ALLIED MACHINE & ENGINEERING CORP

Threadmilling

Catalog

www.alliedmachine.com

Represented by:

Made in the USA

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ALLIED MACHINE & ENGINEERING CORP

Our focus on product excellence, service to the customer, respect for the individual, and competitive advantage enables us to deliver outstanding results in a diverse range of manufacturing, production and process engineering industries.

As a result, Allied Machine high performance tooling is helping countless businesses around the world to produce better products with greater accuracy, increased speed and higher quality.

Precision, performance, and productivity are core features of Allied Machine tooling. Our commitment to innovation in all aspects of hole making technology means we continually set new industry standards in production efficiency, tool life, and manufacturing cost improvements.

This product catalog provides detailed information on products in a comprehensive, easy to use, and informative single source reference guide. However, we recognize that every company's needs are unique, which is why our customer service and technical support teams are always available to provide help and advice, should you need it.

Whatever your need, Allied Machine & Engineering Corp. delivers high performance tooling on the cutting edge.

ALLIED MACHINE
& ENGINEERING CORP

⚠ WARNING

Tool failure during use can cause serious injury. Follow safety precautions and instructions that accompany machinery and all tools.

Wear safety glasses and appropriate safety equipment at all times when machinery is operating.

Contents

THREADMILL PROGRAM SOFTWARE

- Create G-code programs in minutes
- Simple and easy to use
- No download necessary
- Available 24/7

AVAILABLE FOR ALL THREADMILL PRODUCTS

Check it out at
www.alliedmachine.com
under Threadmills product section

AccuThread 856®

ThreadMills USA
An Allied Machine & Engineering Co.

This catalog contains important messages that pertain to proper use of the products shown in this catalog. Always read and follow all precautions that use these words.

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

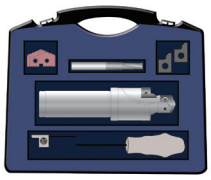
NOTE is also used. It is important that you read and follow but is not safety-related.

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

AccuThread 856® Solid Carbide

NPT, NPTF 8
BSPT, BSPP, BSW 9
UN 10-11
Metric 12

AccuThread 856® Port Specific



AccuPort® J1926 Kits 14
Port Specific Threadmills 15

Threadmills USA Solid Carbide

NPT, NPTF 18
NPT (Heavy Duty, Coolant Through) 18
NPS, NPSF, BSPT, BSPP 19
UN 20
UN Coolant Through
(Heavy Duty, Double End) 21
Metric 22

AccuThread 856® Bolt-in Indexable

NPT, NPTF, BSPT & Holders 24
UN 25
UNJ, Metric 26
Metric, BSPP, Holders 27

AccuThread 856® Pin Style Indexable

NPT, NPTF 30
BSPT, BSPP, API-Round 31
UN 32
UNJ 33
Metric, ACME 34
Weldon, Shell Mill Holders. 35-36

Technical

Pre-Drill Diameter Chart 38
Pass Charts & Formulas 39
Speed & Feed Charts
AccuThread 856® Solid Carbide 40-41
AccuThread 856® Indexable 42-45
Threadmills USA 46-47
Programming & Troubleshooting Guide . . 48-49

Threadmills

High Performance Threading Solutions

AMEC's threadmilling program has developed into a comprehensive range of high precision tooling offering outstanding productivity with exceptional levels of tool life and thread accuracy. The threadmill range covers both solid carbide and indexable replaceable insert tools with an extensive range of thread forms.

Our threadmilling program has been specifically designed to provide customers with a wide choice. This is achieved by offering two threadmill ranges within our product lineup – the low cost, general purpose Threadmills USA threadmill range, and the high performance, high productivity AccuThread 856® range.

Both product ranges are designed for manufacturing and production environments and offer excellent performance and thread accuracy, allowing AMEC to offer the best product for the job and to give our customers the cutting edge.

Also available are AMEC's 'Special Products,' solutions that provide engineers, designers, and production managers with the opportunity of creating application specific tooling that can achieve levels of efficiency amd performance beyond standard threading solutions.

Solid Carbide

AccuThread 856®

The AccuThread 856 is AMEC's premium threadmilling product range, manufactured from micro grain carbide and coated in AMEC's AM210® premium coating. This product is designed for the demanding environment of high production threadmilling, providing extraordinary tool life and exceptionally high quality thread forms. The AccuThread range is available in a wide selection of thread standards and forms part of our specials program, allowing you to tailor design threadmills to your specific requirements.

AccuThread 856®

Features & Benefits

- AMEC's proprietary AM210® coating has a 25-50% increase in tool life over competitor product
- Standard cutting lengths allow for multiple applications without the need for special thread mills
- Helical flute which offers increased strength and rigidity when cutting forces are applied
- Online CNC G code programs available

Threadmills USA

The threadmill range is manufactured from solid carbide with ground helical flutes and a TiAlN coating as standard. These products have been designed for the low volume/low cost production environment, providing excellent performance at a competitive price.

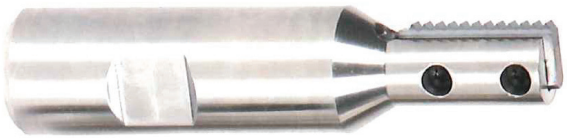
A helical flute design has been maintained across the Threadmills USA range to allow for maximum production benefits and to negate the need for straight flute threadmills. A comprehensive range of thread forms and technical information further supports the program.

ThreadMills USA
An Allied Machine & Engineering Co.

Features & Benefits

- Helical flute which offers increased strength and rigidity when forces are applied
- TiAlN coated for increased tool life over uncoated tools
- Extensive range of thread forms
- High quality for consistent predictable production
- Online CNC G code programs available

Indexable



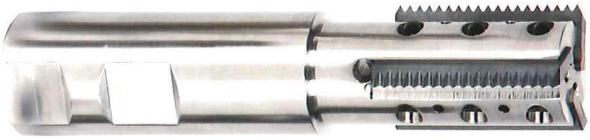
AccuThread 856® – Bolt-in Style

The AccuThread 856 indexable bolt-in style is our general purpose system available in two insert lengths with an extensive range of thread forms. The tool holders are manufactured from dampened stainless steel providing excellent rigidity when in contact with work pieces, helping to provide quality thread forms.

AccuThread 856®

Features & Benefits

- Threadmill 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
- Online CNC G code programs available



AccuThread 856® – Pin Style

The AccuThread 856 indexable pin style is designed to allow for a deeper working thread and higher rigidity, enabling high productivity, extended tool life, and excellent performance when producing threads. The tool holders are manufactured from dampened stainless steel, which provides outstanding rigidity when in contact with the work piece, helping ensure high quality thread forms are produced. Available with a positive and neutral rake to accommodate a variety of applications.

AccuThread 856®

Features & Benefits

- Patented pin style locking system ensures unsurpassed repeatability
- Threadmill holders are manufactured from stainless steel that is engineered to dampen vibration during operation
- Extensive range of thread forms with two thread lengths
- Online CNC G code programs available

AccuThread 856® – Indexable Inserts

Bolt-in Style

Pin Style

AccuThread 856®

Features & Benefits

- Full profiles present on all inserts allow 100% thread form against 65-75% for tapping
- AMEC's proprietary AM210® coating has a 25-50% increase in tool life over competitor product
- AMEC's premium carbide allows for extended tool life while providing high quality thread forms

Reference

AccuThread 856® Solid Carbide Threadmills

TM	U	K	0250	–	20
Threadmill	**Thread Class**	**Coating**	**Min. Thread Dia**		**Thread Pitch**
TM - Standard	U - UN	K - AM210®	English - 0250 - 1/4"		UN - 20
HDTM - Heavy Duty	N - NPT, NPTF	U - Uncoated	Number Drill - 0008 - #8		Metric - 1.0
	M - Metric		Metric - 0450 - M4.5		
	A - AccuPort® Specific				
	B - BSPP, BSPT, BSW				

Threadmills USA Solid Carbide Threadmills

TM	250	20	CH
Threadmill	**Min. Thread Dia**	**Thread Pitch**	**Optional**
TM - TiAlN	English - 250 - 1/4"	20 - UN 20 TPI	CH - Coolant Hole
TMFT - Uncoated	Number Drill - 08 - #8	075 - Metric 0.75	DE - Double End
HDTM - Heavy Duty	Metric - 45 - M4.5		NPT - All pipe threads will show thread form
HDTMFT - Heavy Duty Uncoated			

AccuThread 856® Indexable Threadmill Holders

THT	–	0400	–	1F	075	M
Holder Style		**Cutter Dia**		**# of Flutes**	**Length of Insert**	**Shank Designation**
THT - Tapered Head		0400 - .400"		1F - 1 flute	075 - 3/4"	Blank - Inch
THN - Straight Head				2F - 2 flutes	100 - 1.00"	M - Metric
THP - Straight Head				3F - 3 flutes	150 - 1.50"	
TSN - Shell Mill				5F - 5 flutes		
TNR - Neutral Rake				6F - 6 flutes		
TSR - Shell Mill Neutral Rake				7F - 7 flutes		
				8F - 8 flutes		

AccuThread 856® Indexable Threadmill Inserts

TP	075	K	–	UN	32	I
Insert Style	**Insert Length**	**Coating**		**Thread Class**	**Thread Pitch**	**Thread Style**
TP - Bolt-in	075 - 3/4"	K - AM210®		UN, UNJ	UN - 20	I - Internal
TN - Pin & Screw	100 - 1.00"	A - TiAlN		NPT, NPTF	Metric - 1.0	E - External
	150 - 1.50"	U - Uncoated		BSPP, BSPT		
				M - Metric		
				FA - Full ACME		
				AP - API Round		

AccuThread 856® Solid Carbide

CONTENTS

NPT 8
NPT (Heavy Duty) 8
NPTF 8
BSPT 9
BSPP 9
BSW 9
UN & UN Extra Length 10-11
Metric 12

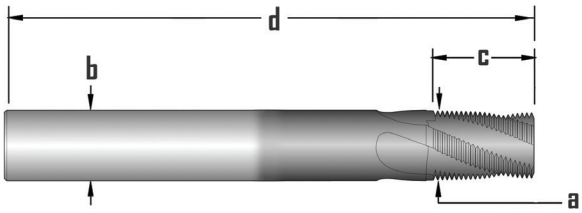
Features & Benefits

- **AM210® premium coating for improved tool life and higher speeds**
- **Helical flutes for increased stability**
- **Thicker core for increased strength**

ALLIED MACHINE & ENGINEERING CORP

AccuThread 856®

Solid Carbide



NPT

Inch Shank

Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMNK0063-NPT	1/16" and 1/8"	27	3	0.245	0.250	0.437	2.500	❍
TMNK0250-NPT	1/4" and 3/8"	18	4	0.305	0.312	0.625	3.000	❍
TMNK0500-NPT	1/2" and 3/4"	14	4	0.495	0.500	0.875	3.500	❍
TMNK1000-NPT	1" to 2"	11.5	4	0.620	0.625	1.125	4.000	❍
TMNK2500-NPT	2-1/2" to 6"	8	4	0.745	0.750	1.500	5.000	❍

Metric Shank

Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMNK0063-NPTM	1/16" and 1/8"	27	3	5,95	6,00	11,30	58,00	❍
TMNK0250-NPTM	1/4" and 3/8"	18	4	7,75	8,00	15,70	64,00	❍
TMNK0500-NPTM	1/2" and 3/4"	14	4	11,95	12,00	23,70	84,00	❍
TMNK1000-NPTM	1" to 2"	11.5	4	15,75	16,00	28,75	93,00	❍
TMNK2500-NPTM	2-1/2" to 6"	8	5	19,75	20,00	38,10	115,00	❍

NPT (Heavy Duty)

Inch Shank

Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
HDTMNK0125-NPT	1/8"	27	3	0.300	0.312	0.482	3.000	❍
HDTMNK0250-NPT	1/4" and 3/8"	18	4	0.363	0.375	0.680	3.500	❍
HDTMNK0750-NPT	3/4"	14	4	0.620	0.625	1.000	4.000	❍
HDTMNK1000-NPT	1"	11.5	5	0.745	0.750	1.219	4.000	❍

NPTF

Inch Shank

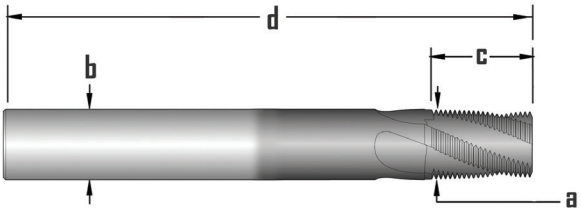
Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMNK0063-NPTF	1/16" and 1/8"	27	3	0.245	0.250	0.437	2.500	❍
TMNK0250-NPTF	1/4" and 3/8"	18	4	0.305	0.312	0.625	3.000	❍
TMNK0500-NPTF	1/2" and 3/4"	14	4	0.495	0.500	0.875	3.500	❍
TMNK1000-NPTF	1" to 2"	11.5	4	0.620	0.625	1.125	4.000	❍
TMNK2500-NPTF	2-1/2" to 6"	8	4	0.745	0.750	1.500	5.000	❍

Metric Shank

Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMNK0063-NPTFM	1/16" and 1/8"	27	3	5,95	6,00	11,30	58,00	▲
TMNK0250-NPTFM	1/4" and 3/8"	18	4	7,75	8,00	15,70	64,00	▲
TMNK0500-NPTFM	1/2" and 3/4"	14	4	11,95	12,00	23,70	84,00	▲
TMNK1000-NPTFM	1" to 2"	11.5	4	15,75	16,00	28,75	93,00	▲
TMNK2500-NPTFM	2-1/2" to 6"	8	5	19,75	20,00	38,10	115,00	▲

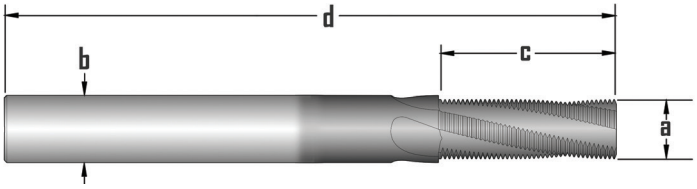
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.



