

# KOLOBO

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# KOLOBO

## 螺纹加工刀具解决方案 THREAD MACHINING TOOL SOLUTIONS

产品选型手册  
CATALOGUE



精密丝锥刀具制造企业  
PRECISION TAPS MANUFACTURE

# ABOUT KOLOBO 公司简介

公司创建于 2005 年，位于浙江省温岭市，是一家专业从事螺纹切削工具研发，制造，销售为一体拥有自主知识产权的品牌企业，经过近二十年的发展历程，获得多项荣誉，发明专利，实用性专利，重合同守信用企业，放心消费单位，放心工厂，著名商标认定，并荣获浙江省创新型企业，省级高成长企业，国家科技型中小企业，国家高新技术企业等。

The company was founded in 2005 and is located in Wenling City, Zhejiang Province. It is a brand enterprise specializing in the research, manufacturing and sales of thread cutting tools, with independent intellectual property rights. After nearly two decades of development, it has received numerous honors, including invention patents, utility patents, a contract-abiding and creditworthy enterprise, a trustworthy consumption unit, a trustworthy factory, a famous trademark recognition, and was awarded as a provincial innovative enterprise, a provincial high-growth enterprise, a national technology-based small and medium-sized enterprise, and a national high-tech enterprise.

产品以锥度挤压丝锥，铝合金专用丝锥，螺旋槽丝锥，先端丝锥，左旋右牙丝锥，硬度钢专用丝锥，不锈钢专用丝锥及超深孔专用丝锥，内容屑丝锥等，经全国刀具标准化技术委员会检测一致通过达到一等品，并荣获国家刀具质量监督检验中心颁发的检验合格证书。

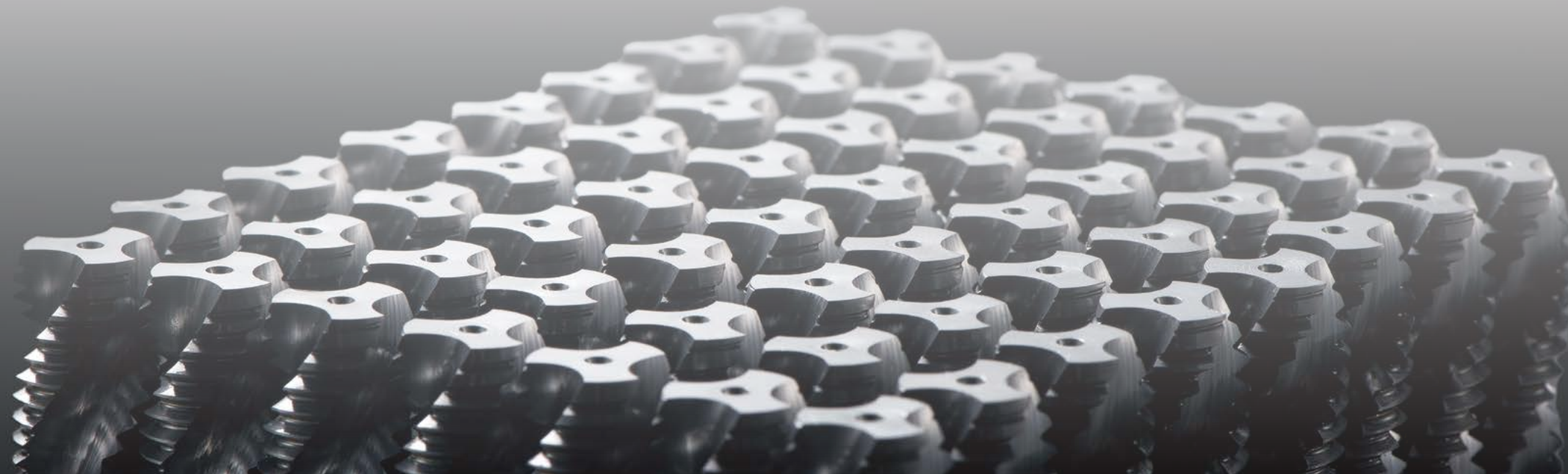
The products include conical extrusion taps, aluminum alloy special taps, helical groove taps, end taps, left-hand right-tapered taps, hardness steel special taps, stainless steel special taps, ultra-deep hole special taps, and content-cutting taps, etc. They have all passed the national tool standardization technical committee's inspection and been certified as first-class products. They also received the inspection certificate issued by the national tool quality supervision and inspection center.

KOLOBO 在国内和国际市场享有良好的信誉，深受客户信赖。产品销往俄罗斯，印度，新加坡，马来西亚，南非，阿拉伯，波兰，巴基斯坦，伊朗，伊拉克，阿根廷，摩洛哥，埃及等多个国家和地区。

KOLOBO enjoys a strong reputation in both domestic and international markets, earning the trust of customers worldwide. Its products are sold to numerous countries and regions, including Russia, India, Singapore, Malaysia, South Africa, the Arab region, Poland, Pakistan, Iran, Iraq, Argentina, Morocco, and Egypt.

经过二十年的发展历程，公司始终诚信进取，奋发图强，科技创新，以“精湛，卓越，客户心”的品牌理念，为中国智造提供高精度的螺纹切削工具。为感谢国内外用户的长期信赖和支持，公司高度重视引进技术的消化吸收和科技研发，加大资金与人才的投入，努力做到具有社会责任感的企业。

After 20 years of development, the company has always been honest and enterprising, striving to be stronger, and focusing on technological innovation. With the brand concept of "excellence, outstanding, customer-oriented", it provides high-precision thread cutting tools for "Made in China". To express gratitude for the long-term trust and support of domestic and foreign users, the company attaches great importance to the digestion and absorption of introduced technologies and scientific research and development, increases investment in funds and talents, and strives to be a socially responsible enterprise.

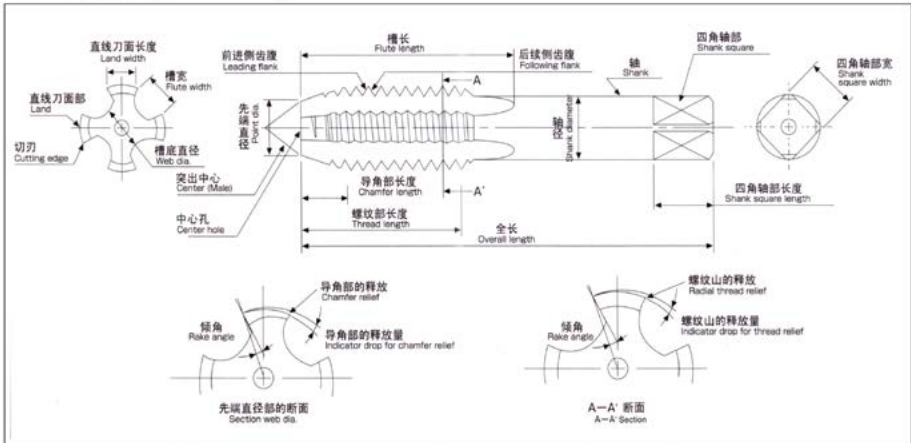


## CUTTING TAP 切削丝锥

切削丝攻为加工母螺纹的工具，包括手用丝攻，螺旋丝攻，先端丝攻，管用丝攻，螺母丝攻等等。

Cutting taps are used as a machining tool for production of internal threads. They include straight fluted taps (hand taps), spiral fluted taps, spiral pointed taps, as well as pipe thread taps and nut taps.

## 切削丝攻的各部位名称 / Terminology



## 导角部位 Chamfer

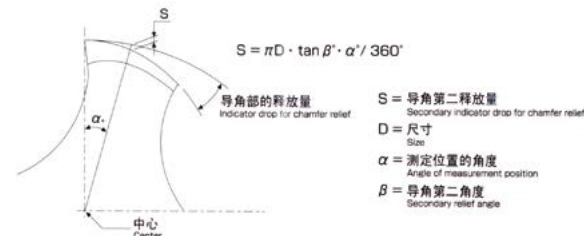
切削丝攻上，导角作为切削刃是很重要的部分。为了通过导角长，角度，槽数的不同达到合适的切削水准各个种类的切削丝攻有其作为基准的导角长和导角部角度。

This is an important element in cutting taps, providing the teeth for cutting. To ensure appropriate sharpness (according to chamfer length, chamfer angle and number of flutes), each cutting tap has its standard Chamfer length and Chamfer angle.

| 丝攻种类 Types of taps                  |                        | 导角部长度 Chamfer length           | 导角部长度 Chamfer angle |
|-------------------------------------|------------------------|--------------------------------|---------------------|
| 手用丝攻 Hand taps                      | 前部 Taper               | 9 牙 (pitches)                  | 4°                  |
|                                     | 中部 Plug                | 5 牙 (pitches)                  | 7.5°                |
|                                     | 上部 Bottoming           | 1.5 牙 (pitches)                | 24°                 |
| 螺旋丝攻 spiral fluted taps             |                        | 2.5 牙·3 牙 (pitches)            | 15°·12.5            |
| 线段丝攻 spiral pointed taps(gun taps)  |                        | 4 牙·5 牙 (pitches)              | 9.5°·7.5            |
| 管用平行螺丝用丝攻 parallel pipe thread taps |                        | 1.5 牙·3.5 牙 (pitches)          | 25°·11.5            |
| 锥管螺纹用丝攻 taper pipe thread taps      | 平行螺纹用 parallel threads | 1.5 牙·3.5 牙 (pitches)          | 25°·11.5            |
|                                     | 锥度螺纹用 taper threads    | 2.5 牙 (pitches)                | 16°                 |
| 螺母丝攻 nut taps                       |                        | 螺纹部长度的 75% 75%of thread length | 1.5°                |

导角部位的各个切刃,通过丝攻的回转将所要求的切削的规定量进行分担切削,通过导角部位将母螺纹成型。完全螺纹山部分与成型后母螺纹的螺纹山咬合,起到将丝攻导入的目的。一般来说,导角部位长度越长,螺纹精度和完成面越好,但是因为存在被切削材质与母螺线形状的限制,如果丝攻采用基准以外的导角长度,可能会给丝攻的性能造成影响。

切削丝攻的再研磨一般是对导角部的再研磨，针对导角部的长度的导角部角度之外，导角部的释放量的设定会左右丝攻的切削水平，是重要的要素。利用以下的算式设置各尺寸丝攻的导角部的合适的释放量。



倾角 Rake angle

倾角根据被切削材质设定。不同的被切削材质拥有不同的机械性质，因此有必要设定合适的角度和形状：切削作业中排出的切屑因为倾角的不同而变化，倾角还含有存放切屑的复合功能。

有代表性的槽的形状，包括相对于丝攻轴的直槽，螺旋槽以及在导角部位的倾斜槽。根据不同的攻牙作业用途选用这些槽。根据倾角，倾斜形状，槽形状这三要素，满足被切削材质的适应条件。

The rake angle is set according to the material being tapped. Since mechanical properties differ among materials, appropriate angles and shapes are required. Chips ejected by tapping change according to the rake angle, and compounded elements such as stored chips are included. Flute shape is classified into straight flute, spiral flute and spiral pointed flute (which has an inclined chamfer). Assuming proper usage according to the particular tapping purpose, the optimum requirements of any given material are satisfied by correct rake angle, rake shape and flute shape.

| 被加工材料<br>Work material    | 倾角 (°)<br>Rake angle | 倾斜形状<br>shape of rake |
|---------------------------|----------------------|-----------------------|
| 低碳素钢<br>Low-carbon steel  | 10~13                | H                     |
| 高碳素钢<br>High-carbon steel | 5~7                  | R                     |
| 工具钢<br>Tool steel         | 5~7                  | R                     |
| 不锈钢<br>Stainless steel    | 10~13                | R                     |
| 铬钢<br>Chromi              | 10~13                | R                     |
| 锰钢<br>Manganese steel     | 10~13                | H                     |
| 铸钢<br>Cast steel          | 10~13                | R                     |

| 被加工材料<br>Work material  | 倾角 (°)<br>Rake angle | 倾斜形状<br>shape of rake |
|-------------------------|----------------------|-----------------------|
| 铸铁<br>Cast iron         | 2~4                  | R                     |
| 铝<br>Aluminum           | 16~20                | H                     |
| 铝合金<br>Aluminum alloy   | 12~14                | H                     |
| 铜<br>Copper             | 16                   | R                     |
| 黄铜<br>Brass             | 3~5                  | R                     |
| 青铜<br>Bronze            | 1~3                  | R                     |
| 合成树脂<br>Synthetic resin | 3~5                  | R                     |

注:H为挂钩状,R为倾斜状 Note:H=hook-shaped.R=rake-shaped



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精密丝锥刀具制造企业

**PRECISION TAP TOOL  
MANUFACTURING ENTERPRISE**

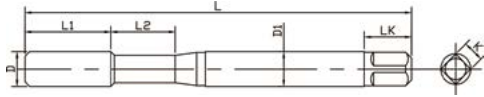
**KOLOBO**

## 碳钢、合金钢用 -DIN 螺旋丝锥

For carbon steel &amp; Alloy steel-Spiral Flute Taps

Cpm Super Taps X-Series-DIN

NEW HSS-PM X

攻牙深度  
≤ 3D加工硬度  
≤ 35°刀具材料 **HSS-PM** 表面处理 **TICN X** 切削锥长 **2.5P** 公差 **6HX 6H** 切削方向 **R**

## 丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating. Tap has stronger cutting performance and long life.

## TOOL IDENT: TDM114

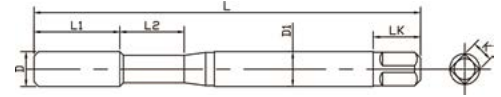
| D    | P    | L   | L1 | D1  | K   | Standard |
|------|------|-----|----|-----|-----|----------|
| M1.2 | 0.25 | 40  | 5  | 2.5 | 2.1 | DIN371   |
| M1.4 | 0.3  | 40  | 6  | 2.5 | 2.1 |          |
| M1.6 | 0.35 | 40  | 8  | 2.5 | 2.1 |          |
| M2   | 0.4  | 45  | 6  | 2.8 | 2.1 |          |
| M2.5 | 0.45 | 50  | 7  | 2.8 | 2.1 |          |
| M3   | 0.5  | 56  | 7  | 3.5 | 2.7 |          |
| M4   | 0.7  | 63  | 9  | 4.5 | 3.4 |          |
| M5   | 0.8  | 70  | 10 | 6   | 4.9 |          |
| M6   | 1    | 80  | 10 | 6   | 4.9 |          |
| M7   | 1    | 80  | 10 | 7   | 5.5 |          |
| M8   | 1.25 | 90  | 13 | 8   | 6.2 |          |
|      | 1    | 90  | 13 | 8   | 6.2 |          |
| M10  | 1.5  | 100 | 15 | 10  | 8   |          |
|      | 1.25 | 100 | 15 | 10  | 8   |          |
|      | 1    | 100 | 15 | 10  | 8   |          |
| M12  | 1.75 | 110 | 17 | 9   | 7   | DIN376   |
|      | 1.5  | 110 | 17 | 9   | 7   |          |
|      | 1.25 | 110 | 17 | 9   | 7   |          |
|      | 1    | 110 | 17 | 9   | 7   |          |
| M14  | 2    | 110 | 20 | 11  | 9   |          |
|      | 1.5  | 110 | 20 | 11  | 9   |          |
|      | 1.25 | 110 | 20 | 11  | 9   |          |
|      | 1    | 110 | 20 | 11  | 9   |          |

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For carbon steel &amp; Alloy steel-Spiral Flute Taps

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## TOOL IDENT: TDM114

| D   | P    | L   | L1 | D1 | K    | Standard |
|-----|------|-----|----|----|------|----------|
| M16 | 2    | 110 | 20 | 12 | 9    | DIN376   |
|     | 1.5  | 110 | 20 | 12 | 9    |          |
|     | 1.25 | 110 | 20 | 12 | 9    |          |
|     | 1    | 110 | 20 | 12 | 9    |          |
| M18 | 2.5  | 125 | 25 | 14 | 11   |          |
|     | 2    | 125 | 25 | 14 | 11   |          |
|     | 1.5  | 125 | 25 | 14 | 11   |          |
| M20 | 2.5  | 140 | 25 | 16 | 12   |          |
|     | 2    | 140 | 25 | 16 | 12   |          |
|     | 1.5  | 140 | 25 | 16 | 12   |          |
| M22 | 2.5  | 140 | 25 | 18 | 14.5 |          |
|     | 2    | 140 | 25 | 18 | 14.5 |          |
|     | 1.5  | 140 | 25 | 18 | 14.5 |          |
| M24 | 3    | 160 | 30 | 18 | 14.5 |          |
|     | 2.5  | 160 | 30 | 18 | 14.5 |          |
|     | 2    | 160 | 30 | 18 | 14.5 |          |
| M27 | 3    | 160 | 30 | 20 | 16   |          |
|     | 2.5  | 160 | 30 | 20 | 16   |          |
|     | 2    | 160 | 30 | 20 | 16   |          |
| M30 | 3.5  | 180 | 35 | 22 | 18   |          |
|     | 3    | 180 | 35 | 22 | 18   |          |
|     | 2.5  | 180 | 35 | 22 | 18   |          |
|     | 2    | 180 | 35 | 22 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     | ○                         | ○                         | ○                 | ○                   | ○                  | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

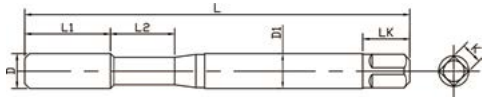
| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     | ○                         | ○                         | ○                 | ○                   | ○                  | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |



碳钢、合金钢用 -DIN 先端丝锥  
For carbon steel & Alloy steel-Spiral Point Taps  
Cpm Super Taps X-Series-DIN

攻牙深度 ≤ 3D  
加工硬度 ≤ 35°

NEW HSS-PM X



刀具材料 HSS-PM 表面处理 TiCN X 切削锥长 5P 公差 6HX 6H 切削方向 R

丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating.Tap has stronger cutting performance and long life.

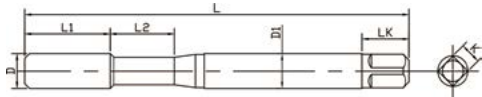
TOOL IDENT:TDM214

| D    | P    | L   | L1 | D1  | K   | Standard |
|------|------|-----|----|-----|-----|----------|
| M1.2 | 0.25 | 40  | 5  | 2.5 | 2.1 | DIN371   |
| M1.4 | 0.3  | 40  | 6  | 2.5 | 2.1 |          |
| M1.6 | 0.35 | 40  | 8  | 2.5 | 2.1 |          |
| M2   | 0.4  | 45  | 6  | 2.8 | 2.1 |          |
| M2.5 | 0.45 | 50  | 7  | 2.8 | 2.1 |          |
| M3   | 0.5  | 56  | 7  | 3.5 | 2.7 |          |
| M4   | 0.7  | 63  | 9  | 4.5 | 3.4 |          |
| M5   | 0.8  | 70  | 10 | 6   | 4.9 |          |
| M6   | 1    | 80  | 10 | 6   | 4.9 |          |
| M7   | 1    | 80  | 10 | 7   | 5.5 |          |
| M8   | 1.25 | 90  | 13 | 8   | 6.2 |          |
|      | 1    | 90  | 13 | 8   | 6.2 |          |
| M10  | 1.5  | 100 | 15 | 10  | 8   |          |
|      | 1.25 | 100 | 15 | 10  | 8   |          |
|      | 1    | 100 | 15 | 10  | 8   |          |
| M12  | 1.75 | 110 | 17 | 9   | 7   | DIN376   |
|      | 1.5  | 110 | 17 | 9   | 7   |          |
|      | 1.25 | 110 | 17 | 9   | 7   |          |
|      | 1    | 110 | 17 | 9   | 7   |          |
| M14  | 2    | 110 | 20 | 11  | 9   |          |
|      | 1.5  | 110 | 20 | 11  | 9   |          |
|      | 1.25 | 110 | 20 | 11  | 9   |          |
|      | 1    | 110 | 20 | 11  | 9   |          |

碳钢、合金钢用 -DIN 先端丝锥  
For carbon steel & Alloy steel-Spiral Point Taps  
Cpm Super Taps X-Series-DIN

攻牙深度 ≤ 3D  
加工硬度 ≤ 35°

NEW HSS-PM X



刀具材料 HSS-PM 表面处理 TiCN X 切削锥长 5P 公差 6HX 6H 切削方向 R

丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating.Tap has stronger cutting performance and long life.

TOOL IDENT:TDM214

| D   | P    | L   | L1 | D1 | K    | Standard |
|-----|------|-----|----|----|------|----------|
| M16 | 2    | 110 | 20 | 12 | 9    | DIN376   |
|     | 1.5  | 110 | 20 | 12 | 9    |          |
|     | 1.25 | 110 | 20 | 12 | 9    |          |
|     | 1    | 110 | 20 | 12 | 9    |          |
| M18 | 2.5  | 125 | 25 | 14 | 11   |          |
|     | 2    | 125 | 25 | 14 | 11   |          |
|     | 1.5  | 125 | 25 | 14 | 11   |          |
| M20 | 2.5  | 140 | 25 | 16 | 12   |          |
|     | 2    | 140 | 25 | 16 | 12   |          |
|     | 1.5  | 140 | 25 | 16 | 12   |          |
| M22 | 2.5  | 140 | 25 | 18 | 14.5 |          |
|     | 2    | 140 | 25 | 18 | 14.5 |          |
|     | 1.5  | 140 | 25 | 18 | 14.5 |          |
| M24 | 3    | 160 | 30 | 18 | 14.5 |          |
|     | 2.5  | 160 | 30 | 18 | 14.5 |          |
|     | 2    | 160 | 30 | 18 | 14.5 |          |
| M27 | 3    | 160 | 30 | 20 | 16   |          |
|     | 2.5  | 160 | 30 | 20 | 16   |          |
|     | 2    | 160 | 30 | 20 | 16   |          |
| M30 | 3.5  | 180 | 35 | 22 | 18   |          |
|     | 3    | 180 | 35 | 22 | 18   |          |
|     | 2.5  | 180 | 35 | 22 | 18   |          |
|     | 2    | 180 | 35 | 22 | 18   |          |

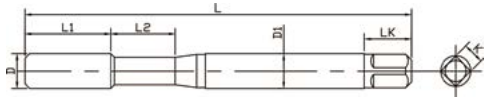
| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     | ○                         | ○                         | ○                 | ○                   | ○                  | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     | ○                         | ○                         | ○                 | ○                   | ○                  | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

碳钢、合金钢用 -DIN 挤压丝锥  
For carbon steel & Alloy steel-Forming Taps  
Cpm Super Taps X-Series-DIN

攻牙深度 ≤ 3D  
加工硬度 ≤ 35°

NEW HSS-PM X



刀具材料 **HSS-PM** 表面处理 **TICN X** 切削锥长 **2.5P** 公差 **6HX 6H** 切削方向 **R**

丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating.Tap has stronger cutting performance and long life.

TOOL IDENT:TDM314

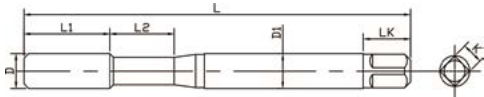
| D    | P    | L   | L1 | D1  | K   | Standard |
|------|------|-----|----|-----|-----|----------|
| M1.2 | 0.25 | 40  | 5  | 2.5 | 2.1 | DIN371   |
| M1.4 | 0.3  | 40  | 6  | 2.5 | 2.1 |          |
| M1.6 | 0.35 | 40  | 8  | 2.5 | 2.1 |          |
| M2   | 0.4  | 45  | 6  | 2.8 | 2.1 |          |
| M2.5 | 0.45 | 50  | 7  | 2.8 | 2.1 |          |
| M3   | 0.5  | 56  | 7  | 3.5 | 2.7 |          |
| M4   | 0.7  | 63  | 9  | 4.5 | 3.4 |          |
| M5   | 0.8  | 70  | 10 | 6   | 4.9 |          |
| M6   | 1    | 80  | 10 | 6   | 4.9 |          |
| M7   | 1    | 80  | 10 | 7   | 5.5 |          |
| M8   | 1.25 | 90  | 13 | 8   | 6.2 |          |
|      | 1    | 90  | 13 | 8   | 6.2 |          |
| M10  | 1.5  | 100 | 15 | 10  | 8   |          |
|      | 1.25 | 100 | 15 | 10  | 8   |          |
|      | 1    | 100 | 15 | 10  | 8   |          |
| M12  | 1.75 | 110 | 17 | 9   | 7   | DIN376   |
|      | 1.5  | 110 | 17 | 9   | 7   |          |
|      | 1.25 | 110 | 17 | 9   | 7   |          |
|      | 1    | 110 | 17 | 9   | 7   |          |
| M14  | 2    | 110 | 20 | 11  | 9   |          |
|      | 1.5  | 110 | 20 | 11  | 9   |          |
|      | 1.25 | 110 | 20 | 11  | 9   |          |
|      | 1    | 110 | 20 | 11  | 9   |          |

| 加工材料<br>Work Material | 低碳素钢<br>Low Carbon Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|--------------------------|-----------------------------|---------------------------|--------------------|-----------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
|                       | C-0.25%                  | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC 35-45 HRC   | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
| 商品记号<br>Abbreviation  | ○                        | ○                           | ○                         | ○                  | ○                     | ○                      |                   | ○                |                 |                           | ○           | ○           | ○                     |              | ○                        | ○                               |                                  | ○                           |

碳钢、合金钢用 -DIN 挤压丝锥  
For carbon steel & Alloy steel-Forming Taps  
Cpm Super Taps X-Series-DIN

攻牙深度 ≤ 3D  
加工硬度 ≤ 35°

NEW HSS-PM X



刀具材料 **HSS-PM** 表面处理 **TICN X** 切削锥长 **2.5P** 公差 **6HX 6H** 切削方向 **R**

丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating.Tap has stronger cutting performance and long life.

TOOL IDENT:TDM314

| D   | P    | L   | L1 | D1 | K    | Standard |
|-----|------|-----|----|----|------|----------|
| M16 | 2    | 110 | 20 | 12 | 9    | DIN376   |
|     | 1.5  | 110 | 20 | 12 | 9    |          |
|     | 1.25 | 110 | 20 | 12 | 9    |          |
|     | 1    | 110 | 20 | 12 | 9    |          |
| M18 | 2.5  | 125 | 25 | 14 | 11   |          |
|     | 2    | 125 | 25 | 14 | 11   |          |
|     | 1.5  | 125 | 25 | 14 | 11   |          |
| M20 | 2.5  | 140 | 25 | 16 | 12   |          |
|     | 2    | 140 | 25 | 16 | 12   |          |
|     | 1.5  | 140 | 25 | 16 | 12   |          |
| M22 | 2.5  | 140 | 25 | 18 | 14.5 |          |
|     | 2    | 140 | 25 | 18 | 14.5 |          |
|     | 1.5  | 140 | 25 | 18 | 14.5 |          |
| M24 | 3    | 160 | 30 | 18 | 14.5 |          |
|     | 2.5  | 160 | 30 | 18 | 14.5 |          |
|     | 2    | 160 | 30 | 18 | 14.5 |          |
| M27 | 3    | 160 | 30 | 20 | 16   |          |
|     | 2.5  | 160 | 30 | 20 | 16   |          |
|     | 2    | 160 | 30 | 20 | 16   |          |
| M30 | 3.5  | 180 | 35 | 22 | 18   |          |
|     | 3    | 180 | 35 | 22 | 18   |          |
|     | 2.5  | 180 | 35 | 22 | 18   |          |
|     | 2    | 180 | 35 | 22 | 18   |          |

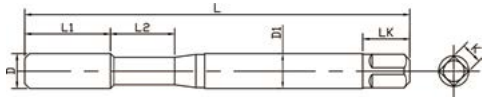
| 加工材料<br>Work Material | 低碳素钢<br>Low Carbon Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|--------------------------|-----------------------------|---------------------------|--------------------|-----------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
|                       | C-0.25%                  | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC 35-45 HRC   | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
| 商品记号<br>Abbreviation  | ○                        | ○                           | ○                         | ○                  | ○                     | ○                      |                   | ○                |                 |                           | ○           | ○           | ○                     |              | ○                        | ○                               |                                  | ○                           |



碳钢、合金钢用 -DIN 直槽丝锥  
For carbon steel & Alloy steel-Straight Fluted Taps  
Cpm Super Taps X-Series-DIN

NEW HSS-PM X

攻牙深度 ≤ 3D  
加工硬度 ≤ 35°



刀具材料 **HSS-PM** 表面处理 **TICN X** 切削锥长 **2.5P** 公差 **6HX 6H** 切削方向 **R**

丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating.Tap has stronger cutting performance and long life.

TOOL IDENT:TDM414

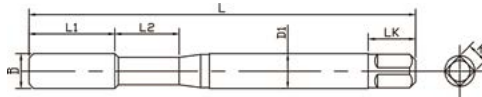
| D    | P    | L   | L1 | D1  | K   | Standard |
|------|------|-----|----|-----|-----|----------|
| M1.2 | 0.25 | 40  | 5  | 2.5 | 2.1 | DIN371   |
| M1.4 | 0.3  | 40  | 6  | 2.5 | 2.1 |          |
| M1.6 | 0.35 | 40  | 8  | 2.5 | 2.1 |          |
| M2   | 0.4  | 45  | 6  | 2.8 | 2.1 |          |
| M2.5 | 0.45 | 50  | 7  | 2.8 | 2.1 |          |
| M3   | 0.5  | 56  | 7  | 3.5 | 2.7 |          |
| M4   | 0.7  | 63  | 9  | 4.5 | 3.4 |          |
| M5   | 0.8  | 70  | 10 | 6   | 4.9 |          |
| M6   | 1    | 80  | 10 | 6   | 4.9 |          |
| M7   | 1    | 80  | 10 | 7   | 5.5 |          |
| M8   | 1.25 | 90  | 13 | 8   | 6.2 |          |
|      | 1    | 90  | 13 | 8   | 6.2 |          |
| M10  | 1.5  | 100 | 15 | 10  | 8   |          |
|      | 1.25 | 100 | 15 | 10  | 8   |          |
|      | 1    | 100 | 15 | 10  | 8   |          |
| M12  | 1.75 | 110 | 17 | 9   | 7   | DIN376   |
|      | 1.5  | 110 | 17 | 9   | 7   |          |
|      | 1.25 | 110 | 17 | 9   | 7   |          |
|      | 1    | 110 | 17 | 9   | 7   |          |
| M14  | 2    | 110 | 20 | 11  | 9   |          |
|      | 1.5  | 110 | 20 | 11  | 9   |          |
|      | 1.25 | 110 | 20 | 11  | 9   |          |
|      | 1    | 110 | 20 | 11  | 9   |          |

| 加工材料<br>Work Material | 低碳素钢<br>Low Carbon Steel<br>Mild Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|----------------------------------------|-----------------------------|---------------------------|--------------------|-----------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
| 商品记号<br>Abbreviation  | C-0.25%                                | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC 35-45 HRC   | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
|                       | ○                                      | ○                           | ○                         | ◎                  | ◎                     | ○                      | ◎                 | ◎                | ◎               | ◎                         | ○           | ○           | ○                     | ○            | ○                        | ○                               | ○                                | ○                           |

碳钢、合金钢用 -DIN 直槽丝锥  
For carbon steel & Alloy steel-Straight Fluted Taps  
Cpm Super Taps X-Series-DIN

NEW HSS-PM X

攻牙深度 ≤ 3D  
加工硬度 ≤ 35°



刀具材料 **HSS-PM** 表面处理 **TICN X** 切削锥长 **2.5P** 公差 **6HX 6H** 切削方向 **R**

丝锥特性 / Taps spec

- 原材料采用欧洲粉末高速钢，全新的生产工艺，升级版的表面涂层；丝锥具有更强的切削性能和寿命。  
The raw materials are made of European powder high-speed steel, with a new production process and an upgraded surface coating.Tap has stronger cutting performance and long life.

