



不锈钢·钛合金用钻头

Vol.6

# ADO-SUS

Carbide Drill Series for Stainless Steel and Titanium Alloy

ADO-SUS-3D · ADO-SUS-5D · ADO-SUS-8D

丰富的714款产品  
Vast lineup of 714 items

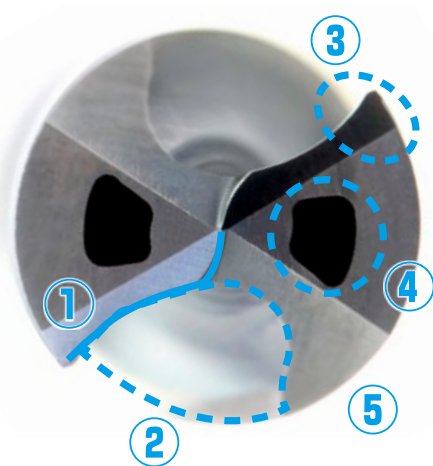


# 即使在高效率加工条件下也能实现稳定加工和良好的工具寿命。

Stable Performance and Long Tool Life Even Under High Feed Rates

## 不锈钢·钛合金加工用ADO-SUS钻头

ADO-SUS Drill for Stainless Steels and Titanium Alloys



### 加工不锈钢·钛合金时常见问题

Common machining problems associated with these materials

- 易发生加工硬化  
Work hardening tendency
- 切屑易卷曲缠绕  
Elongation of chips
- 切削温度增高,  
工具寿命缩短  
Short tool life due to high cutting temperature
- 易发生溶着  
Welding on cutting tool

→ 由ADO-SUS来解决

Solved by the ADO-SUS

Solution for work hardening

抑制加工硬化

### ① 重视锋利性的刃尖形状

PAT. in Japan

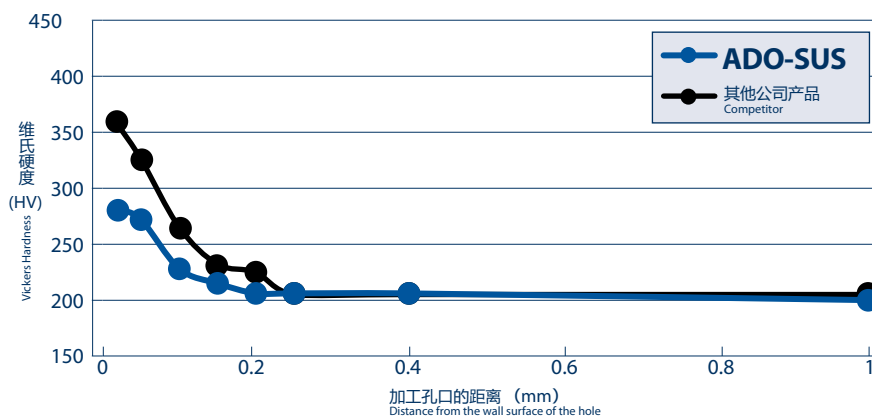
Sharp Cutting Edge

切削阻力低，减少加工硬化。不仅可以延长刀具自身的使用寿命，还能延长后续加工中使用的丝锥、铰刀的刀具寿命。

Reduces work hardening, which leads to longer tool life during tapping and reaming.

|                       |   |
|-----------------------|---|
| 使用工具<br>Tool          | ADO-SUS-5D  |
| 尺寸<br>Size            | φ10   |
| 加工材料<br>Work Material | SUS304  |
| 切削速度<br>Cutting Speed | 70m/min (2,229min <sup>-1</sup> )                   |
| 进给速度<br>Feed          | 446mm/min (0.2mm/rev)                               |
| 切削油剂<br>Coolant       | 水溶性切削油剂 (内部给油 · 1.5MPa)<br>Water-Soluble (Internal) |
| 使用机械<br>Machine       | 卧式加工中心<br>Horizontal Machining Center               |

