ADVENT TOOL, INC.

2007 Catalog

Advent® Tool and Manufacturing Inc.

The Thread Milling Specialists

Specializing in Solid and Replaceable Thread and Form Mill Tooling

call toll-free

1.800.THREAD4

or visit our website at

www.advent-threadmill.com

ADVENT TOOL CATALOG 2007

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Mission Statement

It is the primary goal of Advent Tool & Manufacturing, Inc. to be the customer - needs driven, preferred, world class manufacturer / supplier of the finest quality thread milling / form milling / specialty milling systems and solutions, to the machining, metalworking, and manufacturing industry, for the next millennium.

Welcome to 2007

Thread Milling is no longer a black art and Helical Interpolation is now included as a standard feature within your machine control. High performance form milling is now within your reach.

Advent Tool & Manufacturing is pleased to offer the finest, proven and well-engineered form milling tooling in the industry. Made by craftspeople for craftspeople, we feel our tools are so well made that the only regret you'll have buying our mills is that you'll eventually have to use them instead of displaying them!!!

ADVENT TOOL

Replaceable Insert Thread Mill Designation

1	2		3		4		5		6
H	**P**	**1 2 5**	**–**	**T A**	**–**	**7 8**	**–**	**F 3**	**–**	**9**

Column 1: "-" = Standard Tool Style
HP = High Pressure Tool Style - New design to optimize high pressure coolant by placing coolant exit holes directly in the front of the inserts.

Column 2: Minimum Size Thread with Standard Pitch Inserts
78 = 0.875"
01 = 1.0"
125 = 1.250"
138 = 1.375"
15 = 1.5"
175 = 1.75"
20 = 2.0"
25 = 2.5"
30 = 3.0"
35 = 3.5"
40 = 4.0"
50 = 5.0"
60 = 6.0"

Column 3: TA - Weldon Shank Replaceable Insert Thread Mill

Column 4: Tool Weldon Shank Size
05 = Shank Ø0.500"
34 = Shank Ø0.750"
78 = Shank Ø0.875"
01 = Shank Ø1.000"
125 = Shank Ø1.250"
150 = Shank Ø1.500"
200 = Shank Ø2.000"

Column 5: Number of Flutes
F2 = 2 Flutes Tool
F3 = 3 Flutes Tool
F4 = 4 Flutes Tool
F5 = 5 Flutes Tool
F6 = 6 Flutes Tool
F8 = 8 Flutes Tool
F10 = 10 Flutes Tool
F12 = 12 Flutes Tool
F14 = 14 Flutes Tool
F16 = 16 Flutes Tool
F20 = 20 Flutes Tool
F24 = 24 Flutes Tool

Column 6: Tool Length Weldon Shank Tools: Over All Length (OAL) (Extended Length Tools only)
9 = 9" OAL - Extended Length Tool

TECH TIP:

Minimum size threads are, by default, listed in this catalog to 'standard pitch inserts.' Please keep this in mind when picking an Advent Tool; especially for your I.D. thread form. Too large a cutter diameter relative to the minor diameter of your thread form will have adverse effects on every aspect of your thread/form milling operation(s).

For example, a #125-TA-78-F3 tool (see page 3, right) loaded with 12 pitch inserts has a cutter diameter of .970″. The same tool loaded with 8 pitch (or even tapered form inserts) has a cutter diameter of 1.100″! In cases like these, with your minor diameter in mind, you may opt to choose a smaller diameter Advent Tool: But by all means contact us or your local representative for guidance!

ADVENT TOOL

Replaceable Insert Thread Mills

† Standard Pitches **ST**
40UN - 10UN And M1.0 - M2.75

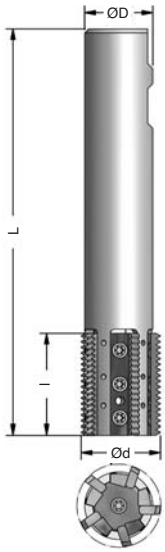
Oversized Inserts **OS**
Cover All Large Pitches:
9UN - 4UN, M3.0 and Up,
And All Tapered Forms

- Through Coolant
- Hardened and CNC Ground
- Standard Weldon Shanks
- Additional Options (SEE BELOW)

Dimensions in Inches (mm)

**Min I.D. Thread* UN	Metric	Tool Number	Cutter Diameter†(d) Standard	Oversize	Insert Number	Length of Cut (l)	Number of Flutes	Tool (L) Length	Shank (D) Diameter
.875	M22	**78-TA-05-F2**	.700 *(17.78)*	.820 *(20.83)*	ATM-38A	1.0 *(25)*	2	4.0 *(102)*	.500
1.0	M24	**01-TA-34-F2**	.750 *(19.05)*	.870 *(22.10)*	ATM-38A	1.0 *(25)*	2	4.0 *(102)*	.750
		01-TA-34-F2-6						6.0 *(152)*	
1.0	M27	**01-TA-78-F3**	.844 *(21.44)*	.964 *(24.49)*	ATM-38B	1.5 *(38)*	3	4.0 *(102)*	.875
		01-TA-78-F3-9						9.0 *(229)*	
		01-TA-01-F3						4.0 *(102)*	1.000
		01-TA-01-F3-9						9.0 *(229)*	
1.25	M33	**125-TA-78-F3**	.970 *(24.64)*	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	3	4.25 *(108)*	.875
		125-TA-78-F3-9						9.0 *(229)*	
		125-TA-01-F3						4.25 *(108)*	1.000
		125-TA-01-F3-9						9.0 *(229)*	
1.375	M35	**138-TA-01-F4**	1.180 *(29.97)*	1.310 *(33.27)*	ATM-410A	1.5 *(38)*	4	4.5*(114)*	1.000
		138-TA-125-F4-7						7.0 *(178)*	1.250
		138-TA-125-F4-9						9.0 *(229)*	
1.5	M39	**15-TA-01-F5**	1.220 *(30.99)*	1.350 *(34.29)*	ATM-410A	1.5 *(38)*	5	4.5 *(114)*	1.000
		15-TA-01-F5-9						9.0 *(229)*	
1.75	M45	**175-TA-125-F5**	1.470 *(37.34)*	1.600 *(40.64)*	ATM-410A	1.5 *(38)*	5	4.5 *(114)*	1.250
		175-TA-125-F5-9						9.0 *(229)*	
2.0	M52	**20-TA-125-F6**	1.720 *(43.69)*	1.850 *(46.99)*	ATM-410A	1.5 *(38)*	6	5.0 *(127)*	1.250
		20-TA-125-F6-9						9.0 *(229)*	
2.5	M64	**25-TA-125-F8**	2.120 *(53.85)*	2.250 *(57.15)*	ATM-410A	1.5 *(38)*	8	5.0 *(127)*	1.250
		25-TA-125-F8-9						9.0 *(229)*	
3.0	M76	**30-TA-150-F12**	2.620 *(66.55)*	2.750 *(69.85)*	ATM-410A	1.5 *(38)*	12	6.0 *(152)*	1.500
		30-TA-150-F12-9						9.0 *(229)*	
3.5	M90	**35-TA-150-F14**	3.120 *(79.25)*	3.250 *(82.55)*	ATM-410A	1.5 *(38)*	14	6.0 *(152)*	1.500
		35-TA-150-F14-9						9.0 *(229)*	
4.0	M105	**40-TA-200-F16**	3.620 *(91.95)*	3.750 *(95.25)*	ATM-410A	1.5 *(38)*	16	7.0 *(178)*	2.000
		40-TA-200-F16-12						12.0 *(305)*	
5.0	M130	**50-TA-200-F20**	4.620 *(117.35)*	4.750 *(120.65)*	ATM-410A	1.5 *(38)*	20	9.0 *(229)*	2.000
		50-TA-200-F20-12						12.0 *(305)*	
6.0	M160	**60-TA-200-F24**	5.595 *(142.11)*	5.725 *(145.42)*	ATM-410A	1.5 *(38)*	24	11.0 *(279)*	2.000

*** SEE TECH TIP on Page 2**



Replacement Parts

Tool Number	Locating Pin** Locating Disk	Wedge	Torx Screw	Torx Plus Screw
** **78-TA-05-F2**	** ATM-PIN78F2	ATM-38AWN	PT464	PT464-8IP
** **01-TA-34-F2**	** ATM-PIN01F2	ATM-38AWN	PT464	PT464-8IP
** **01-TA-78-F3**	** ATM-PIN01F3	ATM-38BWN	PT464	PT464-8IP
125-TA-78-F3	ATM-125LD	ATM-410WS	PT483S	PT483S-15IP
138-TA-01-F4	ATM-138LD	ATM-410WS	PT483T	PT483T-15IP
15-TA-01-F5	ATM-150LD	ATM-410WS	PT483T	PT483T-15IP
175-TA-125-F5	ATM-175LD	ATM-410WS	PT483T	PT483T-15IP
20-TA-125-F6	ATM-200LD	ATM-410WS	PT483T	PT483T-15IP
25-TA-125-F8	ATM-250LD	ATM-410WL	PT483T	PT483T-15IP
30-TA-150-F12	ATM-300LD	ATM-410WL	PT483T	PT483T-15IP
35-TA-150-F14	ATM-350LD	ATM-410WL	PT483T	PT483T-15IP
40-TA-200-F16	ATM-400LD	ATM-410WL	PT483T	PT483T-15IP
50-TA-200-F20	ATM-500LD	ATM-410WL	PT483T	PT483T-15IP
60-TA-200-F24	ATM-600LD	ATM-410WL	PT483T	PT483T-15IP

** Version of the tools with locating pin

Options -

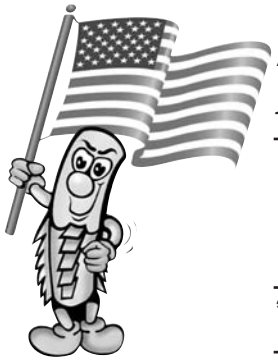
1) *High Pressure (HP) tool style includes tool redesigned to optimize high pressure coolant. This redesign includes wedges and a tool shank capable of directing coolant into the cutting tool interface with the workpiece. Available in tools listed above from 01-TA-34-F2 and up. See Page 5.*

2) *Round shank only without flat for hydraulic and shrink fit applications.*

Ordering Information

When ordering an Advent Replaceable Insert Thread Mill, always check minor diameter of hole, then compare appropriate diameter of Tool (dependent upon thread pitch chosen) with size of hole to check for proper clearance.

Ordering Sample:
To cut a 1" - 11.5 NPT - Tool #:
***01-TA-78-F3**, with insert # ATM-38B115NPT*



ADVENT TOOL

Replaceable Insert Thread Mills, Metric Shank

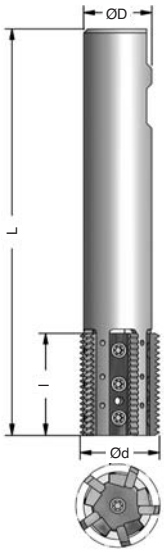
- Through Coolant
- Hardened and CNC Ground
- Standard Weldon Shanks
- Additional Options (SEE BELOW)

† Standard Pitches **ST** *40UN - 10UN And M1.0 - M2.75*

Oversized Inserts **OS** *Cover All Large Pitches: 9UN - 4UN, M3.0 and Up, And All Tapered Forms*

Dimensions in Inches (mm)

**Min I.D. Thread* Metric	UN	Tool Number	Cutter Diameter†(d) Standard	Oversize	Insert Number	Length of Cut (l)	Number of Flutes	Tool (L) Length	Shank (D) Diameter
M22	.875	**EM22-TA-12-F2**	.700 *(17.78)*	.820 *(20.83)*	ATM-38A	1.0 *(25)*	2	4.0 *(102)*	(12)
M24	1.0	**EM24-TA-20-F2** **EM24-TA-20-F2-6**	.750 *(19.05)*	.870 *(22.10)*	ATM-38A	1.0 *(25)*	2	4.0 *(102)* 6.0 *(152)*	(20)
M27	1.0	**EM27-TA-20-F3** **EM27-TA-20-F3-9**	.844 *(21.44)*	.964 *(24.49)*	ATM-38B	1.5 *(38)*	3	4.0 *(102)* 9.0 *(229)*	(20)
M33	1.25	**EM33-TA-20-F3** **EM33-TA-20-F3-9**	.970 *(24.64)*	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	3	4.25 *(108)* 9.0 *(229)*	(20)
M35	1.375	**EM35-TA-25-F4** **EM35-TA-25-F4-7** **EM35-TA-25-F4-9**	1.180 *(29.97)*	1.310 *(33.27)*	ATM-410A	1.5 *(38)*	4	4.5 *(114)* 7.0 *(178)* 9.0 *(229)*	(25)
M39	1.5	**EM39-TA-25-F5** **EM39-TA-25-F5-9**	1.220 *(30.99)*	1.350 *(34.29)*	ATM-410A	1.5 *(38)*	5	4.5 *(114)* 9.0 *(229)*	(25)
M45	1.75	**EM45-TA-32-F5** **EM45-TA-32-F5-9**	1.470 *(37.34)*	1.600 *(40.64)*	ATM-410A	1.5 *(38)*	5	4.5 *(114)* 9.0 *(229)*	(32)
M52	2.0	**EM52-TA-32-F6** **EM52-TA-32-F6-9**	1.720 *(43.69)*	1.850 *(46.99)*	ATM-410A	1.5 *(38)*	6	5.0 *(127)* 9.0 *(229)*	(32)
M64	2.5	**EM64-TA-32-F8** **EM64-TA-32-F8-9**	2.120 *(53.85)*	2.250 *(57.15)*	ATM-410A	1.5 *(38)*	8	5.0 *(127)* 9.0 *(229)*	(32)
M76	3.0	**EM76-TA-40-F12** **EM76-TA-40-F12-9**	2.620 *(66.55)*	2.750 *(69.85)*	ATM-410A	1.5 *(38)*	12	6.0 *(152)* 9.0 *(229)*	(40)
M90	3.5	**EM90-TA-40-F14** **EM90-TA-40-F14-9**	3.120 *(79.25)*	3.250 *(82.55)*	ATM-410A	1.5 *(38)*	14	6.0 *(152)* 9.0 *(229)*	(40)
M105	4.0	**EM105-TA-50-F16** **EM105-TA-50-F16-12**	3.620 *(91.95)*	3.750 *(95.25)*	ATM-410A	1.5 *(38)*	16	7.0 *(178)* 12.0 *(305)*	(50)
M130	5.0	**EM130-TA-50-F20** **EM130-TA-50-F20-12**	4.620 *(117.35)*	4.750 *(120.65)*	ATM-410A	1.5 *(38)*	20	9.0 *(229)* 12.0 *(305)*	(50)
M160	6.0	**EM160-TA-50-F24**	5.595 *(142.11)*	5.725 *(145.42)*	ATM-410A	1.5 *(38)*	24	11.0 *(279)*	(50)



*** SEE TECH TIP on Page 2**

Replacement Parts

Tool Number	Locating Pin** Locating Disk	Wedge	Torx Screw	Torx Plus Screw
** **EM22-TA-12-F2**	** ATM-PIN78F2	ATM-38AWN	PT464	PT464-8IP
** **EM24-TA-20-F2**	** ATM-PIN01F2	ATM-38AWN	PT464	PT464-8IP
** **EM27-TA-20-F3**	** ATM-PIN01F3	ATM-38BWN	PT464	PT464-8IP
EM33-TA-20-F3	ATM-125LD	ATM-410WS	PT483S	PT483S-15IP
EM35-TA-25-F4	ATM-138LD	ATM-410WS	PT483T	PT483T-15IP
EM39-TA-25-F5	ATM-150LD	ATM-410WS	PT483T	PT483T-15IP
EM45-TA-32-F5	ATM-175LD	ATM-410WS	PT483T	PT483T-15IP
EM52-TA-32-F6	ATM-200LD	ATM-410WL	PT483T	PT483T-15IP
EM64-TA-32-F8	ATM-250LD	ATM-410WL	PT483T	PT483T-15IP
EM76-TA-40-F12	ATM-300LD	ATM-410WL	PT483T	PT483T-15IP
EM90-TA-40-F14	ATM-350LD	ATM-410WL	PT483T	PT483T-15IP
EM105-TA-50-F16	ATM-400LD	ATM-410WL	PT483T	PT483T-15IP
EM130-TA-50-F20	ATM-500LD	ATM-410WL	PT483T	PT483T-15IP
EM160-TA-50-F24	ATM-600LD	ATM-410WL	PT483T	PT483T-15IP

** Version of the tools with locating pin

Options -

1) *High Pressure (HP) tool style includes tool redesigned to optimize high pressure coolant. This redesign includes wedges and a tool shank capable of directing coolant into the cutting tool interface with the workpiece. Available in tools listed above from 01-TA-34-F2 and up. See Page 5.*

2) *Round shank only available for hydraulic and shrink fit applications.*

Ordering Information

When ordering an Advent Replaceable Insert Thread Mill, always check minor diameter of hole, then compare appropriate diameter of Tool (dependent upon thread pitch chosen) with size of hole to check for proper clearance.

Ordering Sample:

To cut a M33 x 1.5 - Tool #:
EM33-TA-20-F3*, with insert # ATM-410A 1.5mm*
To cut a M42 x 4.5 - Tool #:
EM33-TA-20-F3*, with insert # ATM-410A 4.5mm*
EM35-TA-25-F4*, with insert # ATM-410A 4.5mm*

ADVENT TOOL

Replaceable Insert Thread Mills, High Pressure Version

- Through Coolant
- Hardened and CNC Ground
- Standard Weldon Shanks
- Additional Options (SEE BELOW)

† Standard Pitches **ST** *40UN - 10UN And M1.0 - M2.75*

Oversized Inserts **OS** *Cover All Large Pitches: 9UN - 4UN, M3.0 and Up, And All Tapered Forms*

Dimensions in Inches (mm)

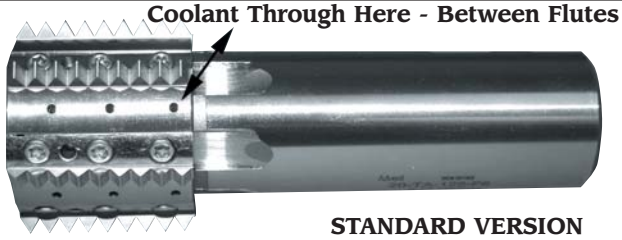
**Min I.D. Thread Metric*	*UN*	*Tool Number*	*Cutter Diameter†(d) Standard*	*Oversize*	*Insert Number*	*Length of Cut (l)*	*Number of Flutes*	*Tool (L) Length*	*Shank (D) Diameter*
M24	1.0	HP01-TA-34-F2 HP01-TA-34-F2-6	.750 *(19.05)*	.870 *(22.10)*	ATM-38A	1.0 *(25)*	2	4.0 *(102)* 6.0 *(152)*	.750
M27	1.0	HP01-TA-78-F3 HP01-TA-78-F3-9	.844 *(21.44)*	.964 *(24.49)*	ATM-38B	1.5 *(38)*	3	4.0 *(102)* 9.0 *(229)*	.875
M33	1.25	HP125-TA-78-F3 HP125-TA-78-F3-9	.970 *(24.64)*	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	3	4.25 *(108)* 9.0 *(229)*	.875
M35	1.375	HP138-TA-01-F4	1.180 *(29.97)*	1.310 *(33.27)*	ATM-410A	1.5 *(38)*	4	4.5 (114)	1.000
		HP138-TA-125-F4-7 HP138-TA-125-F4-9						7.0 *(178)* 9.0 *(229)*	1.250
M39	1.5	HP15-TA-01-F5 HP15-TA-01-F5-9	1.220 *(30.99)*	1.350 *(34.29)*	ATM-410A	1.5 *(38)*	5	4.5 *(114)* 9.0 *(229)*	1.000
M45	1.75	HP175-TA-125-F5 HP175-TA-125-F5-9	1.470 *(37.34)*	1.600 *(40.64)*	ATM-410A	1.5 *(38)*	5	4.5 *(114)* 9.0 *(229)*	1.250
M52	2.0	HP20-TA-125-F6 HP20-TA-125-F6-9	1.720 *(43.69)*	1.850 *(46.99)*	ATM-410A	1.5 *(38)*	6	5.0 *(127)* 9.0 *(229)*	1.250
M64	2.5	HP25-TA-125-F8 HP25-TA-125-F8-9	2.120 *(53.85)*	2.250 *(57.15)*	ATM-410A	1.5 *(38)*	8	5.0 *(127)* 9.0 *(229)*	1.250
M76	3.0	HP30-TA-150-F12 HP30-TA-150-F12-9	2.620 *(66.55)*	2.750 *(69.85)*	ATM-410A	1.5 *(38)*	12	6.0 *(152)* 9.0 *(229)*	1.500
M90	3.5	HP35-TA-150-F14 HP35-TA-150-F14-9	3.120 *(79.25)*	3.250 *(82.55)*	ATM-410A	1.5 *(38)*	14	6.0 *(152)* 9.0 *(229)*	1.500
M105	4.0	HP40-TA-200-F16 HP40-TA-200-F16-12	3.620 *(91.95)*	3.750 *(95.25)*	ATM-410A	1.5 *(38)*	16	7.0 *(178)* 12.0 *(305)*	2.000
M130	5.0	HP50-TA-200-F20 HP50-TA-200-F20-12	4.620 *(117.35)*	4.750 *(120.65)*	ATM-410A	1.5 *(38)*	20	9.0 *(229)* 12.0 *(305)*	2.000
M160	6.0	HP60-TA-200-F24	5.595 *(142.11)*	5.725 *(145.42)*	ATM-410A	1.5 *(38)*	24	11.0 *(279)*	2.000

* SEE TECH TIP on Page 2

Coolant Through Here - In front of Flutes

HIGH PRESSURE VERSION

Coolant Through Here - Between Flutes



STANDARD VERSION

Options - 1) *Round shank only is available for hydraulic and shrink fit applications.*

Replacement Parts

Tool Number	*LocatingPin** Locating Disk*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
** **HP01-TA-34-F2**	** ATM-PIN01F2	ATM-38AW/HP	PT464	PT464-8IP
** **HP01-TA-78-F3**	** ATM-PIN01F3	ATM-38BW/HP	PT464	PT464-8IP
HP125-TA-78-F3	ATM-125LD	ATM-410WS/HP	PT483S	PT483S-15IP
HP138-TA-125-F4	ATM-138LD	ATM-410WS/HP	PT483T	PT483T-15IP
HP15-TA-01-F5	ATM-150LD	ATM-410WS/HP	PT483T	PT483T-15IP
HP175-TA-125-F5	ATM-175LD	ATM-410WS/HP	PT483T	PT483T-15IP
HP20-TA-125-F6	ATM-200LD	ATM-410WS/HP	PT483T	PT483T-15IP
HP25-TA-125-F8	ATM-250LD	ATM-410WL/HP	PT483T	PT483T-15IP
HP30-TA-150-F12	ATM-300LD	ATM-410WL/HP	PT483T	PT483T-15IP
HP35-TA-150-F14	ATM-350LD	ATM-410WL/HP	PT483T	PT483T-15IP
HP40-TA-200-F16	ATM-400LD	ATM-410WL/HP	PT483T	PT483T-15IP
HP50-TA-200-F20	ATM-500LD	ATM-410WL/HP	PT483T	PT483T-15IP
HP60-TA-200-F24	ATM-600LD	ATM-410WL/HP	PT483T	PT483T-15IP

** Version of the tools with locating pin

- Through Coolant
- Hardened and CNC Ground
- Standard Weldon Shanks

Ordering Information

When ordering an Advent Replaceable Insert Thread Mill, always check minor diameter of hole, then compare appropriate diameter of Tool (dependent upon thread pitch chosen) with size of hole to check for proper clearance.

