



## HT Hand Taps

metric ISO-thread DIN 13

## 手用丝锥

公制ISO螺纹 DIN 13



**JIS B 4430 HSS-G Tol. ISO2/6H**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| M 2 x 0.4             | 42  | 15  | 3.0  | 2.5  | 90414    |
| M 2.3 x 0.4           | 42  | 15  | 3.0  | 2.5  | 90416    |
| M 2.5 x 0.45          | 44  | 16  | 3.0  | 2.5  | 90418    |
| M 2.6 x 0.45          | 44  | 16  | 3.0  | 2.5  | 90420    |
| M 3 x 0.5             | 46  | 18  | 4.0  | 3.2  | 90422    |
| M 3.5 x 0.6           | 48  | 18  | 4.0  | 3.2  | 90424    |
| M 4 x 0.7             | 52  | 20  | 5.0  | 4.0  | 90426    |
| M 5 x 0.8             | 60  | 22  | 5.5  | 4.5  | 90430    |
| M 6 x 1.0             | 62  | 24  | 6.0  | 4.5  | 90438    |
| M 7 x 1.0             | 65  | 26  | 6.2  | 4.5  | 90444    |
| M 8 x 1.25            | 70  | 30  | 6.2  | 5.0  | 90446    |
| M 10 x 1.5            | 75  | 32  | 7.0  | 5.5  | 90454    |
| M 12 x 1.75           | 82  | 38  | 8.5  | 6.5  | 90460    |
| M 14 x 2.0            | 88  | 42  | 10.5 | 8.0  | 90466    |
| M 16 x 2.0            | 95  | 45  | 12.5 | 10.0 | 90472    |
| M 18 x 2.5            | 100 | 48  | 14.0 | 11.0 | 90478    |
| M 20 x 2.5            | 105 | 50  | 15.0 | 12.0 | 90484    |
| M 22 x 2.5            | 115 | 55  | 17.0 | 13.0 | 90490    |
| M 24 x 3.0            | 120 | 58  | 19.0 | 15.0 | 90496    |
| M 27 x 3.0            | 130 | 62  | 20.0 | 15.0 | 91402    |
| M 30 x 3.5            | 135 | 65  | 23.0 | 17.0 | 91408    |

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

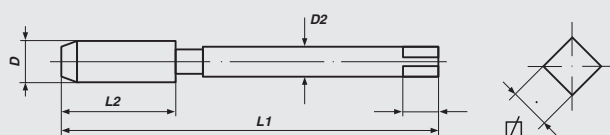
#### How to order/如何订货:

- M3 = 90422
- M3, No. 1 = 90422-1
- M3, No. 2 = 90422-2
- M3, No. 3 = 90422-3

### 应用:

#### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔和盲孔
- 手用





## HT Hand Taps

metric-fine ISO-thread DIN 13

## 手用丝锥

公制细牙ISO螺纹 DIN 13



**JIS B 4430**

**HSS-G**

**Tol. ISO2/6H**

**Mf**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| M 5 x 0.75            | 60  | 22  | 5.5  | 4.5  | 90431    |
| M 6 x 0.75            | 62  | 24  | 6.0  | 4.5  | 90440    |
| M 8 x 1.0             | 70  | 30  | 6.2  | 5.0  | 90448    |
| M 8 x 0.75            | 70  | 30  | 6.2  | 5.0  | 90450    |
| M 10 x 1.25           | 75  | 32  | 7.0  | 5.5  | 90455    |
| M 10 x 1.0            | 75  | 32  | 7.0  | 5.5  | 90456    |
| M 12 x 1.5            | 82  | 38  | 8.5  | 6.5  | 90462    |
| M 12 x 1.25           | 82  | 38  | 8.5  | 6.5  | 90463    |
| M 12 x 1.0            | 82  | 38  | 8.5  | 6.5  | 90464    |
| M 14 x 1.5            | 88  | 42  | 10.5 | 8.0  | 90468    |
| M 14 x 1.25           | 88  | 39  | 10.5 | 8.0  | 90469    |
| M 14 x 1.0            | 70  | 30  | 10.5 | 8.0  | 90470    |
| M 16 x 1.5            | 95  | 45  | 12.5 | 10.0 | 90474    |
| M 16 x 1.0            | 75  | 30  | 12.5 | 10.0 | 90476    |
| M 18 x 1.5            | 95  | 45  | 14.0 | 11.0 | 90480    |
| M 18 x 1.0            | 95  | 45  | 14.0 | 11.0 | 90482    |
| M 20 x 1.5            | 95  | 45  | 15.0 | 12.0 | 90486    |
| M 20 x 1.0            | 80  | 30  | 15.0 | 12.0 | 90488    |
| M 22 x 2.0            | 95  | 45  | 17.0 | 13.0 | 90493    |
| M 22 x 1.5            | 95  | 45  | 17.0 | 13.0 | 90492    |
| M 22 x 1.0            | 95  | 45  | 17.0 | 13.0 | 90494    |
| M 24 x 1.5            | 95  | 45  | 19.0 | 15.0 | 90498    |
| M 27 x 1.5            | 95  | 45  | 20.0 | 15.0 | 91406    |
| M 30 x 1.5            | 105 | 45  | 23.0 | 17.0 | 91409    |

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand

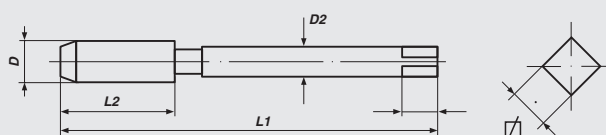
### How to order/如何订货:

- M3 = 90448
- M3, No. 1 = 90448-1
- M3, No. 2 = 90448-2
- M3, No. 3 = 90448-3

### 应用:

#### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔和盲孔
- 手用





## PO Spiral Pointed Taps

metric ISO-thread DIN 13

### 螺尖丝锥

公制ISO螺纹 DIN 13



**JIS B 4430**

**HSS-E**

**Tol. ISO2/6H**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| M 2.6 x 0.45          | 44  | 16  | 3.0  | 2.5  | 90520    |
| M 3.0 x 0.5           | 46  | 18  | 4.0  | 3.2  | 90522    |
| M 3.5 x 0.6           | 48  | 18  | 4.0  | 3.2  | 90524    |
| M 4 x 0.7             | 52  | 20  | 5.0  | 4.0  | 90526    |
| M 5 x 0.8             | 60  | 22  | 5.5  | 4.5  | 90530    |
| M 6 x 1.0             | 62  | 24  | 6.0  | 4.5  | 90538    |
| M 7 x 1.0             | 65  | 26  | 6.2  | 4.5  | 90544    |
| M 8 x 1.25            | 70  | 30  | 6.2  | 5.0  | 90546    |
| M 10 x 1.5            | 75  | 32  | 7.0  | 5.5  | 90554    |
| M 12 x 1.75           | 82  | 38  | 8.5  | 6.5  | 90560    |
| M 14 x 2.0            | 88  | 42  | 10.5 | 8.0  | 90566    |
| M 16 x 2.0            | 95  | 45  | 12.5 | 10.0 | 90572    |
| M 18 x 2.5            | 100 | 48  | 14.0 | 11.0 | 90578    |
| M 20 x 2.5            | 105 | 50  | 15.0 | 12.0 | 90584    |
| M 22 x 2.5            | 115 | 55  | 17.0 | 13.0 | 90590    |
| M 24 x 3.0            | 120 | 58  | 19.0 | 15.0 | 90596    |
| M 27 x 3.0            | 130 | 62  | 20.0 | 15.0 | 91502    |
| M 30 x 3.5            | 135 | 65  | 23.0 | 17.0 | 91508    |

#### Application:

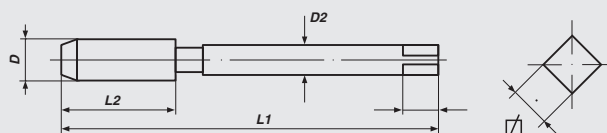
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔
- 手用和机用





## PO Spiral Pointed Taps

metric-fine ISO-thread DIN 13

### 螺尖丝锥

公制细牙ISO螺纹 DIN 13



**JIS B 4430**

**HSS-E**

**Tol. ISO2/6H**

**Mf**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| M 6 x 0.75            | 62  | 24  | 6.0  | 4.5  | 90540    |
| M 8 x 1.0             | 70  | 30  | 6.2  | 5.0  | 90548    |
| M 8 x 0.75            | 70  | 30  | 6.2  | 5.0  | 90550    |
| M 10 x 1.25           | 75  | 32  | 7.0  | 5.5  | 90555    |
| M 10 x 1.0            | 75  | 32  | 7.0  | 5.5  | 90556    |
| M 12 x 1.5            | 82  | 38  | 8.5  | 6.5  | 90562    |
| M 12 x 1.25           | 82  | 38  | 8.5  | 6.5  | 90563    |
| M 12 x 1.0            | 82  | 38  | 8.5  | 6.5  | 90564    |
| M 14 x 1.5            | 88  | 42  | 10.5 | 8.0  | 90568    |
| M 14 x 1.25           | 88  | 39  | 10.5 | 8.0  | 90569    |
| M 14 x 1.0            | 70  | 30  | 10.5 | 8.0  | 90570    |
| M 16 x 1.5            | 95  | 45  | 12.5 | 10.0 | 90574    |
| M 16 x 1.0            | 75  | 30  | 12.5 | 10.0 | 90576    |
| M 18 x 1.5            | 95  | 45  | 14.0 | 11.0 | 90580    |
| M 18 x 1.0            | 95  | 45  | 14.0 | 11.0 | 90582    |
| M 20 x 1.5            | 95  | 45  | 15.0 | 12.0 | 90586    |
| M 20 x 1.0            | 80  | 30  | 15.0 | 12.0 | 90588    |
| M 22 x 2.0            | 95  | 45  | 17.0 | 13.0 | 90593    |
| M 22 x 1.5            | 95  | 45  | 17.0 | 13.0 | 90592    |
| M 22 x 1.0            | 95  | 45  | 17.0 | 13.0 | 90594    |
| M 24 x 1.5            | 95  | 45  | 19.0 | 15.0 | 90598    |
| M 27 x 1.5            | 95  | 45  | 20.0 | 15.0 | 91506    |
| M 30 x 1.5            | 105 | 45  | 23.0 | 17.0 | 91509    |

#### Application:

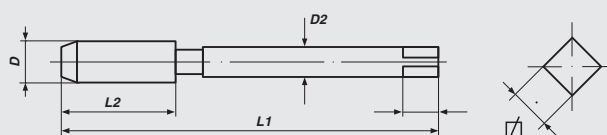
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔
- 手用和机用





