



OSG's A Brand® Tap Lineup

Vol 2

# A-TAPS

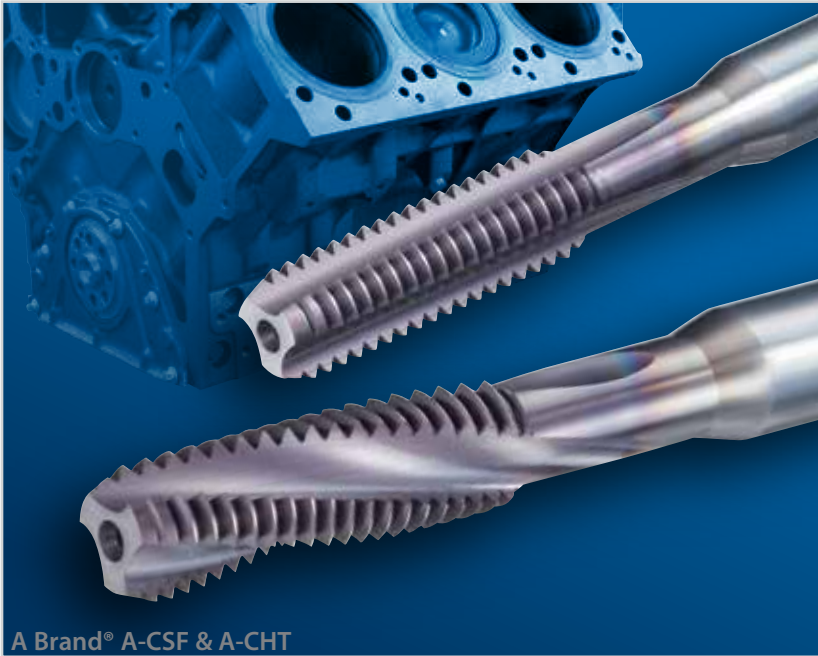
A-NPT • A-LT-NPT • A-BSPP • A-BSPT • A-NPS • AT-1 • A-CSF • A-CHT • A-SFT  
A-OIL-SFT • A-LT-SFT • A-POT • A-OIL-POT • A-LT-POT



# A-Taps

Taps Designed with A Brand Values in Mind

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A Brand® A-SFT & A-POT



A Brand® A-SFT



A Brand® A-SFT

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A Brand® AT-1



A Brand® A-SFT

# The A Brand Story

*The joy of delivering new values*

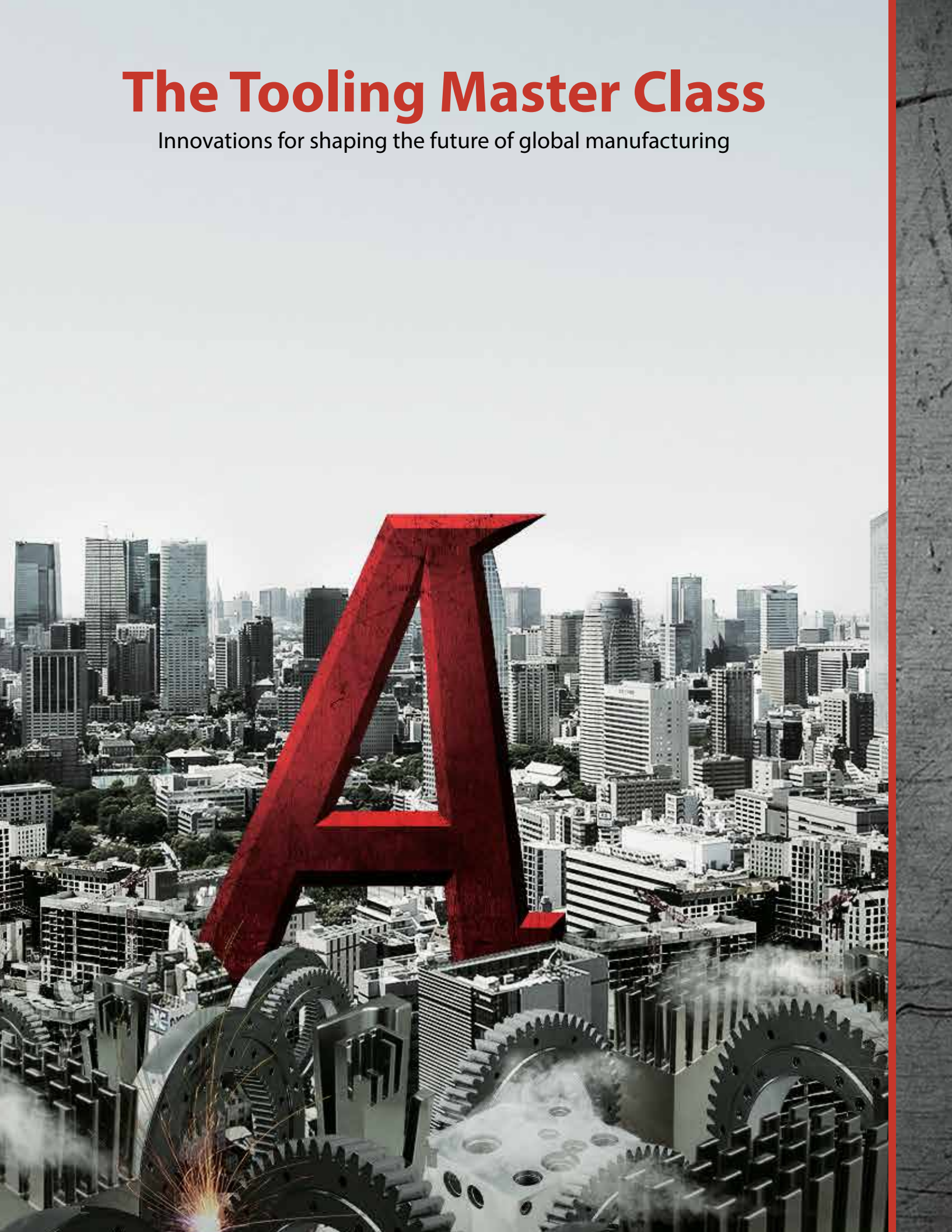
The A Brand represents a new evolution in cutting tool technology. With a commitment to only the best, the A Brand emanates innovations essential for shaping the future of global manufacturing. The A Brand is not only a premium tooling brand, it also represents the quality assurance OSG guarantees to each and every customer. The A Brand is composed of OSG's latest high performance threading, drilling and milling tool innovations. Developed with attention to the finest details, manufacturers will experience the level of quality, reliability and satisfaction that can only be delivered by the A Brand tooling master class.

Advanced tool qualities have been incorporated into the A Brand products, including a versatility that enables a wide range of processing in different work materials, an excellent capability to perform difficult processing tasks, and high efficiency that leads to shortened production time and cost savings. Expectations have risen that the A Brand will bring innovations into the manufacturing field, and pass on OSG's technologies from today to the future. To better understand the concept of the A Brand, interviews were conducted with OSG experts who have devoted their manufacturing careers to the development of A Brand products. They spoke enthusiastically about how their passions underpinned the development process.



# The Tooling Master Class

Innovations for shaping the future of global manufacturing



# The A Brand *The Tooling Master Class*

## LINE-UP

The A Brand is not only a premium tooling brand, it also represents the quality assurance OSG guarantees to each and every customer.

To better accommodate evolving manufacturing needs, the A Brand offering has been expanded. Whether you are looking for better tools or need assistance in choosing the right tool, give one of the A Brand products a try. You will experience a level of quality, reliability and satisfaction that can only be delivered by the A Brand tooling master class.

## A-DRILL



**A Brand® ADO-TRS 3D & 5D**



**A Brand® ADF • ADFO • ADFL**



**A Brand® ADO 3-30D**



**A Brand® AD 2D & 4D**



**A Brand® ADO-SUS 3D, 5D & 8D**



**A Brand® AD-LDS**

## A-END MILL



**A Brand® AE-VMS**

## A-TAP



**A Brand® AT-1**



**A Brand® A-CSF**



**A Brand® A-CHT**



**A Brand® A-SFT • A-OIL-SFT • A-LT-SFT**



**A Brand® A-POT • A-OIL-POT • A-LT-POT**

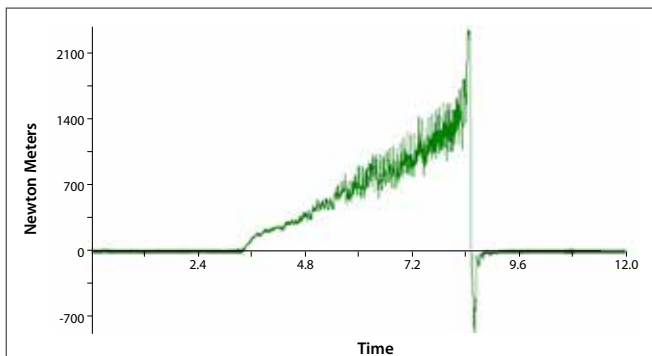
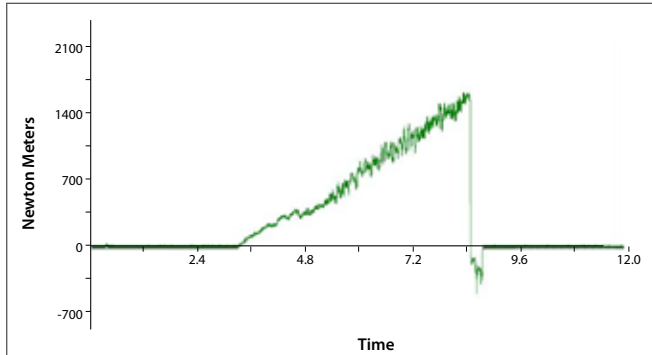


**A Brand® A-NPT • A-LT-NPT • A-BSPP •  
A-BSPT • A-NPS**

## Stabilized Cutting Torque

### Comparison

The A Brand® A-NPT tap demonstrates more consistent torque while producing threads than the competitor, resulting in better tool life and thread quality.



**Interrupted Thread**  
for reduced cutting torque

**Variable Lead Flute**  
accelerates chip evacuation

**Enhanced Cutting Geometry**  
to eliminate galling

**V Coating**  
for exceptional wear resistance

**HSSE Substrate**  
for high wear resistance and toughness

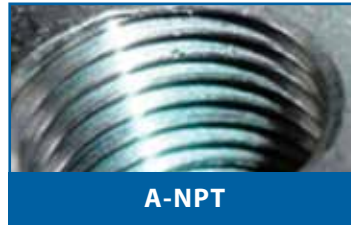
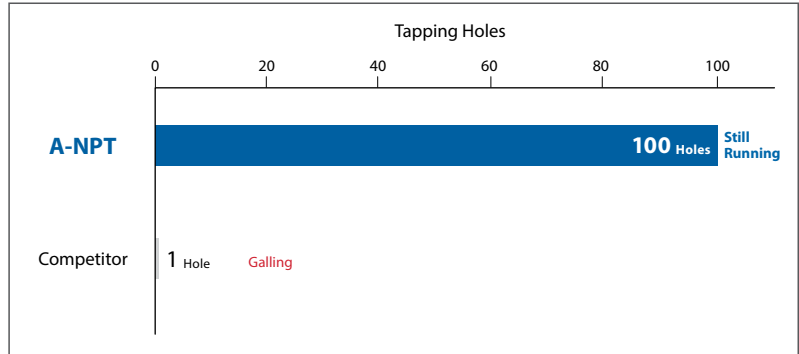


## Processing with Taper Pipe Taps

### A36 Steel

The A-Pipe taps are able to achieve stable performance beyond 100 holes while the competitor's tool failed to successfully process a single hole.

Tool	A-NPT	Competitor
Tool Size	PT 1/8-28 2.5P	
Work Material	A36 Steel	
Pre-Drilled Hole	Ø0.32" x 0.62" (Through)	
Gage Plane	0.51"	
Cutting Speed	23 SFM (272 RPM)	
Coolant	Water-soluble Chlorine-Free (10%)	
Machine	Horizontal Machining Center	





## Minimal Wear in Multiple Materials

A36 Steel • Cast Iron • 304 Stainless Steel

The A-NPT showed minimal wear and can continue to be used even after successfully tapping 100 holes in various work materials.

Tool	A-NPT		
Tool Size	PT 1/8-28 2.5P		
Work Material	A36 Steel	Cast Iron	304 Stainless Steel
Pre-Drilled Hole	Ø0.32" x 0.62" (Through)		
Gage Plane	0.51"		
Cutting Speed	16 SFM (190 RPM)		
Coolant	Water-soluble Chlorine-Free (10%)		
Machine	Vertical Machining Center		



**A36 Steel**



**Cast Iron**



**304 Stainless Steel**

## List 16570

NEW HSSE V 40°

A-NPT, Interrupted



Units: Inch

Size	Number of Flutes	EDP Number	Overall Length	Length of Cut	Neck Length	Shank Diameter	Square Width	Square Length
		NPT	L	Lc	Ln	d	k	lk
		V						
1/16 - 27	3	1657001008	3.543	0.689	1.417	0.313	0.234	0.374
1/8 - 27 (Sm. Shk)		1657002008		0.752	1.457	0.438	0.328	
1/8 - 27 (Lg. Shk)		1657003008						
1/4 - 18	4	1657004008	3.937	1.063	1.929	0.563	0.421	0.437
3/8 - 18		1657005008			1.969	0.700	0.531	0.500
1/2 - 14		1657006008	4.921	1.374	2.362	0.688	0.515	0.626
3/4 - 14		1657007008	5.511		2.913	0.906	0.679	0.689
1 - 11, 1/2		1657008008	6.299		1.752	3.150	1.125	0.843

Packed: 1 pc.  
Available in V coating only.



