948L-0750	3908L-0750
3/4	3/4	5	2.1/4	0.012	3926L-0750	3927L-0750
1	1	4	1	0.012	3924L-1000	3925L-1000
1	1	5	2	0.012	2948L-1000	3908L-1000
1	1	6	3	0.012	3926L-1000	3927L-1000

7 FLUTE

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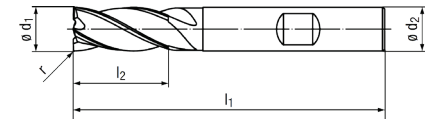
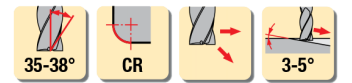


HIGH PERFORMANCE TOP-CUT CARBIDE END-MILLS

- Variable Helix
- ALCR PVD Coated

4-FLUTE WITH CORNER RADIUS

- Ideal for most materials including high tensile strength applications
- Suitable for roughing and finishing operations
- Variable helix angle flutes
 - ALCR PVD coating
 - Sub-micro grain carbide
- Vibration dampening
- Corner radius options
 - Center cutting



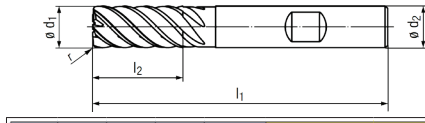
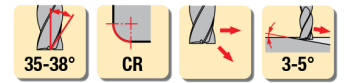
d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
1/8	1/8	1.1/2	1/4	0.010	3945L.012010	-
	1/8	1.1/2	1/4	0.015	3945L.012015	-
	1/8	1.1/2	3/8	0.010	2998L.012010	-
	1/8	1.1/2	3/8	0.015	2998L.012015	-
	1/8	2.1/4	3/4	0.010	3947L.012010	-
	1/8	2.1/4	3/4	0.015	3947L.012015	-
3/16	3/16	2	3/8	0.010	3945L.018010	-
	3/16	2	3/8	0.015	3945L.018015	-
	3/16	2	7/16	0.010	2998L.018010	-
	3/16	2	7/16	0.015	2998L.018015	-
	3/16	2	7/16	0.020	2998L.018020	-
	3/16	2	7/16	0.030	2998L.018030	-
1/4	1/4	2	1/2	0.010	3945L.025010	3946L.025010
	1/4	2	1/2	0.015	3945L.025015	3946L.025015
	1/4	2	1/2	0.020	3945L.025020	3946L.025020
	1/4	2	1/2	0.030	3945L.025030	3946L.025030
	1/4	2.1/2	1/2	0.010	2998L.025010	2999L.025010
	1/4	2.1/2	1/2	0.015	2998L.025015	2999L.025015
5/16	5/16	2.1/4	9/16	0.010	3945L.031010	3946L.031010
	5/16	2.1/4	9/16	0.015	3945L.031015	3946L.031015
	5/16	2.1/4	9/16	0.020	3945L.031020	3946L.031020
	5/16	2.1/4	9/16	0.030	3945L.031030	3946L.031030
	5/16	2.1/2	13/16	0.010	2998L.031010	2999L.031010
	5/16	2.1/2	13/16	0.015	2998L.031015	2999L.031015

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
5/16	5/16	3	1.1/8	0.015	3947L.031015	3948L.031015
	5/16	3	1.1/8	0.020	3947L.031020	3948L.031020
	5/16	3	1.1/8	0.030	3947L.031030	3948L.031030
	3/8	2.1/2	5/8	0.010	3945L.037010	3946L.037010
	3/8	2.1/2	5/8	0.015	3945L.037015	3946L.037015
	3/8	2.1/2	5/8	0.020	3945L.037020	3946L.037020
3/8	3/8	2.1/2	5/8	0.030	3945L.037030	3946L.037030
	3/8	2.1/2	5/8	0.060	3945L.037060	3946L.037060
	3/8	2.1/2	5/8	0.090	3945L.037090	3946L.037090
	3/8	2.1/2	7/8	0.010	2998L.037010	2999L.037010
	3/8	2.1/2	7/8	0.015	2998L.037015	2999L.037015
	3/8	2.1/2	7/8	0.020	2998L.037020	2999L.037020
7/16	7/16	2.3/4	1	0.010	2998L.043010	-
	7/16	2.3/4	1	0.015	2998L.043015	-
	1/2	2.3/4	5/8	0.010	3945L.050010	3946L.050010
	1/2	2.3/4	5/8	0.015	3945L.050015	3946L.050015
	1/2	2.3/4	5/8	0.020	3945L.050020	3946L.050020
	1/2	2.3/4	5/8	0.030	3945L.050030	3946L.050030

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
5/8	5/8	3	3/4	0.030	3945L.062030	3946L.062030
	5/8	3	3/4	0.060	3945L.062060	3946L.062060
	5/8	3	3/4	0.090	3945L.062090	3946L.062090
	5/8	3	3/4	0.120	3945L.062120	3946L.062120
	5/8	3.1/2	1.1/4	0.030	2998L.062030	2999L.062030
	5/8	3.1/2	1.1/4	0.040	2998L.062040	2999L.062040
3/4	3/4	3.1/2	1.1/4	0.060	2998L.062060	2999L.062060
	3/4	3.1/2	1.1/4	0.090	2998L.062090	2999L.062090
	3/4	3.1/2	1.1/4	0.120	2998L.062120	2999L.062120
	3/4	4	1.1/8	0.030	2998L.062030	2999L.062030
	3/4	4	1.1/8	0.060	2998L.062060	2999L.062060
	3/4	4	1.1/8	0.090	2998L.062090	2999L.062090

