



VP挤压丝锥系列

VP Nu-Roll Tap Series

Vol. 6



VP-NRT VP-NRTS IT-NRT VP-SC-NRT VP-LT-NRT VP-LT-SC-NRT

**针对不锈钢及IT零部件加工
能发挥巨大威力!**

Especially in Stainless Steels, it performs very well.
Especially in IT industry, it works tremendously.

- **什么是VP?** 表面处理: V涂层 (TiCN) +材质: 粉末高速钢。
 VP stands for : V(TiCN) coated surface treatment + Powder metallurgy HSS (CPM) for tool material

- 1** 广泛适用于碳素钢、合金钢、一般构造钢、不锈钢、铸铝钢, 可实现长寿命加工。
 特别针对与不锈钢发挥超大威力。

The VP Nu-Roll Tap Series with extra long tool life is applicable to various work materials: Carbon Steels, Alloy Steels, Mild Steels, Stainless Steels, and Aluminum Alloy. Especially in Stainless Steels, it performs very well.

加工材质 Work Material	与V-NRT的寿命对比 Comparative durability with V-NRT
低碳素钢 Low Carbon Steels	1.5倍以上 more than 1.5 times
高碳素钢 High Carbon Steels	2倍以上 more than 2 times
调质钢 (≈35HRC) Hardened Steels	1.2倍以上 more than 1.2 times
不锈钢 Stainless Steels	2.6倍以上 more than 2.6 times
铝合金延展材 Aluminum Rolled	1.5倍以上 more than 1.5 times
铝合金铸造物 Aluminum Alloy Castings	1.5倍以上 more than 1.5 times

- 2** 采用特殊设计的螺纹, 能实现无毛刺的高品质内螺纹。
 A special thread form of the VP Nu-Roll Tap Series can produce high quality threads without burrs.

针对不锈钢 进行高精度无毛刺的内螺纹加工!! Clean and smooth surface finish tapping in stainless steel No burrs!!



其他公司产品 Competitor's TiCN coated tap



VP-NRT

母螺纹内部的刮痕和毛刺若脱落在精密零件和引擎零件里面, 可能会引起重大故障。

VP挤压丝锥 (VP-NRT) 可加工出无刮痕和毛刺, 高品质的母螺纹。

Small burrs inside the internal thread could cause significant interruption if they fall into precision parts or an engine. The VP Nu-Roll Tap Series brings you high quality machined products that are free from these tiny burrs.

切削条件 Cutting Conditions	
尺寸 Tool	VP-NRT M3×0.5
加工材质 Work Material	SUS304 (X5CrNi1810)
切削速度 Tapping Speed	7.5m/min (800min ⁻¹)
切削液 Coolant	水溶性切削油剂 (10倍) Water Soluble(10%)
底孔 Hole Size	φ 2.8×9mm (通孔) (through)
螺纹长度 Tapping Length	6mm (2D)
使用设备 Machine	立式加工中心 Vertical Machining Center

品名 Description	材质 Tool Material	切削孔数 Number of Holes	耐久性 Limiting Factor
		5,000 10,000 15,000 20,000	
VP-NRT	CPM	19,000孔以上 (Over 19,000 Holes)	可持续加工 Continue
V复合涂层 NRT丝锥 Fluteless (Nu-Roll) Taps V coated V- NRT	HSS-Co	7,180孔 (Holes)	刀刃受损 chipping
TiCN复合涂层 其他公司产品 Competitor's TiCN coated tap	粉末高速钢 Powder metallurgy HSS	8,330孔 (Holes)	GP-OUT

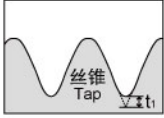
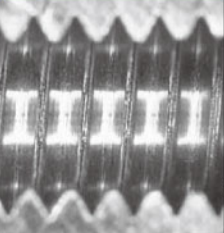
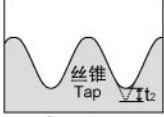
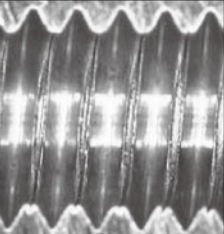
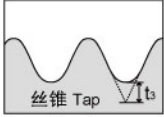
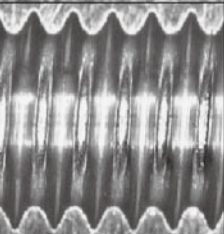
- 3** 采用耐磨性及韧性高相兼备的粉末高速钢CPM, 使产品具有高稳定性。
 Thanks to high wear resistance and toughness of powder metallurgy H.S.S., stable tapping performance can be achieved.

- 4** 表面处理使用了耐磨性和抗溶着性良好的V复合涂层, 使产品更具有耐久性。

The good wear resistance and anti-welding properties of the V coating provide the VP Nu-Roll Tap Series with stable tool life.

- 5** 可以根据需求, 分别使用VP-NRTS或IT-NRT来加工小径螺纹。

VP-NRT, VP-NRTS, or IT-NRT can be used selectively to satisfy a variety of small diameter tapping needs. ※UM Nu-Roll Tap(UM-NRT) sizes S0.5-0.9 are available for ultra-small diameter threads.

品名・形状 Description・Type	丝锥底径的作用 Effect of tap root diameter	加工内螺纹的形状 Internal thread	加工后的牙形 Thread shape after tapping	用途 Use
VP-NRT  $t_1 < t_2 < t_3$	加工时丝锥底径与工件不会接触 The work does not contact the root diameter of the tap during tapping.			丝锥的底径与内螺纹内径没有干涉，用于加工一般的螺纹。 Taps normal internal threads, without causing the tap root diameter and the internal thread diameter to come in contact.
VP-NRTS  $t_1 < t_2 < t_3$	底孔径的不同，底径与工件接触 Depending on the hole size, the work can come in contact with the root diameter of the tap during tapping.			使用于能确保内螺纹内径但难以保证底孔径精度的加工情况，通过将嵌合率设定为100%来控制毛刺。若目标为完整牙形时，则会出现内螺纹孔径变小的情况。 Use it for tapping a hole of a size that is difficult to control while controlling the inner thread bore. Controls burrs by setting the thread engagement to 100%. When attempting complete top rolls, the internal thread diameter may become too small.
IT-NRT  $t_1 < t_2 < t_3$	加工时底径与工件相接触 The work comes in contact with the root diameter of the tap during tapping.			丝锥底径与内螺纹内径相接触，用于防止内螺纹被丝锥破坏，及毛刺的产生，在自动装配装置上使用，可防止螺纹被破坏。必须严格控制底孔径。 Allow the tap root diameter and the inner thread bore to come in contact in order to prevent the inner thread diameter from burring or cracking, and the inner bore from burrs. Use it to prevent a bolt from galling during automatic assembly. The hole diameter must be strictly controlled.

不保证丝锥种类与内螺纹的牙形一致
Tap type does not guarantee internal thread shape.