TOOL IDENT:TDM414

| D   | P    | L   | L1 | D1 | K    | Standard |
|-----|------|-----|----|----|------|----------|
| M16 | 2    | 110 | 20 | 12 | 9    | DIN376   |
|     | 1.5  | 110 | 20 | 12 | 9    |          |
|     | 1.25 | 110 | 20 | 12 | 9    |          |
|     | 1    | 110 | 20 | 12 | 9    |          |
| M18 | 2.5  | 125 | 25 | 14 | 11   |          |
|     | 2    | 125 | 25 | 14 | 11   |          |
|     | 1.5  | 125 | 25 | 14 | 11   |          |
| M20 | 2.5  | 140 | 25 | 16 | 12   |          |
|     | 2    | 140 | 25 | 16 | 12   |          |
|     | 1.5  | 140 | 25 | 16 | 12   |          |
| M22 | 2.5  | 140 | 25 | 18 | 14.5 |          |
|     | 2    | 140 | 25 | 18 | 14.5 |          |
|     | 1.5  | 140 | 25 | 18 | 14.5 |          |
| M24 | 3    | 160 | 30 | 18 | 14.5 |          |
|     | 2.5  | 160 | 30 | 18 | 14.5 |          |
|     | 2    | 160 | 30 | 18 | 14.5 |          |
|     | 2    | 160 | 30 | 18 | 14.5 |          |
| M27 | 3    | 160 | 30 | 20 | 16   |          |
|     | 2.5  | 160 | 30 | 20 | 16   |          |
|     | 2    | 160 | 30 | 20 | 16   |          |
| M30 | 3.5  | 180 | 35 | 22 | 18   |          |
|     | 3    | 180 | 35 | 22 | 18   |          |
|     | 2.5  | 180 | 35 | 22 | 18   |          |
|     | 2    | 180 | 35 | 22 | 18   |          |

| 加工材料<br>Work Material | 低碳素钢<br>Low Carbon Steel<br>Mild Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|----------------------------------------|-----------------------------|---------------------------|--------------------|-----------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
| 商品记号<br>Abbreviation  | C-0.25%                                | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC 35-45 HRC   | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
|                       | ○                                      | ○                           | ○                         | ◎                  | ◎                     | ○                      | ◎                 | ◎                | ◎               | ◎                         | ○           | ○           | ○                     | ○            | ○                        | ○                               | ○                                | ○                           |

## 一般用螺旋丝锥

General application

Spiral Flute Taps

攻牙深度  
≤ 2D

刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCM112

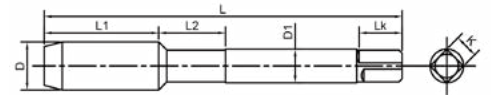
| D    | P    | L  | L1   | D1   | K   | Standard |
|------|------|----|------|------|-----|----------|
| M2   | 0.4  | 50 | 12.5 | 3    | 2.5 | JIS      |
| M2.5 | 0.45 | 50 | 9    | 3    | 2.5 |          |
| M3   | 0.5  | 50 | 10   | 4    | 3.2 |          |
| M3.5 | 0.6  | 50 | 10   | 4    | 3.2 |          |
| M4   | 0.7  | 57 | 13   | 5    | 4   |          |
|      | 0.5  | 57 | 10   | 5    | 4   |          |
| M5   | 0.8  | 64 | 16   | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 10   | 5.5  | 4.5 |          |
| M6   | 1    | 67 | 19   | 6    | 4.5 |          |
|      | 0.75 | 67 | 15   | 6    | 4.5 |          |
|      | 0.5  | 67 | 10   | 6    | 4.5 |          |
| M8   | 1.25 | 70 | 19   | 6.3  | 5   | ISO      |
|      | 1    | 70 | 19   | 6.3  | 5   |          |
| M10  | 1.5  | 80 | 23   | 8    | 6.3 |          |
|      | 1.25 | 80 | 19   | 8    | 6.3 |          |
|      | 1    | 80 | 19   | 8    | 6.3 |          |
| M12  | 1.75 | 89 | 28   | 9    | 7.1 |          |
|      | 1.5  | 89 | 19   | 9    | 7.1 |          |
|      | 1.25 | 89 | 19   | 9    | 7.1 |          |
|      | 1    | 89 | 19   | 9    | 7.1 |          |
| M14  | 2    | 95 | 29   | 11.2 | 9   |          |
|      | 1.5  | 95 | 19   | 11.2 | 9   |          |
|      | 1.25 | 95 | 19   | 11.2 | 9   |          |
|      | 1    | 95 | 19   | 11.2 | 9   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL_ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                              | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

## 一般用螺旋丝锥

General application

Spiral Flute Taps

攻牙深度  
≤ 2D

刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCM112

| D   | P   | L   | L1 | D1   | K    | Standard |
|-----|-----|-----|----|------|------|----------|
| M16 | 2   | 102 | 31 | 12.5 | 10   | ISO      |
|     | 1.5 | 102 | 20 | 12.5 | 10   |          |
|     | 1   | 102 | 20 | 12.5 | 10   |          |
| M18 | 2.5 | 112 | 36 | 14   | 11.2 |          |
|     | 2   | 112 | 23 | 14   | 11.2 |          |
|     | 1.5 | 112 | 23 | 14   | 11.2 |          |
|     | 1   | 112 | 23 | 14   | 11.2 |          |
| M20 | 2.5 | 112 | 36 | 14   | 11.2 |          |
|     | 2   | 112 | 23 | 14   | 11.2 |          |
|     | 1.5 | 112 | 23 | 14   | 11.2 |          |
|     | 1   | 112 | 23 | 14   | 11.2 |          |
| M22 | 2.5 | 118 | 38 | 16   | 12.5 |          |
|     | 2   | 118 | 23 | 16   | 12.5 |          |
|     | 1.5 | 118 | 23 | 16   | 12.5 |          |
| M24 | 3   | 130 | 45 | 18   | 14   |          |
|     | 2   | 130 | 25 | 18   | 14   |          |
|     | 1.5 | 130 | 25 | 18   | 14   |          |
| M27 | 3   | 135 | 45 | 20   | 16   |          |
|     | 2   | 135 | 28 | 20   | 16   |          |
|     | 1.5 | 135 | 28 | 20   | 16   |          |
| M30 | 3.5 | 138 | 48 | 20   | 16   |          |
|     | 3   | 138 | 31 | 20   | 16   |          |
|     | 2   | 138 | 31 | 20   | 16   |          |
|     |     |     |    |      |      |          |
|     | 1.5 | 138 | 31 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL_ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                              | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

## 一般用长柄型螺旋丝锥

General application Long Shank  
Spiral Flute Taps攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

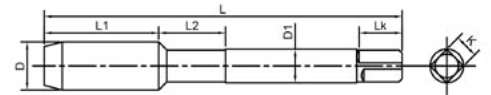
## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCM112L

| D    | P    | L          | L1 | D1   | K   | Standard |
|------|------|------------|----|------|-----|----------|
| M3   | 0.5  | 100        | 10 | 4    | 3.2 | JIS      |
| M3.5 | 0.6  | 100        | 10 | 4    | 3.2 |          |
| M4   | 0.7  | 100        | 13 | 5    | 4   |          |
|      | 0.5  | 100        | 10 | 5    | 4   |          |
| M5   | 0.8  | 100        | 16 | 5.5  | 4.5 |          |
|      | 0.5  | 100        | 10 | 5.5  | 4.5 |          |
| M6   | 1    | 100 or 120 | 19 | 6    | 4.5 |          |
|      | 0.75 | 100 or 120 | 15 | 6    | 4.5 |          |
|      | 0.5  | 100 or 120 | 10 | 6    | 4.5 |          |
| M8   | 1.25 | 100 or 120 | 19 | 6.3  | 5   |          |
|      | 1    | 100 or 120 | 19 | 6.3  | 5   |          |
| M10  | 1.5  | 100 or 120 | 23 | 8    | 6.3 | ISO      |
|      | 1.25 | 100 or 120 | 19 | 8    | 6.3 |          |
|      | 1    | 100 or 120 | 19 | 8    | 6.3 |          |
| M12  | 1.75 | 120 or 150 | 28 | 9    | 7.1 |          |
|      | 1.5  | 120 or 150 | 19 | 9    | 7.1 |          |
|      | 1.25 | 120 or 150 | 19 | 9    | 7.1 |          |
|      | 1    | 120 or 150 | 19 | 9    | 7.1 |          |
| M14  | 2    | 150 or 200 | 29 | 11.2 | 9   |          |
|      | 1.5  | 150 or 200 | 19 | 11.2 | 9   |          |
|      | 1.25 | 150 or 200 | 19 | 11.2 | 9   |          |
|      | 1    | 150 or 200 | 19 | 11.2 | 9   |          |

## 一般用长柄型螺旋丝锥

General application Long Shank  
Spiral Flute Taps攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCM112L

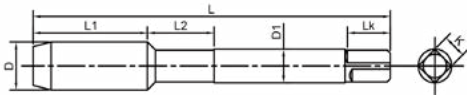
| D   | P   | L          | L1 | D1   | K    | Standard |
|-----|-----|------------|----|------|------|----------|
| M16 | 2   | 150 or 200 | 31 | 12.5 | 10   | ISO      |
|     | 1.5 | 150 or 200 | 20 | 12.5 | 10   |          |
|     | 1   | 150 or 200 | 20 | 12.5 | 10   |          |
| M18 | 2.5 | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 2   | 150 or 200 | 23 | 14   | 11.2 |          |
|     | 1.5 | 150 or 200 | 23 | 14   | 11.2 |          |
|     | 1   | 150 or 200 | 23 | 14   | 11.2 |          |
| M20 | 2.5 | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 2   | 150 or 200 | 23 | 14   | 11.2 |          |
|     | 1.5 | 150 or 200 | 23 | 14   | 11.2 |          |
|     | 1   | 150 or 200 | 23 | 14   | 11.2 |          |
| M22 | 2.5 | 150 or 200 | 38 | 16   | 12.5 |          |
|     | 2   | 150 or 200 | 23 | 16   | 12.5 |          |
|     | 1.5 | 150 or 200 | 23 | 16   | 12.5 |          |
| M24 | 3   | 200        | 45 | 18   | 14   |          |
|     | 2   | 200        | 25 | 18   | 14   |          |
|     | 1.5 | 200        | 25 | 18   | 14   |          |
| M27 | 3   | 200        | 45 | 20   | 16   |          |
|     | 2   | 200        | 28 | 20   | 16   |          |
|     | 1.5 | 200        | 28 | 20   | 16   |          |
| M30 | 3.5 | 200        | 48 | 20   | 16   |          |
|     | 3   | 200        | 31 | 20   | 16   |          |
|     | 2   | 200        | 31 | 20   | 16   |          |
|     | 1.5 | 200        | 31 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳<br>素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                          | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                                  | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳<br>素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                          | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                                  | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

一般用左螺纹螺旋丝锥  
General application LH Thread  
Spiral Flute Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **L** 切削槽角度 **NR38**

丝锥特性 / Taps spec

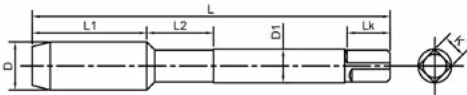
- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TCM112Z

| D    | P    | L  | L1   | D1   | K   | Standard |
|------|------|----|------|------|-----|----------|
| M2   | 0.4  | 50 | 12.5 | 3    | 2.5 | JIS      |
| M2.5 | 0.45 | 50 | 9    | 3    | 2.5 |          |
| M3   | 0.5  | 50 | 10   | 4    | 3.2 |          |
| M3.5 | 0.6  | 50 | 10   | 4    | 3.2 |          |
| M4   | 0.7  | 57 | 13   | 5    | 4   |          |
|      | 0.5  | 57 | 10   | 5    | 4   |          |
| M5   | 0.8  | 64 | 16   | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 10   | 5.5  | 4.5 |          |
| M6   | 1    | 67 | 19   | 6    | 4.5 |          |
|      | 0.75 | 67 | 15   | 6    | 4.5 |          |
|      | 0.5  | 67 | 10   | 6    | 4.5 |          |
| M8   | 1.25 | 70 | 19   | 6.3  | 5   | ISO      |
|      | 1    | 70 | 19   | 6.3  | 5   |          |
| M10  | 1.5  | 80 | 23   | 8    | 6.3 |          |
|      | 1.25 | 80 | 19   | 8    | 6.3 |          |
|      | 1    | 80 | 19   | 8    | 6.3 |          |
| M12  | 1.75 | 89 | 28   | 9    | 7.1 |          |
|      | 1.5  | 89 | 19   | 9    | 7.1 |          |
|      | 1.25 | 89 | 19   | 9    | 7.1 |          |
|      | 1    | 89 | 19   | 9    | 7.1 |          |
| M14  | 2    | 95 | 29   | 11.2 | 9   |          |
|      | 1.5  | 95 | 19   | 11.2 | 9   |          |
|      | 1.25 | 95 | 19   | 11.2 | 9   |          |
|      | 1    | 95 | 19   | 11.2 | 9   |          |

一般用左螺纹螺旋丝锥  
General application LH Thread  
Spiral Flute Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **L** 切削槽角度 **NR38**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TCM112Z

| D   | P   | L   | L1 | D1   | K    | Standard |
|-----|-----|-----|----|------|------|----------|
| M16 | 2   | 102 | 31 | 12.5 | 10   | ISO      |
|     | 1.5 | 102 | 20 | 12.5 | 10   |          |
|     | 1   | 102 | 20 | 12.5 | 10   |          |
| M18 | 2.5 | 112 | 36 | 14   | 11.2 |          |
|     | 2   | 112 | 23 | 14   | 11.2 |          |
|     | 1.5 | 112 | 23 | 14   | 11.2 |          |
|     | 1   | 112 | 23 | 14   | 11.2 |          |
| M20 | 2.5 | 112 | 36 | 14   | 11.2 |          |
|     | 2   | 112 | 23 | 14   | 11.2 |          |
|     | 1.5 | 112 | 23 | 14   | 11.2 |          |
|     | 1   | 112 | 23 | 14   | 11.2 |          |
| M22 | 2.5 | 118 | 38 | 16   | 12.5 |          |
|     | 2   | 118 | 23 | 16   | 12.5 |          |
|     | 1.5 | 118 | 23 | 16   | 12.5 |          |
| M24 | 3   | 130 | 45 | 18   | 14   |          |
|     | 2   | 130 | 25 | 18   | 14   |          |
|     | 1.5 | 130 | 25 | 18   | 14   |          |
| M27 | 3   | 135 | 45 | 20   | 16   |          |
|     | 2   | 135 | 28 | 20   | 16   |          |
|     | 1.5 | 135 | 28 | 20   | 16   |          |
| M30 | 3.5 | 138 | 48 | 20   | 16   |          |
|     | 3   | 138 | 31 | 20   | 16   |          |
|     | 2   | 138 | 31 | 20   | 16   |          |
|     | 1.5 | 138 | 31 | 20   | 16   |          |
|     | 1.5 | 138 | 31 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳<br>素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%-                          | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                                  | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳<br>素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%-                          | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                                  | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

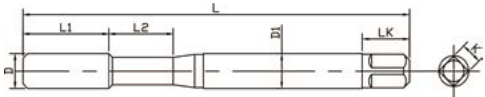


一般用 DIN371-DIN376 螺旋丝锥

General application DIN371-DIN376

Spiral Flute Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对不锈钢加工 For stainless steel

TOOL IDENT:TDM112

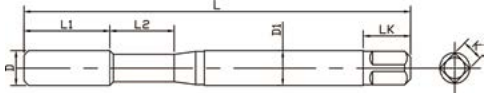
| D    | P    | L   | L1 | D1  | K    | Standard |
|------|------|-----|----|-----|------|----------|
| M2   | 0.4  | 45  | 4  | 2.8 | 2.1  | DIN371   |
| M2.5 | 0.45 | 50  | 5  | 2.8 | 2.1  |          |
| M3   | 0.5  | 56  | 6  | 3.5 | 2.7  |          |
| M4   | 0.7  | 63  | 7  | 4.5 | 3.4  |          |
| M5   | 0.8  | 70  | 8  | 6   | 4.9  |          |
| M6   | 1    | 80  | 10 | 6   | 4.9  |          |
| M8   | 1.25 | 90  | 14 | 8   | 6.2  |          |
| M10  | 1.5  | 100 | 16 | 10  | 8    |          |
| M12  | 1.75 | 110 | 18 | 9   | 7    |          |
| M14  | 2    | 110 | 20 | 11  | 9    |          |
| M16  | 2    | 110 | 22 | 12  | 9    | DIN376   |
| M18  | 2.5  | 125 | 25 | 14  | 11   |          |
| M20  | 2.5  | 140 | 25 | 16  | 12   |          |
| M22  | 2.5  | 140 | 27 | 18  | 14.5 |          |
| M24  | 3    | 160 | 30 | 18  | 14.5 |          |
| M27  | 3    | 160 | 30 | 20  | 16   |          |
| M30  | 3.5  | 180 | 35 | 22  | 18   |          |
| M33  | 3.5  | 180 | 35 | 22  | 20   |          |

一般用 DIN374 螺旋丝锥

General application DIN374

Spiral Flute Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

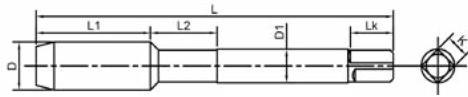
TOOL IDENT:TDM112

| D   | P    | L   | L1 | D1  | K    | Standard |
|-----|------|-----|----|-----|------|----------|
| M4  | 0.5  | 66  | 10 | 2.8 | 2.1  | DIN374   |
|     | 0.35 | 66  | 10 | 2.8 | 2.1  |          |
| M5  | 0.5  | 74  | 11 | 3.5 | 2.7  |          |
| M6  | 0.75 | 84  | 13 | 4.5 | 3.4  |          |
|     | 0.5  | 84  | 13 | 4.5 | 3.4  |          |
| M8  | 1    | 90  | 20 | 6   | 4.9  |          |
|     | 0.75 | 90  | 20 | 6   | 4.9  |          |
| M10 | 1.25 | 100 | 22 | 7   | 5.5  |          |
|     | 1    | 100 | 22 | 7   | 5.5  |          |
|     | 0.75 | 100 | 22 | 7   | 5.5  |          |
| M12 | 1.5  | 100 | 22 | 9   | 7    |          |
|     | 1.25 | 100 | 22 | 9   | 7    |          |
| M14 | 1    | 100 | 22 | 9   | 7    |          |
|     | 1.5  | 100 | 22 | 11  | 9    |          |
| M16 | 1    | 100 | 22 | 11  | 9    |          |
|     | 1.5  | 100 | 22 | 12  | 9    |          |
| M18 | 1    | 100 | 22 | 12  | 9    |          |
|     | 2    | 125 | 25 | 14  | 11   |          |
|     | 1.5  | 125 | 25 | 14  | 11   |          |
| M20 | 1    | 125 | 25 | 14  | 11   |          |
|     | 2    | 140 | 25 | 16  | 12   |          |
|     | 1.5  | 140 | 25 | 16  | 12   |          |
| M22 | 1    | 140 | 25 | 16  | 12   |          |
|     | 2    | 140 | 27 | 18  | 14.5 |          |
|     | 1.5  | 140 | 27 | 18  | 14.5 |          |
| M24 | 1    | 140 | 27 | 18  | 14.5 |          |
|     | 2    | 140 | 27 | 18  | 14.5 |          |
|     | 1.5  | 140 | 27 | 18  | 14.5 |          |
| M27 | 1    | 140 | 27 | 18  | 14.5 |          |
|     | 2    | 140 | 28 | 20  | 16   |          |
| M30 | 1.5  | 140 | 28 | 20  | 16   |          |
|     | 2    | 150 | 28 | 22  | 18   |          |
|     | 1.5  | 150 | 28 | 22  | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                | 高碳素钢              | 合金钢         | 调质钢            |           | 不锈钢             | 工具钢        | 铸钢         | 铸铁        | 球墨铸铁              | 铜      | 黄铜    | 黄铜铸件          | 青铜     | 变形铝合金           | 铝合金铸件                  | 镁合金铸件                   | 锌合金铸件              |
|--------------------------|--------------------------------|---------------------|-------------------|-------------|----------------|-----------|-----------------|------------|------------|-----------|-------------------|--------|-------|---------------|--------|-----------------|------------------------|-------------------------|--------------------|
|                          | Low Carbon Steel<br>Mild Steel | Medium Carbon Steel | High Carbon Steel | Alloy Steel | Hardened Steel |           | Stainless Steel | Tool Steel | Cast Steel | Cast Iron | Ductile Cast Iron | Copper | Brass | Brass Casting | Bronze | Aluminum Rolled | Aluminum Alloy Casting | Magnesium Alloy Casting | Zinc Alloy Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%~0.45%        | C0.45%~           | SCM         | 25-35 HRC      | 35-45 HRC | SUS             | SKD        | SC         | FC        | FCD               | Cu     | Bs    | BsC           | PB     | AL              | AL_ADC                 | MC                      | ZDC                |
|                          | ○                              | ○                   |                   | ○           |                |           | ○               |            |            |           | ○                 | ○      | ○     | ○             | ○      |                 |                        |                         |                    |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                | 高碳素钢              | 合金钢         | 调质钢            | 不锈钢             | 工具钢        | 铸钢         | 铸铁        | 球墨铸铁              | 铜      | 黄铜    | 黄铜铸件          | 青铜     | 变形铝<br>合金       | 铝合金铸件                  | 镁合金铸件                   | 锌合金铸件              |     |
|--------------------------|--------------------------------|---------------------|-------------------|-------------|----------------|-----------------|------------|------------|-----------|-------------------|--------|-------|---------------|--------|-----------------|------------------------|-------------------------|--------------------|-----|
|                          | Low Carbon Steel<br>Mild Steel | Medium Carbon Steel | High Carbon Steel | Alloy Steel | Hardened Steel | Stainless Steel | Tool Steel | Cast Steel | Cast Iron | Ductile Cast Iron | Copper | Brass | Brass Casting | Bronze | Aluminum Rolled | Aluminum Alloy Casting | Magnesium Alloy Casting | Zinc Alloy Casting |     |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%~0.45%        | C0.45%~           | SCM         | 25~35<br>HRC   | 35~45<br>HRC    | SUS        | SKD        | SC        | FC                | FCD    | Cu    | Bs            | BsC    | PB              | AL                     | AL_ADC                  | MC                 | ZDC |
|                          | ○                              | ○                   |                   | ○           |                |                 | ○          |            |           |                   | ○      | ○     | ○             | ○      |                 |                        |                         |                    |     |

## 铝加工用螺旋丝锥

For Aluminium  
Spiral Flute Taps攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **DLC** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR45**  
Material Surface treatment Cutting angle Tolerance Cutting direction Chamfer

## 丝锥特性 / Taps spec

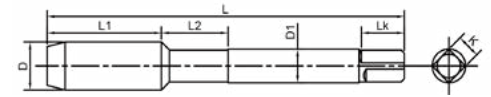
- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对铝材加工 For aluminum

## TOOL IDENT:TCM132

| D    | P    | L  | L1 | D1   | K   | Standard |
|------|------|----|----|------|-----|----------|
| M2   | 0.4  | 50 | 5  | 3    | 2.5 | JIS      |
| M2.5 | 0.45 | 50 | 5  | 3    | 2.5 |          |
| M3   | 0.5  | 50 | 5  | 4    | 3.2 |          |
| M3.5 | 0.6  | 50 | 5  | 4    | 3.2 |          |
| M4   | 0.7  | 57 | 7  | 5    | 4   |          |
|      | 0.5  | 57 | 7  | 5    | 4   |          |
| M5   | 0.8  | 64 | 9  | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 9  | 5.5  | 4.5 |          |
| M6   | 1    | 67 | 10 | 6    | 4.5 |          |
|      | 0.75 | 67 | 10 | 6    | 4.5 |          |
|      | 0.5  | 67 | 10 | 6    | 4.5 |          |
| M8   | 1.25 | 70 | 12 | 6.3  | 5   | ISO      |
|      | 1    | 70 | 12 | 6.3  | 5   |          |
| M10  | 1.5  | 80 | 13 | 8    | 6.3 |          |
|      | 1.25 | 80 | 13 | 8    | 6.3 |          |
|      | 1    | 80 | 13 | 8    | 6.3 |          |
| M12  | 1.75 | 89 | 15 | 9    | 7.1 |          |
|      | 1.5  | 89 | 15 | 9    | 7.1 |          |
|      | 1.25 | 89 | 15 | 9    | 7.1 |          |
|      | 1    | 89 | 15 | 9    | 7.1 |          |
| M14  | 2    | 95 | 18 | 11.2 | 9   |          |
|      | 1.5  | 95 | 18 | 11.2 | 9   |          |
|      | 1.25 | 95 | 18 | 11.2 | 9   |          |
|      | 1    | 95 | 18 | 11.2 | 9   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL_ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  |             |             |                              |              | ○                               | ○                                      | ○                                       | ○                                  |

## 铝加工用螺旋丝锥

For Aluminium  
Spiral Flute Taps攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **DLC** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR45**  
Material Surface treatment Cutting angle Tolerance Cutting direction Chamfer

## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对铝材加工 For aluminum

## TOOL IDENT:TCM132

| D   | P   | L   | L1 | D1   | K    | Standard |
|-----|-----|-----|----|------|------|----------|
| M16 | 2   | 102 | 18 | 12.5 | 10   | ISO      |
|     | 1.5 | 102 | 18 | 12.5 | 10   |          |
|     | 1   | 102 | 18 | 12.5 | 10   |          |
| M18 | 2.5 | 112 | 21 | 14   | 11.2 |          |
|     | 2   | 112 | 21 | 14   | 11.2 |          |
|     | 1.5 | 112 | 21 | 14   | 11.2 |          |
|     | 1   | 112 | 21 | 14   | 11.2 |          |
| M20 | 2.5 | 112 | 21 | 14   | 11.2 |          |
|     | 2   | 112 | 21 | 14   | 11.2 |          |
|     | 1.5 | 112 | 21 | 14   | 11.2 |          |
|     | 1   | 112 | 21 | 14   | 11.2 |          |
| M22 | 2.5 | 118 | 25 | 16   | 12.5 |          |
|     | 2   | 118 | 25 | 16   | 12.5 |          |
|     | 1.5 | 118 | 25 | 16   | 12.5 |          |
|     | 1   | 118 | 25 | 16   | 12.5 |          |
| M24 | 3   | 130 | 25 | 18   | 14   |          |
|     | 2   | 130 | 25 | 18   | 14   |          |
|     | 1.5 | 130 | 25 | 18   | 14   |          |
|     | 1   | 130 | 25 | 18   | 14   |          |
| M27 | 3   | 135 | 28 | 20   | 16   |          |
|     | 2   | 135 | 28 | 20   | 16   |          |
|     | 1.5 | 135 | 28 | 20   | 16   |          |
|     | 3.5 | 138 | 31 | 20   | 16   |          |
| M30 | 3   | 138 | 31 | 20   | 16   |          |
|     | 2   | 138 | 31 | 20   | 16   |          |
|     | 1.5 | 138 | 31 | 20   | 16   |          |
|     | 3.5 | 138 | 31 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL_ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  |             |             |                              |              | ○                               | ○                                      | ○                                       | ○                                  |

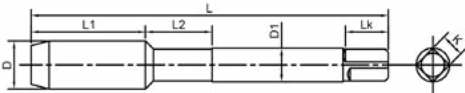
不锈钢加工用螺旋丝锥

For Stainless Steels

Spiral Flute Taps

攻牙深度

≤ 3D



刀具材料 **HSSE**

表面处理 **BRT** **TIN** **TICN**

切削锥长 **2.5P**

公差 **6H**

切削方向 **R**

切削槽角度 **NR45**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对不锈钢加工 For stainless steel

TOOL IDENT:TCM122

| D    | P    | L  | L1 | D1   | K   | Standard |
|------|------|----|----|------|-----|----------|
| M2   | 0.4  | 50 | 5  | 3    | 2.5 | JIS      |
| M2.5 | 0.45 | 50 | 5  | 3    | 2.5 |          |
| M3   | 0.5  | 50 | 5  | 4    | 3.2 |          |
| M3.5 | 0.6  | 50 | 5  | 4    | 3.2 |          |
| M4   | 0.7  | 57 | 7  | 5    | 4   |          |
|      | 0.5  | 57 | 7  | 5    | 4   |          |
| M5   | 0.8  | 64 | 9  | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 9  | 5.5  | 4.5 |          |
| M6   | 1    | 67 | 10 | 6    | 4.5 |          |
|      | 0.75 | 67 | 10 | 6    | 4.5 |          |
|      | 0.5  | 67 | 10 | 6    | 4.5 |          |
| M8   | 1.25 | 70 | 12 | 6.3  | 5   | ISO      |
|      | 1    | 70 | 12 | 6.3  | 5   |          |
| M10  | 1.5  | 80 | 13 | 8    | 6.3 |          |
|      | 1.25 | 80 | 13 | 8    | 6.3 |          |
|      | 1    | 80 | 13 | 8    | 6.3 |          |
| M12  | 1.75 | 89 | 15 | 9    | 7.1 |          |
|      | 1.5  | 89 | 15 | 9    | 7.1 |          |
|      | 1.25 | 89 | 15 | 9    | 7.1 |          |
|      | 1    | 89 | 15 | 9    | 7.1 |          |
| M14  | 2    | 95 | 18 | 11.2 | 9   |          |
|      | 1.5  | 95 | 18 | 11.2 | 9   |          |
|      | 1.25 | 95 | 18 | 11.2 | 9   |          |
|      | 1    | 95 | 18 | 11.2 | 9   |          |

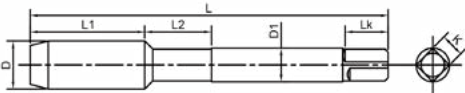
不锈钢加工用螺旋丝锥

For Stainless Steels

Spiral Flute Taps

攻牙深度

≤ 3D



刀具材料 **HSSE**

表面处理 **BRT** **TIN** **TICN**

切削锥长 **2.5P**

公差 **6H**

切削方向 **R**

切削槽角度 **NR45**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对不锈钢加工 For stainless steel

TOOL IDENT:TCM122

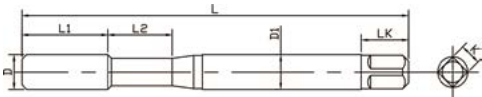
| D   | P   | L   | L1 | D1   | K    | Standard |
|-----|-----|-----|----|------|------|----------|
| M16 | 2   | 102 | 18 | 12.5 | 10   | ISO      |
|     | 1.5 | 102 | 18 | 12.5 | 10   |          |
|     | 1   | 102 | 18 | 12.5 | 10   |          |
| M18 | 2.5 | 112 | 21 | 14   | 11.2 |          |
|     | 2   | 112 | 21 | 14   | 11.2 |          |
|     | 1.5 | 112 | 21 | 14   | 11.2 |          |
|     | 1   | 112 | 21 | 14   | 11.2 |          |
| M20 | 2.5 | 112 | 21 | 14   | 11.2 |          |
|     | 2   | 112 | 21 | 14   | 11.2 |          |
|     | 1.5 | 112 | 21 | 14   | 11.2 |          |
|     | 1   | 112 | 21 | 14   | 11.2 |          |
| M22 | 2.5 | 118 | 25 | 16   | 12.5 |          |
|     | 2   | 118 | 25 | 16   | 12.5 |          |
|     | 1.5 | 118 | 25 | 16   | 12.5 |          |
|     | 1   | 118 | 25 | 16   | 12.5 |          |
| M24 | 3   | 130 | 25 | 18   | 14   |          |
|     | 2   | 130 | 25 | 18   | 14   |          |
|     | 1.5 | 130 | 25 | 18   | 14   |          |
|     | 1   | 130 | 25 | 18   | 14   |          |
| M27 | 3   | 135 | 28 | 20   | 16   |          |
|     | 2   | 135 | 28 | 20   | 16   |          |
|     | 1.5 | 135 | 28 | 20   | 16   |          |
| M30 | 3.5 | 138 | 31 | 20   | 16   |          |
|     | 3   | 138 | 31 | 20   | 16   |          |
|     | 2   | 138 | 31 | 20   | 16   |          |
|     | 1.5 | 138 | 31 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢         | 调质钢            |              | 不锈钢                | 工具钢        | 铸钢            | 铸铁        | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|-------------|----------------|--------------|--------------------|------------|---------------|-----------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy Steel | Hardened Steel |              | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%~0.45%           | C0.45%~              | SCM         | 25-35<br>HRC   | 35-45<br>HRC | SUS                | SKD        | SC            | FC        | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL_ADC                    | MC                         | ZDC                   |
|                          | ○                              |                        |                      |             |                |              | ◎                  |            |               |           |                      | ◎      |       |                  |        |                    |                           |                            |                       |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |     |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|-----------------------|------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|-----|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%~0.45%                   | C0.45%~                      | SCM                   | 25~35<br>HRC          | 35~45<br>HRC           | SUS               | SKD                 | SC                 | FC                               | FCD         | Cu          | Bs                           | BsC          | PB                              | AL                                     | AL_ADC                                  | MC                                 | ZDC |
|                          | ○                                            |                                |                              |                       |                       | ◎                      |                   |                     |                    |                                  | ◎           |             |                              |              |                                 |                                        |                                         |                                    |     |