Ordering Sample: *To cut a 1" - 11.5 NPT - Tool #:* ***01-TA-78-F3****, with insert # ATM-38B115NPT*

ADVENT TOOL

Integral Shank Replaceable Insert Thread Mills

† *Standard Pitches* **ST**
40UN - 10UN And
M1.0 - M2.75

Oversized Inserts **OS**
Cover All Large Pitches:
9UN - 4UN, M3.0 and Up,
And All Tapered Forms

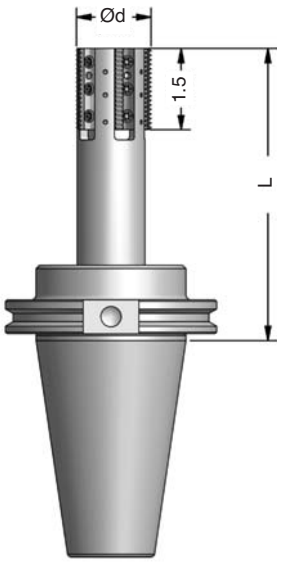
- Standard V-flange Tool Shank (ANSI/ASME B5.50-1985)
- 1.5" Length of Cut
- Through Coolant
- Hardened and CNC Ground

All CV-40 Tools Use ***ATM-410A*** Insert

CV-40 Thread Mills

Dimensions in Inches (mm)

**Min I.D. Thread* UN	Metric	*Tool Number*	*Cutter Diameter†(d)* Standard	Oversize	*Number of Flutes*	*Length From Gauge Line*	*Useable Cutter Length*
1.25	M33	**C125TAC40-F3-4** **C125TAC40-F3-5**	.970 *(24.64)*	1.100 *(27.94)*	3	4 *(102)* 5 *(127)*	3.0 *(76)* 3.5 *(89)*
1.375	M35	**C138TAC40-F4-4** **C138TAC40-F4-5** **C138TAC40-F4-6**	1.180 *(29.97)*	1.310 *(33.27)*	4	4 *(102)* 5 *(127)* 6 *(152)*	3.0 *(76)* 3.5 *(89)* 4.5 *(114)*
1.5	M39	**C15TAC40-F5-4** **C15TAC40-F5-5** **C15TAC40-F5-6**	1.220 *(30.99)*	1.350 *(34.29)*	5	4 *(102)* 5 *(127)* 6 *(152)*	3.0 *(76)* 3.5 *(89)* 4.5 *(114)*
1.75	M45	**C175TAC40-F5-4** **C175TAC40-F5-5** **C175TAC40-F5-6**	1.470 *(37.34)*	1.600 *(40.64)*	5	4 *(102)* 5 *(127)* 6 *(152)*	3.0 *(76)* 3.5 (89) 4.5 *(114)*
2.0	M52	**C20TAC40-F6-5** **C20TAC40-F6-6** **C20TAC40-F6-7**	1.720 *(43.69)*	1.850 *(46.99)*	6	5 *(127)* 6 *(152)* 7 *(178)*	3.5 *(89)* 4.5 *(114)* 5.5 *(140)*
2.5	M64	**C25TAC40-F8-5** **C25TAC40-F8-6** **C25TAC40-F8-7**	2.120 *(53.89)*	2.250 *(57.15)*	8	5 *(127)* 6 *(152)* 7 *(178)*	4.0 *(102)* 5.0 *(127)* 6.0 *(152)*
3.0	M76	**C30TAC40-F12-5** **C30TAC40-F12-6** **C30TAC40-F12-7**	2.620 *(66.55)*	2.750 *(69.85)*	12	5 *(127)* 6 *(152)* 7 *(178)*	4.0 *(102)* 5.0 *(127)* 6.0 *(152)*
3.5	M90	**C35TAC40-F14-5** **C35TAC40-F14-6** **C35TAC40-F14-7**	3.120 *(79.25)*	3.250 *(82.55)*	14	5 *(127)* 6 *(152)* 7 *(178)*	4.0 *(102)* 5.0 *(127)* 6.0 *(152)*



*** SEE TECH TIP on Page 2**

Replacement Parts

Tool Number	*Locating Disk*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
C125TAC40-F3	ATM-125LD	ATM-410WS	PT483S	PT483S-15IP
C138TAC40-F4	ATM-138LD	ATM-410WS	PT483T	PT483T-15IP
C15TAC40-F5	ATM-150LD	ATM-410WS	PT483T	PT483T-15IP
C175TAC40-F5	ATM-175LD	ATM-410WS	PT483T	PT483T-15IP
C20TAC40-F6	ATM-200LD	ATM-410WS	PT483T	PT483T-15IP
C25TAC40-F8	ATM-250LD	ATM-410WL	PT483T	PT483T-15IP
C30TAC40-F12	ATM-300LD	ATM-410WL	PT483T	PT483T-15IP
C35TAC40-F14	ATM-350LD	ATM-410WL	PT483T	PT483T-15IP

Options - 1) *Suitability for coolant through the flange per DIN 69871 Form B specs. ("D" in front of tool number: D15TAC40-F5-5)*

2) *Custom Form available, see page 8.*

ADVENT TOOL

Integral Shank Replaceable Insert Thread Mills

† *Standard Pitches* **ST**
40UN - 10UN And
M1.0 - M2.75

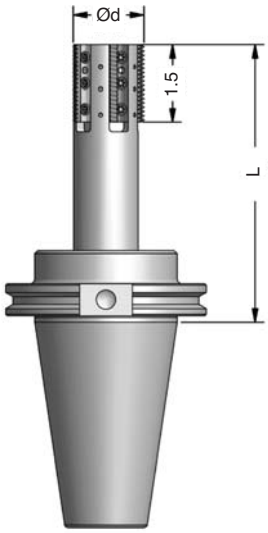
Oversized Inserts **OS**
Cover All Large Pitches:
9UN - 4UN, M3.0 and Up,
And All Tapered Forms

- Standard V-flange Tool Shank (ANSI/ASME B5.50-1985)
- 1.5" Length of Cut
- Through Coolant
- Hardened and CNC Ground

All CV-50 Tools Use ***ATM-410A*** Insert

CV-50 Thread Mills

Dimensions in Inches (mm)



**Min I.D. Thread* UN	Metric	*Tool Number*	*Cutter Diameter†(d)* Standard	Oversize	*Number of Flutes*	*Length From Gauge Line*	*Useable Cutter Length*
1.25	M33	**C125TAC50-F3-4** **C125TAC50-F3-5**	.970 *(24.64)*	1.100 *(27.94)*	3	4 *(102)* 5 *(127)*	3.0 *(76)* 3.5 *(89)*
1.375	M35	**C138TAC50-F4-4** **C138TAC50-F4-5** **C138TAC50-F4-6**	1.180 *(29.97)*	1.310 *(33.27)*	4	4 *(102)* 5 *(127)* 6 *(152)*	3.0 *(76)* 3.5 *(89)* 4.5 *(114)*
1.5	M39	**C15TAC50-F5-4** **C15TAC50-F5-5** **C15TAC50-F5-6**	1.220 *(30.99)*	1.350 *(34.29)*	5	4 *(102)* 5 *(127)* 6 *(152)*	3.0 *(76)* 3.5 *(89)* 4.5 *(114)*
1.75	M45	**C175TAC50-F5-4** **C175TAC50-F5-5** **C175TAC50-F5-6** **C175TAC50-F5-7**	1.470 *(37.34)*	1.600 *(40.64)*	5	4 *(102)* 5 *(127)* 6 *(152)* 7 *(178)*	3.0 *(76)* 3.5 *(89)* 4.5 *(114)* 5.5 *(140)*
2.0	M52	**C20TAC50-F6-4** **C20TAC50-F6-5** **C20TAC50-F6-6** **C20TAC50-F6-7** **C20TAC50-F6-8**	1.720 *(43.69)*	1.850 *(46.99)*	6	4 *(102)* 5 *(127)* 6 *(152)* 7 *(178)* 8 *(203)*	3.0 *(76)* 3.5 *(89)* 4.5 *(114)* 5.5 *(140)* 6.5 *(165)*
2.5	M64	**C25TAC50-F8-6** **C25TAC50-F8-8** **C25TAC50-F8-10**	2.120 *(53.85)*	2.250 *(57.15)*	8	6 *(152)* 8 *(203)* 10 *(254)*	4.5 *(114)* 6.5 *(165)* 8.5 *(216)*
3.0	M76	**C30TAC50-F12-6** **C30TAC50-F12-8** **C30TAC50-F12-10**	2.620 *(66.55)*	2.750 *(69.85)*	12	6 *(152)* 8 *(203)* 10 *(254)*	4.5 *(114)* 6.5 *(165)* 8.5 *(216)*
3.5	M90	**C35TAC50-F14-6** **C35TAC50-F14-8** **C35TAC50-F14-10**	3.120 *(79.25)*	3.250 *(82.55)*	14	6 *(152)* 8 *(203)* 10 *(254)*	5.25 *(133)* 7.25 *(184)* 9.25 *(235)*
4.0	M105	**C40TAC50-F16-6** **C40TAC50-F16-8** **C40TAC50-F16-10**	3.620 *(91.95)*	3.750 *(95.25)*	16	6 *(152)* 8 *(203)* 10 *(254)*	5.25 *(133)* 7.25 *(184)* 9.25 *(235)*

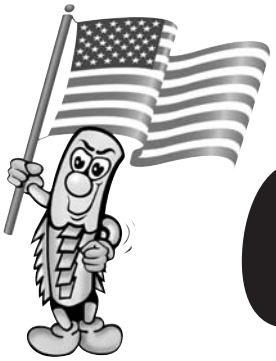
*** SEE TECH TIP on Page 2**

Replacement Parts

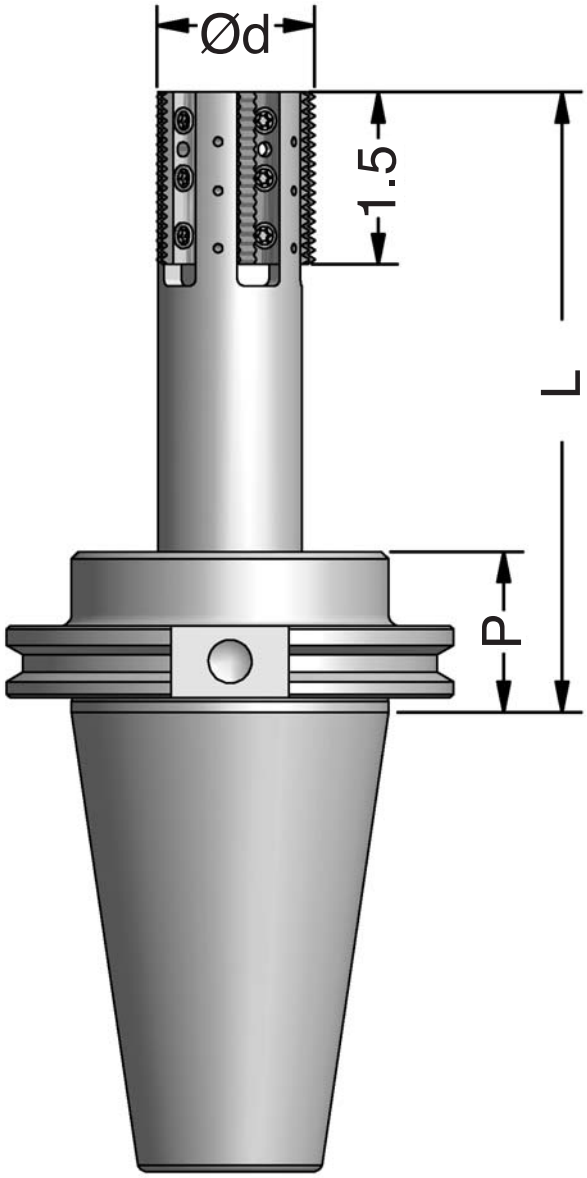
Tool Number	*Locating Disk*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
C125TAC50-F3	ATM-125LD	ATM-410WS	PT483S	PT483S-15IP
C138TAC50-F4	ATM-138LD	ATM-410WS	PT483T	PT483T-15IP
C15TAC50-F5	ATM-150LD	ATM-410WS	PT483T	PT483T-15IP
C175TAC50-F5	ATM-175LD	ATM-410WS	PT483T	PT483T-15IP
C20TAC50-F6	ATM-200LD	ATM-410WS	PT483T	PT483T-15IP
C25TAC50-F8	ATM-250LD	ATM-410WL	PT483T	PT483T-15IP
C30TAC50-F12	ATM-300LD	ATM-410WL	PT483T	PT483T-15IP
C35TAC50-F14	ATM-350LD	ATM-410WL	PT483T	PT483T-15IP
C40TAC50-F16	ATM-400LD	ATM-410WL	PT483T	PT483T-15IP

Options - 1) *Suitability for coolant through the flange per DIN 69871 Form B specs. ("D" in front of tool number: D15TAC40-F5-5)*

2) *Custom Form available, see page 8.*



"Advantage" Custom V/Flange



Create your own custom integral shank "V" flange Threadmill, using our ***Advantage Custom "V" Flange*** system.

Simply complete the form below, fax a copy to **847/549-9714**, or email us at info@Advent-Threadmill.com and we will create a quotation for price and delivery of your custom tool.

TAPER SIZE _____

DIAMETER (d) _____

GAUGE LENGTH (L) _____

PROJECTION (P) _____
Specify or use standard 1.38"

OTHER INFORMATION _____

_____

_____

**** BT, ISO, HSK available upon request***

ADVENT TOOL

Drill Thread Mill Combo-Tool

COMBO TOOLS ARE DESIGNED TO DELIVER OPTIMUM PERFORMANCE IN "NPT" APPLICATIONS,

such as: ALUMINUM MANIFOLDS AND WATER JACKETS.

Replaceable Carbide Drilling and Thread Milling Combination Tools

- Standard Threading Inserts
- Standard Weldon Shank
- Hardened and CNC Ground

FOR 1/2" to 3/4" - 14 NPT/F Thread Forms

Tool Number	*Drill Diameter*	*Cutter Diameter*(d)*	*Length (l) of Thread*	*Number of Flutes*	*Tool (L) Length*	*Shank (D) Diameter*
COM12-DT-34	.701	.690	1.000	1	5.030	.750

Inserts: SB701 (Drill Insert)
ATM-38A14NPT (Thread Insert)

Parts: ATM-38AWN (Wedge)
PT464 (Screw)

FOR 1" - 11.5 & Up Thread Forms

Tool Number	*Drill Diameter*	*Cutter Diameter*(d)*	*Length (l) of Thread*	*Number of Flutes*	*Tool (L) Length*	*Shank (D) Diameter*
COM10-DT-10	.901	.875	1.500	2	6.030	1.000

Inserts: SB901 (Drill Insert)
ATM-38B11.5NPT (Thread Insert)

Parts: ATM-38BWN (Wedge)
PT464 (Screw)

NON-STOCK COATINGS available in 10 days

THE 'SWISS ARMY KNIFE' OF CORNER ROUNDING AND CHAMFERING TOOLS!

ATM-38AMRAD1

ATM-38AMRAD2

- Up to 8 different forms in one load - from the people that bring world-class indexable and solid carbide thread mills to your spindle.
- One tool body, 2 different inserts = flexibility for any application.

Tool Number	*Overall Length*	*Cutter Dia. Min.*	*Insert Number*	*Length of Cut*	*No. of Flutes*	*Shank Diameter*	*List Price*
RTD175A01-F4	4.0″	.650″	ATM-38A	1.0″	4	1.0″	$260.00
RTD175TA34-F4	4.0″	.650″	ATM-38A	1.0″	4	.750″	$260.00

Insert Number	*Radii (+ Chamfer)*	*Coatings Available*					*List Price*
		C TiN	*Z TiAlN*	*Y TiCN*	*X Hard Lube*	*V Xtreme*	
ATM-38AMRAD1_	1/32″, 3/64″, 1/16″, 5/64″, 3/32″, 1/8″ & 5/32″	$34.30	$35.30	$35.30	$35.30	$35.30	$32.30
ATM-38AMRAD2_	3/16″& 1/4″	$34.30	$35.30	$35.30	$35.30	$35.30	$32.30

ADVENT TOOL

Single Flute Replaceable Insert Thread Mills

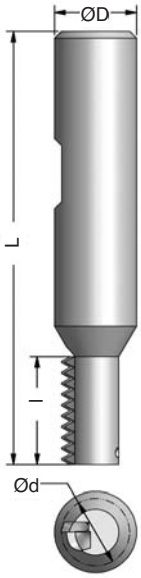
- Economical Alternative for Short Run Jobs
- Uses Standard Advent Inserts
- Hardened Tool Steel Body
- Additional Options (SEE BELOW)

† Standard Pitches **ST** *40UN - 10UN And M1.0 - M2.75*

Oversized Inserts **OS** *Cover All Large Pitches: 9UN - 4UN, M3.0 and Up, And All Tapered Forms*

Round shank only is available for hydraulic and shrink fit applications.

Dimensions in Inches (mm)



Standard Form

**Min I.D. Thread* UN	Metric	*Tool Number*	*Cutter Diameter†(d)* Standard	Oversize	*Insert Number*	*Length of Cut (l)*	*Tool (L) Length*	*Shank (D) Diameter*
7/16	M12	**716-TA-05**	.350 *(8.89)*	N/A	ATM-83A	.75 *(19)*	3.0 *(76)*	.500
9/16	M15	**916-TA-05**	.450 *(11.43)*	N/A	ATM-83T	.75 *(19)*	3.5 *(76)*	.500
3/4	M20	**34-TA-34**	.625 *(15.88)*	.750 *(19.05)*	ATM-38A	1.0 *(25)*	4.0 *(102)*	.750
7/8	M24	**78-TA-34**	.750 *(19.05)*	.870 *(22.10)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	.750
1	M27	**01-TA-01**	.844 *(21.44)*	.964 *(24.49)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	1.000
1-1/4	M33	**125-TA-01**	.970 *(24.64)*	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	4.5 *(114)*	1.000

NPT Form

**Min I.D. Thread NPT*	*Tool Number*	*Cutter Diameter†(d) Oversize*	*Insert Number*	*Length of Cut (l)*	*Tool (L) Length*	*Shank (D) Diameter*
1/4", 3/8" - 18NPT	**14-TA-12NPT**	.425 *(10.80)*	ATM-83A	.75 *(19)*	3.0 *(76)*	.500
1/2", 3/4" - 14NPT	**12-TA-34NPT**	.690 *(17.53)*	ATM-38A	1.0 *(25)*	4.0 *(102)*	.750
3/4" - 14NPT, 1" - 11.5NPT	**78-TA-34**	.870 *(22.10)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	.750
1"-11.5NPT	**01-TA-01**	.964 *(24.49)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	1.000
1-1/4"-11.5NPT	**125-TA-01**	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	4.5 *(114)*	1.000

Standard Form, Metric Shank

**Min I.D. Thread* Metric	UN	*Tool Number*	*Cutter Diameter†(d)* Standard	Oversize	*Insert Number*	*Length of Cut (l)*	*Tool (L) Length*	*Shank (D) Diameter*
M12	7/16	**EM12-TA-12**	.350 *(8.89)*	N/A	ATM-83A	.75 *(19)*	3.0 *(76)*	*(12)*
M15	9/16	**EM15-TA-12**	.450 *(11.43)*	N/A	ATM-83T	.75 *(19)*	3.5 *(89)*	*(12)*
M20	3/4	**EM20-TA-20**	.625 *(15.88)*	.750 *(19.05)*	ATM-38A	1.0 *(25)*	4.0 *(102)*	*(20)*
M24	7/8	**EM24-TA-20**	.750 *(19.05)*	.870 *(22.10)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	*(20)*
M27	1	**EM27-TA-25**	.844 *(21.44)*	.964 *(24.49)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	*(25)*
M33	1-1/4	**EM33-TA-25**	.970 *(24.64)*	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	4.5 *(114)*	*(25)*

NPT Form, Metric Shank

**Min I.D. Thread NPT*	*Tool Number*	*Cutter Diameter†(d) Oversize*	*Insert Number*	*Length of Cut (l)*	*Tool (L) Length*	*Shank (D) Diameter*
1/4", 3/8" - 18NPT	**14-TA-12MMNPT**	.425 *(10.80)*	ATM-83A	.75 *(19)*	3.0 *(76)*	*(12)*
1/2", 3/4" - 14NPT	**12-TA-20MMNPT**	.690 *(17.53)*	ATM-38A	1.0 *(25)*	4.0 *(102)*	*(20)*
3/4" - 14NPT, 1" - 11.5NPT	**EM24-TA-20**	.870 *(22.10)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	*(20)*
1"-11.5NPT	**EM27-TA-25**	.964 *(24.49)*	ATM-38B	1.5 *(38)*	4.5 *(114)*	*(25)*
1-1/4"-11.5NPT	**EM33-TA-25**	1.100 *(27.94)*	ATM-410A	1.5 *(38)*	4.5 *(114)*	*(25)*

*** SEE TECH TIP on Page 2**

Replacement Parts

Tool Number	*Locating Disk*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
716-TA-05 EM12-TA-12			PT464	PT464-8IP
916-TA-05 EM15-TA-12			PT464	PT464-8IP
34-TA-34 EM20-TA-20	ATM-PIN34F1	ATM-38AWN	PT464	PT464-8IP
78-TA-34 EM24-TA-20	ATM-PIN78F1	ATM-38BWN	PT464	PT464-8IP

Tool Number	*Locating Disk*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
01-TA-01 EM27-TA-25	ATM-PIN01F1	ATM-38BWN	PT464	PT464-8IP
125-TA-01 EM33-TA-25	ATM-PIN125F1	ATM-410WS	PT483T	PT483T-15IP
14-TA-12NPT 14-TA-12MMNPT			PT464	PT464-8IP
12-TA-34NPT 12-TA-20MMNPT	ATM-PIN12NPTF1	ATM-38AWN	PT464	PT464-8IP

Options - 1) *Round shank only without flat for hydraulic and shrink fit applications.*

ADVENT TOOL

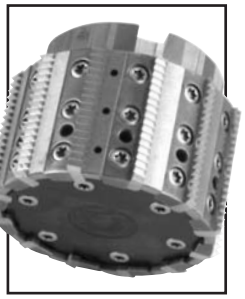
Shell Mill Replaceable Insert Thread Mills

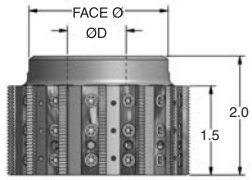
† Standard Pitches **ST** *40UN - 10UN And M1.0 - M2.75*

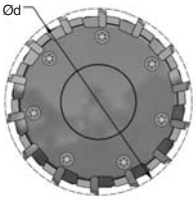
Oversized Inserts **OS** *Cover All Large Pitches: 9UN - 4UN, M3.0 and Up, And All Tapered Forms*

- 1.5" Length of Cut
- Through Coolant Holders Available
- Fits Standard Shell Mill Adaptors
- 2.0" Overall Length
- Additional Options (SEE BELOW)

All Shell Mill Tools Use ***ATM-410A*** Insert







Dimensions in Inches (mm)

Min I.D. Thread UN	*Min I.D. Thread Metric*	*Tool Number*	*Cutter Diameter†(d) Standard*	*Cutter Diameter†(d) Oversize*	*Face Diameter*	*Number of Flutes*	*Hole Diameter (D)*	*Slot Width*
2.5	M64	**SM25TA-F8 SMEM64TA-F8**	2.120 *(53.85)*	2.250 *(57.15)*	1.900	8	.750 (16)	.312 (8)
3.0	M76	**SM30TA-F12 SMEM76TA-F12**	2.620 *(66.55)*	2.750 *(69.85)*	2.000	12	.750 (22)	.312 (10)
3.5	M90	**SM35TA-F14 SMEM90TA-F14**	3.120 *(79.25)*	3.250 *(82.55)*	2.375	14	1.000 (27)	.375 (12)
4.0	M105	**SM40TA-F16 SMEM105TA-F16**	3.620 *(91.95)*	3.750 *(95.25)*	2.375	16	1.000 (27)	.375 (12)
5.0	M130	**SM50TA-F20**	4.620 *(117.35)*	4.750 *(120.65)*	3.750	20	1.500	.625
6.0	M160	**SM60TA-F24**	5.595 *(142.11)*	5.725 *(145.42)*	4.500	24	2.000	.750

* SEE TECH TIP on Page 2

Replacement Parts

Tool Number	*Locating Disk*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
SM25TA-F8 SMEM64TA-F8	ATM-250LD	ATM-410WL	PT483T	PT483T-15IP
SM30TA-F12 SMEM76TA-F12	ATM-300LD	ATM-410WL	PT483T	PT483T-15IP
SM35TA-F14 SMEM90TA-F14	ATM-350LD	ATM-410WL	PT483T	PT483T-15IP
SM40TA-F16 SMEM105TA-F16	ATM-400LD	ATM-410WL	PT483T	PT483T-15IP
SM50TA-F20	ATM-500LD	ATM-410WL	PT483T	PT483T-15IP
SM60TA-F24	ATM-600LD	ATM-410WL	PT483T	PT483T-15IP

* Concentricity of cutters is subject to quality of tool holder used.
* For non-coolant thru applications specify "LDH" locating discs with thru hole.

Select the Proper Thread Mill For Your Application

Choose an Advent Thread Mill that best fits your application. Consider the number of parts being made. For a large production run where cycle times are of the utmost importance, a multi-flute thread mill would be your best choice for speed and thread quality. Also consider the diameter of the thread form being cut along with the length of the form and the pitch. The machine tool holders should also be considered so as not to choose too large of a thread mill in relation to your holder. Keep in mind that the thread mill must fit inside the minor diameter of your thread form. In most cases the first two numbers of our tools represents the smallest thread form that it is able to cut, always check for the cutter diameter in the catalog to ensure proper clearance. Also, note the ST and the OS notations in the catalog, it states the tool diameter with the deeper form, which requires a larger insert. This may indicate that you require the smaller tool holder so as to fit into the minor diameter. If you should need any assistance in selecting a thread mill for your application answer the questions on our request form in catalog and fax it to us at (847) 549-9714 or give us a call at (800) THREAD-4 *(800-847-3234)* or (847) 549-9737 and ask for technical assistance.

ADVENT TOOL

Threadmill Insert Designation

1			2		3		4		5	6
A	**T**	**M**	**–**	**4**	**1**	**0**	**A**	**8**	**N**	**P**	**T**	**P**	**C**

Column 1: ***ATM*** = Standard Insert Form
SATM = Special Form

Column 2: Insert Size

83A = 0.083" Insert Thickness
0.750" Insert Length

83T = 0.083" Insert Thickness
0.750" Insert Length

38A = 0.093" Insert Thickness
1.000" Insert Length

38B = 0.093" Insert Thickness
1.500" Insert Length

410A = 0.130" Insert Thickness
1.500" Insert Length

Column 3: Thread per Inch

Specify Thread Pitch.
Example ***8*** = 8 Pitch
1.5MM = 1.5mm Pitch

Column 4: Thread Form

Standard Thread Form for
Internal and External Threads
A = External Thread Form ONLY
B = Internal Thread Form ONLY
NPT = NPT Standard Taper Pipe Thread Form
NPTF = NPTF Dryseal Taper Pipe Thread Form
NH = National Hose Thread Form
NPSF = Straight Dryseal Pipe Thread Form
NPSM = Straight Pipe for Mechanical Joints
FA = Full Acme Thread Form
SA = Stub Acme Thread Form
API = API Round Thread Form
BSP = BSP British Standard Pipe Thread Form
BSPT = BSPT British Standard Taper Pipe Thread Form
MM = Metric Thread Form
E2 = One Skipped Tooth

Column 5: Rake Angle

"-" = Neutral Rake Angle

CR = Cam Ground - Good insert form recommended for harder workpieces, including high temperature alloys, M2 and D2. By "Rounding"the relief of the form of the insert, less chipping and cracking occurs as the insert becomes stronger due to greater mass behind the cutting edge of the insert.

P = Positive - Recommended for non-ferrous or gummy materials, like 1018 steel or 318 stainless. By producing an insert form with a positive shearing action, a freer cut is produced, providing for lower horsepower consumption and less application sensitivity.

Column 6: Coating

"-" = Uncoated

C = TIN - General purpose, 'Gold' coating. Recommended for straightforward applications where adequate flood coolant is available.

Y = TICN - General purpose, 'Blue Grey' coating. Highly recommended for flood and coolant through applications and slightly harder than TiN coating.

Z = Futura / TiALN - "Violet" color high heat coating. Recommended for cutting in abrasive and difficult to machine materials. Harder yet than TiCN, this coating works best in applications where high heat is generated in the cut. Otherwise, we recommend TiCN coating.

X = Hard Lube - "Dark Grey" color coating for high heat applications. Recommended for dry cutting conditions in tough materials and where long chips are generated.

V = X.treme - "Violet-Grey" color coating that is the hardest coating available. Recommended for high heat, dry cutting conditions in tough materials.

NON-STOCK COATINGS
available
in 10 days

Ordering Examples:

ATM-410A12PC

12 pitch UN form with 5 degree positive rake & TiN coating

ATM-38B11.5NPTFZ

11.5 pitch NPTF form with TiALN coating

ADVENT TOOL

Solid Carbide Form and Cam Ground Replaceable Inserts

ATM38A - ATM410A

Special and Standard Form Introduction

Long known for thread milling, Advent Tool & Manufacturing has established themselves as leader in the field with patentable technologies, precision ground tools and stable milling platforms. But we have always known that threads are simply a form, nothing more and nothing less. Over the past three years we have developed and perfected a range of milling products somewhat outside of the box; but still using our current line of toolholders — sometimes with small modifications.

If you have a medium to long run of workpieces and need to reduce cycle time and increase throughput, copy and fill out the form on the inside of the 2006 catalog and send us a part print and specs on your machine tool(s). We have engineers standing by to duplicate your form on our platform. Your production rates will never be the same again!

Insert 1

This is one of our 410A class skipped tooth inserts. Designed for tougher materials with coarser pitches and/or longer thread depths, this design helps reduce side load pressure on the tool and spindle, ensuring better finish and longer tool life.

Insert 2

A newer design, this insert is for face and bottom finish milling. This double ended insert was designed to be flipped over in the pocket (for two cutting edges per insert) and with a .040" corner radius. Used in conjunction with our mill bodies suited to this type of milling, we provide a completely ground indexable cutting tool with more inserts in the cut than any other design on the market. Tool life, finish and part quality are greatly enhanced with precision tools of this type. Combined with wiper designs, what surface finish, exactly, would you like?

Insert 3

In production for two years now, this design has two identical forms due to the length of the insert. The workpiece milled here is the inside of the ear of a drive shaft yoke. With one end, we circular interpolate the front chamfer, groove and back chamfer, all in one pass. When the workpiece indexes, the other end of the insert goes to work — evening out wear. Tool changes and cycle time were drastically decreased and tool life tripled.

Insert 4

This is a prime example of a special form. This insert, used with a shell mill body replaced a broaching operation on ductile iron parts. Due to the precision ground structure of the mill body, the insert and the way it is located, tracking of the inserts (14 in 2.5" Diameter in this case) was dead on. With that platform, one body roughs and one body finishes the parts. We can't print the tool life here as it might be regarded as a typo!