Work Material																	
List No.	P					M			K	N		S	H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16570	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
SFM	5-35	5-35	5-35	5-20	5-20	5-20	5-20		5-20		5-35		5-10	5-20			

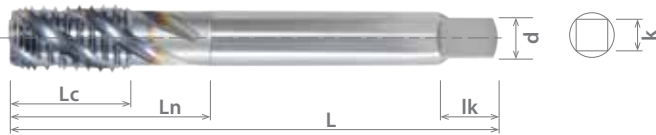
good  best



## List 16575

NEW HSSE V 40°

A-LT-NPT, Long Shank, NPT, Interrupted



Units: Inch

Size	Number of Flutes	EDP Number	Overall Length	Length of Cut	Neck Length	Shank Diameter	Square Width	Square Length		
		NPT								
		V							L	Lc
1/16 - 27	3	1657501008	4.000	0.689	1.614	0.313	0.234	0.374		
		1657502008	6.000		2.402					
1/8 - 27 (Sm. Shk)		1657503008	4.000	1.614						
		1657504008	6.000	2.402						
1/8 - 27 (Lg. Shk)		1657505008	4.000	0.752	1.614	0.438	0.328			
		1657506008	6.000	2.402						
1/4 - 18		4	1657507008	4.000	1.063	1.929	0.563		0.421	0.437
			1657508008	6.000		2.402				
3/8 - 18	1657509008		4.000	1.969	0.700	0.531		0.500		
	1657510008		6.000	2.402						
1/2 - 14	1657511008		4.000	1.374	2.362	0.688	0.515	0.626		
	1657512008		6.000		2.402					
3/4 - 14	1657513008		4.000	2.504	0.906			0.679	0.689	
	1657514008		6.000	2.913						
1 - 11,1/2	1657515008		4.000	1.752	2.504	1.125	0.843	0.811		
	1657516008		6.000		3.150					

Packed: 1 pc.  
Available in V coating only.



Work Material																	
List No.	P					M			K	N		S	H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16575	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
SFM	5-35	5-35	5-35	5-20	5-20	5-20	5-20		5-20		5-35		5-10	5-20			

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## List 16590

NEW	HSSE	V	40°
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A-NPS



Units: Inch

Size	Number of Flutes	EDP Number	Overall Length	Length of Cut	Neck Length	Shank Diameter	Square Width	Square Length
		NPS	L	Lc	Ln	d	k	lk
		V	L	Lc	Ln	d	k	lk
1/16 - 27	3	1659001008	3.543	0.551	1.417	0.313	0.234	0.374
1/8 - 27 (Sm. Shk)		1659002008			1.457			
1/8 - 27 (Lg. Shk)		1659003008						
1/4 - 18	4	1659004008	3.937	0.748	1.929	0.563	0.421	0.437
3/8 - 18		1659005008			1.969			
1/2 - 14		1659006008			2.362			
3/4 - 14		1659007008			2.913			
1 - 11,1/2		1659008008			3.150			

Packed: 1 pc.  
Available in V coating only.



Work Material																			
List No.	P					M			K	N		S	H						
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels					
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16590	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SFM	5-35	5-35	5-35	5-20	5-20	5-20	5-20		5-20		5-35		5-10	5-20					

good  best



## List 16585

A-BSPT, Interrupted Thread

NEW	HSSE	V	40°
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Units: Inch

Size	Number of Flutes	EDP Number	Overall Length	Length of Cut	Neck Length	Shank Diameter	Square Width	Square Length
		NPT						
		V						
1/8 - 28	3	1658501008	3.543	0.591	1.457	0.313	0.234	0.374
1/4 - 19		1658502008	3.937	0.748	1.929	0.563	0.421	0.437
3/8 - 19		1658503008		0.827	1.969	0.700	0.531	0.500
1/2 - 14	4	1658504008	4.921	1.024	2.362	0.688	0.515	0.626
3/4 - 14		1658505008	5.511	1.102	2.913	0.906	0.679	0.689
1 - 11		1658506008	6.299	1.299	3.150	1.125	0.843	0.811

Packed: 1 pc.  
Available in V coating only.



List No.	Work Material																	
	P					M			K	N		S	H					
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16585	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SFM	5-35	5-35	5-35	5-20	5-20	5-20	5-20	5-20		5-35		5-10	5-20					

good  best



# A Brand® A-Pipe

Advanced Performance Pipe Taps

## List 16580

A-BSPP

NEW	HSSE	V	40°
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Units: Inch

Size	Number of Flutes	EDP Number	Overall Length	Length of Cut	Neck Length	Shank Diameter	Square Width	Square Length
		NPT	L	Lc	Ln	d	k	lk
		V						
1/8 - 28	3	1658001008	3.543	0.591	1.457	0.313	0.234	0.374
1/4 - 19		1658002008	3.937	0.748	1.929	0.563	0.421	0.437
3/8 - 19	4	1658003008	4.921	0.827	1.969	0.700	0.531	0.500
1/2 - 14		1658004008		1.024	2.362	0.688	0.515	0.626
3/4 - 14		1658005008		1.102	2.913	0.906	0.679	0.689
1 - 11		1658006008		1.299	3.150	1.125	0.843	0.811

Packed: 1 pc.  
Available in V coating only.



Work Material																	
List No.	P					M			K	N		S	H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
SFM	5-35	5-35	5-35	5-20	5-20	5-20	5-20		5-20		5-35		5-10	5-20			

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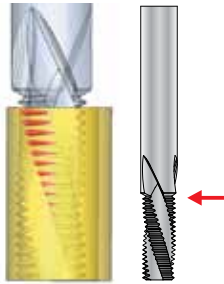


## 1-Pass Cutting

### Left Hand Helix Reduces Deflection for 1-Pass Cutting

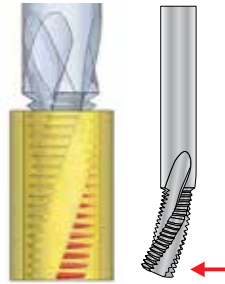
The AT-1 is designed with a left hand helix and starts cutting from the shank side, reducing deflection, preventing bending, thus allowing for 1-pass cutting and reducing overall cutting time.

#### AT-1 Left Hand Helix



Starts cutting from the shank side  
Result: Reduced deflection  
Note: Climb milling recommended

#### Conventional Right Hand Helix



Starts cutting from the tip  
Result: Big deflection

**Unequal Spacing/  
Variable Lead Flute**  
for reduced vibration

**Right-Hand Cut &  
Left-Hand Helix  
Geometry**  
increases tool stability

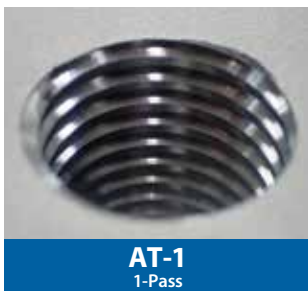
**EgiAs Coating**  
for exceptional wear  
resistance

**Ultra-Fine Grain  
Carbide**  
for high wear resistance and  
toughness

## Superior Internal Threads

### Superior Threads Made in Just 1-Pass

Tool	AT-1 (List 16620)	Conventional
Size	Ø19.7mm • 54mm Length of Cut	
Thread Size	M24 x 3	
Work Material	304 Stainless Steel	
Tapping Depth	45mm (full depth)	
Cutting Speed	131 SFM (646 RPM)	
Feed	5.9 IPM (0.0016 IPT)	
Number of Passes	1	2
Coolant	Water-Soluble	
Machine	Horizontal Machining Center	

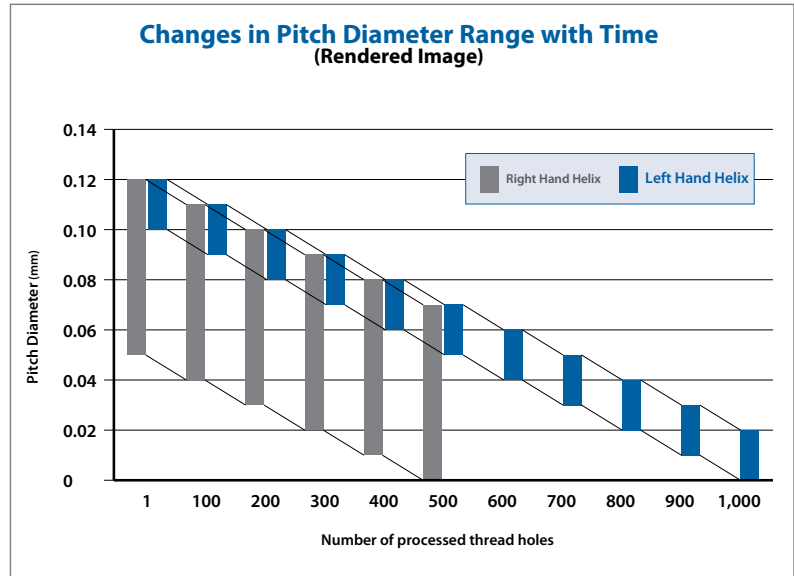


## Effects of Left-Hand Helix

Alloy Steel (4140)

The AT-1 threadmill is designed with a left-hand helix for a small pitch diameter difference between the hole entry and the bottom of the hole, allowing a delay in gauge-out failure. Longer tool life can be achieved with elimination of “zero cutting” for correcting bending.

Tool	AT-1 (List 16620)	Conventional
Size	Ø7.7mm • 22mm Length of Cut	
Thread Size	M10 x 1	
Work Material	4140 Alloy Steel	
Tapping Depth	15mm (Blind)	
Cutting Speed	328 SFM (4,136 RPM)	
Feed	15 IPM (0.0009 IPT)	
Number of Passes	1	
Coolant	Water-Soluble	
Machine	Vertical Machining Center	



### Right & Left-Hand Helix Comparison Internal Thread Pitch Dia. at Initial Cutting Stage

Unit: mm

	Hole Entry	Inner Hole Area	Dia. Difference
Right-Hand Helix	+0.120 ~ +0.140	+0.040 ~ +0.060	0.060 ~ 0.100
Left-Hand Helix	+0.120 ~ +0.140	+0.120 ~ +0.140	0 ~ 0.020

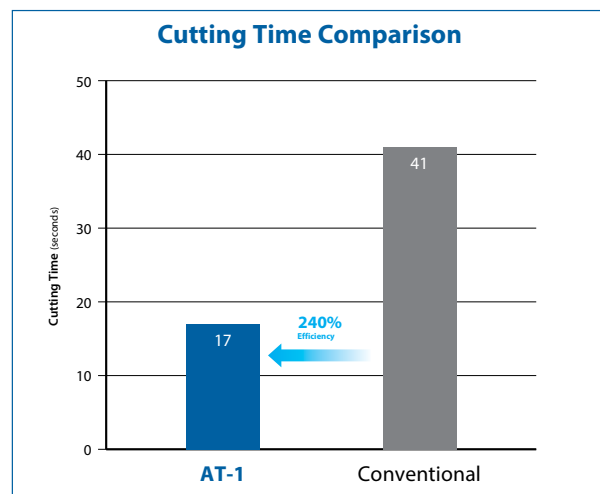
Pitch Diameter Measurement Method: Step Gauge

## Twice as Fast as Conventional Threadmills

304 Stainless Steel

When processing the same number of thread holes, the AT-1 completed the job in less than half the time of the conventional tool.

Tool	AT-1 (List 16620)	Conventional
Size	Ø9.7mm • 27mm Length of Cut	
Thread Size	M12 x 1.5	
Work Material	304 Stainless Steel	
Tapping Depth	22.5 mm (Through Hole)	
Cutting Speed	328 SFM (3,283 RPM)	393 SFM (4,021 RPM)
Feed	0.49 IPM (0.0004 IPT)	1.65 IPM (0.0004 IPT)
Number of Passes	1	2
Coolant	Water-Soluble	
Machine	Vertical Machining Center	

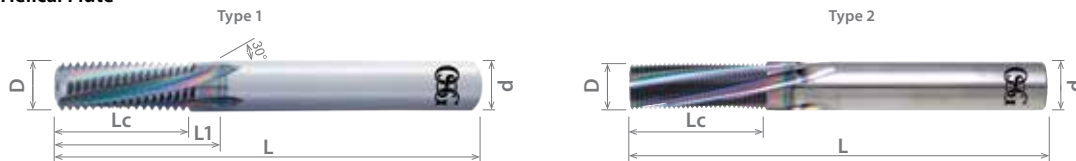




## List 16625

AT-1, Helical Flute

<b>SPEED FEED</b> P21	<b>CARBIDE</b>	<b>EgiAs</b>	<b>11°</b>	<b>SHANK</b> h6
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Units: Inch

Size	Threads Per Inch	Cutter Diameter D	Overall Length L	Length of Cut		Shank Diameter d	No. of Flutes	Type	EDP Number	
				Lc	L1				EgiAs	
1/4	20	0.179	3.000	0.600	0.700	1/4	4	1	1662500017	
	28			0.607	0.680				1662500117	
	32			0.563	0.625				1662500217	
5/16	18	0.224		0.778	0.889				1662500317	
	24			0.750	0.833				1662500417	
	32			0.688	0.750				1662500517	
3/8	16	0.264	3.500	0.875	1.000	5/16	4	1	1662500617	
	24			0.813	0.875				1662500717	
	32			0.875	0.958				1662500817	
7/16	14	0.303		1.071	-				1662500917	
	20			1.000	-				1662501017	
	28			0.964	-				1662501117	
1/2	13	0.343	1.154	1.308	1662501217					
	20		1.100	1.200	1662501317					
	28		1.107	1.178	1662501417					
9/16	12	0.382	5.000	1.333	1.500	1/2	5	1	1662501517	
	18			1.278	1.389				1662501617	
	24			1.250	1.333				1662501717	
5/8	11	0.421		1.454	1.636				1662501817	
	18			1.389	1.500				1662501917	
	24			1.374	1.458				1662502017	
3/4	10	0.461	1.700	1.900	1662502117					
	16		1.626	1.750	1662502217					
	20		1.600	1.700	1662502317					
7/8	9	0.539	5.500	2.000	2.222	5/8	5	1	1662502417	
	14			1.928	2.071				1662502517	
	20			1.850	1.950				1662502617	
1	8	0.736		2.250	2.500				1662502717	
	12			2.167	2.334				1662502817	
	20			2.100	2.200				1662502917	

Packed: 1 pc.  
Available in EgiAs coating only.  
For internal threads only.



