



高效率・多功能丝锥

Vol.8

A-TAP

Highly Efficient Multi-Purpose Tap Series



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· A-SFT 标准切削锥长：2.5P
Standard chamfer length of A-SFT : 2.5P



再见了，烂牙！ 追加锥管螺纹

Newly expanded taper pipe tap lineup to help you achieve the perfect thread with no galling!

“即使是锥管螺纹，有没有一把丝锥能够加工出无烂牙的螺纹？”
为了回应客户的需求，我们追加了 A 丝锥管用型丝锥。

封面的内螺纹照片，是分别使用以往型与 A 丝锥在加工 SS400 时的对比图。

Manufacturers have demanded for “a reliable tap for taper pipe threads free of galling.”
We have answered such a calling with the new A-Tap series taper pipe tap lineup.

Catalog cover image features a comparison of hole quality of a conventional taper pipe tap and the A-Tap series taper pipe tap in SS400.



加工 SS400 材的照片
Image to process taper pipe thread in SS400 material

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Long Shank

铣刀柄型 52
End Mill Shank

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A-POT 46

■ 标记种类 Guide for Icons

1 材质 Tool Materials

CPM 粉末高速钢
Powder Metallurgy HSS (CPM)

HSSE 高钒高速钢
High Vanadium HSS

2 表面处理 Surface Treatment

V V 涂层
(复合多层涂层)
V (Composite multi-layered) Coating

3 柄部 Shank

SHANK h7 柄部精度表示。
Tolerance for Shank Diameter

4 螺旋角

45° 表示丝锥螺旋角
Helix angle of flute for taps

5 形状 Appearance

盲孔 Blind Hole 通孔 Through Hole

不带内冷 Non-Oil Hole 内冷油孔 With Oil Hole

OIL HOLE

M 公制螺纹 Metric Screw Thread U 美制螺纹 Unified Screw Thread

管用 Pipe Thread SHANK LONG 长柄 Long Shank

PIPE

嵌套螺纹用 Helicoil / EG / STI

你有攻丝方面的问题吗？

Do you have any problems with tapping?

多数的攻丝问题都是由排屑不畅所引起的。A 丝锥系列的出色的排屑性能使其能广泛的适用于各种切削材料和速度。

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.

螺纹加工的问题 TOP3 Tapping troubles		
No.1	折损, 崩刃 Breakage and chipping	26%
No.2	螺纹精度不良 Dimensional error	17%
No.3	烂牙, 刮痕 Galling	14%
	其他 Others	43%

2013 年上半年电话咨询统计所得
Source: OSG Technical Consultation Division

造成问题的
要因是“切屑”
Main factor is chip packing



A 丝锥还可以做到这些！

A-Tap takes it to another level.

稳定的切屑形状
锋利的
刀尖样式
Sharp Cutting Edge
Stabilizes chip shape

提高排屑速度
不等导程的槽沟
[PAT.]
Variable Lead
Flute [PAT.]
Accelerate chip
evacuation

高耐磨损性
V涂层
V Coating
High wear resistance

高耐磨损性
粉末高速钢
Powder Metallurgy
HSS (CPM)
High wear resistance

绝对出众的排屑性！

Chip Evacuation Redefined!



以往产品 Conventional Tap



A-SFT

高质量的内螺纹加工

High-Grade Internal Threading

无切痕、烂牙

No Galling



被切削材质：
SS400
Work Material:
Mild Steel

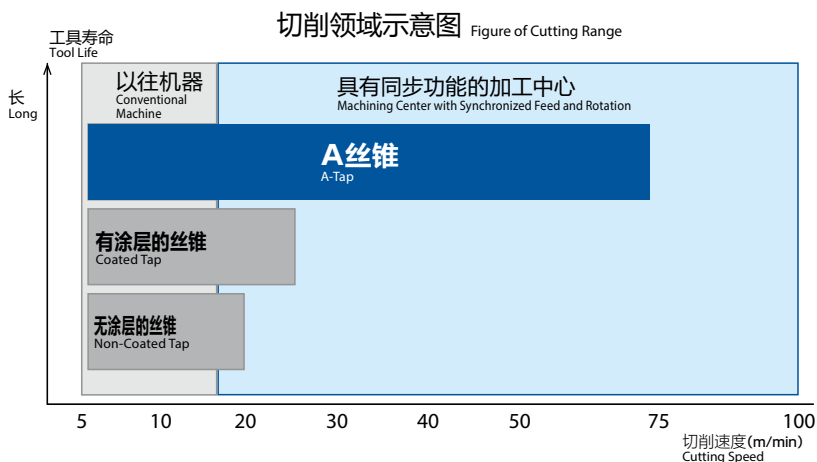


被切削材质：
SUS304
Work Material:
Stainless Steel



A 丝锥能适用于广泛的切削范围

Comparison of Cutting Range



- ※此图是使用水溶性切削油剂加工中、高碳素钢
- ※当切削速度在 15m/min 以上时，推荐使用有同步功能的机械
- ※因为使用条件的不同，最适合的速度也会有所变化，请根据实际加工数据进行选择
- ※Cutting range in medium and high carbon steel with water soluble coolant.
- ※Machining center with synchronized feed and rotation is recommended for more than 15m/min.
- ※Results may vary based on cutting condition. Please adjust speeds and feeds accordingly.

A 丝锥能适用于所有类型的加工设备

A-Tap is compatible with any type of machining equipment.

A 丝锥无论是手动攻丝机还是最新的加工中心，都能对应。当然，如果配合加工中心使用的话，可以发挥 A 丝锥最大的性能

A-Tap is compatible with various types of machining equipment, from manual drilling machines to the latest machining centers. A-Tap can maximize the performance of any machining center.



A 丝锥可以对应不锈钢，合金钢等各式各样的加工材料

Applies to a wide variety of work materials

A 丝锥可以对应不锈钢，合金钢等各式各样的加工材料

A-Tap excels in a wide variety of materials, including stainless steels and alloy steels.

特点
Features

切削条件
Cutting Conditions

加工情报
Cutting Data

A-SFT

M

U

A-POT

M

U

参考资料
References



■ A-SFT・A-LT-SFT (～ M24、2.5P)

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C		5-15	15-50			50-75		
合金鋼 Alloy Steel	SCM		5-10	10-15	15-30				
一般構造用 Mild Steel	SS400		5-20 ^(*)						
不锈钢 Stainless Steel	SUS304 SUS420		5-10	10-15					
铝合金延伸材 Aluminum	AC ADC			5-50					
球墨铸铁 Ductile Cast Iron	FCD			5-50					

■ A-SFT (～ M24、短切削锥型1.5P・1P Short Chamfer)

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C		3-15	15-30					
合金鋼 Alloy Steel	SCM		3-8 ^(*)						
一般構造用 Mild Steel	SS400		3-20 ^(*)						
不锈钢 Stainless Steel	SUS304 SUS420		3-8 ^(*)						
铝合金延伸材 Aluminum	AC ADC			3-30					
球墨铸铁 Ductile Cast Iron	FCD		3-15						

■ A-SFT (M27 ～、2.5P)・A-SFT(U)・A-SPT(G)・A-SFT HL・A-LT-SFT HL

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C		3-8	8-15					
合金鋼 Alloy Steel	SCM		3-8	8-15					
一般構造用 Mild Steel	SS400		3-15 ^(*)						
不锈钢 Stainless Steel	SUS304 SUS420		3-8						
铝合金延伸材 Aluminum	AC ADC			3-20					
球墨铸铁 Ductile Cast Iron	FCD		3-15						

■ A-SFT・A-LT-SFT (铣刀柄型 End Mill Shank)

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C		5-15	15-50			50-75		
合金鋼 Alloy Steel	SCM		5-10	10-15	15-30				
一般構造用 Mild Steel	SS400		5-20 ^(*)						
不锈钢 Stainless Steel	SUS304 SUS420		5-10	10-15					
铝合金延伸材 Aluminum	AC ADC			5-50					
球墨铸铁 Ductile Cast Iron	FCD			5-75					

推荐领域
Advisable

加工可能领域
Possible





■ A-TPT・A-S-TPT・A-SPT(Rp・NPS)

切削速度(m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C	2-5 5-10							
合金鋼 Alloy Steel	SCM	2-5 (*)							
一般構造用 Mild Steel	SS400	2-5 5-10							
不銹鋼 Stainless Steel	SUS304 SUS420	2-5							
鋁合金延伸材 Aluminum	AC ADC	2-5 5-10							
球墨鑄鐵 Ductile Cast Iron	FCD	2-5							

■ A-POT・A-LT-POT

切削速度(m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C	5-15 15-50 50-75							
合金鋼 Alloy Steel	SCM	5-10 10-30 30-50							
一般構造用 Mild Steel	SS400	5-15 15-50 50-75							
不銹鋼 Stainless Steel	SUS304 SUS420	5-15 15-30							
鋁合金延伸材 Aluminum	AC ADC	5-50							
球墨鑄鐵 Ductile Cast Iron	FCD	5-50							

■ A-POT・A-LT-POT (铣刀柄型 End Mill Shank)

切削速度(m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高炭素鋼 Medium Carbon Steel High Carbon Steel	S45C	5-15 15-75							
合金鋼 Alloy Steel	SCM	5-10 10-30 30-50							
一般構造用 Mild Steel	SS400	5-15 15-50 50-75							
不銹鋼 Stainless Steel	SUS304 SUS420	5-15 15-30							
鋁合金延伸材 Aluminum	AC ADC	5-50							
球墨鑄鐵 Ductile Cast Iron	FCD	5-75							

推荐領域
Advisable
 加工可能領域
Possible

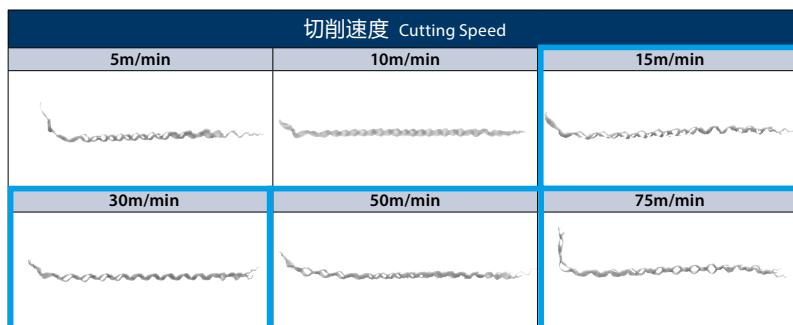
1. 切削速度請確認好實際加工情況後進行選定。
 2. 這張切削條件基準表是使用水溶性切削油機的情況
 3. 根據切削油劑的情況，有可能不能發揮十足的性能
- (*) 請注意加工領域。

1. Cutting speed should be adjusted according to the machining conditions.
 2. The indicated speeds and feeds are for tapping with water soluble oil.
 3. Depending on the coolant condition, it may not show a good results.
 4. Although taps with end mill shank are compatible with a collet holder, milling holder and etc., use a holder with a detent.
- (*) Please set cutting speed carefully.

攻丝速度和切屑形状 Cutting speed and shape of chips

使用工具 Tool	A-SFT M8×1.25 2.5P
切削材质 Work Material	S45C
孔尺寸 Drill Hole Size	φ6.8×18mm (盲孔) Blind
攻丝长度 Tapping Length	12mm (1.5D)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Synchronized Machining Center

- 即使变更切削速度，切屑形状也能稳定
- 即使在10m/min以下的切削速度，切屑形状也能稳定。随着高速切削时离心力的增加，使得切屑更易脱离丝锥



- The shape of chips is stable even if the tapping speed is high.
- Shape of chips is stable even if the tapping speed is 10m/min or less, however, separation of chip would improve tremendously by increasing the speed and centrifugal force.

推荐条件
Recommended Speed

切削速度与稳定性 Cutting speed and performance stability

使用工具 Tool	A-SFT M6×1 2.5P
切削材质 Work Material	S45C
孔尺寸 Drill Hole Size	φ5×16mm (盲孔) Blind
攻丝长度 Tapping Length	12mm (2D)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Synchronized Machining Center

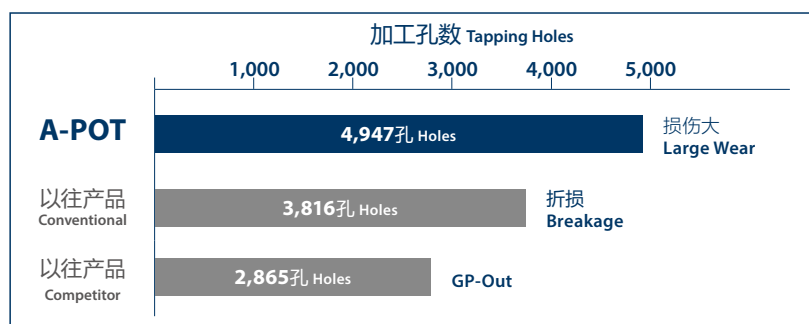
40m/min 切削时的切屑 Chip generated in 40m/min



在速度为15, 30, 40m/min 时进行测试，都能稳定加工
The results of tapping operations in 15, 30, 40m/min are all stable.

在充分利用加工中心能力的切削领域中发挥出色性能 A-POT maximizes the performance of machining center

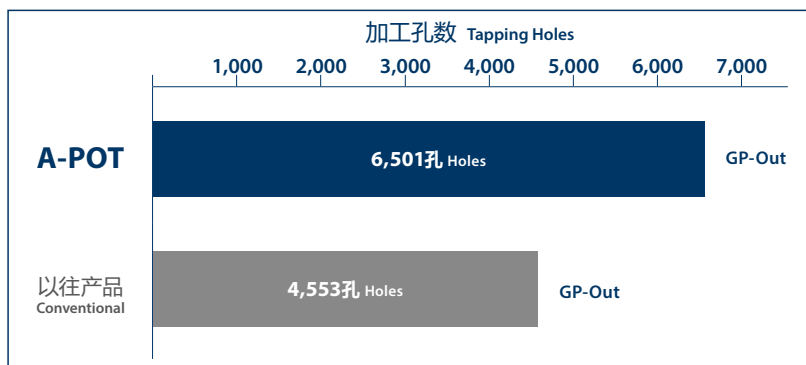
使用工具 Tool	A-POT M8×1.25
切削材质 Work Material	S50C
孔尺寸 Drill Hole Size	φ6.8×16mm (通孔) Through
攻丝长度 Tapping Length	16mm (2D)
切削速度 Cutting Speed	30m/min (1,190min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	卧式加工中心 (有同步进给功能) Horizontal Synchronized Machining Center



A 丝锥与其他公司产品 and 传统产品的性能相比
The advantage of A-POT over the competitors' and conventional taps was verified.

■ 高速加工 S45C (通孔) High speed machining of S45C (Through)

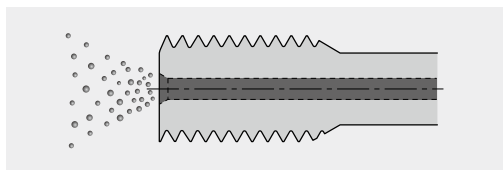
使用工具 Tool	A-POT	以往产品 Conventional Tap
尺寸 Size	M8×1.25	
切削材质 Work Material	S45C	
孔尺寸 Drill Hole Size	φ6.8×16mm (通孔) Though	
攻丝长度 Tapping Length	16mm (2D)	
切削速度 Cutting Speed	50m/min (1,990min ⁻¹)	
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)	
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Synchronized Machining Center	



A-POT (铣刀柄) 与以往产品相比, 耐久性约为1.5倍
A-POT (End Mill Shank) has achieved 1.5 times of durability versus conventional tool.

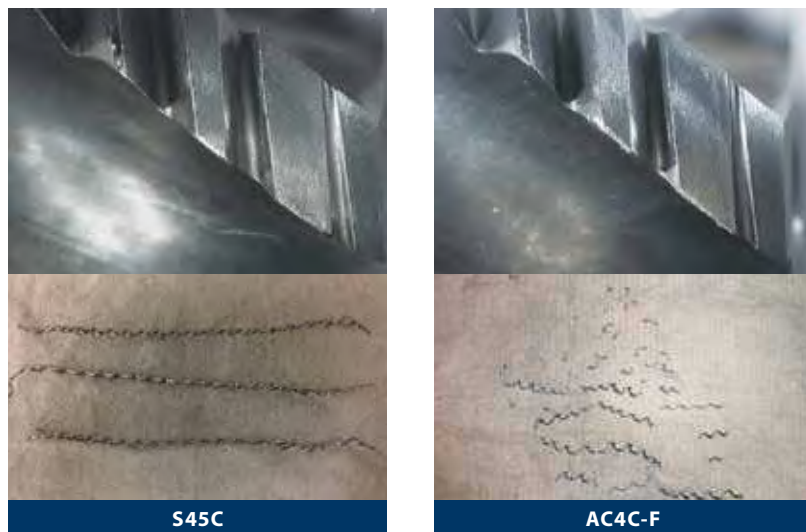
■ 十分稳定的供油即使 MQL 也能加工 MQL possible with sufficient and stable coolant supply

使用工具 Tool	A-SFT M8×1.25 2.5P
切削材质 Work Material	S45C AC4C-F
孔尺寸 Drill Hole Size	φ6.8×24mm (盲孔) Blind
攻丝长度 Tapping Length	16mm (2D)
切削速度 Cutting Speed	30m/min (1,194min ⁻¹)
切削油剂 Coolant	MQL 50cc/h (内部给油) (Internal)
使用机械 Machine	卧式加工中心 (有同步进给功能) Horizontal Synchronized Machining Center



非标品 (中心通孔) Center through coolant hole

■ 500孔加工后 Cutting edge after tapping 500 hole



加工500孔后也无大磨损
No significant damage was found even after tapping 500 holes.

大径加工 Threading in large hole

使用工具 Tool	A-SFT M36×4 2.5P	
切削材质 Work Material	SS400	SUS304
孔尺寸 Drill Hole Size	φ32×70mm (盲孔) Blind	
攻丝长度 Tapping Length	54mm (1.5D)	
切削速度 Cutting Speed	7m/min (62min ⁻¹)	
切削油剂 Coolant	无氯水溶性切削油剂 (20%) Water Soluble Chlorine-Free (20%)	
使用机械 Machine	卧式加工中心 Horizontal Machining Center	

以往的内螺纹烂牙问题较多的SS400与SUS材也能在水溶性油剂下加工

The use of water-soluble coolant is possible even in difficult-to-machine materials such as SS400 and stainless steels, which could not be achieved by conventional taps.



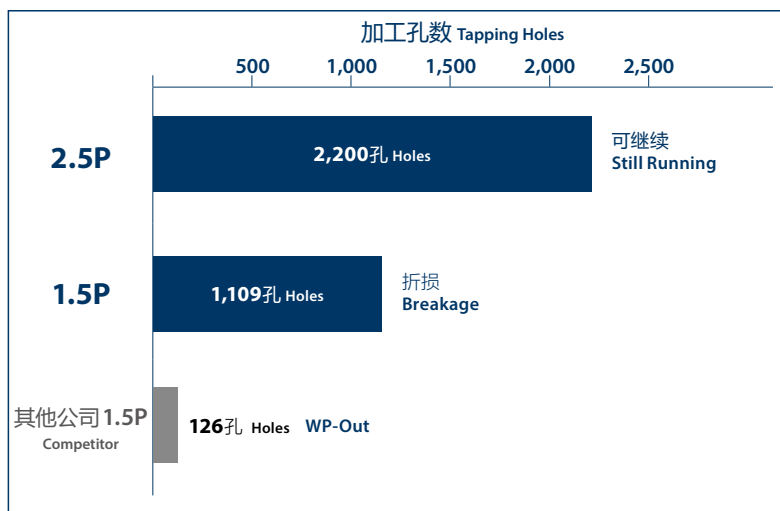
※内螺纹加工示意
Visual reference of internal threads. Result may differ based on actual machining condition.