Insert 5

An Advent Tool classic! 8NPT form in our 410A class insert. Why a classic? It is within our top 5 selling inserts. Why? We get the whole NPT thread depth in one pass. Drill a straight hole, use our body and this tapered insert and you are done!

Insert 6

Once a special, this 410A class insert is now a standard. This 8 Pitch Buttress thread form is becoming more and more common. Advent Tool has them in stock!

Insert 7

A real problem solver. Face milling up against a short shoulder with .040" corner radius and a 30° chamfer on another shoulder. This double ended 410A class insert is actually combined in one cutter body with three (3) other inserts to do a multitude of operations; all with one tool change and a lot of flutes in the cut to balance the tool. Oh yes, we also made this tool to fit the popular Kaiser CKB/CKS modular tooling system.

Insert 8

An example of one of our standard 410A class inserts. 1.5" long, it's sole purpose is to mill 6UN thread forms time and time again. Available in several forms, including positive rake, cam ground or form ground, we have the insert available for whatever material your workpiece is made of.

Insert 9

A double ended 410A class insert like no other. Designed to chamfer a 45 degree shoulder in the bottom of a bore, mill a special groove, and chamfer/mill the backside of a bore, this tool was designed in conjunction with other inserts to reduce tool changes and increase throughput. Completely precision ground, the inserts track perfectly due to our patented tool design and benefit from coolant through designed toolholders. Not designed to alter the minor diameter of the bore, through circular interpolation this tool puts in the final form.

Insert 10

Did we mention Metric thread forms? We've got it. This 410A class insert is for an internal thread. All of our inserts are available in a multitude of pitches; standard and not yet thought of!

Insert 11

A modified ATM38A class insert, with 1.0" length of cut. Inspired by the frustrations of one of our customers with multiple radii callouts on his print, this insert is held at 45 degree to the work piece and allows corner chamfering or any of 7 different radii to be milled on the corner of the workpiece. With a drawing of where the centers are, you can mill 5/32" to 1/32" in one setup!

Insert 12

Lots of our competitors market inserts that are useable on both sides; but one of the major failure modes with inserts is losing teeth in materials that tend to vary over time (i.e. castings). When you lose teeth with any insert, you are effectively finished with that insert (or load of inserts). With our design (given a short thread length) we have a real "flippable" insert — with two real cutting edges!

ADVENT TOOL

Indexable Tool Available Formats

Special and Standard Form Introduction

While we wish our standard platforms could be every thing to every application, every once in a while a new platform has to be created to achieve the right throughput. Below are several examples of tools that were a work in process and some of them may well become standards in the near future based on their initial success!

Face Grooving Tool

This tool was created to mill a specific form on top of a connecting rod for a combustion engine. The mating form was generated on the cap in order to facilitate a perfect mate; and precluding any shifting between the two surfaces. The form was generated by plunging in the Z-Axis down onto the part.

Stubby Tool - ATM-38A Inserts

Lots of our customers really appreciate the fact that we have long inserts available for their threading applications. But what about those customers that have short threads? Enter the 1.0" long insert in larger bodies for short threads. With this tool we now have more inserts in the cut, standard inserts and a short, stubby tool to cut short thread forms with.

Face and End Milling Tool

Utilizing a modified shell mill from our standard stock, this face mill has coolant through down at the bottom corners. See Insert 2 (left) for details. The insert locating pin is further down in the body facilitating the "flippable" design. These types of tools have been in ductile iron applications for years and work very well for finish milling of various surfaces in a large variety of applications. As everything, including the inserts and tool bodies are ground, tool life is exceptional.

Adjustable Insert Face Grooving Tool, Shell Mill Mount

Using Advent 410 Inserts, this tool is used by plunging into the workpiece in the Z Axis only. Pipe flanges in industry vary widely in diameter, so this tool is designed for some compensation in mind. If you look closely you can see how the wedge and the insert can be moved away from the tool centerline for different part arrangements. Using inserts with your specific form in mind, getting surfaces and gaskets to seal the first time is now within reach.

Combination Tool

Every week, we get a call for tools exactly like this. Smaller thread form further inside a bore, with another thread form in the same bore or nearby! Need we say more?

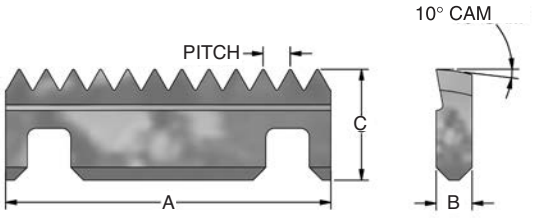
Double Sided Insert Tool

Similar to Stubby Tool (middle left), the main difference is that this tool has "flippable" inserts for short threads, rather than shorter inserts. The main advantage? See Insert 12 (left) for details. These 410A class inserts have much more mass and are much more durable than the rest. Besides, unlike our competition, if you chip one tooth, you really have another edge that is useable! So much for the "flippable" inserts brand X and Y have!

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

ATM-83A, ATM-83T - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-83A16	16UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A18	18UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A20	20UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A24	24UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A27	27UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A28	28UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A32	32UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A36	36UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A40	40UN	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83T16	16UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T18	18UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T20	20UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T24	24UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T27	27UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T28	28UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T32	32UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T36	36UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T40	40UN	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A

** TiN Stocked Coating only

for Insert ATM-83A - use Tool Holder 716-TA-05 or EM12-TA-12 only

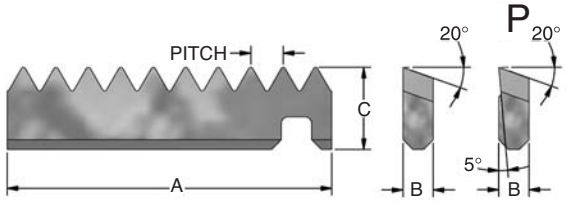
for Insert ATM-83T - use Tool Holder 916-TA-05 or EM15-TA-12 only

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

ATM-38A - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-38A6	6UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A6P	6UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A7	7UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A7P	7UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A8	8UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A8P	8UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A9	9UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A9P	9UN	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A10	10UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A10P	10UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A11	11UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A11P	11UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A12	12UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A12P	12UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A13	13UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A13P	13UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14	14UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14P	14UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A16	16UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A16P	16UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A18	18UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A18P	18UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A20	20UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A20P	20UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A24	24UN	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A24P	24UN	60	1.000	0.093	0.250	20	X	O	O	O	O

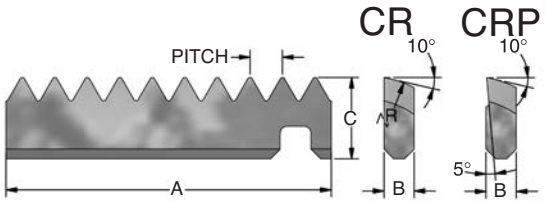
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available
in 10 days

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

ATM-38A_CR - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-38A6CR	6UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A6CRP	6UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A7CR	7UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A7CRP	7UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A8CR	8UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A8CRP	8UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A9CR	9UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A9CRP	9UN	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A10CR	10UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A10CRP	10UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A11CR	11UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A11CRP	11UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A12CR	12UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A12CRP	12UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A13CR	13UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A13CRP	13UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A14CR	14UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A14CRP	14UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A16CR	16UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A16CRP	16UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A18CR	18UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A18CRP	18UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A20CR	20UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A20CRP	20UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A24CR	24UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A24CRP	24UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A28CR	28UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A28CRP	28UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A32CR	32UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A32CRP	32UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A36CR	36UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A36CRP	36UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A40CR	40UN	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A40CRP	40UN	60	1.000	0.093	0.250	10	X	O	O	O	O

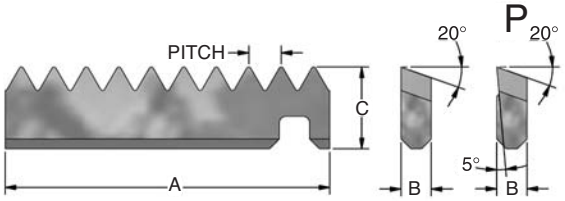
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available
in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

ATM-38B - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-38B6	6UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B6P	6UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B7	7UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B7P	7UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8	8UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8P	8UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8/90	8/90	90	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8/90P	8/90	90	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B9	9UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B9P	9UN	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B10	10UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B10P	10UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B11	11UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B11P	11UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B12	12UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B12P	12UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B13	13UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B13P	13UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14	14UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14P	14UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B16	16UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B16P	16UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B16/90	16/90	90	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B16/90P	16/90	90	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B18	18UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B18P	18UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B20	20UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B20P	20UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B24	24UN	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B24P	24UN	60	1.500	0.093	0.250	20	X	O	O	O	O

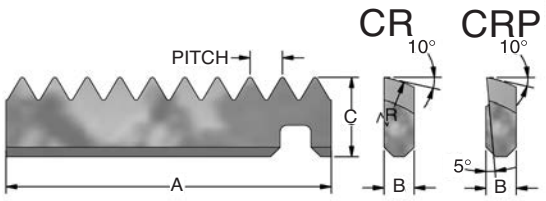
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

ATM-38B_CR - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-38B6CR	6UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B6CRP	6UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B7CR	7UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B7CRP	7UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B8CR	8UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B8CRP	8UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B8/90CR	8/90	90	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B8/90CRP	8/90	90	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B9CR	9UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B9CRP	9UN	60	1.500	0.093	0.310	10	X	O	O	O	O
ATM-38B10CR	10UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B10CRP	10UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B11CR	11UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B11CRP	11UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B12CR	12UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B12CRP	12UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B13CR	13UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B13CRP	13UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B14CR	14UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B14CRP	14UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B16CR	16UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B16CRP	16UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B16/90CR	16/90	90	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B16/90CRP	16/90	90	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B18CR	18UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B18CRP	18UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B20CR	20UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B20CRP	20UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B24CR	24UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B24CRP	24UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B27CR	27UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B27CRP	27UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B28CR	28UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B28CRP	28UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B30CR	30UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B30CRP	30UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B32CR	32UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B32CRP	32UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B36CR	36UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B36CRP	36UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B40CR	40UN	60	1.500	0.093	0.250	10	X	O	O	O	O
ATM-38B40CRP	40UN	60	1.500	0.093	0.250	10	X	O	O	O	O

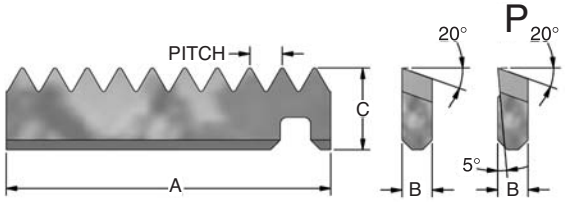
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

ATM-410A - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-410A3B	3UN INT	60	1.500	0.130	0.475	20	X	O	O	O	O
ATM-410A3A	3UN EXT	60	1.500	0.130	0.475	20	X	O	O	O	O
ATM-410A3.5B	3.5UN INT	60	1.500	0.130	0.425	20	X	O	O	O	O
ATM-410A3.5A	3.5UN EXT	60	1.500	0.130	0.425	20	X	O	O	O	O
ATM-410A4B	4UN INT	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A4BP	4UN INT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4A	4UN EXT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4AP	4UN EXT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.5B	4.5UN INT	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A4.5BP	4.5UN INT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.5A	4.5UN EXT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.5AP	4.5UN EXT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5	5UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A5P	5UN	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6	6UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A6P	6UN	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A7	7UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A7P	7UN	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8	8UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A8P	8UN	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8/90	8/90	90	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8/90P	8/90	90	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A9	9UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A9P	9UN	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A10	10UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A10P	10UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A11	11UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A11P	11UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12	12UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A12P	12UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A13	13UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A13P	13UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A14	14UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A14P	14UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A16	16UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A16P	16UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A16/90	16/90	90	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A16/90P	16/90	90	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A18	18UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A18P	18UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A20	20UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A20P	20UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A22	22UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A22P	22UN	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A24	24UN	60	1.500	0.130	0.310	20	X	X	O	O	O
ATM-410A24P	24UN	60	1.500	0.130	0.310	20	X	O	O	O	O

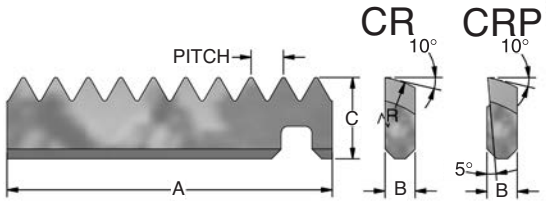
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

ATM-410A_CR - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-410A3BCR	3UN INT	60	1.500	0.130	0.475	10	X	O	O	O	O
ATM-410A3ACR	3UN EXT	60	1.500	0.130	0.475	10	X	O	O	O	O
ATM-410A3.5BCR	3.5UN INT	60	1.500	0.130	0.425	10	X	O	O	O	O
ATM-410A3.5ACR	3.5UN EXT	60	1.500	0.130	0.425	10	X	O	O	O	O
ATM-410A4BCR	4UN INT	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A4BCRP	4UN INT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A4ACR	4UN EXT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A4ACRP	4UN EXT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A4.5BCR	4.5UN INT	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A4.5BCRP	4.5UN INT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A4.5ACR	4.5UN EXT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A4.5ACRP	4.5UN EXT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A5CR	5UN	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A5CRP	5UN	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A6CR	6UN	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A6CRP	6UN	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A7CR	7UN	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A7CRP	7UN	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A8CR	8UN	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A8CRP	8UN	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A8/90CR	8/90	90	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A8/90CRP	8/90	90	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A9CR	9UN	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A9CRP	9UN	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A10CR	10UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A10CRP	10UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A11CR	11UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A11CRP	11UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A12CR	12UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A12CRP	12UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A13CR	13UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A13CRP	13UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A14CR	14UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A14CRP	14UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A16CR	16UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A16CRP	16UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A16/90CR	16/90	90	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A16/90CRP	16/90	90	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A18CR	18UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A18CRP	18UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A20CR	20UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A20CRP	20UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A22CR	22UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A22CRP	22UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A24CR	24UN	60	1.500	0.130	0.310	10	X	X	O	O	O
ATM-410A24CRP	24UN	60	1.500	0.130	0.310	10	X	O	O	O	O

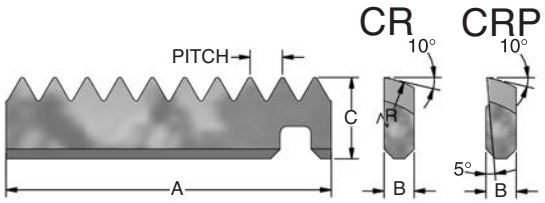
NON-STOCK COATINGS available in 10 days

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

ATM-410A_CR - Unified (UN) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-410A27CR	27UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A27CRP	27UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A28CR	28UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A28CRP	28UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A30CR	30UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A30CRP	30UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A32CR	32UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A32CRP	32UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A36CR	36UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A36CRP	36UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A40CR	40UN	60	1.500	0.130	0.310	10	X	O	O	O	O
ATM-410A40CRP	40UN	60	1.500	0.130	0.310	10	X	O	O	O	O

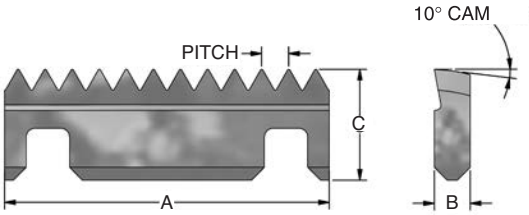
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available in 10 days

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

ATM-83A, ATM-83T - Metric (M) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-83A1.5MM	1.5MM	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A1.25MM	1.25MM	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A1.0MM	1.0MM	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83A0.75MM	0.75MM	60	0.750	0.083	0.210	10	X	N/A	N/A	N/A	N/A
ATM-83T2.0MM	2.0MM	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T1.75MM	1.75MM	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T1.5MM	1.5MM	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T1.25MM	1.25MM	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T1.0MM	1.0MM	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A
ATM-83T0.75MM	0.75MM	60	0.750	0.083	0.240	10	X	N/A	N/A	N/A	N/A

** TiN Stocked Coating only

for Insert ATM-83A - use Tool Holder 716-TA-05 or EM12-TA-12 only

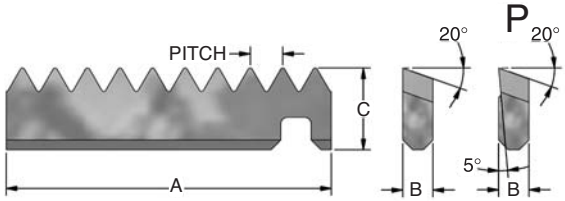
for Insert ATM-83T - use Tool Holder 916-TA-05 or EM15-TA-12 only

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

ATM-38A - Metric (M) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-38A4.0MM	4.0MM	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A4.0MMP	4.0MM	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A3.5MM	3.5MM	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A3.5MMP	3.5MM	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A3.0MM	3.0MM	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A3.0MMP	3.0MM	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A2.5MM	2.5MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A2.5MMP	2.5MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A2.0MM	2.0MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A2.0MMP	2.0MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.75MM	1.75MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.75MMP	1.75MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.5MM	1.5MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.5MMP	1.5MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.25MM	1.25MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.25MMP	1.25MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.0MM	1.0MM	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A1.0MMP	1.0MM	60	1.000	0.093	0.250	20	X	O	O	O	O

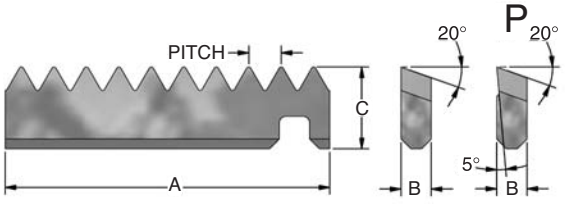
* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

ATM-38B - Metric (M) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-38B4.0MM	4.0MM	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B4.0MMP	4.0MM	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B3.5MM	3.5MM	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B3.5MMP	3.5MM	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B3.0MM	3.0MM	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B3.0MMP	3.0MM	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B2.5MM	2.5MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B2.5MMP	2.5MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B2.0MM	2.0MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B2.0MMP	2.0MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.75MM	1.75MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.75MMP	1.75MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.5MM	1.5MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.5MMP	1.5MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.25MM	1.25MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.25MMP	1.25MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.0MM	1.0MM	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B1.0MMP	1.0MM	60	1.500	0.093	0.250	20	X	O	O	O	O

* CR Style Insert Upon Request

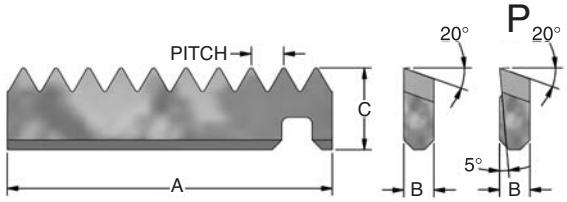
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

ATM-410A - Metric (M) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-410A6.0BMM	6.0MM INT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6.0BMMP	6.0MM INT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6.0AMM	6.0MM EXT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6.0AMMP	6.0MM EXT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5.0MM	5.0MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5.0MMP	5.0MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.5MM	4.5MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.5MMP	4.5MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.0MM	4.0MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4.0MMP	4.0MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A3.5MM	3.5MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A3.5MMP	3.5MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A3.0MM	3.0MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A3.0MMP	3.0MM	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A2.5MM	2.5MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A2.5MMP	2.5MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A2.0MM	2.0MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A2.0MMP	2.0MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.75MM	1.75MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.75MMP	1.75MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.5MM	1.5MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.5MMP	1.5MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.25MM	1.25MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.25MMP	1.25MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.0MM	1.0MM	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A1.0MMP	1.0MM	60	1.500	0.130	0.310	20	X	O	O	O	O

* CR Style Insert Upon Request

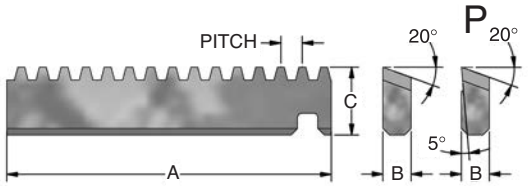
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

FULL Acme (FA) Internal Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-410A3FA	3FA INT	29	1.500	0.130	0.408	20	X	O	O	O	O
ATM-410A3FAP	3FA INT	29	1.500	0.130	0.408	20	X	O	O	O	O
ATM-410A3.5FA	3.5FA INT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A3.5FAP	3.5FA INT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4FA	4FA INT	29	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A4FAP	4FA INT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5FA	5FA INT	29	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A5FAP	5FA INT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6FA	6FA INT	29	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A6FAP	6FA INT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8FA	8FA INT	29	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A8FAP	8FA INT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A10FA	10FA INT	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A10FAP	10FA INT	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12FA	12FA INT	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12FAP	12FA INT	29	1.500	0.130	0.310	20	X	O	O	O	O

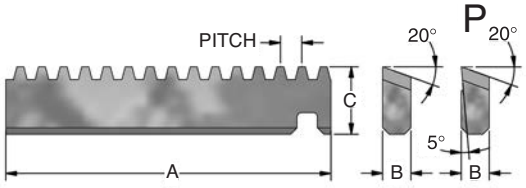
* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

FULL Acme (FA) External Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-410A3AFA	3FA EXT	29	1.500	0.130	0.408	20	X	O	O	O	O
ATM-410A3AFAP	3FA EXT	29	1.500	0.130	0.408	20	X	O	O	O	O
ATM-410A3.5AFA	3.5FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A3.5AFAP	3.5FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4AFA	4FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4AFAP	4FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5AFA	5FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5AFAP	5FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6AFA	6FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6AFAP	6FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8AFA	8FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8AFAP	8FA EXT	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A10AFA	10FA EXT	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A10AFAP	10FA EXT	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12AFA	12FA EXT	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12AFAP	12FA EXT	29	1.500	0.130	0.310	20	X	O	O	O	O

* CR Style Insert Upon Request

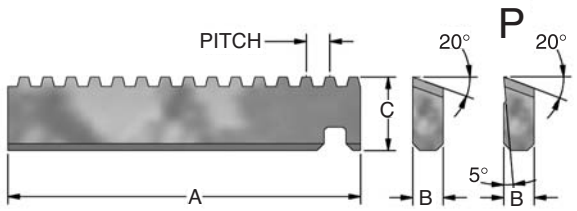
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

STUB Acme (SA) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-410A3SA	3SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4SA	4SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A4SAP	4SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5SA	5SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A5SAP	5SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6SA	6SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A6SAP	6SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8SA	8SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8SAP	8SA	29	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A10SA	10SA	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A10SAP	10SA	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12SA	12SA	29	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A12SAP	12SA	29	1.500	0.130	0.310	20	X	O	O	O	O

* CR Style Insert Upon Request

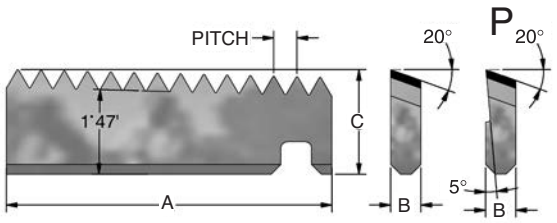
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS
available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

National Taper Pipe (NPT) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-83A27NPT	27NPT	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-83A18NPT	18NPT	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-38A27NPTCR	27NPT	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A27NPTCRP	27NPT	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A18NPT*	18NPT	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A18NPTP*	18NPT	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A14NPT*	14NPT	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-38A14NPTP*	14NPT	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A115NPT*	11.5NPT	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-38A115NPTP*	11.5NPT	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38B18NPT*	18NPT	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B18NPTP*	18NPT	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B14NPT*	14NPT	60	1.500	0.093	0.310	20	X	X	O	O	O
ATM-38B14NPTP*	14NPT	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B115NPT*	11.5NPT	60	1.500	0.093	0.310	20	X	X	O	O	O
ATM-38B115NPTP*	11.5NPT	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8NPT*	8NPT	60	1.500	0.093	0.310	20	X	X	O	O	O
ATM-38B8NPTP*	8NPT	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-410A18NPT*	18NPT	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A18NPTP*	18NPT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A14NPT*	14NPT	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A14NPTP*	14NPT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A115NPT	11.5NPT	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A115NPTP	11.5NPT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A115NPTCR	11.5NPT	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A115NPTCRP	11.5NPT	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A8NPT	8NPT	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A8NPTP	8NPT	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8NPTCR	8NPT	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A8NPTCRP	8NPT	60	1.500	0.130	0.375	10	X	O	O	O	O

* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

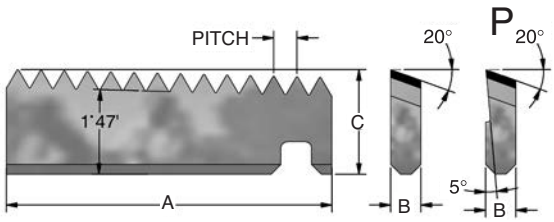
for Insert ATM-83A_NPT use Tool Holder 14-TA-12NPT or 14-TA-12MMNPT only

NON-STOCK COATINGS
available
in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

Dryseal Pipe (NPTF) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-83A27NPTF	27NPTF	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-83A18NPTF	18NPTF	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-38A27NPTFCR	27NPTF	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A27NPTFCRP	27NPTF	60	1.000	0.093	0.310	10	X	O	O	O	O
ATM-38A18NPTF*	18NPTF	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A18NPTFP*	18NPTF	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A14NPTF*	14NPTF	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-38A14NPTFP*	14NPTF	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A115NPTF*	11.5NPTF	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-38A115NPTFP*	11.5NPTF	60	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38B18NPTF*	18NPTF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B18NPTFP*	18NPTF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B14NPTF*	14NPTF	60	1.500	0.093	0.310	20	X	X	O	O	O
ATM-38B14NPTFP*	14NPTF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B115NPTF*	11.5NPTF	60	1.500	0.093	0.310	20	X	X	O	O	O
ATM-38B115NPTFP*	11.5NPTF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8NPTF*	8NPTF	60	1.500	0.093	0.310	20	X	X	O	O	O
ATM-38B8NPTFP*	8NPTF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-410A18NPTF*	18NPTF	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A18NPTFP*	18NPTF	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A14NPTF*	14NPTF	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A14NPTFP*	14NPTF	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A115NPTF	11.5NPTF	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A115NPTFP	11.5NPTF	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A115NPTFCR	11.5NPTF	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A115NPTFCRP	11.5NPTF	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A8NPTF	8NPTF	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A8NPTFP	8NPTF	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8NPTFCR	8NPTF	60	1.500	0.130	0.375	10	X	X	O	O	O
ATM-410A8NPTFCRP	8NPTF	60	1.500	0.130	0.375	10	X	O	O	O	O

* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

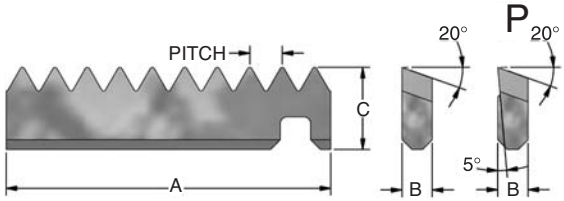
for Insert ATM-83A_NPTF use Tool Holder 14-TA-12NPT or 14-TA-12MMNPT only