For more information on thread mill applications, including ThreadPro software, visit: [www.osgtool.com/ThreadPro](http://www.osgtool.com/ThreadPro).

List No.	Work Material																
	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High	4140 4340		300	400	17-4 PH		6061 7075	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16625	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

good  best



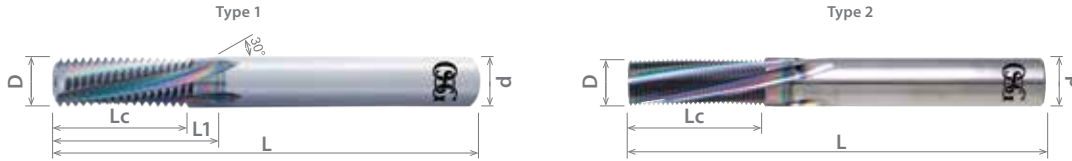
# A Brand® AT-1

Advanced Performance One Pass Thread Mill

## List 16620

AT-1, Helical Flute

SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
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Units: mm

Size	Pitch	Cutter Diameter	Overall Length	Length of Cut	Neck Length	Shank Diameter	No. of Flutes	Type	EDP Number
		D	L	Lc	L1	d			EgiAs
M6	1.00	4.50	75.00	14.00	16.00	6.00	4	1	8331001
	0.75			13.50					8331000
M8	1.25	5.70	75.00	18.75	-	8.00	4	1	8331004
	1.00			18.00	-				8331003
M10	1.50	7.70	85.00	24.00	-	10.00	5	2	8331007
	1.25			22.50	-				8331006
	1.00			22.00	-				8331005
M12	1.75	9.70	100.00	28.00	-	12.00	5	2	8331011
	1.50			27.00	-				8331010
	1.25			27.50	-				8331009
	1.00			26.00	-				8331008
M14	2.00	9.70	100.00	32.00	-	16.00	5	1	8331016
	1.50	10.70	120.00	31.50	34.50				8331015
M16	2.00	11.70	135.00	36.00	-	16.00	5	2	8331019
	1.50	13.70		39.00	-				8331018
M18	2.50	11.70	120.00	42.50	-	12.00	5	2	8331020
	2.50	13.70	135.00	45.00	50.00	16.00			1
M20	1.50	15.70	135.00	43.50	-	16.00	6	2	8331021
	3.00	19.70		54.00	-				8331025
M24	2.00	19.70	150.00	52.00	-	20.00	6	2	8331024

Packed: 1 pc.  
Available in EgiAs coating only.  
For internal threads only.



For more information on thread mill applications, including ThreadPro software, visit: [www.osgtool.com/ThreadPro](http://www.osgtool.com/ThreadPro).

List No.	Work Material																
	P				M			K	N		S		H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High	4140 4340			300	400		17-4 PH		6061 7075	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16620	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

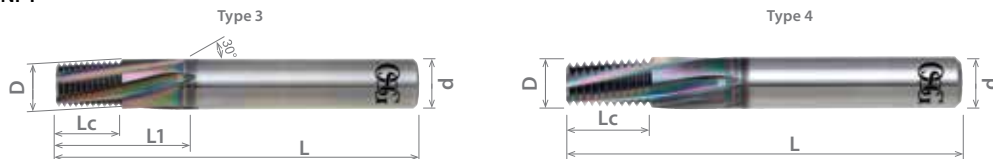
good  best



## List 16630

AT-1, NPT

SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
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Units: Inch

Size	Threads Per Inch	Cutter Diameter	Overall Length	Length of Cut		Shank Diameter	No. of Flutes	Type	EDP Number
		D	L	Lc	L1	d			EgiAs
1/16 or 1/8 1/8	27	0.223	3.000	0.407	0.480	1/4	4	3	1663000017
		0.302			-	5/16			4
1/4 or 3/8 3/8	18	0.381	3.500	0.611	0.720	1/2	5	3	1663000217
		0.461							-
1/2 or 3/4 1 thru 2	14 11-1/2	0.617	4.000	0.786	-	5/8	6	4	1663000417
		0.737							0.957

Packed: 1 pc.  
Available in EgiAs coating only.  
For internal and external threads.



For more information on thread mill applications, including ThreadPro software, visit: [www.osgtool.com/ThreadPro](http://www.osgtool.com/ThreadPro).



List No.	Work Material																	
	P				M			K	N		S		H					
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High															
	1010	1035	1065	4140					6061	Casting	Inconel	6Al4V	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC		
	1018	1045	1065	4340			17-4 PH		7075			(30 HRC)						
16630	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

good  best



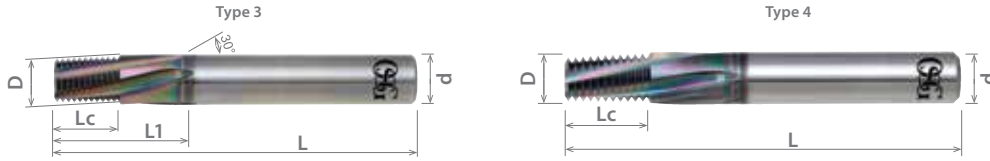
# A Brand® AT-1

Advanced Performance One Pass Thread Mill

## List 16631

AT-1, NPTF

SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
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Units: Inch

Size	Threads Per Inch	Cutter Diameter	Overall Length	Length of Cut	Neck Length	Shank Diameter	No. of Flutes	Type	EDP Number
		D	L	Lc	L1	d			EgiAs
1/16 or 1/8 1/8	27	0.223	3.000	0.407	0.480	1/4	4	3	1663100017
		0.302			-	5/16			4
1/4 or 3/8 3/8	18	0.381	3.500	0.611	0.720	1/2	5	3	1663100217
		0.459							1663100317
1/2 or 3/4 1 thru 2	14 11-1/2	0.617	4.000	0.786	-	5/8	6	4	1663100417
		0.737							1663100517

Packed: 1 pc.  
Available in EgiAs coating only.  
For internal and external threads.



For more information on thread mill applications, including ThreadPro software, visit: [www.osgtool.com/ThreadPro](http://www.osgtool.com/ThreadPro).



List No.	Work Material																	
	P				M			K	N		S		H					
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High															
	1010	1035	1065	4140														
	1018	1045		4340	300	400	17-4 PH		6061	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC		
16631	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

good  best



## List 16620/16625 - A Brand® AT-1: Inch/Metric

## List 16630/16631 - A Brand® AT-1: NPT/NPTF

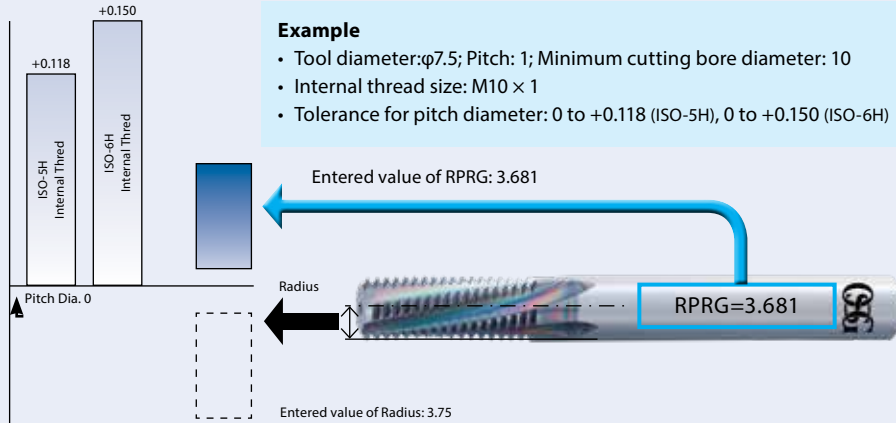
Work Material		Cutting Speed SFM	Feed Rate (in/t)
Low Carbon Steel	~C0.25%	260 - 790	0.0004 - 0.002
Medium Carbon Steel	C0.25%~0.45%	260 - 790	0.0004 - 0.002
High Carbon Steel	C0.45%~	260 - 790	0.0004 - 0.002
Alloy Steel	SCM	200 - 650	0.0004 - 0.002
Hardened Steel	25-45 HRC	260 - 650	0.0004 - 0.002
	45-55 HRC	-	-
	50-60 HRC	-	-
Stainless Steel	SUS	200 - 790	0.0004 - 0.002
Tool Steel	SKD	-	-
Cast Steel	SC	200 - 790	0.0004 - 0.002
Cast Iron	FC	260 - 790	0.0004 - 0.002
Ductile Cast Iron	FCD	200 - 790	0.0004 - 0.002
Copper	Cu	260 - 790	0.001 - 0.004
Brass	Bs	260 - 790	0.001 - 0.004
Brass Casting	BsC	260 - 790	0.001 - 0.004
Bronze	PB	260 - 790	0.001 - 0.004
Aluminum	Al	260 - 790	0.001 - 0.004
Aluminum Alloy Casting	AD, ADC	330 - 1000	0.002 - 0.008
Magnesium Alloy Casting	MC	330 - 1000	0.002 - 0.008
Zinc Alloy Casting	ZDC	330 - 1000	0.002 - 0.008
Titanium Alloy	Ti-6Al-4V	-	-
Nickel Alloy	Inconel	-	-
Thermosetting Plastic	-	260 - 650	0.001 - 0.004
Thermo Plastic	-	260 - 650	0.001 - 0.004

1. The indicated speeds and feeds are for water-soluble coolant.
2. Water-soluble coolant is not suitable for threading magnesium alloy.
3. Please adjust the cutting conditions depending on the rigidity of the machine, tool holders, and workpiece clamping.
4. If the threading length is long, or when machining a large-pitch thread, reduce the feed rate and take multiple passes.
5. If a machined parallel internal thread is tapered and prevents the go-gauge from going through, add a zero cut/spring pass.

## Radius Offset (RPRG)

### RPRG is the reference value of tool radius offset.

Conventionally, the tool radius was entered during setup as a parameter of the NC system, which was corrected by checking the thread with a gauge. However, it has become possible to reduce the checking and correction simply by entering the RPRG value indicated on the tool shank.



#### NOTES:

1. RPRG are reference values. Determine optimal values after trial cutting as values depend on machining environment.
2. RPRG values are optimally established to achieve ISO:5H (formerly Grade 1) internal thread limits for metric threads and ANSI:3B internal thread limits for unified threads. RPRG values established for taper pipes (R/Rc) are effective when using the thread milling NC code generator software ThreadPro available on our website.
3. For diameters of thread mills, RPRG values are calculated based on the minimum cutting bore diameter (the minimum cutting internal thread size of the tool diameter). To cut other diameters, it is necessary to use a smaller value than RPRG.

## ThreadPro (Thread Milling NC Code Generator Software)

[www.osgtool.com/threadpro](http://www.osgtool.com/threadpro)



- Available in 12 different languages
- Supports 8 NC programming languages
- Incorporates RPRG\* value to further simplify process

\* RPRG = reference value of tool radius offset



**ThreadPro**

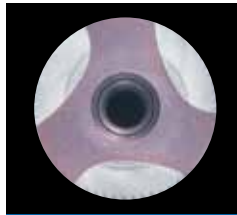
Powered by  
**AUTODESK**

## Larger Coolant Hole

1.3 Times More Coolant Flow



Conventional

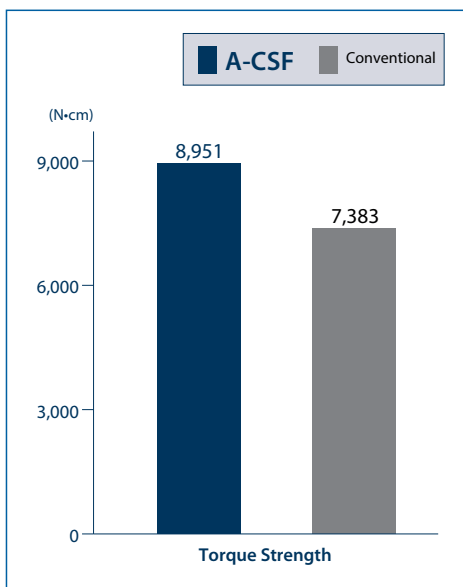


A-CSF

## Ideal for Cast Iron

Rigid Design Prevents Tool Breakage

Tool	A-CSF
Size	M10 x 1.5
Drill Hole Size	Ø 8.5 x 20mm (Blind)
Work Material	Pearlitic Cast Iron
Tapping Depth	15mm (1.5xD)
Cutting Speed	40 SFM (640 RPM)
Coolant	Water-Soluble (Internal)
Machine	Vertical Machining Center (Synchronized)



\*Cutting Torque 650N-cm

**Larger Oil Hole Design**  
for excellent coolant flow

**Bright**  
for greater performance in non-ferrous materials.

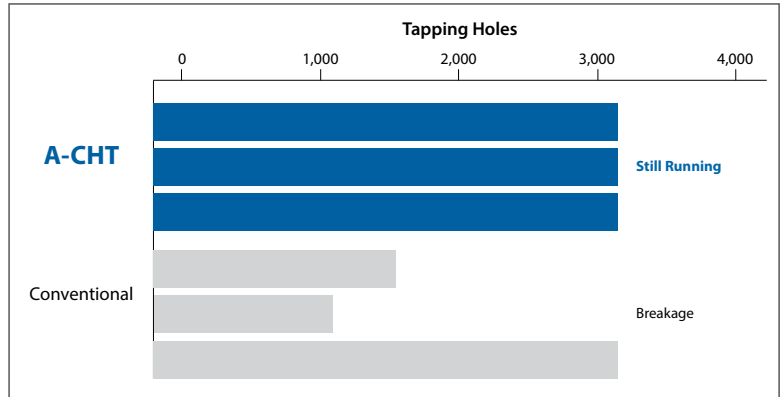
**Ultra-Fine Grain Carbide**  
for high wear resistance and toughness