	以往产品 Conventional Tap	A-SFT
SS400	✗ Galling	○ No Galling
SUS304	✗ Galling	○ No Galling

切削锥长与耐久度 Chamfer length & durability

使用工具 Tool	A-SFT M6×1
切削材质 Work Material	S45C
孔尺寸 Drill Hole Size	φ5×16mm (盲孔) Blind
攻丝长度 Tapping Length	12mm (2D)
切削速度 Cutting Speed	15m/min (796min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 Vertical Machining Center

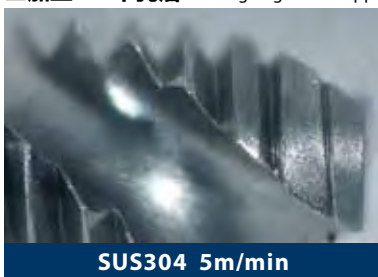
切削锥部在1.5P也能加工1000孔以上
The machining of over 1,000 holes is possible even with 1.5 chamfer length.



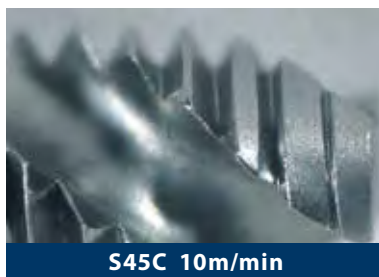
小径事例 Threading in small hole

使用工具 Tool	A-SFT M2×0.4 2.5P		
切削材质 Work Material	SUS304	S45C	
孔尺寸 Drill Hole Size	φ1.6×4.5mm (止り) Blind		
攻丝长度 Tapping Length	3mm (1.5D)		
切削速度 Cutting Speed	5m/min (800min ⁻¹)	10m/min (1,600min ⁻¹)	30m/min (4,800min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)		
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Synchronized Machining Center		

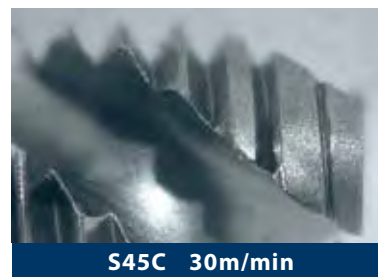
加工100个孔后 Cutting edge after tapping 100 hole



SUS304 5m/min



S45C 10m/min



S45C 30m/min

一把丝锥可以稳定加工 SUS304 与 S45C
A single tap for stable machining in SUS304 and S45C.

SUS304的2D 深孔加工 Deep hole tapping (2D) in stainless steel

使用工具 Tool	A-SFT M8×1.25 2.5P
切削材质 Work Material	SUS304
孔尺寸 Drill Hole Size	φ6.8×22mm (盲孔) Blind
攻丝长度 Tapping Length	16mm (2D)
切削速度 Cutting Speed	10m/min (398min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Synchronized Machining Center



不锈钢水溶性加工也能有拔群效果
High performance achieved in stainless steel with water soluble oil.

1,000孔加工后 Cutting edge after tapping 1,000 holes



■ 锥管螺纹 Processing of taper pipe threads

使用工具 Tool	A-TPT PT 1/8-28 2.5P		
切削材质 Work Material	SS400	FCD400	SUS304
孔尺寸 Drill Hole Size	φ8.2×16mm (通孔) Though		
基准径位置 Position of Gauge Plane	13mm		
切削速度 Cutting Speed	5m/min (164min ⁻¹)		
切削油剂 Coolant	无氯水溶性切削油剂(10%) Water Soluble Chlorine-Free (10%)		
使用机械 Machine	立式加工中心 (BT30) Vertical Machining Center		

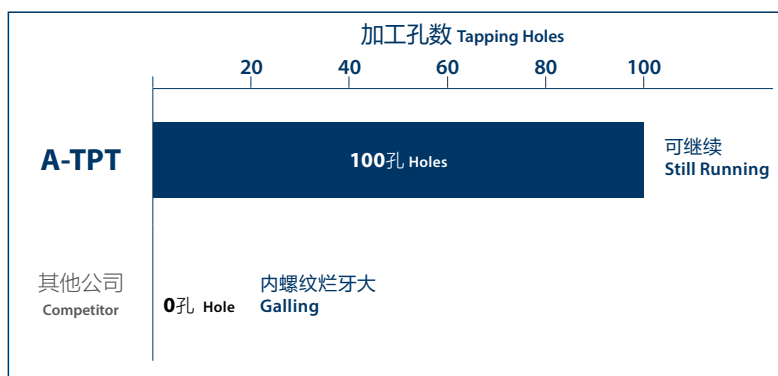


加工100孔后3种材料损伤小，且可继续使用。

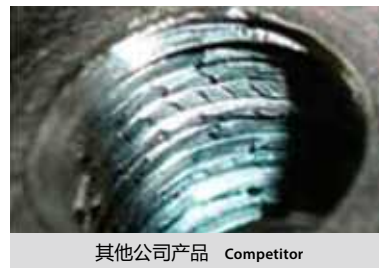
The taper pipe tap was observed with minimal wear and can continue to be used even after tapping 100 holes in three different work materials.

■ 锥管螺纹 Processing with taper pipe taps

使用工具 Tool	A-TPT PT 1/8-28 2.5P
切削材质 Work Material	SS400
孔尺寸 Drill Hole Size	φ8.2×16mm (通孔) Though
基准径位置 Position of Gauge Plane	13mm
切削速度 Cutting Speed	7m/min (230min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂(10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	卧式加工中心 Horizontal Machining Center



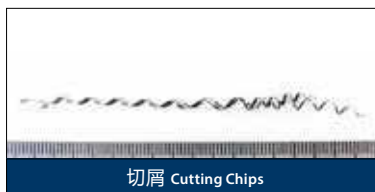
即使在其他公司产品不能加工的情况下也能稳定加工！
Stable performance can be achieved even under conditions where the competitor tool failed to process a single hole.



15-5PH的加工 Tapping in 15-5PH

使用工具 Tool	A-SFT HL No.10-32UNF
切削材质 Work Material	15-5PH (37HRC)
孔尺寸 Drill Hole Size	φ5×16mm (盲孔) Blind
攻丝长度 Tapping Length	10mm
切削速度 Cutting Speed	5m/min (275min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Synchronized Machining Center

航空机用的先进材料也能稳定加工！
Stable processing is possible even in advanced materials for aircraft!



特点
Features

切削条件
Cutting Conditions

加工情报
Cutting Data



A-SFT



A-POT



参考文献
References

带同步进给机能的加工中心的效果 Benefit of machining center with synchronized feed and rotation

使用工具 Tool	A-SFT M6×1 2.5P
切削材质 Work Material	S45C
孔尺寸 Drill Hole Size	φ5×16mm (盲孔) Blind
攻丝长度 Tapping Length	12mm (2D)
切削速度 Cutting Speed	15m/min (796min ⁻¹)
切削油剂 Coolant	无氯水溶性切削油剂 (10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 (有同步进给功能) Vertical Machining Center



以往的机械可以加工1,700孔以上，而具备同步进给机能的机械可以达到更高的耐久性。
Over 1,700 holes can be processed by using a conventional machining center, but performance can be further improved by using machining with synchronized feed and rotation.

■ 丝锥的耐久是由底孔决定的！

The tool life of a tap is determined by the drill used for pre-tapped hole!

使用工具 Tool	A-POT M10×1.5
攻丝长度 Tapping Length	19mm (通孔) Through
切削速度 Cutting Speed	20m/min (637min ⁻¹)
切削材质 Work Material	SUS304
切削油剂 Coolant	无氯水溶性切削油剂(10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	卧式加工中心(有同步进给功能) Horizontal Synchronized Machining Center

不同的两种钻头开孔后，用A-POT进行攻丝。WDO-SUS开底孔时，丝锥的耐久差最大1,570个孔。

Two different drills were used for the pre-tapped hole. Result demonstrates that with the use of ADO-SUS, tool life of A-POT can be extended by as many as 1,570 holes.

*底孔加工用钻头：3D、φ8.5、底孔深度19mm(通孔)

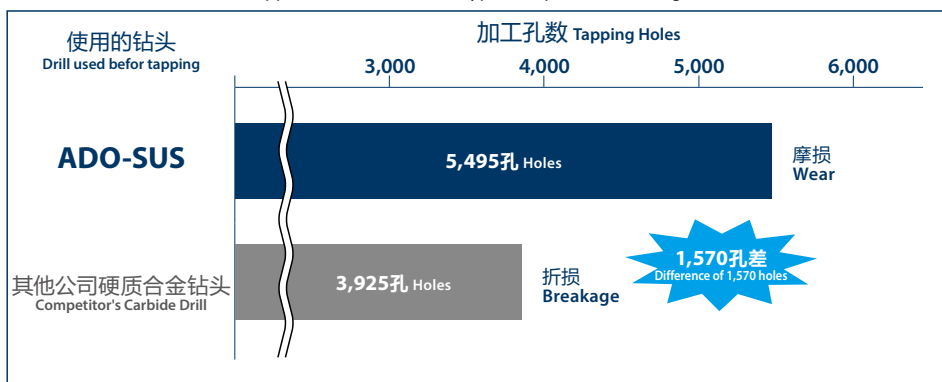
*Drills：3D, φ8.5, Depth of Hole 19mm (Through)

ADO-SUS 钻头：70m/min (2,630min⁻¹), 526mm/min (0.2mm/rev)

其他公司硬质合金钻头：60m/min (2,250min⁻¹), 450mm/min (0.2mm/rev)
Competitor's Carbide Drill

■ 不同钻头对应的丝锥加工孔数

Difference in the number of tapped holes based on drill type used prior to threading



■ 丝锥损伤状态 (加工3,500孔)

Wear on cutting edge after tapping 3,500 holes



A-Drill 的优势在这里！

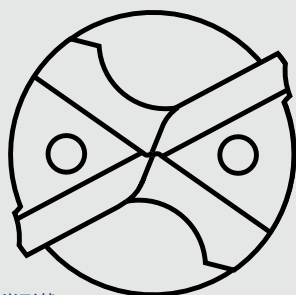
The A-Drill Advantage

SUS·TI用 硬质合金钻头
ADO Carbide Drill for SUS·TI

ADO-SUS

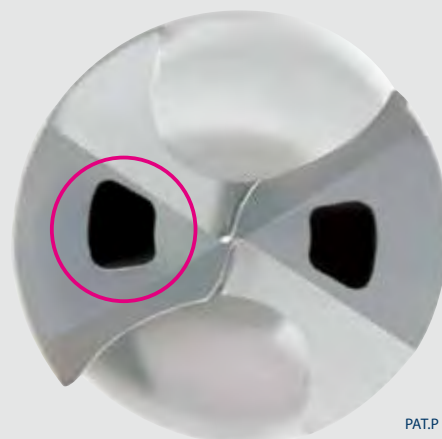
ADO-SUS 采用了新型油孔形状 “MEGA COOLER”

By adopting the new oil hole shape “MEGA COOLER,” coolant flow velocity can be increased by 120%



切削油剂供给量
Feed Rate of Coolant

120%



PAT.P in China

MEGA COOLER 是 OSG 注册商标。
MEGA COOLER is registered trademark of OSG Corporation.

■ 丝锥的耐久由底孔决定！ The tool life of a tap is determined by the drill used for pre-tapped hole!

使用工具 Tool	A-POT M10×1.5
攻丝长度 Tapping Length	20mm (通孔) Through
切削速度 Cutting Speed	30m/min(955min ⁻¹)
切削材质 Work Material	SS400
切削油剂 Coolant	无氯水溶性切削油剂(10%) Water Soluble Chlorine-Free (10%)
使用机械 Machine	卧式加工中心(有同步进给功能) Horizontal Synchronized Machining Center

其他公司通用钻头在退刀时很容易产生毛刺导致丝锥耐久不稳定。另一边，ADF加工出来的底孔可以使丝锥耐久稳定。

With the use of a competitor's carbide general-purpose drill, large burrs were left resulting in instability of the after tapping process. With the ADF, on the other hand, stable tapping performance can be achieved.

*底孔加工用钻头：φ8.5、底孔深度20mm(通孔)

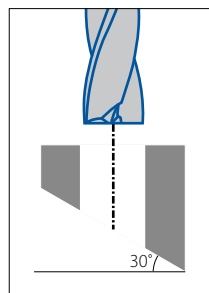
*Drills: φ8.5, Depth of Hole 20mm (Through)

50m/min (1,873min⁻¹), 318mm/min (0.17mm/rev)

■ 不同钻头退刀面的比较 Damage comparison based on drill type used prior to threading

损伤状态 State of Damage	ADF使用 Drilled by ADF	使用其他通用钻头 Drilled by Competitor's General Carbide Drill
刃尖 (加工200孔后的丝锥) Wear on cutting edge after tapping 200 holes		
	可继续 Still Running	崩刃大 Chipping
退刀面 Hole Exit		

■ 加工模型图 Application



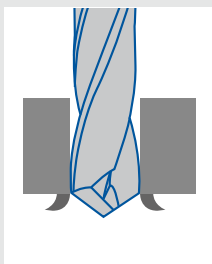
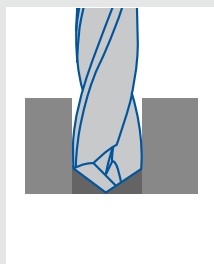
A-Drill 的优势在这里！ The A-Drill Advantage

硬质合金平头钻 ADF
Carbide Flat Drill

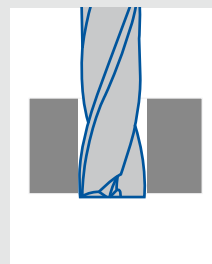
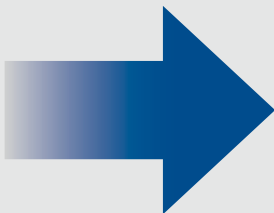
ADF的底刃形状是平的
With a flat cutting edge geometry,

由于切削阻力，推力集中在一个方向上，所以可以实现稳定加工

cutting resistance can be reduced with thrust force concentrated in one direction, enabling stable machining.



通用钻头 General Drills



ADF先端平头
ADF (flat cutting edge)



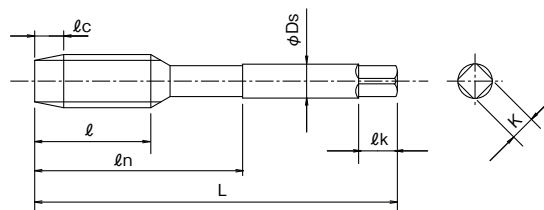
A-SFT

■ 切削锥长 (ℓ_c) 2.5P、1.5P、1P

Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓ_c	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 D_s	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325234	M 1.4 × 0.3	2.5P	STD	OH1	34	6	—	3	2	1.1
8325239	M 1.6 × 0.35	2.5P	STD	OH1.5	36	7	—	3	2	1.25
8325244	M 1.7 × 0.35	2.5P	STD	OH1.5	36	8	—	3	2	1.35
8325249	M 2 × 0.4	2.5P	STD	OH1.5	40	3.2	10	3	2	1.6
8325630			STD+1	OH2.5						
8325631			STD+2	OH3.5						
8327449		1.5P	STD	OH1.5						
8325250	M 2 × 0.25	2.5P	STD	OH1	40	3.2	10	3	2	1.75
8325632			STD+1	OH2						
8327450		1.5P	STD	OH1						
8325252	M 2.2 × 0.45	2.5P	STD	OH2	42	3.6	11	3	2	1.75
8325634			STD+1	OH3						
8327452		1.5P	STD	OH2						
8325253	M 2.2 × 0.25	2.5P	STD	OH1	42	3.6	11	3	2	1.95
8325636			STD+1	OH2						
8327453		1.5P	STD	OH1						
8325254	M 2.3 × 0.4	2.5P	STD	OH1.5	42	3.6	12	3	2	1.9
8325638			STD+1	OH2.5						
8327454		1.5P	STD	OH1.5						
8325259	M 2.5 × 0.45	2.5P	STD	OH2	44	3.6	13	3	2	2.05
8325640			STD+1	OH3						
8325641			STD+2	OH4						
8327459		1.5P	STD	OH2						
8325262	M 2.5 × 0.35	2.5P	STD	OH1.5	44	3.6	13	3	2	2.15
8325642			STD+1	OH2.5						
8327462		1.5P	STD	OH1.5						
8325264	M 2.6 × 0.45	2.5P	STD	OH2	44	3.6	13	3	2	2.15
8325644			STD+1	OH3						
8327464		1.5P	STD	OH2						



优势在这！ Key Point

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所以适于无底孔余量的加工。

The entire lineup of A-SFT is without external center on the screw side,
which is ideal for applications with tight clearance at the bottom of the hole.



FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325269	M 3 × 0.5	2.5P	STD	OH2	46	4	19	4	3	2.5
8325650			STD+1	OH3						
8325651			STD+2	OH4						
8326711		1.5P	STD	OH2						
8326811		1P	STD	OH2						
8325272	M 3 × 0.35	2.5P	STD	OH2	46	4	19	4	3	2.65
8325652			STD+1	OH3						
8327472		1.5P	STD	OH2						
8325276	M 3.5 × 0.6	2.5P	STD	OH2	48	4.8	20	4	3	2.9
8325654			STD+1	OH3						
8327476		1.5P	STD	OH2						
8325279	M 3.5 × 0.35	2.5P	STD	OH2	48	4.8	20	4	3	3.15
8325655			STD+1	OH3						
8327479		1.5P	STD	OH2						
8325283	M 4 × 0.7	2.5P	STD	OH3	52	5.6	21	5	3	3.3
8325660			STD+1	OH4						
8325661			STD+2	OH5						
8326714		1.5P	STD	OH3						
8326814		1P	STD	OH3						
8325286	M 4 × 0.5	2.5P	STD	OH2	52	5.6	21	5	3	3.5
8325662			STD+1	OH3						
8327486		1.5P	STD	OH2						

■ 标记的说明请参照P.2

■ 柄四方部的长和宽，请参见61页

1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时，也会发生内螺纹扩大的问题，请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用，(除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

■ See p. 2 for explanation of marks.

■ See p.61 for shank square length(ℓk) and width(K).

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
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The recommended drill hole size that are not listed on JIS is as reference.

