



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

CONTENTS



A Brand A-CSF & A-CHT

The A Brand

- 4** What is A Brand?
- 6** A Brand Line-up

A Brand A-Pipe

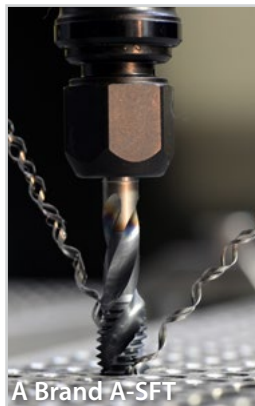
- 7** Features & Benefits
- 8** Cutting Data
- 10** A-NPT - List 16570
- 11** A-LT-NPT - List 16575
- 12** A-NPS - List 16590
- 13** A-BSPT - List 16585
- 14** A-BSPP - List 16580

A Brand AT-1 Threadmill

- 15** Features & Benefits
- 16** Cutting Data
- 17** AT-1 (in) - List 16625
- 18** AT-1 (mm) - List 16620
- 19** AT-1 (NPT) - List 16630
- 20** AT-1 (NPTF) - List 16631
- 21** Speeds & Feeds



A Brand A-SFT & A-POT



A Brand A-SFT



A Brand A-SFT

A Brand A-CSF & A-CHT

23 Features & Benefits

24 Cutting Data

25 A-CSF (in) - List 16605

26 A-CSF (mm) - List 16600

27 A-CHT (in) - List 16615

28 A-CHT (mm) - List 16610

A Brand A-SFT & A-POT

29 Features & Benefits

30 Cutting Data

32 A-SFT (in) - List 16505

34 A-SFT (mm) - List 16500

36 A-OIL-SFT (in) - List 16545

37 A-OIL-SFT (mm) - List 16540

38 A-LT-SFT (in) - List 16525

39 A-LT-SFT (mm) - List 16520

40 A-POT (in) - List 16515

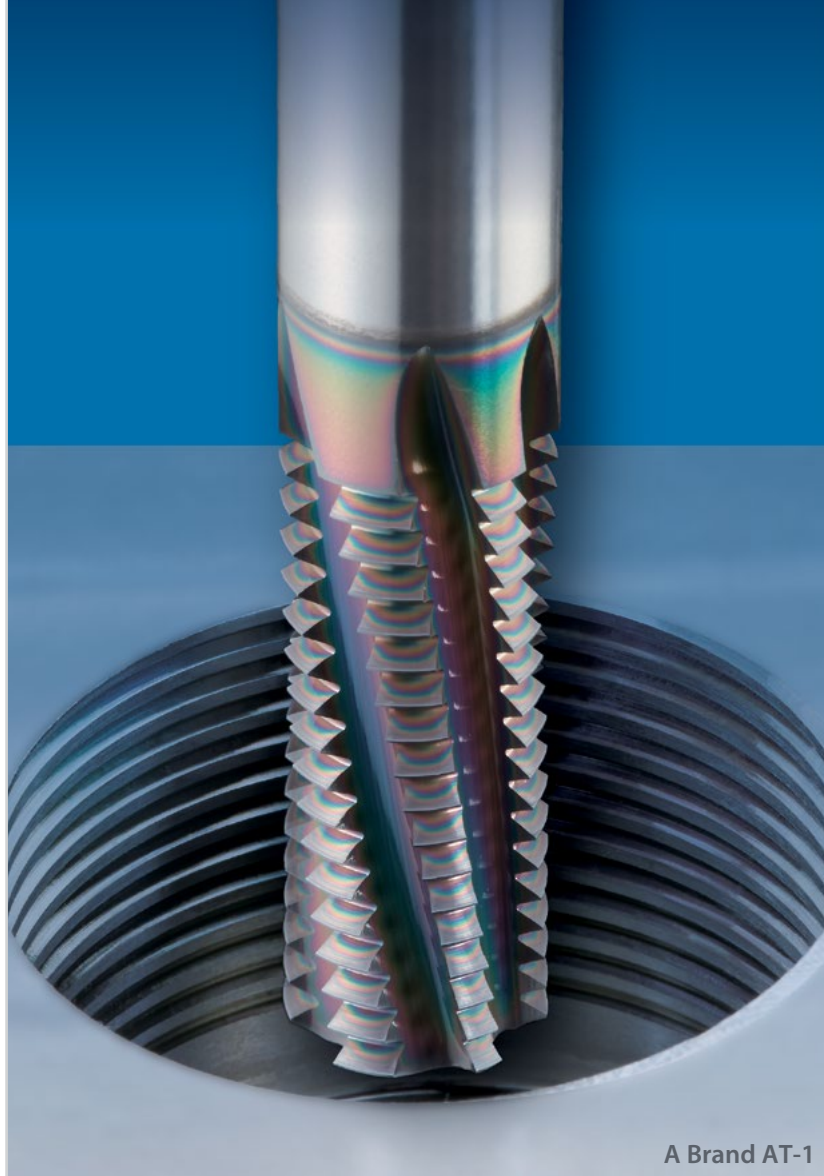
42 A-POT (mm) - List 16510

44 A-OIL-POT (in) - List 16555

45 A-OIL-POT (mm) - List 16550

46 A-LT-POT (in) - List 16535

47 A-LT-POT (mm) - List 16530



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-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

A-END MILL

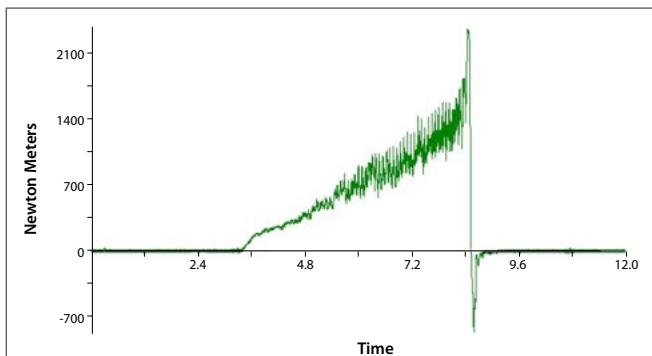
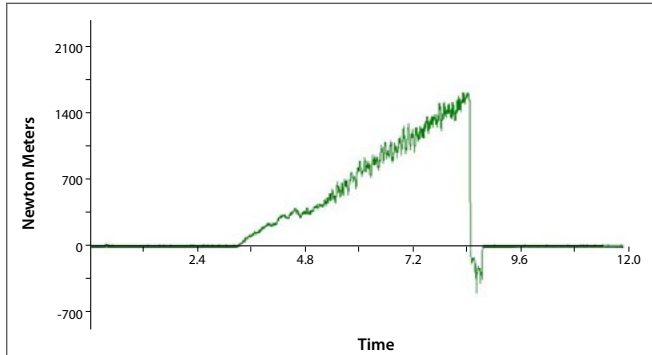


A Brand AE-VMS

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

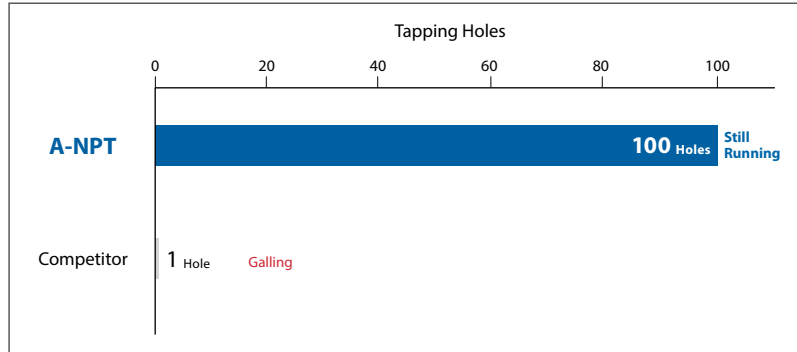


Processing with Taper Pipe Taps

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	

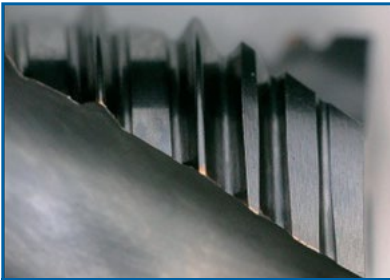


Minimal Wear in Multiple Materials

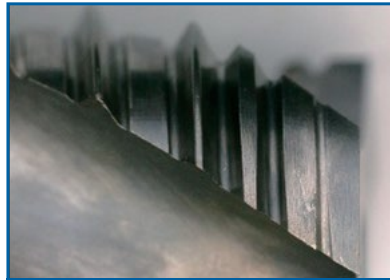
A36 Steel • Cast Iron • 304 Stainless Steel