钢丝螺套用螺旋丝锥  
 Helicoil Screw Thread Taps  
 Spiral Flute Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE**    表面处理 **BRT** **TIN** **TICN**    切削锥长 **2.5P**    公差 **6H**    切削方向 **R**    切削槽角度 **NR38**  
 Material    Surface treatment    Cutting angle    Tolerance    Cutting direction    Chamfer

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

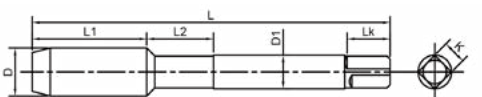
TOOL IDENT:TCS112

| D     | P    | L   | L1 | D1   | K    | Standard |
|-------|------|-----|----|------|------|----------|
| ST2   | 0.4  | 50  | 9  | 3    | 2.5  | JIS      |
| ST2.5 | 0.45 | 50  | 10 | 4    | 3.2  |          |
| ST3   | 0.5  | 57  | 13 | 5    | 4    |          |
| ST4   | 0.7  | 64  | 16 | 5.5  | 4.5  |          |
| ST5   | 0.8  | 67  | 19 | 6    | 4.5  |          |
| ST6   | 1    | 70  | 19 | 6.3  | 5    | ISO      |
| ST7   | 1    | 70  | 19 | 6.3  | 5    |          |
| ST8   | 1.25 | 80  | 23 | 8    | 6.3  |          |
|       | 1    | 80  | 23 | 8    | 6.3  |          |
| ST10  | 1.5  | 89  | 28 | 9    | 7.1  |          |
|       | 1.25 | 89  | 28 | 9    | 7.1  |          |
|       | 1    | 89  | 28 | 9    | 7.1  |          |
| ST12  | 1.75 | 95  | 29 | 11.2 | 9    |          |
|       | 1.5  | 95  | 29 | 11.2 | 9    |          |
| ST14  | 2    | 102 | 31 | 12.5 | 10   |          |
|       | 1.5  | 102 | 31 | 12.5 | 10   |          |
| ST16  | 2    | 112 | 36 | 14   | 11.2 |          |
|       | 1.5  | 112 | 36 | 14   | 11.2 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

钢丝螺套用螺旋丝锥  
 Helicoil Screw Thread Taps  
 Spiral Flute Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE**    表面处理 **BRT** **TIN** **TICN**    切削锥长 **2.5P**    公差 **6H**    切削方向 **R**    切削槽角度 **NR38**  
 Material    Surface treatment    Cutting angle    Tolerance    Cutting direction    Chamfer

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TCS112

| D    | P   | L   | L1 | D1 | K    | Standard |
|------|-----|-----|----|----|------|----------|
| ST18 | 2.5 | 118 | 38 | 16 | 12.5 | ISO      |
|      | 1.5 | 112 | 36 | 14 | 11.2 |          |
| ST20 | 2.5 | 130 | 45 | 18 | 14   |          |
|      | 2   | 118 | 38 | 16 | 12.5 |          |
| ST22 | 1.5 | 118 | 38 | 16 | 12.5 |          |
|      | 2.5 | 135 | 45 | 20 | 16   |          |
|      | 2   | 130 | 45 | 18 | 14   |          |
| ST24 | 1.5 | 130 | 45 | 18 | 14   |          |
|      | 3   | 138 | 48 | 20 | 16   |          |
|      | 2   | 135 | 45 | 20 | 16   |          |
| ST27 | 1.5 | 135 | 45 | 20 | 16   |          |
|      | 3   | 138 | 48 | 20 | 16   |          |
|      | 2   | 138 | 48 | 20 | 16   |          |
|      | 1.5 | 138 | 48 | 20 | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |



## 一般用 UNC/UNF 螺旋丝锥

General application UNC/UNF

Spiral Flute Taps

攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCU112

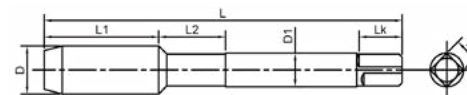
| D       | L  | L1 | D1  | K   | Standard |
|---------|----|----|-----|-----|----------|
| 2-56    | 50 | 12 | 3.0 | 2.5 | JIS      |
| 2-64    | 50 | 12 | 3.0 | 2.5 |          |
| 3-48    | 50 | 9  | 3.0 | 2.5 |          |
| 3-56    | 50 | 9  | 3.0 | 2.5 |          |
| 4-40    | 50 | 10 | 4.0 | 3.2 |          |
| 4-48    | 50 | 10 | 4.0 | 3.2 |          |
| 5-40    | 50 | 10 | 4.0 | 3.2 |          |
| 5-44    | 50 | 10 | 4.0 | 3.2 |          |
| 6-32    | 50 | 10 | 5.0 | 4   |          |
| 6-40    | 50 | 10 | 5.0 | 4   |          |
| 8-32    | 57 | 13 | 5.0 | 4   |          |
| 8-36    | 57 | 13 | 5.0 | 4   |          |
| 10-24   | 64 | 16 | 5.5 | 4.5 |          |
| 10-32   | 64 | 16 | 5.5 | 4.5 |          |
| 12-24   | 67 | 19 | 6.0 | 4.5 |          |
| 12-28   | 67 | 19 | 6.0 | 4.5 |          |
| 12-32   | 67 | 15 | 6.0 | 4.5 |          |
| 1/4-20  | 67 | 19 | 6.3 | 5   | ISO      |
| 1/4-28  | 67 | 19 | 6.3 | 5   |          |
| 1/4-32  | 67 | 15 | 6.3 | 5   |          |
| 5/16-18 | 70 | 19 | 6.3 | 5   |          |
| 5/16-24 | 70 | 19 | 6.3 | 5   |          |
| 5/16-32 | 70 | 19 | 6.3 | 5   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%-                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL_ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                              | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

## 一般用 UNC/UNF 螺旋丝锥

General application UNC/UNF

Spiral Flute Taps

攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

## 丝锥特性 / Taps spec

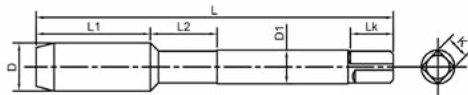
- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCU112

| D        | L   | L1 | D1   | K    | Standard |
|----------|-----|----|------|------|----------|
| 3/8-16   | 80  | 23 | 8.0  | 6.3  | ISO      |
| 3/8-24   | 80  | 19 | 8.0  | 6.3  |          |
| 3/8-32   | 80  | 19 | 8.0  | 6.3  |          |
| 7/16-14  | 89  | 28 | 9.0  | 7.1  |          |
| 7/16-20  | 89  | 19 | 9.0  | 7.1  |          |
| 7/16-28  | 89  | 19 | 9.0  | 7.1  |          |
| 1/2-13   | 89  | 28 | 9.0  | 7.1  |          |
| 1/2-20   | 89  | 19 | 9.0  | 7.1  |          |
| 1/2-28   | 89  | 19 | 9.0  | 7.1  |          |
| 9/16-12  | 95  | 29 | 11.2 | 9    |          |
| 9/16-18  | 95  | 19 | 11.2 | 9    |          |
| 9/16-24  | 95  | 19 | 11.2 | 9    |          |
| 5/8-11   | 102 | 31 | 12.5 | 10   |          |
| 5/8-18   | 102 | 20 | 12.5 | 10   |          |
| 5/8-24   | 102 | 20 | 12.5 | 10   |          |
| 3/4-10   | 112 | 36 | 14.0 | 11.2 |          |
| 3/4-16   | 112 | 23 | 14.0 | 11.2 |          |
| 3/4-20   | 112 | 23 | 14.0 | 11.2 |          |
| 7/8-9    | 118 | 38 | 16.0 | 12.5 |          |
| 7/8-14   | 118 | 23 | 16.0 | 12.5 |          |
| 1-8      | 135 | 45 | 20.0 | 16   |          |
| 1-12     | 135 | 28 | 20.0 | 16   |          |
| 1 1/8-7  | 138 | 48 | 20.0 | 16   |          |
| 1 1/8-12 | 138 | 31 | 20.0 | 16   |          |
| 1 1/4-7  | 151 | 51 | 22.4 | 18   |          |
| 1 1/4-12 | 151 | 34 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%-                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL_ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              |                              | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

## 铝加工用 UNC/UNF 螺旋丝锥

For Aluminium UNC/UNF  
Spiral Flute Taps攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **DLC** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR45**  
Material Surface treatment Cutting angle Tolerance Cutting direction Chamfer

## 丝锥特性 / Taps spec

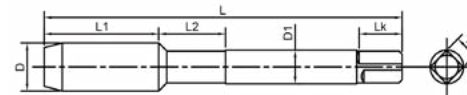
- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCU132

| D       | L  | L1 | D1  | K   | Standard |
|---------|----|----|-----|-----|----------|
| 2-56    | 50 | 5  | 3.0 | 2.5 | JIS      |
| 2-64    | 50 | 5  | 3.0 | 2.5 |          |
| 3-48    | 50 | 5  | 3.0 | 2.5 |          |
| 3-56    | 50 | 5  | 3.0 | 2.5 |          |
| 4-40    | 50 | 5  | 4.0 | 3.2 |          |
| 4-48    | 50 | 5  | 4.0 | 3.2 |          |
| 5-40    | 50 | 5  | 4.0 | 3.2 |          |
| 5-44    | 50 | 5  | 4.0 | 3.2 |          |
| 6-32    | 50 | 5  | 5.0 | 4   |          |
| 6-40    | 50 | 5  | 5.0 | 4   |          |
| 8-32    | 57 | 7  | 5.0 | 4   |          |
| 8-36    | 57 | 7  | 5.0 | 4   |          |
| 10-24   | 64 | 9  | 5.5 | 4.5 |          |
| 10-32   | 64 | 9  | 5.5 | 4.5 |          |
| 12-24   | 67 | 10 | 6.0 | 4.5 |          |
| 12-28   | 67 | 10 | 6.0 | 4.5 |          |
| 12-32   | 67 | 10 | 6.0 | 4.5 |          |
| 1/4-20  | 67 | 10 | 6.3 | 5   |          |
| 1/4-28  | 67 | 10 | 6.3 | 5   |          |
| 1/4-32  | 67 | 10 | 6.3 | 5   |          |
| 5/16-18 | 70 | 12 | 6.3 | 5   | ISO      |
| 5/16-24 | 70 | 12 | 6.3 | 5   |          |
| 5/16-32 | 70 | 12 | 6.3 | 5   |          |
| 3/8-16  | 80 | 13 | 8.0 | 6.3 |          |
| 3/8-24  | 80 | 13 | 8.0 | 6.3 |          |
| 3/8-32  | 80 | 13 | 8.0 | 6.3 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL,ADC                    | MC                         | ZDC                   |
|                          |                                |                        |                      |                |                           |                    |            |               |              |                      |        |       |                  |        | ○                  | ○                         | ○                          | ○                     |

## 铝加工用 UNC/UNF 螺旋丝锥

For Aluminium UNC/UNF  
Spiral Flute Taps攻牙深度  
≤ 2D刀具材料 **HSSE** 表面处理 **BRT** **DLC** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR45**  
Material Surface treatment Cutting angle Tolerance Cutting direction Chamfer

## 丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对铝材加工 For aluminum

## TOOL IDENT:TCU132

| D        | L   | L1 | D1   | K    | Standard |
|----------|-----|----|------|------|----------|
| 7/16-14  | 89  | 15 | 9.0  | 7.1  | ISO      |
| 7/16-20  | 89  | 15 | 9.0  | 7.1  |          |
| 7/16-28  | 89  | 15 | 9.0  | 7.1  |          |
| 1/2-13   | 89  | 15 | 9.0  | 7.1  |          |
| 1/2-20   | 89  | 15 | 9.0  | 7.1  |          |
| 1/2-28   | 89  | 15 | 9.0  | 7.1  |          |
| 9/16-12  | 95  | 19 | 11.2 | 9    |          |
| 9/16-18  | 95  | 19 | 11.2 | 9    |          |
| 9/16-24  | 95  | 19 | 11.2 | 9    |          |
| 5/8-11   | 102 | 20 | 12.5 | 10   |          |
| 5/8-18   | 102 | 20 | 12.5 | 10   |          |
| 5/8-24   | 102 | 20 | 12.5 | 10   |          |
| 3/4-10   | 112 | 23 | 14.0 | 11.2 |          |
| 3/4-16   | 112 | 23 | 14.0 | 11.2 |          |
| 3/4-20   | 112 | 23 | 14.0 | 11.2 |          |
| 7/8-9    | 118 | 23 | 16.0 | 12.5 |          |
| 7/8-14   | 118 | 23 | 16.0 | 12.5 |          |
| 1-8      | 135 | 28 | 20.0 | 16   |          |
| 1-12     | 135 | 28 | 20.0 | 16   |          |
| 1 1/8-7  | 138 | 31 | 20.0 | 16   |          |
| 1 1/8-12 | 138 | 31 | 20.0 | 16   |          |
| 1 1/4-7  | 151 | 34 | 22.4 | 18   |          |
| 1 1/4-12 | 151 | 34 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL,ADC                    | MC                         | ZDC                   |
|                          |                                |                        |                      |                |                           |                    |            |               |              |                      |        |       |                  |        | ○                  | ○                         | ○                          | ○                     |

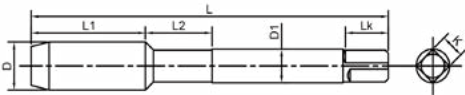
不锈钢加工用 UNC/UNF 螺旋丝锥

For Stainless Steels UNC/UNF

Spiral Flute Taps

攻牙深度

≤ 3D



刀具材料 **HSSE**

表面处理 **BRT** **TIN** **TICN**

切削锥长 **2.5P**

公差 **6H**

切削方向 **R**

切削槽角度 **NR45**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对不锈钢加工 For stainless steel

TOOL IDENT:TCU122

| D      | L  | L1 | D1  | K   | Standard |
|--------|----|----|-----|-----|----------|
| 2-56   | 50 | 5  | 3.0 | 2.5 | JIS      |
| 2-64   | 50 | 5  | 3.0 | 2.5 |          |
| 3-48   | 50 | 5  | 3.0 | 2.5 |          |
| 3-56   | 50 | 5  | 3.0 | 2.5 |          |
| 4-40   | 50 | 5  | 4.0 | 3.2 |          |
| 4-48   | 50 | 5  | 4.0 | 3.2 |          |
| 5-40   | 50 | 5  | 4.0 | 3.2 |          |
| 5-44   | 50 | 5  | 4.0 | 3.2 |          |
| 6-32   | 50 | 5  | 5.0 | 3.2 |          |
| 6-40   | 50 | 5  | 5.0 | 3.2 |          |
| 8-32   | 57 | 7  | 5.0 | 4   |          |
| 8-36   | 57 | 7  | 5.0 | 4   |          |
| 10-24  | 64 | 9  | 5.5 | 4.5 |          |
| 10-32  | 64 | 9  | 5.5 | 4.5 |          |
| 12-24  | 67 | 10 | 6.0 | 4.5 |          |
| 12-28  | 67 | 10 | 6.0 | 4.5 |          |
| 12-32  | 67 | 10 | 6.0 | 4.5 |          |
| 1/4-20 | 67 | 10 | 6.0 | 4.5 | ISO      |
| 1/4-28 | 67 | 10 | 6.0 | 4.5 |          |
| 1/4-32 | 67 | 10 | 6.0 | 4.5 |          |

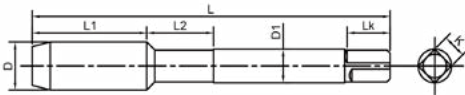
不锈钢加工用 UNC/UNF 螺旋丝锥

For Stainless Steels UNC/UNF

Spiral Flute Taps

攻牙深度

≤ 3D



刀具材料 **HSSE**

表面处理 **BRT** **TIN** **TICN**

切削锥长 **2.5P**

公差 **6H**

切削方向 **R**

切削槽角度 **NR45**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 针对不锈钢加工 For stainless steel

TOOL IDENT:TCU122

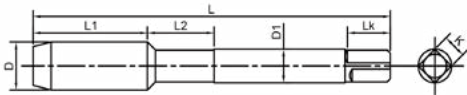
| D       | L   | L1 | D1   | K    | Standard |
|---------|-----|----|------|------|----------|
| 5/16-18 | 70  | 12 | 6.3  | 5    | ISO      |
| 5/16-24 | 70  | 12 | 6.3  | 5    |          |
| 5/16-32 | 70  | 12 | 6.3  | 5    |          |
| 3/8-16  | 80  | 13 | 8.0  | 6.3  |          |
| 3/8-24  | 80  | 13 | 8.0  | 6.3  |          |
| 3/8-32  | 80  | 13 | 8.0  | 6.3  |          |
| 7/16-14 | 89  | 15 | 9.0  | 7.1  |          |
| 7/16-20 | 89  | 15 | 9.0  | 7.1  |          |
| 7/16-28 | 89  | 15 | 9.0  | 7.1  |          |
| 1/2-13  | 89  | 15 | 9.0  | 7.1  |          |
| 1/2-20  | 89  | 15 | 9.0  | 7.1  |          |
| 1/2-28  | 89  | 15 | 9.0  | 7.1  |          |
| 9/16-12 | 95  | 18 | 11.2 | 9    |          |
| 9/16-18 | 95  | 18 | 11.2 | 9    |          |
| 9/16-24 | 95  | 18 | 11.2 | 9    |          |
| 5/8-11  | 102 | 18 | 12.5 | 10   |          |
| 5/8-18  | 102 | 18 | 12.5 | 10   |          |
| 5/8-24  | 102 | 18 | 12.5 | 10   |          |
| 3/4-10  | 112 | 21 | 14.0 | 11.2 |          |
| 3/4-16  | 112 | 21 | 14.0 | 11.2 |          |
| 3/4-20  | 112 | 21 | 14.0 | 11.2 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL_ADC                    | MC                         | ZDC                   |
|                          | ○                              |                        |                      |                |                           | ◎                  |            |               |              |                      | ◎      |       |                  |        |                    |                           |                            |                       |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL_ADC                    | MC                         | ZDC                   |
|                          | ○                              |                        |                      |                |                           | ◎                  |            |               |              |                      | ◎      |       |                  |        |                    |                           |                            |                       |

一般用先端丝锥  
General application  
Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

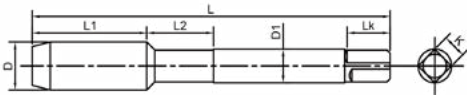
TOOL IDENT:TCM212

| D    | P    | L  | L1   | D1   | K   | Standard |
|------|------|----|------|------|-----|----------|
| M2   | 0.4  | 50 | 12.5 | 3    | 2.5 | JIS      |
| M2.5 | 0.45 | 50 | 9    | 3    | 2.5 |          |
| M3   | 0.5  | 50 | 10   | 4    | 3.2 |          |
| M3.5 | 0.6  | 50 | 10   | 4    | 3.2 |          |
| M4   | 0.7  | 57 | 13   | 5    | 4   |          |
|      | 0.5  | 57 | 13   | 5    | 4   |          |
| M5   | 0.8  | 64 | 16   | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 16   | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 16   | 5.5  | 4.5 |          |
| M6   | 1    | 67 | 19   | 6    | 4.5 |          |
|      | 0.75 | 67 | 19   | 6    | 4.5 |          |
|      | 0.5  | 67 | 19   | 6    | 4.5 |          |
| M8   | 1.25 | 70 | 19   | 6.3  | 5   | ISO      |
|      | 1    | 70 | 19   | 6.3  | 5   |          |
| M10  | 1.5  | 80 | 23   | 8    | 6.3 |          |
|      | 1.25 | 80 | 23   | 8    | 6.3 |          |
|      | 1    | 80 | 23   | 8    | 6.3 |          |
| M12  | 1.75 | 89 | 28   | 9    | 7.1 |          |
|      | 1.5  | 89 | 28   | 9    | 7.1 |          |
|      | 1.25 | 89 | 28   | 9    | 7.1 |          |
|      | 1    | 89 | 28   | 9    | 7.1 |          |
| M14  | 2    | 95 | 29   | 11.2 | 9   |          |
|      | 1.5  | 95 | 29   | 11.2 | 9   |          |
|      | 1.25 | 95 | 29   | 11.2 | 9   |          |
|      | 1    | 95 | 29   | 11.2 | 9   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

一般用先端丝锥  
General application  
Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

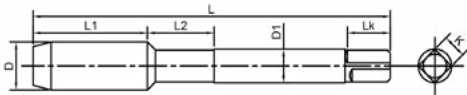
TOOL IDENT:TCM212

| D   | P   | L   | L1 | D1   | K    | Standard |
|-----|-----|-----|----|------|------|----------|
| M16 | 2   | 102 | 31 | 12.5 | 10   | ISO      |
|     | 1.5 | 102 | 31 | 12.5 | 10   |          |
|     | 1   | 102 | 31 | 12.5 | 10   |          |
| M18 | 2.5 | 112 | 36 | 14   | 11.2 |          |
|     | 2   | 112 | 36 | 14   | 11.2 |          |
|     | 1.5 | 112 | 36 | 14   | 11.2 |          |
|     | 1   | 112 | 36 | 14   | 11.2 |          |
| M20 | 2.5 | 112 | 36 | 14   | 11.2 |          |
|     | 2   | 112 | 36 | 14   | 11.2 |          |
|     | 1.5 | 112 | 36 | 14   | 11.2 |          |
|     | 1   | 112 | 36 | 14   | 11.2 |          |
| M22 | 2.5 | 118 | 38 | 16   | 12.5 |          |
|     | 2   | 118 | 38 | 16   | 12.5 |          |
|     | 1.5 | 118 | 38 | 16   | 12.5 |          |
| M24 | 3   | 130 | 45 | 18   | 14   |          |
|     | 2   | 130 | 45 | 18   | 14   |          |
|     | 1.5 | 130 | 45 | 18   | 14   |          |
| M27 | 3   | 135 | 45 | 20   | 16   |          |
|     | 2   | 135 | 45 | 20   | 16   |          |
|     | 1.5 | 135 | 45 | 20   | 16   |          |
| M30 | 3.5 | 138 | 48 | 20   | 16   |          |
|     | 3   | 138 | 48 | 20   | 16   |          |
|     | 2   | 138 | 48 | 20   | 16   |          |
|     | 1.5 | 138 | 48 | 20   | 16   |          |
|     | 1.5 | 138 | 48 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

一般用长柄型先端丝锥  
General application Long Shank  
Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

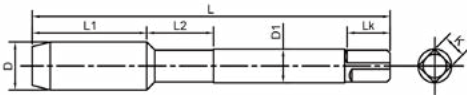
TOOL IDENT:TCM212L

| D    | P    | L          | L1 | D1   | K   | Standard |
|------|------|------------|----|------|-----|----------|
| M3   | 0.5  | 100        | 10 | 4    | 3.2 | JIS      |
| M3.5 | 0.6  | 100        | 10 | 4    | 3.2 |          |
| M4   | 0.7  | 100        | 13 | 5    | 4   |          |
|      | 0.5  | 100        | 13 | 5    | 4   |          |
| M5   | 0.8  | 100        | 16 | 5.5  | 4.5 |          |
|      | 0.5  | 100        | 16 | 5.5  | 4.5 |          |
| M6   | 1    | 100 or 120 | 19 | 6    | 4.5 |          |
|      | 0.75 | 100 or 120 | 19 | 6    | 4.5 |          |
|      | 0.5  | 100 or 120 | 19 | 6    | 4.5 |          |
| M8   | 1.25 | 100 or 120 | 19 | 6.3  | 5   |          |
|      | 1    | 100 or 120 | 19 | 6.3  | 5   |          |
| M10  | 1.5  | 100 or 120 | 23 | 8    | 6.3 | ISO      |
|      | 1.25 | 100 or 120 | 23 | 8    | 6.3 |          |
|      | 1    | 100 or 120 | 23 | 8    | 6.3 |          |
| M12  | 1.75 | 120 or 150 | 28 | 9    | 7.1 |          |
|      | 1.5  | 120 or 150 | 28 | 9    | 7.1 |          |
|      | 1.25 | 120 or 150 | 28 | 9    | 7.1 |          |
|      | 1    | 120 or 150 | 28 | 9    | 7.1 |          |
| M14  | 2    | 150 or 200 | 29 | 11.2 | 9   |          |
|      | 1.5  | 150 or 200 | 29 | 11.2 | 9   |          |
|      | 1.25 | 150 or 200 | 29 | 11.2 | 9   |          |
|      | 1    | 150 or 200 | 29 | 11.2 | 9   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

一般用长柄型先端丝锥  
General application Long Shank  
Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TCM212L

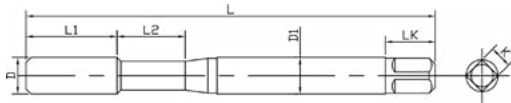
| D   | P   | L          | L1 | D1   | K    | Standard |
|-----|-----|------------|----|------|------|----------|
| M16 | 2   | 150 or 200 | 31 | 12.5 | 10   | ISO      |
|     | 1.5 | 150 or 200 | 31 | 12.5 | 10   |          |
|     | 1   | 150 or 200 | 31 | 12.5 | 10   |          |
| M18 | 2.5 | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 2   | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 1.5 | 150 or 200 | 36 | 14   | 11.2 |          |
| M20 | 1   | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 2.5 | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 2   | 150 or 200 | 36 | 14   | 11.2 |          |
| M22 | 1.5 | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 1   | 150 or 200 | 36 | 14   | 11.2 |          |
|     | 2.5 | 150 or 200 | 38 | 16   | 12.5 |          |
| M24 | 2   | 150 or 200 | 38 | 16   | 12.5 |          |
|     | 1.5 | 150 or 200 | 38 | 16   | 12.5 |          |
| M27 | 3   | 200        | 45 | 18   | 14   |          |
|     | 2   | 200        | 45 | 18   | 14   |          |
|     | 1.5 | 200        | 45 | 18   | 14   |          |
| M30 | 3   | 200        | 45 | 20   | 16   |          |
|     | 2   | 200        | 45 | 20   | 16   |          |
|     | 1.5 | 200        | 45 | 20   | 16   |          |
|     | 3.5 | 200        | 48 | 20   | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |



一般用 DIN371-DIN376 先端丝锥  
General application DIN371-DIN376  
Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

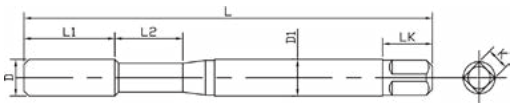
TOOL IDENT:TDM212

| D    | P    | L    | L1 | D1  | K    | Standard |
|------|------|------|----|-----|------|----------|
| M2   | 0.4  | 46.5 | 7  | 2.8 | 2.1  | DIN371   |
| M2.5 | 0.45 | 51.5 | 9  | 2.8 | 2.1  |          |
| M3   | 0.5  | 58   | 11 | 3.5 | 2.7  |          |
| M4   | 0.7  | 66   | 13 | 4.5 | 3.4  |          |
| M5   | 0.8  | 74   | 15 | 6   | 4.9  |          |
| M6   | 1    | 84   | 17 | 6   | 4.9  |          |
| M8   | 1.25 | 90   | 20 | 8   | 6.2  |          |
| M10  | 1.5  | 100  | 22 | 10  | 8    |          |
| M12  | 1.75 | 110  | 24 | 9   | 7    |          |
| M14  | 2    | 110  | 26 | 11  | 9    |          |
| M16  | 2    | 110  | 27 | 12  | 9    | DIN376   |
| M18  | 2.5  | 125  | 30 | 14  | 11   |          |
| M20  | 2.5  | 140  | 32 | 16  | 12   |          |
| M22  | 2.5  | 140  | 32 | 18  | 14.5 |          |
| M24  | 3    | 160  | 34 | 18  | 14.5 |          |
| M27  | 3    | 160  | 36 | 20  | 16   |          |
| M30  | 3.5  | 180  | 40 | 22  | 18   |          |
| M33  | 3.5  | 180  | 40 | 25  | 20   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

一般用 DIN374 先端丝锥  
General application DIN374  
Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

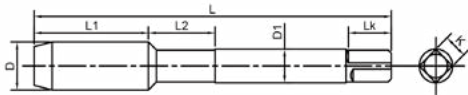
TOOL IDENT:TDM212

| D   | P    | L   | L1 | D1  | K    | Standard |
|-----|------|-----|----|-----|------|----------|
| M4  | 0.5  | 66  | 10 | 2.8 | 2.1  | DIN374   |
| M4  | 0.35 | 66  | 10 | 2.8 | 2.1  |          |
|     | 0.5  | 74  | 11 | 3.5 | 2.7  |          |
| M6  | 0.75 | 84  | 13 | 4.5 | 3.4  |          |
|     | 0.5  | 84  | 13 | 4.5 | 3.4  |          |
| M8  | 1    | 90  | 20 | 6   | 4.9  |          |
|     | 0.75 | 90  | 20 | 6   | 4.9  |          |
| M10 | 1.25 | 100 | 22 | 7   | 5.5  |          |
|     | 1    | 100 | 22 | 7   | 5.5  |          |
|     | 0.75 | 100 | 22 | 7   | 5.5  |          |
| M12 | 1.5  | 100 | 22 | 9   | 7    |          |
|     | 1.25 | 100 | 22 | 9   | 7    |          |
|     | 1    | 100 | 22 | 9   | 7    |          |
| M14 | 1.5  | 100 | 22 | 11  | 9    |          |
|     | 1.25 | 100 | 22 | 11  | 9    |          |
|     | 1    | 100 | 22 | 11  | 9    |          |
| M16 | 1.5  | 100 | 22 | 12  | 9    |          |
|     | 1    | 100 | 22 | 12  | 9    |          |
| M18 | 2    | 125 | 25 | 14  | 11   |          |
|     | 1.5  | 125 | 25 | 14  | 11   |          |
|     | 1    | 125 | 25 | 14  | 11   |          |
| M20 | 2    | 140 | 25 | 16  | 12   |          |
|     | 1.5  | 140 | 25 | 16  | 12   |          |
|     | 1    | 140 | 25 | 16  | 12   |          |
| M22 | 2    | 140 | 27 | 18  | 14.5 |          |
|     | 1.5  | 140 | 27 | 18  | 14.5 |          |
|     | 1    | 140 | 27 | 18  | 14.5 |          |
| M24 | 2    | 140 | 27 | 18  | 14.5 |          |
|     | 1.5  | 140 | 27 | 18  | 14.5 |          |
|     | 1    | 140 | 27 | 18  | 14.5 |          |
| M27 | 2    | 140 | 28 | 20  | 16   |          |
|     | 1.5  | 140 | 28 | 20  | 16   |          |
| M30 | 2    | 150 | 28 | 22  | 18   |          |
|     | 1.5  | 150 | 28 | 22  | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

钢丝螺套用先端丝锥  
 Helicoil Screw Thread Taps  
 Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE**    表面处理 **BRT** **TIN** **TICN**    切削锥长 **5P**    公差 **6H**    切削方向 **R**  
 Material    Surface treatment    Cutting angle    Tolerance    Cutting direction

丝锥特性 / Taps spec

- 通孔 Forblind holes    ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action    ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

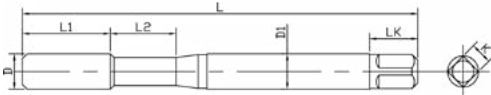
TOOL IDENT:TCS212

| D     | P    | L   | L1 | D1   | K    | Standard |
|-------|------|-----|----|------|------|----------|
| ST2   | 0.4  | 50  | 9  | 3    | 2.5  | JIS      |
| ST2.5 | 0.45 | 50  | 10 | 4    | 3.2  |          |
| ST3   | 0.5  | 57  | 13 | 5    | 4    |          |
| ST4   | 0.7  | 64  | 16 | 5.5  | 4.5  |          |
| ST5   | 0.8  | 67  | 19 | 6    | 4.5  |          |
| ST6   | 1    | 70  | 19 | 6.3  | 5    | ISO      |
| ST7   | 1    | 70  | 19 | 6.3  | 5    |          |
| ST8   | 1.25 | 80  | 23 | 8    | 6.3  |          |
|       | 1    | 80  | 23 | 8    | 6.3  |          |
| ST10  | 1.5  | 89  | 28 | 9    | 7.1  |          |
|       | 1.25 | 89  | 28 | 9    | 7.1  |          |
|       | 1    | 89  | 28 | 9    | 7.1  |          |
| ST12  | 1.75 | 90  | 29 | 11.2 | 9    |          |
|       | 1.5  | 90  | 29 | 11.2 | 9    |          |
| ST14  | 2    | 102 | 31 | 12.5 | 10   |          |
|       | 1.5  | 102 | 31 | 12.5 | 10   |          |
| ST16  | 2    | 112 | 36 | 14   | 11.2 |          |
|       | 1.5  | 112 | 36 | 14   | 11.2 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|------------------|-----------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC               | FC              | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          |                                              |                                |                              |                       |                           |                           |                   |                  |                 |                                  | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