NEXT



特点
Features

切削条件
Cutting Conditions

加工情报
Cutting Data



A-SFT

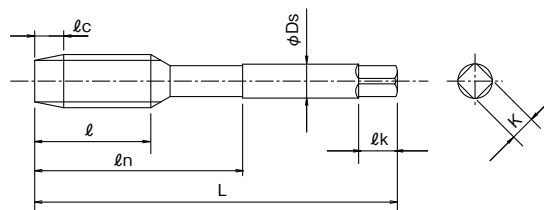


A-POT



参考资料
References

A-SFT



- 切削锥长 (ℓc) 2.5P、1.5P、1P
Chamfer Length
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FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325287	M 4.5 × 0.75	2.5P	STD	OH2	55	6	21	5	3	3.8
8325664			STD+1	OH3						
8327487		1.5P	STD	OH2						
8325288	M 4.5 × 0.5	2.5P	STD	OH2	55	6	21	5	3	4
8325665			STD+1	OH3						
8327488		1.5P	STD	OH2						
8325290	M 5 × 0.8	2.5P	STD	OH3	60	6.4	24	5.5	3	4.2
8325668			STD+1	OH4						
8325669			STD+2	OH5						
8326717		1.5P	STD	OH3						
8326817		1P	STD	OH3						
8325293	M 5 × 0.5	2.5P	STD	OH2	60	6.4	24	5.5	3	4.5
8325673			STD+1	OH3						
8327493		1.5P	STD	OH2						
8325295	M 5.5 × 0.5	2.5P	STD	OH2	60	7.2	25	5.5	3	5
8325676			STD+1	OH3						
8327495		1.5P	STD	OH2						
8325297	M 6 × 1	2.5P	STD	OH3	62	8	29	6	3	5
8325678			STD+1	OH4						
8325679			STD+2	OH5						
8326720		1.5P	STD	OH3						
8326820		1P	STD	OH3						
8325300	M 6 × 0.75	2.5P	STD	OH2	62	8	29	6	3	5.3
8325680			STD+1	OH3						
8327500		1.5P	STD	OH2						

NEXT



优势在这！

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FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325302	M 6 × 0.5	2.5P	STD	OH2	62	8	29	6	3	5.5
8325681			STD+1	OH3						
8327502		1.5P	STD	OH2						
8325304	M 7 × 1	2.5P	STD	OH3	65	12	33	6.2	3	6
8325684			STD+1	OH4						
8327504		1.5P	STD	OH3						
8325305	M 7 × 0.75	2.5P	STD	OH2	65	9	33	6.2	3	6.3
8325685			STD+1	OH3						
8327505		1.5P	STD	OH2						
8325307	M 8 × 1.25	2.5P	STD	OH3	70	15	37	6.2	3	6.8
8325688			STD+1	OH4						
8325689			STD+2	OH5						
8326723		1.5P	STD	OH3						
8326823		1P	STD	OH3						
8325311	M 8 × 1	2.5P	STD	OH3	70	12	37	6.2	3	7
8325690			STD+1	OH4						
8327511		1.5P	STD	OH3						
8325312	M 8 × 0.75	2.5P	STD	OH3	70	12	37	6.2	3	7.3
8325691			STD+1	OH4						
8327512		1.5P	STD	OH3						
8325314	M 9 × 1.25	2.5P	STD	OH3	72	15	38	7	3	7.8
8325694			STD+1	OH4						
8327514		1.5P	STD	OH3						

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3. 使用进给不稳定的机械时，也会发生内螺纹扩大的问题，请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧 JIS2 级用，(除了旧 JIS 的规格没有的内螺纹) JIS 规格中没有的内螺纹底孔径仅供参考。

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■ See p.61 for shank square length(ℓk) and width(K).

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The recommended drill hole size that are not listed on JIS is as reference.

NEXT



特点
Features

切削条件
Cutting Conditions

加工情报
Cutting Data



A-SFT

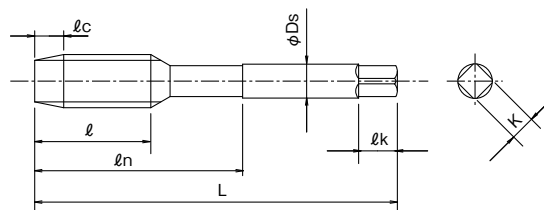


A-POT



参考文献
References

A-SFT



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Chamfer Length
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FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325315	M 9 × 1	2.5P	STD	OH3	72	12	38	7	3	8
8325695			STD+1	OH4						
8327515		1.5P	STD	OH3						
8325316	M 9 × 0.75	2.5P	STD	OH3	72	12	38	7	3	8.3
8325696			STD+1	OH4						
8327516		1.5P	STD	OH3						
8325317	M 10 × 1.5	2.5P	STD	OH3	75	18	41	7	3	8.5
8325700			STD+1	OH4						
8325701			STD+2	OH5						
8326726		1.5P	STD	OH3						
8326826		1P	STD	OH3						
8325321	M 10 × 1.25	2.5P	STD	OH3	75	15	41	7	3	8.8
8325702			STD+1	OH4						
8326729		1.5P	STD	OH3						
8326829		1P	STD	OH3						
8325324	M 10 × 1	2.5P	STD	OH3	75	15	41	7	3	9
8325703			STD+1	OH4						
8327524		1.5P	STD	OH3						
8325325	M 10 × 0.75	2.5P	STD	OH3	75	15	41	7	3	9.3
8325704			STD+1	OH4						
8327525		1.5P	STD	OH3						
8325327	M 11 × 1.5	2.5P	STD	OH3	80	18	48	8	3	9.5
8325710			STD+1	OH4						
8327527		1.5P	STD	OH3						

NEXT



FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325328	M 11 × 1	2.5P	STD	OH3	80	15	48	8	3	10
8325714			STD+1	OH4						
8327528		1.5P	STD	OH3						
8325329	M 11 × 0.75	2.5P	STD	OH3	80	15	48	8	3	10.3
8325715			STD+1	OH4						
8327529		1.5P	STD	OH3						
8325330	M 12 × 1.75	2.5P	STD	OH4	82	21	48	8.5	3	10.3
8325718			STD+1	OH5						
8325719			STD+2	OH6						
8326732		1.5P	STD	OH4						
8326832		1P	STD	OH4						
8325334	M 12 × 1.5	2.5P	STD	OH3	82	18	48	8.5	3	10.5
8325720			STD+1	OH4						
8327534		1.5P	STD	OH3						
8325337	M 12 × 1.25	2.5P	STD	OH3	82	18	48	8.5	3	10.8
8325721			STD+1	OH4						
8326736		1.5P	STD	OH3						
8326836		1P	STD	OH3						
8325340	M 12 × 1	2.5P	STD	OH3	82	18	48	8.5	3	11
8325722			STD+1	OH4						
8327540		1.5P	STD	OH3						
8325347	M 14 × 2	2.5P	STD	OH4	88	24	48	10.5	3	12
8325730			STD+1	OH5						
8327547		1.5P	STD	OH4						
8325350	M 14 × 1.5	2.5P	STD	OH3	88	18	48	10.5	3	12.5
8325731			STD+1	OH4						
8327550		1.5P	STD	OH3						
8325352	M 14 × 1.25	2.5P	STD	OH3	88	18	48	10.5	3	12.8
8325732			STD+1	OH4						
8327552		1.5P	STD	OH3						

- 标记的说明请参照P.2
 ■ 柄四方部的长和宽, 请参见61页

1. 精度栏  是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用, (除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

- See p. 2 for explanation of marks.
 ■ See p.61 for shank square length(ℓk) and width(K).

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.

NEXT

特点
Features切削条件
Cutting Conditions加工情报
Cutting Data

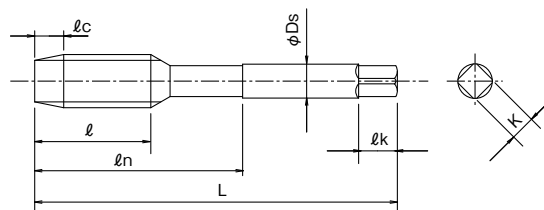
A-SFT



A-POT

参考资料
References

A-SFT



- 切削锥长 (ℓc) 2.5P、1.5P、1P
Chamfer Length
- A-SFT为全尺寸突顶尖去除品
The entire lineup of A-SFT is without external center on the screw side.



FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325354	M 14 × 1	2.5P	STD	OH3	88	18	48	10.5	3	13
8325733			STD+1	OH4						
8325355	M 15 × 1.5	2.5P	STD	OH3	95	18	52	10.5	3	13.5
8325736			STD+1	OH4						
8325356	M 15 × 1	2.5P	STD	OH3	95	18	52	10.5	3	14
8325737			STD+1	OH4						
8325357	M 16 × 2	2.5P	STD	OH4	95	24	52	12.5	3	14
8325740			STD+1	OH5						
8327557		1.5P	STD	OH4						
8325360	M 16 × 1.5	2.5P	STD	OH3	95	18	52	12.5	3	14.5
8325741			STD+1	OH4						
8327560		1.5P	STD	OH3						
8325362	M 16 × 1	2.5P	STD	OH3	95	18	52	12.5	3	15
8325742			STD+1	OH4						
8325364	M 17 × 1.5	2.5P	STD	OH3	100	18	55	13	3	15.5
8325745			STD+1	OH4						
8325366	M 17 × 1	2.5P	STD	OH3	100	18	55	13	3	16
8325746			STD+1	OH4						
8325367	M 18 × 2.5	2.5P	STD	OH5	100	30	55	14	4	15.5
8325749			STD+1	OH6						
8327567		1.5P	STD	OH5						
8325369	M 18 × 2	2.5P	STD	OH4	100	24	55	14	4	16
8325750			STD+1	OH5						
8327569		1.5P	STD	OH4						

NEXT



FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325370	M 18 × 1.5	2.5P	STD	OH4	100	24	55	14	4	16.5
8325751			STD+1	OH5						
8327570		1.5P	STD	OH4						
8325372	M 18 × 1	2.5P	STD	OH3	100	24	55	14	4	17
8325752			STD+1	OH4						
8325377	M 20 × 2.5	2.5P	STD	OH5	105	30	58	15	4	17.5
8325757			STD+1	OH6						
8327577		1.5P	STD	OH5						
8325379	M 20 × 2	2.5P	STD	OH4	105	24	58	15	4	18
8325758			STD+1	OH5						
8327579		1.5P	STD	OH4						
8325380	M 20 × 1.5	2.5P	STD	OH4	105	24	58	15	4	18.5
8325759			STD+1	OH5						
8327580		1.5P	STD	OH4						
8325382	M 20 × 1	2.5P	STD	OH3	105	24	58	15	4	19
8325760			STD+1	OH4						
8325387	M 22 × 2.5	2.5P	STD	OH5	115	30	63	17	4	19.5
8325763			STD+1	OH6						
8327587		1.5P	STD	OH5						
8325389	M 22 × 2	2.5P	STD	OH4	115	24	63	17	4	20
8325764			STD+1	OH5						
8327589		1.5P	STD	OH4						
8325390	M 22 × 1.5	2.5P	STD	OH4	115	24	63	17	4	20.5
8325765			STD+1	OH5						
8327590		1.5P	STD	OH4						
8325392	M 22 × 1	2.5P	STD	OH3	115	24	63	17	4	21
8325766			STD+1	OH4						
8325397	M 24 × 3	2.5P	STD	OH5	120	36	66	19	4	21
8325769			STD+1	OH6						
8327597		1.5P	STD	OH5						

■ 标记的说明请参照P.2

■ 柄四方部的长和宽, 请参见61页

1. 精度栏  是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用, (除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

■ See p.2 for explanation of marks.

■ See p.61 for shank square length(ℓk) and width(K).

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard.
The recommended drill hole size that are not listed on JIS is as reference.

NEXT

特点
Features切削条件
Cutting Conditions加工情报
Cutting Data

A-SFT

参考文献
References

A-SFT

■ 切削锥长 (ℓ_c) 2.5P、1.5P、1P

Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



切削条件 P.5 ~ P.6

FROM

螺纹种类: M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓ_c	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 D_s	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325399	M 24 × 2	2.5P	STD	OH4	120	24	66	19	4	22
8325770			STD+1	OH5						
8327599		1.5P	STD	OH4						
8325400	M 24 × 1.5	2.5P	STD	OH4	120	24	66	19	4	22.5
8325771			STD+1	OH5						
8327600		1.5P	STD	OH4						
8325402	M 24 × 1	2.5P	STD	OH3	120	24	66	19	4	23
8325772			STD+1	OH4						

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽, 请参见 61 页

■ See p. 2 for explanation of marks.

■ See p.61 for shank square length (ℓ_k) and width (K).

1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧 JIS2 级用, (除了旧 JIS 的规格没有的内螺纹) JIS 规格中没有的内螺纹底孔径仅供参考。

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.

优势在这!

Key Point

加工大型部件时 For the machining of large parts

1. 长槽长及悬伸可以防止切屑问题!

Long flute and overhang length geometry minimizes chip evacuation troubles!

· 全长: 加长的 DIN 规格

· Total length: DIN standard (longer than conventional)

· 柄部: 以往 JIS 规格

· Shank: JIS standard (conventional)

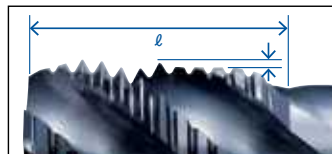
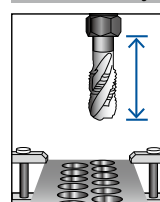
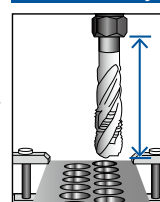
2. 半牙处理防止崩刃!

Half thread ground off to prevent chipping!

3. M27 以上的产品全都有内冷却孔! 同样对应加工点给油困难的大型零部件。

无论是“内部给油”还是“外部给油”, 都可稳定加工。

Available with internal coolant holes! Capable of machining large components, which are difficult to feed coolant to the work area. Stable machining can be ensured with both internal and external coolant supply.

JIS 规格全长
JIS standard overall lengthDIN 规格全长
DIN standard overall length

A-SFT

■ 切削锥长 (ℓ_c) 2.5P

Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 D_s	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8326605	M 27 × 3	STD	OH5	160	36	79	20	4	24
8326608	M 27 × 1.5	STD	OH4	140	24	79	20	4	25.5
8326614	M 30 × 3.5	STD	OH5	180	42	88	23	4	26.5
8326615	M 30 × 3	STD	OH5	180	36	88	23	4	27
8326618	M 30 × 1.5	STD	OH4	150	36	88	23	4	28.5
8326624	M 33 × 3.5	STD	OH5	180	42	95	25	4	29.5
8326625	M 33 × 3	STD	OH5	180	36	95	25	4	30
8326628	M 33 × 1.5	STD	OH4	160	36	92	25	4	31.5
8326633	M 36 × 4	STD	OH6	200	48	104	28	4	32
8326635	M 36 × 3	STD	OH6	200	36	104	28	4	33
8326638	M 36 × 1.5	STD	OH4	170	36	97	28	4	34.5
8326643	M 39 × 4	STD	OH6	200	48	112	30	4	35
8326652	M 42 × 4.5	STD	OH6	200	54	118	32	4	37.5
8326655	M 42 × 3	STD	OH6	200	48	118	32	4	39
8326658	M 42 × 1.5	STD	OH4	170	48	88	32	4	40.5
8326659	M 45 × 4.5	STD	OH6	220	54	128	35	4	40.5
8326661	M 48 × 5	STD	OH6	250	60	137	38	4	43
8326665	M 48 × 3	STD	OH6	225	48	137	38	4	45
8326668	M 52 × 5	STD	OH7	250	60	147	42	4	47
8326670	M 56 × 5.5	STD	OH8	250	66	153	44	4	50.5

■ 标记的说明请参照P.2

■ 柄四方部的长和宽, 请参见61页

1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用, (除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

■ See p. 2 for explanation of marks.

■ See p.61 for shank square length(ℓ_k) and width(K).

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.

A-SFT

■ 切削锥长 (ℓ_c) 2.5P

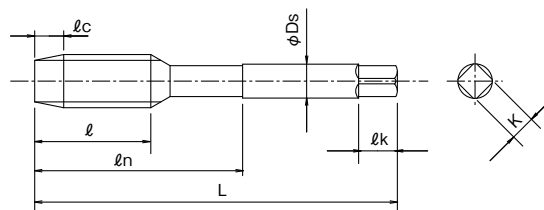
Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



切削条件 P.5 ~ P.6



螺纹种类：U

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8327221	No. 4 - 40UNC	STD	OH2	44	5.1	17	3	2	2.3
8327227	No. 5 - 40UNC	STD	OH2	46	5.1	19	4	2	2.6
8327233	No. 6 - 32UNC	STD	OH2	48	6.4	21	4	2	2.8
8327240	No. 8 - 32UNC	STD	OH2	52	6.4	21	5	2	3.4
8327246	No. 10 - 24UNC	STD	OH2	60	8.5	24	5.5	2	3.8
8327249	No. 10 - 32UNF	STD	OH2	60	8.5	24	5.5	2	4.1
8327258	1/4 - 20UNC	STD	OH3	62	10.2	29	6	2	5.1
8327261	1/4 - 28UNF	STD	OH2	62	10.2	29	6	2	5.5
8327267	5/16 - 18UNC	STD	OH3	70	17	37	6.1	3	6.6
8327270	5/16 - 24UNF	STD	OH3	70	13	37	6.1	3	6.9
8327276	3/8 - 16UNC	STD	OH3	75	19	41	7	3	8
8327282	3/8 - 24UNF	STD	OH3	75	13	41	7	3	8.5
8327291	7/16 - 14UNC	STD	OH3	80	22	48	8	3	9.4
8327294	7/16 - 20UNF	STD	OH3	80	15	48	8	3	9.9
8327300	1/2 - 13UNC	STD	OH3	85	23	48	9	3	10.8
8327306	1/2 - 20UNF	STD	OH3	85	15	48	9	3	11.5
8327312	9/16 - 12UNC	STD	OH4	90	25	48	10.5	3	12.2
8327315	9/16 - 18UNF	STD	OH3	90	17	48	10.5	3	12.9
8327319	5/8 - 11UNC	STD	OH4	95	28	52	12	3	13.6
8327321	5/8 - 18UNF	STD	OH3	95	17	52	12	3	14.5
8327325	3/4 - 10UNC	STD	OH4	105	31	58	14	4	16.5
8327327	3/4 - 16UNF	STD	OH3	105	19	58	14	4	17.5
8327331	7/8 - 9UNC	STD	OH5	115	34	63	17	4	19.5
8327333	7/8 - 14UNF	STD	OH4	115	22	63	17	4	20.5

■ 标记的说明请参照P.2

■ 柄四方部的长和宽，请参见61页

1. 精度栏 是2Bめねじ相当適応のタップ推奨精度です。

2. 丝锥精度不能保证内螺纹精度。

3. 使用进给不稳定的机械时，也会发生内螺纹扩大的问题，请务必注意。

4. 不推荐再研磨。

5. 精度栏是相当于2级内螺纹适应的丝锥推荐精度。

推荐的钻孔尺寸没有作为参考列入JIS中。

■ See p. 2 for explanation of marks.

■ See p.61 for shank square length(ℓ_k) and width(K).

1. The recommended tap limit corresponds to JIS 2 B internal thread standard.

2. Tap limit does not guarantee thread limit for the internal thread after tapping.

3. Stable feed control machines are recommended to avoid over size tapping.

4. Regrinding is not recommended.

5. The recommended tap limit corresponds to JIS 2 B internal thread standard (with the exception of internal threads not listed in the JIS standard).

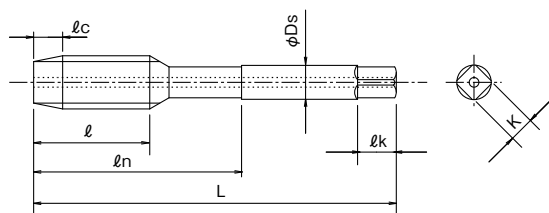
The recommended drill hole size that are not listed on JIS is as reference.



A-SFT



- 切削锥长 (ℓ_c) 2.5P
Chamfer Length
- A-SFT为全尺寸突顶尖去除品
The entire lineup of A-SFT is without external center on the screw side.



