ALLIED MACHINE & ENGINEERING | WOHLHAUPTER®

Holemaking Solutions for Today's Manufacturing

Drilling

Boring

Reaming

Burnishing

Thread Milling

THREADING

Solid Carbide and Indexable Thread Mills

Specials

AccuThread® 856 | AccuThread® T3 |

ThreadMills USA®

SECTION

E

Threading

Threading Solutions

Solid Carbide and Indexable Thread Mills | AccuThread® 856 | ThreadMills USA™

Any Thread, Any Time

Allied Machine's thread milling product line has developed into a comprehensive range of high-precision tooling that offers outstanding productivity with exceptional levels of tool life and thread accuracy. The thread mill range covers both solid carbide and indexable replaceable insert tools with an extensive range of thread forms.

Our thread milling product line has been specifically designed to provide customers with a wide range of options. This is achieved by offering two thread mill ranges within our product lineup: the low cost, general production ThreadMills USA range and the high performance, high productivity AccuThread range.

Online programmer available 24/7.	Solid carbide and indexable insert styles.	Large range of thread form options.

Applicable Industries

Aerospace
Agriculture
Automotive
Firearms
General Machining
Medical
Oil & Gas
Renewable Energy
Tool, Mold & Die

Your safety and the safety of others is very important. This catalogue contains important safety messages. Always read and follow all safety precautions.

This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury.

When you see this symbol in the catalogue, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalogue. Safety messages follow these words.

WARNING

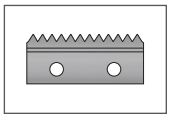
WARNING (shown above) means that failure to follow the precautions in this message could result in tool failure and serious injury.

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

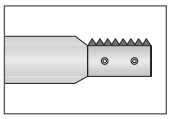
NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit www.alliedmachine.com for the most up-to-date information and procedures.

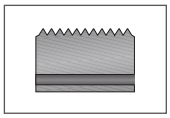
Reference Icons
The following icons will appear throughout the catalogue to help you navigate between products.



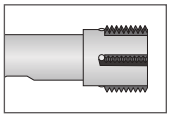
Bolt-in Style Inserts
Refers to the available bolt-in style thread mill insert options



Bolt-in Style Insert Holders
Refers to the range of holder options available for bolt-in style inserts

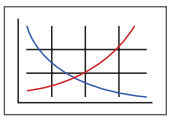


Pin Style Inserts
Refers to the available pin style thread mill insert options.



Pin Style Insert Holders
Refers to the range of holder options available for pin style inserts

Setup / Assembly Information
Detailed instructions and information regarding the corresponding part(s)



Recommended Cutting Data
Speed and feed recommendations for optimum and safe threading

Through Coolant Option
Indicates that the product is through coolant

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High Performance Threading Solutions

THREAD MILLING DONE *RIGHT*

Solid Carbide Thread Mills		Notes
AccuThread® 856		• Allied Machine's proprietary AM210® coating yields a 25-50% increase in tool life over competitor products. • Standard cutting lengths allow for multiple applications without the need for special thread mills. • Helical flute offers increased strength and rigidity when cutting forces are applied.
ThreadMills USA™		• Helical flute offers increased strength and rigidity when cutting forces are applied. • High quality for consistent, predictable production. • Through coolant options available. • TiAlN coating improves tool life versus uncoated tools.
AccuThread® T3		• Allied Machine's proprietary AM210® coating yields a 25-50% increase in tool life over competitor products. • Standard cutting lengths allow for multiple applications without the need for special thread mills. • Helical flute offers increased strength and rigidity when cutting forces are applied.

Indexable Insert Thread Mills		Notes
AccuThread® 856 Bolt-in Style		• Thread mill holders are manufactured from stainless steel that is engineered to dampen vibration during operation. • Extensive range of thread forms with two thread lengths. • Can produce left- or right-handed threads.
AccuThread® 856 Pin Style		• Patented pin style locking system ensures unsurpassed repeatability. • Thread mill holders are manufactured from stainless steel that is engineered to dampen vibration during operation. • Extensive range of thread forms with two thread lengths.
AccuThread® 856 Indexable Inserts	Bolt-in Style Pin Style	• Full profiles present on all inserts allow 100% thread form against 65-75% for tapping. • Allied Machine's premium carbide allows for extended tool life while providing high-quality thread forms. • Allied Machine's proprietary AM210® coating yields a 25-50% increase in tool life over competitor products.

www.alliedmachine.com | +44 (0) 1384 400 900 | enquiries.eu@alliedmachine.com

Online Tools

Insta-Code®

Find your thread mill. Create your program.

The all new software lets you choose the best thread mill product for your application and create the program code for your machine. Insta-Code is available as a PC download app (that can be used offline) and an online web app available 24/7 at www.alliedmachine.com/InstaCode.

Eliminate the wait. Get your program now.

Insta-Code also has a **Cycle Time Calculator**

Online Version

- Generates thread mill G-code programs.
- Available online 24/7.
- No login required.
- No updates needed.
- Easily share the program code.
- Supported on all web browsers.

Download Version

- Creates program code for multiple machine platforms.
- Suggests a thread mill based on application details.
- Provides estimated cycle time for improved production.
- Available for use offline.

Offline Version Updates

- Update your offline Insta-Code software.
- Download the updated .zip file, then transfer to the offline computer. Click "check for update" in your Insta-Code software and navigate to the downloaded zip file.
- This allows you to keep all your saved programs.

1. Download and open **Allied_Machine_Insta-Code.zip**
2. Click on **setup.exe** to install the program
3. **One click updates** are available for online computers

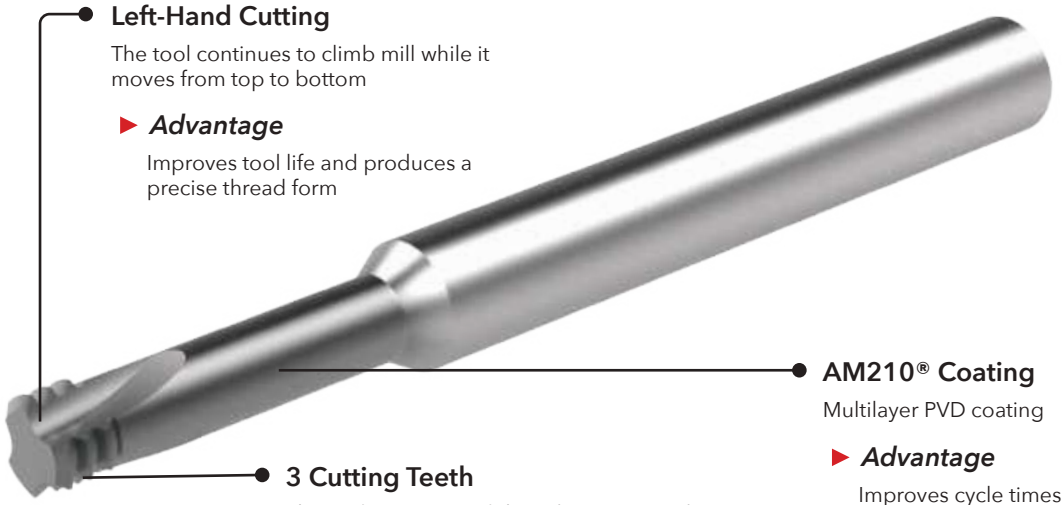
Supported on all Windows OS

www.alliedmachine.com/InstaCode

Solid Carbide Styles and Thread Forms

Straight BSW	Helical BSPP, NPS, NPSF, UN, ISO	Taper Helical BSPT, NPT, NPTF	Helical (3-Tooth Style) UN, ISO
 AccuThread® 856	 AccuThread® 856	 AccuThread® 856	 AccuThread® T3
 ThreadMills USA™ (coolant and noncoolant)	 ThreadMills USA™ (coolant and noncoolant)	 ThreadMills USA™ (coolant and noncoolant)	

AccuThread® T3



Left-Hand Cutting

The tool continues to climb mill while it moves from top to bottom

▶ ***Advantage***

Improves tool life and produces a precise thread form

AM210® Coating

Multilayer PVD coating

▶ ***Advantage***

Improves cycle times and tool life

3 Cutting Teeth

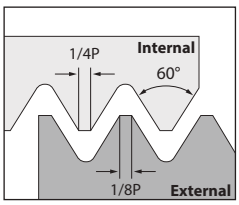
The tool cuts minimal threads at once and reduces side deflection

▶ ***Advantage***

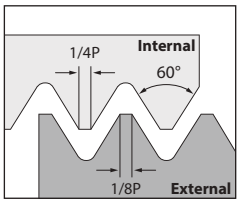
Cuts harder materials and produces deeper threads than a standard thread mill

Additional Information

- Available in UN and ISO thread forms.
- Available in imperial and metric shanks.
- Available in 2xD and 3xD lengths.



UN Thread Form



ISO Thread Form

Port and Thread Finishing Kits

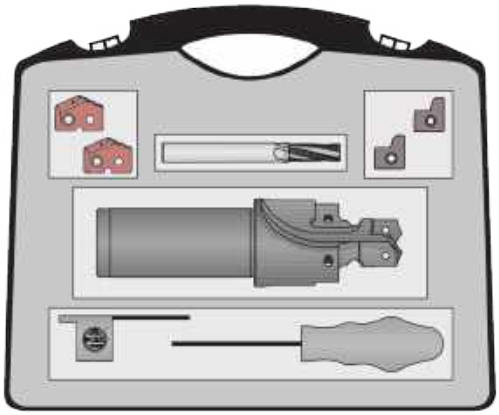
WE HAVE A KIT FOR THAT

Kits aren't for everyone, but if you work on different projects from day to day, you need to ***be prepared for the work tomorrow will bring.***

The Complete Package

Producing fully finished threaded hydraulic ports has never been easier. The Port and Thread Finishing Kit includes the AccuPort 432® port contour cutter with a dedicated AccuThread® 856 solid carbide thread mill in a single kit. You also receive the T-A® inserts and port form inserts needed to complete the assembly.

Port kits incorporate the AccuThread 856 solid carbide thread mills to increase the manufacturing flexibility by allowing hydraulic ports to be produced in just two operations. In addition, where a unique port profile is required, Allied Machine provides a dedicated special tooling solution using our extensive tool design and manufacturing experience to meet precise specifications.



NOTE: See Section A92 of our product catalogue for the complete list of Port and Thread Finishing Kits.

One Tool, FOUR Operations

- Spot Face
- Port Contour
- Tap Drill
- Spot Drill

4 IN 1

NOTE: See Section A92 of our product catalogue for full AccuPort 432 product line information.

Product Nomenclature

AccuThread® 856 Solid Carbide Thread Mills

TM	U	K	0250	–	20	M
1	2	3	4		5	6

1. Thread Mill	2. Thread Class	3. Coating	4. Min Thread Diameter	5. Thread Pitch	6. Shank
TM = Standard	**U** = UN	**K** = AM210®	**0250** = 1/4 (Imperial)	**20** = UN 20 TPI	**M** = Metric
HDTM = Heavy duty	**N** = NPT, NPTF	**U** = Uncoated	**0008** = #8 (Number Drill)	**075** = ISO 0.75	**Blank** = Imperial
TW = Weldon flat	**B** = BSPP, BSPT, BSW		**0450** = M4.5 (ISO)	**NPT** = All pipe threads will show thread form	
	M = ISO				
	A = AccuPort® specific				

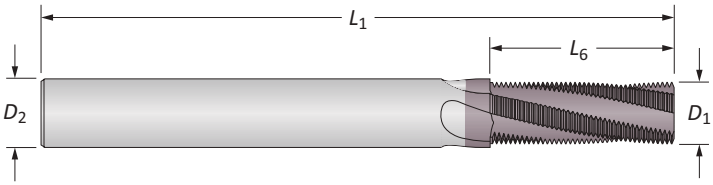
ThreadMills USA™ Solid Carbide Thread Mills

TM	250	20	CH	M
1	2	3	4	5

1. Thread Mill	2. Min Thread Diameter	3. Thread Pitch	4. Optional	5. Shank
TM = TiAlN	**250** = 1/4 (Imperial)	**20** = UN 20 TPI	**CH** = Coolant hole	**M** = Metric
TMFT = Uncoated	**08** = #8 (Number Drill)	**075** = ISO 0.75	**DE** = Double end	**Blank** = Imperial
HDTM = Heavy duty	**45** = M4.5 (ISO)	**NPT** = All pipe threads will show thread form	**NPT** = All pipe threads will show thread form	
HDTMFT = Heavy duty uncoated				

Reference Key

Symbol	Attribute
D_1	Maximum cutter diameter
D_2	Shank diameter
L_1	Overall length
L_6	Length of cut



Product Nomenclature

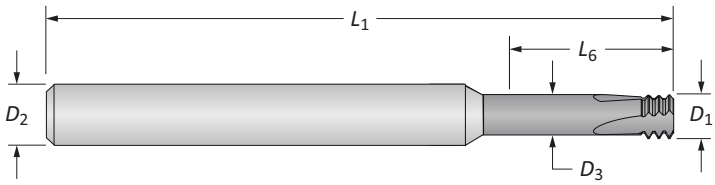
AccuThread® T3 Solid Carbide Thread Mills

TM	073	64	M	–	3T	2X
1	2	3	4		5	6

1. Thread Mill	2. Min Thread Diameter	3. Pitch	4. Shank	5. Style	6. Depth to Diameter Ratio
TM = Standard	**45** = M4.5 (Metric) **250** = 1/4 (Imperial)	**20** = UN 20 TPI **075** = ISO 0.75	**M** = Metric **Blank** = Imperial	**3T** = 3 tooth	**2X** = 2xD **3X** = 3xD

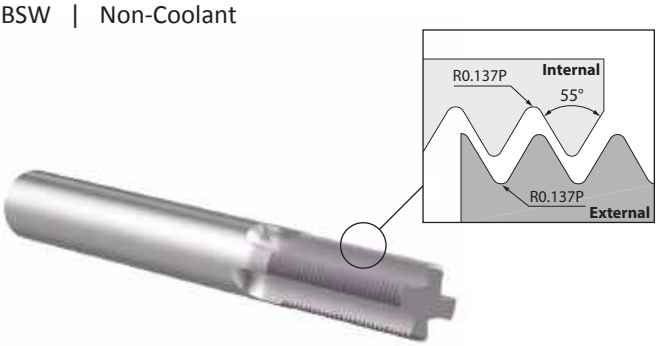
Reference Key

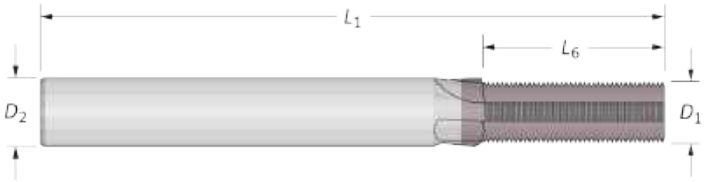
Symbol	Attribute
D_1	Maximum cutter diameter
D_2	Shank diameter
D_3	Undercut diameter
L_1	Overall length
L_6	Length of cut



Solid Carbide Thread Mills

BSW | Non-Coolant





BSW | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	20	1/4	3	4.50	6.00	10.16	58.00	TM20BSWM	TMBK0250-20M
	18	5/16	3	5.00	6.00	11.29	58.00	TM18BSWM	TMBK0312-18M
	16	3/8	5	7.00	8.00	14.29	64.00	TM16BSWM	TMBK0375-16M
	14	7/16	5	7.90	8.00	18.15	64.00	TM14BSWM	TMBK0437-14M
m	12	1/2	5	9.00	10.00	19.10	73.00	TM12BSWM	TMBK0500-12M
	11	5/8	5	11.90	12.00	23.10	84.00	TM11BSWM	TMBK0625-11M
	10	3/4	5	11.90	12.00	27.94	84.00	TM10BSWM	TMBK0750-10M
	9	7/8	6	15.90	16.00	28.23	93.00	TM9BSWM	TMBK0875-9M
	8	1	6	15.90	16.00	34.94	93.00	TM8BSWM	TMBK1000-8M
	20	1/4	3	0.177	0.250	0.400	2.500	TM20BSW	–
	18	5/16	3	0.197	0.250	0.445	2.500	TM18BSW	–
	16	3/8	5	0.276	0.312	0.563	3.000	TM16BSW	–
	14	7/16	5	0.311	0.312	0.715	3.000	TM14BSW	–
i	12	1/2	5	0.354	0.375	0.750	3.500	TM12BSW	–
	11	5/8	5	0.468	0.500	0.910	3.500	TM11BSW	–
	10	3/4	5	0.468	0.500	1.100	3.500	TM10BSW	–
	9	7/8	6	0.620	0.625	1.112	4.000	TM9BSW	–
	8	1	6	0.620	0.625	1.375	4.000	TM8BSW	–

E: 54 - 57
Key on E: 1

E: 4

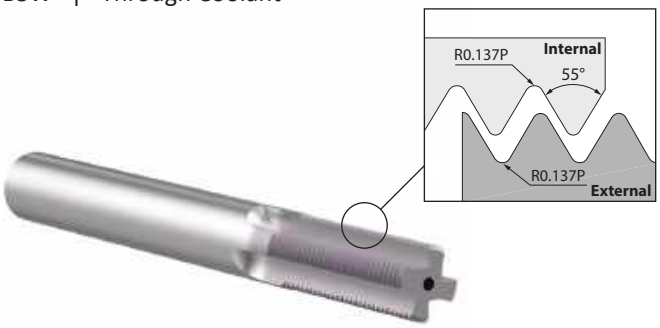
Weldon Flat

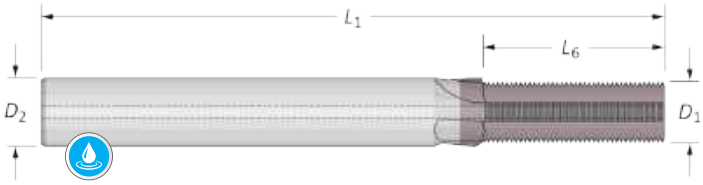
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces.

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

BSW | Through Coolant

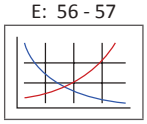




BSW | Through Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	20	1/4	3	4.50	6.00	10.16	58.00	**TM20BSWCHM**
	18	5/16	3	5.00	6.00	11.29	58.00	**TM18BSWCHM**
	16	3/8	5	7.00	8.00	14.29	64.00	**TM16BSWCHM**
	14	7/16	5	7.90	8.00	18.15	64.00	**TM14BSWCHM**
	12	1/2	5	9.00	10.00	19.10	84.00	**TM12BSWCHM**
	11	5/8	5	11.90	12.00	23.10	84.00	**TM11BSWCHM**
	10	3/4	5	11.90	12.00	27.94	84.00	**TM10BSWCHM**
	9	7/8	6	15.90	16.00	28.23	93.00	**TM9BSWCHM**
	8	1	6	15.90	16.00	34.94	93.00	**TM8BSWCHM**
i	20	1/4	3	0.177	0.250	0.400	2.375	**TM20BSWCH**
	18	5/16	3	0.197	0.250	0.445	2.375	**TM18BSWCH**
	16	3/8	5	0.276	0.312	0.563	3.000	**TM16BSWCH**
	14	7/16	5	0.311	0.312	0.715	3.000	**TM14BSWCH**
	12	1/2	5	0.354	0.375	0.750	3.000	**TM12BSWCH**
	11	5/8	5	0.468	0.500	0.910	3.500	**TM11BSWCH**
	10	3/4	5	0.468	0.500	1.100	3.500	**TM10BSWCH**
	9	7/8	6	0.620	0.625	1.112	4.000	**TM9BSWCH**
	8	1	6	0.620	0.625	1.375	4.000	**TM8BSWCH**

E: 56 - 57
Key on E: 1



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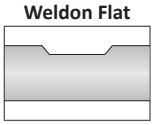
Weldon Flat

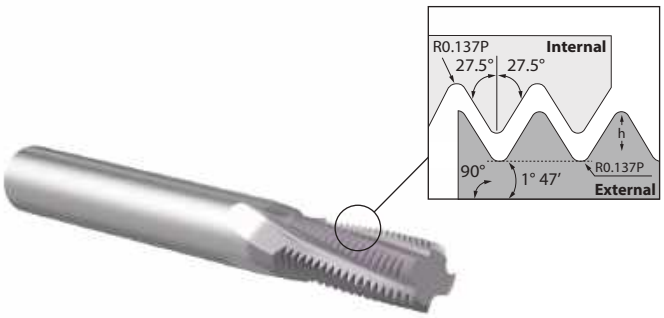


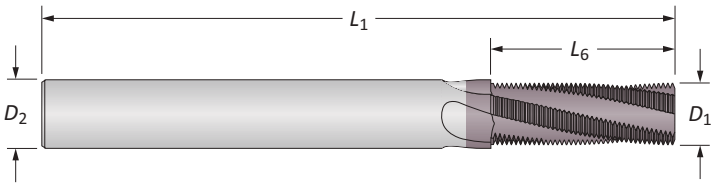
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces.

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

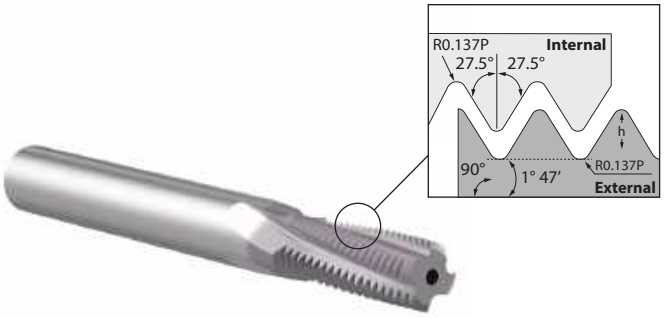
BSPT

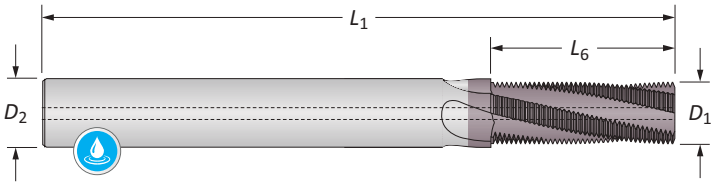




BSPT | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
m	28	1/16 and 1/8	3	5.97	6.00	9.98	58.00	TM28BSPTM	TMBK0063-BSPTM
	19	1/4 and 3/8	4	9.91	10.00	14.73	73.00	TM19BSPTM	TMBK0250-BSPTM
	14	1/2 and 3/4	4	11.94	12.00	20.00	84.00	TM14BSPTM	TMBK0500-BSPTM
	11	1	4	15.75	16.00	32.31	93.00	TM11BSPTM	TMBK1000-BSPTM
i	28	1/16 and 1/8	3	0.240	0.250	0.393	2.500	TM28BSPT	–
	19	1/4 and 3/8	4	0.310	0.312	0.580	3.000	TM19BSPT	–
	14	1/2 and 3/4	4	0.470	0.500	0.787	3.500	TM14BSPT	–
	11	1	4	0.620	0.625	1.546	4.000	TM11BSPT	–





BSPT | Through Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	28	1/16 and 1/8	3	5.97	6.00	9.98	58.00	TM28BSPTCHM
	19	1/4 and 3/8	4	9.91	10.00	14.73	84.00	TM19BSPTCHM
	14	1/2 and 3/4	4	11.94	12.00	20.00	84.00	TM14BSPTCHM
	11	1	4	15.75	16.00	32.31	93.00	TM11BSPTCHM
i	28	1/16 and 1/8	3	0.240	0.250	0.393	2.375	TM28BSPTCH
	19	1/4 and 3/8	4	0.310	0.312	0.580	3.000	TM19BSPTCH
	14	1/2 and 3/4	4	0.470	0.500	0.787	3.500	TM14BSPTCH
	11	1	4	0.620	0.625	1.546	4.000	TM11BSPTCH

E: 54 - 57
Key on E: 1

E: 4

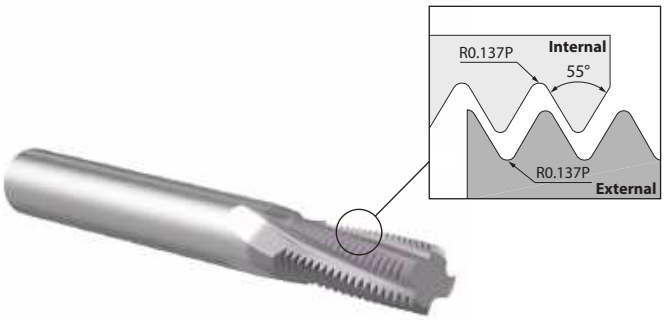
Weldon Flat

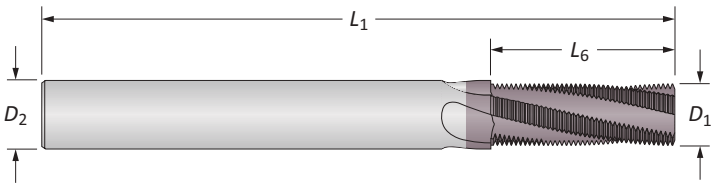
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces.

