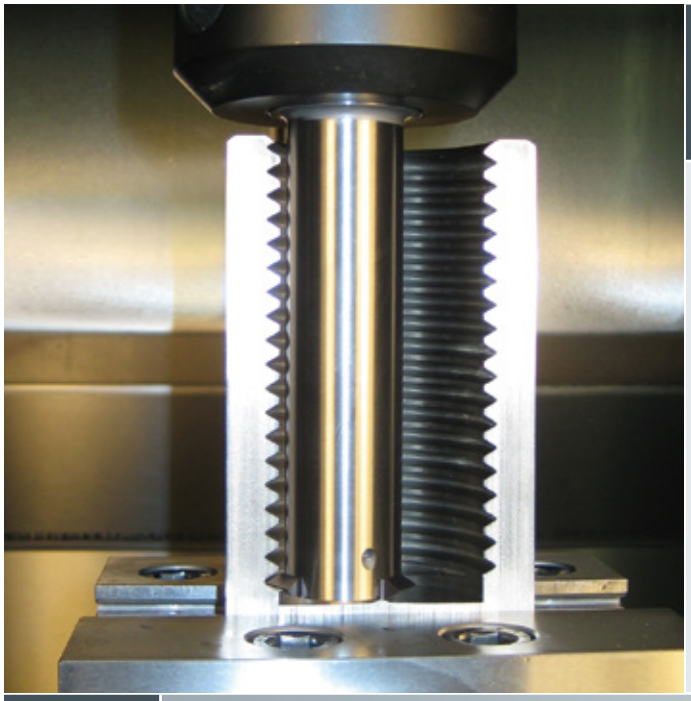
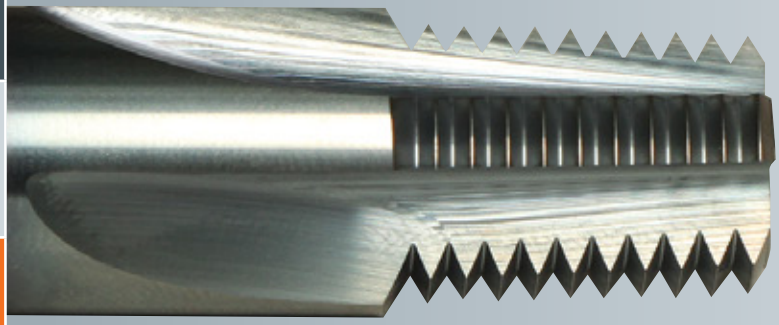
EMUGE





LEADING SOLUTIONS IN
THREAD MILLING TECHNOLOGY

Thread with Maximum Confidence, Depth, Versatility and Economy.

Emuge Shur-Thread™, Threads-All™, Vario-Z and NPT Solid Carbide Thread Mills; and Gigant-ic Indexable Insert System offer manufacturers advanced generation threading solutions at an unmatched value-to-performance ratio, providing new ways to improve part quality and increase productivity while reducing operating costs.

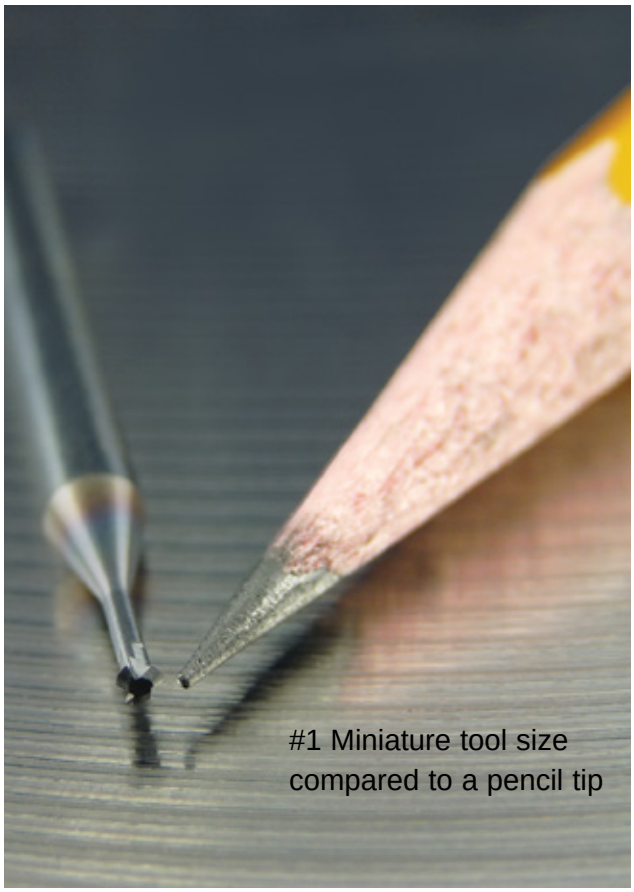
Thread Milling Technology Advantages:

- High process security and control
- Produce threads with excellent form, finish, and dimensional accuracy
- Easy machining of difficult materials
- Eliminate the possibilities and consequences of tap breakage
- Achieve full-bottom threading and precise thread depth control
- Optimum positional accuracy
- Pitch diameter can be controlled by CNC offset
- One tool for right-hand and left-hand threads
- One tool for through or blind holes
- Produces small controllable chips (no bird nesting of chips)
- Less spindle torque enables small machines to produce larger threads
- Less cutting pressure for thin-walled parts
- No spindle reversal required

Advanced Application Capabilities

Emuge is proud to introduce an expanded line of solid carbide thread mills. In the dynamic world of metal cutting, Emuge recognizes the need to continually deliver the latest technology to help manufacturers reduce costs, improve delivery times and produce world-class products.

Emuge thread mills set the standard for versatility, performance, process security and value and ar specially designed for a wide range of threading applications. They are ideal for demanding industr using difficult materials such as Stainless Steels, Titanium and Inconel.



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 and 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.

- **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

ZGF-I 2XD - TiCN Coated

2XD	Tool Size	Thread Size									Cutter Dia.	Cut Length	No. Flutes	Overall Length	Shank Dia.	Shank Type	EDP No.
		UNC	UNF	STI UNC	STI UNF	UNEF	UNJC	UNJF	M	MJ							
MINIATURE SIZES	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 •
STANDARD SIZES	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

• 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

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

3XD	Tool Size	Thread Size					Cutter Dia.	Cut Length	No. Flutes	Overall Length	Shank Dia.	Shank Type	EDP No.
		UNC	UNF	STI UNC	STI UNF	M							
MINIATURE SIZES	2	2-56	2-64	2-56	2-64	M 2.2	0.067	0.258	3	1.625	1/8"	HA	GFS83706.5001
	4	4-40	4-48	4-40	4-48	M 3	0.085	0.336	3	1.625	1/8"	HA	GFS83706.5003
	6	6-32	6-40	6-32	6-40	M 3.5	0.106	0.414	3	1.625	1/8"	HA	GFS83706.5005
	8	8-32	8-36	8-32	8-36	–	0.132	0.492	3	1.750	3/16"	HA	GFS83706.5006
STANDARD SIZES	10	10-24	–	10-24	–	M 5	0.146	0.570	3	1.875	3/16"	HA	GFS83706.5007 •
		–	10-32	–	10-32	–	0.154	0.570	4	1.875	3/16"	HA	GFS83706.5041 •
	1/4	1/4-20	–	1/4-20	–	M 6	0.195	0.750	4	2.375	1/4"	HB	GFS83106.5009 •
		–	1/4-28	–	1/4-28	–	0.207	0.750	4	2.375	1/4"	HB	GFS83106.5043 •
	5/16	5/16-18	–	5/16-18	–	M 8	0.248	0.937	4	2.563	5/16"	HB	GFS83106.5010
		–	5/16-24	–	5/16-24	–	0.260	0.937	5	2.563	5/16"	HB	GFS83106.5044
	3/8	3/8-16	–	3/8-16	–	M 10	0.303	1.125	5	2.750	5/16"	HB	GFS83106.5011
		–	3/8-24	–	3/8-24	–	0.323	1.125	5	2.875	3/8"	HB	GFS83106.5045
	7/16	7/16-14	–	7/16-14	–	M 12	0.354	1.312	5	3.125	3/8"	HB	GFS83106.5012
		–	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

SHUR-THREAD™

Solid Carbide Thread Mills for 1 1/8" and under, with or without Coolant-Thru

Shur-Thread redefines the measure of value in solid carbide thread mills. This tooling line is packed with essential advanced technology for assured quality, performance, versatility, and ease-of-use.