## Stable and Consistent Performance

### Stable Machining in Ductile Cast Iron

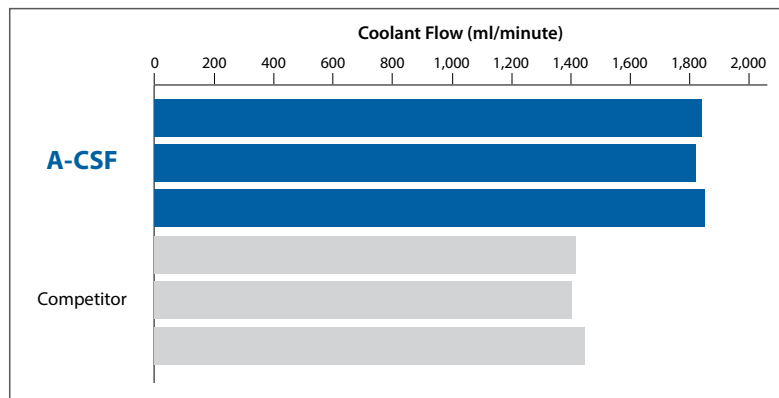
Tool	A-CHT	Conventional
Size	ØM6 x 1	
Drill Hole Size	Ø5mm x 15mm (Blind)	
Work Material	Ductile Cast Iron	
Tapping Depth	12mm (2xD)	
Cutting Speed	100 SFM (1,600 RPM)	
Coolant	Water Soluble Chlorine-Free (10%) (Internal)	
Machine	Horizontal Machining Center (Synchronized)	



## Exceptional Coolant Flow

### Coolant Flow Amount by Time

Tool	A-CSF	Competitor
Size	ØM6 x 1	
Spindle Speed	61 SFM (1,000 RPM)	
Coolant	Water Soluble Chlorine-Free (10%)	
Coolant Pressure	1 MPa	
Time Run	60 Seconds	



A-CSF



Competitor

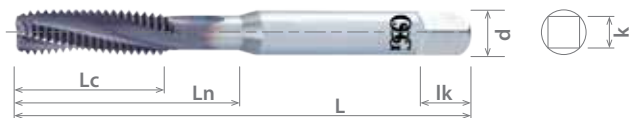




## List 16605



A-CSF, Coolant - Through, DIN Overall Length, Modified Bottom (2.5P), Bottom (1.5P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number		DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Bottom (1.5P)	Mod Bottom (2.5P)						
			Bright	Bright						
1/4 - 20 UNC	H5	3	1660500100	1660500000	3.140	0.598	1.181	0.255	0.191	0.313
1/4 - 28 UNF	H4		1660500300	1660500200						
5/16 - 18 UNC	H5		1660500500	1660500400	3.540	0.665	1.377	0.318	0.238	0.375
3/8 - 16 UNC			1660500700	1660500600	3.930	0.751		0.381	0.286	0.438
7/16 - 14 UNC			1660500900	1660500800		0.858	-	0.322	0.242	0.406
1/2 - 13 UNC			1660501100	1660501000	4.330	0.921	-	0.367	0.275	0.438

Packed: 1 pc.

EDP's listed above are stocked standard, other coatings available upon request.

Specify treatment at time of order.

Note: Reduce SFM 50% - 70% while using external coolant.



Work Material																		
List No.	P					M			K	N		S		H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16605									☐	☐	☐							
SFM									15-50	30-330	30-330							

☐ good ☐ best



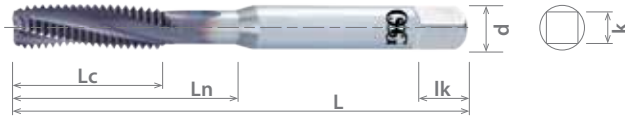
# A Brand® A-CSF & A-CHT

Advanced Performance Carbide Coolant-Through Taps for Cast Iron and Aluminum Alloy



## List 16600

A-CSF, Coolant - Through, DIN Overall Length, Modified Bottom (2.5P), Bottom (1.5P)



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number		DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Bottom (1.5P)	Mod Bottom (2.5P)						
			Bright	Bright						
M5 x 0.8	D4	3	1660000000	1660000100	70.00	10.00	25.00	4.928	3.86	6.4
M6 x 1.0	D5		1660000200	1660000300	80.00	12.00	31.00	6.477	4.85	7.9
M8 x 1.25			1660000400	1660000500	90.00	15.00	35.00	8.077	6.05	9.5
M10 x 1.5	D6		1660000600	1660000700	100.00	18.00	39.00	9.677	7.26	11.1
M10 x 1.25	D5		1660000800	1660000900						
M12 x 1.75	D6		1660001000	1660001100						

Packed: 1 pc.

EDP's listed above are stocked standard, other coatings available upon request.

Specify treatment at time of order.

Note: Reduce SFM 50% - 70% while using external coolant.



### Work Material

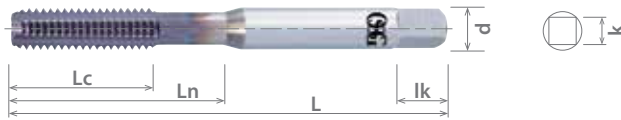
List No.	P				Die Steels	M			K Cast Iron	N		S		H					
	Carbon Steels			Alloy Steels		Stainless Steels				Aluminum		Nickel Alloy	Titanium	Hardened Steels					
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16600	1010	1035	1065	4140															
SFM	1018	1045		4340					15-50	30-330	30-330								

good  best



## List 16615

A-CHT, Coolant-Through, DIN Overall Length, Bottom (1.5P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length			
			Bottom (1.5P)									
			Bright	L	Lc	Ln	d	k	lk			
12 - 24 UNC	H3	3	1661500200	3.150	0.500	0.945	0.220	0.165	0.281			
12 - 28 UNF			1661500300									
1/4 - 20 UNC			H5		1661500400							
1/4 - 28 UNF	H4	4	1661500500	3.543	0.665	1.181	0.255	0.191	0.313			
5/16 - 18 UNC	H5		1661500600									
5/16 - 24 UNF	H4		1661500700									
3/8 - 16 UNC	H5		1661500800	3.937	0.752	1.378	0.318	0.238	0.375			
3/8 - 24 UNF	H4		1661500900	3.543								
7/16 - 14 UNC	H5			1661501000	3.937	0.858	0.323	0.242	0.406			
7/16 - 20 UNF				1661501100								
1/2 - 13 UNC		1661501200		4.331	0.921	-				0.367	0.275	0.438
1/2 - 20 UNF		1661501300		3.937								

Packed: 1 pc.  
 EDP's listed above are stocked standard, other coatings available upon request.  
 Specify treatment at time of order.  
 Note: Reduce SFM 50% - 70% while using external coolant.



Work Material																		
List No.	P					M			K	N		S	H					
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16615									☐	☐	☐							
SFM									15-50	30-330	30-330							

☐ good ☐ best

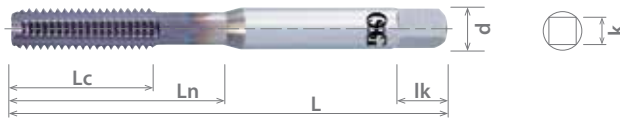


# A Brand® A-CSF & A-CHT

Advanced Performance Carbide Coolant-Through Taps for Cast Iron and Aluminum Alloy

## List 16610

A-CHT, Coolant-Through, DIN Overall Length, Bottom (1.5P)



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Bottom (1.5P)						
			Bright						
M5 x 0.8	D4	3	1661000000	70.00	10.00	25.00	4.93	3.86	6.35
M6 x 1.0			1661000100	80.00	12.00	31.00	6.48	4.85	7.92
M8 x 1.25	D5	4	1661000200	90.00	15.00	35.00	8.08	6.05	9.52
M10 x 1.5			1661000300	100.00	18.00	39.00	9.68	7.26	11.11
M10 x 1.25			1661000400						
M12 x 1.75	D6	4	1661000500	110.00	21.00	-	9.32	6.98	
M12 x 1.5			1661000600						
M12 x 1.25			1661000700						

Packed: 1 pc.

EDP's listed above are stocked standard, other coatings available upon request.

Specify treatment at time of order.

Note: Reduce SFM 50% - 70% while using external coolant.



Work Material																	
List No.	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061	Casting			~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16610	1010	1035	1065	4140													
SFM	1018	1045		4340				15-50	30-330	30-330							

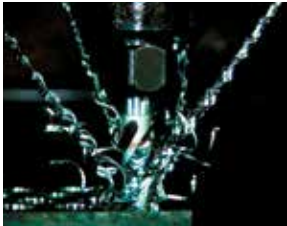
good  best



## Chip Evacuation

### Excellent Chip Evacuation in Various Materials

Most tapping troubles are caused by unstable chip evacuation. The A-Tap series resolves such troubles and is applicable to a wide range of work materials and cutting conditions.



Conventional Tap



A-SFT

## Superior Threads

### No Galling of the Work Material



Mild Steel



Stainless Steel

### Sharp Cutting Edge

stabilizes chip shape

### Variable Lead Flute

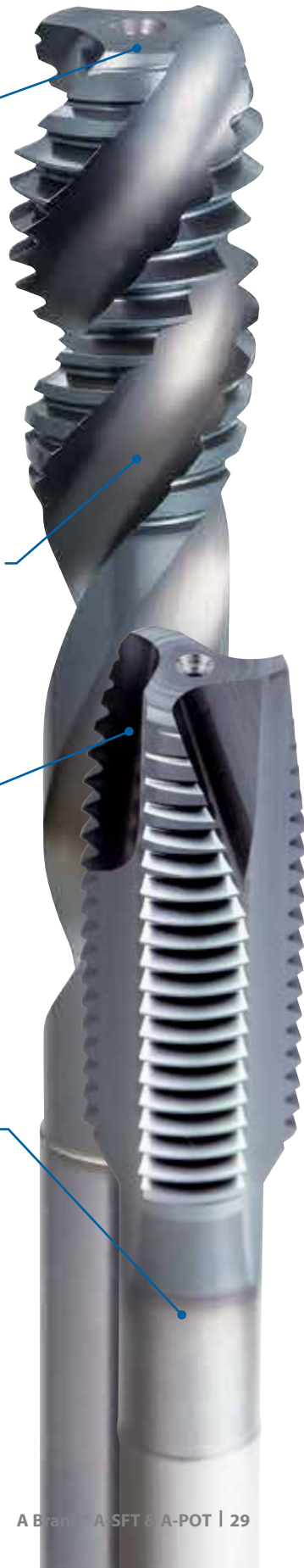
accelerates chip evacuation

### V Coating

for high wear resistance

### Powder Metallurgy HSS

for high wear resistance and toughness

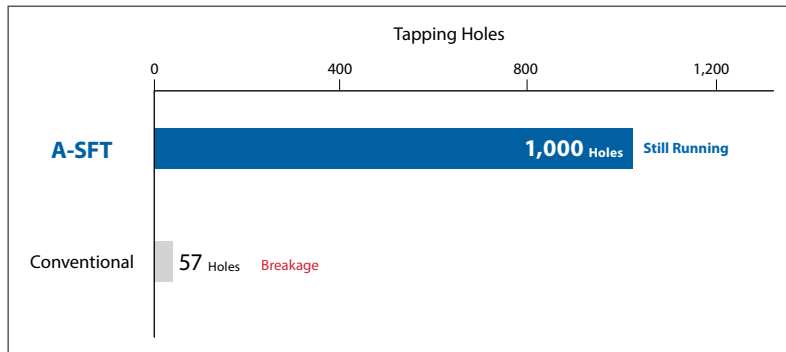


## Deep Hole Tapping in Stainless Steel

### 304 Stainless Steel

The A-SFT is capable of achieving superior results in stainless steel with water-soluble coolant. Capable of continuing after 1,000 holes while the competitor tool broke after tapping just 57 holes.

Tool	A-SFT	Conventional
Drill Size	ØM8 x 1.25 (2.5P Chamfer)	
Work Material	304 Stainless Steel	
Pre-Drilled Hole	Ø6.8mm x 22mm (Blind)	
Tapping Depth	16mm (2D)	
Cutting Speed	33 SFM (398 RPM)	
Coolant	Water-soluble Chlorine-Free (10%)	
Machine	Vertical Machining Center (Synchronized)	



Cutting Edge after Tapping 1,000 Holes

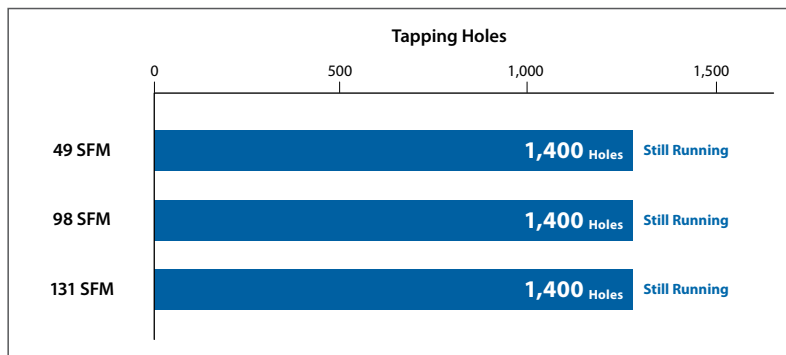


## Cutting Speed and Performance Stability

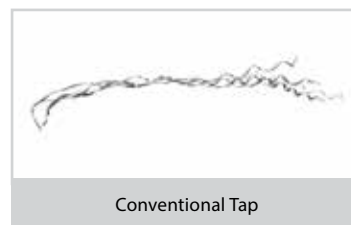
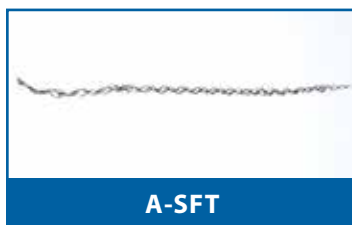
### 1045 Carbon Steel

The A-SFT maintained stable cutting when tapping at 49, 98 and 131 SFM in carbon steel.