钢丝螺套用先端丝锥  
 Helicoil Screw Thread Taps  
 Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE**    表面处理 **BRT** **TIN** **TICN**    切削锥长 **5P**    公差 **6H**    切削方向 **R**  
 Material    Surface treatment    Cutting angle    Tolerance    Cutting direction

丝锥特性 / Taps spec

- 通孔 Forblind holes    ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action    ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TCS212

| D    | P   | L   | L1 | D1 | K    | Standard |
|------|-----|-----|----|----|------|----------|
| ST18 | 2.5 | 118 | 38 | 16 | 12.5 | ISO      |
|      | 1.5 | 112 | 36 | 14 | 11.2 |          |
| ST20 | 2.5 | 130 | 45 | 18 | 14   |          |
|      | 2   | 118 | 38 | 16 | 12.5 |          |
| ST22 | 1.5 | 118 | 38 | 16 | 12.5 |          |
|      | 2.5 | 135 | 45 | 20 | 16   |          |
|      | 2   | 130 | 45 | 18 | 14   |          |
| ST24 | 1.5 | 130 | 45 | 18 | 14   |          |
|      | 3   | 138 | 48 | 20 | 16   |          |
|      | 2   | 135 | 45 | 20 | 16   |          |
| ST27 | 1.5 | 135 | 45 | 20 | 16   |          |
|      | 3   | 138 | 48 | 20 | 16   |          |
|      | 2   | 138 | 48 | 20 | 16   |          |
| ST27 | 1.5 | 138 | 48 | 20 | 16   |          |

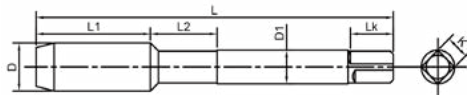
| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|------------------|-----------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC               | FC              | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          |                                              |                                |                              |                       |                           |                           |                   |                  |                 |                                  | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

# 一般用 UNC/UNF 先端丝锥

General application UNC/UNF

Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

## 丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

## TOOL IDENT:TCU212

| D       | L  | L1 | D1  | K   | Standard |
|---------|----|----|-----|-----|----------|
| 2-56    | 50 | 12 | 3.0 | 2.5 | JIS      |
| 2-64    | 50 | 12 | 3.0 | 2.5 |          |
| 3-48    | 50 | 9  | 3.0 | 2.5 |          |
| 3-56    | 50 | 9  | 3.0 | 2.5 |          |
| 4-40    | 50 | 10 | 4.0 | 3.2 |          |
| 4-48    | 50 | 10 | 4.0 | 3.2 |          |
| 5-40    | 50 | 10 | 4.0 | 3.2 |          |
| 5-44    | 50 | 10 | 4.0 | 3.2 |          |
| 6-32    | 50 | 10 | 5.0 | 4   |          |
| 6-40    | 50 | 10 | 5.0 | 4   |          |
| 8-32    | 57 | 13 | 5.0 | 4   |          |
| 8-36    | 57 | 13 | 5.0 | 4   |          |
| 10-24   | 64 | 16 | 5.5 | 4.5 |          |
| 10-32   | 64 | 16 | 5.5 | 4.5 |          |
| 12-24   | 67 | 19 | 6.0 | 4.5 |          |
| 12-28   | 67 | 19 | 6.0 | 4.5 |          |
| 12-32   | 67 | 15 | 6.0 | 4.5 |          |
| 1/4-20  | 67 | 19 | 6.3 | 5   | ISO      |
| 1/4-28  | 67 | 19 | 6.3 | 5   |          |
| 1/4-32  | 67 | 19 | 6.3 | 5   |          |
| 5/16-18 | 70 | 19 | 6.3 | 5   |          |
| 5/16-24 | 70 | 19 | 6.3 | 5   |          |
| 5/16-32 | 70 | 19 | 6.3 | 5   |          |

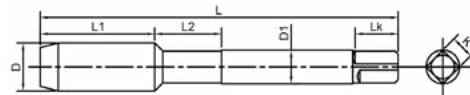
| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

# 一般用 UNC/UNF 先端丝锥

General application

Spiral Pointed Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

## 丝锥特性 / Taps spec

- 通孔 Forblind holes ■ 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action ■ 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

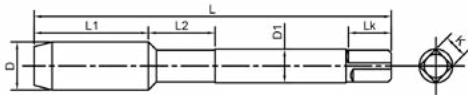
## TOOL IDENT:TCU212

| D        | L   | L1 | D1   | K    | Standard |
|----------|-----|----|------|------|----------|
| 3/8-16   | 80  | 23 | 8.0  | 6.3  | ISO      |
| 3/8-24   | 80  | 23 | 8.0  | 6.3  |          |
| 3/8-32   | 80  | 23 | 8.0  | 6.3  |          |
| 7/16-14  | 89  | 28 | 9.0  | 7.1  |          |
| 7/16-20  | 89  | 28 | 9.0  | 7.1  |          |
| 7/16-28  | 89  | 28 | 9.0  | 7.1  |          |
| 1/2-13   | 89  | 28 | 9.0  | 7.1  |          |
| 1/2-20   | 89  | 28 | 9.0  | 7.1  |          |
| 1/2-28   | 89  | 28 | 9.0  | 7.1  |          |
| 9/16-12  | 95  | 29 | 11.2 | 9    |          |
| 9/16-18  | 95  | 30 | 11.2 | 9    |          |
| 9/16-24  | 95  | 31 | 11.2 | 9    |          |
| 5/8-11   | 102 | 31 | 12.5 | 10   |          |
| 5/8-18   | 102 | 31 | 12.5 | 10   |          |
| 5/8-24   | 102 | 31 | 12.5 | 10   |          |
| 3/4-10   | 112 | 36 | 14.0 | 11.2 |          |
| 3/4-16   | 112 | 36 | 14.0 | 11.2 |          |
| 3/4-20   | 112 | 36 | 14.0 | 11.2 |          |
| 7/8-9    | 118 | 38 | 16.0 | 12.5 |          |
| 7/8-14   | 118 | 38 | 16.0 | 12.5 |          |
| 1-8      | 135 | 45 | 20.0 | 16   |          |
| 1-12     | 135 | 45 | 20.0 | 16   |          |
| 1 1/8-7  | 138 | 48 | 20.0 | 16   |          |
| 1 1/8-12 | 138 | 48 | 20.0 | 16   |          |
| 1 1/4-7  | 151 | 51 | 22.4 | 18   |          |
| 1 1/4-12 | 151 | 51 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            | ○                               | ○                                      | ○                                       | ○                                  |

有色金属用挤压丝锥  
For Non-Ferrous Metals  
Forming Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2-4.5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

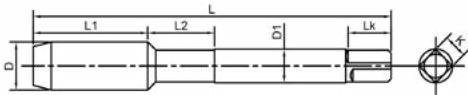
TOOL IDENT:TCM312

| D    | P    | L  | L1   | D1   | K   | Standard |
|------|------|----|------|------|-----|----------|
| M2   | 0.4  | 50 | 12.5 | 3    | 2.5 | JIS      |
| M2.3 | 0.4  | 50 | 12.5 | 3    | 2.5 |          |
| M2.5 | 0.45 | 50 | 14.5 | 3    | 2.5 |          |
| M2.6 | 0.45 | 50 | 14.5 | 3    | 2.5 |          |
| M3   | 0.5  | 50 | 10   | 4    | 3.2 |          |
| M3.5 | 0.6  | 50 | 10   | 4    | 3.2 |          |
| M4   | 0.7  | 57 | 13   | 5    | 4   |          |
|      | 0.5  | 57 | 10   | 5    | 4   |          |
| M5   | 0.8  | 64 | 16   | 5.5  | 4.5 |          |
|      | 0.5  | 64 | 10   | 5.5  | 4.5 |          |
| M6   | 1    | 67 | 19   | 6    | 4.5 | ISO      |
|      | 0.75 | 67 | 15   | 6    | 4.5 |          |
|      | 0.5  | 67 | 10   | 6    | 4.5 |          |
| M8   | 1.25 | 70 | 19   | 6.3  | 5   |          |
|      | 1    | 70 | 19   | 6.3  | 5   |          |
| M10  | 1.5  | 80 | 19   | 8    | 6.3 |          |
|      | 1.25 | 80 | 19   | 8    | 6.3 |          |
|      | 1    | 80 | 19   | 8    | 6.3 |          |
| M12  | 1.75 | 89 | 19   | 9    | 7.1 |          |
|      | 1.5  | 89 | 19   | 9    | 7.1 |          |
|      | 1.25 | 89 | 19   | 9    | 7.1 |          |
|      | 1    | 89 | 19   | 9    | 7.1 |          |
| M14  | 2    | 95 | 20   | 11.2 | 9   |          |
|      | 1.5  | 95 | 20   | 11.2 | 9   |          |
|      | 1.25 | 95 | 20   | 11.2 | 9   |          |
|      | 1    | 95 | 20   | 11.2 | 9   |          |

| 加工材料<br>Work Material | 低碳素钢<br>软钢<br>Low Carbon Steel<br>Mild Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel  | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|----------------------------------------------|-----------------------------|---------------------------|--------------------|------------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
| 商品记号<br>Abbreviation  | C-0.25%                                      | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC<br>35-45 HRC | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
|                       | ○                                            | ○                           | ○                         | ○                  |                        | ◎                      |                   | ○                |                 |                           | ○           | ○           | ○                     |              | ○                        | ○                               |                                  | ○                           |

有色金属用挤压丝锥  
For Non-Ferrous Metals  
Forming Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2-4.5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

TOOL IDENT:TCM312

| D   | P   | L   | L1 | D1   | K    | Standard |
|-----|-----|-----|----|------|------|----------|
| M16 | 2   | 102 | 20 | 12.5 | 10   | ISO      |
|     | 1.5 | 102 | 20 | 12.5 | 10   |          |
|     | 1   | 102 | 20 | 12.5 | 10   |          |
| M18 | 2.5 | 112 | 23 | 14   | 11.2 |          |
|     | 2   | 112 | 23 | 14   | 11.2 |          |
|     | 1.5 | 112 | 23 | 14   | 11.2 |          |
|     | 1   | 112 | 23 | 14   | 11.2 |          |
| M20 | 2.5 | 112 | 23 | 14   | 11.2 |          |
|     | 2   | 112 | 23 | 14   | 11.2 |          |
|     | 1.5 | 112 | 23 | 14   | 11.2 |          |
|     | 1   | 112 | 23 | 14   | 11.2 |          |
| M22 | 2.5 | 118 | 25 | 16   | 12.5 |          |
|     | 2   | 118 | 25 | 16   | 12.5 |          |
|     | 1.5 | 118 | 25 | 16   | 12.5 |          |
|     | 1   | 118 | 25 | 16   | 12.5 |          |
| M24 | 3   | 130 | 25 | 18   | 14   |          |
|     | 2   | 130 | 25 | 18   | 14   |          |
|     | 1.5 | 130 | 25 | 18   | 14   |          |
|     | 1   | 130 | 25 | 18   | 14   |          |
| M27 | 3   | 135 | 28 | 20   | 16   |          |
|     | 2   | 135 | 28 | 20   | 16   |          |
|     | 1.5 | 135 | 28 | 20   | 16   |          |
|     |     |     |    |      |      |          |
| M30 | 3.5 | 138 | 31 | 20   | 16   |          |
|     | 3   | 138 | 31 | 20   | 16   |          |
|     | 2   | 138 | 31 | 20   | 16   |          |
|     |     |     |    |      |      |          |
|     | 1.5 | 138 | 31 | 20   | 16   |          |

| 加工材料<br>Work Material | 低碳素钢<br>软钢<br>Low Carbon Steel<br>Mild Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel  | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|----------------------------------------------|-----------------------------|---------------------------|--------------------|------------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
| 商品记号<br>Abbreviation  | C-0.25%                                      | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC<br>35-45 HRC | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
|                       | ○                                            | ○                           | ○                         | ○                  |                        | ◎                      |                   | ○                |                 |                           | ○           | ○           | ○                     |              | ○                        | ○                               |                                  | ○                           |

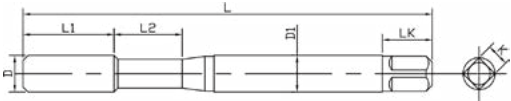
有色金属用 DIN371-DIN376 挤压丝锥

For Non-Ferrous Metals DIN371-DIN376

Forming Taps

攻牙深度

≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2-4.5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

TOOL IDENT:TDM312

| D    | P    | L    | L1 | D1  | K    | Standard |
|------|------|------|----|-----|------|----------|
| M2   | 0.4  | 46.5 | 7  | 2.8 | 2.1  | DIN371   |
| M2.5 | 0.45 | 51.5 | 9  | 2.8 | 2.1  |          |
| M3   | 0.5  | 58   | 11 | 3.5 | 2.7  |          |
| M4   | 0.7  | 66   | 13 | 4.5 | 3.4  |          |
| M5   | 0.8  | 74   | 15 | 6   | 4.9  |          |
| M6   | 1    | 84   | 17 | 6   | 4.9  |          |
| M8   | 1.25 | 90   | 20 | 8   | 6.2  |          |
| M10  | 1.5  | 100  | 16 | 10  | 8    |          |
| M12  | 1.75 | 110  | 18 | 9   | 7    |          |
| M14  | 2    | 110  | 20 | 11  | 9    |          |
| M16  | 2    | 110  | 22 | 12  | 9    | DIN376   |
| M18  | 2.5  | 125  | 25 | 14  | 11   |          |
| M20  | 2.5  | 140  | 25 | 16  | 12   |          |
| M22  | 2.5  | 140  | 27 | 18  | 14.5 |          |
| M24  | 3    | 160  | 30 | 18  | 14.5 |          |
| M27  | 3    | 160  | 30 | 20  | 16   |          |
| M30  | 3.5  | 180  | 35 | 22  | 18   |          |
| M33  | 3.5  | 180  | 35 | 25  | 20   |          |

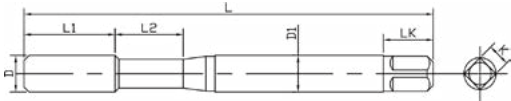
有色金属用 DIN374 挤压丝锥

For Non-Ferrous Metals DIN374

Forming Taps

攻牙深度

≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2-4.5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

TOOL IDENT:TDM312

| D   | P    | L   | L1 | D1  | K    | Standard |
|-----|------|-----|----|-----|------|----------|
| M4  | 0.5  | 66  | 10 | 2.8 | 2.1  | DIN374   |
|     | 0.35 | 66  | 10 | 2.8 | 2.1  |          |
| M5  | 0.5  | 74  | 11 | 3.5 | 2.7  |          |
| M6  | 0.75 | 84  | 13 | 4.5 | 3.4  |          |
|     | 0.5  | 84  | 13 | 4.5 | 3.4  |          |
| M8  | 1    | 90  | 20 | 6   | 4.9  |          |
|     | 0.75 | 90  | 20 | 6   | 4.9  |          |
| M10 | 1.25 | 100 | 22 | 7   | 5.5  |          |
|     | 1    | 100 | 22 | 7   | 5.5  |          |
|     | 0.75 | 100 | 22 | 7   | 5.5  |          |
| M12 | 1.5  | 100 | 22 | 9   | 7    |          |
|     | 1.25 | 100 | 22 | 9   | 7    |          |
| M14 | 1    | 100 | 22 | 9   | 7    |          |
|     | 1.5  | 100 | 22 | 11  | 9    |          |
|     | 1.25 | 100 | 22 | 11  | 9    |          |
| M16 | 1    | 100 | 22 | 11  | 9    |          |
|     | 1.5  | 100 | 22 | 12  | 9    |          |
| M18 | 1    | 100 | 22 | 12  | 9    |          |
|     | 2    | 125 | 25 | 14  | 11   |          |
|     | 1.5  | 125 | 25 | 14  | 11   |          |
| M20 | 1    | 125 | 25 | 14  | 11   |          |
|     | 2    | 140 | 25 | 16  | 12   |          |
|     | 1.5  | 140 | 25 | 16  | 12   |          |
| M22 | 1    | 140 | 25 | 16  | 12   |          |
|     | 2    | 140 | 27 | 18  | 14.5 |          |
|     | 1.5  | 140 | 27 | 18  | 14.5 |          |
|     | 1    | 140 | 27 | 18  | 14.5 |          |

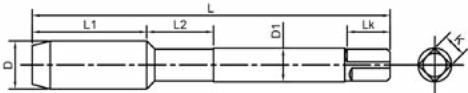
| 加工材料<br>Work Material | 低碳素钢<br>软钢                  | 中碳素钢                | 高碳素钢              | 合金钢         | 调质钢                 | 不锈钢             | 工具钢        | 铸钢         | 铸铁        | 球墨铸铁              | 铜      | 黄铜    | 黄铜铸件          | 青铜     | 变形铝合金           | 铝合金铸件                  | 镁合金铸件                   | 锌合金铸件              |
|-----------------------|-----------------------------|---------------------|-------------------|-------------|---------------------|-----------------|------------|------------|-----------|-------------------|--------|-------|---------------|--------|-----------------|------------------------|-------------------------|--------------------|
|                       | Low Carbon Steel Mild Steel | Medium Carbon Steel | High Carbon Steel | Alloy Steel | Hardened Steel      | Stainless Steel | Tool Steel | Cast Steel | Cast Iron | Ductile Cast Iron | Copper | Brass | Brass Casting | Bronze | Aluminum Rolled | Aluminum Alloy Casting | Magnesium Alloy Casting | Zinc Alloy Casting |
| 商品记号<br>Abbreviation  | C-0.25%                     | C0.25%-0.45%        | C0.45%~           | SCM         | 25-35 HRC 35-45 HRC | SUS             | SKD        | SC         | FC        | FCD               | Cu     | Bs    | BsC           | PB     | AL              | AL,ADC                 | MC                      | ZDC                |
|                       | ○                           | ○                   | ○                 | ○           |                     | ◎               |            | ○          |           |                   | ○      | ○     | ○             |        | ○               | ○                      |                         | ○                  |

| 加工材料<br>Work Material | 低碳素钢<br>软钢                  | 中碳素钢                | 高碳素钢              | 合金钢         | 调质钢                 | 不锈钢             | 工具钢        | 铸钢         | 铸铁        | 球墨铸铁              | 铜      | 黄铜    | 黄铜铸件          | 青铜     | 变形铝合金           | 铝合金铸件                  | 镁合金铸件                   | 锌合金铸件              |
|-----------------------|-----------------------------|---------------------|-------------------|-------------|---------------------|-----------------|------------|------------|-----------|-------------------|--------|-------|---------------|--------|-----------------|------------------------|-------------------------|--------------------|
|                       | Low Carbon Steel Mild Steel | Medium Carbon Steel | High Carbon Steel | Alloy Steel | Hardened Steel      | Stainless Steel | Tool Steel | Cast Steel | Cast Iron | Ductile Cast Iron | Copper | Brass | Brass Casting | Bronze | Aluminum Rolled | Aluminum Alloy Casting | Magnesium Alloy Casting | Zinc Alloy Casting |
| 商品记号<br>Abbreviation  | C-0.25%                     | C0.25%-0.45%        | C0.45%~           | SCM         | 25-35 HRC 35-45 HRC | SUS             | SKD        | SC         | FC        | FCD               | Cu     | Bs    | BsC           | PB     | AL              | AL,ADC                 | MC                      | ZDC                |
|                       | ○                           | ○                   | ○                 | ○           |                     | ◎               |            | ○          |           |                   | ○      | ○     | ○             |        | ○               | ○                      |                         | ○                  |



钢丝螺套 - 有色金属用挤压丝锥  
 Helicoil Screw Thread Taps-For Non-Ferrous Metals  
 Forming Taps

攻牙深度  
 ≤ 3D



刀具材料 **HSSE**    表面处理 **BRT** **TIN** **TICN**    切削锥长 **5P**    公差 **6H**    切削方向 **R**  
 Material    Surface treatment    Cutting angle    Tolerance    Cutting direction

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips    ■ 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

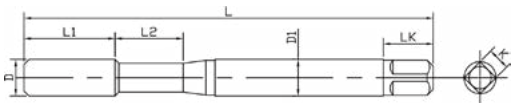
TOOL IDENT:TCS312

| D     | P    | L   | L1 | D1   | K    | Standard |
|-------|------|-----|----|------|------|----------|
| ST2   | 0.4  | 50  | 9  | 3    | 2.5  | JIS      |
| ST2.5 | 0.45 | 50  | 10 | 4    | 3.2  |          |
| ST3   | 0.5  | 57  | 13 | 5    | 4    |          |
| ST4   | 0.7  | 64  | 16 | 5.5  | 4.5  |          |
| ST5   | 0.8  | 67  | 19 | 6    | 4.5  |          |
| ST6   | 1    | 70  | 19 | 6.3  | 5    | ISO      |
| ST7   | 1    | 70  | 19 | 6.3  | 5    |          |
| ST8   | 1.25 | 80  | 23 | 8    | 6.3  |          |
|       | 1    | 80  | 23 | 8    | 6.3  |          |
| ST10  | 1.5  | 89  | 28 | 9    | 7.1  |          |
|       | 1.25 | 89  | 28 | 9    | 7.1  |          |
|       | 1    | 89  | 28 | 9    | 7.1  |          |
| ST12  | 1.75 | 95  | 29 | 11.2 | 9    |          |
|       | 1.5  | 95  | 29 | 11.2 | 9    |          |
| ST14  | 2    | 102 | 31 | 12.5 | 10   |          |
|       | 1.5  | 102 | 31 | 12.5 | 10   |          |
| ST16  | 2    | 112 | 36 | 14   | 11.2 |          |
|       | 1.5  | 112 | 36 | 14   | 11.2 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  | ○           | ○           | ○                            |              | ◎                               | ◎                                      | ◎                                       |                                    |

钢丝螺套 - 有色金属用挤压丝锥  
 Helicoil Screw Thread Taps-For Non-Ferrous Metals  
 Forming Taps

攻牙深度  
 ≤ 3D



刀具材料 **HSSE**    表面处理 **BRT** **TIN** **TICN**    切削锥长 **5P**    公差 **6H**    切削方向 **R**  
 Material    Surface treatment    Cutting angle    Tolerance    Cutting direction

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips    ■ 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

TOOL IDENT:TCS312

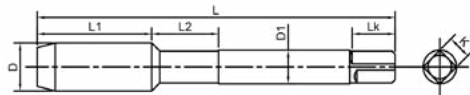
| D    | P   | L   | L1 | D1 | K    | Standard |
|------|-----|-----|----|----|------|----------|
| ST18 | 2.5 | 118 | 38 | 16 | 12.5 | ISO      |
|      | 1.5 | 112 | 36 | 14 | 11.2 |          |
| ST20 | 2.5 | 130 | 45 | 18 | 14   |          |
|      | 2   | 118 | 38 | 16 | 12.5 |          |
| ST22 | 1.5 | 118 | 38 | 16 | 12.5 |          |
|      | 2.5 | 135 | 45 | 20 | 16   |          |
|      | 2   | 130 | 45 | 18 | 14   |          |
| ST24 | 1.5 | 130 | 45 | 18 | 14   |          |
|      | 3   | 138 | 48 | 20 | 16   |          |
|      | 2   | 135 | 45 | 20 | 16   |          |
| ST27 | 1.5 | 135 | 45 | 20 | 16   |          |
|      | 3   | 138 | 48 | 20 | 16   |          |
|      | 2   | 138 | 48 | 20 | 16   |          |
| ST27 | 1.5 | 138 | 48 | 20 | 16   |          |
|      | 1.5 | 138 | 48 | 20 | 16   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
| 商品记号<br>Abbreviation     | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
|                          |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  | ○           | ○           | ○                            |              | ◎                               | ◎                                      | ◎                                       |                                    |

## 有色金属用 UNC/UNF 挤压丝锥

For Non-Ferrous Metals UNC/UNF

Forming Taps

攻牙深度  
≤ 3D刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2-4.5P** 公差 **6H** 切削方向 **R**

## 丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unique flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

## TOOL IDENT:TCU312

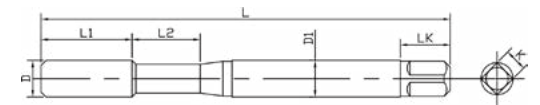
| D       | L  | L1   | D1  | K   | Standard |
|---------|----|------|-----|-----|----------|
| 2-56    | 50 | 12.5 | 3.0 | 2.5 | JIS      |
| 2-64    | 50 | 12.5 | 3.0 | 2.5 |          |
| 3-48    | 50 | 14.5 | 3.0 | 2.5 |          |
| 3-56    | 50 | 14.5 | 3.0 | 2.5 |          |
| 4-40    | 50 | 10   | 4.0 | 3.2 |          |
| 4-48    | 50 | 10   | 4.0 | 3.2 |          |
| 5-40    | 50 | 10   | 4.0 | 3.2 |          |
| 5-44    | 50 | 10   | 4.0 | 3.2 |          |
| 6-32    | 50 | 10   | 4.0 | 3.2 |          |
| 6-40    | 50 | 10   | 4.0 | 3.2 |          |
| 8-32    | 57 | 13   | 5.0 | 4   |          |
| 8-36    | 57 | 13   | 5.0 | 4   |          |
| 10-24   | 64 | 16   | 5.5 | 4.5 |          |
| 10-32   | 64 | 16   | 5.5 | 4.5 |          |
| 12-24   | 67 | 19   | 6.0 | 4.5 |          |
| 12-28   | 67 | 19   | 6.0 | 4.5 |          |
| 12-32   | 67 | 19   | 6.0 | 4.5 |          |
| 1/4-20  | 67 | 19   | 6.3 | 5   | ISO      |
| 1/4-28  | 67 | 19   | 6.3 | 5   |          |
| 1/4-32  | 67 | 19   | 6.3 | 5   |          |
| 5/16-18 | 70 | 19   | 6.3 | 5   |          |
| 5/16-24 | 70 | 19   | 6.3 | 5   |          |
| 5/16-32 | 70 | 19   | 6.3 | 5   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                        | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢            | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |     |
|--------------------------|-----------------------------------|------------------------|----------------------|----------------|----------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|-----|
|                          | Low Carbon<br>Steel<br>Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |     |
| 商品记号<br>Abbreviation     | C-0.25%                           | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC   | 35-45<br>HRC       | SUS        | SKD           | SC           | FC                   | FCD    | Cu    | Bs               | BsC    | PB                 | AL                        | AL,ADC                     | MC                    | ZDC |
|                          | ○                                 | ○                      | ○                    | ○              |                |                    | ◎          |               | ○            |                      |        | ○     | ○                | ○      |                    | ○                         | ○                          |                       | ○   |

## 有色金属用 UNC/UNF 挤压丝锥

For Non-Ferrous Metals UNC/UNF

Forming Taps

攻牙深度  
≤ 3D刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

## 丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unique flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

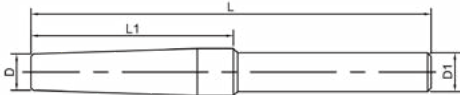
## TOOL IDENT:TCU312

| D        | L   | L1 | D1   | K    | Standard |
|----------|-----|----|------|------|----------|
| 3/8-16   | 80  | 19 | 8.0  | 6.3  | ISO      |
| 3/8-24   | 80  | 19 | 8.0  | 6.3  |          |
| 3/8-32   | 80  | 19 | 8.0  | 6.3  |          |
| 7/16-14  | 89  | 19 | 9.0  | 7.1  |          |
| 7/16-20  | 89  | 19 | 9.0  | 7.1  |          |
| 7/16-28  | 89  | 19 | 9.0  | 7.1  |          |
| 1/2-13   | 89  | 19 | 9.0  | 7.1  |          |
| 1/2-20   | 89  | 19 | 9.0  | 7.1  |          |
| 1/2-28   | 89  | 19 | 9.0  | 7.1  |          |
| 9/16-12  | 95  | 20 | 11.2 | 9    |          |
| 9/16-18  | 95  | 20 | 11.2 | 9    |          |
| 9/16-24  | 95  | 20 | 11.2 | 9    |          |
| 5/8-11   | 102 | 20 | 12.5 | 10   |          |
| 5/8-18   | 102 | 20 | 12.5 | 10   |          |
| 5/8-24   | 102 | 20 | 12.5 | 10   |          |
| 3/4-10   | 112 | 23 | 14.0 | 11.2 |          |
| 3/4-16   | 112 | 23 | 14.0 | 11.2 |          |
| 3/4-20   | 112 | 23 | 14.0 | 11.2 |          |
| 7/8-9    | 118 | 23 | 16.0 | 12.5 |          |
| 7/8-14   | 118 | 23 | 16.0 | 12.5 |          |
| 1-8      | 135 | 28 | 20.0 | 16   |          |
| 1-12     | 135 | 28 | 20.0 | 16   |          |
| 1 1/8-7  | 138 | 31 | 20.0 | 16   |          |
| 1 1/8-12 | 138 | 31 | 20.0 | 16   |          |
| 1 1/4-7  | 151 | 34 | 22.4 | 18   |          |
| 1 1/4-12 | 151 | 34 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢            | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |     |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|----------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|-----|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |     |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%~0.45%           | C0.45%~              | SCM            | 25-35<br>HRC   | 35-45<br>HRC       | SUS        | SKD           | SC           | FC                   | FCD    | Cu    | Bs               | BsC    | PB                 | AL                        | AL,ADC                     | MC                    | ZDC |
|                          | ○                              | ○                      | ○                    | ○              |                |                    | ◎          |               | ○            |                      |        | ○     | ○                | ○      |                    | ○                         | ○                          |                       | ○   |

# 碳钢用螺母丝锥 For Carbon Steel Nut Taps

攻牙深度  
≤ 2D



刀具材料 **HSSG** 表面处理 **TIN** **TICN** 标准 **JIS** 公差 **6H** 切削方向 **R**

## 丝锥特性 / Taps spec

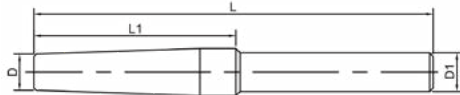
- 针对不锈钢加工 For stainless steel
- 主要用于螺母的螺纹加工，从螺母的加工性考虑，螺纹部分的长度，柄部需要加长以适应连续加工  
These taps are used for producing nuts. The length of thread and long shank are used to accumulate the nuts, thereby increasing efficiency.

### TOOL IDENT: TJM713

| D    | P    | L   | L1   | D1  | 刃数 | Standard |
|------|------|-----|------|-----|----|----------|
| M3   | 0.5  | 61  | 12.5 | 2.3 | 3  | JIS      |
| M3.5 | 0.6  | 61  | 15.5 | 2.3 | 3  |          |
| M4   | 0.7  | 62  | 17.5 | 3   | 3  |          |
|      | 0.5  | 62  | 12.5 | 3   | 3  |          |
| M5   | 0.8  | 67  | 20   | 3.8 | 3  |          |
|      | 0.5  | 67  | 12.5 | 3.8 | 3  |          |
| M6   | 1    | 73  | 25   | 4.6 | 3  |          |
|      | 0.75 | 73  | 19   | 4.6 | 3  |          |
| M7   | 1    | 70  | 25   | 5.6 | 3  |          |
|      | 0.75 | 70  | 19   | 5.6 | 3  |          |
| M8   | 1.25 | 77  | 31.3 | 6   | 5  |          |
|      | 1    | 77  | 25   | 6   | 5  |          |
| M10  | 1.5  | 89  | 37.5 | 8   | 5  |          |
|      | 1.25 | 89  | 31.3 | 8   | 5  |          |
|      | 1    | 89  | 25   | 8   | 5  |          |
| M12  | 1.75 | 102 | 43.8 | 9.5 | 5  |          |
|      | 1.5  | 102 | 37.5 | 9.5 | 5  |          |
|      | 1.25 | 102 | 31.3 | 9.5 | 5  |          |

# 碳钢用螺母丝锥 For Carbon Steel Nut Taps

攻牙深度  
≤ 2D



刀具材料 **HSSG** 表面处理 **TIN** **TICN** 标准 **JIS** 公差 **6H** 切削方向 **R**

## 丝锥特性 / Taps spec

- 针对不锈钢加工 For stainless steel
- 主要用于螺母的螺纹加工，从螺母的加工性考虑，螺纹部分的长度，柄部需要加长以适应连续加工  
These taps are used for producing nuts. The length of thread and long shank are used to accumulate the nuts, thereby increasing efficiency.