The Shur-Thread Series is designed and priced to offer a superior level of value for any size machine shop or production volume. When combined with the latest CNC technology and smart controllers; outstanding flexibility, process control, tool life and part quality can be realized.

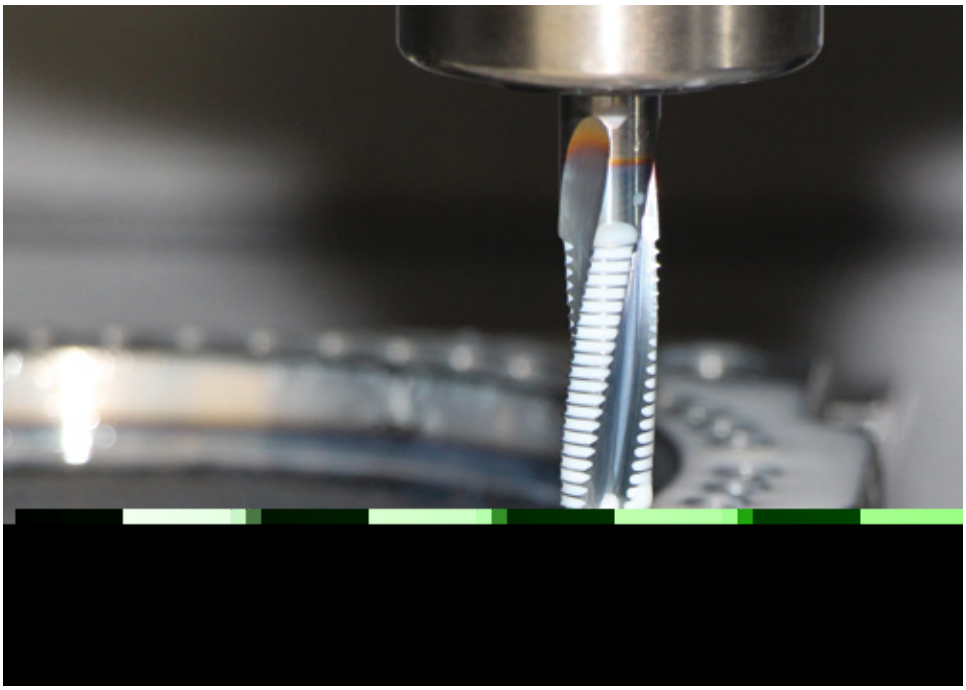
Exceptional balance of performance benefits and price are achieved by combining select design elements:

- **Premium micro-grain carbide** with state-of-the-art grinding techniques
- **Specially engineered** multiple-spiral flutes eliminate chatter
- **Large cutter diameter with high profile correction** ensures true-to-gage threads

