ALLIED MACHINE & ENGINEERING CORP.

AccuThread 856®

Solid Carbide and Indexable Threadmills

Represented by:

AccuThread 856®

Item Number Descriptions

Solid Carbide Threadmills

TM	U	K	0250	-	20	M
Threadmill	**Thread Class**	**Coating**	**Min. Thread Dia.**		**Thread Pitch**	**Shank Designation**
	U - UN, UNF	K - AM210®	English - 0250 - 1/4”		UN - 20	Blank - Inch
	N - NPT, NPTF	H - AM200®	Number Drill - 0008 - #8		Metric - 1.0	M - Metric
	M - Metric	T - TiN	Metric - 0450 - M4.5			
	A - AccuPort® Specific	A - TiAlN				
	B - BSPP, BSPT	N - TiCN				
		U - Uncoated				

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		
				7F - 7 Flutes		
THT and THN Holders utilize bolt-in style inserts THP and TSN Holders utilize pin style inserts				8F - 8 Flutes		

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”	H - AM200®		NPT, NPTF	Metric - 1.0	E - External
	150 - 1.50”	T - TiN		BSPP, BSPT		
		A - TiAlN		M - Metric		
		N - TiCN		FA - Full ACME		
		U - Uncoated		AP - API Round		

Solid Carbide and Indexable Threadmills

Features and Benefits

- AMEC's proprietary AM210® coating has a 25-50% increase in tool life over the competition.
- AccuThread 856® solid carbide threadmills have a thicker core and helical flute which offers increased strength and rigidity when cutting forces are applied.
- AccuThread 856® standard cutting lengths allow for multiple applications without the need for special threadmills.
- AMEC's Indexable Threadmill Holders are made from a premium material that is engineered to dampen vibration during operation.
- The AccuThread 856® Indexable Line of Threadmills offer three insert lengths and a wide range of thread forms.
- The AccuThread 856® Indexable Threadmilling Holders are offered in multiple flute configurations and feature a bolt-in type and a patented pin style locking system, which ensures unsurpassed repeatability.
- Allied Machine & Engineering Corp.'s website has a CNC programming software to create CNC G code programs online at **www.alliedmachine.com**.
- AccuThread 856® is backed by the highly experienced technical staff you come to expect from AMEC.

Allied Machine & Engineering *Corp*.
120 Deeds Drive, Dover, Ohio 44622
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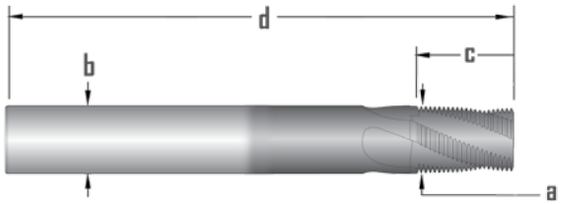
THREADMILLS

AccuThread 856®

Solid Carbide Threadmills



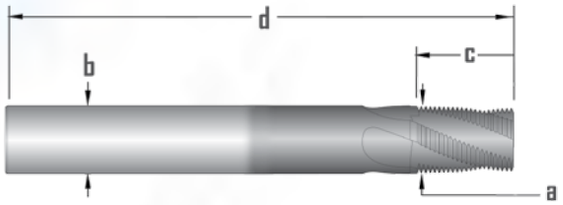
Solid Carbide Threadmills NPT / NPTF

Inch Shank

Item Number	NPT 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 NPT	27	3	0.245	0.250	0.437	2.500	❍
TMNK0250-NPT	1/4 and 3/8 NPT	18	4	0.305	0.312	0.625	3.000	❍
TMNK0500-NPT	1/2 and 3/4 NPT	14	4	0.495	0.500	0.875	3.500	❍
TMNK1000-NPT	1” to 2” NPT	11.5	4	0.620	0.625	1.125	4.000	❍
TMNK2500-NPT	2-1/2” to 6” NPT	8	4	0.745	0.750	1.500	5.000	❍

Inch Shank

Item Number	NPTF 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 NPTF	27	3	0.245	0.250	0.437	2.500	❍
TMNK0250-NPTF	1/4 and 3/8 NPTF	18	4	0.305	0.312	0.625	3.000	❍
TMNK0500-NPTF	1/2 and 3/4 NPTF	14	4	0.495	0.500	0.875	3.500	❍
TMNK1000-NPTF	1” to 2” NPTF	11.5	4	0.620	0.625	1.125	4.000	❍
TMNK2500-NPTF	2-1/2” to 6” NPTF	8	4	0.745	0.750	1.500	5.000	❍



Solid Carbide Threadmills BSPP / BSPT

Metric Shank

Item Number	BSPP Size	Pitch	Flutes	Max Cutter Dia. (a)		Shank Dia. (b)		Length of Cut (c)		OAL (d)		❶ AM210®
				Inch	mm	Inch	mm	Inch	mm	Inch	mm	
TMBK0063-BSPPM	1/16 and 1/8 BSPP	28	3	0.235	5,97	0.236	6,00	0.572	14,53	2.008	51,00	❍
TMBK0250-BSPPM	1/4 and 3/8 BSPP	19	4	0.390	9,91	0.394	10,00	0.737	18,72	2.874	73,00	❍
TMBK0500-BSPPM	1/2 and 3/4 BSPP	14	4	0.470	11,94	0.472	12,00	1.143	29,03	3.307	84,00	❍
TMBK1000-BSPPM	1” to 2” BSPP	11	4	0.620	15,75	0.630	16,00	1.365	34,67	3.661	93,00	❍

Metric Shank

Item Number	BSPT Size	Pitch	Flutes	Max Cutter Dia. (a)		Shank Dia. (b)		Length of Cut (c)		OAL (d)		❶ AM210®
				Inch	mm	Inch	mm	Inch	mm	Inch	mm	
TMBK0063-BSPTM	1/16 and 1/8 BSPT	28	3	0.235	5,97	0.236	6,00	0.393	9,98	2.008	51,00	❍
TMBK0250-BSPTM	1/4 and 3/8 BSPT	19	4	0.390	9,91	0.394	10,00	0.580	14,73	2.874	73,00	❍
TMBK0500-BSPTM	1/2 and 3/4 BSPT	14	4	0.470	11,94	0.472	12,00	0.787	20,00	3.307	84,00	❍
TMBK1000-BSPTM	1” to 2” BSPT	11	4	0.620	15,75	0.630	16,00	1.272	32,31	3.661	93,00	❍

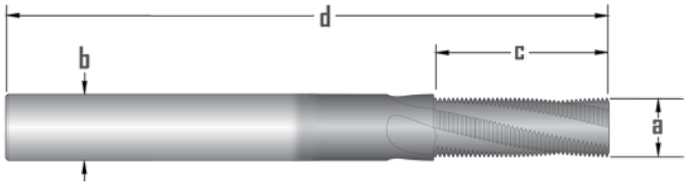
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Solid Carbide Threadmills are sold in 1 pc. packages.