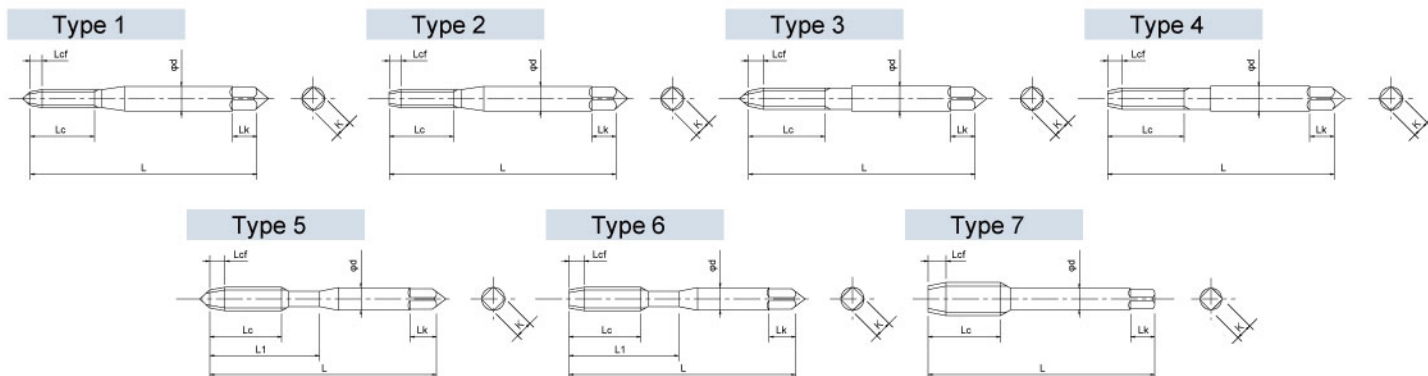
VP挤压丝锥产品线 Line up

品名 Description	特点 Feature	库存尺寸 Stocked Size	页数 Page
VP-NRT	从小径到大径的一般加工用 From small to large diameter threads, for general internal thread machining.	M1~12 No.2~6	3~4
VP-NRTS	采用短螺纹形状，丝锥的底径加大设计，实现了高折损强度。 S0.5~S0.9（极小径螺纹）为标准库存品。 The high breakage-resistance of the VP-NRTS is achieved by a short thread shape and a large tap root diameter.	M1~2.6	5
IT-NRT	采用VP-NRT的形状，通过丝锥的谷底对内螺纹谷底形状进行控制。 可以加工出无毛刺的内螺纹。 The IT-NRT achieves high-quality, burr-less tapping by using the VP Nu Roll Tap and controlling the build-up at the tap root.	M1~3 No.0~4 部分为受注生产品 Particular Size: Special order products	6
VP-LT-NRT	长颈形设计，可加工深孔螺纹 The long shank series is capable of tapping in deeper holes.	M1~12 No.2~6	8~10
VP-SC-NRT	切削锥长为1P，适用于底孔预留空间较短的盲孔加工 The SC series with one thread chamfer is optimal for blind hole tapping where there is not enough room.	M1~6 No.2~6	7
VP-LT-SC-NRT	切削锥长为1P，长颈形设计，可加工深孔且底孔预留空间较短的盲孔加工 The SC series with one thread chamfer is optimal for blind hole tapping where there is not enough room. The long shank series is capable of tapping in deeper holes.	M1~6 No.2~6	11

VP挤压丝锥 VP-NRT

VP NU-ROLL

- 材质
Tool Material
粉末冶金高速钢
Powder metallurgy HSS (CPM)
- 表面处理
Surface Treatment
V复合涂层
V coating



螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8317410	M 1 × 0.25	RH4	4P	30	7	—	3	5	2.5	1	●
8317411	M 1 × 0.25	RH4	2P	30	7	—	3	5	2.5	2	●
8317414	M 1.2 × 0.25	RH4	4P	32	8	—	3	5	2.5	1	●
8317415	M 1.2 × 0.25	RH4	2P	32	8	—	3	5	2.5	2	●
8317418	M 1.4 × 0.3	RH4	4P	34	9	—	3	5	2.5	1	●
8317419	M 1.4 × 0.3	RH4	2P	34	9	—	3	5	2.5	2	●
8317420	M 1.4 × 0.3	* RH5	4P	34	9	—	3	5	2.5	1	●
8317421	M 1.4 × 0.3	* RH5	2P	34	9	—	3	5	2.5	2	●
8317424	M 1.6 × 0.35	RH4	4P	36	10	—	3	5	2.5	1	○
8317425	M 1.6 × 0.35	RH4	2P	36	10	—	3	5	2.5	2	○
8317430	M 1.7 × 0.35	RH4	4P	36	11	—	3	5	2.5	1	●
8317431	M 1.7 × 0.35	RH4	2P	36	11	—	3	5	2.5	2	●
8317432	M 1.7 × 0.35	RH5	4P	36	11	—	3	5	2.5	1	●
8317433	M 1.7 × 0.35	RH5	2P	36	11	—	3	5	2.5	2	●
8317442	M 2 × 0.4	RH4	4P	40	12	—	3	5	2.5	1	●
8317443	M 2 × 0.4	RH4	2P	40	12	—	3	5	2.5	2	●
8317444	M 2 × 0.4	RH5	4P	40	12	—	3	5	2.5	1	●
8317445	M 2 × 0.4	RH5	2P	40	12	—	3	5	2.5	2	●
8317446	M 2.3 × 0.4	RH4	4P	42	13	—	3	5	2.5	3	●
8317447	M 2.3 × 0.4	RH4	2P	42	13	—	3	5	2.5	4	●
8317478	M 2.5 × 0.45	RH4	4P	44	14	—	3	5	2.5	3	●
8317479	M 2.5 × 0.45	RH4	2P	44	14	—	3	5	2.5	4	●
8317490	M 2.6 × 0.45	RH4	4P	44	14	—	3	5	2.5	3	●
8317491	M 2.6 × 0.45	RH4	2P	44	14	—	3	5	2.5	4	●
8317492	M 2.6 × 0.45	RH5	4P	44	14	—	3	5	2.5	3	●
8317493	M 2.6 × 0.45	RH5	2P	44	14	—	3	5	2.5	4	●
8317502	M 3 × 0.5	RH5	4P	46	9	18	4	6	3.2	5	●
8317503	M 3 × 0.5	RH5	2P	46	9	18	4	6	3.2	6	●
8317504	M 3 × 0.5	RH6	4P	46	9	18	4	6	3.2	5	○
8317505	M 3 × 0.5	RH6	2P	46	9	18	4	6	3.2	6	○
8317514	M 3.5 × 0.6	RH4	4P	48	9	18	4	6	3.2	5	●
8317515	M 3.5 × 0.6	RH4	2P	48	9	18	4	6	3.2	6	●
8317526	M 4 × 0.7	RH6	4P	52	10	20	5	7	4	5	●
8317527	M 4 × 0.7	RH6	2P	52	10	20	5	7	4	6	●
8317528	M 4 × 0.7	RH7	4P	52	10	20	5	7	4	5	○
8317529	M 4 × 0.7	RH7	2P	52	10	20	5	7	4	6	○