螺纹种类: U

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327337	1 - 8UNC	STD	OH5	160	38	88	20	4	22.2
8327345	1 1/8 - 8UN	STD	OH5	180	38	97	22	4	25.5
8327352	1 1/4 - 8UN	STD	OH5	180	38	100	24	4	28.7
8327358	1 3/8 - 8UN	STD	OH5	200	38	115	26	4	31.8
8327364	1 1/2 - 8UN	STD	OH6	200	38	115	30	4	35
8327367	1 5/8 - 8UN	STD	OH6	200	38	115	32	4	38.2
8327370	1 3/4 - 8UN	STD	OH6	200	51	103	35	4	41.4
8327374	1 7/8 - 8UN	STD	OH6	225	51	130	38	4	44.5
8327376	2 - 8UN	STD	OH6	225	51	122	40	4	47.7

- 标记的说明请参照P.2
- 柄四方部的长和宽, 请参见61页

1. 精度栏 $\square$ は2Bめねじ相当適応のタップ推奨精度です。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 精度栏是相当于2级内螺纹适应的丝锥推荐精度。

推荐的钻孔尺寸没有作为参考列入 JIS 中。

- See p. 2 for explanation of marks.
- See p.61 for shank square length(ℓ_k) and width(K).

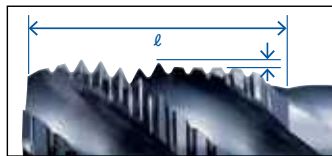
1. The recommended tap limit corresponds to JIS 2 B internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS 2 B internal thread standard (with the exception of internal threads not listed in the JIS standard).

The recommended drill hole size that are not listed on JIS is as reference.

优势在这! Key Point

大型部件加工用 For the machining of large parts

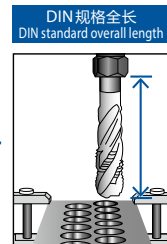
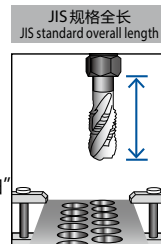
1. 长槽长及悬伸可以防止切屑问题!
Long flute and overhang length geometry minimizes chip evacuation troubles!
 - 全长: 加长的 DIN 规格
 - Total length: DIN standard (longer than conventional)
 - 柄部: 以往 JIS 规格
 - Shank: JIS standard (conventional)



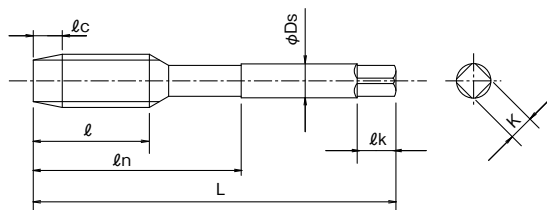
2. 半牙处理防止崩刃!
Half thread ground off to prevent chipping!

3. M27 以上的产品全都有内冷油孔! 同样对应加工点给油困难的大型零部件。无论是“内部给油”还是“外部给油”, 都可稳定加工。

Available with internal coolant holes! Capable of machining large components, which are difficult to feed coolant to the work area. Stable machining can be ensured with both internal and external coolant supply.



A-LT-SFT



- 切削锥长 (ℓc) 2.5P
Chamfer Length
- A-SFT为全尺寸突顶尖去除品
The entire lineup of A-SFT is without external center on the screw side.



螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8326202	M2 ×0.4 × 80	STD	OH1.5	80	3.2	10	3	2	1.6
8326201	M2 ×0.25 × 80	STD	OH1	80	3.2	10	3	2	1.75
8326204	M2.2 ×0.45 × 80	STD	OH2	80	3.6	11	3	2	1.75
8326203	M2.2 ×0.25 × 80	STD	OH1	80	3.6	11	3	2	1.95
8326205	M2.3 ×0.4 × 80	STD	OH1.5	80	3.6	12	3	2	1.9
8326207	M2.5 ×0.45 × 80	STD	OH2	80	3.6	13	3	2	2.05
8326206	M2.5 ×0.35 × 80	STD	OH1.5	80	3.6	13	3	2	2.15
8326208	M2.6 ×0.45 × 80	STD	OH2	80	3.6	13	3	2	2.15
8326210	M3 ×0.5 × 100	STD	OH2	100	4	19	4	3	2.5
8326209	M3 ×0.35 × 100	STD	OH2	100	4	19	4	3	2.65
8326212	M3.5 ×0.6 × 100	STD	OH2	100	4.8	19	4	3	2.9
8326211	M3.5 ×0.35 × 100	STD	OH2	100	4.8	19	4	3	3.15
8326214	M4 ×0.7 × 100	STD	OH3	100	5.6	21	5	3	3.3
8326213	M4 ×0.5 × 100	STD	OH2	100	5.6	21	5	3	3.5
8326216	M4.5 ×0.75 × 100	STD	OH2	100	6	21	5	3	3.8
8326215	M4.5 ×0.5 × 100	STD	OH2	100	6	21	5	3	4
8326218	M5 ×0.8 × 100	STD	OH3	100	6.4	24	5.5	3	4.2
8326217	M5 ×0.5 × 100	STD	OH2	100	6.4	24	5.5	3	4.5
8326219	M5.5 ×0.5 × 100	STD	OH2	100	7.2	25	5.5	3	5
8326222	M6 ×1	STD	OH3	100	8	29	6	3	5
8326223				150					
8326220	M6 ×0.75	STD	OH2	100	8	29	6	3	5.3
8326221				150					
8326226	M7 ×1	STD	OH3	100	12	33	6.2	3	6
8326227				150					





FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8326224	M7 $\times 0.75$	STD	OH2	100	9	33	6.2	3	6.3
8326225				150					
8326232	M8 $\times 1.25$	STD	OH3	100	15	37	6.2	3	6.8
8326233				150					
8326230	M8 $\times 1$	STD	OH3	100	12	37	6.2	3	7
8326231				150					
8326228	M8 $\times 0.75$	STD	OH3	100	12	37	6.2	3	7.3
8326229				150					
8326238	M9 $\times 1.25$	STD	OH3	100	15	38	7	3	7.8
8326239				150					
8326236	M9 $\times 1$	STD	OH3	100	12	38	7	3	8
8326237				150					
8326234	M9 $\times 0.75$	STD	OH3	100	12	38	7	3	8.3
8326235				150					
8326246	M10 $\times 1.5$	STD	OH3	100	18	41	7	3	8.5
8326247				150					
8326244	M10 $\times 1.25$	STD	OH3	100	15	41	7	3	8.8
8326245				150					
8326242	M10 $\times 1$	STD	OH3	100	15	41	7	3	9
8326243				150					
8326240	M10 $\times 0.75$	STD	OH3	100	15	41	7	3	9.3
8326241				150					
8326252	M11 $\times 1.5$	STD	OH3	100	18	48	8	3	9.5
8326253				150					
8326292	M11 $\times 1.25$	STD	OH3	100	15	48	8	3	9.8
8326293				150					
8326250	M11 $\times 1$	STD	OH3	100	15	48	8	3	10
8326251				150					
8326248	M11 $\times 0.75$	STD	OH3	100	15	48	8	3	10.3
8326249				150					

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽, 请参见61页

■ See p. 2 for explanation of marks.

■ See p.61 for shank square length(ℓ_k) and width(K).

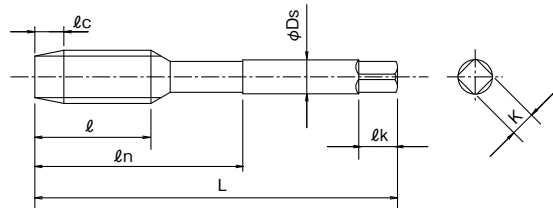
1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用, (除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.

NEXT



A-LT-SFT



- 切削锥长 (ℓ_c) 2.5P
Chamfer Length
- A-SFT为全尺寸突顶尖去除品
The entire lineup of A-SFT is without external center on the screw side.



FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8326260	M12 × 1.75	STD	OH4	100	21	48	8.5	3	10.3
8326261				150					
8326258	M12 × 1.5	STD	OH3	100	18	48	8.5	3	10.5
8326259				150					
8326256	M12 × 1.25	STD	OH3	100	18	48	8.5	3	10.8
8326257				150					
8326254	M12 × 1	STD	OH3	100	18	48	8.5	3	11
8326255				150					
8326265	M14 × 2	STD	OH4	150	24	50	10.5	3	12
8326264	M14 × 1.5	STD	OH3	150	18	50	10.5	3	12.5
8326263	M14 × 1.25	STD	OH3	150	18	50	10.5	3	12.8
8326262	M14 × 1	STD	OH3	150	18	50	10.5	3	13
8326267	M15 × 1.5	STD	OH3	150	18	52	10.5	3	13.5
8326266	M15 × 1	STD	OH3	150	18	52	10.5	3	14
8326270	M16 × 2	STD	OH4	150	24	56	12.5	3	14
8326271				200					
8326269	M16 × 1.5	STD	OH3	150	18	56	12.5	3	14.5
8326268	M16 × 1	STD	OH3	150	18	56	12.5	3	15
8326273	M17 × 1.5	STD	OH3	150	18	58	13	3	15.5
8326272	M17 × 1	STD	OH3	150	18	58	13	3	16
8326277	M18 × 2.5	STD	OH5	150	30	64	14	4	15.5
8326276	M18 × 2	STD	OH4	150	24	64	14	4	16
8326275	M18 × 1.5	STD	OH4	150	24	64	14	4	16.5
8326274	M18 × 1	STD	OH3	150	24	64	14	4	17

NEXT



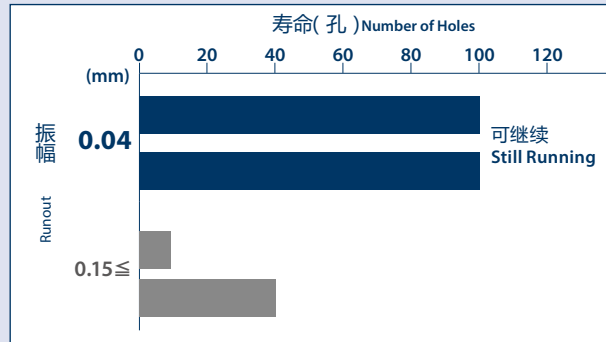
加工要点(安装部震动的影响)

Points of tapping (effect of attachment runout)

- 抑制安装部震动使其稳定加工。
Stable tapping can be ensured by controlling the attachment runout.

使用工具 Tool	A-LT-SFT M2×0.4×80
加工材料 Work Material	S45C
切削速度 Cutting Speed	15m/min (2,400min ⁻¹)
底孔径 Drilling Hole Size	1.6mm
攻丝长度 Tapping Length	3mm (1.5D)
刀具突出量 Overhang Length	60mm
切削油剂 Coolant	水溶性切削油剂 (10倍) Water Soluble(10%)
使用机械 Machine	立式加工中心 Vertical Machining Center

■安装部震动与寿命 Attachment runout and number of holes



· 安装部震动是在刀柄端面处40mm附近测定的。The attachment runout is the value measured at a point about 40mm away from the end face of the holder.

FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size		精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8326281	M20 ×2.5	×150	STD	OH5	150	30	70	15	4	17.5
8326282		×200			200					
8326280	M20 ×2	×150	STD	OH4	150	24	70	15	4	18
8326279	M20 ×1.5	×150	STD	OH4	150	24	70	15	4	18.5
8326278	M20 ×1	×150	STD	OH3	150	24	70	15	4	19
8326286	M22 ×2.5	×150	STD	OH5	150	30	76	17	4	19.5
8326285	M22 ×2	×150	STD	OH4	150	24	76	17	4	20
8326284	M22 ×1.5	×150	STD	OH4	150	24	76	17	4	20.5
8326283	M22 ×1	×150	STD	OH3	150	24	76	17	4	21
8326290	M24 ×3	×150	STD	OH5	150	36	83	19	4	21
8326291		×200			200					
8326289	M24 ×2	×150	STD	OH4	150	24	83	19	4	22
8326288	M24 ×1.5	×150	STD	OH4	150	24	83	19	4	22.5
8326287	M24 ×1	×150	STD	OH3	150	24	83	19	4	23

- 标记的说明请参照 P.2
- 柄四方部的长和宽, 请参见61页

1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用, (除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

- See p. 2 for explanation of marks.
- See p.61 for shank square length (ℓk) and width (K).

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.

A-SFT

立铣刀柄丝锥适用于和“HS 系列”相同的柄部尺寸(高速同步丝锥)。

A-SFT with end mill style shank uses the same shank shape as OSG's HS (high speed) synchro tap series.



■ 切削锥长 (ℓc) 2.5P

Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

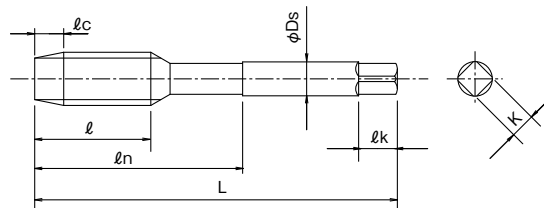
The entire lineup of A-SFT is without external center on the screw side.



切削条件

P.5 ~ P.6

OIL HOLE



螺纹种类: M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	油孔 Oil Hole	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	推荐的钻孔尺寸 Recommended drill hole dia.
8325900	M 3 × 0.5 - 4	—	STD	OH3	46	4	19	4	3	2.5
8325901	M 4 × 0.7 - 6	—	STD	OH3	52	5.6	21	6	3	3.3
8325902	M 5 × 0.8 - 6	—	STD	OH3	60	6.4	24	6	3	4.2
8325903	M 6 × 1 - 6	—	STD	OH3	62	8	29	6	3	5
8326951		○								
8326952	M 6 × 0.75 - 6	○	STD	OH3	62	19	29	6	3	5.3
8325904	M 8 × 1.25 - 8	—	STD	OH4	70	15	37	8	3	6.8
8326953		○								
8326954	M 8 × 1 - 8	○	STD	OH3	70	22	37	8	3	7
8325906	M 10 × 1.5 - 8	—	STD	OH4	75	18	41	8	3	8.5
8326955		○								
8325905	M 10 × 1.25 - 8	—	STD	OH4	75	15	41	8	3	8.8
8326956		○								
8325907	M 12 × 1.75 - 10	—	STD	OH4	82	21	48	10	3	10.3
8326957		○								
8326958	M 12 × 1.5 - 10	○	STD	OH4	82	18	48	10	3	10.5
8326959	M 12 × 1.25 - 10	○	STD	OH4	82	18	48	10	3	10.8
8325908	M 14 × 2 - 12	—	STD	OH5	88	24	48	12	3	12

■ 标记的说明请参照P.2

■ 柄四方部的长和宽, 请参见61页

■ See p. 2 for explanation of marks.

■ See p.61 for shank square length(ℓk) and width(K).

- 虽然(立铣刀柄)丝锥可以对应弹簧刀柄、立铣刀柄等, 但都使用止动块。
- 精度栏 是以确保高精度及完全同步进给相结合为前提的相当于2级丝锥的推荐精度。
- 丝锥精度不能保证内螺纹精度。
- 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
- 不推荐再研磨。
- 推荐底孔径为旧JIS2级用, (除了旧JIS的规格没有的内螺纹)JIS规格中没有的内螺纹底孔径仅供参考。

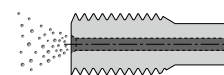
- Although taps with end mill shank are compatible with a collet holder, milling holder and etc., use a holder with a detent.
- The recommended tap limit corresponds to JIS class 2 internal thread standards only if combination of maintaining the high accuracy and complete synchronous feed is applied.
- Tap limit does not guarantee thread limit for the internal thread after tapping.
- Stable feed control machines are recommended to avoid over size tapping.
- Regrinding is not recommended.
- The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.

优势在这!

Key Point

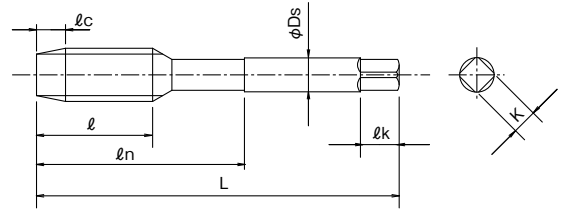
铣刀柄根据用途可以选择内冷油孔型。
油雾冷却(MQL)等推荐内冷油孔型。

Choose end mill shank with oil hole based on usage. For mist (MQL) and similar machining environment, oil hole type (those marked with ○ in the chart above) is recommended.



A-LT-SFT

立铣刀柄丝锥适用于和“HS系列”相同的柄部尺寸(高速同步丝锥)。
A-SFT with end mill style shank uses the same shank shape as OSG's HS (high speed) synchro tap series.

■ 切削锥长 (l_c) 2.5P

Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



P.5 ~ P.6

螺纹种类:M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 l	颈长 l _n	柄径 D _s	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8326500	M 3 × 0.5	STD	OH3	100	4	19	4	3	2.5
8326520				150					
8326501	M 4 × 0.7	STD	OH3	100	5.6	21	6	3	3.3
8326521				150					
8326502	M 5 × 0.8	STD	OH3	100	6.4	24	6	3	4.2
8326522				150					
8326503	M 6 × 1	STD	OH3	100	8	29	6	3	5
8326523				150					
8326524				200					
8326504	M 8 × 1.25	STD	OH4	100	15	37	8	3	6.8
8326525				150					
8326526				200					
8326506	M10 × 1.5	STD	OH4	100	18	41	8	3	8.5
8326527				150		60			
8326528				200		80			
8326505	M10 × 1.25	STD	OH4	100	15	41	8	3	8.8
8326529				150		60			
8326530				200		80			
8326507	M12 × 1.75	STD	OH4	100	21	48	10	3	10.3
8326531				150		60			
8326532				200		80			
8326508	M14 × 2	STD	OH5	150	24	50	12	3	12
8326533				200		80			
8326509	M16 × 2	STD	OH5	150	24	60	16	3	14
8326534				200		80			
8326510	M20 × 2.5	STD	OH5	150	30	75	16	4	17.5
8326535				200		80			
8326511	M24 × 3	STD	OH5	150	36	90	20	4	21
8326536				200		90			

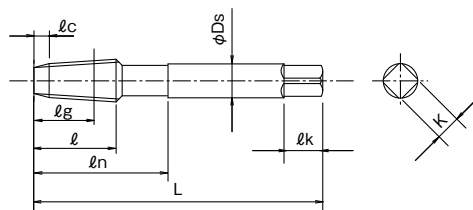
■ 使用上注意点请参照 P.31。

■ Please refer p.31 for notes/precaution of usage.

A-TPT



■ 切削锥长 (ℓ_c) 2.5P
Chamfer Length



螺纹种类: PT(Rc)

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	基准径位置 ℓ_g	柄径 D _s	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327651	PT 1/16 - 28	JIS2	90	18	36	10.1	8	3	*
8327652	PT 1/8 - 28	JIS2	90	19	37	13	8	3	*
8327653	PT 1/4 - 19	JIS2	100	28	49	21	11	3	*
8327654	PT 3/8 - 19	JIS2	100	28	50	21	14	4	*
8327655	PT 1/2 - 14	JIS2	125	35	60	25	18	4	*
8327657	PT 3/4 - 14	JIS2	140	35	74	25	23	4	*
8327659	PT 1 - 11	JIS2	160	45	80	32	26	4	*

螺纹种类: NPT

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	基准径位置 ℓ_g	柄径 D _s	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327671	1/16 - 27 NPT	ANSI G	90	18	36	12	8	3	*
8327672	1/8 - 27 NPT	ANSI G	90	19	37	12.1	8	3	*
8327673	1/4 - 18 NPT	ANSI G	100	28	49	17.4	11	3	*
8327674	3/8 - 18 NPT	ANSI G	100	28	50	17.6	14	4	*
8327675	1/2 - 14 NPT	ANSI G	125	35	60	22.9	18	4	*
8327677	3/4 - 14 NPT	ANSI G	140	35	74	22.9	23	4	*
8327679	1 - 11 1/2 NPT	ANSI G	160	45	80	27.4	26	4	*

■ 标记的说明请参照P.2
■ 柄四方部的长和宽, 请参见61页
* 推荐底孔径请参考P.60。

1. 丝锥精度不能保证内螺纹精度。
2. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
3. 不推荐再研磨。

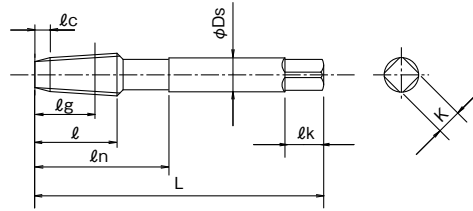
■ See p.2 for explanation of marks.
■ See p.61 for shank square length (ℓ_k) and width (K).
* Please see p.60 for recommended drill hole dia.