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						
		V	L	Lc	Ln	d	k	Ik
1/16 - 27	3	1657001008	3.543	0.689	1.417	0.313	0.234	0.374
1/8 - 27 (Sm. Shk)		1657002008						
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						
1/2 - 14		1657006008						
3/4 - 14		1657007008						
1 - 11,1/2		1657008008						
			4.921	1.374	2.362	0.688	0.515	0.626
			5.511	1.374	2.913	0.906	0.679	0.689
			6.299	1.752	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
16570	⊙	⊙	⊙	⊙	○	○	○		○		⊙	○	⊙				
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						
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	0.752	1.614			
		1657504008	6.000		2.402			
1/8 - 27 (Lg. Shk)		1657505008	4.000	1.063	1.614			
		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	1.374	1.969			
		1657510008	6.000		2.402			
1/2 - 14		1657511008	4.000	1.374	2.362			
		1657512008	6.000		2.402			
3/4 - 14		1657513008	4.000	1.752	2.504			
		1657514008	6.000		2.913			
1 - 11,1/2		1657515008	4.000	1.752	2.504			
		1657516008	6.000		3.150			

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
16575	⊙	⊙	⊙	⊙	○	○	○	○	○	○	○	○	⊙				
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



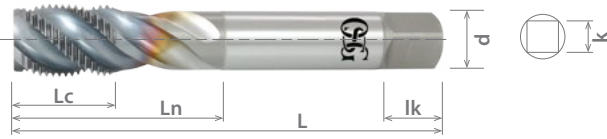
A Brand A-Pipe

Advanced Performance Pipe Taps

List 16590

NEW	HSSE	V	40°
-----	------	---	-----

A-NPS



Units: Inch

Size	Number of Flutes	EDP Number	Overall Length	Length of Cut	Neck Length	Shank Diameter	Square Width	Square Length
		NPS						
		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		0.827	1.969	0.700	0.531	0.500
1/2 - 14		1659006008		1.024	2.362	0.688	0.515	0.626
3/4 - 14		1659007008		1.102	2.913	0.906	0.679	0.689
1 - 11,1/2		1659008008		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
16590	⊙	⊙	⊙	⊙	○	○	○		○		⊙	○	⊙				
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°
-----	------	---	-----



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.



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
16585	⊙	⊙	⊙	⊙	○	○	○		○		⊙	○	⊙				
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

NEW	HSSE	V	40°
-----	------	---	-----

A-BSPP



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	⊙	⊙	⊙	⊙	○	○	○		○		⊙	○	⊙				
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

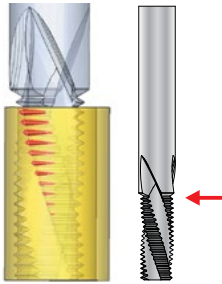


1-Pass Cutting

Left Hand Helix Reduces Deflection for 1-Pass Cutting

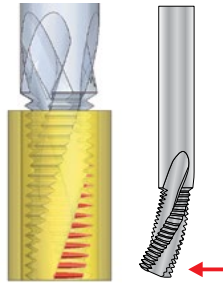
The AT-1 is designed with a left hand helix and starts cutting from the shank side, reducing deflection, preventing bending, thus allowing for 1-pass cutting and reducing overall cutting time.

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

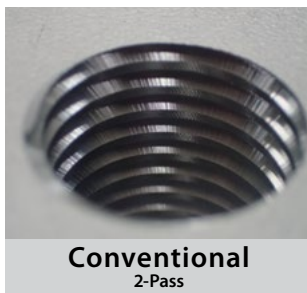
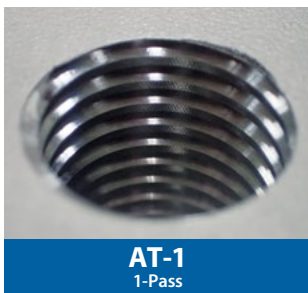
EgiAs Coating
for exceptional wear
resistance

**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	

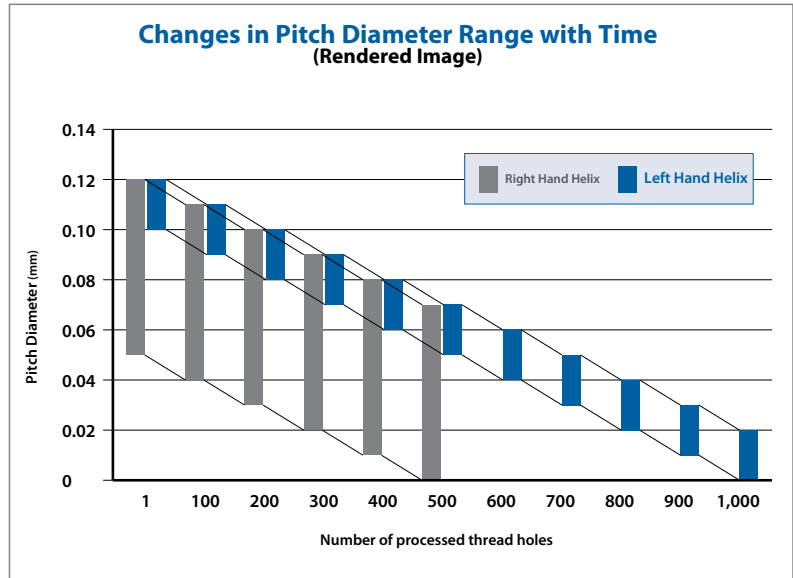


Effects of Left-Hand Helix

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

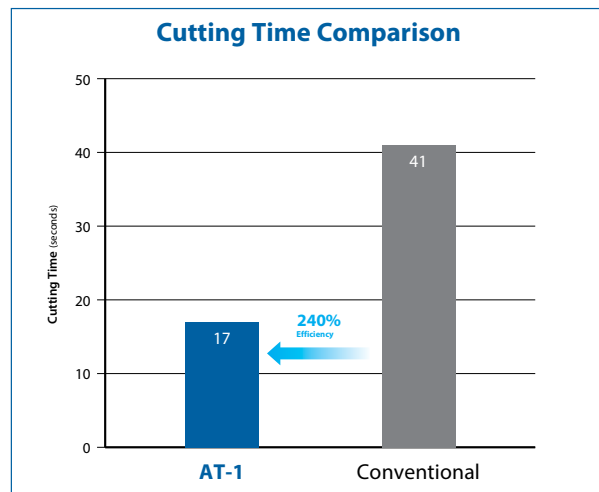
Pitch Diameter Measurement Method: Step Gauge

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.

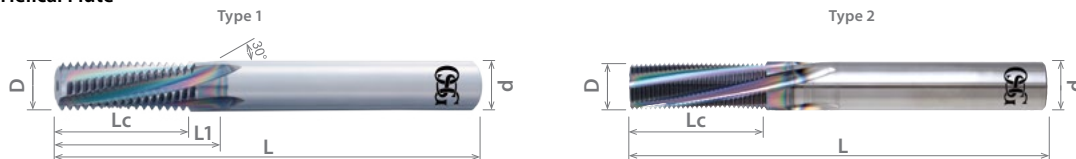
Tool	AT-1 (List 16620)	Conventional
Size	Ø9.7mm • 27mm Length of Cut	
Thread Size	M12 x 1.5	
Work Material	304 Stainless Steel	
Tapping Depth	22.5 mm (Through Hole)	
Cutting Speed	328 SFM (3,283 RPM)	393 SFM (4,021 RPM)
Feed	0.49 IPM (0.0004 IPT)	1.65 IPM (0.0004 IPT)
Number of Passes	1	2
Coolant	Water-Soluble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



List 16625

AT-1, Helical Flute

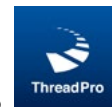
SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
--------------------------	----------------	--------------	------------	--------------------



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.

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	⊙	⊙	⊙	⊙		⊙	○	○	⊙	⊙	⊙			⊙	⊙		

○ good ⊙ best



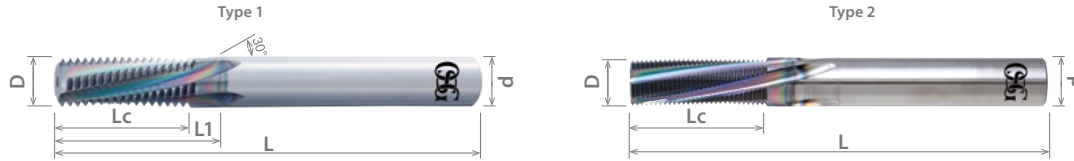
A Brand AT-1

Advanced Performance One Pass Thread Mill

List 16620

AT-1, Helical Flute

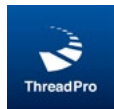
SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
-------------------	---------	-------	-----	-------------



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.