### ■加工孔口的硬度 Work Hardness Near Hole Entry

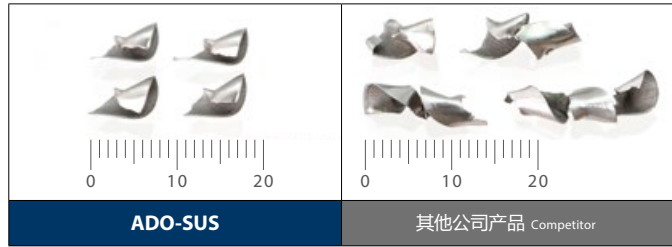


Solution for elongation of chips  
解决切屑问题

## ② 新的槽型设计 PAT. in Japan

New Flute Geometry

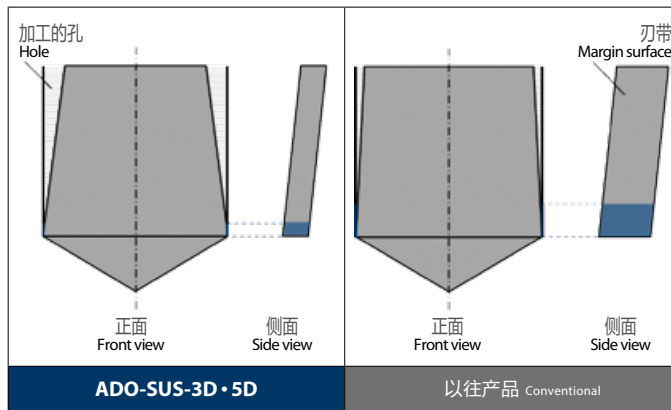
可以将切屑细小分断。  
Enables the creation of compact cutting chips.



Solution for high machining heat  
降低切削温度

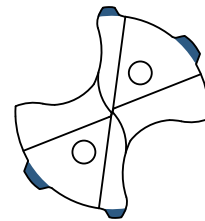
## ③ 特殊刃带形状 PAT. in Japan

Special Margin Shape



为了保证悬伸量长的ADO-SUS-8D的加工稳定性，采用了M刃带。

In response to the ADO-SUS-8D's long overhang length, a M(middle) margin design is adopted to ensure machining stability.



降低与加工材料的摩擦面积，减少刃带部发生的摩擦热量。  
Reduces friction and heat generation.

Solution for high machining heat  
降低切削温度

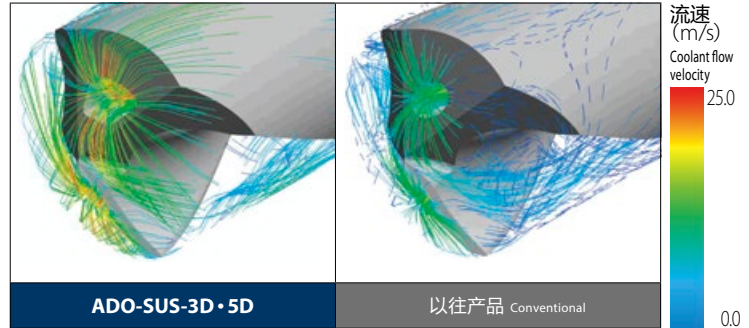
## ④ 新型的内冷油孔形状"MEGA COOLER" PAT. in Japan

New Coolant Hole Shape

快速排散切削热量。  
增大冷却油的喷出量  
的同时提高排屑性。  
Improves coolant flow, chip evacuation  
and cutting heat generation.

\*适用于3D·5Dφ6以上的尺寸  
\* Applies only to diameter sizes over 6mm in 3D and 5D

实现最大级的喷油量！  
Maximum amount of coolant flow to suppress heat generation!



刀具转速为 2,200min<sup>-1</sup>时的分析  
Analysis of coolant flow with spindle speed of 2,200min<sup>-1</sup>