1. Tap limit does not guarantee thread limit for the internal thread after tapping.
2. Stable feed control machines are recommended to avoid over size tapping.
3. Regrinding is not recommended.

A-S-TPT



- 切削锥长 (ℓ_c) 2.5P
Chamfer Length



螺纹种类: PT(Rc)

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	基准径位置 ℓ _g	柄径 Ds	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327661	PT 1/16 - 28	JIS2	90	16.5	36	8.6	8	3	*
8327662	PT 1/8 - 28	JIS2	90	16.5	37	10.5	8	3	*
8327663	PT 1/4 - 19	JIS2	100	19.5	49	12.5	11	3	*
8327664	PT 3/8 - 19	JIS2	100	21	50	14	14	4	*
8327665	PT 1/2 - 14	JIS2	125	27	60	17	18	4	*
8327667	PT 3/4 - 14	JIS2	140	29	74	19	23	4	*
8327669	PT 1 - 11	JIS2	160	35	80	22	26	4	*

螺纹种类: NPT

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	基准径位置 ℓ _g	柄径 Ds	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327681	1/16 - 27 NPT	ANSI G	90	16	36	10	8	3	*
8327682	1/8 - 27 NPT	ANSI G	90	16.5	37	10.5	8	3	*
8327683	1/4 - 18 NPT	ANSI G	100	19.5	49	12.5	11	3	*
8327684	3/8 - 18 NPT	ANSI G	100	21	50	14	14	4	*
8327685	1/2 - 14 NPT	ANSI G	125	27	60	17	18	4	*
8327687	3/4 - 14 NPT	ANSI G	140	29	74	19	23	4	*
8327689	1 - 11 1/2 NPT	ANSI G	160	35	80	22	26	4	*

- 标记的说明请参照 P.2
■ 柄四方部的长和宽, 请参见 61 页
* 推荐底孔径请参考 P.60.

1. 丝锥精度不能保证内螺纹精度。
2. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
3. 不推荐再研磨。

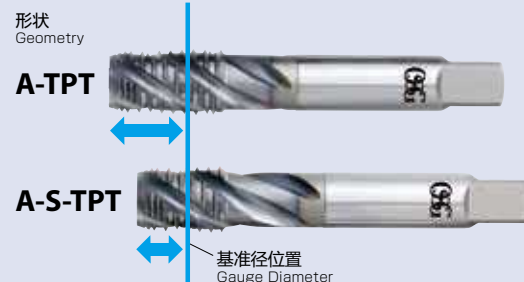
- See p.2 for explanation of marks.
■ See p.61 for shank square length (ℓ_k) and width (K).
* Please see p.60 for recommended drill hole dia.

1. Tap limit does not guarantee thread limit for the internal thread after tapping.
2. Stable feed control machines are recommended to avoid over size tapping.
3. Regrinding is not recommended.

加工要点(A-TAP管用)

Points of Tapping (Taper Pipe)

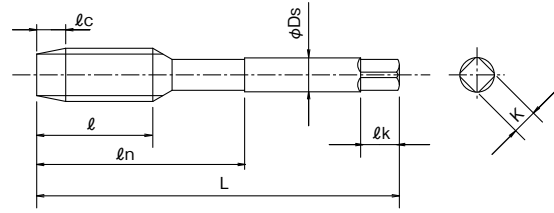
加工的注意点, 以及 A-TPT 与 A-S-TPT 的区别请参照 P.55~P.56。
Please refer p.55 ~ 56 for precaution and difference between A-TPT and A-S-TPT.



A-SPT



■ 切削锥长 (ℓ_c) 2.5P、1.5P
Chamfer Length



切削条件 P.5 ~ P.6

螺纹种类: Rp 螺纹部精度 ISO 适用

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓ_c	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	刃数 Flutes	推荐底孔径 Recommended drill hole dia.
8327701	Rp $\frac{1}{16}$ - 28	2.5P	90	14	36	8	3	*
8327711		1.5P						
8327702	Rp $\frac{1}{8}$ - 28	2.5P	90	15	37	8	3	*
8327712		1.5P						
8327703	Rp $\frac{1}{4}$ - 19	2.5P	100	19	49	11	3	*
8327713		1.5P						
8327704	Rp $\frac{3}{8}$ - 19	2.5P	100	21	50	14	4	*
8327714		1.5P						
8327705	Rp $\frac{1}{2}$ - 14	2.5P	125	26	60	18	4	*
8327715		1.5P						
8327707	Rp $\frac{3}{4}$ - 14	2.5P	140	28	74	23	4	*
8327717		1.5P						
8327709	Rp 1 - 11	2.5P	160	33	80	26	4	*
8327719		1.5P						

螺纹种类: G

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓ_c	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	刃数 Flutes	推荐底孔径 Recommended drill hole dia.
8327400	G $\frac{1}{16}$ - 28	2.5P	STD	OH3	90	14	36	8	3	6.7
8327401	G $\frac{1}{8}$ - 28	2.5P	STD	OH3	90	15	32	8	3	8.7
8327402	G $\frac{1}{4}$ - 19	2.5P	STD	OH3	100	19	35	11	3	11.7
8327403	G $\frac{3}{8}$ - 19	2.5P	STD	OH3	100	21	44	14	4	15.2
8327404	G $\frac{1}{2}$ - 14	2.5P	STD	OH3.5	125	26	55	18	4	19
8327405	G $\frac{5}{8}$ - 14	2.5P	STD	OH3.5	125	26	60	19	4	21
8327406	G $\frac{3}{4}$ - 14	2.5P	STD	OH3.5	140	28	69	23	4	24.5
8327407	G $\frac{7}{8}$ - 14	2.5P	STD	OH3.5	150	29	75	24	4	28
8327408	G 1 - 11	2.5P	STD	OH4	160	33	80	26	4	30.5

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽, 请参见 P.61

* 推荐底孔径请参考 P.60。

1. 精度栏 是相当于 2 级内螺纹适应的丝锥推荐精度。

2. 丝锥精度不能保证内螺纹精度。

3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。

4. 不推荐再研磨。

■ See p.2 for explanation of marks.

■ See p.61 for shank square length (ℓ_k) and width (K).

* Please see p.60 for recommended drill hole dia.

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.

2. Tap limit does not guarantee thread limit for the internal thread after tapping.

3. Stable feed control machines are recommended to avoid over size tapping.

4. Regrinding is not recommended.

螺纹种类：NPS

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 ℓc	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	刃数 Flutes	推荐底孔径 Recommended drill hole dia.
8327691	1/16 - 27 NPS	2.5P	ANSI G	90	14	36	8	3	*
8327692	1/8 - 27 NPS	2.5P	ANSI G	90	15	37	8	3	*
8327693	1/4 - 18 NPS	2.5P	ANSI G	100	19	49	11	3	*
8327694	3/8 - 18 NPS	2.5P	ANSI G	100	21	50	14	4	*
8327695	1/2 - 14 NPS	2.5P	ANSI G	125	26	60	18	4	*
8327697	3/4 - 14 NPS	2.5P	ANSI G	140	28	74	23	4	*
8327699	1 - 11 1/2 NPS	2.5P	ANSI G	160	33	80	26	4	*

- 标记的说明请参照 P.2
 ■ 柄四方部的长和宽, 请参见 61 页
 * 推荐底孔径请参考 P.60。

1. 丝锥精度不能保证内螺纹精度。
 2. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
 3. 不推荐再研磨。

- See p.2 for explanation of marks.
 ■ See p.61 for shank square length (ℓk) and width (K).
 * Please see p.60 for recommended drill hole dia.

1. Tap limit does not guarantee thread limit for the internal thread after tapping.
 2. Stable feed control machines are recommended to avoid over size tapping.
 3. Regrinding is not recommended.

种类 Type	旧记号 Previous Symbol	新记号 New Symbol
耐用平行内螺纹 Parallel pipe threads for pressure-tight joints (JIS B0203-1982)	PS	Rp
机械结合用平行内螺纹 Parallel pipe threads for mechanical joints (JIS B0202-1982)	PF (A 级) (Class A)	G

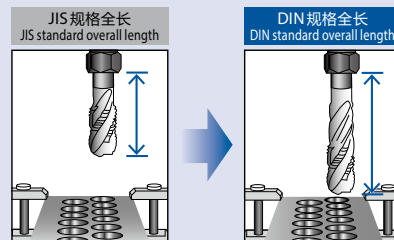
1982年, 随着 ISO 导入后, JIS 的管用螺纹规格, 螺纹尺寸记号也被更改。由于螺纹精度没有变化, 所以丝锥还是沿用旧记号。

The JIS pipe thread standard was revised in 1982 to meet ISO standards. Although thread symbols changed, the limits were not changed. Therefore, it is still acceptable to use the older symbols.

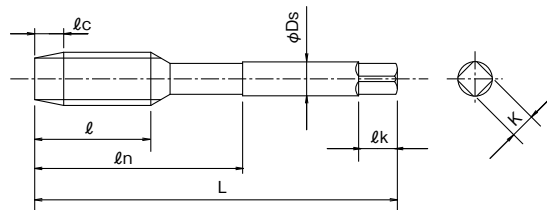
加工要点 (A-TAP 管用)

Points of Tapping (Parallel Pipe)

A-TAP 管用加工的注意点请参照 P.55。
 Please refer p.55 for parallel tap guide line.



A-SFT HL



- 切削锥长 (l_c) 2.5P、1.5P

Chamfer Length

- A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



切削条件 P.5 ~ P.6

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 l_c	精度 TAP Limit	全长 L	螺纹部长度 l	颈长 l_n	柄径 Ds	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327751	M 2 × 0.4	2.5P	OH1	44	3.6	13	3	2	*
8327753	M 2.5 × 0.45	2.5P	OH1.5	46	4	19	4	3	*
8327755	M 2.6 × 0.45	2.5P	OH1.5	46	4	19	4	3	*
8327757	M 3 × 0.5	2.5P	OH1.5	48	4.8	20	4	3	*
8327759		1.5P							*
8327761	M 4 × 0.7	2.5P	OH2	60	6.4	24	5.5	3	*
8327763		1.5P							*
8327765	M 5 × 0.8	2.5P	OH2	62	8	29	6	3	*
8327767		1.5P							*
8327769	M 6 × 1	2.5P	OH2	65	12	33	6.2	3	*
8327771		1.5P							*
8327773	M 8 × 1.25	2.5P	OH2	75	15	41	7	3	*
8327775		1.5P							*
8327777	M 10 × 1.5	2.5P	OH2	82	18	48	8.5	3	*
8327779		1.5P							*
8327781	M 12 × 1.75	2.5P	OH2	90	21	48	10.5	3	*



切削条件 P.5 ~ P.6

螺纹种类：U

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	切削锥部 l_c	精度 TAP Limit	全长 L	螺纹部长度 l	颈长 l_n	柄径 Ds	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327785	No.10 - 32UNF	2.5P	GH2	62	8	29	6	3	*
8327787	1/4 - 28UNF	2.5P	GH2.5	70	11	37	6.2	3	*
8327789	5/16 - 24UNF	2.5P	GH3	75	13	41	7	3	*
8327791	3/8 - 24UNF	2.5P	GH3	80	13	48	8	3	*

■ 使用上的注意点请参照 P.38。

■ Please refer p.38 for notes/precaution of usage.

优势在这！

Key Point

GH精度 GH Limit

为了对应有高精度要求的航空机零部件，相对于 OH 精度，而采用公差较窄的 GH 精度。

Applied tighter tolerance GH limits to satisfy high precision demand from aerospace threading parts operation.

A-LT-SFT HL



■ 切削锥长 (ℓ_c) 2.5P

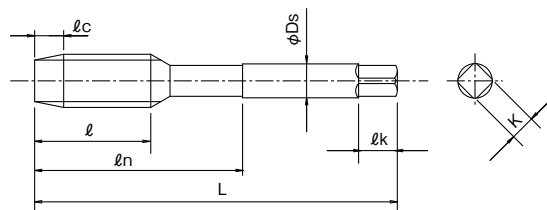
Chamfer Length

■ A-SFT为全尺寸突顶尖去除品

The entire lineup of A-SFT is without external center on the screw side.



切削条件 P.5 ~ P.6



特点
Features

切削条件
Cutting Conditions

加工情报
Cutting Data



A-SFT



参考资料
References

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	槽数 Flutes	推荐底孔径 Recommended drill hole dia.
8327801	M 3 × 0.5 × 100	OH1.5	100	4.8	20	4	3	*
8327803	M 4 × 0.7 × 100	OH2	100	6.4	24	5.5	3	*
8327805	M 5 × 0.8 × 100	OH2	100	8	29	6	3	*
8327807	M 6 × 1 × 100	OH2	100	12	33	6.2	3	*
8327809	M 8 × 1.25 × 100	OH2	100	15	41	7	3	*
8327811	M 10 × 1.5 × 100	OH2	100	18	48	8.5	3	*

■ 标记的说明请参照P.2

■ 柄四方部的长和宽, 请参见61页

* 推荐底孔径请参考P.59。

■ See p.2 for explanation of marks.

■ See p.61 for shank square length(ℓ_k) and width(K).

* Please see p.59 for recommended drill hole dia.

1. 丝锥精度不能保证内螺纹精度。

2. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。

3. 不推荐再研磨。

1. Tap limit does not guarantee thread limit for the internal thread after tapping.

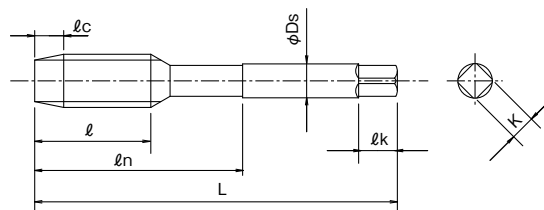
2. Stable feed control machines are recommended to avoid over size tapping.

3. Regrinding is not recommended.

A-POT



■ 切削锥长 (ℓ_c) 5P
Chamfer Length



螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 D _s	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325034	M 1.4 × 0.3	STD	OH1	34	9	—	3	2	○	1.1
8325039	M 1.6 × 0.35	STD	OH1.5	36	10	—	3	2	○	1.25
8325044	M 1.7 × 0.35	STD	OH1.5	36	11	—	3	2	○	1.35
8325049	M 2 × 0.4	STD	OH1.5	40	12	—	3	2	○	1.6
8325430		STD+1	OH2.5							
8325431		STD+2	OH3.5							
8325050	M 2 × 0.25	STD	OH1	40	12	—	3	2	○	1.75
8325432		STD+1	OH2							
8325052	M 2.2 × 0.45	STD	OH2	42	13	—	3	2	○	1.75
8325434		STD+1	OH3							
8325053	M 2.2 × 0.25	STD	OH1	42	13	—	3	2	○	1.95
8325436		STD+1	OH2							
8325054	M 2.3 × 0.4	STD	OH1.5	42	13	—	3	2	○	1.9
8325438		STD+1	OH2.5							
8325059	M 2.5 × 0.45	STD	OH2	44	14	—	3	2	○	2.05
8325440		STD+1	OH3							
8325441		STD+2	OH4							
8325062	M 2.5 × 0.35	STD	OH2	44	14	—	3	2	○	2.15
8325442		STD+1	OH3							
8325064	M 2.6 × 0.45	STD	OH2	44	14	—	3	2	○	2.15
8325444		STD+1	OH3							
8325069	M 3 × 0.5	STD	OH3	46	11	19	4	3	○	2.5
8325450		STD+1	OH4							
8325451		STD+2	OH5							



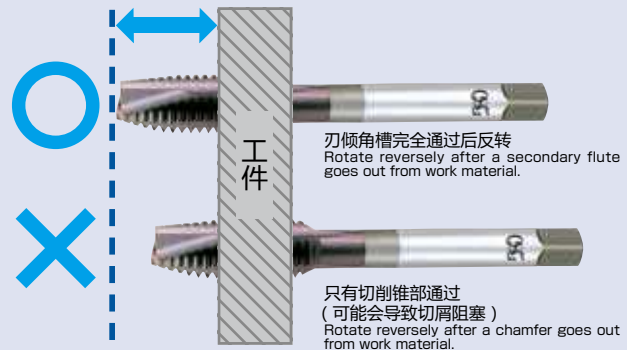
加工要点(刃倾角丝锥的最佳用法)

Points of Tapping (how to use a spiral pointed tap properly)

刃倾角丝锥是贯穿工件端面，通过它前面的副槽排出切屑的。

Spiral pointed tap can discharge chips smoothly by setting the stroke so that a secondary flute goes out from the end face of work material.

推荐值：切削锥部 +3 牙左右
Recommended: Chamfer + about 3 threads



FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325072	M 3 × 0.35	STD	OH2	46	11	19	4	3	○	2.65
8325452		STD+1	OH3							
8325076	M 3.5 × 0.6	STD	OH2	48	13	20	4	3	○	2.9
8325454		STD+1	OH3							
8325079	M 3.5 × 0.35	STD	OH2	48	13	20	4	3	○	3.15
8325455		STD+1	OH3							
8325083	M 4 × 0.7	STD	OH3	52	13	21	5	3	○	3.3
8325460		STD+1	OH4							
8325461		STD+2	OH5							
8325086	M 4 × 0.5	STD	OH3	52	13	21	5	3	○	3.5
8325462		STD+1	OH4							
8325087	M 4.5 × 0.75	STD	OH3	55	13	21	5	3	○	3.8
8325464		STD+1	OH4							

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽，请参见 61 页

1. 精度栏 是相当于 2 级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时，也会发生内螺纹扩大的问题，请务必注意。
4. 不推荐再研磨。
5. 精度栏是相当于 2 级内螺纹适应的丝锥推荐精度。
推荐的钻孔尺寸没有作为参考列入 JIS 中。

■ See p. 2 for explanation of marks.

■ See p.61 for length of external center and shank square length(ℓ_k) and width(K) .

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard.
The recommended drill hole size that are not listed on JIS is as reference.