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

National Straight Pipe (NPS) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-83A27NPS	27NPS	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-83A18NPS	18NPS	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-38A27NPSCR	27NPS	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A27NPSCRP	27NPS	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A18NPS*	18NPS	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A18NPSP*	18NPS	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14NPS*	14NPS	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14NPSP*	14NPS	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A115NPS*	11.5NPS	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A115NPSP*	11.5NPS	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38B18NPS*	18NPS	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B18NPSP*	18NPS	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14NPS*	14NPS	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14NPSP*	14NPS	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B115NPS*	11.5NPS	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B115NPSP*	11.5NPS	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B8NPS*	8NPS	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8NPSP*	8NPS	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-410A18NPS*	18NPS	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A18NPSP*	18NPS	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A14NPS*	14NPS	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A14NPSP*	14NPS	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A115NPS*	11.5NPS	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A115NPSP*	11.5NPS	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A8NPS*	8NPS	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8NPSP*	8NPS	60	1.500	0.130	0.375	20	X	O	O	O	O

* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

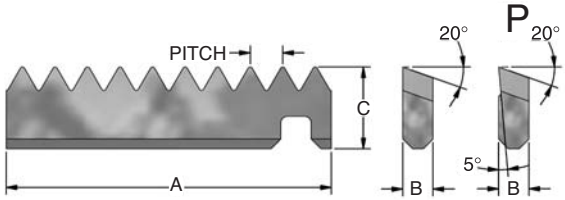
for Insert ATM-83A_NPS use Tool Holder 716-TA-05 or EM12-TA-12 only

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

Dryseal Straight Pipe (NPSF) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-83A27NPSF	27NPSF	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-83A18NPSF	18NPSF	60	0.750	0.083	0.250	10	X	O	O	O	O
ATM-38A27NPSFCR	27NPSF	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A27NPSFCRP	27NPSF	60	1.000	0.093	0.250	10	X	O	O	O	O
ATM-38A18NPSF*	18NPSF	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A18NPSFP*	18NPSF	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14NPSF*	14NPSF	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14NPSFP*	14NPSF	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A115NPSF*	11.5NPSF	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A115NPSFP*	11.5NPSF	60	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38B18NPSF*	18NPSF	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B18NPSFP*	18NPSF	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14NPSF*	14NPSF	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14NPSFP*	14NPSF	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B115NPSF*	11.5NPSF	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B115NPSFP*	11.5NPSF	60	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B8NPSF*	8NPSF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B8NPSFP*	8NPSF	60	1.500	0.093	0.310	20	X	O	O	O	O
ATM-410A18NPSF*	18NPSF	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A18NPSFP*	18NPSF	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A14NPSF*	14NPSF	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A14NPSFP*	14NPSF	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A115NPSF*	11.5NPSF	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A115NPSFP*	11.5NPSF	60	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A8NPSF*	8NPSF	60	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A8NPSFP*	8NPSF	60	1.500	0.130	0.375	20	X	O	O	O	O

* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

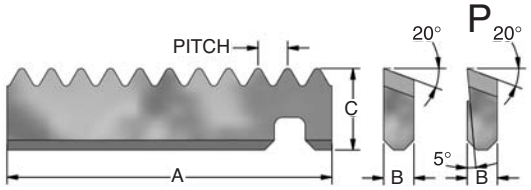
for Insert ATM-83A_NPSF use Tool Holder 716-TA-05 or EM12-TA-12 only

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

British Standard Pipe (BSP) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-38A14BSP*	14BSP	55	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A14BSPP*	14BSP	55	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A11BSP*	11BSP	55	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38A11BSPP*	11BSP	55	1.000	0.093	0.250	20	X	O	O	O	O
ATM-38B14BSP*	14BSP	55	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B14BSPP*	14BSP	55	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B11BSP*	11BSP	55	1.500	0.093	0.250	20	X	O	O	O	O
ATM-38B11BSPP*	11BSP	55	1.500	0.093	0.250	20	X	O	O	O	O
ATM-410A14BSP*	14BSP	55	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A14BSPP*	14BSP	55	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A11BSP*	11BSP	55	1.500	0.130	0.310	20	X	O	O	O	O
ATM-410A11BSPP*	11BSP	55	1.500	0.130	0.310	20	X	O	O	O	O

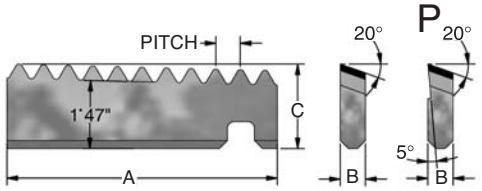
* CR Style Insert Upon Request

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

British Standard Taper Pipe (BSPT) Threads



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-38A14BSPT*	14BSP	55	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A14BSPTP*	14BSP	55	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A11BSPT*	11BSP	55	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38A11BSPTP*	11BSP	55	1.000	0.093	0.310	20	X	O	O	O	O
ATM-38B14BSPT*	14BSP	55	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B14BSPTP*	14BSP	55	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B11BSPT*	11BSP	55	1.500	0.093	0.310	20	X	O	O	O	O
ATM-38B11BSPTP*	11BSP	55	1.500	0.093	0.310	20	X	O	O	O	O
ATM-410A14BSPT*	14BSP	55	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A14BSPTP*	14BSP	55	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A11BSPT*	11BSP	55	1.500	0.130	0.375	20	X	O	O	O	O
ATM-410A11BSPTP*	11BSP	55	1.500	0.130	0.375	20	X	O	O	O	O

* CR Style Insert Upon Request

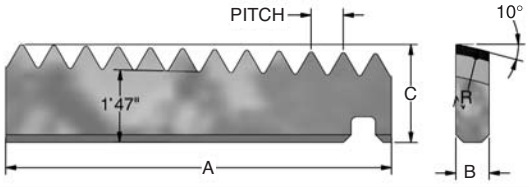
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

American Petroleum Institute Round (API) Thread



Dimensions in Inches

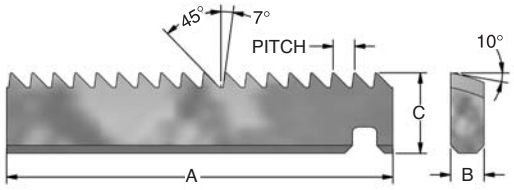
Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-410A8API	8API	60	1.500	0.130	0.375	10	X	O	O	O	O
ATM-410A10API	10API	60	1.500	0.130	0.375	10	X	O	O	O	O

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide CAM Ground Replaceable Inserts

American Buttress Threads (Internal/External)



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAIN	TiCN	Hard Lube	Xtreme
ATM-6B-7/45	6BUTT.INT	52	1.500	0.130	0.375	10	X	O	O	O	O
ATM-8B-7/45	8BUTT.INT	52	1.500	0.130	0.375	10	X	O	O	O	O
ATM-10B-7/45	10BUTT.INT	52	1.500	0.130	0.310	10	X	O	O	O	O
ATM-12B-7/45	12BUTT.INT	52	1.500	0.130	0.310	10	X	O	O	O	O
ATM-16B-7/45	16BUTT.INT	52	1.500	0.130	0.310	10	X	O	O	O	O
ATM-20B-7/45	20BUTT.INT	52	1.500	0.130	0.310	10	X	O	O	O	O

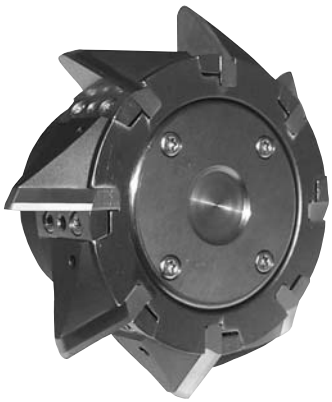
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

For Buttress Thread Inserts 6 - 20 pitch use Standard Replaceable Insert Thread Mill Tools (Insert Style ATM-410A)
For Buttress Thread Inserts 1 - 5 pitch use Special Holder for each Buttress Thread Pitch
Insert Style ATM-38A & ATM-38B available upon request
Coarse Pitch & Different Flank Angle Buttress Thread Form available upon request

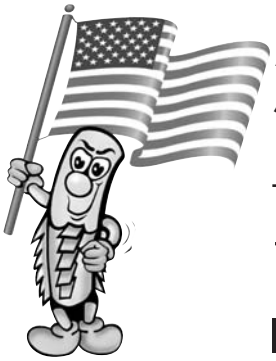
ADVENT TOOL

Sample Tool & Inserts to cut 1 Pitch Buttress Thread 0/45

Tool Number - SM401BFL
Insert Number - SATM-1B-0/45Z



NON-STOCK COATINGS
available
in 10 days



ADVENT TOOL

Special Holders to Cut — 1" - 8UNC, 1⅛" - 7UNC, M24 x 3mm x 2" DEEP

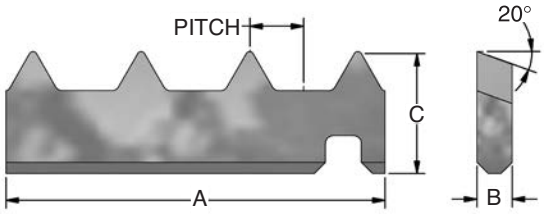
(See Page 36)

Minimum Size	*Tool Number*	*Cutter Diameter*	*Length of Cut*	*Number of Flutes*	*Length*	*Shank Diameter*	*Insert Number*
1" - 8UN	S01-TA-34-F2-4.5	0.810	1.0	2	4.5	0.750	ATM-38A8E2
1⅛" - 7UN	S01-TA-34-F2-4.5	0.810	1.0	2	4.5	0.750	ATM-38A7E2
1¼" - 7UN	S125-TA-34-F2-4.5	0.870	1.0	2	4.5	0.750	ATM-38A7E2
M24 x 3.0	SM24-TA-34-F2-4.5	0.750	1.0	2	4.5	0.750	ATM-38A3.0MME2

ADVENT TOOL

Solid Carbide Form Ground Replaceable Inserts

Skipped Tooth Inserts (E2) - UN + Metric



Dimensions in Inches

Insert Number	*Pitch*	*Flank Angle*	*Measurements*			*Clearance Angle*	*Coatings Available***				
			A	B	C		C	Z	Y	X	V
							TiN	TiAlN	TiCN	Hard Lube	Xtreme
ATM-38A7E2	7UN	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-38A8E2	8UN	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-410A4E2	4UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A4.5E2	4.5UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A5E2	5UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A6E2	6UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A7E2	7UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A8E2	8UN	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-38A3.5MME2	3.5MM	60	1.000	0.093	0.310	20	X	X	O	O	O
ATM-38A3.0MME2	3.0MM	60	1.000	0.093	0.280	20	X	X	O	O	O
ATM-410A6.0MME2	6.0MM	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A5.0MME2	5.0MM	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A4.5MME2	4.5MM	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A4.0MME2	4.0MM	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A3.5MME2	3.5MM	60	1.500	0.130	0.375	20	X	X	O	O	O
ATM-410A3.0MME2	3.0MM	60	1.500	0.130	0.375	20	X	X	O	O	O

Other Sizes Available Upon Request

Standard E2 Insert will cut Internal thread ONLY

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

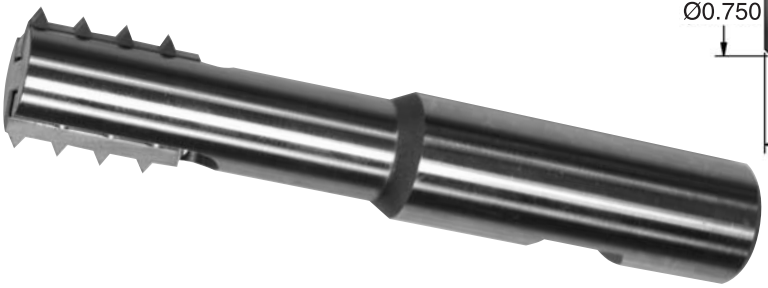
NON-STOCK COATINGS available in 10 days

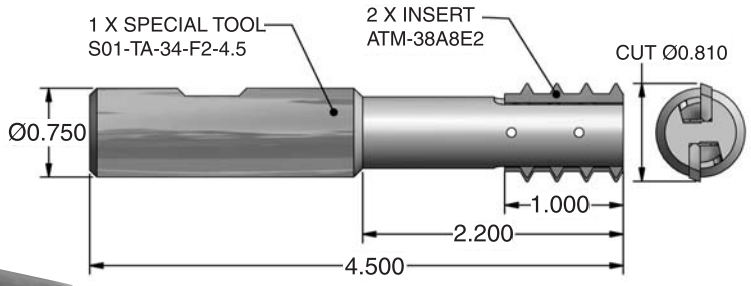
ADVENT TOOL

Special E2 Insert Indexable Tool Bodies:

1" - 8UNC x 2" DEEP

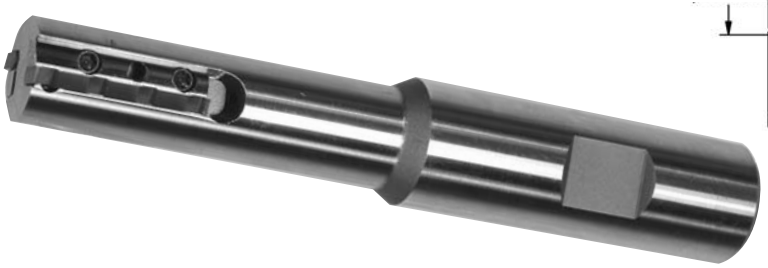
Tool Number - S01-TA-34-F2-4.5
Insert Number - ATM-38A8E2Z (2PCS)

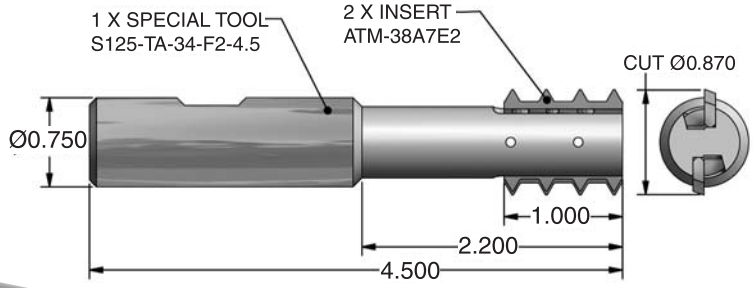




1¼" - 7UNC x 2" DEEP

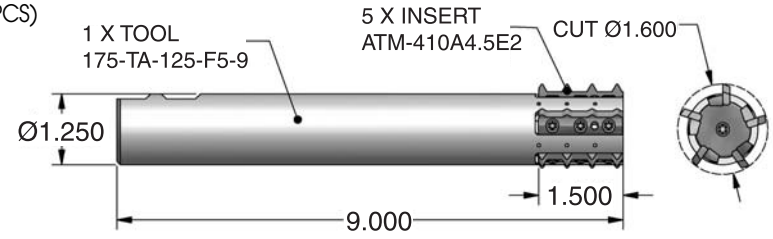
Tool Number - S125-TA-34-F2-4.5
Insert Number - ATM-38A7E2Z (2PCS)





2" - 4.5UNC x 5" DEEP

Tool Number - 175-TA-125-F5-9
Insert Number - ATM-410A4.5E2Z (5PCS)



ADVENT TOOL

Quadmill Designation

1	2		3			4		5
R	**M**	**2**	**0**	**–**	**C**	**5**	**0**	**–**	**F**	**6**	**–**	**6**

Column 1: ***RM*** = Standard Quadmill Tool
SRM = Special Quadmill Tool

Column 2: Tool Standard Cutter Diameter
10 = 1.000"
125 = 1.250"
15 = 1.500"
175 = 1.750"
20 = 2.000"
25 = 2.500"
30 = 3.000"
35 = 3.500"
40 = 4.000"

Column 3: Tool Shank Size
10 = Weldon Shank Ø1.000"
125 = Weldon Shank Ø1.250"
20 = Weldon Shank Ø2.000"
25MM = Weldon Shank Ø25.0mm
32MM = Weldon Shank Ø32.0mm
50MM = Weldon Shank Ø50.0mm
C40 = CAT 40 Holder
C50 = CAT 50 Holder

Column 4: Number of Flutes
F4 = 4 Flutes Tool
F5 = 5 Flutes Tool
F6 = 6 Flutes Tool
F10 = 10 Flutes Tool
F14 = 14 Flutes Tool

Column 5: Tool Length Weldon Shank Tools:
Over All Length (OAL)
(Extended Length Tools only)
9 = 9" OAL - Extended Length Tool

CAT Tools:
Length From Gauge Line (FGL)
4 = 4.0" FGL
5 = 5.0" FGL
6 = 6.0" FGL
7 = 7.0" FGL
8 = 8.0" FGL
Useable Length is about 1.5" shorter

ADVENT TOOL

Quadmills

Replaceable Carbide Helical Roughing, Semi-finishing, Finishing and Thread Mill Inserts

- Through Coolant
- Hardened and CNC Ground
- Standard Weldon Shank
- 10 Degree Helix

Dimensions in Inches (mm)

Tool Number	*Cutter Diameter*(d)*	*Length (l) of Cut**	*Number of Flutes*	*Tool (L) Length*	*Shank (D) Diameter*
RM10-10-F4	1.000 *(25.40)*	1.0 *(25)*	4	4.0 *(102)*	1.000
RM125-10-F4	1.250 *(31.75)*	1.5 *(38)*	4	4.5 *(114)*	1.000
RM15-125-F5	1.500 *(38.10)*	2.0 *(51)*	5	5.0 *(127)*	1.250
RM175-125-F6	1.750 *(44.45)*	2.0 *(51)*	6	5.0 *(127)*	1.250
RM20-20-F6	2.000 *(50.80)*	3.0 *(76)*	6	6.75 *(171)*	2.000
RM30-20-F10	3.000 *(76.20)*	3.0 *(76)*	10	7.0 *(178)*	2.000
RM40-20-F14	4.000 *(101.60)*	3.0 *(76)*	14	7.0 *(178)*	2.000

* Cutter Diameter and Length of Cut - see: Quadmill Tool - Inserts

ADVENT TOOL

Quadmills, Metric Shank

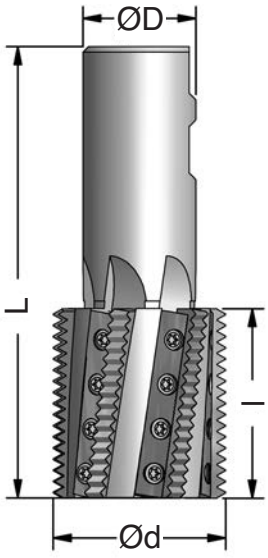
Replaceable Carbide Helical Roughing, Semi-finishing, Finishing and Thread Mill Inserts

- Through Coolant
- Hardened and CNC Ground
- Standard Weldon Shank
- 10 Degree Helix

Dimensions in Inches (mm)

Tool Number	*Cutter Diameter*(d)*	*Length (l) of Cut**	*Number of Flutes*	*Tool (L) Length*	*Shank (D) Diameter*
RM10-25MM-F4	1.000 *(25.40)*	1.0 *(25)*	4	4.0 *(102)*	*(25)*
RM125-25MM-F4	1.250 *(31.75)*	1.5 *(38)*	4	4.5 *(114)*	*(25)*
RM15-32MM-F5	1.500 *(38.10)*	2.0 *(51)*	5	5.0 *(127)*	*(32)*
RM175-32MM-F6	1.750 *(44.45)*	2.0 *(51)*	6	5.0 *(127)*	*(32)*
RM20-50MM-F6	2.000 *(50.80)*	3.0 *(76)*	6	6.75 *(171)*	*(50)*
RM30-50MM-F10	3.000 *(76.20)*	3.0 *(76)*	10	7.0 *(178)*	*(50)*
RM40-50MM-F14	4.000 *(101.60)*	3.0 *(76)*	14	7.0 *(178)*	*(50)*

* Cutter Diameter and Length of Cut - see: Quadmill Tool - Inserts



ADVENT TOOL

CV-40 Mills

Replaceable Carbide Helical Roughing, Semi-finishing, Finishing and Thread Mill Inserts

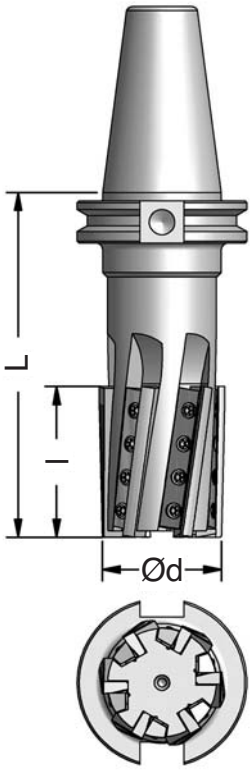
- Through Coolant
- Hardened and CNC Ground
- Standard V-flange with Integral Shank
- 10 Degree Helix

CV-40 Mills

Dimensions in Inches (mm)

Tool Number	*Cutter Diameter*(d)*	*Length (l) of Cut**	*Number of Flutes*	*Length From Gauge Line*	*Useable Cutter Length*
RM10-C40-F4-4 **RM10-C40-F4-5**	1.000 *(25.40)*	1.0 *(25)*	4	4 *(102)*	2.5 *(64)*
RM125-C40-F4-4 **RM125-C40-F4-5**	1.250 *(31.75)*	1.5 *(38)*	4	4 *(102)* 5 *(127)*	2.5 *(64)* 3.5 *(89)*
RM15-C40-F5-5 **RM15-C40-F5-6**	1.500 *(38.10)*	2.0 *(51)*	5	5 *(127)* 6 *(152)*	3.5 *(89)* 4.5 *(114)*
RM175-C40-F6-4 **RM175-C40-F6-5** **RM175-C40-F6-6**	1.750 *(44.45)*	2.0 *(51)*	6	4 *(102)* 5 *(127)* 6 *(152)*	2.5 *(64)* 3.5 *(89)* 4.5 *(114)*

* Cutter Diameter and Length of Cut - see: Quadmill Tool - Inserts



ADVENT TOOL

Quadmills, Integral Shank

Replaceable Carbide Helical Roughing, Semi-finishing, Finishing and Thread Mill Inserts

- Through Coolant
- Hardened and CNC Ground
- Standard V-flange with Integral Shank
- 10 Degree Helix

CV-50 Mills

Dimensions in Inches (mm)

Tool Number	*Cutter Diameter*(d)*	*Length (l) of Cut**	*Number of Flutes*	*Length From Gauge Line*	*Useable Cutter Length*
RM15-C50-F5-5 **RM15-C50-F5-6**	1.500 *(38.10)*	2.0 *(51)*	5	5 *(127)* 6 *(152)*	3.5 (89) 4.5 *(114)*
RM175-C50-F6-5 **RM175-C50-F6-6** **RM175-C50-F6-7**	1.750 *(44.45)*	2.0 *(51)*	6	5 *(127)* 6 *(152)* 7 *(178)*	3.5 (89) 4.5 *(114)* 5.5 *(140)*
RM20-C50-F6-6 **RM20-C50-F6-7** **RM20-C50-F6-8**	2.000 *(50.80)*	3.0 *(76)*	6	6 *(152)* 7 *(178)* 8 *(203)*	4.5 *(114)* 5.5 *(140)* 6.5 *(165)*
RM30-C50-F10-6 **RM30-C50-F10-7** **RM30-C50-F10-8**	3.000 *(76.20)*	3.0 *(76)*	10	6 *(152)* 7 *(178)* 8 *(203)*	4.5 *(114)* 5.5 *(140)* 6.5 *(165)*
RM40-C50-F14-6 **RM40-C50-F14-7** **RM40-C50-F14-8**	4.000 *(101.60)*	3.0 *(76)*	14	6 *(152)* 7 *(178)* 8 *(203)*	4.5 *(114)* 5.5 *(140)* 6.5 *(165)*

* Cutter Diameter and Length of Cut - see: Quadmill Tool - Inserts

ADVENT TOOL

Quadmill Replacement Parts

Tool Number	*Locating Pin*	*Wedge*	*Torx Screw*	*Torx Plus Screw*
RM10-10-F4 **RM10-25MM-F4** **RM10-C40-F4-x**	ATM-PINRM10S	ATM-WRM10SH2	PT464	PT464-8IP
RM125-10-F4 **RM125-25MM-F4** **RM125-C40-F4-x**	ATM-PINRM12L	ATM-WRM12LH3	PT483T	PT483T-151P
RM15-125-F5 **RM15-32MM-F5** **RM15-C40-F5-x** **RM15-C50-F5-x**	ATM-PINRMR	ATM-WRM15RH4	PT483T	PT483T-151P
RM175-125-F6 **RM175-32MM-F6** **RM175-C40-F6-x** **RM175-C50-F6-x**	ATM-PINRMR	ATM-WRM175RH4	PT483T	PT483T-151P
RM20-20-F6 **RM20-50MM-F6** **RM20-C50-F6-x**	ATM-PINRMR	ATM-WRM20RH6	PT483T	PT483T-151P
RM30-20-F10 **RM30-50MM-F10** **RM30-C50-F10-x**	ATM-PINRMR	ATM-WRM30RH6	PT483T	PT483T-151P
RM40-20-F14 **RM40-50MM-F14** **RM40-C50-F14-x**	ATM-PINRMR	ATM-WRM40RH6	PT483T	PT483T-151P

ADVENT TOOL

Quadmill Inserts Designation

1 2 3 4 5 6 7 8

I T R 2 0 - 8 N P T - 3 0 C

Column 1: ***I*** = Regular Insert Form
SI = Special Form

Column 2: **Insert Style**
R = Roughing Mill Insert
S = Semi-finishing Mill Insert
F = Finishing Mill Insert
T = Thread Form Insert

Column 3: **Carbide Insert Thickness**
S = 0.093 - Insert Thickness
L = 0.130 - Insert Thickness
R = 0.188 - Insert Thickness

Column 4: **Tool Standard Cutter Diameter**
10 = 1.000"
125 = 1.250"
15 = 1.500"
175 = 1.750"
20 = 2.000"
30 = 3.000"
40 = 4.000"

Column 5: Thread Pitch (Thread Form Insert Only)
8 = 8 Pitch
1.5MM = 1.5mm Pitch

Column 6: Thread Form (Thread Form Insert Only)
A = External Thread Form
B = Internal Thread Form
NPT = NPT Thread Form
NPTF = NPTF Thread Form
BSP = BSP Thread Form
BSPT = BSPT Thread Form

Column 7: Insert Length of Cut
10 = 1.0"
15 = 1.5"
20 = 2.0"
30 = 3.0"

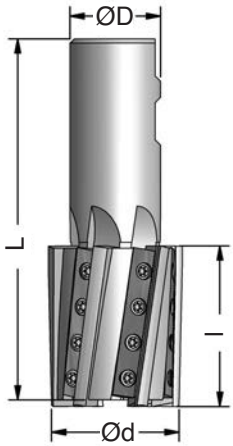
Column 8: For Titanium Nitride Coating add a **"C"** to End of Insert Number

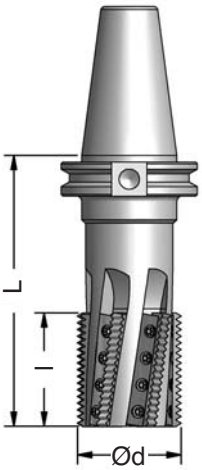
NON-STOCK COATINGS
available
in 10 days

Note: Roughing and Semi-Finishing Inserts will be sold in sets only, for appropriate amount of tool flutes.

