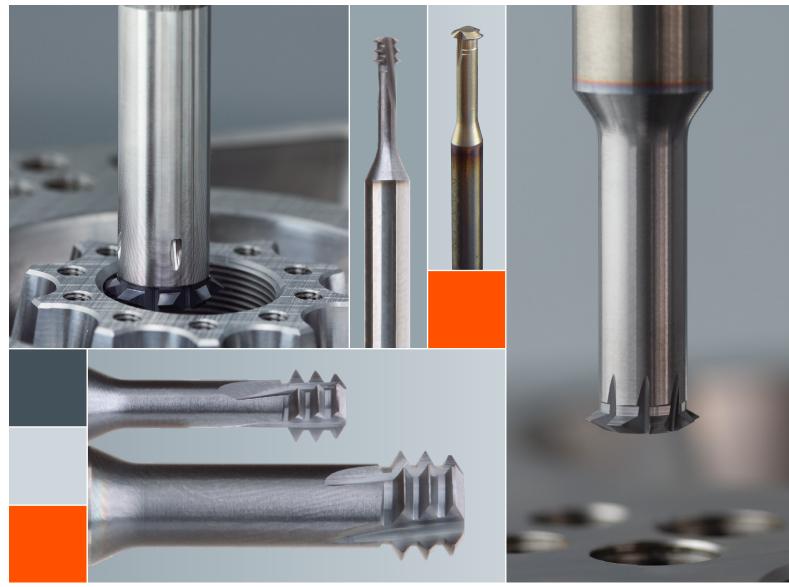




TOOLING & MACHINERY

COMPLETE METALWORKING SOLUTIONS(800) 991-4225www.ahbinc.comISO Certifiedcustomerservice@ahbinc.com



LEADING SOLUTIONS IN AEROSPACE THREAD MILLING TECHNOLOGY





Introducing Emuge ZGF Circular Thread Milling Solutions

Emuge advanced Circular Thread Milling Technology provides innovative solutions for meeting the challenges of today's most demanding industries, such as aerospace. The ZGF program leads the way to new levels of threading performance, accuracy and reliability:

ZGF-S-CUT

Left-hand helical flute, multi-tooth design delivers **10X tool life and cycle time reductions**

ZGF-Z

Optimized tooth geometry and increased flutes for faster cutting and reduced cycle times

ZGF-CIRC-GF

Fast, easy exchangeable face insert solution for making larger threads

THREADS-ALL™

Complete line of sizes from miniature to 3/4" in 2XD and 3XD – eight standard sizes capable of producing over 100 common thread designations

Circular Thread Milling Advantages:

- Unprecedented tool life and cycle time reduction in difficult materials
- High process security, reliability and control
- Produce threads with excellent form, finish and dimensional accuracy
- Attain optimal positional accuracy
- One tool for right and left-hand threads and for through or blind holes
- Achieve full bottom threading and precise depth control











EMUGE

ZGF-S-CUT 2XD SOLID CARBIDE THREAD MILLS

ZGF-S-CUT

Helical Flute Multi-Tooth Thread Mills

The Emuge ZGF-S-CUT line of premium sub-micro grain carbide thread mills is ideal in demanding materials and industries such as aerospace where nickel alloys, titanium and stainless steel are the norm. A unique design enables three tooth pitches to simultaneously rough and finish-cut threads, **dramatically increasing tool life and reducing cycle times.**

- Left-hand helix flute design with left-hand spindle rotation greatly enhances stability and performance
- First tooth acts as a rougher, while the second and third teeth finish full thread profile

1

- 10X higher tool life and cycle time reductions than conventional tools!
- TiAIN T46 coating resists heat and wear, extending tool life
- Full bottoming threads within 1 pitch
- One tool easily makes STI threads for both through and blind holes
- Internal coolant tools starting at 1/4" size