List No.	Work Material															
	P				M			K	N		S		H			
	Carbon Steels			Alloy 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
16620	⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙		⊙	⊙			

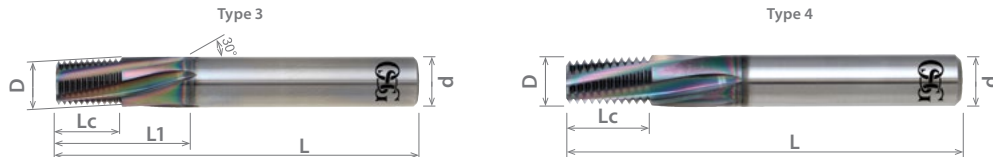
○ good ⊙ best



List 16630

AT-1, NPT

SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
-------------------	---------	-------	-----	-------------



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.

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 1010 1018	Med. 1035 1045	High 1065	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
16630	⊙	⊙	⊙	⊙		⊙	○	○	⊙	⊙	⊙			⊙	⊙		

○ good ⊙ best



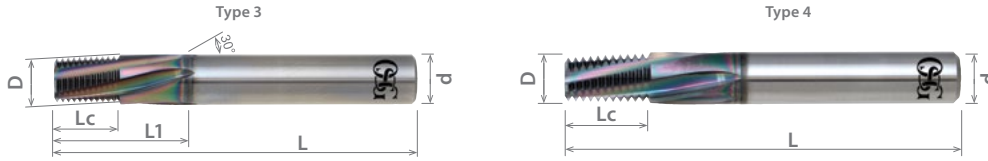
A Brand AT-1

Advanced Performance One Pass Thread Mill

List 16631

AT-1, NPTF

SPEED FEED P21	CARBIDE	EgiAs	11°	SHANK h6
----------------------	---------	-------	-----	-------------



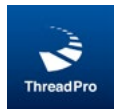
Units: Inch

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.



List No.	Work Material														
	P				M			K	N		S		H		
	Carbon Steels			Alloy Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels		
	Low	Med.	High	Alloy Steels	300	400	17-4 PH		6061	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
	1010	1035	1065	4140 4340				7075							
16631	⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙			⊙	⊙		

○ good ⊙ best



List 16620/16625 - A Brand AT-1: **Inch/Metric** List 16630/16631 - A Brand AT-1: **NPT/NPTF**

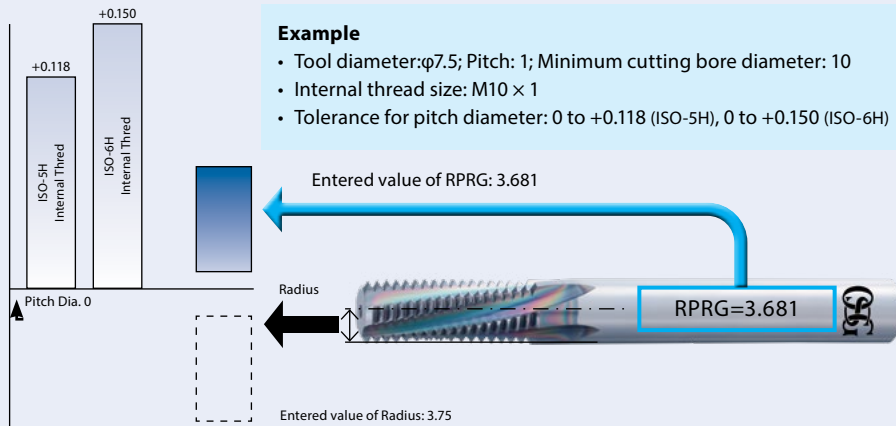
Work Material		Cutting Speed SFM	Feed Rate (in/t)
Low Carbon Steel	~C0.25%	260 - 790	0.0004 - 0.002
Medium Carbon Steel	C0.25%~0.45%	260 - 790	0.0004 - 0.002
High Carbon Steel	C0.45%~	260 - 790	0.0004 - 0.002
Alloy Steel	SCM	200 - 650	0.0004 - 0.002
Hardened Steel	25-45 HRC	260 - 650	0.0004 - 0.002
	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



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

* RPRG = reference value of tool radius offset

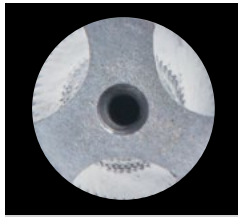


ThreadPro

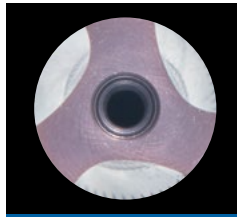
Powered by
AUTODESK

Larger Coolant Hole

1.3 Times More Coolant Flow



Conventional

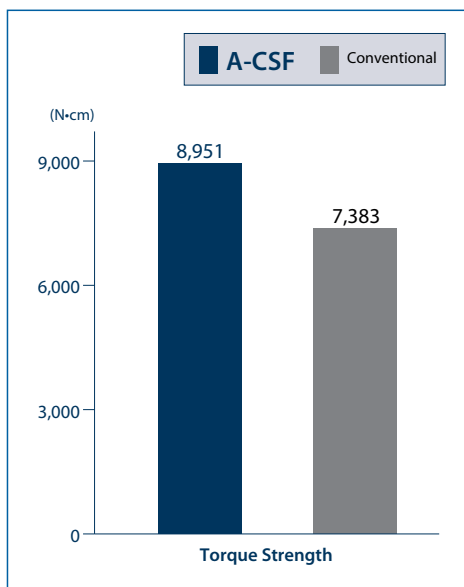


A-CSF

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



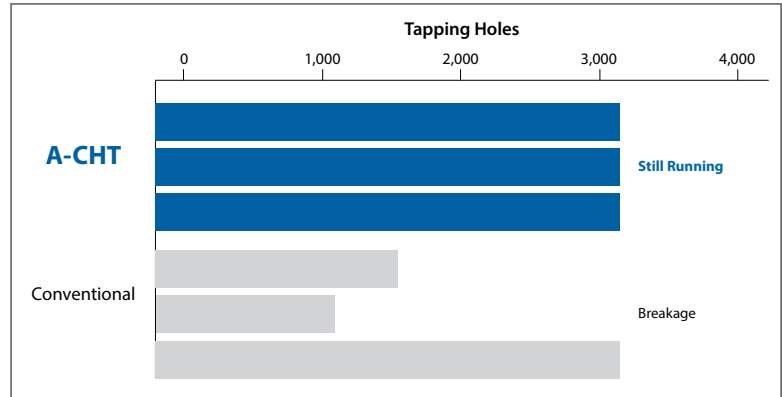
A Brand A-CSF & A-CHT

Cutting Data

Stable and Consistent Performance

Stable Machining in Ductile Cast Iron

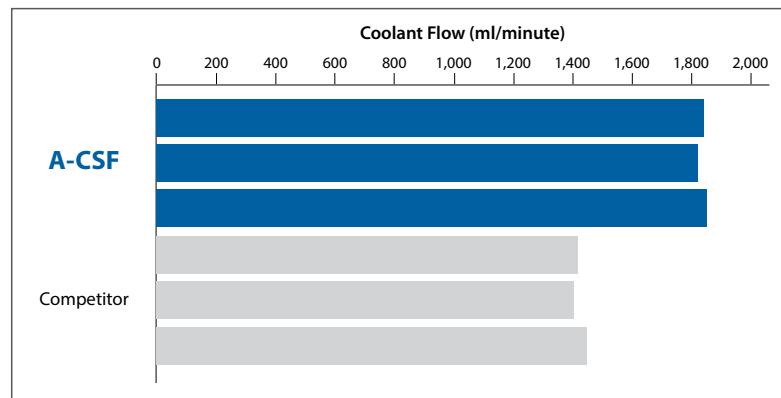
Tool	A-CHT	Conventional
Size	ØM6 x 1	
Drill Hole Size	Ø5mm x 15mm (Blind)	
Work Material	Ductile Cast Iron	
Tapping Depth	12mm (2xD)	
Cutting Speed	100 SFM (1,600 RPM)	
Coolant	Water Soluble Chlorine-Free (10%) (Internal)	
Machine	Horizontal Machining Center (Synchronized)	



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



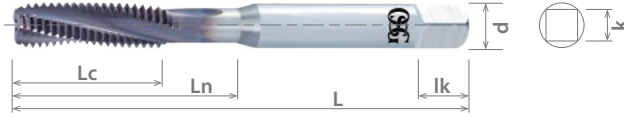
A Brand A-CSF & A-CHT

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

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



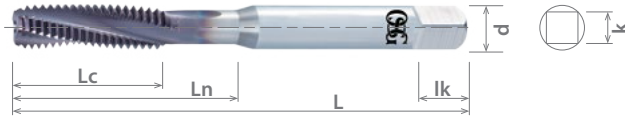
A Brand A-CSF & A-CHT

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	110.00	21.00	-	9.322	6.98	

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

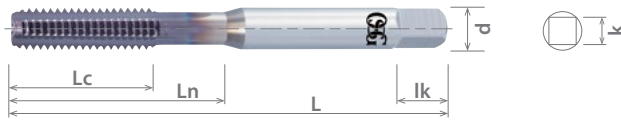
List No.	P				Die Steels	M			K Cast Iron	N		S		H				
	Carbon Steels			Alloy Steels		Stainless Steels				Aluminum		Nickel Alloy	Titanium	Hardened Steels				
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16600									⊙	⊙	⊙							
SFM									15-50	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			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	4	1661500800	3.937	0.752	1.378	0.318	0.238	0.375			
3/8 - 24 UNF	H4		1661500900									
7/16 - 14 UNC	H5		4	1661501000	3.937	0.858				-	0.381	0.286
7/16 - 20 UNF		1661501100										
1/2 - 13 UNC		1661501200		4.331	0.921	0.323	0.242	0.406				
1/2 - 20 UNF		1661501300		3.937					0.367			