AccuThread 856®

Solid Carbide Threadmills

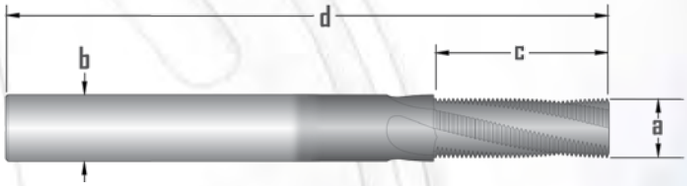


Solid Carbide Threadmills UN

Inch Shank

Item Number	Min. Thread Size	Pitch	Flutes	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	❍

***Items marked with an asterisk are straight fluted.**



Solid Carbide Threadmills UN Extra Length

Inch Shank

Item Number	Min. Thread Size	Pitch	Flutes	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	❍

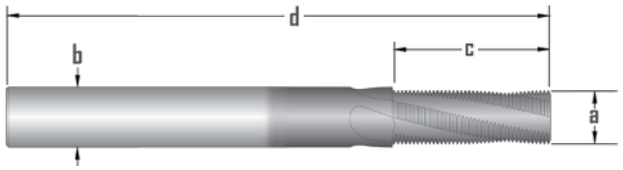
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Solid Carbide Threadmills are sold in 1 pc. packages.

AccuThread 856®

Solid Carbide Threadmills



Solid Carbide Threadmills AccuPort 432® Specific (UN)

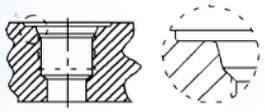
Inch Shank

Item Number	Port Size	Pitch	Flutes	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 Number	Port Size	Pitch	Flutes	Cutter Dia. (a)		Shank Dia. (b)		Length of Cut (c)		OAL (d)		❶ AM210®
				Inch	mm	Inch	mm	Inch	mm	Inch	mm	
TMAK0438-20M	-4 to -5	20	4	0.335	8,51	0.394	10,00	0.600	15,24	2.874	73,00	❍
TMAK0563-18M	-6	18	4	0.370	9,40	0.394	10,00	0.666	16,92	2.874	73,00	❍
TMAK0750-16M	-8	16	4	0.470	11,94	0.472	12,00	0.750	19,05	3.307	84,00	❍
TMAK0875-14M	-10	14	4	0.470	11,94	0.472	12,00	0.857	21,77	3.307	84,00	❍
TMAK1063-12M	-12 to -32	12	4	0.470	11,94	0.472	12,00	0.917	23,29	3.307	84,00	❍

AccuPort Specific - International Unified Series (UN) manufactured specifically for use with AccuPort 432 hydraulic port forms. The length of cut allows full thread with one pass. Conforms with J1926 and SAE AS5202 port form spec.



SAE J-1926-1 / ISO 11926-1

AccuPort 432® J1926 Kits

AccuPort 432® AccuThread 856® J1926 Ferrous Material Kit

Tube Dash Number	Port Thread Size	Port Contour Cutter Number	Qty.	T-A® Drill Item Numbers		Port Form Insert Item Numbers		AccuThread 856® Item Numbers		Kit Item Number
				Super Cobalt (AM200®)	Qty.	C5 Carbide (TiAlN)	Qty.	Solid Carbide (AM210™)	Qty.	
- 4	7/16-20 UNF-2B	J1926-04Y-063F	1	15YA-.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

AccuPort 432® AccuThread 856® J1926 Non-Ferrous Material Kit

Tube Dash Number	Port Thread Size	Port Contour Cutter Number	Qty.	T-A® Drill Item Numbers		Port Form Insert Item Numbers		AccuThread 856® Item Numbers		Kit Item Number
				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

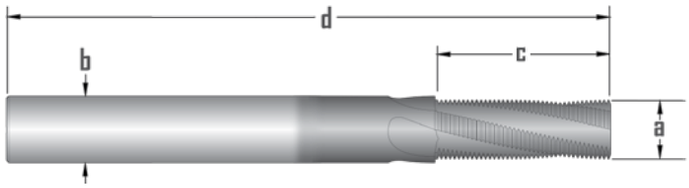
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Solid Carbide Threadmills are sold in 1 pc. packages.

AccuThread 856®

Solid Carbide Threadmills



Solid Carbide Threadmills Metric

Inch Shank

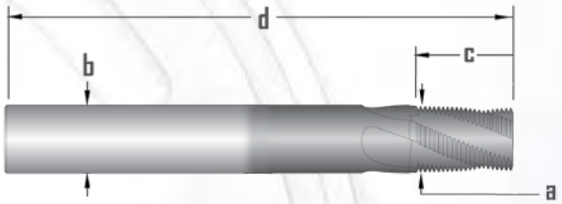
Item Number	Min. Thread Size	Pitch	Flutes	Cutter Dia. (a) Inch	Cutter Dia. (a) mm	Shank Dia. (b) (Inch)	Length of Cut (c) (Inch)	OAL (d) (Inch)	❶ AM210®
TMMK0450-075	M4.5	0.75	3	0.120	3,05	0.125	0.250	2.000	❍
TMMK0800-075	M8	0.75	3	0.235	5,97	0.250	0.625	2.500	❍
TMMK0500-080	M5	0.80	3	0.120	3,05	0.125	0.312	2.000	❍
TMMK0600-100	M6	1.00	3	0.170	4,32	0.187	0.500	2.500	❍
TMMK1200-100	M12	1.00	4	0.360	9,14	0.375	0.875	3.500	❍
TMMK0800-125	M8	1.25	3	0.235	5,97	0.250	0.625	2.500	❍
TMMK1000-150	M10	1.50	4	0.300	7,62	0.312	0.750	3.000	❍
TMMK1400-150	M14	1.50	4	0.370	9,40	0.375	0.875	3.500	❍
TMMK1800-150	M18	1.50	4	0.490	12,45	0.500	1.250	3.500	❍
TMMK1200-175	M12	1.75	4	0.360	9,14	0.375	0.875	3.500	❍
TMMK1600-200	M16	2.00	4	0.470	11,94	0.500	1.250	3.500	❍
TMMK2000-250	M20	2.50	4	0.495	12,57	0.500	1.250	3.500	❍
TMMK2400-300	M24	3.00	4	0.620	15,75	0.625	1.375	4.000	❍