ZGF-S-CUT - 2XD - UNC and UNF

	Threa	nd Size	Cutter Dia.	Cut Length	OAL	Shank Dia.	No. Elutor	
	UNC	UNF	in	in	in in		No. Flutes	EDP No.
	#2 - 56		0.067	0.181	1.535	3	3	GF26A729.5001
	#4 - 40		0.085	0.234	1.535	3	3	GF26A729.5003
	#6 - 32		0.106	0.287	1.535	3	3	GF26A729.5005
	#10 - 24		0.146	0.398	1.653	4	3	GF26A729.5007
		#10-32	0.154	0.392	1.653	4	4	GF26A729.5041
	1/4 - 20		0.195	0.520	2.165	6	3	GF26A729.5009
_		1/4-28	0.207	0.516	2.165	6	5	GF26A729.5043
olan	5/16 - 18		0.248	0.648	2.283	8	4	GF26A729.5010
Internal Coolant		5/16 - 24 & 3/8 - 24	0.260	0.642	2.283	8	5	GF26A729.5044
Inte	3/8 - 16		0.303	0.656	2.440	8	4	GF26A729.5011
		716 - 20 & 1/2 - 20	0.376	0.896	2.913	10	6	GF26A729.5046

ZGF-S-CUT - METRIC / METRIC FINE

	Thread Size	Cutter Dia. mm	Cut Length mm	OAL mm	Shank Dia. mm	No. Flutes	EDP No.			
	M3 x 0.5	2.40	6.20	39	3	4	GF26A729.0030			
	M3.5 x 0.6	2.78	7.30	39	3	4	GF26A729.0035			
	M4 x 0.7	3.15	8.30	42	4	4	GF26A729.0040			
	M5 x 0.8	4.04	10.30	52	6	4	GF26A729.0050			
±	M6 x 1.0	4.80	12.43	55	6	4	GF26A729.0060			
olar	M8 x 1.25	6.50	16.70	60	8	4	GF26A729.0080			
Internal Coolant	M10 x 1.5	8.20	20.70	70	10	5	GF26A729.0100			
Item	M12 x 1.75	9.90	24.90	74	10	5	GF26A729.0112			
-	M14 x 2.0	11.60	29.00	80	12	5	GF26A729.0114			
	M16 x 2.0	13.60	33.00	85	14	6	GF26A729.0116			







ZGF-Z Thread Mills

Emuge ZGF-Z premium sub-micro grain carbide thread mills are ideal for threading in difficult materials such as Inconel, titanium and stainless steel. An optimized geometry and multiple flutes in ZGF thread mills enable faster cutting and reduced cycle times.

- Optimized tooth geometry and multiple flutes for maximum performance
- Corrected thread profile for different thread sizes and pitches
- Longer tool life and substantial cycle time reductions compared to conventional tools!
- TiCN coated for extended tool life
- Full bottoming threads within 1 pitch
- One tool easily makes STI threads for both through and blind holes
- Internal coolant tools starting at M8 size

ZGF-Z - 2XL						
Thread Sizes	Cutter Dia. mm	Cut Length mm	OAL mm	Shank Dia. mm	No. Flutes	EDP No.
M1.6	1.18	3.38	39	3	5	GF293746.0016
M2	1.52	4.20	39	3	6	GF293746.0020
M2.5	1.96	5.23	39	3	6	GF293746.0025
M3	2.40	6.25	39	3	6	GF293746.0030
M4	3.15	8.35	41	4	6	GF293746.0040
M5	4.04	10.40	51	6	7	GF293746.0050
M6	4.80	12.50	53	6	7	GF293746.0060
M8	6.50	16.63	58	8	7	GF293746.0080
M10	8.20	20.75	67	10	8	GF293746.0100
M10 M12	9.90	24.88	70	10	8	GF293746.0112

* Also partially suitable for UN sizes

ZGF-CIRC-GF EXCHANGEABLE FACE INSERT THREAD MILLING

EMUGE

ZGF-CIRC-GF

Exchangeable Face Insert Thread Milling System for Making Larger Threads

Circular thread milling bar / bodies with exchangeable face inserts provide an excellent modular solution for milling larger thread dimensions. Face inserts incorporate the ZGF program tooth design / geometry, for maximum tool life and performance.