## SP Spiral Fluted Taps

metric ISO-thread DIN 13

### 螺旋槽丝锥

公制ISO螺纹 DIN 13



JIS B 4430

HSS-E

Tol. ISO2/6H

**M**

| Nominal Diameter | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|------------------|-----|-----|------|------|----------|
| M 2.5 x 0.45     | 44  | 16  | 3.0  | 2.5  | 90718    |
| M 2.6 x 0.45     | 44  | 16  | 3.0  | 2.5  | 90720    |
| M 3 x 0.5        | 46  | 18  | 4.0  | 3.2  | 90722    |
| M 3.5 x 0.6      | 48  | 18  | 4.0  | 3.2  | 90724    |
| M 4 x 0.7        | 52  | 20  | 5.0  | 4.0  | 90726    |
| M 5 x 0.8        | 60  | 22  | 5.5  | 4.5  | 90730    |
| M 6 x 1.0        | 62  | 24  | 6.0  | 4.5  | 90738    |
| M 7 x 1.0        | 65  | 26  | 6.2  | 4.5  | 90744    |
| M 8 x 1.25       | 70  | 30  | 6.2  | 5.0  | 90746    |
| M 10 x 1.5       | 75  | 32  | 7.0  | 5.5  | 90754    |
| M 12 x 1.75      | 82  | 38  | 8.5  | 6.5  | 90760    |
| M 14 x 2.0       | 88  | 42  | 10.5 | 8.0  | 90766    |
| M 16 x 2.0       | 95  | 45  | 12.5 | 10.0 | 90772    |
| M 18 x 2.5       | 100 | 48  | 14.0 | 11.0 | 90778    |
| M 20 x 2.5       | 105 | 50  | 15.0 | 12.0 | 90784    |
| M 22 x 2.5       | 115 | 55  | 17.0 | 13.0 | 90790    |
| M 24 x 3.0       | 120 | 58  | 19.0 | 15.0 | 90796    |
| M 27 x 3.0       | 130 | 62  | 20.0 | 15.0 | 91702    |
| M 30 x 3.5       | 135 | 65  | 23.0 | 17.0 | 91708    |

#### Application:

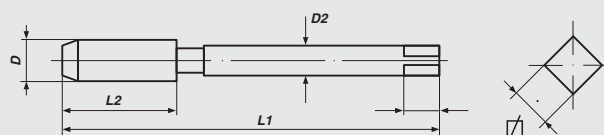
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 盲孔
- 手用和机用





## SP Spiral Fluted Taps

metric-fine ISO-thread DIN 13

### 螺旋槽丝锥

公制细牙ISO螺纹 DIN 13



**JIS B 4430**

**HSS-E**

**Tol. 2B**

**Mf**

| Nominal Diameter | L 1 | L 2 | D 2  | Ø    | Art.-No. |
|------------------|-----|-----|------|------|----------|
| M 6 x 0.75       | 62  | 24  | 6.0  | 4.5  | 90740    |
| M 8 x 1.0        | 70  | 30  | 6.2  | 5.0  | 90748    |
| M 8 x 0.75       | 70  | 30  | 6.2  | 5.0  | 90750    |
| M 10 x 1.25      | 75  | 32  | 7.0  | 5.5  | 90755    |
| M 10 x 1.0       | 75  | 32  | 7.0  | 5.5  | 90756    |
| M 12 x 1.5       | 82  | 38  | 8.5  | 6.5  | 90762    |
| M 12 x 1.25      | 82  | 38  | 8.5  | 6.5  | 90763    |
| M 12 x 1.0       | 82  | 38  | 8.5  | 6.5  | 90764    |
| M 14 x 1.5       | 88  | 42  | 10.5 | 8.0  | 90768    |
| M 14 x 1.25      | 88  | 39  | 10.5 | 8.0  | 90769    |
| M 14 x 1.0       | 70  | 30  | 10.5 | 8.0  | 90770    |
| M 16 x 1.5       | 95  | 45  | 12.5 | 10.0 | 90774    |
| M 16 x 1.0       | 75  | 30  | 12.5 | 10.0 | 90776    |
| M 18 x 1.5       | 95  | 45  | 14.0 | 11.0 | 90780    |
| M 18 x 1.0       | 95  | 45  | 14.0 | 11.0 | 90782    |
| M 20 x 1.5       | 95  | 45  | 15.0 | 12.0 | 90786    |
| M 20 x 1.0       | 80  | 30  | 15.0 | 12.0 | 90788    |
| M 22 x 2.0       | 95  | 45  | 17.0 | 13.0 | 90793    |
| M 22 x 1.5       | 95  | 45  | 17.0 | 13.0 | 90792    |
| M 22 x 1.0       | 95  | 45  | 17.0 | 13.0 | 90794    |
| M 24 x 1.5       | 95  | 45  | 19.0 | 15.0 | 90798    |
| M 27 x 1.5       | 95  | 45  | 20.0 | 15.0 | 91706    |
| M 30 x 1.5       | 105 | 45  | 23.0 | 17.0 | 91709    |

#### Application:

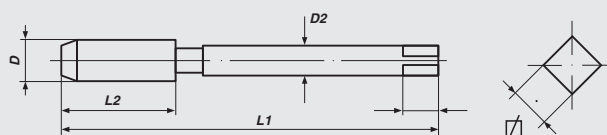
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 盲孔
- 手用和机用





**HT Hand Taps**  
Whitworth-thread BS 84

**手用丝锥**  
惠氏螺纹 BS 84



**JIS B 4430 HSS-G Tol. ISO2/6H**

**W (BSW)**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| W 1/8x40              | 47  | 11  | 4.0  | 3.2  | 94406    |
| W 5/32x32             | 53  | 14  | 5.0  | 4.0  | 94408    |
| W 3/16x24             | 60  | 17  | 5.5  | 4.5  | 94410    |
| W 1/4x20              | 62  | 20  | 6.0  | 4.5  | 94414    |
| W 5/16x18             | 70  | 23  | 6.1  | 5.0  | 94416    |
| W 3/8x16              | 75  | 25  | 7.0  | 5.5  | 94418    |
| W 7/16x14             | 80  | 24  | 8.0  | 6.0  | 94420    |
| W 1/2x13              | 85  | 30  | 9.0  | 7.0  | 94422    |
| W 9/16x12             | 90  | 30  | 10.5 | 8.0  | 94424    |
| W 5/8x11              | 95  | 32  | 12.0 | 9.0  | 94426    |
| W 3/4x10              | 105 | 38  | 14.0 | 11.0 | 94430    |
| W 7/8x 9              | 115 | 38  | 17.0 | 13.0 | 94434    |
| W 1"x 8               | 126 | 45  | 20.0 | 15.0 | 94438    |
| W 1.1/4x 7            | 145 | 51  | 24.0 | 19.0 | 94440    |

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand and machine

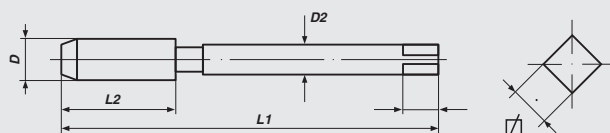
**应用:**

**通用**

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔和盲孔
- 手用和机用

**How to order/如何订货:**

- W 1/8 = 94406
- W 1/8, No. 1 = 94406-1
- W 1/8, No. 2 = 94406-2
- W 1/8, No. 3 = 94406-3





## PO Spiral Pointed Taps

Whitworth-thread BS 84

### 螺尖丝锥

惠氏螺纹 BS 84



**JIS B 4430 HSS-E**

**W (BSW)**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| W 1/8x40              | 47  | 11  | 4.0  | 3.2  | 94506    |
| W 5/32x32             | 53  | 14  | 5.0  | 4.0  | 94508    |
| W 3/16x24             | 60  | 17  | 5.5  | 4.5  | 94510    |
| W 1/4x20              | 62  | 20  | 6.0  | 4.5  | 94514    |
| W 5/16x18             | 70  | 23  | 6.1  | 5.0  | 94516    |
| W 3/8x16              | 75  | 25  | 7.0  | 5.5  | 94518    |
| W 7/16x14             | 80  | 24  | 8.0  | 6.0  | 94520    |
| W 1/2x13              | 85  | 30  | 9.0  | 7.0  | 94522    |
| W 9/16x12             | 90  | 30  | 10.5 | 8.0  | 94524    |
| W 5/8x11              | 95  | 32  | 12.0 | 9.0  | 94526    |
| W 3/4x10              | 105 | 38  | 14.0 | 11.0 | 94530    |
| W 7/8x 9              | 115 | 38  | 17.0 | 13.0 | 94534    |
| W 1"x 8               | 126 | 45  | 20.0 | 15.0 | 94538    |
| W 1.1/4x 7            | 145 | 51  | 24.0 | 19.0 | 94540    |

#### Application:

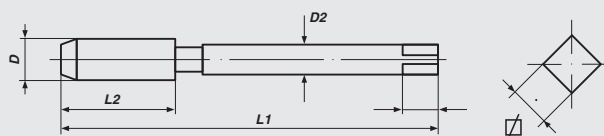
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##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔
- 手用和机用







## SP Spiral Fluted Taps

Whitworth-thread BS 84

### 螺旋槽丝锥

惠氏螺纹 BS 84



**JIS B 4430 HSS-E**

**W (BSW)**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| W 1/8x40              | 47  | 11  | 4.0  | 3.2  | 94706    |
| W 5/32x32             | 53  | 14  | 5.0  | 4.0  | 94708    |
| W 3/16x24             | 60  | 17  | 5.5  | 4.5  | 94710    |
| W 1/4x20              | 62  | 20  | 6.0  | 4.5  | 94714    |
| W 5/16x18             | 70  | 23  | 6.1  | 5.0  | 94716    |
| W 3/8x16              | 75  | 25  | 7.0  | 5.5  | 94718    |
| W 7/16x14             | 80  | 24  | 8.0  | 6.0  | 94720    |
| W 1/2x13              | 85  | 30  | 9.0  | 7.0  | 94722    |
| W 9/16x12             | 90  | 30  | 10.5 | 8.0  | 94724    |
| W 5/8x11              | 95  | 32  | 12.0 | 9.0  | 94726    |
| W 3/4x10              | 105 | 38  | 14.0 | 11.0 | 94730    |
| W 7/8x 9              | 115 | 38  | 17.0 | 13.0 | 94734    |
| W 1"x 8               | 126 | 45  | 20.0 | 15.0 | 94738    |
| W 1.1/4x17            | 145 | 51  | 24.0 | 19.0 | 94740    |

#### Application:

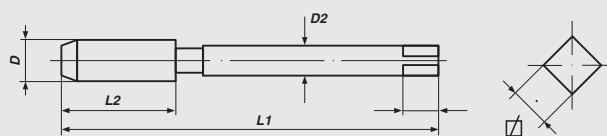
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 盲孔
- 手用和机用





## HT Hand Taps

Unified thread ANSI B 1.1

## 手用丝锥

统一制螺纹 ANSI B 1.1



**JIS B 4430 HSS-G Tol. 2B**

**UNC / UNF**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | Ø | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

### UNC

|             |     |    |      |      |       |
|-------------|-----|----|------|------|-------|
| UNC 3/16x24 | 60  | 17 | 5.5  | 4.5  | 93413 |
| UNC 1/4x20  | 62  | 20 | 6.0  | 4.5  | 93414 |
| UNC 5/16x18 | 70  | 23 | 6.1  | 5.0  | 93415 |
| UNC 3/8x16  | 75  | 25 | 7.0  | 5.5  | 93416 |
| UNC 7/16x14 | 80  | 24 | 8.0  | 6.0  | 93417 |
| UNC 1/2x13  | 85  | 30 | 9.0  | 7.0  | 93418 |
| UNC 5/8x11  | 95  | 32 | 12.0 | 9.0  | 93420 |
| UNC 3/4x10  | 105 | 38 | 14.0 | 11.0 | 93422 |
| UNC 7/8x 9  | 115 | 38 | 17.0 | 13.0 | 93424 |
| UNC 1"x 8   | 126 | 45 | 20.0 | 15.0 | 93426 |