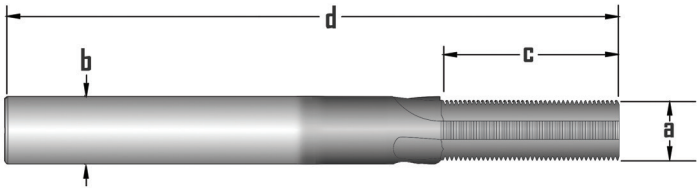
BSPT
Metric Shank

Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMBK0063-BSPTM	1/16" and 1/8"	28	3	5,97	6,00	9,98	51,00	❍
TMBK0250-BSPTM	1/4" and 3/8"	19	4	9,91	10,00	14,73	73,00	❍
TMBK0500-BSPTM	1/2" and 3/4"	14	4	11,94	12,00	20,00	84,00	❍
TMBK1000-BSPTM	1" to 2"	11	4	15,75	16,00	32,31	93,00	❍



BSPP
Metric Shank

Item No.	Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMBK0063-BSPPM	1/16" and 1/8"	28	3	5,97	6,00	14,53	51,00	❍
TMBK0250-BSPPM	1/4" and 3/8"	19	4	9,91	10,00	18,72	73,00	❍
TMBK0500-BSPPM	1/2" and 3/4"	14	4	11,94	12,00	29,03	84,00	❍
TMBK1000-BSPPM	1" to 2"	11	4	15,75	16,00	34,67	93,00	❍



BSW
Metric Shank

Item No.	Min. Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMBK0250-20M	1/4"	20	3	4,50	6,00	10,16	58,00	▲
TMBK0312-18M	5/16"	18	3	5,00	6,00	11,29	58,00	▲
TMBK0375-16M	3/8"	16	5	7,00	8,00	14,29	64,00	▲
TMBK0437-14M	7/16"	14	5	7,90	8,00	18,15	64,00	▲
TMBK0500-12M	1/2"	12	5	9,00	10,00	19,10	73,00	▲
TMBK0625-11M	5/8"	11	5	9,90	12,00	23,10	84,00	▲
TMBK0750-10M	3/4"	10	5	11,90	12,00	27,94	84,00	▲
TMBK0875-9M	7/8"	9	5	11,90	16,00	27,95	93,00	▲
TMBK1000-8M	1"	8	6	15,90	16,00	34,94	93,00	▲

❶ Availability Codes
❍ Stocked
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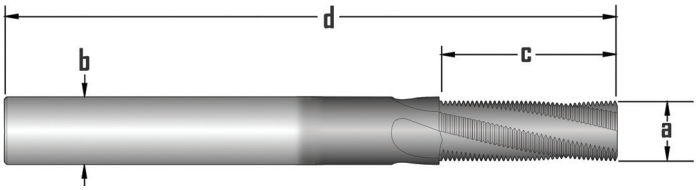
AccuThread 856®

Solid Carbide

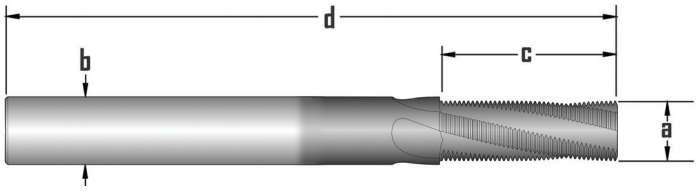


UN

Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMUK0002-56	#2	56	3*	0.065	0.125	0.125	2.000	❍
TMUK0004-40	#4	40	3*	0.085	0.125	0.175	2.000	❍
TMUK0006-32	#6	32	3	0.100	0.125	0.218	2.000	❍
TMUK0008-32	#8	32	3	0.115	0.125	0.250	2.000	❍
TMUK0010-32	#10	32	3	0.120	0.125	0.312	2.000	❍
TMUK0010-28	#10	28	3	0.120	0.125	0.312	2.000	❍
TMUK0250-28	1/4"	28	3	0.180	0.187	0.500	2.500	❍
TMUK0010-24	#10	24	3	0.120	0.125	0.312	2.000	❍
TMUK0313-24	5/16"	24	3	0.235	0.250	0.625	2.500	❍
TMUK0375-24	3/8"	24	4	0.285	0.312	0.750	3.000	❍
TMUK0250-20	1/4"	20	3	0.180	0.187	0.500	2.500	❍
TMUK0438-20	7/16"	20	4	0.335	0.375	0.875	3.500	❍
TMUK0313-18	5/16"	18	3	0.235	0.250	0.625	2.500	❍
TMUK0563-18	9/16"	18	4	0.370	0.375	0.875	3.500	❍
TMUK0375-16	3/8"	16	4	0.285	0.312	0.750	3.000	❍
TMUK0750-16	3/4"	16	4	0.490	0.500	1.250	3.500	❍
TMUK0438-14	7/16"	14	4	0.305	0.312	0.750	3.000	❍
TMUK0875-14	7/8"	14	4	0.490	0.500	1.250	3.500	❍
TMUK0500-13	1/2"	13	4	0.350	0.375	0.875	3.500	❍
TMUK0563-12	9/16"	12	4	0.370	0.375	0.875	3.500	❍
TMUK0750-12	3/4"	12	4	0.495	0.500	1.250	3.500	❍
TMUK0625-11	5/8"	11	4	0.470	0.500	1.250	3.500	❍
TMUK0750-10	3/4"	10	4	0.495	0.500	1.250	3.500	❍
TMUK0875-9	7/8"	9	4	0.620	0.625	1.375	4.000	❍
TMUK1000-8	1"	8	4	0.620	0.625	1.375	4.000	❍

*Straight fluted



UN (Extra Length)

Inch Shank

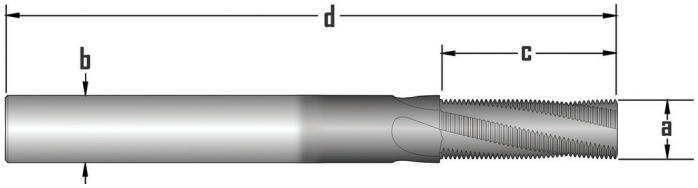
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMUK0625-11XL	5/8"	11	4	0.470	0.500	1.455	3.500	❍
TMUK0750-10XL	3/4"	10	4	0.495	0.500	1.600	4.000	❍
TMUK0875-9XL	7/8"	9	4	0.620	0.625	1.778	4.000	❍
TMUK1000-8XL	1"	8	6	0.745	0.750	2.000	4.500	❍

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

AccuThread 856®

Solid Carbide

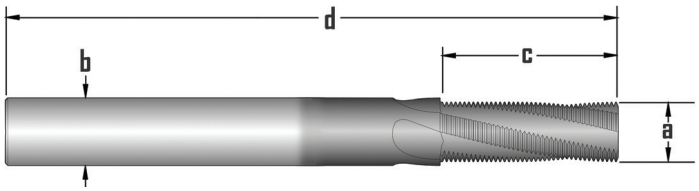


UN

Metric Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMUK0002-64M	#2	64	3*	1,65	3,00	3,20	39,00	▲
TMUK0002-56M	#2	56	3*	1,65	3,00	3,20	39,00	▲
TMUK0003-48M	#3	48	3*	1,80	3,00	3,75	39,00	▲
TMUK0005-44M	#5	44	3	2,40	3,00	4,65	39,00	▲
TMUK0004-40M	#4	40	3*	2,20	3,00	4,45	39,00	▲
TMUK0008-36M	#8	36	3	3,00	4,00	6,35	51,00	▲
TMUK0006-32M	#6	32	3	2,50	3,00	5,55	39,00	▲
TMUK0008-32M	#8	32	3	3,20	4,00	6,35	51,00	▲
TMUK0010-32M	#10	32	3	3,80	4,00	7,95	51,00	▲
TMUK0010-28M	#10	28	3	3,80	4,00	8,20	51,00	▲
TMUK0250-28M	1/4"	28	3	4,75	6,00	12,70	58,00	▲
TMUK0438-28M	7/16"	28	4	7,90	8,00	19,95	64,00	▲
TMUK0010-24M	#10	24	3	3,70	4,00	8,50	51,00	▲
TMUK0313-24M	5/16"	24	3	5,95	6,00	16,00	58,00	▲
TMUK0375-24M	3/8"	24	4	7,25	8,00	19,00	64,00	▲
TMUK0250-20M	1/4"	20	3	4,75	6,00	12,70	58,00	▲
TMUK0438-20M	7/16"	20	4	8,75	10,00	22,85	73,00	▲
TMUK0313-18M	5/16"	18	3	5,95	6,00	17,00	58,00	▲
TMUK0563-18M	9/16"	18	4	9,90	10,00	22,65	73,00	▲
TMUK0375-16M	3/8"	16	4	7,25	8,00	19,00	64,00	▲
TMUK0750-16M	3/4"	16	4	11,95	12,00	31,75	84,00	▲
TMUK0438-14M	7/16"	14	4	7,75	8,00	20,00	64,00	▲
TMUK0875-14M	7/8"	14	4	11,95	12,00	32,70	84,00	▲
TMUK0500-13M	1/2"	13	4	9,40	10,00	23,50	73,00	▲
TMUK0563-12M	9/16"	12	4	9,90	10,00	23,35	73,00	▲
TMUK0750-12M	3/4"	12	4	11,95	12,00	31,75	84,00	▲
TMUK0625-11M	5/8"	11	4	11,95	12,00	32,40	84,00	▲
TMUK0750-10M	3/4"	10	4	11,95	12,00	33,00	84,00	▲
TMUK0875-9M	7/8"	9	4	15,75	16,00	36,75	93,00	▲
TMUK1000-8M	1"	8	4	15,75	16,00	35,00	93,00	▲
TMUK1125-7M	1-1/8"	7	5	19,90	20,00	36,30	105,00	▲
TMUK1375-6M	1-3/8"	6	5	19,90	20,00	38,10	105,00	▲

*Straight fluted



UN (Extra Length)

Metric Shank

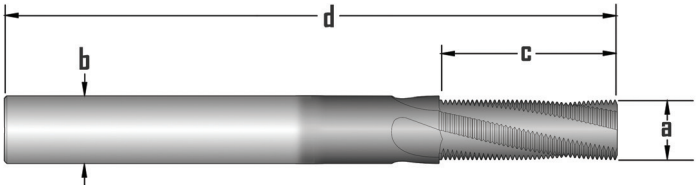
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMUK0625-11XLM	5/8"	11	4	11,95	12,00	37,00	100,00	▲
TMUK0750-10XLM	3/4"	10	4	11,95	12,00	40,70	100,00	▲
TMUK0875-9XLM	7/8"	9	4	15,75	16,00	45,20	100,00	▲
TMUK1000-8XLM	1"	8	6	19,90	20,00	50,80	115,00	▲

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

AccuThread 856®

Solid Carbide



Metric

Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMMK0450-075	M4.5	0.75	3	0.120	0.125	0.250	2.000	❍
TMMK0800-075	M8	0.75	3	0.235	0.250	0.625	2.500	❍
TMMK0500-080	M5	0.80	3	0.120	0.125	0.312	2.000	❍
TMMK0600-100	M6	1.00	3	0.170	0.187	0.500	2.500	❍
TMMK1200-100	M12	1.00	4	0.360	0.375	0.875	3.500	❍
TMMK0800-125	M8	1.25	3	0.235	0.250	0.625	2.500	❍
TMMK1000-150	M10	1.50	4	0.300	0.312	0.750	3.000	❍
TMMK1400-150	M14	1.50	4	0.370	0.375	0.875	3.500	❍
TMMK1800-150	M18	1.50	4	0.490	0.500	1.250	3.500	❍
TMMK1200-175	M12	1.75	4	0.360	0.375	0.875	3.500	❍
TMMK1600-200	M16	2.00	4	0.470	0.500	1.250	3.500	❍
TMMK2000-250	M20	2.50	4	0.495	0.500	1.250	3.500	❍
TMMK2400-300	M24	3.00	4	0.620	0.625	1.375	4.000	❍

Metric Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMMK0200-040M	M2	0.40	3	1,50	3,00	3,20	39,00	❍
TMMK0250-045M	M2.5	0.45	3	1,50	3,00	3,60	39,00	❍
TMMK0300-050M	M3	0.50	3	2,15	3,00	4,50	39,00	❍
TMMK0600-050M	M6	0.50	3	4,60	6,00	12,00	58,00	❍
TMMK1000-050M	M10	0.50	4	7,95	8,00	15,00	64,00	❍
TMMK0450-075M	M4.5	0.75	3	3,00	4,00	6,75	51,00	❍
TMMK0600-075M	M6	0.75	3	4,60	6,00	12,00	51,00	❍
TMMK1000-075M	M10	0.75	4	7,95	8,00	15,00	64,00	❍
TMMK0500-080M	M5	0.80	3	3,60	4,00	8,00	51,00	❍
TMMK0600-100M	M6	1.00	3	4,60	6,00	12,00	51,00	❍
TMMK1200-100M	M12	1.00	4	9,40	10,00	20,00	73,00	❍
TMMK0800-125M	M8	1.25	3	5,90	6,00	16,25	51,00	❍
TMMK1000-150M	M10	1.50	4	7,40	8,00	19,50	64,00	❍
TMMK1400-150M	M14	1.50	4	10,90	12,00	27,00	84,00	❍
TMMK1800-150M	M18	1.50	4	11,90	12,00	31,50	84,00	❍
TMMK1200-175M	M12	1.75	4	9,40	10,00	22,71	73,00	❍
TMMK1400-200M	M14	2.00	4	10,90	12,00	28,00	84,00	❍
TMMK2000-200M	M20	2.00	4	11,95	12,00	30,00	84,00	❍
TMMK2000-250M	M20	2.50	4	11,90	12,00	30,00	84,00	❍
TMMK2400-300M	M24	3.00	4	15,90	16,00	36,00	93,00	❍
TMMK3000-350M	M30	3.50	4	15,75	16,00	38,50	100,00	❍
TMMK3600-400M	M36	4.00	5	19,90	20,00	40,00	105,00	❍