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 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16615									⊙	⊙	⊙							
SFM									15-50	30-330	30-330							

○ good ⊙ best



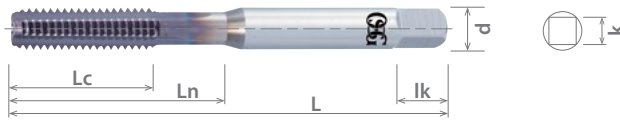
A Brand A-CSF & A-CHT

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)						
M5 x 0.8	D4	3	Bright	L	Lc	Ln	d	k	Ik
M6 x 1.0			1661000000	70.00	10.00	25.00	4.93	3.86	6.35
M8 x 1.25	D5		1661000100	80.00	12.00	31.00	6.48	4.85	7.92
M10 x 1.5	D6	4	1661000200	90.00	15.00	35.00	8.08	6.05	9.52
M10 x 1.25	D5		1661000300	100.00	18.00	39.00	9.68	7.26	11.11
M12 x 1.75	D6		1661000400		110.00	21.00	-	9.32	
M12 x 1.5			1661000500	100.00					
M12 x 1.25			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			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16610	1010	1035	1065	4140													
SFM	1018	1045		4340				15-50	30-330	30-330							

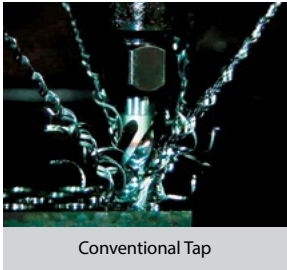
○ good ⊗ best



Chip Evacuation

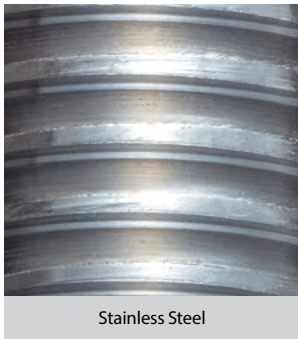
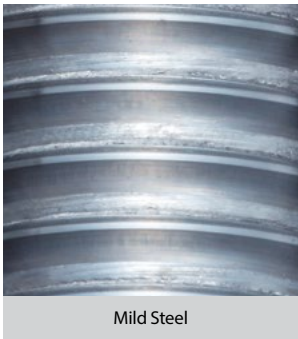
Excellent Chip Evacuation in Various Materials

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.



Superior Threads

No Galling of the Work Material



Sharp Cutting Edge

stabilizes chip shape

Variable Lead Flute

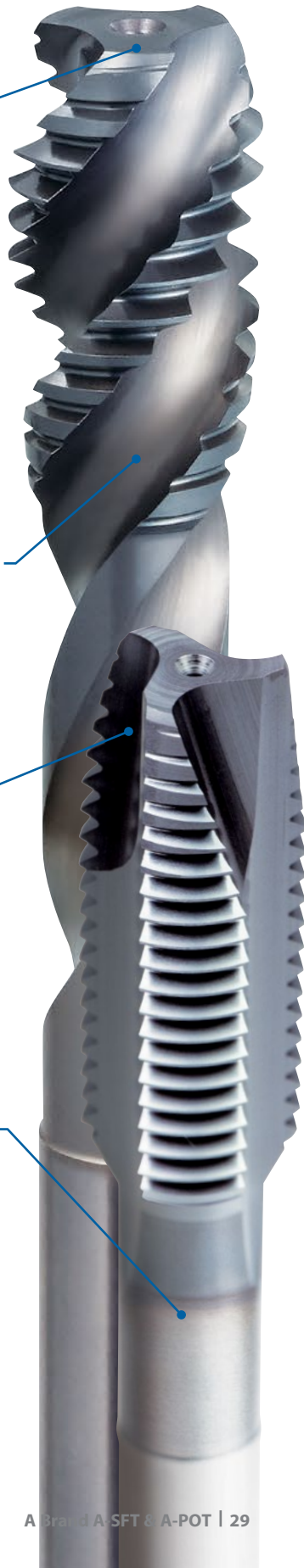
accelerates chip evacuation

V Coating

for high wear resistance

Powder Metallurgy HSS

for high wear resistance and toughness

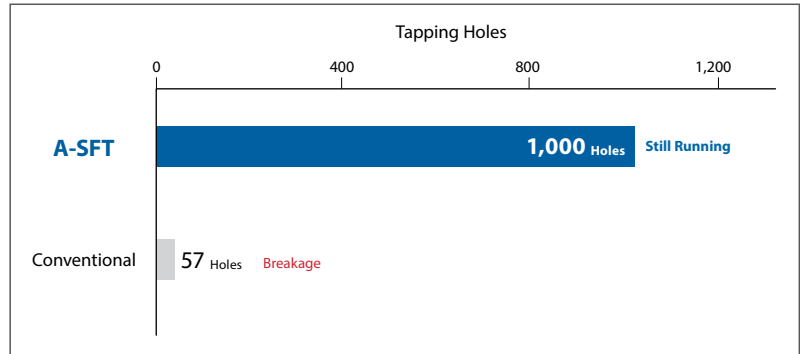


Deep Hole Tapping in Stainless Steel

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

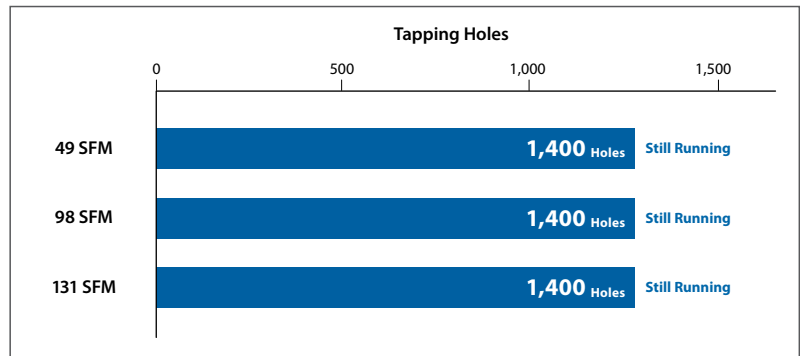


Cutting Speed and Performance Stability

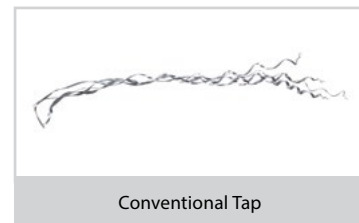
1045 Carbon Steel

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.)

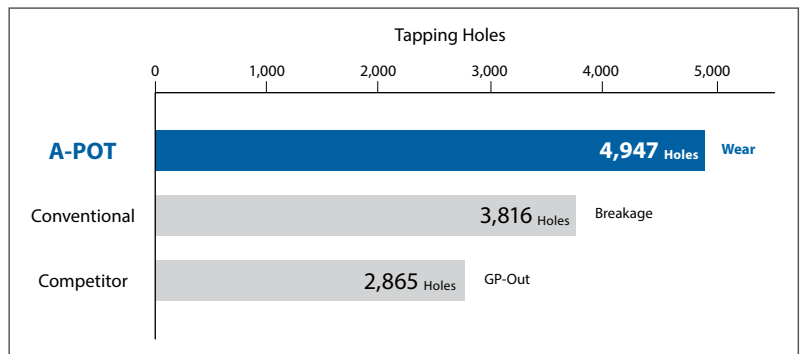


Maximize the Performance of Your Machine

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)		

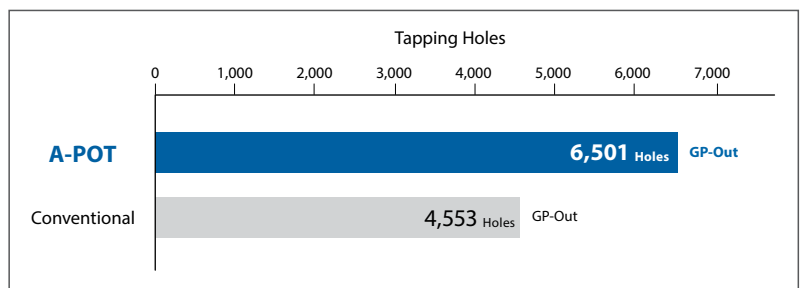


High Speed Machining

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)	