NEXT



特長
Features

切削条件
Cutting Conditions

加工案例
Cutting Data



A-SFT



A-POT

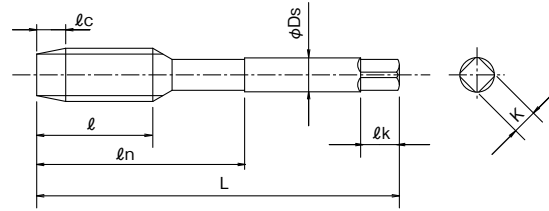


参考文献
References

A-POT



■ 切削长度 (ℓc) 5P
Chamfer Length



FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325088	M 4.5 × 0.5	STD	OH3	55	13	21	5	3	○	4
8325465		STD+1	OH4							
8325090	M 5 × 0.8	STD	OH3	60	16	24	5.5	3	○	4.2
8325468		STD+1	OH4							
8325469		STD+2	OH5							
8325093	M 5 × 0.5	STD	OH3	60	16	24	5.5	3	○	4.5
8325473		STD+1	OH4							
8325095	M 5.5 × 0.5	STD	OH3	60	17	25	5.5	3	○	5
8325476		STD+1	OH4							
8325097	M 6 × 1	STD	OH3	62	19	29	6	3	○	5
8325478		STD+1	OH4							
8325479		STD+2	OH5							
8325100	M 6 × 0.75	STD	OH3	62	19	29	6	3	○	5.3
8325480		STD+1	OH4							
8325102	M 6 × 0.5	STD	OH3	62	19	29	6	3	○	5.5
8325481		STD+1	OH4							
8325104	M 7 × 1	STD	OH3	65	19	33	6.2	3	○	6
8325484		STD+1	OH4							
8325105	M 7 × 0.75	STD	OH3	65	19	33	6.2	3	○	6.3
8325485		STD+1	OH4							
8325107	M 8 × 1.25	STD	OH3	70	22	37	6.2	3	○	6.8
8325488		STD+1	OH4							
8325489		STD+2	OH5							

NEXT





FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325111	M 8 × 1	STD	OH3	70	22	37	6.2	3	○	7
8325490		STD+1	OH4							
8325112	M 8 × 0.75	STD	OH3	70	22	37	6.2	3	○	7.3
8325491		STD+1	OH4							
8325114	M 9 × 1.25	STD	OH3	72	22	38	7	3	○	7.8
8325494		STD+1	OH4							
8325115	M 9 × 1	STD	OH3	72	22	38	7	3	○	8
8325495		STD+1	OH4							
8325116	M 9 × 0.75	STD	OH3	72	22	38	7	3	○	8.3
8325496		STD+1	OH4							
8325117	M 10 × 1.5	STD	OH4	75	24	41	7	3	—	8.5
8325500		STD+1	OH5							
8325501		STD+2	OH6							
8325121	M 10 × 1.25	STD	OH3	75	24	41	7	3	—	8.8
8325502		STD+1	OH4							
8325124	M 10 × 1	STD	OH3	75	24	41	7	3	—	9
8325503		STD+1	OH4							
8325125	M 10 × 0.75	STD	OH3	75	24	41	7	3	—	9.3
8325504		STD+1	OH4							
8325127	M 11 × 1.5	STD	OH4	80	25	48	8	3	—	9.5
8325510		STD+1	OH5							
8325128	M 11 × 1	STD	OH3	80	25	48	8	3	—	10
8325514		STD+1	OH4							
8325129	M 11 × 0.75	STD	OH3	80	25	48	8	3	—	10.3
8325515		STD+1	OH4							

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽, 请参见61页

1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 精度栏是相当于2级内螺纹适应的丝锥推荐精度。
推荐的钻孔尺寸没有作为参考列入 JIS 中。

■ See p. 2 for explanation of marks.

■ See p.61 for length of external center and shank square length (ℓk) and width(K) .

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard.
The recommended drill hole size that are not listed on JIS is as reference.

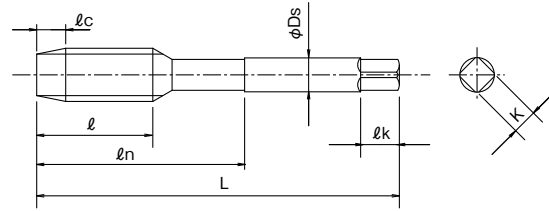
NEXT



A-POT



■ 切削锥长 (ℓ_c) 5P
Chamfer Length



FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 D _s	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325130	M 12 × 1.75	STD	OH4	82	29	48	8.5	3	—	10.3
8325518		STD+1	OH5							
8325519		STD+2	OH6							
8325134	M 12 × 1.5	STD	OH4	82	29	48	8.5	3	—	10.5
8325520		STD+1	OH5							
8325137	M 12 × 1.25	STD	OH4	82	29	48	8.5	3	—	10.8
8325521		STD+1	OH5							
8325140	M 12 × 1	STD	OH3	82	29	48	8.5	3	—	11
8325522		STD+1	OH4							
8325147	M 14 × 2	STD	OH4	88	30	48	10.5	3	—	12
8325530		STD+1	OH5							
8325150	M 14 × 1.5	STD	OH4	88	30	48	10.5	3	—	12.5
8325531		STD+1	OH5							
8325152	M 14 × 1.25	STD	OH4	88	30	48	10.5	3	—	12.8
8325532		STD+1	OH5							
8325154	M 14 × 1	STD	OH3	88	30	48	10.5	3	—	13
8325533		STD+1	OH4							
8325155	M 15 × 1.5	STD	OH4	95	32	52	10.5	3	—	13.5
8325536		STD+1	OH5							
8325156	M 15 × 1	STD	OH3	95	32	52	10.5	3	—	14
8325537		STD+1	OH4							
8325157	M 16 × 2	STD	OH4	95	32	52	12.5	3	—	14
8325540		STD+1	OH5							

NEXT





FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325160	M 16 × 1.5	STD	OH4	95	32	52	12.5	3	—	14.5
8325541		STD+1	OH5							
8325162	M 16 × 1	STD	OH3	95	32	52	12.5	3	—	15
8325542		STD+1	OH4							
8325164	M 17 × 1.5	STD	OH4	100	37	55	13	3	—	15.5
8325545		STD+1	OH5							
8325166	M 17 × 1	STD	OH3	100	37	55	13	3	—	16
8325546		STD+1	OH4							
8325167	M 18 × 2.5	STD	OH5	100	37	55	14	3	—	15.5
8325549		STD+1	OH6							
8325169	M 18 × 2	STD	OH4	100	37	55	14	3	—	16
8325550		STD+1	OH5							
8325170	M 18 × 1.5	STD	OH4	100	37	55	14	3	—	16.5
8325551		STD+1	OH5							
8325172	M 18 × 1	STD	OH3	100	37	55	14	3	—	17
8325552		STD+1	OH4							
8325177	M 20 × 2.5	STD	OH5	105	37	58	15	3	—	17.5
8325557		STD+1	OH6							
8325179	M 20 × 2	STD	OH4	105	37	58	15	3	—	18
8325558		STD+1	OH5							
8325180	M 20 × 1.5	STD	OH4	105	37	58	15	3	—	18.5
8325559		STD+1	OH5							
8325182	M 20 × 1	STD	OH3	105	37	58	15	3	—	19
8325560		STD+1	OH4							
8325187	M 22 × 2.5	STD	OH5	115	38	63	17	3	—	19.5
8325563		STD+1	OH6							
8325189	M 22 × 2	STD	OH4	115	38	63	17	3	—	20
8325564		STD+1	OH5							

■ 标记的说明请参照P.2

■ 柄四方部的长和宽，请参见61页

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3. 使用进给不稳定的机械时，也会发生内螺纹扩大的问题，请务必注意。
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推荐的钻孔尺寸没有作为参考列入 JIS 中。

■ See p. 2 for explanation of marks.

■ See p.61 for length of external center and shank square length(ℓk) and width(K) .

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
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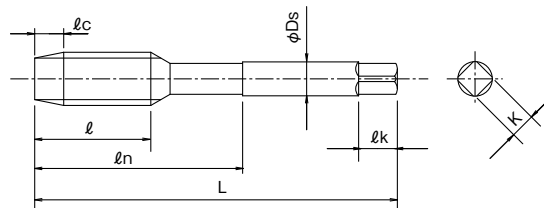
NEXT



A-POT



■ 切削锥长 (ℓc) 5P
Chamfer Length



FROM

螺纹种类：M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐的钻孔尺寸 Recommended drill hole dia.
8325190	M 22 × 1.5	STD	OH4	115	38	63	17	3	—	20.5
8325565		STD+1	OH5							
8325192	M 22 × 1	STD	OH3	115	38	63	17	3	—	21
8325566		STD+1	OH4							
8325197	M 24 × 3	STD	OH5	120	45	66	19	3	—	21
8325569		STD+1	OH6							
8325199	M 24 × 2	STD	OH4	120	45	66	19	3	—	22
8325570		STD+1	OH5							
8325200	M 24 × 1.5	STD	OH4	120	45	66	19	3	—	22.5
8325571		STD+1	OH5							
8325202	M 24 × 1	STD	OH3	120	45	66	19	3	—	23
8325572		STD+1	OH4							

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽，请参见61页

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推荐的钻孔尺寸没有作为参考列入 JIS 中。

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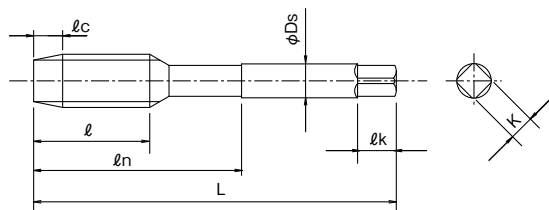
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The recommended drill hole size that are not listed on JIS is as reference.



A-POT



■ 切削锥长 (ℓc) 5P
Chamfer Length



螺纹种类: U

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8327012	No. 4 – 40UNC	STD	OH2	44	15	—	3	2	○	2.3
8327018	No. 5 – 40UNC	STD	OH2	46	11	19	4	3	○	2.6
8327024	No. 6 – 32UNC	STD	OH2	48	13	21	4	3	○	2.8
8327030	No. 8 – 32UNC	STD	OH2	52	13	21	5	3	○	3.4
8327036	No. 10 – 24UNC	STD	OH2	60	16	24	5.5	3	○	3.8
8327039	No. 10 – 32UNF	STD	OH2	60	16	24	5.5	3	○	4.1
8327049	1/4 – 20UNC	STD	OH3	62	19	29	6	3	○	5.1
8327051	1/4 – 28UNF	STD	OH2	62	19	29	6	3	○	5.5
8327058	5/16 – 18UNC	STD	OH3	70	22	37	6.1	3	○	6.6
8327061	5/16 – 24UNF	STD	OH3	70	22	37	6.1	3	○	6.9
8327067	3/8 – 16UNC	STD	OH3	75	24	41	7	3	—	8
8327073	3/8 – 24UNF	STD	OH3	75	24	41	7	3	—	8.5
8327080	7/16 – 14UNC	STD	OH3	80	25	48	8	3	—	9.4
8327083	7/16 – 20UNF	STD	OH3	80	25	48	8	3	—	9.9
8327090	1/2 – 13UNC	STD	OH4	85	29	48	9	3	—	10.8
8327096	1/2 – 20UNF	STD	OH3	85	29	48	9	3	—	11.5
8327105	9/16 – 12UNC	STD	OH4	90	30	48	10.5	3	—	12.2
8327108	9/16 – 18UNF	STD	OH3	90	30	48	10.5	3	—	12.9
8327111	5/8 – 11UNC	STD	OH4	95	32	52	12	3	—	13.6
8327114	5/8 – 18UNF	STD	OH3	95	32	52	12	3	—	14.5
8327120	3/4 – 10UNC	STD	OH4	105	37	58	14	3	—	16.5
8327123	3/4 – 16UNF	STD	OH4	105	37	58	14	3	—	17.5
8327130	7/8 – 9UNC	STD	OH5	115	38	63	17	3	—	19.5
8327132	7/8 – 14UNF	STD	OH4	115	38	63	17	3	—	20.5

■ 标记的说明请参照P.2
■ 柄四方部的长和宽, 请参见61页

1. 精度栏 是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
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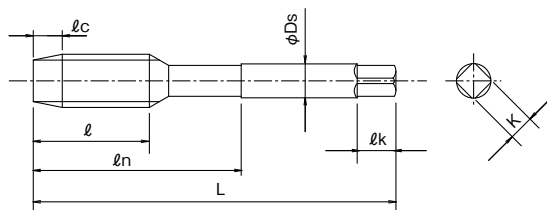
■ See p. 2 for explanation of marks.
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A-LT-POT



■ 切削锥长 (ℓ_c) 5P
Chamfer Length



螺纹种类：M

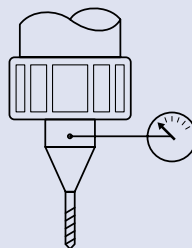
单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8326002	M2 × 0.4 × 80	STD	OH1.5	80	12	—	3	2	○	1.6
8326001	M2 × 0.25 × 80	STD	OH1	80	12	—	3	2	○	1.75
8326004	M2.2 × 0.45 × 80	STD	OH2	80	13	—	3	2	○	1.75
8326003	M2.2 × 0.25 × 80	STD	OH1	80	13	—	3	2	○	1.95
8326005	M2.3 × 0.4 × 80	STD	OH1.5	80	13	—	3	2	○	1.9
8326007	M2.5 × 0.45 × 80	STD	OH2	80	14	—	3	2	○	2.05
8326006	M2.5 × 0.35 × 80	STD	OH2	80	14	—	3	2	○	2.15
8326008	M2.6 × 0.45 × 80	STD	OH2	80	14	—	3	2	○	2.15
8326010	M3 × 0.5 × 100	STD	OH3	100	11	20	4	3	○	2.5
8326009	M3 × 0.35 × 100	STD	OH2	100	11	20	4	3	○	2.65
8326012	M3.5 × 0.6 × 100	STD	OH2	100	13	24	4	3	○	2.9
8326011	M3.5 × 0.35 × 100	STD	OH2	100	13	24	4	3	○	3.15
8326014	M4 × 0.7 × 100	STD	OH3	100	13	27	5	3	○	3.3
8326013	M4 × 0.5 × 100	STD	OH3	100	13	27	5	3	○	3.5
8326016	M4.5 × 0.75 × 100	STD	OH3	100	13	30	5	3	○	3.8
8326015	M4.5 × 0.5 × 100	STD	OH3	100	13	30	5	3	○	4
8326018	M5 × 0.8 × 100	STD	OH3	100	16	33	5.5	3	○	4.2
8326017	M5 × 0.5 × 100	STD	OH3	100	16	33	5.5	3	○	4.5
8326019	M5.5 × 0.5 × 100	STD	OH3	100	17	37	5.5	3	○	5

加工要点(安装部震动的影响)

Points of Tapping (effect of attachment runout)

- 抑制安装部震动使其稳定加工。
- 详细请参考P.30。
- Stable tapping can be ensured by controlling the attachment runout.
- Please see page 30 for the further details.



NEXT



优势在这！ Key Point

A-LT-POT长柄系列被引进到A-POT。
它能应对通常丝锥无法处理的深孔加工。
A long-neck type "A-LT-POT" is introduced in A-POT.
It's suitable for deep hole tapping that regular taps cannot handle.

A-LT-POT



A-POT



FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	柄径 D _s	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8326022	M6 × 1	STD	OH3	100	19	40	6	3	○	5
8326023				150						
8326020	M6 × 0.75	STD	OH3	100	19	40	6	3	○	5.3
8326021				150						
8326026	M7 × 1	STD	OH3	100	19	40	6.2	3	○	6
8326027				150		60				
8326024	M7 × 0.75	STD	OH3	100	19	40	6.2	3	○	6.3
8326025				150		60				
8326032	M8 × 1.25	STD	OH3	100	22	40	6.2	3	○	6.8
8326033				150		60				
8326030	M8 × 1	STD	OH3	100	22	40	6.2	3	○	7
8326031				150		60				
8326028	M8 × 0.75	STD	OH3	100	22	40	6.2	3	○	7.3
8326029				150		60				
8326038	M9 × 1.25	STD	OH3	100	22	40	7	3	○	7.8
8326039				150		60				
8326036	M9 × 1	STD	OH3	100	22	40	7	3	○	8
8326037				150		60				
8326034	M9 × 0.75	STD	OH3	100	22	40	7	3	○	8.3
8326035				150		60				

■ 标记的说明请参照P.2

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■ See p.61 for length of external center and shank square length(ℓ_k) and width(K) .

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard.
The recommended drill hole size that are not listed on JIS is as reference.

NEXT



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A-POT

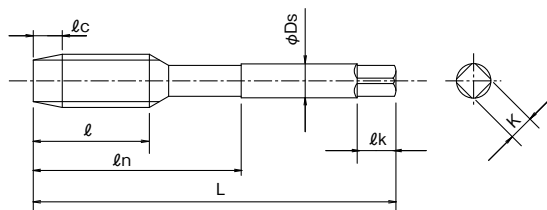


参考资料
References

A-LT-POT



■ 切削锥长 (ℓ_c) 5P
Chamfer Length



FROM

螺纹种类：M

单位：mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8326046	M10 × 1.5	STD	OH4	100	24	41	7	3	—	8.5
8326047				150		60				
8326044	M10 × 1.25	STD	OH3	100	24	41	7	3	—	8.8
8326045				150		60				
8326042	M10 × 1	STD	OH3	100	24	41	7	3	—	9
8326043				150		60				
8326040	M10 × 0.75	STD	OH3	100	24	41	7	3	—	9.3
8326041				150		60				
8326052	M11 × 1.5	STD	OH4	100	25	48	8	3	—	9.5
8326053				150		60				
8326092	M11 × 1.25	STD	OH3	100	25	48	8	3	—	9.8
8326093				150		60				
8326050	M11 × 1	STD	OH3	100	25	48	8	3	—	10
8326051				150		60				
8326048	M11 × 0.75	STD	OH3	100	25	48	8	3	—	10.3
8326049				150		60				
8326060	M12 × 1.75	STD	OH4	100	29	48	8.5	3	—	10.3
8326061				150		60				
8326058	M12 × 1.5	STD	OH4	100	29	48	8.5	3	—	10.5
8326059				150		60				
8326056	M12 × 1.25	STD	OH4	100	29	48	8.5	3	—	10.8
8326057				150		60				
8326054	M12 × 1	STD	OH3	100	29	48	8.5	3	—	11
8326055				150		60				

NEXT



FROM

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓn	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8326065	M14 × 2 × 150	STD	OH4	150	30	60	10.5	3	—	12
8326064	M14 × 1.5 × 150	STD	OH4	150	30	60	10.5	3	—	12.5
8326063	M14 × 1.25 × 150	STD	OH4	150	30	60	10.5	3	—	12.8
8326062	M14 × 1 × 150	STD	OH3	150	30	60	10.5	3	—	13
8326067	M15 × 1.5 × 150	STD	OH4	150	32	60	10.5	3	—	13.5
8326066	M15 × 1 × 150	STD	OH3	150	32	60	10.5	3	—	14
8326070	M16 × 2 × 150 × 200	STD	OH4	150	32	60	12.5	3	—	14
8326071				200		80				
8326069	M16 × 1.5 × 150	STD	OH4	150	32	60	12.5	3	—	14.5
8326068	M16 × 1 × 150	STD	OH3	150	32	60	12.5	3	—	15
8326073	M17 × 1.5 × 150	STD	OH4	150	37	60	13	3	—	15.5
8326072	M17 × 1 × 150	STD	OH3	150	37	60	13	3	—	16
8326077	M18 × 2.5 × 150	STD	OH5	150	37	60	14	3	—	15.5
8326076	M18 × 2 × 150	STD	OH4	150	37	60	14	3	—	16
8326075	M18 × 1.5 × 150	STD	OH4	150	37	60	14	3	—	16.5
8326074	M18 × 1 × 150	STD	OH3	150	37	60	14	3	—	17
8326081	M20 × 2.5 × 150 × 200	STD	OH5	150	37	60	15	3	—	17.5
8326082				200		80				
8326080	M20 × 2 × 150	STD	OH4	150	37	60	15	3	—	18
8326079	M20 × 1.5 × 150	STD	OH4	150	37	60	15	3	—	18.5
8326078	M20 × 1 × 150	STD	OH3	150	37	60	15	3	—	19
8326086	M22 × 2.5 × 150	STD	OH5	150	38	63	17	3	—	19.5
8326085	M22 × 2 × 150	STD	OH4	150	38	63	17	3	—	20
8326084	M22 × 1.5 × 150	STD	OH4	150	38	63	17	3	—	20.5
8326083	M22 × 1 × 150	STD	OH3	150	38	63	17	3	—	21
8326090	M24 × 3 × 150 × 200	STD	OH5	150	45	66	19	3	—	21
8326091				200		66				
8326089	M24 × 2 × 150	STD	OH4	150	45	66	19	3	—	22
8326088	M24 × 1.5 × 150	STD	OH4	150	45	66	19	3	—	22.5
8326087	M24 × 1 × 150	STD	OH3	150	45	66	19	3	—	23

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽, 请参见61页

1. 精度栏  是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 精度栏是相当于2级内螺纹适应的丝锥推荐精度。
推荐的钻孔尺寸没有作为参考列入 JIS 中。

■ See p. 2 for explanation of marks.