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

AccuThread 856®
Port Specific

CONTENTS

AccuPort 432® J1926 Kits 14
UN (AccuPort 432® Specific) 15

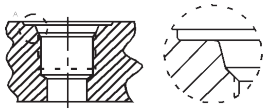
Features & Benefits

- **Includes complete AccuPort 432® drill and AccuThread 856® threadmill for manufacturing J1926 port**
- **Available for port sizes #4-#32**
- **Available for ferrous and non-ferrous applications**
- **AccuPort's replaceable insert design eliminates regrinding and resetting**

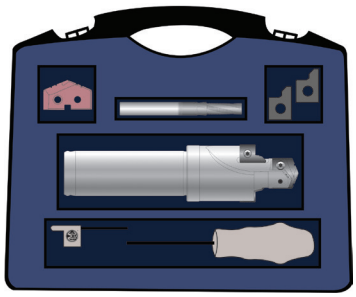
ALLIED MACHINE & ENGINEERING CORP

Port Kits

J1926



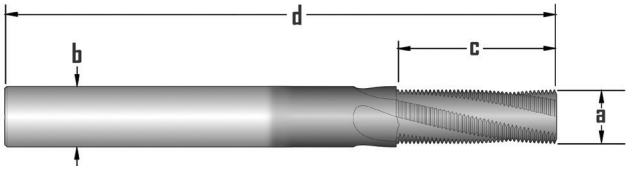
SAE J-1926-1 / ISO 11926-1



AccuPort 432® J1926 Kits

Ferrous Material Kit										
Tube Dash No.	Port Thread Size	Port Contour Cutter No.	Qty.	T-A® Drill Item No.		Port Form Insert Item No.		AccuThread 856® Item No.		Kit Item No.
				Super Cobalt (AM200®)	Qty.	C5 Carbide (TiAlN)	Qty.	Solid Carbide (AM210®)	Qty.	
- 4	7/16-20 UNF-2B	J1926-04Y-063F	1	45YH-.386	2	J1926-02-C5A	2	TMAK0438-20	1	ATK-K-04
- 5	1/2-20 UNF-2B	J1926-05Z-063F	1	45ZH-11.5	2	J1926-02-C5A	2	TMAK0438-20	1	ATK-K-05
- 6	9/16-18 UNF-2B	J1926-060-075F	1	450H-13	2	J1926-02-C5A	2	TMAK0563-18	1	ATK-K-06
- 8	3/4-16 UNF-2B	J1926-080-075F	1	450H-0022	2	J1926-07-C5A	2	TMAK0750-16	1	ATK-K-08
-10	7/8-14 UNF-2B	J1926-101-100F	1	451H-20.5	2	J1926-07-C5A	2	TMAK0875-14	1	ATK-K-10
-12	1 1/16-12 UN-2B	J1926-122-125F	1	452H-25	2	J1926-08-C5A	2	TMAK1063-12	1	ATK-K-12
-14	1 3/16-12UN-2B	J1926-142-125F	1	452H-28	2	J1926-08-C5A	2	TMAK1063-12	1	ATK-K-14
-16	1 5/16-12 UN-2B	J1926-162-125F	1	452H-31	2	J1926-08-C5A	2	TMAK1063-12	1	ATK-K-16
-20	1 5/8-12 UN-2B	J1926-203-150F	1	453H-39	1	J1926-10-C5A	2	TMAK1063-12	1	ATK-K-20
-24	1 7/8-12 UN-2B	J1926-243-150F	1	453H-45.5	1	J1926-10-C5A	2	TMAK1063-12	1	ATK-K-24
-32	2 1/2-12 UN-2B	J1926-324-150F	1	454H-61.5	1	J1926-12-C5A	2	TMAK1063-12	1	ATK-K-32

Non-Ferrous Material Kit										
Tube Dash No.	Port Thread Size	Port Contour Cutter No.	Qty.	T-A® Drill Item No.		Port Form Insert Item No.		AccuThread 856® Item No.		Kit Item No.
				Super Cobalt (TiN)	Qty.	C5 Carbide (TiAlN)	Qty.	Solid Carbide (Uncoated)	Qty.	
- 4	7/16-20 UNF-2B	J1926-04Y-063F	1	15YT-.386	2	J1926-02-C5A	2	TMAU0438-20	1	ATK-U-04
- 5	1/2-20 UNF-2B	J1926-05Z-063F	1	15ZT-11.5	2	J1926-02-C5A	2	TMAU0438-20	1	ATK-U-05
- 6	9/16-18 UNF-2B	J1926-060-075F	1	150T-13	2	J1926-02-C5A	2	TMAU0563-18	1	ATK-U-06
- 8	3/4-16 UNF-2B	J1926-080-075F	1	150T-0022	2	J1926-07-C5A	2	TMAU0750-16	1	ATK-U-08
-10	7/8-14 UNF-2B	J1926-101-100F	1	151T-20.5	2	J1926-07-C5A	2	TMAU0875-14	1	ATK-U-10
-12	1 1/16-12 UN-2B	J1926-122-125F	1	152T-25	2	J1926-08-C5A	2	TMAU1063-12	1	ATK-U-12
-14	1 3/16-12 UN-2B	J1926-142-125F	1	152T-28	2	J1926-08-C5A	2	TMAU1063-12	1	ATK-U-14
-16	1 5/16-12 UN-2B	J1926-162-125F	1	152T-31	2	J1926-08-C5A	2	TMAU1063-12	1	ATK-U-16
-20	1 5/8-12 UN-2B	J1926-203-150F	1	453T-39	1	J1926-10-C5A	2	TMAU1063-12	1	ATK-U-20
-24	1 7/8-12 UN-2B	J1926-243-150F	1	453T-45.5	1	J1926-10-C5A	2	TMAU1063-12	1	ATK-U-24
-32	2 1/2-12 UN-2B	J1926-324-150F	1	454T-61.5	1	J1926-12-C5A	2	TMAU1063-12	1	ATK-U-32



UN (AccuPort 432® Specific)

Inch Shank

Item No.	Port Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMAK0438-20	-4 to -5	20	4	0.335	0.375	0.600	3.500"	❍
TMAK0563-18	-6	18	4	0.370	0.375	0.666	3.500"	❍
TMAK0750-16	-8	16	4	0.495	0.500	0.750	3.500"	❍
TMAK0875-14	-10	14	4	0.495	0.500	0.857	3.500"	❍
TMAK1063-12	-12 to -32	12	4	0.495	0.500	0.917	3.500"	❍

Metric Shank

Item No.	Port Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ AM210®
TMAK0438-20M	-4 to -5	20	4	8,51	10,00	15,24	73,00	❍
TMAK0563-18M	-6	18	4	9,40	10,00	16,92	73,00	❍
TMAK0750-16M	-8	16	4	11,94	12,00	19,05	84,00	❍
TMAK0875-14M	-10	14	4	11,94	12,00	21,77	84,00	❍
TMAK1063-12M	-12 to -32	12	4	11,94	12,00	23,29	84,00	❍

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

Notes

Threadmills USA

CONTENTS

NPT 18
NPT (Coolant Through) 18
NPT (Heavy Duty) 18
NPTF 18
NPS 19
NPSF 19
BSPT 19
BSPP 19
UN 20
UN (Coolant Through) 21
UN (Heavy Duty) 21
UN (Double End) 21
Metric 22

Features & Benefits

- **TiAlN coating for improved tool life over uncoated tools**
- **Helical flutes for increased stability**
- **Thicker core for increased strength**

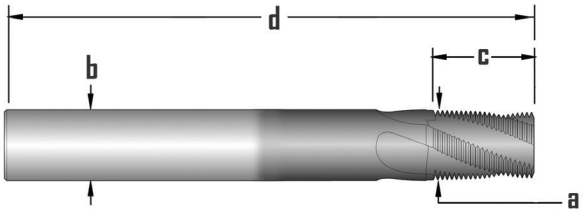
ThreadMills USA

An Allied Machine & Engineering Co.

Threadmills USA

Solid Carbide

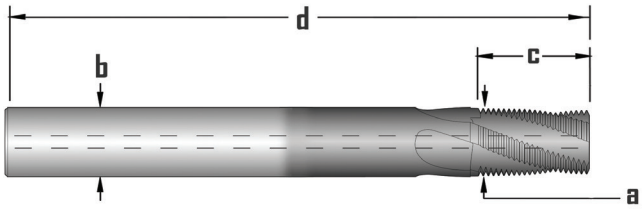
ThreadMills USA
An Allied Machine & Engineering Co.



NPT

Inch Shank

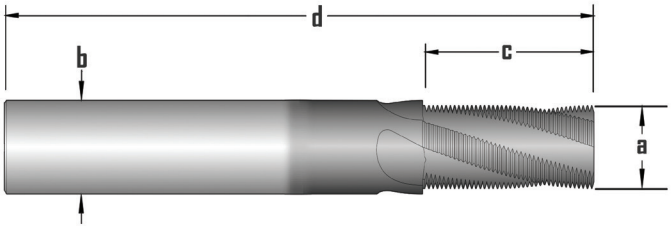
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM27NPT	1/16" and 1/8"	27	3	0.245	0.250	0.437	2.500	❍
TM18NPT	1/4" and 3/8"	18	4	0.305	0.312	0.625	3.000	❍
TM14NPT	1/2" and 3/4"	14	4	0.495	0.500	0.875	3.500	❍
TM11NPT	1" to 2"	11.5	4	0.620	0.625	1.125	4.000	❍
TM8NPT	2-1/2" to 6"	8	4	0.745	0.750	1.500	5.000	❍



NPT (Coolant Through)

Inch Shank

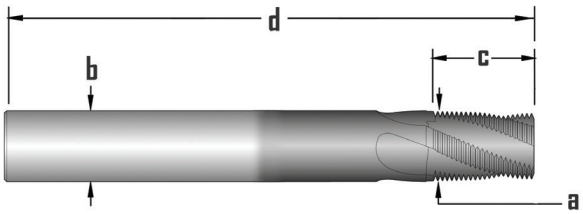
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	Coolant Hole Size	❶ TiAlN
TM18NPTCH	1/4" and 3/8"	18	4	0.305	0.312	0.625	3.000	1.3mm	❍
TM14NPTCH	1/2" and 3/4"	14	4	0.495	0.500	0.875	3.500	2.0mm	❍



NPT (Heavy Duty)

Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
HDTM27NPT	1/8"	27	3	0.300	0.312	0.482	3.000	❍
HDTM18NPT	1/4" and 3/8"	18	4	0.363	0.375	0.680	3.500	❍
HDTM14NPT	3/4"	14	4	0.620	0.625	1.000	4.000	❍
HDTM11NPT	1"	11.5	5	0.745	0.750	1.219	4.000	❍



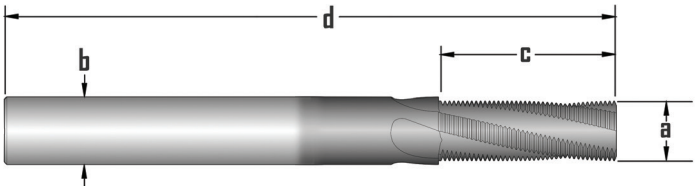
NPTF

Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM27NPTF	1/16" and 1/8"	27	3	0.245	0.250	0.437	2.500	❍
TM18NPTF	1/4" and 3/8"	18	4	0.305	0.312	0.625	3.000	❍
TM14NPTF	1/2" and 3/4"	14	4	0.495	0.500	0.875	3.500	❍
TM11NPTF	1" to 2"	11.5	4	0.620	0.625	1.125	4.000	❍
TM8NPTF	2-1/2" to 6"	8	4	0.745	0.750	1.500	5.000	❍

Threadmills USA

Solid Carbide



NPS

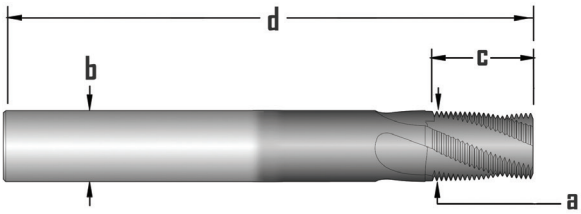
Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM27NPS	1/8"	27	3	0.245	0.250	0.630	2.500	❍
TM18NPS	1/4" and 3/8"	18	4	0.370	0.375	0.889	3.500	❍
TM14NPS	1/2" and 3/4"	14	4	0.490	0.500	1.288	3.500	❍
TM11NPS	1" to 2"	11.5	4	0.620	0.625	1.392	4.000	❍