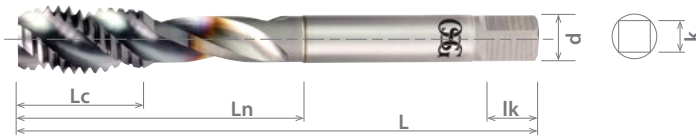
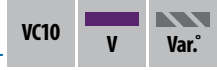


A Brand A-SFT

Advanced Performance Taps for a Variety of Materials

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	0.248				0.783	0.168	0.131	0.250							
			1650509408	-																	
			-	1650500608																	
6 - 40 UNF	H2	2	1650513208	1650500508																	
8 - 32 UNC	H3	3	1650509508	-	2.756	0.326	0.976	0.194	0.152	0.281											
			-	1650500708																	
			1650509608	-																	
8 - 36 UNF	H2	2	1650509708	-		3.150					0.397				1.177	0.255	0.191	0.313			
			-	1650500908																	
			-	1650500808																	
10 - 24 UNC	H3	3	1650509808	-	3.543		0.444				1.377	0.318	0.238	0.375							
			-	1650501008																	
			1650509908	-																	
10 - 32 UNF	H2	2	-	1650501108		3.937	0.500	1.535	0.310	0.286					0.438						
			1650510008	-																	
			1650510108	-																	
12 - 24 UNC	H3	3	-	1650501308	3.937		0.570				1.712					0.323	0.242	0.406			
			-	1650501208																	
			1650510208	-																	
12 - 28 UNF	H3	2	-	1650501408		3.937	0.570	1.712				0.323	0.242	0.406							
			1650510308	-																	
			-	1650501508																	
12 - 32 UNEF	H3	3	1650510408	-	3.543		0.444		1.377	0.310	0.286				0.438						
			-	1650505608																	
			1650510608	-																	
1/4 - 20 UNC	H5	2	1650510708	-		3.937	0.500	1.377								0.310	0.286	0.438			
			-	1650501708																	
			-	1650501608																	
1/4 - 28 UNF	H3	3	1650510908	-	3.937		0.500		1.377			0.310	0.286	0.438							
			1650510808	-																	
			-	1650501908																	
1/4 - 32 UNEF	H3	2	-	1650501808		3.937	0.500	1.377		0.310	0.286				0.438						
			1650510508	1650505708																	
			1650511008	-																	
5/16 - 18 UNC	H5	3	1650511108	1650502108	3.937		0.500		1.377							0.310	0.286	0.438			
			1650511208	1650502008																	
			1650511308	1650502308																	
5/16 - 24 UNF	H3	2	1650511408	1650502208		3.937	0.500	1.377				0.310	0.286	0.438							
			1650511508	1650505808																	
			1650511608	1650502508																	
5/16 - 32 UNEF	H3	3	1650511708	1650502408	3.937		0.500		1.377	0.310	0.286				0.438						
			1650511808	1650502708																	
			1650511908	1650502608																	
3/8 - 16 UNC	H5	2	1650512008	-		3.937	0.500	1.377								0.310	0.286	0.438			
			-	1650505908																	
			1650512108	1650502908																	
3/8 - 24 UNF	H3	3	1650512208	1650502808	3.937		0.500		1.377			0.310	0.286	0.438							
			1650512308	1650503108																	
			1650512408	1650503008																	
3/8 - 32 UNEF	H4	2	1650512508	1650506008		3.543	0.500	1.377		0.310	0.286				0.438						
			-	1650505908																	
7/16 - 14 UNC	H3	3	1650512108	1650502908	3.937	0.570	1.712	0.323	0.242							0.406					
			1650512208	1650502808																	
7/16 - 20 UNF	H5	2	1650512308	1650503108		3.937											0.570	1.712	0.323	0.242	0.406
			1650512408	1650503008																	
7/16 - 28 UNEF	H4	2	1650512508	1650506008	3.543		0.570					1.712	0.323	0.242			0.406				
			-	1650506008																	

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							0.665
	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							0.728
	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							0.909
	H5		-	1650504508							
3/4 - 10 UNC	H3		-	1650504408							4.921
	H5		-	1650504708							
3/4 - 16 UNF	H3		-	1650504608							4.331
	H5		-	1650506508							
13/16 - 20 UNEF	H4		-	1650506608							4.921
7/8 - 9 UNC	H4		-	1650504908							5.512
	H6		-	1650504808							
7/8 - 14 UNF	H4		-	1650505108							4.921
	H6		-	1650505008							
7/8 - 20 UNEF	H5		-	1650506708							1.110
15/16 - 20 UNEF	H4		-	1650506808							
1 - 8 UNC	H4	-	1650505308	6.299							
	H6	-	1650505208								
	H8	-	1650507008								
1 - 12 UNF	H6	-	1650505408	5.512							
	H4	-	1650505508								
1 - 14 UNS	H6	-	1650513308	5.512							
1 - 20 UNEF	H5	-	1650506908								
1,1/8 - 7 UNC	H9	-	1650507108			7.087					
1,1/8 - 8 UN	H8	-	1650507208								
1,1/8 - 12 UNF	H8	-	1650507308			5.906					
1,1/4 - 7 UNC	H10	-	1650507408			7.087					
1,1/4 - 8 UN	H9	-	1650507508								
1,1/4 - 12 UNF	H8	-	1650507608			5.906					
1,3/8 - 6 UNC	H10	-	1650507708			7.874					
1,3/8 - 8 UN	H9	-	1650507808								
1,3/8 - 12 UNF	H8	-	1650507908		6.693						
1,1/2 - 6 UNC	H10	-	1650508008		7.874						
1,1/2 - 8 UN	H9	-	1650508108								
1,1/2 - 12 UNF	H8	-	1650508208		6.693						
1,5/8 - 8 UN	H10	-	1650508308		7.874						
1,3/4 - 5 UNC	H11	-	1650508408		8.661						
1,3/4 - 8 UN	H10	-	1650508508		7.874						
1,7/8 - 8 UN	H10	-	1650508608		8.858						
2 - 4,1/2 UNC	H12	-	1650508708		9.843						
2 - 8 UN	H10	-	1650508808		8.858						

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	⊙	⊙	⊙	⊙	○	⊙	⊙	⊙	○	○	○			⊙				
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

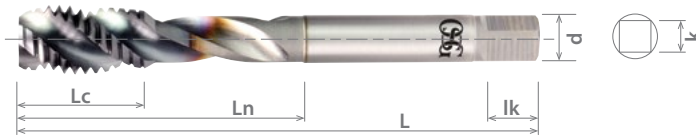
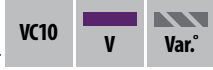