5-FLUTE WITH CORNER RADIUS

- Well suited for most materials including aerospace alloys
- Suitable for finishing and light roughing
- Suitable for trochoidal style machining strategies
- Variable pitch helix angle
 - Fully blended corner radius
 - ALCR PVD coating
 - Sub-micro grain carbide
- Vibration dampening
- Increased feed rates
 - Center cutting



d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
1/4	1/4	2	1/2	0.010	3928L.025010	-
	1/4	2	1/2	0.015	3928L.025015	-
	1/4	2	1/2	0.020	3928L.025020	-
	1/4	2	1/2	0.030	3928L.025030	-
	1/4	2.1/2	1/2	0.010	3902L.025010	-
	1/4	2.1/2	1/2	0.015	3902L.025015	-
3/8	3/8	2.1/2	5/8	0.010	3928L.037010	-
	3/8	2.1/2	5/8	0.015	3928L.037015	-
	3/8	2.1/2	5/8	0.020	3928L.037020	-
	3/8	2.1/2	5/8	0.030	3928L.037030	-
	3/8	2.1/2	5/8	0.060	3928L.037060	-
	3/8	2.1/2	5/8	0.090	3928L.037090	-

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
3/8	3/8	2.3/4	7/8	0.090	3902L.037090	-
	3/8	3	1.1/8	0.010	3933L.037010	-
	3/8	3	1.1/8	0.015	3933L.037015	-
	3/8	3	1.1/8	0.020	3933L.037020	-
	3/8	3	1.1/8	0.030	3933L.037030	-
	3/8	3	1.1/8	0.060	3933L.037060	-
1/2	1/2	2.3/4	5/8	0.010	3928L.050010	3929L.050010
	1/2	2.3/4	5/8	0.015	3928L.050015	3929L.050015
	1/2	2.3/4	5/8	0.020	3928L.050020	3929L.050020
	1/2	2.3/4	5/8	0.030	3928L.050030	3929L.050030
	1/2	2.3/4	5/8	0.060	3928L.050060	3929L.050060
	1/2	2.3/4	5/8	0.120	3928L.050120	3929L.050120

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
5/8	5/8	3	3/4	0.030	3928L.062030	3929L.062030
	5/8	3	3/4	0.060	3928L.062060	3929L.062060
	5/8	3	3/4	0.090	3928L.062090	3929L.062090
	5/8	3	3/4	0.120	3928L.062120	3929L.062120
	5/8	3.1/2	1.1/4	0.030	3902L.062030	3903L.062030
	5/8	3.1/2	1.1/4	0.060	3902L.062060	3903L.062060
3/4	3/4	3.1/2	1.1/4	0.090	3902L.062090	3903L.062090
	3/4	3.1/2	1.1/4	0.120	3902L.062120	3903L.062120
	3/4	4	1.5/8	0.030	3902L.A62030	3903L.A62030
	3/4	4	1.5/8	0.060	3902L.A62060	3903L.A62060
	3/4	4	1.5/8	0.090	3902L.A62090	3903L.A62090
	3/4	4	1.5/8	0.120	3902L.A62120	3903L.A62120

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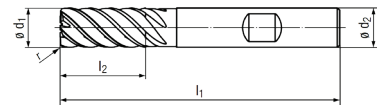


HIGH PERFORMANCE TOP-CUT CARBIDE END-MILLS

- Variable Helix
- ALCR PVD Coated

CONTINUED FROM PREVIOUS PAGE: 5-FLUTE WITH CORNER RADIUS

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
3/4	3/4	5	1.7/8	0.020	3902L.A75020	3903L.A75020
	3/4	5	1.7/8	0.030	3902L.A75030	3903L.A75030
	3/4	5	1.7/8	0.060	3902L.A75060	3903L.A75060
	3/4	5	1.7/8	0.090	3902L.A75090	3903L.A75090
	3/4	5	1.7/8	0.120	3902L.A75120	3903L.A75120
	3/4	5	1.7/8	0.150	3902L.A75190	3903L.A75190
	3/4	5	1.7/8	0.250	3902L.A75250	3903L.A75250
	3/4	5	2.1/4	0.015	3933L.075015	3934L.075015
	3/4	5	2.1/4	0.020	3933L.075020	3934L.075020
	3/4	5	2.1/4	0.030	3933L.075030	3934L.075030
	3/4	5	2.1/4	0.060	3933L.075060	3934L.075060
	3/4	5	2.1/4	0.090	3933L.075090	3934L.075090

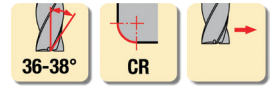
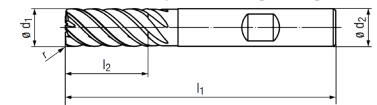


d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
3/4	3/4	5	2.1/4	0.120	3933L.075120	3934L.075120
	3/4	5	2.1/4	0.190	3933L.075190	3934L.075190
	3/4	5	2.1/4	0.250	3933L.075250	3934L.075250
1	1	4	1	0.030	3928L.100030	3929L.100030
	1	4	1	0.060	3928L.100060	3929L.100060

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
1	1	4	1	0.090	3928L.100090	3929L.100090
	1	4	1	0.120	3928L.100120	3929L.100120
	1	5	2	0.030	3902L.100030	3903L.100030
	1	5	2	0.060	3902L.100060	3903L.100060
	1	5	2	0.090	3902L.100090	3903L.100090
	1	5	2	0.120	3902L.100120	3903L.100120
	1	6	3	0.030	3933L.100030	3934L.100030
	1	6	3	0.060	3933L.100060	3934L.100060
	1	6	3	0.090	3933L.100090	3934L.100090
	1	6	3	0.120	3933L.100120	3934L.100120

6-FLUTE WITH CORNER RADIUS

- Well suited for most materials including aerospace alloys
- Suitable for finishing and light roughing
- Suitable for trochoidal style machining strategies
- Variable pitch helix angle
- Vibration dampening
- Increased feed rates
- Fully blended corner radius
- Sub-micro grain carbide
- Non-center cutting