NPSF

Inch Shank

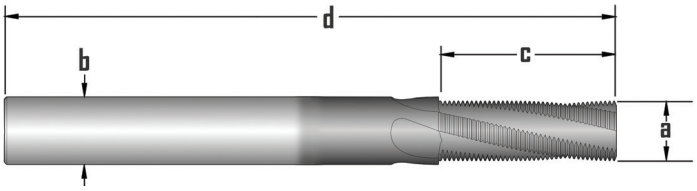
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM27NPSF	1/8"	27	3	0.245	0.250	0.630	2.500	❍
TM18NPSF	1/4" and 3/8"	18	4	0.370	0.375	0.889	3.500	❍
TM14NPSF	1/2" and 3/4"	14	4	0.490	0.500	1.288	3.500	❍
TM11NPSF	1" to 2"	11.5	4	0.620	0.625	1.392	4.000	❍



BSPT

Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM28BSPT	1/16" and 1/8"	28	3	0.240	0.250	0.393	2.500	❍
TM19BSPT	1/4" and 3/8"	19	4	0.310	0.312	0.580	3.000	❍
TM14BSPT	1/2" and 3/4"	14	4	0.470	0.500	0.787	3.500	❍
TM11BSPT	1" to 2"	11	4	0.620	0.625	1.546	4.000	❍



BSPP

Inch Shank

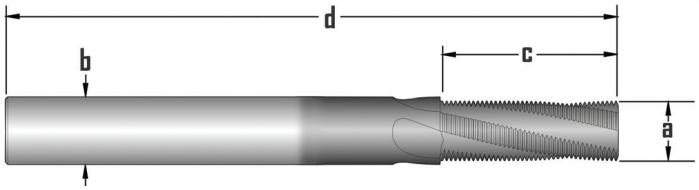
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM28BSPP	1/16" and 1/8"	28	3	0.240	0.250	0.572	2.500	❍
TM19BSPP	1/4" and 3/8"	19	4	0.310	0.312	0.737	3.000	❍
TM14BSPP	1/2" and 3/4"	14	4	0.470	0.500	1.143	3.500	❍
TM11BSPP	1" to 2"	11	4	0.620	0.625	1.365	4.000	❍

❶ Availability Codes
❍ Stocked

Uncoated threadmills are non-stock standards - 5 work day delivery applies.

Threadmills USA

Solid Carbide



UN

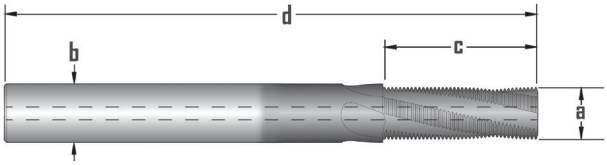
Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM08656	#2	56	3*	0.065	0.125	0.125	2.000	❍
TM09948	#3	48	3*	0.075	0.125	0.167	2.000	❍
TM12544	#5	44	3	0.095	0.125	0.228	2.000	❍
TM12540	#4	40	3*	0.085	0.125	0.175	2.000	❍
TM16436	#8	36	3*	0.115	0.125	0.250	2.000	❍
TM13832	#6	32	3	0.100	0.125	0.218	2.000	❍
TM16432	#8	32	3	0.115	0.125	0.250	2.000	❍
TM19032	#10	32	3	0.120	0.125	0.312	2.000	❍
TM50032	1/2"	32	6	0.370	0.375	1.000	3.500	❍
TM19028	#10	28	3	0.120	0.125	0.312	2.000	❍
TM25028	1/4"	28	3	0.180	0.187	0.500	2.500	❍
TM50028	1/2"	28	6	0.370	0.375	1.000	3.500	❍
TM19024	#10	24	3	0.120	0.125	0.312	2.000	❍
TM31224	5/16"	24	3	0.235	0.250	0.625	2.500	❍
TM37524	3/8"	24	4	0.285	0.312	0.750	3.000	❍
TM50024	1/2"	24	6	0.370	0.375	1.000	3.500	❍
TM25020	1/4"	20	3	0.180	0.187	0.500	2.500	❍
TM43720	7/16"	20	4	0.335	0.375	0.875	3.500	❍
TM50020	1/2"	20	6	0.370	0.375	1.000	3.500	❍
TM31218	5/16"	18	3	0.235	0.250	0.625	2.500	❍
TM56218	9/16"	18	4	0.370	0.375	0.875	3.500	❍
TM37516	3/8"	16	4	0.285	0.312	0.750	3.000	❍
TM75016	3/4"	16	4	0.490	0.500	1.250	3.500	❍
TM43714	7/16"	14	4	0.305	0.312	0.750	3.000	❍
TM87514	7/8"	14	4	0.490	0.500	1.250	3.500	❍
TM50013	1/2"	13	4	0.350	0.375	0.875	3.500	❍
TM56212	9/16"	12	4	0.370	0.375	0.875	3.500	❍
TM75012	3/4"	12	4	0.495	0.500	1.250	3.500	❍
TM10012	1"	12	6	0.745	0.750	1.500	4.000	❍
TM62511	5/8"	11	4	0.470	0.500	1.250	3.500	❍
TM75010	3/4"	10	4	0.495	0.500	1.250	3.500	❍
TM87509	7/8"	9	4	0.620	0.625	1.375	4.000	❍
TM10008	1"	8	4	0.620	0.625	1.375	4.000	❍
TM12507	1-1/8"	7	5	0.745	0.750	1.572	4.500	❍

*Straight fluted

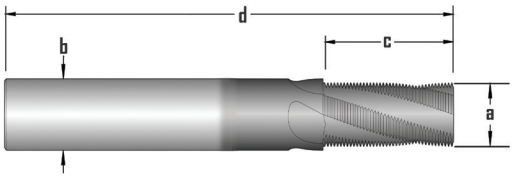
❶ Availability Codes
❍ Stocked

Uncoated threadmills are non-stock standards - 5 work day delivery applies.



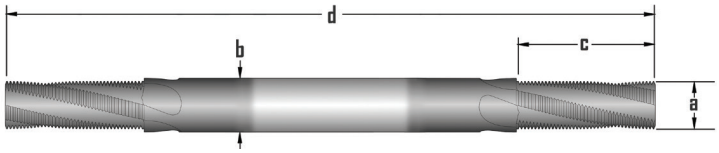
UN (Coolant Through)
Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	Coolant Hole Size	❶ TiAlN
TM19032CH	#10	32	3	0.150	0.187	0.312	2.375	.5mm	❍
TM25028CH	1/4"	28	3	0.180	0.187	0.500	2.375	.5mm	❍
TM19024CH	#10	24	3	0.145	0.187	0.312	2.375	.5mm	❍
TM31224CH	5/16"	24	3	0.235	0.250	0.625	2.375	1.0mm	❍
TM37524CH	3/8"	24	4	0.285	0.312	0.750	3.000	1.3mm	❍
TM25020CH	1/4"	20	3	0.180	0.187	0.500	2.375	.5mm	❍
TM43720CH	7/16"	20	4	0.335	0.375	0.875	3.000	1.5mm	❍
TM31218CH	5/16"	18	3	0.235	0.250	0.625	2.375	1.0mm	❍
TM56218CH	9/16"	18	4	0.370	0.375	0.875	3.000	1.5mm	❍
TM37516CH	3/8"	16	4	0.285	0.312	0.750	3.000	1.3mm	❍
TM75016CH	3/4"	16	4	0.490	0.500	1.250	3.500	2.0mm	❍
TM43714CH	7/16"	14	4	0.305	0.312	0.750	3.000	1.3mm	❍
TM50013CH	1/2"	13	4	0.350	0.375	0.875	3.000	1.5mm	❍
TM75012CH	3/4"	12	4	0.495	0.500	1.250	3.500	2.0mm	❍
TM62511CH	5/8"	11	4	0.470	0.500	1.250	3.500	2.0mm	❍
TM75010CH	3/4"	10	4	0.495	0.500	1.250	3.500	2.0mm	❍
TM87509CH	7/8"	9	4	0.620	0.625	1.375	4.000	2.5mm	❍
TM10008CH	1"	8	4	0.620	0.625	1.375	4.000	2.5mm	❍



UN (Heavy Duty)
Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
HDTM19032	#10	32	3	0.150	0.187	0.312	2.500	❍
HDTM19024	#10	24	3	0.145	0.187	0.312	2.500	❍
HDTM25020	1/4"	20	3	0.195	0.250	0.500	2.500	❍
HDTM31218	5/16"	18	3	0.245	0.312	0.625	3.000	❍
HDTM37516	3/8"	16	4	0.300	0.375	0.750	3.500	❍
HDTM50013	1/2"	13	4	0.400	0.500	0.875	3.500	❍



UN (Double End)
Inch Shank

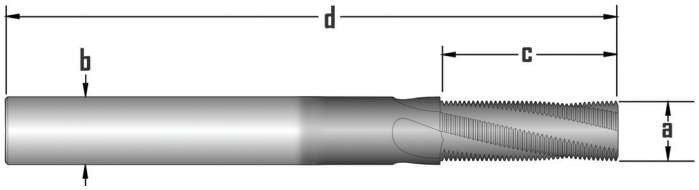
Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM19032DE	#10	32	3	0.120	0.125	0.220	2.000	❍
TM25020DE	1/4"	20	3	0.180	0.187	0.350	2.500	❍
TM31218DE	5/16"	18	3	0.235	0.250	0.390	2.500	❍
TM37516DE	3/8"	16	4	0.285	0.312	0.440	3.000	❍
TM50013DE	1/2"	13	4	0.350	0.375	0.620	3.500	❍

❶ Availability Codes
❍ Stocked

Uncoated threadmills are non-stock standards - 5 work day delivery applies.

Threadmills USA

Solid Carbide



Metric

Inch Shank

Item No.	Min Thread Size	Pitch	Flutes	Max Cutter Dia. (a)	Shank Dia. (b)	Length of Cut (c)	OAL (d)	❶ TiAlN
TM30050	M3	0.50	3*	0.085	0.125	0.178	2.000	❍
TM40070	M4	0.70	3	0.115	0.125	0.276	2.000	❍
TM45075	M4.5	0.75	3	0.120	0.125	0.178	2.000	❍
TM80075	M8	0.75	3	0.235	0.250	0.625	2.500	❍
TM50080	M5	0.80	3	0.120	0.125	0.312	2.000	❍
TM60100	M6	1.00	3	0.170	0.187	0.500	2.500	❍
TM12100	M12	1.00	4	0.360	0.375	0.875	3.500	❍
TM80125	M8	1.25	3	0.235	0.250	0.625	2.500	❍
TM10150	M10	1.50	4	0.300	0.312	0.750	3.000	❍
TM14150	M14	1.50	4	0.370	0.375	0.875	3.500	❍
TM18150	M18	1.50	4	0.490	0.500	1.250	3.500	❍
TM12175	M12	1.75	4	0.360	0.375	0.875	3.500	❍
TM16200	M16	2.00	4	0.470	0.500	1.250	3.500	❍
TM20250	M20	2.50	4	0.495	0.500	1.250	3.500	❍
TM24300	M24	3.00	4	0.620	0.625	1.375	4.000	❍

*Straight fluted

❶ Availability Codes
❍ Stocked

Uncoated threadmills are non-stock standards - 5 work day delivery applies.

AccuThread 856®
Bolt-in Indexable

CONTENTS

NPT 24
NPTF 24
BSPT 24
Tapered Form Holders 24
UN 25
UNJ 26
Metric 26-27
BSPP 27
Straight Form Holders 27

Features & Benefits

- **Dampened stainless steel holders**
- **Carbide inserts with AM210® coating**
- **Variety of thread forms interchangeable in a single holder**

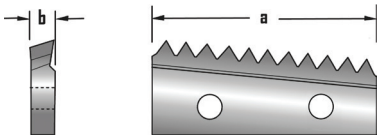
ALLIED MACHINE & ENGINEERING CORP

Bolt-in Style

Taper Forms

NPT

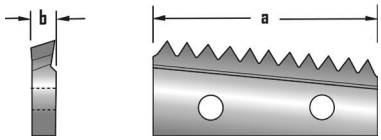
Internal / External



Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-NPT18	18	0.750	19,05	0.080	2,03	❍
TP100K-NPT14	14	1.000	25,40	0.140	3,56	❍

NPTF

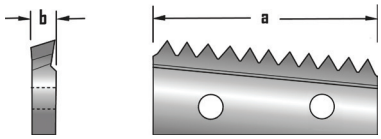
Internal / External



Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-NPTF18	18	0.750	19,05	0.080	2,03	❍
TP100K-NPTF14	14	1.000	25,40	0.140	3,56	❍

BSPT

Internal / External

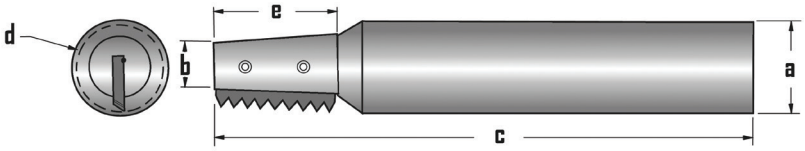


Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-BSPT19	19	0.750	19,05	0.080	2,03	❍
TP100K-BSPT14	14	1.000	25,40	0.140	3,56	❍
TP100K-BSPT19	19					❍

Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

NPT / NPTF / BSPT

Internal / External



Inch Shank

Item No.	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THT-0400-1F075	TP075K	0.500	0.229	3.000	0.400	0.750	1	TMS-250	❍
THT-0659-1F100	TP100K	0.500	0.379	3.000	0.659	1.000	1	TMS-45	❍

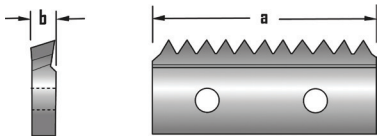
Metric Shank

Item No.	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THT-0400-1F075M	TP075K	13,00	5,82	76,20	10,16	19,05	1	TMS-250	❍
THT-0659-1F100M	TP100K	13,00	9,65	76,20	16,74	25,40	1	TMS-45	❍

Note: Indexable Threadmill Holders are sold in 1 pc. packages.