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

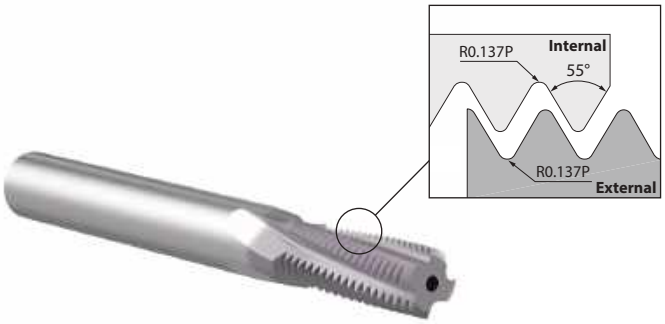
BSPP

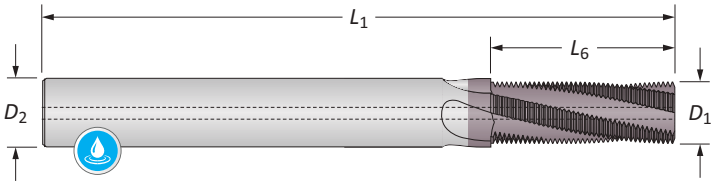




BSPP | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
m	28	1/16 and 1/8	3	5.97	6.00	14.53	58.00	**TM28BSPPM**	**TMBK0063-BSPPM**
	19	1/4 and 3/8	4	9.91	10.00	18.72	73.00	**TM19BSPPM**	**TMBK0250-BSPPM**
	19	3/8	4	11.94	12.00	28.41	84.00	**HDTM19BSPPM**	–
	14	1/2 and 3/4	4	11.94	12.00	29.03	84.00	**TM14BSPPM**	**TMBK0500-BSPPM**
	14	3/4	5	15.75	16.00	34.47	93.00	**HDTM14BSPPM**	–
	11	1	4	15.75	16.00	34.67	93.00	**TM11BSPPM**	**TMBK1000-BSPPM**
i	28	1/16 and 1/8	3	0.240	0.250	0.572	2.500	**TM28BSPP**	–
	19	1/4 and 3/8	4	0.310	0.312	0.737	3.000	**TM19BSPP**	–
	14	1/2 and 3/4	4	0.470	0.500	1.143	3.500	**TM14BSPP**	–
	11	1	4	0.620	0.625	1.365	4.000	**TM11BSPP**	–

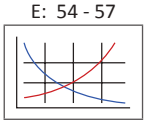




BSPP | Through Coolant

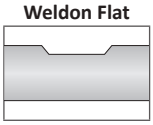
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	28	1/16 and 1/8	3	5.97	6.00	14.53	58.00	**TM28BSPPCHM**
	19	1/4 and 3/8	4	9.91	10.00	18.72	84.00	**TM19BSPPCHM**
	14	1/2 and 3/4	4	11.94	12.00	29.03	84.00	**TM14BSPPCHM**
	11	1	4	15.75	16.00	34.67	93.00	**TM11BSPPCHM**
i	28	1/16 and 1/8	3	0.240	0.250	0.572	2.375	**TM28BSPPCH**
	19	1/4 and 3/8	4	0.310	0.312	0.737	3.000	**TM19BSPPCH**
	14	1/2 and 3/4	4	0.470	0.500	1.143	3.500	**TM14BSPPCH**
	11	1	4	0.620	0.625	1.365	4.000	**TM11BSPPCH**

E: 54 - 57
Key on E: 1



E: 4

Weldon Flat

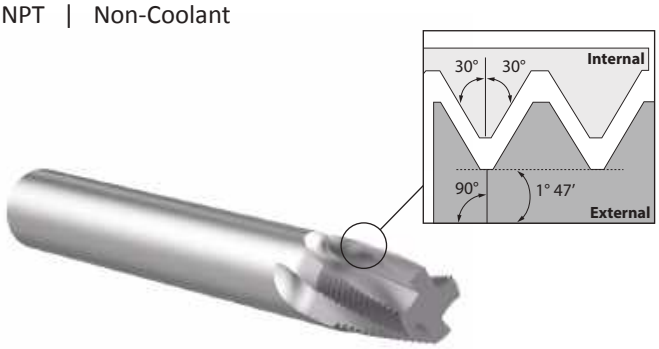


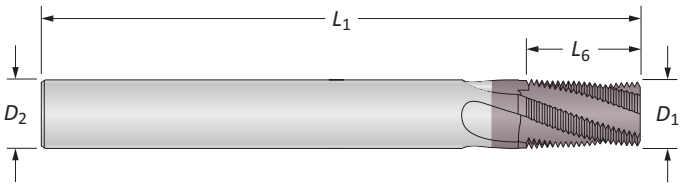
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces.

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

NPT | Non-Coolant





NPT | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	27	1/16 and 1/8	3	5.95	6.00	11.30	58.00	**TM27NPTM**	**TMNK0063-NPTM**
	27	1/8	4	7.62	8.00	12.25	64.00	**HDTM27NPTM**	**–**
	18	1/4 and 3/8	4	7.75	8.00	15.70	64.00	**TM18NPTM**	**TMNK0250-NPTM**
	18	1/4 and 3/8	4	9.22	10.00	17.25	84.00	**HDTM18NPTM**	**–**
m	14	1/2 and 3/4	4	11.95	12.00	23.70	84.00	**TM14NPTM**	**TMNK0500-NPTM**
	14	3/4	4	15.75	16.00	25.40	93.00	**HDTM14NPTM**	**–**
	11.5	1	4	15.75	16.00	28.75	93.00	**TM11NPTM**	**TMNK1000-NPTM**
	11.5	1	5	18.92	20.00	30.95	105.00	**HDTM11NPTM**	**–**
	8	2-1/2	5	19.75	20.00	38.10	115.00	**TM8NPTM**	**TMNK2500-NPTM**
	27	1/16 and 1/8	3	0.245	0.250	0.437	2.500	**TM27NPT**	**TMNK0063-NPT**
	27	1/8	4	0.300	0.312	0.482	3.000	**HDTM27NPT**	**HDTMNK0125-NPT**
	18	1/4 and 3/8	4	0.305	0.312	0.625	3.000	**TM18NPT**	**TMNK0250-NPT**
	18	1/4 and 3/8	4	0.363	0.375	0.680	3.500	**HDTM18NPT**	**HDTMNK0250-NPT**
i	14	1/2 and 3/4	4	0.495	0.500	0.875	3.500	**TM14NPT**	**TMNK0500-NPT**
	14	3/4	4	0.620	0.625	1.000	4.000	**HDTM14NPT**	**HDTMNK0750-NPT**
	11.5	1	4	0.620	0.625	1.125	4.000	**TM11NPT**	**TMNK1000-NPT**
	11.5	1	5	0.745	0.750	1.219	4.000	**HDTM11NPT**	**HDTMNK1000-NPT**
	8	2-1/2	4	0.745	0.750	1.500	5.000	**TM8NPT**	**TMNK2500-NPT**

E: 54 - 57
Key on E: 1

E: 4

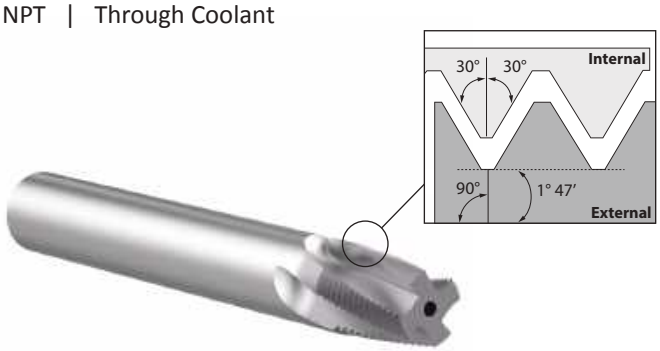
Weldon Flat

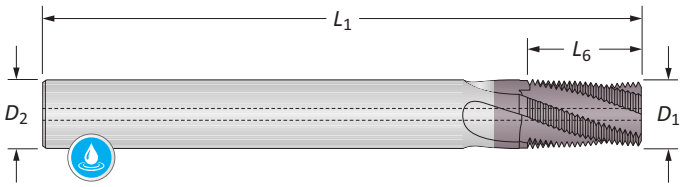
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces.

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

NPT | Through Coolant

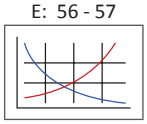




NPT | Through Coolant

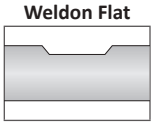
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
	27	1/16 and 1/8	3	5.95	6.00	11.30	58.00	**TM27NPTCHM**
	27	1/8	4	7.62	8.00	12.25	64.00	**HDTM27NPTCHM**
	18	1/4 and 3/8	4	7.75	8.00	15.70	64.00	**TM18NPTCHM**
	18	1/4 and 3/8	4	9.22	10.00	17.25	84.00	**HDTM18NPTCHM**
m	14	1/2 and 3/4	4	11.95	12.00	23.70	84.00	**TM14NPTCHM**
	14	3/4	4	15.75	16.00	25.40	93.00	**HDTM14NPTCHM**
	11.5	1	4	15.75	16.00	28.75	93.00	**TM11NPTCHM**
	11.5	1	5	18.92	20.00	30.95	105.00	**HDTM11NPTCHM**
	8	2-1/2	5	19.75	20.00	38.10	115.00	**TM8NPTCHM**
	27	1/16 and 1/8	3	0.245	0.250	0.437	2.375	**TM27NPTCH**
	27	1/8	4	0.300	0.312	0.482	3.000	**HDTM27NPTCH**
	18	1/4 and 3/8	4	0.305	0.312	0.625	3.000	**TM18NPTCH**
	18	1/4 and 3/8	4	0.363	0.375	0.680	3.000	**HDTM18NPTCH**
i	14	1/2 and 3/4	4	0.495	0.500	0.875	3.500	**TM14NPTCH**
	14	3/4	4	0.620	0.625	1.000	4.000	**HDTM14NPTCH**
	11.5	1	4	0.620	0.625	1.125	4.000	**TM11NPTCH**
	11	1	5	0.745	0.750	1.219	4.000	**HDTM11NPTCH**
	8	2-1/2	4	0.745	0.750	1.500	5.000	**TM8NPTCH**

E: 56 - 57
Key on E: 1



E: 4

Weldon Flat

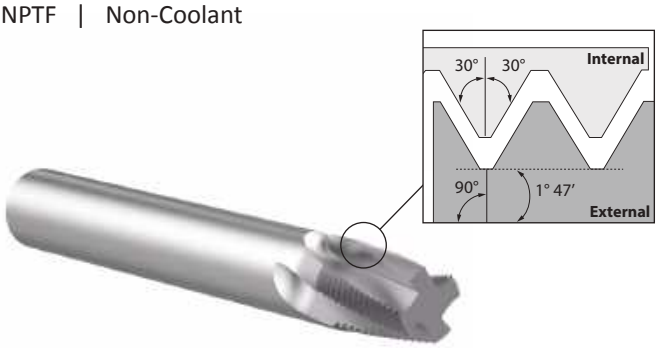


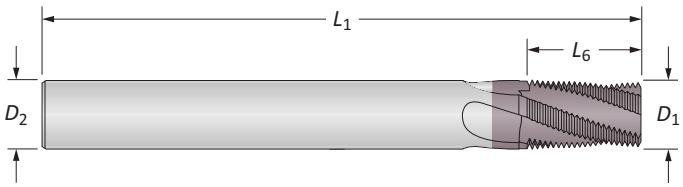
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces.

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

NPTF | Non-Coolant





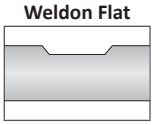
NPTF | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
m	27	1/16 and 1/8	3	5.95	6.00	11.30	58.00	TM27NPTFM	TMNK0063-NPTFM
	18	1/4 and 3/8	4	7.75	8.00	15.70	64.00	TM18NPTFM	TMNK0250-NPTFM
	14	1/2 and 3/4	4	11.95	12.00	23.70	84.00	TM14NPTFM	TMNK0500-NPTFM
	11.5	1	4	15.75	16.00	28.75	93.00	TM11NPTFM	TMNK1000-NPTFM
	8	2-1/2	5	19.75	20.00	38.10	115.00	TM8NPTFM	TMNK2500-NPTFM
i	27	1/16 and 1/8	3	0.245	0.250	0.437	2.500	TM27NPTF	TMNK0063-NPTF
	18	1/4 and 3/8	4	0.305	0.312	0.625	3.000	TM18NPTF	TMNK0250-NPTF
	14	1/2 and 3/4	4	0.495	0.500	0.875	3.500	TM14NPTF	TMNK0500-NPTF
	11.5	1	4	0.620	0.625	1.125	4.000	TM11NPTF	TMNK1000-NPTF
	8	2-1/2	4	0.745	0.750	1.500	5.000	TM8NPTF	TMNK2500-NPTF

E: 54 - 57
Key on E: 1

E: 4

Weldon Flat

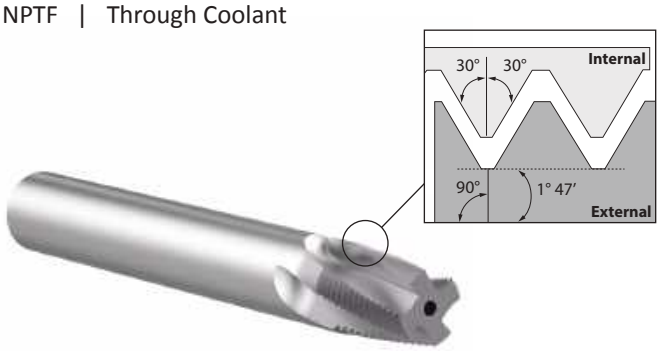


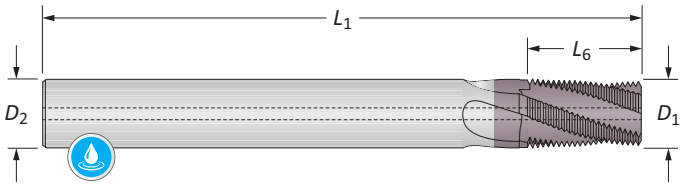
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

NPTF | Through Coolant





NPTF | Through Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	27	1/16 and 1/8	3	5.95	6.00	11.30	58.00	**TM27NPTFCHM**
	18	1/4 and 3/8	4	7.75	8.00	15.70	64.00	**TM18NPTFCHM**
	14	1/2 and 3/4	4	11.95	12.00	23.70	84.00	**TM14NPTFCHM**
	11.5	1	4	15.75	16.00	28.75	93.00	**TM11NPTFCHM**
	8	2-1/2	5	19.75	20.00	38.10	115.00	**TM8NPTFCHM**
i	27	1/16 and 1/8	3	0.245	0.250	0.437	2.375	**TM27NPTFCH**
	18	1/4 and 3/8	4	0.305	0.312	0.625	3.000	**TM18NPTFCH**
	14	1/2 and 3/4	4	0.495	0.500	0.875	3.500	**TM14NPTFCH**
	11.5	1	4	0.620	0.625	1.125	4.000	**TM11NPTFCH**
	8	2-1/2	4	0.745	0.750	1.500	5.000	**TM8NPTFCH**

E: 56 - 57
Key on E: 1

E: 4

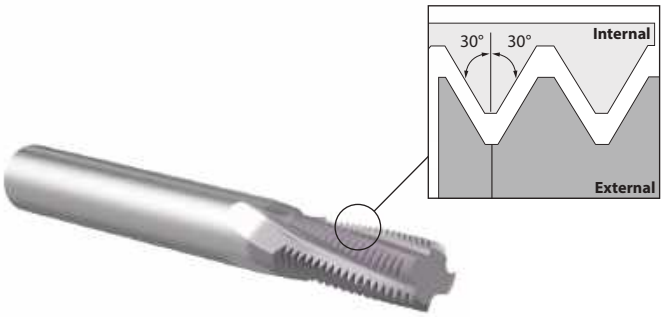
Weldon Flat

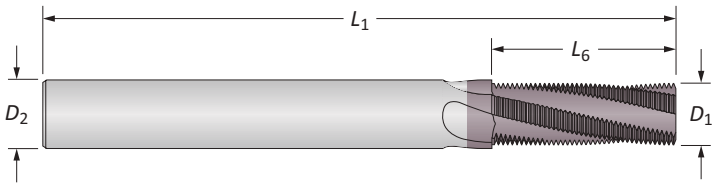
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

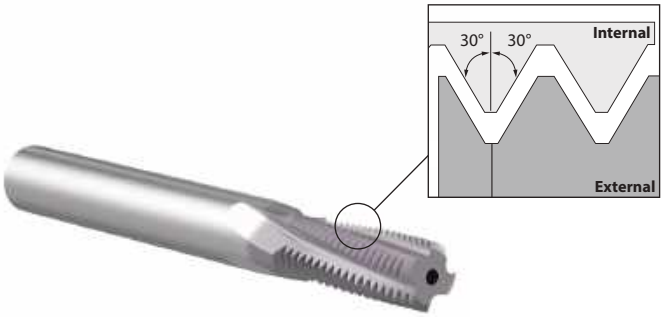
NPS

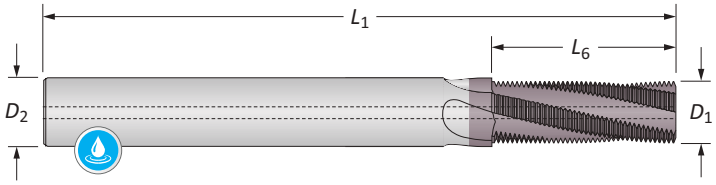




NPS | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	27	1/8	3	5.95	6.00	16.00	58.00	**TM27NPSM**
	18	1/4 and 3/8	4	9.40	10.00	22.60	84.00	**TM18NPSM**
	14	1/2 and 3/4	4	11.94	12.00	32.70	84.00	**TM14NPSM**
	11.5	1	4	15.75	16.00	35.35	93.00	**TM11NPSM**
i	27	1/8	3	0.245	0.250	0.630	2.500	**TM27NPS**
	18	1/4 and 3/8	4	0.370	0.375	0.889	3.500	**TM18NPS**
	14	1/2 and 3/4	4	0.490	0.500	1.288	3.500	**TM14NPS**
	11.5	1	4	0.620	0.625	1.392	4.000	**TM11NPS**





NPS | Through Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	27	1/8	3	5.95	6.00	16.00	58.00	**TM27NPSCHM**
	18	1/4 and 3/8	4	9.40	10.00	22.60	84.00	**TM18NPSCHM**
	14	1/2 and 3/4	4	11.94	12.00	32.70	84.00	**TM14NPSCHM**
	11.5	1	4	15.75	16.00	35.35	93.00	**TM11NPSCHM**
i	27	1/8	3	0.245	0.250	0.630	2.375	**TM27NPSCH**
	18	1/4 and 3/8	4	0.370	0.375	0.889	3.000	**TM18NPSCH**
	14	1/2 and 3/4	4	0.490	0.500	1.288	3.500	**TM14NPSCH**
	11.5	1	4	0.620	0.625	1.392	4.000	**TM11NPSCH**

E: 56 - 57
Key on E: 1

E: 4

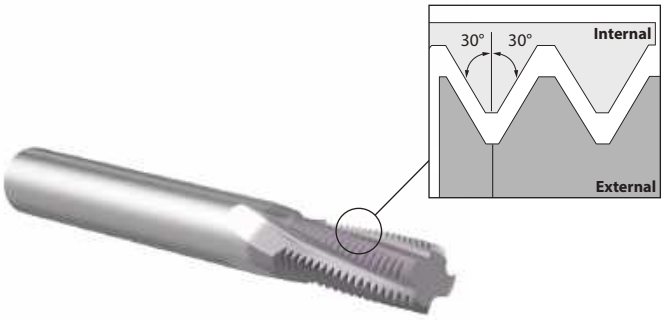
Weldon Flat

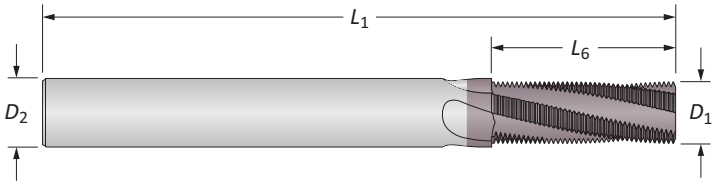
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

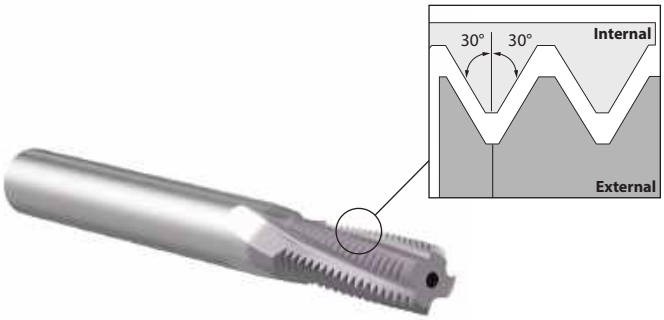
NPSF

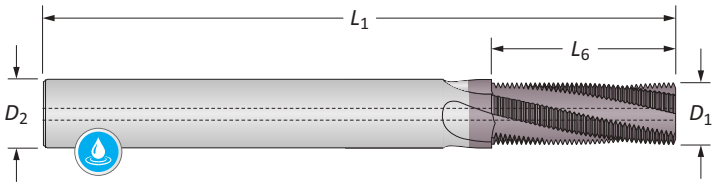




NPSF | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	27	1/8	3	5.95	6.00	16.00	58.00	**TM27NPSFM**
	18	1/4 and 3/8	4	9.40	10.00	22.60	84.00	**TM18NPSFM**
	14	1/2 and 3/4	4	11.94	12.00	32.70	84.00	**TM14NPSFM**
	11.5	1	4	15.75	16.00	35.35	93.00	**TM11NPSFM**
i	27	1/8	3	0.245	0.250	0.630	2.500	**TM27NPSF**
	18	1/4 and 3/8	4	0.370	0.375	0.889	3.500	**TM18NPSF**
	14	1/2 and 3/4	4	0.490	0.500	1.288	3.500	**TM14NPSF**
	11.5	1	4	0.620	0.625	1.392	4.000	**TM11NPSF**

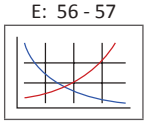




NPSF | Through Coolant

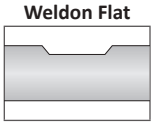
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
m	27	1/8	3	5.95	6.00	16.00	58.00	**TM27NPSFCHM**
	18	1/4 and 3/8	4	9.40	10.00	22.60	84.00	**TM18NPSFCHM**
	14	1/2 and 3/4	4	11.94	12.00	32.70	84.00	**TM14NPSFCHM**
	11.5	1	4	15.75	16.00	35.35	93.00	**TM11NPSFCHM**
i	27	1/8	3	0.245	0.250	0.630	2.375	**TM27NPSFCH**
	18	1/4 and 3/8	4	0.370	0.375	0.889	3.000	**TM18NPSFCH**
	14	1/2 and 3/4	4	0.490	0.500	1.288	3.500	**TM14NPSFCH**
	11.5	1	4	0.620	0.625	1.392	4.000	**TM11NPSFCH**

E: 56 - 57
Key on E: 1



E: 4

Weldon Flat

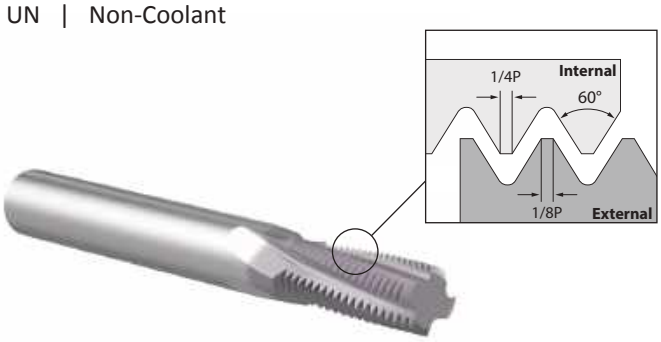


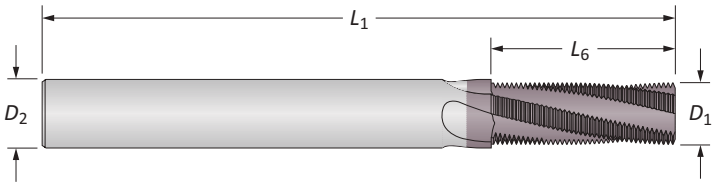
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

UN | Non-Coolant





UN | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	64	#2	3*	1.65	3.00	3.20	39.00	TM08664M	TMUK0002-64M
	56	#2	3*	1.65	3.00	3.20	39.00	TM08656M	TMUK0002-56M
	48	#3	3*	1.80	3.00	3.75	39.00	TM09948M	TMUK0003-48M
	44	#5	3	2.40	3.00	4.65	39.00	TM12544M	TMUK0005-44M
	40	#4	3*	2.20	3.00	4.45	39.00	TM12540M	TMUK0004-40M
	36	#8	3	3.00	4.00	6.35	51.00	TM16436M	TMUK0008-36M
	32	#6	3	2.50	3.00	5.55	39.00	TM13832M	TMUK0006-32M
	32	#8	3	3.20	4.00	6.35	51.00	TM16432M	TMUK0008-32M
	32	#10	3	3.80	4.00	7.95	51.00	TM19032M	TMUK0010-32M
	32	#10	3	3.80	4.00	7.95	51.00	HDTM19032M	–
	32	1/2	6	9.40	10.00	25.40	84.00	TM50032M	–
m	28	#10	3	3.80	4.00	8.20	51.00	TM19028M	TMUK0010-28M
m	28	1/4	3	4.75	6.00	12.70	58.00	TM25028M	TMUK0250-28M
m	28	7/16	4	7.90	8.00	19.95	64.00	–	TMUK0438-28M
m	28	1/2	6	9.40	10.00	25.40	84.00	TM50028M	–
	24	#10	3	3.70	4.00	8.50	51.00	TM19024M	TMUK0010-24M
	24	#10	3	3.70	4.00	8.50	51.00	HDTM19024M	–
	24	5/16	3	5.95	6.00	16.00	58.00	TM31224M	TMUK0313-24M
	24	3/8	4	7.25	8.00	19.00	64.00	TM37524M	TMUK0375-24M
	24	1/2	6	9.40	10.00	25.40	84.00	TM50024M	–
	20	1/4	3	4.75	6.00	12.70	58.00	TM25020M	TMUK0250-20M
	20	1/4	3	4.95	6.00	12.70	58.00	HDTM25020M	–
	20	7/16	4	8.75	10.00	22.85	73.00	TM43720M	TMUK0438-20M
	20	1/2	6	9.40	10.00	25.40	84.00	TM50020M	–

*Straight fluted.