### UNF

|             |     |    |      |      |       |
|-------------|-----|----|------|------|-------|
| UNF 3/16x32 | 60  | 17 | 5.5  | 4.5  | 93463 |
| UNF 1/4x28  | 62  | 20 | 6.0  | 4.5  | 93464 |
| UNF 5/16x24 | 70  | 23 | 6.1  | 5.0  | 93465 |
| UNF 3/8x24  | 75  | 25 | 7.0  | 5.5  | 93466 |
| UNF 7/16x20 | 80  | 24 | 8.0  | 6.0  | 93467 |
| UNF 1/2x20  | 85  | 30 | 9.0  | 7.0  | 93468 |
| UNF 5/8x18  | 95  | 32 | 12.0 | 9.0  | 93470 |
| UNF 3/4x16  | 105 | 38 | 14.0 | 11.0 | 93472 |
| UNF 7/8x14  | 115 | 38 | 17.0 | 13.0 | 93474 |
| UNF 1"x12   | 126 | 45 | 20.0 | 15.0 | 93476 |

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand and machine

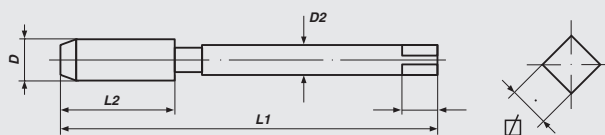
### 应用:

#### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔和盲孔
- 手用和机用

### How to order/如何订货:

- UNC 1/4 = 93414
- UNC 1/4, No. 1 = 93414-1
- UNC 1/4, No. 2 = 93414-2
- UNC 1/4, No. 3 = 93414-3





**PO Spiral Pointed Taps**  
Unified Coarse thread ANSI B 1.1

**螺尖丝锥**

统一制粗牙螺纹 ANSI B 1.1



**JIS B 4430**

**HSS-E**

**Tol. 2B**

**UNC**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| UNC Nr. 4x40          | 45  | 10  | 3.0  | 2.5  | 93504    |
| UNC Nr. 5x40          | 47  | 12  | 4.0  | 3.2  | 93505    |
| UNC Nr. 6x32          | 49  | 14  | 4.0  | 3.2  | 93506    |
| UNC Nr. 8x32          | 53  | 14  | 5.0  | 4.0  | 93508    |
| UNC Nr. 10x24         | 61  | 17  | 5.5  | 4.5  | 93509    |
| UNC Nr. 12x24         | 61  | 17  | 5.5  | 4.5  | 93510    |
| UNC 1/4x20            | 62  | 20  | 6.0  | 4.5  | 93514    |
| UNC 5/16x18           | 70  | 23  | 6.1  | 5.0  | 93515    |
| UNC 3/8x16            | 75  | 25  | 7.0  | 5.5  | 93516    |
| UNC 7/16x14           | 80  | 24  | 8.0  | 6.0  | 93517    |
| UNC 1/2x13            | 85  | 30  | 9.0  | 7.0  | 93518    |
| UNC 9/16x12           | 90  | 30  | 10.5 | 8.0  | 93519    |
| UNC 5/8x11            | 95  | 32  | 12.0 | 9.0  | 93520    |
| UNC 3/4x10            | 105 | 38  | 14.0 | 11.0 | 93522    |
| UNC 7/8x 9            | 115 | 38  | 17.0 | 13.0 | 93524    |
| UNC 1"x 8             | 126 | 45  | 20.0 | 15.0 | 93526    |

**Application:**

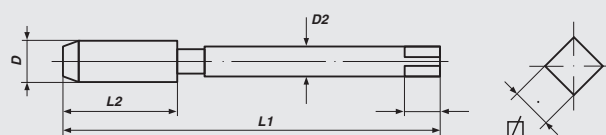
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

**应用:**

**通用**

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔
- 手用和机用





## PO Spiral Pointed Taps

Unified Fine thread ANSI B 1.1

### 螺尖丝锥

统一制细牙螺纹 ANSI B 1.1



**JIS B 4430**

**HSS-E**

**Tol. 2B**

**UNF**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| UNF Nr. 4x48          | 45  | 10  | 3.0  | 2.5  | 93554    |
| UNF Nr. 5x44          | 47  | 12  | 4.0  | 3.2  | 93555    |
| UNF Nr. 6x40          | 49  | 14  | 4.0  | 3.2  | 93556    |
| UNF Nr. 8x36          | 53  | 14  | 5.0  | 4.0  | 93558    |
| UNF Nr. 10x32         | 61  | 17  | 5.5  | 4.5  | 93559    |
| UNF Nr. 12x28         | 61  | 17  | 5.5  | 4.5  | 93560    |
| UNF 1/8x44            | 47  | 11  | 4.0  | 3.2  | 93561    |
| UNF 5/32x36           | 53  | 14  | 5.0  | 4.0  | 93562    |
| UNF 3/16x32           | 60  | 17  | 5.5  | 4.5  | 93563    |
| UNF 1/4x28            | 62  | 20  | 6.0  | 4.5  | 93564    |
| UNF 5/16x24           | 70  | 23  | 6.1  | 5.0  | 93565    |
| UNF 3/8x24            | 75  | 25  | 7.0  | 5.5  | 93566    |
| UNF 7/16x20           | 80  | 24  | 8.0  | 6.0  | 93567    |
| UNF 1/2x20            | 85  | 30  | 9.0  | 7.0  | 93568    |
| UNF 9/16x18           | 90  | 30  | 10.5 | 8.0  | 93569    |
| UNF 5/8x18            | 95  | 32  | 12.0 | 9.0  | 93570    |
| UNF 3/4x16            | 105 | 38  | 14.0 | 11.0 | 93572    |
| UNF 7/8x14            | 115 | 38  | 17.0 | 13.0 | 93574    |
| UNF 1"x12             | 126 | 45  | 20.0 | 15.0 | 93576    |

#### Application:

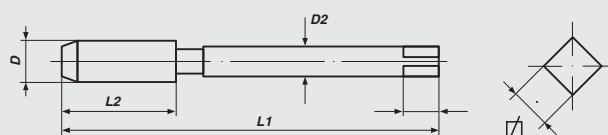
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔
- 手用和机用





**SP Spiral Fluted Taps**  
Unified Coarse thread ANSI B 1.1

**螺旋槽丝锥**  
统一制粗牙螺纹 ANSI B 1.1



**JIS B 4430 HSS-E Tol. 2B**

**UNC**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∩    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| UNC Nr. 4x40          | 45  | 10  | 3.0  | 2.5  | 93704    |
| UNC Nr. 5x40          | 47  | 12  | 4.0  | 3.2  | 93705    |
| UNC Nr. 6x32          | 49  | 14  | 4.0  | 3.2  | 93706    |
| UNC Nr. 8x32          | 53  | 14  | 5.0  | 4.0  | 93708    |
| UNC Nr. 10x24         | 61  | 17  | 5.5  | 4.5  | 93709    |
| UNC Nr. 12x24         | 61  | 17  | 5.5  | 4.5  | 93710    |
| UNC 1/8x40            | 47  | 11  | 4.0  | 3.2  | 93711    |
| UNC 5/32x32           | 53  | 14  | 5.0  | 4.0  | 93712    |
| UNC 3/16x24           | 60  | 17  | 5.5  | 4.5  | 93713    |
| UNC 1/4x20            | 62  | 20  | 6.0  | 4.5  | 93714    |
| UNC 5/16x18           | 70  | 23  | 6.1  | 5.0  | 93715    |
| UNC 3/8x16            | 75  | 25  | 7.0  | 5.5  | 93716    |
| UNC 7/16x14           | 80  | 24  | 8.0  | 6.0  | 93717    |
| UNC 1/2x13            | 85  | 30  | 9.0  | 7.0  | 93718    |
| UNC 9/16x12           | 90  | 30  | 10.5 | 8.0  | 93719    |
| UNC 5/8x11            | 95  | 32  | 12.0 | 9.0  | 93720    |
| UNC 3/4x10            | 105 | 38  | 14.0 | 11.0 | 93722    |
| UNC 7/8x 9            | 115 | 38  | 17.0 | 13.0 | 93724    |
| UNC 1"x 8             | 126 | 45  | 20.0 | 15.0 | 93726    |

**Application:**

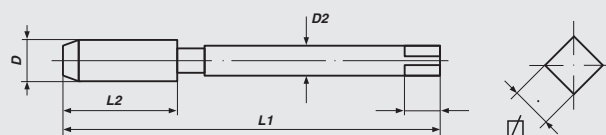
**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes
- for thread cutting by hand and machine

**应用:**

**通用**

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 盲孔
- 手用和机用





## SP Spiral Fluted Taps

Unified Fine thread ANSI B 1.1

### 螺旋槽丝锥

统一制细牙螺纹 ANSI B 1.1



**JIS B 4430**

**HSS-E**

**Tol. 2B**

**UNF**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | Ø    | Art.-No. |
|-----------------------|-----|-----|------|------|----------|
| UNF Nr. 4x48          | 45  | 10  | 3.0  | 2.5  | 93754    |
| UNF Nr. 5x44          | 47  | 12  | 4.0  | 3.2  | 93755    |
| UNF Nr. 6x40          | 49  | 14  | 4.0  | 3.2  | 93756    |
| UNF Nr. 8x36          | 53  | 14  | 5.0  | 4.0  | 93758    |
| UNF Nr. 10x32         | 61  | 17  | 5.5  | 4.5  | 93759    |
| UNF Nr. 12x28         | 61  | 17  | 5.5  | 4.5  | 93760    |
| UNF 1/8x44            | 47  | 11  | 4.0  | 3.2  | 93761    |
| UNF 5/32x36           | 53  | 14  | 5.0  | 4.0  | 93762    |
| UNF 3/16x32           | 60  | 17  | 5.5  | 4.5  | 93763    |
| UNF 1/4x28            | 62  | 20  | 6.0  | 4.5  | 93764    |
| UNF 5/16x24           | 70  | 23  | 6.1  | 5.0  | 93765    |
| UNF 3/8x24            | 75  | 25  | 7.0  | 5.5  | 93766    |
| UNF 7/16x20           | 80  | 24  | 8.0  | 6.0  | 93767    |
| UNF 1/2x20            | 85  | 30  | 9.0  | 7.0  | 93768    |
| UNF 9/16x18           | 90  | 30  | 10.5 | 8.0  | 93769    |
| UNF 5/8x18            | 95  | 32  | 12.0 | 9.0  | 93770    |
| UNF 3/4x16            | 105 | 38  | 14.0 | 11.0 | 93772    |
| UNF 7/8x14            | 115 | 38  | 17.0 | 13.0 | 93774    |
| UNF 1"x12             | 126 | 45  | 20.0 | 15.0 | 93776    |

#### Application:

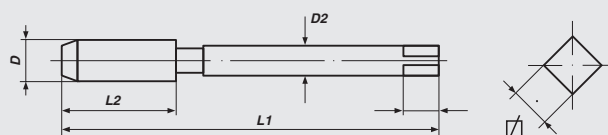
##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for blind holes
- for thread cutting by hand and machine

#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 盲孔
- 手用和机用





## Machine Taps

Pipe-thread ISO 7-1 (DIN EN 10226-1)

## 机用丝锥

管螺纹 ISO 7-1 (DIN EN 10226-1)



**JIS B 4430**

**HSS-G**

**PS (BSPP / Rp)**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | ☐ | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