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螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺紋长 Lc	颈长 L ₁	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8317538	M 5× 0.8	RH6	4P	60	11	22	5.5	7	4.5	5	●
8317539	M 5× 0.8	RH6	2P	60	11	22	5.5	7	4.5	6	●
8317542	M 5× 0.8	RH8	4P	60	11	22	5.5	7	4.5	5	○
8317543	M 5× 0.8	RH8	2P	60	11	22	5.5	7	4.5	6	○
8317550	M 6× 1	RH7	4P	62	12	24	6	7	4.5	5	●
8317551	M 6× 1	RH7	2P	62	12	24	6	7	4.5	6	●
8317554	M 6× 1	RH9	4P	62	12	24	6	7	4.5	5	○
8317555	M 6× 1	RH9	2P	62	12	24	6	7	4.5	6	○
8317568	M 8× 1.25	RH7	4P	70	18	—	6.2	8	5	7	●
8317569	M 8× 1.25	RH7	2P	70	18	—	6.2	8	5	7	●
8317574	M 8× 1	RH7	4P	70	18	—	6.2	8	5	7	●
8317575	M 8× 1	RH7	2P	70	18	—	6.2	8	5	7	●
8317586	M10× 1.5	RH7	4P	75	19	—	7	8	5.5	7	●
8317587	M10× 1.5	RH7	2P	75	19	—	7	8	5.5	7	●
8317592	M10× 1.25	RH7	4P	75	19	—	7	8	5.5	7	●
8317593	M10× 1.25	RH7	2P	75	19	—	7	8	5.5	7	●
8317598	M10× 1	RH7	4P	75	19	—	7	8	5.5	7	●
8317599	M10× 1	RH7	2P	75	19	—	7	8	5.5	7	●
8317610	M12× 1.75	RH8	4P	82	23	—	8.5	9	6.5	7	●
8317611	M12× 1.75	RH8	2P	82	23	—	8.5	9	6.5	7	●
8317616	M12× 1.5	RH7	4P	82	23	—	8.5	9	6.5	7	●
8317617	M12× 1.5	RH7	2P	82	23	—	8.5	9	6.5	7	●
8317622	M12× 1.25	RH7	4P	82	23	—	8.5	9	6.5	7	●
8317623	M12× 1.25	RH7	2P	82	23	—	8.5	9	6.5	7	●
8317628	M12× 1	RH7	4P	82	23	—	8.5	9	6.5	7	●
8317629	M12× 1	RH7	2P	82	23	—	8.5	9	6.5	7	●

1. ☐ 为适用于 2 级内螺纹的精度
(※印是适用于 3 级内螺纹的精度)
2. 丝锥精度不能保证内螺纹的精度。
3. 4P (M 以下) 是凸尖顶丝锥。
4. M2.6 以下没有油槽
5. 切削锥长 4P=P (通孔用) 2P=B (盲孔用)

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
(※ The recommended tap limit corresponds to JIS class 3 internal thread standards.)
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. 4P (Up to M6) : with male center.
4. Thread Size ≤ M2.6 : without oil groove.
5. Lcf: 4P=P (for through holes), 2P=B (for blind holes)

- = 标准库存品
● = Standard stock item.
○ = 库存中心标准库存品
○ = Inventory center stock item.

螺纹种类: U

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺紋长 Lc	颈长 L ₁	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8317724	No.2-56UNC	RH4	4P	42	13	—	3	5	2.5	1	●
8317725	No.2-56UNC	RH4	2P	42	13	—	3	5	2.5	2	●
8317754	No.4-40UNC	RH4	4P	44	15	—	3	5	2.5	3	●
8317755	No.4-40UNC	RH4	2P	44	15	—	3	5	2.5	4	●
8317756	No.4-40UNC	RH5	4P	44	15	—	3	5	2.5	3	●
8317757	No.4-40UNC	RH5	2P	44	15	—	3	5	2.5	4	●
8317788	No.6-32UNC	RH5	4P	48	9	18	4	6	3.2	5	●
8317789	No.6-32UNC	RH5	2P	48	9	18	4	6	3.2	6	●

1. ☐ 为适用于 2 级内螺纹的精度
(※印是适用于 3 级内螺纹的精度)
2. 丝锥精度不能保证内螺纹的精度。
3. 4P (M 以下) 是凸尖顶丝锥。
4. M2.6 以下没有油槽
5. 切削锥长 4P=P (通孔用) 2P=B (盲孔用)

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. 4P : with male center.
4. Thread Size ≤ No.4 : without oil groove.
5. Lcf: 4P=P (for through holes), 2P=B (for blind holes)

- = 标准库存品
● = Standard stock item.

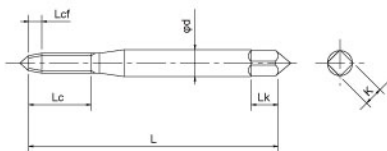
VP挤压丝锥（短螺纹型）VP-NRTS

VP NU-ROLL · Short Thread

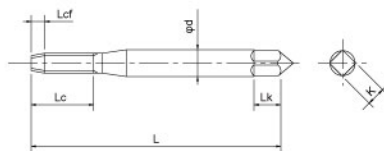
- 材质
Tool Material 粉末冶金高速钢 Powder metallurgy HSS (CPM)
- 表面处理
Surface Treatment V复合涂层 V coating



Type 1



Type 2



螺纹种类：M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8317811	M 1 × 0.25	RH4	2P	30	5	3	5	2.5	2	●
8317815	M 1.2 × 0.25	RH4	2P	32	5	3	5	2.5	2	●
8317819	M 1.4 × 0.3	RH4	2P	34	6.5	3	5	2.5	2	●
8317825	M 1.6 × 0.35	RH4	2P	36	7	3	5	2.5	2	○
8317831	M 1.7 × 0.35	RH4	2P	36	8	3	5	2.5	2	●
8317843	M 2 × 0.4	RH4	2P	40	8	3	5	2.5	2	●
8317847	M 2.3 × 0.4	RH4	2P	42	9	3	5	2.5	3	●
8317879	M 2.5 × 0.45	RH4	2P	44	9	3	5	2.5	3	●
8317891	M 2.6 × 0.45	RH4	2P	44	9.5	3	5	2.5	3	●

1. 为适用于4H5内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. 切削锥长 2P=B(盲孔用)

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Lcf: 2P=B (for blind holes)

- = 标准库存品
● = Standard stock item.
○ = 库存中心标准库存品
○ = Inventory center stock item.