E: 54 - 57
Key on E: 1

E: 4

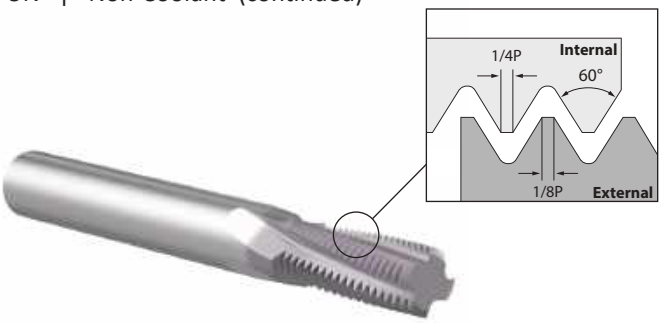
Weldon Flat

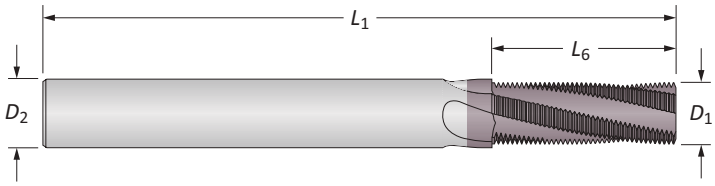
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

UN | Non-Coolant (continued)

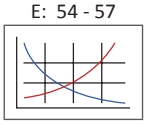




UN | Non-Coolant

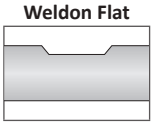
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	18	5/16	3	5.95	6.00	17.00	58.00	TM31218M	TMUK0313-18M
	18	5/16	3	6.22	8.00	15.87	64.00	HDTM31218M	–
	18	9/16	4	9.90	10.00	22.65	73.00	TM56218M	TMUK0563-18M
	16	3/8	4	7.25	8.00	19.05	64.00	TM37516M	TMUK0375-16M
	16	3/8	4	7.62	10.00	19.05	84.00	HDTM37516M	–
	16	3/4	4	11.95	12.00	31.75	84.00	TM75016M	TMUK0750-16M
	14	7/16	4	7.75	8.00	20.00	64.00	TM43714M	TMUK0438-14M
	14	7/8	4	11.95	12.00	32.70	84.00	TM87514M	TMUK0875-14M
	13	1/2	4	9.40	10.00	23.50	73.00	TM50013M	TMUK0500-13M
	13	1/2	4	10.16	12.00	23.50	84.00	HDTM50013M	–
	12	9/16	4	9.90	10.00	23.35	73.00	TM56212M	TMUK0563-12M
m	12	3/4	4	11.95	12.00	31.75	84.00	TM75012M	TMUK0750-12M
	12	1	6	18.92	20.00	38.10	105.00	TM10012M	–
	11	5/8	4	11.95	12.00	32.40	84.00	TM62511M	TMUK0625-11M
	11	5/8	4	11.95	12.00	37.00	100.00	TM62511M-XL	TMUK0625-11XLM
	10	3/4	4	11.95	12.00	33.00	84.00	TM75010M	TMUK0750-10M
	10	3/4	4	11.95	12.00	40.70	100.00	TM75010M-XL	TMUK0750-10XLM
	9	7/8	4	15.75	16.00	36.75	93.00	TM87509M	TMUK0875-9M
	9	7/8	4	15.75	16.00	45.20	100.00	TM87509M-XL	TMUK0875-9XLM
	8	1	4	15.75	16.00	35.00	93.00	TM10008M	TMUK1000-8M
	8	1	6	19.90	20.00	50.80	115.00	TM10008M-XL	TMUK1000-8XLM
	7	1-1/8	5	19.90	20.00	36.30	105.00	TM12507M	TMUK1125-7M
	6	1-3/8	5	19.90	20.00	38.10	105.00	TM13706M	TMUK1375-6M

E: 54 - 57
Key on E: 1



E: 4

Weldon Flat

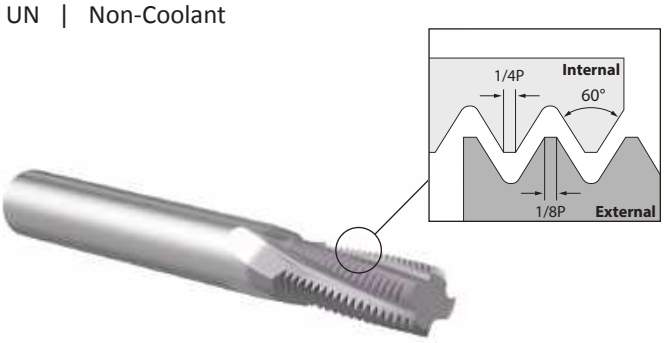


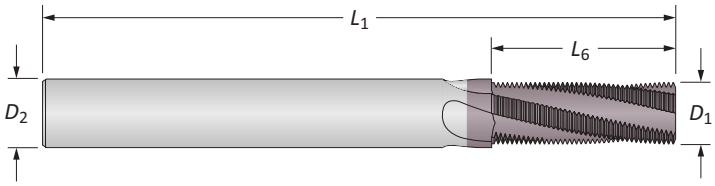
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

UN | Non-Coolant





UN | Non-Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	64	#2	3*	0.065	0.125	0.125	2.000	**TM08664**	–
	56	#2	3*	0.065	0.125	0.125	2.000	**TM08656**	**TMUK0002-56**
	48	#3	3*	0.075	0.125	0.167	2.000	**TM09948**	–
	44	#5	3	0.095	0.125	0.228	2.000	**TM12544**	–
	40	#4	3*	0.085	0.125	0.175	2.000	**TM12540**	**TMUK0004-40**
	36	#8	3	0.115	0.125	0.250	2.000	**TM16436**	–
	32	#6	3	0.100	0.125	0.218	2.000	**TM13832**	**TMUK0006-32**
	32	#8	3	0.115	0.125	0.250	2.000	**TM16432**	**TMUK0008-32**
	32	#10	3	0.120	0.125	0.312	2.000	**TM19032**	**TMUK0010-32**
	32	#10	3	0.150	0.187	0.312	2.500	**HDTM19032**	–
	32	1/2	6	0.370	0.375	1.000	3.500	**TM50032**	–
ⓘ	28	#10	3	0.120	0.125	0.312	2.000	**TM19028**	**TMUK0010-28**
	28	1/4	3	0.180	0.187	0.500	2.500	**TM25028**	**TMUK0250-28**
	28	1/2	6	0.370	0.375	1.000	3.500	**TM50028**	–
	24	#10	3	0.120	0.125	0.312	2.000	**TM19024**	**TMUK0010-24**
	24	#10	3	0.145	0.187	0.312	2.500	**HDTM19024**	–
	24	5/16	3	0.235	0.250	0.625	2.500	**TM31224**	**TMUK0313-24**
	24	3/8	4	0.285	0.312	0.750	3.000	**TM37524**	**TMUK0375-24**
	24	1/2	6	0.370	0.375	1.000	3.500	**TM50024**	–
	20	1/4	3	0.180	0.187	0.500	2.500	**TM25020**	**TMUK0250-20**
	20	1/4	3	0.195	0.250	0.500	2.500	**HDTM25020**	–
	20	7/16	4	0.335	0.375	0.875	3.500	**TM43720**	**TMUK0438-20**
	20	1/2	6	0.370	0.375	1.000	3.500	**TM50020**	–

*Straight fluted.

E: 54 - 57
Key on E: 1

E: 4

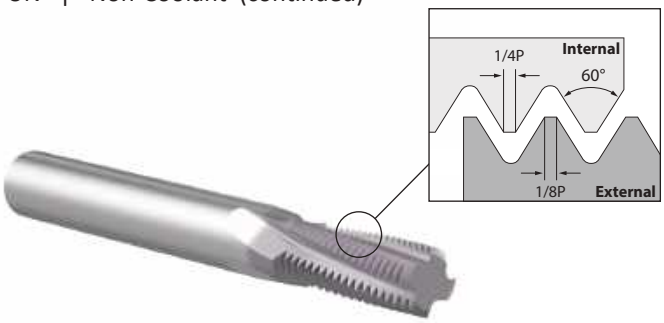
Weldon Flat

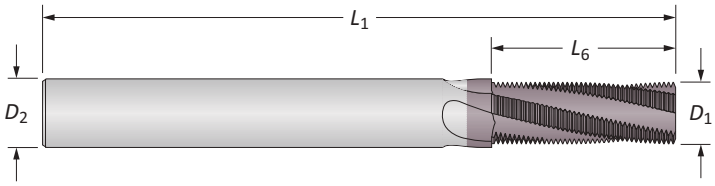
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

ⓜ = Metric (mm)
ⓘ = Imperial (in)

Solid Carbide Thread Mills

UN | Non-Coolant (continued)

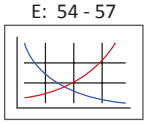




UN | Non-Coolant

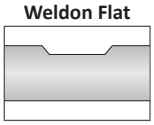
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	18	5/16	3	0.235	0.250	0.625	2.500	**TM31218**	**TMUK0313-18**
	18	5/16	3	0.245	0.312	0.625	3.000	**HDTM31218**	**–**
	18	9/16	4	0.370	0.375	0.875	3.500	**TM56218**	**TMUK0563-18**
	16	3/8	4	0.285	0.312	0.750	3.000	**TM37516**	**TMUK0375-16**
	16	3/8	4	0.300	0.375	0.750	3.500	**HDTM37516**	**–**
	16	3/4	4	0.490	0.500	1.250	3.500	**TM75016**	**TMUK0750-16**
	14	7/16	4	0.305	0.312	0.750	3.000	**TM43714**	**TMUK0438-14**
	14	7/8	4	0.490	0.500	1.250	3.500	**TM87514**	**TMUK0875-14**
	13	1/2	4	0.350	0.375	0.875	3.500	**TM50013**	**TMUK0500-13**
	13	1/2	4	0.400	0.500	0.875	3.500	**HDTM50013**	**–**
	12	9/16	4	0.370	0.375	0.875	3.500	**TM56212**	**TMUK0563-12**
ⓘ	12	3/4	4	0.495	0.500	1.250	3.500	**TM75012**	**TMUK0750-12**
	12	1	6	0.745	0.750	1.500	4.000	**TM10012**	**–**
	11	5/8	4	0.470	0.500	1.250	3.500	**TM62511**	**TMUK0625-11**
	11	5/8	4	0.470	0.500	1.455	3.500	**TM62511-XL**	**TMUK0625-11XL**
	10	3/4	4	0.495	0.500	1.250	3.500	**TM75010**	**TMUK0750-10**
	10	3/4	4	0.495	0.500	1.600	4.000	**TM75010-XL**	**TMUK0750-10XL**
	9	7/8	4	0.620	0.625	1.375	4.000	**TM87509**	**TMUK0875-9**
	9	7/8	4	0.620	0.625	1.778	4.000	**TM87509-XL**	**TMUK0875-9XL**
	8	1	4	0.620	0.625	1.375	4.000	**TM10008**	**TMUK1000-8**
	8	1	6	0.745	0.750	2.000	4.500	**TM10008-XL**	**TMUK1000-8XL**
	7	1-1/8	5	0.745	0.750	1.572	4.500	**TM12507**	**–**
	6	1-3/8	5	0.745	0.750	1.500	4.500	**TM13706**	**–**

E: 54 - 57
Key on E: 1



E: 4

Weldon Flat

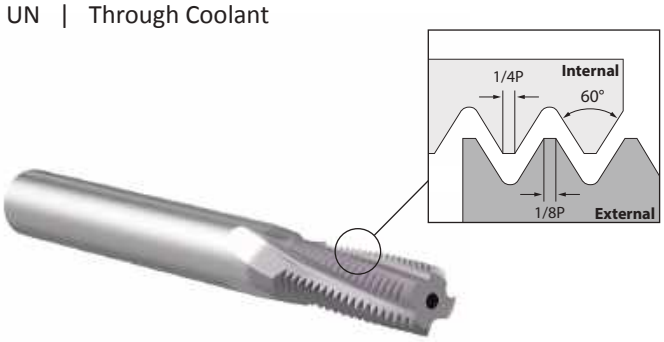


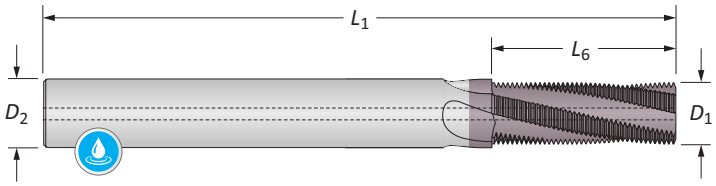
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

ⓜ = Metric (mm)
ⓘ = Imperial (in)

Solid Carbide Thread Mills

UN | Through Coolant





UN | Through Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
	64	#2	3*	1.65	3.00	3.20	39.00	**TM08664CHM**
	56	#2	3*	1.65	3.00	3.20	39.00	**TM08656CHM**
	48	#3	3*	1.80	3.00	3.75	39.00	**TM09948CHM**
	44	#5	3	2.40	3.00	4.65	39.00	**TM12544CHM**
	40	#4	3*	2.20	3.00	4.45	39.00	**TM12540CHM**
	36	#8	3	3.00	4.00	6.35	51.00	**TM16436CHM**
	32	#6	3	2.50	3.00	5.55	39.00	**TM13832CHM**
	32	#8	3	3.20	4.00	6.35	51.00	**TM16432CHM**
	32	#10	3	3.80	4.00	7.95	51.00	**TM19032CHM**
	32	#10	3	3.80	4.00	7.95	51.00	**HDTM19032CHM**
	32	1/2	6	9.40	10.00	25.40	84.00	**TM50032CHM**
m	28	#10	3	3.80	4.00	8.20	51.00	**TM19028CHM**
	28	1/4	3	4.75	6.00	12.70	58.00	**TM25028CHM**
	28	1/2	6	9.40	10.00	25.40	84.00	**TM50028CHM**
	24	#10	3	3.68	4.00	8.50	51.00	**TM19024CHM**
	24	#10	3	3.70	4.00	8.50	51.00	**HDTM19024CHM**
	24	5/16	3	5.95	6.00	16.00	58.00	**TM31224CHM**
	24	3/8	4	7.25	8.00	19.00	64.00	**TM37524CHM**
	24	1/2	6	9.40	10.00	25.40	84.00	**TM50024CHM**
	20	1/4	3	4.75	6.00	12.70	58.00	**TM25020CHM**
	20	1/4	3	4.95	6.00	12.70	58.00	**HDTM25020CHM**
	20	7/16	4	8.75	10.00	22.85	84.00	**TM43720CHM**
	20	1/2	6	9.40	10.00	25.40	84.00	**TM50020CHM**

*Straight fluted.

E: 56 - 57
Key on E: 1

E: 4

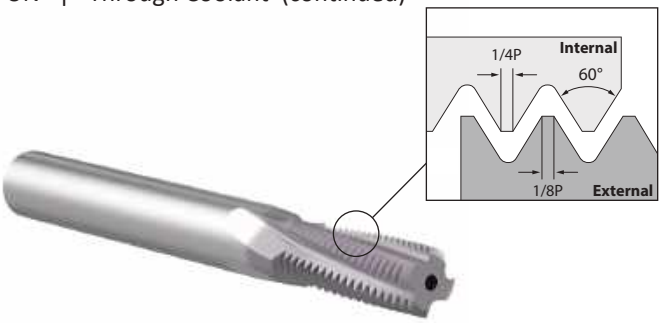
Weldon Flat

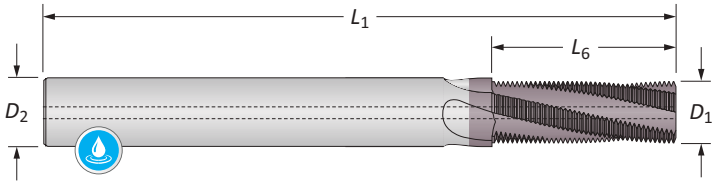
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

UN | Through Coolant (continued)

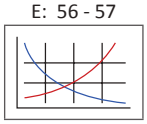




UN | Through Coolant

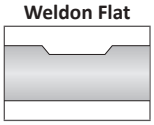
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
	18	5/16	3	5.95	6.00	17.00	58.00	**TM31218CHM**
	18	5/16	3	6.22	8.00	15.87	64.00	**HDTM31218CHM**
	18	9/16	4	9.90	10.00	22.65	84.00	**TM56218CHM**
	16	3/8	4	7.25	8.00	19.05	64.00	**TM37516CHM**
	16	3/8	4	7.62	10.00	19.05	84.00	**HDTM37516CHM**
	16	3/4	4	11.95	12.00	31.75	84.00	**TM75016CHM**
	14	7/16	4	7.75	8.00	20.00	64.00	**TM43714CHM**
	14	7/8	4	11.95	12.00	32.70	84.00	**TM87514CHM**
	13	1/2	4	9.40	10.00	23.50	84.00	**TM50013CHM**
	13	1/2	4	10.16	12.00	23.50	84.00	**HDTM50013CHM**
	12	9/16	4	9.90	10.00	23.35	84.00	**TM56212CHM**
m	12	3/4	4	11.95	12.00	31.75	84.00	**TM75012CHM**
	12	1	6	18.92	20.00	38.10	105.00	**TM10012CHM**
	11	5/8	4	11.95	12.00	32.40	84.00	**TM62511CHM**
	11	5/8	4	11.95	12.00	37.00	100.00	**TM62511CHM-XL**
	10	3/4	4	11.95	12.00	33.00	84.00	**TM75010CHM**
	10	3/4	4	11.95	12.00	40.70	100.00	**TM75010CHM-XL**
	9	7/8	4	15.75	16.00	36.75	93.00	**TM87509CHM**
	9	7/8	4	15.75	16.00	45.20	100.00	**TM87509CHM-XL**
	8	1	4	15.75	16.00	35.00	93.00	**TM10008CHM**
	8	1	6	19.90	20.00	50.80	115.00	**TM10008CHM-XL**
	7	1-1/8	5	19.90	20.00	36.10	105.00	**TM12507CHM**
	6	1-3/8	5	19.90	20.00	38.10	105.00	**TM13706CHM**

E: 56 - 57
Key on E: 1



E: 4

Weldon Flat

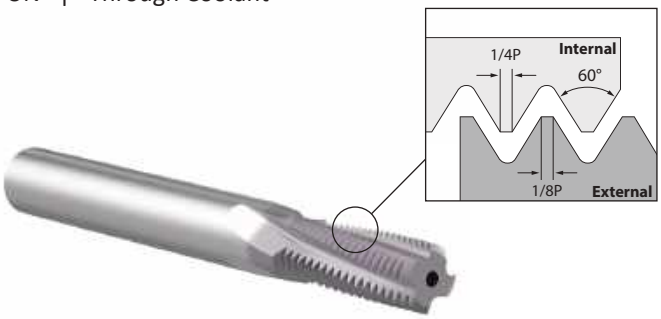


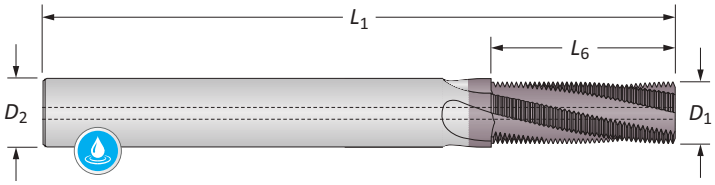
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

UN | Through Coolant





UN | Through Coolant

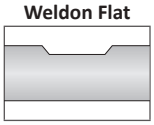
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
	64	#2	3*	0.065	0.125	0.125	1.500	**TM08664CH**
	56	#2	3*	0.065	0.125	0.125	1.500	**TM08656CH**
	48	#3	3*	0.075	0.125	0.167	1.500	**TM09948CH**
	44	#5	3	0.095	0.125	0.228	1.500	**TM12544CH**
	40	#4	3*	0.085	0.125	0.175	1.500	**TM12540CH**
	36	#8	3	0.115	0.125	0.250	1.500	**TM16436CH**
	32	#6	3	0.100	0.125	0.218	1.500	**TM13832CH**
	32	#8	3	0.115	0.125	0.250	1.500	**TM16432CH**
	32	#10	3	0.150	0.187	0.312	2.375	**TM19032CH**
	32	#10	3	0.150	0.187	0.312	2.375	**HDTM19032CH**
	32	1/2	6	0.370	0.375	1.000	3.500	**TM50032CH**
i	28	#10	3	0.120	0.125	0.312	1.500	**TM19028CH**
	28	1/4	3	0.180	0.187	0.500	2.375	**TM25028CH**
	28	1/2	6	0.370	0.375	1.000	3.500	**TM50028CH**
	24	#10	3	0.145	0.187	0.312	2.375	**TM19024CH**
	24	#10	3	0.145	0.187	0.312	2.375	**HDTM19024CH**
	24	5/16	3	0.235	0.250	0.625	2.375	**TM31224CH**
	24	3/8	4	0.285	0.312	0.750	3.000	**TM37524CH**
	24	1/2	6	0.370	0.375	1.000	3.500	**TM50024CH**
	20	1/4	3	0.180	0.187	0.500	2.375	**TM25020CH**
	20	1/4	3	0.195	0.250	0.500	2.375	**HDTM25020CH**
	20	7/16	4	0.335	0.375	0.875	3.000	**TM43720CH**
	20	1/2	6	0.370	0.375	1.000	3.500	**TM50020CH**

*Straight fluted.

E: 56 - 57
Key on E: 1

E: 4

Weldon Flat

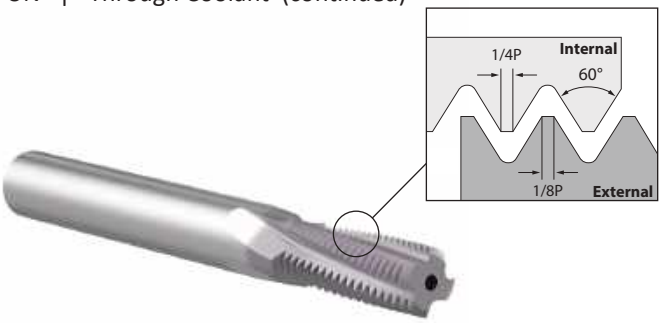


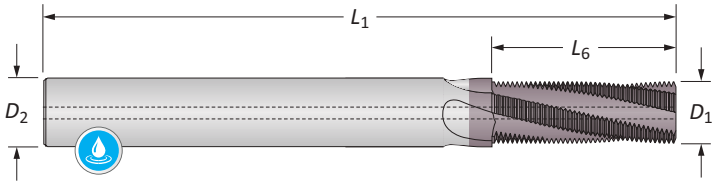
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

UN | Through Coolant (continued)





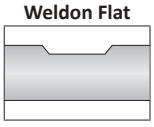
UN | Through Coolant

	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
	18	5/16	3	0.235	0.250	0.625	2.375	**TM31218CH**
	18	5/16	3	0.245	0.312	0.625	3.000	**HDTM31218CH**
	18	9/16	4	0.370	0.375	0.875	3.000	**TM56218CH**
	16	3/8	4	0.285	0.312	0.750	3.000	**TM37516CH**
	16	3/8	4	0.300	0.375	0.750	3.000	**HDTM37516CH**
	16	3/4	4	0.490	0.500	1.250	3.500	**TM75016CH**
	14	7/16	4	0.305	0.312	0.750	3.000	**TM43714CH**
	14	7/8	4	0.490	0.500	1.250	3.500	**TM87514CH**
	13	1/2	4	0.350	0.375	0.875	3.000	**TM50013CH**
	13	1/2	4	0.400	0.500	0.875	3.500	**HDTM50013CH**
	12	9/16	4	0.370	0.375	0.875	3.500	**TM56212CH**
i	12	3/4	4	0.495	0.500	1.250	3.500	**TM75012CH**
	12	1	6	0.745	0.750	1.500	4.000	**TM10012CH**
	11	5/8	4	0.470	0.500	1.250	3.500	**TM62511CH**
	11	5/8	4	0.470	0.500	1.455	3.500	**TM62511CH-XL**
	10	3/4	4	0.495	0.500	1.250	3.500	**TM75010CH**
	10	3/4	4	0.495	0.500	1.600	4.000	**TM75010CH-XL**
	9	7/8	4	0.620	0.625	1.375	4.000	**TM87509CH**
	9	7/8	4	0.620	0.625	1.778	4.000	**TM87509CH-XL**
	8	1	4	0.620	0.625	1.375	4.000	**TM10008CH**
	8	1	6	0.745	0.750	2.000	4.500	**TM10008CH-XL**
	7	1-1/8	5	0.745	0.750	1.572	4.500	**TM12507CH**
	6	1-3/8	5	0.745	0.750	1.500	4.500	**TM13706CH**

E: 56 - 57
Key on E: 1

E: 4

Weldon Flat

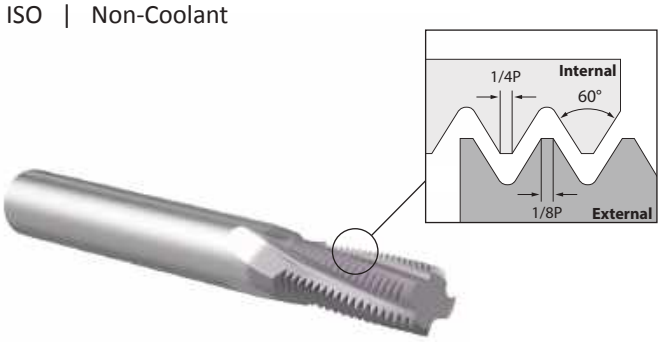


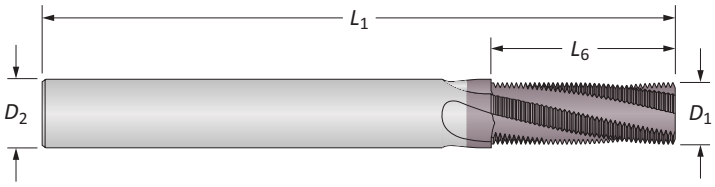
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

ISO | Non-Coolant





ISO | Non-Coolant

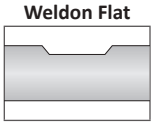
	Pitch	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	0.40	M2	3*	1.50	3.00	3.20	39.00	**TM20040M**	**TMMK0200-040M**
	0.45	M2.5	3*	1.50	3.00	3.60	39.00	**TM25045M**	**TMMK0250-045M**
	0.50	M3	3*	2.15	3.00	4.50	39.00	**TM30050M**	**TMMK0300-050M**
	0.50	M6	3	4.60	6.00	12.00	58.00	**TM60050M**	**TMMK0600-050M**
	0.50	M10	4	7.95	8.00	15.00	64.00	**TM10050M**	**TMMK1000-050M**
	0.70	M4	3	2.90	3.00	8.00	39.00	**TM40070M**	**TMMK0400-070M**
	0.75	M4.5	3	3.00	4.00	6.75	51.00	**TM45075M**	**TMMK0450-075M**
	0.75	M6	3	4.60	6.00	12.00	58.00	**TM60075M**	**TMMK0600-075M**
	0.75	M10	4	7.95	8.00	15.00	64.00	**TM10075M**	**TMMK1000-075M**
	0.80	M5	3	3.60	4.00	8.00	51.00	**TM50080M**	**TMMK0500-080M**
	1.00	M6	3	4.60	6.00	12.00	58.00	**TM60100M**	**TMMK0600-100M**
	1.00	M12	4	9.40	10.00	20.00	73.00	**TM12100M**	**TMMK1200-100M**
m	1.25	M8	3	5.90	6.00	16.25	58.00	**TM80125M**	**TMMK0800-125M**
	1.50	M10	4	7.40	8.00	19.50	64.00	**TM10150M**	**TMMK1000-150M**
	1.50	M14	4	10.90	12.00	27.00	84.00	**TM14150M**	**TMMK1400-150M**
	1.50	M18	4	11.90	12.00	31.50	84.00	**TM18150M**	**TMMK1800-150M**
	1.50	M20	5	15.75	16.00	36.00	93.00	**TM20150M**	–
	1.75	M12	4	9.40	10.00	22.71	73.00	**TM12175M**	**TMMK1200-175M**
	2.00	M14	4	10.90	12.00	28.00	84.00	**TM14200M**	**TMMK1400-200M**
	2.00	M16	4	11.95	12.00	30.00	84.00	**TM16200M**	–
	2.50	M20	4	11.90	12.00	30.00	84.00	**TM20250M**	**TMMK2000-250M**
	3.00	M24	4	15.90	16.00	36.00	93.00	**TM24300M**	**TMMK2400-300M**
	3.50	M30	4	15.75	16.00	38.50	100.00	**TM30350M**	**TMMK3000-350M**
	4.00	M36	5	19.90	20.00	40.00	105.00	**TM36400M**	**TMMK3600-400M**

*Straight fluted.