■ See p.61 for length of external center and shank square length (ℓk) and width(K) .

1. The recommended tap limit corresponds to JIS class 2 internal thread standard.
2. Tap limit does not guarantee thread limit for the internal thread after tapping.
3. Stable feed control machines are recommended to avoid over size tapping.
4. Regrinding is not recommended.
5. The recommended tap limit corresponds to JIS class 2 internal thread standard.
The recommended drill hole size that are not listed on JIS is as reference.

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参考資料
References

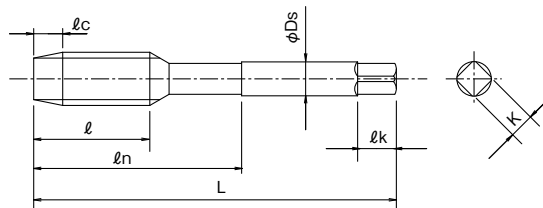
A-POT

拥有立铣刀柄的A丝锥和普通柄型都是OSG高速钢丝锥系列。

A-SFT with end mill style shank uses the same shank shape as OSG's HS (high speed) synchro tap series.



■ 切削锥长 (ℓ_c) 5P
Chamfer Length



螺纹种类: M

单位:mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	油孔 Oil Hole	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ_n	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8325800	M 3 × 0.5 - 4	—	STD	OH3	46	11	19	4	3	○	2.5
8325801	M 4 × 0.7 - 6	—	STD	OH3	52	13	21	6	3	○	3.3
8325802	M 5 × 0.8 - 6	—	STD	OH3	60	16	24	6	3	○	4.2
8325803	M 6 × 1 - 6	—	STD	OH3	62	19	29	6	3	○	5
8326901		○								—	
8326902	M 6 × 0.75 - 6	○	STD	OH3	62	19	29	6	3	—	5.3
8325804	M 8 × 1.25 - 8	—	STD	OH4	70	22	37	8	3	○	6.8
8326903		○								—	
8326904	M 8 × 1 - 8	○	STD	OH3	70	22	37	8	3	—	7
8325806	M 10 × 1.5 - 8	—	STD	OH4	75	24	41	8	3	—	8.5
8326905		○								—	
8325805	M 10 × 1.25 - 8	—	STD	OH4	75	24	41	8	3	—	8.8
8326906		○								—	
8325807	M 12 × 1.75 - 10	—	STD	OH4	82	29	48	10	3	—	10.3
8326907		○								—	
8326908	M 12 × 1.5 - 10	○	STD	OH4	82	29	48	10	3	—	10.5
8326909	M 12 × 1.25 - 10	○	STD	OH4	82	29	48	10	3	—	10.8
8325808	M 14 × 2 - 12	—	STD	OH5	88	30	48	12	3	—	12

■ 标记的说明请参照 P.2

■ 柄四方部的长和宽, 请参见61页

- 虽然(立铣刀柄)丝锥可以对应弹簧刀柄、立铣刀柄等, 但都使用止动块。
- 精度栏 是以确保高精度及完全同步进给相结合为前提的相当于2级丝锥的推荐精度。
- 丝锥精度不能保证内螺纹精度。
- 使用进给不稳定的机械时, 也会发生内螺纹扩大的问题, 请务必注意。
- 不推荐再研磨。
- 精度栏是相当于2级内螺纹适应的丝锥推荐精度。
推荐的钻孔尺寸没有作为参考列入 JIS 中。

■ See p. 2 for explanation of marks.

■ See p.61 for length of external center and shank square length(ℓ_k) and width(K) .

- Although taps with end mill shank are compatible with a collet holder, milling holder and etc., use a holder with a detent.
- The recommended tap limit corresponds to JIS class 2 internal thread standards only if combination of maintaining the high accuracy and complete synchronous feed is applied.
- Tap limit does not guarantee thread limit for the internal thread after tapping.
- Stable feed control machines are recommended to avoid over size tapping.
- Regrinding is not recommended.
- The recommended tap limit corresponds to JIS class 2 internal thread standard. The recommended drill hole size that are not listed on JIS is as reference.



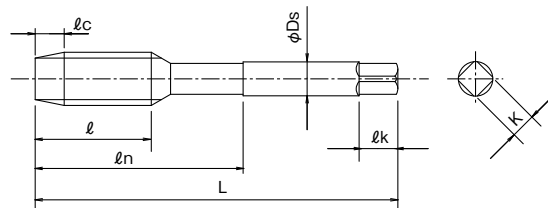
A-LT-POT

铣刀柄型采用与高速同步进给HS系列同一形状的柄部。

A-SFT with end mill style shank uses the same shank shape as OSG's HS (high speed) synchro tap series.



■ 切削锥长 (ℓ_c) 5P
Chamfer Length



螺纹种类 : M

单位 :mm Unit:mm

工具 No. EDP No.	尺寸 Thread Size	精度标识 Grade	精度 TAP Limit	全长 L	螺纹部长度 ℓ	颈长 ℓ _n	柄径 Ds	槽数 Flutes	突顶尖 External Center	推荐底孔径 Recommended drill hole dia.
8326400	M 3 × 0.5	STD	OH3	100	11	20	4	3	○	2.5
8326420				150						
8326401	M 4 × 0.7	STD	OH3	100	13	27	6	3	○	3.3
8326421				150						
8326402	M 5 × 0.8	STD	OH3	100	16	33	6	3	○	4.2
8326422				150						
8326403	M 6 × 1	STD	OH3	100	19	40	6	3	○	5
8326423				150						
8326424				200						
8326404	M 8 × 1.25	STD	OH4	100	22	53	8	3	○	6.8
8326425				150						
8326426				200						
8326406	M 10 × 1.5	STD	OH4	100	24	41	8	3	—	8.5
8326427				150		60				
8326428				200		80				
8326405	M 10 × 1.25	STD	OH4	100	24	41	8	3	—	8.8
8326429				150		60				
8326430				200		80				
8326407	M 12 × 1.75	STD	OH4	100	29	48	10	3	—	10.3
8326431				150		60				
8326432				200		80				
8326408	M 14 × 2	STD	OH5	150	30	60	12	3	—	12
8326433				200		80				
8326409	M 16 × 2	STD	OH5	150	32	60	16	3	—	14
8326434				200		80				
8326410	M 20 × 2.5	STD	OH5	150	37	75	16	4	—	17.5
8326435				200		80				
8326411	M 24 × 3	STD	OH5	150	45	90	20	4	—	21
8326436				200						

■ 使用上注意点请参照 P.51。

■ Please refer p.51 for notes / precaution of usage.

OSG为了满足所需内螺纹精度，设定了阶梯式的精度，采用结合加工条件的独特的OH精度方式。

OSG applies a unique system of tap pitch diameter limits. We call it the OH Limit System. Using the step method, you can select the best tap pitch diameter limits to match your work conditions.

$P \leq 0.6$ (40牙以上) $P \leq 0.6$ (T.P.I. ≥ 40)

上公差: $0.010 + 0.015 \times n$

upper limit: $0.010 + 0.015 \times n$

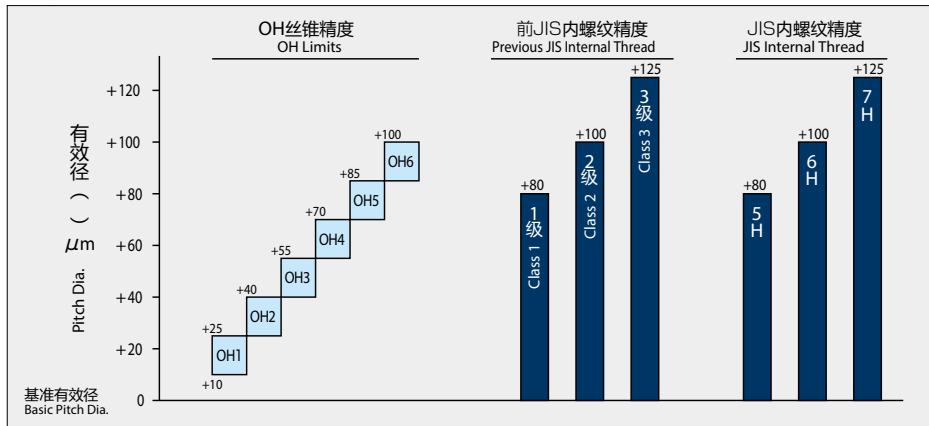
下公差: 上公差 -0.015

lower limit: (upper limit) -0.015

单位: mm (n=OH号)

Unit: mm (n=OH number)

■例 M3×0.5 Ex. M3×0.5



0.7 (36牙以下) $< P < 4$ (超过8牙) 0.7 (T.P.I. ≤ 36) $\leq P < 4$ (T.P.I. > 8)

上公差: $0.020 \times n$

upper limit: $0.020 \times n$

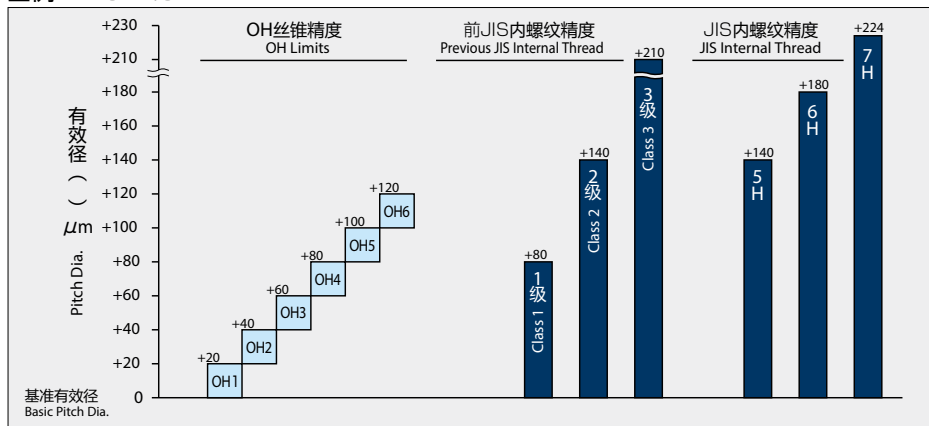
下公差: 上公差 -0.020

lower limit: (upper limit) -0.020

单位: mm (n=OH号)

Unit: mm (n=OH number)

■例 M10×1.5 Ex. M10×1.5



$P \geq 4$ (8山以下) $P \geq 4$ (T.P.I. ≤ 8)

上公差: $0.020 \times n$

upper limit: $0.020 \times n$

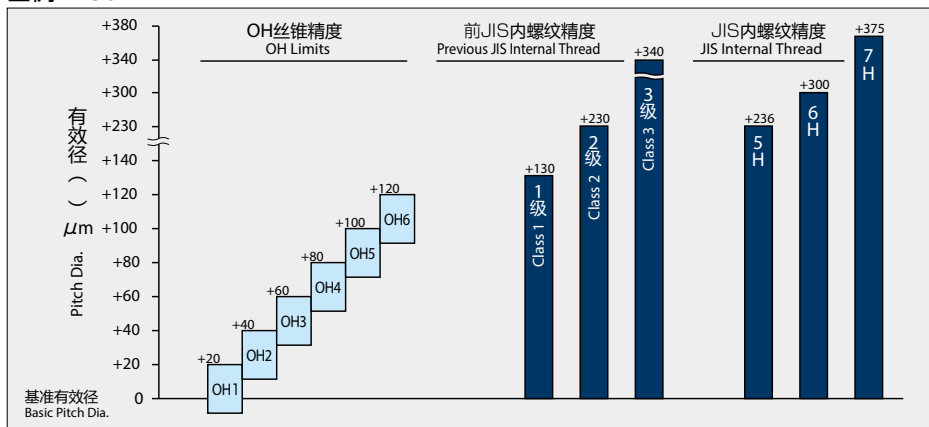
下公差: 上公差 -0.030

lower limit: (upper limit) -0.030

单位: mm (n=OH号)

Unit: mm (n=OH number)

■例 M36×4 Ex. M36×4



为了对应有高精度要求的航空机零部件，相对于OH精度，而采用公差较窄的GH精度。

Applied tighter tolerance GH limits to satisfy high precision demand from aerospace threading parts operation.

GH 精度 GH LIMIT

GH1, 2

上公差： $0.013 \times n$
upper limit: $0.013 \times n$

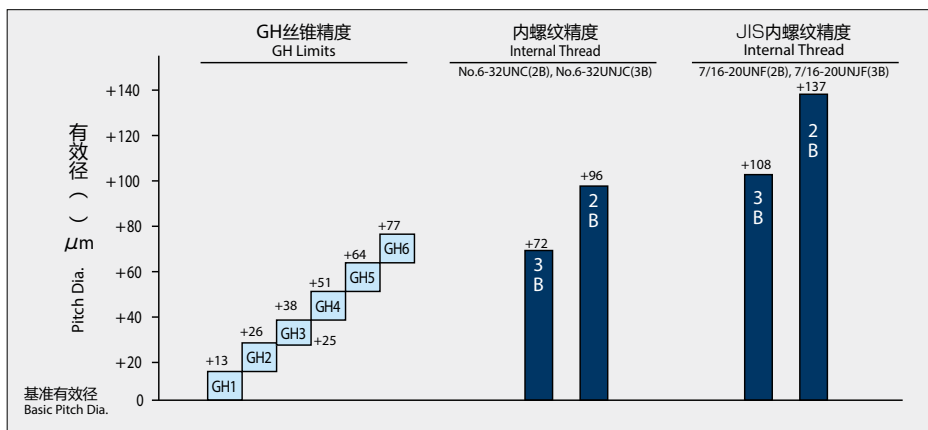
下公差：上公差 -0.013
lower limit: (upper limit) -0.013

GH3以上 GH3 over

上公差： $0.013 \times (n-2) + 0.025$
upper limit: $0.013 \times (n-2) + 0.025$

下公差：上公差 -0.013
lower limit: (upper limit) -0.013

单位：mm (n=GH号)
Unit: mm (n=GH number)



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参考资料
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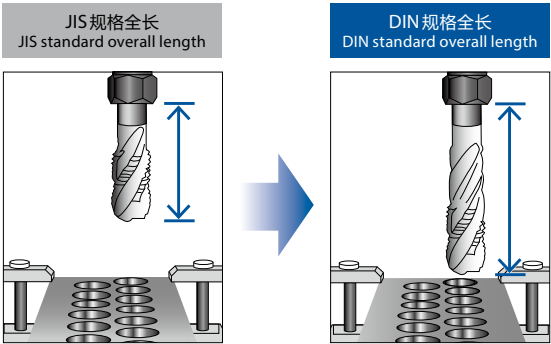
A-TAP 管用加工要点

Guidelines for A-Tap Taper Pipe Thread

① 长槽长与悬长可以防止切屑问题的产生！

Long flute and overhang length geometry minimizes chip evacuation troubles!

- 全长：加长的DIN规格
Total length : DIN standard (longer than conventional)
- 柄部：以往的JIS规格
Shank : JIS standard (conventional)



② 尺寸记号 Thread Symbols

1982年，随着ISO导入后，JIS的管用螺纹规格，螺纹尺寸记号也被更改。由于螺纹精度没有变化，所以丝锥还是延用旧记号。

The JIS pipe thread standard was revised in 1982 to meet ISO standards. Although thread symbols changed, the limits were not changed. Therefore, it is still acceptable to use the older symbols.

(JIS B 0202-1982
JIS B 0203-1982)

种类 Type	旧号 Previous Symbol	新记号 New Symbol
耐密用锥管内螺纹 Taper pipe threads for pressure-tight joints	PT	Rc
耐密用平行管内螺纹 Parallel pipe threads for pressure-tight joints	PS	Rp
机械结合用平行管内螺纹 Parallel pipe threads for mechanical joints	PF	G

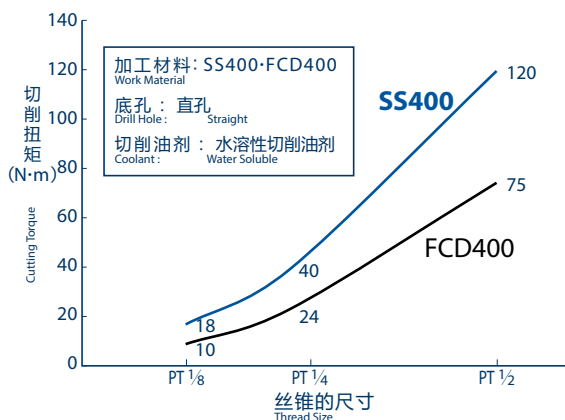


锥管丝锥的注意事项

Precautions When Using Taper Pipe Taps

1 切削扭矩 Cutting Torque

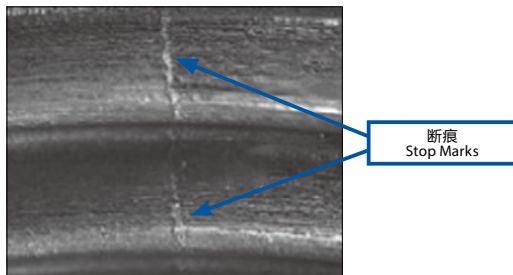
■ 锥管丝锥的切削扭矩 Cutting torque of taper pipe thread



锥管丝锥与一般的平行螺纹不同，完全螺纹部也参与切削，所以摩擦阻力会增加，是直槽丝锥2~3倍切削扭矩。

Unlike straight taps, taper pipe taps have a much higher volume of chip removal in the tapping process, resulting in greater friction and requires 2~3 times the tapping torque than hand taps.

2 断痕 Stop Marks



切削丝锥加工内螺纹，出现了断痕。发生这种不好的情况，我们推荐使用螺纹铣刀。

Female screws processed by cut taps have stop marks. If it presents a problem, the use of OSG's thread mill "Planet Cutter" series is recommended.

3 形状 Geometry

■ 采用了跳牙形状 Interrupted thread geometry

交错刀的效果可以确保适当的切深量的同时，防止烂牙。

The variable skip tooth geometry prevents galling by maintaining appropriate amount of cutting depth.

■ A-TPT与A-S-TPT形状的区别 Geometry comparison of A-TPT and A-S-TPT

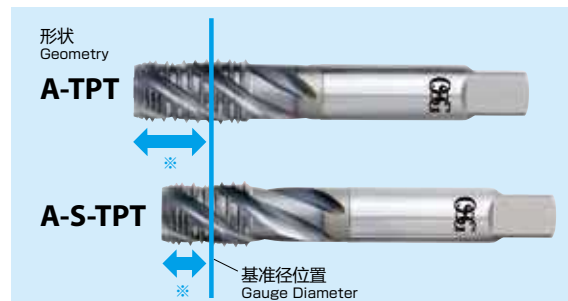
锥管螺纹 Rc(PT)・NPT 采用以往的 TPT 与 S-TPT 两种形状。

螺纹部长度与基准径位置根据 JIS B 4446 附件(规定) 锥管螺纹用丝锥(PT 形以及 PS 形) 设定长螺纹型(TPT) 与短螺纹型(S-TPT)。

Taper pipe taps Rc(PT) and NPT employs two types of geometries from the conventional TPT and S-TPT. The length of threaded parts and gauge diameters of TPT and S-TPT are following JIS B 4446 Appendix. Hand Taps for Pipe Thread for Taper Thread (PT Series Taper Taps and PS Series Parallel Taps).