Tool	A-SFT	Conventional
Drill Size	ØM8 x 1.25 (2.5P Chamfer)	
Work Material	304 Stainless Steel	
Pre-Drilled Hole	Ø6.8mm x 22mm (Blind)	
Tapping Depth	16mm (2D)	
Cutting Speed	33 SFM (398 RPM)	
Coolant	Water-soluble Chlorine-Free (10%)	
Machine	Vertical Machining Center (Synchronized)	



Chips Generated at 131 SFM



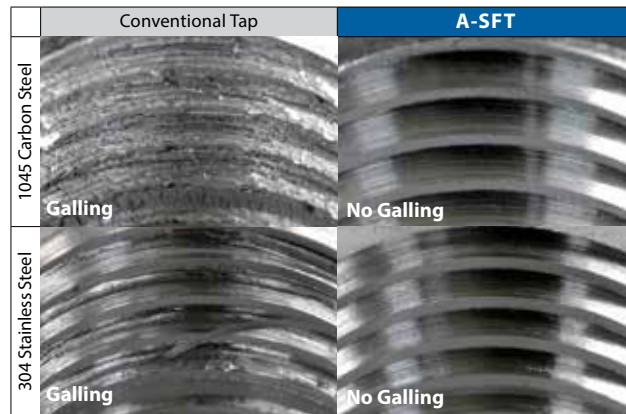
## Large Hole Threading

### 1045 Carbon Steel and 304 Stainless Steel

The use of water-soluble coolant is possible even in difficult to machine materials such as carbon steels and stainless steels, which could not be achieved with conventional taps.

Tool	A-SFT	Conventional
Drill Size	ØM36 x 4	
Work Material	1045 Carbon Steel 304 Stainless Steel	
Pre-Drilled Hole	Ø32mm x 70mm (Blind)	
Tapping Depth	54mm (1.5D)	
Cutting Speed	23 SFM (62 RPM)	
Coolant	Water-soluble Chlorine-Free (20%)	
Machine	Horizontal Machining Center	

**Visual Reference of Internal Threads.**  
(Results may vary based on machining conditions.)

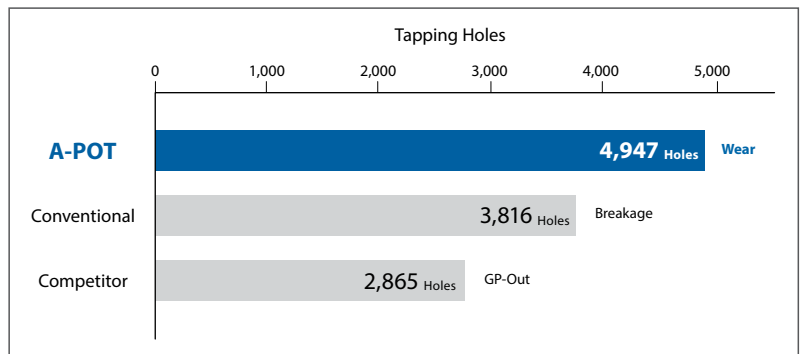


## Maximize the Performance of Your Machine

### Carbon Steel (1045)

The A-POT greatly outperformed the competitor and conventional taps.

Tool	A-POT	Conventional	Competitor
Drill Size	ØM8 x 1.25		
Work Material	1050 Steel		
Pre-Drilled Hole	Ø6.8mm x 16mm (Through)		
Tapping Depth	16mm (2D)		
Cutting Speed	98 SFM (1,190 RPM)		
Coolant	Water-soluble Chlorine-Free (10%)		
Machine	Horizontal Machining Center (Synchronized)		

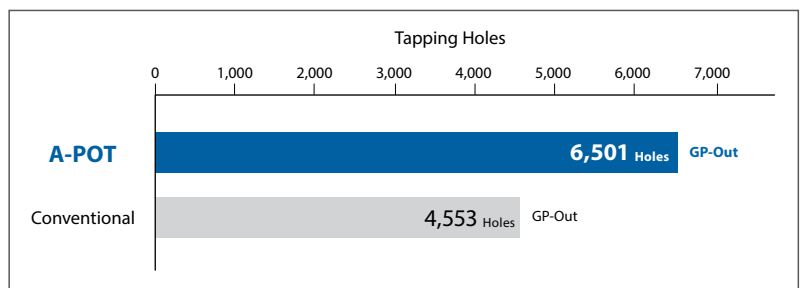


## High Speed Machining

### Carbon Steel (1045)

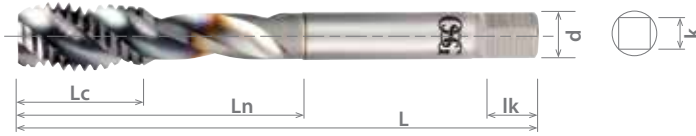
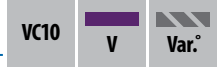
The A-POT achieved 1.5 times the durability compared to conventional taps.

Tool	A-POT	Conventional
Drill Size	ØM8 x 1.25	
Work Material	1045 Steel	
Pre-Drilled Hole	Ø6.8mm x 16mm (Through)	
Tapping Depth	16mm (2D)	
Cutting Speed	164 SFM (1,990 RPM)	
Coolant	Water-soluble Chlorine-Free (10%)	
Machine	Vertical Machining Center (Synchronized)	



## List 16505

A-SFT, DIN Overall Length, Modified Bottom (2P-3P), Bottom (1.5P-2P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number		DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length				
			Bottom (1.5P)	Mod Bottom (2.5P)										
			V	V										
					L	Lc	Ln	d	k	lk				
4 - 40 UNC	H2	2	1650508908	1650500108	2.205	0.196	0.704	0.141	0.110	0.188				
4 - 48 UNF			1650509008	1650500208										
5 - 40 UNC			1650509108	1650500308										
5 - 44 UNF			1650509208	1650500408										
6 - 32 UNC	H3	3	1650509308	1650513108		2.480	0.200				0.708	0.168	0.131	0.250
			1650509408	-										
			-	1650500608										
6 - 40 UNF	H2	2	1650513208	1650500508			-				0.248			
			1650509508	-										
8 - 32 UNC	H3	3	1650509608	-	2.756	0.251	0.826	0.194	0.152	0.281				
			1650509708	-										
			-	1650500908										
8 - 36 UNF	H2	2	1650509808	-		-	0.326				0.976			
			-	1650501008										
10 - 24 UNC	H3	3	1650509908	-	3.150	0.326	1.059				0.220	0.165	0.281	
			-	1650501108										
			1650510008	-										
10 - 32 UNF	H2	2	1650510108	-		-	0.330	0.976						
			-	1650501308										
12 - 24 UNC	H3	3	1650510208	-	3.543	0.397	1.177	0.310	0.286	0.438				
			-	1650501408										
			1650510308	-										
12 - 28 UNF	H2	2	1650510308	-		-	0.444				1.377			
			-	1650501508										
12 - 32 UNEF	H3	3	1650510408	-	3.937	0.500	1.535				0.323	0.242	0.406	
			1650510608	-										
			1650510708	-										
1/4 - 20 UNC	H5	2	-	1650501708		-	0.397	0.255						
			-	1650501608										
1/4 - 28 UNF	H3	3	1650510908	-	3.543	0.444	1.377	0.310	0.286	0.438				
			1650510808	-										
			-	1650501908										
1/4 - 32 UNEF	H4	2	-	1650501808		-	0.397				0.255			
			1650510508	1650505708										
5/16 - 18 UNC	H3	3	1650511008	-	3.150	0.444	1.377				0.310	0.286	0.438	
			1650511108	1650502108										
			1650511208	1650502008										
5/16 - 24 UNF	H5	2	1650511308	1650502308		-	0.500	1.377						
			1650511408	1650502208										
5/16 - 32 UNEF	H3	3	1650511508	1650505808	3.937	0.500	1.535	0.310	0.286	0.438				
			1650511608	1650502508										
			1650511708	1650502408										
3/8 - 16 UNC	H3	2	1650511808	1650502708		-	0.570				1.712			
			1650511908	1650502608										
3/8 - 24 UNF	H4	3	1650512008	-	3.543	0.570	1.712				0.323	0.242	0.406	
			-	1650505908										
			1650512108	1650502908										
3/8 - 32 UNEF	H3	2	1650512208	1650502808		-	0.570	1.712						
			1650512308	1650503108										
7/16 - 14 UNC	H5	3	1650512408	1650503008	3.543	0.570	1.712	0.323	0.242	0.406				
			1650512508	1650506008										
			1650512308	1650503108										
7/16 - 20 UNF	H3	2	1650512408	1650503008		-	0.570				1.712			
			1650512508	1650506008										
7/16 - 28 UNEF	H4	3	1650512508	1650506008	-	0.570	1.712				0.323	0.242	0.406	

Packed: 1 pc.  
Available V coating only.





## List 16505 (Continued)



A-SFT, DIN Overall Length, Modified Bottom (2P-3P), Bottom (1.5P-2P)

Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number		DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Bottom (1.5P)	Mod Bottom (2.5P)						
			V	V						
1/2 - 13 UNC	H3	3	1650512608	1650503308	4.331	0.614	1.933	0.367	0.275	0.438
	H5		1650512708	1650503208						
1/2 - 20 UNF	H3		1650512808	1650503508	3.937					
	H5		1650512908	1650503408						
1/2 - 28 UNEF	H4		1650513008	1650506108	4.331					
9/16 - 12 UNC	H3		-	1650503708						
	H5		-	1650503608						
9/16 - 18 UNF	H3		-	1650503908	3.937					
	H5		-	1650503808						
9/16 - 24 UNEF	H4		-	1650506208	4.331					
5/8-11 UNC	H3		-	1650504108						
	H5		-	1650504008						
5/8 - 18 UNF	H3		-	1650504308	3.937					
	H5		-	1650504208						
5/8 - 24 UNEF	H4		-	1650506308	4.331					
11/16 - 24 UNEF	H3		-	1650506408						
	H5		-	1650504508						
3/4 - 10 UNC	H3		-	1650504408	4.331					
	H5		-	1650504708						
3/4 - 16 UNF	H3		-	1650504608	4.921					
	H5		-	1650506508						
3/4 - 20 UNEF	H4		-	1650506608	5.512					
13/16 - 20 UNEF	H3		-	1650504908						
	H5		-	1650504808						
7/8 - 9 UNC	H4		-	1650505108	4.921					
	H6		-	1650505008						
7/8 - 14 UNF	H4		-	1650506708	5.512					
	H6		-	1650506808						
7/8 - 20 UNEF	H4	-	1650505308	6.299						
	H6	-	1650505208							
15/16 - 20 UNEF	H8	-	1650507008	5.512						
	H6	-	1650505408							
1 - 8 UNC	H4	-	1650505508	5.512						
	H6	-	1650513308							
1 - 12 UNF	H4	-	1650506908	7.087						
	H6	-	1650507108							
1 - 14 UNS	H5	-	1650507208	5.906						
	H6	-	1650507308							
1 - 20 UNEF	H9	-	1650507408	7.087						
	H8	-	1650507508							
1,1/8 - 7 UNC	H10	-	1650507608	5.906						
	H8	-	1650507708							
1,1/8 - 8 UN	H9	-	1650507808	7.874						
	H10	-	1650507908							
1,1/8 - 12 UNF	H8	-	1650508008	6.693						
	H9	-	1650508108							
1,1/4 - 7 UNC	H8	-	1650508208	7.874						
	H9	-	1650508308							
1,1/4 - 8 UN	H8	-	1650508408	8.661						
	H9	-	1650508508							
1,1/4 - 12 UNF	H8	-	1650508608	8.858						
	H9	-	1650508708							
1,3/8 - 6 UNC	H10	-	1650508808	9.843						
	H9	-	-							
1,3/8 - 8 UN	H8	-	-	8.858						
	H9	-	-							
1,3/8 - 12 UNF	H8	-	-	0.826						
	H9	-	-							
1,1/2 - 6 UNC	H10	-	-	1.299						
	H8	-	-							
1,1/2 - 8 UN	H10	-	-	0.826						
	H8	-	-							
1,1/2 - 12 UNF	H8	-	-	1.299						
	H9	-	-							
1,5/8 - 8 UN	H10	-	-	0.826						
	H11	-	-							
1,3/4 - 5 UNC	H10	-	-	1.299						
	H11	-	-							
1,3/4 - 8 UN	H10	-	-	0.826						
	H12	-	-							
1,7/8 - 8 UN	H10	-	-	1.456						
	H12	-	-							
2 - 4,1/2 UNC	H10	-	-	0.826						
	H12	-	-							
2 - 8 UN	H10	-	-	4.803						
	H12	-	-							

Packed: 1 pc.  
Available V coating only.



