



WWW.AMERICANTHREADMILLS.COM



PROUDLY MADE IN AMERICA

304 MEYER ROAD, BENSENVILLE, IL 60106

PHONE: 630-595-0122 • FAX: 630-595-0918 • EMAIL: SALES@AMERICANTHREADMILLS.COM

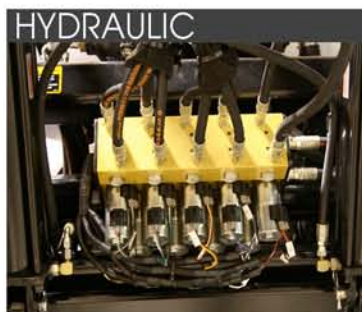
If you have a CNC machining center with helical interpolation, you can take advantage of the benefits of thread milling. **If you buy thread mills you should buy American.**



- Superior thread quality, comparable to grinding
- Cut right of left hand threads with the same tool
- Cut various thread diameters of the same pitch with the same tool
- Cut different thread tolerance classes with the same tool
- Absolute control of thread orientation and depth
- Elimination of the need for expensive taps and tapping chucks
- Ability to cut large diameter of coarse threads on lower horsepower machines
- Higher percentage of threads, thread up to shoulders in blind holes
- Produces small controllable chips, eliminates chip problems
- Low cutting pressure enables thread cutting in thin wall parts

Our standard products are stocked with TiALN coating. Other coatings are available by request.

Modifications to standards such as grooves for coolant or necks for extended reach are available with quick service.



SPECIAL THREAD MILLS

Engineering and production of special and multi-purpose thread mills is a large part of what we do at **American Thread Mills**. In addition to our standard range of UN, Metric, NPT and BSP thread forms, we can produce tools to meet a variety of needs. Whether it is a medical thread, aerospace thread or your own unique design, let us design a tool to meet your requirements.

We are experts at designing tools to combine operations, saving you time and space. In many cases, we can add the following to a thread mill.

- Drilling
- Counterboring
- Spotfacing
- Chamfering

Radial and/or axial coolant are available for all special tools.

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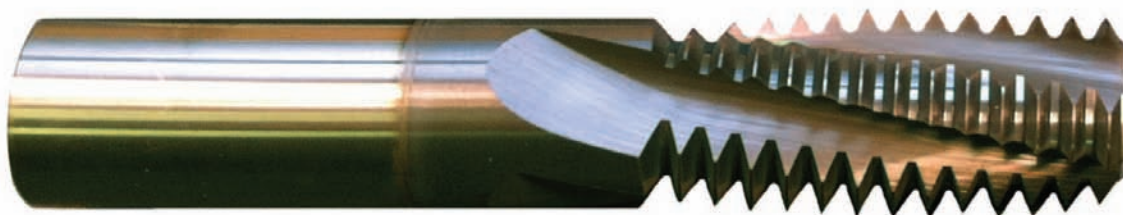
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UN