E: 54 - 57
Key on E: 1

E: 4

Weldon Flat

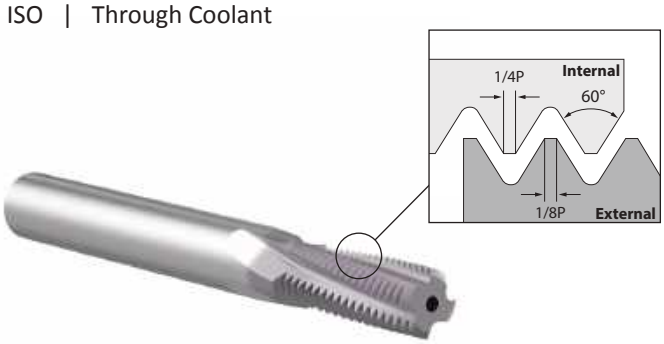


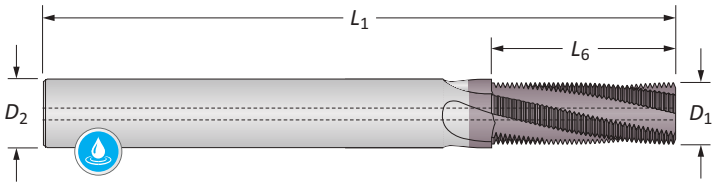
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

ISO | Through Coolant



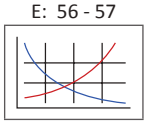


ISO | Through Coolant

	Pitch	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
	0.40	M2	3*	1.50	3.00	3.20	39.00	**TM20040CHM**
	0.45	M2.5	3*	1.50	3.00	3.60	39.00	**TM25045CHM**
	0.50	M3	3*	2.15	3.00	4.50	39.00	**TM30050CHM**
	0.50	M6	3	4.60	6.00	12.00	58.00	**TM60050CHM**
	0.50	M10	4	7.95	8.00	15.00	64.00	**TM10050CHM**
	0.70	M4	3	2.90	3.00	8.00	39.00	**TM40070CHM**
	0.75	M4.5	3	3.00	4.00	6.75	51.00	**TM45075CHM**
	0.75	M6	3	4.60	6.00	12.00	58.00	**TM60075CHM**
	0.75	M10	4	7.95	8.00	15.00	64.00	**TM10075CHM**
	0.80	M5	3	3.60	4.00	8.00	51.00	**TM50080CHM**
	1.00	M6	3	4.60	6.00	12.00	58.00	**TM60100CHM**
	1.00	M12	4	9.40	10.00	20.00	84.00	**TM12100CHM**
m	1.25	M8	3	5.90	6.00	16.25	58.00	**TM80125CHM**
	1.50	M10	4	7.40	8.00	19.50	64.00	**TM10150CHM**
	1.50	M14	4	10.90	12.00	27.00	84.00	**TM14150CHM**
	1.50	M18	4	11.90	12.00	31.50	84.00	**TM18150CHM**
	1.50	M20	5	15.75	16.00	36.00	93.00	**TM20150CHM**
	1.75	M12	4	9.40	10.00	22.71	84.00	**TM12175CHM**
	2.00	M14	4	10.90	12.00	28.00	84.00	**TM14200CHM**
	2.00	M16	4	11.95	12.00	30.00	84.00	**TM16200CHM**
	2.50	M20	4	11.90	12.00	30.00	84.00	**TM20250CHM**
	3.00	M24	4	15.90	16.00	36.00	93.00	**TM24300CHM**
	3.50	M30	4	15.75	16.00	38.50	100.00	**TM30350CHM**
	4.00	M36	5	19.90	20.00	40.00	105.00	**TM36400CHM**

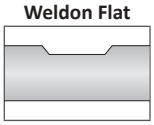
*Straight fluted.

E: 56 - 57
Key on E: 1



E: 4

Weldon Flat

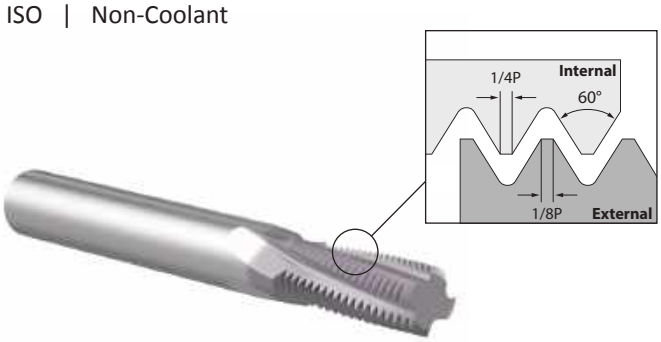


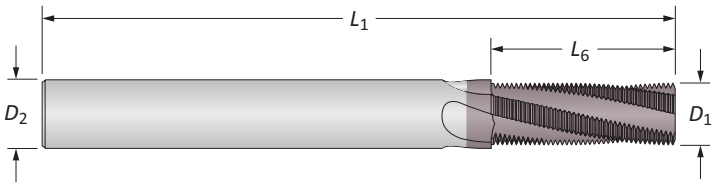
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

ISO | Non-Coolant





ISO | Non-Coolant

	Pitch	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™	AccuThread® 856
	0.40	M2	3*	0.059	0.125	0.126	2.000	**TM20040**	–
	0.45	M2.5	3*	0.059	0.125	0.142	2.000	**TM25045**	–
	0.50	M3	3*	0.085	0.125	0.178	2.000	**TM30050**	–
	0.50	M6	3	0.181	0.187	0.473	2.500	**TM60050**	–
	0.50	M10	4	0.310	0.312	0.591	3.000	**TM10050**	–
	0.70	M4	3	0.115	0.125	0.276	2.000	**TM40070**	–
	0.75	M4.5	3	0.120	0.125	0.266	2.000	**TM45075**	**TMMK0450-075**
	0.75	M8	3	0.235	0.250	0.625	2.500	**TM80075**	**TMMK0800-075**
	0.75	M10	4	0.310	0.312	0.591	3.000	**TM10075**	–
	0.80	M5	3	0.120	0.125	0.312	2.000	**TM50080**	**TMMK0500-080**
	1.00	M6	3	0.170	0.187	0.500	2.500	**TM60100**	**TMMK0600-100**
	1.00	M12	4	0.360	0.375	0.875	3.500	**TM12100**	**TMMK1200-100**
i	1.25	M8	3	0.235	0.250	0.625	2.500	**TM80125**	**TMMK0800-125**
	1.50	M10	4	0.300	0.312	0.750	3.000	**TM10150**	**TMMK1000-150**
	1.50	M14	4	0.370	0.375	0.875	3.500	**TM14150**	**TMMK1400-150**
	1.50	M18	4	0.490	0.500	1.250	3.500	**TM18150**	**TMMK1800-150**
	1.50	M20	5	0.620	0.625	1.418	4.000	**TM20150**	–
	1.75	M12	4	0.360	0.375	0.875	3.500	**TM12175**	**TMMK1200-175**
	2.00	M14	4	0.429	0.500	1.103	3.500	**TM14200**	–
	2.00	M16	4	0.470	0.500	1.250	3.500	**TM16200**	**TMMK1600-200**
	2.50	M20	4	0.495	0.500	1.250	3.500	**TM20250**	**TMMK2000-250**
	3.00	M24	4	0.620	0.625	1.375	4.000	**TM24300**	**TMMK2400-300**
	3.50	M30	4	0.620	0.625	1.516	4.000	**TM30350**	–
	4.00	M36	5	0.745	0.750	1.575	4.500	**TM36400**	–

*Straight fluted.

E: 54 - 57
Key on E: 1

E: 4

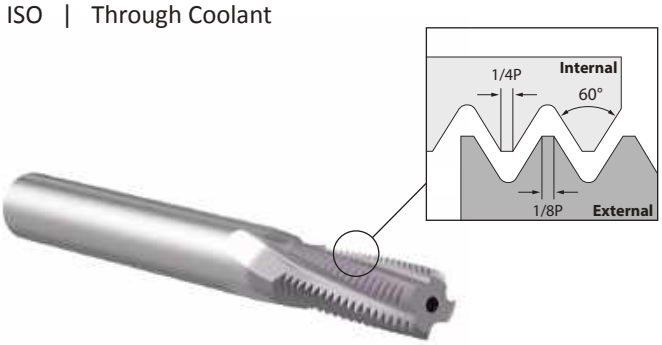
Weldon Flat

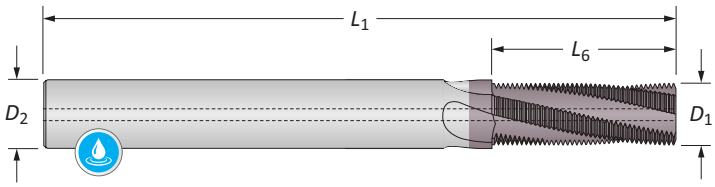
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = **TM**NK0500-NPT | Weldon shank flat = **TW**NK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

ISO | Through Coolant





ISO | Through Coolant

Pitch	Min Thread Ø	Flutes	Thread Mill D_1	D_2	L_6	L_1	Part No. ThreadMills USA™
0.40	M2	3*	0.059	0.125	0.126	1.500	**TM20040CH**
0.45	M2.5	3*	0.059	0.125	0.142	1.500	**TM25045CH**
0.50	M3	3*	0.085	0.125	0.178	1.500	**TM30050CH**
0.50	M6	3	0.181	0.187	0.473	2.375	**TM60050CH**
0.50	M10	4	0.310	0.312	0.591	3.000	**TM10050CH**
0.70	M4	3	0.115	0.125	0.276	1.500	**TM40070CH**
0.75	M4.5	3	0.120	0.125	0.266	1.500	**TM45075CH**
0.75	M8	3	0.235	0.250	0.625	2.375	**TM80075CH**
0.75	M10	4	0.310	0.312	0.591	3.000	**TM10075CH**
0.80	M5	3	0.120	0.125	0.312	1.500	**TM50080CH**
1.00	M6	3	0.170	0.187	0.500	2.375	**TM60100CH**
1.00	M12	4	0.360	0.375	0.875	3.000	**TM12100CH**
1.25	M8	3	0.235	0.250	0.625	2.375	**TM80125CH**
1.50	M10	4	0.300	0.312	0.750	3.000	**TM10150CH**
1.50	M14	4	0.370	0.375	0.875	3.000	**TM14150CH**
1.50	M18	4	0.490	0.500	1.250	3.500	**TM18150CH**
1.50	M20	5	0.620	0.625	1.418	4.000	**TM20150CH**
1.75	M12	4	0.360	0.375	0.875	3.000	**TM12175CH**
2.00	M14	4	0.429	0.500	1.103	3.500	**TM14200CH**
2.00	M16	4	0.470	0.500	1.250	3.500	**TM16200CH**
2.50	M20	4	0.495	0.500	1.250	3.500	**TM20250CH**
3.00	M24	4	0.620	0.625	1.375	4.000	**TM24300CH**
3.50	M30	4	0.620	0.625	1.516	4.000	**TM30350CH**
4.00	M36	5	0.745	0.750	1.575	4.500	**TM36400CH**

*Straight fluted.

E: 56 - 57
Key on E: 1

E: 4

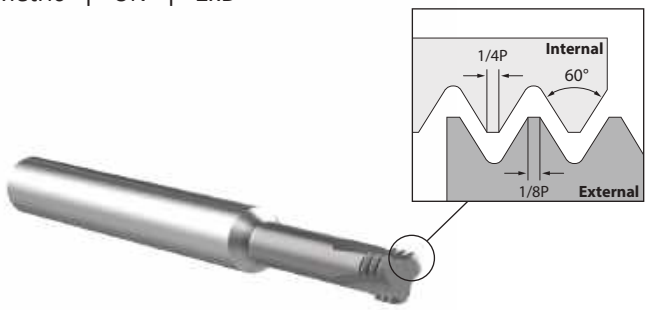
Weldon Flat

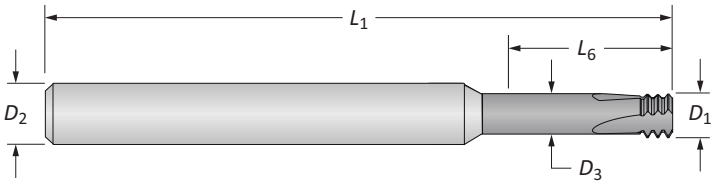
To order a thread mill with a Weldon flat, replace the leading TM designator with TW (available for metric shanks 6 mm and above, or inch shanks 3/8 and above)
Example: Cylindrical shank = TMNK0500-NPT | Weldon shank flat = TWNK0500-NPT
NOTE: Weldon flats have a minimum order quantity of 2 pieces

= Metric (mm)
= Imperial (in)

Solid Carbide Thread Mills

Metric | UN | 2xD





UN | Non-Coolant

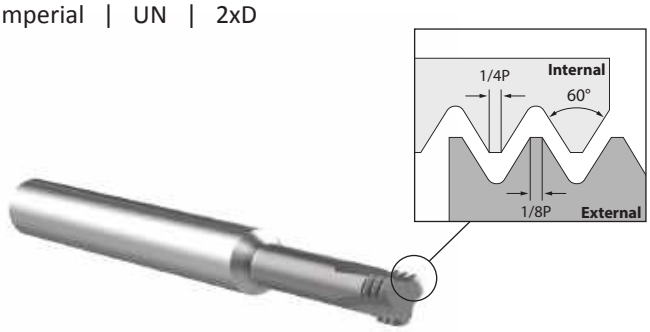
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_3	D_2	L_6	L_1	Part No. AccuThread® T3
	64	#1	3	1.40	0.89	6.00	3.81	63.00	**TM07364M-3T2X**
	56	#2	3	1.65	1.08	6.00	4.32	63.00	**TM08656M-3T2X**
	48	#3	3	1.91	1.24	6.00	5.08	63.00	**TM09948M-3T2X**
	40	#4	3	2.16	1.36	6.00	6.35	63.00	**TM11240M-3T2X**
	36	#8	3	3.30	2.42	6.00	8.89	63.00	**TM16436M-3T2X**
	32	#6	3	2.54	1.55	6.00	7.11	63.00	**TM13832M-3T2X**
	32	#8	3	3.20	2.21	6.00	9.40	63.00	**TM16432M-3T2X**
	32	#10	3	3.68	2.70	6.00	10.41	63.00	**TM19032M-3T2X**
	28	1/4	3	5.00	3.88	6.00	14.48	63.00	**TM25028M-3T2X**
	24	#10	3	3.51	2.20	6.00	10.67	63.00	**TM19024M-3T2X**
	24	5/16	3	6.60	5.30	8.00	17.02	64.00	**TM31224M-3T2X**
m	20	1/4	3	4.75	3.18	6.00	13.97	63.00	**TM25020M-3T2X**
	20	7/16	4	7.92	6.36	8.00	24.89	64.00	**TM43720M-3T2X**
	18	5/16	3	5.94	4.26	6.00	17.02	63.00	**TM31218M-3T2X**
	16	3/8	3	6.71	4.76	8.00	22.10	64.00	**TM37516M-3T2X**
	16	3/4	4	11.94	9.88	12.00	38.10	88.90	**TM75016M-3T2X**
	14	7/16	4	7.62	5.39	8.00	24.89	64.00	**TM43714M-3T2X**
	14	7/8	4	15.75	13.42	16.00	44.45	100.00	**TM87514M-3T2X**
	12	3/4	4	11.94	9.24	12.00	38.10	88.90	**TM75012M-3T2X**
	11	5/8	4	11.94	9.01	12.00	31.75	88.90	**TM62511M-3T2X**
	10	3/4	4	11.94	8.73	12.00	38.10	88.90	**TM75010M-3T2X**
	9	7/8	4	15.75	12.20	16.00	44.45	100.00	**TM87509M-3T2X**
	8	1	4	15.75	11.77	16.00	50.80	100.00	**TM10008M-3T2X**

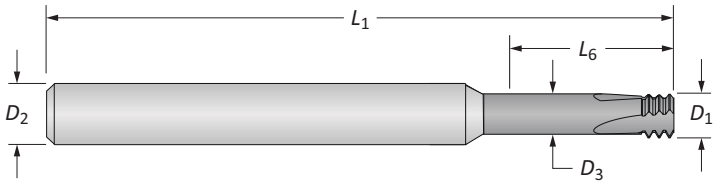
E: 58 - 59
Key on E: 1
E: 4

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

Imperial | UN | 2xD





UN | Non-Coolant

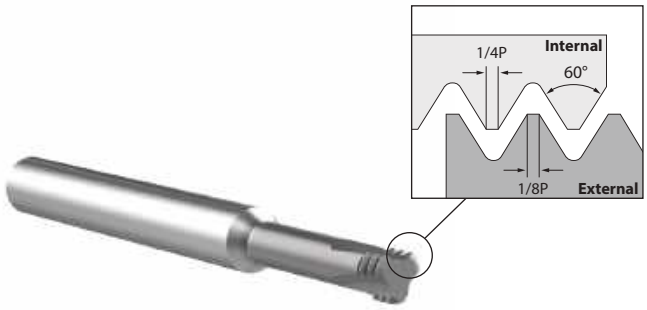
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_3	D_2	L_6	L_1	Part No. AccuThread® T3
	64	#1	3	0.055	0.035	0.250	0.150	2.500	**TM07364-3T2X**
	56	#2	3	0.065	0.042	0.250	0.170	2.500	**TM08656-3T2X**
	48	#3	3	0.075	0.049	0.250	0.200	2.500	**TM09948-3T2X**
	40	#4	3	0.085	0.054	0.250	0.250	2.500	**TM11240-3T2X**
	36	#8	3	0.130	0.095	0.250	0.350	2.500	**TM16436-3T2X**
	32	#6	3	0.100	0.061	0.250	0.280	2.500	**TM13832-3T2X**
	32	#8	3	0.126	0.087	0.250	0.370	2.500	**TM16432-3T2X**
	32	#10	3	0.145	0.106	0.250	0.410	2.500	**TM19032-3T2X**
	28	1/4	3	0.197	0.153	0.250	0.570	2.500	**TM25028-3T2X**
	24	#10	3	0.138	0.086	0.250	0.420	2.500	**TM19024-3T2X**
	24	5/16	3	0.260	0.208	0.312	0.670	2.500	**TM31224-3T2X**
	20	1/4	3	0.187	0.125	0.250	0.550	2.500	**TM25020-3T2X**
ⓘ	20	7/16	4	0.312	0.250	0.312	0.980	2.500	**TM43720-3T2X**
	18	5/16	3	0.236	0.168	0.250	0.670	2.500	**TM31218-3T2X**
	16	3/8	3	0.264	0.187	0.312	0.870	2.500	**TM37516-3T2X**
	16	3/4	4	0.495	0.414	0.500	1.500	3.500	**TM75016-3T2X**
	14	7/16	4	0.300	0.212	0.312	0.980	2.500	**TM43714-3T2X**
	14	7/8	4	0.620	0.528	0.625	1.750	4.000	**TM87514-3T2X**
	13	1/2	4	0.360	0.266	0.375	1.080	3.000	**TM50013-3T2X**
	12	9/16	4	0.410	0.308	0.500	1.240	3.500	**TM56212-3T2X**
	12	3/4	4	0.495	0.389	0.500	1.500	3.500	**TM75012-3T2X**
	11	5/8	4	0.470	0.355	0.500	1.250	3.500	**TM62511-3T2X**
	10	3/4	4	0.495	0.369	0.500	1.500	3.500	**TM75010-3T2X**
	9	7/8	4	0.620	0.480	0.625	1.750	4.000	**TM87509-3T2X**
	8	1	4	0.620	0.463	0.625	2.000	4.000	**TM10008-3T2X**

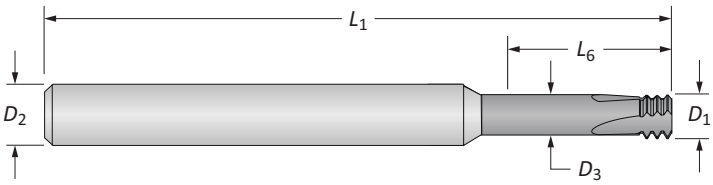
E: 58 - 59
Key on E: 1
E: 4

ⓜ = Metric (mm)
ⓘ = Imperial (in)

Solid Carbide Thread Mills

UN | 3xD





UN | Non-Coolant

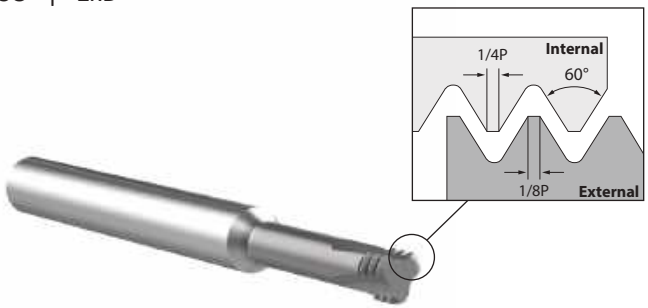
	TPI (Pitch)	Min Thread Ø	Flutes	Thread Mill D_1	D_3	D_2	L_6	L_1	Part No. AccuThread® T3
m	40	#4	3	2.16	1.36	6.00	7.87	63.00	**TM11240M-3T3X**
	32	#6	3	2.54	1.55	6.00	10.41	63.00	**TM13832M-3T3X**
	32	#8	3	3.20	2.21	6.00	12.45	63.00	**TM16432M-3T3X**
	32	#10	3	3.68	2.70	6.00	14.99	63.00	**TM19032M-3T3X**
	28	1/4	3	5.00	3.88	6.00	19.05	63.00	**TM25028M-3T3X**
	24	#10	3	3.51	2.20	6.00	14.99	63.00	**TM19024M-3T3X**
	24	5/16	3	6.60	5.30	8.00	23.88	64.00	**TM31224M-3T3X**
	20	1/4	3	4.75	3.18	6.00	19.05	63.00	**TM25020M-3T3X**
	18	5/16	3	5.94	4.21	6.00	23.11	63.00	**TM31218M-3T3X**
	16	3/4	4	11.94	9.88	12.00	57.15	88.90	**TM75016M-3T3X**
	14	7/8	4	15.75	13.42	16.00	66.68	100.00	**TM87514M-3T3X**
	12	3/4	4	11.94	9.24	12.00	57.15	88.90	**TM75012M-3T3X**
	11	5/8	4	11.94	9.01	12.00	47.63	88.90	**TM62511M-3T3X**
	10	3/4	4	11.94	8.73	12.00	57.15	88.90	**TM75010M-3T3X**
	9	7/8	4	15.75	12.20	16.00	66.68	100.00	**TM87509M-3T3X**
	8	1	4	15.75	11.77	16.00	76.20	114.30	**TM10008M-3T3X**
i	40	#4	3	0.085	0.054	0.250	0.310	2.500	**TM11240-3T3X**
	32	#6	3	0.100	0.061	0.250	0.410	2.500	**TM13832-3T3X**
	32	#8	3	0.126	0.087	0.250	0.490	2.500	**TM16432-3T3X**
	32	#10	3	0.145	0.106	0.250	0.590	2.500	**TM19032-3T3X**
	28	1/4	3	0.197	0.153	0.250	0.750	2.500	**TM25028-3T3X**
	24	#10	3	0.138	0.086	0.250	0.590	2.500	**TM19024-3T3X**
	24	5/16	3	0.260	0.208	0.312	0.940	2.500	**TM31224-3T3X**
	20	1/4	3	0.187	0.125	0.250	0.750	2.500	**TM25020-3T3X**
	18	5/16	3	0.236	0.168	0.250	0.910	2.500	**TM31218-3T3X**
	16	3/4	4	0.495	0.414	0.500	2.250	4.000	**TM75016-3T3X**
	14	7/8	4	0.620	0.528	0.625	2.625	4.000	**TM87514-3T3X**
	12	3/4	4	0.495	0.389	0.500	2.250	4.000	**TM75012-3T3X**
	11	5/8	4	0.470	0.355	0.500	1.875	4.000	**TM62511-3T3X**
	10	3/4	4	0.495	0.369	0.500	2.250	4.000	**TM75010-3T3X**
	9	7/8	4	0.620	0.480	0.625	2.625	4.000	**TM87509-3T3X**
	8	1	4	0.620	0.463	0.625	3.000	4.500	**TM10008-3T3X**

