



# 再见了，烂牙！ 追加锥管螺纹

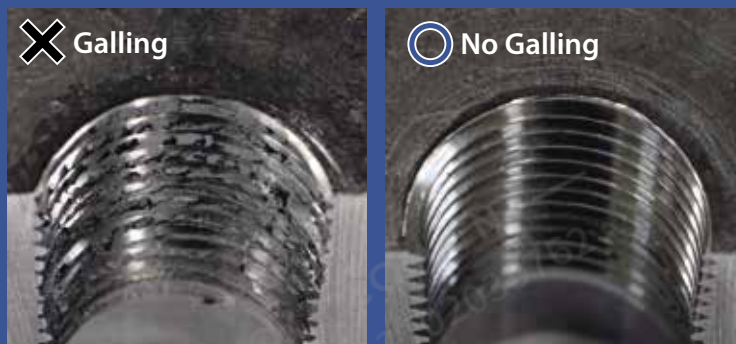
Newly expanded taper pipe tap lineup to help you achieve the perfect thread with no galling!

“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.

The images below features a comparison of hole quality between a conventional taper pipe tap and the A-Tap series taper pipe tap in SS400.



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

## 刃倾角丝锥 通孔用 Spiral Pointed Tap for Through Holes

### 公制螺纹 Metric Screw Thread

A-POT ..... 39

铣刀柄型 ..... 51  
End Mill Shank

A-LT-POT 长柄型 ..... 47  
Long Shank

铣刀柄型 ..... 52  
End Mill Shank

### 美制螺纹 Unified Screw Thread

A-POT ..... 46

## DIN 规格

### DIN Standard

A-SFT ..... 53

A-LT-SFT ..... 58

A-OIL-SFT ..... 59

A-POT ..... 61

A-LT-POT ..... 65

A-TPT ..... 66

A-SFT (A-SPT) ..... 67

A-POT (A-SPT) ..... 68

## 攻丝刀柄

Tap Holder

SynchroMaster ..... 61

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

#### 3 柄部 Shank

SHANK  
h7 表示柄部精度  
Tolerance for Shank Diameter

#### 4 螺旋角 Helix Angle

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

#### 5 切削条件 Cutting Conditions

SPEED FEED 表示切削条件表所在页码  
Indicates page number for cutting conditions

■ A-SFT・A-LT-SFT・A-OIL-SFT (～ M24、2.5P)

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高碳素钢 Medium Carbon Steel High Carbon Steel	S45C		5-15	15-50			50-75		
合金钢 Alloy Steel	SCM		5-10	10-15	15-30				
一般构造用钢 Mild Steel	SS400		5-20 <sup>(*)</sup>						
不锈钢 Stainless Steel	SUS304 SUS420		5-10	10-15					
铝 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)・A-SFT HL・A-LT-SFT HL

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高碳素钢 Medium Carbon Steel High Carbon Steel	S45C		3-15		15-30				
合金钢 Alloy Steel	SCM		3-8 <sup>(*)</sup>						
一般构造用钢 Mild Steel	SS400		3-20 <sup>(*)</sup>						
不锈钢 Stainless Steel	SUS304 SUS420		3-8 <sup>(*)</sup>						
铝 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)

切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高碳素钢 Medium Carbon Steel High Carbon Steel	S45C		3-8	8-15					
合金钢 Alloy Steel	SCM		3-8	8-15					
一般构造用钢 Mild Steel	SS400		3-15 <sup>(*)</sup>						
不锈钢 Stainless Steel	SUS304 SUS420		3-8						
铝 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)

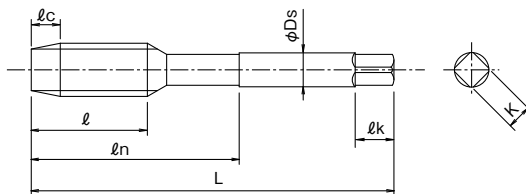
切削速度 (m/min) Cutting Speed		0	10	20	30	40	50	60	70
中・高碳素钢 Medium Carbon Steel High Carbon Steel	S45C		5-15	15-50			50-75		
合金钢 Alloy Steel	SCM		5-10	10-15	15-30				
一般构造用钢 Mild Steel	SS400		5-20 <sup>(*)</sup>						
不锈钢 Stainless Steel	SUS304 SUS420		5-10	10-15					
铝 Aluminum	AC ADC		5-50						
球墨铸铁 Ductile Cast Iron	FCD		5-75						

推荐范围  
Advisable

可加工范围  
Possible



# 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

商品号 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	推荐底孔径 Recommended drill hole dia.	库存 Stock
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

商品号 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 <sub>n</sub>	柄径 D <sub>s</sub>	槽数 Flutes	推荐底孔径 Recommended drill hole dia.	库存 Stock
8326224	M7 × 0.75	STD	OH2	100	9	33	6.2	3	6.3	
8326225				150						
8326232	M8 × 1.25	STD	OH3	100	15	37	6.2	3	6.8	
8326233				150						
8326230	M8 × 1	STD	OH3	100	12	37	6.2	3	7	
8326231				150						
8326228	M8 × 0.75	STD	OH3	100	12	37	6.2	3	7.3	
8326229				150						
8326238	M9 × 1.25	STD	OH3	100	15	38	7	3	7.8	
8326239				150						
8326236	M9 × 1	STD	OH3	100	12	38	7	3	8	
8326237				150						
8326234	M9 × 0.75	STD	OH3	100	12	38	7	3	8.3	
8326235				150						
8326246	M10 × 1.5	STD	OH3	100	18	41	7	3	8.5	○
8326247				150						
8326244	M10 × 1.25	STD	OH3	100	15	41	7	3	8.8	
8326245				150						
8326242	M10 × 1	STD	OH3	100	15	41	7	3	9	
8326243				150						
8326240	M10 × 0.75	STD	OH3	100	15	41	7	3	9.3	
8326241				150						
8326252	M11 × 1.5	STD	OH3	100	18	48	8	3	9.5	
8326253				150						
8326292	M11 × 1.25	STD	OH3	100	15	48	8	3	9.8	
8326293				150						
8326250	M11 × 1	STD	OH3	100	15	48	8	3	10	
8326251				150						
8326248	M11 × 0.75	STD	OH3	100	15	48	8	3	10.3	
8326249				150						