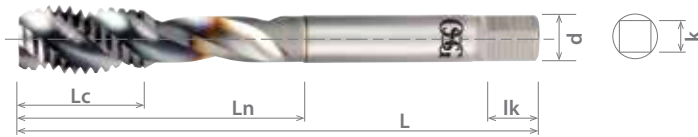
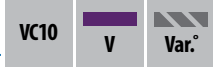
List No.	Work Material																	
	P					M			K	N		S		H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High	4140 4340	300	400	17-4 PH	6061 7075		Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC		
16505	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>				
SFM	80-120	80-120	80-120	35-50	20-40	15-35	15-35	15-25	50-80	70-120	70-120			30-55				

good  best



## List 16500

A-SFT, DIN Overall Length, Modified Bottom (2P-3P), Bottom (1.5P-2P)



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number		DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Bottom (1.5P)	Mod Bottom (2.5P)						
			V	V						
M1.4 x 0.3	D2	2	-	1650003008	40.00	6.00	11.50	3.581	2.79	4.80
M1.6 x 0.35	D3		-	1650003108		7.00	13.60			
M1.7 x 0.35			-	1650003208		8.00	13.40			
M2 x 0.4	D2		-	1650003408	45.00	3.30	10.00			
M2 x 0.25			-	1650003308			11.00			
M2.2 x 0.45	D3		-	1650003608		50.00	3.70			
M2.2 x 0.25	D2		-	1650003508	11.90					
M2.3 x 0.4	D3		-	1650003708	50.00	3.70	13.00			
M2.5 x 0.45			-	1650003908			13.00			
M2.5 x 0.35			-	1650003808			13.00			
M2.6 x 0.45			-	1650004008			13.00			
M3 x 0.5			-	1650004008			13.00			
M3 x 0.35	D2		1650009808	1650000108	56.00	4.00	18.00			
M3.5 x 0.6	D3		1650009708	-						
		-	1650004108	4.80				20.00		
M3.5 x 0.35	D4	1650010008	1650004308	70.00	6.10	24.90				
M4 x 0.7		1650009908	1650004208				4.928	3.86	6.40	
M4 x 0.5	D3	1650010208	1650000308	80.00	8.00	29.90				
M4.5 x 0.75	D4	1650010108	1650000208				30.00			
M4.5 x 0.5	D3	1650010408	1650004508	90.00	10.00	35.00				
M5 x 0.8	D4	1650010308	1650004408				8.077	6.05	9.50	
M5 x 0.5	D3	1650010608	1650000508	80.00	8.00	33.00				
M5.5 x 0.5	D3	1650010508	1650000408				7.30	30.10	5.588	4.19
M6 x 1.0	D5	1650010708	1650004608	90.00	10.00	35.00				
M6 x 0.75	D4	1650011008	1650000808				6.477	4.85	7.90	
M6 x 0.5	D3	1650010908	1650000708	80.00	8.00	30.00				
M7 x 1.0	D5	1650010808	1650000608				8.077	6.05	9.50	
M7 x 0.75	D4	1650011208	1650004808	90.00	10.00	35.00				
M8 x 1.25	D5	1650011108	1650004708				9.677	7.26	11.10	
M8 x 1.0	D4	1650011508	1650001008	100.00	12.00	39.00				
M8 x 0.75	D4	1650011408	1650000908				90.00	10.00	35.00	
M9 x 1.25	D5	1650011308	1650004908	90.00	8.00	35.00				
M9 x 1.0	D5	1650011808	1650005208				10.00	35.00	11.10	
M9 x 0.75	D4	1650011708	1650005108	100.00	12.00	39.00				
M10 x 1.5	D6	1650011608	1650005008				90.00	10.00	35.00	
M10 x 1.25	D5	1650012208	1650001308	100.00	12.00	39.00				
M10 x 1.0	D5	1650012108	1650001208				90.00	10.00	35.00	
M10 X 0.75	D4	1650012008	1650001108	100.00	12.00	39.00				
M11 x 1.5	D6	1650011908	1650005308				100.00	12.00	43.50	8.204
M11 x 1.25	D5	1650012608	1650005608	90.00	8.00	49.10				
M11 X 1.0	D5	1650012508	-				110.00	14.00	9.322	6.98
M11 x 0.75	D4	1650012408	1650005508	100.00	12.00	49.10				
M12 x 1.75	D6	1650012308	1650005408				100.00	12.00	10.897	8.18
M12 x 1.5		1650013008	1650001708	100.00	12.00	50.10	10.897	8.18	12.70	
M12 x 1.25	1650012908	1650001608								
M12 x 1.0	D5	1650012808	1650001508	100.00	12.00	50.10				
M14 x 2.0	D7	1650012708	1650001408				110.00	16.00	12.70	
M14 x 1.5	D6	-	1650001908	100.00	12.00	54.00				
M14 x 1.25	D6	-	1650001808				110.00	16.00	14.30	
M14 x 1.0	D5	-	1650005708	100.00	12.00	54.00				
M15 x 1.25	D6	-	1650013208				110.00	16.00	14.30	
M15 X 1.5	D7	-	1650006008	100.00	12.00	54.00				
M15 x 2		-	1650013108				110.00	16.00	14.30	
M15 x 1.0	D5	-	1650005908	100.00	12.00	54.00				
M16 x 2.0	D7	-	1650002108				110.00	16.00	14.30	
M16 x 1.25	D6	-	1650013308	100.00	12.00	54.00				
M16 x 1.5		-	1650002008				110.00	16.00	14.30	
M16 x 1.0		D5	-				1650006108	110.00	12.00	14.30

Packed: 1 pc.  
Available V coating only.



## List 16500 (Continued)



A-SFT, DIN Overall Length, Modified Bottom (2P-3P), Bottom (1.5P-2P)

Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number		DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Bottom (1.5P)	Mod Bottom (2.5P)						
			V	V						
M17 x 1.5	D6	4	-	1650006208	100.00	16.00	55.00	13.767	10.31	15.90
M17 x 1.25			-	1650013408		12.00				
M17 x 1.0			-	1650006308		12.00				
M18 x 2.5	D7	4	-	1650002308	125.00	25.00	61.80	16.561	12.42	17.50
M18 x 2.0			-	1650006508		25.00				
M18 x 1.5			-	1650002208		25.00				
M18 x 1.25	D6	4	-	1650013508	110.00	16.00	67.40	17.704	13.28	19.10
M18 x 1.0			-	1650006408		16.00				
M20 x 2.5			-	1650002508		16.00				
M20 x 2.0	D7	4	-	1650006708	140.00	25.00	68.40	19.304	14.48	22.20
M20 x 1.5			-	1650002408		25.00				
M20 x 1.0			-	1650006608		25.00				
M22 x 2.5	D7	4	-	1650002708	140.00	25.00	68.40	19.304	14.48	25.40
M22 x 2.0			-	1650006908		25.00				
M22 x 1.5			-	1650002608		25.00				
M22 x 1.0	D5	4	-	1650006808	125.00	16.00	22.758	17.07	17.07	22.20
M24 x 3.0			-	1650002908		16.00				
M24 x 2.0			-	1650007108		16.00				
M24 x 1.5	D6	4	-	1650002808	140.00	16.00	68.40	19.304	14.48	25.40
M24 x 1.0			-	1650007008		16.00				
M27 x 3.0			-	1650007408		16.00				
M27 x 2.0	D8	4	-	1650007308	140.00	24.00	60.00	22.758	17.07	22.20
M27 x 1.5			-	1650007208		24.00				
M30 x 3.5			-	1650007708		24.00				
M30 x 2.0	D9	4	-	1650007608	150.00	36.00	70.00	25.933	19.46	25.40
M30 x 1.5			-	1650007508		36.00				
M33 x 3.5			-	1650008008		36.00				
M33 x 2.0	D9	4	-	1650007908	160.00	36.00	75.00	28.143	21.11	27.00
M33 x 1.5			-	1650007808		36.00				
M36 x 4.0			-	1650008408		36.00				
M36 X 3.0	D10	4	-	1650008308	200.00	48.00	115.00	31.318	23.50	28.60
M36 x 2.0			-	1650008208		48.00				
M36 x 1.5			-	1650008108		48.00				
M39 x 4.0	D11	4	-	1650008508	200.00	48.00	110.00	33.147	24.87	31.80
M42 x 3.0			-	1650008808		48.00				
M42 x 2.0			-	1650008708		48.00				
M42 x 4.5	D12	4	-	1650008908	200.00	54.00	100.00	36.322	27.23	31.80
M42 x 1.5			-	1650008608		54.00				
M45 x 4.5			-	1650009108		54.00				
M45 x 3.0	D10	4	-	1650009008	200.00	48.00	100.00	38.583	28.93	34.90
M48 x 5.0			-	1650009508		48.00				
M48 x 3.0			-	1650009408		48.00				
M48 x 2.0	D9	4	-	1650009308	190.00	48.00	80.00	41.758	31.32	34.90
M48 x 1.5			-	1650009208		48.00				
M56 x 5.5			-	1650009608		48.00				

Packed: 1 pc.  
Available V coating only.



List No.	Work Material																	
	P					M			K	N		S		H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16500	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			☐				
SFM	80-120	80-120	80-120	35-50	20-40	15-35	15-35	15-25	50-80	70-120	70-120			30-55				

☐ good ☐ best

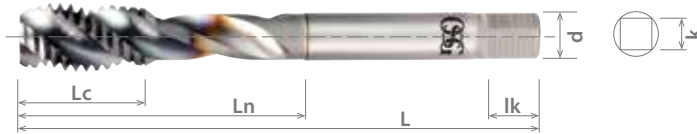


# A Brand® A-OIL-SFT

Advanced Performance Taps for a Variety of Materials

## List 16545

A-OIL-SFT, Coolant-Through, DIN Overall Length, Modified Bottom (2.5P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length		
			Mod Bottom (2.5P)								
			V							L	Lc
1/4 - 20 UNC	H5	3	1654500108	3.150	0.402	1.181	0.255	0.191	0.313		
1/4 - 28 UNF	H4		1654500208		0.402	1.181					
5/16 - 18 UNC	H5		1654500308	3.543	0.445	1.378	0.318	0.238	0.375		
5/16 - 24 UNF	H4		1654500408		0.445	1.378					
3/8 - 16 UNC	H5		1654500508	3.937	0.500	1.535	0.381	0.286	0.438		
3/8 - 24 UNF	H4		1654500608	3.543	0.500	1.378					
7/16 - 14 UNC	H5		1654500708	3.937	0.571	1.713	0.323	0.242	0.406		
7/16 - 20 UNF			1654500808		0.571	1.713					
1/2 - 13 UNC			1654500908	4.331	0.614	1.933	0.367	0.275	0.438		
1/2 - 20 UNF			1654501008	3.937	0.614	1.933					
9/16 - 12 UNC			1654501108	4.331	0.665	1.972	0.429	0.322	0.500		
9/16 - 18 UNF			1654501208	3.937	0.665	1.972					
5/8 - 11 UNC			H6	1654501308	4.331	0.728	2.126	0.480	0.360	0.563	
5/8 - 18 UNF				1654501408	3.937	0.728	2.126				
3/4 - 10 UNC				1654501508	4.921	1.000	2.433	0.590	0.442	0.688	
3/4 - 16 UNF				1654501608	4.331	1.000	2.433				
7/8 - 9 UNC				H6	1654501708	5.512	1.110	2.654	0.697	0.523	0.750
7/8 - 14 UNF					1654501808	4.921	1.110	2.654			
1 - 8 UNC	H8	1654501908			6.299	1.252	3.012	0.800	0.600	0.813	
1 - 12 UNF		H6				1654502108	1.252				3.012
1,1/8 - 7 UNC	H9	1654502208			7.087	1.732	3.819	0.896	0.672	0.875	
1,1/8 - 8 UN		1654502308				1.496	3.819				
1,1/8 - 12 UNF	H8	1654502408			5.906	1.496	3.071	1.021	0.766	1.000	
1,1/4 - 7 UNC	H10	1654502508			7.087	1.732	3.937				
1,1/4 - 8 UN	H9	1654502608				1.496	3.937				
1,1/4 - 12 UNF	H8	1654502708			5.906	1.496	3.071	1.108	0.831	1.063	
1,3/8 - 6 UNC	H10	1654502808			7.874	2.008	4.528				
1,3/8 - 8 UN	H9	1654502908			6.693	1.496	3.583	1.233	0.925	1.125	
1,3/8 - 12 UNF	H8	1654503008		1.496		3.583					
1,1/2 - 6 UNC	H10	1654503108		7.874	2.008	4.528	1.430	1.072	1.250		
1,1/2 - 8 UN	H9	1654503208	1.496		4.528						
1,1/2 - 12 UNF	H8	1654503308	6.693	1.496	3.583	1.305	0.979	1.125			
1,5/8 - 8 UN	H10	1654503408	7.874	1.496	4.331						
1,3/4 - 5 UNC	H11	1654503508	8.661	2.402	4.724	1.430	1.072	1.250			
1,3/4 - 8 UN	H10	1654503608	7.874	2.008	3.976						
1,7/8 - 8 UN		H12	1654503708	8.858	2.008	4.921	1.519	1.139	1.375		
2 - 4,1/2 UNC	H12	1654503808	9.843	2.677	5.512	1.644	1.233	1.375			
2 - 8 UN	H10	1654503908	8.858	2.008	4.803						

Packed: 1 pc.  
Available V coating only.



Work Material																		
List No.	P					Die Steels	M			K Cast Iron	N		S		H			
	Carbon Steels			Alloy Steels 4140 4340	Stainless Steels			Aluminum			Nickel Alloy Inconel	Titanium 6Al4V (30 HRC)	Hardened Steels					
	Low 1010 1018	Med. 1035 1045	High 1065		300		400	17-4 PH	6061 7075				Casting	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC	
16545	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SFM	100-200	100-200	100-200	50-100	40-80	25-70	25-70	25-50	60-150	90-220	90-220			50-100				

good  best

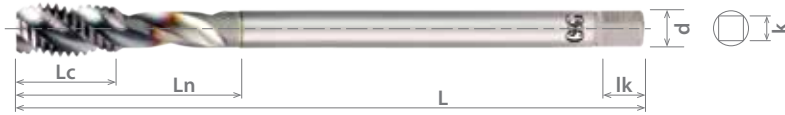






## List 16520

A-LT-SFT, Long Shank, Modified Bottom (2.5P)



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number		Long Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length		
			Mod Bottom (2.5P)									
			V	L								
M3 x 0.5	D3	3	1652001308		100.00	4.10	18.10	3.58	2.79	4.80		
M3 x 0.35			1652001208			4.80	20.00					
M3.5 x 0.6			1652001508			5.60	21.00				4.27	3.33
M3.5 x 0.35			1652001408									
M4 x 0.7	D4		1652001708		125.00	6.10	25.10	4.93	3.86	6.40		
M4 x 0.5	D3		1652001608									
M4.5 x 0.75	D4		1652001908		150.00	6.40	25.00	5.59	4.19		7.10	
M4.5 x 0.5	D3		1652001808									
M5 x 0.8	D4		1652002108		125.00	7.30	30.10	6.48	4.85	7.90		
M5 x 0.5	D3		1652002008									
M5.5 x 0.5	D5		1652002208		150.00	8.00	30.00	6.48	4.85	7.90		
M6 x 1.0			1652002708									
M6 x 0.75			1652002508									
M6 x 0.5			1652002308									
M8 x 1.25	D5		1652003708		150.00	10.00	35.00	8.08	6.05	9.50		
M8 x 1.0			1652003508									
M8 x 0.75	D4		1652003308			12.00	39.00	9.68	7.26	11.10		
M10 x 1.5	D6		1652005108									
M10 x 1.25	D5		1652004908		180.00	14.00	72.00	9.32	6.98			
M10 x 1.0			1652004708									
M10 x 0.75			1652004508									
M12 x 1.75	D6		1652006708		150.00	12.00	60.00	10.90	8.18	12.70		
M12 x 1.5			1652006508									
M12 x 1.25			1652006308									
M12 x 1.0		1652006108										
M14 x 2	D7	1652007108		160.00	16.00	64.00	12.19	9.14	14.30			
M14 x 1.5	D6	1652007008										
M14 x 1.25		1652006908		180.00	12.00	72.00	12.19	9.14				
M14 x 1.0	D5	1652006808										
M15 x 1.5	D6	1652007308		160.00	16.00	64.00	12.19	9.14	14.30			
M15 x 1.0	D5	1652007208										
M16 x 2.0	D7	1652007708		180.00	16.00	72.00	12.19	9.14				
M16 x 1.5	D6	1652007508										
M16 x 1.0	D5	1652007408		160.00	12.00	64.00						
M18 x 2.5	D7	1652008308		180.00	25.00	72.00	13.77	10.31	15.90			
M18 x 2.0		1652008208										
M18 x 1.5		1652008108										
M18 x 1.0		1652008008										
M20 x 2.5	D7	1652008708		200.00	25.00	80.00	16.56	12.42	17.50			
M20 x 2.0		1652008608										
M20 x 1.5	D6	1652008508			16.00		17.70	13.28		19.10		
M20 x 1.0	D5	1652008408										
M22 x 2.5	D7	1652009108		200.00	25.00	83.00	19.30	14.48				
M22 x 2.0		1652009008										
M22 x 1.5		D6	1652008908									
M22 x 1.0		D5	1652008808									
M24 x 3.0	D8	1652009508		30.00	83.00	19.30	14.48					
M24 x 2.0	D7	1652009408										
M24 x 1.5	D6	1652009308		16.00	83.00	19.30	14.48					
M24 x 1.0	D5	1652009208										

Packed: 1 pc.  
Available V coating only.