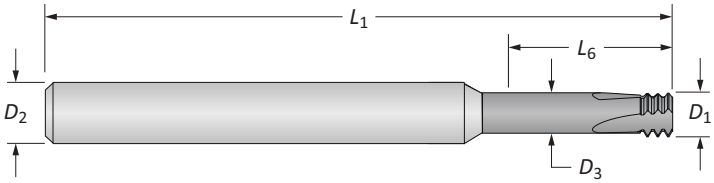
E: 58 - 59
Key on E: 1
E: 4

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

ISO | 2xD





ISO | Non-Coolant

	Pitch	Min Thread Ø	Flutes	Thread Mill D_1	D_3	D_2	L_6	L_1	Part No. AccuThread® T3
	0.35	M1.8	3	1.35	0.84	6.00	4.32	63.00	**TM18035M-3T2X**
	0.40	M2	3	1.55	1.04	6.00	4.60	63.00	**TM20040M-3T2X**
	0.45	M2.5	3	1.96	1.38	6.00	5.60	63.00	**TM25045M-3T2X**
	0.50	M3	3	2.36	1.73	6.00	6.60	63.00	**TM30050M-3T2X**
	0.60	M3.5	3	2.74	1.99	6.00	7.60	63.00	**TM35060M-3T2X**
	0.70	M4	3	3.10	2.22	6.00	8.90	63.00	**TM40070M-3T2X**
	0.75	M4.5	3	3.38	2.41	6.00	10.92	63.00	**TM45075M-3T2X**
	0.80	M5	3	3.81	2.81	6.00	12.40	63.00	**TM50080M-3T2X**
m	1.00	M6	3	4.65	3.41	6.00	14.00	63.00	**TM60100M-3T2X**
	1.25	M8	3	5.94	4.40	6.00	18.00	63.00	**TM80125M-3T2X**
	1.50	M10	4	7.80	5.95	8.00	23.10	64.00	**TM10150M-3T2X**
	1.50	M14	4	9.40	7.45	10.00	27.94	88.90	**TM14150M-3T2X**
	1.50	M18	4	11.94	9.98	12.00	36.07	88.90	**TM18150M-3T2X**
	1.75	M12	4	7.92	5.78	8.00	24.00	64.00	**TM12175M-3T2X**
	2.00	M16	4	11.94	9.40	12.00	32.00	88.90	**TM16200M-3T2X**
	2.50	M20	4	14.99	11.83	16.00	39.88	100.00	**TM20250M-3T2X**
	3.00	M24	4	15.75	11.98	16.00	48.01	100.00	**TM24300M-3T2X**
	0.35	M1.8	3	0.053	0.033	0.250	0.170	2.500	**TM18035-3T2X**
	0.40	M2	3	0.061	0.041	0.250	0.180	2.500	**TM20040-3T2X**
	0.45	M2.5	3	0.077	0.055	0.250	0.220	2.500	**TM25045-3T2X**
	0.50	M3	3	0.093	0.068	0.250	0.260	2.500	**TM30050-3T2X**
	0.60	M3.5	3	0.108	0.078	0.250	0.300	2.500	**TM35060-3T2X**
	0.70	M4	3	0.122	0.088	0.250	0.350	2.500	**TM40070-3T2X**
	0.75	M4.5	3	0.133	0.095	0.250	0.430	2.500	**TM45075-3T2X**
	0.80	M5	3	0.150	0.111	0.250	0.490	2.500	**TM50080-3T2X**
i	1.00	M6	3	0.183	0.134	0.250	0.550	2.500	**TM60100-3T2X**
	1.25	M8	3	0.234	0.173	0.250	0.710	2.500	**TM80125-3T2X**
	1.50	M10	4	0.307	0.234	0.312	0.910	2.500	**TM10150-3T2X**
	1.50	M14	4	0.370	0.293	0.375	1.100	3.500	**TM14150-3T2X**
	1.50	M18	4	0.495	0.418	0.500	1.420	3.500	**TM18150-3T2X**
	1.75	M12	4	0.310	0.225	0.312	0.945	2.500	**TM12175-3T2X**
	2.00	M16	4	0.470	0.370	0.500	1.260	3.500	**TM16200-3T2X**
	2.50	M20	4	0.590	0.466	0.625	1.570	4.000	**TM20250-3T2X**
	3.00	M24	4	0.620	0.472	0.625	1.890	4.000	**TM24300-3T2X**

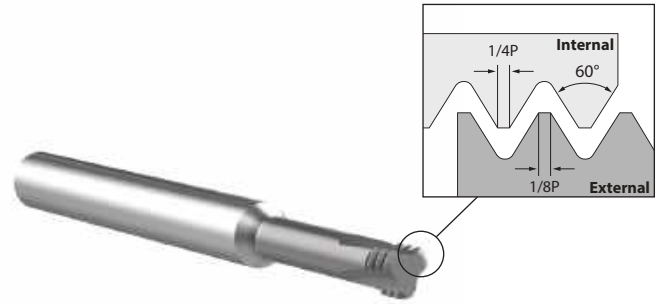
E: 58 - 59
Key on E: 1

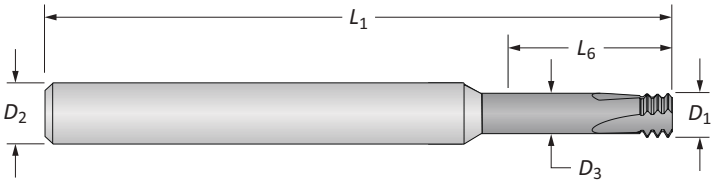
E: 4

m = Metric (mm)
i = Imperial (in)

Solid Carbide Thread Mills

ISO | 3xD





ISO | Non-Coolant

	Pitch	Min Thread Ø	Flutes	Thread Mill D_1	D_3	D_2	L_6	L_1	Part No. AccuThread® T3
m	0.45	M2.5	3	1.96	1.38	6.00	7.60	63.00	**TM25045M-3T3X**
	0.50	M3	3	2.36	1.73	6.00	9.40	63.00	**TM30050M-3T3X**
	0.60	M3.5	3	2.74	1.99	6.00	11.40	63.00	**TM35060M-3T3X**
	0.70	M4	3	3.10	2.22	6.00	12.40	63.00	**TM40070M-3T3X**
	0.80	M5	3	3.81	2.81	6.00	16.00	63.00	**TM50080M-3T3X**
	1.00	M6	3	4.65	3.41	6.00	20.10	63.00	**TM60100M-3T3X**
	1.25	M8	3	5.94	4.40	6.00	23.90	63.00	**TM80125M-3T3X**
	1.50	M10	4	7.80	5.95	8.00	28.40	64.00	**TM10150M-3T3X**
	1.50	M14	4	9.40	7.45	10.00	41.91	88.90	**TM14150M-3T3X**
	1.50	M18	4	11.94	9.98	12.00	53.85	88.90	**TM18150M-3T3X**
	1.75	M12	4	7.92	5.78	8.00	36.00	64.00	**TM12175M-3T3X**
	2.00	M16	4	11.94	9.40	12.00	49.53	88.90	**TM16200M-3T3X**
	2.50	M20	4	14.99	11.83	16.00	59.94	100.00	**TM20250M-3T3X**
	3.00	M24	4	15.75	11.98	16.00	71.88	100.00	**TM24300M-3T3X**
i	0.45	M2.5	3	0.077	0.055	0.250	0.300	2.500	**TM25045-3T3X**
	0.50	M3	3	0.093	0.068	0.250	0.370	2.500	**TM30050-3T3X**
	0.60	M3.5	3	0.108	0.078	0.250	0.450	2.500	**TM35060-3T3X**
	0.70	M4	3	0.122	0.088	0.250	0.490	2.500	**TM40070-3T3X**
	0.80	M5	3	0.150	0.111	0.250	0.630	2.500	**TM50080-3T3X**
	1.00	M6	3	0.183	0.134	0.250	0.790	2.500	**TM60100-3T3X**
	1.25	M8	3	0.234	0.173	0.250	0.940	2.500	**TM80125-3T3X**
	1.50	M10	4	0.307	0.234	0.312	1.120	2.500	**TM10150-3T3X**
	1.50	M14	4	0.370	0.293	0.375	1.650	3.500	**TM14150-3T3X**
	1.50	M18	4	0.495	0.418	0.500	2.120	4.000	**TM18150-3T3X**
	1.75	M12	4	0.310	0.225	0.312	1.418	2.500	**TM12175-3T3X**
	2.00	M16	4	0.470	0.370	0.500	1.950	4.000	**TM16200-3T3X**
	2.50	M20	4	0.590	0.466	0.625	2.360	4.000	**TM20250-3T3X**
	3.00	M24	4	0.620	0.472	0.625	2.830	4.000	**TM24300-3T3X**

E: 58 - 59
Key on E: 1
E: 4

m = Metric (mm)
i = Imperial (in)

Notes

Indexable Insert Thread Mills Overview

Bolt-in Style

- Replaceable inserts allow for quick setups and tool changes to keep the production process moving smoothly.
- Inserts are available with AM210® coating, which increases tool life.
- Available with 1 flute only.
- Multiple thread form styles are available.
- Tapered thread forms: NPT, NPTF, BSPT.
- Straight thread forms: BSPP, UN, UNJ, ISO.

Bolt-in Style Indexable Thread Mill Assembly

Step 1:
Slide the thread mill insert into the insert holder slot.

Step 2:
Hand tighten insert screws to hold insert in place.

Step 3:
Tighten each screw to 1.5 Nm (1.1 ft-lbs).

Step 4:
Tighten each screw to 3.5 Nm (2.6 ft-lbs).

Pin Style

- Replaceable inserts allow for quick setups and tool changes to keep the production process moving smoothly.
- Inserts are available with AM210® coating, which increases tool life.
- Holders available in 2 styles: Weldon Shank and Shell Mill.
- Weldon Shank holders available with 1, 2, 3, and 5 flutes.
- Shell Mill holders available with 6, 7, and 8 flutes.
- Thread forms available: NPT, NPTF, BSPT, BSPP, API-ROUND, ACME, UN, UNJ, ISO.

Pin Style Indexable Thread Mill Assembly

Step 1:
Slide the thread mill insert into the insert holder slot.

Step 2:
Slide the pin into the pin holder slot to hold the insert in place.

Step 3:
Hand tighten insert screws to hold insert in place. If there are three insert screws, start tightening the middle screw, then the two outer screws. Repeat for each insert.

Step 4:
Following the order from step three, tighten each screw to 1.5 Nm (1.1 ft-lbs).

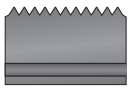
Step 5:
Following the order from step three, tighten each screw to 3.5 Nm (2.6 ft-lbs).

Product Nomenclature

AccuThread® 856 Indexable Inserts

TP	075	K	–	UN	32	I
1	2	3		4	5	6

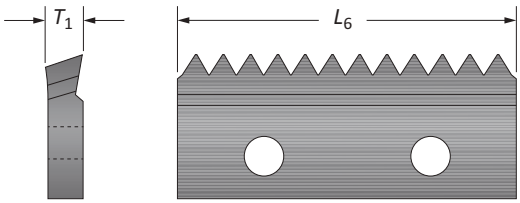
Bolt-in Style


Pin Style

1. Insert Style	2. Insert Length	3. Coating	4. Thread Class		5. Thread Pitch	6. Thread Style
TP = Bolt-in	**075** = 3/4	**K** = AM210®	**UN** = UN	**BSPT** = BSPT	**20** = UN	**I** = Internal
TN = Pin style	**100** = 1.00	**A** = TiAlN	**UNJ** = UNJ	**M** = ISO	**1.0** = ISO	**E** = External
	150 = 1.50	**U** = Uncoated	**NPT** = NPT	**FA** = Full ACME		
			NPTF = NPTF	**AP** = API Round		
			BSPP = BSPP			

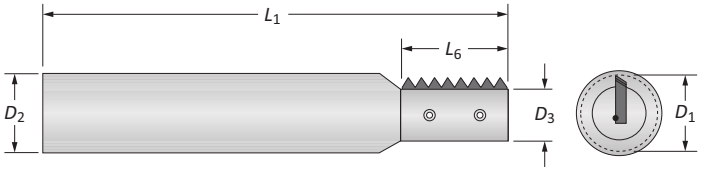
Indexable Inserts

Symbol	Attribute
L_6	Length of insert
T_1	Insert thickness



AccuThread® 856 Indexable Insert Holders

THT	–	0400	–	1F	075	M
1		2		3	4	5

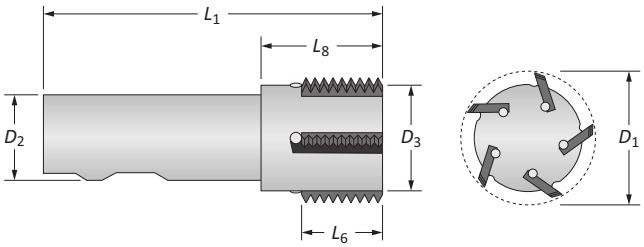


1. Holder Style	
Bolt-in Style	**Pin Style**
THT = Tapered Head	**THP** = Weldon Positive Rake
THN = Straight Head	**TNR** = Weldon Neutral Rake
	TSN = Shell Mill Positive Rake
	TSR = Shell Mill Neutral Rake

Bolt-in Style Holders

Symbol	Attribute	Symbol	Attribute
D_1	Maximum cutter diameter	L_1	Overall length
D_2	Shank diameter	L_6	Length of insert
D_3	Pilot diameter		

2. Cutter Diameter	3. Shank Designation	
0400 = 0.400	**1F** = 1 flute	**6F** = 6 flutes
	2F = 2 flutes	**7F** = 7 flutes
	3F = 3 flutes	**8F** = 8 flutes
	5F = 5 flutes	



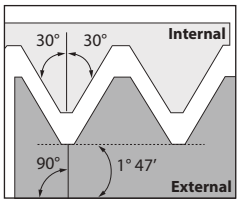
4. Length of Insert	5. Shank Designation
075 = 3/4	**M** = Metric
100 = 1.00	**Blank** = Imperial
150 = 1.50	

Pin Style Holders

Symbol	Attribute	Symbol	Attribute
D_1	Cutter diameter	D_5	Bore diameter (Shell Mill)
D_1*	Oversized cutter diameter	L_1	Overall length
D_2	Shank diameter	L_6	Length of insert
D_3	Pilot diameter	L_8	Flute length
D_4	Body diameter (Shell Mill)	T_2	Slot width (Shell Mill)

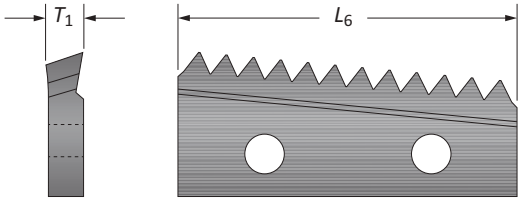
AccuThread® 856 Thread Mill Inserts

Bolt-in Style | NPT / NPTF

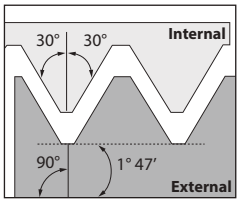


NPT

Internal / External

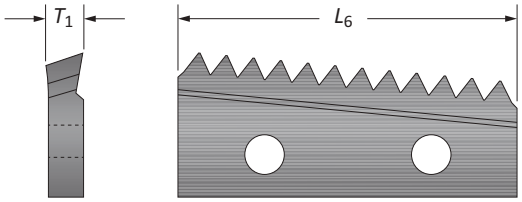


TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. NPT Internal/External
18	19.05	0.750	2.03	0.080	**TP075K-NPT18**
14	25.40	1.000	3.56	0.140	**TP100K-NPT14**



NPTF

Internal / External



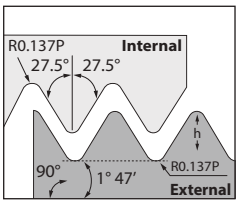
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. NPTF Internal/External
18	19.05	0.750	2.03	0.080	**TP075K-NPTF18**
14	25.40	1.000	3.56	0.140	**TP100K-NPTF14**

E: 60 - 63
Key on E: 1
E: 36
E: 43

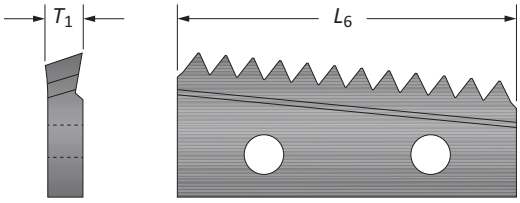
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

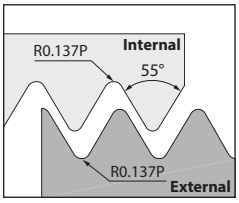
Bolt-in Style | BSPT / BSPP



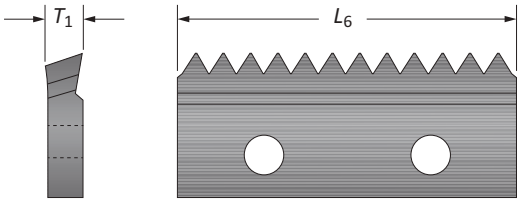
BSPT
Internal / External



TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. BSPT Internal/External
19	19.05	0.750	2.03	0.080	**TP075K-BSPT19**
19	25.40	1.000	3.56	0.140	**TP100K-BSPT19**
14	25.40	1.000	3.56	0.140	**TP100K-BSPT14**



BSPP
Internal / External



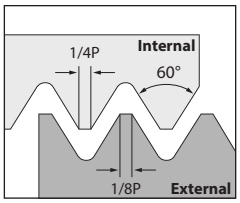
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. BSPP Internal/External
19	19.05	0.750	2.03	0.080	**TP075K-BSPP19**
19	25.40	1.000	3.56	0.140	**TP100K-BSPP19**
14	25.40	1.000	3.56	0.140	**TP100K-BSPP14**

E: 60 - 63
Key on E: 1
E: 36
E: 43

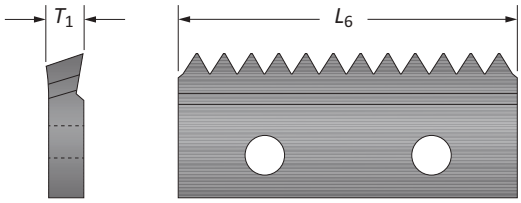
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

Bolt-in Style | UN

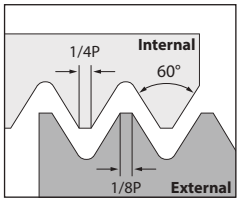


UN
Internal

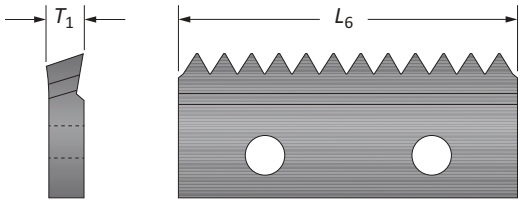


TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UN Internal
32	19.05	0.750	2.03	0.080	**TP075K-UN32I**
32	25.40	1.000	3.56	0.140	**TP100K-UN32I**
24	19.05	0.750	2.03	0.080	**TP075K-UN24I**
24	25.40	1.000	3.56	0.140	**TP100K-UN24I**
20	19.05	0.750	2.03	0.080	**TP075K-UN20I**
20	25.40	1.000	3.56	0.140	**TP100K-UN20I**
18	19.05	0.750	2.03	0.080	**TP075K-UN18I**
18	25.40	1.000	3.56	0.140	**TP100K-UN18I**
16	19.05	0.750	2.03	0.080	**TP075K-UN16I**
16	25.40	1.000	3.56	0.140	**TP100K-UN16I**
14	25.40	1.000	3.56	0.140	**TP100K-UN14I**
13	25.40	1.000	3.56	0.140	**TP100K-UN13I**
12	25.40	1.000	3.56	0.140	**TP100K-UN12I**
10*	25.40	1.000	3.56	0.140	**TP100K-UN10I***

*This item is only used with THN-0611-1F100. The reduced body allows a 3/4"-10 UN/UNJ to be produced.



UN
External



TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UN External
32	19.05	0.750	2.03	0.080	**TP075K-UN32E**
32	25.40	1.000	3.56	0.140	**TP100K-UN32E**
24	19.05	0.750	2.03	0.080	**TP075K-UN24E**
24	25.40	1.000	3.56	0.140	**TP100K-UN24E**
20	19.05	0.750	2.03	0.080	**TP075K-UN20E**
20	25.40	1.000	3.56	0.140	**TP100K-UN20E**
18	19.05	0.750	2.03	0.080	**TP075K-UN18E**
18	25.40	1.000	3.56	0.140	**TP100K-UN18E**
16	19.05	0.750	2.03	0.080	**TP075K-UN16E**
16	25.40	1.000	3.56	0.140	**TP100K-UN16E**
14	25.40	1.000	3.56	0.140	**TP100K-UN14E**
13	25.40	1.000	3.56	0.140	**TP100K-UN13E**
12	25.40	1.000	3.56	0.140	**TP100K-UN12E**
10*	25.40	1.000	3.56	0.140	**TP100K-UN10E***

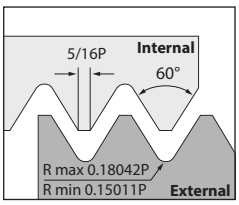
*This item is only used with THN-0611-1F100. The reduced body allows a 3/4"-10 UN/UNJ to be produced.

E: 60 - 63
Key on E: 1
E: 36
E: 43

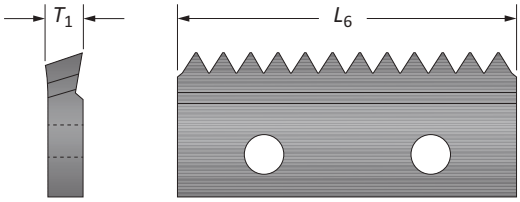
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

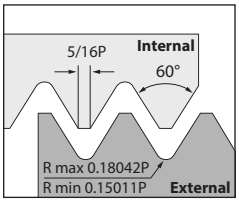
Bolt-in Style | UNJ



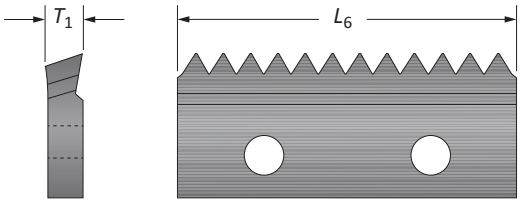
UNJ
Internal



TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UNJ Internal
32	19.05	0.750	2.03	0.080	**TP075K-UNJ32I**
32	25.40	1.000	3.56	0.140	**TP100K-UNJ32I**
24	19.05	0.750	2.03	0.080	**TP075K-UNJ24I**
24	25.40	1.000	3.56	0.140	**TP100K-UNJ24I**
20	19.05	0.750	2.03	0.080	**TP075K-UNJ20I**
20	25.40	1.000	3.56	0.140	**TP100K-UNJ20I**
18	19.05	0.750	2.03	0.080	**TP075K-UNJ18I**
18	25.40	1.000	3.56	0.140	**TP100K-UNJ18I**
16	19.05	0.750	2.03	0.080	**TP075K-UNJ16I**
16	25.40	1.000	3.56	0.140	**TP100K-UNJ16I**
14	25.40	1.000	3.56	0.140	**TP100K-UNJ14I**
12	25.40	1.000	3.56	0.140	**TP100K-UNJ12I**



UNJ
External



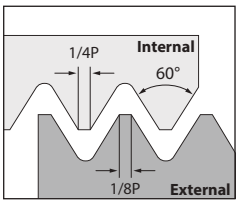
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UNJ External
32	19.05	0.750	2.03	0.080	**TP075K-UNJ32E**
32	25.40	1.000	3.56	0.140	**TP100K-UNJ32E**
24	19.05	0.750	2.03	0.080	**TP075K-UNJ24E**
24	25.40	1.000	3.56	0.140	**TP100K-UNJ24E**
20	19.05	0.750	2.03	0.080	**TP075K-UNJ20E**
20	25.40	1.000	3.56	0.140	**TP100K-UNJ20E**
18	19.05	0.750	2.03	0.080	**TP075K-UNJ18E**
18	25.40	1.000	3.56	0.140	**TP100K-UNJ18E**
16	19.05	0.750	2.03	0.080	**TP075K-UNJ16E**
16	25.40	1.000	3.56	0.140	**TP100K-UNJ16E**
12	25.40	1.000	3.56	0.140	**TP100K-UNJ12E**

E: 60 - 63
Key on E: 1
E: 36
E: 43

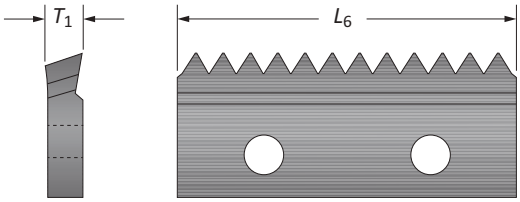
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

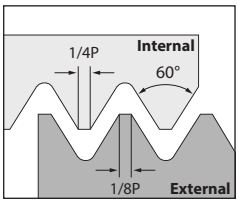
Bolt-in Style | ISO



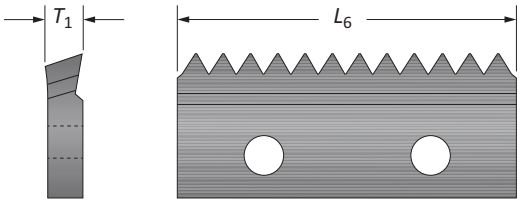
ISO
Internal



Pitch	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. ISO Internal
0.5	19.05	0.5	2.03	0.080	**TP075K-M0.5I**
1.0	19.05	1.0	2.03	0.080	**TP075K-M1.0I**
1.0	24.40	1.0	3.56	0.140	**TP100K-M1.0I**
1.25	19.05	1.25	2.03	0.080	**TP075K-M1.25I**
1.5	19.05	1.5	2.03	0.080	**TP075K-M1.5I**
1.5	25.40	1.5	3.56	0.140	**TP100K-M1.5I**
2.0	25.40	2.0	3.56	0.140	**TP100K-M2.0I**



ISO
External



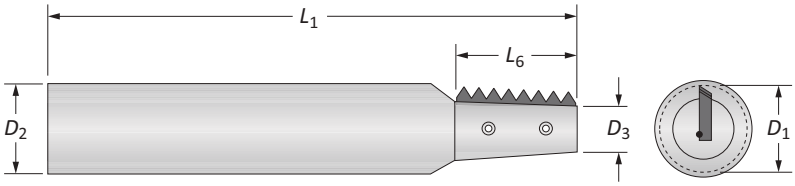
Pitch	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. ISO External
1.0	19.05	1.5	2.03	0.080	**TP100K-M1.0E**
1.5	25.40	1.5	3.56	0.140	**TP100K-M1.5E**
2.0	25.40	2.0	3.56	0.140	**TP100K-M2.0E**

E: 60 - 63
Key on E: 1
E: 36
E: 43

Inserts sold in quantities of 2

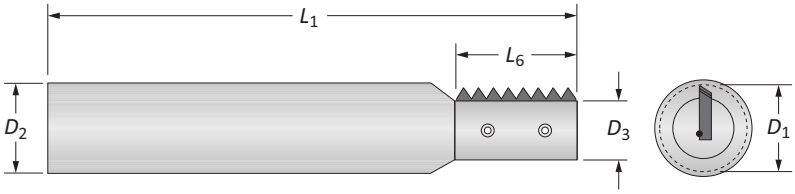
AccuThread® 856 Thread Mill Insert Holders

Bolt-in Style



Tapered Insert Holders | NPT / NPTF / BSPT

	Holder									
	D_1	D_3	D_2	L_6	L_1	Flutes	Part No.	Inserts	Screw	Wrench
m	10.16	5.82	13.00	19.05	76.20	1	**THT-0400-1F075M**	TP075K...	TMS-250	8T-8
	16.74	9.65	13.00	25.40	76.20	1	**THT-0659-1F100M**	TP100K...	TMS-45	8T-9
i	0.400	0.229	0.500	0.750	3.000	1	**THT-0400-1F075**	TP075K...	TMS-250	8T-8
	0.659	0.379	0.500	1.000	3.000	1	**THT-0659-1F100**	TP100K...	TMS-45	8T-9



Straight Insert Holders | BSPP / UN / UNJ / ISO

	Holder									
	D_1	D_3	D_2	L_6	L_1	Flutes	Part No.	Inserts	Screw	Wrench
m	10.01	6.35	13.00	19.05	76.20	1	**THN-0394-1F075M**	TP075K...	TMS-250	8T-8
	15.88	11.58	25.00	25.40	88.90	1	**THN-0625-1F100M**	TP100K...	TMS-40	8T-9
i	0.394	0.250	0.500	0.750	3.000	1	**THN-0394-1F075**	TP075K...	TMS-250	8T-8
	0.611	0.383	0.750	1.000	3.500	1	**THN-0611-1F100**	*SEE NOTE	TMS-40	8T-9
	0.625	0.454	0.750	1.000	3.500	1	**THN-0625-1F100**	TP100K...	TMS-40	8T-9

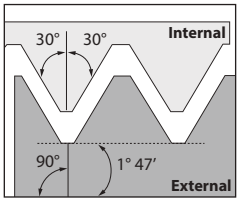
*NOTE: Only UN/UNJ 10 TPI inserts can be used in this holder. Please refer to inserts on pages E: 38-39.