Metric Shank

Item Number	Min. Thread Size	Pitch	Flutes	Cutter Dia. (a) Inch	Cutter Dia. (a) mm	Shank Dia. (b) Inch	Shank Dia. (b) mm	Length of Cut (c) Inch	Length of Cut (c) mm	OAL (d) Inch	OAL (d) mm	❶ AM210®
TMMK0600-100M	M6	1.00	3	0.181	4,60	0.236	6,00	0.472	12,00	2.008	51,00	❍
TMMK0600-075M	M6	0.75	3	0.181	4,60	0.236	6,00	0.472	12,00	2.008	51,00	❍
TMMK0800-125M	M8	1.25	3	0.232	5,90	0.236	6,00	0.640	16,25	2.008	51,00	❍
TMMK1000-150M	M10	1.50	4	0.291	7,40	0.315	8,00	0.768	19,50	2.520	64,00	❍
TMMK1400-150M	M14	1.50	4	0.429	10,90	0.472	12,00	1.063	27,00	3.307	84,00	❍
TMMK1800-150M	M18	1.50	4	0.469	11,90	0.472	12,00	1.240	31,50	3.307	84,00	❍
TMMK1200-175M	M12	1.75	4	0.370	9,40	0.394	10,00	0.894	22,71	2.874	73,00	❍
TMMK1400-200M	M14	2.00	4	0.429	10,90	0.472	12,00	1.102	28,00	3.307	84,00	❍
TMMK2000-250M	M20	2.50	4	0.469	11,90	0.472	12,00	1.181	30,00	3.307	84,00	❍
TMMK2400-300M	M24	3.00	4	0.626	15,90	0.630	16,00	1.417	36,00	3.661	93,00	❍

Made to order tool specification - Priced on Request

Fax or mail a copy of the table below to AMEC's Application Engineering Department (330) 364-7666 to receive pricing for a special thread mill.



Thread Size	Thread Form	Pitch	# Flutes	Cutter Diameter (a)	Shank Diameter (b)	Length of Cut (c)	OAL (d)	Flute Style	Coating	QTY

Company Name	Contact Name	Telephone	Fax
Distributor Name	Distributor Contact Name	Telephone	Fax

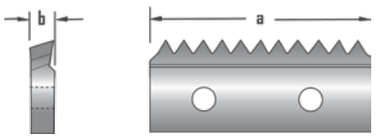
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Solid Carbide Threadmills are sold in 1 pc. packages.

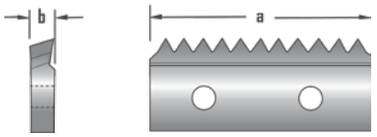
AccuThread 856®

Indexable Threadmills



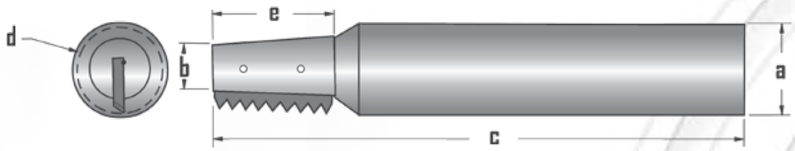
Bolt-In Style Inserts
NPT / NPTF
Internal / External

Item Number	Threads per Inch	Insert Length (a)		Insert Thickness (b)		❶
		Inch	mm	Inch	mm	AM210®
TP075K-NPT18	18	0.750	19,05	0.080	2,03	❍
TP075K-NPTF18	18	0.750	19,05	0.080	2,03	❍
TP100K-NPT14	14	1.000	25,40	0.140	3,56	❍
TP100K-NPTF14	14	1.000	25,40	0.140	3,56	❍



Bolt-In Style Inserts
BSPT
Internal / External

Item Number	Threads per Inch	Insert Length (a)		Insert Thickness (b)		❶
		Inch	mm	Inch	mm	AM210®
TP075K-BSPT19	19	0.750	19,05	0.080	2,03	❍
TP100K-BSPT14	14	1.000	25,40	0.140	3,56	❍



Tapered Bolt-In Style
NPT / NPTF / BSPT
Internal / External

Inch Shank

Item Number	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THT-0400-1F075	TP075K-NPT/NPTF/BSPT	0.500	0.229	3.000	0.400	0.750	1	TMS-250	❍
THT-0659-1F100	TP100K-NPT/NPTF/BSPT	0.500	0.379	3.000	0.659	1.000	1	TMS-45	❍

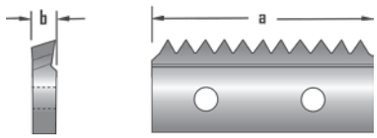
Metric Shank

Item Number	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THT-0400-1F075M	TP075K-NPT/NPTF/BSPT	13,00	5,82	76,20	10,16	19,05	1	TMS-250	▲
THT-0659-1F100M	TP100K-NPT/NPTF/BSPT	13,00	9,63	76,20	16,74	25,40	1	TMS-45	▲

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

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

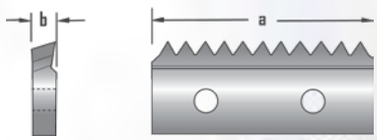
Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.



Bolt-In Style Inserts
UN
Internal

Item Number	Threads per Inch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP075K-UN32I	32	0.750	19,05	.080	2,03	❍
TP075K-UN24I	24	0.750	19,05	.080	2,03	❍
TP075K-UN20I	20	0.750	19,05	.080	2,03	❍
TP075K-UN18I	18	0.750	19,05	.080	2,03	❍
TP075K-UN16I	16	0.750	19,05	.080	2,03	❍
TP100K-UN32I	32	1.000	25,40	.140	3,56	❍
TP100K-UN24I	24	1.000	25,40	.140	3,56	❍
TP100K-UN20I	20	1.000	25,40	.140	3,56	❍
TP100K-UN18I	18	1.000	25,40	.140	3,56	❍
TP100K-UN16I	16	1.000	25,40	.140	3,56	❍
TP100K-UN14I	14	1.000	25,40	.140	3,56	❍
TP100K-UN12I	12	1.000	25,40	.140	3,56	❍
TP100K-UN10I*	10	1.000	25,40	.140	3,56	❍

* 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.