Work Material																		
List No.	P					M			K	N		S		H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16520	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			☐				
SFM	80-120	80-120	80-120	35-50	20-40	15-35	15-35	15-25	50-80	70-120	70-120			30-55				

☐ good ☐ best



## List 16515

VC10

V

A-POT, DIN Overall Length, Plug (3.5P-4.5P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length					
			Plug (3.5P-4.5P)											
			V	L	Lc	Ln	d	k	lk					
2 - 56 UNC	H2	2	1651505608	1.772	0.437	0.476	0.141	0.110	0.188					
2 - 64 UNF			1651505708											
3 - 48 UNC			1651505808	1.969	0.500	0.539								
3 - 56 UNF			1651505908											
4 - 40 UNC			1651500108	2.205	0.295	0.704								
4 - 48 UNF			1651500208											
5 - 40 UNC		1651500308	0.299		0.708									
5 - 44 UNF		1651500408												
6 - 32 UNC		H3	1651500608		0.370	0.783								
6 - 40 UNF		H2	1651500708											
8 - 32 UNC		H3	1651500908	2.480	0.374	0.826				0.168	0.131	0.250		
8 - 36 UNF		H2	1651500808											
10 - 24 UNC		H3	1651501008	2.756	0.492	0.976				0.194	0.152			
10 - 32 UNF		H2	1651501308											
12 - 24 UNC	H3	1651501208	3.150	0.496	1.177	0.220	0.165	0.281						
12 - 28 UNF		1651501408												
12 - 32 UNEF		1651501508												
1/4 - 20 UNC		H5							1651501608	0.594	1.173	0.255	0.191	0.313
1/4 - 28 UNF		H3							1651501908					
1/4 - 32 UNEF		H4							1651501808	0.590	1.169	0.318	0.238	0.375
5/16 - 18 UNC	H3	1651506108												
5/16 - 24 UNF	H5	1651502108	3.543	0.665	1.377	0.381	0.286	0.438						
5/16 - 32 UNEF	H3	1651502008												
3/8 - 16 UNC	H3	1651502308	3.937	0.661	1.374	0.381	0.286	0.438						
3/8 - 24 UNF	H4	1651502208												
3/8 - 32 UNEF	H3	1651506208	3.543	0.653	1.366	0.381	0.286	0.438						
7/16 - 14 UNC	H5	1651502508							0.751	1.535	0.381	0.286	0.438	
7/16 - 20 UNF	H3	1651502408	0.744	1.370	0.381	0.286	0.438							
7/16 - 28 UNEF	H4	1651506308						3.937	0.858	1.291	0.323	0.242	0.406	
1/2 - 13 UNC	H3	1651502908	3.543	0.921	1.354	0.367	0.275							0.438
1/2 - 20 UNF	H5	1651503208						4.331	0.921	1.354	0.367	0.275	0.438	
1/2 - 28 UNEF	H3	1651503508	3.937	1.000	1.472	0.429	0.322							0.500
9/16 - 12 UNC	H5	1651503408						4.331	1.000	1.472	0.429	0.322	0.500	
9/16 - 18 UNF	H3	1651503908	3.937	1.090	1.562	0.480	0.360							0.563
9/16 - 24 UNEF	H5	1651503808						4.331	1.090	1.562	0.480	0.360	0.563	
5/8 - 11 UNC	H3	1651506608	3.937	1.090	1.562	0.480	0.360							0.563
5/8 - 18 UNF	H5	1651504108						3.937	1.090	1.562	0.480	0.360	0.563	
5/8 - 24 UNEF	H4	1651504008	3.937	1.090	1.562	0.480	0.360							0.563
		1651504308						3.937	1.090	1.562	0.480	0.360	0.563	
		1651504208	3.937	1.090	1.562	0.480	0.360							0.563
		1651506708												

Packed: 1 pc.  
Available V coating only.





## List 16515 (Continued)



A-POT, DIN Overall Length, Plug (3.5P-4.5P)

Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length		
			Plug (3.5P - 4.5P)	L	Lc	Ln	d	k	lk		
			V	L	Lc	Ln	d	k	lk		
11/16 - 24 UNEF	H4	3	1651506808	4.331	1.200	1.712	0.542	0.406	0.625		
3/4 - 10 UNC	H3		1651504508	4.921							
3/4 - 16 UNF	H5		1651504408	4.331			1.200	1.712	0.590	0.442	0.688
	H3		1651504708								
3/4 - 20 UNEF	H5		1651504608	4.331	1.200	1.712	0.590	0.442	0.688		
13/16 - 20 UNEF			1651506908								
7/8 - 9 UNC	H4		1651507008	4.921	1.334	1.885	0.652	0.489	0.750		
	H6		1651504908	5.512							
7/8 - 14 UNF	H4		1651505108	4.921	1.334	1.885	0.697	0.523	0.750		
	H6		1651504808								
7/8 - 20 UNEF	H5		1651505008	4.921	1.334	1.885	0.697	0.523	0.750		
15/16 - 20 UNEF			1651507108								
1 - 8 UNC	H4		1651507208	5.512	1.500	2.090	0.760	0.570	0.750		
	H6		1651505308	6.299							
1 - 12 UNF	H4		1651505208	5.512	1.500	2.090	0.800	0.600	0.813		
	H6		1651505508								
1 - 14 UNS	H4		1651505408	5.512	1.500	2.090	0.800	0.600	0.813		
	H6		1651505408								
1 - 20 UNEF	H5		1651507408	5.512	1.500	2.090	0.800	0.600	0.813		
				1651507308							

Packed: 1 pc.  
Available V coating only.



List No.	Work Material																	
	P					M			K	N		S		H				
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16515	☑	☑	☑	☑	☐	☑	☑	☑	☐	☐	☐			☑				
SFM	80-120	80-120	80-120	40-65	35-55	25-75	25-60	25-60	60-100	70-120	70-120			40-65				

☐ good ☑ best

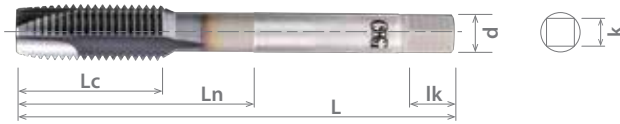


## List 16510

VC10

V

A-POT, DIN Overall Length, Plug (3.5P-4.5P)



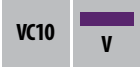
Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length	
			Plug (3.5P - 4.5P)							
			V	L	Lc	Ln	d	k	lk	
M1.4 x 0.3	D2	2	1651003008	40.00	7.90	8.90	3.58	2.79	4.80	
M1.6 x 0.35	D3		1651003108		9.50	10.50				
M1.7 x 0.35			1651003208							
M2 x 0.4	1651003408									
M2 x 0.25	D2		1651003308	45.00	11.10	12.10				
M2.2 x 0.45	D3		1651003608							
M2.2 x 0.25	D2		1651003508							
M2.3 x 0.4	D3		1651003708							
M2.5 x 0.45			1651003908							
M2.5 x 0.35			1651003808	50.00	12.80	13.80				
M2.6 x 0.45		1651004008								
M3 x 0.5		1651000108	56.00	6.10	18.10					
M3 x 0.35		1651004108								
M3.5 x 0.6	1651004308	7.20		19.80						
M3.5 x 0.35	1651004208									
M4 x 0.7	D4	1651000308	63.00	8.40	21.00	4.27	3.33	6.40		
M4 x 0.5	D3	1651000208								
M4.5 x 0.75	D4	1651004508	70.00	9.10	24.80	4.93	3.86			
M4.5 x 0.5	D3	1651004408								
M5 x 0.8	D4	1651000508								
M5 x 0.5	D3	1651000408								
M5.5 x 0.5		1651004608	80.00	10.80	29.70	5.59	4.19		7.10	
M6 x 1.0	D5	1651000808		12.00						
M6 x 0.75	D4	1651000708		12.10		34.80	8.08		6.05	9.50
M6 x 0.5	D3	1651000608								
M7 x 1.0	D5	1651004808								
M7 x 0.75	D4	1651004708								
M8 x 1.25	D5	1651001008	90.00	15.40	34.80	8.08	6.05	9.50		
M8 x 1.0		1651000908								
M8 x 0.75	D4	1651004908	80.00		30.00	9.68	7.26	11.10		
M9 x 1.25	D5	1651005208	90.00	14.00	34.70					
M9 x 1.0		1651005108								
M9 x 0.75	D4	1651005008								
M10 x 1.5	D6	1651001308	100.00	18.00	38.90	9.68	7.26	11.10		
M10 x 1.25	D5	1651001208		17.00						
M10 x 1.0		1651001108	90.00	18.00	34.80					
M10 x 0.75	D4	1651005308	90.00	17.00						
M11 x 1.5	D6	1651005608	100.00	18.00	29.00	8.20	6.15	10.30		
M11 x 1.0	D5	1651005508								
M11 x 0.75	D4	1651005408								
M12 x 1.75	D6	1651001708	110.00						21.00	32.00
M12 x 1.5		1651001608								
M12 x 1.25		1651001508	100.00							
M12 x 1.0	D5	1651001408	110.00	24.00	36.00	12.19	9.14	14.30		
M14 x 2.0	D7	1651001908								
M14 x 1.5	D6	1651001808	100.00	10.90	8.18				12.70	
M14 x 1.25		1651005808								
M14 x 1.0	D5	1651005708	110.00	24.00	36.00	12.19	9.14	14.30		
M15 x 2.0	D7	1651007208								
M15 x 1.5	D6	1651006008							100.00	
M15 x 1.25		1651007308								
M15 x 1.0	D5	1651005908								
M16 x 2.0	D7	1651002108	110.00	100.00	12.19	9.14	14.30			
M16 x 1.5	D6	1651002008								
M16 x 1.25		1651007408								
M16 x 1.0	D5	1651006108								

Packed: 1 pc.  
Available V coating only.



## List 16510 (Continued)



A-POT, DIN Overall Length, Plug (3.5P-4.5P)

Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Plug (3.5P - 4.5P)						
			V						
			L	Lc	Ln	d	k	lk	
M17 x 1.5	D6	4	1651006308	100.00	24.00	36.00	13.77	10.31	15.90
M17 x 1.25			1651007508						
M17 x 1.0	D5		1651006208						
M18 x 2.5	D7	3	1651002308	125.00	30.00	43.00	16.56	12.42	17.50
M18 x 2.0			1651006508						
M18 x 1.25	D6	4	1651007608	110.00	30.00	44.00	17.70	13.28	19.10
M18 x 1.5			1651002208						
M18 x 1.0	D5		1651006408						
M20 x 2.5	D7	3	1651002508	140.00	30.00	44.00	16.56	12.42	17.50
M20 x 2.0			1651006708						
M20 x 1.5	D6	4	1651002408	125.00	30.00	44.00	17.70	13.28	19.10
M20 x 1.0			1651006608						
M22 x 2.5	D7	3	1651002708	140.00	30.00	44.00	17.70	13.28	19.10
M22 x 2.0			1651006908						
M22 x 1.5	D6	4	1651002608	125.00	30.00	44.00	17.70	13.28	19.10
M22 x 1.0			1651006808						
M24 x 3.0	D8	3	1651002908	160.00	36.00	51.00	19.30	14.48	
M24 x 2.0	D7		1651007108						
M24 x 1.5	D6	4	1651002808	140.00	36.00	51.00	19.30	14.48	
M24 x 1.0			1651007008						

Packed: 1 pc.  
Available V coating only.