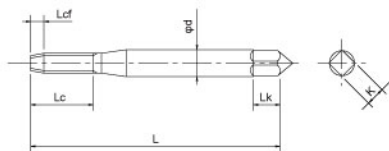
IT挤压丝锥 IT-NRT

IT NU-ROLL

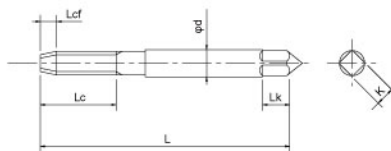
- 材质 粉末冶金高速钢
Tool Material Powder metallurgy HSS (CPM)
- 表面处理 V复合涂层
Surface Treatment V coating



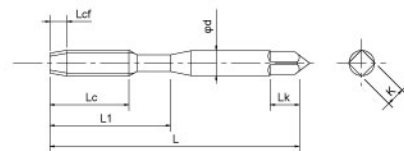
Type 1



Type 2



Type 3



螺纹种类：M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8319811	M 1 × 0.25	RH4	2P	30	5	—	3	5	2.5	1	○
8319815	M 1.2 × 0.25	RH4	2P	32	5	—	3	5	2.5	1	○
8319819	M 1.4×0.3	RH4	2P	34	6.5	—	3	5	2.5	1	○
8319825	M 1.6 × 0.35	RH4	2P	36	7	—	3	5	2.5	1	○
8319831	M 1.7 × 0.35	RH4	2P	36	8	—	3	5	2.5	1	○
8319843	M 2 × 0.4	RH4	2P	40	8	—	3	5	2.5	1	○
8319847	M 2.3×0.4	RH4	2P	42	9	—	3	5	2.5	2	○
8319879	M 2.5 × 0.45	RH4	2P	44	9	—	3	5	2.5	2	○
8319891	M 2.6 × 0.45	RH4	2P	44	9.5	—	3	5	2.5	2	○
8319903	M 3 × 0.5	RH5	2P	46	9	18	4	6	3.2	3	○

1. 为适用于4H5内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. 切削锥长 2 P=B(盲孔用)
4. M2.6以下没有油槽

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Lcf: 2P=B (for blind holes)
4. Thread size ≤ M2.6 : without oil groove.

○ = 库存中心标准库存品
○ = Inventory center stock item.

螺纹种类：U

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
*	No.0-80UNF	RH3	2P	36	7	3	5	2.5	1	*
*	No.1-64UNC	RH3	2P	36	8	3	5	2.5	1	*
*	No.1-72UNF	RH3	2P	36	8	3	5	2.5	1	*
8319925	No.2-56UNC	RH4	2P	42	9.5	3	5	2.5	1	○
*	No.2-64UNF	RH3	2P	42	9.5	3	5	2.5	1	*
*	No.3-48UNC	RH4	2P	44	9.5	3	5	2.5	2	*
*	No.3-56UNF	RH4	2P	44	9.5	3	5	2.5	2	*
8319957	No.4-40UNC	RH5	2P	44	11	3	5	2.5	2	○
*	No.4-48UNF	RH4	2P	44	11	3	5	2.5	2	*

1. 为适用于4H5内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. 切削锥长 2 P=B(盲孔用)

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Lcf: 2P=B (for blind holes)

○ = 库存中心标准库存品
○ = Inventory center stock item.
* 库存中心标准库存品
Sizes marked with * are special order items.

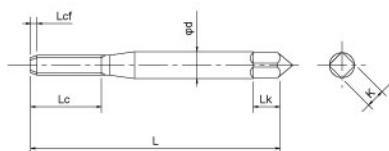
VP挤压丝锥 短切削锥形 VP-SC-NRT

VP NU-ROLL · Short Chamfer

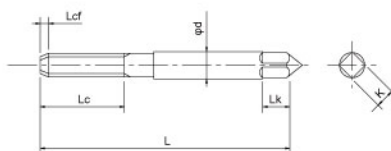
- 材质
Tool Material 粉末冶金高速钢
Powder metallurgy HSS (CPM)
- 表面处理
Surface Treatment V复合涂层
V coating



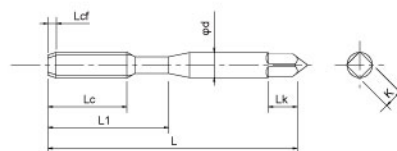
Type 1



Type 2



Type 3



螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8318001	M1 × 0.25	RH4	1P	30	7	—	3	5	2.5	1	○
8318004	M1.2 × 0.25	RH4	1P	32	8	—	3	5	2.5	1	○
8318006	M1.4 × 0.3	RH4	1P	34	9	—	3	5	2.5	1	○
8318011	M1.7 × 0.35	RH4	1P	36	11	—	3	5	2.5	1	○
8318017	M2 × 0.4	RH4	1P	40	12	—	3	5	2.5	1	○
8318025	M2.5 × 0.45	RH4	1P	44	14	—	3	5	2.5	2	○
8318027	M2.6 × 0.45	RH4	1P	44	14	—	3	5	2.5	2	○
8318031	M3 × 0.5	RH5	1P	46	9	18	4	6	3.2	3	○
8318033	M3.5 × 0.6	RH4	1P	48	9	18	4	6	3.2	3	○
8318037	M4 × 0.7	RH6	1P	52	10	20	5	7	4	3	○
8318042	M5 × 0.8	RH6	1P	60	11	22	5.5	7	4.5	3	○
8318048	M6 × 1	RH7	1P	62	12	24	6	7	4.5	3	○

1. [] 为适用于 2 级内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. M2.6以下没有油槽
4. 全部尺寸为平头丝锥

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Thread Size ≤ M2.6: without oil groove.
4. All Sizes: without male center

○ = 库存中心标准库存品
○ = Inventory center stock item.

螺纹种类: U

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8318104	No.2-56UNC	RH4	1P	42	13	—	3	5	2.5	1	○
8318108	No.4-40UNC	RH5	1P	44	15	—	3	5	2.5	2	○
8318112	No.6-32UNC	RH5	1P	48	9	18	4	6	3.2	3	○

1. [] 为适用于 2 级内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. M2.6以下没有油槽
4. 全部尺寸为平头丝锥

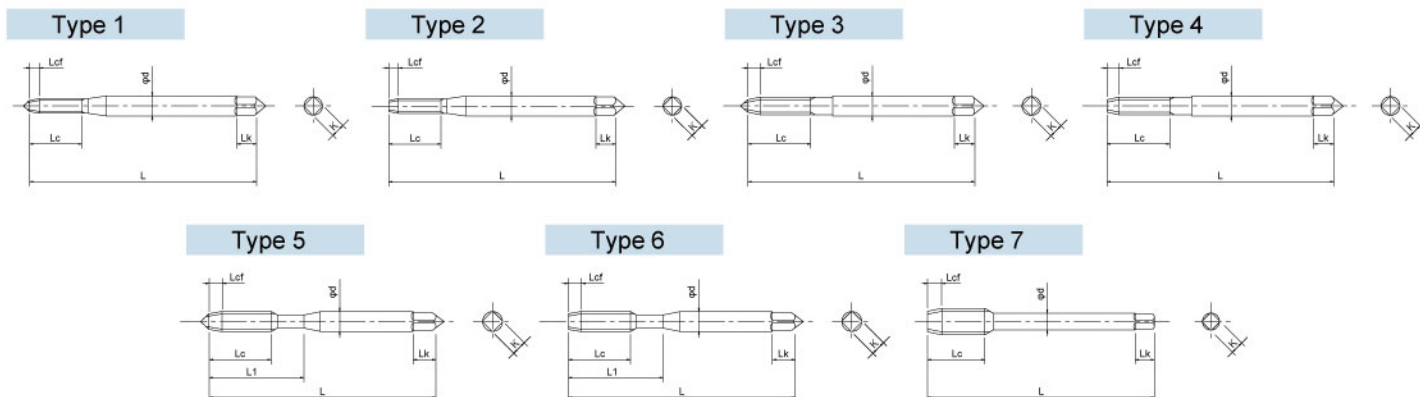
1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Thread Size ≤ NO.4: without oil groove.
4. All Sizes: without male center

○ = 库存中心标准库存品
○ = Inventory center stock item.