ADVENT TOOL

Quadmill - Inserts





NON-STOCK COATINGS
available
in 10 days

Dimensions in Inches (mm)

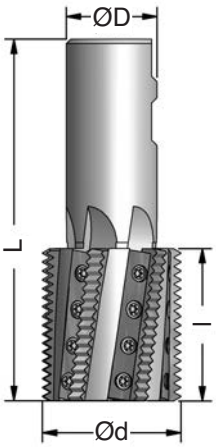
Tool Number	*Tool Style*	*Thread Form*	*Insert*** # Example*	*Tool Cutter Diameter (d)*	*Insert Height*	*Insert Thickness*	*Length of Cut (l)*
RM10-10-F4 RM10-25MM-F4 RM10-C40-F4-4 RM10-C40-F4-5	Roughing	-	I R S 10-10C	1.000 *(25.40)*	.250 *(6.35)*	.093 *(2.36)*	1.0 *(25)*
	Semi-Finishing	-	I S S 10-10C	1.000 *(25.40)*	.250 *(6.35)*	.093 *(2.36)*	1.0 *(25)*
	Finishing	-	I F S 10-10C	1.000 *(25.40)*	.250 *(6.35)*	.093 *(2.36)*	1.0 *(25)*
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T S 10-1.5MMB-10C	1.000 *(25.40)*	.250 *(6.35)*	.093 *(2.36)*	1.0 *(25)*
		13UN-8UN** 2.0mm-3.5mm** 27NPT(F)-11.5NPT(F) 11BSP, 28BSPT-11BSPT	I T S 10-8B-10C	1.100 *(27.94)*	.300 *(7.62)*	.093 *(2.36)*	1.0 *(25)*
RM125-10-F4 RM125-25MM-F4 RM125-C40-F4-4 RM125-C40-F4-5 RM125-C40-F4-6	Roughing	-	I R L 125-15C	1.250 *(31.75)*	.325 *(8.26)*	.130 *(3.30)*	1.5 *(38)*
	Semi-Finishing	-	I S L 125-15C	1.250 *(31.75)*	.325 *(8.26)*	.130 *(3.30)*	1.5 *(38)*
	Finishing	-	I F L 125-15C	1.250 *(31.75)*	.325 *(8.26)*	.130 *(3.30)*	1.5 *(38)*
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T L 125-1.5MMB-15C	1.250 *(31.75)*	.325 *(8.26)*	.130 *(3.30)*	1.5 *(38)*
		13UN-8UN** 2.0mm-3.5mm** 11BSP	I T L 125-8B-15C	1.350 *(34.29)*	.375 *(9.53)*	.130 *(3.30)*	1.5 *(38)*
		7UN-4UN** 4.0m-6.0mm** all NPT, NPTF and BSPT	I T L 125-8NPT-15C	1.450 *(36.83)*	.425 *(10.80)*	.130 *(3.30)*	1.5 *(38)*
RM15-125-F5 RM15-32MM-F5 RM15-C40-F5-5 RM15-C40-F5-6 RM15-C50-F5-5 RM15-C50-F5-6	Roughing	-	I R R 15-20C	1.500 *(38.10)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
	Semi-Finishing	-	I S R 15-20C	1.500 *(38.10)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
	Finishing	-	I F R 15-20C	1.500 *(38.10)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T R 15-1.5MMB-20C	1.500 *(38.10)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
		13UN-8UN** 2.0mm-3.5mm** 113BSP	I T R 15-12B-20C	1.600 *(40.64)*	.425 *(10.80)*	.188 *(4.78)*	2.0 *(51)*
		7UN-4UN** 4.0mm-6.0mm**	I T R 15-4.0MMB-20C	1.700 *(43.18)*	.475 *(12.07)*	.188 *(4.78)*	2.0 *(51)*
		all NPT, NPTF and BSPT	I T R 15-8NPT-15C	1.700 *(43.18)*	.475 *(12.07)*	.188 *(4.78)*	1.5 *(38)*
RM175-125-F6 RM175-32MM-F6 RM175-C40-F6-4 RM175-C40-F6-5 RM175-C40-F6-6 RM175-C50-F6-5 RM175-C50-F6-6 RM175-C50-F6-7	Roughing	-	I R R 175-20C	1.750 *(44.45)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
	Semi-Finishing	-	I S R 175-20C	1.750 *(44.45)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
	Finishing	-	I F R 175-20C	1.750 *(44.45)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T R 175-14B-20C	1.750 *(44.45)*	.375 *(9.53)*	.188 *(4.78)*	2.0 *(51)*
		13UN-8UN** 2.0mm-3.5mm** 11BSP	I T R 175-12B-20C	1.850 *(46.99)*	.425 *(10.80)*	.188 *(4.78)*	2.0 *(51)*
		7UN-4UN** 4.0mm-6.0mm**	I T R 175-4.0MMB-20C	1.950 *(49.53)*	.475 *(12.07)*	.188 *(4.78)*	2.0 *(51)*
		all NPT, NPTF and BSPT	I T R 175-8NPT-15C	1.950 *(49.53)*	.475 *(12.07)*	.188 *(4.78)*	1.5 *(38)*

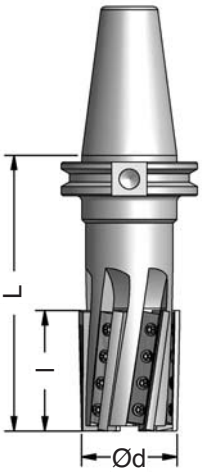
** Must specify internal (B) or external (A) for UN and Metric thread
- **Insert Number:** I T R 20-8B-30 - will cut internal threads
- **Insert Number:** I T R 20-8A-30 - will cut external threads

*** Insert Number Designation - see ***Quadmill Inserts Designation***

ADVENT TOOL

Quadmill - Inserts





NON-STOCK COATINGS available in 10 days

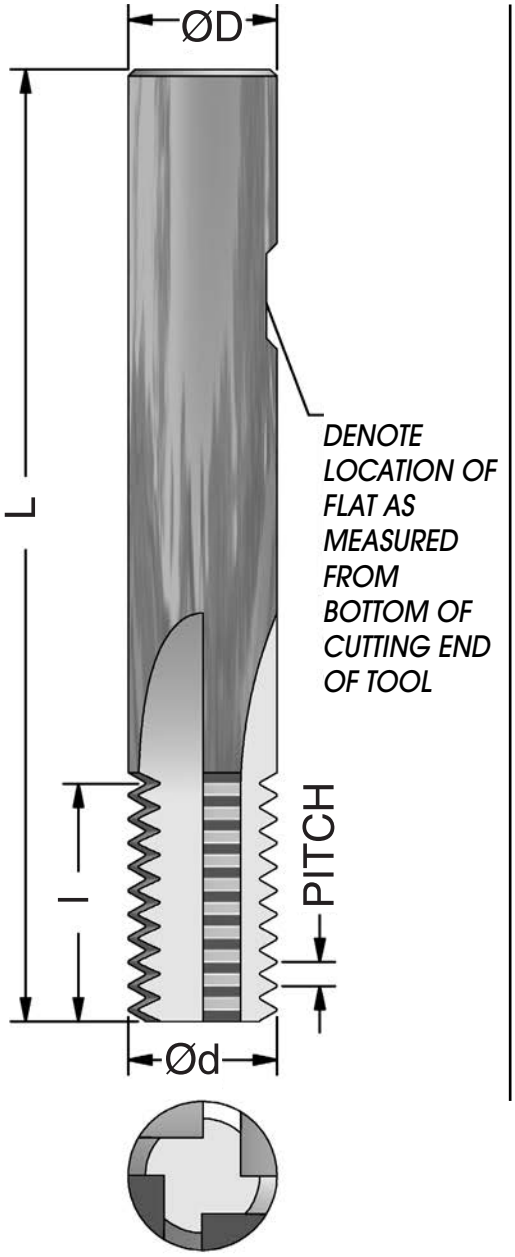
Dimensions in Inches (mm)

Tool Number	*Tool Style*	*Thread Form*	*Insert*** *# Example*	*Tool Cutter Diameter (d)*	*Insert Height*	*Insert Thickness*	*Length of Cut (l)*
RM20-20-F6 RM20-50MM-F6 RM20-C50-F6-6 RM20-C50-F6-7 RM20-C50-F6-8	Roughing	-	I R R 20-30C	2.000 (50.80)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Semi-Finishing	-	I S R 20-30C	2.000 (50.80)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Finishing	-	I F R 20-30C	2.000 (50.80)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T R 20-14A-30C I T R 20-1.5MMA-30C I T R 20-14BSP-30	2.000 (50.80)	.375 (9.53)	.188 (4.78)	3.0 (76)
		13UN-8UN** 2.0mm-3.5mm** 11BSP	I T R 20-12B-30C	2.100 (53.34)	.425 (10.80)	.188 (4.78)	3.0 (76)
		7UN-4UN** 4.0mm-6.0mm**	I T R 20-7B-30C	2.200 (55.88)	.475 (12.07)	.188 (4.78)	3.0 (76)
		all NPT, NPTF and BSPT	I T R 20-8NPTF-15C	2.200 (55.88)	.475 (12.07)	.188 (4.78)	1.5 (38)
RM30-20-F10 RM30-50MM-F10 RM30-C50-F10-6 RM30-C50-F10-7 RM30-C50-F10-8	Roughing	-	I R R 30-30C	3.000 (76.20)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Semi-Finishing	-	I S R 30-30C	3.000 (76.20)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Finishing	-	I F R 30-30C	3.000 (76.20)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T R 30-14BSP-30	3.000 (76.20)	.375 (9.53)	.188 (4.78)	3.0 (76)
		13UN-8UN** 2.0mm-3.5mm** 11BSP	I T R 30-12B-30C	3.100 (78.74)	.425 (10.80)	.188 (4.78)	3.0 (76)
		7UN-4UN** 4.0mm-6.0mm**	I T R 30-4.0MMB-30C	3.200 (81.28)	.475 (12.07)	.188 (4.78)	3.0 (76)
		all NPT, NPTF and BSPT	I I T R 30-8NPT-15C I T R 30-4.0MMB-30C	3.200 (81.28)	.475 (12.07)	.188 (4.78)	1.5 (38)
RM40-20-F14 RM40-50MM-F14 RM40-C50-F14-6 RM40-C50-F14-7 RM40-C50-F14-8	Roughing	-	I R R 40-30C	4.000 (101.6)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Semi-Finishing	-	I S R 40-30C	4.000 (101.6)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Finishing	-	I F R 40-30C	4.000 (101.6)	.375 (9.53)	.188 (4.78)	3.0 (76)
	Thread Mill	32UN-14UN** 0.75mm-1.75mm** 28BSP-14BSP	I T R 40-1.5MMA-30C	4.000 (101.6)	.375 (9.53)	.188 (4.78)	3.0 (76)
		13UN-8UN** 2.0mm-3.5mm** 11BSP	I T R 40-12B-30C	4.100 (104.14)	.425 (10.80)	.188 (4.78)	3.0 (76)
		7UN-4UN** 4.0mm-6.0mm**	I T R 40-4.0MMB-30	4.200 (106.68)	.475 (12.07)	.188 (4.78)	3.0 (76)
		all NPT, NPTF and BSPT	I T R 40-8NPTF-15	4.200 (106.68)	.475 (12.07)	.188 (4.78)	1.5 (38)

** Must specify internal (B) or external (A) for UN and Metric thread
- **Insert Number:** I T R 20-8B-30 - will cut internal threads
- **Insert Number:** I T R 20-8A-30 - will cut external threads

* See Page 15 for Insert Designation

"Advantage" CustomWeldonFlats



Create your own custom weldon flat location on your solid carbide threadmills, using our ***Advantage Custom Weldon Flat Service***

Simply complete the form below, fax a copy to **847/549-9714**, and we will provide flat(s) as marked within three (3) working days.

INSTRUCTIONS:

1) Use Part Number "WFlat" as a separate line item underneath each tool ordered on your purchase order.
2) Fax or Email completed form to Advent along with purchase order for proper processing.
3) Pricing of the Advantage Flat Service is $10.00 List.
4) Service applies only for tools that are not currently advertised as having a flat. Solid Carbide ISO, UN, NPT/F, BSP/T presently do not. Refer to artwork next to product listings for details.

TOOL PART NUMBER(S) _____

_____

OTHER INFORMATION _____

_____

_____

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide/Carbide Tipped Thread Mill Designation

1	2	3					4				5
7	8	0	9	5	8	-	1	C	S	F	6	Z

Column 1: Minimum Size Thread

04 = No.4 - 0.112" (0440316-40 Pitch Tool)
06 = No.6 - 0.138" (0632316-32 Pitch Tool)
08 = No.8 - 0.164" (0832316-32 Pitch Tool)
10 = No.10 - 0.190" (1024316-24 Pitch Tool)
12 = No.12 - 0.216" (1224316-24 Pitch Tool)
14 = 1 /4" - 0.250"
516 = 5/16" - 0.3125"
38 = 3/8" - 0.375"
716 = 7/16" - 0.4375"
12 = 1 /2" - 0.500" (121338-13 Pitch Tool)
916 = 9/16" - 0.5625"
58 = 5/8" - 0.625"
1116 = 11/16" – 0.6875"
34 = 3 /4" – 0.750"
78 = 7 /8" – 0.875"
01 = 1" – 1.000"

M6 = 6.0mm (Shank Diameter is in Inch Sizes)
M30 = 30.0mm (Shank Diameter is in Inch Sizes)
EM6 = 6.0mm (Shank Diameter is in MM Sizes)
EM30 = 30.0mm (Shank Diameter is in MM Sizes)

Column 2: Threads per Inch

(Pitch in mm - Metric Tools)

Column 3: Shank Size

316 = Shank Ø0.1875"
14 = Shank Ø0.250"
516 = Shank Ø0.3125"
38 = Shank Ø0.375"
12 = Shank Ø0.500"
58 = Shank Ø0.625"
34 = Shank Ø0.750"
01 = 1" – 1.000"

Metric Shank Thread Mills (EM)

06 = Shank Ø6.0mm
08 = Shank Ø8.0mm
10 = Shank Ø10.0mm
12 = Shank Ø12.0mm
16 = Shank Ø16.0mm
20 = Shank Ø20.0mm
25 = Shank Ø25.0mm

Column 4: Tool Style Description

1CS = Solid Carbide Straight UN or MM Thread Form, 4 Flutes
1CSF6 = Solid Carbide Straight UN or MM Thread Form, 6 Flutes
1C = Carbide Cutting Edge Brazed on Steel Shank Straight UN or MM Thread Form, 4 Flutes
1CRL25 = Carbide Cutting Edge Brazed on Steel Shank Straight, Relief for 2.5" Reach, 4 Flutes
1CSSF6 = Solid Carbide Straight Brazed in Steel Shank, Coolant Through, 6 Flutes
1CSNPT = Solid Carbide Straight NPT Thread Form, 4 Flutes
1CSNPTF6 = Solid Carbide Straight NPT Thread Form, 6 Flutes
1CSNPTF = Solid Carbide Straight NPTF Thread Form, 4 Flutes
1CSNPTFF6 = Solid Carbide Straight NPTF Thread Form, 6 Flutes
1CSNPSF = Solid Carbide Straight NPSF Thread Form, 4 Flutes
1CNPSF = Carbide Cutting Edge Brazed on Steel Shank Straight NPSF Thread Form, 4 Flutes
1CSBSP = Solid Carbide Straight BSP Thread Form, 4 Flutes
1CBSP = Carbide Cutting Edge Brazed on Steel Shank Straight BSP Thread Form, 4 Flutes
1CSBSPT = Solid Carbide Straight BSPT Thread Form, 4 Flutes
1CBSPT = Carbide Cutting Edge Brazed on Steel Shank Straight BSPT Thread Form, 4 Flutes
1CSF3BH = Solid Carbide Helical UN or MM Internal Thread Form, 3 Flutes
1CSF3AH = Solid Carbide Helical UN or MM External Thread Form, 3 Flutes
1CSBH = Solid Carbide Helical UN or MM Internal Thread Form, 4 Flutes
1CSAH = Solid Carbide Helical UN or MM External Thread Form, 4 Flutes
1CSNPTH = Solid Carbide Helical NPT Thread Form, 4 Flutes
1CSBSPH = Solid Carbide Helical BSP Thread Form, 4 Flutes
1CSBSPTH = Solid Carbide Helical BSPT Thread Form, 4 Flutes

Column 5: Coating

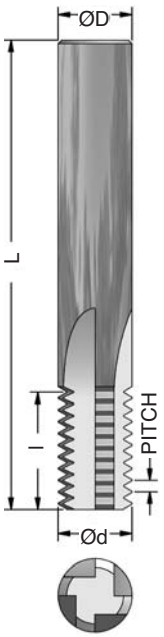
"-" = Uncoated
C = TIN
Y = TICN
Z = Futura / TiALN
X = Hard Lube
V = X.treme

NON-STOCK COATINGS
available
in 10 days

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

Unified (UN) Threads



Custom Weldon Flats available in lieu of round shanks (see page 43)

NON-STOCK COATINGS available in 10 days

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
#4-40	0440316-1CS	40	0.080	0.100	4	2.0	0.188	X	X	O	O	O
#6-32	0632316-1CS	32	0.100	0.200	4	2.0	0.188	X	X	O	O	O
#8-32	0832316-1CS	32	0.120	0.200	4	2.0	0.188	X	X	O	O	O
#10-24	1024316-1CS	24	0.140	0.250	4	2.0	0.188	X	X	O	O	O
#10-32	1032316-1CS	32	0.140	0.250	4	2.0	0.188	X	X	O	O	O
#12-24	1224316-1CS	24	0.160	0.350	4	2.0	0.188	X	X	O	O	O
#12-28	1228316-1CS	28	0.160	0.350	4	2.0	0.188	X	X	O	O	O
1/4"-20	142014-1CS	20	0.190	0.400	4	3.0	0.250	X	X	O	O	O
1/4"-24	142414-1CS	24	0.190	0.400	4	3.0	0.250	O	O	O	O	O
1/4"-27	142714-1CS	27	0.190	0.400	4	3.0	0.250	O	O	O	O	O
1/4"-28	142814-1CS	28	0.190	0.400	4	3.0	0.250	X	X	O	O	O
1/4"-32	143214-1CS	32	0.190	0.400	4	3.0	0.250	X	X	O	O	O
1/4"-36	143614-1CS	36	0.190	0.400	4	3.0	0.250	O	O	O	O	O
1/4"-40	144014-1CS	40	0.190	0.400	4	3.0	0.250	O	O	O	O	O
1/4"-48	144814-1CS*	48	0.190	0.400	4	3.0	0.250	O	O	O	O	O
1/4"-56	145614-1CS*	56	0.190	0.400	4	3.0	0.250	O	O	O	O	O
5/16"-16	5161614-1CS	16	0.245	0.625	4	3.0	0.250	O	O	O	O	O
5/16"-18	5161814-1CS	18	0.245	0.625	4	3.0	0.250	X	X	O	O	O
5/16"-20	5162014-1CS	20	0.245	0.625	4	3.0	0.250	O	O	O	O	O
5/16"-24	5162414-1CS	24	0.245	0.625	4	3.0	0.250	X	X	O	O	O
5/16"-27	5162714-1CS	27	0.245	0.625	4	3.0	0.250	O	O	O	O	O
5/16"-28	5162814-1CS	28	0.245	0.625	4	3.0	0.250	O	O	O	O	O
5/16"-32	5163214-1CS	32	0.245	0.625	4	3.0	0.250	X	X	O	O	O
5/16"-36	5163614-1CS	36	0.245	0.625	4	3.0	0.250	O	O	O	O	O
5/16"-40	5164014-1CS	40	0.245	0.625	4	3.0	0.250	O	O	O	O	O
5/16"-48	5164814-1CS*	48	0.245	0.625	4	3.0	0.250	O	O	O	O	O
3/8"-16	3816516-1CS	16	0.300	0.750	4	3.0	0.312	X	X	O	O	O
3/8"-18	3818516-1CS	18	0.300	0.750	4	3.0	0.312	O	O	O	O	O
3/8"-20	3820516-1CS	20	0.300	0.750	4	3.0	0.312	O	O	O	O	O
3/8"-24	3824516-1CS	24	0.300	0.750	4	3.0	0.312	X	X	O	O	O
3/8"-27	3827516-1CS	27	0.300	0.750	4	3.0	0.312	O	O	O	O	O
3/8"-28	3828516-1CS	28	0.300	0.750	4	3.0	0.312	O	O	O	O	O
3/8"-32	3832516-1CS	32	0.300	0.750	4	3.0	0.312	X	X	O	O	O
3/8"-36	3836516-1CS	36	0.300	0.750	4	3.0	0.312	O	O	O	O	O
3/8"-40	3840516-1CS	40	0.300	0.750	4	3.0	0.312	O	O	O	O	O
7/16"-14	7161438-1CS	14	0.350	0.750	4	3.0	0.375	X	X	O	O	O
7/16"-16	7161638-1CS	16	0.350	0.750	4	3.0	0.375	O	O	O	O	O
7/16"-18	7161838-1CS	18	0.350	0.750	4	3.0	0.375	O	O	O	O	O
7/16"-20	7162038-1CS	20	0.350	0.750	4	3.0	0.375	X	X	O	O	O
7/16"-24	7162438-1CS	24	0.350	0.750	4	3.0	0.375	O	O	O	O	O
7/16"-27	7162738-1CS	27	0.350	0.750	4	3.0	0.375	O	O	O	O	O
7/16"-28	7162838-1CS	28	0.350	0.750	4	3.0	0.375	X	X	O	O	O
7/16"-32	7163238-1CS	32	0.350	0.750	4	3.0	0.375	O	O	O	O	O
1/2"-12	121238-1CS	12	0.370	0.750	4	3.0	0.375	O	O	O	O	O
1/2"-13	121338-1CS	13	0.370	0.750	4	3.0	0.375	X	X	O	O	O
1/2"-14	121438-1CS	14	0.370	0.750	4	3.0	0.375	O	O	O	O	O
1/2"-16	121638-1CS	16	0.370	0.750	4	3.0	0.375	O	O	O	O	O
1/2"-18	121838-1CS	18	0.370	0.750	4	3.0	0.375	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

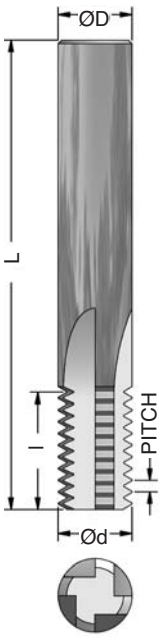
*Designates Staggered Thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

Unified (UN) Threads



Custom Weldon Flats available in lieu of round shanks (see page 43)

NON-STOCK COATINGS available in 10 days

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/2"-20	122038-1CS	20	0.370	0.750	4	3.0	0.375	X	X	O	O	O
1/2"-24	122438-1CS	24	0.370	0.750	4	3.0	0.375	O	O	O	O	O
1/2"-27	122738-1CS	27	0.370	0.750	4	3.0	0.375	O	O	O	O	O
1/2"-28	122838-1CS	28	0.370	0.750	4	3.0	0.375	X	X	O	O	O
1/2"-32	123238-1CS	32	0.370	0.750	4	3.0	0.375	O	O	O	O	O
9/16"-12	9161212-1CS	12	0.430	0.750	4	4.0	0.500	X	X	O	O	O
9/16"-14	9161412-1CS	14	0.450	0.750	4	4.0	0.500	O	O	O	O	O
9/16"-16	9161612-1CS	16	0.450	0.750	4	4.0	0.500	O	O	O	O	O
9/16"-18	9161812-1CS	18	0.450	0.750	4	4.0	0.500	X	X	O	O	O
9/16"-20	9162012-1CS	20	0.450	0.750	4	4.0	0.500	O	O	O	O	O
9/16"-24	9162412-1CS	24	0.450	0.750	4	4.0	0.500	X	X	O	O	O
9/16"-27	9162712-1CS	27	0.450	0.750	4	4.0	0.500	O	O	O	O	O
9/16"-28	9162812-1CS	28	0.450	0.750	4	4.0	0.500	O	O	O	O	O
9/16"-32	9163212-1CS	32	0.450	0.750	4	4.0	0.500	O	O	O	O	O
5/8"-11	581112-1CS	11	0.430	1.000	4	4.0	0.500	X	X	O	O	O
5/8"-11	581112-1CSF6	11	0.430	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-12	581212-1CS	12	0.430	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-12	581212-1CSF6	12	0.430	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-14	581412-1CS	14	0.495	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-14	581412-1CSF6	14	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-16	581612-1CS	16	0.495	1.000	4	4.0	0.500	X	X	O	O	O
5/8"-16	581612-1CSF6	16	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-18	581812-1CS	18	0.495	1.000	4	4.0	0.500	X	X	O	O	O
5/8"-18	581812-1CSF6	18	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-20	582012-1CS	20	0.495	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-20	582012-1CSF6	20	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-24	582412-1CS	24	0.495	1.000	4	4.0	0.500	X	X	O	O	O
5/8"-24	582412-1CSF6	24	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-27	582712-1CS	27	0.495	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-27	582712-1CSF6	27	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-28	582812-1CS	28	0.495	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-28	582812-1CSF6	28	0.495	1.000	6	4.0	0.500	O	O	O	O	O
5/8"-32	583212-1CS	32	0.495	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-32	583212-1CSF6	32	0.495	1.000	6	4.0	0.500	O	O	O	O	O
3/4"-10	341058-1CS	10	0.620	1.000	4	4.0	0.625	X	X	O	O	O
3/4"-10	341058-1CSF6	10	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-12	341258-1CS	12	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-12	341258-1CSF6	12	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-14	341458-1CS	14	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-14	341458-1CSF6	14	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-16	341658-1CS	16	0.620	1.000	4	4.0	0.625	X	X	O	O	O
3/4"-16	341658-1CSF6	16	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-18	341858-1CS	18	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-18	341858-1CSF6	18	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-20	342058-1CS	20	0.620	1.000	4	4.0	0.625	X	X	O	O	O
3/4"-20	342058-1CSF6	20	0.620	1.000	6	4.0	0.625	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

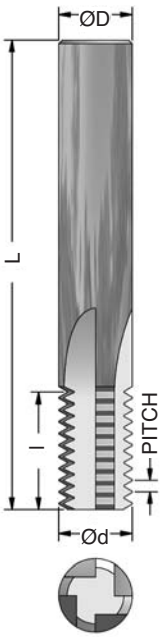
*Designates Staggered Thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

Unified (UN) Threads



Custom Weldon Flats available in lieu of round shanks (see page 43)

NON-STOCK COATINGS available in 10 days

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
3/4"-24	342458-1CS	24	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-24	342458-1CSF6	24	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-27	342758-1CS	27	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-27	342758-1CSF6	27	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-28	342858-1CS	28	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-28	342858-1CSF6	28	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-32	343258-1CS	32	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-32	343258-1CSF6	32	0.620	1.000	6	4.0	0.625	O	O	O	O	O
7/8"-9	780934-1CS	9	0.745	1.250	4	4.0	0.750	X	X	O	O	O
7/8"-9	780934-1CSF6	9	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-10	781034-1CS	10	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-10	781034-1CSF6	10	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-12	781234-1CS	12	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-12	781234-1CSF6	12	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-14	781434-1CS	14	0.745	1.250	4	4.0	0.750	X	X	O	O	O
7/8"-14	781434-1CSF6	14	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-16	781634-1CS	16	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-16	781634-1CSF6	16	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-18	781834-1CS	18	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-18	781834-1CSF6	18	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-20	782034-1CS	20	0.745	1.250	4	4.0	0.750	X	X	O	O	O
7/8"-20	782034-1CSF6	20	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-24	782434-1CS	24	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-24	782434-1CSF6	24	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-27	782734-1CS	27	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-27	782734-1CSF6	27	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-28	782834-1CS	28	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-28	782834-1CSF6	28	0.745	1.250	6	4.0	0.750	O	O	O	O	O
7/8"-32	783234-1CS	32	0.745	1.250	4	4.0	0.750	O	O	O	O	O
7/8"-32	783234-1CSF6	32	0.745	1.250	6	4.0	0.750	O	O	O	O	O
1"-8	010834-1CS	8	0.745	1.250	4	4.0	0.750	X	X	O	O	O
1"-8	010834-1CSF6	8	0.745	1.250	6	4.0	0.750	O	O	O	O	O
1-1/8"-7	010734-1CS	7	0.745	1.250	4	4.0	0.750	X	X	O	O	O
1-1/8"-7	010734-1CSF6	7	0.745	1.250	6	4.0	0.750	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