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
1/4	1/4	2	1/2	0.010	3941L.025010	-
	1/4	2	1/2	0.015	3941L.025015	-
	1/4	2	1/2	0.020	3941L.025020	-
	1/4	2	1/2	0.030	3941L.025030	-
	1/4	2	1/2	0.060	3941L.025060	-
	1/4	2	1/2	0.090	3941L.025090	-
	1/4	2.1/2	3/4	0.015	2947L.025015	-
	1/4	2.1/2	3/4	0.020	2947L.025020	-
	1/4	2.1/2	3/4	0.030	2947L.025030	-
	1/4	2.1/2	3/4	0.060	2947L.025060	-
	1/4	3	1.1/8	0.010	3943L.025010	-
	1/4	3	1.1/8	0.015	3943L.025015	-
1/4	3	1.1/8	0.020	3943L.025020	-	
1/4	3	1.1/8	0.030	3943L.025030	-	
1/4	3	1.1/8	0.060	3943L.025060	-	
3/8	3/8	2.1/2	5/8	0.010	3941L.037010	-
	3/8	2.1/2	5/8	0.015	3941L.037015	-
	3/8	2.1/2	5/8	0.020	3941L.037020	-
	3/8	2.1/2	5/8	0.030	3941L.037030	-
	3/8	2.1/2	5/8	0.060	3941L.037060	-
	3/8	2.1/2	5/8	0.090	3941L.037090	-
	3/8	2.3/4	7/8	0.015	2947L.037015	-
	3/8	2.3/4	7/8	0.020	2947L.037020	-
	3/8	2.3/4	7/8	0.030	2947L.037030	-
	3/8	2.3/4	7/8	0.060	2947L.037060	-
	3/8	2.3/4	7/8	0.090	2947L.037090	-
	3/8	3	1.1/8	0.010	3943L.037010	-
3/8	3	1.1/8	0.015	3943L.037015	-	
3/8	3	1.1/8	0.020	3943L.037020	-	
3/8	3	1.1/8	0.030	3943L.037030	-	
3/8	3	1.1/8	0.060	3943L.037060	-	
3/8	3	1.1/8	0.090	3943L.037090	-	

d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
1/2	1/2	2.3/4	5/8	0.010	3941L.050010	3942L.050010
	1/2	2.3/4	5/8	0.015	3941L.050015	3942L.050015
	1/2	2.3/4	5/8	0.020	3941L.050020	3942L.050020
	1/2	2.3/4	5/8	0.030	3941L.050030	3942L.050030
	1/2	2.3/4	5/8	0.060	3941L.050060	3942L.050060
	1/2	2.3/4	5/8	0.090	3941L.050090	3942L.050090
	1/2	2.3/4	5/8	0.120	3941L.050120	3942L.050120
	1/2	3	1	0.010	2947L.050010	3909L.050010
	1/2	3	1	0.015	2947L.050015	3909L.050015
	1/2	3	1	0.020	2947L.050020	3909L.050020
	1/2	3	1	0.030	2947L.050030	3909L.050030
	1/2	3	1	0.060	2947L.050060	3909L.050060
1/2	3	1	0.090	2947L.050090	3909L.050090	
1/2	3	1	0.120	2947L.050120	3909L.050120	
3/4	3/4	3.1/4	1.1/4	0.010	2947L.A50010	3909L.A50010
	3/4	3.1/4	1.1/4	0.015	2947L.A50015	3909L.A50015
	3/4	3.1/4	1.1/4	0.020	2947L.A50020	3909L.A50020
	3/4	3.1/4	1.1/4	0.030	2947L.A50030	3909L.A50030
	3/4	3.1/4	1.1/4	0.060	2947L.A50060	3909L.A50060
	3/4	3.1/4	1.1/4	0.090	2947L.A50090	3909L.A50090
	3/4	3.1/4	1.1/4	0.120	2947L.A50120	3909L.A50120
	3/4	4	1.1/2	0.010	3943L.050010	3944L.050010
	3/4	4	1.1/2	0.015	3943L.050015	3944L.050015
	3/4	4	1.1/2	0.020	3943L.050020	3944L.050020
	3/4	4	1.1/2	0.030	3943L.050030	3944L.050030
	3/4	4	1.1/2	0.060	3943L.050060	3944L.050060
3/4	4	1.1/2	0.090	3943L.050090	3944L.050090	
3/4	4	1.1/2	0.120	3943L.050120	3944L.050120	
5/8	5/8	3	3/4	0.030	3941L.062030	3942L.062030
	5/8	3	3/4	0.060	3941L.062060	3942L.062060
	5/8	3	3/4	0.090	3941L.062090	3942L.062090
	5/8	3	3/4	0.120	3941L.062120	3942L.062120
	5/8	3.1/2	1.1/4	0.030	3941L.062030	3942L.062030
	5/8	3.1/2	1.1/4	0.060	3941L.062060	3942L.062060
	5/8	3.1/2	1.1/4	0.090	3941L.062090	3942L.062090
	5/8	3.1/2	1.1/4	0.120	3941L.062120	3942L.062120
	5/8	4	1.7/8	0.030	2947L.A62030	3909L.A62030
	5/8	4	1.7/8	0.060	2947L.A62060	3909L.A62060
	5/8	4	1.7/8	0.090	2947L.A62090	3909L.A62090
	5/8	4	1.7/8	0.120	2947L.A62120	3909L.A62120