### TOOL IDENT: TJM713

| D   | P    | L   | L1   | D1   | 刃数 | Standard |
|-----|------|-----|------|------|----|----------|
| M14 | 2    | 114 | 50   | 11.2 | 5  | JIS      |
|     | 1.5  | 114 | 37.5 | 11.2 | 5  |          |
|     | 1.25 | 114 | 31.3 | 11.2 | 5  |          |
| M16 | 2    | 127 | 50   | 13.1 | 5  |          |
|     | 1.5  | 127 | 37.5 | 13.1 | 5  |          |
| M18 | 2.5  | 133 | 62.5 | 14   | 5  |          |
|     | 2    | 133 | 50   | 14   | 5  |          |
| M20 | 2.5  | 133 | 62.5 | 16.5 | 5  |          |
|     | 2    | 133 | 50   | 16.5 | 5  |          |
|     | 1.5  | 133 | 37.5 | 16.5 | 5  |          |
| M22 | 2.5  | 146 | 62.5 | 17.5 | 5  |          |
|     | 2    | 146 | 50   | 17.5 | 5  |          |
| M24 | 3    | 165 | 75   | 18.5 | 5  |          |
|     | 2    | 165 | 50   | 18.5 | 5  |          |
|     | 1.5  | 165 | 37.5 | 18.5 | 5  |          |

| 加工材料<br>Work Material | 低碳素钢<br>软钢<br>Low Carbon Steel Mild Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|-------------------------------------------|-----------------------------|---------------------------|--------------------|-----------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
| 商品记号<br>Abbreviation  | C-0.25%                                   | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC 35-45 HRC   | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
|                       | ○                                         | ○                           | ○                         |                    |                       |                        |                   |                  |                 |                           |             |             |                       |              |                          |                                 |                                  |                             |

| 加工材料<br>Work Material | 低碳素钢<br>软钢<br>Low Carbon Steel Mild Steel | 中碳素钢<br>Medium Carbon Steel | 高碳素钢<br>High Carbon Steel | 合金钢<br>Alloy Steel | 调质钢<br>Hardened Steel | 不锈钢<br>Stainless Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast Steel | 铸铁<br>Cast Iron | 球墨铸铁<br>Ductile Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜铸件<br>Brass Casting | 青铜<br>Bronze | 变形铝合金<br>Aluminum Rolled | 铝合金铸件<br>Aluminum Alloy Casting | 镁合金铸件<br>Magnesium Alloy Casting | 锌合金铸件<br>Zinc Alloy Casting |
|-----------------------|-------------------------------------------|-----------------------------|---------------------------|--------------------|-----------------------|------------------------|-------------------|------------------|-----------------|---------------------------|-------------|-------------|-----------------------|--------------|--------------------------|---------------------------------|----------------------------------|-----------------------------|
| 商品记号<br>Abbreviation  | C-0.25%                                   | C0.25%-0.45%                | C0.45%~                   | SCM                | 25-35 HRC 35-45 HRC   | SUS                    | SKD               | SC               | FC              | FCD                       | Cu          | Bs          | BsC                   | PB           | AL                       | AL,ADC                          | MC                               | ZDC                         |
|                       | ○                                         | ○                           | ○                         |                    |                       |                        |                   |                  |                 |                           |             |             |                       |              |                          |                                 |                                  |                             |

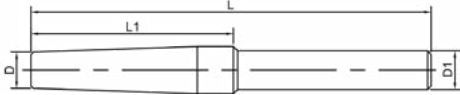
不锈钢加工用螺母丝锥

For Stainless Steels

Nut Taps

攻牙深度

≤ 2D



刀具材料

HSSG

表面处理

TIN

TICN

标准

JIS

公差

6H

切削方向

R

丝锥特性 / Taps spec

- 针对不锈钢加工 For stainless steel
- 主要用于螺母的螺纹加工，从螺母的加工性考虑，螺纹部分的长度，柄部需要加长以适应连续加工  
These taps are used for producing nuts. The length of thread and long shank areused to accumulate the nuts, thereby increasing efficiency.

TOOL IDENT:TJM723

| D    | P    | L   | L1   | D1  | 刃数 | Standard |
|------|------|-----|------|-----|----|----------|
| M3   | 0.5  | 61  | 12.5 | 2.3 | 3  | JIS      |
| M3.5 | 0.6  | 61  | 15.5 | 2.3 | 3  |          |
| M4   | 0.7  | 62  | 17.5 | 3   | 3  |          |
|      | 0.5  | 62  | 12.5 | 3   | 3  |          |
| M5   | 0.8  | 67  | 20   | 3.8 | 3  |          |
|      | 0.5  | 67  | 12.5 | 3.8 | 3  |          |
| M6   | 1    | 73  | 25   | 4.6 | 3  |          |
|      | 0.75 | 73  | 19   | 4.6 | 3  |          |
| M7   | 1    | 70  | 25   | 5.6 | 3  |          |
|      | 0.75 | 70  | 19   | 5.6 | 3  |          |
| M8   | 1.25 | 77  | 31.3 | 6   | 5  |          |
|      | 1    | 77  | 25   | 6   | 5  |          |
| M10  | 1.5  | 89  | 37.5 | 8   | 5  |          |
|      | 1.25 | 89  | 31.3 | 8   | 5  |          |
|      | 1    | 89  | 25   | 8   | 5  |          |
| M12  | 1.75 | 102 | 43.8 | 9.5 | 5  |          |
|      | 1.5  | 102 | 37.5 | 9.5 | 5  |          |
|      | 1.25 | 102 | 31.3 | 9.5 | 5  |          |

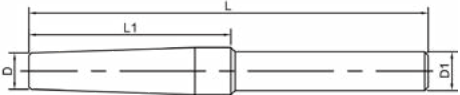
不锈钢加工用螺母丝锥

For Stainless Steels

Nut Taps

攻牙深度

≤ 2D



刀具材料

HSSG

表面处理

TIN

TICN

标准

JIS

公差

6H

切削方向

R

丝锥特性 / Taps spec

- 针对不锈钢加工 For stainless steel
- 主要用于螺母的螺纹加工，从螺母的加工性考虑，螺纹部分的长度，柄部需要加长以适应连续加工  
These taps are used for producing nuts. The length of thread and long shank areused to accumulate the nuts, thereby increasing efficiency.

TOOL IDENT:TJM723

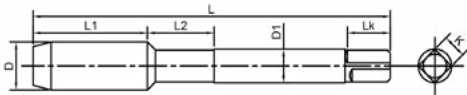
| D   | P    | L   | L1   | D1   | 刃数 | Standard |
|-----|------|-----|------|------|----|----------|
| M14 | 2    | 114 | 50   | 11.2 | 5  | JIS      |
|     | 1.5  | 114 | 37.5 | 11.2 | 5  |          |
|     | 1.25 | 114 | 31.3 | 11.2 | 5  |          |
| M16 | 2    | 127 | 50   | 13.1 | 5  |          |
|     | 1.5  | 127 | 37.5 | 13.1 | 5  |          |
| M18 | 2.5  | 133 | 62.5 | 14   | 5  |          |
|     | 2    | 133 | 50   | 14   | 5  |          |
| M20 | 2.5  | 133 | 62.5 | 16.5 | 5  |          |
|     | 2    | 133 | 50   | 16.5 | 5  |          |
|     | 1.5  | 133 | 37.5 | 16.5 | 5  |          |
| M22 | 2.5  | 146 | 62.5 | 17.5 | 5  |          |
|     | 2    | 146 | 50   | 17.5 | 5  |          |
| M24 | 3    | 165 | 75   | 18.5 | 5  |          |
|     | 2    | 165 | 50   | 18.5 | 5  |          |
|     | 1.5  | 165 | 37.5 | 18.5 | 5  |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                        | 中碳素钢                   | 高碳<br>素钢             | 合金钢            | 调质钢            | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |     |
|--------------------------|-----------------------------------|------------------------|----------------------|----------------|----------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|-----|
|                          | Low Carbon<br>Steel<br>Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |     |
| 商品记号<br>Abbreviation     | C-0.25%                           | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC   | 35-45<br>HRC       | SUS        | SKD           | SC           | FC                   | FCD    | Cu    | Bs               | BsC    | PB                 | AL                        | AL_ADC                     | MC                    | ZDC |
|                          |                                   |                        |                      |                |                |                    | ○          |               |              |                      |        |       |                  |        |                    |                           |                            |                       |     |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳<br>素钢             | 合金钢            | 调质钢            | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |     |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|----------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|-----|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |     |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%~0.45%           | C0.45%~              | SCM            | 25-35<br>HRC   | 35-45<br>HRC       | SUS        | SKD           | SC           | FC                   | FCD    | Cu    | Bs               | BsC    | PB                 | AL                        | AL_ADC                     | MC                    | ZDC |
|                          |                                |                        |                      |                |                |                    | ○          |               |              |                      |        |       |                  |        |                    |                           |                            |                       |     |

一般用管螺纹螺旋丝锥  
General application-Spiral Flute Taps  
Parallel Pipe Thread Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

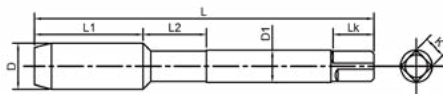
TOOL IDENT:TGG112

| D     | L   | L1 | D1   | K    | Standard |
|-------|-----|----|------|------|----------|
| G1/16 | 70  | 12 | 6.3  | 5    | ISO      |
| G1/8  | 80  | 13 | 8    | 6.3  |          |
| G1/4  | 95  | 18 | 11.2 | 9    |          |
| G3/8  | 112 | 21 | 14   | 11.2 |          |
| G1/2  | 118 | 25 | 16   | 12.5 |          |
| G5/8  | 130 | 25 | 18   | 14   |          |
| G3/4  | 135 | 28 | 20   | 16   |          |
| G7/8  | 138 | 31 | 20   | 16   |          |
| G1    | 151 | 34 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              |                              | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

一般用管螺纹先端丝锥  
General application-Spiral Pointed Taps  
Parallel Pipe Thread Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 通孔 Forblind holes
- 无屑堵塞状况 No chip blockage condition
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 切削性能锋利 Good cutting action
- 高速加工 High speed tapping
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TGG212

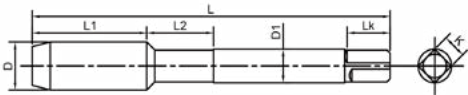
| D     | L   | L1 | D1   | K    | Standard |
|-------|-----|----|------|------|----------|
| G1/16 | 70  | 19 | 6.3  | 5    | ISO      |
| G1/8  | 80  | 23 | 8    | 6.3  |          |
| G1/4  | 95  | 29 | 11.2 | 9    |          |
| G3/8  | 112 | 36 | 14   | 11.2 |          |
| G1/2  | 118 | 38 | 16   | 12.5 |          |
| G5/8  | 130 | 45 | 18   | 14   |          |
| G3/4  | 135 | 45 | 20   | 16   |          |
| G7/8  | 138 | 48 | 20   | 16   |          |
| G1    | 151 | 51 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              |                              | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |



一般用管螺纹挤压丝锥  
General application-Fluteless Taps  
Parallel Pipe Thread Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2-4.5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

TOOL IDENT:TGG312

| D     | L   | L1 | D1   | K    | Standard |
|-------|-----|----|------|------|----------|
| G1/16 | 70  | 12 | 6.3  | 5    | ISO      |
| G1/8  | 80  | 13 | 8    | 6.3  |          |
| G1/4  | 95  | 18 | 11.2 | 9    |          |
| G3/8  | 112 | 23 | 14   | 11.2 |          |
| G1/2  | 118 | 25 | 16   | 12.5 |          |
| G5/8  | 130 | 25 | 18   | 14   |          |
| G3/4  | 135 | 28 | 20   | 16   |          |
| G7/8  | 138 | 31 | 20   | 16   |          |
| G1    | 151 | 34 | 22.4 | 18   |          |

一般用管螺纹直槽丝锥  
General application-Straight Fluted Taps  
Parallel Pipe Thread Taps

攻牙深度  
≤ 3D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2.5~5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 刃部强度大 Strong cutting edges
- 切削锥长度选择容易 Shallow and unigue flute form provides strong structure
- 切削呈粉末状的材料 Materials where chips come out in powder form
- 适用于通孔和盲孔 For both through & blind holes

TOOL IDENT:TGG412

| D     | L  | L1 | D1 | K  | Standard |
|-------|----|----|----|----|----------|
| G1/16 | 55 | 18 | 8  | 6  | JIS      |
| G1/8  | 55 | 19 | 8  | 6  |          |
| G1/4  | 62 | 28 | 11 | 9  |          |
| G3/8  | 65 | 28 | 14 | 11 |          |
| G1/2  | 80 | 35 | 18 | 14 |          |
| G5/8  | 82 | 35 | 19 | 15 |          |
| G3/4  | 85 | 35 | 23 | 17 |          |
| G7/8  | 90 | 40 | 24 | 19 |          |
| G1    | 95 | 45 | 26 | 21 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              | ○                            | ○                     |                           | ◎                         |                   | ○                   |                    |                                  | ○           | ○           | ○                            |              | ○                               | ○                                      |                                         | ○                                  |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     | ○                                            | ○                              | ○                            | ○                     |                           | ○                         |                   |                     |                    | ○                                | ○           | ○           | ○                            | ○            |                                 |                                        |                                         |                                    |

一般用管螺纹直槽丝锥  
General application-Straight Fluted Taps  
Parallel Pipe Thread Taps



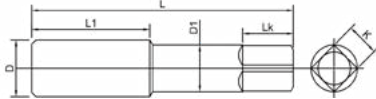
刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 标准 **JIS** 切削锥长 **2.5-5P** 公差 **6H** 切削方向 **R**

- 丝锥特性 / Taps spec
- 刃部强度大 Strong cutting edges
  - 切削锥长度选择容易 Shallow and unigue flute form provides strong structure
  - 切削呈粉末状的材料 Materials where chips come out in powder form
  - 适用于通孔和盲孔 For both through & blind holes

TOOL IDENT: **TJR412**

| D      | L  | L1 | D1 | K  | Standard |
|--------|----|----|----|----|----------|
| RC1/16 | 55 | 18 | 8  | 6  | JIS      |
| RC1/8  | 55 | 19 | 8  | 6  |          |
| RC1/4  | 62 | 28 | 11 | 9  |          |
| RC3/8  | 65 | 28 | 14 | 11 |          |
| RC1/2  | 80 | 35 | 18 | 14 |          |
| RC5/8  | 82 | 35 | 19 | 15 |          |
| RC3/4  | 85 | 35 | 23 | 17 |          |
| RC7/8  | 90 | 40 | 24 | 19 |          |
| RC1    | 95 | 45 | 26 | 21 |          |

一般用 NPT 直槽丝锥  
General application-Straight Fluted Taps  
Parallel Pipe Thread Taps



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 标准 **JIS** 切削锥长 **2.5-5P** 公差 **6H** 切削方向 **R**

- 丝锥特性 / Taps spec
- 刃部强度大 Strong cutting edges
  - 切削锥长度选择容易 Shallow and unigue flute form provides strong structure
  - 切削呈粉末状的材料 Materials where chips come out in powder form
  - 适用于通孔和盲孔 For both through & blind holes

TOOL IDENT: **TJN412**

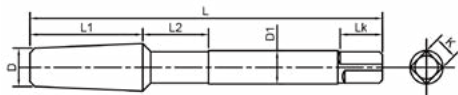
| D          | L  | L1 | D1 | K  | Standard |
|------------|----|----|----|----|----------|
| NPT1/16-27 | 55 | 18 | 8  | 6  | JIS      |
| NPT1/8-27  | 55 | 19 | 8  | 6  |          |
| NPT1/4-18  | 62 | 28 | 11 | 9  |          |
| NPT3/8-18  | 65 | 28 | 14 | 11 |          |
| NPT1/2-14  | 80 | 35 | 18 | 14 |          |
| NPT3/4-14  | 85 | 35 | 23 | 17 |          |
| NPT1-11.5  | 95 | 45 | 26 | 21 |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL_ADC                    | MC                         | ZDC                   |
|                          | ○                              | ○                      |                      | ○              |                           | ○                  |            |               |              | ○                    | ○      | ○     | ○                | ○      |                    |                           |                            |                       |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL_ADC                    | MC                         | ZDC                   |
|                          | ○                              | ○                      |                      | ○              |                           | ○                  |            |               |              | ○                    | ○      | ○     | ○                | ○      |                    |                           |                            |                       |

一般用 NPT 螺旋丝锥  
General application-Spiral Flute Taps  
Parallel Pipe Thread Taps

攻牙深度  
≤ 2D



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 切削锥长 **2P** 公差 **6H** 切削方向 **R** 切削槽角度 **NR38**

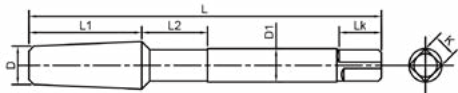
丝锥特性 / Taps spec

- 盲孔 Forblind holes
- 有良好的切削性 Good cutting action
- 可攻丝至盲孔的最下部 Chips flow out against tappingdirection (ejected from holes)
- 切屑呈连续卷曲状的材料 Materials where chips come outcontinuously in coil shape

TOOL IDENT:TGN112

| D          | L   | L1 | D1   | K    | Standard |
|------------|-----|----|------|------|----------|
| NPT1/16-27 | 80  | 23 | 8    | 6.3  | ISO      |
| NPT1/8-27  | 89  | 28 | 9    | 7.1  |          |
| NPT1/4-18  | 95  | 29 | 11.2 | 9    |          |
| NPT3/8-18  | 112 | 36 | 14   | 11.2 |          |
| NPT1/2-14  | 118 | 38 | 16   | 12.5 |          |
| NPT3/4-14  | 135 | 45 | 20   | 16   |          |
| NPT1-11.5  | 151 | 51 | 22.4 | 18   |          |

一般用 NPT 挤压丝锥  
General application-Fluteless Taps  
Parallel Pipe Thread Taps



刀具材料 **HSSE** 表面处理 **BRT** **TIN** **TICN** 标准 **JIS** 切削锥长 **2.5P** 公差 **6H** 切削方向 **R**

丝锥特性 / Taps spec

- 无屑排出 Taps do not produce chips
- 内螺纹精度稳定 Precise uniformity of tapped thread limit
- 抗折损强度大 Shallow and unigue flute form provides strong structure
- 通孔，盲孔兼用 Materials with Formability
- 主要针对延伸性良好的材料加工 Mainly aimed at processing materials with good extensibility

TOOL IDENT:TGN312

| D          | L   | L1 | D1   | K    | Standard |
|------------|-----|----|------|------|----------|
| NPT1/16-27 | 80  | 23 | 8    | 6.3  | ISO      |
| NPT1/8-27  | 89  | 28 | 9    | 7.1  |          |
| NPT1/4-18  | 95  | 29 | 11.2 | 9    |          |
| NPT3/8-18  | 112 | 36 | 14   | 11.2 |          |
| NPT1/2-14  | 118 | 38 | 16   | 12.5 |          |
| NPT3/4-14  | 135 | 45 | 20   | 16   |          |
| NPT1-11.5  | 151 | 51 | 22.4 | 18   |          |

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL,ADC                    | MC                         | ZDC                   |
|                          | ○                              | ○                      |                      | ○              |                           | ○                  |            |               |              | ○                    | ○      | ○     | ○                | ○      |                    |                           |                            |                       |

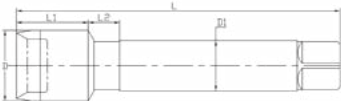
| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢                     | 中碳素钢                   | 高碳素钢                 | 合金钢            | 调质钢                       | 不锈钢                | 工具钢        | 铸钢            | 铸铁           | 球墨<br>铸铁             | 铜      | 黄铜    | 黄铜<br>铸件         | 青铜     | 变形铝<br>合金          | 铝合金<br>铸件                 | 镁合金<br>铸件                  | 锌合金<br>铸件             |
|--------------------------|--------------------------------|------------------------|----------------------|----------------|---------------------------|--------------------|------------|---------------|--------------|----------------------|--------|-------|------------------|--------|--------------------|---------------------------|----------------------------|-----------------------|
|                          | Low Carbon<br>Steel Mild Steel | Medium<br>Carbon Steel | High Carbon<br>Steel | Alloy<br>Steel | Hardened Steel            | Stainless<br>Steel | Tool Steel | Cast<br>Steel | Cast<br>Iron | Ductile<br>Cast Iron | Copper | Brass | Brass<br>Casting | Bronze | Aluminum<br>Rolled | Aluminum<br>Alloy Casting | Magnesium<br>Alloy Casting | Zinc Alloy<br>Casting |
| 商品记号<br>Abbreviation     | C-0.25%                        | C0.25%-0.45%           | C0.45%~              | SCM            | 25-35<br>HRC 35-45<br>HRC | SUS                | SKD        | SC            | FC           | FCD                  | Cu     | Bs    | BsC              | PB     | AL                 | AL,ADC                    | MC                         | ZDC                   |
|                          | ○                              | ○                      | ○                    | ○              |                           | ◎                  |            | ○             |              |                      | ○      | ○     | ○                |        | ○                  | ○                         |                            | ○                     |

内容屑丝锥

With Internal Chip Collector

攻牙深度

≤ 2D



刀具材料MaterialHSSE

表面处理Surface treatmentBRTTINTICN

切削锥长Cutting angle2.5P

公差Tolerance6HX

切削方向Cutting directionR

丝锥特性 / Taps spec

- 带中空内冷腔 Provided wiht ahollow face
- 适合加工盲孔和通孔螺纹 For blind hole and through hole threads

| D       | L   | L1 | L2 | D1 | D2 | K    | Standard |
|---------|-----|----|----|----|----|------|----------|
| M20*1.5 | 125 | 25 | 25 | 16 | 15 | 12   | DIN      |
| M22*1.5 | 125 | 25 | 25 | 18 | 17 | 14.5 |          |
| M24*1.5 | 140 | 27 | 27 | 18 | 17 | 14.5 |          |
| M24*2   | 140 | 27 | 27 | 18 | 17 | 14.5 |          |
| M27*1.5 | 140 | 28 | 28 | 20 | 19 | 16   |          |
| M27*2   | 140 | 28 | 28 | 20 | 19 | 16   |          |
| M30*1.5 | 150 | 28 | 28 | 22 | 21 | 18   |          |
| M33*1.5 | 160 | 30 | 30 | 25 | 24 | 20   |          |
| M33*2   | 160 | 30 | 30 | 25 | 24 | 20   |          |
| M36*1.5 | 170 | 30 | 30 | 28 | 27 | 22   |          |
| M36*2   | 170 | 30 | 30 | 28 | 27 | 22   |          |
| M36*3   | 200 | 42 | 42 | 28 | 27 | 22   |          |
| M38*1.5 | 170 | 30 | 30 | 28 | 27 | 22   |          |
| M39*3   | 200 | 42 | 42 | 32 | 31 | 24   |          |
| M40*2   | 170 | 30 | 30 | 32 | 31 | 24   |          |
| M42*1.5 | 170 | 30 | 30 | 32 | 31 | 24   |          |
| M42*2   | 170 | 30 | 30 | 32 | 31 | 24   |          |
| M42*3   | 200 | 45 | 45 | 32 | 31 | 24   |          |
| M45*3   | 200 | 45 | 45 | 36 | 35 | 29   |          |
| M48*1.5 | 190 | 32 | 32 | 36 | 35 | 29   |          |
| M48*2   | 190 | 32 | 32 | 36 | 35 | 29   |          |
| M48*3   | 225 | 50 | 50 | 36 | 35 | 29   |          |
| M52*3   | 225 | 50 | 50 | 40 | 39 | 32   |          |
| M56*3   | 225 | 50 | 50 | 40 | 39 | 32   |          |

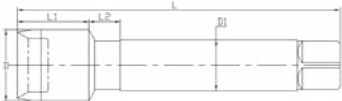
| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  |             |             |                              |              |                                 |                                        |                                         |                                    |

内容屑丝锥

With Internal Chip Collector

攻牙深度

≤ 2D



刀具材料MaterialHSSE

表面处理Surface treatmentBRTTINTICN

切削锥长Cutting angle2.5P

公差Tolerance6HX

切削方向Cutting directionR

丝锥特性 / Taps spec

- 带中空内冷腔 Provided wiht ahollow face
- 适合加工盲孔和通孔螺纹 For blind hole and through hole threads

| D     | L   | L1 | L2 | D1 | D2 | K  | Standard |
|-------|-----|----|----|----|----|----|----------|
| M56*4 | 250 | 60 | 60 | 40 | 39 | 32 | DIN      |
| M60*4 | 280 | 60 | 60 | 45 | 44 | 35 |          |
| M64*3 | 275 | 55 | 55 | 50 | 49 | 39 |          |
| M64*4 | 315 | 65 | 65 | 50 | 49 | 39 |          |
| M68*4 | 315 | 65 | 65 | 50 | 49 | 39 |          |
| M70*3 | 275 | 55 | 55 | 50 | 49 | 39 |          |
| M70*4 | 340 | 65 | 65 | 50 | 49 | 39 |          |
| M72*3 | 275 | 55 | 55 | 50 | 49 | 39 |          |
| M72*4 | 340 | 65 | 65 | 50 | 49 | 39 |          |
| M72*6 | 340 | 80 | 80 | 50 | 49 | 39 |          |
| M76*3 | 275 | 55 | 55 | 50 | 49 | 39 |          |
| M76*4 | 340 | 65 | 65 | 50 | 49 | 39 |          |
| M76*6 | 340 | 80 | 80 | 50 | 49 | 39 |          |
| M80*4 | 360 | 65 | 65 | 50 | 49 | 39 |          |
| M80*6 | 360 | 80 | 80 | 50 | 49 | 39 |          |

特殊的皇冠型前端切削部分使该类丝锥在切入材料时就具有非常好的精度。加工出来的螺纹表面光洁度非常好而且尺寸精确。在加工盲孔螺纹时，铁屑会被收集在丝锥中空部分中。该类丝锥应该使用润滑膏润滑。润滑必须同时涂抹在刀具上和螺纹底孔的内表面上！只有在立式加工且盲孔内注满润滑油的情况下，才可以使用润滑油。

The special crown-shaped front portion of this tool provides excellent accuracy even in the first stage of the cutting process.Extra clean and accurate threads can be cut in this way, The swarf is collected in the hollow face of the tap (internal chip collector) when cutting blind hole threads. For this tool, we recommend using paste lubrication wherever possible. Please make sure to cover not only the tool but also the walls of the hole with paste.Oil lubrication is possible only in vertical machining,if the blind hole can be completely filled with oil.

| 加工材料<br>Work<br>Material | 低碳素钢<br>软钢<br>Low Carbon<br>Steel Mild Steel | 中碳素钢<br>Medium<br>Carbon Steel | 高碳素钢<br>High Carbon<br>Steel | 合金钢<br>Alloy<br>Steel | 调质钢<br>Hardened Steel     | 不锈钢<br>Stainless<br>Steel | 工具钢<br>Tool Steel | 铸钢<br>Cast<br>Steel | 铸铁<br>Cast<br>Iron | 球墨<br>铸铁<br>Ductile<br>Cast Iron | 铜<br>Copper | 黄铜<br>Brass | 黄铜<br>铸件<br>Brass<br>Casting | 青铜<br>Bronze | 变形铝<br>合金<br>Aluminum<br>Rolled | 铝合金<br>铸件<br>Aluminum<br>Alloy Casting | 镁合金<br>铸件<br>Magnesium<br>Alloy Casting | 锌合金<br>铸件<br>Zinc Alloy<br>Casting |
|--------------------------|----------------------------------------------|--------------------------------|------------------------------|-----------------------|---------------------------|---------------------------|-------------------|---------------------|--------------------|----------------------------------|-------------|-------------|------------------------------|--------------|---------------------------------|----------------------------------------|-----------------------------------------|------------------------------------|
|                          | C-0.25%                                      | C0.25%-0.45%                   | C0.45%~                      | SCM                   | 25-35<br>HRC 35-45<br>HRC | SUS                       | SKD               | SC                  | FC                 | FCD                              | Cu          | Bs          | BsC                          | PB           | AL                              | AL,ADC                                 | MC                                      | ZDC                                |
| 商品记号<br>Abbreviation     |                                              |                                |                              |                       |                           |                           |                   |                     |                    |                                  |             |             |                              |              |                                 |                                        |                                         |                                    |

钴材系列磨制直柄钻  
Cobalt Material Series Grinding  
Straight Shank Drill



- 表面处理 :TIN 涂层 Surface treatment :TIN coating
- DIN338 标准 DIN338 standard

| D1  | L1 | L2 |
|-----|----|----|
| 1.0 | 34 | 12 |
| 1.1 | 36 | 14 |
| 1.2 | 38 | 16 |
| 1.3 | 38 | 16 |
| 1.4 | 40 | 18 |
| 1.5 | 40 | 18 |
| 1.6 | 43 | 20 |
| 1.7 | 43 | 20 |
| 1.8 | 46 | 22 |
| 1.9 | 46 | 22 |
| 2.0 | 49 | 24 |
| 2.1 | 49 | 24 |
| 2.2 | 53 | 27 |
| 2.3 | 53 | 27 |
| 2.4 | 57 | 30 |
| 2.5 | 57 | 30 |
| 2.6 | 57 | 30 |
| 2.7 | 61 | 33 |
| 2.8 | 61 | 33 |
| 2.9 | 61 | 33 |
| 3.0 | 61 | 33 |
| 3.1 | 65 | 36 |
| 3.2 | 65 | 36 |
| 3.3 | 65 | 36 |
| 3.4 | 70 | 39 |
| 3.5 | 70 | 39 |
| 3.6 | 70 | 39 |
| 3.7 | 70 | 39 |
| 3.8 | 75 | 43 |
| 3.9 | 75 | 43 |
| 4.0 | 75 | 43 |
| 4.1 | 75 | 43 |
| 4.2 | 75 | 43 |
| 4.3 | 80 | 47 |
| 4.4 | 80 | 47 |
| 4.5 | 80 | 47 |
| 4.6 | 80 | 47 |
| 4.7 | 80 | 47 |
| 4.8 | 86 | 52 |
| 4.9 | 86 | 52 |
| 5.0 | 86 | 52 |

| D1  | L1  | L2 |
|-----|-----|----|
| 5.1 | 86  | 52 |
| 5.2 | 86  | 52 |
| 5.3 | 86  | 52 |
| 5.4 | 93  | 57 |
| 5.5 | 93  | 57 |
| 5.6 | 93  | 57 |
| 5.7 | 93  | 57 |
| 5.8 | 93  | 57 |
| 5.9 | 93  | 57 |
| 6.0 | 93  | 57 |
| 6.1 | 101 | 57 |
| 6.2 | 101 | 63 |
| 6.3 | 101 | 63 |
| 6.4 | 101 | 63 |
| 6.5 | 101 | 63 |
| 6.6 | 101 | 63 |
| 6.7 | 101 | 63 |
| 6.8 | 109 | 63 |
| 6.9 | 109 | 69 |
| 7.0 | 109 | 69 |
| 7.1 | 109 | 69 |
| 7.2 | 109 | 69 |
| 7.3 | 109 | 69 |
| 7.4 | 109 | 69 |
| 7.5 | 109 | 69 |
| 7.6 | 117 | 69 |
| 7.7 | 117 | 75 |
| 7.8 | 117 | 75 |
| 7.9 | 117 | 75 |
| 8.0 | 117 | 75 |
| 8.1 | 117 | 75 |
| 8.2 | 117 | 75 |
| 8.3 | 117 | 75 |
| 8.4 | 117 | 75 |
| 8.5 | 117 | 75 |
| 8.6 | 125 | 81 |
| 8.7 | 125 | 81 |
| 8.8 | 125 | 81 |
| 8.9 | 125 | 81 |
| 9.0 | 125 | 81 |
| 9.1 | 125 | 81 |

| D1   | L1  | L2  |
|------|-----|-----|
| 9.2  | 125 | 81  |
| 9.3  | 125 | 81  |
| 9.4  | 125 | 81  |
| 9.5  | 125 | 81  |
| 9.6  | 133 | 87  |
| 9.7  | 133 | 87  |
| 9.8  | 133 | 87  |
| 9.9  | 133 | 87  |
| 10.0 | 133 | 87  |
| 10.1 | 133 | 87  |
| 10.2 | 133 | 87  |
| 10.3 | 133 | 87  |
| 10.4 | 133 | 87  |
| 10.5 | 133 | 87  |
| 10.6 | 142 | 94  |
| 10.7 | 142 | 94  |
| 10.8 | 142 | 94  |
| 10.9 | 142 | 94  |
| 11.0 | 142 | 94  |
| 11.1 | 142 | 94  |
| 11.2 | 142 | 94  |
| 11.3 | 142 | 94  |
| 11.4 | 142 | 94  |
| 11.5 | 142 | 94  |
| 11.6 | 142 | 94  |
| 11.7 | 142 | 94  |
| 11.8 | 142 | 94  |
| 11.9 | 151 | 101 |
| 11.0 | 151 | 101 |
| 12.1 | 151 | 101 |
| 12.2 | 151 | 101 |
| 12.3 | 151 | 101 |
| 12.4 | 151 | 101 |
| 12.5 | 151 | 101 |
| 12.6 | 151 | 101 |
| 12.7 | 151 | 101 |
| 12.8 | 151 | 101 |
| 12.9 | 151 | 101 |
| 13.0 | 151 | 101 |
| 13.5 | 160 | 108 |
| 14.0 | 160 | 108 |