- Rigid, anti-vibration body design allows for a length-todiameter ratio to 2XD and greater
- PVD coated insert application range
- Micro-grain carbide face inserts with TiAlN-T4 coating are ideal for stainless steels, titanium, nickel alloys, cast iron, hard high alloy steel > 25 Rc, mold and tool steels
- Low radial cutting pressure ensures true-to-gage threads
- Fast and easy setup, programming and maintenance
- Innovative internal coolant supply exits radially at the insert cutting edge for optimized cooling, chip evacuation and thread quality
- Face inserts are rigidly affixed in a solid steel precision pocket, securely fastened with a Torx locking screw





Incort Cizo	Cutter Dia.	Thread Pit	tch Range	No. Elutoo			
Insert Size	mm	TPI	mm	No. Flutes	EDP No.		
А	9.9	13-24	1 - 1.75	6	GF653109.9512		
В	11.6	12-24	1 - 2.0	7	GF653209.9512		
C	15.9	10-16	1.5 - 2.5	8	GF653309.9514		
D	19.9	8-16	1.5 - 3.0	8	GF653409.9514		

ZGF-CIRC-GF BODIES

Bar Size	Cutter Dia. Minimum mm Thread Dia.				Shank Dia. mm	No. Flutes	EDP No.
А	9.9	1/2" - M12	24	68	10	1	GZ38100A
В	11.6	5/8" - M16	32	71.5	10	1	GZ38100B
С	15.9	7/8" - M20	40	88	14	1	GZ38100C
D	19.9	1" - M24	48	99	16	1	GZ38100D







THREADS-ALL[™]

A Complete Line of 2XD Solid Carbide Thread Mills, Plus 3XD Sizes for Maximum Reach

Miniature size thread mills provide a high-quality, dependable threading solution for a variety of difficult materials.

Standard sizes provide manufacturers a ready tooling solution which allows for quick adaptation to a variety of threading requirements in a wide range of materials.

- TiCN coated for extended tool life
- Requiring only 8 stock standard tool sizes, #10 • 1/4 • 5/16 • 3/8 • 7/16 • 1/2 • 5/8 • 3/4, it is now possible to produce 100+ commonly produced screw thread designations
- In addition, Threads-All tools provide total control over pitch diameter limits including 2B • 3B • 3BG • and all oversize variants