A Brand A-SFT

Advanced Performance Taps for a Variety of Materials

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	13.00
M2.2 x 0.25	D2		-	1650003508								
M2.3 x 0.4	D3		-	1650003708	56.00		4.00					18.00
M2.5 x 0.45			-	1650003908								
M2.5 x 0.35			-	1650003808								
M2.6 x 0.45			-	1650004008								
M3 x 0.5	D2		1650009808	1650000108	63.00	5.60	20.90					
M3 x 0.35		-	1650004108	4.267			3.33	6.40				
M3.5 x 0.6	D3	1650010008	1650004308		70.00	6.10			24.90			
M3.5 x 0.35		-	1650009908	1650004208			4.928	3.86	7.10			
M4 x 0.7	D4	1650010208	1650000308	80.00	8.00	29.90						
M4 x 0.5	D3	1650010108	1650000208			6.40	25.10	5.588				
M4.5 x 0.75	D4	1650010408	1650004508						30.00	6.477	4.85	
M4.5 x 0.5	D3	1650010308	1650004408			8.077	6.05	9.50				
M5 x 0.8	D4	1650010608	1650000508						80.00	8.00	33.00	
M5 x 0.5	D3	1650010508	1650000408			90.00	10.00	35.00				
M5.5 x 0.5		1650010708	1650004608					8.00	9.677	7.26	11.10	
M6 x 1.0	D5	1650011008	1650000808			90.00	10.00					39.00
M6 x 0.75	D4	1650010908	1650000708					90.00	10.00	35.00		
M6 x 0.5	D3	1650010808	1650000608			100.00	12.00			39.00		
M7 x 1.0	D5	1650011208	1650004808					90.00	10.00	35.00		
M7 x 0.75	D4	1650011108	1650004708			100.00	12.00			39.00		
M8 x 1.25	D5	1650011508	1650001008	90.00	10.00			35.00				
M8 x 1.0		1650011408	1650000908			8.00	9.677	7.26	11.10			
M8 x 0.75	D4	1650011308	1650004908	90.00	10.00					35.00		
M9 x 1.25	D5	1650011808	1650005208			100.00	12.00	39.00				
M9 x 1.0		1650011708	1650005108	90.00	10.00			35.00				
M9 x 0.75	D4	1650011608	1650005008			100.00	12.00	39.00				
M10 x 1.5	D6	1650012208	1650001308	90.00	10.00			35.00				
M10 x 1.25	D5	1650012108	1650001208			100.00	12.00	39.00				
M10 x 1.0		1650012008	1650001108	100.00	12.00			39.00				
M10 X 0.75	D4	1650011908	1650005308			100.00	12.00	39.00				
M11 x 1.5	D6	1650012608	1650005608	100.00	12.00			43.50				
M11 x 1.25	D5	1650012508	-			90.00	8.00	8.204	6.15	10.30		
M11 X 1.0		1650012408	1650005508									
M11 x 0.75	D4	1650012308	1650005408	110.00	14.00	49.10	9.322	6.98	11.10			
M12 x 1.75	D6	1650013008	1650001708									
M12 x 1.5		1650012908	1650001608	100.00	12.00	50.10	10.897	8.18	12.70			
M12 x 1.25	1650012808	1650001508										
M12 x 1.0	D5	1650012708	1650001408	100.00	16.00	54.00	12.192	9.14	14.30			
M14 x 2.0	D7	-	1650001908									
M14 x 1.5	D6	-	1650001808	100.00	12.00	54.00	12.192	9.14	14.30			
M14 x 1.25		-	1650005808									
M14 x 1.0	D5	-	1650005708	110.00	16.00	54.00	12.192	9.14	14.30			
M15 x 1.25	D6	-	1650013208									
M15 X 1.5		-	1650006008	100.00	12.00	54.00	12.192	9.14	14.30			
M15 x 2	D7	-	1650013108									
M15 x 1.0	D5	-	1650005908	100.00	16.00	54.00	12.192	9.14	14.30			
M16 x 2.0	D7	-	1650002108									
M16 x 1.25	D6	-	1650013308	100.00	12.00	54.00	12.192	9.14	14.30			
M16 x 1.5		-	1650002008									
M16 x 1.0	D5	-	1650006108									

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	80.00	25.933	19.46	25.40
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	28.143	21.11	27.00
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	31.318	23.50	28.60
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	33.147	24.87	31.80
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	100.00	36.322	27.23	34.90
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	38.583	28.93	34.90
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	41.758	31.32	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	48.108	36.07	36.50
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

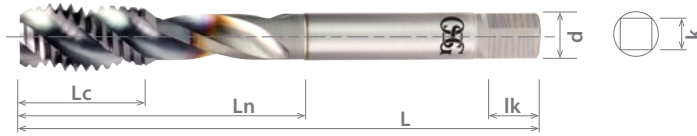


A Brand A-OIL-SFT

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)	L	Lc	Ln					
			V	L	Lc	Ln				d	k
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	
		1654502008				1.252	3.012				
1 - 12 UNF	H6	1654502108			5.512	1.252	3.012	0.896	0.672	0.875	
1,1/8 - 7 UNC	H9	1654502208			7.087	1.732	3.819				
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	1.305	0.979	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	1.430	1.072	1.250			
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	1.519	1.139	1.375			
1,3/4 - 8 UN	H10	1654503608	7.874	2.008	3.976						
1,7/8 - 8 UN		1654503708	8.858	2.008	4.921						
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	⊙	⊙	⊙	⊙	○	⊙	⊙	⊙	○	○	○			⊙				
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				

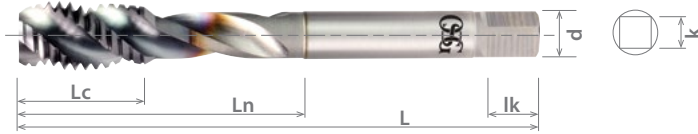
○ good ⊙ best



List 16540



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



Units: mm

Tap Size	Thread Limit	No. of Flutes	EDP Number	DIN Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length						
			Mod Bottom (2.5P)												
			V	L	Lc	Ln	d	k	lk						
M6 x 1.0	D5	3	1654000208	80.00	8.00	30.00	6.48	4.85	7.90						
M6 x 0.75	D4		1654000108												
M7 x 1.0	D5		1654000308	90.00	10.00	35.00	8.08	6.05	9.50						
M8 x 1.25			1654000608												
M8 x 1.0			1654000508												
M8 X 0.75	D4		1654000408	80.00	8.00	33.00	9.68	7.26	11.10						
M9 x 1.25	D5		1654000708	90.00	10.00	35.00									
M10 x 1.5	D6		1654001008	100.00	12.00	39.00				8.20	6.15	10.30			
M10 x 1.25	D5		1654000908												
M10 x 1.0	D6		1654000808	90.00	10.00	35.00				9.32	6.98	11.10			
M11 x 1.5			1654001108	100.00	12.00	43.50									
M12 x 1.75			1654001508	110.00	14.00	49.10							10.90	8.18	12.70
M12 x 1.5			1654001408												
M12 x 1.25	D5		1654001308	100.00	12.00	50.10				12.19	9.14	14.30			
M12 x 1.0			1654001208												
M14 x 2.0			D7										1654001708	110.00	16.00
M14 x 1.5	D6		1654001608	100.00											
M15 x 1.5	D7		1654001808	110.00	25.00	55.00				13.77	10.31	15.90			
M16 x 2.0			1654002008										110.00	16.00	
M16 x 1.5	D6		1654001908	100.00	25.00	61.80				16.56	12.42	17.50			
M17 x 1.5		1654002108	125.00										16.00		
M18 x 2.5	D7	1654002308	125.00	25.00	67.40	17.70				13.28	19.10				
M18 x 1.5	D6	1654002208	110.00	16.00											
M20 x 2.5	D7	1654002508	140.00	25.00	68.40	19.30				14.48	22.20				
M20 x 1.5	D6	1654002408	125.00	16.00											
M22 x 2.5	D7	1654002808	140.00	25.00	80.00	22.76	17.07	22.20							
M22 x 2.0		1654002708							140.00	25.00	67.40	17.70	13.28	19.10	
M22 x 1.5	D6	1654002608	125.00	16.00	100.00	25.93	19.46	25.40							
M24 x 3.0	D8	1654003108	160.00	30.00					95.00	28.14	21.11	27.00			
M24 x 2.0	D7	1654003008	140.00	16.00	68.40	19.30	14.48	28.60							
M24 x 1.5	D6	1654002908													
M27 x 3.0	D10	1654003208	160.00	36.00	80.00	22.76	17.07	22.20							
M30 x 3.5	D11	1654003308	180.00	42.00	100.00	25.93	19.46	25.40							
M33 x 3.5		1654003408							95.00	28.14	21.11	27.00			
M36 x 4.0		1654003508							200.00	48.00	115.00	31.32	23.50	28.60	
M39 x 4.0	1654003608	110.00	33.15	24.87											
M42 x 4.5	D12	1654003708	220.00	54.00	100.00	36.32	27.23	31.80							
M45 x 4.5		1654003808							120.00	38.58	28.93				
M48 x 5.0	D13	1654003908	250.00	60.00	140.00	41.76	31.32	34.90							
M56 x 5.5	D14	1654004008	250.00	66.00	130.00	48.11	36.07	36.50							

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
16540	⊙	⊙	⊙	⊙	○	⊙	⊙	⊙	○	○	○			⊙				
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

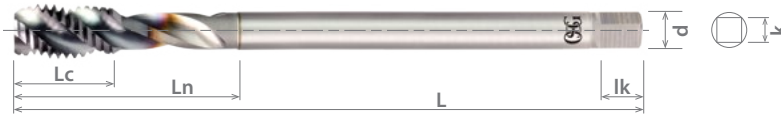
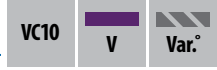