### HT Straight Flute Form C / 直槽 Form C

|               |     |    |      |      |       |
|---------------|-----|----|------|------|-------|
| PS 1/16 x 28  | 55  | 19 | 6.5  | 5.0  | 95402 |
| PS 1/8 x 28   | 55  | 19 | 8.0  | 6.0  | 95406 |
| PS 1/4 x 19   | 62  | 28 | 11.0 | 9.0  | 95414 |
| PS 3/8 x 19   | 65  | 28 | 14.0 | 11.0 | 95418 |
| PS 1/2 x 14   | 80  | 35 | 18.0 | 14.0 | 95422 |
| PS 3/4 x 14   | 85  | 35 | 23.0 | 17.0 | 95430 |
| PS 1" x 11    | 95  | 45 | 26.0 | 21.0 | 95438 |
| PS 1.1/4 x 11 | 105 | 45 | 32.0 | 26.0 | 95446 |
| PS 1.1/2 x 11 | 110 | 45 | 38.0 | 29.0 | 95454 |
| PS 2" x 11    | 120 | 50 | 46.0 | 35.0 | 95470 |

### SP Spiral Flute / 螺旋槽

|               |     |    |      |      |       |
|---------------|-----|----|------|------|-------|
| PS 1/16 x 28  | 55  | 19 | 6.5  | 5.0  | 95702 |
| PS 1/8 x 28   | 55  | 19 | 8.0  | 6.0  | 95706 |
| PS 1/4 x 19   | 62  | 28 | 11.0 | 9.0  | 95714 |
| PS 3/8 x 19   | 65  | 28 | 14.0 | 11.0 | 95718 |
| PS 1/2 x 14   | 80  | 35 | 18.0 | 14.0 | 95722 |
| PS 3/4 x 14   | 85  | 35 | 23.0 | 17.0 | 95730 |
| PS 1" x 11    | 95  | 45 | 26.0 | 21.0 | 95738 |
| PS 1.1/4 x 11 | 105 | 45 | 32.0 | 26.0 | 95746 |
| PS 1.1/2 x 11 | 110 | 45 | 38.0 | 29.0 | 95754 |
| PS 2" x 11    | 120 | 50 | 46.0 | 35.0 | 95770 |

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Flute:** for blind holes

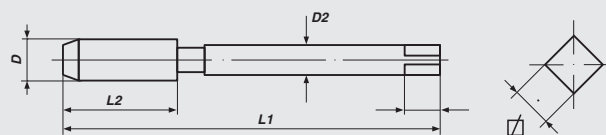
#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 手用和机用

**Form C:** 用于通孔和盲孔

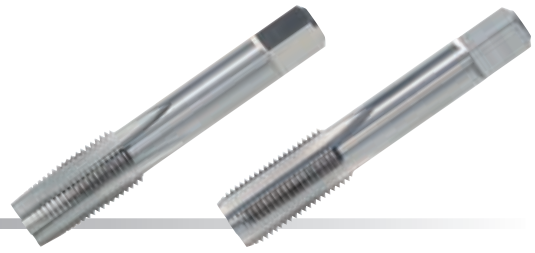
**螺旋槽:** 用于盲孔





**HT Hand Taps**  
Pipe-thread DIN ISO 228

**手用丝锥**  
管螺纹 DIN ISO 228



**JIS B 4430 HSS-G**

**PF (BSPF / G)**

| Nominal Diameter<br>D | L 1 | L 2  | D 2  | ∅    | Art.-No. |
|-----------------------|-----|------|------|------|----------|
| PF 1/16x28            | 55  | 17.5 | 8.0  | 6.0  | 96402    |
| PF 1/8x28             | 55  | 19.0 | 8.0  | 6.0  | 96406    |
| PF 1/4x19             | 62  | 28.0 | 11.0 | 9.0  | 96414    |
| PF 3/8x19             | 65  | 28.0 | 14.0 | 11.0 | 96418    |
| PF 1/2x14             | 80  | 35.0 | 18.0 | 14.0 | 96422    |
| PF 3/4x14             | 85  | 35.0 | 23.0 | 17.0 | 96430    |
| PF 1"x11              | 95  | 45.0 | 26.0 | 21.0 | 96438    |
| PF 1.1/4x11           | 105 | 45.0 | 32.0 | 26.0 | 96446    |
| PF 1.1/2x11           | 110 | 45.0 | 38.0 | 29.0 | 96454    |
| PF 2"x11              | 120 | 50.0 | 46.0 | 35.0 | 96470    |



**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for through and blind holes
- for thread cutting by hand and machine

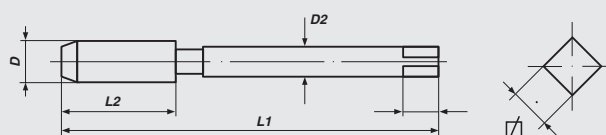
**应用:**

**通用**

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 通孔和盲孔
- 手用和机用

**How to order/如何订货:**

- PF 1/4 = 96402
- PF 1/4, No. 1 = 96402-1
- PF 1/4, No. 3 = 96402-3







**Machine Taps**  
Pipe-thread DIN ISO 228

**机用丝锥**  
管螺纹 DIN ISO 228



**JIS B 4430 HSS-E**

**PF (BSPF / G)**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | ☒ | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

**PO Spiral Point / 螺尖**

|             |     |      |      |      |       |
|-------------|-----|------|------|------|-------|
| PF 1/16x28  | 55  | 17.5 | 8.0  | 6.0  | 96502 |
| PF 1/8x28   | 55  | 19.0 | 8.0  | 6.0  | 96506 |
| PF 1/4x19   | 62  | 28.0 | 11.0 | 9.0  | 96514 |
| PF 3/8x19   | 65  | 28.0 | 14.0 | 11.0 | 96518 |
| PF 1/2x14   | 80  | 35.0 | 18.0 | 14.0 | 96522 |
| PF 3/4x14   | 85  | 35.0 | 23.0 | 17.0 | 96530 |
| PF 1"x11    | 95  | 45.0 | 26.0 | 21.0 | 96538 |
| PF 1.1/4x11 | 105 | 45.0 | 32.0 | 26.0 | 96546 |
| PF 1.1/2x11 | 110 | 45.0 | 38.0 | 29.0 | 96554 |
| PF 2"x11    | 120 | 50.0 | 46.0 | 35.0 | 96570 |

**SP Spiral Flute / 螺旋槽**

|             |     |      |      |      |       |
|-------------|-----|------|------|------|-------|
| PF 1/16x28  | 55  | 17.5 | 8.0  | 6.0  | 96702 |
| PF 1/8x28   | 55  | 19.0 | 8.0  | 6.0  | 96706 |
| PF 1/4x19   | 62  | 28.0 | 11.0 | 9.0  | 96714 |
| PF 3/8x19   | 65  | 28.0 | 14.0 | 11.0 | 96718 |
| PF 1/2x14   | 80  | 35.0 | 18.0 | 14.0 | 96722 |
| PF 3/4x14   | 85  | 35.0 | 23.0 | 17.0 | 96730 |
| PF 1"x11    | 95  | 45.0 | 26.0 | 21.0 | 96738 |
| PF 1.1/4x11 | 105 | 45.0 | 32.0 | 26.0 | 96746 |
| PF 1.1/2x11 | 110 | 45.0 | 38.0 | 29.0 | 96754 |
| PF 2"x11    | 120 | 50.0 | 46.0 | 35.0 | 96770 |

**Application:**

**for general use**

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**PO:** for through holes

**SP:** for blind holes

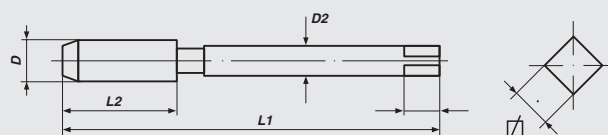
**应用:**

**通用**

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 手用和机用

**螺尖:** 用于通孔

**螺旋槽:** 用于盲孔





## Machine Taps

tapered pipe thread, taper 1:16, con. 55°

## 机用丝锥

锥管螺纹, 锥度 1:16, 牙型角55°



**JIS B 4430**

**HSS-G**

**PT (BSPT / Rc)**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | ∅ | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

### HT Straight Flute Form C / 直槽Form C

|               |     |      |      |      |       |
|---------------|-----|------|------|------|-------|
| PT 1/16 x 28  | 55  | 17.5 | 8.0  | 6.0  | 97402 |
| PT 1/8 x 28   | 55  | 19.0 | 8.0  | 6.0  | 97406 |
| PT 1/4 x 19   | 62  | 28.0 | 11.0 | 9.0  | 97414 |
| PT 3/8 x 19   | 65  | 28.0 | 14.0 | 11.0 | 97418 |
| PT 1/2 x 14   | 80  | 35.0 | 18.0 | 14.0 | 97422 |
| PT 3/4 x 14   | 85  | 35.0 | 23.0 | 17.0 | 97430 |
| PT 1" x 11    | 95  | 45.0 | 26.0 | 21.0 | 97438 |
| PT 1.1/4 x 11 | 105 | 45.0 | 32.0 | 26.0 | 97446 |
| PT 1.1/2 x 11 | 110 | 45.0 | 38.0 | 29.0 | 97454 |
| PT 2" x 11    | 120 | 50.0 | 46.0 | 35.0 | 97470 |

### PO Spiral Point / 螺尖

|               |     |      |      |      |       |
|---------------|-----|------|------|------|-------|
| PT 1/16 x 28  | 55  | 17.5 | 8.0  | 6.0  | 97502 |
| PT 1/8 x 28   | 55  | 19.0 | 8.0  | 6.0  | 97506 |
| PT 1/4 x 19   | 62  | 28.0 | 11.0 | 9.0  | 97514 |
| PT 3/8 x 19   | 65  | 28.0 | 14.0 | 11.0 | 97518 |
| PT 1/2 x 14   | 80  | 35.0 | 18.0 | 14.0 | 97522 |
| PT 3/4 x 14   | 85  | 35.0 | 23.0 | 17.0 | 97530 |
| PT 1" x 11    | 95  | 45.0 | 26.0 | 21.0 | 97538 |
| PT 1.1/4 x 11 | 105 | 45.0 | 32.0 | 26.0 | 97546 |
| PT 1.1/2 x 11 | 110 | 45.0 | 38.0 | 29.0 | 97554 |
| PT 2" x 11    | 120 | 50.0 | 46.0 | 35.0 | 97570 |

### SP Spiral Flute / 螺旋槽

|               |     |      |      |      |       |
|---------------|-----|------|------|------|-------|
| PT 1/16 x 28  | 55  | 17.5 | 8.0  | 6.0  | 97702 |
| PT 1/8 x 28   | 55  | 19.0 | 8.0  | 6.0  | 97706 |
| PT 1/4 x 19   | 62  | 28.0 | 11.0 | 9.0  | 97714 |
| PT 3/8 x 19   | 65  | 28.0 | 14.0 | 11.0 | 97718 |
| PT 1/2 x 14   | 80  | 35.0 | 18.0 | 14.0 | 97722 |
| PT 3/4 x 14   | 85  | 35.0 | 23.0 | 17.0 | 97730 |
| PT 1" x 11    | 95  | 45.0 | 26.0 | 21.0 | 97738 |
| PT 1.1/4 x 11 | 105 | 45.0 | 32.0 | 26.0 | 97746 |
| PT 1.1/2 x 11 | 110 | 45.0 | 38.0 | 29.0 | 97754 |
| PT 2" x 11    | 120 | 50.0 | 46.0 | 35.0 | 97770 |