-																
Tool					Thread Si	ze				Cutter	Cut	No.	Overall	Shank	Shank	EDP No.
Size	UNC	UNF	STI UNC	STI UNF	UNEF	UNJC	UNJF	М	MJ	Dia.	Length	Flutes	Length	Dia.	Туре	
0	-	0-80	-	-	-	-	0-80	1.6 x .35	1.6 x .35	0.045	0.125	1	1 5/8"	1/8"	HA	GFS13706.5033 •
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	GFS23706.5000 •
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	GFS23706.5001 •
4	4-40	4-48	2-56	_	-	4-40	4-48	_	-	0.081	0.224	3	1 5/8"	1/8"	HA	GFS23706.5003 •
STI 4	-	-	4-40	4-48	-	-	-	-	-	0.117	0.295	3	1 5/8"	1/8"	HA	GFS23706.5611 •
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	GFS23706.5004 •
6	6-32	6-40	-	_	-	6-32	6-40	-	-	0.100	0.276	3	1 5/8"	1/8"	HA	GFS23706.5005 •
STI 6	-	-	6-32	6-40	-	-	-	5 x .8	5 x .8	0.143	0.364	3	2 1/2"	1/4"	HB	GFS23106.5613 •
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	GFS23706.5006 •
STI 8	-	-	8-32	8-36	1/4-32	_	-	_	_	0.167	0.415	3	2 1/2"	1/4"	HB	GFS23106.5614 •
10	10-24	10-32	10-24	10-32	-	10-24	10-32	-	-	0.136	0.380	3	2 1/2"	1/4"	HB	GFS23106.5007 •
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	GFS23106.5009 •
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	GFS33106.5010 🔺
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	GFS33106.5011 🔺
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	GFS33106.5012 🔺
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	1.00	5	3 3/4"	1/2"	HB	GFS33106.5013 🔺
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	1.25	5	3 3/4"	1/2"	HB	GFS33106.5015 🔺
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	1.50	6	4 1/4"	5/8"	HB	GFS33106.5016 🔺
	Size 0 1 2 4 STI 4 5 6 STI 6 8 STI 6 8 STI 8 10 1/4 5/16 3/8 7/16 1/2 5/8	Size UNC 0 - 1 1-64 2 2-56 4 4-40 5 4 5 5-40 6 32 STI 4 - 6 6-32 STI 6 - 8 8-32 STI 8 - 10 10-24 1/4 1/4-20 5/16 5/16-18 3/8 3/8-16 1/14 1/2-13 5/8 5/8-11	Size UNC UNF 0 - 0.80 1 1-64 1.72 2 2.56 2.64 4 4.40 4.48 5T1 4 - - 5 5.40 5.44 6 5.4 - 8 6.32 6.40 ST1 6 - - 8 8.32 8.36 ST1 8 - - 9 1.024 10.32 ST1 8 - - 9 1.22 8.36 ST1 8 - - 9 1.24 10.32 ST1 8 - - 9 1.24 1.428 ST1 8 - - 9 1.42.0 1.428 ST1 9 5.161.2 3.824 3/8 3.8316 3.824 7/16 7/16.4 7/16.20 5/8.1 5/8-11	Size UNC UNF STI UNC 0 - 0-80 - 1 1-64 1-72 - 2 2-56 2-64 1-64 4 4-40 4-48 2-56 STI 4 - - 4-40 5 5-40 5-44 - 6 6-32 6-40 - STI 6 - - 6-32 6 6-32 8-30 - STI 6 - - 6-32 8 8-32 8-36 - STI 8 - - 8-32 9 10-24 10-3 10-24 14 1/4-20 1/4-20 1/4-20 174 1/4-20 1/4-20 1/4-20 3/8 3/8-16 3/8-16 3/8-16 3/8 3/8-16 3/8-12 3/8-16 1/12 1/2-13 1/2-20 1/2-13 5/8-1 5/8-11<	Note UNC UNF STI UNC STI UNF 0 - 0-80 - - 1 1-64 1-72 - - 2 2-56 2-64 1-64 - 4 4-40 4-48 2-56 - STI 4 - - 4-40 4-48 2-56 - STI 5 5-40 5-44 - - - - 6 6-32 6-40 - - - - STI 6 - - 6-32 6-40 - - STI 6 - - 8-32 8-36 - - STI 8 8-32 8-32 10-24 10-32 14-20 10-32	Note UNC UNF STI UNC STI UNF UNEF 0 - 0-80 - - - 1 1-64 1-72 - - - 2 2-56 2-64 1-64 - - 4 4-40 4-48 2-56 - - 5 2-54 1-64 - - - 4 4-40 4-48 2-56 - - 5 5-40 4-40 4-48 - - 5 5-40 5-44 - - - 6 6-32 6-40 - - - 5 5-40 5-44 - - - 5 6-32 6-40 - - - - 5 5-40 5-4 - - - - - - - - - - - - - -<	SizeUNCUNFSTI UNCSTI UNFUNEFUNJC0-0-8011-641-721-6422-562-641-642-5644-404-482-564-405TI 44-404-4855-405-445-4066-326-406-32STI 