公制螺旋（切削丝锥用）  
M-SFT,POT

单位: mm

| 螺纹尺寸     | 推荐底孔径 | 最小底孔径 | 最大底孔径 |      |      |
|----------|-------|-------|-------|------|------|
|          |       | 各精度通用 | 4H 用  | 5H 用 | 6H 用 |
| M 1X0.25 | 0.75  | 0.73  | 0.77  | 0.78 | 0.8  |
| 1X0.2    | 0.8   | 0.79  | 0.82  | 0.83 | 0.84 |
| 1.1X0.25 | 0.85  | 0.83  | 0.87  | 0.88 | 0.9  |
| 1.1X0.2  | 0.9   | 0.89  | 0.92  | 0.93 | 0.94 |
| 1.2X0.25 | 0.95  | 0.93  | 0.97  | 0.98 | 1    |
| 1.2X0.2  | 1     | 0.99  | 1.02  | 1.03 | 1.04 |
| 1.4X0.3  | 1.1   | 1.08  | 1.12  | 1.14 | 1.16 |
| 1.4X0.2  | 1.2   | 1.19  | 1.22  | 1.23 | 1.24 |
| 1.6X0.35 | 1.25  | 1.23  | 1.28  | 1.3  | 1.32 |
| 1.6X0.2  | 1.4   | 1.39  | 1.42  | 1.43 | 1.44 |
| 1.7X0.35 | 1.35  | --    | 1.38  | 1.4  | 1.42 |
| 1.7X0.3  | 1.4   | --    | 1.42  | 1.44 | 1.46 |
| 1.7X0.25 | 1.45  | --    | 1.47  | 1.48 | 1.5  |
| 1.7X0.2  | 1.5   | --    | 1.52  | 1.53 | 1.54 |
| 1.8X0.35 | 1.45  | 1.43  | 1.48  | 1.5  | 1.52 |
| 1.8X0.2  | 1.6   | 1.59  | 1.62  | 1.63 | 1.64 |
| 2X0.4    | 1.6   | 1.57  | 1.63  | 1.65 | 1.67 |
| 2X0.25   | 1.75  | 1.73  | 1.77  | 1.78 | 1.8  |
| 2.2X0.45 | 1.75  | 1.72  | 1.79  | 1.81 | 1.83 |
| 2.2X0.25 | 1.95  | 1.93  | 1.97  | 1.98 | 2    |
| 2.3X0.4  | 1.9   | --    | 1.93  | 1.95 | 1.97 |
| 2.3X0.35 | 1.95  | --    | 1.98  | 2    | 2.02 |
| 2.3X0.25 | 2.05  | --    | 2.07  | 2.08 | 2.1  |
| 2.5X0.45 | 2.05  | 2.02  | 2.09  | 2.11 | 2.13 |
| 2.5X0.35 | 2.15  | 2.13  | 2.18  | 2.2  | 2.22 |
| 2.6X0.45 | 2.15  | --    | 2.19  | 2.22 | 2.23 |
| 2.6X0.35 | 2.25  | --    | 2.28  | 2.3  | 2.32 |
| 3X0.6    | 2.4   | 2.35  | 2.45  | 2.47 | 2.51 |
| 3X0.5    | 2.5   | 2.46  | 2.54  | 2.57 | 2.59 |
| 3X0.35   | 2.65  | 2.63  | 2.68  | 2.7  | 2.72 |
| 3.5X0.6  | 2.9   | 2.85  | 2.95  | 2.97 | 3.01 |
| 3.5X0.5  | 3     | 2.96  | 3.04  | 3.07 | 3.09 |
| 3.5X0.35 | 3.15  | 3.13  | 3.18  | 3.2  | 3.22 |
| 4X0.75   | 3.25  | 3.19  | 3.3   | 3.33 | 3.37 |
| 4X0.7    | 3.3   | 3.25  | 3.35  | 3.38 | 3.42 |
| 4X0.5    | 3.5   | 3.46  | 3.54  | 3.57 | 3.59 |
| 4.5X0.75 | 3.75  | 3.69  | 3.8   | 3.83 | 3.87 |
| 4.5X0.5  | 4     | 3.96  | 4.04  | 4.07 | 4.09 |
| 5X0.9    | 4.1   | --    | 4.15  | 4.19 | 4.23 |
| 5X0.8    | 4.2   | 4.14  | 4.25  | 4.29 | 4.33 |
| 5X0.75   | 4.25  | 4.19  | 4.3   | 4.33 | 4.37 |
| 5X0.5    | 4.5   | 4.46  | 4.54  | 4.57 | 4.59 |
| 5.5X0.9  | 4.6   | --    | 4.65  | 4.69 | 4.73 |
| 5.5X0.75 | 4.75  | --    | 4.8   | 4.83 | 4.87 |
| 5.5X0.5  | 5     | 4.96  | 5.04  | 5.07 | 5.09 |
| 6X1      | 5     | 4.92  | 5.06  | 5.1  | 5.15 |
| 6X0.75   | 5.25  | 5.19  | 5.3   | 5.33 | 5.37 |
| 6X0.5    | 5.5   | --    | 5.54  | 5.57 | 5.59 |
| 7X1      | 6     | 5.92  | 6.06  | 6.1  | 6.15 |
| 7X0.75   | 6.25  | 6.19  | 6.3   | 6.33 | 6.37 |
| 7X0.5    | 6.5   | --    | 6.54  | 6.57 | 6.59 |
| 8X1.25   | 6.75  | 6.65  | 6.81  | 6.85 | 6.91 |



公制螺旋（切削丝锥用）  
M-SFT,POT

单位：mm

| 螺纹尺寸    | 推荐底孔径 | 最小底孔径 | 最大底孔径 |       |       |
|---------|-------|-------|-------|-------|-------|
|         |       | 各精度通用 | 4H 用  | 5H 用  | 6H 用  |
| 8X1     | 7     | 6.92  | 7.06  | 7.1   | 7.15  |
| 8X0.75  | 7.25  | 7.19  | 7.3   | 7.33  | 7.37  |
| 8X0.5   | 7.5   | --    | 7.54  | 7.57  | 7.59  |
| 9X1.25  | 7.75  | 7.65  | 7.81  | 7.85  | 7.91  |
| 9X1     | 8     | 7.92  | 8.06  | 8.1   | 8.15  |
| 9X0.75  | 8.25  | 8.19  | 8.3   | 8.33  | 8.37  |
| 9X0.5   | 8.5   | --    | 8.54  | 8.57  | 8.59  |
| 10X1.5  | 8.5   | 8.38  | 8.52  | 8.61  | 8.67  |
| 10X1.25 | 8.75  | 8.65  | 8.81  | 8.85  | 8.91  |
| 10X1    | 9     | 8.92  | 9.06  | 9.1   | 9.15  |
| 10X0.75 | 9.25  | 9.19  | 9.3   | 9.33  | 9.37  |
| 10X0.5  | 9.5   | --    | 9.54  | 9.57  | 9.59  |
| 11X1.5  | 9.5   | 9.38  | 9.52  | 9.61  | 9.67  |
| 11X1.25 | 9.75  | 9.65  | 9.81  | 9.85  | 9.91  |
| 11X1    | 10    | 9.92  | 10.06 | 10.1  | 10.15 |
| 11X0.75 | 10.25 | 10.19 | 10.3  | 10.33 | 10.37 |
| 11X0.5  | 10.5  | --    | 10.54 | 10.57 | 10.59 |
| 12X1.75 | 10.25 | 10.11 | 10.31 | 10.37 | 10.44 |
| 12X1.5  | 10.5  | 10.38 | 10.56 | 10.61 | 10.67 |
| 12X1.25 | 10.75 | 10.65 | 10.81 | 10.85 | 10.91 |
| 12X1    | 11    | 10.92 | 11.06 | 11.1  | 11.15 |
| 12X0.75 | 11.25 | --    | 11.3  | 11.33 | 11.37 |
| 12X0.5  | 11.5  | --    | 11.54 | 11.57 | 11.59 |
| 13X1.75 | 11.25 | --    | 11.31 | 11.37 | 11.44 |
| 13X1.5  | 11.5  | --    | 11.56 | 11.61 | 11.67 |
| 13X1.25 | 11.75 | --    | 11.81 | 11.85 | 11.91 |
| 13X1    | 12    | --    | 12.06 | 12.1  | 12.15 |
| 13X0.75 | 12.3  | --    | 12.3  | 12.33 | 12.37 |
| 13X0.5  | 12.5  | --    | 12.54 | 12.57 | 12.59 |
| 14X2    | 12    | 11.84 | 12.07 | 12.13 | 12.21 |
| 14X1.5  | 12.5  | 12.38 | 12.56 | 12.61 | 12.67 |
| 14X1.25 | 12.75 | 12.65 | --    | --    | 12.91 |
| 14X1    | 13    | 12.92 | 13.06 | 13.1  | 13.15 |
| 14X0.75 | 13.3  | --    | 13.3  | 13.33 | 13.37 |
| 14X0.5  | 13.5  | --    | 13.54 | 13.57 | 13.59 |
| 15X2    | 13    | --    | 13.07 | 13.13 | 13.21 |
| 15X1.5  | 13.5  | 13.4  | 13.56 | 13.61 | 13.67 |
| 15X1.25 | 13.8  | 13.7  | 13.81 | 13.85 | 13.91 |
| 15X1    | 14    | 13.95 | 14.06 | 14.1  | 14.15 |
| 15X0.75 | 14.3  | --    | 14.3  | 14.33 | 14.37 |
| 15X0.5  | 14.5  | --    | 14.54 | 14.57 | 14.59 |
| 16X2    | 14    | 13.9  | 14.07 | 14.13 | 14.21 |
| 16X1.5  | 14.5  | 14.4  | 14.56 | 14.61 | 14.67 |
| 16X1.25 | 14.75 | 14.65 | 14.81 | 14.85 | 14.91 |
| 16X1    | 15    | 14.95 | 15.06 | 15.1  | 15.15 |
| 16X0.75 | 15.25 | 15.19 | 15.3  | 15.33 | 15.37 |
| 16X0.5  | 15.5  | 15.46 | 15.54 | 15.57 | 15.59 |
| 17X2    | 15    | --    | 15.07 | 15.13 | 15.21 |
| 17X1.5  | 15.5  | 15.4  | 15.56 | 15.61 | 15.67 |
| 17X1.25 | 15.8  | --    | 15.81 | 15.85 | 15.91 |
| 17X1    | 16    | 15.95 | 16.06 | 16.1  | 16.15 |
| 17X0.75 | 16.3  | --    | 16.3  | 16.33 | 16.37 |

公制螺旋（切削丝锥用）  
M-SFT,POT

单位：mm

| 螺纹尺寸    | 推荐底孔径 | 最小底孔径 | 最大底孔径 |       |       |
|---------|-------|-------|-------|-------|-------|
|         |       | 各精度通用 | 4H 用  | 5H 用  | 6H 用  |
| 17X0.5  | 16.5  | --    | 16.54 | 16.57 | 16.59 |
| 18X2.5  | 15.5  | 15.3  | 15.57 | 15.64 | 15.74 |
| 18X2    | 16    | 15.9  | 16.07 | 16.13 | 16.21 |
| 18X1.5  | 16.5  | 16.4  | 16.56 | 16.61 | 16.67 |
| 18X1.25 | 16.75 | 16.65 | 16.81 | 16.85 | 16.91 |
| 18X1    | 17    | 16.95 | 17.06 | 17.1  | 17.15 |
| 18X0.75 | 17.25 | 17.19 | 17.3  | 17.33 | 17.37 |
| 18X0.5  | 17.5  | 17.46 | 17.54 | 17.57 | 17.59 |
| 19X2.5  | 16.5  | --    | 16.57 | 16.64 | 16.74 |
| 19X2    | 17    | --    | 17.07 | 17.13 | 17.21 |
| 19X1.5  | 17.5  | --    | 17.56 | 17.61 | 17.67 |
| 19X1.25 | 17.8  | --    | 17.81 | 17.85 | 17.91 |
| 19X1    | 18    | --    | 18.06 | 18.1  | 18.15 |
| 19X0.75 | 18.3  | --    | 18.3  | 18.33 | 18.37 |
| 19X0.5  | 18.5  | --    | 18.54 | 18.57 | 18.59 |
| 20X2.5  | 17.5  | 17.3  | 17.57 | 17.64 | 17.74 |
| 20X2    | 18    | 17.9  | 18.07 | 18.13 | 18.21 |
| 20X1.5  | 18.5  | 18.4  | 18.56 | 18.61 | 18.67 |
| 20X1.25 | 18.75 | 18.65 | 18.81 | 18.85 | 18.91 |
| 20X1    | 19    | 18.95 | 19.06 | 19.1  | 19.15 |
| 20X0.5  | 19.5  | 19.46 | 19.54 | 19.57 | 19.59 |
| 21X2.5  | 18.5  | --    | 18.57 | 18.64 | 18.74 |
| 21X1.5  | 19.5  | --    | 19.56 | 19.61 | 19.67 |
| 21X1    | 20    | --    | 20.06 | 20.1  | 20.15 |
| 22X2.5  | 19.5  | 19.3  | 19.57 | 19.64 | 19.74 |
| 22X2    | 20    | 19.9  | 20.07 | 20.13 | 20.21 |
| 22X1.5  | 20.5  | 20.4  | 20.56 | 20.61 | 20.67 |
| 22X1    | 21    | 20.95 | 21.06 | 21.1  | 21.15 |
| 22X0.5  | 21.5  | 21.46 | 21.54 | 21.57 | 21.59 |
| 23X2.5  | 20.5  | --    | 20.57 | 20.64 | 20.74 |
| 23X2    | 21    | --    | 21.07 | 21.13 | 21.21 |
| 23X1.5  | 21.5  | --    | 21.56 | 21.61 | 21.67 |
| 23X1    | 22    | --    | 22.06 | 22.1  | 22.15 |
| 24X3    | 21    | 20.8  | 21.06 | 21.15 | 21.15 |
| 24X2.5  | 21.5  | 21.29 | 21.57 | 21.64 | 21.74 |
| 24X2    | 22    | 21.9  | 22.07 | 22.13 | 22.21 |
| 24X1.5  | 22.5  | 22.4  | 22.56 | 22.61 | 22.67 |
| 24X1.25 | 22.75 | 22.65 | 22.81 | 22.85 | 22.91 |
| 24X1    | 23    | 22.95 | 23.06 | 23.1  | 23.15 |
| 25X3    | 22    | --    | 22.06 | 22.15 | 22.25 |
| 25X2    | 23    | 22.9  | 23.07 | 23.13 | 23.21 |
| 25X1.5  | 23.5  | 23.4  | 23.56 | 23.61 | 23.67 |
| 25X1    | 24    | 23.95 | 24.06 | 24.1  | 24.15 |
| 26X3    | 23    | --    | 23.06 | 23.15 | 23.25 |
| 26X2    | 24    | --    | 24.07 | 24.13 | 24.21 |
| 26X1.5  | 24.5  | 24.4  | 24.56 | 24.61 | 24.67 |
| 26X1    | 25    | 24.95 | 25.06 | 25.1  | 25.15 |
| 27X3    | 24    | 23.8  | 24.06 | 24.15 | 24.25 |
| 27X2.5  | 24.5  | --    | 24.57 | 24.64 | 24.74 |
| 27X2    | 25    | 24.9  | 25.07 | 25.13 | 25.21 |
| 27X1.5  | 25.5  | 25.4  | 25.56 | 25.61 | 25.67 |
| 27X1    | 26    | 25.95 | 26.06 | 26.1  | 26.15 |

公制螺旋（切削丝锥用）  
M-SFT,POT

单位：mm

| 螺纹尺寸   | 推荐底孔径 | 最小底孔径 | 最大底孔径 |       |       |
|--------|-------|-------|-------|-------|-------|
|        |       | 各精度通用 | 4H 用  | 5H 用  | 6H 用  |
| 28X3   | 25    | --    | 25.06 | 25.15 | 25.25 |
| 28X2   | 26    | 25.9  | 26.07 | 26.13 | 26.21 |
| 28X1.5 | 26.5  | 26.4  | 26.56 | 26.61 | 26.67 |
| 28X1   | 27    | 26.95 | 27.06 | 27.1  | 27.15 |
| 30X3.5 | 26.5  | 26.3  | 26.56 | 26.66 | 26.77 |
| 30X3   | 27    | 26.8  | 27.06 | 27.15 | 27.25 |
| 30X2   | 28    | 27.9  | 28.07 | 28.13 | 28.21 |
| 30X1.5 | 28.5  | 28.4  | 28.56 | 28.61 | 28.67 |
| 30X1   | 29    | 28.95 | 29.06 | 29.1  | 29.15 |
| 32X3   | 29    | --    | 29.06 | 29.15 | 29.25 |
| 32X2   | 30    | 29.9  | 30.07 | 30.13 | 30.21 |
| 32X1.5 | 30.5  | 30.4  | 30.56 | 30.61 | 30.67 |
| 32X1   | 31    | 30.95 | 31.06 | 31.1  | --    |
| 33X3.5 | 29.5  | 29.3  | 29.56 | 29.66 | 29.77 |
| 33X3   | 30    | 29.8  | 30.06 | 30.15 | 30.25 |
| 33X2   | 31    | 30.9  | 31.07 | 31.13 | 31.21 |
| 33X1.5 | 31.5  | 31.4  | 31.56 | 31.61 | 31.67 |
| 33X1   | 32    | --    | 32.06 | 32.1  | 32.15 |
| 34X3   | 31    | --    | 31.06 | 31.15 | 31.25 |
| 34X2   | 32    | --    | 32.07 | 32.13 | 32.21 |
| 34X1.5 | 32.5  | --    | 32.56 | 32.61 | 32.67 |
| 34X1   | 33    | --    | 33.06 | 33.1  | 33.15 |
| 35X3   | 32    | --    | 32.06 | 32.15 | 32.25 |
| 35X2   | 33    | --    | 33.07 | 33.13 | 33.2  |
| 35X1.5 | 33.5  | 33.4  | 33.56 | 33.61 | 33.67 |
| 35X1   | 34    | --    | 34.06 | 34.1  | 34.15 |
| 36X4   | 32    | 31.7  | 32.04 | 32.14 | 32.27 |
| 36X3   | 33    | 32.8  | 33.06 | 33.15 | 33.25 |
| 36X2   | 34    | 33.9  | 34.07 | 34.13 | 34.21 |
| 36X1.5 | 34.5  | 34.4  | 34.56 | 34.61 | 34.67 |
| 36X1   | 35    | --    | 35.06 | 35.1  | 35.15 |
| 37X1.5 | 35.5  | --    | 35.56 | 35.61 | 35.67 |
| 37X1   | 36    | --    | 36.06 | 36.1  | 36.15 |
| 38X4   | 34    | --    | 34.04 | 34.14 | 34.27 |
| 38X3   | 35    | --    | 35.06 | 35.15 | 35.25 |
| 38X2   | 36    | --    | 36.07 | 36.13 | 36.21 |
| 38X1.5 | 36.5  | 36.4  | 36.56 | 36.61 | 36.67 |
| 38X1   | 37    | 36.95 | 37.06 | 37.1  | 37.15 |
| 39X4   | 35    | 34.7  | 35.04 | 35.14 | 35.27 |
| 39X3   | 36    | 35.8  | 36.06 | 36.15 | 36.25 |
| 39X2   | 37    | 36.9  | 37.07 | 37.13 | 37.21 |
| 39X1.5 | 37.5  | 37.4  | 37.56 | 37.61 | 37.67 |
| 39X1   | 38    | --    | 38.06 | 38.1  | 38.15 |
| 40X4   | 36    | --    | 36.04 | 36.14 | 36.27 |
| 40X3   | 37    | 36.8  | 37.06 | 37.15 | 37.25 |
| 40X2   | 38    | 37.9  | 38.07 | 38.13 | 38.21 |
| 40X1.5 | 38.5  | 38.4  | 38.56 | 38.61 | 38.67 |
| 40X1   | 39    | --    | 39.06 | 39.1  | 39.15 |
| 42X4.5 | 37.5  | 37.2  | 37.55 | 37.65 | 37.79 |
| 42X4   | 38    | 37.7  | 38.04 | 38.14 | 38.27 |
| 42X3   | 39    | 38.8  | 39.06 | 39.15 | 39.25 |
| 42X2   | 40    | 39.9  | 40.07 | 40.13 | 40.21 |

公制螺旋（切削丝锥用）  
M-SFT,POT

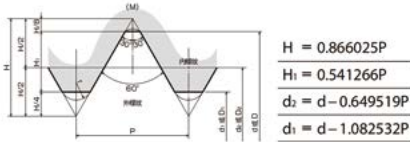
单位：mm

| 螺纹尺寸   | 推荐底孔径 | 最小底孔径 | 最大底孔径 |       |       |
|--------|-------|-------|-------|-------|-------|
|        |       | 各精度通用 | 4H 用  | 5H 用  | 6H 用  |
| 42X1.5 | 40.5  | 40.4  | 40.56 | 40.61 | 40.67 |
| 42X1   | 41    | 40.95 | 41.06 | 41.1  | 41.15 |
| 45X4.5 | 40.5  | 40.2  | 40.55 | 40.65 | 40.79 |
| 45X4   | 41    | 40.7  | 41.04 | 41.14 | 41.27 |
| 45X3   | 42    | 41.8  | 42.06 | 42.15 | 42.25 |
| 45X2   | 43    | 42.9  | 43.07 | 43.13 | 43.21 |
| 45X1.5 | 43.5  | 43.4  | 43.56 | 43.61 | 43.67 |
| 45X1   | 44    | --    | 44.06 | 44.1  | 44.15 |
| 46X1.5 | 44.5  | --    | 44.56 | 44.61 | 44.67 |
| 48X5   | 43    | 42.6  | 43.03 | 43.14 | 43.29 |
| 48X4   | 44    | 43.7  | 44.04 | 44.14 | 44.27 |
| 48X3   | 45    | 44.8  | 45.06 | 45.15 | 45.25 |
| 48X2   | 46    | 45.9  | 46.07 | 46.13 | 46.21 |
| 48X1.5 | 46.5  | 46.4  | 46.56 | 46.61 | 46.67 |
| 48X1   | 47    | --    | 47.06 | 47.1  | 47.15 |
| 50X5   | 45    | --    | 45.03 | 45.14 | 45.29 |
| 50X4   | 46    | 45.7  | 46    | 46.1  | 46.2  |
| 50X3   | 47    | 46.8  | 47.06 | 47.15 | 47.25 |
| 50X2   | 48    | 47.9  | 48.07 | 48.13 | 48.21 |
| 50X1.5 | 48.5  | 48.4  | 48.56 | 48.61 | 48.67 |
| 50X1   | 49    | --    | 49.1  | 49.1  | 49.15 |
| 52X5   | 47    | 46.6  | 47    | 47.1  | 47.2  |
| 52X4   | 48    | 47.7  | 48    | 48.1  | 48.2  |
| 52X3   | 49    | 48.8  | 49    | 49.1  | 49.2  |
| 52X2   | 50    | 49.9  | 50    | 50.1  | 50.2  |
| 52X1.5 | 50.5  | 50.4  | 50.5  | 50.6  | 50.6  |
| 55X4   | 51    | 50.7  | 51    | 51.1  | 51.2  |
| 55X3   | 52    | 51.8  | 52    | 52.1  | 52.2  |
| 55X2   | 53    | 52.9  | 53    | 53.1  | 53.2  |
| 55X1.5 | 53.5  | 53.4  | 53.5  | 53.6  | 53.6  |
| 56X5.5 | 50.5  | 50.1  | 50.5  | 50.6  | 50.7  |
| 56X4   | 52    | 51.7  | 52    | 52.1  | 52.2  |
| 56X3   | 53    | 52.8  | 53    | 53.1  | 53.2  |
| 56X2   | 54    | 53.9  | 54    | 54.1  | 54.2  |
| 56X1.5 | 54.5  | 54.4  | 54.5  | 54.6  | 54.6  |
| 58X4   | 54    | 53.7  | 54    | 54.1  | 54.2  |
| 58X3   | 55    | 54.8  | 55    | 55.1  | 55.2  |
| 58X2   | 56    | 55.9  | 56    | 56.1  | 56.2  |
| 58X1.5 | 56.5  | 56.4  | 56.5  | 56.6  | 56.6  |
| 60X5.5 | 54.5  | 54.1  | 54.5  | 54.6  | 54.7  |
| 60X4   | 56    | 55.7  | 56    | 56.1  | 56.2  |
| 60X3   | 57    | 56.8  | 57    | 57.1  | 57.2  |
| 60X2   | 58    | 57.9  | 58    | 58.1  | 58.2  |
| 60X1.5 | 58.5  | 58.4  | 58.5  | 58.6  | 58.6  |
| 62X4   | 58    | 57.7  | 58    | 58.1  | 58.2  |
| 62X3   | 59    | 58.8  | 59    | 59.1  | 59.2  |
| 62X2   | 60    | 59.9  | 60    | 60.1  | 60.2  |
| 62X1.5 | 60.5  | 60.4  | 60.5  | 60.6  | 60.6  |
| 64X6   | 58    | 57.6  | 58    | 58.1  | 58.2  |
| 64X4   | 60    | 59.7  | 60    | 60.1  | 60.2  |
| 64X3   | 61    | 60.8  | 61    | 61.1  | 61.2  |
| 64X2   | 62    | 61.9  | 62    | 62.1  | 62.2  |

公制螺旋（切削丝锥用）  
M-SFT,POT

单位：mm

| 螺纹尺寸   | 推荐底孔径 | 最小底孔径 | 最大底孔径 |      |      |
|--------|-------|-------|-------|------|------|
|        |       | 各精度通用 | 4H 用  | 5H 用 | 6H 用 |
| 64X1.5 | 62.5  | 62.4  | 62.5  | 62.6 | 62.6 |
| 65X4   | 61    | 60.7  | 61    | 61.1 | 61.2 |
| 65X3   | 62    | 61.8  | 62    | 62.1 | 62.2 |
| 65X2   | 63    | 62.9  | 63    | 63.1 | 63.2 |
| 65X1.5 | 63.5  | 63.4  | 63.5  | 63.6 | 63.6 |
| 68X6   | 62    | 61.6  | 62    | 62.1 | 62.2 |
| 68X4   | 64    | 63.7  | 64    | 64.1 | 64.2 |
| 68X3   | 65    | 64.8  | 65    | 65.1 | 65.2 |
| 68X2   | 66    | 65.9  | 66    | 66.1 | 66.2 |
| 68X1.5 | 66.5  | 66.4  | 66.5  | 66.6 | 66.6 |
| 70X6   | 64    | 63.6  | 64    | 64.1 | 64.3 |
| 70X4   | 66    | 65.7  | 66    | 66.1 | 66.2 |
| 70X3   | 67    | 66.8  | 67    | 67.1 | 67.2 |
| 70X2   | 68    | 67.9  | 68    | 68.1 | 68.2 |
| 72X6   | 66    | 65.6  | 66    | 66.1 | 66.3 |
| 72X4   | 68    | 67.7  | 68    | 68.1 | 68.2 |
| 72X3   | 69    | 68.8  | 69    | 69.1 | 69.2 |
| 72X2   | 70    | 69.9  | 70    | 70.1 | 70.2 |
| 75X4   | 71    | 70.7  | 71    | 71.1 | 71.2 |
| 75X3   | 72    | 71.8  | 72    | 72.1 | 72.2 |
| 75X2   | 73    | 72.9  | 73    | 73.1 | 73.2 |
| 76X2   | 74    | 73.9  | 74    | 74.1 | 74.2 |
| 80X6   | 74    | 73.6  | 74    | 74.1 | 74.3 |
| 80X4   | 76    | 75.7  | 76    | 76.1 | 76.2 |
| 80X3   | 77    | 76.8  | 77    | 77.1 | 77.2 |
| 80X2   | 78    | 77.9  | 78    | 78.1 | 78.2 |
| 85X6   | 79    | 78.6  | 79    | 79.1 | 79.3 |
| 85X4   | 81    | 80.7  | 81    | 81.1 | 81.2 |
| 85X3   | 82    | 81.8  | 82    | 82.1 | 82.2 |
| 85X2   | 83    | 82.9  | 83    | 83.1 | 83.2 |
| 90X6   | 84    | 83.6  | 84    | 84.1 | 84.3 |
| 90X4   | 86    | 85.7  | 86    | 86.1 | 86.2 |
| 90X2   | 88    | 87.9  | 88    | 88.1 | 88.2 |
| 95X6   | 89    | 88.6  | 89    | 89.1 | 89.3 |
| 95X4   | 91    | 90.7  | 91    | 91.1 | 91.2 |
| 95X2   | 93    | 92.9  | 93    | 93.1 | 93.2 |
| 100X6  | 94    | 93.6  | 94    | 94.1 | 94.3 |
| 100X4  | 96    | 95.7  | 96    | 96.1 | 96.2 |
| 100X2  | 98    | 97.9  | 98    | 98.1 | 98.2 |