Min. Thread Diameter/Pitch	Cutter Diameter	Shank Diameter	Length of Cut	Overall Length	Part Number	Price
4-40	0.085	1/8"	(7).175	2"	9108540	\$ 96.00
6-32	0.100	1/8"	(7).218	2"	9110032	\$ 96.00
6-40	0.100	1/8"	(9).225	2"	9110040	\$ 96.00
8-32	0.120	1/8"	(8).250	2"	9112032	\$ 96.00
8-36	0.120	1/8"	(9).250	2"	9112036	\$ 96.00
10-24	0.140	3/16"	(7).292	2.5"	9114024	\$ 106.00
10-28	0.140	3/16"	(9).321	2.5"	9114028	\$ 106.00
10-32	0.140	3/16"	(10).312	2.5"	9114032	\$ 106.00
1/4-20	0.180	3/16"	(10).500	2.5"	9118020	\$ 116.00
1/4-28	0.180	3/16"	(14).500	2.5"	9118028	\$ 116.00
5/16-18	0.235	1/4"	(11).611	2.5"	9123518	\$ 125.00
5/16-24	0.235	1/4"	(15).625	2.5"	9123524	\$ 125.00
3/8-16	0.300	5/16"	(12).750	3"	9130016	\$ 149.00
3/8-20	0.300	5/16"	(15).750	3"	9130020	\$ 149.00
3/8-24	0.300	5/16"	(18).750	3"	9130024	\$ 149.00
7/16-14	0.345	3/8"	(12).857	3.5"	9134514	\$ 165.00
7/16-20	0.345	3/8"	(17).850	3.5"	9134520	\$ 165.00
1/2-13	0.370	3/8"	(13)1.000	3.5"	9137013	\$ 165.00
1/2-20	0.370	3/8"	(20)1.000	3.5"	9137020	\$ 165.00
9/16-12	0.450	1/2"	(13)1.083	3.5"	9145012	\$ 199.00
9/16-18	0.450	1/2"	(20)1.111	3.5"	9145018	\$ 199.00
5/8-10	0.490	1/2"	(12)1.200	3.5"	9149010	\$ 199.00
5/8-11	0.490	1/2"	(14)1.273	3.5"	9149011	\$ 199.00
5/8-16	0.490	1/2"	(20)1.250	3.5"	9149016	\$ 199.00
5/8-18	0.490	1/2"	(22)1.222	3.5"	9149018	\$ 199.00
3/4-10	0.585	5/8"	(13)1.300	3.5"	9158510	\$ 259.00
3/4-12	0.585	5/8"	(16)1.333	3.5"	9158512	\$ 259.00
3/4-16	0.585	5/8"	(21)1.312	3.5"	9158516	\$ 259.00
7/8-8	0.620	5/8"	(11)1.375	4"	9162008	\$ 289.00
7/8-9	0.620	5/8"	(12)1.333	4"	9162009	\$ 289.00
7/8-12	0.620	5/8"	(16)1.333	4"	9162012	\$ 289.00
7/8-14	0.620	5/8"	(19)1.357	4"	9162014	\$ 289.00
1"-8	0.740	3/4"	(12)1.500	5"	9174008	\$ 408.00
1"-12	0.740	3/4"	(18)1.500	5"	9174012	\$ 408.00

	Min. Thread Diameter/Pitch	Pitch	Cutter Diameter	Shank Diameter	Length of Cut	Overall Length	Part Number	Price
METRIC	M3	0.50	0.085	1/8"	(9).177	2"	93085050	\$ 96.00
	M3.5	0.60	0.095	1/8"	(10).236	2"	93095060	\$ 96.00
	M4	0.70	0.115	1/8"	(9).248	2"	93115070	\$ 96.00
	M4.5	0.75	0.120	1/8"	(9).266	2"	93120075	\$ 96.00
	M5	0.80	0.145	3/16"	(10).315	2.5"	93145080	\$ 106.00
	M6	0.75	0.170	3/16"	(16).472	2.5"	93170075	\$ 116.00
	M6	1.00	0.170	3/16"	(13).512	2.5"	93170100	\$ 116.00
	M8	0.75	0.235	1/4"	(21).620	2.5"	93235075	\$ 125.00
	M8	1.00	0.235	1/4"	(16).630	2.5"	93235100	\$ 125.00
	M8	1.25	0.235	1/4"	(13).640	2.5"	93235125	\$ 125.00
	M10	1.25	0.300	5/16"	(15).738	3"	93300125	\$ 149.00
	M10	1.50	0.300	5/16"	(13).768	3"	93300150	\$ 149.00
	M12	1.00	0.370	3/8"	(22).866	3.5"	93370100	\$ 165.00
	M12	1.25	0.370	3/8"	(18).886	3.5"	93370125	\$ 165.00
	M12	1.75	0.370	3/8"	(13).896	3.5"	93370175	\$ 165.00
	M14	1.50	.0450	1/2"	(17)1.004	3.5"	93450150	\$ 199.00
	M14	2.00	0.450	1/2"	(13)1.024	3.5"	93450200	\$ 199.00
	M18	1.50	0.490	1/2"	(21)1.240	3.5"	93490150	\$ 199.00
	M18	2.50	0.490	1/2"	(13)1.280	3.5"	93490250	\$ 199.00
	M20	1.50	0.620	5/8"	(22)1.299	4"	93620150	\$ 289.00
	M20	2.00	0.620	5/8"	(17)1.338	4"	93620200	\$ 289.00
	M20	2.50	0.620	5/8"	(14)1.378	4"	93620250	\$ 289.00
	M20	3.00	0.620	5/8"	(12)1.417	4"	93620300	\$ 289.00