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

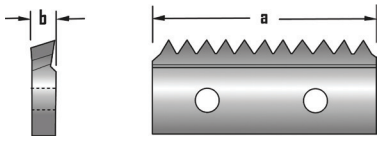
All other coatings are non-stocked standards - 20 work day delivery applies.



UN
Internal

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-UN32I	32	0.750	19,05	0.080	2,03	❍
TP075K-UN24I	24					❍
TP075K-UN20I	20					❍
TP075K-UN18I	18					❍
TP075K-UN16I	16					❍
TP100K-UN32I	32	1.000	25,40	0.140	3,56	❍
TP100K-UN24I	24					❍
TP100K-UN20I	20					❍
TP100K-UN18I	18					❍
TP100K-UN16I	16					❍
TP100K-UN14I	14					❍
TP100K-UN12I	12					❍
TP100K-UN10I*	10					❍

*This item is used only with THN-0611-1F100 or TNH-0611-1F100M. The reduced body allows a 3/4"-10 UN/UNJ to be produced.



UN
External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-UN32E	32	0.750	19,05	0.080	2,03	▲
TP075K-UN24E	24					▲
TP075K-UN20E	20					▲
TP075K-UN18E	18					▲
TP075K-UN16E	16					▲
TP100K-UN32E	32	1.000	25,40	0.140	3,56	▲
TP100K-UN24E	24					▲
TP100K-UN20E	20					▲
TP100K-UN18E	18					▲
TP100K-UN16E	16					▲
TP100K-UN14E	14					▲
TP100K-UN12E	12					▲

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

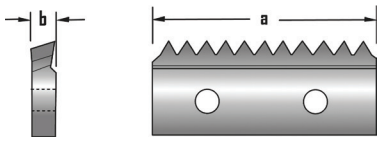
All other coatings are non-stocked standards - 20 work day delivery applies.

Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

Bolt-in Style

Straight Forms

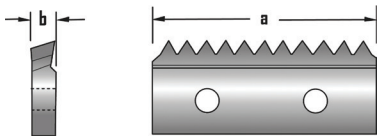
UNJ
Internal



Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-UNJ32I	32	0.750	19,05	0.080	2,03	▲
TP075K-UNJ24I	24					▲
TP075K-UNJ20I	20					▲
TP075K-UNJ18I	18					▲
TP075K-UNJ16I	16					▲
TP100K-UNJ32I	32	1.000	25,40	0.140	3,56	▲
TP100K-UNJ24I	24					▲
TP100K-UNJ20I	20					▲
TP100K-UNJ18I	18					▲
TP100K-UNJ16I	16					▲
TP100K-UNJ14I	14					▲
TP100K-UNJ12I	12					▲
TP100K-UNJ10I*	10					▲

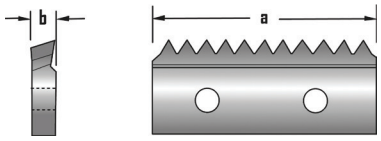
*This item is used only with THN-0611-1F100 or TNH-0611-1F100M. The reduced body allows a 3/4"-10 UN/UNJ to be produced.

UNJ
External



Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-UNJ32E	32	0.750	19,05	0.080	2,03	▲
TP075K-UNJ24E	24					▲
TP075K-UNJ20E	20					▲
TP075K-UNJ18E	18					▲
TP075K-UNJ16E	16					▲
TP100K-UNJ32E	32	1.000	25,40	0.140	3,56	▲
TP100K-UNJ24E	24					▲
TP100K-UNJ20E	20					▲
TP100K-UNJ18E	18					▲
TP100K-UNJ16E	16					▲
TP100K-UNJ12E	12					▲

Metric
Internal

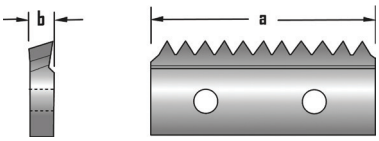


Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-M1.5I	1.5	0.750	19,05	0.080	2,03	❍
TP075K-M1.25I	1.25					❍
TP075K-M1.0I	1.0					❍
TP075K-M0.5I	0.5					❍
TP100K-M2.0I	2.0	1.000	25,40	0.140	3,56	❍
TP100K-M1.5I	1.5					❍
TP100K-M1.0I	1.0					❍

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

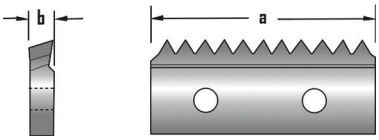
All other coatings are non-stocked standards - 20 work day delivery applies.

Note: Indexable Threadmill Inserts are sold in 2 pc. packages.



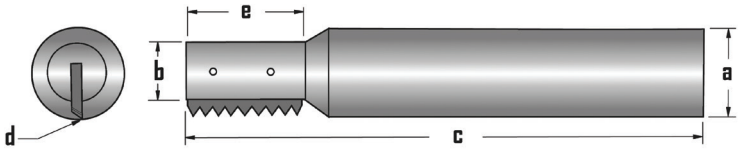
Metric
External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP100K-M2.0E	2.0	1.000	25,40	0.140	3,56	▲
TP100K-M1.5E	1.5					▲
TP100K-M1.0E	1.0					▲



BSPP
Internal / External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-BSPP19	19	0.750	19,05	0.080	2,03	❍
TP100K-BSPP14	14	1.000	25,40	0.140	3,56	❍
TP100K-BSPP19	19					❍



UN / UNJ / Metric / BSPP
Internal / External

Inch Shank

Item No.	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THN-0394-1F075	TP075K	0.500	0.250	3.000	0.394	0.750	1	TMS-250	❍
THN-0625-1F100	TP100K	0.750	0.454	3.500	0.625	1.000	1	TMS-40	❍
THN-0611-1F100	TP100K	0.750	0.383	3.500	0.611	1.000	1	TMS-40	▲

Metric Shank

Item No.	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THN-0394-1F075M	TP075K	13,00	6,35	76,20	10,01	19,05	1	TMS-250	❍
THN-0625-1F100M	TP100K	25,00	11,58	88,90	15,88	25,40	1	TMS-40	❍

Note: Indexable Threadmill Holders are sold in 1 pc. packages.

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

Notes

AccuThread 856®
Pin Style Indexable

CONTENTS

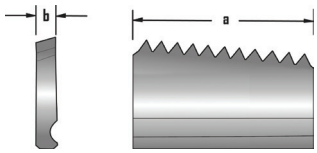
NPT 30
NPTF 30
BSPT 31
BSPP 31
API-Round 31
UN 32
UNJ 33
Metric 34
ACME 34
Positive Rake Holders 35
Neutral Rake Holders 36

Features & Benefits

- **Dampened stainless steel holders**
- **Carbide inserts with AM210® coating**
- **Variety of thread forms interchangeable in a single holder**
- **Body design allows for extended reach for deeper applications**

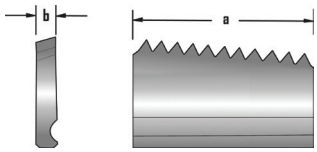
ALLIED MACHINE & ENGINEERING CORP

Pin Style Inserts



NPT
Internal / External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-NPT11.5	11.5	1.500	38,10	0.140	3,56	❍
TN150K-NPT8	8					❍



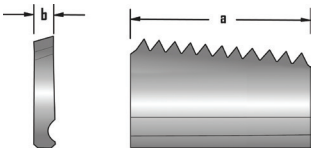
NPTF
Internal / External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-NPTF11.5	11.5	1.500	38,10	0.140	3,56	❍
TN150K-NPTF8	8					❍

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

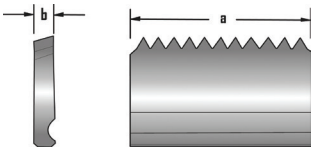
All other coatings are non-stocked standards - 20 work day delivery applies.

Note: Indexable Threadmill Inserts are sold in 2 pc. packages.



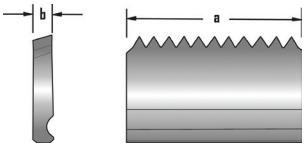
BSPT
Internal / External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-BSPT11	11	1.500	38,10	0.140	3,56	❍



BSPP
Internal / External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-BSPP11	11	1.500	38,10	0.140	3,56	❍



API-ROUND
Internal / External

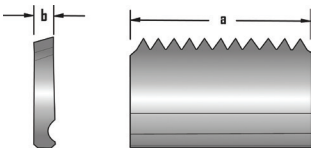
Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-AP10	10	1.500	38,10	0.140	3,56	❍
TN150K-AP8	8					❍

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

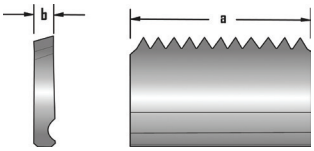
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

Pin Style Inserts



UN
Internal

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN100K-UN32I	32	1.000	25,40	0.140	3,56	❍
TN100K-UN24I	24					❍
TN100K-UN20I	20					❍
TN100K-UN18I	18					❍
TN100K-UN16I	16					❍
TN100K-UN12I	12					❍
TN100K-UN10I	10					❍
TN100K-UN8I	8					❍
TN100K-UN7I	7					❍
TN150K-UN24I	24	1.500	38,10			❍
TN150K-UN20I	20					❍
TN150K-UN18I	18					❍
TN150K-UN16I	16					❍
TN150K-UN14I	14					❍
TN150K-UN12I	12					❍
TN150K-UN10I	10					❍
TN150K-UN8I	8					❍
TN150K-UN7I	7					❍
TN150K-UN6I	6					❍



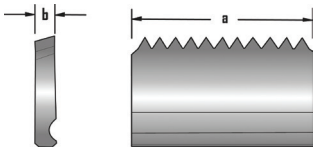
UN
External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN100K-UN32E	32	1.000	25,40	0.140	3,56	▲
TN100K-UN24E	24					▲
TN100K-UN20E	20					▲
TN100K-UN18E	18					▲
TN100K-UN16E	16					▲
TN100K-UN12E	12					▲
TN100K-UN10E	10					▲
TN100K-UN8E	8					▲
TN150K-UN24E	24	1.500	38,10			▲
TN150K-UN20E	20					▲
TN150K-UN18E	18					▲
TN150K-UN16E	16					▲
TN150K-UN12E	12					▲
TN150K-UN10E	10					▲
TN150K-UN8E	8					▲
TN150K-UN6E	6					▲

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

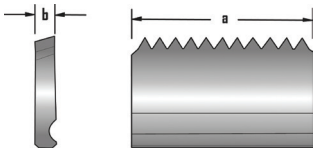
All other coatings are non-stocked standards - 20 work day delivery applies.

Note: Indexable Threadmill Inserts are sold in 2 pc. packages.



UNJ
Internal

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN100K-UNJ32I	32	1.000	25,40	0.140	3,56	▲
TN100K-UNJ24I	24					▲
TN100K-UNJ20I	20					▲
TN100K-UNJ18I	18					▲
TN100K-UNJ16I	16					▲
TN100K-UNJ12I	12					▲
TN100K-UNJ10I	10					▲
TN150K-UNJ24I	24	1.500	38,10			▲
TN150K-UNJ20I	20					▲
TN150K-UNJ18I	18					▲
TN150K-UNJ16I	16					▲
TN150K-UNJ12I	12					❍
TN150K-UNJ10I	10					▲
TN150K-UNJ8I	8					▲



UNJ
External

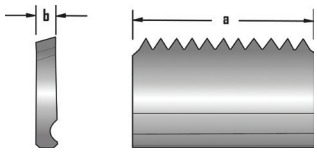
Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN100K-UNJ32E	32	1.000	25,40	0.140	3,56	▲
TN100K-UNJ24E	24					▲
TN100K-UNJ20E	20					▲
TN100K-UNJ18E	18					▲
TN100K-UNJ16E	16					▲
TN100K-UNJ12E	12					▲
TN100K-UNJ10E	10					▲
TN150K-UNJ24E	24	1.500	38,10			▲
TN150K-UNJ20E	20					▲
TN150K-UNJ18E	18					▲
TN150K-UNJ16E	16					▲
TN150K-UNJ12E	12					▲
TN150K-UNJ10E	10					▲
TN150K-UNJ8E	8					▲

❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

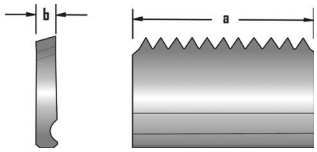
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

Pin Style Inserts



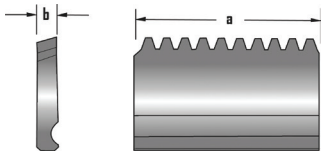
Metric
Internal

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-M6.0I	6.0	1.500	38,10	0.140	3,56	❍
TN150K-M5.0I	5.0					❍
TN150K-M4.5I	4.5					❍
TN150K-M4.0I	4.0					❍
TN150K-M3.5I	3.5					❍
TN150K-M3.0I	3.0					❍
TN150K-M2.5I	2.5					❍
TN150K-M2.0I	2.0					❍
TN150K-M1.5I	1.5					❍



Metric
External

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-M6.0E	6.0	1.500	38,10	0.140	3,56	▲
TN150K-M5.0E	5.0					▲
TN150K-M4.5E	4.5					▲
TN150K-M4.0E	4.0					▲
TN150K-M2.0E	2.0					▲



ACME (Full Profile)
Internal

Item No.	Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN100K-FA12	12	1.000	25,40	0.140	3,56	❍
TN100K-FA10	10					❍
TN100K-FA8	8					❍
TN150K-FA12	12	1.500	38,10			❍
TN150K-FA10	10					❍
TN150K-FA8	8					❍
TN150K-FA6	6					❍
TN150K-FA5	5					❍

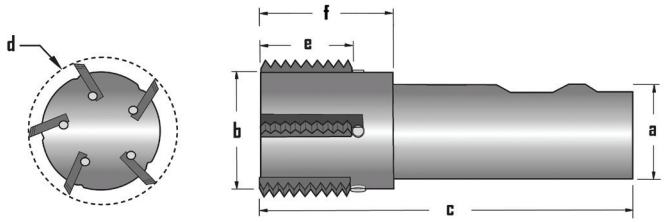
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

All other coatings are non-stocked standards - 20 work day delivery applies.

Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

Pin Style Holders

Positive Rake



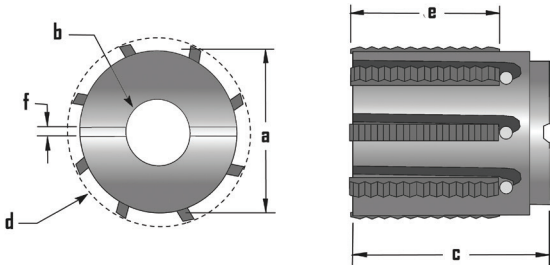
Weldon (Positive Rake)

Inch Shank

Item No.	Insert	Coolant Port	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Flute Length (f)	Flutes	Screw	Pin	❶
THP-0969-2F100	TN100K-	N	1.000	0.750	4-1/2"	0.969	–	1.000	1.38	2	TMSS-3	TMP-1	❍
THP-1755-5F100		Y	1.250	1.500	4"	1.755	–		2.25	5	TMSS-2	TMP-1	❍
THP-0932-1F150	TN150K-	N	1.000	0.722	4-1/2"	0.932	1.063	1.500	1.90	1	TMSS-2	TMP-2	❍
THP-1116-3F150		Y	1.000	0.812	4-1/2"	1.116	1.247		2.00	3	TMSS-3	TMP-2	❍
THP-1755-5F150		Y	1.250	1.500	4-1/2"	1.755	1.887		2.25	5	TMSS-2	TMP-2	❍
THP-0969-2F150		N	1.000	0.750	4-1/2"	0.969	1.100		2.00	2	TMSS-3	TMP-2	❍

Metric Shank

Item No.	Insert	Coolant Port	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Flute Length (f)	Flutes	Screw	Pin	❶
THP-0969-2F100M	TN100K-	N	25,00	19,05	114,30	24,61	–	25,40	35,05	2	TMSS-3	TMP-1	▲
THP-1755-5F100M		Y	32,00	38,10	101,60	44,58	–		57,15	5	TMSS-2	TMP-1	▲
THP-0932-1F150M	TN150K-	N	25,00	18,34	114,30	23,67	27,00	38,10	48,44	1	TMSS-2	TMP-2	▲
THP-1116-3F150M		Y	25,00	20,63	114,30	28,35	31,67		50,80	3	TMSS-3	TMP-2	▲
THP-1755-5F150M		Y	32,00	38,10	114,30	44,58	47,93		57,15	5	TMSS-2	TMP-2	▲
THP-0969-2F150M		N	25,00	19,05	114,30	24,61	27,94		50,80	2	TMSS-3	TMP-2	▲



Shell Mill (Positive Rake)

Inch Connection

Item No.	Insert	Body Dia. (a)	Bore Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Slot Width (f)	Flutes	Screw	Pin	❶
TSN-2846-7F150	TN150K-	2.500	1.000	2.250	2.714	2.845	1.500	0.375	7	TMSS-2	TMP-2	❍
TSN-3341-8F150		3.000	1.250	2.250	3.208	3.340	1.500	0.500	8	TMSS-2	TMP-2	❍

Metric Connection

Item No.	Insert	Body Dia. (a)	Bore Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Slot Width (f)	Flutes	Screw	Pin	❶
TSN-2846-7F150M	TN150K-	63,50	27,00	57,15	68,94	72,26	38,10	12	7	TMSS-2	TMP-2	▲
TSN-3341-8F150M		76,20	32,00	57,15	81,48	84,84	38,10	14	8	TMSS-2	TMP-2	▲

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

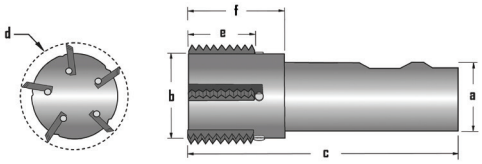
NPT 8 • NPTF 11.5 • NPTF 8 • API 8 • Metric 6.0 • Metric 5.0 • Metric 4.5 • ACME 5

❶ Availability Codes
❍ Stocked
▲ Non-Stocked

Note: Indexable Threadmill Holders are sold in 1 pc. packages.

Pin Style Holders

Neutral Rake



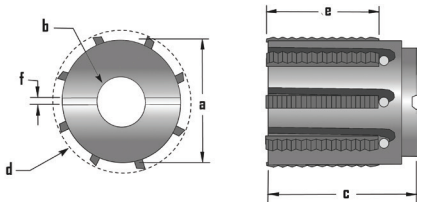
Weldon (Neutral Rake)

Inch Shank

Item No.	Insert	Coolant Port	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Flute Length (f)	Flutes	Screw	Pin	❶
TNR-1116-3F150	TN150K-	Y	1.000	0.812	4-1/2	1.116	1.247	1.500	2.00	3	TMSS-3	TMP-2	❍
TNR-1755-5F150		Y	1.250	1.500	4-1/2	1.755	1.887		2.25	5	TMSS-2	TMP-2	❍

Metric Shank

Item No.	Insert	Coolant Port	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Flute Length (f)	Flutes	Screw	Pin	❶
TNR-1116-3F150M	TN150K-	Y	25,00	20,63	114,30	28,35	31,67	38,10	50,80	3	TMSS-3	TMP-2	▲
TNR-1755-5F150M		Y	32,00	38,10	114,30	44,58	47,93		57,15	5	TMSS-2	TMP-2	▲



Shell Mill (Neutral Rake)

Inch Connection

Item No.	Insert	Body Dia. (a)	Bore Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Slot Width (f)	Flutes	Screw	Pin	❶
TSR-2217-6F150	TN150K-	2.000	0.750	2.250	2.217	2.349	1.500	0.312	6	TMSS-2	TMP-2	❍

Metric Connection

Item No.	Insert	Body Dia. (a)	Bore Dia. (b)	OAL (c)	Cutter Dia. (d)	*Oversized Cutter Dia. (d)	Insert Length (e)	Slot Width (f)	Flutes	Screw	Pin	❶
TSR-2217-6F150M	TN150K-	50,80	22,00	57,15	56,31	59,66	38,10	10,00	6	TMSS-2	TMP-2	▲

*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

❶ Availability Codes
❍ Stocked
▲ Non-Stocked

Note: Indexable Threadmill Holders are sold in 1 pc. packages.

Technical

CONTENTS

Pre-Drill Diameter Chart 38
Pass Charts & Formulas 39
Speed & Feed Charts
- AccuThread 856® Solid Carbide (Inch) 40
- AccuThread 856® Solid Carbide (Metric) 41
- AccuThread 856® Indexable Positive Rake (Inch) 42
- AccuThread 856® Indexable Positive Rake (Metric) 43
- AccuThread 856® Indexable Neutral Rake (Inch) 44
- AccuThread 856® Indexable Neutral Rake (Metric) 45
- Threadmills USA Solid Carbide (Inch) 46
- Threadmills USA Solid Carbide (Metric) 47

Programming Guide 48
Troubleshooting Guide 49
Application Request 50

ALLIED MACHINE & ENGINEERING CORP

Pre-Drill Diameter Chart

Thread Specification and Drill Chart

Thread Specification	Use this drill	Closest Fraction	Decimal Inches
#2-56	#50	–	0.0700
#3-56	#45	–	0.0820
#4-40	#43	3/32"	0.0890
1/8-40	#38	–	0.1015
#5-40	#38	–	0.1015
#6-40	#33	–	0.1130
M4 x .07	3,4mm	–	0.1338
M4 x .075	3,4mm	–	0.1338
#8-32	#29	–	0.1360
#8-40	#28	–	0.1405
3/16-24	#26	–	0.1470
#10-24	#25	5/32"	0.1495
3/16-32	#22	–	0.1570
#10-32	#21	5/32"	0.1590
M5 x .09	4,2mm	–	0.1653
M5 x .08	4,2mm	–	0.1693
#12-24	#16	11/64"	0.1770
#12-28	#14	3/16"	0.1820
#12-32	#13	–	0.1850
1/4-20	#10	–	0.1935
1/4-20	#7	13/64"	0.2010
1/4-24	#7	–	0.2010
M6 x 1.0	5,2mm	–	0.2047
1/4-24	#4	–	0.2090
1/4-28	#3	7/32"	0.2130
1/4-32	7/32"	7/32"	0.2188
1/4-40	#1	–	0.2280
M7 x 1.0	6,1mm	15/64"	0.2401
5/16-18	F	17/64"	0.2570
M8 x 1.25	6,9mm	17/64"	0.2716
5/16-24	I	–	0.2720
M8 x 1.0	7,1mm	–	0.2795
5/16-32	9/32"	9/32"	0.2812
M9 x 1.25	7,9mm	–	0.3110
3/8-16	5/16"	5/16"	0.3125
M9 x 1.0	8,1mm	–	0.3189
M9 x 0.75	8,3mm	–	0.3268
3/8-24	Q	21/64"	0.3320
M10 x 1.5	8,7mm	–	0.3425
M10 x 1.25	8,9mm	11/32"	0.3503
M10 x 1.0	9,1mm	–	0.3583
7/16-14	U	23/64"	0.3680
M11 x 1.5	9,7mm	–	0.3818
7/16-20	25/64"	25/64"	0.3906
M12 x 1.75	10,5mm	–	0.4133
M12 x 1.5	10,7mm	27/64"	0.4212
1/2-13	27/64"	27/64"	0.4291
M12 x 1.25	10,9mm	27/64"	0.4291

Thread Specification	Use this drill	Closest Fraction	Decimal Inches
1/2-20	29/64"	29/64	0.4531
M14 x 2.0	12,2mm	–	0.4803
9/16-12	31/64"	31/64	0.4844
M14 x 1.5	12,7mm	–	0.4999
M14 x 1.25	12,8mm	–	0.5039
9/16-18	33/64"	33/64	0.5156
5/8-11	17/32"	17/32	0.5312
M16 x 2.0	14,2mm	35/64	0.5590
5/8-18	37/64"	37/64	0.5781
M16 x 1.5	14,7mm	–	0.5787
11/16-11	19/32"	19/32	0.5938
M18 x 2.5	15,8mm	39/64	0.5220
11/16-16	5/8"	5/8	0.6250
3/4-10	21/32"	21/32	0.6562
M18 x 1.5	16,8mm	–	0.6614
3/4-16	11/16"	11/16	0.6875
M20 x 2.5	17,8mm	11/16	0.7008
7/8-9	49/64"	49/64	0.7656
7/8-14	13/16"	13/16	0.8125
M22 x 1.5	20,9mm	–	0.8228
7/8-18	53/64"	53/64	0.8281
M24 x 3.0	21,4mm	53/64	0.8425
1-8	7/8"	7/8	0.8750
M24 x 2.0	22,3mm	–	0.8779
1-12	59/64"	59/64	0.9219
1-14	15/16"	15/16	0.9375
1-1/8-7	63/64"	63/64	0.9844
1-1/8-12	1-3/64"	1-3/64	1.0469
1-1/4-7	1-7/64"	1-7/64	1.1094
1-1/4-12	1-11/64"	1-11/64	1.1719
1-3/8-6	1-7/32"	1-7/32	1.2188
1-3/8-12	1-19/64"	1-19/64	1.2969
1-1/2-6	1-11/32"	1-11/32	1.3438
1-1/2-12	1-27/32"	1-27/64	1.4219

NPT Threadmill Chart

Thread Specification	Use this drill	Closest Fraction	Decimal Inches
1/16-27	D	1/4"	0.246
1/8-27	R	11/32"	0.3390
1/4-18	7/16"	7/16"	0.4375
3/8-18	37/64"	37/64"	0.5781
1/2-14	45/64"	45/64"	0.7031
3/4-14	59/64"	59/64"	0.9219
1-11-1/2	1-5/32"	1-5/32"	1.1562
1-1/4-11.5	1-1/2"	1-1/2"	1.5000
1-1/2-11.5	1-47/64"	1-47/64"	1.7344
2-11.5	2-7/32"	2-7/32"	2.2188

Threadmill Drill Calculation

Inch

Based on nominal tap drill diameter. Based on .003" or 0,075mm probable mean oversize

To calculate percent of full thread for given hole diameter:

$$\text{\% Thread} = \text{\# of Threads per inch} * \frac{(\text{Basic major diameter of thread (inch)} - \text{Drill hole size (inch)})}{0.0130}$$

Metric

$$\text{\% Thread} = \frac{76.93}{\text{Pitch (mm)}} * (\text{Basic major diameter of thread (mm)} - \text{Drill hole size (mm)})$$

Major Thread Diameter for # Drills		
# 2	–	.086
# 3	–	.099
# 4	–	.112
# 5	–	.125
# 6	–	.132
# 8	–	.164
# 10	–	.190
# 12	–	.216

Number of Radial Passes

NPT/NPTF/BSPT			
Pitch Size	Materials Machinability		
	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
8	2	3	4

Metric (ISO)			
Pitch Size	Materials Machinability		
	Easy	Average	Difficult
.40	1	1	2
.45	1	1	2
.50	1	1	2
.70	1	1	2
.75	1	1	2
.80	1	1	2
1.0	1	1	2
1.25	1	2	3
1.5	1	2	3
1.75	1	2	3
2.0	1	2	3
2.5	2	3	4
3.0	2	3	4
3.5	2	3	4
4.5	2	3	4
4.0	2	3	4
5.0	2	3	4
6.0	2	3	4

UN/UNJ/BSPP/BSW/NPS/NPSF			
Pitch Size	Materials Machinability		
	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
24	1	1	2
28	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

Formulas

Linear Feed Rate (LFR) = RPM • (IPT • No. of Flutes)

SFM = RPM • 0.262 • DIA.