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

#### 应用:

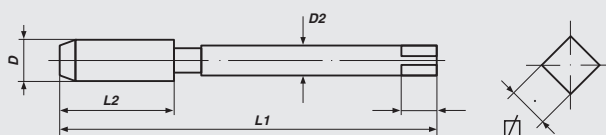
##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 手用和机用

**Form C:** 用于通孔和盲孔

**螺尖:** 用于通孔

**螺旋槽:** 用于盲孔





## Machine Taps

american tapered pipe thread, taper 1:16

## 机用丝锥

美标锥管螺纹, 锥度 1:16



**JIS B 4430**

**HSS-G**

**NPT**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | ∅ | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

### Straight Flute Form C / 直槽 Form C

|                  |     |      |      |      |       |
|------------------|-----|------|------|------|-------|
| NPT 1/16 x 27    | 55  | 17.5 | 8.0  | 6.0  | 98402 |
| NPT 1/8 x 27     | 55  | 19.0 | 8.0  | 6.0  | 98406 |
| NPT 1/4 x 18     | 62  | 28.0 | 11.0 | 9.0  | 98414 |
| NPT 3/8 x 18     | 65  | 28.0 | 14.0 | 11.0 | 98418 |
| NPT 1/2 x 14     | 80  | 35.0 | 18.0 | 14.0 | 98422 |
| NPT 3/4 x 14     | 85  | 35.0 | 23.0 | 17.0 | 98430 |
| NPT 1" x 11.5    | 95  | 45.0 | 26.0 | 21.0 | 98438 |
| NPT 1.1/4 x 11.5 | 105 | 45.0 | 32.0 | 26.0 | 98446 |
| NPT 1.1/2 x 11.5 | 110 | 45.0 | 38.0 | 29.0 | 98454 |
| NPT 2" x 11.5    | 120 | 50.0 | 46.0 | 35.0 | 98470 |

### PO Spiral Point / 螺尖

|                  |     |      |      |      |       |
|------------------|-----|------|------|------|-------|
| NPT 1/16 x 27    | 55  | 17.5 | 8.0  | 6.0  | 98502 |
| NPT 1/8 x 27     | 55  | 19.0 | 8.0  | 6.0  | 98506 |
| NPT 1/4 x 18     | 62  | 28.0 | 11.0 | 9.0  | 98514 |
| NPT 3/8 x 18     | 65  | 28.0 | 14.0 | 11.0 | 98518 |
| NPT 1/2 x 14     | 80  | 35.0 | 18.0 | 14.0 | 98522 |
| NPT 3/4 x 14     | 85  | 35.0 | 23.0 | 17.0 | 98530 |
| NPT 1" x 11.5    | 95  | 45.0 | 26.0 | 21.0 | 98538 |
| NPT 1.1/4 x 11.5 | 105 | 45.0 | 32.0 | 26.0 | 98546 |
| NPT 1.1/2 x 11.5 | 110 | 45.0 | 38.0 | 29.0 | 98554 |
| NPT 2" x 11.5    | 120 | 50.0 | 46.0 | 35.0 | 98570 |

### SP Spiral Flute / 螺旋槽

|                  |     |      |      |      |       |
|------------------|-----|------|------|------|-------|
| NPT 1/16 x 27    | 55  | 17.5 | 8.0  | 6.0  | 98702 |
| NPT 1/8 x 27     | 55  | 19.0 | 8.0  | 6.0  | 98706 |
| NPT 1/4 x 18     | 62  | 28.0 | 11.0 | 9.0  | 98714 |
| NPT 3/8 x 18     | 65  | 28.0 | 14.0 | 11.0 | 98718 |
| NPT 1/2 x 14     | 80  | 35.0 | 18.0 | 14.0 | 98722 |
| NPT 3/4 x 14     | 85  | 35.0 | 23.0 | 17.0 | 98730 |
| NPT 1" x 11.5    | 95  | 45.0 | 26.0 | 21.0 | 98738 |
| NPT 1.1/4 x 11.5 | 105 | 45.0 | 32.0 | 26.0 | 98746 |
| NPT 1.1/2 x 11.5 | 110 | 45.0 | 38.0 | 29.0 | 98754 |
| NPT 2" x 11.5    | 120 | 50.0 | 46.0 | 35.0 | 98770 |

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

#### 应用:

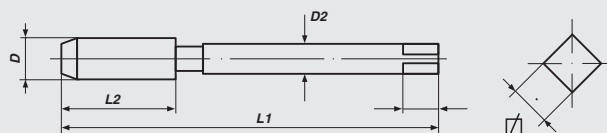
##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 手用和机用

**Form C:** 用于通孔和盲孔

**螺尖:** 用于通孔

**螺旋槽:** 用于盲孔





## Machine Taps

american tapered pipe thread, taper 1:16

## 机用丝锥

美标锥管螺纹, 锥度 1:16



**JIS B 4430**

**HSS-E**

**NPTF**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | ∅ | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

### PO Spiral Point / 螺尖

|                   |     |    |      |      |       |
|-------------------|-----|----|------|------|-------|
| NPTF 1/16 x 27    | 55  | 19 | 6.5  | 5.0  | 98571 |
| NPTF 1/8 x 27     | 55  | 19 | 8.0  | 6.0  | 98572 |
| NPTF 1/4 x 18     | 62  | 28 | 11.0 | 9.0  | 98574 |
| NPTF 3/8 x 18     | 65  | 28 | 14.0 | 11.0 | 98576 |
| NPTF 1/2 x 14     | 80  | 35 | 18.0 | 14.0 | 98578 |
| NPTF 3/4 x 14     | 85  | 35 | 23.0 | 17.0 | 98580 |
| NPTF 1" x 11.5    | 95  | 45 | 26.0 | 21.0 | 98582 |
| NPTF 1.1/4 x 11.5 | 105 | 45 | 32.0 | 26.0 | 98584 |
| NPTF 1.1/2 x 11.5 | 110 | 45 | 38.0 | 29.0 | 98586 |
| NPTF 2" x 11.5    | 120 | 50 | 46.0 | 35.0 | 98588 |

### SP Spiral Flute / 螺旋槽

|                |    |    |      |      |       |
|----------------|----|----|------|------|-------|
| NPTF 1/8 x 27  | 55 | 19 | 8.0  | 6.0  | 98772 |
| NPTF 1/4 x 18  | 62 | 28 | 11.0 | 9.0  | 98774 |
| NPTF 3/8 x 18  | 65 | 28 | 14.0 | 11.0 | 98776 |
| NPTF 1/2 x 14  | 80 | 35 | 18.0 | 14.0 | 98778 |
| NPTF 3/4 x 14  | 85 | 35 | 23.0 | 17.0 | 98780 |
| NPTF 1" x 11.5 | 95 | 45 | 26.0 | 21.0 | 98782 |

### Application:

#### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Spiral Point:** for through holes

**Spiral Flute:** for blind holes

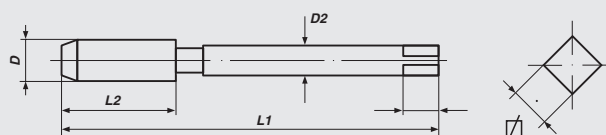
### 应用:

#### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 手用和机用

**螺尖:** 用于通孔

**螺旋槽:** 用于盲孔





## Machine Taps

american tapered pipe thread,

### 机用丝锥

美标锥管螺纹



**JIS B 4430**

**HSS-E**

**NPS**

| Nominal Diameter<br>D | L 1 | L 2 | D 2 | ☒ | Art.-No. |
|-----------------------|-----|-----|-----|---|----------|
|-----------------------|-----|-----|-----|---|----------|

#### HT Straight Flute Form C / 直槽 Form C

|                  |     |      |      |      |       |
|------------------|-----|------|------|------|-------|
| NPS 1/16 x 27    | 54  | 17.5 | 8.0  | 6.0  | 99402 |
| NPS 1/8 x 27     | 55  | 19.0 | 8.0  | 6.0  | 99406 |
| NPS 1/4 x 18     | 62  | 28.0 | 11.0 | 9.0  | 99414 |
| NPS 3/8 x 18     | 65  | 28.0 | 14.0 | 11.0 | 99418 |
| NPS 1/2 x 14     | 80  | 35.0 | 18.0 | 14.0 | 99422 |
| NPS 3/4 x 14     | 85  | 35.0 | 23.0 | 17.0 | 99430 |
| NPS 1" x 11.5    | 95  | 45.0 | 26.0 | 21.0 | 99438 |
| NPS 1.1/4 x 11.5 | 105 | 45.0 | 32.0 | 26.0 | 99446 |
| NPS 1.1/2 x 11.5 | 110 | 45.0 | 38.0 | 29.0 | 99454 |
| NPS 2" x 11.5    | 120 | 50.0 | 46.0 | 35.0 | 99470 |

#### SP Spiral Flute / 螺旋槽

|                  |     |      |      |      |       |
|------------------|-----|------|------|------|-------|
| NPS 1/16 x 27    | 54  | 17.5 | 8.0  | 6.0  | 99702 |
| NPS 1/8 x 27     | 55  | 19.0 | 8.0  | 6.0  | 99706 |
| NPS 1/4 x 18     | 62  | 28.0 | 11.0 | 9.0  | 99714 |
| NPS 3/8 x 18     | 65  | 28.0 | 14.0 | 11.0 | 99718 |
| NPS 1/2 x 14     | 80  | 35.0 | 18.0 | 14.0 | 99722 |
| NPS 3/4 x 14     | 85  | 35.0 | 23.0 | 17.0 | 99730 |
| NPS 1" x 11.5    | 95  | 45.0 | 26.0 | 21.0 | 99738 |
| NPS 1.1/4 x 11.5 | 105 | 45.0 | 32.0 | 26.0 | 99746 |
| NPS 1.1/2 x 11.5 | 110 | 45.0 | 38.0 | 29.0 | 99754 |
| NPS 2" x 11.5    | 120 | 50.0 | 46.0 | 35.0 | 99770 |

#### Application:

##### for general use

- non abrasive material up to 900 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- for thread cutting by hand and machine

**Form C:** for through and blind holes

**Spiral Flute:** for blind holes

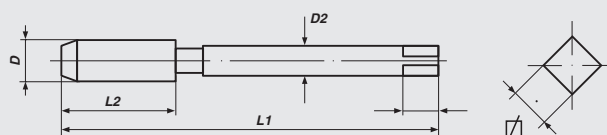
#### 应用:

##### 通用

- 抗拉强度小于900N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 手用和机用









**Form C:** 用于通孔和盲孔

**螺旋槽:** 用于盲孔





**MACHINE TAPS WITH COLOURED RING**  
彩圈机用丝锥

|   |   | Form B/A/C | 39°RSP | TwinBox |
|---|---|------------|--------|---------|
|    | for general use<br>通用   | 40         | 41     | 161     |
|    | for general use<br>通用   | 42         | 43     |         |
|    | for wear resistant steel<br>耐磨钢   | 44         | 45     | 162     |
|    | for stainless steel<br>不锈钢  | 46         | 47     | 163     |
|    | for cast iron<br>铸铁   | 156        |        |         |
|  | Material from 1200 N/mm <sup>2</sup> tensile strength<br>抗拉强度大于1200 N/mm <sup>2</sup> 的材料 | 159        |        |         |
|  | for aluminium alloys<br>铝合金   |            | 157    |         |
|  | for brass<br>黄铜   | 158        |        |         |
|   |   |            |        |         |
|   |   |            |        |         |
|   |   |            |        |         |
|   |   |            |        |         |
|   |   |            |        |         |
|   |   |            |        |         |