Work Material																	
List No.	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16510	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			☐			
SFM	80-120	80-120	80-120	40-65	35-55	25-75	25-60	25-60	60-100	70-120	70-120			40-65			

☐ good ☐ best

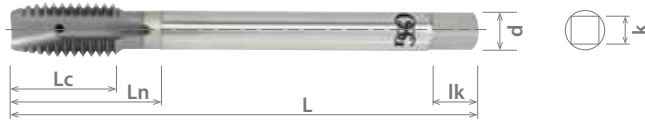


# A Brand® A-OIL-POT

Advanced Performance Taps for a Variety of Materials

## List 16555

A-OIL-POT, Coolant-Through, DIN Overall Length, Plug (3.5P-4.5P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length	
			Plug (3.5P - 4.5P)							
			V	L	Lc	Ln	d	k	lk	
1/4 - 20 UNC	H5	3	1655500108	3.15	0.598	1.181	0.255	0.191	0.313	
1/4 - 28 UNF	H4		1655500208							
5/16 - 18 UNC	H5		1655500308	3.543	0.665	1.377	0.318	0.238	0.375	
5/16 - 24 UNF	H4		1655500408							
3/8 - 16 UNC	H5		1655500508	3.937	0.751	1.535	0.381	0.286	0.438	
3/8 - 24 UNF	H4		1655500608							
7/16 - 14 UNC	H5		1655500708	3.937	0.858	1.291	0.323	0.242	0.406	
7/16 - 20 UNF			1655500808							
1/2 - 13 UNC			1655500908	4.331	0.921	1.354	0.367	0.275	0.438	
1/2 - 20 UNF			1655501008							
9/16 - 12 UNC			1655501108	4.331	1.000	1.472	0.429	0.322	0.500	
9/16 - 18 UNF			1655501208							
5/8 - 11 UNC			1655501308	4.331	1.090	1.562	0.480	0.360	0.563	
5/8 - 18 UNF			1655501408							
3/4 - 10 UNC			1655501508	4.921	1.200	1.712	0.590	0.442	0.688	
3/4 - 16 UNF			1655501608							
7/8 - 9 UNC			H6	1655501708	5.512	1.334	1.885	0.697	0.523	0.750
7/8 - 14 UNF				1655501808						
1 - 8 UNC	1655501908			6.299	1.500	2.090	0.800	0.600	0.813	
1 - 12 UNF	1655502008									

Packed: 1 pc.  
Available V coating only.



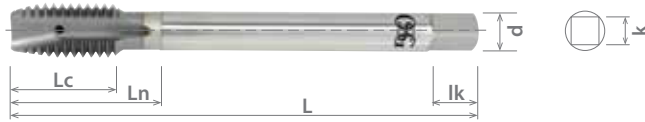
Work Material																		
List No.	P					Die Steels	M			K	N		S		H			
	Carbon Steels			Alloy Steels	Stainless Steels		Cast Iron	Aluminum			Nickel Alloy	Titanium	Hardened Steels					
	Low	Med.	High					6061	Casting				Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16555	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SFM	100-200	100-200	100-200	50-120	45-110	40-120	40-120	40-100	80-160	90-220	90-220		60-120					

good  best



## List 16550

A-OIL-POT, Coolant-Through, DIN Overall Length, Plug (3.5P-4.5P)



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Plug (3.5P-4.5P)						
			V	L	Lc	Ln	d	k	Ik
M6 x 1.0	D5	3	1655000208	80.00	12.00	30.00	6.48	4.85	7.90
M6 x 0.75	D4		1655000108						
M7 x 1.0	D5		1655000308	90.00	15.00	35.00	8.08	6.05	9.50
M8 x 1.25			1655000608						
M8 x 1.0			1655000508						
M8 x 0.75	D4		1655000408	80.00	15.00	30.00	8.08	6.05	9.50
M9 x 1.25	D5		1655000708	90.00		35.00			
M10 x 1.5	D6		1655001008	100.00	18.00	39.00	9.68	7.26	11.10
M10 x 1.25	D5		1655000908	100.00		35.00			
M12 x 1.75			1655000808	90.00	8.20	6.15	10.30		
M11 x 1.5		1655001108	100.00	29.00					
M12 x 1.5	D6	1655001508	110.00	21.00	32.00	9.32	6.98	11.10	
M12 x 1.25		1655001408	100.00						
M12 x 1.0	D5	1655001208	100.00	24.00	36.00	10.90	8.18	12.70	
M14 x 2.0	D7	1655001708	110.00						
M14 x 1.5	D6	4	1655001608	100.00	24.00	36.00	12.19	9.14	14.30
M15 x 1.5			1655001808						
M16 x 2.0	D7	3	1655002008	110.00	30.00	43.00	13.77	10.31	15.90
M16 x 1.5	D6	4	1655001908	100.00					
M17 x 1.5			1655002108	100.00	30.00	44.00	16.56	12.42	17.50
M18 x 2.5	D7	3	1655002308	125.00					
M18 x 1.5	D6	4	1655002208	110.00	30.00	43.00	13.77	10.31	15.90
M20 x 2.5	D7	3	1655002508	140.00					
M20 x 1.5	D6	4	1655002408	125.00	30.00	44.00	16.56	12.42	17.50
M22 x 2.5	D7	3	1655002808	140.00					
M22 x 2.0			1655002708	140.00	36.00	51.00	19.30	14.48	19.10
M22 x 1.5	D6	4	1655002608	125.00					
M24 x 3.0	D8	3	1655003108	160.00	36.00	51.00	19.30	14.48	19.10
M24 x 2.0	D7	4	1655003008	140.00					
M24 x 1.5	D6	4	1655002908	140.00	36.00	51.00	19.30	14.48	19.10

Packed: 1 pc.  
Available V coating only.



List No.	Work Material																
	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High	4140		300	400	17-4 PH		6061	Casting	Inconel	6Al4V	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
	1010	1035	1065	4340						7075			(30 HRC)				
16550	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			☐			
SFM	100-200	100-200	100-200	50-120	45-110	40-120	40-120	40-100	80-160	90-220	90-220			60-120			

☐ good ☐ best



# A Brand® A-LT-POT

Advanced Performance Taps for a Variety of Materials

## List 16535

VC10

V

A-LT-POT, Long Shank, Plug (3.5P-4.5P)



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	Long Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length
			Plug (3.5P - 4.5P)						
			V	L	Lc	Ln	d	k	lk
4 - 40 UNC	H2	2	1653506008	3.149	0.342	0.751	0.140	0.109	0.188
4 - 48 UNF			1653506108						
5 - 40 UNC			1653500708						
5 - 44 UNF			1653506308						
6 - 32 UNC	H3		1653501008	4.724	0.429	0.842			
6 - 40 UNF	H2		1653501108	3.937	0.433	0.846			
8 - 32 UNC	H3		1653501308	4.724	0.444	0.897	0.167	0.131	0.251
8 - 36 UNF	H2		1653501408	3.937					
10 - 24 UNC	H3	3	1653501508	4.921	0.574	1.059	0.194	0.151	0.279
10 - 32 UNF			1653501708	5.906	0.582	1.066			
12 - 24 UNC			1653501808	4.921	0.590	1.271	0.220	0.164	
12 - 28 UNF			1653501908						
1/4 - 20 UNC	H5		1653502108	5.906	0.704	1.366	0.255	0.190	0.287
1/4 - 28 UNF	H4		1653502308						
5/16 - 18 UNC	H5		1653502508						
5/16 - 24 UNF	H4		1653502708						
3/8 - 16 UNC	H5		1653502908	5.906	0.917	1.897	0.380	0.285	0.397
3/8 - 24 UNF	H4		1653503108		0.929				
7/16 - 14 UNC	H5	3	1653503308	7.087	0.858	2.362	0.322	0.242	0.405
7/16 - 20 UNF			1653503508						
1/2 - 13 UNC			1653503708						
1/2 - 20 UNF			1653503908						
9/16 - 12 UNC	H5	3	1653504108	7.087	0.921	2.834	0.367	0.274	0.437
9/16 - 18 UNF			1653504308						
5/8 - 11 UNC			1653504508						
5/8 - 18 UNF			1653504708						
3/4 - 10 UNC	H6	3	1653504908	7.874	1.000	3.149	0.429	0.322	0.500
3/4 - 16 UNF			1653505108						
7/8 - 9 UNC			1653505308						
7/8 - 14 UNF			1653505508						
1 - 8 UNC	H6	3	1653505708	7.874	1.090	3.149	0.480	0.359	0.562
1 - 12 UNF			1653505908						
1 - 8 UNC	H6	3	1653505708	7.874	1.200	3.149	0.590	0.442	0.688
1 - 12 UNF			1653505908						
1 - 8 UNC	H6	3	1653505708	7.874	1.334	3.149	0.697	0.522	0.751
1 - 12 UNF			1653505908						
1 - 8 UNC	H6	3	1653505708	7.874	1.334	3.149	0.800	0.600	0.811
1 - 12 UNF			1653505908						

Packed: 1 pc.  
Available V coating only.



Work Material																		
List No.	P					Die Steels	M			K Cast Iron	N		S		H			
	Carbon Steels			Alloy Steels	Titanium		Stainless Steels				Aluminum	Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High				300	400	17-4 PH					6061 7075	Casting	Inconel	6Al4V (30 HRC)	~35 HRC
16535	☉	☉	☉	☉	☐	☉	☉	☉	☐	☐	☐				☉			
SFM	80-120	80-120	80-120	40-65	35-55	25-75	25-60	25-60	60-100	70-120	70-120				40-65			

☐ good ☉ best



## List 16530

A-LT-POT, Long Shank, Plug (3.5P-4.5P)



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number	Long Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length			
			Plug (3.5P - 4.5P)									
			V	L	Lc	Ln	d	k	lk			
M3 x 0.5	D3	3	1653001308	100.00	6.00	20.00	3.58	2.79	4.80			
M3 x 0.35			1653001208									
M3.5 x 0.6			1653001508									
M3.5 x 0.35			1653001408									
M4 x 0.7	1653001708		8.00		27.00	4.26	3.32					
M4 x 0.5	1653001608											
M4.5 x 0.75	1653001908		9.00		30.00			4.92		3.86		
M4.5 x 0.5	1653001808											
M5 x 0.8	1653002108		10.00	35.90	5.58	4.19						
M5 x 0.5	1653002008											
M5.5 x 0.5	1653002208		150.00	40.00	6.47	4.85						
M6 x 1.0	1653002708											
M6 x 0.75	D4		1653002508	125.00	11.00	15.00	51.90	8.07	6.04	9.40		
M6 x 0.5	D3		1653002308									
M8 x 1.25	D5		1653003708	150.00	18.00	59.90	9.67	7.26	11.00			
M8 x 1.0			1653003508									
M8 x 0.75		D4	1653003308									
M10 x 1.5		D6	1653005108									
M10 x 1.25	D5	1653004908	180.00		21.00	72.00	9.32	6.98		9.40		
M10 x 1.0		D4									1653004708	
M10 x 0.75	D6	1653004508	150.00		24.00	59.90	10.89	8.17		12.70		
M12 x 1.75		1653006708										
M12 x 1.5		1653006508										
M12 x 1.25		1653006308										
M12 x 1.0	D5	1653006108		160.00	72.00	13.76	10.31	15.90				
M14 x 2.0	D7	1653007108										
M14 x 1.5	D6	1653007008										
M14 x 1.25		1653006908										
M14 x 1.0	D5	1653006808	200.00	80.00	17.70	13.28	19.10					
M15 x 1.5	D6	1653007308										
M15 x 1.0	D5	1653007208										
M16 x 2.0	D7	1653007708										
M16 x 1.5	D6	1653007508	29.00	72.00	16.56	12.42		17.50				
M16 x 1.0		D4							1653007408			
M18 x 2.5	D7	1653008308							35.00	19.30	14.47	19.10
M18 x 2.0	D6	1653008208										
M18 x 1.5		D5	1653008108									
M18 x 1.0	D5	1653008008	200.00	80.00	17.70	13.28	19.10					
M20 x 2.5	D7	1653008708										
M20 x 2.0		1653008608										
M20 x 1.5	D6	1653008508										
M20 x 1.0	D5	1653008408	200.00	80.00	17.70	13.28		19.10				
M22 x 2.5	D7	1653009108										
M22 x 2.0		1653009008										
M22 x 1.5	D6	1653008908										
M22 x 1.0	D5	1653008808	200.00	80.00	17.70	13.28	19.10					
M24 x 3.0	D8	1653009508										
M24 x 2.0	D7	1653009408										
M24 x 1.5	D6	1653009308										
M24 x 1.0		D5	1653009208									

Packed: 1 pc.  
Available V coating only.



List No.	Work Material																
	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High	4140 4340		300	400	17-4 PH		6061 7075	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
16530	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			☐			
SFM	80-120	80-120	80-120	40-65	35-55	25-75	25-60	25-60	60-100	70-120	70-120			40-65			

☐ good ☐ best





*shaping your dreams*

 **Safe use of cutting tools**

- Use safety cover, safety glasses and safety shoes during operation.
- Do not touch cutting edges with bare hands.
- Do not touch cutting chips with bare hands. Chips will be hot after cutting.
- Stop cutting when the tool becomes dull.
- Stop cutting operation immediately if you hear any abnormal cutting sounds.
- Do not modify tools.
- Please use appropriate tools for the operation. Check dimensions to ensure proper selection.

**TEXAS**  
**(National Headquarters)**

1945 W. Walnut Hill Ln.  
Irving, TX 75038, USA  
Toll Free: 800-837-2223  
Fax: 800-837-3334

**ILLINOIS**

676 East Fullerton Avenue  
Glendale Heights, IL 60139, USA  
Toll Free: 800-837-2223  
Fax: 800-837-3334

**CALIFORNIA**

1921 Miraloma Ave. Suite B  
Placentia, CA 92870, USA  
Toll Free: 800-837-2223  
Fax: 714-528-9209

**OHIO**

3611 Socialville Foster Rd.  
Ste 102  
Mason, OH 45040, USA  
Phone: 513-755-3360  
Fax: 513-755-3362

**GEORGIA**

5324 Highway 85 Ste 100  
Forest Park, GA 30297, USA  
Toll Free: 800-837-2223  
Fax: 800-837-3334

**CANADA**

538 King Forest Court  
Burlington, ON L7P 5C1, Canada  
Toll Free: 800-263-4861  
Fax: 905-632-8466

**MEXICO**

Avenida Central No. 186  
Col. Nueva Industrial Vallejo  
07700 Ciudad de Mexico, D.F.,  
Mexico  
Phone: (52) 55-51-19-3363  
Fax: (52) 55-51-19-3370