VP挤压丝锥 长柄型 VP-LT-NRT

VP NU-ROLL · Long Shank

- 材质
Tool Material 粉末冶金高速钢 Powder metallurgy HSS (CPM)
- 表面处理
Surface Treatment V复合涂层 V coating



螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺线长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8319422	M1 × 0.25	RH4	4P	60	7	—	3	5	2.5	1	○
8319423	M1 × 0.25	RH4	2P	60	7	—	3	5	2.5	2	○
8319426	M1.2 × 0.25	RH4	4P	60	8	—	3	5	2.5	1	○
8319427	M1.2 × 0.25	RH4	2P	60	8	—	3	5	2.5	2	○
8319430	M1.4 × 0.3	RH4	4P	60	9	—	3	5	2.5	1	○
8319431	M1.4 × 0.3	RH4	2P	60	9	—	3	5	2.5	2	○
8319434	M1.7 × 0.35	RH4	4P	60	11	—	3	5	2.5	1	○
8319435	M1.7 × 0.35	RH4	2P	60	11	—	3	5	2.5	2	○
8319438	M2 × 0.4	RH4	4P	80	12	—	3	5	2.5	1	○
8319439	M2 × 0.4	RH4	2P	80	12	—	3	5	2.5	2	○
8319442	M2.3 × 0.4	RH4	4P	80	13	—	3	5	2.5	3	○
8319443	M2.3 × 0.4	RH4	2P	80	13	—	3	5	2.5	4	○
8319446	M2.5 × 0.45	RH4	4P	80	14	—	3	5	2.5	3	○
8319447	M2.5 × 0.45	RH4	2P	80	14	—	3	5	2.5	4	○
8319450	M2.6 × 0.45	RH4	4P	80	14	—	3	5	2.5	3	○
8319451	M2.6 × 0.45	RH4	2P	80	14	—	3	5	2.5	4	○
8319454	M3 × 0.5	RH5	4P	80	9	18	4	6	3.2	5	○
8319455	M3 × 0.5	RH5	2P	80	9	18	4	6	3.2	6	○
8319458	M3 × 0.5	RH5	4P	120	9	18	4	6	3.2	5	○
8319459	M3 × 0.5	RH5	2P	120	9	18	4	6	3.2	6	○
8319462	M3.5 × 0.6	RH4	4P	80	9	18	4	6	3.2	5	○
8319463	M3.5 × 0.6	RH4	2P	80	9	18	4	6	3.2	6	○
8319466	M3.5 × 0.6	RH4	4P	120	9	18	4	6	3.2	5	○
8319467	M3.5 × 0.6	RH4	2P	120	9	18	4	6	3.2	6	○

1. 为适用于2级内螺纹的精度
(※印是适用于3级内螺纹的精度)

2. 丝锥精度不能保证内螺纹的精度。

3. 4P (M以下) 是凸尖顶丝锥。

4. M2.6以下没有油槽

5. 切削锥长4P=P(通孔用) 2P=B(盲孔用)

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

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

3. 4P (Up to M6) : with male center.

4. Thread Size ≤ M2.6: without oil groove.

5. Lcf: 4P=P (for through holes), 2P=B (for blind holes)

○ = 库存中心标准库存品
○ = Inventory center stock item.



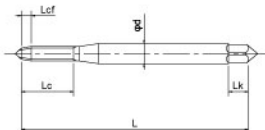
VP挤压丝锥 长柄型 VP-LT-NRT

VP NU-ROLL · Long Shank

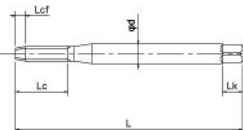
- 材质
Tool Material 粉末冶金高速钢
Powder metallurgy HSS (CPM)
- 表面处理
Surface Treatment V复合涂层
V coating



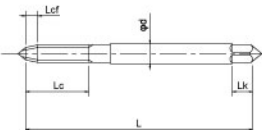
Type 1



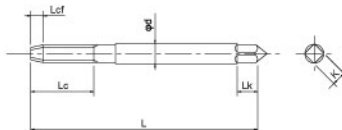
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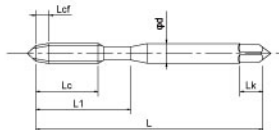
Type 3



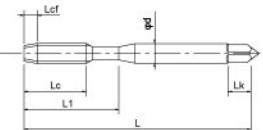
Type 4



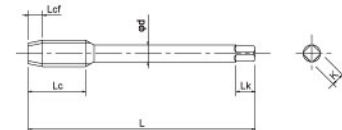
Type 5



Type 6



Type 7



接上页

螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8319470	M 4 × 0.7	RH6	4P	80	10	20	5	7	4	5	○
8319471	M 4 × 0.7	RH6	2P	80	10	20	5	7	4	6	○
8319474	M 4 × 0.7	RH6	4P	120	10	20	5	7	4	5	○
8319475	M 4 × 0.7	RH6	2P	120	10	20	5	7	4	6	○
8319478	M 5 × 0.8	RH6	4P	100	11	22	5.5	7	4.5	5	○
8319479	M 5 × 0.8	RH6	2P	100	11	22	5.5	7	4.5	6	○
8319482	M 5 × 0.8	RH6	4P	150	11	22	5.5	7	4.5	5	○
8319483	M 5 × 0.8	RH6	2P	150	11	22	5.5	7	4.5	6	○
8319484	M 6 × 1	RH7	4P	100	12	24	6	7	4.5	5	○
8319485	M 6 × 1	RH7	2P	100	12	24	6	7	4.5	6	○
8319488	M 6 × 1	RH7	4P	150	12	24	6	7	4.5	5	○
8319489	M 6 × 1	RH7	2P	150	12	24	6	7	4.5	6	○
8319498	M 8 × 1.25	RH7	4P	100	18	—	6.2	8	5	7	○
8319499	M 8 × 1.25	RH7	2P	100	18	—	6.2	8	5	7	○
8319502	M 8 × 1.25	RH7	4P	150	18	—	6.2	8	5	7	○
8319503	M 8 × 1.25	RH7	2P	150	18	—	6.2	8	5	7	○
8319506	M 8 × 1	RH7	4P	100	18	—	6.2	8	5	7	○
8319507	M 8 × 1	RH7	2P	100	18	—	6.2	8	5	7	○
8319510	M 8 × 1	RH7	4P	150	18	—	6.2	8	5	7	○
8319511	M 8 × 1	RH7	2P	150	18	—	6.2	8	5	7	○
8319512	M 10 × 1.5	RH7	4P	100	19	—	7	8	5.5	7	○
8319513	M 10 × 1.5	RH7	2P	100	19	—	7	8	5.5	7	○
8319516	M 10 × 1.5	RH7	4P	150	19	—	7	8	5.5	7	○
8319517	M 10 × 1.5	RH7	2P	150	19	—	7	8	5.5	7	○
8319520	M 10 × 1.25	RH7	4P	100	19	—	7	8	5.5	7	○
8319521	M 10 × 1.25	RH7	2P	100	19	—	7	8	5.5	7	○
8319524	M 10 × 1.25	RH7	4P	150	19	—	7	8	5.5	7	○