RPM = (SFM • 3.82) / DIA.

Adjusted Feed Rate (AFR) for internal threadmilling = ((Major DIA. - Cutter DIA.) / Major DIA.) • Linear Feed Rate

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

Example of an internal thread feed rate calculation:

Cast Iron 125 BHN with a 1/2-13 thread form using AccuThread 856® Solid Carbide (TMUK0500-13).

Step 1:

RPM = (SFM • 3.82) / DIA.

RPM = (675 • 3.82) / .350

RPM = 7367

Step 2:

LFR = RPM • (IPT • No. of Flutes)

LFR = 7367 • (.0010 • 4)

LFR = 29.47 IPM

Step 3:

AFR = ((Major DIA. - Cutter DIA.) / Major DIA.) • LFR

AFR = ((.500 - .350) / .500) • 29.47

AFR = 8.84 IPM

AccuThread 856®

Solid Carbide Speeds & Feeds

Inch

Material	Hardness (BHN)	**Machinability	AM210® SFM	Cutter Diameter (Inch) Chipload per Tooth (IPT) .060-.125	.126-.188	.189-.250	.251-.312	.313-.375	.376-.500	.501-.625	.626-.750
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	Easy	900	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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 1010, 1020, 1025, 1522, 1144	85-125	Average	900	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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 1010, 1040, 1050, 1527, 1140	125-175	Average	575	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	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 4140, 5140, 8640	125-175	Average	575	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	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 4340, 4330V, 300M	225-300	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	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 A36, A285, A516	100-150	Average	600	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	120	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
	220-310	Difficult	90	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
Stainless Steel 303, 416, 420	135-185	Difficult	525	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	185-275	Difficult	500	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
Stainless Steel PH 17-4	185-275	Difficult	300	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	275-325	Difficult	150	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
Tool Steel H-13, H21, A-4	150-200	Difficult	575	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	200-250	Difficult	500	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
Cast Iron Gray, Ductile, Nodular	120-150	Easy	675	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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
Wrought Aluminum 6061 T6	30	Easy	1100	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	180	Easy	1000	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
***Cast Aluminum** (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

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

AccuThread 856®

Solid Carbide Speeds & Feeds

Metric

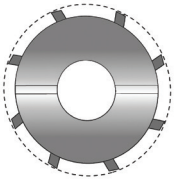
Material	Hardness (BHN)	**Machinability	AM210® M/min	Cutter Diameter (mm) Chipload per Tooth (mm/tooth) 0,00-3,18	3,19-4,76	4,77-6,35	6,36-7,94	7,95-9,53	9,54-12,70	12,71-15,88	15,89-19,05
Free Machining Steel 1118, 1215, 12L14, etc,	100-150	Easy	274	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	150-200	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 1010, 1020, 1025, 1522, 1144	85-125	Average	274	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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 1010, 1040, 1050, 1527, 1140	125-175	Average	175	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	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 4140, 5140, 8640	125-175	Average	175	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	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 4340, 4330V, 300M	225-300	Average	137	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	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 A36, A285, A516	100-150	Average	183	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	37	0,008	0,010	0,015	0,020	0,023	0,025	0,030	0,038
	220-310	Difficult	27	0,008	0,010	0,015	0,020	0,023	0,025	0,030	0,038
Stainless Steel 303, 416, 420	135-185	Difficult	160	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
	185-275	Difficult	152	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
Stainless Steel PH 17-4	185-275	Difficult	91	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
	275-325	Difficult	46	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
Tool Steel H-13, H21, A-4	150-200	Difficult	175	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	200-250	Difficult	152	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
Cast Iron Gray, Ductile, Nodular	120-150	Easy	206	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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
Wrought Aluminum 6061 T6	30	Easy	335	0,013	0,015	0,023	0,025	0,038	0,051	0,064	0,076
	180	Easy	305	0,013	0,015	0,023	0,025	0,038	0,051	0,064	0,076
***Cast Aluminum** (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

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

AccuThread 856®

Indexable Speeds & Feeds

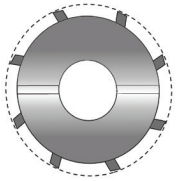


Inch - Positive Rake

Material	Hardness (BHN)	**Machinability	AM210® SFM	.375 - .500	.501 - .750	.751 - 1.000	1.001 - 1.500	1.501 - 2.000	2.001 - 2.750	2.751 - 3.500
	Cutter Diameter (Inch)			.375 - .500	.501 - .750	.751 - 1.000	1.001 - 1.500	1.501 - 2.000	2.001 - 2.750	2.751 - 3.500
	Number of Flutes			1	1	1 & 2	3	5	7	8
				Chipload per Tooth (IPT)						
Free Machining Steel 1118, 1215, 12L14	100-150	Easy	900	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	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 1010, 1020, 1025, 1522, 1144	85-125	Average	900	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	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 1010, 1040, 1050, 1527, 1140	125-175	Average	575	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	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 4140, 5140, 8640	125-175	Average	575	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	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 4340, 4330V, 300M	225-300	Average	450	0.0008	0.0009	0.0010	0.0012	0.0015	0.0020	0.0025
	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 A36, A285, A516	100-150	Average	600	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	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
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	120	0.0005	0.0006	0.0008	0.0010	0.0015	0.0020	0.0025
	220-310	Difficult	90	0.0005	0.0006	0.0008	0.0010	0.0015	0.0020	0.0025
Stainless Steel 303, 416, 420	135-185	Difficult	525	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
	185-275	Difficult	500	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
Stainless Steel PH 17-4	185-275	Difficult	300	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
	275-325	Difficult	150	0.0005	0.0007	0.0009	0.0015	0.0020	0.0025	0.0030
Tool Steel H-13, H21, A-4	150-200	Difficult	575	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
	200-250	Difficult	500	0.0008	0.0010	0.0012	0.0015	0.0020	0.0025	0.0030
Cast Iron Gray, Ductile, Nodular	120-150	Easy	675	0.0008	0.0012	0.0015	0.0020	0.0030	0.0040	0.0050
	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
Wrought Aluminum 6061 T6	30	Easy	1100	0.0015	0.0020	0.0025	0.0030	0.0040	0.0050	0.0060
	180	Easy	1000	0.0015	0.0020	0.0025	0.0030	0.0040	0.0050	0.0060
***Cast Aluminum** (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

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.



AccuThread 856®

Indexable Speeds & Feeds

Metric - Positive Rake

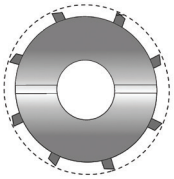
Material	Hardness (BHN)	**Machinability	AM210® M/min	9,53 - 12,70	12,71 - 19,05	19,06 - 25,40	25,41 - 38,10	38,11 - 50,80	50,81 - 69,85	69,85 - 88,90
	Cutter Diameter (mm)			9,53 - 12,70	12,71 - 19,05	19,06 - 25,40	25,41 - 38,10	38,11 - 50,80	50,81 - 69,85	69,85 - 88,90
	Number of Flutes			1	1	1 & 2	3	5	7	8
				Chipload per Tooth (mm/tooth)						
Free Machining Steel 1118, 1215, 12L14	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
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
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
Cast Iron Gray, 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
Wrought Aluminum 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 Aluminum** (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

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

AccuThread 856®

Indexable Speeds & Feeds



Inch - Neutral Rake

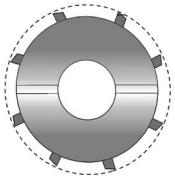
Material	Cutter Diameter (Inch)			1.000 - 1.499	1.500 - 1.999	2.000 - 2.750
	Number of Flutes			3	5	6
	Hardness (BHN)	**Machinability	AM210® SFM	Chipload per Tooth (IPT)		
Free Machining Steel 1118, 1215, 12L14	100-150	Easy	765	0.0013	0.0017	0.0021
	150-200	Easy	595	0.0013	0.0017	0.0021
	200-250	Easy	425	0.0013	0.0017	0.0021
Low Carbon Steel 1010, 1020, 1025, 1522, 1144	85-125	Average	765	0.0013	0.0017	0.0021
	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 1010, 1040, 1050, 1527, 1140	125-175	Average	490	0.0010	0.0013	0.0017
	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 4140, 5140, 8640	125-175	Average	490	0.0010	0.0013	0.0017
	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 4340, 4330V, 300M	225-300	Average	390	0.0010	0.0013	0.0017
	300-350	Difficult	340	0.0010	0.0013	0.0017
	350-400	Difficult	300	0.0010	0.0013	0.0017
Structural Steel A36, A285, A516	100-150	Average	510	0.0013	0.0017	0.0021
	150-250	Average	425	0.0013	0.0017	0.0021
	250-350	Difficult	390	0.0013	0.0017	0.0021
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	100	0.0009	0.0013	0.0017
	220-310	Difficult	80	0.0009	0.0013	0.0017
Stainless Steel 303, 416, 420	135-185	Difficult	450	0.0013	0.0017	0.0021
	185-275	Difficult	425	0.0013	0.0017	0.0021
Stainless Steel PH 17-4	185-275	Difficult	250	0.0013	0.0017	0.0021
	275-325	Difficult	125	0.0013	0.0017	0.0021
Tool Steel H-13, H21, A-4	150-200	Difficult	490	0.0013	0.0017	0.0021
	200-250	Difficult	425	0.0013	0.0017	0.0021
Cast Iron Gray, Ductile, Nodular	120-150	Easy	575	0.0017	0.0026	0.0034
	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
Wrought Aluminum 6061 T6	30	Easy	935	0.0026	0.0034	0.0043
	180	Easy	850	0.0026	0.0034	0.0043
***Cast Aluminum** (up to 10% Silicon)	120	Easy	525	0.0026	0.0034	0.0043
Brass	30-125	Easy	935	0.0034	0.0038	0.0047

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

AccuThread 856®

Indexable Speeds & Feeds



Metric - Neutral Rake

Material	Cutter Diameter (mm)			25,41 - 38,09	38,10 - 50,77	50,78 - 69,85
	Number of Flutes			3	5	6
	Hardness (BHN)	**Machinability	AM210® M/min	Chipload per Tooth (mm/tooth)		
Free Machining Steel 1118, 1215, 12L14	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
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	31	0,021	0,032	0,043
	220-310	Difficult	23	0,021	0,032	0,043
Stainless Steel 303, 416, 420	135-185	Difficult	136	0,032	0,043	0,054
	185-275	Difficult	129	0,032	0,043	0,054
Stainless Steel PH 17-4	185-275	Difficult	77	0,032	0,043	0,054
	275-325	Difficult	39	0,032	0,043	0,054
Tool Steel H-13, H21, A-4	150-200	Difficult	149	0,032	0,043	0,054
	200-250	Difficult	129	0,032	0,043	0,054
Cast Iron Gray, 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
Wrought Aluminum 6061 T6	30	Easy	285	0,065	0,087	0,108
	180	Easy	259	0,065	0,087	0,108
***Cast Aluminum** (up to 10% Silicon)	120	Easy	162	0,065	0,087	0,108
Brass	30-125	Easy	285	0,087	0,097	0,119

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

Threadmills USA

Solid Carbide Speeds & Feeds

Inch

Material	Hardness	**Machinability	TiAlN SFM	Cutter Diameter (Inch) Chipload per Tooth (IPT) .060-.125	.126-.188	.189-.250	.251-.312	.313-.375	.376-.500	.501-.625	.626-.750
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	Easy	725	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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 1010, 1020, 1025, 1522, 1144	85-125	Average	725	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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 1010, 1040, 1050, 1527, 1140	125-175	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	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 4140, 5140, 8640	125-175	Average	450	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	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 4340, 4330V, 300M	225-300	Average	350	0.0004	0.0005	0.0006	0.0008	0.0010	0.0013	0.0018	0.0020
	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 A36, A285, A516	100-150	Average	450	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	100	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
	220-310	Difficult	75	0.0003	0.0004	0.0006	0.0008	0.0009	0.0010	0.0012	0.0015
Stainless Steel 303, 416, 420	135-185	Difficult	425	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	185-275	Difficult	400	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
Stainless Steel PH 17-4	185-275	Difficult	250	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
	275-325	Difficult	125	0.0004	0.0005	0.0006	0.0008	0.0009	0.0010	0.0015	0.0020
Tool Steel H-13, H21, A-4	150-200	Difficult	325	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	200-250	Difficult	225	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
Cast Iron Gray, Ductile, Nodular	120-150	Easy	550	0.0004	0.0005	0.0007	0.0009	0.0010	0.0015	0.0020	0.0025
	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
Wrought Aluminum 6061 T6	30	Easy	1000	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
	180	Easy	900	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030
***Cast Aluminum** (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