d1	d2	l1	l2	Radius	PART #		
					Cylindrical Shank	Weldon Shank	
5/8	5/8	4.3/4	2.1/4	0.030	3943L.062030	3944L.062030	
	5/8	4.3/4	2.1/4	0.060	3943L.062060	3944L.062060	
	5/8	4.3/4	2.1/4	0.090	3943L.062090	3944L.062090	
	5/8	4.3/4	2.1/4	0.120	3943L.062120	3944L.062120	
	3/4	3/4	3.1/2	1	0.015	3941L.075015	3942L.075015
		3/4	3.1/2	1	0.020	3941L.075020	3942L.075020
		3/4	3.1/2	1	0.030	3941L.075030	3942L.075030
		3/4	3.1/2	1	0.060	3941L.075060	3942L.075060
		3/4	3.1/2	1	0.090	3941L.075090	3942L.075090
		3/4	3.1/2	1	0.120	3941L.075120	3942L.075120
		3/4	3.1/2	1	0.190	3941L.075190	3942L.075190
		3/4	3.1/2	1	0.250	3941L.075250	3942L.075250
3/4		4	1.1/2	0.015	2947L.075015	3909L.075015	
3/4		4	1.1/2	0.020	2947L.075020	3909L.075020	
3/4		4	1.1/2	0.030	2947L.075030	3909L.075030	
3/4		4	1.1/2	0.060	2947L.075060	3909L.075060	
3/4	4	1.1/2	0.090	2947L.075090	3909L.075090		
3/4	4	1.1/2	0.120	2947L.075120	3909L.075120		
3/4	4	1.1/2	0.190	2947L.075190	3909L.075190		
3/4	4	1.1/2	0.250	2947L.075250	3909L.075250		
1	1	4	1	0.030	3941L.100030	3942L.100030	
	1	4	1	0.060	3941L.100060	3942L.100060	
	1	4	1	0.090	3941L.100090	3942L.100090	
	1	4	1	0.120	3941L.100120	3942L.100120	
	1	5	2	0.030	3943L.100030	3944L.100030	
	1	5	2	0.060	3943L.100060	3944L.100060	
	1	5	2	0.090	3943L.100090	3944L.100090	
	1	5	2	0.120	3943L.100120	3944L.100120	
	1	6	3	0.030	3943L.100030	3944L.100030	
	1	6	3	0.060	3943L.100060	3944L.100060	
	1	6	3	0.090	3943L.100090	3944L.100090	
	1	6	3	0.120	3943L.100120	3944L.100120	

7-FLUTE WITH CORNER RADIUS

- SAME FEATURES AS 6-FLUTE • SEE ABOVE

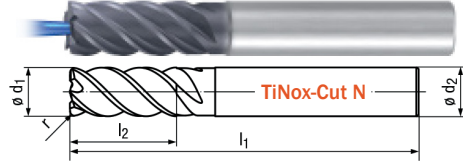
d1	d2	l1	l2	Radius	PART #	
					Cylindrical Shank	Weldon Shank
1/4	1/4	2	1/2	0.010	3935L.025010	-
	1/4	2	1/2	0.015	3935L.025015	-
	1/4	2	1/2	0.020	3935L.025020	-
	1/4	2	1/2	0.030	3935L.025030	-
	1/4	2	1/2	0.060	3935L.025060	-
	1/4	2	1/2	0.090	3935L.025090	-
	1/4	2.1/2	3/4	0.010	3937L.025010	-
	1/4	2.1/2	3/4	0.015	3937L.025015	-
	1/4	2.1/2	3/4	0.020	3937L.025020	-
	1/4	2.1/2	3/4	0.030	3937L.025030	-
	1/4	2.1/2	3/4	0.060	3937L.025060	-
	1/4	3	1.1/8	0.010	3939L.025010	-
1/4	3	1.1/8	0.015	3939L.025015	-	
1/4	3	1.1/8	0.020	3939L.025020	-	
1/4	3	1.1/8	0.030	3939L.025030	-	
1/4	3	1.1/8	0.060	3939L.025060	-	
1/4	3	1.1/8	0.090	3939L.025090	-	
3/8	3/8	2.1/2	5/8	0.010	3935L.03	



HIGH PERFORMANCE CARBIDE END-MILLS FOR AEROSPACE MATERIALS

5-FLUTE ROUGHER FINISHER

- Internal coolant
- Special geometry prevents vibration
- Especially made for Titanium Alloys
- ALCR coating
- For efficient machining of Stainless Steel

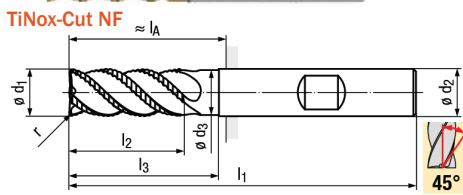


d1	l2	l1	d2	Chamfer	PART #
1/4	3/4	2.1/2	1/4	0.005	2962LZ-0250
5/16	3/4	2.1/2	5/16	0.005	2962LZ-03125
3/8	7/8	2.1/2	3/8	0.008	2962LZ-0375
1/2	1.1/4	3	1/2	0.008	2962LZ-0500
5/8	1.1/4	3.1/2	5/8	0.008	2962LZ-0625
3/4	1.1/2	4	3/4	0.012	2962LZ-0750
1	1.3/4	4.1/2	1	0.012	2962LZ-1000

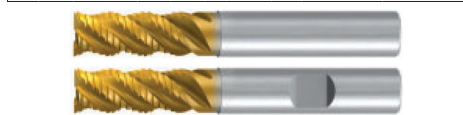
d1	l2	l1	Ød2	r	PART #
1/4	3/4	2.1/2	1/4	0.015	2966LZ-025015
5/16	3/4	2.1/2	1/4	0.030	2966LZ-025030
5/16	3/4	2.1/2	5/16	0.015	2966LZ-031015
5/16	3/4	2.1/2	5/16	0.030	2966LZ-031030
3/8	7/8	2.1/2	3/8	0.015	2966LZ-037015
3/8	7/8	2.1/2	3/8	0.030	2966LZ-037030
1/2	1.1/4	3	1/2	0.015	2966LZ-050015
1/2	1.1/4	3	1/2	0.030	2966LZ-050030
1/2	1.1/4	3	1/2	0.060	2966LZ-050060
1/2	1.1/4	3	1/2	0.090	2966LZ-050090
1/2	1.1/4	3	1/2	0.120	2966LZ-050120
5/8	1.1/4	3.1/2	5/8	0.015	2966LZ-062015
5/8	1.1/4	3.1/2	5/8	0.030	2966LZ-062030
5/8	1.1/4	3.1/2	5/8	0.060	2966LZ-062060
3/4	1.1/2	4	3/4	0.015	2966LZ-075015
3/4	1.1/2	4	3/4	0.030	2966LZ-075030
3/4	1.1/2	4	3/4	0.060	2966LZ-075060
3/4	1.1/2	4	3/4	0.090	2966LZ-075090
3/4	1.1/2	4	3/4	0.120	2966LZ-075120
1	1.3/4	4.1/2	1	0.015	2966LZ-100015
1	1.3/4	4.1/2	1	0.030	2966LZ-100030
1	1.3/4	4.1/2	1	0.060	2966LZ-100060
1	1.3/4	4.1/2	1	0.090	2966LZ-100090
1	1.3/4	4.1/2	1	0.120	2966LZ-100120