SHUR-THREAD™ - GFI without Coolant-Thru

Thread Size	Cutter Dia.	Cut Length	No. Flutes	OAL	Shank Dia.	EDP No.
#10 - 24	0.136	0.395	3	2 1/2	1/4	GFR15106.5007
#10 - 32	0.150	0.390	3	2 1/2	1/4	GFR15106.5041
1/4 - 20	0.185	0.524	3	2 1/2	1/4	GFR15106.5009
1/4 - 28	0.203	0.517	3	2 1/2	1/4	GFR15106.5043
5/16 - 18	0.242	0.637	3	2 1/2	1/4	GFR15106.5010
5/16 - 24	0.246	0.644	3	2 1/2	1/4	GFR15106.5044
3/8 - 16	0.301	0.780	3	2 1/2	5/16	GFR15106.5011
3/8 - 24	0.309	0.769	3	2 1/2	5/16	GFR15106.5045
7/16 - 14	0.354	0.891	3	3	3/8	GFR15106.5012
7/16 - 20	0.371	0.874	3	3	3/8	GFR15106.5046
1/2 - 13	0.371	1.036	3	3	3/8	GFR15106.5013
1/2 - 20	0.371	1.023	3	3	3/8	GFR15106.5047
5/8 - 11	0.496	1.316	4	3 3/4	1/2	GFR15106.5015
3/4 - 10	0.621	1.548	4	4 1/4	5/8	GFR15106.5016
7/8 - 9	0.621	1.829	4	4 1/4	5/8	GFR15106.5017
1"- 8 & 1 1/8 - 8	0.746	2.058	4	4 3/4	3/4	GFR15106.5018

- **Extended milling portion** allows for length-of-cut to 2XD
- **Enlarged flute space** for efficient chip evacuation
- **End mill type shank** with clamping flat for secure tool holding
- **TiCN coated** for long tool life
- **Produce threads 1 1/8" and under** in a wide range of soft and pre-hardened steels to 58 Rc, Stainless Steels, Aluminum, Cast Iron, Titanium, Inconel and all difficult to machine exotics



SHUR-THREAD™ - GFI-IKZ with Coolant-Thru

	Thread Size	Cutter Dia.	Cut Length	No. Flutes	OAL	Shank Dia.	EDP No.
	#10 - 24	0.136	0.395	3	2 1/2	1/4	GFR35106.5007
	#10 - 32	0.150	0.390	3	2 1/2	1/4	GFR35106.5041
	1/4 - 20	0.185	0.524	3	2 1/2	1/4	GFR35106.5009
	1/4 - 28	0.203	0.517	3	2 1/2	1/4	GFR35106.5043
	5/16 - 18	0.242	0.637	3	2 1/2	1/4	GFR35106.5010
	5/16 - 24	0.246	0.644	3	2 1/2	1/4	GFR35106.5044
	3/8 - 16	0.301	0.780	3	2 1/2	5/16	GFR35106.5011
	3/8 - 24	0.309	0.769	3	2 1/2	5/16	GFR35106.5045
	7/16 - 14	0.354	0.891	3	3	3/8	GFR35106.5012
	7/16 - 20	0.371	0.874	3	3	3/8	GFR35106.5046
	1/2 - 13	0.371	1.036	3	3	3/8	GFR35106.5013
	1/2 - 20	0.371	1.023	3	3	3/8	GFR35106.5047
	9/16 & 5/8-18	0.496	1.138	4	3 3/4	1/2	GFR35106.5048
	5/8 - 11	0.496	1.316	4	3 3/4	1/2	GFR35106.5015
	3/4 - 10	0.621	1.548	4	4 1/4	5/8	GFR35106.5016
	3/4 - 16	0.621	1.530	4	4 1/4	5/8	GFR35106.5050
	7/8 - 9	0.621	1.829	4	4 1/4	5/8	GFR35106.5017
	7/8 -14 & 1"-14	0.621	1.817	4	4 1/4	5/8	GFR35106.5051
	1"- 8 & 1 1/8 - 8	0.746	2.058	4	4 3/4	3/4	GFR35106.5018
METRIC	M 6 x 1.0	0.189	0.491	3	2 1/2	1/4	GFR35106.0060
	M 8 x1.25	0.246	0.663	3	2 1/2	1/4	GFR35106.0080
	M 10 x 1.5	0.309	0.796	3	2 1/2	5/16	GFR35106.0100
	M 12 x 1.75	0.371	0.997	3	3	3/8	GFR35106.0112
	M 14 x 2.0	0.457	1.140	4	3 3/4	1/2	GFR35106.0114
	M 16 x 2.0	0.496	1.280	4	3 3/4	1/2	GFR35106.0116
	M 20 x 2.5	0.621	1.595	4	4 1/4	5/8	GFR35106.0120
	M 24 x 3.0	0.746	1.920	4	4 3/4	3/4	GFR35106.0124