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

Threadmills USA

Solid Carbide Speeds & Feeds

Metric

Material	Hardness	**Machinability	TiAlN M/min	Cutter Diameter (mm) / Chipload per Tooth (mm/tooth) 1,50-3,18	3,19-4,76	4,77-6,35	6,36-7,94	7,95-9,53	9,54-12,70	12,71-15,88	15,89-19,05
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	Easy	221	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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 1010, 1020, 1025, 1522, 1144	85-125	Average	221	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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 1010, 1040, 1050, 1527, 1140	125-175	Average	137	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	175-225	Average	122	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	225-275	Average	107	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	275-325	Average	91	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
Alloy Steel 4140, 5140, 8640	125-175	Average	137	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	175-225	Average	122	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	225-275	Average	107	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	275-325	Difficult	91	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	325-375	Difficult	76	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
High Strength Alloy 4340, 4330V, 300M	225-300	Average	107	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	300-350	Difficult	91	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
	350-400	Difficult	76	0,010	0,013	0,015	0,020	0,025	0,033	0,046	0,051
Structural Steel A36, A285, A516	100-150	Average	137	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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
High Temp Alloy Hastelloy B, Inconel 600	140-220	Difficult	30	0,008	0,010	0,015	0,020	0,023	0,025	0,030	0,038
	220-310	Difficult	23	0,008	0,010	0,015	0,020	0,023	0,025	0,030	0,038
Stainless Steel 303, 416, 420	135-185	Difficult	130	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
	185-275	Difficult	122	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
Stainless Steel PH 17-4	185-275	Difficult	76	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
	275-325	Difficult	38	0,010	0,013	0,015	0,020	0,023	0,025	0,038	0,051
Tool Steel H-13, H21, A-4	150-200	Difficult	99	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	200-250	Difficult	69	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
Cast Iron Gray, Ductile, Nodular	120-150	Easy	168	0,010	0,013	0,018	0,023	0,025	0,038	0,051	0,064
	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
Wrought Aluminum 6061 T6	30	Easy	305	0,013	0,015	0,023	0,025	0,038	0,051	0,064	0,076
	180	Easy	274	0,013	0,015	0,023	0,025	0,038	0,051	0,064	0,076
***Cast Aluminum** (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

*Uncoated threadmills are recommended for cast aluminum applications
**Refer to recommended pass chart on page 39 when referencing material machinability

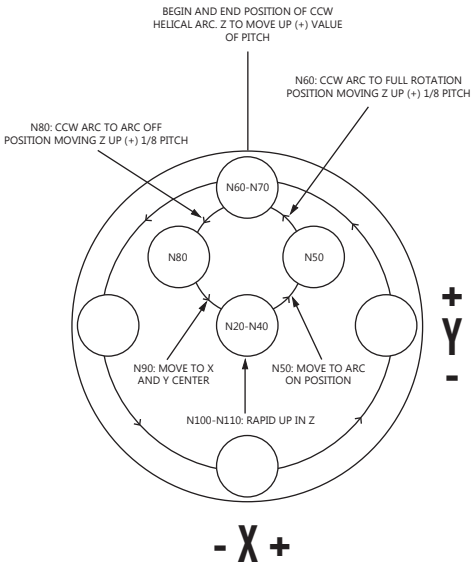
NOTICE: Reduce feed and speed by 30% for NPT and NPTF thread forms due to tapered cutting action.

Programming Guide

- Threadmilling can be easily accomplished with sample G code programming
- If your machine is capable of 3 axis (Helical) Interpolation, you can and should be threadmilling
- Basic programming of a one pass threadmill can be achieved in 6 basic steps (see below)

The following are examples of how to calculate and program a 7/16-20 right hand thread that will be 1/2" deep and produced in one pass

Major Thread Diameter	0.4375	Major diameter of thread (7/16 = .4375)
Threads Per Inch	20	Number of threads per inch (20 is from 7/16-20 designation)
Length of Thread	0.5	Desired length of thread
SFM	475	Recommended surface footage for material to be cut
Feed Per Flute	0.0025	Recommended feed rate per cutting edge
Number of Flutes	4	Number of flutes on tool to be used
Tool Diameter	0.335	Diameter of cutting tool



Using the information above, the values can be calculated

Pitch	0.05	= 1/Threads Per Inch
RPM	5416	(SFM * 3.82) / Tool Dia
Linear Feed	54.16	RPM * Feed Per Flute * Number of Flutes
Feed Rate for Threadmilling	12.69	Linear Feed * ((Major Thread Dia - Tool Dia) / Major Thread Dia)
Z axis move for full Thread	0.5063	(pitch / 8) + Length of Thread
Z axis move on Arc On	0.0063	(pitch / 8)
Arc On/Off	0.0256	(Major Thread Dia - Tool Dia) / 4
Full Rotation Value	0.05125	(Major Thread Dia - Tool Dia) / 2

Major Thread Dia	0.4375
Cutter Diameter	0.335
Length of Thread	0.5

Feed Rate for Threadmilling	12.69
Z Axis Depth for Full Thread	0.5063
Z Axis for Arc On/Off	0.0063

Arc On/Off Value	0.0256
Full Rotation Value	0.05125
Pitch Value	0.05

Incremental Program for 1 Pass Threadmill

	N10	S		5416	M03			
1			ABSOLUTE POSITION IN RAPID TO CENTER OF HOLE IN X AND Y, THEN RAPID TO Z0 (LEVEL WITH SURFACE OF HOLE) (ASSUMED TO BE X0, Y0, Z0 FOR DEMONSTRATION PURPOSES.) TO BE DONE BY CUSTOMER					
	N20	G90	G00	X 0.0000	Y 0.0000			
	N30			Z 0.0000				
			SWITCH TO INCREMENTAL POSITIONING AND HIGH FEED TO Z AXIS DEPTH FOR FULL THREAD					
2	N40	G91	G01	Z -0.5063		F 50.0		
			ACTIVATE LEFT DIAMETER COMPENSATION FOR TOOL NUMBER 1 (NEEDS TO BE WHATEVER TOOL NUMBER YOU ARE USING) AND FEED TO ARC ON/OFF POSITION AT 1/4 FEED RATE FOR THREADMILLING					
	N50	G41	G01	X 0.0256	Y 0.0256	D1		F 3.17
3			CCW ARC FROM FULL ROTATION FROM THE ARC ON POSITION AT THE CALCULATED THREADMILLING FEEDRATE MOVING Z UP (+) 1/8 PITCH VALUE (Z AXIS MOVE UP FOR ARC ON/OFF). X AND Y POSITIONS ARE THE INCREMENTAL DISTANCE FROM WHERE TOOL IS TO WHERE IT WILL BE AFTER ARC (ARC ON/OFF VALUE). 1 IS THE INCREMENTAL X VALUE OF CENTER OF ROTATION FROM WHERE TOOL CURRENTLY IS ARC ON/OFF VALUE * -1. J IS THE INCREMENTAL Y VALUE FROM CURRENT TOOL POSITION TO CENTER OF ROTATION.					
	N60		G03	X -0.0256	Y 0.0256	Z 0.0063	I -0.0256	J 0.0000	F 12.69
			ONE COMPLETE CCW ARC FROM THE FULL ARC ROTATION POSITION AT THE CALCULATED THREADMILLING FEEDRATE MOVING Z UP (POSITIVE PITCH VALUE). I AND J VALUES ARE CALCULATED SAME AS ABOVE. I WILL BE 0.0 AND J WILL BE FULL ROTATION VALUE * -1					
4	N70		G03	X 0.0000	Y 0.0000	Z 0.0500	I 0.0000	J -0.0513	F 12.69
			CCW ARC FROM FULL ROTATION DIAMETER TO ARC OFF POSITION AT DOUBLE THE CALCULATED THREADMILLING FEED RATE MOVING Z UP (+) 1/8 PITCH VALUE (Z AXIS MOVE UP FOR ARC ON/OFF). I AND J VALUES ARE CALCULATED SAME AS ABOVE.					
	N80		G03	X -0.0256	Y -0.0256	Z 0.0063	I 0.0000	J -0.0256	F 25.38
5			SHUT OFF CUTTER COMP AND MOVE FROM ARC OFF POSITION TO CENTER OF HOLE IN X (ARC ON/OFF VALUE -1) AND Y (ARC ON/OFF VALUE * -1) AT HIGH FEED RATE.					
	N90	G40	G01	X 0.0256	Y -0.0256			
			RAPID Z UP INCREMENTAL VALUE (LENGTH OF THREAD - ALL Z VALUES IN G03 ARC COMMANDS).					
	N100		G00	Z 0.4438				
6			SWITCH BACK TO ABSOLUTE POSITIONING AND RAPID TO A SAFE POINT IN Z ABOVE PART LEVEL (ASSUMED TO BE 1" ABOVE PART LEVEL FOR DEMONSTRATION PURPOSES).					
	N110	G90	G00	Z 1.0000				

1	2	3	4	5	6
N10-N30 Preparatory commands Positioning above hole center and at hole level in Z In absolute position mode	N40 Change to incremental mode Feed to bottom of hole (Z axis depth for full thread)	N50-N60 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)	N70 One complete CCW rotation at full arc rotation value while moving Z up 1 pitch value	N80-N90 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)	N100-N110 Rapid up in Z

Troubleshooting Guide

Causes		Threadmill is showing accelerated or excessive wear	Cutting edges are chipping	Threadmill is breaking in the first hole of part	Threadmill 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
Catalog	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 RPM's			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 feedrate					7, 19						
	Ramp-in is programmed as an axial move			20					20			
Tool	Threadmill 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 threadmill and holder				10			10				
	Incorrect coating creating built up edge	8, 17								8, 17		
	Helix angle too low				9			9				
	Excessive threadmill 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

Solutions

1. Refer to catalog to insure proper tool selection.
2. Verify the correct speed was selected from the catalog speed and feed chart.
3. Verify the correct feed rate was selected from the catalog speed and feed chart.
4. Increase the spindle speed (RPM).
5. Decrease the spindle speed (RPM).
6. Increase feed per tooth (IPT).
7. Decrease the feed per tooth (IPT).
8. Investigate other coatings.
9. Increase the tool helix.
10. Gauge runout between threadmill 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 page 39 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 threadmill 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 threadmill 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. Fax a copy of your program to the Applications Engineering Department at 330-364-7666.

Threadmilling
Application Request

Allied Machine & Engineering Corp.
Telephone: **(330) 343-4283**
Toll Free USA & Canada: **(800) 321-5537**
Fax: **(330) 364-7666**
Email: **aesupport@alliedmachine.com**

Distributor P.O. #: _____

The following form must be filled out completely before test will be considered.

☐ **Guaranteed Test**
☐ **Program**

Distributor: _____ End User: _____
Contact: _____ Contact: _____
City: _____ Industry: _____
Phone: _____ Phone: _____
Email: _____ Email: _____

Current Process: _____

Application Information

Thread Size and Pitch: _____ Thread Depth: _____ Material: _____ Hardness: _____

Thread: ☐ Internal ☐ External

Thread Form % : ☐ 100 ☐ 75 ☐ Other _____

Drill Size: _____ ☐ Thru ☐ Blind

Material State: ☐ Forged ☐ Bar ☐ Cast ☐ Other _____

Machine Information

Machine Type: ☐ Machine Center ☐ Lathe ☐ Mill ☐ Other _____ Builder: _____ Model #: _____

Horse Power: _____ Maximum RPM: _____ Tool Rotating: ☐ Yes ☐ No

CNC Control Type: ☐ Fanuc ☐ Siemens ☐ Mazatrol ☐ Other _____

Spindle Orientation: ☐ Vertical ☐ Horizontal

Rigidity: ☐ Excellent ☐ Good ☐ Poor

ISO - ASCII Compatable: ☐ Yes ☐ No

Helical Interpolation: ☐ Yes ☐ No

Coolant Information

Coolant Pressure: _____ Coolant Volume: _____ Coolant Type: _____

Text Objective: _____

Tooling to be Used		**Programming Data**		
Item Number	QTY	Dimensions:	☐ **Inch**	☐ **Metric**
		Arc Center:	☐ **I and J**	☐ **R (Radius)**
		Tool Path:	☐ **Offset**	☐ **No Offset**
		Arc Limitation:	☐ **Full Circle**	☐ **Quadrant**
		K Value:	☐ **Required**	☐ **Not Required**
		If Required:	☐ **In Radians**	☐ **Per Revolution**

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Allied Machine & Engineering Corp. warrants to original equipment manufacturers, distributors, industrial and commercial users of its products that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied's obligation under this warranty is limited to furnishing without additional charge a replacement or, at its option repairing or issuing credit for any product which shall within one year from the date of sale be returned freight prepaid to the plant designated by an Allied representative and which upon inspection is determined by Allied to be defective in materials or workmanship.

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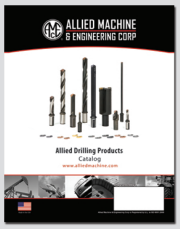

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Literature Order Number: ADP

Allied Criterion Boring Systems

Allied Criterion products offer a wide variety of options that can cover a range of .050" in diameter. Products include CB Style Boring Head, Cri-Twin®, Cri-Bore®, LCB1.5, and CBER®. Ideal for close tolerance precision boring.

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This catalog lists the widest variety of spade drills and holders in our industry. Our TiN, TiAlN, and TiCN coated high performance spade drills (31/32" to 5") offer a 100% to 500% increase in productivity and an extended tool life of 3 to 20 times over uncoated tools.

Literature Order Number: HPU-13

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The ALVAN® product line includes monobloc, ring style, and replaceable head reamers, offered with carbide, cermet, PCD, and CBN cutting edges.

Literature Order Number: ALV-13

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(Vol. 14)