4 & 5 FLUTE SEMI-FINISHER

- Fine semi-finishing profile
- Variable index
- Axial internal coolant
- TIN/TIALN PVD coating
- Ideal for difficult to cut materials such as nickel alloys (Inconel) and Titanium.



d1	l2	l3	l1	d3	l4	d2	lA	# Fl.	PART #
1/4	17/32	3/4	2.1/2	0.236	7/8	3/8	15/16	4	2648TZ-0250
5/16	3/4	7/8	2.1/2	0.295	15/16	3/8	15/16	4	2648TZ-03125
3/8	7/8	1.1/8	2.3/4	0.358	-	3/8	1.3/16	4	2648TZ-0375
1/2	1.1/8	1.3/8	3.1/4	0.480	-	1/2	1.15/32	4	2648TZ-0500
5/8	1.1/4	1.12	3.1/2	0.605	-	5/8	1.19/32	4	2648TZ-0625
3/4	1.1/2	1.7/8	4	0.730	-	3/4	1.31/32	4	2648TZ-0750
1	1.3/4	2.5/8	5	0.969	-	1	2.23/32	5	2648TZ-1000



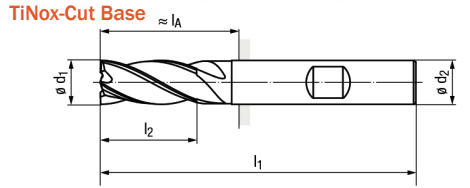
SAME AS ABOVE WITHOUT COOLANT HOLE

d1	l2	l1	d3	d2	# Fl.	PART #
1/4	17/32	2.1/2	0.236	1/4	4	2958T-0250
5/16	3/4	2.1/2	0.295	5/16	4	2958T-03125
3/8	7/8	2.3/4	0.358	3/8	4	2958T-0375
1/2	1.1/8	3.1/4	0.480	1/2	4	2958T-0500
5/8	1.1/4	3.1/2	0.605	5/8	4	2958T-0625
3/4	1.1/2	4	0.730	3/4	4	2958T-0750
1	1.3/4	5	0.969	1	5	2958T-1000

FRANKEN TiNox-Cut End Mills are application-specific for the machining of tough materials and are guaranteed to deliver unmatched metal removal rates and tool life.

4-FLUTE ROUGHER FINISHER

- Especially suitable for Stainless Steel materials
- Suitable for Titanium, Alloyed Steels, HPC roughing and finishing
- Variable spacing
- TIN/TIAlN coating

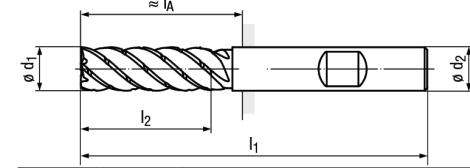


Stub Length							PART #	
d1	l2	l1	lA	d2	lA	Chamfer	Cylindrical Shank	Weldon Shank
1/8	1/4	2	5/8	1/4	5/8	0.003	2975T-0125	-
3/16	3/8	2	5/8	1/4	5/8	0.005	2975T-01875	-
1/4	1/2	2	-	1/4	5/8	0.005	2975T-0250	-
5/16	9/16	2.1/4	-	5/16	7/8	0.005	2975T-03125	-
3/8	5/8	2.1/2	-	3/8	15/16	0.008	2975T-0375	-
1/2	5/8	2.3/4	-	1/2	31/32	0.008	2975T-0500	2976T-0500
5/8	3/4	3	-	5/8	1.3/32	0.008	2975T-0625	2976T-0625
3/4	1	3.1/2	-	3/4	1.15/32	0.012	2975T-0750	2976T-0750

Standard Length							PART #	
d1	l2	l1	lA	d2	lA	Chamfer	Cylindrical Shank	Weldon Shank
1/8	3/8	2.1/4	7/8	1/4	7/8	0.003	2977T-0125	-
3/16	9/16	2.1/4	7/8	1/4	7/8	0.005	2977T-01875	-
1/4	3/4	2.1/2	-	1/4	1.1/8	0.005	2977T-0250	-
5/16	13/16	2.1/2	-	5/16	1.1/8	0.005	2977T-03125	-
3/8	7/8	2.3/4	-	3/8	1.3/16	0.008	2977T-0375	-
1/2	1	3	-	1/2	1.7/32	0.008	2977T-0500	2978T-0500
5/8	1.1/4	3.1/2	-	5/8	1.19/32	0.008	2977T-0625	2978T-0625
3/4	1.1/2	4	-	3/4	1.31/32	0.012	2977T-0750	2978T-0750

4 & 5 FLUTE TROCHOIDAL

- High performance tool for trochoidal milling
- Especially suitable for difficult-to-cut materials such as Titanium
- TIN/TIAlN coating
- Newly developed geometry with chip breaker
- Low-vibration machining
- Axial depths of cut up to 4xD
- Axial internal coolant
- Weldon shank