■ 标记的说明请参照 p.2。

■ 柄部四方部尺寸 ℓ<sub>k</sub>, K 请参见 p.56。

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, 可能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。(除旧JIS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.

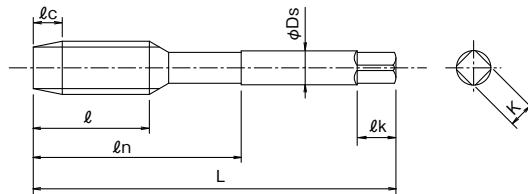
■ See p.56 for shank square length(ℓ<sub>k</sub>) and width(K).

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-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

商品号 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.	库存 Stock
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	



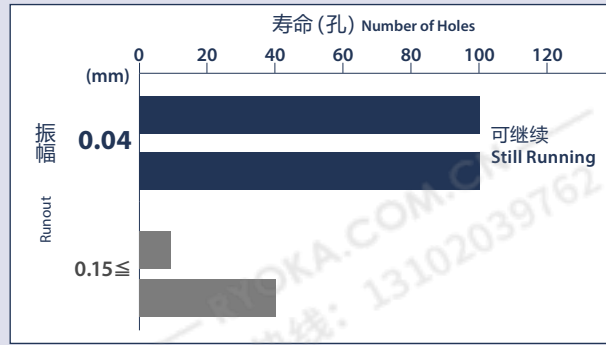
## 加工要点(安装部振动的影响)

Points of tapping (effect of attachment runout)

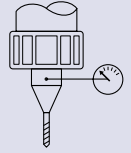
- 抑制安装部振动使其稳定加工。  
Stable tapping can be ensured by controlling the attachment runout.

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 <sup>-1</sup> )
底孔径 Drilling Hole Size	1.6mm
攻丝长度 Tapping Length	3mm (1.5D)
刀具悬伸量 Overhang Length	60mm
切削油剂 Coolant	无氯水溶性切削油剂 (10倍) Water-Soluble Chlorine-Free (10%)
使用机械 Machine	立式加工中心 Vertical Machining Center

### ■安装部振动与寿命 Attachment runout and number of holes



- 安装部振动是在刀柄端面处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

商品号 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	推荐底孔径 Recommended drill hole dia.	库存 Stock
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.
- 柄部四方部尺寸ℓk, K请参见 p.56.

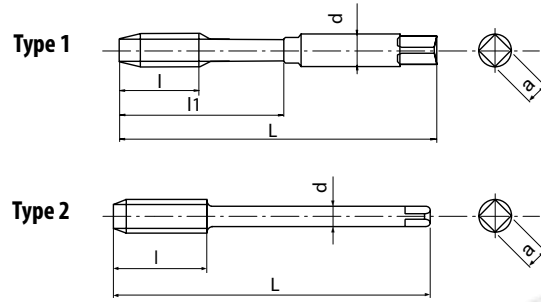
1. 精度栏   是相当于2级内螺纹适应的丝锥推荐精度。
2. 丝锥精度不能保证内螺纹精度。
3. 使用进给不稳定的机械时, 可能会发生内螺纹扩大的问题, 请务必注意。
4. 不推荐再研磨。
5. 推荐底孔径为旧JIS2级用。(除旧JIS规格没有的内螺纹)  
JIS规格中没有的内螺纹底孔径仅供参考。

- See p.2 for explanation of marks.
- See p.56 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-LT-SFT



■ 切削锥长2.5P  
Chamfer Length



螺纹种类：M

单位:mm Unit:mm

商品号 EDP No.	尺寸 Thread Size	精度 TAP Limit	形状规格 Din	全长 L	螺纹部长度 l	螺纹部长度+颈长 ll	柄径 d	四方部尺寸 a	槽数 Z	形状类型 Type	库存 Stock
48208125	M2X0.4	6HX	DIN371	80	3.2	10	2.8	2.1	2	1	○
48208133	M2.5X0.45		DIN371	100	3.6	13	2.8	2.1	2	1	
48208138	M3X0.5		DIN371	100	4	18	3.5	2.7	3	1	
48208144	M4X0.7		DIN371	125	5.6	21	4.5	3.4	3	1	
48208149	M5X0.8		DIN371	160	6.4	25	6	4.9	3	1	
48208155	M6X1		DIN371	160	8	30	6	4.9	3	1	
48208161	M8X1.25		DIN371	180	10	35	8	6.2	3	1	
48208169	M10X1.5		DIN371	200	12	39	10	8	3	1	
48209179	M12X1.75		DIN376	200	14	-	9	7	3	2	
48209191	M14X2		DIN376	200	16	-	11	9	3	2	
48209202	M16X2		DIN376	200	16	-	12	9	3	2	
48209214	M18X2.5		DIN376	200	25	-	14	11	4	2	
48209228	M20X2.5		DIN376	200	25	-	16	12	4	2	

■ 标记的说明请参照p.2。

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，可能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.

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.