Solution for welding  
抑制溶着

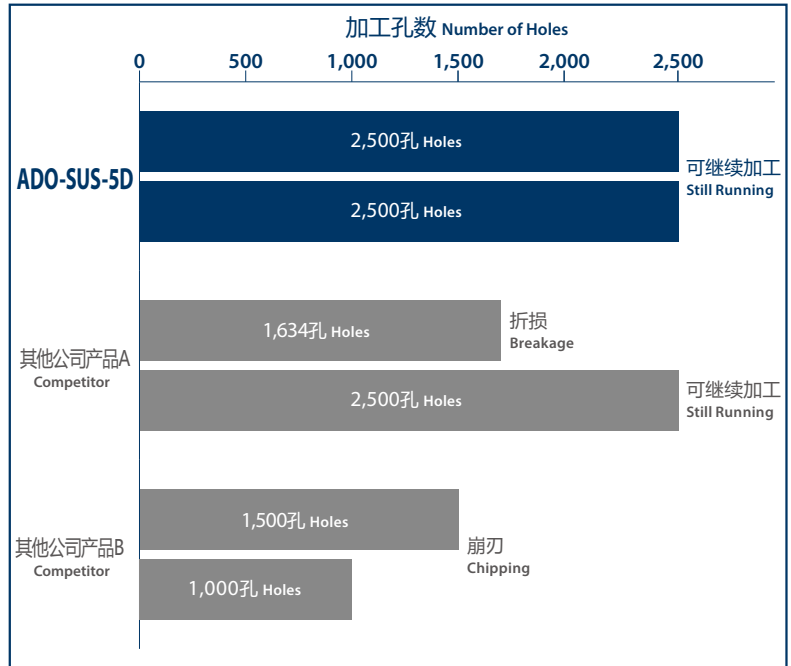
## ⑤ WXL涂层

WXL Coating

采用耐溶着性与附着力度优良的涂层，可以防止刀具的磨损。  
High adhesion strength, which minimizes the possibility of chipping.

# 奥氏体不锈钢加工 Machining Austenitic Stainless Steel

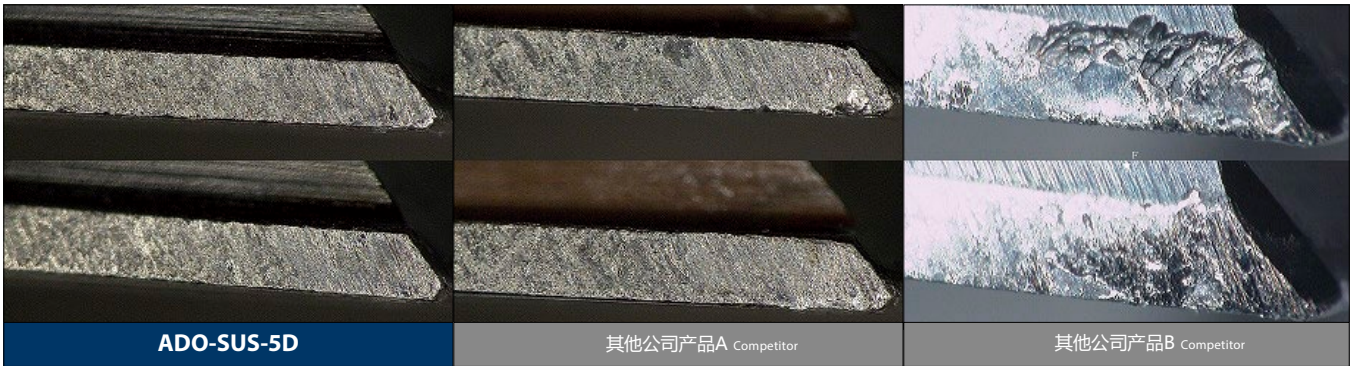
|                       |   |                      |
|-----------------------|---|----------------------|
| 使用工具<br>Tool          | ADO-SUS-5D  | 其他公司产品<br>Competitor |
| 尺寸<br>Size            | φ10   |                      |
| 加工材料<br>Work Material | SUS304  |                      |
| 切削速度<br>Cutting Speed | 70m/min (2,229min <sup>-1</sup> )                   |                      |
| 进给速度<br>Feed          | 446mm/min (0.20mm/rev)                              |                      |
| 孔深<br>Depth of Hole   | 50mm (通孔)<br>(Through)                              |                      |
| 切削油剂<br>Coolant       | 水溶性切削油剂 (内部给油 · 1.5MPa)<br>Water-Soluble (Internal) |                      |
| 使用机械<br>Machine       | 卧式加工中心<br>Horizontal Machining Center               |                      |



## 降低切削温度的刀具式样可显著抑制钻头切削刃的磨损!

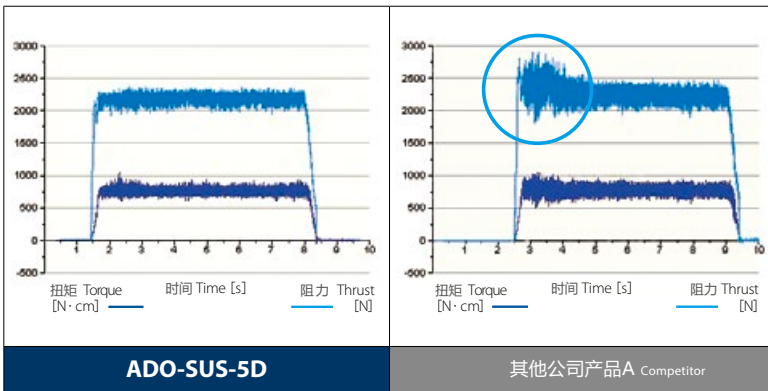
ADO-SUS has the least margin wear by restraining heat generation!