E: 36
Key on E: 1
E: 38 - 42

m = Metric (mm)
i = Imperial (in)

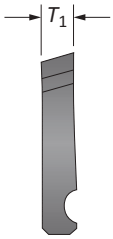
AccuThread® 856 Thread Mill Inserts

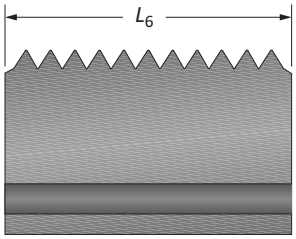
Pin Style | NPT / NPTF / BSPT



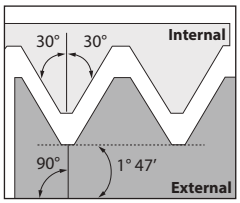
NPT

Internal / External



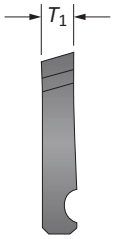


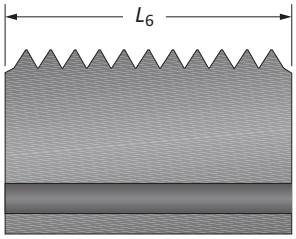
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. NPT Internal/External
11.5	38.10	1.500	3.56	0.140	**TN150K-NPT11.5**
8	38.10	1.500	3.56	0.140	**TN150K-NPT8**



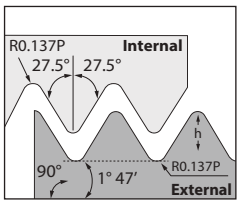
NPTF

Internal / External



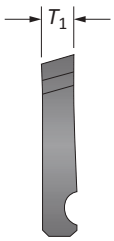


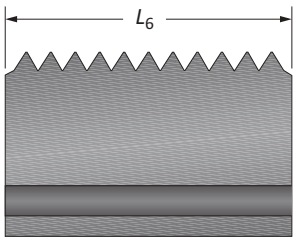
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. NPTF Internal/External
11.5	38.10	1.500	3.56	0.140	**TN150K-NPTF11.5**
8	38.10	1.500	3.56	0.140	**TN150K-NPTF8**



BSPT

Internal / External





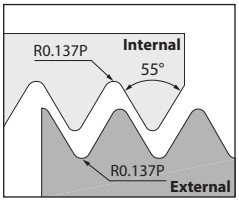
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. BSPT Internal/External
11	38.10	1.500	3.56	0.140	**TN150K-BSPT11**

E: 60 - 63
Key on E: 1
E: 36
E: 50 - 51

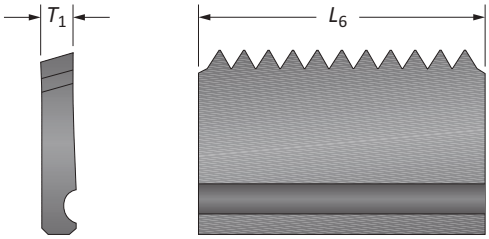
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

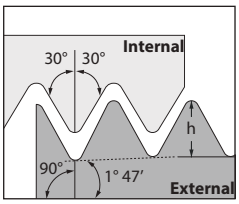
Pin Style | BSPP / API-ROUND / ACME



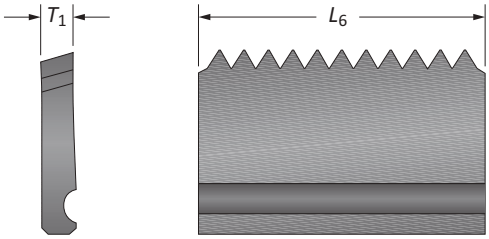
BSPP
Internal / External



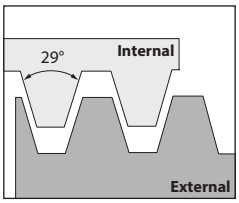
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. BSPP Internal/External
11	38.10	1.500	3.56	0.140	**TN150K-BSPP11**



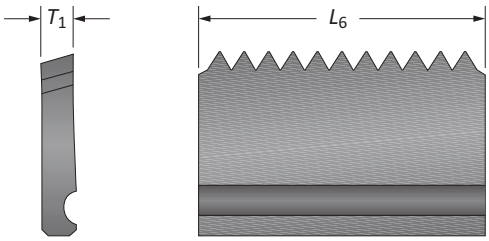
API-ROUND
Internal / External



TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. API-ROUND Internal/External
10	38.10	1.500	3.56	0.140	**TN150K-AP10**
8	38.10	1.500	3.56	0.140	**TN150K-AP8**



ACME
Full Profile



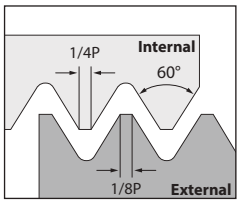
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. ACME Full Profile
12	25.40	1.000	3.56	0.140	**TN100K-FA12**
12	38.10	1.500	3.56	0.140	**TN150K-FA12**
10	25.40	1.000	3.56	0.140	**TN100K-FA10**
10	38.10	1.500	3.56	0.140	**TN150K-FA10**
8	25.40	1.000	3.56	0.140	**TN100K-FA8**
8	38.10	1.500	3.56	0.140	**TN150K-FA8**
6	38.10	1.500	3.56	0.140	**TN150K-FA6**
5	38.10	1.500	3.56	0.140	**TN150K-FA5**

E: 60 - 63
Key on E: 1
E: 36
E: 50 - 51

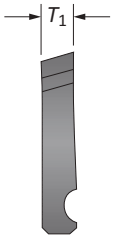
Inserts sold in quantities of 2

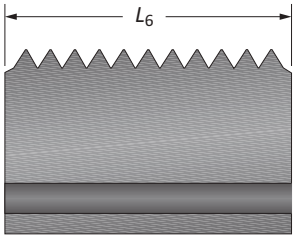
AccuThread® 856 Thread Mill Inserts

Pin Style | UN



UN
Internal





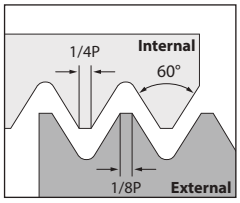
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UN Internal
32	25.40	1.000	3.56	0.140	**TN100K-UN32I**
24	25.40	1.000	3.56	0.140	**TN100K-UN24I**
24	38.10	1.500	3.56	0.140	**TN150K-UN24I**
20	25.40	1.000	3.56	0.140	**TN100K-UN20I**
20	38.10	1.500	3.56	0.140	**TN150K-UN20I**
18	25.40	1.000	3.56	0.140	**TN100K-UN18I**
18	38.10	1.500	3.56	0.140	**TN150K-UN18I**
16	25.40	1.000	3.56	0.140	**TN100K-UN16I**
16	38.10	1.500	3.56	0.140	**TN150K-UN16I**
14	38.10	1.500	3.56	0.140	**TN150K-UN14I**
12	25.40	1.000	3.56	0.140	**TN100K-UN12I**
12	38.10	1.500	3.56	0.140	**TN150K-UN12I**
10	25.40	1.000	3.56	0.140	**TN100K-UN10I**
10	38.10	1.500	3.56	0.140	**TN150K-UN10I**
8	25.40	1.000	3.56	0.140	**TN100K-UN8I**
8	38.10	1.500	3.56	0.140	**TN150K-UN8I**
7	25.40	1.000	3.56	0.140	**TN100K-UN7I**
7	38.10	1.500	3.56	0.140	**TN150K-UN7I**
6	38.10	1.500	3.56	0.140	**TN150K-UN6I**

E: 60 - 63
Key on E: 1
E: 36
E: 50 - 51

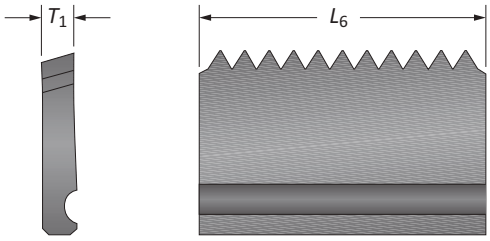
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

Pin Style | UN



UN
External



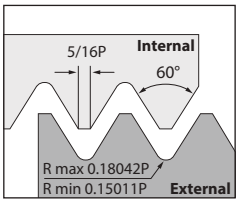
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UN External
32	25.40	1.000	3.56	0.140	**TN100K-UN32E**
24	25.40	1.000	3.56	0.140	**TN100K-UN24E**
20	25.40	1.000	3.56	0.140	**TN100K-UN20E**
20	38.10	1.500	3.56	0.140	**TN150K-UN20E**
18	25.40	1.000	3.56	0.140	**TN100K-UN18E**
18	38.10	1.500	3.56	0.140	**TN150K-UN18E**
16	25.40	1.000	3.56	0.140	**TN100K-UN16E**
16	38.10	1.500	3.56	0.140	**TN150K-UN16E**
12	25.40	1.000	3.56	0.140	**TN100K-UN12E**
12	38.10	1.500	3.56	0.140	**TN150K-UN12E**
10	25.40	1.000	3.56	0.140	**TN100K-UN10E**
10	38.10	1.500	3.56	0.140	**TN150K-UN10E**
8	25.40	1.000	3.56	0.140	**TN100K-UN8E**
8	38.10	1.500	3.56	0.140	**TN150K-UN8E**
6	38.10	1.500	3.56	0.140	**TN150K-UN6E**

E: 60 - 63
Key on E: 1
E: 36
E: 50 - 51

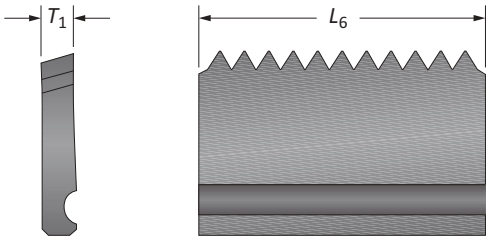
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

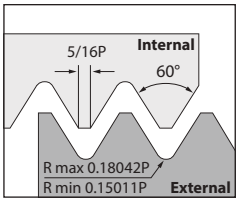
Pin Style | UNJ



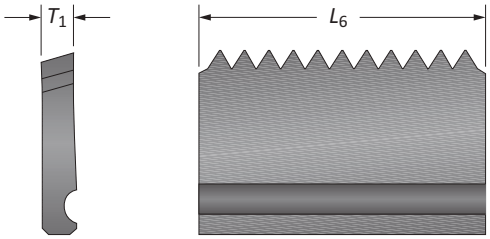
UNJ
Internal



TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UNJ Internal
32	25.40	1.000	3.56	0.140	**TN100K-UNJ32I**
24	25.40	1.000	3.56	0.140	**TN100K-UNJ24I**
24	38.10	1.500	3.56	0.140	**TN150K-UNJ24I**
20	25.40	1.000	3.56	0.140	**TN100K-UNJ20I**
20	38.10	1.500	3.56	0.140	**TN150K-UNJ20I**
18	25.40	1.000	3.56	0.140	**TN100K-UNJ18I**
18	38.10	1.500	3.56	0.140	**TN150K-UNJ18I**
16	25.40	1.000	3.56	0.140	**TN100K-UNJ16I**
16	38.10	1.500	3.56	0.140	**TN150K-UNJ16I**
12	25.40	1.000	3.56	0.140	**TN100K-UNJ12I**
12	38.10	1.500	3.56	0.140	**TN150K-UNJ12I**
8	38.10	1.500	3.56	0.140	**TN150K-UNJ8I**



UNJ
External



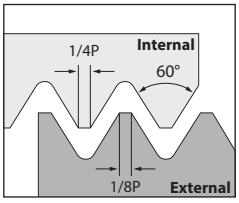
TPI (Pitch)	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. UNJ External
32	25.40	1.000	3.56	0.140	**TN100K-UNJ32E**
24	25.40	1.000	3.56	0.140	**TN100K-UNJ24E**
24	38.10	1.500	3.56	0.140	**TN150K-UNJ24E**
20	25.40	1.000	3.56	0.140	**TN100K-UNJ20E**
20	38.10	1.500	3.56	0.140	**TN150K-UNJ20E**
18	25.40	1.000	3.56	0.140	**TN100K-UNJ18E**
18	38.10	1.500	3.56	0.140	**TN150K-UNJ18E**
16	25.40	1.000	3.56	0.140	**TN100K-UNJ16E**
16	38.10	1.500	3.56	0.140	**TN150K-UNJ16E**
12	25.40	1.000	3.56	0.140	**TN100K-UNJ12E**
12	38.10	1.500	3.56	0.140	**TN150K-UNJ12E**
8	38.10	1.500	3.56	0.140	**TN150K-UNJ8E**

E: 60 - 63
Key on E: 1
E: 36
E: 50 - 51

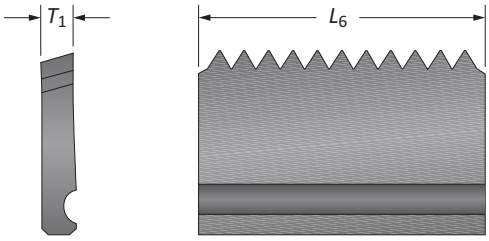
Inserts sold in quantities of 2

AccuThread® 856 Thread Mill Inserts

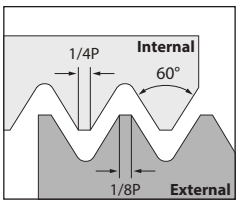
Pin Style | ISO



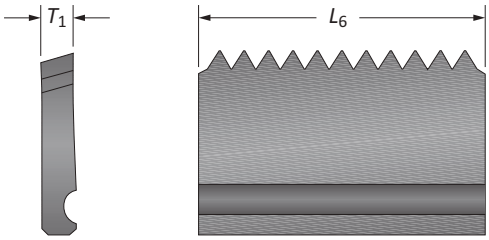
ISO
Internal



Pitch	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. ISO Internal
1.5	38.10	1.500	3.56	0.140	**TN150K-M1.5I**
2.0	38.10	1.500	3.56	0.140	**TN150K-M2.0I**
2.5	38.10	1.500	3.56	0.140	**TN150K-M2.5I**
3.0	38.10	1.500	3.56	0.140	**TN150K-M3.0I**
3.5	38.10	1.500	3.56	0.140	**TN150K-M3.5I**
4.0	38.10	1.500	3.56	0.140	**TN150K-M4.0I**
4.5	38.10	1.500	3.56	0.140	**TN150K-M4.5I**
5.0	38.10	1.500	3.56	0.140	**TN150K-M5.0I**
6.0	38.10	1.500	3.56	0.140	**TN150K-M6.0I**



ISO
External



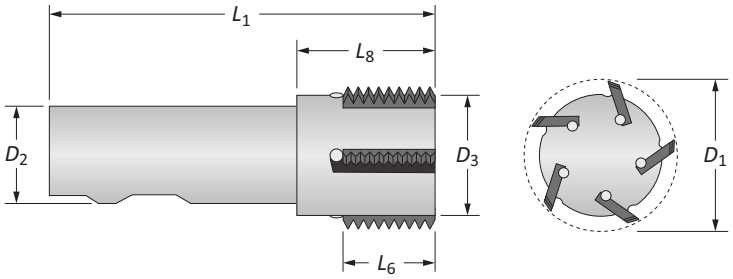
Pitch	Insert L_6 mm	Insert L_6 inch	Insert T_1 mm	Insert T_1 inch	Part No. ISO External
2.0	38.10	1.500	3.56	0.140	**TN150K-M2.0E**
4.0	38.10	1.500	3.56	0.140	**TN150K-M4.0E**
4.5	38.10	1.500	3.56	0.140	**TN150K-M4.5E**
5.0	38.10	1.500	3.56	0.140	**TN150K-M5.0E**
6.0	38.10	1.500	3.56	0.140	**TN150K-M6.0E**

E: 60 - 63
Key on E: 1
E: 36
E: 50 - 51

Inserts sold in quantities of 2

AccuThread® Pin Style Holders

Weldon Shank



Positive Rake

	D_1		Holder											
	Standard	Oversize*	D_3	L_8	L_6	L_1	D_2	Coolant	Flutes	Part No.	Inserts	Screw	Key Size	Pin
m	24.61	–	19.05	35.05	25.40	114.30	25.00	N	2	**THP-0969-2F100M**	TN100K...	TMSS-3	3/32	TMP-1
	44.58	–	38.10	57.15	25.40	101.60	32.00	Y	5	**THP-1755-5F100M**	TN100K...	TMSS-2	3/32	TMP-1
	23.67	27.00	18.34	48.44	38.10	114.30	25.00	N	1	**THP-0932-1F150M**	TN150K...	TMSS-2	3/32	TMP-2
	24.61	27.94	19.05	50.80	38.10	114.30	25.00	N	2	**THP-0969-2F150M**	TN150K...	TMSS-3	3/32	TMP-2
	28.35	31.67	20.63	50.80	38.10	114.30	25.00	Y	3	**THP-1116-3F150M**	TN150K...	TMSS-3	3/32	TMP-2
	44.58	47.93	38.10	57.15	38.10	114.30	32.00	Y	5	**THP-1755-5F150M**	TN150K...	TMSS-2	3/32	TMP-2
i	0.969	–	0.750	1.38	1.000	4.500	1.000	N	2	**THP-0969-2F100**	TN100K...	TMSS-3	3/32	TMP-1
	1.755	–	1.500	2.25	1.000	4.000	1.250	Y	5	**THP-1755-5F100**	TN100K...	TMSS-2	3/32	TMP-1
	0.932	1.063	0.722	1.90	1.500	4.500	1.000	N	1	**THP-0932-1F150**	TN150K...	TMSS-2	3/32	TMP-2
	0.969	1.100	0.750	2.00	1.500	4.500	1.000	N	2	**THP-0969-2F150**	TN150K...	TMSS-3	3/32	TMP-2
	1.116	1.247	0.812	2.00	1.500	4.500	1.000	Y	3	**THP-1116-3F150**	TN150K...	TMSS-3	3/32	TMP-2
	1.755	1.887	1.500	2.25	1.500	4.500	1.250	Y	5	**THP-1755-5F150**	TN150K...	TMSS-2	3/32	TMP-2

*See note at bottom of page.

Neutral Rake

	D_1		Holder											
	Standard	Oversize*	D_3	L_8	L_6	L_1	D_2	Coolant	Flutes	Part No.	Inserts	Screw	Key Size	Pin
m	28.35	31.67	20.63	50.80	38.10	114.30	25.00	Y	3	**TNR-1116-3F150M**	TN150K...	TMSS-3	3/32	TMP-2
	44.58	47.93	38.10	57.15	38.10	114.30	32.00	Y	5	**TNR-1755-5F150M**	TN150K...	TMSS-2	3/32	TMP-2
i	1.116	1.247	0.812	2.00	1.500	4.500	1.000	Y	3	**TNR-1116-3F150**	TN150K...	TMSS-3	3/32	TMP-2
	1.755	1.887	1.500	2.25	1.500	4.531	1.250	Y	5	**TNR-1755-5F150**	TN150K...	TMSS-2	3/32	TMP-2

*See note at bottom of page.

*Oversized cutter diameter occurs when assembled with the following pin style inserts:

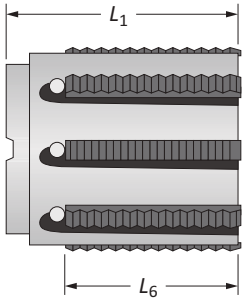
NPT 8 NPTF 11.5 NPTF 8	API 8	Metric 6.0 Metric 5.0 Metric 4.5	ACME 5 ACME 6

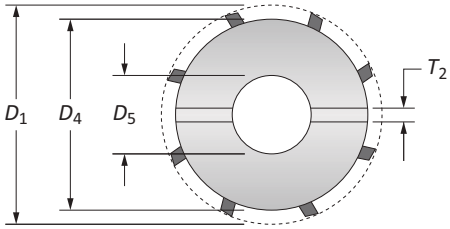
E: 36 Key on E: 1
E: 44 - 49

m = Metric (mm)
i = Imperial (in)

AccuThread® Pin Style Holders

Shell Mill





Positive Rake

	D_1		Holder										
	Standard	Oversize*	D_4	D_5	L_6	L_1	T_2	Flutes	Part No.	Inserts	Screw	Key Size	Pin
m	68.94	72.26	63.50	27.00	38.10	57.15	12	7	**TSN-2846-7F150M**	TN150K...	TMSS-2	3/32	TMP-2
	81.48	84.84	76.20	32.00	38.10	57.15	14	8	**TSN-3341-8F150M**	TN150K...	TMSS-2	3/32	TMP-2
i	2.714	2.845	2.500	1.000	1.500	2.250	0.375	7	**TSN-2846-7F150**	TN150K...	TMSS-2	3/32	TMP-2
	3.208	3.340	3.000	1.250	1.500	2.250	0.500	8	**TSN-3341-8F150**	TN150K...	TMSS-2	3/32	TMP-2

*See note at bottom of page.

Neutral Rake

	D_1		Holder										
	Standard	Oversize*	D_4	D_5	L_6	L_1	T_2	Flutes	Part No.	Inserts	Screw	Key Size	Pin
m	56.31	59.66	50.80	22.00	38.10	57.15	10.00	6	**TSR-2217-6F150M**	TN150K...	TMSS-2	3/32	TMP-2
i	2.217	2.349	2.000	0.750	1.500	2.250	0.312	6	**TSR-2217-6F150**	TN150K...	TMSS-2	3/32	TMP-2

*See note at bottom of page.

E: 36
Key on E: 1

E: 44 - 49

*Oversized cutter diameter occurs when assembled with the following pin style inserts:

NPT 8 NPTF 11.5 NPTF 8	API 8	Metric 6.0 Metric 5.0 Metric 4.5	ACME 5 ACME 6

m = Metric (mm)
i = Imperial (in)

Thread Mill Pre-Drill Information

Formula	Metric	Imperial
Velocity	m/min = RPM • 0.003 • Cutter Diameter	SFM = RPM • 0.262 • Cutter Diameter
Speed	$RPM = \frac{(m/min \bullet 318.47)}{\text{Cutter Diameter}}$	$RPM = \frac{(SFM \bullet 3.82)}{\text{Cutter Diameter}}$
Linear Feed Rate (LFR)	mm/min = RPM • (mm/tooth • Number of Flutes)	IPM = RPM • (IPT • Number of Flutes)
Adjusted Feed Rate (AFR) ***See Note Below***	$AFR = \left(\frac{(\text{Major Diameter - Cutter Diameter})}{\text{Major Diameter}}\right) \bullet LFR$	

NOTE: The above formula on an internal thread program adjusts the linear feed rate to be applied to the outer diameter instead of the center of the cutting tool. If the feed rate is not adjusted, the excessive feed rate will cause the thread mill cutting edges to fail.

Example of an Internal Adjusted Feed Rate Calculation:

Free-machining steel at 125 BHN with a M16x2 2B thread using ThreadMills USA™ solid carbide thread mill (TM16200) running at 221 m/min and 0.038 mm/tooth

STEP 1:	$RPM = \frac{(m/min \bullet 318.47)}{\text{Cutter Diameter}}$	$RPM = \frac{(221 \bullet 318.47)}{11.94}$	RPM = 5895
STEP 2:	LFR = RPM • (mm/tooth • Number of flutes)	LFR = 5895 • (0.038 • 4)	LFR = 896.04 mm/min
STEP 3:	$AFR = \left(\frac{(\text{Major Diameter - Cutter Diameter})}{\text{Major Diameter}}\right) \bullet LFR$	$AFR = \left(\frac{(16.00 - 11.94)}{16.00}\right) \bullet 896.04$	AFR = 227.37 mm/min

Unit Definitions

Velocity	**m/min** = meters per minute **SFM** = surface feet per minute
Speed	**RPM** = revolutions per minute
Feed	**mm/rev** = millimeters per revolution **mm/tooth** = millimeters per tooth *also known as* millimeters per flute **IPR** = inch per revolution **IPT** = inch per tooth *also known as* inch per flute **mm/min** = millimeters per minute **IPM** = inches per minute

Thread Mill Calculations and Recommended Passes

Thread Mill Drill Calculation

Based on nominal tap drill diameter. Based on 0.075 mm or 0.003" probable mean oversize.