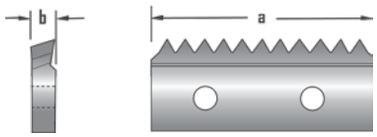
Bolt-In Style Inserts
UN
External

Item Number	Threads per inch	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	0.750	19,05	0.080	2,03	▲
TP075K-UN20E	20	0.750	19,05	0.080	2,03	▲
TP075K-UN18E	18	0.750	19,05	0.080	2,03	▲
TP075K-UN16E	16	0.750	19,05	0.080	2,03	▲
TP100K-UN32E	32	1.000	25,40	0.140	3,56	▲
TP100K-UN24E	24	1.000	25,40	0.140	3,56	▲
TP100K-UN20E	20	1.000	25,40	0.140	3,56	▲
TP100K-UN18E	18	1.000	25,40	0.140	3,56	▲
TP100K-UN16E	16	1.000	25,40	0.140	3,56	▲
TP100K-UN12E	12	1.000	25,40	0.140	3,56	▲

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

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

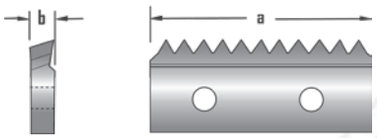
Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.



Bolt-In Style Inserts
UNJ
Internal

Item Number	Threads per Inch	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	0.750	19,05	0.080	2,03	▲
TP075K-UNJ20I	20	0.750	19,05	0.080	2,03	▲
TP075K-UNJ18I	18	0.750	19,05	0.080	2,03	▲
TP075K-UNJ16I	16	0.750	19,05	0.080	2,03	▲
TP100K-UNJ32I	32	1.000	25,40	0.140	3,56	▲
TP100K-UNJ24I	24	1.000	25,40	0.140	3,56	▲
TP100K-UNJ20I	20	1.000	25,40	0.140	3,56	▲
TP100K-UNJ18I	18	1.000	25,40	0.140	3,56	▲
TP100K-UNJ16I	16	1.000	25,40	0.140	3,56	▲
TP100K-UNJ14I	14	1.000	25,40	0.140	3,56	▲
TP100K-UNJ12I	12	1.000	25,40	0.140	3,56	▲
TP100K-UNJ10I*	10	1.000	25,40	0.140	3,56	▲

* 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.



Bolt-In Style Inserts
UNJ
External

Item Number	Threads per Inch	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	0.750	19,05	0.080	2,03	▲
TP075K-UNJ20E	20	0.750	19,05	0.080	2,03	▲
TP075K-UNJ18E	18	0.750	19,05	0.080	2,03	▲
TP075K-UNJ16E	16	0.750	19,05	0.080	2,03	▲
TP100K-UNJ32E	32	1.000	25,40	0.140	3,56	▲
TP100K-UNJ24E	24	1.000	25,40	0.140	3,56	▲
TP100K-UNJ20E	20	1.000	25,40	0.140	3,56	▲
TP100K-UNJ18E	18	1.000	25,40	0.140	3,56	▲
TP100K-UNJ16E	16	1.000	25,40	0.140	3,56	▲
TP100K-UNJ12E	12	1.000	25,40	0.140	3,56	▲

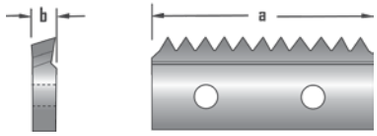
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

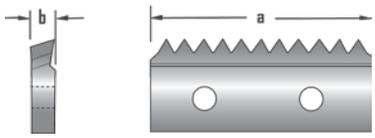
AccuThread 856®

Indexable Threadmills



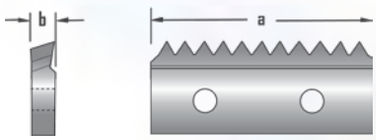
Bolt-In Style Inserts
Metric
Internal

Item Number	Thread Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TP100K-M1.0I	1,0	1.000	25,40	0.140	3,56	❍
TP100K-M1.5I	1,5	1.000	25,40	0.140	3,56	❍
TP100K-M2.0I	2,0	1.000	25,40	0.140	3,56	❍



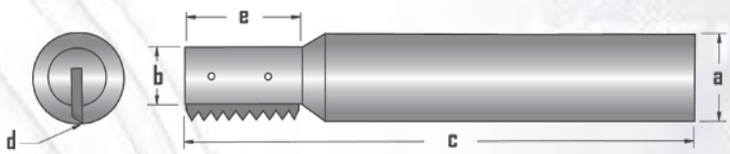
Bolt-In Style Inserts
Metric
External

Item Number	Thread 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	1.000	25,40	0.140	3,56	▲
TP100K-M1.0E	1,0	1.000	25,40	0.140	3,56	▲



Bolt-In Style Inserts
BSPP
Internal / External

Item Number	Threads per Inch	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	❍



Straight Bolt-In Style
UN / Metric / BSPP
Internal / External

Inch Shank

Item Number	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THN-0394-1F075	TP075K-UN/ISO/BSPP	0.500	0.250	3.000	0.394	0.750	1	TMS-250	❍
THN-0625-1F100	TP100K-UN/ISO/BSPP	0.750	0.454	3.500	0.625	1.000	1	TMS-40	❍
THN-0611-1F100	TP100K-UN/UNJI	0.750	0.383	3.500	0.611	1.000	1	TMS-40	▲

Metric Shank

Item Number	Insert	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Flutes	Screw	❶
THN-0394-1F075M	TP075K-UN/ISO/BSPP	13,00	6,35	76,20	10,01	19,05	1	TMS-250	▲
THN-0625-1F100M	TP100K-UN/ISO/BSPP	20,00	11,53	88,90	15,88	25,40	1	TMS-40	▲
THN-0611-1F100M	TP100K-UN/UNJI	20,00	9,73	88,90	15,52	25,40	1	TMS-40	▲

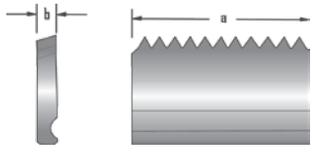
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

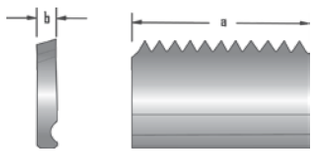
AccuThread 856®

Indexable Threadmills



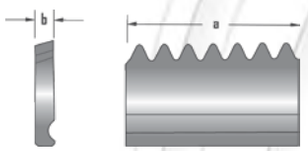
Pin Style Inserts
NPT / NPTF
Internal / External

Item Number	Threads per Inch	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-NPTF11.5	11.5	1.500	38,10	0.140	3,56	❍
TN150K-NPT8	8	1.500	38,10	0.140	3,56	❍
TN150K-NPTF8	8	1.500	38,10	0.140	3,56	❍



Pin Style Inserts
BSPP / BSPT
Internal / External

Item Number	Threads per Inch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-BSPP11	11	1.500	38,10	0.140	3,56	❍
TN150K-BSPT11	11	1.500	38,10	0.140	3,56	❍