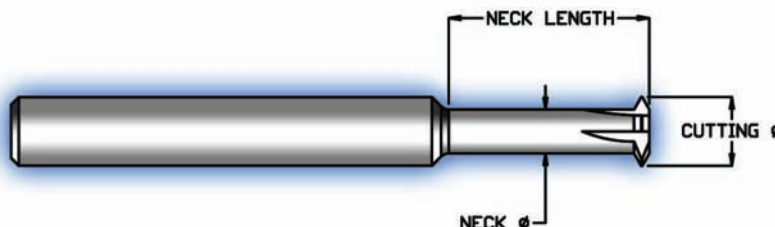
	Min. Thread Diameter/Pitch	Cutter Diameter	Shank Diameter	Length of Cut	Overall Length	Part Number	Price
NPT	1/16-27NPT	0.245	1/4"	(13).481	2.5"	9524527	\$ 125.00
	1/8-27NPT	0.300	5/16"	(16).592	3"	9530027	\$ 149.00
	1/4-18NPT	0.360	3/8"	(11).611	3.5"	9536018	\$ 165.00
	3/8-18NPT	0.427	1/2"	(13).722	3.5"	9542718	\$ 185.00
	1/2-14NPT	0.490	1/2"	(14)1.000	3.5"	9549014	\$ 199.00
	1-11.5NPT	0.620	5/8"	(13)1.130	4"	9562011	\$ 289.00
	2.5-8NPT	0.740	3/4"	(12)1.500	5"	9574008	\$ 408.00

NPTF	1/16-27NPTF	0.245	1/4"	(13).481	2.5"	9524527F	\$ 125.00
	1/8-27NPTF	0.300	5/16"	(16).592	3"	9530027F	\$ 149.00
	1/4-18NPTF	0.360	3/8"	(11).611	3.5"	9536018F	\$ 165.00
	3/8-18NPTF	0.427	1/2"	(13).722	3.5"	9542718F	\$ 185.00
	1/2-14NPTF	0.490	1/2"	(14)1.000	3.5"	9549014F	\$ 199.00
	1-11.5NPTF	0.620	5/8"	(13)1.130	4"	9562011F	\$ 289.00
	2.5-8NPTF	0.740	3/4"	(12)1.500	5"	9574008F	\$ 408.00