To calculate the percent of full thread for a given hole diameter:

METRIC:

$$\text{\% of thread} = \frac{76.96}{\text{Pitch (mm)}} \bullet [\text{ Basic major diameter of thread - Drill hole size }]$$

IMPERIAL:

$$\text{\% of thread} = \text{\# of threads per inch} \bullet \frac{\text{Basic major diameter of thread - Drill hole size}}{0.0130}$$

Major Thread Diameter for # Drills

Drill #	Thread Diameter
# 2	0.086
# 3	0.099
# 4	0.112
# 5	0.125
# 6	0.132
# 8	0.164
# 10	0.190
# 12	0.216

Recommended Passes

NPT / NPTF / BSPT / API			
	Machinability		
Pitch Size	Easy	Average	Difficult
28	1	1	2
27	1	1	2
19	1	1	2
18	1	1	2
14	1	2	3
11.5	1	2	3
11	1	2	3
10	1	2	3
8	2	3	4

ISO			
	Machinability		
Pitch Size	Easy	Average	Difficult
0.40	1	1	2
0.45	1	1	2
0.50	1	1	2
0.70	1	1	2
0.75	1	1	2
0.80	1	1	2
1.00	1	1	2
1.25	1	2	3
1.50	1	2	3
1.75	1	2	3
2.00	1	2	3
2.50	2	3	4
3.00	2	3	4
3.50	2	3	4
4.00	2	3	4
4.50	2	3	4
5.00	2	3	4
6.00	2	3	4

UN / UNJ / BSPP / BSW / NPS / NPSF			
	Machinability		
Pitch Size	Easy	Average	Difficult
64	1	1	2
56	1	1	2
48	1	1	2
44	1	1	2
40	1	1	2
36	1	1	2
32	1	1	2
28	1	1	2
24	1	1	2
20	1	2	3
19	1	2	3
18	1	2	3
16	1	2	3
14	1	2	3
13	1	2	3
12	1	2	3
11	2	2	4
10	2	3	4
9	2	3	4
8	2	3	4
7	2	3	4
6	2	3	4

- 1 Pass
- 2 Passes
- 3 Passes
- 4 Passes

Recommended Cutting Data | Metric (mm)

Solid Carbide | AccuThread® 856

ISO	Material	Hardness (BHN)	Machinability*	Speed (m/min)	Recommended Feed (mm/tooth) by Cutter Diameter							
					1.50 mm - 3.18 mm	3.19 mm - 4.76 mm	4.77 mm - 6.35 mm	6.36 mm - 7.94 mm	7.95 mm - 9.53 mm	9.54 mm - 12.70 mm	12.71 mm - 15.88 mm	15.89 mm - 19.05 mm
P	**Free-Machining Steel**	100 - 150	Easy	274	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	1118, 1215, 12L14, etc.	150 - 200	Easy	213	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		200 - 250	Easy	152	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	Low-Carbon Steel	85 - 125	Average	274	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	1010, 1020, 1025, 1522, 1144	125 - 175	Average	213	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		175 - 225	Average	183	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		225 - 275	Average	152	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	Medium-Carbon Steel	125 - 175	Average	175	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
	1010, 1040, 1050, 1527, 1140	175 - 225	Average	152	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
		225 - 275	Average	137	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
		275 - 325	Average	122	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
	Alloy Steel	125 - 175	Average	175	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
	4140, 5140, 8640	175 - 225	Average	152	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
		225 - 275	Average	137	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
		275 - 325	Difficult	122	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
		325 - 375	Difficult	114	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
	High-Strength Alloy	225 - 300	Average	137	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
	4340, 4330V, 300M	300 - 350	Difficult	122	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
		350 - 400	Difficult	107	0.010	0.013	0.015	0.020	0.025	0.033	0.046	0.051
	Structural Steel	100 - 150	Average	183	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	A36, A285, A516	150 - 250	Average	152	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		250 - 350	Difficult	137	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
S	**High-Temp Alloy**	140 - 220	Difficult	37	0.008	0.010	0.015	0.020	0.023	0.025	0.030	0.038
	Hastelloy B, Inconel 600	220 - 310	Difficult	27	0.008	0.010	0.015	0.020	0.023	0.025	0.030	0.038
M	**Stainless Steel**	135 - 185	Difficult	160	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	303, 416, 420	185 - 275	Difficult	152	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	Stainless Steel PH	185 - 275	Difficult	91	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	17-4	275 - 325	Difficult	46	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	Tool Steel	150 - 200	Difficult	175	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	H-13, H21, A-4	200 - 250	Difficult	152	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
K	**Cast Iron**	120 - 150	Easy	206	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	Grey, Ductile, Nodular	150 - 200	Easy	191	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		200 - 220	Easy	175	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		220 - 260	Average	152	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		260 - 320	Average	145	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
N	**Wrought Aluminium**	30	Easy	335	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076
	6061 T6	180	Easy	305	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076
	Cast Aluminium** up to 10% silicon	120	Easy	191	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076
	Brass	30 - 125	Easy	335	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Imperial (inch)

Solid Carbide | AccuThread® 856

ISO	Material	Hardness (BHN)	Machinability*	Speed (SFM)	Recommended Feed (inch/tooth) by Cutter Diameter							
					0.060" - 0.125"	0.126" - 0.188"	0.189" - 0.250"	0.251" - 0.312"	0.313" - 0.375"	0.376" - 0.500"	0.501" - 0.625"	0.626" - 0.750"
P	**Free-Machining Steel**	100 - 150	Easy	900	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	1118, 1215, 12L14, etc.	150 - 200	Easy	700	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		200 - 250	Easy	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	Low-Carbon Steel	85 - 125	Average	900	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	1010, 1020, 1025, 1522, 1144	125 - 175	Average	700	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		175 - 225	Average	600	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		225 - 275	Average	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	Medium-Carbon Steel	125 - 175	Average	575	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	1010, 1040, 1050, 1527, 1140	175 - 225	Average	500	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		225 - 275	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		275 - 325	Average	400	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	Alloy Steel	125 - 175	Average	575	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	4140, 5140, 8640	175 - 225	Average	500	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		225 - 275	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		275 - 325	Difficult	400	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		325 - 375	Difficult	375	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	High-Strength Alloy	225 - 300	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	4340, 4330V, 300M	300 - 350	Difficult	400	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		350 - 400	Difficult	350	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	Structural Steel	100 - 150	Average	600	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	A36, A285, A516	150 - 250	Average	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		250 - 350	Difficult	450	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
S	**High-Temp Alloy**	140 - 220	Difficult	120	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
	Hastelloy B, Inconel 600	220 - 310	Difficult	90	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
M	**Stainless Steel**	135 - 185	Difficult	525	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	303, 416, 420	185 - 275	Difficult	500	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	Stainless Steel PH	185 - 275	Difficult	300	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	17-4	275 - 325	Difficult	150	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	Tool Steel	150 - 200	Difficult	575	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	H-13, H21, A-4	200 - 250	Difficult	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
K	**Cast Iron**	120 - 150	Easy	675	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	Grey, Ductile, Nodular	150 - 200	Easy	625	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		200 - 220	Easy	575	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		220 - 260	Average	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		260 - 320	Average	475	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
N	**Wrought Aluminium**	30	Easy	1100	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	6061 T6	180	Easy	1000	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	Cast Aluminium** up to 10% silicon	120	Easy	625	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	Brass	30 - 125	Easy	1100	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Metric (mm)

Solid Carbide | ThreadMills USA™

ISO	Material	Hardness (BHN)	Machinability*	Speed (m/min)	Recommended Feed (mm/tooth) by Cutter Diameter 1.50 mm - 3.18 mm	3.19 mm - 4.76 mm	4.77 mm - 6.35 mm	6.36 mm - 7.94 mm	7.95 mm - 9.53 mm	9.54 mm - 12.70 mm	12.71 mm - 15.88 mm	15.89 mm - 19.05 mm
P	**Free-Machining Steel**	100 - 150	Easy	221	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	1118, 1215, 12L14, etc.	150 - 200	Easy	168	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		200 - 250	Easy	137	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	Low-Carbon Steel	85 - 125	Average	221	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	1010, 1020, 1025, 1522, 1144	125 - 175	Average	168	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		175 - 225	Average	137	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		225 - 275	Average	122	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	Medium-Carbon Steel	125 - 175	Average	137	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
	1010, 1040, 1050, 1527, 1140	175 - 225	Average	122	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
		225 - 275	Average	107	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
		275 - 325	Average	91	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
	Alloy Steel	125 - 175	Average	137	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
	4140, 5140, 8640	175 - 225	Average	122	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
		225 - 275	Average	107	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
		275 - 325	Difficult	91	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
		325 - 375	Difficult	76	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
	High-Strength Alloy	225 - 300	Average	107	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
	4340, 4330V, 300M	300 - 350	Difficult	91	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
		350 - 400	Difficult	76	0.010	0.013	0.015	0.020	0.025	0.038	0.046	0.051
	Structural Steel	100 - 150	Average	137	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	A36, A285, A516	150 - 250	Average	122	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		250 - 350	Difficult	91	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
S	**High-Temp Alloy**	140 - 220	Difficult	30	0.008	0.010	0.015	0.020	0.023	0.025	0.030	0.038
	Hastelloy B, Inconel 600	220 - 310	Difficult	23	0.008	0.010	0.015	0.020	0.023	0.025	0.030	0.038
M	**Stainless Steel**	135 - 185	Difficult	130	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	303, 416, 420	185 - 275	Difficult	122	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	Stainless Steel PH	185 - 275	Difficult	76	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	17-4	275 - 325	Difficult	38	0.010	0.013	0.015	0.020	0.023	0.025	0.038	0.051
	Tool Steel	150 - 200	Difficult	99	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	H-13, H21, A-4	200 - 250	Difficult	69	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
R	**Cast Iron**	120 - 150	Easy	168	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
	Grey, Ductile, Nodular	150 - 200	Easy	152	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		200 - 220	Easy	137	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		220 - 260	Average	122	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
		260 - 320	Average	114	0.010	0.013	0.018	0.023	0.025	0.038	0.051	0.064
S	**Wrought Aluminium**	30	Easy	305	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076
	6061 T6	180	Easy	274	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076
	Cast Aluminium** up to 10% silicon	120	Easy	152	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076
	Brass	30 - 125	Easy	305	0.013	0.015	0.023	0.025	0.038	0.051	0.064	0.076

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Imperial (inch)

Solid Carbide | ThreadMills USA™

ISO	Material	Hardness (BHN)	Machinability*	Speed (SFM)	Recommended Feed (inch/tooth) by Cutter Diameter							
					0.060" - 0.125"	0.126" - 0.188"	0.189" - 0.250"	0.251" - 0.312"	0.313" - 0.375"	0.376" - 0.500"	0.501" - 0.625"	0.626" - 0.750"
P	**Free-Machining Steel**	100 - 150	Easy	725	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	1118, 1215, 12L14, etc.	150 - 200	Easy	550	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		200 - 250	Easy	450	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	Low-Carbon Steel	85 - 125	Average	725	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	1010, 1020, 1025, 1522, 1144	125 - 175	Average	550	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		175 - 225	Average	450	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		225 - 275	Average	400	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	Medium-Carbon Steel	125 - 175	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	1010, 1040, 1050, 1527, 1140	175 - 225	Average	400	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		225 - 275	Average	350	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		275 - 325	Average	300	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	Alloy Steel	125 - 175	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	4140, 5140, 8640	175 - 225	Average	400	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		225 - 275	Average	350	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		275 - 325	Difficult	300	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		325 - 375	Difficult	250	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	High-Strength Alloy	225 - 300	Average	350	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	4340, 4330V, 300M	300 - 350	Difficult	300	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
		350 - 400	Difficult	250	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	Structural Steel	100 - 150	Average	450	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	A36, A285, A516	150 - 250	Average	400	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		250 - 350	Difficult	300	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
S	**High-Temp Alloy**	140 - 220	Difficult	100	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
	Hastelloy B, Inconel 600	220 - 310	Difficult	75	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
M	**Stainless Steel**	135 - 185	Difficult	425	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	303, 416, 420	185 - 275	Difficult	400	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	Stainless Steel PH	185 - 275	Difficult	250	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	17-4	275 - 325	Difficult	125	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	Tool Steel	150 - 200	Difficult	325	0.0004	0.0005	0.0007	0.0008	0.0010	0.0015	0.0020	0.0025
	H-13, H21, A-4	200 - 250	Difficult	225	0.0004	0.0005	0.0007	0.0008	0.0010	0.0015	0.0020	0.0025
K	**Cast Iron**	120 - 150	Easy	550	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	Grey, Ductile, Nodular	150 - 200	Easy	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		200 - 220	Easy	450	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		220 - 260	Average	400	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
		260 - 320	Average	375	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
N	**Wrought Aluminium**	30	Easy	1000	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	6061 T6	180	Easy	900	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	Cast Aluminium** up to 10% silicon	120	Easy	500	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	Brass	30 - 125	Easy	1000	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Metric (mm)

Solid Carbide | AccuThread® T3

ISO	Material	Hardness (BHN)	Speed (m/min)	Chipload per Tooth (mm/tooth) by Cutter Diameter						
				1.40 mm - 3.17 mm	3.18 mm - 4.77 mm	4.78 mm - 6.35 mm	6.36 mm - 7.92 mm	7.93 mm - 9.52 mm	9.53 mm - 12.70 mm	12.71 mm - 19.05 mm
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	115	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		150 - 200	85	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		200 - 250	70	0.020	0.025	0.035	0.045	0.050	0.075	0.090
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	115	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		125 - 175	85	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		175 - 225	70	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		225 - 275	60	0.020	0.025	0.035	0.045	0.050	0.075	0.090
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	70	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		175 - 225	60	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		225 - 275	50	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		275 - 325	45	0.020	0.025	0.030	0.040	0.050	0.065	0.080
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	70	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		175 - 225	60	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		225 - 275	50	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		275 - 325	45	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		325 - 375	38	0.020	0.025	0.030	0.040	0.050	0.065	0.080
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	50	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		300 - 350	45	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		350 - 400	38	0.020	0.025	0.030	0.040	0.050	0.065	0.080
	Structural Steel A36, A285, A516, etc.	100 - 150	70	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		150 - 250	60	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		250 - 350	45	0.020	0.025	0.035	0.045	0.050	0.075	0.090
	Tool Steel H-13, H-21, A-4, 0-2, S-3, etc.	150 - 200	50	0.020	0.025	0.030	0.040	0.050	0.065	0.080
		200 - 250	38	0.020	0.025	0.030	0.040	0.050	0.065	0.080
S	**High-Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	30	0.015	0.020	0.030	0.040	0.045	0.050	0.065
		220 - 310	23	0.015	0.020	0.030	0.040	0.045	0.050	0.065
	Titanium Alloy	140 - 220	30	0.015	0.020	0.030	0.040	0.045	0.050	0.065
		220 - 310	23	0.015	0.020	0.030	0.040	0.045	0.050	0.065
	Aerospace Alloy S82	185 - 275	30	0.015	0.020	0.030	0.040	0.045	0.050	0.065
		275 - 350	23	0.015	0.020	0.030	0.040	0.045	0.050	0.065
M	**Stainless Steel** 416, 420, etc.	185 - 275	70	0.020	0.025	0.030	0.040	0.045	0.050	0.065
		275 - 350	60	0.020	0.025	0.030	0.040	0.045	0.050	0.065
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135 - 185	38	0.020	0.025	0.030	0.040	0.045	0.050	0.065
		185 - 275	23	0.020	0.025	0.030	0.040	0.045	0.050	0.065
	Super Duplex Stainless Steel	135 - 185	38	0.015	0.020	0.030	0.040	0.045	0.050	0.065
		185 - 275	23	0.015	0.020	0.030	0.040	0.045	0.050	0.065
H	**Hardened Steels**	450 - 500	50	0.015	0.020	0.030	0.040	0.045	0.050	0.065
		500 - 550	38	0.015	0.020	0.030	0.040	0.045	0.050	0.065
K	**Cast Iron** Grey, Ductile, Nodular	120 - 150	85	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		150 - 200	75	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		200 - 220	70	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		220 - 260	60	0.020	0.025	0.035	0.045	0.050	0.075	0.090
		260 - 320	60	0.020	0.025	0.035	0.045	0.050	0.075	0.090
N	**Wrought Aluminium**	30	150	0.025	0.030	0.045	0.050	0.075	0.100	0.120
		180	135	0.025	0.030	0.045	0.050	0.075	0.100	0.120
	Cast Aluminium	30 - 180	75	0.025	0.030	0.045	0.050	0.075	0.100	0.120
	Brass	30 - 100	150	0.025	0.030	0.045	0.050	0.075	0.100	0.120

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Imperial (inch)

Solid Carbide | AccuThread® T3

ISO	Material	Hardness (BHN)	Speed (SFM)	Chipload per Tooth (IPT) by Cutter Diameter						
				0.055" - 0.125"	0.126" - 0.188"	0.189" - 0.250"	0.251" - 0.312"	0.313" - 0.375"	0.376" - 0.500"	0.501" - 0.750"
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	375	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		150 - 200	275	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		200 - 250	225	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	375	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		125 - 175	275	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		175 - 225	225	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		225 - 275	200	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	225	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		175 - 225	200	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		225 - 275	175	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		275 - 325	150	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	225	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		175 - 225	200	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		225 - 275	175	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		275 - 325	150	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		325 - 375	125	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	175	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		300 - 350	150	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		350 - 400	125	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
	Structural Steel A36, A285, A516, etc.	100 - 150	225	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		150 - 250	200	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		250 - 350	150	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
	Tool Steel H-13, H-21, A-4, 0-2, S-3, etc.	150 - 200	175	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
		200 - 250	125	0.0008	0.0010	0.0012	0.0016	0.0020	0.0026	0.0031
S	**High-Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	100	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
		220 - 310	75	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
	Titanium Alloy	140 - 220	100	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
		220 - 310	75	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
	Aerospace Alloy S82	185 - 275	100	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
		275 - 350	75	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
M	**Stainless Steel** 416, 420, etc.	185 - 275	225	0.0008	0.0010	0.0012	0.0016	0.0018	0.0020	0.0025
		275 - 350	200	0.0008	0.0010	0.0012	0.0016	0.0018	0.0020	0.0025
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135 - 185	125	0.0008	0.0010	0.0012	0.0016	0.0018	0.0020	0.0025
		185 - 275	75	0.0008	0.0010	0.0012	0.0016	0.0018	0.0020	0.0025
	Super Duplex Stainless Steel	135 - 185	125	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
		185 - 275	75	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
H	**Hardened Steels**	450 - 500	175	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
		500 - 550	125	0.0006	0.0008	0.0012	0.0016	0.0018	0.0020	0.0025
K	**Cast Iron** Grey, Ductile, Nodular	120 - 150	275	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		150 - 200	250	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		200 - 220	225	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		220 - 260	200	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
		260 - 320	200	0.0008	0.0010	0.0014	0.0018	0.0020	0.0030	0.0035
N	**Wrought Aluminium**	30	500	0.0010	0.0012	0.0018	0.0020	0.0030	0.0040	0.0048
		180	450	0.0010	0.0012	0.0018	0.0020	0.0030	0.0040	0.0048
	Cast Aluminium	30 - 180	250	0.0010	0.0012	0.0018	0.0020	0.0030	0.0040	0.0048
	Brass	30 - 100	500	0.0010	0.0012	0.0018	0.0020	0.0030	0.0040	0.0048

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Metric (mm)

Indexable | AccuThread® 856 | Positive Rake

ISO	Material	Hardness (BHN)	Machinability**	Speed (m/min)	Recommended Feed (mm/tooth) by Cutter Diameter: 1 flute 9.53 mm - 12.70 mm	1 flute 12.71 mm - 19.05 mm	1 and 2 flutes 19.06 mm - 25.40 mm	3 flutes 25.41 mm - 38.10 mm	5 flutes 38.11 mm - 50.80 mm	7 flutes 50.81 mm - 69.85 mm	8 flutes 69.86 mm - 88.90 mm
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	Easy	274	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		150 - 200	Easy	213	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		200 - 250	Easy	152	0.020	0.025	0.030	0.038	0.051	0.064	0.076
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144	85 - 125	Average	274	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		125 - 175	Average	213	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		175 - 225	Average	183	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		225 - 275	Average	152	0.020	0.025	0.030	0.038	0.051	0.064	0.076
	Medium-Carbon Steel 1010, 1040, 1050, 1527, 1140	125 - 175	Average	175	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		175 - 225	Average	152	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		225 - 275	Average	137	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		275 - 325	Average	122	0.020	0.023	0.025	0.030	0.038	0.051	0.064
	Alloy Steel 4140, 5140, 8640	125 - 175	Average	175	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		175 - 225	Average	152	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		225 - 275	Average	137	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		275 - 325	Difficult	122	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		325 - 375	Difficult	114	0.020	0.023	0.025	0.030	0.038	0.051	0.064
	High-Strength Alloy 4340, 4330V, 300M	225 - 300	Average	137	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		300 - 350	Difficult	122	0.020	0.023	0.025	0.030	0.038	0.051	0.064
		350 - 400	Difficult	107	0.020	0.023	0.025	0.030	0.038	0.051	0.064
	Structural Steel A36, A285, A516	100 - 150	Average	183	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		150 - 250	Average	152	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		250 - 350	Difficult	137	0.020	0.025	0.030	0.038	0.051	0.064	0.076
S	**High-Temp Alloy** Hastelloy B, Inconel 600	140 - 220	Difficult	37	0.013	0.015	0.020	0.025	0.038	0.051	0.064
		220 - 310	Difficult	27	0.013	0.015	0.020	0.025	0.038	0.051	0.064
M	**Stainless Steel** 303, 416, 420	135 - 185	Difficult	160	0.013	0.018	0.023	0.038	0.051	0.064	0.076
		185 - 275	Difficult	152	0.013	0.018	0.023	0.038	0.051	0.064	0.076
	Stainless Steel PH 17-4	185 - 275	Difficult	91	0.013	0.018	0.023	0.038	0.051	0.064	0.076
		275 - 325	Difficult	46	0.013	0.018	0.023	0.038	0.051	0.064	0.076
	Tool Steel H-13, H21, A-4	150 - 200	Difficult	175	0.020	0.025	0.030	0.038	0.051	0.064	0.076
		200 - 250	Difficult	152	0.020	0.025	0.030	0.038	0.051	0.064	0.076
K	**Cast Iron** Grey, Ductile, Nodular	120 - 150	Easy	206	0.020	0.030	0.038	0.051	0.076	0.102	0.127
		150 - 200	Easy	191	0.020	0.030	0.038	0.051	0.076	0.102	0.127
		200 - 220	Easy	175	0.020	0.030	0.038	0.051	0.076	0.102	0.127
		220 - 260	Average	152	0.020	0.030	0.038	0.051	0.076	0.102	0.127
		260 - 320	Average	145	0.020	0.030	0.038	0.051	0.076	0.102	0.127
N	**Wrought Aluminium** 6061 T6	30	Easy	335	0.038	0.051	0.064	0.076	0.102	0.127	0.152
		180	Easy	305	0.038	0.051	0.064	0.076	0.102	0.127	0.152
	Cast Aluminium** up to 10% silicon	120	Easy	191	0.038	0.051	0.064	0.076	0.102	0.127	0.152
	Brass	30 - 125	Easy	335	0.051	0.064	0.076	0.102	0.114	0.140	0.165

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Imperial (inch)

Indexable | AccuThread® 856 | Positive Rake

ISO	Material	Hardness (BHN)	Machinability**	Speed (SFM)	Recommended Feed (inch/tooth) by Cutter Diameter: 1 flute 0.375" - 0.500"	1 flute 0.501" - 0.750"	1 and 2 flutes 0.751" - 1.000"	3 flutes 1.001" - 1.500"	5 flutes 1.501" - 2.000"	7 flutes 2.001" - 2.750"	8 flutes 2.751" - 3.500"
P	**Free-Machining Steel**	100 - 150	Easy	900	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	1118, 1215, 12L14, etc.	150 - 200	Easy	700	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
		200 - 250	Easy	500	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	Low-Carbon Steel	85 - 125	Average	900	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	1010, 1020, 1025, 1522, 1144	125 - 175	Average	700	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
		175 - 225	Average	600	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
		225 - 275	Average	500	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	Medium-Carbon Steel	125 - 175	Average	575	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	1010, 1040, 1050, 1527, 1140	175 - 225	Average	500	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
		225 - 275	Average	450	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
		275 - 325	Average	400	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	Alloy Steel	125 - 175	Average	575	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	4140, 5140, 8640	175 - 225	Average	500	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
		225 - 275	Average	450	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
		275 - 325	Difficult	400	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
		325 - 375	Difficult	375	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	High-Strength Alloy	225 - 300	Average	450	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	4340, 4330V, 300M	300 - 350	Difficult	400	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
		350 - 400	Difficult	350	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	Structural Steel	100 - 150	Average	600	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	A36, A285, A516	150 - 250	Average	500	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
		250 - 350	Difficult	450	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
S	**High-Temp Alloy**	140 - 220	Difficult	120	0.0005	0.0006	0.0008	0.0010	0.0015	0.0020	0.0025
	Hastelloy B, Inconel 600	220 - 310	Difficult	90	0.0005	0.0006	0.0008	0.0010	0.0015	0.0020	0.0025
M	**Stainless Steel**	135 - 185	Difficult	525	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
	303, 416, 420	185 - 275	Difficult	500	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
	Stainless Steel PH	185 - 275	Difficult	300	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
	17-4	275 - 325	Difficult	150	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
	Tool Steel	150 - 200	Difficult	575	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	H-13, H21, A-4	200 - 250	Difficult	500	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
K	**Cast Iron**	120 - 150	Easy	675	0.0008	0.0012	0.0015	0.0020	0.0030	0.0040	0.0050
	Grey, Ductile, Nodular	150 - 200	Easy	625	0.0008	0.0012	0.0015	0.0020	0.0030	0.0040	0.0050
		200 - 220	Easy	575	0.0008	0.0012	0.0015	0.0020	0.0030	0.0040	0.0050
		220 - 260	Average	500	0.0008	0.0012	0.0015	0.0020	0.0030	0.0040	0.0050
		260 - 320	Average	475	0.0008	0.0012	0.0015	0.0020	0.0030	0.0040	0.0050
N	**Wrought Aluminium**	30	Easy	1100	0.0015	0.0020	0.0025	0.0030	0.0040	0.0050	0.0060
	6061 T6	180	Easy	1000	0.0015	0.0020	0.0025	0.0030	0.0040	0.0050	0.0060
	Cast Aluminium** up to 10% silicon	120	Easy	625	0.0015	0.0020	0.0025	0.0030	0.0040	0.0050	0.0060
	Brass	30 - 125	Easy	1100	0.0020	0.0025	0.0030	0.0040	0.0045	0.0055	0.0065

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Metric (mm)