例: Example

品名 Tool	工具 No. EDP No.	尺寸 Thread Size	全长 Total Length	基准径位置※ Gauge Diameter
A-TPT	8327655	PT 1/2-14	125	25
A-S-TPT	8327665			17



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参考资料
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公制螺纹 Metric screw threads

尺寸 Thread Size	推荐底孔径 Recommended drill hole dia.	最小底孔径 Min. drill hole dia.	最大底孔径 Max. drill hole dia.	
		各精度共通	旧JIS2级用	6H用
M 1.4 × 0.3	1.1	1.08	1.14	1.16
M 1.6 × 0.35	1.25	1.23	1.32	1.32
※ M 1.7 × 0.35	1.35	—	—	1.42
M 2 × 0.4	1.6	1.57	1.67	1.67
※ M 2 × 0.25	1.75	1.73	—	1.8
M 2.2 × 0.45	1.75	1.72	1.83	1.83
※ M 2.2 × 0.25	1.95	1.93	—	2
※ M 2.3 × 0.4	1.9	—	—	1.97
M 2.5 × 0.45	2.05	2.02	2.13	2.13
M 2.5 × 0.35	2.15	2.13	2.22	2.22
※ M 2.6 × 0.45	2.15	—	—	2.23
M 3 × 0.5	2.5	2.46	2.59	2.59
M 3 × 0.35	2.65	2.63	2.72	2.72
M 3.5 × 0.6	2.9	2.85	3.01	3.01
M 3.5 × 0.35	3.15	3.13	3.22	3.22
M 4 × 0.7	3.3	3.25	3.42	3.42
M 4 × 0.5	3.5	3.46	3.59	3.59
M 4.5 × 0.75	3.8	3.69	3.87	3.87
M 4.5 × 0.5	4	3.96	4.09	4.09
M 5 × 0.8	4.2	4.14	4.33	4.33
M 5 × 0.5	4.5	4.46	4.59	4.59
M 5.5 × 0.5	5	4.96	5.09	5.09
M 6 × 1	5	4.92	5.15	5.15
M 6 × 0.75	5.3	5.19	5.37	5.37
※ M 6 × 0.5	5.5	—	—	5.59
M 7 × 1	6	5.92	6.15	6.15
M 7 × 0.75	6.3	6.19	6.37	6.37
M 8 × 1.25	6.8	6.65	6.91	6.91
M 8 × 1	7	6.92	7.15	7.15
M 8 × 0.75	7.3	7.19	7.37	7.37
M 9 × 1.25	7.8	7.65	7.91	7.91
M 9 × 1	8	7.92	8.15	8.15
M 9 × 0.75	8.3	8.19	8.37	8.37

推荐底孔径为旧JIS2级内螺纹用。(除去旧JIS规格中没有的内螺纹)
 ※ JIS规格中没有的内螺纹的底孔径为参考值。

单位:mm Unit:mm

尺寸 Thread Size	推荐底孔径 Recommended drill hole dia.	最小底孔径 Min. drill hole dia.	最大底孔径 Max. drill hole dia.	
		各精度共通	旧JIS2级用	6H用
M10 × 1.5	8.5	8.38	8.67	8.67
M10 × 1.25	8.8	8.65	8.91	8.91
M10 × 1	9	8.92	9.15	9.15
M10 × 0.75	9.3	9.19	9.37	9.37
M11 × 1.5	9.5	9.38	9.67	9.67
M11 × 1.25	9.8	9.65	—	9.91
M11 × 1	10	9.92	10.15	10.15
M11 × 0.75	10.3	10.19	10.37	10.37
M12 × 1.75	10.3	10.11	10.44	10.44
M12 × 1.5	10.5	10.38	10.67	10.67
M12 × 1.25	10.8	10.65	10.91	10.91
M12 × 1	11	10.92	11.15	11.15
M14 × 2	12	11.84	12.21	12.21
M14 × 1.5	12.5	12.38	12.67	12.67
M14 × 1.25	12.8	12.65	—	12.91
M14 × 1	13	12.92	13.15	13.15
M15 × 1.5	13.5	13.4	13.6	13.67
M15 × 1	14	13.95	14.15	14.15
M16 × 2	14	13.9	14.2	14.21
M16 × 1.5	14.5	14.4	14.6	14.67
M16 × 1	15	14.95	15.15	15.15
M17 × 1.5	15.5	15.4	15.68	15.67
M17 × 1	16	15.95	16.15	16.15
M18 × 2.5	15.5	15.3	15.7	15.74
M18 × 2	16	15.9	16.2	16.21
M18 × 1.5	16.5	16.4	16.6	16.67
M18 × 1	17	16.95	17.15	17.15
M20 × 2.5	17.5	17.3	17.7	17.74
M20 × 2	18	17.9	18.2	18.21
M20 × 1.5	18.5	18.4	18.6	18.67
M20 × 1	19	18.95	19.15	19.15

The recommended tap limit corresponds to JIS class 2 internal thread standard.
 ※ The recommended drill hole size that are not listed on JIS is as reference.



单位:mm Unit:mm

尺寸 Thread Size	推荐底孔径 Recommended drill hole dia.	最小底孔径 Min. drill hole dia.	最大底孔径 Max. drill hole dia.	
		各精度共通	旧JIS2级用	6H用
M22 × 2.5	19.5	19.3	19.7	19.74
M22 × 2	20	19.9	20.2	20.21
M22 × 1.5	20.5	20.4	20.6	20.67
M22 × 1	21	20.95	21.15	21.15
M24 × 3	21	20.8	21.2	21.25
M24 × 2	22	21.9	22.2	22.21
M24 × 1.5	22.5	22.4	22.6	22.67
M24 × 1	23	22.95	23.15	23.15
M27 × 3	24	23.8	24.2	24.25
M27 × 1.5	25.5	25.4	25.6	25.67
M30 × 3.5	26.5	26.3	26.7	26.77
M30 × 3	27	26.8	27.2	27.25
M30 × 1.5	28.5	28.4	28.6	28.67
M33 × 3.5	29.5	29.3	29.7	29.77
M33 × 3	30	29.8	30.2	30.25
M33 × 1.5	31.5	31.4	31.6	31.67

尺寸 Thread Size	推荐底孔径 Recommended drill hole dia.	最小底孔径 Min. drill hole dia.	最大底孔径 Max. drill hole dia.	
		各精度共通	旧JIS2级用	6H用
M36 × 4	32	31.7	32.2	32.27
M36 × 3	33	32.8	33.2	33.25
M36 × 1.5	34.5	34.4	34.6	34.67
M39 × 4	35	34.7	35.2	35.27
M42 × 4.5	37.5	37.2	37.7	37.79
M42 × 3	39	38.8	39.2	39.25
M42 × 1.5	40.5	40.4	40.6	40.67
M45 × 4.5	40.5	40.2	40.7	40.79
M48 × 5	43	42.6	43.2	43.29
M48 × 3	45	44.8	45.2	45.25
M52 × 5	47	46.6	47.2	47.2
M56 × 5.5	50.5	50.1	50.7	50.7

推荐底孔径为旧JIS2级内螺纹用。(除去旧JIS规格中没有的内螺纹)

※ JIS规格中没有的内螺纹的底孔径为参考值。

The recommended tap limit corresponds to JIS class 2 internal thread standard.

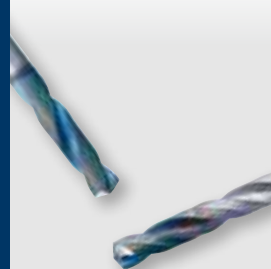
※ The recommended drill hole size that are not listed on JIS is as reference.

底孔加工

Flawless holes for
perfect threading



A-Drill



WD/WDO
AD/ADO



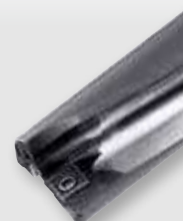
ADF



ADO-SUS



TRS



PD



特长
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A-SFT



参考资料
References

美制螺纹 Unified screw threads

尺寸 Thread Size	外径 d Major dia.	推荐底孔径 Recommended drill hole dia.	JIS2B 级用 JIS class 2B drill hole dia.	
			最小底孔径 Min. drill hole dia.	最大底孔径 Max. drill hole dia.
No. 4 - 40UNC	2.845	2.3	2.16	2.38
5 - 40UNC	3.175	2.6	2.49	2.69
6 - 32UNC	3.505	2.8	2.65	2.89
8 - 32UNC	4.166	3.4	3.31	3.53
10 - 24UNC	4.826	3.8	3.69	3.96
10 - 32UNF		4.1	3.97	4.16
1/4 - 20UNC	6.35	5.1	4.98	5.25
1/4 - 28UNF		5.5	5.36	5.58
5/16 - 18UNC	7.938	6.6	6.41	6.73
5/16 - 24UNF		6.9	6.79	7.03
3/8 - 16UNC	9.525	8	7.8	8.15
3/8 - 24UNF		8.5	8.39	8.63
7/16 - 14UNC	11.112	9.4	9.15	9.55
7/16 - 20UNF		9.9	9.73	10.03
1/2 - 13UNC	12.7	10.8	10.6	11.02
1/2 - 20UNF		11.5	11.33	11.6
5/8 - 12UNC	14.288	12.2	11.99	12.4
5/8 - 18UNF		12.9	12.8	13

单位:mm Unit:mm

尺寸 Thread Size	外径 d Major dia.	推荐底孔径 Recommended drill hole dia.	JIS2B 级用 JIS class 2B drill hole dia.	
			最小底孔径 Min. drill hole dia.	最大底孔径 Max. drill hole dia.
5/8 - 11UNC	15.875	13.6	13.4	13.8
5/8 - 18UNF		14.5	14.4	14.6
3/4 - 10UNC	19.05	16.5	16.4	16.8
3/4 - 16UNF		17.5	17.4	17.6
7/8 - 9UNC	22.225	19.5	19.2	19.7
7/8 - 14UNF		20.5	20.3	20.6
1 - 8UNC	25.4	22.2	22	22.6
1 1/8 - 8UN	28.575	25.5	25.2	25.7
1 1/4 - 8UN	31.75	28.7	28.4	28.9
1 3/8 - 8UN	34.925	31.8	31.5	32.1
1 1/2 - 8UN	38.1	35	34.7	35.3
1 5/8 - 8UN	41.275	38.2	37.9	38.4
1 3/4 - 8UN	44.45	41.4	41.1	41.6
1 7/8 - 8UN	47.625	44.5	44.2	44.8
2 - 8UN	50.8	47.7	47.4	48

JIS 规格中没有的内螺纹的推荐底孔径。
 ※根据 JIS B 1004-1975, 基准牙型以及各个数据与公制螺纹相同。
 Reference for internal threads not listed in the JIS standard.
 ※ In accordance to JIS B 1004-1975. Thread values are the same as metric standard.

嵌套螺纹用公制螺纹

Helicoil / EG / STI : Metric screw threads

单位:mm Unit:mm

尺寸 Thread Size	丝锥底孔径 Drill hole dia.		适用钻径 Suitable Drill dia.
	最小尺寸 Min.	最大尺寸 Max.	
M 2 × 0.4 (2.520)	2.09	2.17	2.1
2.5 × 0.45 (3.085)	2.6	2.65	2.6
2.6 × 0.45 (3.185)	2.7	2.75	2.7
3 × 0.5 (3.650)	3.12	3.2	3.15
4 × 0.7 (4.909)	4.17	4.3	4.2
5 × 0.8 (6.039)	5.16	5.33	5.2
6 × 1 (7.300)	6.25	6.42	6.3
8 × 1.25 (9.624)	8.31	8.52	8.4
10 × 1.5 (11.948)	10.37	10.62	10.5
12 × 1.75 (14.274)	12.43	12.73	12.5

嵌套螺纹用美制螺纹

Helicoil / EG / STI : Unified screw threads

单位:mm Unit:mm

尺寸 Thread Size	丝锥底孔径 Drill hole dia.		适用钻径 Suitable Drill dia.
	最小尺寸 Min.	最大尺寸 Max.	
No. 10 - 32 (5.857)	4.98	5.13	5
1/4 - 28 (7.528)	6.53	6.71	6.6
5/16 - 24 (9.313)	8.2	8.38	8.2
3/8 - 24 (10.900)	9.78	9.96	9.8



G(PF)

单位:mm Unit:mm

管用螺纹 Pipe Thread		推荐底孔径 Recommended drill hole dia.	最小底孔径 (咬合率) Drill hole dia. min.	最大底孔径 (咬合率) Drill hole dia. max.
尺寸 Thread Size	外径 d Major dia.			
G	1/16	7.723	6.7	6.56 (100%)
G (PF)	1/8	9.728	8.7	8.57 //
	1/4	13.157	11.7	11.45 //
	3/8	16.662	15.2	14.95 //
	1/2	20.955	19	18.6 //
	5/8	22.911	21	20.6 //
	3/4	26.441	24.5	24.1 //
	7/8	30.201	28	27.9 //
1	33.249	30.5	30.3 //	30.9 //

1982年, 导入ISO后, JIS管用螺纹规格进行更改, 尺寸记号也进行了变更。螺纹精度没有变更, 所以丝锥可以使用旧记号。

The JIS pipe thread standard was revised in 1982 to meet ISO standards. Although thread symbols changed, the limits were not changed. Therefore, it is still acceptable to use the older symbols.

(JIS B 0202-1982
JIS B 0203-1982)

种类 Type	旧记号 Previous Symbol	新记号 New Symbol
耐用用锥管内螺纹 Taper pipe threads for pressure-tight joints	PT	Rc
耐用用平行管内螺纹 Parallel pipe threads for pressure-tight joints	PS	Rp
机械结合用平行管内螺纹 Parallel pipe threads for mechanical joints	PF	G

- JIS B 0203锥管内螺纹的计算值为, 当基准值位于连接部端面时, 允许有效螺纹的小端处最后一牙为不完全牙形的直孔孔径。
 - JIS B 2301锥管内螺纹的计算值为, 当基准值位于连接部端口时, 不允许在小端处存在不完全牙形的直孔孔径。
 - PT, PS的1/16参照JIS B 0203-1982的Rc, Rp内螺纹
- Calculated value of JIS B 0203 taper thread refers to the diameter of the straight hole in case that the last one thread at the small diameter position in useful threads is allowed to be incomplete when the reference is on the end surface of the joint.
 - Calculated value of JIS B 2301 taper thread refers to the diameter of the straight hole in case that the last thread at the small diameter position needs to be complete when the reference is on the end surface of the joint.
 - The values for 1/16 of PT and PS conform to those of Rc and Rp threads under JIS B 0203-1982.

PT(Rc) · Rp(PS)

单位:mm Unit:mm

管用平行螺纹 Pipe Thread		JIS B 0203				JIS B 2301	
尺寸 Thread Size	外径 d Major dia.	锥管内螺纹 PT(Rc) Taper internal threads PT(Rc)		平行管内螺纹 Rp(PS) Parallel internal threads Rp(PS)		锥管内螺纹 Taper internal threads	
		计算值 Calculated value	底孔径 Drill hole dia.	计算值 Calculated value	底孔径 Drill hole dia.	计算值 Calculated value	底孔径 Drill hole dia.
1/16	7.723	6.23	6.2	6.49	6.5	—	—
1/8	9.728	8.235	8.2	8.495	8.5	8.191	8.2
1/4	13.157	10.941	10.9	11.341	11.4	10.945	10.9
3/8	16.662	14.428	14.4	14.846	14.9	14.388	14.4
1/2	20.955	17.95	18	18.489	18.5	17.943	18
3/4	26.441	23.349	23	23.975	24	23.305	23
1	33.249	29.423	29	30.111	30	29.353	29

NPT · NPSC

单位:mm()=inch Unit:mm()=inch

管用螺纹 Pipe Thread		锥管螺纹 (NPT) Taper threads (NPT)				平行管螺纹 (NPSC) Parallel threads (NPSC)	
尺寸 Thread Size	外径 d Major dia.	钻头直径 Drill dia.				钻头直径 Drill dia.	
		使用铰刀的情况 Where Reamer is used		不使用铰刀的情况 Where Reamer is not used			
1/16	7.770	—	5.94 (0.234)	—	6.15 (0.242)	1/4	6.35 (0.25)
1/8	10.117	21/64	8.33 (0.328)	—	8.43 (0.332)	11/32	8.74 (0.344)
1/4	13.426	27/64	10.72 (0.422)	7/16	11.13 (0.438)	7/16	11.13 (0.438)
3/8	16.866	9/16	14.27 (0.562)	9/16	14.27 (0.562)	37/64	14.68 (0.578)
1/2	20.980	11/16	17.48 (0.688)	45/64	17.86 (0.703)	23/32	18.26 (0.719)
3/4	26.325	57/64	22.63 (0.891)	29/32	23.01 (0.906)	59/64	23.42 (0.922)
1	32.934	1 1/8	28.58 (1.125)	1 9/64	28.98 (1.141)	1 5/32	29.36 (1.156)

钻头直径是美制管用螺纹 ANSI/ASME B1.20.1-1983 Pipe Threads, General Purpose(Inch)附件推荐钻头直径。

The drill sizes are quoted from ANSI/ASME B1.20.1-1983 Pipe Threads, General Purpose (Inch) Appendix.

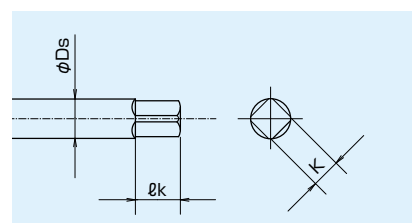


单位:mm Unit:mm

柄径 Ds	四方部长 ℓk	四方部宽 K
3	5	2.5
4	6	3.2
5	7	4
5.5	7	4.5
6	7	4.5
6.1	8	5
6.2	8	5
7	8	5.5
8	9	6
8.5	9	6.5
9	10	7
10	11	8
10.5	11	8
11	12	9

柄径 Ds	四方部长 ℓk	四方部宽 K
12	12	9
12.5	13	10
13	13	10
14	14	11
15	15	12
16	15	12
17	16	13
18	17	14
19	18	15
20	18	15
22	20	17
23	20	17
24	22	19
25	22	19

柄径 Ds	四方部长 ℓk	四方部宽 K
26	24	21
28	24	21
30	26	23
32	30	26
35	30	26
38	32	29
40	35	32
44	38	35



突顶尖长度 Length of External Center

公制螺纹 Metric threads

单位:mm Unit:mm

尺寸 Size	长度 Length
M 1.4	0.6
M 1.6	0.6
M 1.7	0.7
M 2	0.8
M 2.2	0.8
M 2.3	1
M 2.5	1
M 2.6	1.1
M 3	1.2
M 3.5	1.5
M 4	1.7
M 4.5	1.9
M 5	2.2
M 5.5	2.4
M 6	2.6
M 7	3.1
M 8	3.5
M 9	4

标准螺纹 Unified threads

单位:mm Unit:mm

尺寸 Size	长度 Length
No. 4	1.2
No. 5	1.3
No. 6	1.5
No. 8	1.8
No. 10	2.1
U 1/4	2.7
U 5/16	3.4

仅 A-POT Only for spiral pointed taps

※突顶尖长度为参考值。 ※ The lengths listed above are for reference only.



特長
Features

切削条件
Cutting Conditions

加工案例
Cutting Data



A-SFT



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