*Designates Staggered Thread

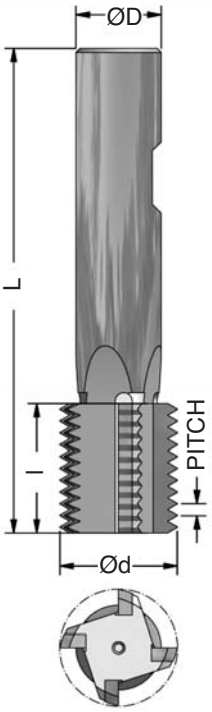
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

Unified (UN) Threads

WELDON FLATS INCLUDED



NON-STOCK COATINGS available in 10 days

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
5/8"-14	581412-1C	14	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-14	581434-1C6OAL	14	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-16	581612-1C	16	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-16	581634-1C6OAL	16	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-18	581812-1C	18	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-18	581834-1C6OAL	18	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-20	582012-1C	20	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-20	582034-1C6OAL	20	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-24	582412-1C	24	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-24	582434-1C6OAL	24	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-27	582712-1C	27	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-27	582734-1C6OAL	27	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-28	582812-1C	28	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-28	582834-1C6OAL	28	0.495	1.000	4	6.0	0.750	O	O	O	O	O
5/8"-32	583212-1C	32	0.495	1.000	4	3.6	0.500	O	O	O	O	O
5/8"-32	583234-1C6OAL	32	0.495	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-10	341012-1C	10	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-10	341034-1C6OAL	10	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-12	341212-1C	12	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-12	341234-1C6OAL	12	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-14	341412-1C	14	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-14	341434-1C6OAL	14	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-16	341612-1C	16	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-16	341634-1C6OAL	16	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-18	341812-1C	18	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-18	341834-1C6OAL	18	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-20	342012-1C	20	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-20	342034-1C6OAL	20	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-24	342412-1C	24	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-24	342434-1C6OAL	24	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-28	342812-1C	28	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-28	342834-1C6OAL	28	0.620	1.000	4	6.0	0.750	O	O	O	O	O
3/4"-32	343212-1C	32	0.620	1.000	4	3.6	0.500	O	O	O	O	O
3/4"-32	343234-1C6OAL	32	0.620	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-9	780958-1C	9	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-9	780934-1C6OAL	9	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-10	781058-1C	10	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-10	781034-1C6OAL	10	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-12	781258-1C	12	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-12	781234-1C6OAL	12	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-14	781458-1C	14	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-14	781434-1C6OAL	14	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-16	781658-1C	16	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-16	781634-1C6OAL	16	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-18	781858-1C	18	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-18	781834-1C6OAL	18	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-20	782058-1C	20	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-20	782034-1C6OAL	20	0.745	1.000	4	6.0	0.750	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

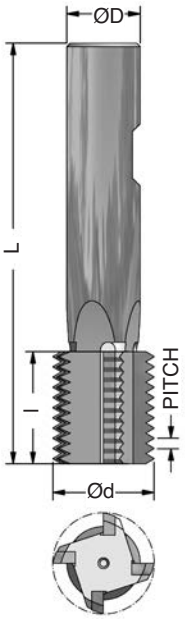
Carbide Tipped HSS Straight Flute Thread Mills

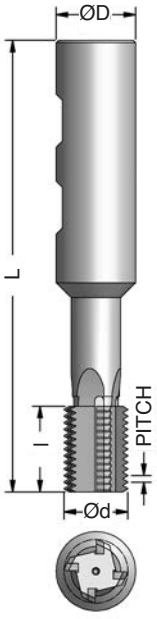
Unified (UN) Threads

WELDON FLATS INCLUDED

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
7/8"-24	782458-1C	24	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-24	782434-1C6OAL	24	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-27	782758-1C	27	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-27	782734-1C6OAL	27	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-28	782858-1C	28	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-28	782834-1C6OAL	28	0.745	1.000	4	6.0	0.750	O	O	O	O	O
7/8"-32	783258-1C	32	0.745	1.000	4	3.6	0.625	O	O	O	O	O
7/8"-32	783234-1C6OAL	32	0.745	1.000	4	6.0	0.750	O	O	O	O	O
1"-8	010858-1C	8	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-8	010801-1C7OAL	8	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-8	010801-1CRL25	8	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-9	010958-1C	9	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-9	010901-1C7OAL	9	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-9	010901-1CRL25	9	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-10	011058-1C	10	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-10	011001-1C7OAL	10	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-10	011001-1CRL25	10	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-12	011258-1C	12	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-12	011201-1C7OAL	12	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-12	011201-1CRL25	12	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-14	011458-1C	14	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-14	011401-1C7OAL	14	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-14	011401-1CRL25	14	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-16	011658-1C	16	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-16	011601-1C7OAL	16	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-16	011601-1CRL25	16	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-18	011858-1C	18	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-18	011801-1C7OAL	18	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-18	011801-1CRL25	18	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-20	012058-1C	20	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-20	012001-1C7OAL	20	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-20	012001-1CRL25	20	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-24	012458-1C	24	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-24	012401-1C7OAL	24	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-24	012401-1CRL25	24	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-28	012858-1C	28	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-28	012801-1C7OAL	28	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-28	012801-1CRL25	28	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1"-32	013258-1C	32	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1"-32	013201-1C7OAL	32	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1"-32	013201-1CRL25	32	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1-1/8"-7	010758-1C	7	0.812	1.125	4	4.0	0.625	O	O	O	O	O
1-1/8"-7	010701-1C7OAL	7	0.812	1.000	4	7.0	1.000	O	O	O	O	O
1-1/8"-7	010701-1CRL25	7	0.812	1.125	4	5.7	1.000	O	O	O	O	O
1-1/4"-7	1250778-1C	7	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-7	1250701-1CRL25	7	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-8	1250878-1C	8	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-8	1250801-1CRL25	8	0.990	1.000	4	7.5	1.000	O	O	O	O	O





NON-STOCK COATINGS available in 10 days

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

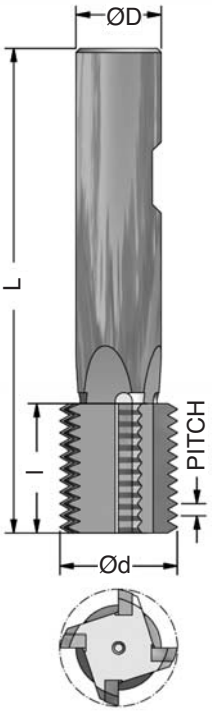
1CRL25 = Relief for 2.5" Reach

ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

Unified (UN) Threads

WELDON FLATS INCLUDED



Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1-1/4"-9	1250978-1C	9	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-9	1250901-1CRL25	9	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-10	1251078-1C	10	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-10	1251001-1CRL25	10	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-12	1251278-1C	12	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-12	1251201-1CRL25	12	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-14	1251478-1C	14	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-14	1251401-1CRL25	14	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-16	1251678-1C	16	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-16	1251601-1CRL25	16	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-18	1251878-1C	18	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-18	1251801-1CRL25	18	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-20	1252078-1C	20	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-20	1252001-1CRL25	20	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-24	1252478-1C	24	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-24	1252401-1CRL25	24	0.990	1.000	4	7.5	1.000	O	O	O	O	O
1-1/4"-28	1252878-1C	28	0.990	1.125	4	4.0	0.875	O	O	O	O	O
1-1/4"-28	1252801-1CRL25	28	0.990	1.000	4	7.5	1.000	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

1CRL25 = Relief for 2.5" Reach

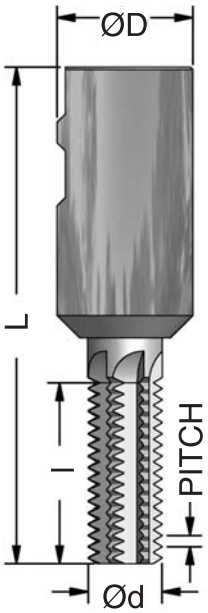
NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Straight Flute, Brazed In Steel Shank, Coolant Through, Extended Length, Thread Mills

Unified (UN) Threads

WELDON FLATS INCLUDED



Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/2"-12	121234-1CSS	12	0.370	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-13	121334-1CSS	13	0.370	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-14	121434-1CSS	14	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-16	121634-1CSS	16	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-18	121834-1CSS	18	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-20	122034-1CSS	20	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-24	122434-1CSS	24	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-27	122734-1CSS	27	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-28	122834-1CSS	28	0.400	1.000	4	3.7	0.750	O	O	O	O	O
1/2"-32	123234-1CSS	32	0.400	1.000	4	3.7	0.750	O	O	O	O	O
5/8"-11	581134-1CSS	11	0.430	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-12	581234-1CSS	12	0.430	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-14	581434-1CSS	14	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-16	581634-1CSS	16	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-18	581834-1CSS	18	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-20	582034-1CSS	20	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-24	582434-1CSS	24	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-27	582734-1CSS	27	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-28	582834-1CSS	28	0.495	1.250	4	4.0	0.750	O	O	O	O	O
5/8"-32	583234-1CSS	32	0.495	1.250	4	4.0	0.750	O	O	O	O	O
3/4"-10	341001-1CSSF5	10	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-12	341201-1CSSF5	12	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-14	341401-1CSSF5	14	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-16	341601-1CSSF5	16	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-18	341801-1CSSF5	18	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-20	342001-1CSSF5	20	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-24	342401-1CSSF5	24	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-27	342701-1CSSF5	27	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-28	342801-1CSSF5	28	0.620	1.500	5	4.6	1.000	O	O	O	O	O
3/4"-32	343201-1CSSF5	32	0.620	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-9	780901-1CSSF5	9	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-10	781001-1CSSF5	10	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-12	781201-1CSSF5	12	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-14	781401-1CSSF5	14	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-16	781601-1CSSF5	16	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-18	781801-1CSSF5	18	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-20	782001-1CSSF5	20	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-24	782401-1CSSF5	24	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-27	782701-1CSSF5	27	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-28	782801-1CSSF5	28	0.745	1.500	5	4.6	1.000	O	O	O	O	O
7/8"-32	783201-1CSSF5	32	0.745	1.500	5	4.6	1.000	O	O	O	O	O
1"-8	010815-1CSSF6	8	0.812	2.000	6	5.2	1.500	O	O	O	O	O
1-1/8"-7	010715-1CSSF6	7	0.812	2.000	6	5.2	1.500	O	O	O	O	O
1-1/4"-8	1250815-1CSSF6	8	0.990	2.000	6	5.2	1.500	O	O	O	O	O
1-1/4"-7	1250715-1CSSF6	7	0.990	2.000	6	5.2	1.500	O	O	O	O	O
1-3/8"-6	1250615-1CSSF6	6	0.990	2.000	6	5.2	1.500	O	O	O	O	O

NON-STOCK COATINGS available in 10 days

Other Sizes Available Upon Request - Tools will cut internal & external thread

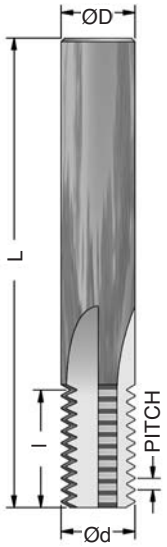
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

Metric (M) Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)



Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
M4x0.7	M40.7316-1CS	0.70	0.110	0.200	4	2.0	0.188	X	X	O	O	O
M5x0.8	M50.8316-1CS	0.80	0.140	0.250	4	2.0	0.188	X	X	O	O	O
M6x1.0	M61.014-1CS	1.00	0.169	0.400	4	3.0	0.250	X	X	O	O	O
M6x0.75	M60.7514-1CS	0.75	0.169	0.400	4	3.0	0.250	O	O	O	O	O
M8x1.25	M81.2514-1CS	1.25	0.232	0.625	4	3.0	0.250	X	X	O	O	O
M8x1.0	M81.014-1CS	1.00	0.232	0.625	4	3.0	0.250	X	X	O	O	O
M8x0.75	M80.7514-1CS	0.75	0.232	0.625	4	3.0	0.250	O	O	O	O	O
M10x1.5	M101.5516-1CS	1.50	0.287	0.750	4	3.0	0.312	X	X	O	O	O
M10x1.25	M101.25516-1CS	1.25	0.287	0.750	4	3.0	0.312	X	X	O	O	O
M10x1.0	M101.0516-1CS	1.00	0.287	0.750	4	3.0	0.312	O	O	O	O	O
M10x0.75	M100.75516-1CS	0.75	0.287	0.750	4	3.0	0.312	O	O	O	O	O
M12x1.75	M121.7538-1CS	1.75	0.370	0.750	4	3.0	0.375	X	X	O	O	O
M12x1.5	M121.538-1CS	1.50	0.370	0.750	4	3.0	0.375	O	O	O	O	O
M12x1.25	M121.2538-1CS	1.25	0.370	0.750	4	3.0	0.375	X	X	O	O	O
M12x1.0	M121.038-1CS	1.00	0.370	0.750	4	3.0	0.375	O	O	O	O	O
M14x2.0	M142.012-1CS	2.00	0.429	1.000	4	4.0	0.500	X	X	O	O	O
M14x2.0	M142.012-1CSF6	2.00	0.429	1.000	6	4.0	0.500	O	O	O	O	O
M14x1.5	M141.512-1CS	1.50	0.429	1.000	4	4.0	0.500	X	X	O	O	O
M14x1.5	M141.512-1CSF6	1.50	0.429	1.000	6	4.0	0.500	O	O	O	O	O
M14x1.25	M141.2512-1CS	1.25	0.429	1.000	4	4.0	0.500	O	O	O	O	O
M14x1.25	M141.2512-1CSF6	1.25	0.429	1.000	6	4.0	0.500	O	O	O	O	O
M14x1.0	M141.012-1CS	1.00	0.429	1.000	4	4.0	0.500	O	O	O	O	O
M14x1.0	M141.012-1CSF6	1.00	0.429	1.000	6	4.0	0.500	O	O	O	O	O
M18x2.5	M182.512-1CS	2.50	0.495	1.000	4	4.0	0.500	X	X	O	O	O
M18x2.5	M182.512-1CSF6	2.50	0.495	1.000	6	4.0	0.500	O	O	O	O	O
M18x2.0	M182.012-1CS	2.00	0.495	1.000	4	4.0	0.500	O	O	O	O	O
M18x2.0	M182.012-1CSF6	2.00	0.495	1.000	6	4.0	0.500	O	O	O	O	O
M18x1.5	M181.512-1CS	1.50	0.495	1.000	4	4.0	0.500	X	X	O	O	O
M18x1.5	M181.512-1CSF6	1.50	0.495	1.000	6	4.0	0.500	O	O	O	O	O
M18x1.0	M181.012-1CS	1.00	0.495	1.000	4	4.0	0.500	O	O	O	O	O
M18x1.0	M181.012-1CSF6	1.00	0.495	1.000	6	4.0	0.500	O	O	O	O	O
M22x2.5	M222.558-1CS	2.50	0.620	1.000	4	4.0	0.625	X	X	O	O	O
M22x2.5	M222.558-1CSF6	2.50	0.620	1.000	6	4.0	0.625	O	O	O	O	O
M22x2.0	M222.058-1CS	2.00	0.620	1.000	4	4.0	0.625	X	X	O	O	O
M22x2.0	M222.058-1CSF6	2.00	0.620	1.000	6	4.0	0.625	O	O	O	O	O
M22x1.5	M221.558-1CS	1.50	0.620	1.000	4	4.0	0.625	X	X	O	O	O
M22x1.5	M221.558-1CSF6	1.50	0.620	1.000	6	4.0	0.625	O	O	O	O	O
M22x1.0	M221.058-1CS	1.00	0.620	1.000	4	4.0	0.625	O	O	O	O	O
M22x1.0	M221.058-1CSF6	1.00	0.620	1.000	6	4.0	0.625	O	O	O	O	O
M24x3.0	M243.058-1CS	3.00	0.620	1.000	4	4.0	0.625	X	X	O	O	O
M24x3.0	M243.058-1CSF6	3.00	0.620	1.000	6	4.0	0.625	O	O	O	O	O
M30x3.5	M303.534-1CS	3.50	0.745	1.250	4	4.0	0.750	X	X	O	O	O
M30x3.5	M303.534-1CSF6	3.50	0.745	1.250	6	4.0	0.750	O	O	O	O	O
M36x4.0	M364.034-1CS	4.00	0.745	1.250	4	4.0	0.750	X	X	O	O	O
M36x4.0	M364.034-1CSF6	4.00	0.745	1.250	6	4.0	0.750	O	O	O	O	O

NON-STOCK COATINGS available in 10 days

Other Sizes Available Upon Request - Tools will cut internal & external thread

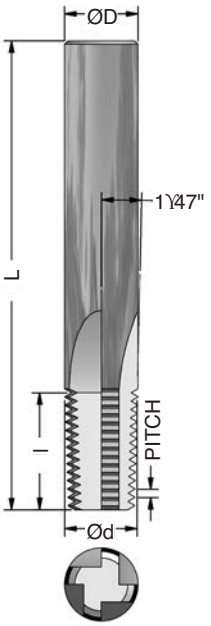
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

National Taper Pipe (NPT) Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)



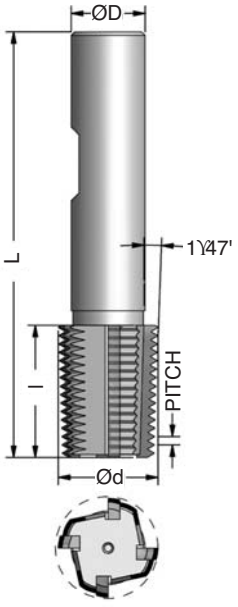
Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/16"-27	142714-1CSNPTD190	27	0.190	0.400	4	3.0	0.250	X	X	O	O	O
1/8"-27	142714-1CSNPT	27	0.240	0.625	4	3.0	0.250	X	X	O	O	O
1/8"-27	51627516-1CSNPT	27	0.308	0.741	4	3.0	0.312	X	X	O	O	O
1/8"-27	5162738-1CSNPT	27	0.308	0.741	4	3.0	0.375	O	O	O	O	O
1/4-3/8"-18	381838-1CSNPT	18	0.370	0.778	4	3.0	0.375	X	X	O	O	O
1/4-3/8"-18	7161812-1CSNPT	18	0.432	0.778	4	4.0	0.500	O	O	O	O	O
1/2-3/4"-14	121412-1CSNPT	14	0.495	1.000	4	4.0	0.500	X	X	O	O	O
1/2-3/4"-14	121412-1CSNPTF6	14	0.495	1.000	6	4.0	0.500	O	O	O	O	O
1/2-3/4"-14	581458-1CSNPT	14	0.620	1.000	4	4.0	0.625	X	X	O	O	O
1/2-3/4"-14	581458-1CSNPTF6	14	0.620	1.000	6	4.0	0.625	O	O	O	O	O
1"-11.5	5811558-1CSNPT	11.5	0.620	1.044	4	4.0	0.625	X	X	O	O	O
1"-11.5	5811558-1CSNPTF6	11.5	0.620	1.044	6	4.0	0.625	O	O	O	O	O
1"-11.5	3411534-1CSNPT	11.5	0.745	1.044	4	4.0	0.750	X	X	O	O	O
1"-11.5	3411534-1CSNPTF6	11.5	0.745	1.044	6	4.0	0.750	O	O	O	O	O
2-1/2"-8	340834-1CSNPT	8	0.745	1.125	4	4.0	0.750	X	X	O	O	O
2-1/2"-8	340834-1CSNPTF6	8	0.745	1.125	6	4.0	0.750	O	O	O	O	O

NPT form is full form, for 27 NPT or 18 NPT Staggered thread form replaces 27 with 27G, 18 with 18G

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

National Taper Pipe (NPT) Threads

WELDON FLATS INCLUDED

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/2-3/4"-14	581412-1CNPT	14	0.620	1.000	4	4.0	0.500	O	O	O	O	O
3/4"-14	781458-1CNPT	14	0.843	1.125	4	3.6	0.625	O	O	O	O	O
1"-11.5	7811558-1CNPT	11.5	0.843	1.125	4	3.6	0.625	O	O	O	O	O
1-1/2"-11.5	1511501-1CNPT	11.5	1.500	1.500	4	4.5	1.000	O	O	O	O	O
2-1/2"-8	780858-1CNPT	8	0.843	1.125	4	3.6	0.625	O	O	O	O	O
2-1/2"-8	150801-1CNPT	8	1.500	1.500	4	4.5	1.000	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

Dryseal Pipe (NPTF) Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)

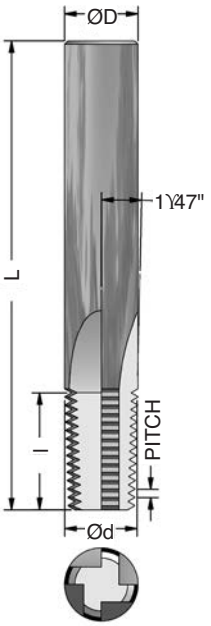
Dimensions in Inches

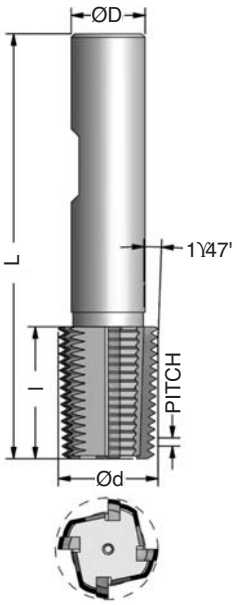
Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/16"-27	142714-1CSNPTFD190	27	0.190	0.400	4	3.0	0.250	X	X	O	O	O
1/8"-27	142714-1CSNPTF	27	0.240	0.625	4	3.0	0.250	X	X	O	O	O
1/8"-27	51627516-1CSNPTF	27	0.308	0.741	4	3.0	0.312	X	X	O	O	O
1/8"-27	5162738-1CSNPTF	27	0.308	0.741	4	3.0	0.375	O	O	O	O	O
1/4-3/8"-18	381838-1CSNPTF	18	0.370	0.778	4	3.0	0.375	X	X	O	O	O
1/4-3/8"-18	7161812-1CSNPTF	18	0.432	0.778	4	4.0	0.500	O	O	O	O	O
1/2-3/4"-14	121412-1CSNPTF	14	0.495	1.000	4	4.0	0.500	X	X	O	O	O
1/2-3/4"-14	121412-1CSNPTFF6	14	0.495	1.000	6	4.0	0.500	O	O	O	O	O
1/2-3/4"-14	581458-1CSNPTF	14	0.620	1.000	4	4.0	0.625	X	X	O	O	O
1/2-3/4"-14	581458-1CSNPTFF6	14	0.620	1.000	6	4.0	0.625	O	O	O	O	O
1"-11.5	5811558-1CSNPTF	11.5	0.620	1.044	4	4.0	0.625	X	X	O	O	O
1"-11.5	5811558-1CSNPTFF6	11.5	0.620	1.044	6	4.0	0.625	O	O	O	O	O
1"-11.5	3411534-1CSNPTF	11.5	0.745	1.044	4	4.0	0.750	X	X	O	O	O
1"-11.5	3411534-1CSNPTFF6	11.5	0.745	1.044	6	4.0	0.750	O	O	O	O	O
2-1/2"-8	340834-1CSNPTF	8	0.745	1.125	4	4.0	0.750	X	X	O	O	O
2-1/2"-8	340834-1CSNPTFF6	8	0.745	1.125	6	4.0	0.750	O	O	O	O	O

NPT form is full form, for 27 NPT or 18 NPT Staggered thread form replaces 27 with 27G, 18 with 18G

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery





ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

Dryseal Pipe (NPTF) Threads

WELDON FLATS INCLUDED

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/2-3/4"-14	581412-1CNPTF	14	0.620	1.000	4	4.0	0.500	O	O	O	O	O
3/4"-14	781458-1CNPTF	14	0.843	1.125	4	3.6	0.625	O	O	O	O	O
1"-11.5	7811558-1CNPTF	11.5	0.843	1.125	4	3.6	0.625	O	O	O	O	O
1-1/2"-11.5	1511501-1CNPTF	11.5	1.500	1.500	4	4.5	1.000	O	O	O	O	O
2-1/2"-8	780858-1CNPTF	8	0.843	1.125	4	3.6	0.625	O	O	O	O	O
2-1/2"-8	150801-1CNPTF	8	1.500	1.500	4	4.5	1.000	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

Dryseal Straight Pipe (NPSF) Threads

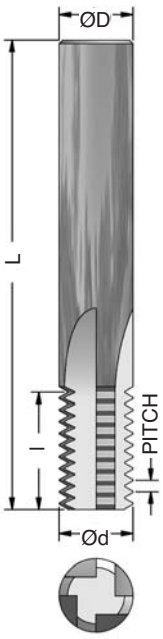
Custom Weldon Flats available in lieu of round shanks (see page 43)

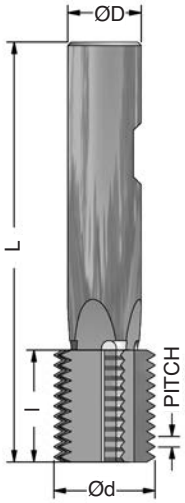
Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/16"-27	142714-1CSNPSFD190	27	0.190	0.400	4	3.0	0.250	O	O	O	O	O
1/8"-27	142714-1CSNPSF	27	0.240	0.625	4	3.0	0.250	O	O	O	O	O
1/8"-27	51627516-1CSNPSF	27	0.300	0.741	4	3.0	0.312	O	O	O	O	O
1/4-3/8"-18	381838-1CSNPSF	18	0.370	0.778	4	3.0	0.375	O	O	O	O	O
1/2-3/4"-14	581458-1CSNPSF	14	0.620	1.000	4	4.0	0.625	O	O	O	O	O
1/2-3/4"-14	581458-1CSNPSFF6	14	0.620	1.000	6	4.0	0.625	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery





ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

Dryseal Straight Pipe (NPSF) Threads

WELDON FLATS INCLUDED

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/2-3/4"-14	581412-1CNPSF	14	0.620	1.000	4	4.0	0.500	O	O	O	O	O
1"-11.5	7811558-1CNPSF	11.5	0.860	1.125	4	3.6	0.625	O	O	O	O	O
2-1/2"-8	1250801-1CNPSF	8	1.250	1.500	4	4.5	1.000	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

British Standard Pipe (BSP) Threads

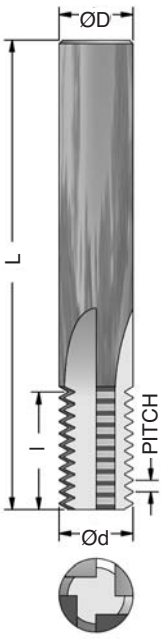
Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"-28	1828516-1CSBSP	28	0.300	0.750	4	3.0	0.312	O	O	O	O	O
1/4-3/8"-19	141938-1CSBSP	19	0.370	0.789	4	3.0	0.375	O	O	O	O	O
1/2"-14	121458-1CSBSP	14	0.620	1.000	4	4.0	0.625	O	O	O	O	O
1/2"-14	121458-1CSBSPF6	14	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-14	341434-1CSBSP	14	0.745	1.286	4	4.0	0.750	O	O	O	O	O
3/4"-14	341434-1CSBSPF6	14	0.745	1.286	6	4.0	0.750	O	O	O	O	O
1"-11	011134-1CSBSP	11	0.745	1.272	4	4.0	0.750	O	O	O	O	O
1"-11	011134-1CSBSPF6	11	0.745	1.272	6	4.0	0.750	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