66-326-4088-328-368-32STI 88-328-361/4-32-1010-2410-3210-2410-32110-241/41/4-201/4-285/16-185/16-185/16-183/8-163/83/8-163/8-143/8-163/8-243/8-163/8-243/8-161/21/2-131/2-201/2-131/2-205/8-241/2-135/85/8-115/8-115/8-185/8-183/4-205/8-11	Note UNC UNF STI UNC STI UNF UNEF UNJC UNJF 0 - 0-80 - - - - 0-80 1 1-64 1-72 - - - 1-64 1-72 2 2-56 2-64 1-64 - - 2-56 2-64 4 4-40 4-48 2-56 - - 4-40 4-48 5TI 4 - - - - 4-40 4-48 5TI 4 - - - - - - - 5 5-40 5-44 - - - - - - - 5 5-40 5-44 -<	Size UNC UNF STI UNC STI UNF UNEF UNJC UNJF M 0 0-80 0-80 1.6 x .35 1 1-64 1-72 1-64 1-72 2 x.4 2 2-56 2-64 1-64 2-56 2-64 2.5 x.45 4 4-40 4-48 2-56 - 4-40 4-48 5 5-40 5-44 2-56 - - - - - 5 5-40 5-44 - - - - - - 5 5-40 5-44 - - - - - - - 5 6-32 6-40 - - - - - 5 x.8 8 8-32 8-36 - - - - - -	SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJ0-0-801-720-801.6 x.351.6 x.351.6 x.351.6 x.3511-641-7201-641-722 x.42 x.422-562-641-642-562-642.5 x.452.5 x.4544-404-482-564-404-485T144-404-485T144-404-485T145-405-443 x.53 x.566-326-405T166-326-405T166-326-405T186-328-364 x.74 x.75T188-328-364 x.71010-2410-3210-2410-321110-2410-2410-2410-2410-2410-246 x 15/165/16-185/16-185/16-185/16-243/8-325/16-185/16-248x1.253/83/8-163/8-243/8-163/8-243/8-163/8-2410x1.510x1.55/165/16-185/16-18 <th>Size UNC UNF STI UNC STI UNF UNEF UNJC UNJF M MJ Dia. 0 - 0-80 - - - 0-80 1.6 x.35 1.6 x.35 0.045 1 1-64 1-72 - - - 0-80 1.6 x.35 1.6 x.35 0.045 2 2-56 2-64 1-72 - - - 0-80 1.6 x.35 0.045 4 4-40 4-48 1-64 - - 2x.64 2x.4 2x.4 2x.4 0.056 5 2-56 2-64 1-40 4-40 0.0117 0.0117</th> <th>SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDia.Length0-0-801-6400.6x.351.6x.350.0450.12511-641-721-641-722x.42x.40.0560.14622-562-641-642-562-642.5x.452.5x.450.0640.17244-404-482-564-404-480.0810.224ST144-404-480.0810.22455-405-444-404-480.1170.29555-405-440.1170.29555-405-440.1170.29555-405-440.1170.29556-6326-6400.1000.276ST166-326-400.1000.276ST166-326-400.1000.276ST186-326-400.1000.276ST186-328-364x.74x.70.1240.383ST18</th> <th>SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDia.LengthFlutes00-800-801.6 x.351.6 x.350.0450.125111-641.721-641.722x.42x.40.0560.146322-562-641-642-562-642.5 x.452.5 x.450.0640.172344-404-482-564-404-480.0810.224355-405-444-404-480.1170.2953355-405-446-326-400.1170.295355-405-446-326-400.1170.295355-405-446-326-400.1000.276355-405-446-326-400.1000.276355-405-446-326-400.1000.276355555655353533355565</th> <th>SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDia.LengthFlutesLength0-0.800.801.6 x.351.6 x.350.0450.12511.5/"11-641.721-641.722 x.42 x.40.0560.14631.5/"22-562-641-642-562-642.5 x.452.5 x.450.0640.17231.5/"44-404-482-564-404-480.0810.22431.5/"55-405-444-404-480.0810.22431.5/"55-405-440.01170.29531.5/"55-405-440.0100.27631.5/"55-405-445x.85x.80.1430.36432.1/2"66-326-405x.85x.80.1430.36432.1/2"558-328-361/4-320.1000.276331.5/"555x.85x.85x.8<t< th=""><th>SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDialLengthFulseLengthDials00-800-801.6 x.351.6 x.351.6 x.350.0450.12511.5/8"1/8"11-641-721-641-722 x.42 x.40.0560.14631.5/8"1/8"22-562-641-642-562-642.5 x.452.5 x.450.0640.17231.5/8"1/8"44-404-482-562-562-642.5 x.452.5 x.450.0640.12531.5/8"1/8"54-404-480.0110.29531.5/8"1/8"55-405-440.1170.