加工1,500孔后 After drilling 1,500 holes



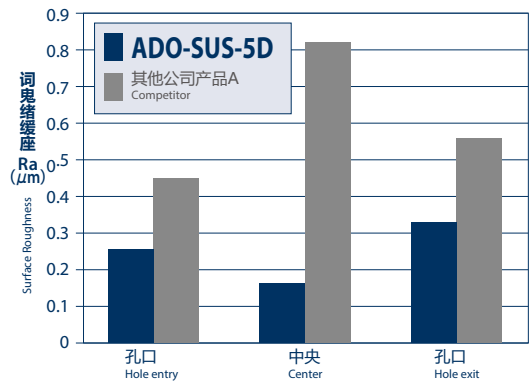
## 在加工开始时就展现稳定的加工!

ADO-SUS achieves stable machining from the beginning!



## 孔壁的表面粗糙度良好!

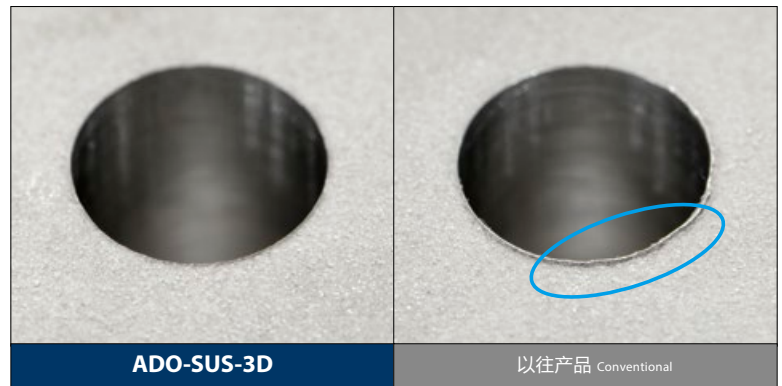
Stable machining leads to excellent surface finish of holes!



## 加工奥氏体不锈钢 Machining Austenitic Stainless Steel

|                       |   |                      |
|-----------------------|---|----------------------|
| 使用工具<br>Tool          | ADO-SUS-3D  | 以往产品<br>Conventional |
| 尺寸<br>Size            | φ8.5  |                      |
| 加工材料<br>Work Material | SUS304  |                      |
| 切削速度<br>Cutting Speed | 80m/min (2,997min <sup>-1</sup> )                   |                      |
| 进给速度<br>Feed          | 659mm/min (0.22mm/rev)                              |                      |
| 孔深<br>Depth of Hole   | 25mm (通孔)<br>(Through)                              |                      |
| 切削油剂<br>Coolant       | 水溶性切削油剂 (内部给油 · 1.5MPa)<br>Water-Soluble (Internal) |                      |
| 使用机械<br>Machine       | 立式加工中心 (BT30)<br>Vertical Machining Center          |                      |

### 孔口比较 Comparison of hole entry



## 加工析出硬化体不锈钢 Machining Precipitation Stainless Steel

|                       |   |                      |
|-----------------------|---|----------------------|
| 使用工具<br>Tool          | ADO-SUS-5D  | 其他公司产品<br>Competitor |
| 尺寸<br>Size            | φ6.7  |                      |
| 加工材料<br>Work Material | 15-5PH (43HRC)                                    |                      |
| 切削速度<br>Cutting Speed | 50m/min (2,377min <sup>-1</sup> )                 |                      |
| 进给速度<br>Feed          | 357mm/min (0.15mm/rev)                            |                      |
| 孔深<br>Depth of Hole   | 45mm (盲孔)<br>(Blind)                              |                      |
| 切削油剂<br>Coolant       | 水溶性切削油剂 (内部给油 · 3MPa)<br>Water-Soluble (Internal) |                      |
| 使用机械<br>Machine       | 卧式加工中心<br>Horizontal Machining Center             |                      |