公制螺旋（NRT 丝锥）  
M-NRT

■ 挤压丝锥用

单位：mm

| 螺纹尺寸      | 4H                      | 5H                      | 6H                      |
|-----------|-------------------------|-------------------------|-------------------------|
|           | 最小 ~ 最大 (咬合率 %)         | 最小 ~ 最大 (咬合率 %)         | 最小 ~ 最大 (咬合率 %)         |
| M1*0.25   | 0.875~ 0.889 (100 ~ 85) | 0.901~ 0.920 (100 ~ 80) | —                       |
| M1.1*0.25 | 0.975~ 0.989            | 1.001~ 1.020            | —                       |
| M1.2*0.25 | 1.075~ 1.089            | 1.101~ 1.120            | —                       |
| M1.4*0.3  | 1.245~ 1.262            | 1.270~ 1.294            | 1.270~ 1.291 (100 ~ 82) |
| M1.6*0.35 | 1.415~ 1.442 (100 ~ 80) | 1.440~ 1.466 (100 ~ 81) | 1.440~ 1.475 (100 ~ 75) |
| M1.6*0.2  | —                       | —                       | 1.530~ 1.550 (100 ~ 75) |
| M1.7*0.35 | —                       | —                       | —                       |
| M1.8*0.35 | 1.615~ 1.634 (100 ~ 86) | 1.640~ 1.666 (100 ~ 81) | 1.640~ 1.675 (100 ~ 75) |
| M2*0.4    | 1.785~ 1.806            | 1.810~ 1.840            | 1.810~ 1.849            |
| M2*0.25   | 1.875~ 1.888 (100 ~ 87) | 1.901~ 1.918 (99 ~ 82)  | —                       |
| M2.2*0.45 | 1.955~ 1.979 (100 ~ 86) | 1.980~ 2.012 (100 ~ 82) | 1.980~ 2.024 (100 ~ 75) |
| M2.3*0.4  | —                       | —                       | —                       |
| M2.5*0.45 | 2.255~ 2.279 (100 ~ 86) | 2.280~ 2.312 (100 ~ 82) | 2.280~ 2.324 (100 ~ 75) |
| M2.6*0.45 | —                       | —                       | —                       |
| M3*0.6    | —                       | —                       | —                       |
| M3*0.5    | 2.737~ 2.764 (100 ~ 86) | 2.762~ 2.798 (100 ~ 82) | 2.762~ 2.812 (100 ~ 75) |
| M3.5*0.6  | 3.177~ 3.210            | 3.202~ 3.242 (100 ~ 83) | 3.202~ 3.250 (100 ~ 80) |
| M4*0.75   | —                       | —                       | —                       |
| M4*0.7    | 3.63 ~ 3.66 (100 ~ 88)  | 3.63 ~ 3.67 (100 ~ 85)  | 3.66 ~ 3.69 (100 ~ 85)  |
| M4.5*0.75 | 4.10 ~ 4.13             | 4.10 ~ 4.14             | 4.13 ~ 4.18 (100 ~ 80)  |
| M5*0.9    | —                       | —                       | —                       |
| M5*0.8    | 4.57 ~ 4.60 (100 ~ 88)  | 4.57 ~ 4.61 (100 ~ 85)  | 4.60 ~ 4.65 (100 ~ 80)  |
| M6*1      | 5.45 ~ 5.49             | 5.45 ~ 5.50             | 5.49 ~ 5.56             |
| M7*1      | 6.45 ~ 6.49 (100 ~ 89)  | 6.45 ~ 6.50             | 6.49 ~ 6.56             |
| M8*1.25   | 7.31 ~ 7.36 (100 ~ 90)  | 7.34 ~ 7.40 (100 ~ 87)  | 7.34 ~ 7.41 (100 ~ 85)  |
| M8*1      | 7.45 ~ 7.48 (100 ~ 91)  | 7.45 ~ 7.50 (100 ~ 85)  | 7.49 ~ 7.56 (100 ~ 80)  |
| M10*1.5   | 9.16 ~ 9.21             | 9.19 ~ 9.24 (100 ~ 90)  | 9.19 ~ 9.27 (100 ~ 85)  |
| M10*1.25  | 9.31 ~ 9.36 (100 ~ 90)  | 9.34 ~ 9.40 (100 ~ 87)  | 9.34 ~ 9.41             |
| M10*1     | 9.47 ~ 9.50             | 9.47 ~ 9.52 (100 ~ 85)  | 9.49 ~ 9.56 (100 ~ 80)  |
| M12*1.75  | 11.01 ~11.07 (100 ~ 91) | 11.05 ~11.11 (100 ~ 90) | 11.05 ~11.15 (100 ~ 85) |
| M12*1.5   | 11.16 ~ 11.21           | 11.19 ~ 11.24           | 11.19 ~ 11.27           |
| M12*1.25  | 11.31 ~11.36 (100 ~ 90) | 11.34 ~11.40 (100 ~ 87) | 11.34 ~ 11.41           |
| M12*1     | 11.47 ~ 11.50           | 11.47 ~11.52 (100 ~ 85) | 11.49 ~11.56 (100 ~ 80) |
| M14*2     | 12.88 ~12.93 (100 ~ 92) | 12.93 ~13.00 (100 ~ 90) | 12.93 ~13.04 (100 ~ 85) |
| M14*1.5   | 13.16 ~13.21 (100 ~ 91) | 13.21 ~ 13.27           | 13.21 ~ 13.30           |
| M16*2     | 14.88 ~14.93 (100 ~ 92) | 14.88 ~ 14.95           | 14.93 ~ 15.04           |
| M16*1.5   | 15.16 ~15.21 (100 ~ 91) | 15.21 ~ 15.27           | 15.21 ~ 15.30           |
| M18*2.5   | 16.57 ~16.64 (100 ~ 92) | 16.64 ~ 16.73           | 16.64 ~ 16.78           |
| M18*1.5   | 17.18 ~17.22 (100 ~ 91) | 17.18 ~ 17.23           | 17.23 ~ 17.31           |
| M20*2.5   | 18.57 ~18.64 (100 ~ 92) | 18.64 ~ 18.73           | 18.64 ~ 18.78           |
| M20*1.5   | 19.18 ~19.22 (100 ~ 91) | 19.18 ~ 19.23           | 19.23 ~ 19.31           |
| M22*2.5   | —                       | —                       | 20.63 ~20.78 (100 ~ 85) |
| M22*1.5   | —                       | —                       | 21.22 ~21.31            |
| M24*3     | —                       | —                       | 22.36 ~22.53            |
| M24*1.5   | —                       | —                       | 23.22 ~23.31            |
| M27*3     | —                       | —                       | 25.36 ~25.53            |
| M30*3.5   | —                       | —                       | 28.07 ~28.25            |
| M33*3.5   | —                       | —                       | 31.07 ~31.25            |
| M36*4     | —                       | —                       | 33.78 ~33.99            |
| M42*4.5   | —                       | —                       | 39.49 ~39.71            |
| M45*4.5   | —                       | —                       | 42.49 ~42.71            |

1. 上表的底孔径因加工材料等不同而变化，仅供参考
2. 底孔径根据加工材料·硬度·形状尺寸等塑性多少会变，请试加工后再做选择。
3. 底孔径稍大点比较有利于刀具寿命。请按照需求选型。
4. 底孔弯曲、振纹、错位等将导致加工困难，请注意。

嵌套 ST 螺纹用  
ST-M(SFT,POT)

公制粗牙螺纹单位：mm

| 螺纹尺寸      | 标准外径   | 丝锥底孔径 |       | 适用钻头直径 |
|-----------|--------|-------|-------|--------|
|           |        | 最小尺寸  | 最大尺寸  |        |
| M2*0.4    | 2.520  | 2.1   | 2.17  | 2.1    |
| M2.5*0.45 | 3.085  | 2.6   | 2.65  | 2.6    |
| M2.6*0.45 | 3.185  | 2.7   | 2.75  | 2.7    |
| M3*0.5    | 3.650  | 3.12  | 3.2   | 3.15   |
| M4*0.7    | 4.909  | 4.17  | 4.3   | 4.2    |
| M5*0.8    | 6.039  | 5.16  | 5.33  | 5.2    |
| M6*1      | 7.300  | 6.25  | 6.42  | 6.3    |
| M8*1.25   | 9.624  | 8.31  | 8.52  | 8.4    |
| M10*1.5   | 11.948 | 10.37 | 10.62 | 10.5   |
| M12*1.75  | 14.274 | 12.43 | 12.73 | 12.5   |
| M14*2     | 16.598 | 14.49 | 14.83 | 14.5   |
| M16*2     | 18.598 | 16.49 | 16.83 | 16.5   |
| M18*2.5   | 21.248 | 18.58 | 19.04 | 19     |
| M20*2.5   | 23.248 | 20.58 | 21.04 | 21     |
| M22*2.5   | 25.248 | 22.58 | 23.04 | 23     |
| M24*3     | 27.898 | 24.7  | 25.25 | 25     |
| M27*3     | 30.898 | 27.65 | 28.05 | 27.8   |
| M30*3.5   | 34.547 | 30.76 | 31.2  | 31     |

公制细牙螺纹单位：mm

| 螺纹尺寸     | 标准外径   | 丝锥底孔径 |       | 适用钻头直径 |
|----------|--------|-------|-------|--------|
|          |        | 最小尺寸  | 最大尺寸  |        |
| M10*1    | 11.300 | 10.25 | 10.42 | 10.3   |
| M10*1.25 | 11.624 | 10.31 | 10.52 | 10.4   |
| M12*1.25 | 13.624 | 12.31 | 12.52 | 12.5   |
| M12*1.5  | 13.948 | 12.37 | 12.62 | 12.5   |
| M14*1.5  | 15.948 | 14.37 | 14.62 | 14.5   |
| M16*1.5  | 17.948 | 16.37 | 16.62 | 16.5   |
| M18*1.5  | 19.948 | 18.37 | 18.62 | 18.5   |
| M20*1.5  | 21.948 | 20.37 | 20.62 | 20.5   |
| M20*2    | 22.598 | 20.47 | 20.83 | 20.5   |
| M22*1.5  | 23.948 | 22.37 | 22.62 | 22.5   |
| M24*1.5  | 25.948 | 24.37 | 24.62 | 24.5   |
| M24*2    | 26.598 | 24.47 | 24.83 | 24.5   |
| M27*1.5  | 28.948 | 27.33 | 27.56 | 27.4   |
| M30*1.5  | 31.948 | 30.37 | 30.62 | 30.5   |

美制螺纹  
U-SFT,POT

切削丝锥用单位：mm

| 螺纹尺寸          | 推荐底孔径 | 2B 级  |       |
|---------------|-------|-------|-------|
|               |       | 最小底孔径 | 最大底孔径 |
| N0. 0 - 80UNF | 1.25  | 1.19  | 1.3   |
| 1- 64UNC      | 1.5   | 1.43  | 1.57  |
| 1- 72UNF      | 1.55  | 1.48  | 1.61  |
| 2- 56UNC      | 1.79  | 1.7   | 1.87  |
| 2- 64UNF      | 1.84  | 1.76  | 1.91  |
| 3- 48UNC      | 2.05  | 1.95  | 2.14  |
| 3- 56UNF      | 2.11  | 2.03  | 2.19  |
| 4- 40UNC      | 2.27  | 2.16  | 2.38  |
| 4- 48UNC      | 2.37  | 2.28  | 2.45  |
| 5- 40UNC      | 2.59  | 2.49  | 2.69  |
| 5- 44UNF      | 2.65  | 2.56  | 2.74  |
| 6- 32UNC      | 2.77  | 2.65  | 2.89  |
| 6- 40UNF      | 2.92  | 2.82  | 3.02  |
| 8- 32UNC      | 3.42  | 3.31  | 3.53  |
| 8- 36UNF      | 3.51  | 3.41  | 3.6   |
| 10- 24UNC     | 3.81  | 3.69  | 3.93  |
| 10- 32UNF     | 4.07  | 3.97  | 4.16  |
| 12- 24UNC     | 4.47  | 4.35  | 4.59  |
| 12- 28UNF     | 4.61  | 4.5   | 4.72  |
| 1/4- 20UNC    | 5.12  | 4.98  | 5.25  |
| 1/4- 28UNF    | 5.47  | 5.36  | 5.58  |
| 1/4- 32UNEF   | 5.59  | 5.49  | 5.68  |
| 5/16- 18UNC   | 6.57  | 6.41  | 6.73  |
| 5/16- 24UNF   | 6.91  | 6.79  | 7.03  |
| 5/16- 32UNEF  | 7.18  | 7.09  | 7.26  |
| 3/8- 16UNC    | 7.98  | 7.8   | 8.15  |
| 3/8- 20UN     | 8.3   | 8.16  | 8.43  |
| 3/8- 24UNF    | 8.51  | 8.39  | 8.63  |
| 3/8- 32UNEF   | 8.77  | 8.67  | 8.86  |
| 7/16- 14UNC   | 9.35  | 9.15  | 9.55  |
| 7/16- 20UNF   | 9.88  | 9.73  | 10.03 |
| 1/2- 13UNC    | 10.81 | 10.6  | 11.02 |
| 1/2- 20UNF    | 11.47 | 11.33 | 11.6  |
| 9/16- 12UNC   | 12.2  | 12    | 12.4  |
| 9/16- 18UNF   | 12.9  | 12.8  | 13    |
| 5/8- 11UNC    | 13.6  | 13.4  | 13.8  |
| 5/8- 18UNF    | 14.5  | 14.4  | 14.6  |
| 5/8- 24UNEF   | 14.9  | 14.8  | 14.9  |
| 3/4- 10UNC    | 16.6  | 16.4  | 16.8  |
| 3/4- 16UNF    | 17.5  | 17.4  | 17.6  |
| 3/4- 20UNEF   | 17.8  | 17.7  | 17.9  |
| 7/8- 9UNC     | 19.5  | 19.2  | 19.7  |
| 7/8- 14UNF    | 20.5  | 20.3  | 20.6  |
| 7/8- 20UNEF   | 21    | 20.9  | 21.1  |
| 1- 8UNC       | 22.3  | 22    | 22.6  |
| 1- 12UNF      | 23.4  | 23.2  | 23.5  |
| 1- 14UNS      | 23.7  | 23.5  | 23.8  |
| 1 1/16- 12UN  | 24.9  | 24.7  | 25.1  |
| 1 1/8- 7UNC   | 25    | 24.7  | 25.3  |
| 1 1/8- 8UN    | 25.5  | 25.2  | 25.7  |
| 1 1/8- 12UNF  | 26.5  | 26.3  | 26.7  |
| 1 1/4- 7UNC   | 28.2  | 27.9  | 28.5  |
| 1 1/4- 8UN    | 28.7  | 28.4  | 28.9  |
| 1 1/4- 12UNF  | 29.7  | 29.5  | 29.9  |

美制螺纹  
U-SFT,POT

■ 切削丝锥用

单位：mm

| 螺纹尺寸          | 推荐底孔径 | 2B 级  |       |
|---------------|-------|-------|-------|
|               |       | 最小底孔径 | 最大底孔径 |
| 1 5/16- 12UN  | 31.3  | 31.1  | 31.4  |
| 1 3/8- 6UNC   | 30.8  | 30.4  | 31.1  |
| 1 3/8- 8UN    | 31.8  | 31.5  | 32.1  |
| 1 3/8- 12UNF  | 32.9  | 32.7  | 33    |
| 1 1/2- 6UNC   | 33.9  | 33.6  | 34.2  |
| 1 1/2- 8UN    | 35    | 34.7  | 35.3  |
| 1 1/2- 12UNF  | 36.1  | 35.9  | 36.2  |
| 1 5/8- 5UNS   | 36.2  | 35.8  | 36.6  |
| 1 5/8- 8UN    | 38.2  | 37.9  | 38.4  |
| 1 5/8- 12UN   | 39.2  | 39    | 39.4  |
| 1 3/4- 5UNC   | 39.4  | 39    | 39.8  |
| 1 3/4- 8UN    | 41.4  | 41.1  | 41.6  |
| 1 3/4- 12UN   | 42.4  | 42.2  | 42.6  |
| 1 7/8- 8UN    | 44.5  | 44.2  | 44.8  |
| 2- 4.5UNC     | 45.1  | 44.7  | 45.5  |
| 2- 8UN        | 47.7  | 47.4  | 48    |
| 2- 12UN       | 48.8  | 48.6  | 48.9  |
| 2 1/4- 4.5UNC | 51.5  | 51.1  | 51.9  |
| 2 1/2- 4UNC   | 57.1  | 56.7  | 57.5  |
| 2 1/2- 8UN    | 60.4  | 60.1  | 60.7  |
| 2 3/4-4UNC    | 63.5  | 63    | 63.9  |
| 2 3/4-8UN     | 66.8  | 66.5  | 67    |
| 3-4UNC        | 69.8  | 69.4  | 70.2  |
| 3-8UN         | 73.1  | 72.8  | 73.4  |
| 3 1/4-4UNC    | 76.2  | 75.7  | 76.6  |
| 3 1/2-4UNC    | 82.5  | 82.1  | 82.9  |
| 3 1/2-8UN     | 85.8  | 85.5  | 86.1  |
| 3 3/4-4UNC    | 88.9  | 88.4  | 89.3  |
| 4-4UNC        | 95.2  | 94.8  | 95.6  |
| 4-8UN         | 98.5  | 98.2  | 98.8  |
| 4 1/4-4UN     | 101.6 | 101.1 | 102   |
| 4 1/4-6UN     | 103.8 | 103.4 | 104.1 |
| 4 1/4-8UN     | 104.9 | 104.6 | 105.1 |
| 4 1/2-4UN     | 107.9 | 107.5 | 108.3 |
| 4 1/2-6UN     | 110.1 | 109.8 | 110.4 |
| 4 1/2-8UN     | 111.2 | 110.9 | 111.5 |
| 4 3/4-4UN     | 126.3 | 137.8 | 114.7 |
| 4 3/4-6UN     | 116.5 | 116.1 | 116.8 |
| 4 3/4-8UN     | 117.6 | 117.3 | 117.8 |
| 5-4UN         | 120.6 | 120.2 | 121   |
| 5-6UN         | 122.8 | 122.5 | 123.1 |
| 5-8UN         | 123.9 | 123.6 | 124.2 |
| 5 1/4-4UN     | 127   | 126.5 | 127.4 |
| 5 1/4-6UN     | 129.2 | 128.8 | 129.5 |
| 5 1/4-8UN     | 130.3 | 130   | 130.5 |
| 5 1/2-4UN     | 133.3 | 132.9 | 133.7 |
| 5 1/2-6UN     | 134.5 | 135.2 | 133.8 |
| 5 1/2-8UN     | 136.6 | 136.3 | 136.9 |
| 5 3/4-4UN     | 139.7 | 139.2 | 140.1 |
| 5 3/4-6UN     | 141.9 | 141.5 | 142.2 |
| 5 3/4-8UN     | 143   | 142.7 | 143.2 |
| 6-4UN         | 146   | 145.6 | 146.4 |
| 6-6UN         | 148.2 | 147.9 | 148.5 |
| 6-8UN         | 149.3 | 149   | 149.6 |

美制螺纹 ( 挤压丝锥用 )  
U-NRT

■ 美制粗牙螺纹

单位：mm

| 螺纹尺寸       | 2B                   | 3B                   |
|------------|----------------------|----------------------|
|            | 最小 ~ 最大 ( 咬合率 % )    | 最小 ~ 最大 ( 咬合率 % )    |
| No.1-64UNC | 1.66 ~ 1.7 (100~65)  | 1.65~ 1.69(100~65)   |
| No.2- 56   | 1.96~ 2.02(100~65)   | 1.95 ~ 2.01(100~65)  |
| No.3- 48   | 2.25~ 2.32(100~65)   | 2.23~ 2.31(100~65)   |
| No.4-40    | 2.52~2.6(100~70)     | 2.5~2.58(100~70)     |
| No.5-40    | 2.86 ~ 2.93(100~70)  | 2.83 ~ 2.91(100~70)  |
| No.6 - 32  | 3.09 ~ 3.17(100~75)  | 3.06 ~3.14(100~75)   |
| No.8- 32   | 3.75 ~3.83(100~75)   | 3.74~ 3.82(100~75)   |
| No.10-24   | 4.26 ~ 4.35(100~80)  | 4.24~4.32(100~80)    |
| No.12-24   | 4.92 ~5.01(100~80)   | 4.9~4.96(100~85)     |
| 1/4 - 20   | 5.66 ~5.76(100~80)   | 5.64~5.74(100~80)    |
| 5/16 - 18  | 7.18 ~7.29(100~80)   | 7.15~7.24(100~85)    |
| 3/8 - 16   | 8.66~8.78(100~80)    | 8.63 ~ 8.73(100~85)  |
| 7/16 - 14  | 10.11~10.25(100~80)  | 10.08 ~10.19(100~85) |
| 1/2 - 13   | 11.62 ~11.78(100~80) | 11.6 ~11.68(100~90)  |
| 9/16 - 12  | 13.14 ~13.27(100~85) | 13.11 ~13.24(100~85) |
| 5/8 - 11   | 14.62~14.76(100~85)  | 14.58~14.67(100~90)  |
| 3/4 - 10   | 17.67~17.88(100~80)  | 17.63~17.74(100~90)  |
| 7/8 - 9    | 20.68~20.85(100~85)  | 20.64~20.75(100~90)  |
| 1-8        | 23.65~23.84(100~85)  | 23.61 ~23.74(100~90) |

■ 美制细牙螺纹

单位：mm

| 螺纹尺寸       | 2B                  | 3B                  |
|------------|---------------------|---------------------|
|            | 最小 ~ 最大 ( 咬合率 % )   | 最小 ~ 最大 ( 咬合率 % )   |
| No.0-80UNF | 1.38~1.41(100~65)   | 1.36~1.4 (100~65)   |
| No.1-72    | 1.68~1.72(100~65)   | 1.67~1.71(100~65)   |
| No.2-64    | 1.98~ 2.04(100~65)  | 1.97~2.03(100~65)   |
| No.3-56    | 2.29~2.35(100~65)   | 2.28~ 2.34(100~65)  |
| No.4-48    | 2.57~2.64(100~70)   | 2.56~2.63(100~70)   |
| No.5-44    | 2.89~2.96(100~70)   | 2.87~2.94(100~70)   |
| No.6-40    | 3.19~ 3.26(100~70)  | 3.16~ 3.22(100~75)  |
| No.8 -36   | 3.8~3.88(100~75)    | 3.79~3.86(100~75)   |
| No.10 -32  | 4.41~ 4.48(100~80)  | 4.4~4.46(100~80)    |
| No.12 -28  | 5 ~5.08(100~80)     | 4.99~5.06(100~80)   |
| 1/4-28     | 5.86~5.93(100~80)   | 5.85~5.92(100~80)   |
| 5/16-24    | 7.38~ 7.46(100~80)  | 7.36~7.43(100~85)   |
| 3/8 -24    | 8.96~9.05(100~80)   | 8.95~9.02(100~85)   |
| 7/16-20    | 10.44~10.54(100~80) | 10.41~10.49(100~85) |
| 1/2-20     | 12.02~12.12(100~80) | 12 ~12.05(100~90)   |
| 9/6-18     | 13.55~13.66(100~80) | 13.53~13.58(100~90) |
| 5/8 -18    | 15.14~15.25(100~80) | 15.11~15.17(100~90) |
| 3/4 -16    | 18.22~18.32(100~85) | 18.18~18.25(100~90) |
| 7/8-14     | 21.27~21.38(100~85) | 21.23~21.27(100~95) |
| 1-12       | 24.28~24.41(100~85) | 24.24~24.32(100~90) |

美制螺纹 ( 嵌套 ST 螺纹用 )  
ST-U(SFT,POT)

■ 美制粗牙螺纹

单位：mm

| 螺纹尺寸        | 标准外径   | 丝锥底孔径 |       | 适用钻头直径 |
|-------------|--------|-------|-------|--------|
|             |        | 最小尺寸  | 最大尺寸  |        |
| No.2- 56UNC | 2.773  | 2.29  | 2.39  | 2.3    |
| No.3- 48    | 3.202  | 2.64  | 2.74  | 2.7    |
| No.4-40     | 3.670  | 2.95  | 3.07  | 3      |
| No.5-40     | 4.000  | 3.25  | 3.38  | 3.3    |
| No.6 - 32   | 4.536  | 3.66  | 3.81  | 3.7    |
| No.8- 32    | 5.197  | 4.32  | 4.47  | 4.4    |
| No.10-24    | 6.201  | 5.05  | 5.21  | 5.1    |
| No.12-24    | 6.861  | 5.61  | 5.77  | 5.7    |
| 1/4 - 20    | 8.000  | 6.63  | 6.78  | 6.7    |
| 5/16 - 18   | 9.771  | 8.33  | 8.48  | 8.4    |
| 3/8 - 16    | 11.587 | 9.91  | 10.11 | 10     |
| 7/16 - 14   | 13.469 | 11.51 | 11.76 | 11.5   |
| 1/2 - 13    | 15.238 | 13.08 | 13.34 | 13.1   |
| 9/16 - 12   | 17.038 | 14.68 | 14.94 | 14.7   |
| 5/8 - 11    | 18.875 | 16.59 | 16.84 | 16.7   |
| 3/4 - 10    | 22.350 | 19.84 | 20.09 | 20     |
| 7/8 - 9     | 25.891 | 23.01 | 23.27 | 23.1   |
| 1-8         | 29.524 | 26.19 | 26.52 | 26.4   |

■ 美制细牙螺纹

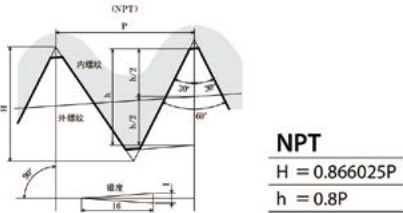
单位：mm

| 螺纹尺寸      | 标准外径   | 丝锥底孔径 |       | 适用钻头直径 |
|-----------|--------|-------|-------|--------|
|           |        | 最小尺寸  | 最大尺寸  |        |
| No.4-48   | 3.532  | 2.97  | 3.05  | 3      |
| No.6-40   | 4.330  | 3.66  | 3.78  | 3.7    |
| No.8 -36  | 5.083  | 4.32  | 4.44  | 4.4    |
| No.10 -32 | 5.857  | 4.98  | 5.13  | 5      |
| No.12 -28 | 6.665  | 5.7   | 5.86  | 5.8    |
| 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    |
| 7/16-20   | 12.762 | 11.43 | 11.63 | 11.5   |
| 1/2-20    | 14.350 | 13.03 | 13.26 | 13.1   |
| 9/6-18    | 16.121 | 14.66 | 14.88 | 14.7   |
| 5/8 -18   | 17.708 | 16.26 | 16.48 | 16.3   |
| 3/4 -16   | 21.112 | 19.43 | 19.68 | 19.5   |
| 7/8-14    | 24.582 | 22.61 | 22.86 | 22.7   |
| 1-12      | 28.150 | 25.76 | 26.04 | 26     |

美标管用螺纹 (NPT)  
NPT-SFT,HT

单位：mm

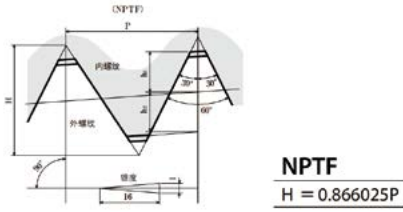
| 螺 纹   |        | 锥管螺纹 (NPT) |              |         |              |
|-------|--------|------------|--------------|---------|--------------|
|       |        | 钻头直径       |              |         |              |
| 尺寸    | 外径     | 使用铰刀时      |              | 不使用铰刀时  |              |
| 1/16  | 7.770  | —          | 5.94(0.234)  | —       | 6.15(0.242)  |
| 1/8   | 10.117 | 21/64      | 8.33(0.328)  | —       | 8.43(0.332)  |
| 1/4   | 13.426 | 27/64      | 10.72(0.422) | 7/16    | 11.13(0.438) |
| 3/8   | 16.866 | 9/16       | 14.27(0.562) | 9/16    | 14.27(0.562) |
| 1/2   | 20.980 | 11/16      | 17.48(0.688) | 45/64   | 17.86(0.703) |
| 3/4   | 26.325 | 57/64      | 22.63(0.891) | 29/32   | 23.01(0.906) |
| 1     | 32.934 | 1 1/8      | 28.58(1.125) | 1 9/64  | 28.98(1.141) |
| 1 1/4 | 41.689 | 1 15/32    | 37.31(1.469) | 1 31/64 | 37.69(1.484) |
| 1 1/2 | 47.760 | 1 45/64    | 43.26(1.703) | 1 23/32 | 43.66(1.719) |
| 2     | 59.797 | 2 11/64    | 55.17(2.172) | 2 3/16  | 55.58(2.188) |
| 2 1/2 | 72.273 | 2 37/64    | 65.48(2.578) | 2 39/64 | 66.27(2.609) |



美标管用螺纹  
NPTF-SFT,HT

单位：mm

| 螺 纹   |        | 锥管螺纹 (NPTF) |              |         |              |
|-------|--------|-------------|--------------|---------|--------------|
|       |        | 钻头直径        |              |         |              |
| 尺寸    | 外径     | 使用铰刀时       |              | 不使用铰刀时  |              |
| 1/16  | 7.770  | —           | 5.94(0.234)  | —       | 6.15(0.242)  |
| 1/8   | 10.117 | 21/64       | 8.33(0.328)  | —       | 8.43(0.332)  |
| 1/4   | 13.426 | 27/64       | 10.72(0.422) | 7/16    | 11.13(0.438) |
| 3/8   | 16.866 | 9/16        | 14.3(0.563)  | 9/16    | 14.27(0.562) |
| 1/2   | 20.980 | 11/16       | 17.48(0.688) | 45/64   | 17.86(0.703) |
| 3/4   | 26.325 | 57/64       | 22.63(0.891) | 29/32   | 23.01(0.906) |
| 1     | 32.934 | 1 1/8       | 28.58(1.125) | 1 9/64  | 28.98(1.141) |
| 1 1/4 | 41.689 | 1 15/32     | 37.31(1.469) | 1 31/64 | 37.69(1.484) |
| 1 1/2 | 47.760 | 1 45/64     | 43.26(1.703) | 1 23/32 | 43.66(1.719) |
| 2     | 59.797 | 2 11/64     | 55.17(2.172) | 2 3/16  | 55.58(2.188) |
| 2 1/2 | 72.273 | 2 37/64     | 65.48(2.578) | 2 39/64 | 66.27(2.609) |





缝纫机螺纹

SM-SFT,POT

单位：mm

| 螺纹尺寸       | 钻头直径 | 2 级螺纹底孔径 ( 咬合率 %) | 2 级内螺纹小径 |        |
|------------|------|-------------------|----------|--------|
|            |      |                   | 最小尺寸     | 最大尺寸   |
| SM 1/16-80 | 1.25 | 1.28(75)          | 1.211    | 1.281  |
| 5/64-64    | 1.55 | 1.57(80)          | 1.513    | 1.593  |
| 3/32-100   | 2.1  | 2.15(70)          | 2.081    | 2.156  |
| 3/32-56    | 1.85 | 1.91(80)          | 1.841    | 1.936  |
| 1/8-44     | 2.5  | 2.58(80)          | 2.485    | 2.605  |
| 1/8-40     | 2.45 | 2.52(80)          | 2.421    | 2.551  |
| 9/64-40    | 2.85 | 2.91(80)          | 2.818    | 2.948  |
| 11/64-40   | 3.65 | 3.71(80)          | 3.612    | 3.742  |
| 3/16-32    | 3.9  | 3.94(80)          | 3.82     | 3.98   |
| 3/16-28    | 3.7  | 3.82(80)          | 3.684    | 3.844  |
| 3/16-24    | 3.55 | 3.59(85)          | 3.498    | 3.658  |
| 7/32-32    | 4.7  | 4.73(80)          | 4.614    | 4.774  |
| 15/64-28   | 4.9  | 5.01(80)          | 4.875    | 5.055  |
| 1/4-40     | 5.6  | 5.69(80)          | 5.596    | 5.726  |
| 1/4-28     | 5.3  | 5.41(80)          | 5.272    | 5.452  |
| 1/4-24     | 5.1  | 5.25(80)          | 5.086    | 5.266  |
| 9/32-28    | 6.1  | 6.2 (80)          | 6.066    | 6.256  |
| 9/32/20    | 5.7  | 5.82(80)          | 5.634    | 5.824  |
| 5/16-28    | 6.9  | 6 (80)            | 6.86     | 7.05   |
| 5/16-24    | 6.7  | 6.84(80)          | 6.674    | 6.864  |
| 5/16-18    | 6.3  | 6.38(85)          | 6.254    | 6.444  |
| 11/32-28   | 7.6  | 7.79(80)          | 7.653    | 7.843  |
| 3/8-28     | 8.5  | 8.58(80)          | 8.447    | 8.637  |
| 3/8-18     | 7.9  | 7.97(85)          | 7.843    | 8.053  |
| 7/16-28    | 10.1 | 10.17(80)         | 10.034   | 10.224 |
| 7/16-16    | 9.3  | 9.36(85)          | 9.22     | 9.44   |
| 1/2-28     | 11.7 | 11.76(80)         | 11.622   | 11.812 |
| 1/2-20     | 11.3 | 11.38(80)         | 11.19    | 11.41  |
| 1/2-12     | 10.3 | 10.36(85)         | 10.18    | 10.42  |

惠氏粗牙螺纹

BSW,BSF-SFT,POT

单位：mm

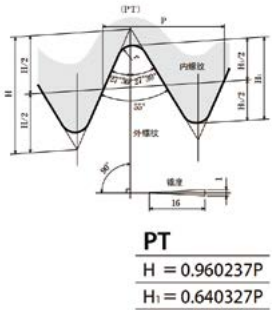
| 螺纹尺寸  | 牙数 | 最小小径   | 最大小径   |
|-------|----|--------|--------|
| W 1/8 | 40 | 2.452  | 2.602  |
| 5/32  | 32 | 3.073  | 3.253  |
| 3/16  | 24 | 3.567  | 3.807  |
| 1/4   | 20 | 4.914  | 5.204  |
| 5/16  | 18 | 6.34   | 6.67   |
| 3/8   | 16 | 7.733  | 8.113  |
| 7/16  | 14 | 9.048  | 9.508  |
| 1/2   | 12 | 10.31  | 10.83  |
| 9/16  | 12 | 11.898 | 12.418 |
| 5/8   | 11 | 13.257 | 13.817 |
| 3/4   | 10 | 16.178 | 16.778 |
| 7/8   | 9  | 19.031 | 19.691 |
| 1     | 8  | 21.814 | 22.514 |
| 1 1/8 | 7  | 24.469 | 25.229 |
| 1 1/4 | 1  | 27.644 | 28.404 |
| 1 3/8 | 6  | 30.123 | 30.923 |
| 1 1/2 | 6  | 33.298 | 34.098 |