UN
&
METRIC

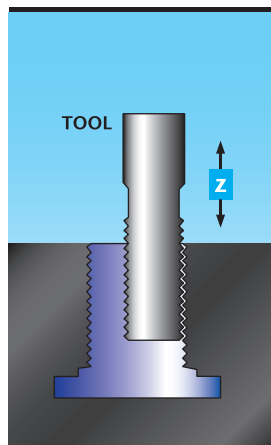
Single Pitch Thread Mills



for TiALN add -C3 to Tool Number

Min. I.D. Thread	Recommended T.P.I.	Cutting Diameter	Neck Length	Neck Diameter	Tool Number	Uncoated Price	TiALN Price
2 Flute, 1/8" Shank Diameter, 2" OAL							
#0	72-80	0.040	0.120	0.022	99040	\$ 42.00	\$ 45.00 (-C3)
3 Flute, 1/8" Shank Diameter, 2" OAL							
#1	64-80	0.050	0.150	0.028	99050	\$ 42.00	\$ 45.00 (-C3)
3 Flute, 3/16" Shank Diameter, 2.5" OAL							
#2	56-80	0.060	0.180	0.034	99060	\$ 48.00	\$ 52.00 (-C3)
#3	48-72	0.072	0.200	0.040	99072	\$ 48.00	\$ 52.00 (-C3)
#4	40-64	0.080	0.225	0.045	99080	\$ 48.00	\$ 52.00 (-C3)
#6	32-64	0.098	0.280	0.049	99098	\$ 48.00	\$ 52.00 (-C3)
#8	32-56	0.120	0.330	0.070	99120	\$ 48.00	\$ 52.00 (-C3)
#10	24-56	0.135	0.380	0.070	99135	\$ 48.00	\$ 52.00 (-C3)
4 Flute, 1/4" Shank Diameter, 2.5" OAL							
1/4"	20-56	0.180	0.500	0.105	99180	\$ 53.00	\$ 60.00 (-C3)
5/16"	18-48	0.240	0.625	0.160	99240	\$ 53.00	\$ 60.00 (-C3)
4 Flute, 3/8" Shank Diameter, 3" OAL							
3/8"	14-40	0.290	0.875	0.190	99290	\$ 63.00	\$ 77.00 (-C3)
1/2"	12-32	0.372	1.125	0.240	99372	\$ 63.00	\$ 77.00 (-C3)
5 Flute, 1/2" Shank Diameter, 3.5" OAL							
5/8"	11-32	0.490	1.375	0.350	99490	\$ 94.00	\$ 114.00 (-C3)
6 Flute, 5/8" Shank Diameter, 4" OAL							
3/4"	10-32	0.595	1.625	0.420	99595	\$ 156.00	\$ 179.00 (-C3)
6 Flute, 3/4" Shank Diameter, 5" OAL							
7/8"	8-24	0.695	1.750	0.490	99695	\$ 248.00	\$ 284.00 (-C3)
1"	6-32	0.740	2.000	0.490	99740	\$ 248.00	\$ 284.00 (-C3)

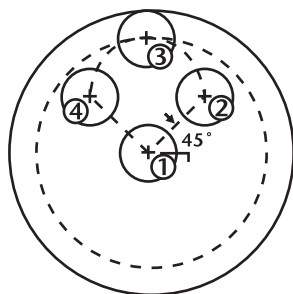
HOW TO USE THREADMILLS



INTERNAL THREADS

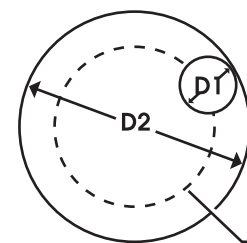
- ★ First, the interior of the workpiece must be drilled to its minor diameter.
- ★ Position threadmill over center of pre-drilled hole and move to required depth.
- ★ Mill out desired thread depth and pitch diameter. Interpolate 360° while moving "Z" axis up or down one pitch to produce a right or left handed thread.

THREAD MILL PROGRAMMING EXAMPLE



This example will produce an internal right hand thread.

- ★ Position to ① (centerline of thread)
- ★ GO1 to desired Z depth
- ★ GO1 to ②
- ★ GO3 to ③ (while Z moves up 1/8 pitch)
- ★ GO3 to ③ (while Z moves up 1 pitch)
- ★ GO3 to ④ (while Z moves up 1/8 pitch)
- ★ GO1 to ①
- ★ Retract from hole



INTERNAL CUTTER PATH

To obtain the correct feed rate for the centerline of the tool, multiply the desired feed rate at the cutting edge by the appropriate factor.