转下页

VP挤压丝锥 长柄型 VP-LT-NRT

VP NU-ROLL · Long Shank



接上页

螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺紋长 Lc	颈长 L ₁	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8319525	M10 × 1.25	RH7	2P	150	19	—	7	8	5.5	7	○
8319528	M10 × 1	RH7	4P	100	19	—	7	8	5.5	7	○
8319529	M10 × 1	RH7	2P	100	19	—	7	8	5.5	7	○
8319532	M10 × 1	RH7	4P	150	19	—	7	8	5.5	7	○
8319533	M10 × 1	RH7	2P	150	19	—	7	8	5.5	7	○
8319538	M12 × 1.75	RH8	4P	150	23	—	8.5	9	6.5	7	○
8319539	M12 × 1.75	RH8	2P	150	23	—	8.5	9	6.5	7	○
8319540	M12 × 1.75	RH8	4P	200	23	—	8.5	9	6.5	7	○
8319541	M12 × 1.75	RH8	2P	200	23	—	8.5	9	6.5	7	○
8319546	M12 × 1.5	RH7	4P	150	23	—	8.5	9	6.5	7	○
8319547	M12 × 1.5	RH7	2P	150	23	—	8.5	9	6.5	7	○
8319548	M12 × 1.5	RH7	4P	200	23	—	8.5	9	6.5	7	○
8319549	M12 × 1.5	RH7	2P	200	23	—	8.5	9	6.5	7	○
8319554	M12 × 1.25	RH7	4P	150	23	—	8.5	9	6.5	7	○
8319555	M12 × 1.25	RH7	2P	150	23	—	8.5	9	6.5	7	○
8319556	M12 × 1.25	RH7	4P	200	23	—	8.5	9	6.5	7	○
8319557	M12 × 1.25	RH7	2P	200	23	—	8.5	9	6.5	7	○
8319562	M12 × 1	RH7	4P	150	23	—	8.5	9	6.5	7	○
8319563	M12 × 1	RH7	2P	150	23	—	8.5	9	6.5	7	○
8319564	M12 × 1	RH7	4P	200	23	—	8.5	9	6.5	7	○
8319565	M12 × 1	RH7	2P	200	23	—	8.5	9	6.5	7	○

1. [] 为适用于2级内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. 4P (M以下) 是凸尖顶丝锥。
4. M2.6以下没有油槽
5. 切削锥长4P=P(通孔用) 2P=B(盲孔用)

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. 4P (Up to M6) : with male center.
4. Thread Size ≤ M2.6: without oil groove.
5. Lcf: 4P=P (for through holes), 2P=B (for blind holes)

○ = 库存中心标准库存品
○ = Inventory center stock item.

螺纹种类: U

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺紋长 Lc	颈长 L ₁	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8319610	No.2 - 56UNC	RH4	4P	80	13	—	3	5	2.5	1	○
8319611	No.2 - 56UNC	RH4	2P	80	13	—	3	5	2.5	2	○
8319614	No.4 - 40UNC	RH4	4P	80	15	—	3	5	2.5	3	○
8319615	No.4 - 40UNC	RH4	2P	80	15	—	3	5	2.5	4	○
8319618	No.4 - 40UNC	RH5	4P	80	15	—	3	5	2.5	3	○
8319619	No.4 - 40UNC	RH5	2P	80	15	—	3	5	2.5	4	○
8319623	No.6 - 32UNC	RH5	4P	80	9	18	4	6	3.2	5	○
8319624	No.6 - 32UNC	RH5	2P	80	9	18	4	6	3.2	6	○

1. [] 为适用于2级内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. 4P (M以下) 是凸尖顶丝锥。
4. M2.6以下没有油槽
5. 切削锥长4P=P(通孔用) 2P=B(盲孔用)

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. 4P : with male center.
4. Thread Size ≤ NO.4: without oil groove.
5. Lcf: 4P=P (for through holes), 2P=B (for blind holes)

○ = 库存中心标准库存品
○ = Inventory center stock item.

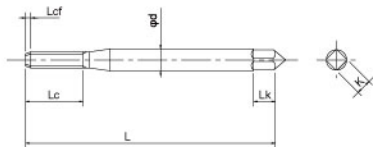
VP挤压丝锥 短切削锥长柄型 VP-LT-SC-NRT

VP NU-ROLL · Short Chamfer · Long Shank

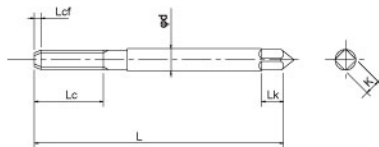
- 材质
Tool Material 粉末冶金高速钢
Powder metallurgy HSS (CPM)
- 表面处理
Surface Treatment V复合涂层
V coating



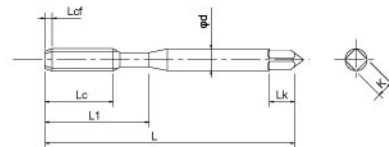
Type 1



Type 2



Type 3



螺纹种类: M

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	切削锥长 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8318201	M 1 × 0.25	RH4	1P	60	7	—	3	5	2.5	1	○
8318207	M 1.2 × 0.25	RH4	1P	60	8	—	3	5	2.5	1	○
8318211	M 1.4 × 0.3	RH4	1P	60	9	—	3	5	2.5	1	○
8318221	M 1.7 × 0.35	RH4	1P	60	11	—	3	5	2.5	1	○
8318233	M 2 × 0.4	RH4	1P	80	12	—	3	5	2.5	1	○
8318249	M 2.5 × 0.45	RH4	1P	80	14	—	3	5	2.5	2	○
8318253	M 2.6 × 0.45	RH4	1P	80	14	—	3	5	2.5	2	○
8318261	M 3 × 0.5	RH5	1P	80	9	18	4	6	3.2	3	○
8318265	M 3.5 × 0.6	RH4	1P	80	9	18	4	6	3.2	3	○
8318273	M 4 × 0.7	RH6	1P	80	10	20	5	7	4	3	○
8318283	M 5 × 0.8	RH6	1P	100	11	22	5.5	7	4.5	3	○
8318295	M 6 × 1	RH7	1P	100	12	24	6	7	4.5	3	○

1. [] 为适用于2级内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. M2.6以下没有油槽
4. 全部尺寸为平头丝锥。

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Thread Size ≤ M2.6: without oil groove.
4. All Sizes: without male center

○ = 库存中心标准库存品
○ = Inventory center stock item.

螺纹种类: U

单位:mm (Unit:mm)

商品号No. EDP NO.	尺寸 Thread Size	精度 TAP Limit	牙短 Lcf	全长 L	螺纹长 Lc	颈长 L1	柄径 d	四角部长 Lk	四角部宽 K	形状类型 Type	库存 Stock
8318407	No.2-56UNC	RH4	1P	80	13	—	3	5	2.5	1	○
8318415	No.4-40UNC	RH5	1P	80	15	—	3	5	2.5	2	○
8318423	No.6-32UNC	RH5	1P	80	9	18	4	6	3.2	3	○

1. [] 为适用于2级内螺纹的精度
2. 丝锥精度不能保证内螺纹的精度。
3. M2.6以下没有油槽
4. 全部尺寸为平头丝锥。

1. The recommended tap limit corresponds to JIS class 2 internal thread standards.
2. TAP Limit does not guarantee thread limit for the internal thread after tapping.
3. Thread Size ≤ NO.4: without oil groove.
4. All Sizes: without male center

○ = 库存中心标准库存品
○ = Inventory center stock item.