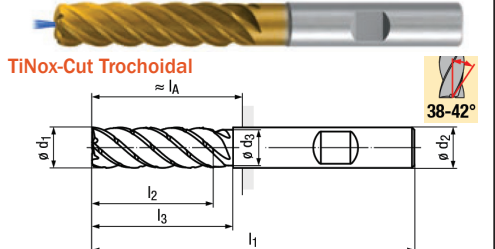
2xD - Standard length							PART #	
d1	l2	l1	d2	lA	Chamfer	# Flutes	Cylindrical Shank	Weldon Shank
1/4	1/2	2.1/4	1/4	7/8	0.005	4	2577TZ-0250	-
5/16	13/16	2.1/2	5/16	1.1/8	0.005	5	2577TZ-03125	-
3/8	7/8	3	3/8	1.7/16	0.008	5	2577TZ-0375	-
1/2	1	3.1/4	1/2	1.15/32	0.008	5	2577TZ-0500	-
5/8	1.1/4	3.3/4	5/8	1.27/32	0.008	5	2577TZ-0625	-
3/4	1.1/2	4.1/4	3/4	2.7/32	0.012	5	2577TZ-0750	-

3xD - Long length							PART #	
d1	l1	l2	d2	r	lA	# Flutes	Cylindrical Shank	Weldon Shank
1/4	3/4	2.1/2	1/4	1.1/8	0.005	4	2579TZ-0250	-
5/16	1	2.3/4	5/16	1.3/8	0.005	5	2579TZ-03125	-
3/8	1.1/8	3.1/4	3/8	1.11/16	0.008	5	2579TZ-0375	-
1/2	1.1/2	3.3/4	1/2	1.31/32	0.008	5	2579TZ-0500	-
5/8	1.7/8	4.1/4	5/8	2.11/32	0.008	5	2579TZ-0625	-
3/4	2.1/4	5	3/4	2.31/32	0.012	5	2579TZ-0750	-

4xD - Extra long length							PART #	
d1	l1	l2	d2	r	lA	# Flutes	Cylindrical Shank	Weldon Shank
1/4	1	2.3/4	1/4	1.3/8	0.005	4	2581TZ-0250	-
5/16	1.1/4	3	5/16	1.5/8	0.005	5	2581TZ-03125	-
3/8	1.1/2	3.3/4	3/8	2.3/16	0.008	5	2581TZ-0375	-
1/2	2	4.1/4	1/2	2.15/32	0.008	5	2581TZ-0500	-
5/8	2.1/2	5	5/8	3.3/32	0.008	5	2581TZ-0625	-
3/4	3	6	3/4	3.31/32	0.012	5	2581TZ-0750	-

4 & 5 FLUTE TROCHOIDAL WITH CORNER RADIUS

- High performance tool for trochoidal milling
- Especially suitable for difficult-to-cut materials such as Titanium
- TIN/TIAlN coating
- Newly developed geometry with chip breaker
- Low-vibration machining
- Axial depths of cut up to 4xD
- Axial internal coolant
- Weldon shank



3xD - Corner Radius							PART #	
d1	l1	l2	d2	r	lA	# Flutes	Weldon Shank	
1/4	2.1/2	3/4	1/4	0.010	1.1/8	4	3911TZ-025010	
1/4	2.1/2	3/4	1/4	0.015	1.1/8	4	3911TZ-025015	
1/4	2.1/2	3/4	1/4	0.020	1.1/8	4	3911TZ-025020	
1/4	2.1/2	3/4	1/4	0.030	1.1/8	4	3911TZ-025030	
1/4	2.1/2	3/4	1/4	0.060	1.1/8	5	3911TZ-025060	
5/16	2.3/4	1	5/16	0.015	1.3/8	5	3911TZ-031015	
5/16	2.3/4	1	5/16	0.030	1.3/8	5	3911TZ-031030	
5/16	2.3/4	1	5/16	0.060	1.3/8	5	3911TZ-031060	
3/8	3.1/4	1.1/8	3/8	0.010	1.11/16	5	3911TZ-037010	
3/8	3.1/4	1.1/8	3/8	0.015	1.11/16	5	3911TZ-037015	
3/8	3.1/4	1.1/8	3/8	0.020	1.11/16	5	3911TZ-037020	
3/8	3.1/4	1.1/8	3/8	0.030	1.11/16	5	3911TZ-037030	
3/8	3.1/4	1.1/8	3/8	0.060	1.11/16	5	3911TZ-037060	
3/8	3.1/4	1.1/8	3/8	0.090	1.11/16	5	3911TZ-037090	
1/2	3.3/4	1.1/2	1/2	0.010	1.31/32	5	3911TZ-050010	
1/2	3.3/4	1.1/2	1/2	0.015	1.31/32	5	3911TZ-050015	
1/2	3.3/4	1.1/2	1/2	0.020	1.31/32	5	3911TZ-050020	
1/2	3.3/4	1.1/2	1/2	0.030	1.31/32	5	3911TZ-050030	
1/2	3.3/4	1.1/2	1/2	0.060	1.31/32	5	3911TZ-050060	
1/2	3.3/4	1.1/2	1/2	0.090	1.31/32	5	3911TZ-050090	
5/8	4.1/4	1.7/8	5/8	0.030	2.11/32	5	3911TZ-062030	
5/8	4.1/4	1.7/8	5/8	0.060	2.11/32	5	3911TZ-062060	
5/8	4.1/4	1.7/8	5/8	0.090	2.11/32	5	3911TZ-062090	
5/8	4.1/4	1.7/8	5/8	0.120	2.11/32	5	3911TZ-062120	
3/4	5	2.1/4	3/4	0.020	2.31/32	5	3911TZ-075020	
3/4	5	2.1/4	3/4	0.030	2.31/32	5	3911TZ-075030	
3/4	5	2.1/4	3/4	0.060	2.31/32	5	3911TZ-075060	
3/4	5	2.1/4	3/4	0.090	2.31/32	5	3911TZ-075090	
3/4	5	2.1/4	3/4	0.120	2.31/32	5	3911TZ-075120	
3/4	5	2.1/4	3/4	0.190	2.31/32	5	3911TZ-075190	

4xD - Corner Radius							PART #	
d1	l1	l2	d2	r	lA	# Flutes	Weldon Shank	
1/4	2.3/4	1	1/4	0.010	1.3/8	4	3913TZ-025010	
1/4	2.3/4	1	1/4	0.015	1.3/8	4	3913TZ-025015	
1/4	2.3/4	1						

BASS TOOL & SUPPLY, INC.