Pin Style Inserts
API-ROUND
Internal / External

Item Number	Threads per Inch	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	1.500	38,10	0.140	3,56	❍

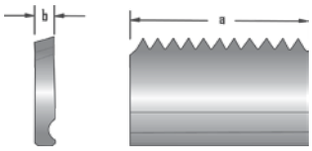
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

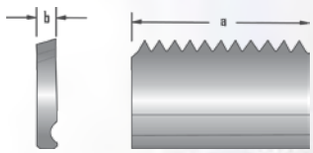
AccuThread 856®

Indexable Threadmills



Pin Style Inserts
UN
Internal

Item Number	Threads per Inch	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	1.000	25,40	0.140	3,56	❍
TN100K-UN20I	20	1.000	25,40	0.140	3,56	❍
TN100K-UN18I	18	1.000	25,40	0.140	3,56	❍
TN100K-UN16I	16	1.000	25,40	0.140	3,56	❍
TN100K-UN12I	12	1.000	25,40	0.140	3,56	❍
TN100K-UN10I	10	1.000	25,40	0.140	3,56	❍
TN150K-UN24I	24	1.500	38,10	0.140	3,56	❍
TN150K-UN20I	20	1.500	38,10	0.140	3,56	❍
TN150K-UN18I	18	1.500	38,10	0.140	3,56	❍
TN150K-UN16I	16	1.500	38,10	0.140	3,56	❍
TN150K-UN14I	14	1.500	38,10	0.140	3,56	❍
TN150K-UN12I	12	1.500	38,10	0.140	3,56	❍
TN150K-UN10I	10	1.500	38,10	0.140	3,56	❍
TN150K-UN8I	8	1.500	38,10	0.140	3,56	❍
TN150K-UN7I	7	1.500	38,10	0.140	3,56	❍
TN150K-UN6I	6	1.500	38,10	0.140	3,56	❍



Pin Style Inserts
UN
External

Item Number	Threads per Inch	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	1.000	25,40	0.140	3,56	▲
TN100K-UN20E	20	1.000	25,40	0.140	3,56	▲
TN100K-UN18E	18	1.000	25,40	0.140	3,56	▲
TN100K-UN16E	16	1.000	25,40	0.140	3,56	▲
TN100K-UN12E	12	1.000	25,40	0.140	3,56	▲
TN100K-UN10E	10	1.000	25,40	0.140	3,56	▲
TN150K-UN24E	24	1.500	38,10	0.140	3,56	▲
TN150K-UN20E	20	1.500	38,10	0.140	3,56	▲
TN150K-UN18E	18	1.500	38,10	0.140	3,56	▲
TN150K-UN16E	16	1.500	38,10	0.140	3,56	▲
TN150K-UN12E	12	1.500	38,10	0.140	3,56	▲
TN150K-UN10E	10	1.500	38,10	0.140	3,56	▲

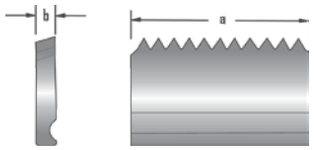
❶ Availability Codes
❍ Stocked
▲ Non-Stocked - 20 work day lead time

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

Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.

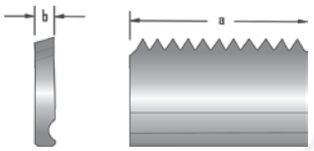
AccuThread 856®

Indexable Threadmills



Pin Style Inserts
UNJ
Internal

Item Number	Threads per Inch	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	1.000	25,40	0.140	3,56	▲
TN100K-UNJ20I	20	1.000	25,40	0.140	3,56	▲
TN100K-UNJ18I	18	1.000	25,40	0.140	3,56	▲
TN100K-UNJ16I	16	1.000	25,40	0.140	3,56	▲
TN100K-UNJ12I	12	1.000	25,40	0.140	3,56	▲
TN100K-UNJ10I	10	1.000	25,40	0.140	3,56	▲
TN150K-UNJ24I	24	1.500	38,10	0.140	3,56	▲
TN150K-UNJ20I	20	1.500	38,10	0.140	3,56	▲
TN150K-UNJ18I	18	1.500	38,10	0.140	3,56	▲
TN150K-UNJ16I	16	1.500	38,10	0.140	3,56	▲
TN150K-UNJ12I	12	1.500	38,10	0.140	3,56	▲
TN150K-UNJ10I	10	1.500	38,10	0.140	3,56	▲
TN150K-UNJ8I	8	1.500	38,10	0.140	3,56	▲



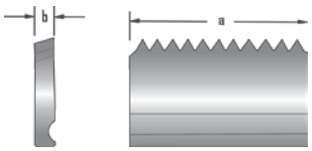
Pin Style Inserts
UNJ
External

Item Number	Threads per Inch	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	1.000	25,40	0.140	3,56	▲
TN100K-UNJ20E	20	1.000	25,40	0.140	3,56	▲
TN100K-UNJ18E	18	1.000	25,40	0.140	3,56	▲
TN100K-UNJ16E	16	1.000	25,40	0.140	3,56	▲
TN100K-UNJ12E	12	1.000	25,40	0.140	3,56	▲
TN100K-UNJ10E	10	1.000	25,40	0.140	3,56	▲
TN150K-UNJ24E	24	1.500	38,10	0.140	3,56	▲
TN150K-UNJ20E	20	1.500	38,10	0.140	3,56	▲
TN150K-UNJ18E	18	1.500	38,10	0.140	3,56	▲
TN150K-UNJ16E	16	1.500	38,10	0.140	3,56	▲
TN150K-UNJ12E	12	1.500	38,10	0.140	3,56	▲
TN150K-UNJ10E	10	1.500	38,10	0.140	3,56	▲
TN150K-UNJ8E	8	1.500	38,10	0.140	3,56	▲

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

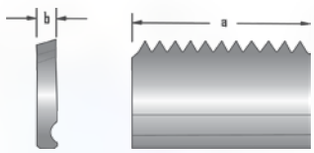
All other coatings are non-stocked standards - 20 work day delivery applies.

Note: Indexable Threadmill Holders are sold in 1 pc. packages.
Note: Indexable Threadmill Inserts are sold in 2 pc. packages.