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-45-45-43.5.53.5.50.1430.6431.5/8"1.5/8"550.1000.27631.5/8"</th></t<><th>SizeUNCUNFSTI UNCSTI UNFUNEFUNEFUNEFUNEFUNEFMMDiaLengthFitteLengthFitteLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteL</th></th>	Size UNC UNF STI UNC STI UNF UNEF UNJC UNJF M MJ Dia. 0 - 0-80 - - - 0-80 1.6 x.35 1.6 x.35 0.045 1 1-64 1-72 - - - 0-80 1.6 x.35 1.6 x.35 0.045 2 2-56 2-64 1-72 - - - 0-80 1.6 x.35 0.045 4 4-40 4-48 1-64 - - 2x.64 2x.4 2x.4 2x.4 0.056 5 2-56 2-64 1-40 4-40 0.0117 0.0117	SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDia.Length0-0-801-6400.6x.351.6x.350.0450.12511-641-721-641-722x.42x.40.0560.14622-562-641-642-562-642.5x.452.5x.450.0640.17244-404-482-564-404-480.0810.224ST144-404-480.0810.22455-405-444-404-480.1170.29555-405-440.1170.29555-405-440.1170.29555-405-440.1170.29556-6326-6400.1000.276ST166-326-400.1000.276ST166-326-400.1000.276ST186-326-400.1000.276ST186-328-364x.74x.70.1240.383ST18	SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDia.LengthFlutes00-800-801.6 x.351.6 x.350.0450.125111-641.721-641.722x.42x.40.0560.146322-562-641-642-562-642.5 x.452.5 x.450.0640.172344-404-482-564-404-480.0810.224355-405-444-404-480.1170.2953355-405-446-326-400.1170.295355-405-446-326-400.1170.295355-405-446-326-400.1000.276355-405-446-326-400.1000.276355-405-446-326-400.1000.276355555655353533355565	SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDia.LengthFlutesLength0-0.800.801.6 x.351.6 x.350.0450.12511.5/"11-641.721-641.722 x.42 x.40.0560.14631.5/"22-562-641-642-562-642.5 x.452.5 x.450.0640.17231.5/"44-404-482-564-404-480.0810.22431.5/"55-405-444-404-480.0810.22431.5/"55-405-440.01170.29531.5/"55-405-440.0100.27631.5/"55-405-445x.85x.80.1430.36432.1/2"66-326-405x.85x.80.1430.36432.1/2"558-328-361/4-320.1000.276331.5/"555x.85x.85x.8 <t< th=""><th>SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDialLengthFulseLengthDials00-800-801.6 x.351.6 x.351.6 x.350.0450.12511.5/8"1/8"11-641-721-641-722 x.42 x.40.0560.14631.5/8"1/8"22-562-641-642-562-642.5 x.452.5 x.450.0640.17231.5/8"1/8"44-404-482-562-562-642.5 x.452.5 x.450.0640.12531.5/8"1/8"54-404-480.0110.29531.5/8"1/8"55-405-440.1170.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-45-45-43.5.53.5.50.1430.6431.5/8"1.5/8"550.1000.27631.5/8"</th></t<> <th>SizeUNCUNFSTI UNCSTI UNFUNEFUNEFUNEFUNEFUNEFMMDiaLengthFitteLengthFitteLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteL</th>	SizeUNCUNFSTI UNCSTI UNFUNEFUNJCUNJFMMJDialLengthFulseLengthDials00-800-801.6 x.351.6 x.351.6 x.350.0450.12511.5/8"1/8"11-641-721-641-722 x.42 x.40.0560.14631.5/8"1/8"22-562-641-642-562-642.5 x.452.5 x.450.0640.17231.5/8"1/8"44-404-482-562-562-642.5 x.452.5 x.450.0640.12531.5/8"1/8"54-404-480.0110.29531.5/8"1/8"55-405-440.1170.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-440.1010.29531.5/8"1/8"55-405-45-45-43.5.53.5.50.1430.6431.5/8"1.5/8"550.1000.27631.5/8"	SizeUNCUNFSTI UNCSTI UNFUNEFUNEFUNEFUNEFUNEFMMDiaLengthFitteLengthFitteLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteLengthDiaLengthFitteL

ZGF-I - 2XD - TICN COATED

With external flood coolant only
 With external flood coolant or axial internal coolant hole (MINIATURE SIZES EXTERNAL COOLANT ONLY)
Shank Types: HA-Straight shank without clamping flat, HB-Straight shank with Weldon clamping flat

ZGF-I 3XD SOLID CARBIDE THREAD MILLS





BOTH 2XD AND 3XD THREADS-ALL™ TOOLS PROVIDE:

- Easy machining of difficult materials
- One tool for through and blind holes
- Pitch diameter can be easily controlled
- Full bottom threading to within 1 pitch
- STI threads can be easily produced
- Produces excellent thread finish and gaging



ZGF-I - 3XD - TICN COATED

	2ui -i	570											
	Tool			Thread Size			Cutter	Cut	No.	Overall	Shank	Shank	EDP No.
	Size	UNC	UNF	STI UNC	STI UNF	М	Dia.	Length	Flutes	Length	Dia.	Туре	LDI NO.
ZES	2	2-56	2-64	2-56	2-64	M 2.2	0.067	0.258	3	1.625	1/8"	HA	GFS83706.5001 •
RE SI	4	4-40	4-48	4-40	4-48	M 3	0.085	0.336	3	1.625	1/8"	HA	GFS83706.5003 •
MINIATURE SIZES	6	6-32	6-40	6-32	6-40	M 3.5	0.106	0.414	3	1.625	1/8"	HA	GFS83706.5005 •
MIN	8	8-32	8-36	8-32	8-36	_	0.132	0.492	3	1.750	3/16"	HA	GFS83706.5006 •
	10	10-24	-	10-24	_	M 5	0.146	0.570	3	1.875	3/16"	HA	GFS83706.5007 •
	10	-	10-32	-	10-32	-	0.154	0.570	4	1.875	3/16"	HA	GFS83706.5041 •
		1/4-20	_	1/4-20	_	M 6	0.195	0.750	4	2.375	1/4"	HB	GFS83106.5009 •
	1/4	-	1/4-28	-	1/4-28	_	0.207	0.750	4	2.375	1/4"	HB	GFS83106.5043 •
ŝ	5/16	5/16-18	-	5/16-18	-	M 8	0.248	0.937	4	2.563	5/16"	HB	GFS83106.5010 🔺
SIZES	5/10	-	5/16-24	-	5/16-24	-	0.260	0.937	5	2.563	5/16"	HB	GFS83106.5044 🔺
STANDARD	3/8	3/8-16	-	3/8-16	_	M 10	0.303	1.125	5	2.750	5/16"	HB	GFS83106.5011 🔺
AND	3/8	-	3/8-24	-	3/8-24	_	0.323	1.125	5	2.875	3/8"	HB	GFS83106.5045 🔺
SI	7/16	7/16-14	-	7/16-14	-	M 12	0.354	1.312	5	3.125	3/8"	HB	GFS83106.5012 🔺
	//10	_	7/16-20	-	7/16-20	-	0.376	1.312	5	3.060	3/8"	HB	GFS83106.5046 🔺
	1/2	1/2-13	1/2-20	1/2-13	1/2-20	_	0.409	1.500	5	3.625	1/2"	HB	GFS83106.5013 🔺
	5/8	5/8-11	5/8-18	5/8-11	5/8-18	M 16	0.514	1.875	5	4.125	5/8"	HB	GFS83106.5015 🔺
	3/4	3/4-10	3/4-16	3/4-10	3/4-16	_	0.630	2.250	6	4.500	5/8"	HB	GFS83106.5016 🔺

With external flood coolant only
 With external flood coolant or axial internal coolant hole (MINIATURE SIZES EXTERNAL COOLANT ONLY)

Shank Types: HA-Straight shank without clamping flat, HB-Straight shank with Weldon clamping flat



Ask about our High Precision / Performance FPC Milling / Drilling / Thread Milling Chucks Learn more at: emuge.com/holders/FPC-Chucks





Strong clamping force via internal worm gear design, along with optional Pin-Lock System, provides guaranteed holding power and pullout protection.

EMUGE Corp. 1800 Century Drive, West Boylston, MA 01583 800-991-4225 • www.ahbinc.com Emuge Corp. has been the product technology and performance leader in their field for nearly 100 years. Emuge manufactures an extensive line of taps, drills, thread mills, end mills, toolholders, clamping devices and other rotary cutting tools, over 100,000 items sold through distributors worldwide.