2300 Fairway Park Dr.

Houston, TX 77092



Thread Gages

- Short form certificate is supplied at no additional charge
- Long form certificate is available on request

GO/NO-GO PLUG GAGES



UNC (2B&3B)

Size (in)	Class	PART #
#1-64	2B Class of Fit	L01001005000
#2-56		L01001005001
#3-48		L01001005002
#4-40		L01001005003
#5-40		L01001005004
#6-32		L01001005005
#8-32		L01001005006
#10-24		L01001005007
#12-24		L01001005008
1/4-20		L01001005009
5/16-18		L01001005010
3/8-16		L01001005011
7/16-14		L01001005012
1/2-13		L01001005013
9/16-12		L01001005014
5/8-11		L01001005015
3/4-10		L01001005016
7/8-9		L01001005017
1"-8	L01001005018	
1 1/8-7	L01001005019	
1 1/4-7	L01001005020	
1 3/8-6	L01001005021	
1 1/2-6	L01001005022	
#1-64	3B Class of Fit	L01001005000
#2-56		L01001005001
#3-48		L01001005002
#4-40		L01001005003
#5-40		L01001005004
#6-32		L01001005005
#8-32		L01001005006
#10-24		L01001005007
#12-24		L01001005008
1/4-20		L01001005009
5/16-18		L01001005010
3/8-16		L01001005011
7/16-14		L01001005012
1/2-13		L01001005013
9/16-12		L01001005014
5/8-11		L01001005015
3/4-10		L01001005016
7/8-9		L01001005017
1"-8	L01001005018	
1 1/8-7	L01001005019	
1 1/4-7	L01001005020	
1 3/8-6	L01001005021	
1 1/2-6	L01001005022	

UNF (2B&3B)

Size (in)	Class	PART #
#0-80	2B Class of Fit	L01001005033
#1-72		L01001005034
#2-64		L01001005035
#3-56		L01001005036
#4-48		L01001005037
#5-44		L01001005038
#6-40		L01001005039
#8-36		L01001005040
#10-32		L01001005041
#12-28		L01001005042
1/4-28		L01001005043
5/16-24		L01001005044
3/8-24		L01001005045
7/16-20		L01001005046
1/2-20		L01001005047
9/16-18		L01001005048
5/8-18		L01001005049
3/4-16		L01001005050
7/8-14	L01001005051	
1"-12	L01001005052	
1 1/8-12	L01001005053	
1 1/4-12	L01001005054	
1 3/8-12	L01001005055	
1 1/2-12	L01001005056	
#0-80	3B Class of Fit	L01001005033
#1-72		L01001005034
#2-64		L01001005035
#3-56		L01001005036
#4-48		L01001005037
#5-44		L01001005038
#6-40		L01001005039
#8-36		L01001005040
#10-32		L01001005041
#12-28		L01001005042
1/4-28		L01001005043
5/16-24		L01001005044
3/8-24		L01001005045
7/16-20		L01001005046
1/2-20		L01001005047
9/16-18		L01001005048
5/8-18		L01001005049
3/4-16		L01001005050
7/8-14	L01001005051	
1"-12	L01001005052	
1 1/8-12	L01001005053	
1 1/4-12	L01001005054	
1 3/8-12	L01001005055	
1 1/2-12	L01001005056	

UNC/UNF/UNEF/UNG GAGES FEATURES:

- Gage dimensions according to ANSI/ASME B1.2
- Manufactured with hardened tool steel for durability
- NO-GO side is clearly marked with a Red ring
- A cleansing channel is ground into the GO side to eliminate thread damage from dirt on sizes above 1/4" or M5.5

UNJ CLASS (3B)

Size (in)	PART #
#4-48	L01001105505
#4-40	L01001105479
#6-40	L01001105507
#6-32	L01001105481
#8-36	L01001105508
#8-32	L01001105482
#10-32	L01001105509
#10-24	L01001105483
1/4-28	L01001105511
1/4-20	L01001105485
5/16-24	L01001105512
3/8-24	L01001105486
7/16-14	L01001105513
1/2-13	L01001105514
9/16-12	L01001105515
5/8-18	L01001105517
3/4-16	L01001105518
13/16-16	L01001105519
7/8-14	L01001105519
1 1/16-16	L01001105559

LEFT HAND UNC - (3B)

Size (in)	PART #
#4-40	L01001605003
#6-32	L01001605005
#8-32	L01001605006
#10-24	L01001605007
#12-24	L01001605008
1/4-20	L01001605009
5/16-18	L01001605010
3/8-16	L01001605011
7/16-14	L01001605012
1/2-13	L01001605013
9/16-12	L01001605014
5/8-11	L01001605015
3/4-10	L01001605016
7/8-9	L01001605017
1"-8	L01001605018

METRIC (6H CLASS)

Size (mm)	PART #
M1.6 x 0.35	LU1001000016
M2 x 0.4	LU1001000020
M2.5 x 0.45	LU1001000025
M3 x 0.5	LU1001000030
M3.5 x 0.6	LU1001000035
M4 x 0.7	LU1001000040
M5 x 0.8	LU1001000048
M6 x 0.75	LU1001000050
M6 x 1	LU1001000050
M8 x 0.75	LU1001000250
M8 x 1	LU1001000251
M8 x 1.25	LU1001000080
M10 x 1	LU1001000276
M10 x 1.25	LU1001000277
M10 x 1.5	LU1001000100
M11 x 1.5	LU1001000111
M12 x 1.25	LU1001000302
M12 x 1.5	LU1001000303
M12 x 1.75	LU1001000112
M14 x 1.5	LU1001000331
M14 x 2	LU1001000114
M15 x 1.5	LU1001000345
M16 x 1.5	LU1001000359
M16 x 2	LU1001000116
M18 x 1.5	LU1001000390
M18 x 2.5	LU1001000118
M20 x 1.5	LU1001000422
M20 x 2.5	LU1001000120
M22 x 1.5	LU1001000438
M22 x 2.5	LU1001000122
M24 x 3	LU1001000124
M30 x 3.5	LU1001000130
M36 x 4	LU1001000136