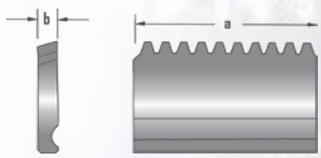
Pin Style Inserts
Metric
Internal

Item Number	Thread Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-M2.0I	2,0	1.500	38,10	0.140	3,56	❍



Pin Style Inserts
Metric
External

Item Number	Thread Pitch	Insert Length (a)		Insert Thickness (b)		❶ AM210®
		Inch	mm	Inch	mm	
TN150K-M2.0E	2,0	1.500	38,10	0.140	3,56	❍



Pin Style Inserts
(Full Profile)
ACME
Internal / External

Item Number	Threads per Inch	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	1.000	25,40	0.140	3,56	❍
TN100K-FA8	8	1.000	25,40	0.140	3,56	❍
TN150K-FA12	12	1.500	38,10	0.140	3,56	❍
TN150K-FA10	10	1.500	38,10	0.140	3,56	❍
TN150K-FA8	8	1.500	38,10	0.140	3,56	❍
TN150K-FA6	6	1.500	38,10	0.140	3,56	❍
TN150K-FA5	5	1.500	38,10	0.140	3,56	❍

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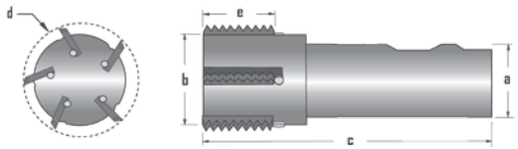
AccuThread 856®

Indexable Threadmills

Pin Style Holders
UN / NPT / Metric / ACME
API / NPTF / BSPP / BSPT
Internal / External



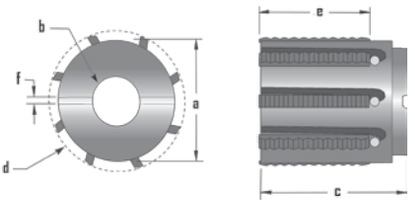
Inch Shank

Item Number	Insert	Coolant Port	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. Straight (d)	Cutter Dia. Tapered (d)	Insert Length (e)	Flutes	Screw	Pin	❶
THP-0969-2F100	TN100K-	N	1.000	0.750	4.500	0.969	-	1.000	2	TMSS-3	TMP-6	❍
THP-1755-5F100	TN100K-	Y	1.250	1.500	4.000	1.755	-	1.000	5	TMSS-2	TMP-1	❍
THP-0932-1F150	TN150K-	N	1.000	0.722	4.500	0.932	1.065	1.500	1	TMSS-2	TMP-2	❍
THP-1116-3F150	TN150K-	Y	1.000	0.812	4.500	1.116	1.247	1.500	3	TMSS-3	TMP-2	❍
THP-1755-5F150	TN150K-	Y	1.250	1.500	4.500	1.755	1.888	1.500	5	TMSS-2	TMP-2	❍
THP-0969-2F150	TN150K-	N	1.000	0.750	4.500	0.969	-	1.500	2	TMSS-3	TMP-6	❍

Metric Shank

Item Number	Insert	Coolant Port	Shank Dia. (a)	Pilot Dia. (b)	OAL (c)	Cutter Dia. Straight (d)	Cutter Dia. Tapered (d)	Insert Length (e)	Flutes	Screw	Pin	❶
THP-0969-2F100M	TN100K-	N	25,00	19,05	114,30	24,61	-	25,40	2	TMSS-3	TMP-6	▲
THP-1755-5F100M	TN100K-	Y	32,00	38,10	101,60	44,58	-	25,40	5	TMSS-2	TMP-1	▲
THP-0932-1F150M	TN150K-	N	25,00	18,34	114,30	23,67	27,05	38,10	1	TMSS-2	TMP-2	▲
THP-1116-3F150M	TN150K-	Y	25,00	20,63	114,30	28,35	31,67	38,10	3	TMSS-3	TMP-2	▲
THP-1755-5F150M	TN150K-	Y	32,00	38,10	114,30	44,58	47,96	38,10	5	TMSS-2	TMP-2	▲
THP-0969-2F150M	TN150K-	N	25,00	19,05	114,30	24,61	-	38,10	2	TMSS-3	TMP-6	▲

Pin Style Holders
(Shell Mill)
UN / Metric / ACME / BSPP
Internal / External



Inch Shank

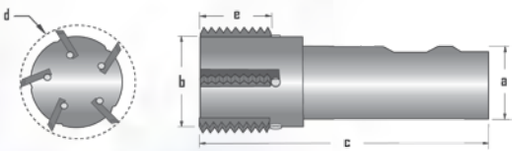
Item Number	Insert	Body Dia. (a)	Bore Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Slot Width (f)	Flutes	Screw	Pin	❶
TSN-2846-7F150	TN150K-	2.500	1.000	2.250	2.846	1.500	0.375	7	TMSS-2	TMP-2	❍
TSN-3341-8F150	TN150K-	3.000	1.250	2.250	3.341	1.500	0.500	8	TMSS-2	TMP-2	❍

Metric Shank

Item Number	Insert	Body Dia. (a)	Bore Dia. (b)	OAL (c)	Cutter Dia. (d)	Insert Length (e)	Slot Width (f)	Flutes	Screw	Pin	❶
TSN-2846-7F150M	TN150K-	63,50	27,00	57,15	72,29	38,10	9,53	7	TMSS-2	TMP-2	▲
TSN-3341-8F150M	TN150K-	76,20	32,00	57,15	84,86	38,10	12,70	8	TMSS-2	TMP-2	▲

Made to order tool specification - Priced on Request

Fax or mail a copy of the table below to AMEC's Application Engineering Department (330) 364-7666 to receive pricing for a special thread mill.



Thread Size	Thread Form	Pitch	# Flutes	Cutter Diameter (d)	Shank Diameter (a)	Length of Cut (e)	OAL (c)	Bolt-In or Pin Style	Coating	QTY

Company Name	Contact Name	Telephone	Fax
Distributor Name	Distributor Contact Name	Telephone	Fax

❶ Availability Codes
❍ Stocked
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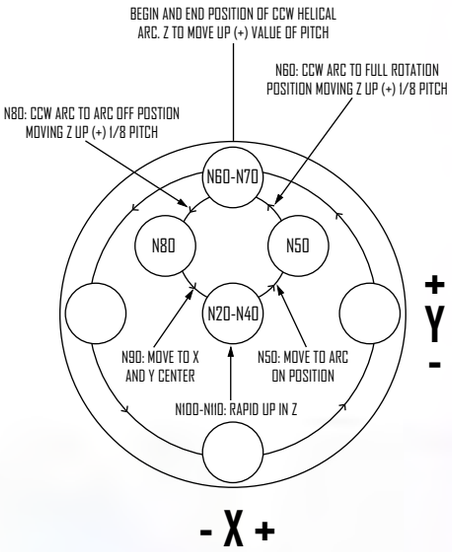
AccuThread 856®

Programming Guide

- Threadmilling can be easily accomplished with simple 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 - specified on pages 4 through 6



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). I 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

AccuThread 856®

Solid Carbide Threadmills

Recommended Speeds & Feeds

MATERIAL	Material Hardness (BHN)	**Material Machinability	AM210® SFM	Cutter Diameter (Inch) Chipload per Tooth (IPT) 1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Free Machining Steel 1118, 1215, 12L14	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 Temperature Alloy Hastealloy 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
Aluminum, Wrought 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
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
Brass	30-125	Easy	1100	0.0005	0.0006	0.0009	0.0010	0.0015	0.0020	0.0025	0.0030

Formulas: Linear Feed Rate = RPM * (IPT * No. of Teeth) SFM = RPM * 0.262 * DIA. RPM = (SFM * 3.82) /DIA.