■加工SCM440 (35HRC) 的性能 Performance of VP-NRT in SCM440 (35HRC)

采用了粉末冶金高速钢 (CPM) 的VP-NRT，
即使对以前V-NRT很难加工的35HRC高硬度材质也能进行稳定的长寿命加工。

This VP-NRT with the Powder Metallurgy HSS (CPM) makes it possible to have stable, long tool life machining even with 35HRC, difficult to machine by the conventional V-NRT.

尺寸 Tool	VP-NRT M3×0.5
加工材质 Work Material	SCM440 (35HRC)
切削速度 Tapping Speed	5m/min (530min ⁻¹)
底孔 Hole Size	φ2.8×10mm (通孔) (through)
螺纹长度 Tapping Length	6mm (2D)
切削液 Coolant	水溶性切削油剂 (10倍) Water Soluble (10%)
使用设备 Machine	立式加工中心 Vertical Machining Center

	切削孔数 Number of Holes			寿命判定 Criterion for life
	1,000	2,000	3,000	
一次				GP-OUT
二次				GP-OUT

■加工S45C的性能 Performance of VP-NRT in S45C

加工S45C材质时，比其他公司产品V-NRT有1.8倍以上的稳定高寿命加工。

Stable, long tool life realized for S45C machining. 1.8 times tool life was realized in comparison with the life of the conventional V-NRT or other competitors' products.

尺寸 Tool	VP-NRT M6×1
加工材质 Work Material	S45C (CK45, 1045)
切削速度 Tapping Speed	15m/min (800min ⁻¹)
底孔 Hole Size	φ5.52×15mm (通孔) (through)
螺纹长度 Tapping Length	12mm (2D)
切削液 Coolant	水溶性切削油剂 (10倍) Water Soluble (10%)
使用设备 Machine	立式加工中心 Horizontal Machining Center

品名 Description	材质 Tool Material	切削孔数 Number of Holes			耐久性 Limiting Factor
		5,000	10,000	15,000	
VP-NRT	CPM				可持续加工 Possible to Continue
V复合涂层 NRT丝锥 Fluteless (Nu-Roll) Taps V coated V- NRT	HSS-Co				GP-OUT
TiCN复合涂层 其他公司产品 Competitor's TiCN coated tap	粉末高速钢 Powder metallurgy HSS				GP-OUT

■VP-NRT的高速加工 High speed tapping of VP-NRT

在SS400的高速加工中，也可以实现内螺纹表面高精度、稳定长寿命的加工。

When tapping in SS400 (mild steel) at high speed, good surface finish is available with stable, long tool life.

尺寸 Tool	VP-NRT M3×0.5
加工材质 Work Material	SS400
切削速度 Tapping Speed	47m/min (5,000min ⁻¹)
底孔 Hole Size	φ2.8×9mm (通孔) (through)
螺纹长度 Tapping Length	6mm (2D)
切削液 Coolant	水溶性切削油剂 (10倍) Water Soluble (10%)
使用设备 Machine	立式加工中心 Vertical Machining Center

切削孔数 Number of Holes		耐久性 Limiting Factor
5,000	10,000	
8, 000孔以上 (Over 8,000 Holes)		可持續加工 Possible to Continue
8, 000孔以上 (Over 8,000 Holes)		

VP-NRTS的深孔加工 Deep hole tapping of VP-NRTS

高折损强度的VP-NRTS可以稳定地进行小径深孔加工。

The breakage-resistant VP-NRTS tapped small, deep holes in a stable manner.

尺寸 Tool	VP-NRTS M1.4X0.3
加工材质 Work Material	S45C
切削速度 Tapping Speed	13m/min (3,150min ⁻¹)
底孔 Hole Size	φ1.28×6mm (通孔) (through)
螺纹长度 Tapping Length	6mm(4.3D)
切削液 Coolant	油性切削油剂 Water Soluble (10%)
使用设备 Machine	立式加工中心 Vertical Machining Center

	切削孔数 Number of Holes				耐久性 Limiting Factor
	1,000	2,000	3,000	4,000	
一次	4,000孔以上 (Over 4,000 Holes)				可持续 Possible to Continue
二次	4,000孔以上 (Over 4,000 Holes)				可持续 Possible to Continue

加工SUS420时IT-NRT的性能 Performance of IT-NRT in SUS420

Performance of IT-NRT in SUS420

不论丝锥的底部是否与工件接触，都不会产生磨损，溶屑等异常情况，可以加工11000孔以上。

Did not exhibit any abnormal wear or fusion despite the contact of the workpiece with the root of the tap, and tapped more than 11,000 holes.



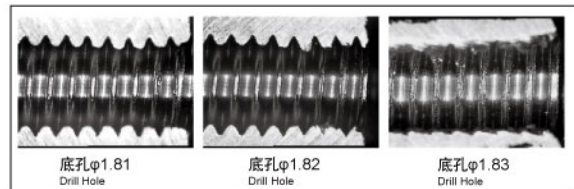
尺寸 Tool	IT-NRT M2X0.4
加工材质 Work Material	SUS420
切削速度 Tapping Speed	10m/min (1,590min ⁻¹)
底孔 Hole Size	φ1.8×7.5mm (通孔) (through)
螺纹长度 Tapping Length	7.5mm(3.75D)
切削液 Coolant	水溶性切削油剂 (10倍) Non-Water Soluble
使用设备 Machine	立式加工中心 Vertical Machining Center

	切削孔数 Number of Holes		耐久性 Limiting Factor	内螺纹内径 (嵌合率) Minor Dia. of Internal Thread (Thread Overlap Ratio%)
	5,000	10,000		
一次	11,000孔以上 (Over 11,000 Holes)		可持续 Possible to Continue	1.62~1.63 (相当于85.5%) (Equal 85.5%)
二次	11,000孔以上 (Over 11,000 Holes)		可持续 Possible to Continue	1.61~1.62 (相当于87.8%) (Equal 87.8%)

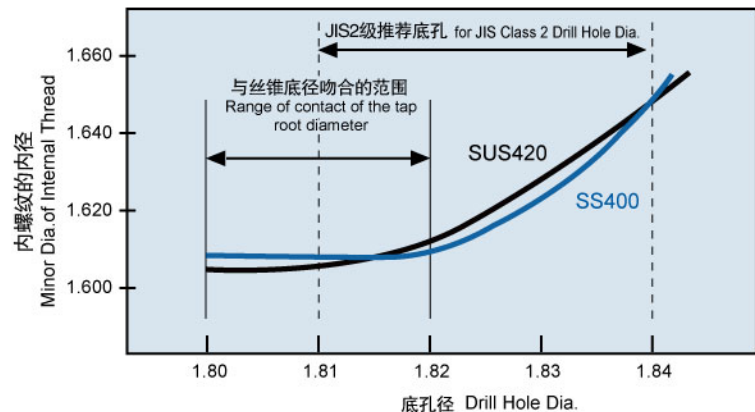
IT-NRT内螺纹的成孔状态 Build-up at the inner threads of IT-NRT

通过对底孔径的控制，可以防止毛刺产生。

Burrs were prevented by controlling the hole size and stabilizing the bore.