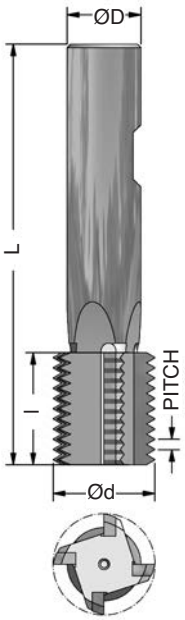
British Standard Pipe (BSP) Threads

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
3/4"–14	341458-1CBSP	14	0.860	1.071	4	3.625	0.625	O	O	O	O	O
1"-11	011158-1CBSP	11	0.860	1.091	4	3.625	0.625	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

British Standard Pipe (BSP) Threads, Metric Shank

WELDON FLATS INCLUDED

Dimensions in Inches (mm)

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	No. of Flutes	Length (L)	Shank Dia. (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"-28	182808MM-1CSBSP	28	0.300 (7.6)	0.750 (19)	4	3.0 (76)	(8)	O	O	O	O	O
1/4-3/8"-19	141910MM-1CSBSP	19	0.390 (9.9)	0.789 (20)	4	3.0 (76)	(10)	O	O	O	O	O
1/2"-14	121416MM-1CSBSP	14	0.626 (15.9)	1.000 (25.4)	4	3.5 (90)	(16)	O	O	O	O	O
3/4"-14	341420MM-1CSBSP	14	0.783 (19.9)	1.286 (32.7)	4	4.0 (102)	(20)	O	O	O	O	O
1"-11	011120MM-1CSBSP	11	0.783 (19.9)	1.272 (32.3)	4	4.0 (102)	(20)	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

British Standard Pipe Tapered (BSPT) Threads

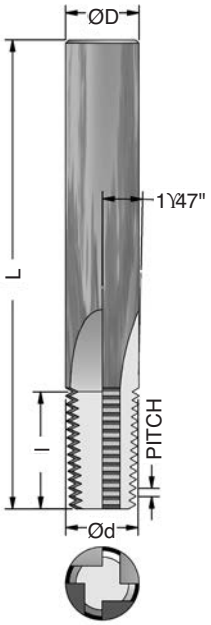
Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available** C TiN	Z TiAlN	Y TiCN	X Hard Lube	V Xtreme
1/8"-28	1828516-1CSBSPT	28	0.300	0.750	4	3.0	0.312	O	O	O	O	O
1/4-3/8"-19	141938-1CSBSPT	19	0.370	0.789	4	3.0	0.375	O	O	O	O	O
1/2"-14	121458-1CSBSPT	14	0.620	1.000	4	4.0	0.625	O	O	O	O	O
1/2"-14	121458-1CSBSPTF6	14	0.620	1.000	6	4.0	0.625	O	O	O	O	O
3/4"-14	341434-1CSBSPT	14	0.745	1.286	4	4.0	0.750	O	O	O	O	O
3/4"-14	341434-1CSBSPTF6	14	0.745	1.286	6	4.0	0.750	O	O	O	O	O
1"-11	011134-1CSBSPT	11	0.745	1.272	4	4.0	0.750	O	O	O	O	O
1"-11	011134-1CSBSPTF6	11	0.745	1.272	6	4.0	0.750	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Carbide Tipped HSS Straight Flute Thread Mills

British Standard Pipe Tapered (BSPT) Threads

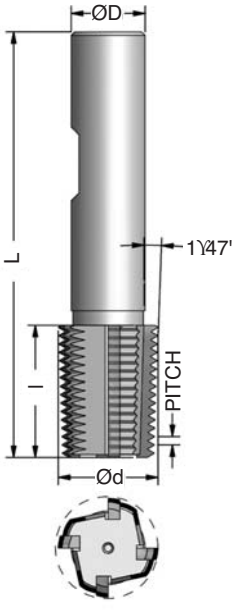
WELDON FLATS INCLUDED

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available** C TiN	Z TiAlN	Y TiCN	X Hard Lube	V Xtreme
3/4"–14	341458-1CBSPT	14	0.860	1.071	4	3.625	0.625	O	O	O	O	O
1"-11	011158-1CBSPT	11	0.860	1.091	4	3.625	0.625	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Solid Carbide Straight Flute Thread Mills

British Standard Pipe Tapered (BSPT) Threads, Metric Shank

WELDON FLATS INCLUDED

Dimensions in Inches (mm)

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	No. of Flutes	Length (L)	Shank Dia. (D)	Coatings Available** C TiN	Z TiAlN	Y TiCN	X Hard Lube	V Xtreme
1/8"-28	182808MM-1CSBSPT	28	0.300 (7.6)	0.750 (19)	4	3.0 (76)	(8)	O	O	O	O	O
1/4-3/8"-19	141910MM-1CSBSPT	19	0.390 (9.9)	0.789 (20)	4	3.0 (76)	(10)	O	O	O	O	O
1/2"-14	121416MM-1CSBSPT	14	0.626 (15.9)	1.000 (25.4)	4	3.5 (90)	(16)	O	O	O	O	O
3/4"-14	341420MM-1CSBSPT	14	0.783 (19.9)	1.286 (32.7)	4	4.0 (102)	(20)	O	O	O	O	O
1"-11	011120MM-1CSBSPT	11	0.783 (19.9)	1.272 (32.3)	4	4.0 (102)	(20)	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Helical Thread Mills

Unified (UN) Internal Threads

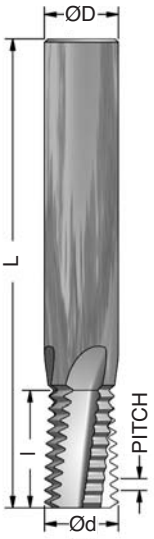
Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/4"-20	142014-1CSF3BH	20	0.190	0.400	3	3.0	0.250	X	X	O	O	O
1/4"-28	142814-1CSF3BH	28	0.190	0.393	3	3.0	0.250	X	X	O	O	O
5/16"-18	5161814-1CSF3BH	18	0.245	0.611	3	3.0	0.250	X	X	O	O	O
5/16"-24	5162414-1CSF3BH	24	0.245	0.625	3	3.0	0.250	X	X	O	O	O
3/8"-16	3816516-1CSF3BH	16	0.300	0.750	3	3.0	0.312	X	X	O	O	O
3/8"-24	3824516-1CSF3BH	24	0.300	0.750	3	3.0	0.312	X	X	O	O	O
7/16"-14	7161438-1CSF3BH	14	0.350	0.786	3	3.0	0.375	X	X	O	O	O
7/16"-20	7162038-1CSF3BH	20	0.350	0.750	3	3.0	0.375	X	X	O	O	O
1/2"-13	121338-1CSF3BH	13	0.370	0.769	3	3.0	0.375	X	X	O	O	O
1/2"-20	122038-1CSF3BH	20	0.370	0.750	3	3.0	0.375	X	X	O	O	O
9/16"-12	9161212-1CSBH	12	0.430	0.750	4	4.0	0.500	X	X	O	O	O
9/16"-18	9161812-1CSBH	18	0.450	0.778	4	4.0	0.500	X	X	O	O	O
5/8"-11	581112-1CSBH	11	0.430	1.000	4	4.0	0.500	X	X	O	O	O
5/8"-18	581812-1CSBH	18	0.495	1.000	4	4.0	0.500	X	X	O	O	O
3/4"-10	341058-1CSBH	10	0.620	1.000	4	4.0	0.625	X	X	O	O	O
3/4"-16	341658-1CSBH	16	0.620	1.000	4	4.0	0.625	X	X	O	O	O
7/8"-9	780934-1CSBH	9	0.745	1.333	4	4.0	0.750	X	X	O	O	O
7/8"-14	781434-1CSBH	14	0.745	1.286	4	4.0	0.750	X	X	O	O	O
1"-8	010834-1CSBH	8	0.745	1.250	4	4.0	0.750	X	X	O	O	O
1"-12	011234-1CSBH	12	0.745	1.250	4	4.0	0.750	X	X	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread ONLY

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Solid Carbide Helical Thread Mills

Unified (UN) External Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)

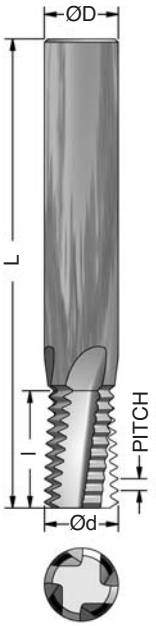
Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/4"-20	142014-1CSF3AH	20	0.190	0.400	3	3.0	0.250	O	O	O	O	O
1/4"-28	142814-1CSF3AH	28	0.190	0.393	3	3.0	0.250	O	O	O	O	O
5/16"-18	5161814-1CSF3AH	18	0.245	0.611	3	3.0	0.250	O	O	O	O	O
5/16"-24	5162414-1CSF3AH	24	0.245	0.625	3	3.0	0.250	O	O	O	O	O
3/8"-16	3816516-1CSF3AH	16	0.300	0.750	3	3.0	0.312	O	O	O	O	O
3/8"-24	3824516-1CSF3AH	24	0.300	0.750	3	3.0	0.312	O	O	O	O	O
7/16"-14	7161438-1CSF3AH	14	0.350	0.786	3	3.0	0.375	O	O	O	O	O
7/16"-20	7162038-1CSF3AH	20	0.350	0.750	3	3.0	0.375	O	O	O	O	O
1/2"-13	121338-1CSF3AH	13	0.370	0.769	3	3.0	0.375	O	O	O	O	O
1/2"-20	122038-1CSF3AH	20	0.370	0.750	3	3.0	0.375	O	O	O	O	O
9/16"-12	9161212-1CSAH	12	0.430	0.750	4	4.0	0.500	O	O	O	O	O
9/16"-18	9161812-1CSAH	18	0.450	0.778	4	4.0	0.500	O	O	O	O	O
5/8"-11	581112-1CSAH	11	0.430	1.000	4	4.0	0.500	O	O	O	O	O
5/8"-18	581812-1CSAH	18	0.495	1.000	4	4.0	0.500	O	O	O	O	O
3/4"-10	341058-1CSAH	10	0.620	1.000	4	4.0	0.625	O	O	O	O	O
3/4"-16	341658-1CSAH	16	0.620	1.000	4	4.0	0.625	O	O	O	O	O
7/8"-9	780934-1CSAH	9	0.745	1.333	4	4.0	0.750	O	O	O	O	O
7/8"-14	781434-1CSAH	14	0.745	1.286	4	4.0	0.750	O	O	O	O	O
1"-8	010834-1CSAH	8	0.745	1.250	4	4.0	0.750	O	O	O	O	O
1"-12	011234-1CSAH	12	0.745	1.250	4	4.0	0.750	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut external thread ONLY

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days



ADVENT TOOL

Solid Carbide Helical Thread Mills

Metric (M) Internal Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches (mm)

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*No. of Flutes*	*Length (L)*	*Shank Dia. (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
M6x1.0	M61.014-1CSF3BH	1.00	0.169 (4.3)	0.394 (10)	3	3.0 (76)	0.250	X	X	O	O	O
M6x0.75	M60.7514-1CSF3BH	0.75	0.169 (4.3)	0.413 (10.5)	3	3.0 (76)	0.250	X	X	O	O	O
M8x1.25	M81.2514-1CSF3BH	1.25	0.232 (5.9)	0.640 (16.25)	3	3.0 (76)	0.250	X	X	O	O	O
M8x1.0	M81.014-1CSF3BH	1.00	0.232 (5.9)	0.630 (16)	3	3.0 (76)	0.250	X	X	O	O	O
M10x1.5	M101.5516-1CSF3BH	1.50	0.287 (7.3)	0.768 (19.5)	3	3.0 (76)	0.312	X	X	O	O	O
M10x1.25	M101.25516-1CSF3BH	1.25	0.287 (7.3)	0.787 (20)	3	3.0 (76)	0.312	X	X	O	O	O
M12x1.75	M121.7538-1CSF3BH	1.75	0.370 (9.4)	0.827 (21)	3	3.0 (76)	0.375	X	X	O	O	O
M12x1.25	M121.2538-1CSF3BH	1.25	0.370 (9.4)	0.837 (21.25)	3	3.0 (76)	0.375	X	X	O	O	O
M14x2.0	M142.012-1CSBH	2.00	0.429 (10.9)	1.024 (26)	4	4.0 (102)	0.500	X	X	O	O	O
M14x1.5	M141.512-1CSBH	1.50	0.429 (10.9)	1.004 (25.5)	4	4.0 (102)	0.500	X	X	O	O	O
M18x2.5	M182.512-1CSBH	2.50	0.495 (12.57)	0.984 (25)	4	4.0 (102)	0.500	X	X	O	O	O
M18x1.5	M181.512-1CSBH	1.50	0.495 (12.57)	1.004 (25.5)	4	4.0 (102)	0.500	X	X	O	O	O
M24x3.0	M243.058-1CSBH	3.00	0.620 (15.75)	1.063 (27)	4	4.0 (102)	0.625	X	X	O	O	O
M24x2.0	M242.058-1CSBH	2.00	0.620 (15.75)	1.024 (26)	4	4.0 (102)	0.625	X	X	O	O	O
M30x3.5	M303.534-1CSBH	3.50	0.745 (18.9)	1.240 (31.5)	4	4.0 (102)	0.750	X	X	O	O	O
M36x4.0	M364.001-1CSF6BH	4.00	0.995 (25.27)	1.417 (36)	6	5.0 (127)	1.000	X	X	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread ONLY

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Helical Thread Mills

Metric (M) External Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)

NON-STOCK COATINGS available in 10 days

Dimensions in Inches (mm)

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*No. of Flutes*	*Length (L)*	*Shank Dia. (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
M6x1.0	M61.014-1CSF3AH	1.00	0.169 (4.3)	0.394 (10)	3	3.0 (76)	0.250	O	O	O	O	O
M6x0.75	M60.7514-1CSF3AH	0.75	0.169 (4.3)	0.413 (10.5)	3	3.0 (76)	0.250	O	O	O	O	O
M8x1.25	M81.2514-1CSF3AH	1.25	0.232 (5.9)	0.640 (16.25)	3	3.0 (76)	0.250	O	O	O	O	O
M8x1.0	M81.014-1CSF3AH	1.00	0.232 (5.9)	0.630 (16)	3	3.0 (76)	0.250	O	O	O	O	O
M10x1.5	M101.5516-1CSF3AH	1.50	0.287 (7.3)	0.768 (19.5)	3	3.0 (76)	0.312	O	O	O	O	O
M10x1.25	M101.25516-1CSF3AH	1.25	0.287 (7.3)	0.787 (20)	3	3.0 (76)	0.312	O	O	O	O	O
M12x1.75	M121.7538-1CSF3AH	1.75	0.370 (9.4)	0.827 (21)	3	3.0 (76)	0.375	O	O	O	O	O
M12x1.25	M121.2538-1CSF3AH	1.25	0.370 (9.4)	0.837 (21.25)	3	3.0 (76)	0.375	O	O	O	O	O
M14x2.0	M142.012-1CSAH	2.00	0.429 (10.9)	1.024 (26)	4	4.0 (102)	0.500	O	O	O	O	O
M14x1.5	M141.512-1CSAH	1.50	0.429 (10.9)	1.004 (25.5)	4	4.0 (102)	0.500	O	O	O	O	O
M18x2.5	M182.512-1CSAH	2.50	0.495 (12.57)	0.984 (25)	4	4.0 (102)	0.500	O	O	O	O	O
M18x1.5	M181.512-1CSAH	1.50	0.495 (12.57)	1.004 (25.5)	4	4.0 (102)	0.500	O	O	O	O	O
M24x3.0	M243.058-1CSAH	3.00	0.620 (15.75)	1.063 (27)	4	4.0 (102)	0.625	O	O	O	O	O
M24x2.0	M242.058-1CSAH	2.00	0.620 (15.75)	1.024 (26)	4	4.0 (102)	0.625	O	O	O	O	O
M30x3.5	M303.534-1CSAH	3.50	0.745 (18.9)	1.240 (31.5)	4	4.0 (102)	0.750	O	O	O	O	O
M36x4.0	M364.001-1CSF6AH	4.00	0.995 (25.27)	1.417 (36)	6	5.0 (127)	1.000	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread ONLY

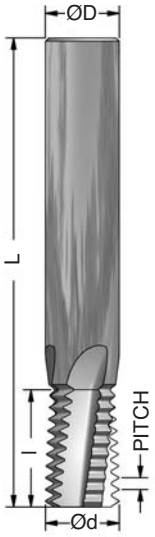
** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Helical Thread Mills

Metric (M) Internal Threads, Metric Shank

Custom Weldon Flats available in lieu of round shanks (see page 43)



Dimensions in Inches (mm)

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*No. of Flutes*	*Length (L)*	*Shank Dia. (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
M6x1.0	EM61.006-1CSF3BH	1.00	0.169 (4.3)	0.394 (10)	3	3.0 (76)	(6)	O	O	O	O	O
M6x0.75	EM60.7506-1CSF3BH	0.75	0.169 (4.3)	0.413 (10.5)	3	3.0 (76)	(6)	O	O	O	O	O
M8x1.25	EM81.2506-1CSF3BH	1.25	0.232 (5.9)	0.640 (16.25)	3	3.0 (76)	(6)	O	O	O	O	O
M8x1.0	EM81.006-1CSF3BH	1.00	0.232 (5.9)	0.630 (16)	3	3.0 (76)	(6)	O	O	O	O	O
M10x1.5	EM101.508-1CSF3BH	1.50	0.287 (7.3)	0.768 (19.5)	3	3.0 (76)	(8)	O	O	O	O	O
M10x1.25	EM101.2508-1CSF3BH	1.25	0.287 (7.3)	0.787 (20)	3	3.0 (76)	(8)	O	O	O	O	O
M12x1.75	EM121.7510-1CSF3BH	1.75	0.370 (9.4)	0.827 (21)	3	3.0 (76)	(10)	O	O	O	O	O
M12x1.25	EM121.2510-1CSF3BH	1.25	0.370 (9.4)	0.837 (21.25)	3	3.0 (76)	(10)	O	O	O	O	O
M14x2.0	EM142.012-1CSBH	2.00	0.429 (10.9)	1.024 (26)	4	3.5 (90)	(12)	O	O	O	O	O
M14x1.5	EM141.512-1CSBH	1.50	0.429 (10.9)	1.004 (25.5)	4	3.5 (90)	(12)	O	O	O	O	O
M18x2.5	EM182.512-1CSBH	2.50	0.469 (11.9)	0.984 (25)	4	3.5 (90)	(12)	O	O	O	O	O
M18x1.5	EM181.512-1CSBH	1.50	0.469 (11.9)	1.004 (25.5)	4	3.5 (90)	(12)	O	O	O	O	O
M24x3.0	EM243.016-1CSBH	3.00	0.626 (15.9)	1.063 (27)	4	3.5 (90)	(16)	O	O	O	O	O
M24x2.0	EM242.016-1CSBH	2.00	0.626 (15.9)	1.024 (26)	4	3.5 (90)	(16)	O	O	O	O	O
M30x3.5	EM303.520-1CSBH	3.50	0.783 (19.9)	1.240 (31.5)	4	4.0 (102)	(20)	O	O	O	O	O
M36x4.0	EM364.025-1CSF6BH	4.00	0.980 (24.9)	1.417 (36)	6	5.0 (157)	(25)	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread ONLY

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Helical Thread Mills

Metric (M) External Threads, Metric Shank

Custom Weldon Flats available in lieu of round shanks (see page 43)

NON-STOCK COATINGS available in 10 days

Dimensions in Inches (mm)

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*No. of Flutes*	*Length (L)*	*Shank Dia. (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
M6x1.0	EM61.006-1CSF3AH	1.00	0.169 (4.3)	0.394 (10)	3	3.0 (76)	(6)	O	O	O	O	O
M6x0.75	EM60.7506-1CSF3AH	0.75	0.169 (4.3)	0.413 (10.5)	3	3.0 (76)	(6)	O	O	O	O	O
M8x1.25	EM81.2506-1CSF3AH	1.25	0.232 (5.9)	0.640 (16.25)	3	3.0 (76)	(6)	O	O	O	O	O
M8x1.0	EM81.006-1CSF3AH	1.00	0.232 (5.9)	0.630 (16)	3	3.0 (76)	(6)	O	O	O	O	O
M10x1.5	EM101.508-1CSF3AH	1.50	0.287 (7.3)	0.768 (19.5)	3	3.0 (76)	(8)	O	O	O	O	O
M10x1.25	EM101.2508-1CSF3AH	1.25	0.287 (7.3)	0.787 (20)	3	3.0 (76)	(8)	O	O	O	O	O
M12x1.75	EM121.7510-1CSF3AH	1.75	0.370 (9.4)	0.827 (21)	3	3.0 (76)	(10)	O	O	O	O	O
M12x1.25	EM121.2510-1CSF3AH	1.25	0.370 (9.4)	0.837 (21.25)	3	3.0 (76)	(10)	O	O	O	O	O
M14x2.0	EM142.012-1CSAH	2.00	0.429 (10.9)	1.024 (26)	4	3.5 (90)	(12)	O	O	O	O	O
M14x1.5	EM141.512-1CSAH	1.50	0.429 (10.9)	1.004 (25.5)	4	3.5 (90)	(12)	O	O	O	O	O
M18x2.5	EM182.512-1CSAH	2.50	0.469 (11.9)	0.984 (25)	4	3.5 (90)	(12)	O	O	O	O	O
M18x1.5	EM181.512-1CSAH	1.50	0.469 (11.9)	1.004 (25.5)	4	3.5 (90)	(12)	O	O	O	O	O
M24x3.0	EM243.016-1CSAH	3.00	0.626 (15.9)	1.063 (27)	4	3.5 (90)	(16)	O	O	O	O	O
M24x2.0	EM242.016-1CSAH	2.00	0.626 (15.9)	1.024 (26)	4	3.5 (90)	(16)	O	O	O	O	O
M30x3.5	EM303.520-1CSAH	3.50	0.783 (19.9)	1.240 (31.5)	4	4.0 (102)	(20)	O	O	O	O	O
M36x4.0	EM364.025-1CSF6AH	4.00	0.980 (24.9)	1.417 (36)	6	5.0 (157)	(25)	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread ONLY

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Helical Thread Mills

National Pipe (NPT) Threads

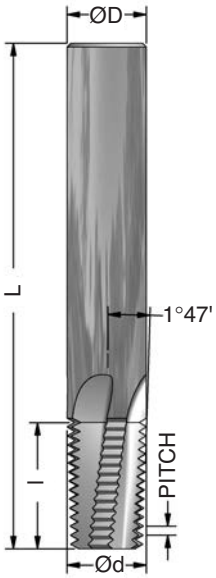
Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"–27	51627516-1CSNPTF3H	27	0.308	0.741	3	3.0	0.312	X	X	O	O	O
1/4-3/8"–18	381838-1CSNPTF3H	18	0.370	0.778	3	3.0	0.375	X	X	O	O	O
1/4-3/8"–18	7161812-1CSNPTH	18	0.432	0.778	4	4.0	0.500	X	X	O	O	O
1/2-3/4"-14	121412-1CSNPTH	14	0.495	1.000	4	4.0	0.500	X	X	O	O	O
1/2-3/4"-14	581458-1CSNPTH	14	0.620	1.000	4	4.0	0.625	X	X	O	O	O
1"-11.5	3411534-1CSNPTF5H	11.5	0.745	1.044	5	4.0	0.750	X	X	O	O	O
1"-11.5	0111501-1CSNPTF6H	11.5	0.995	1.391	6	5.0	1.000	X	X	O	O	O
2-1/2"-8	340834-1CSNPTH	8	0.745	1.125	4	4.0	0.750	X	X	O	O	O
2-1/2"-8	010801-1CSNPTF5H	8	0.995	1.500	5	5.0	1.000	X	X	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Solid Carbide Helical Thread Mills

National Pipe (NPT) Threads, Metric Shank

Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches (mm)

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*No. of Flutes*	*Length (L)*	*Shank Dia. (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"–27	E082708-1CSNPTF3H	27	0.311 (7.90)	0.741 (18.82)	3	3.0 (76)	(8)	O	O	O	O	O
1/4-3/8"–18	E101810-1CSNPTF3H	18	0.390 (9.90)	0.778 (19.76)	3	3.0 (76)	(10)	O	O	O	O	O
1/4-3/8"–18	E111812-1CSNPTH	18	0.429 (10.90)	0.778 (19.76)	4	3.5 (90)	(12)	O	O	O	O	O
1/2-3/4"-14	E121412-1CSNPTH	14	0.469 (11.90)	1.000 (25.40)	4	3.5 (90)	(12)	O	O	O	O	O
1/2-3/4"-14	E161416-1CSNPTH	14	0.626 (15.90)	1.000 (25.40)	4	3.5 (90)	(16)	O	O	O	O	O
1"-11.5	E2011520-1CSNPTF5H	11.5	0.783 (19.90)	1.044 (26.52)	5	4.0 (102)	(20)	O	O	O	O	O
1"-11.5	E2511525-1CSNPTF6H	11.5	0.980 (24.90)	1.391 (35.33)	6	5.0 (127)	(25)	O	O	O	O	O
2-1/2"-8	E200820-1CSNPTH	8	0.783 (19.90)	1.125 (28.58)	4	4.0 (102)	(20)	O	O	O	O	O
2-1/2"-8	E250825-1CSNPTF5H	8	0.980 (24.90)	1.500 (38.10)	5	5.0 (127)	(25)	O	O	O	O	O

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

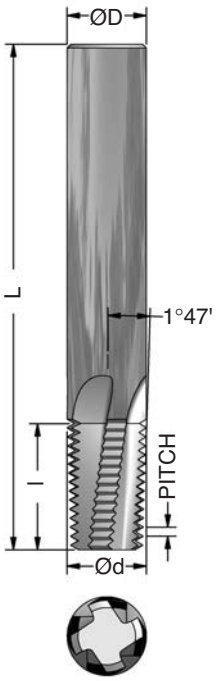
Solid Carbide Helical Thread Mills

British Standard Pipe (BSP) Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"-28	1828516-1CSBSPF3H	28	0.300	0.750	3	3.0	0.312	X	X	O	O	O
1/4-3/8"-19	141938-1CSBSPF3H	19	0.370	0.789	3	3.0	0.375	X	X	O	O	O
1/2"-14	121458-1CSBSPH	14	0.620	1.000	4	4.0	0.625	X	X	O	O	O
3/4"-14	341434-1CSBSPH	14	0.745	1.286	4	4.0	0.750	X	X	O	O	O
1"-11	011134-1CSBSPH	11	0.745	1.272	4	4.0	0.750	X	X	O	O	O



ADVENT TOOL

Solid Carbide Helical Thread Mills

British Standard Pipe Tapered (BSP) Threads, Metric Shank

Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches (mm)