Adjusted Feed Rate (AFR) for Internal Thread Milling = ((Major DIA. - Cutter DIA.) / Major DIA.) * Linear Feed Rate

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

Example of an Internal Thread Feed Rate Calculation: Cast Iron 125 BHN with a 1/2-13 thread form.

Step 1	Step 2	Step 3
RPM = (SFM * 3.82) / DIA.	Linear Feed Rate = RPM * (IPT * No. of Teeth)	AFR for Internal Thread Milling = ((Major DIA. - Cutter DIA.) / Major DIA.) * Linear Feed Rate
RPM = (500 * 3.82) / .350	Linear Feed Rate = 5457 * (.0015 * 4)	AFR for Internal Thread Milling = ((.500 - .350) / .500) * 32.74
RPM = 5457	Linear Feed Rate = 32.74 IPM	AFR for Internal Thread Milling = 9.82 IPM

Note: Reduce feed and speed by 30% for NPT and NPTF Thread Forms due to tapered cutting action.

* Uncoated thread mills are recommended for cast aluminum applications.

** Refer to recommended pass chart on page 20 when referencing material machinability.

AccuThread 856®

Indexable Threadmills

Recommended Speeds & Feeds

	Cutter Diameter (Inch)		3/8 - 1/2	1/2 - 3/4	3/4 - 1	1 - 1 1/2	1 1/2 - 2	2 - 2 3/4	2 3/4 - 3 1/2
	Number of Flutes		1	1	1 & 2	3	5	7	8
MATERIAL	Material Hardness (BHN)	**Material Machinability	AM210® SFM	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 Temperature 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
Aluminum, Wrought 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
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
Brass	30-125	Easy	1100	0.0020	0.0025	0.0030	0.0040	0.0045	0.0055	0.0065

Formulas: Linear Feed Rate = RPM * (IPT * No. of Teeth) SFM = RPM * 0.262 * DIA. RPM = (SFM * 3.82) /DIA.

Adjusted Feed Rate (AFR) for Internal Thread Milling = ((Major DIA. - Cutter DIA.) / Major DIA.) * Linear Feed Rate

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

-See Page 17 for an Example of an Internal Thread Feed Rate Calculation

* Uncoated thread mills are recommended for cast aluminum applications.

** Refer to recommended pass chart on page 20 when referencing material machinability

Note: Reduce feed and speed by 30% for NPT and NPTF Thread Forms due to tapered cutting action.

AccuThread 856®

Pass Chart & Threadmilling Formulas

Number of Passes NPT/NPTF			
	Materials		
Thread Size	Easy to Machine	Average to Machine	Difficult to Machine
1/16 NPT	1	1	2
1/8 NPT	1	1	2
1/4 NPT	1	1	2
3/8 NPT	1	1	2
1/2 NPT	1	2	3
3/4 NPT	1	2	3
1 NPT	1	2	3
1-1/4 NPT	1	2	3
1-1/2 NPT	1	2	3
2 NPT	1	2	3
2-1/2 NPT	2	3	4
3 NPT	2	3	4
3-1/2 NPT	2	3	4
4 NPT	2	3	4
5 NPT	2	3	4
6 NPT	2	3	4

Number of Passes Metric (ISO)			
	Materials		
Thread Size	Easy to Machine	Average to Machine	Difficult to Machine
M4.5 x .75	1	1	2
M5 x .80	1	1	2
M6 x .75	1	1	2
M6 x 1.0	1	1	2
M8 x .75	1	2	3
M8 x 1.25	1	2	3
M10 x 1.0	1	2	3
M10 x 1.5	1	2	3
M12 x 1.0	1	2	3
M12 x 1.75	1	2	3
M14 x 1.5	1	2	3
M14 x 2.0	1	2	3
M16 x 1.0	1	2	3
M16 x 2.0	1	2	3
M18 x 1.5	1	2	3
M18 x 2.0	1	2	3
M18 x 2.5	2	3	4
M20 x 2.5	2	3	4
M24 x 3.0	2	3	4
M30 x 3.5	2	3	4
M27 x 3.0	2	3	4
M33 x 3.5	2	3	4
M33 x 4.5	2	3	4
M36 x 4.0	2	3	4
M39 x 5.0	2	3	4
M39 x 4.0	2	3	4
M45 x 4.5	2	3	4
M52 x 5.0	2	3	4
M56 x 5.5	2	3	4

Threadmilling Formulas
Linear Feed Rate = RPM * (IPT * # of Flutes)
SFM = RPM * 0.262 * Diameter
RPM = (SFM * 3.82) / Diameter
AFR = ((Major Diameter - Cutter Diameter) / Major Diameter) * Linear Feed Rate
Arc On/Off Value = (Major Diameter - Tool Diameter) / 4
2 Axis Move Full Thread = (Pitch / 8) + Length of Thread
2 Axis Move Arc On = (Pitch / 8)

Number of Passes UN			
	Materials		
Thread Size	Easy to Machine	Average to Machine	Difficult to Machine
#2-56	1	1	2
#4-40	1	1	2
#5-40	1	1	2
#6-32	1	1	2
#8-32	1	1	2
#10-32	1	1	2
#10-24	1	1	2
#12-28	1	1	2
#12-24	1	1	2
1/4-28	1	2	3
1/4-20	1	2	3
5/16-24	1	2	3
5/16-18	1	2	3
3/8-24	1	2	3
3/8-16	1	2	3
7/16-20	1	2	3
7/16-14	1	2	3
1/2-20	1	2	3
1/2-13	1	2	3
9/16-18	1	2	3
9/16-12	1	2	3
5/8-18	1	2	3
5/8-11	2	2	4
3/4-16	1	2	3
3/4-10	2	3	4
7/8-14	1	2	3
7/8-9	2	3	4
1-14	1	2	3
1-10	2	3	4
1-8	2	2	4
1-1/8-7	2	3	4
1-1/4-7	2	3	4
1-3/8-6	2	3	4
1-1/2-6	2	3	4
1-3/4-5	2	3	4
2-4 1/2	2	3	4
2-1/4-4 1/2	2	3	4
2-1/2-4	2	3	4
2-3/4-4	2	3	4
3-4	2	3	4