A Brand A-LT-SFT

Advanced Performance Taps for a Variety of Materials

List 16525

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



Units: Inch

Tap Size	Thread Limit	No. of Flutes	EDP Number	Long Overall Length	Thread Length	Neck Length	Shank Dia.	Square Width	Square Length						
			Mod Bottom (2.5P)												
			V												
			L	Lc	Ln	d	k	Ik							
4 - 40 UNC	H2	2	1652505608	3.150	0.197	0.705	0.141	0.110	0.188						
4 - 48 UNF			1652505708												
5 - 40 UNC			1652500308												
5 - 44 UNF			1652505908												
6 - 32 UNC	H3		1652500608	4.724	0.248	0.783	0.168	0.131	0.250						
6 - 40 UNF	H2		1652500708	3.937											
8 - 32 UNC	H3		1652500908	4.724											
8 - 36 UNF	H2		1652501008	3.937											
10 - 24 UNC	H3		1652501108	4.921	0.327	0.976	0.194	0.152	0.281						
10 - 32 UNF			1652501308	5.906											
12 - 24 UNC			1652501408	4.921						0.331	1.177	0.220	0.165	0.281	
12 - 28 UNF			1652501508												
1/4 - 20 UNC	H5	1652501708	5.906	0.398	0.445	1.378	0.318	0.238	0.375						
1/4 - 28 UNF	H4	1652501908													
5/16 - 18 UNC	H5	1652502108													
5/16 - 24 UNF	H4	1652502308													
3/8 - 16 UNC	H5	1652502508													
3/8 - 24 UNF	H4	1652502708													
7/16 - 14 UNC	H5	1652502908								7.087	0.571	2.362	0.323	0.242	0.406
7/16 - 20 UNF		1652503108													
1/2 - 13 UNC		1652503308													
1/2 - 20 UNF		1652503508													
9/16 - 12 UNC		1652503708													
9/16 - 18 UNF		1652503908													
5/8 - 11 UNC		1652504108													
5/8 - 18 UNF		1652504308													
3/4 - 10 UNC		1652504508													
3/4 - 16 UNF		1652504708													
7/8 - 9 UNC		H6	1652504908	7.874	1.000	3.150	0.590	0.442	0.688						
7/8 - 14 UNF			1652505108												
1 - 8 UNC	1652505308														
1 - 12 UNF	1652505508														
				1.110		0.697	0.523	0.750							
				1.252		3.465	0.800	0.600	0.813						

Packed: 1 pc.
Available V coating only.



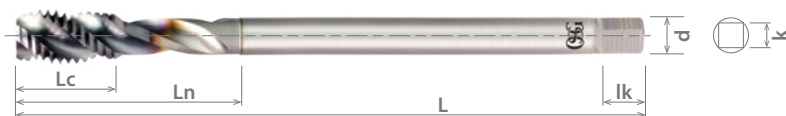
Work Material																	
List No.	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16525	⊙	⊙	⊙	⊙	○	⊙	⊙	⊙	○	○	○			⊙			
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 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)	L	Lc	Ln									
			V	L	Lc	Ln				d	k	lk			
M3 x 0.5	D3	3	1652001308	100.00	4.10	18.10	3.58	2.79	4.80						
M3 x 0.35			1652001208												
M3.5 x 0.6			1652001508												
M3.5 x 0.35			1652001408												
M4 x 0.7	1652001708		5.60		21.00	4.27	3.33								
M4 x 0.5	1652001608														
M4.5 x 0.75	1652001908		6.10		25.10			4.93		3.86	6.40				
M4.5 x 0.5	1652001808														
M5 x 0.8	1652002108		6.40	25.00	5.59	4.19	7.10								
M5 x 0.5	1652002008														
M5.5 x 0.5	1652002208		7.30	30.10				6.48	4.85	7.90					
M6 x 1.0	1652002708														
M6 x 0.75	1652002508		150.00	8.00	30.00	6.48						4.85	7.90		
M6 x 0.5	1652002308		125.00												
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		8.00	33.00	9.68	7.26							
M10 x 1.5	D6		1652005108									12.00			39.00
M10 x 1.25	D5		1652004908		10.00	35.00			9.32	6.98	11.10				
M10 x 1.0			1652004708												
M10 x 0.75	D4		1652004508		14.00	72.00	10.90	8.18				12.70			
M12 x 1.75	D6		1652006708										12.00		72.00
M12 x 1.5			1652006508	180.00	16.00	60.00			12.19	9.14					
M12 x 1.25	1652006308		12.00										64.00	12.19	9.14
M12 x 1.0	D5	1652006108		16.00	64.00	12.19	9.14								
M14 x 2	D7	1652007108	16.00					64.00					12.19		
M14 x 1.5	D6	1652007008		12.00	60.00				12.19	9.14					
M14 x 1.25		1652006908	150.00					12.00			64.00			12.19	9.14
M14 x 1.0	D5	1652006808		16.00	64.00	12.19	9.14								
M15 x 1.5	D6	1652007308	16.00					64.00			12.19	9.14			
M15 x 1.0	D5	1652007208		12.00	64.00				12.19	9.14					
M16 x 2.0	D7	1652007708	16.00					72.00					12.19	9.14	
M16 x 1.5	D6	1652007508		16.00	64.00	12.19	9.14								
M16 x 1.0	D5	1652007408	16.00					64.00			12.19	9.14			
M18 x 2.5	D7	1652008308		25.00	72.00				13.77	10.31					15.90
M18 x 2.0		1652008208	180.00					25.00					72.00	13.77	
M18 x 1.5	D6	1652008108		16.00	72.00	13.77	10.31								
M18 x 1.0	D5	1652008008	25.00					80.00			13.77	10.31			
M20 x 2.5	D7	1652008708		25.00	80.00				13.77	10.31					
M20 x 2.0		1652008608	200.00					16.00					64.00	13.77	
M20 x 1.5	D6	1652008508		16.00	64.00	13.77	10.31								
M20 x 1.0	D5	1652008408	25.00					80.00			13.77	10.31			
M22 x 2.5	D7	1652009108		25.00	80.00				13.77	10.31					
M22 x 2.0		1652009008	200.00					16.00					64.00	13.77	10.31
M22 x 1.5	D6	1652008908		16.00	64.00	13.77	10.31								
M22 x 1.0	D5	1652008808	30.00					83.00			13.77	10.31			
M24 x 3.0	D8	1652009508		16.00	64.00				13.77	10.31					
M24 x 2.0	D7	1652009408	30.00					83.00					13.77	10.31	
M24 x 1.5	D6	1652009308		16.00	64.00	13.77	10.31								
M24 x 1.0	D5	1652009208	30.00					83.00			13.77	10.31			

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



A Brand A-POT

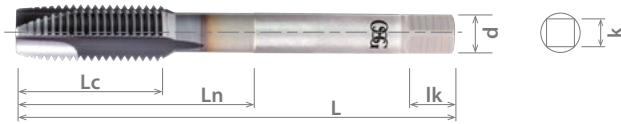
Advanced Performance Taps for a Variety of Materials

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					
8 - 36 UNF		H2	1651500808													
10 - 24 UNC		H3	1651501008	2.756	0.492	0.976				0.194	0.152					
10 - 32 UNF		H2	1651501108													
12 - 24 UNC	H3	3	1651501308	2.756	0.492	0.976	0.194	0.152								
12 - 28 UNF			1651501208													
12 - 32 UNEF			1651501408	3.150	0.496	1.177			0.220	0.165						
1/4 - 20 UNC			H5								1651501508					
1/4 - 28 UNF			H3	1651506008	3.150	0.594					1.173	0.255	0.191			
1/4 - 32 UNEF			H4	1651501708												
5/16 - 18 UNC	H5	1651501608	3.543	0.665	1.377	0.318	0.238									
5/16 - 24 UNF	H3	1651501908														
5/16 - 32 UNEF	H4	1651501808	3.150	0.653	1.366			0.381	0.438							
3/8 - 16 UNC	H5	1651506108														
3/8 - 24 UNF	H3	1651502108	3.937	0.751	1.535					0.381	0.286					
3/8 - 32 UNEF	H4	1651502008														
7/16 - 14 UNC	H5	1651502308	3.543	0.744	1.370	0.323	0.242									
7/16 - 20 UNF	H3	1651502208														
7/16 - 28 UNEF	H4	1651506208	3.937	0.858	1.291			0.429	0.322							
1/2 - 13 UNC	H3	1651502508										4.331	0.921	1.354	0.367	0.275
1/2 - 20 UNF	H5	1651502408														
1/2 - 28 UNEF	H4	1651506308	3.937	1.000	1.472					0.480	0.360					
9/16 - 12 UNC	H3	1651502908				4.331	1.090					1.562	0.480	0.563		
9/16 - 18 UNF	H5	1651503008	3.937	1.090	1.562											
9/16 - 24 UNEF	H4	1651503108				4.331	1.090	1.562	0.480			0.563				
5/8 - 11 UNC	H3	1651503208	3.937	1.090	1.562										0.480	0.563
5/8 - 18 UNF	H5	1651503308				3.937	1.090	1.562								
5/8 - 24 UNEF	H4	1651503408	3.937	1.090	1.562					0.480	0.563					
						1651506408										

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					
	H5		1651504408						
3/4 - 16 UNF	H3		1651504708	4.331			0.652	0.489	
			1651504608						
3/4 - 20 UNEF	H5		1651506908	4.921			0.697	0.523	
13/16 - 20 UNEF			1651507008						
7/8 - 9 UNC	H4		1651504908	5.512	1.334	1.885	0.760	0.570	0.750
	H6		1651504808						
7/8 - 14 UNF	H4		1651505108	4.921	1.500	2.090	0.800	0.600	0.813
	H6		1651505008						
7/8 - 20 UNEF	H5		1651507108	5.512	0.800	0.600	0.813		
15/16 - 20 UNEF			1651507208						
1 - 8 UNC	H4		1651505308	6.299	1.500	2.090	0.800	0.600	0.813
	H6		1651505208						
1 - 12 UNF	H4		1651505508	5.512	1.500	2.090	0.800	0.600	0.813
			1651505408						
1 - 14 UNS	H6		1651507408	5.512	1.500	2.090	0.800	0.600	0.813
1 - 20 UNEF	H5	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	4140		300	400	17-4 PH		6061	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC	50-70 HRC
	1010	1035	1065	4340						7075							
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