**because available ■ because reliable ■ because you ■**



## RECOMMENDED APPLICATION OF COLOURED RING MACHINE TAPS 彩圈机用丝锥使用建议

| Material<br>材料  | Lubricant<br>润滑剂 | Cutting Speed<br>切削速度<br>m/min. |
|---|------------------|---------------------------------|
| Steel, unalloyed and low alloyed, short-chipping<br>非合金钢和低合金钢, 短屑                   | S/E              | 10-20                           |
| non abrasive Material, short-chipping<br>非研磨材料, 短屑                                  | S/E              | 6-15                            |
| Steel, heat resistant, long-chipping<br>耐热钢, 长屑                                     | S                | 4- 8                            |
| Steel, heat resistant, short-chipping<br>耐热钢, 短屑                                    | S                | 4- 8                            |
| Steel, cementation and heat treatable, short-chipping<br>渗碳钢、可热处理钢, 短屑              | S                | 4- 8                            |
| Steel, Tool Steel up to 1200 N/mm <sup>2</sup><br>工具钢, 抗拉强度小于1200 N/mm <sup>2</sup> | S                | 2- 5                            |
| Steel, Tool Steel over 1200 N/mm <sup>2</sup><br>工具钢, 抗拉强度大于1200 N/mm <sup>2</sup>  | S                | 2- 5                            |
| Steel stainless, short-chipping<br>不锈钢, 短屑  | S                | 5-10                            |
| Steel stainless, long-chipping<br>不锈钢, 长屑   | S                | 5-10                            |
| Iron, Cast<br>铸铁  | P/T              | 6-20                            |
| Iron, spheroidal graphite<br>球墨铸铁   | P/T              | 6-20                            |
| Iron, Malleable Cast<br>可锻铸铁  | E                | 6-12                            |
| Brass, short-chipping<br>黄铜, 短屑   | E                | 20-30                           |
| Brass, long-chipping<br>黄铜, 长屑  | S/E              | 10-15                           |
| Bronze, short-chipping<br>青铜, 短屑  | S/E              | 6-15                            |
| Bronze, long-chipping<br>青铜, 长屑   | S/E              | 6-15                            |
| Copper<br>紫铜  | S/E              | 10-15                           |
| Aluminium-alloys, short-chipping<br>铝合金, 短屑   | S/E              | 15-30                           |
| Aluminium-alloys, long-chipping<br>铝合金, 长屑  | E                | 10-20                           |
| Zinc Alloys<br>锌合金  | S/E              | 10-15                           |
| Magnesium Alloys<br>镁合金   | E/T              | 10-20                           |
| Titanium, short-chipping<br>钛合金, 短屑   | S                | 3- 4                            |
| Titanium, long-chipping<br>钛合金, 长屑  | S                | 3- 4                            |
| Plastics, thermoplastics<br>热塑性塑料   | E/T              | 5-15                            |
| Plastics, thermosetting<br>热固性塑料  | T                | 5-15                            |

S = cutting oil / 切削油

E = oil emulsion / 乳化油

P = kerosene / 煤油

T = dry / 干性



## RECOMMENDED APPLICATION OF COLOURED RING MACHINE TAPS 彩圈机用丝锥使用建议

| Material<br>材料  | Green<br>Ring<br>绿圈 | Blue<br>Ring<br>蓝圈 | White<br>Ring<br>白圈 | Black<br>Ring<br>黑圈 | Red<br>Ring<br>红圈 | Yellow<br>Ring<br>黄圈 | Orange<br>Ring<br>橙圈 |
|---|---------------------|--------------------|---------------------|---------------------|-------------------|----------------------|----------------------|
| Steel, unalloyed and low alloyed, short-chipping<br>非合金钢和低合金钢, 短屑                   | ● PM                |                    |                     |                     |                   |                      |                      |
| non abrasive Material, short-chipping<br>非研磨材料, 短屑                                  | ● PM                |                    |                     |                     |                   |                      |                      |
| Steel, heat resistant, long-chipping<br>耐热钢, 长屑                                     | ● PM                |                    | ○                   |                     |                   |                      |                      |
| Steel, heat resistant, short-chipping<br>耐热钢, 短屑                                    | ● PM                | ●                  |                     |                     |                   |                      |                      |
| Steel, cementation and heat treatable, short-chipping<br>渗碳钢、可热处理钢, 短屑              | ● PM                | ●                  |                     |                     |                   |                      |                      |
| Steel, Tool Steel up to 1200 N/mm <sup>2</sup><br>工具钢, 抗拉强度小于1200 N/mm <sup>2</sup> |                     | ●                  |                     |                     |                   |                      |                      |
| Steel, Tool Steel over 1200 N/mm <sup>2</sup><br>工具钢, 抗拉强度大于1200 N/mm <sup>2</sup>  |                     |                    |                     |                     | ●                 |                      |                      |
| Steel stainless, short-chipping<br>不锈钢, 短屑  | ● PM                | ●                  |                     |                     |                   |                      |                      |
| Steel stainless, long-chipping<br>不锈钢, 长屑   | ● PM                |                    | ○                   |                     |                   |                      |                      |
| Iron, Cast<br>铸铁  |                     |                    |                     | ●                   |                   |                      |                      |
| Iron, spheroidal graphite<br>球墨铸铁   |                     | ●                  |                     |                     |                   |                      |                      |
| Iron, Malleable Cast<br>可锻铸铁  | ● PM                |                    |                     |                     |                   |                      |                      |
| Brass, short-chipping<br>黄铜, 短屑   |                     | ●                  |                     | ●                   |                   |                      | ●                    |
| Brass, long-chipping<br>黄铜, 长屑  | ● PM                |                    |                     |                     |                   |                      |                      |
| Bronze, short-chipping<br>青铜, 短屑  |                     | ●                  |                     | ●                   |                   |                      |                      |
| Bronze, long-chipping<br>青铜, 长屑   | ● PM                |                    |                     |                     |                   |                      |                      |
| Copper<br>紫铜  | ● PM                |                    |                     |                     |                   |                      |                      |
| Aluminium-alloys, short-chipping<br>铝合金, 短屑   |                     | ●                  |                     |                     |                   |                      |                      |
| Aluminium-alloys, long-chipping<br>铝合金, 长屑  | ● PM                |                    |                     |                     |                   | ●                    |                      |
| Zinc Alloys<br>锌合金  | ● PM                |                    |                     |                     |                   |                      |                      |
| Magnesium Alloys<br>镁合金   | ● PM                | ●                  |                     |                     |                   |                      |                      |
| Titanium, short-chipping<br>钛合金, 短屑   |                     | ●                  |                     |                     |                   |                      |                      |
| Titanium, long-chipping<br>钛合金, 长屑  |                     |                    | ○                   |                     |                   |                      |                      |
| Plastics, thermoplastics<br>热塑性塑料   | ● PM                |                    |                     |                     |                   |                      |                      |
| Plastics, thermosetting<br>热固性塑料  |                     |                    |                     | ●                   | ●                 |                      |                      |





## GREEN RING PO Machine Taps

metric ISO-thread DIN 13

### 绿圈螺尖机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**PO Spiral Point**

**HSS-E**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 2 x 0.4             | 42  | 8   | 3.0  | 2.5  | OH1       | 91601    |
| M 2.3 x 0.4           | 42  | 8   | 3.0  | 2.5  | OH1       | 91602    |
| M 2.5 x 0.45          | 44  | 8   | 3.0  | 2.5  | OH2       | 91603    |
| M 2.6 x 0.45          | 44  | 8   | 3.0  | 2.5  | OH2       | 91604    |
| M 3 x 0.5             | 46  | 9   | 4.0  | 3.2  | OH2       | 91605    |
| M 3.5 x 0.6           | 48  | 11  | 4.0  | 3.2  | OH2       | 91606    |
| M 4 x 0.7             | 52  | 11  | 5.0  | 4.0  | OH2       | 91607    |
| M 5 x 0.8             | 60  | 14  | 5.5  | 4.5  | OH2       | 91609    |
| M 6 x 1.0             | 62  | 17  | 6.0  | 4.5  | OH2       | 91611    |
| M 6 x 0.75            | 62  | 17  | 6.0  | 4.5  | OH2       | 91612    |
| M 8 x 1.25            | 70  | 20  | 6.2  | 5.0  | OH3       | 91613    |
| M 8 x 1.0             | 70  | 20  | 6.2  | 5.0  | OH3       | 91614    |
| M 8 x 0.75            | 70  | 20  | 6.2  | 5.0  | OH3       | 91624    |
| M 10 x 1.5            | 75  | 22  | 7.0  | 5.5  | OH3       | 91615    |
| M 10 x 1.25           | 75  | 22  | 7.0  | 5.5  | OH3       | 91616    |
| M 10 x 1.0            | 75  | 22  | 7.0  | 5.5  | OH3       | 91626    |
| M 12 x 1.75           | 82  | 27  | 8.5  | 6.5  | OH4       | 91617    |
| M 12 x 1.5            | 82  | 27  | 8.5  | 6.5  | OH4       | 91690    |
| M 12 x 1.25           | 82  | 27  | 8.5  | 6.5  | OH4       | 91618    |
| M 12 x 1.0            | 82  | 27  | 8.5  | 6.5  | OH4       | 91627    |
| M 14 x 2.0            | 88  | 28  | 10.5 | 8.0  | OH4       | 91619    |
| M 14 x 1.5            | 88  | 28  | 10.5 | 8.0  | OH4       | 91620    |
| M 14 x 1.25           | 88  | 28  | 10.5 | 8.0  | OH4       | 91628    |
| M 16 x 2.0            | 95  | 30  | 12.5 | 10.0 | OH4       | 91621    |
| M 16 x 1.5            | 95  | 30  | 12.5 | 10.0 | OH4       | 91622    |
| M 16 x 1.0            | 95  | 30  | 12.5 | 10.0 | OH4       | 91629    |
| M 18 x 2.5            | 100 | 32  | 14.0 | 11.0 | OH4       | 91623    |
| M 20 x 2.5            | 105 | 32  | 15.0 | 12.0 | OH4       | 91625    |

**Application:**

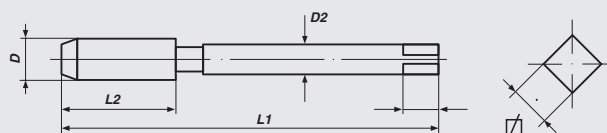
**for general use**

- non abrasive material up to 1000 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- long chipping material
- PO Spiral Point for through holes