Easy machining materials: Non-ferrous and leaded steels
Average machining materials: Carbon and alloy steels up to 30 Rc, 300 and 400 series stainless
Difficult machining materials: Inconels, harder steels, titanium, 17-4PH Stainless

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 :

$$\%\ \text{Thread} = \#\ \text{of Threads per Inch} * \frac{\left(\text{Basic Major Diameter of thread (inch)} - \text{Drill Hole Size (Inch)}\right)}{0.0130}$$

Metric

$$\%\ \text{Thread} = \frac{76.93}{\text{Pitch (mm)}} * \left(\text{Basic Major Diameter of thread (mm)} - \text{Drill Hole Size (mm)}\right)$$

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

AccuThread 856®

Troubleshooting Guide

Causes		Problem: 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	
	Didn't 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.	**14.**	Check the tool for excessive wear, beginning threads will wear the fastest.
2.	Verify the correct speed was selected from the catalog speed and feed chart.	**15.**	Make the amount of overhang in the holding device as short as possible.
3.	Verify the correct feed rate was selected from the catalog speed and feed chart.	**16.**	Verify the workpiece is properly clamped, retighten or increase stability if necessary.
4.	Increase the spindle speed (RPM).	**17.**	Increase the coolant flow and volume.
5.	Decrease the spindle speed (RPM).	**18.**	Check the milling program variables, especially the positive or negative value associated with I and J values.
6.	Increase feed per tooth (IPT).	**19.**	Make sure the machine has the appropriate axis and path speed capabilities.
7.	Decrease the feed per tooth (IPT).	**20.**	Make sure the threadmill is arcing in the major diameter instead of making a radial move.
8.	Investigate other coatings.	**21.**	Make sure the machine tool has a helical interpolation option that is "on".
9.	Increase the tool helix.	**22.**	Increase the number of threadmill passes.
10.	Gauge runout between threadmill and tool holder.	**23.**	Make sure the cutter compensation variables are input into the G41 program line.
11.	Perform tool change at quicker intervals.	**24.**	Adjust the program for pipe tap threads to taper out on diameter in X/Y directions to create proper form.
12.	Adjust the feedrate ratio properly to the correct actual penetration rate for internal threads. Refer to page 18 for formula.	**25.**	Request information from the machine tool builder regarding its programming formats.
13.	Use hydraulic clamping chuck.	**26.**	Fax a copy of your program to the Applications Engineering Department at 330-364-7666.

AccuThread 856®

Application Request

Allied Machine & Engineering Corp.
Telephone: **(330) 343-4283**
Toll Free USA & Canada: **(800) 321-5537**
Engineering Fax: **(330) 602-3400**
www.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: _____

OAL: _____ Drill Size: _____ ☐ Thru ☐ Blind

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

Thread Form % : ☐ 100 ☐ 75 ☐ Other _____ Thread: ☐ Internal ☐ External

Machine Information

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

Horse Power: _____ Maximum RPM: _____

Spindle Taper : ☐ Cat 40 ☐ Cat 50 ☐ Other _____

Spindle Orientation: ☐ Vertical ☐ Horizontal

Tool Rotating: ☐ Yes ☐ No

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

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**

Warranty

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.

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

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Allied shall have no liability or responsibility on any claim of any kind, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein. IN NO EVENT SHALL ALLIED MACHINE & ENGINEERING CORP. BE LIABLE FOR ANY SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES. Allied makes no other warranty, express or implied, except as set forth above, and Allied neither assumes nor authorizes any other person or entity to assume for it any other obligation or liability in connection with any of its products.

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WARNING
Cutting tools, tooling and metalworking machines may fail during use. Use safety glasses, appropriate safety equipment and exercise personal safety at all times while operating machinery.

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Other Product Literature:

T-A® and ASC 320® Drilling Products

T-A® and ASC 320® Drilling Products are designed and manufactured by Allied Machine & Engineering Corp.

The combination of premium materials, along with unique geometry and coatings allows for the finest drilling systems in the metal cutting industry, resulting in the lowest cost per hole.

Literature Order Number: TAASC-081

Alvan® Expandable Reamers

The Alvan® product line includes both monobloc and ring style expandable reamers, offered with carbide, cermet, PCD and CBN cutting edges and are available in sizes from 0.228 inch to 7.898 inch (5.8 mm to 200.6 mm) diameters.

Literature Order Number: ALV-08

Ecocut

DRILLING AND TURNING WITH ONLY ONE TOOL

AMEC offers a versatile line of lathe tools that can perform up to four machining operations. One EcoCut tool caN be used for drilling, boring applications, facing applications and standard turning operations.

Literature Order Number: EC-08

Structural Steel T-A® Drilling System

HIGH PERFORMANCE HOLDERS AND INSERTS

Designed specifically for use on structural steel materials, this patent-pending system delivers Outstanding Performance and Durablity. TiAlN insert coating allows for increased tool life and better heat resistance while providing better hole tolerances. Tool holders can be used with standard T-A® Drill Inserts.

Literature Order Number: SS-08

Opening Drill® / Revolution Drill®

The Revolution Drill™ is an IC Drill that allows adjustability of up to .200" (5,1mm) in diameter. Available in sizes from 1.875" (47,63mm) to 4.00" (101,6mm). The Opening Drill® offers adjustable diameters for the coring of existing holes up to 5.62" (142,75mm). These adjustable diameter tools reduce inventory requirements and offer removable cartridges for easy replacement.

Literature Order Number: ODREV-08

GEN3SYS®

HIGH PENETRATION DRILLING SYSTEM

The GEN3SYS® High Penetration Drilling System offers diameters from 12-32mm (0.4724" - 1.2598"). GEN3SYS® holders are offered in 3X, 5X, and 7X depths in both helical and straight fluted options. GEN3SYS® inserts are offered in C1 and C2 carbide with AMEC's exclusive AM200® coating.

Literature Order Number: GEN3-07

AccuPort 432® Port Contour Cutter

One Operation Port Hole Drilling System

Allied's revolutionary port hole drilling system combines two manufacturing functions into one. The patent-pending design provides excellent repeatability and surface finish while eliminating lost production time due to pre-drilling, set-ups, and regrinding.

Literature Order Number: AP432-09

Member USCTI United States Cutting Tool Institute

ISA Industrial Supply Association Linking Channel Partners

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