LEFT HAND UNF - (3B)

Size (in)	PART #
#4-48	L01001605037
#4-40	L01001605039
#6-36	L01001605040
#10-32	L01001605041
#12-28	L01001605042
1/4-28	L01001605043
5/16-24	L01001605044
3/8-24	L01001605045
7/16-20	L01001605046
1/2-20	L01001605047
9/16-18	L01001605048
5/8-18	L01001605049
3/4-16	L01001605050
7/8-14	L01001605051
1"-12	L01001605052

UNEF (2B&3B)

Size (in)	Class	PART #	
1/4-32	2B Class of Fit	L01001005058	
5/16-32		L01001005059	
3/8-32		L01001005060	
7/16-28		L01001005061	
1/2-28		L01001005062	
9/16-24		L01001005063	
5/8-24		L01001005064	
3/4-20		L01001005066	
7/8-20		L01001005068	
1"-20		L01001005070	
1/4-32		3B Class of Fit	L01001005058
5/16-32			L01001005059
3/8-32			L01001005060
7/16-28			L01001005061
1/2-28			L01001005062
9/16-24			L01001005063
5/8-24			L01001005064
3/4-20			L01001005066
7/8-20	L01001005068		
1"-20	L01001005070		

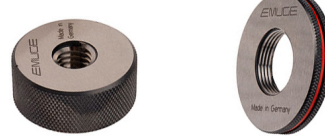
NPT

Size (in)	PART #
1/16-27	L05001005763
1/8-27	L05001005764
1/4-18	L05001005785
3/8-18	L05001005786
1/2-14	L05001005787
3/4-14	L05001005788
1"-11.1/2	L05001005789

NPTF

Size (in)	PART #
1/16-27	L05201005782
1/8-27	L05201005783
1/4-18	L05201005784
3/8-18	L05201005785
1/2-14	L05201005786
3/4-14	L05201005787

Ring Gages



- Manufactured with hardened tool steel for durability
- NO-GO gage is clearly marked with a red ring
- Short form certificate included

UNC - 2A GO

Size	PART #
#2-56	L02005005001
#4-40	L02005005003
#6-32	L02005005005
#8-32	L02005005006
#10-24	L02005005007
1/4-20	L02005005009
5/16-18	L02005005010
3/8-16	L02005005011
7/16-14	L02005005012
1/2-13	L02005005013
9/16-12	L02005005014
5/8-11	L02005005015
3/4-10	L02005005016
7/8-9	L02005005017
1"-8	L02005005018
1 1/4-7	L02005005020
1 3/8-6	L02005005021
1 1/2-6	L02005005022
2"-4 1/2	L02005005024

UNF - 2A GO

Size	PART #
#0-80	L02005005033
#2-64	L02005005035
#4-48	L02005005037
#6-40	L02005005039
#8-36	L02005005040
#10-32	L02005005041
1/4-28	L02005005043
5/16-24	L02005005044
3/8-24	L02005005045
7/16-20	L02005005046
1/2-20	L02005005047
5/8-18	L02005005049
3/4-16	L02005005050
7/8-14	L02005005051
1"-12	L02005005052
1 1/8-12	L02005005053
1 1/4-12	L02005005054
1 3/8-12	L02005005055
1 1/2-12	L02005005056

METRIC 6G GO

Size	PART #
M2 x .4	L02005000020
M2.5 x .45	L02005000025
M3 x .5	L02005000030
M4 x .7	L02005000040
M5 x .8	L02005000050
M6 x 1	L02005000060
M8 x 1	L02005000251
M8 x 1.25	L02005000080
M10 x 1	L02005000276
M10 x 1.25	L02005000112
M10 x 1.5	L02005000100
M12 x 1	L02005000301
M12 x 1.25	L02005000302
M12 x 1.5	L02005000303
M12 x 1.75	L02005000112
M14 x 1	L02005000329
M14 x 1.25	L02005000330
M14 x 1.5	L02005000331
M14 x 2	L02005000114
M16 x 1	L02005000357
M16 x 1.5	L02005000359
M16 x 2	L02005000116
M18 x 2.5	L02005000118
M20 x 1	L02005000420
M20 x 1.5	L02005000422
M20 x 2.5	L02005000120
M24 x 1	L02005000450
M24 x 1.5	L02005000452
M24 x 3	L02005000124
M30 x 1	L02005000488
M30 x 3.5	L02005000130
M36 x 2	L02005000136
M36 x 4	L02005000142
M42 x 1.5	L02005000574
M42 x 4.5	L02005000142
M48 x 1	L02005000614
M56 x 5.5	L02005000156
M68 x 6	L02005000168

UNC - 2A NO-GO

Size	PART #
#2-56	L03005005001
#4-40	L03005005003
#6-32	L03005005005
#8-32	L03005005006
#10-24	L03005005007
1/4-20	L03005005009
5/16-18	L03005005010
3/8-16	L03005005011
7/16-14	L03005005012
1/2-13	L03005005013
9/16-12	L03005005014
5/8-11	L03005005015
3/4-10	L03005005016
7/8-9	L03005005017
1"-8	L03005005018
1 1/4-7	L03005005020
1 3/8-6	L03005005021
1 1/2-6	L03005005022
2"-4 1/2	L03005005024

UNF - 2A NO-GO

Size	PART #
#0-80	L03005005033
#2-64	L03005005035
#4-48	L03005005037
#6-4	