$$\text{INTERNAL} = \frac{D2 - D1}{D2}$$

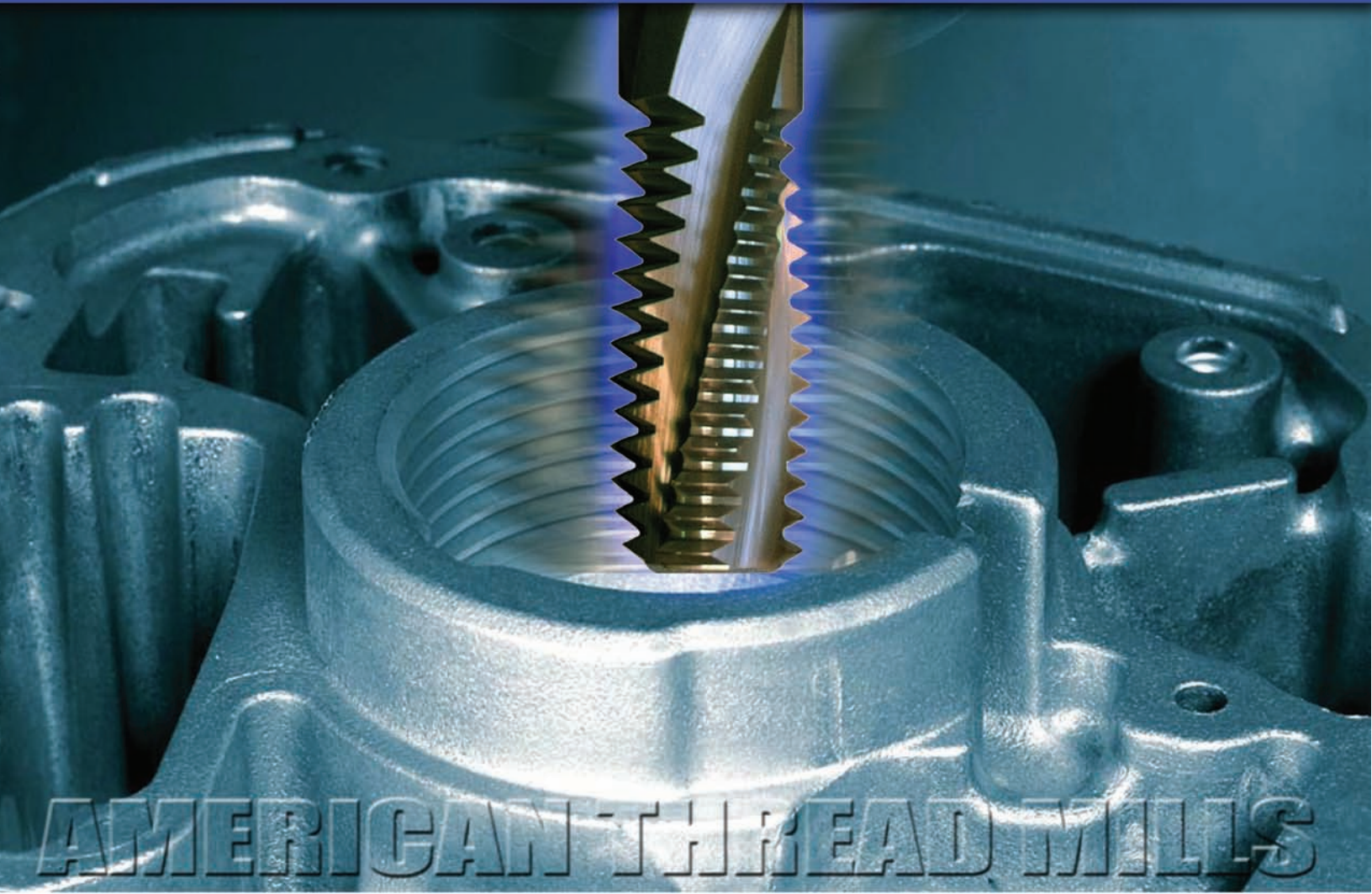
D1 = TOOL CUTTING DIAMETER
D2 = THREAD DIAMETER

MATERIAL	SPEED SFM	SUGGESTED FEED (INCHES PER FLUTE) BY SHANK DIAMETER							
		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
STEEL	250-600	0.0003	0.0004	0.0005	0.0006	0.0007	0.001	0.0015	0.002
STAINLESS STEEL	150-400	0.0003	0.0004	0.0005	0.0006	0.0007	0.001	0.0015	0.002
ALUMINUM	800+	0.0003	0.0005	0.0008	0.0012	0.0015	0.002	0.0025	0.003
TITANIUM	80-120	0.0002	0.0003	0.0004	0.0005	0.0007	0.0007	0.0008	0.001
BRASS	500-800	0.0003	0.0005	0.0008	0.0012	0.0015	0.002	0.0025	0.003
CAST IRON	250-450	0.0003	0.0004	0.0005	0.0007	0.0007	0.001	0.0015	0.002

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