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	No. of Flutes	Length (L)	Shank Dia. (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"-28	182808MM-1CSBSPF3H	28	0.300 (7.6)	0.750 (19)	3	3.0 (76)	(8)	O	O	O	O	O
1/4-3/8"-19	141910MM-1CSBSPF3H	19	0.390 (9.9)	0.789 (20)	3	3.0 (76)	(10)	O	O	O	O	O
1/2"-14	121416MM-1CSBSPH	14	0.626 (15.9)	1.000 (25.4)	4	3.5 (90)	(16)	O	O	O	O	O
3/4"-14	341420MM-1CSBSPH	14	0.783 (19.9)	1.286 (32.7)	4	4.0 (102)	(20)	O	O	O	O	O
1"-11	011120MM-1CSBSPH	11	0.783 (19.9)	1.272 (32.3)	4	4.0 (102)	(20)	O	O	O	O	O

ADVENT TOOL

Solid Carbide Helical Thread Mills

British Standard Pipe (BSPT) Threads

Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	Number of Flutes	Length (L)	Shank Diameter (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"-28	1828516-1CSBSPTF3H	28	0.300	0.750	3	3.0	0.312	X	X	O	O	O
1/4-3/8"-19	141938-1CSBSPTF3H	19	0.370	0.789	4	3.0	0.375	X	X	O	O	O
1/2"-14	121458-1CSBSPTH	14	0.620	1.000	4	4.0	0.625	X	X	O	O	O
3/4"-14	341434-1CSBSPTH	14	0.745	1.286	4	4.0	0.750	X	X	O	O	O
1"-11	011134-1CSBSPTH	11	0.745	1.272	4	4.0	0.750	X	X	O	O	O

ADVENT TOOL

Solid Carbide Helical Thread Mills

British Standard Pipe Tapered (BSPT) Threads, Metric Shank

Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches (mm)

Minimum Size	Tool Number	Pitch	Cutter Diameter (d)	Length of Cut (l)	No. of Flutes	Length (L)	Shank Dia. (D)	Coatings Available**				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
1/8"-28	182808MM-1CSBSPTF3H	28	0.300 (7.6)	0.750 (19)	3	3.0 (76)	(8)	O	O	O	O	O
1/4-3/8"-19	141910MM-1CSBSPTF3H	19	0.390 (9.9)	0.789 (20)	3	3.0 (76)	(10)	O	O	O	O	O
1/2"-14	121416MM-1CSBSPTH	14	0.626 (15.9)	1.000 (25.4)	4	3.5 (90)	(16)	O	O	O	O	O
3/4"-14	341420MM-1CSBSPTH	14	0.783 (19.9)	1.286 (32.7)	4	4.0 (102)	(20)	O	O	O	O	O
1"-11	011120MM-1CSBSPTH	11	0.783 (19.9)	1.272 (32.3)	4	4.0 (102)	(20)	O	O	O	O	O

NON-STOCK COATINGS available in 10 days

Other Sizes Available Upon Request - Tools will cut internal & external thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery

ADVENT TOOL

Solid Carbide Extended Length E2 & E3 Thread Mill Designation

1	2	3		4	5	6
7	8	0	9	5	8	–	E	2	C	R	Z

Column 1: Minimum Size Thread
- ***12* = *No. 12*** - 0.216" (1228316-28 Pitch Tool)
- ***10* = *No. 10*** - 0.190"
- ***14* = *1/4*"** - 0.250"
- ***516* = *5/16*"** - 0.3125"
- ***38* = *3/8*"** - 0.375"
- ***716* = *7/16*"** - 0.4375"
- ***12* = *1/2*"** - 0.500" (1213516-13 Pitch Tool)
- ***916* = *9/16*"** - 0.5625"
- ***58* = *5/8*"** - 0.625"
- ***1116* = *11/16*"** - 0.6875"
- ***34* = *3/4*"** - 0.750"
- ***78* = *7/8*"** - 0.875"
- ***01* = *1*"** - 1.000"

Column 2: Threads per Inch

Column 3: Solid Carbide Shank Size
- ***316*** = Shank Ø0.1875"
- ***14*** = Shank Ø0.250"
- ***516*** = Shank Ø0.3125"
- ***38*** = Shank Ø0.375"
- ***12*** = Shank Ø0.500"
- ***58*** = Shank Ø0.625"

Column 4:
- ***E2*** = One Skipped Tooth
- ***E3*** = Two Skipped Teeth

Column 5: ***CR*** = Cam Ground Carbide

Column 6: Coating
- **"-"** = Uncoated
- ***C*** = TIN
- ***Y*** = TICN
- ***Z*** = Futura / TiALN
- ***X*** = Hard Lube
- ***V*** = X.treme

NON-STOCK COATINGS available in 10 days

ADVENT TOOL

Solid Carbide Extended Length Thread Mills

One skipped form E2 - Unified (UN)

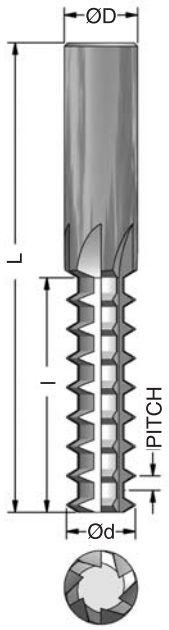
Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
#10-24	1024316-E2CR	24	0.140	0.500	3	2.5	0.188	X	X	O	O	O
#12-28	1228316-E2CR	28	0.160	0.500	3	2.5	0.188	X	X	O	O	O
1/4"-28	142814-E2CR	28	0.180	0.750	3	3.0	0.250	X	X	O	O	O
1/4"-20	1420316-E2CR	20	0.160	0.500	3	2.5	0.188	X	X	O	O	O
5/16"-24	5162414-E2CR	24	0.200	0.833	3	3.0	0.250	X	X	O	O	O
5/16"-18	5161814-E2CR	18	0.200	0.667	3	3.0	0.250	X	X	O	O	O
3/8"-24	382414-E2CR	24	0.240	0.833	5	3.0	0.250	X	X	O	O	O
3/8"-16	381614-E2CR	16	0.240	0.750	5	3.0	0.250	X	X	O	O	O
7/16"-20	71620516-E2CR	20	0.310	1.000	5	3.0	0.312	X	X	O	O	O
7/16"-14	71614516-E2CR	14	0.310	0.857	5	3.0	0.312	X	X	O	O	O
1/2"-13	1213516-E2CR	13	0.310	1.077	5	3.0	0.312	X	X	O	O	O
9/16"-12	9161238-E2CR	12	0.370	1.333	5	3.0	3.750	X	X	O	O	O
5/8"-11	581112-E2CR	11	0.437	1.455	5	4.0	0.500	X	X	O	O	O
11/16"-16	11161612-E2CR	16	0.470	1.625	5	4.0	0.500	X	X	O	O	O
3/4"-12	341212-E2CR	12	0.470	1.500	5	4.0	0.500	X	X	O	O	O
3/4"-10	341012-E2CR	10	0.470	1.600	5	4.0	0.500	X	X	O	O	O
7/8"-9	780958-E2CR	9	0.620	2.000	6	4.0	0.625	X	X	O	O	O
1"-8	010858-E2CR	8	0.620	2.000	6	4.0	0.625	X	X	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



ADVENT TOOL

Solid Carbide Extended Length Thread Mills

Two skipped form E3 - Unified (UN)

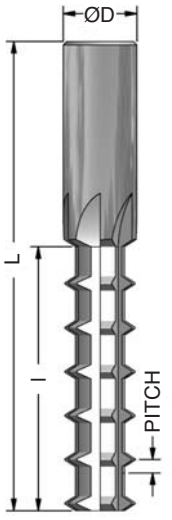
Custom Weldon Flats available in lieu of round shanks (see page 43)

Dimensions in Inches

Minimum Size	*Tool Number*	*Pitch*	*Cutter Diameter (d)*	*Length of Cut (l)*	*Number of Flutes*	*Length (L)*	*Shank Diameter (D)*	*Coatings Available***				
								C	Z	Y	X	V
								TiN	TiAlN	TiCN	Hard Lube	Xtreme
#10-24	1024316-E3CR	24	0.140	0.625	3	2.5	0.188	X	X	O	O	O
#12-28	1228316-E3CR	28	0.160	0.750	3	2.5	0.188	X	X	O	O	O
1/4"-28	142814-E3CR	28	0.180	0.750	3	3.0	0.250	X	X	O	O	O
1/4"-20	1420316-E3CR	20	0.160	0.750	3	2.5	0.188	X	X	O	O	O
5/16"-24	5162414-E3CR	24	0.200	1.000	3	3.0	0.250	X	X	O	O	O
5/16"-18	5161814-E3CR	18	0.200	1.000	3	3.0	0.250	X	X	O	O	O
3/8"-24	382414-E3CR	24	0.240	1.000	5	3.0	0.250	X	X	O	O	O
3/8"-16	381614-E3CR	16	0.240	1.125	5	3.0	0.250	X	X	O	O	O
7/16"-20	71620516-E3CR	20	0.310	1.200	5	3.0	0.312	X	X	O	O	O
7/16"-14	71614516-E3CR	14	0.310	1.286	5	3.0	0.312	X	X	O	O	O
1/2"-13	1213516-E3CR	13	0.310	1.385	5	3.0	0.312	X	X	O	O	O
9/16"-12	9161238-E3CR	12	0.370	1.500	5	3.0	0.375	X	X	O	O	O
5/8"-11	581112-E3CR	11	0.437	1.909	5	4.0	0.500	X	X	O	O	O
3/4"-12	341212-E3CR	12	0.470	2.000	5	4.0	0.500	X	X	O	O	O
3/4"-10	341012-E3CR	10	0.470	2.100	5	4.0	0.500	X	X	O	O	O
7/8"-9	780958-E3CR	9	0.620	2.000	6	4.0	0.625	X	X	O	O	O
1"-8	010858-E3CR	8	0.620	2.250	6	4.0	0.625	X	X	O	O	O
1-1/8"-7	1120758-E3CR	7	0.620	2.143	6	4.0	0.625	X	X	O	O	O

Other Sizes Available Upon Request - Tools will cut internal thread

** For Coatings: **X** - Stocked Coating, **O** - Not stocked, Call for delivery



NON-STOCK COATINGS available in 10 days

Thread Milling requires the use of a machining center capable of helical interpolation. This means that the machine must be capable of three axes simultaneous movement. Two of the axes perform circular interpolation, while the third axis moves perpendicular to the circular plane. On most CNC controls this is achieved with a G02, or a G03 code. There are other factors to consider when using a Thread Mill, the most important being fixturing, and tool length extension. Due to the cutting action of a Thread Mill the forces acting on the part differ greatly than those due to tapping. The more rigidly the part is fastened to the fixture the faster you can Thread Mill. The speeds and feeds are maximized when vibration of the part and fixture is minimized. The next factor of the utmost importance, is the tool, and tool holder. Speeds and feeds are reduced depending on the distance a tool is held from the spindle face. A positive lock end mill style holder is always recommended. Never use a collet style holder for a Thread Mill. If you consider the rigidity of your fixture, and the distance of the tool from gauge line, you should not have a problem with any thread milling operation.

Feed Rate Calculation

Due to the circular motion of the cutter as it forms a thread the actual feed rate at the cutting edge will be different from that which is programmed at the center of the tool. For an internal thread the feed rate at the edge increases as the cutter diameter increases. For an external thread the feed rate at the edge decreases as the cutter diameter increases. This can be shown as a direct relation between the size if the circle the cutter moves around, and the size of the circle cut.

Internal thread: $$F1 = \frac{F2 \times (Dw - Dc)}{Dw}$$

External thread: $$F1 = \frac{F2 \times (Dw + Dc)}{Dw}$$

Where :

F1 = Programmed feed rate at the tool center (in/min)
F2 = Actual feed rate at the cutting edge
Dw = Diameter of the work piece, or thread diameter
Dc = Cutter diameter

The actual feed rate is calculated using the standard formula :

F = (RPM) X (Chip load) X (No. of teeth)

Recommended Starting Cutting Conditions

MATERIAL	SPEED SPM	TOOL DIAMETER .110-.125	.140	.170-.187	.250	.350	.500	Feed (Inches Per Tooth) .750	1.0+
Aluminum & Magnesium	800-UP	.0006-.0010	.0006-.0015	.0010-.0020	.0015-.0030	.002-.004	.003-.006	.004-.008	.006-.009
Brass	500-800	.0006-.0010	.0006-.0015	.0010-.0020	.0015-.0025	.002-.003	.003-.005	.004-.008	.005-.009
Bronze	400-600	.0005-.0010	.0005-.0015	.0010-.0020	.0015-.0025	.002-.003	.003-.005	.005-.007	.005-.008
Hard Bronze	230-290	.0004-.0008	.0004-.0009	.0005-.0013	.0007-.0015	.001-.002	.002-.003	.004-.006	.004-.007
Cast Iron-Soft	200-280	.0004-.0008	.0006-.0010	.0010-.0020	.0010-.0025	.002-.003	.002-.004	.003-.006	.004-.007
Cast Iron-Hard	190-260	.0003-.0007	.0005-.0010	.0006-.0015	.0007-.0015	.001-.002	.002-.003	.003-.004	.004-.005
Steel-Soft	230-400	.0006-.0010	.0007-.0015	.0010-.0020	.0010-.0025	.002-.003	.002-.004	.003-.005	.003-.005
Steel-Medium	200-350	.0004-.0008	.0006-.0015	.0007-.0013	.0008-.0020	.001-.003	.001-.003	.002-.004	.003-.005
Steel-Hard	120-220	.0003-.0006	.0004-.0010	.0005-.0010	.0007-.0015	.001-.002	.001-.003	.002-.004	.002-.004
Stainless Steel	120-220	.0003-.0010	.0004-.0010	.0005-.0010	.0007-.0015	.001-.002	.001-.003	.002-.004	.002-.004
Titanium	70-100	.0003-.0006	.0003-.0008	.0004-.0008	.0005-.0010	.001-.002	.001-.002	.002-.003	.002-.003
Inconel	70-100	.0003-.0006	.0003-.0007	.0004-.0007	.0005-.0010	.001-.002	.001-.002	.002-.003	.002-.003

Thread Mill Programming

Internal Threads *(climb milling)*

The simplest method to produce a thread form using an Advent Thread Mill is as follows:

1. The center of the hole being the X-Y zero point. Move the cutter to the center of the hole, then to the thread depth required.
2. Move the cutter over a small distance (usually about .02"towards the three-o'clock position) to call up your cutter compensation.
3. Machine in a counter-clockwise direction generating a 1⁄2 circle and ending at the full thread depth at the nine-oíclock position. Simultaneously moving 1⁄2 pitch in the Z direction. The direction of the Z movement will determine the handedness of the thread.
4. Produce your thread by generating 1 full circle (counter-clockwise) around the center, while moving 1 full pitch in the Z direction.
5. After the full form has been machined, return to your starting position near the center of the hole. This is done by generating another 1/2 circle (counter-clockwise) combined with a 1/2 pitch move in Z direction.
6. Return to your hole center, and exit the hole.

ADVENT TOOL

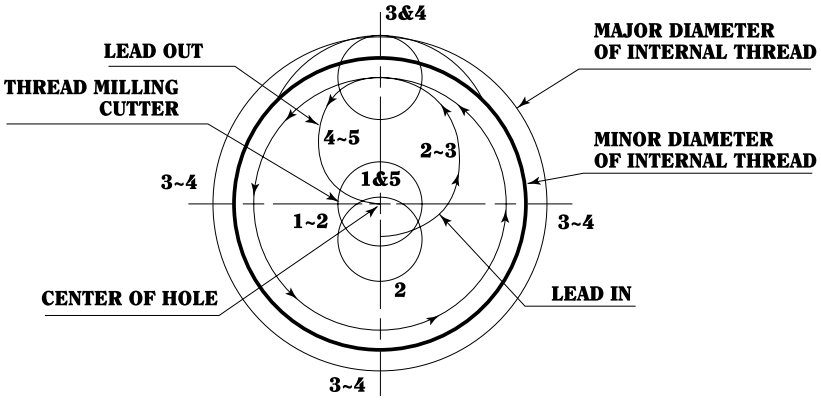
Tool Body and Insert Selection for Advent Tool Replaceable Insert Thread Mill

1. Select the thread form you desire to thread mill. (1.5" - 12UN internal)
2. Choose the tool body that will cut the thread form you need. (tool #15-TA-01-F5)
3. Check the diameter of tool with inserts.
   This depends on the thread form on the insert.
   - The "Standard" cutter diameter is applicable when the insert is 10UN - 32UN, and M1.0 - M2.75.
   - The "Oversize" cutter diameter is pitches 4UN - 9UN, and all NPT, and BSPT forms measured at large end.
   - Cutter diameters for specialized forms such as ACME, and Stub ACME should be checked with Advent Tool's technical department. (12UN is "standard" diameter form. Cutter diameter is 1.22")
4. Compare proper diameter of tool with minor diameter of thread, or drill size. The cutter diameter must not exceed minor diameter of thread, or drill size. (1.5" - 12UN minor diameter = 1.41")
5. Find insert style that fits body chosen.
6. Order insert by applying form to insert style. (insert #ATM-410A12)

ADVENT TOOL

Thread Mill Process - Internal Thread

(view from above)



STEP	FUNCTION
1	Z rapids in minus direction to depth
1~2	rapid in Y-axis to within 0.05 of minor diameter from pos. 1 to 2 and picks up cutter compensation.
2~3	feed from pos. 2 to 3 lead in as Z is moved up in the + direction 1/2 thread pitch
3~4	feeds 1 revolution from pos. 3 as Z is moved up in the + direction one thread pitch
4~5	feeds from pos. 4 to 5 lead out to the center of the hole as Z is moved up in the + direction 1/2 thread pitch all at a higher feed rate
5	Z will rapid to the top of the hole and remove cutter compensation

This programming method can be shown in standardized "G" code programming.

N10 (Incremental program)
N11 1"- 8 UNC (internal in aluminum alloy)
N12 (Tool # 780834-1CS (.745" diam))
N13 G00 G40 G80 G90 G17
N14 M06 T1
N15 G00 X0 Y0 M03 S5128 (X0-Y0 = center of hole)
N16 G43 H1 Z.5 M08 (Z0 being top of part)
N17 G91 G01 Z-1.0 F100.
N18 G01 G41 D1 X.02 F10. (0.0 in diam. offset)
N19 G03 X-.1475 Z.0625 I-.0738 F7.9
N20 G03 Z.125 I.1275 F7.9
N21 G03 X.1475 Z.0625 I.0738 F7.9
N22 G00 G40 X-.02
N23 G90 G00 Z.5 M09

- The actual cutting of the thread is only three lines of code.(N19-N21)
- The feed rate and RPM are calculated using the given surface footage, and chip load as dictated from the chart provided. (1000 SFM, and .0015 chip load)
- These starting conditions are then used with the equations provided to determine the programmed feed rate.

$$RPM = \frac{3.82 \times 1000(sfm)}{.745"} = 5128\ RPM$$

$$F(actual) = 5128(rpm) \times .0015(chip\ load) \times 4(\#\ of\ flutes) = 31.\ IPM$$

$$F(programmed) = \frac{31 \times (1.0 - .745)}{1.0} = 7.9\ IPM$$

NPT and NPTF

When programming an NPT or NPTF thread form, it may be necessary to program a correction factor to compensate for the tapered thread form. This is achieved by dividing the circular move into quarters or eighths, and moving the cutter out as the arc is generated so that the taper is included in the movement. The amount of the taper for a given form is determined as follows:

$$\text{Taper per pitch} = \frac{.0625"}{\text{pitch}}$$ *(amount of taper per inch on NPT form) (threads per inch)*

e.g. $0.0044" = \frac{.0625"}{14} / 2 = 0.0022$ RAD

This amount of taper per pitch is a total. Divide it by two which will give you the amount per radian then dived this number by the number of programmed quadrants. This determines the radial amount that the cutter must be moved out as the cutter forms the thread.

N10 (absolute program)
N15 (1/2-14 NPT in 303 stainless)
N20 (Tool # 581458-1CSNPTCR (.62 diam.))
N25 (0.0007 chip load, and 300 SFM)
N30 G00 G40 G80 G90 G17
N35 M06 T1
N40 G00 X0. Y0. M03 S1850 (X0 Y0 = center of hole)
N45 G43 H1 Z0.5 M08 (Z0.0 being top of part)
N50 G01 Z-1.0 F100.0
N55 G01 G41 D1 X0.02 F10.0 (0.0 in diam. offset)
N60 G03 X 0.1 Y 0.0 Z-0.9643 I-0.06 F1.3
N65 G03 X 0.0 Y-0.1005 Z-0.9464 I 0.1
N70 G03 X 0.1011 Y 0.0 Z-0.9286 J0.1005
N75 G03 X 0.0 Y 0.1016 Z-0.9107 I 0.1011
N80 G03 X 0.1022 Y 0.0 Z-0.8929 J 0.1016
N85 G03 X 0.02 Y 0 Z-0.8571 I 0.0611
N90 G00 G40 X0.0
N95 G00 Z0.5 M09

NOTES

Telephone Inquiry / Quote Request / Programming Assistance / Tool Testing Form

Advent's Technical Support Staff offers free programming assistance to first time users of any Advent Thread Milling product. If you are not familiar with thread milling, we highly recommend you copy the program request form below and fill out all information. You can then fax it to **1-847-549-9714** or email us at info@Advent-Threadmill.com and we will return a suggested CNC program. A free CD-ROM of programming software is available upon request.

Company Name : _____ Date : _____/_____/_____

Contact : _____ Phone : (_____)_____

Tooling Purchased From : _____ Fax : (_____)_____

Machine Information

Brand Make : _____

Model : _____

Spindle Taper : ☐ 35 Cat ☐ 40 Cat ☐ 50 Cat

Max RPM : _____

CNC Controller Information

Brand Make : _____

Model : _____

ISO - ASCII Compatible : ☐ Yes ☐ No ☐ Don't Know

Is Helical Option Available : ☐ Yes ☐ No ☐ Don't Know

Thread Specification To Be Produced

Thread Specifications : _____

Length of Full Thread : _____

Thread From : ☐ 100% ☐ 75% Other ____%

Thread : ☐ Internal ☐ External

Drill Size : _____ ☐ Thru ☐ Blind ☐ Counterbored

Material To Be Machined

Material : _____

Hardness : _____

Condition : ☐ Annealed ☐ Normalized ☐ Heat Treated

☐ Cast ☐ Forged ☐ Rolled ☐ Plate ☐ Bar ☐ Pre-Machined ☐ Flame cut ☐ Scale ☐ Sand

Thread Mill Selected ☐ Solid ☐ Indexable

Tool Description : _____

Insert Selected (If Indexable) : _____

Tool Purchased From : _____

If you are not sure what tool to select, check one of the following and we will recommend a tool for you:

☐ Shortest Cycle Time ☐ Lowest Tooling Cost

Tool Recommended : _____

Distributor you purchased tool from must be filled in to receive a program for your application, otherwise a tool recommendation will be faxed back with approximate cycle time given.

Programming Data

Dimensions : ☐ Inch ☐ Metric

Program Values : ☐ Absolute (G90) ☐ Incremental (G91)

Arc Center : ☐ I & J ☐ R (Radius)

Tool Path : ☐ Offset ☐ No Offset

Arc Limitation : ☐ Full Circle ☐ Quadrant

K Value : ☐ Not Required ☐ Required

If Required : ☐ In Radians ☐ Per Revolution

Feed Direction : ☐ Climb Mill ☐ Conventional

NOTE: *Climb Milling is always recommended for carbide tooling. In some cases where thin wall parts, long extensions or worn spindle bearings are encountered, conventional milling may be an option to production of a given thread.*

PRODUCT INFO

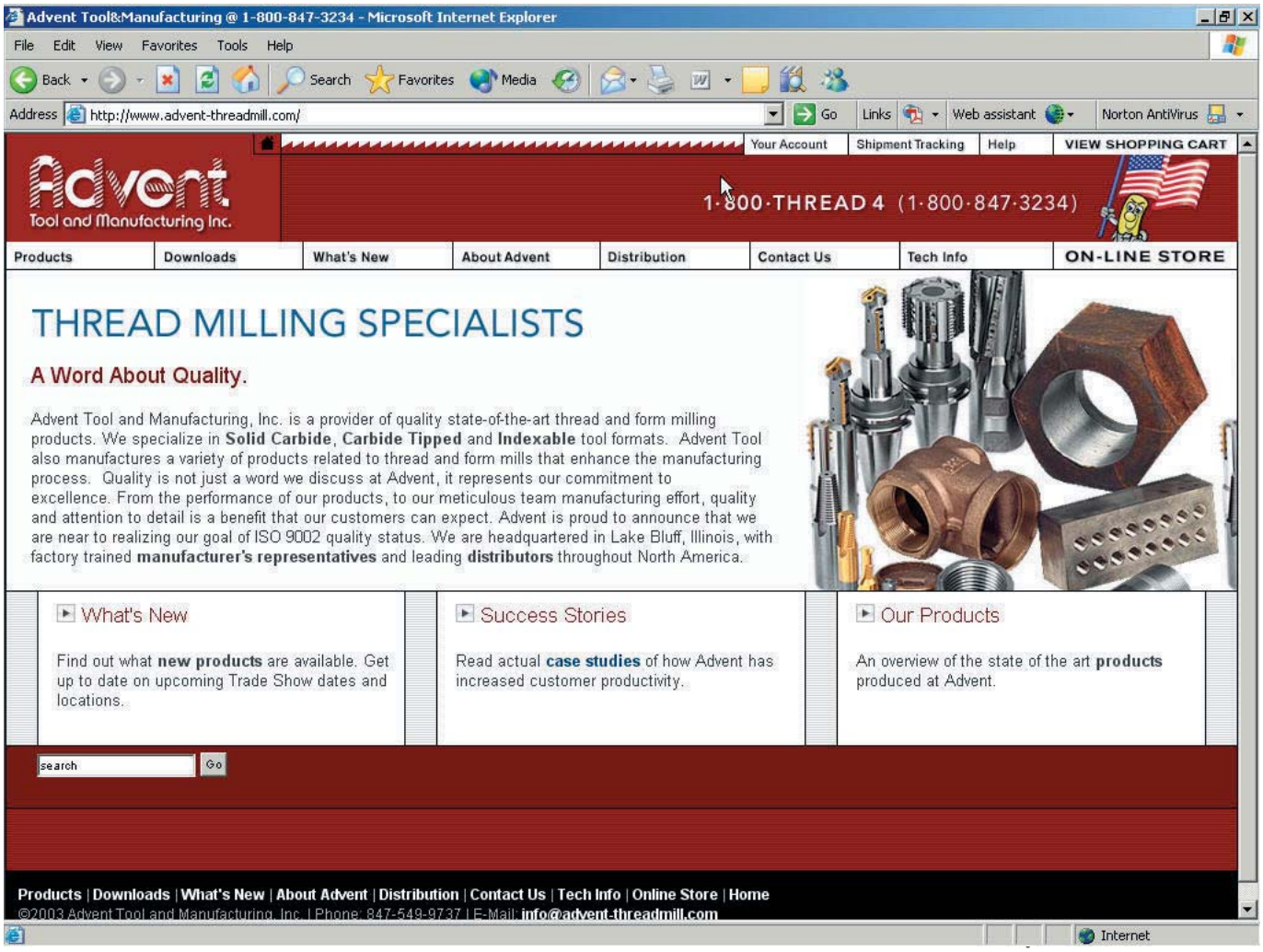
CASE STUDIES

NEW PRODUCTS

Visit our NEW web-site at...

www.Advent-Threadmill.com

TECHNICAL INFO



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PRODUCT UPDATES

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