**应用:**

**通用**

- 抗拉强度小于1000N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 长屑
- 通孔





## GREEN RING SP Machine Taps

metric ISO-thread DIN 13

### 绿圈螺旋槽机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**SP Spiral Flute**

**HSS-E**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 2 x 0.4             | 42  | 6   | 3.0  | 2.5  | OH1       | 91801    |
| M 2.3 x 0.4           | 42  | 6   | 3.0  | 2.5  | OH1       | 91802    |
| M 2.5 x 0.45          | 44  | 6   | 3.0  | 2.5  | OH1       | 91803    |
| M 2.6 x 0.45          | 44  | 6   | 3.0  | 2.5  | OH1       | 91804    |
| M 3 x 0.5             | 46  | 6   | 4.0  | 3.2  | OH1       | 91805    |
| M 3.5 x 0.6           | 48  | 7   | 4.0  | 3.2  | OH2       | 91806    |
| M 4 x 0.7             | 52  | 7   | 5.0  | 4.0  | OH2       | 91807    |
| M 5 x 0.8             | 60  | 8   | 5.5  | 4.5  | OH2       | 91809    |
| M 6 x 1.0             | 62  | 10  | 6.0  | 4.5  | OH2       | 91811    |
| M 6 x 0.75            | 62  | 10  | 6.0  | 4.5  | OH2       | 91812    |
| M 8 x 1.25            | 70  | 14  | 6.2  | 5.0  | OH2       | 91813    |
| M 8 x 1.0             | 70  | 14  | 6.2  | 5.0  | OH2       | 91814    |
| M 8 x 0.75            | 70  | 14  | 6.2  | 5.0  | OH2       | 91824    |
| M 10 x 1.5            | 75  | 16  | 7.0  | 5.5  | OH2       | 91815    |
| M 10 x 1.25           | 75  | 16  | 7.0  | 5.5  | OH2       | 91816    |
| M 10 x 1.0            | 75  | 16  | 7.0  | 5.5  | OH2       | 91826    |
| M 12 x 1.75           | 82  | 18  | 8.5  | 6.5  | OH2       | 91817    |
| M 12 x 1.5            | 82  | 18  | 8.5  | 6.5  | OH2       | 91890    |
| M 12 x 1.25           | 82  | 18  | 8.5  | 6.5  | OH2       | 91818    |
| M 12 x 1.0            | 82  | 18  | 8.5  | 6.5  | OH2       | 91827    |
| M 14 x 2.0            | 88  | 20  | 10.5 | 8.0  | OH2       | 91819    |
| M 14 x 1.5            | 88  | 20  | 10.5 | 8.0  | OH2       | 91820    |
| M 14 x 1.25           | 88  | 20  | 10.5 | 8.0  | OH2       | 91828    |
| M 16 x 2.0            | 95  | 22  | 12.5 | 10.0 | OH2       | 91821    |
| M 16 x 1.5            | 95  | 22  | 12.5 | 10.0 | OH2       | 91822    |
| M 16 x 1.0            | 95  | 22  | 12.5 | 10.0 | OH2       | 91829    |
| M 18 x 2.5            | 100 | 25  | 14.0 | 11.0 | OH3       | 91823    |
| M 20 x 2.5            | 105 | 25  | 15.0 | 12.0 | OH3       | 91825    |

#### Application:

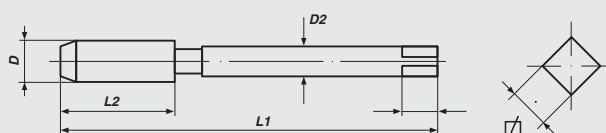
##### for general use

- non abrasive material up to 1000 N/mm<sup>2</sup>
- unalloyed and low alloyed steel
- long chipping material
- SP Spiral Flute for blind holes

#### 应用:

##### 通用

- 抗拉强度小于1000N/mm<sup>2</sup>的非研磨材料
- 非合金钢和低合金钢
- 长屑
- 盲孔





## GREEN RING PO Machine Taps

metric ISO-thread DIN 13

### 绿圈螺尖机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**PO Spiral Point**

**HSSE-PM-TIN**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 3 x 0.5             | 46  | 9   | 4.0  | 3.2  | OH2       | 91105    |
| M 4 x 0.7             | 52  | 11  | 5.0  | 4.0  | OH2       | 91107    |
| M 5 x 0.8             | 60  | 14  | 5.5  | 4.5  | OH2       | 91108    |
| M 6 x 1.0             | 62  | 17  | 6.0  | 4.5  | OH2       | 91109    |
| M 8 x 1.25            | 70  | 20  | 6.2  | 5.0  | OH3       | 91111    |
| M 10 x 1.5            | 75  | 22  | 7.0  | 5.5  | OH3       | 91113    |
| M 12 x 1.75           | 82  | 27  | 8.5  | 6.5  | OH4       | 91115    |
| M 14 x 2.0            | 88  | 28  | 10.5 | 8.0  | OH4       | 91116    |
| M 16 x 2.0            | 95  | 30  | 12.5 | 10.0 | OH4       | 91117    |

#### Application:

##### for general use

- non abrasive material up to 1000 N/mm<sup>2</sup>
- stainless and alloyed steel
- unalloyed and low alloyed steel
- copper and aluminium alloys
- PO Spiral Point for through holes

##### Advantages **HSSE-PM-TIN**

- increased wear resistance and toughness
- TiN-coating improves anti-friction properties, thereby improved wear-resistance and reduced tendency of build-up edge

#### 应用:

##### 通用

- 抗拉强度小于1000N/mm<sup>2</sup>的非研磨材料
- 不锈钢和合金钢
- 非合金钢和低合金钢
- 紫铜和铝合金
- 通孔

##### **HSSE-PM-TIN**的优点

- 增加韧性和耐磨性
- TiN涂层减少摩擦、磨损和切屑粘在工具表面



## GREEN RING SP Machine Taps

metric ISO-thread DIN 13

## 绿圈螺旋槽机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**SP Spiral Flute**

**HSSE-PM-TIN**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 3 x 0.5             | 46  | 6   | 4.0  | 3.2  | OH1       | 91155    |
| M 4 x 0.7             | 52  | 7   | 5.0  | 4.0  | OH2       | 91157    |
| M 5 x 0.8             | 60  | 8   | 5.5  | 4.5  | OH2       | 91158    |
| M 6 x 1.0             | 62  | 10  | 6.0  | 4.5  | OH2       | 91159    |
| M 8 x 1.25            | 70  | 14  | 6.2  | 5.0  | OH2       | 91161    |
| M 10 x 1.5            | 75  | 16  | 7.0  | 5.5  | OH2       | 91163    |
| M 12 x 1.75           | 82  | 18  | 8.5  | 6.5  | OH2       | 91165    |
| M 14 x 2.0            | 88  | 20  | 10.5 | 8.0  | OH2       | 91166    |
| M 16 x 2.0            | 95  | 22  | 12.5 | 10.0 | OH2       | 91167    |

### Application:

#### for general use

- non abrasive material up to 1000 N/mm<sup>2</sup>
- stainless and alloyed steel
- unalloyed and low alloyed steel
- copper and aluminium alloys
- SP Spiral Flute for blind holes

#### Advantages **HSSE-PM-TIN**

- increased wear resistance and toughness
- TiN-coating improves anti-friction properties, thereby improved wear-resistance and reduced tendency of build-up edge

### 应用:

#### 通用

- 抗拉强度小于1000N/mm<sup>2</sup>的非研磨材料
- 不锈钢和合金钢
- 非合金钢和低合金钢
- 紫铜和铝合金
- 盲孔

#### **HSSE-PM-TIN**的优点

- 增加韧性和耐磨性
- TiN涂层减少摩擦、磨损和切屑粘在工具表面



## BLUE RING PO Machine Taps

metric ISO-thread DIN 13

### 蓝圈螺尖机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**PO Spiral Point**

**HSS-E**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 3 x 0.5             | 46  | 9   | 4.0  | 3.2  | OH2       | 91305    |
| M 4 x 0.7             | 52  | 11  | 5.0  | 4.0  | OH2       | 91307    |
| M 5 x 0.8             | 60  | 14  | 5.5  | 4.5  | OH2       | 91308    |
| M 6 x 1.0             | 62  | 17  | 6.0  | 4.5  | OH2       | 91309    |
| M 6 x 0.75            | 62  | 17  | 6.0  | 4.5  | OH2       | 91330    |
| M 8 x 1.25            | 70  | 20  | 6.2  | 5.0  | OH3       | 91311    |
| M 8 x 1.0             | 70  | 20  | 6.2  | 5.0  | OH3       | 91331    |
| M 8 x 0.75            | 70  | 20  | 6.2  | 5.0  | OH3       | 91332    |
| M 10 x 1.5            | 75  | 22  | 7.0  | 5.5  | OH3       | 91313    |
| M 10 x 1.25           | 75  | 22  | 7.0  | 5.5  | OH3       | 91333    |
| M 10 x 1.0            | 75  | 22  | 7.0  | 5.5  | OH3       | 91334    |
| M 12 x 1.75           | 82  | 27  | 8.5  | 6.5  | OH4       | 91315    |
| M 12 x 1.5            | 82  | 27  | 8.5  | 6.5  | OH4       | 91335    |
| M 12 x 1.25           | 82  | 27  | 8.5  | 6.5  | OH4       | 91336    |
| M 12 x 1.0            | 82  | 27  | 8.5  | 6.5  | OH4       | 91337    |
| M 14 x 2.0            | 88  | 28  | 10.5 | 8.0  | OH4       | 91316    |
| M 14 x 1.5            | 88  | 28  | 10.5 | 8.0  | OH4       | 91338    |
| M 14 x 1.25           | 88  | 28  | 10.5 | 8.0  | OH4       | 91339    |
| M 16 x 2.0            | 95  | 30  | 12.5 | 10.0 | OH4       | 91317    |
| M 16 x 1.5            | 95  | 30  | 12.5 | 10.0 | OH4       | 91340    |
| M 16 x 1.0            | 95  | 30  | 12.5 | 10.0 | OH4       | 91341    |

**Application:**

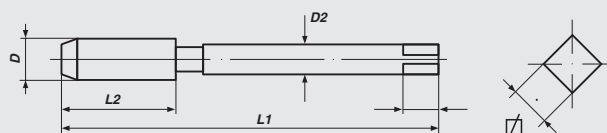
wear resistant steel up to 1200 N/mm<sup>2</sup>

- high alloy steel
- short chipping material
- short chipping stainless steel
- alloy tools steel
- PO Spiral Point for through holes

**应用:**

抗拉强度小于1200N/mm<sup>2</sup>的非研磨材料

- 高合金钢
- 短屑
- 不锈钢, 短屑
- 合金工具钢
- 通孔





## BLUE RING SP Machine Taps

metric ISO-thread DIN 13

## 蓝圈螺旋槽机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**SP Spiral Flute**

**HSS-E**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 3 x 0.5             | 46  | 6   | 4.0  | 3.2  | OH2       | 91355    |
| M 4 x 0.7             | 52  | 7   | 5.0  | 4.0  | OH2       | 91357    |
| M 5 x 0.8             | 60  | 8   | 5.5  | 4.5  | OH2       | 91358    |
| M 6 x 1.0             | 62  | 10  | 6.0  | 4.5  | OH2       | 91359    |
| M 6 x 0.75            | 62  | 10  | 6.0  | 4.5  | OH2       | 91380    |
| M 8 x 1.25            | 70  | 14  | 6.2  | 5.0  | OH3       | 91361    |
| M 8 x 1.0             | 70  | 14  | 6.2  | 5.0  | OH2       | 91381    |
| M 8 x 0.75            | 70  | 14  | 6.2  | 5.0  | OH2       | 91382    |
| M 10 x 1.5            | 75  | 16  | 7.0  | 5.5  | OH3       | 91363    |
| M 10 x 1.25           | 75  | 16  | 7.0  | 5.5  | OH3       | 91383    |
| M 10 x 1.0            | 75  | 16  | 7.0  | 5.5  | OH2       | 91384    |
| M 12 x 1.75           | 82  | 18  | 8.5  | 6.5  | OH3       | 91365    |
| M 12 x 1.5            | 82  | 18  | 8.5  | 6.5  | OH3       | 91385    |
| M 12 x 1.25           | 82  | 18  | 8.5  | 6.5  | OH3       | 91386    |
| M 12 x 1.0            | 82  | 18  | 8.5  | 6.5  | OH2       | 91387    |
| M 14 x 2.0            | 88  | 20  | 10.5 | 8.0  | OH3       | 91366    |
| M 14 x 1.5            | 88  | 20  | 10.5 | 8.0  | OH3       | 91388    |
| M 14 x 1.25           | 88  | 20  | 10.5 | 8.0  | OH3       | 91389    |
| M 16 x 2.0            | 95  | 22  | 12.5 | 10.0 | OH3       | 91367    |
| M 16 x 1.5            | 95  | 22  | 12.5 | 10.0 | OH3       | 91390    |
| M 16 x 1.0            | 95  | 22  | 12.5 | 10.0 | OH3       | 91391    |