锥管螺纹 ( 英式 )  
RC,RP-SFT,HT

■ 锥度管螺纹 ( 英式 )

单位: mm

| 螺纹尺寸  |        | JIS B 0203   |      |              |      | JIS B 2301 |      |
|-------|--------|--------------|------|--------------|------|------------|------|
|       |        | 锥管内螺纹 Rc(PT) |      | 平行内螺纹 Rp(PS) |      | 锥管内螺纹      |      |
| 尺寸    | 外径     | 计算值          | 底孔径  | 计算值          | 底孔径  | 计算值        | 底孔径  |
| 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   |
| 1 1/4 | 41.91  | 37.94        | 38   | 38.772       | 39   | 37.89      | 38   |
| 1 1/2 | 47.803 | 43.833       | 44   | 44.565       | 45   | 43.72      | 43   |



平行管螺纹 ( 英式 )  
G-SFT,POT,HT

■ 平行管螺纹 ( 英式 )

单位: mm

| 螺纹        |        | 最小底孔径 (咬合率 %) | 最大底孔径 (咬合率 %) |
|-----------|--------|---------------|---------------|
| 尺寸        | 外径 d   |               |               |
| G 1/16    | 7.723  | 6.561(100)    | 6.843 (80)    |
| G(PF) 1/8 | 9.728  | 8.566         | 8.848         |
| 1/4       | 13.157 | 11.445        | 11.89 (75)    |
| 3/8       | 16.662 | 14.95         | 15.395        |
| 1/2       | 20.955 | 18.631        | 19.172 (80)   |
| 5/8       | 22.911 | 20.587        | 21.128        |
| 3/4       | 26.441 | 24.117        | 24.658        |
| 7/8       | 30.201 | 27.877        | 28.418        |
| 1         | 33.249 | 30.291        | 30.931        |
| 1 1/8     | 37.897 | 34.939        | 35.579        |
| 1 1/4     | 41.91  | 38.952        | 39.592 (85)   |
| 1 3/8     | 44.323 | 41.365        | 42.005 (80)   |
| 1 1/2     | 47.803 | 44.845        | 45.485        |
| 1 3/4     | 53.746 | 50.788        | 51.428        |

TROUBLE SHOOTING
丝锥加工问题解答

| 问题<br>Problem                             |                                          | 丝 锥<br>Tap                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                            |                                           | 使用条件<br>Operating Conditions                                           |                                                                                           |
|-------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 内容<br>Content                             | 要因<br>Specific Problem                   | 选定<br>Selection                                                                                                                                                                                                                                                                                                                                    | 设计式样<br>Designed Spec.                                                                                                                                                                                                                                                                                                     | 再研磨<br>Regrinding                         | 使用机械<br>Machine Used                                                   | 夹具<br>Tooling                                                                             |
| Oversize Pitch Diameter<br>螺 纹 中 径 大      | 丝锥选定不当<br>Incorrect tap selection        | 1. 选用适当精度的丝锥<br>2. 加长切削锥长度<br>3. 选择同心圆铲背丝锥<br>1.Select tap of appropriate limit.<br>2.Increase chamfer length.<br>3.Select con-eccentric relief tap.                                                                                                                                                                                               | 1. 减少前角<br>2. 加大螺纹部刃带宽<br>3. 调整切削锥长的铲背角<br>1.Reduce rake angle.<br>2.Increase margin width of thread.<br>3.Correct relief angle of chamfer section.                                                                                                                                                                        |                                           |                                                                        |                                                                                           |
|                                           | 切屑堵塞<br>Chip packing                     | 1. 选 POT,SFT,NRT,HRT 丝锥<br>2. 选用内冷式丝锥<br>1.Select POT/SFT/XPF/NRT/HRT.<br>2.Select tap with oil hole.                                                                                                                                                                                                                                              | 1. 减少槽数扩大容屑槽<br>1.Reduce number of flutes to provide extra chip room.                                                                                                                                                                                                                                                      |                                           |                                                                        |                                                                                           |
|                                           | 使用条件不当<br>Incorrect operating conditions |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                            |                                           | 调整机械的功率<br>Adjust machine capacity (drive force) to appropriate level. | 1. 使用柔性攻丝夹具<br>2. 防止轴心振动<br>1.Use floating type tap holder.<br>2.Avoid runout of spindle. |
|                                           | 溶着<br>Welding                            | 1. 选择表面处理 ( 氧化处理涂层 ) 的丝锥<br>2. 选用内冷式丝锥<br>1.Select surface-treatment (steam oxide or coating).<br>2.Select tap with oil hole.                                                                                                                                                                                                                      | 1. 实行氧化处理<br>2. 根据材料选择适当的前角<br>3. 缩短螺纹部长度<br>1.Apply steam oxide treatment.<br>2.Adjust rake angle to suit tapped material.<br>3.Shorten thread length of tap.                                                                                                                                                             |                                           |                                                                        |                                                                                           |
|                                           | 丝锥再研磨不当<br>Incorrect tap regrounding     |                                                                                                                                                                                                                                                                                                                                                    | 1. 正确分割排屑槽角度<br>2. 抑制切削锥部的径向跳动<br>3. 不要把丝锥前角切削锥角磨得太大<br>4. 避免刀刃厚度过小<br>5. 除掉刃磨时的毛刺<br>1.The land must be accurately indexed.<br>2.Reduce run-out of chamfer section.<br>3.Make sure that rake angle and primary relief angle are not too large.<br>4.Make sure that land width is not excessively thin.<br>5.Remove burrs. |                                           |                                                                        |                                                                                           |
| Undersize Pitch Diameter<br>内 螺 纹 中 径 缩 小 | 丝锥选型不当<br>Incorrect tap selection        | 选用精度大的丝锥<br>A. 铜合金、铝合金、铸铁等切扩量小的被切削材料。<br>B. 被切削材料的形状为反弹量较大的管状，薄板等时。<br>Select oversize tap.<br>A.Tapping material: Materials with low over size margin, such as copper alloy, aluminum alloy and cast iron<br>B.Shape of tapping material: Hollow materials and mild sheet steels with punched holes which have a spring back action after tapping | 1. 选择正确的切削锥角<br>2. 加大前角<br>3. 槽数增加<br>1.Adjust primary relief angle to appropriate level.<br>2.Increase rake angle.<br>3.Increase number of flutes.                                                                                                                                                                        | 缩短再研磨周期<br>Shorten regrounding intervals. |                                                                        |                                                                                           |
|                                           | 内螺纹划伤<br>Damaged internal thread         |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                            |                                           |                                                                        |                                                                                           |

| 使用条件<br>Operating Conditions                                                                                                                                                                                                               |                                                                                     | 加工材料<br>Work Material |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                    | 其他<br>Other |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 切削条件<br>Tapping Conditions                                                                                                                                                                                                                 | 切削油剂<br>Cutting Lubricant                                                           | 硬度<br>Hardness        | 形状<br>Dimension                                                                                                                                                                                                                                                                                                                                     | 螺纹底孔<br>Drill Hole                                                                                                                                 |             |
|                                                                                                                                                                                                                                            |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                    |             |
|                                                                                                                                                                                                                                            | 改变切削油剂的种类和供油方法<br>Change lubricant type and lubricating method.                     |                       |                                                                                                                                                                                                                                                                                                                                                     | 1. 尽可能加大底孔直径<br>2. 盲孔的场合，尽可能加深底孔<br>1.Make drill hole diameter as large as possible.<br>2.In the case of blind holes, make it as deep as possible. |             |
| 1. 使用正确的切削速度<br>2. 采用合适的进给量，防止出现过切而使内螺纹牙型瘦小<br>3. 采用强制进给 ( 导向进给 ) 方式<br>1.Adjust tapping speed to appropriate level.<br>2.Adjust feed speed to appropriate level to prevent torn or rough thread.<br>3.Use forced feed (lead feed) tapper. |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                     | 1. 防止底孔的偏心<br>2. 底孔入口处施以倒角<br>1.Prevent misalignment with drill hole.<br>2.Chamfer entrance of the drilled hole.                                   |             |
| 1. 切削速度下降<br>1.Reduce tapping speed.                                                                                                                                                                                                       | 使用抗溶着性良好的切削油<br>Replace lubricant with one that has higher anti-galling properties. |                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                    |             |
|                                                                                                                                                                                                                                            |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                    |             |
| 回转时，采用适当的切削速度以保证内螺纹出口处不产生划伤<br>Adjust reverse speed to an appropriate level, to avoid damage at entrance of tapped thread on the way out of the hole.                                                                                      |                                                                                     |                       | 使用尺寸加大型丝锥<br>A. 铜合金、铝合金、铸铁等切扩量小的被切削材料<br>B. 被切削材料的形状为反弹量较大的管状，薄板等时。<br>Select oversize tap.<br>A.Tapping material: Materials with low over size margin, such as copper alloy, aluminum alloy and cast iron<br>B.Shape of tapping material: Hollow materials and mild sheet steels with punched holes which have a spring back action after tapping. |                                                                                                                                                    |             |
|                                                                                                                                                                                                                                            |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                    |             |

TROUBLE SHOOTING
丝锥加工问题解答

| 问题<br>Problem                                                    |                                          | 丝 锥<br>Tap                                                                                                                                                                   |                                                                                                                                                             |                                                                                                                                                                                                                             | 使用条件<br>Operating Conditions       |                                                                                              |
|------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------|
| 内容<br>Content                                                    | 要因<br>Specific Problem                   | 选定<br>Selection                                                                                                                                                              | 设计式样<br>Designed Spec.                                                                                                                                      | 再研磨<br>Regrinding                                                                                                                                                                                                           | 使用机械<br>Machine Used               | 夹具<br>Tooling                                                                                |
| 内<br>螺<br>纹<br>中<br>径<br>缩<br>小<br><br>Under-size Pitch Diameter | 内螺纹中有切屑残留<br>Left-over chips             |                                                                                                                                                                              | 提高丝锥的锋利度，防止出现须状的切屑<br>Improve sharpness of cutting edges to prevent spare chips.                                                                            |                                                                                                                                                                                                                             |                                    |                                                                                              |
|                                                                  | 丝锥选型不当<br>Incorrect tap selection        | 适量增加切削锥的长度<br>Select tap with long chamfer length.                                                                                                                           | 1. 根据被切削材选择适当的前角<br>2. 减少刃带宽<br>3. 缩短有效螺纹长度<br>1.Adjust rake angle to suit tapped material.<br>2.Reduce margin width.<br>3.Shorten effective thread length. |                                                                                                                                                                                                                             |                                    |                                                                                              |
|                                                                  | 溶着<br>Welding                            | 1. 使用带后角的丝锥<br>2. 选择表面处理（氧化处理涂层）的丝锥<br>3. 选用内冷式丝锥<br>1.Select tap with thread relief.<br>2.Select surface-treatment (steam oxide or coating).<br>3.Select tap with oil hole. | 1. 减小刀刃厚度<br>2. 缩短有效螺纹长度<br>1.Reduce land width.<br>2.Shorten effective thread length.                                                                      | 1. 正确分割排屑槽角度<br>2. 减小前角的不稳定<br>3. 注意刃尖研磨产生的过热，发黑迹象。<br>1.The flutes must be accurately indexed.<br>2.Reduce runout of rake angle.<br>3.Pay special attention to heat build up on the cutting edge.                          |                                    |                                                                                              |
|                                                                  | 切屑堵塞<br>Chip packing                     | 选用 POT,SFT,NRT,HRT, XPF 丝锥<br>Select spiral pointed or spiral fluted taps.                                                                                                   |                                                                                                                                                             |                                                                                                                                                                                                                             | 螺距进给<br>Switch to pitch feed mode. | 1. 防止轴心的振动<br>2. 使用柔性攻丝夹具<br>1.Avoid runout of spindle.<br>2.Use a floating type tap holder. |
|                                                                  | 使用条件不当<br>Incorrect operating conditions |                                                                                                                                                                              |                                                                                                                                                             |                                                                                                                                                                                                                             |                                    |                                                                                              |
|                                                                  | 丝锥再研磨不当<br>Incorrect tap regrinding      |                                                                                                                                                                              |                                                                                                                                                             | 1. 正确分割排屑槽角度<br>2. 抑制切削锥部的径向跳动<br>3. 磨损部全部清除<br>4. 缩短再研磨周期<br>1.The land must be accurately indexed.<br>2.Reduce run-out of chamfer section.<br>3.Make sure these are no worn-out areas.<br>4.Shorten regrinding intervals. |                                    |                                                                                              |
| 表面不光滑<br>有划伤波纹<br><br>Ton or rough Thread                        | 丝锥选型不当<br>Incorrect tap selection        |                                                                                                                                                                              | 1. 减小前角<br>2. 减小铲背<br>1.Reduce rake angle.<br>2.Reduce amount of thread relief.                                                                             | 1. 避免刀刃厚度过小<br>2. 不再进行槽再研磨<br>1.Make sure that land width is not excessively thin.<br>2.Do not regrind flutes.                                                                                                              |                                    | 1. 防止轴心的振动<br>2. 使用柔性攻丝夹具<br>1.Use a floating type tap holder.<br>2.Avoid runout of spindle. |
|                                                                  | 切屑堵塞<br>Chip packing                     | 使用 POT,SFT,XPF, NRT,HRT 丝锥<br>Use spiral pointed, spiral fluted or forming taps                                                                                              | 1. 加大容屑槽<br>2. 适当增加切削锥的长度<br>1.Enlarge chip room<br>2.Increase chamfer length.                                                                              |                                                                                                                                                                                                                             |                                    |                                                                                              |
|                                                                  | 溶着<br>Welding                            | 表面处理（氧化处理、涂层处理）的丝锥<br>Select surface-treatment (steam oxide or coating).                                                                                                     |                                                                                                                                                             | 磨损部全部清除<br>Make sure there are no worn-out areas.                                                                                                                                                                           |                                    |                                                                                              |

| 使用条件<br>Operating Conditions                                |                                                                                                                                                                                                                                                                              | 加工材料<br>Work Material                                                                                              |                                                                                                                            |                                                                                                                                                 | 其他<br>Other                                                                                                                                                      |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 切削条件<br>Tapping Conditions                                  | 切削油剂<br>Cutting Lubricant                                                                                                                                                                                                                                                    | 硬度<br>Hardness                                                                                                     | 形状<br>Dimension                                                                                                            | 螺纹底孔<br>Drill Hole                                                                                                                              |                                                                                                                                                                  |
|                                                             |                                                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                            |                                                                                                                                                 | 在完全清除掉残留的切屑后，再使用螺纹塞规检查内螺纹<br>Before gauge check, be sure to remove chips completely                                                                              |
|                                                             |                                                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                            |                                                                                                                                                 |                                                                                                                                                                  |
| 降低切削速度<br>Reduce tapping speed.                             | 1. 调整切屑油剂的种类和供油方式<br>2. 更换、补充切削油的时间要适当<br>3. 防止混入其他油类<br>4. 过滤切削液<br>1.Review lubricant type and lubricating supply method.<br>2.Correct lubricant change replenishment intervals.<br>3.Prevent entry of other oils such as operating oil.<br>4.Filtrate oil stored in tank. |                                                                                                                    |                                                                                                                            | 尽可能加大底孔直径<br>Make drill hole diameter as large as possible.                                                                                     | 除去前工序的残留切屑<br>Remove chips generated in previous process.                                                                                                        |
| 尽可能加大底孔直径<br>Make drill hole diameter as large as possible. | 调整切削油剂的种类和供油方式<br>Review lubricant type and lubricating method.                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                            | 尽可能加大底孔直径<br>Make drill hole diameter as large as possible.                                                                                     |                                                                                                                                                                  |
|                                                             | 调整切削油剂的种类及供给方法<br>Review lubricant type and lubricating method.                                                                                                                                                                                                              | 调查加工材料的硬度及组织结构的均一性<br>Pay special attention to changes and variations in tapping material, hardness and structure. |                                                                                                                            | 1. 防止底孔偏心和倾斜<br>2. 防止底孔加工时的加工硬化<br>1.Avoid misalignment and inclination from drilled hole.<br>2.Avoid work hardening of the hole after tapping. |                                                                                                                                                                  |
|                                                             |                                                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                            |                                                                                                                                                 |                                                                                                                                                                  |
| 降低切削速度<br>Reduce tapping speed.                             | 调整切削油剂种类和供油方式<br>Review lubricant type and lubricating method.                                                                                                                                                                                                               |                                                                                                                    | 1. 加固工件的夹持具<br>2. 注意工件的厚度<br>1.Hold work material more securely.<br>2.Pay special attention to thickness of work material. |                                                                                                                                                 |                                                                                                                                                                  |
|                                                             |                                                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                            | 1. 尽可能加深盲孔的底孔深度<br>2. 修正底孔倾斜<br>1.Make hole for blind hole as deep as possible.<br>2.Correct inclination of drilled hole.                       | 1. 清除底孔及加工工件周围的切屑<br>2. 确保清除切屑空间<br>1.Remove chips collected in drilled hole and around tapping areas in previous process.<br>2.Keep space for removal of chips. |
|                                                             |                                                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                            |                                                                                                                                                 |                                                                                                                                                                  |

TROUBLE SHOOTING

丝锥加工问题解答

| 问题<br>Problem        |                                          | 丝 锥<br>Tap                                                                                                                                                                                      |                                                                                                                                                                                            |                                                                                                                               | 使用条件<br>Operating Conditions           |                                                                                                                                   |
|----------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 内容<br>Content        | 要因<br>Specific Problem                   | 选定<br>Selection                                                                                                                                                                                 | 设计式样<br>Designed Spec.                                                                                                                                                                     | 再研磨<br>Regrinding                                                                                                             | 使用机械<br>Machine Used                   | 夹具<br>Tooling                                                                                                                     |
| 丝锥折损<br>Breakage     | 切削扭矩过大<br>Excessive tapping torque       | 适当增加切削锥的长度<br>Select tap with long chamfer length.                                                                                                                                              | 1.为了提高丝锥的锋利度，加大前角<br>2. 为了减小扭矩扩大铲背减小刀刃厚度<br><br>1.Increase rake angle to improve cutting sharpness.<br>2.Increase amount of thread relief and reduce land width to reduce friction torque. | 1. 磨损部全部清除<br>2. 缩短复磨周期<br>1.Make sure there are no worn-out areas.<br>2.Shorten regrinding intervals.                        |                                        |                                                                                                                                   |
|                      | 使用条件不当<br>Incorrect operating conditions |                                                                                                                                                                                                 |                                                                                                                                                                                            |                                                                                                                               | 保持稳定进给<br>Avoid inconsistent feed rate | 1. 使用带有扭矩调整功能的装置<br>2. 保持浮动攻丝<br><br>1.Use a tap holder that has torque adjustment function.<br>2.Use a floating type tap holder. |
| 刀刃损伤<br>Chipping     | 丝锥选型不当<br>Incorrect tap selection        | 防止切屑堵塞<br>Prevent chip clogging                                                                                                                                                                 | 1. 缩短螺纹长度<br>2. 更换刀具材料<br>3. 降低硬度<br>4. 加长切削锥的长度<br>1.Reduce thread length.<br>2.Change tool material.<br>3.Reduce hardness of the tap.<br>4.Increase chamfer length.                      | 1. 磨损部全部清除<br>2. 避免刀刃厚度过小<br>1.Make sure there are no worn-out areas.<br>2.Make sure that land width is not excessively thin. |                                        |                                                                                                                                   |
|                      | 使用条件不当<br>Incorrect operating conditions |                                                                                                                                                                                                 |                                                                                                                                                                                            |                                                                                                                               | 保持稳定进给<br>Avoid inconsistent feed rate | 1. 盲孔时回转不宜过快<br>2. 使用柔性攻丝夹具<br><br>1.When tapping hole, do not reverse rotation suddenly.<br>2.Use floating type tap holder.      |
| 磨损<br>Excessive Wear | 丝锥选型不当<br>Incorrect tap selection        | 1. 选择经过表面处理（氧化处理、涂层处理）的丝锥<br>2. 选用 EX 型丝锥或粉末高速钢丝锥<br><br>1.Select surface-treatment (steam oxide or coating).<br>2.Select High-Speed Steel tap that contains high vanadium or powder metal tap. | 切削材料硬度高的情况下刀具要进行表面处理<br>If tapping material is hard, improve tool material or apply surface treatment.                                                                                     | 1. 防止前角过大<br>2. 防止研磨时的发热过高<br>1.Make sure that rake angle is not too large.<br>2.Avoid tapping burn.                          | 螺距进给<br>Switch to pitch feed mode.     | 1. 防止轴心的振动<br>2. 使用柔性攻丝夹具<br><br>1.Avoid runout of spindle.<br>2.Use a floating type tap holder.                                  |
|                      | 使用条件不当<br>Incorrect operating conditions |                                                                                                                                                                                                 |                                                                                                                                                                                            |                                                                                                                               |                                        |                                                                                                                                   |
| 粘结<br>Galling        | 摩擦热过高<br>Excessive frictional heat       |                                                                                                                                                                                                 | 1. 适当加工铲背<br>2. 减小刀刃厚度<br>1.Increase amount of thread relief<br>2.Reduce land width.                                                                                                       |                                                                                                                               |                                        |                                                                                                                                   |

| 使用条件<br>Operating Conditions                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  | 加工材料<br>Work Material                                                                                              |                 |                                                                                                                                                                                                                      | 其他<br>Other |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 切削条件<br>Tapping Conditions                                                                                                                                                                                                              | 切削油剂<br>Cutting Lubricant                                                                                                                                                                                                                                                        | 硬度<br>Hardness                                                                                                     | 形状<br>Dimension | 螺纹底孔<br>Drill Hole                                                                                                                                                                                                   |             |
|                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                  |                                                                                                                    |                 |                                                                                                                                                                                                                      |             |
| 1. 降低切削速度<br>2. 防止丝锥与底孔的偏心 and 底孔的倾斜<br>3. 防止碰到底孔底部<br><br>1.Reduce tapping speed.<br>2.Avoid misalignment between tap and drilled hole as well as inclination of drilled hole.<br>3.Avoid hitting bottom of the drilled hole with tap. |                                                                                                                                                                                                                                                                                  | 注意加工材料的硬度及组织结构的均一性<br>Pay special attention to changes and variations in tapping material, hardness and structure. |                 | 1. 防止底孔的偏心和倾斜<br>2. 防止底孔的加工硬化<br>3. 去除前一工序产生的切屑<br><br>1.Avoid misalignment and inclination from drilled hole.<br>2.Avoid work hardening of the hole after tapping.<br>3.Remove chips generated in previous process. |             |
|                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                  |                                                                                                                    |                 |                                                                                                                                                                                                                      |             |
| 1. 降低切削速度<br>2. 防止底孔偏心和倾斜<br><br>1.Reduce tapping speed.<br>2.Avoid misalignment between tap and drilled hole as well as inclination of drilled hole.                                                                                   | 选用溶着性好的切削油剂<br>Use lubricant that has higher anti-galling properties.                                                                                                                                                                                                            | 注意加工材料的硬度及组织结构的均一性<br>Pay special attention to changes and variations in tapping material, hardness and structure. |                 | 1. 防止底孔的偏心和倾斜<br>2. 防止底孔加工时的加工硬化<br><br>1.Avoid misalignment and inclination from drilled hole.<br>2.Avoid work hardening of the hole after tapping.                                                                 |             |
|                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                  |                                                                                                                    |                 |                                                                                                                                                                                                                      |             |
| 1. 降低切削速度<br>2. 防止底孔加工时的加工硬化<br><br>1.Reduce tapping speed.<br>2.Avoid work hardening of the hole after tapping.                                                                                                                        | 调整切削油剂种类及供油方法<br>Review lubricant type and lubricating method.                                                                                                                                                                                                                   | 注意加工材料的硬度及组织结构的均一性<br>Pay special attention to changes and variations in tapping material, hardness and structure. |                 | 1. 尽可能加大底孔径<br>2. 加工盲孔时，底孔尽可能深<br>3. 防止产生底孔的加工硬化<br><br>1.Make hole as large as possible.<br>2. In the case of a blind hole, make it as deep as possible.<br>3.Avoid work hardening of the hole after tapping.       |             |
| 降低切削速度<br>Reduce tapping speed.                                                                                                                                                                                                         | 1. 调整切削油剂种类及供油方法<br>2. 调整切削油剂的更换周期及补充周期<br>3. 防止其他油剂（如润滑油）混入<br>4. 过滤切削油<br><br>1.Review lubricant type and lubricating method.<br>2.Correct lubricant change replenishment intervals.<br>3.Prevent entry of other oils such as operating oil.<br>4.Filtrate oil stored in tank. |                                                                                                                    |                 |                                                                                                                                                                                                                      |             |

RECOMMENDED CUTTING SPEEDS AND LUBRICANTS

切削速度和切削油剂

■ 选定切削速度时必须考虑丝锥的材质，种类、牙数、底孔形状，加工材质及切削油剂等加工条件，另外切削油剂、具有润滑，冷却，抗溶着 3 种作用，攻丝加工是一种复杂加工，必须选择适当的切削油剂。

This chart shows the recommended cutting speeds and cutting fluids. Tap material, type of tap, chamfer length, dimension of drill hole, work materials and cutting fluids are important factors for determining suitable cutting speed. Lubrication, cooling, capability and adhesion resistance are the three important factors effecting cutting fluid.

■ 标准切削速度与适用切削油剂 Recommended Standard Cutting Speeds And Application Of Cutting Fluids

| 加工材料<br>Work Material                                 |                                           | 切削速度 Cutting Speed (m/min)      |                                    |                                     |                                       |                           |                                         |                            | 切削油剂 Cutting Fluids        |                               |                 |           |
|-------------------------------------------------------|-------------------------------------------|---------------------------------|------------------------------------|-------------------------------------|---------------------------------------|---------------------------|-----------------------------------------|----------------------------|----------------------------|-------------------------------|-----------------|-----------|
|                                                       |                                           | ※直槽丝锥<br>Straight<br>Fluted Tap | ※螺旋槽<br>丝锥<br>Spiral<br>Fluted Tap | ※刃倾角<br>丝锥<br>Spiral<br>Pointed Tap | 硬质合<br>金丝锥<br>Tungsten<br>Carbide Tap | ※挤压丝锥<br>Fluteless<br>Tap | 高速同步<br>丝锥<br>High Speed<br>Synchro Tap | 管用丝锥<br>Pipe Thread<br>Tap | 油性<br>Non-Water<br>Soluble | 水溶性<br>(乳化液)<br>Water-Soluble | 半干式<br>Semi-Dry | 干式<br>Dry |
| 软钢・低碳素钢<br>Mild Steel<br>Low Carbon Steel             | C0.25%以下<br>≤ C0.25%                      | 8~13                            | 8~13                               | 15~25                               | —                                     | 8~13                      | 27~32                                   | 3~6                        | ◎                          | ○                             | —               | —         |
| 中碳素钢<br>Medium Carbon<br>Steel                        | C0.25 ~<br>0.45%                          | 7~12                            | 7~12                               | 10~15                               | —                                     | 7~10                      | 27~32                                   | 3~6                        | ◎                          | ○                             | —               | —         |
| 高碳素钢<br>High Carbon Steel                             | C0.45 以上<br>≥ C0.45%                      | 6~9                             | 6~9                                | 8~13                                | —                                     | 5~8                       | 22~27                                   | 2~5                        | ◎                          | ○                             | —               | —         |
| 合金钢<br>Alloy Steel                                    | SCM                                       | 7~12                            | 7~12                               | 10~15                               | —                                     | 5~8                       | 22~27                                   | 2~5                        | ◎                          | △                             | —               | —         |
| 调质钢<br>Hardened Steel                                 | 25 ~<br>45HRC                             | 3~5<br>(4~8)                    | 3~5<br>(4~8)                       | 4~6<br>(6~10)                       | —                                     | —                         | —                                       | 2~5                        | ◎                          | △                             | —               | —         |
| 不锈钢<br>Stainless Steel                                | SUS                                       | 4~7                             | 5~8                                | 8~13                                | —                                     | 5~10                      | —                                       | 3~6                        | ◎                          | ○                             | —               | —         |
| 析出硬化体不锈钢<br>Precipitation Hardened<br>Stainless Steel | SUS630<br>SUS631                          | 3~5                             | 3~5                                | 4~6                                 | —                                     | —                         | —                                       | 2~5                        | ◎                          | —                             | —               | —         |
| 工具钢<br>Tool Steel                                     | SKD                                       | 6~9                             | 6~9                                | 7~10                                | —                                     | —                         | —                                       | 2~5                        | ◎                          | —                             | —               | —         |
| 铸钢<br>Cast Steel                                      | SC                                        | 6~11                            | 6~11                               | 10~15                               | —                                     | —                         | 17~22                                   | 2~5                        | ◎                          | ○                             | —               | —         |
| 铸铁<br>Cast Iron                                       | FC                                        | 10~15                           | —                                  | —                                   | 10~20                                 | —                         | —                                       | 2~5                        | ◎                          | ○                             | ○               | ○         |
| 球墨铸铁<br>Ductile Cast Iron                             | FCD                                       | 7~12                            | 7~12                               | 10~20                               | 10~20                                 | —                         | —                                       | 4~8                        | ◎                          | ○                             | ○               | —         |
| 铜<br>Copper                                           | CU                                        | 6~9                             | 6~11                               | 7~12                                | 10~20                                 | 7~12                      | 27~32                                   | 2~5                        | ○                          | ○                             | —               | —         |
| 黄铜・黄铜铸件<br>Brass Casting                              | Bs・BsC                                    | 10~15                           | 10~20                              | 15~25                               | 15~25                                 | 7~12                      | 27~32                                   | 5~10                       | ○                          | ○                             | ○               | ○         |
| 青铜・青铜铸件<br>Bronze Casting                             | PB・PBC                                    | 6~11                            | 6~11                               | 10~20                               | 10~20                                 | 7~12                      | —                                       | 6~11                       | ○                          | ○                             | —               | —         |
| 变形铝<br>Aluminum Rolled Steel                          | AL                                        | 10~20                           | 10~20                              | 15~25                               | —                                     | 7~12                      | 100~300                                 | 5~10                       | ◎                          | ○                             | —               | —         |
| 铝合金铸件<br>Aluminum Alloy Casting                       | AC・ADC                                    | 10~15                           | 10~15                              | 15~20                               | 10~20                                 | 12~20                     | 80~300                                  | 10~15                      | ◎                          | ○                             | —               | —         |
| 镁合金铸件<br>Magnesium Alloy<br>Casting                   | MC                                        | 7~12                            | 7~12                               | 10~15                               | 10~20                                 | —                         | —                                       | 10~15                      | ◎                          | ○                             | —               | —         |
| 锌合金铸件<br>Zinc Alloy Casting                           | ZDC                                       | 7~12                            | 7~12                               | 10~15                               | 10~20                                 | 7~12                      | 27~100                                  | 10~15                      | ◎                          | ○                             | —               | —         |
| 热硬化性塑料<br>Thermo Setting Plastic                      | 酚醛树脂<br>环氧树脂<br>Bakelite Phenol<br>Epoxy  | 10~20                           | —                                  | —                                   | 15~25                                 | —                         | —                                       | 5~10                       | —                          | ○                             | ○               | ○         |
| 热可塑性塑料<br>Thermo Plastic                              | 氯乙烯 尼龙<br>共聚甲胺<br>Vinyl Chloride<br>Nylon | 10~20                           | 10~15                              | 10~20                               | 10~20                                 | —                         | 27~32                                   | 5~10                       | —                          | ○                             | —               | —         |

1. 此表为一般性的选定基准，请根据使用条件进行变更。  
2. 选择丝锥时，请参照不同用途丝锥选型基准表。  
3. 调质钢一栏的 ( ) 内为 CPM 丝锥系列的切削速度。  
※ 涂层系列的参数请按照表中数值 +30%~+50% 的标准设定。  
但不包括氧化处理和氮化处理。

◎ 最适 ○ Ideal ○ 适用 ○ Good △ 可使用 △ Applicable — 不可使用 — Not Applicable  
1. These are general recommendations which depending upon conditions, may be altered.  
2. To select the best taps, please see TAP selection chart.  
3. ( ) = recommendation for CPM taps.  
※ Please apply +30 ~ +50% higher speed for coated tap (Exclude Steam Oxide and Nitride Treatment)

KOLOBO