Indexable | AccuThread® 856 | Neutral Rake

ISO	Material	Hardness (BHN)	Machinability**	Speed (m/min)	Recommended Feed (mm/tooth) by Cutter Diameter		
					3 flutes 25.41 mm - 38.09 mm	5 flutes 38.10 mm - 50.77 mm	6 flutes 50.78 mm - 69.85 mm
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	Easy	233	0.032	0.043	0.054
		150 - 200	Easy	181	0.032	0.043	0.054
		200 - 250	Easy	129	0.032	0.043	0.054
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144	85 - 125	Average	233	0.032	0.043	0.054
		125 - 175	Average	181	0.032	0.043	0.054
		175 - 225	Average	156	0.032	0.043	0.054
		225 - 275	Average	129	0.032	0.043	0.054
	Medium-Carbon Steel 1010, 1040, 1050, 1527, 1140	125 - 175	Average	149	0.026	0.032	0.043
		175 - 225	Average	129	0.026	0.032	0.043
		225 - 275	Average	116	0.026	0.032	0.043
		275 - 325	Average	104	0.026	0.032	0.043
	Alloy Steel 4140, 5140, 8640	125 - 175	Average	149	0.026	0.032	0.043
		175 - 225	Average	129	0.026	0.032	0.043
		225 - 275	Average	116	0.026	0.032	0.043
		275 - 325	Difficult	104	0.026	0.032	0.043
		325 - 375	Difficult	97	0.026	0.032	0.043
	High-Strength Alloy 4340, 4330V, 300M	225 - 300	Average	116	0.026	0.032	0.043
		300 - 350	Difficult	104	0.026	0.032	0.043
		350 - 400	Difficult	91	0.026	0.032	0.043
	Structural Steel A36, A285, A516	100 - 150	Average	156	0.032	0.043	0.054
		150 - 250	Average	129	0.032	0.043	0.054
		250 - 350	Difficult	116	0.032	0.043	0.054
S	**High-Temp Alloy** Hastelloy B, Inconel 600	140 - 220	Difficult	–	–	–	–
		220 - 310	Difficult	–	–	–	–
M	**Stainless Steel** 303, 416, 420	135 - 185	Difficult	–	–	–	–
		185 - 275	Difficult	–	–	–	–
	Stainless Steel PH 17-4	185 - 275	Difficult	–	–	–	–
		275 - 325	Difficult	–	–	–	–
	Tool Steel H-13, H21, A-4	150 - 200	Difficult	–	–	–	–
		200 - 250	Difficult	–	–	–	–
K	**Cast Iron** Grey, Ductile, Nodular	120 - 150	Easy	175	0.043	0.065	0.087
		150 - 200	Easy	162	0.043	0.065	0.087
		200 - 220	Easy	149	0.043	0.065	0.087
		220 - 260	Average	129	0.043	0.065	0.087
		260 - 320	Average	123	0.043	0.065	0.087
N	**Wrought Aluminium** 6061 T6	30	Easy	–	–	–	–
		180	Easy	–	–	–	–
	Cast Aluminium** up to 10% silicon	120	Easy	–	–	–	–
	Brass	30 - 125	Easy	–	–	–	–

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Recommended Cutting Data | Imperial (inch)

Indexable | AccuThread® 856 | Neutral Rake

ISO	Material	Hardness (BHN)	Machinability**	Speed (SFM)	Recommended Feed (inch/tooth) by Cutter Diameter		
					3 flutes	5 flutes	6 flutes
					1.000" - 1.499"	1.500" - 1.999"	2.000" - 2.750"
P	**Free-Machining Steel**	100 - 150	Easy	765	0.0013	0.0017	0.0021
	1118, 1215, 12L14, etc.	150 - 200	Easy	595	0.0013	0.0017	0.0021
		200 - 250	Easy	425	0.0013	0.0017	0.0021
	Low-Carbon Steel	85 - 125	Average	765	0.0013	0.0017	0.0021
	1010, 1020, 1025, 1522, 1144	125 - 175	Average	595	0.0013	0.0017	0.0021
		175 - 225	Average	510	0.0013	0.0017	0.0021
		225 - 275	Average	425	0.0013	0.0017	0.0021
	Medium-Carbon Steel	125 - 175	Average	490	0.0010	0.0013	0.0017
	1010, 1040, 1050, 1527, 1140	175 - 225	Average	425	0.0010	0.0013	0.0017
		225 - 275	Average	380	0.0010	0.0013	0.0017
		275 - 325	Average	340	0.0010	0.0013	0.0017
	Alloy Steel	125 - 175	Average	490	0.0010	0.0013	0.0017
	4140, 5140, 8640	175 - 225	Average	425	0.0010	0.0013	0.0017
		225 - 275	Average	380	0.0010	0.0013	0.0017
		275 - 325	Difficult	340	0.0010	0.0013	0.0017
		325 - 375	Difficult	320	0.0010	0.0013	0.0017
	High-Strength Alloy	225 - 300	Average	390	0.0010	0.0013	0.0017
	4340, 4330V, 300M	300 - 350	Difficult	340	0.0010	0.0013	0.0017
		350 - 400	Difficult	300	0.0010	0.0013	0.0017
	Structural Steel	100 - 150	Average	510	0.0013	0.0017	0.0021
	A36, A285, A516	150 - 250	Average	425	0.0013	0.0017	0.0021
		250 - 350	Difficult	390	0.0013	0.0017	0.0021
S	**High-Temp Alloy**	140 - 220	Difficult	–	–	–	–
	Hastelloy B, Inconel 600	220 - 310	Difficult	–	–	–	–
M	**Stainless Steel**	135 - 185	Difficult	–	–	–	–
	303, 416, 420	185 - 275	Difficult	–	–	–	–
	Stainless Steel PH	185 - 275	Difficult	–	–	–	–
	17-4	275 - 325	Difficult	–	–	–	–
	Tool Steel	150 - 200	Difficult	–	–	–	–
	H-13, H21, A-4	200 - 250	Difficult	–	–	–	–
K	**Cast Iron**	120 - 150	Easy	575	0.0017	0.0026	0.0034
	Grey, Ductile, Nodular	150 - 200	Easy	525	0.0017	0.0026	0.0034
		200 - 220	Easy	490	0.0017	0.0026	0.0034
		220 - 260	Average	425	0.0017	0.0026	0.0034
		260 - 320	Average	400	0.0017	0.0026	0.0034
N	**Wrought Aluminium**	30	Easy	–	–	–	–
	6061 T6	180	Easy	–	–	–	–
	Cast Aluminium** up to 10% silicon	120	Easy	–	–	–	–
	Brass	30 - 125	Easy	–	–	–	–

NOTICE: Reduce feed and speed by 30% for tapered thread forms due to additional material removal.
*Refer to recommended pass chart on page E: 53 when referencing material machinability.
**Uncoated thread mills are recommended for cast aluminium applications.

Thread Mill Programming Guide

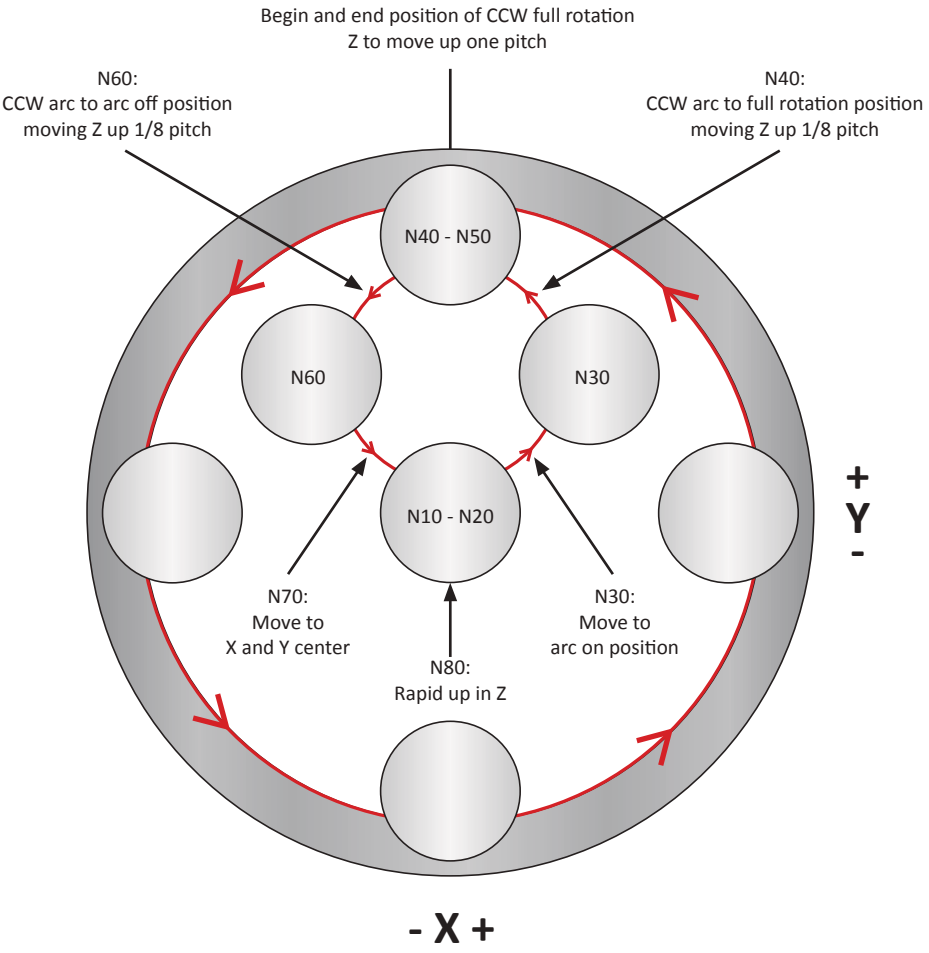
What you need to know
- Thread milling can be easily accomplished with simple G code programming.
- If your machine is capable of 3 axis (helical) interpolation, you can and **should** be thread milling.
- Basic programming of a one pass thread mill can be achieved in six basic steps.

AVAILABLE ONLINE 24/7
or download *INSTA-CODE*®
visit www.alliedmachine.com

The following are examples of how to calculate and program a M16x2 right-hand thread that will be 10 mm deep produced in one pass.

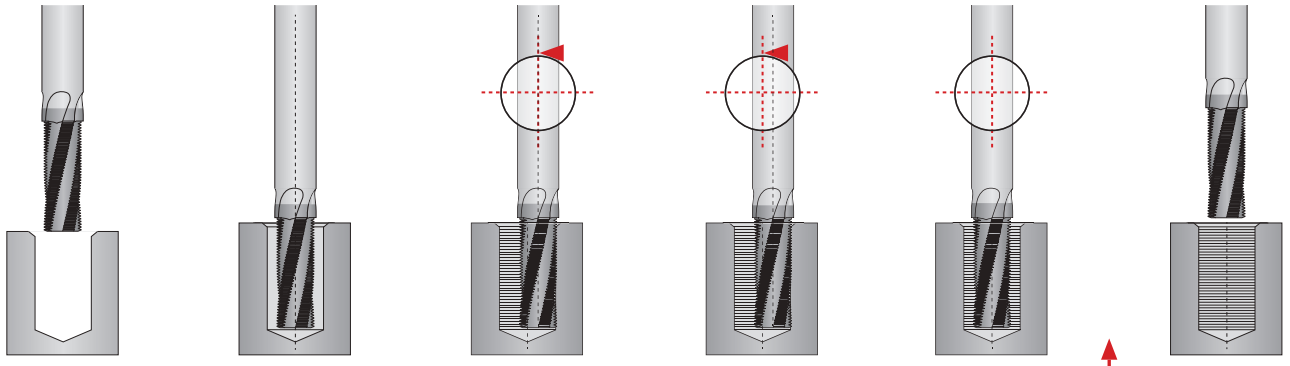
Major thread diameter	**16 mm**	Major diameter of thread
Threads per inch		(only applies to imperial threads)
Length of thread	**10 mm**	Desired length of cut
Velocity	**221 m/min**	Recommended velocity for material to be cut
Feed per flute	**0.038 mm/tooth**	Recommended feed rate per cutting edge
Number of flutes	**4**	Number of flutes on tool to be used
Cutter diameter	**11.94 mm**	Diameter of cutting tool
Using the information above, the values can be calculated:		
Pitch	**2.0 mm**	Use 1/ threads per inch for imperial
Speed	**5895 RPM**	(318.47 • m/min) / cutter diameter or (SFM • 3.82) / cutter diameter
Linear feed	**896.04 mm/min**	RPM • (Feed per flute • Number of flutes)
Feed rate for thread milling	**227.37 mm/min**	((Major thread diameter - cutter diameter) / Major thread diameter) • Linear feed
Z-axis travel on arc on	**0.25 mm**	(Pitch / 8)
Z-axis travel for full thread	**10.25 mm**	(Pitch / 8) + Length of cut
Arc on/off	**1.015 mm**	(Major thread diameter - cutter diameter) / 4
Full rotation value	**2.030 mm**	(Major thread diameter - cutter diameter) / 2

Major thread diameter	16 mm	**Feed rate for thread milling**	227.37 mm/min	**Arc on/off value**	1.015 mm
Cutter diameter	11.94 mm	**Z-axis depth for full thread**	10.25 mm	**Full rotation value**	2.030 mm
Length of thread	10.00 mm	**Z-axis for arc on/off**	0.25 mm	**Pitch value**	2.00 mm



Thread Mill Programming Guide

				5895	M03			
1	N10	S	Turn on spindle in the clockwise direction.					
2	N20	G91	Lower tool the depth required plus an additional 1/8 pitch for the arc on. Tool remains in the center of the hole.					
			G01			Z -10.250		F 1136.25
3	N30	G41	Position the tool for the arc on motion and turn on the cutter compensation.					
				X 1.015	Y 1.015		D1	F 681.75
	N40		Arc on to engage the tool to the major thread diameter while moving the tool up in the Z-axis 1/8 pitch. **NOTE**: X and Y is the end point. I and J is the center point of the arc.					
			G03	X -1.015	Y 1.015	Z 0.250	I -1.015	J0.000 F 227.37
4	N50		Full pass. Interpolate the thread mill inside the major thread diameter while moving the tool up 1 pitch in the Z-axis.					
			G03	X 0.000	Y 0.000	Z 2.000	I 0.000	J -2.030
5	N60		Arc off to disengage the tool from the major thread diameter while moving the tool up in the Z-axis 1/8 pitch.					
			G03	X -1.015	Y -1.015	Z 0.250	I 0.000	J -1.015 F 909.00
	N70	G40	Return to center. Turn off cutter compensation and move the tool back to center.					
			G01	X 1.015	Y -1.015			F 1136.25
6	N80		Return to top. Rapid the tool back to the top of the threaded hole.					
			G00			Z 7.750		
	N90	G90	Switch back to absolute positioning and rapid to a safe point in Z above part level (assumed to be 1 pitch above part level for demonstration purposes below).					



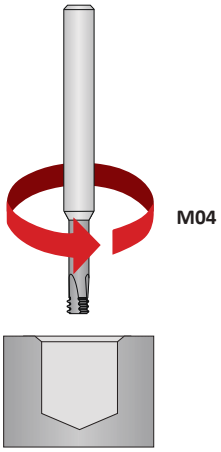
Step 1 N10	Step 2 N20	Step 3 N30 - N40	Step 4 N50	Step 5 N60 - N70	Step 6 N80 - N90
• Preparatory commands. • Positioning above hole center and at hole level in Z. • In absolute position mode.	• Change to incremental. • Feed to bottom of hole. • Z-axis depth for full thread.	• Activate left cutter comp. • Feed to arc on position. • Arc to full rotation value while moving Z up 1/8 pitch. • Z-axis move for arc on.	• One complete CCW rotation at full arc rotation value while moving Z up 1 pitch value.	• CCW arc from full rotation value to the arc on/off value while moving Z up 1/8 pitch (Z-axis move for arc off).	• Rapid up in Z.

Technical Information

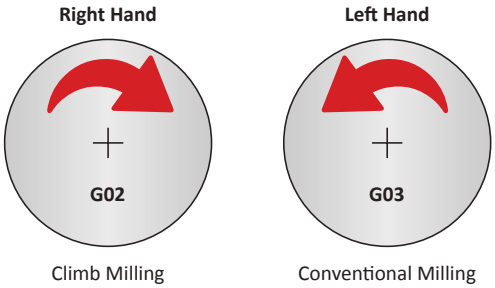
AccuThread® T3

Spindle Rotation

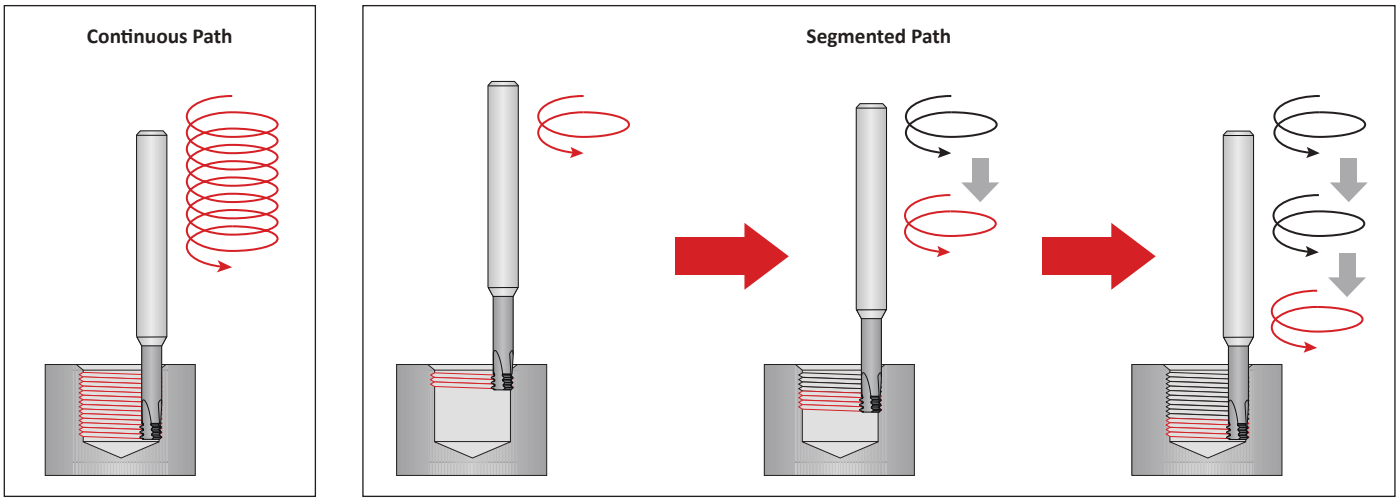
Tools are left-hand cutting. The left-hand cut allows the tool to climb mill when creating a right-hand thread with an AccuThread® T3. Climb milling reduces deflection and heat generated during the cut.

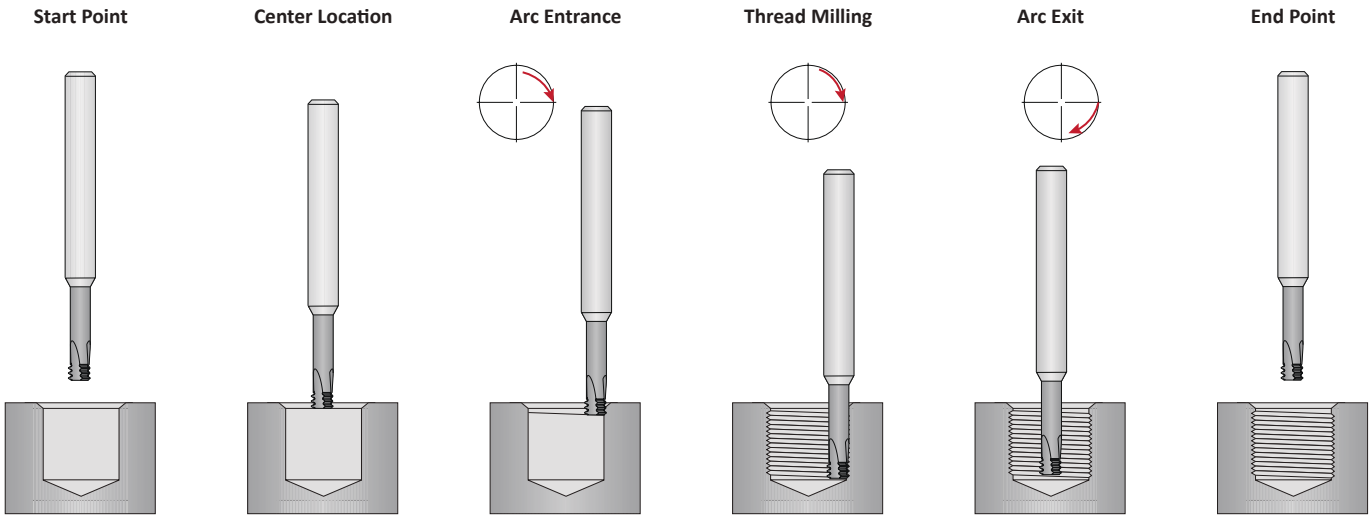


Direction of Helical Interpolation



Programming Z-Axis Cutting Path





Notes

Thread Mill Troubleshooting Guide

Causes		Problem: Thread mill is showing accelerated or excessive wear	Cutting edges are chipping	Thread mill is breaking in the first hole of part	Thread mill is creating excessive chatter	Out of round thread is produced	Bell-mouthed thread form (small at bottom, big at top)	Part rejection because of rough flank finish	Steps in thread profile	Gauge difference from part to part	Machine not making correct paths to create thread profile	Control not accepting the program
Catalogue	Incorrect tool selection			1	1							
	Incorrect speed and feed selection	2, 3	2, 3		2, 3			2, 3				
Speed and Feed	RPM too high	5										
	RPM too low				4		4	4				
	Machine tool specifications restrict RPMs			5, 19								
	Feed rate too high		7	7			7	7	7			
	Feed rate too low	6										
	Incorrect adjusted feed rate adjustment ratio			12								
	Machine tool specification restricts feed rate					7, 19						
	Ramp-in is programmed as an axial move			20					20			
Tool	Thread mill moved or slipped in its holding device	13	13	13	13			13	13			
	Tool is sticking out of the holder too far	15	15	15	15			15	15	15		
	Runout between thread mill and holder				10			10				
	Incorrect coating creating built up edge	8, 17								8, 17		
	Helix angle too low				9			9				
	Excessive thread mill wear								11	11		
	Excessive tool pressure	7, 11, 14					7, 11, 14					
Machine	Workpiece moving in its fixturing	16	16	16	16			16		16		
	Insufficient coolant pressure or flow	17	17									
	Lack of machine rigidity	16	16		16		16	16				
Programming	Incorrect number of passes			22			22					
	Incorrect program variables			18, 26							18, 26	
	Did not account for X/Y radial moves for tapered threads										24, 26	
	Incorrect cutter compensation variables			23, 26								23, 26
	Helical interpolation option not on machine or turned off										21, 26	21, 26
	Machine tool control is not formatted to standard EIA/ASCII/ISO Code											25, 26

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Thread Mill Troubleshooting Guide

Troubleshooting Solutions

1. Refer to catalogue to ensure proper tool selection.
2. Verify the correct speed was selected from the catalogue speed and feed chart.
3. Verify the correct feed rate was selected from the catalogue speed and feed chart.
4. Increase the spindle speed (RPM).
5. Decrease the spindle speed (RPM).
6. Increase feed per tooth.
7. Decrease feed per tooth.
8. Investigate other coatings.
9. Increase the tool helix.
10. Gauge runout between thread mill and tool holder.
11. Perform tool change at quicker intervals.
12. Adjust the feed rate ratio properly to the correct actual penetration rate for internal threads. Refer to speed and feed pages for formula.
13. Use hydraulic clamping chuck.
14. Check the tool for excessive wear. Beginning threads will wear the fastest.
15. Make the amount of overhang in the holding device as short as possible.
16. Verify the workpiece is properly clamped. Retighten or increase stability if necessary.
17. Increase the coolant flow and volume.
18. Check the milling program variables, especially the positive or negative value associated with I and J values.
19. Make sure the machine has the appropriate axis and path speed capabilities.
20. Make sure the thread mill is arcing in the major diameter instead of making a radial move.
21. Make sure the machine tool has a helical interpolation option that is on.
22. Increase the number of thread mill passes.
23. Make sure the cutter compensation variables are input into the G41 program line.
24. Adjust the program for pipe tap threads to taper out on diameter in X/Y directions to create proper form.
25. Request information from the machine tool builder regarding its programming formats.
26. Scan and email a copy of your program to the Application Engineering department at **engineering.eu@alliedmachine.com**.

AccuThread 856® & ThreadMills™ USA Guaranteed Application Form

*The following must be filled out completely before your test will be considered

CONTACT DETAILS

Trial P.O. No.*..... Date*..... Proposed Test Date*.....

Favoured Distributor*..... Distributor Contact*.....

Customer Name*..... Industry..... Contact Name*.....

☐ Guaranteed Test

☐ Programme Request (Please tick box) Distributor PO # .....

APPLICATION INFORMATION

Thread Size ..... Thread Depth..... Material ..... Hardness ☐BRN ☐RC ☐N/mm²

Pitch ..... Drill Size ..... Material State ☐Forged ☐Bar ☐Cast ☐Plate

Thread ☐Internal ☐External ☐Through ☐Blind Thread Form% ☐100 ☐75 ☐Other .....

Thread Mill ☐Indexable ☐Solid Carbide ☐Other .....

MACHINE INFORMATION

Machine Type ☐Machine Centre ☐Lathe ☐Mill ☐ Other Builder ..... Mode# .....

Maximum RPM .....

Available Power* ☐ KW ..... ☐ HP ..... Spindle Orientation ☐ Vertical ☐ Horizontal

Clamping Method ☐ Side Lock ☐ Hydraulic Chuck ☐ Shrink Fit ..... Rigidity ☐ Excellent ☐ Good ☐ Poor Tool Rotating ☐ Yes ☐ No

CNC Control Type ☐ Fanuc ☐ Siemens ☐ Mazatrol ☐ Other ..... Helical Interpolation ☐ Yes ☐ No ISO - ASCII Compatible ☐ Yes ☐ No

COOLANT INFORMATION

Coolant Pressure ..... Bar Coolant Volume ..... L/Min Coolant Type .....

Tooling to be Used

Item Number	Qty

Programming Data

Dimensions:	☐ Inch	☐ Metric
Arc Centre:	☐ I and J	☐ R (Radius)
Tool Path:	☐ Offset	☐ No Offset
Arc Limitation:	☐ Full Circle	☐ Quadrant
K Value:	☐ Not Required	☐ Required
If Required:	☐ In Radians	☐ Per Revolution

FOR OFFICE USE ONLY

Application Engineer:

Number:

Status:

engineering.eu@alliedmachine.com

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Complete information as to operating conditions, machine, setup, and the application of cutting fluid should accompany any product returned for inspection. This warranty shall not apply to any Allied Machine products which have been subjected to misuse, abuse, improper operating conditions, improper machine setup or improper application of cutting fluid or which have been repaired or altered if such repair or alteration, in the judgement of Allied Machine, would adversely affect the performance of the product.

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