### Application:

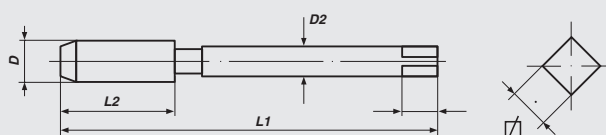
wear resistant steel up to 1200 N/mm<sup>2</sup>

- high alloy steel
- short chipping material
- short chipping stainless steel
- alloy tools steel
- SP Spiral Flute for blind holes

### 应用:

抗拉强度小于1200N/mm<sup>2</sup>的非研磨材料

- 高合金钢
- 短屑
- 不锈钢, 短屑
- 合金工具钢
- 盲孔





## WHITE RING PO Machine Taps

metric ISO-thread DIN 13

## 白圈螺尖机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**PO Spiral Point**

**HSS-E**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 3 x 0.5             | 46  | 9   | 4.0  | 3.2  | OH2       | 91205    |
| M 4 x 0.7             | 52  | 11  | 5.0  | 4.0  | OH2       | 91207    |
| M 5 x 0.8             | 60  | 14  | 5.5  | 4.5  | OH2       | 91208    |
| M 6 x 1.0             | 62  | 17  | 6.0  | 4.5  | OH2       | 91209    |
| M 6 x 0.75            | 62  | 17  | 6.0  | 4.5  | OH2       | 91230    |
| M 8 x 1.25            | 70  | 20  | 6.2  | 5.0  | OH3       | 91211    |
| M 8 x 1.0             | 70  | 20  | 6.2  | 5.0  | OH3       | 91231    |
| M 8 x 0.75            | 70  | 20  | 6.2  | 5.0  | OH3       | 91232    |
| M 10 x 1.5            | 75  | 22  | 7.0  | 5.5  | OH3       | 91213    |
| M 10 x 1.25           | 75  | 22  | 7.0  | 5.5  | OH3       | 91233    |
| M 10 x 1.0            | 75  | 22  | 7.0  | 5.5  | OH3       | 91234    |
| M 12 x 1.75           | 82  | 27  | 8.5  | 6.5  | OH3       | 91215    |
| M 12 x 1.5            | 82  | 27  | 8.5  | 6.5  | OH3       | 91235    |
| M 12 x 1.25           | 82  | 27  | 8.5  | 6.5  | OH3       | 91236    |
| M 12 x 1.0            | 82  | 27  | 8.5  | 6.5  | OH3       | 91237    |
| M 14 x 2.0            | 88  | 28  | 10.5 | 8.0  | OH3       | 91216    |
| M 14 x 1.5            | 88  | 28  | 10.5 | 8.0  | OH3       | 91238    |
| M 14 x 1.25           | 88  | 28  | 10.5 | 8.0  | OH3       | 91239    |
| M 16 x 2.0            | 95  | 30  | 12.5 | 10.0 | OH3       | 91217    |
| M 16 x 1.5            | 95  | 30  | 12.5 | 10.0 | OH3       | 91240    |
| M 16 x 1.0            | 95  | 30  | 12.5 | 10.0 | OH3       | 91241    |

**Application:**

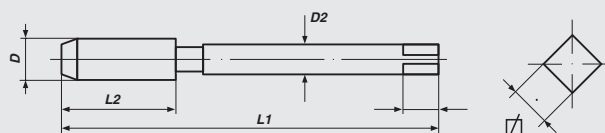
**Stainless Steel (INOX),  
long chipping up to 1000 N/mm<sup>2</sup>**

- abrasive material
- chrome-nickel alloys
- surface treatment: steam tempered
- PO Spiral Point for through holes

**应用:**

**不锈钢, 长屑  
抗拉强度小于1000N/mm<sup>2</sup>**

- 研磨材料
- 铬镍合金
- 表面蒸汽处理
- 通孔





## WHITE RING SP Machine Taps

metric ISO-thread DIN 13

## 白圈螺旋槽机用丝锥

公制ISO螺纹 DIN 13



**JIS B - 4430**

**SP Spiral Flute**

**HSS-E**

**M**

| Nominal Diameter<br>D | L 1 | L 2 | D 2  | ∅    | Tolerance | Art.-No. |
|-----------------------|-----|-----|------|------|-----------|----------|
| M 3 x 0.5             | 46  | 6   | 4.0  | 3,2  | OH2       | 91255    |
| M 4 x 0.7             | 52  | 7   | 5.0  | 4,0  | OH2       | 91257    |
| M 5 x 0.8             | 60  | 8   | 5.5  | 4,5  | OH2       | 91258    |
| M 6 x 1.0             | 62  | 10  | 6.0  | 4,5  | OH2       | 91259    |
| M 6 x 0.75            | 62  | 10  | 6.0  | 4,5  | OH2       | 91280    |
| M 8 x 1.25            | 70  | 14  | 6.2  | 5,0  | OH3       | 91261    |
| M 8 x 1.0             | 70  | 14  | 6.2  | 5,0  | OH2       | 91281    |
| M 8 x 0.75            | 70  | 14  | 6.2  | 5,0  | OH2       | 91282    |
| M 10 x 1.5            | 75  | 16  | 7.0  | 5,5  | OH3       | 91263    |
| M 10 x 1.25           | 75  | 16  | 7.0  | 5,5  | OH3       | 91283    |
| M 10 x 1.0            | 75  | 16  | 7.0  | 5,5  | OH2       | 91284    |
| M 12 x 1.75           | 82  | 18  | 8.5  | 6,5  | OH3       | 91265    |
| M 12 x 1.5            | 82  | 18  | 8.5  | 6,5  | OH3       | 91285    |
| M 12 x 1.25           | 82  | 18  | 8.5  | 6,5  | OH3       | 91286    |
| M 12 x 1.0            | 82  | 18  | 8.5  | 6,5  | OH2       | 91287    |
| M 14 x 2.0            | 88  | 20  | 10.5 | 8,0  | OH3       | 91266    |
| M 14 x 1.5            | 88  | 20  | 10.5 | 8,0  | OH3       | 91288    |
| M 14 x 1.25           | 88  | 20  | 10.5 | 8,0  | OH3       | 91289    |
| M 16 x 2.0            | 95  | 22  | 12.5 | 10,0 | OH3       | 91267    |
| M 16 x 1.5            | 95  | 22  | 12.5 | 10,0 | OH3       | 91290    |
| M 16 x 1.0            | 95  | 22  | 12.5 | 10,0 | OH3       | 91291    |

### Application:

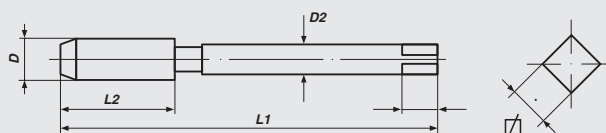
**Stainless Steel (INOX),  
long chipping up to 1000 N/mm<sup>2</sup>**

- abrasive material
- chrome-nickel alloys
- surface treatment: steam tempered
- SP Spiral Flute for blind holes

### 应用:

**不锈钢, 长屑  
抗拉强度小于1000N/mm<sup>2</sup>**

- 研磨材料
- 铬镍合金
- 表面蒸汽处理
- 盲孔





## FLUTELESS MACHINE TAPS 挤压丝锥

### Application:

- Unalloyed and low alloyed Steel
- Constructional Steel
- heat resistant Steel
- Stainless Steel
- long-chipping nonferrous Metal
- Zinc Alloys
- for through and blind holes

### 应用:

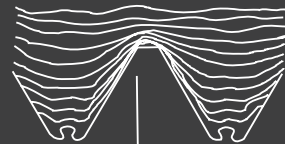
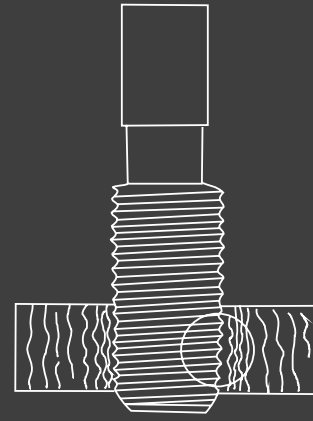
- 非合金钢和低合金钢
- 结构钢
- 耐热钢
- 不锈钢
- 有色金属, 长屑
- 锌合金
- 通孔和盲孔

### Benefit:

- ✓ longer endurance as cutting taps
- ✓ higher possible cutting speed
- ✓ steady exactness of dimension and profile
- ✓ high stability of the forming threads
- ✓ high security against fracture
- ✓ no removal of swarf, no jamming of swarf

### 优点:

- ✓ 比切削丝锥更耐用
- ✓ 更高的切削速度
- ✓ 尺寸和轮廓稳定精确
- ✓ 挤压而成的螺纹具有高稳定性
- ✓ 不易折断
- ✓ 不用排屑, 没有切屑干扰



Fibre structure  
of thread forming  
挤压丝锥攻丝后的组  
织结构



Fibre structure  
of thread cutting  
切削丝锥攻丝后的组  
织结构

### Fluteless Taps (Forming Taps)

are threading tools to form internal threads without cutting. The thread is produced by deformation of the material without damaging the fibre structure.

挤压丝锥是使用挤压形成内螺纹, 不需要切削。螺纹由形变产生, 不会破坏材料的组织结构。



**FLUTELESS MACHINE TAPS**  
挤压丝锥

|              | blank<br>白身 | VAP | TIN |
|--------------|-------------|-----|-----|
| 6HX<br>ISO2X | 50          | 168 | 169 |
| 6GX<br>ISO3X | 170         |     |     |
| UNC / UNF    | 51          |     |     |
|              |             |     |     |
|              |             |     |     |
|              |             |     |     |
|              |             |     |     |
|              |             |     |     |

**Application:**

**bright:**

- for nonferrous metal of good ductility

**VAP (Steam Tempered):**

- for steel up to approx. 700 N/mm<sup>2</sup>

**TIN (Titanium Nitride Coating):**

- for steel up to approx. 900 N/mm<sup>2</sup>  
and to increase endurance and cutting speed

**应用:**

**白身:**

- 用于有良好延展性的有色金属

**VAP(蒸汽处理):**

- 用于抗拉强度小于700N/mm<sup>2</sup>的钢材

**TIN(氮化钛涂层):**

- 用于抗拉强度小于900N/mm<sup>2</sup>的钢材  
提高耐磨度和切削速度

**because available ■ because reliable ■ because you ■**