尺寸 Tool	IT-NRT M2×0.4
加工材质 Work Material	SS400 SUS420
切削速度 Tapping Speed	10m/min (1,590min ⁻¹)
螺纹长度 Tapping Length	6mm(3D) 7mm(3.5D)
切削液 Coolant	水溶性切削油剂 (10倍) Water Soluble (10%)
使用设备 Machine	立式加工中心 Vertical Machining Center



螺纹底孔径表 Recommended Drill Hole Size

公制螺纹 Metric Screw Threads

尺寸 Thread Size	VP-NRT				VP-NRTS		IT-NRT
	前 JIS2 级 Former JIS class 2		5H				
	最小 Min	最大 Max	最小 Min	最大 Max	最小 Min	最大 Max	
M1 × 0.25	0.90	0.92	0.901	0.920	0.90	0.92	0.89
M1.2 × 0.25	1.10	1.12	1.101	1.120	1.10	1.12	1.09
M1.4 × 0.3	1.27	1.29	1.270	1.294	1.27	1.29	1.26
M1.6 × 0.35	1.44	1.48	1.440	1.466	1.44	1.48	1.43
M1.7 × 0.35	1.54	1.58	—	—	1.54	1.58	1.53
M2 × 0.4	1.81	1.85	1.810	1.840	1.81	1.85	1.80
M2.3 × 0.4	2.11	2.15	—	—	2.11	2.15	2.10
M2.5 × 0.45	2.28	2.33	2.280	2.312	2.28	2.33	2.27
M2.6 × 0.45	2.38	2.43	—	—	2.38	2.43	2.37
M3 × 0.5	2.76	2.81	2.762	2.798	2.76	2.81	2.75
M3.5 × 0.6	3.20	3.26	3.202	3.242	—	—	—
M4 × 0.7	3.65	3.70	3.63	3.67	—	—	—
M5 × 0.8	4.59	4.66	4.57	4.61	—	—	—
M6 × 1	5.48	5.57	5.45	5.50	—	—	—
M8 × 1.25	7.34	7.41	7.34	7.40	—	—	—
M8 × 1	7.48	7.57	7.45	7.50	—	—	—
M10 × 1.5	9.18	9.28	9.19	9.24	—	—	—
M10 × 1.25	9.34	9.41	9.34	9.40	—	—	—
M10 × 1	9.48	9.57	9.47	9.52	—	—	—
M12 × 1.5	11.18	11.28	11.19	11.24	—	—	—
M12 × 1.25	11.34	11.41	11.34	11.40	—	—	—
M12 × 1	11.48	11.57	11.47	11.52	—	—	—

美制粗牙螺纹 Unified Coarse Screw Threads

2B螺纹用底孔径 for JIS class 2B drill hole dia

尺寸 Thread Size	VP-NRT		VP-NRTS		IT-NRT
	最小 Min	最大 Max	最小 Min	最大 Max	
No.2-56UNC	1.96	2.02	1.96	2.02	1.95
No.4-40UNC	2.52	2.60	2.52	2.60	2.51
No.6-32UNC	3.09	3.17	—	—	—

1. 上表的底孔径根据加工材质的不同而变化，以上仅为参考值。
 2. 底孔径根据加工材质、硬度、形状尺寸等因素，挤压成形性能有所不同，请在进行试验后决定。
 3. 考虑到丝锥寿命，底孔径较大时较为有利，请根据目的选择。
 4. 底孔的弯曲，内孔径不光洁，偏心等可能造成不良品，请在加工时注意。
 5. IT-NRT的底孔径是使用铰刀后的目标值
 6. IT-NRT的底孔径为完全挤压状态的目标值。
1. The proper drill hole size may change due to material variety. Use the recommended drill hole size as a benchmark.
 2. As the hole diameter may vary by behavior of plasticity depending on the material, hardness and shapes of workpiece, the hole diameter should be determined through trial tapping prior to final machining.
 3. A larger drill hole size is better for extending tool life. Select a drill hole size based on your particular application.
 4. To avoid tapping trouble, correct hole must be maintained free from warp, deformation, stagger and the like.
 5. The hole for the IT-NRT indicates a target value using a reamer.
 6. The hole sizes for the IT-NRT are aimed at complete top rolls.

使用要点 Instructions for use

1 请确认成孔状态必须与以前的丝锥一致。

Check the forming condition in the same way as for conventional taps.

2 底孔径可使用于TIN-NRT和V-NRT相同的设定 (但IT-NRT底孔请参考P14)

The same hole diameter size for TIN-NRT and V-NRT can be utilized. (However, the hole diameter size for IT-NRT must be changed. Please refer to P14)

3 切削液请使用润滑性高的水溶性切削液, 或非水溶性切削液。

Highly lubricating water soluble coolant or non-water soluble coolant is recommended for the coolant.

4 加工材质硬度在35HRC以下时请放心使用。

Hardness of the applicable work material should be 35HRC or less.

5 请使用刚性良好的夹头和机器。

Select the machine and the holder with sufficient rigidity.

切削条件基准表 Recommended cutting conditions

加工材质 Work Material		切削速度(m/min) Tapping Speed
低碳素钢 Low Carbon Steels	~C0.25%	10~40
中碳素钢 Medium Carbon Steels	C0.25~0.45%	7~15
高碳素钢 High Carbon Steels	C0.45%~	5~10
合金钢 Alloy Steels	SCM	5~8
调质钢 Hardened Steels	~35HRC	3~5
不锈钢 Stainless Steels	SUS	5~15
铜 Copper	Cu	10~30
黄铜·黄铜铸件 Brass, Brass Casting	Bs·BsC	10~30
青铜·青铜铸件 Bronze, Bronze Casting	PB·PBC	10~30
铝合金延展物 Aluminum Rolled	AL	20~50
铝合金合金铸件 Aluminum Alloy Castings	~Si16%	20~40
亚铝合金铸件 Zinc Alloy Castings	ZDC	10~30

挤压丝锥底孔加工推荐使用钻头、铰刀

Recommendations for drills and reamers for forming taps.



WX-MS-GDS (Φ0.2~5)



EX-SUS-GDS (Φ0.5~32)



EX-GDN (Φ0.5~6)



EX-SUS-GDR (Φ2~32)



EX-SUS-GDN (Φ1~1.99)



VPH-GDS (Φ0.5~20)



NF-GDN (Φ3~13)



CRM (Φ0.3~13.05)

所列产品尺寸间隔为0.01mm。
最适用于挤压丝锥的底孔加工。

These products are stocked in 0.01mm increments. They are suitable for drilling operation for forming taps.



安全须知

- 工具使用时有破损的危险, 请务必使用保护罩、保护镜、安全靴等。
- 手不要直接碰刀刃。
- 请不要用手接触碎屑。
- 刀具的刀刃不良时请停止使用。
- 如发生异常声音及振动时请立刻停止使用。
- 请不要擅自修改工具。
- 加工前请确认工具尺寸。



Safe use of cutting tools

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



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OSG CORPORATION

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