A Brand A-POT

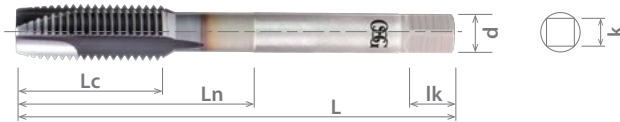
Advanced Performance Taps for a Variety of Materials

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	D2		1651003408											
M2 x 0.25	D3		1651003308	45.00	11.10	12.10								
M2.2 x 0.45	D2		1651003608											
M2.2 x 0.25	D3		1651003508											
M2.3 x 0.4	D2		1651003708											
M2.5 x 0.45	D3		1651003908	50.00	12.80	13.80								
M2.5 x 0.35			1651003808											
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	D5	1651004608	80.00	10.80	29.70	5.59	4.19	7.10						
M6 x 1.0		D4		1651000808					12.00					
M6 x 0.75		D3		1651000708										
M6 x 0.5		D5		1651000608					12.10					
M7 x 1.0		D4		1651004808										
M7 x 0.75		D5		1651004708										
M8 x 1.25		D5		1651001008						90.00	15.40	34.80	8.08	6.05
M8 x 1.0		D4		1651000908										
M8 x 0.75		D5		1651004908					80.00	30.00				
M9 x 1.25		D4		1651005208					90.00		14.00	34.70	9.68	7.26
M9 x 1.0	D5	1651005108												
M9 x 0.75	D6	1651005008												
M10 x 1.5	D5	1651001308	100.00	18.00	38.90									
M10 x 1.25	D4	1651001208		17.00										
M10 x 1.0	D5	1651001108		18.00										
M10 x 0.75	D4	1651005308	90.00	17.00	34.80	8.20	6.15	10.30						
M11 x 1.5	D6	1651005608	100.00											
M11 x 1.0	D5	1651005508	90.00	18.00	29.00	9.32	6.98	11.10						
M11 x 0.75	D4	1651005408												
M12 x 1.75	D6	1651001708	110.00	21.00	32.00	10.90	8.18	12.70						
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												
M14 x 1.25	D5	1651005808												
M14 x 1.0	D7	1651005708	100.00	17.00	34.80	8.20	6.15	10.30						
M15 x 2.0	D5	1651007208												
M15 x 1.5	D6	1651006008												
M15 x 1.25	D5	1651007308												
M15 x 1.0	D5	1651005908	110.00	18.00	29.00	9.32	6.98	11.10						
M16 x 2.0	D7	1651002108												
M16 x 1.5	D6	1651002008												
M16 x 1.25	D5	1651007408												
M16 x 1.0	D5	1651006108												

Packed: 1 pc.
Available V coating only.



List 16510 (Continued)

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	
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	13.77	10.31	15.90
M18 x 2.0			1651006508						
M18 x 1.25	D6	4	1651007608	110.00	30.00	43.00	13.77	10.31	15.90
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	16.56	12.42	17.50
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

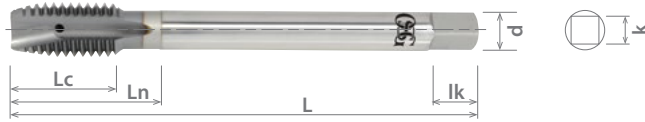


A Brand A-OIL-POT

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	⊙	⊙	⊙	⊙	○	⊙	⊙	⊙	○	○	○	○	○	○	○	○	○	○	○
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	lk
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						
M8 x 1.25			1655000608						
M8 x 1.0			1655000508						
M8 x 0.75			1655000408						
M9 x 1.25	D5		1655000708	90.00	15.00	35.00	8.08	6.05	9.50
M10 x 1.5	D6		1655001008						
M10 x 1.25	D5		1655000908	100.00	18.00	39.00	9.68	7.26	11.10
M10 x 1.0			1655000808						
M11 x 1.5			1655001108						
M12 x 1.75	D6		1655001508	110.00	21.00	32.00	9.32	6.98	11.10
M12 x 1.5		1655001408							
M12 x 1.25		1655001308							
M12 x 1.0	D5	1655001208	110.00	24.00	36.00	10.90	8.18	12.70	
M14 x 2.0	D7	1655001708							
M14 x 1.5	D6	4	1655001608	100.00	30.00	43.00	12.19	9.14	14.30
M15 x 1.5			1655001808						
M16 x 2.0	D7	3	1655002008	110.00	36.00	44.00	13.77	10.31	15.90
M16 x 1.5	D6	4	1655001908						
M17 x 1.5			1655002108	100.00	30.00	51.00	19.30	14.48	19.10
M18 x 2.5	D7	3	1655002308						
M18 x 1.5	D6	4	1655002208	110.00	36.00	44.00	17.70	13.28	19.10
M20 x 2.5	D7	3	1655002508						
M20 x 1.5	D6	4	1655002408	125.00	36.00	44.00	17.70	13.28	19.10
M22 x 2.5	D7	3	1655002808						
M22 x 2.0			1655002708	140.00	36.00	51.00	19.30	14.48	19.10
M22 x 1.5	D6	4	1655002608						
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						
M24 x 1.5	D6	4	1655002908	140.00	36.00	51.00	19.30	14.48	19.10
			1655002908						

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	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 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

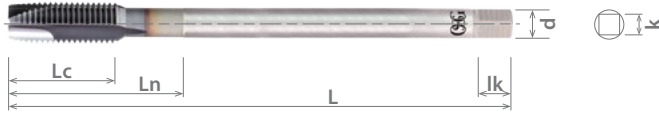
Advanced Performance Taps for a Variety of Materials

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						

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	D3		125.00	1653002208	150.00	11.00	40.00	6.47	4.85	7.80
M6 x 1.0										
M6 x 0.75	D4		1653002508	125.00	15.00	51.90	8.07	6.04	9.40	
M6 x 0.5	D3		1653002308							
M8 x 1.25	D5		3	1653003708	150.00	18.00	59.90	9.67	7.26	11.00
M8 x 1.0				1653003508						
M8 x 0.75		1653003308								
M10 x 1.5		1653005108								
M10 x 1.25	1653004908	180.00		21.00	72.00	9.32	6.98			
M10 x 1.0	D5							1653004708		
M10 x 0.75	D4	1653004508		150.00	24.00	59.90	10.89	8.17	12.70	
M12 x 1.75	D6	1653006708								
M12 x 1.5		1653006508								
M12 x 1.25		1653006308								
M12 x 1.0		D5	1653006108							
M14 x 2.0	D7	1653007108	150.00	24.00	64.00	12.19	9.14	14.30		
M14 x 1.5	D6	1653007008								
M14 x 1.25	D5	1653006908	160.00	29.00	72.00	13.76	10.31	15.90		
M14 x 1.0	D5	1653006808								
M15 x 1.5	D6	1653007308	180.00	29.00	80.00	16.56	12.42	17.50		
M15 x 1.0	D5	1653007208								
M16 x 2.0	D7	1653007708	200.00	35.00	17.70	13.28	19.10			
M16 x 1.5	D6	1653007508								
M16 x 1.0	D4	1653007408	180.00	29.00	80.00	17.70	13.28	19.10		
M18 x 2.5	D7	1653008308								
M18 x 2.0	D6	4	1653008208	200.00	29.00	80.00	17.70	13.28	19.10	
M18 x 1.5			1653008108							
M18 x 1.0		D5	1653008008	200.00	35.00	19.30	14.47			
M20 x 2.5		D7	1653008708							
M20 x 2.0	D6	4	1653008608	200.00	35.00	19.30	14.47			
M20 x 1.5			1653008508							
M20 x 1.0		D5	1653008408	200.00	35.00	19.30	14.47			
M22 x 2.5		D7	1653009108							
M22 x 2.0	D6	4	1653009008	200.00	35.00	19.30	14.47			
M22 x 1.5			1653008908							
M22 x 1.0		D5	1653008808	200.00	35.00	19.30	14.47			
M24 x 3.0		D8	1653009508							
M24 x 2.0	D7	1653009408	200.00	35.00	19.30	14.47				
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.

osgtool.com

OSG USA, Inc. : 800-837-2223

OSG Canada, Ltd. : 905-632-8032 • OSG Royco (Mexico) : (52) 477 478-02-00