## 加工二相体不锈钢 Machining Duplex Stainless Steel

|                       |   |                      |
|-----------------------|---|----------------------|
| 使用工具<br>Tool          | ADO-SUS-5D  | 其他公司产品<br>Competitor |
| 尺寸<br>Size            | φ10.3   |                      |
| 加工材料<br>Work Material | SUS329J3L   |                      |
| 切削速度<br>Cutting Speed | 65m/min (2,010min <sup>-1</sup> )                 |                      |
| 进给速度<br>Feed          | 462mm/min (0.23mm/rev)                            |                      |
| 孔深<br>Depth of Hole   | 48mm (通孔)<br>(Through)                            |                      |
| 切削油剂<br>Coolant       | 水溶性切削油剂 (内部给油 · 8MPa)<br>Water-Soluble (Internal) |                      |
| 使用机械<br>Machine       | 多功能机床<br>Multifunction Lathe                      |                      |



## 加工钛合金 Machining Titanium Alloy

|                       |  |                      |                      |
|-----------------------|--|----------------------|----------------------|
| 使用工具<br>Tool          | ADO-SUS-3D                                     | 其他公司产品<br>Competitor | 以往产品<br>Conventional |
| 尺寸<br>Size            | φ 5.1  |                      |                      |
| 加工材料<br>Work Material | Ti-6Al-4V (34 ~ 36HRC)*                        |                      |                      |
| 切削速度<br>Cutting Speed | 40m/min (2,498min <sup>-1</sup> )              |                      |                      |
| 进给速度<br>Feed          | 300mm/min (0.12mm/rev)                         |                      |                      |
| 孔深<br>Depth of Hole   | 17mm (通孔)<br>(Through)                         |                      |                      |
| 切削油剂<br>Coolant       | 水溶性切削油剂(内部给油·2MPa)<br>Water-Soluble (Internal) |                      |                      |
| 使用机械<br>Machine       | 立式加工中心 (BT30)<br>Vertical Machining Center     |                      |                      |

\*时效处理后 \*After aging treatment

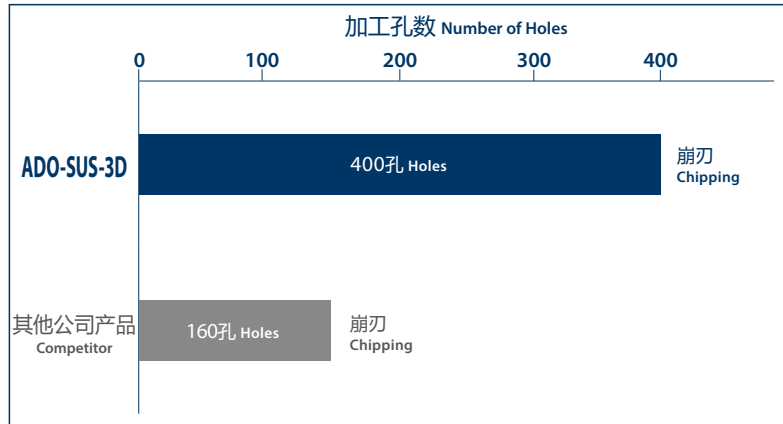


切屑 Cutting chips

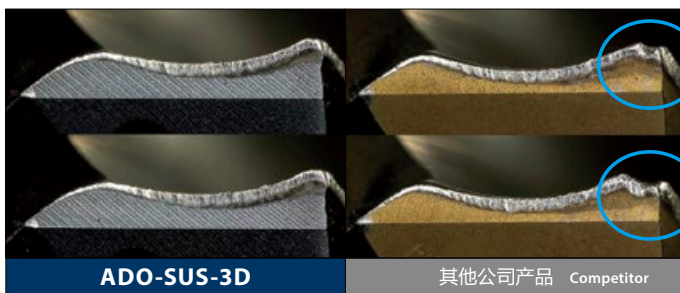


## 镍基超耐热合金加工 Machining Ni-based Superalloy

|                       |  |                      |
|-----------------------|--|----------------------|
| 使用工具<br>Tool          | ADO-SUS-3D                                   | 其他公司产品<br>Competitor |
| 尺寸<br>Size            | φ 6  |                      |
| 加工材料<br>Work Material | Inconel 718 (43HRC)                          |                      |
| 切削速度<br>Cutting Speed | 30m/min (1,592min <sup>-1</sup> )            |                      |
| 进给速度<br>Feed          | 143mm/min (0.09mm/rev)                       |                      |
| 孔深<br>Depth of Hole   | 18mm (通孔) 无阶梯式加工<br>(Through) Non-step       |                      |
| 切削油剂<br>Coolant       | 水溶性切削油剂 (内部给油)<br>Water-Soluble (Internal)   |                      |
| 使用机械<br>Machine       | 卧式加工中心 (BT40)<br>Horizontal Machining Center |                      |



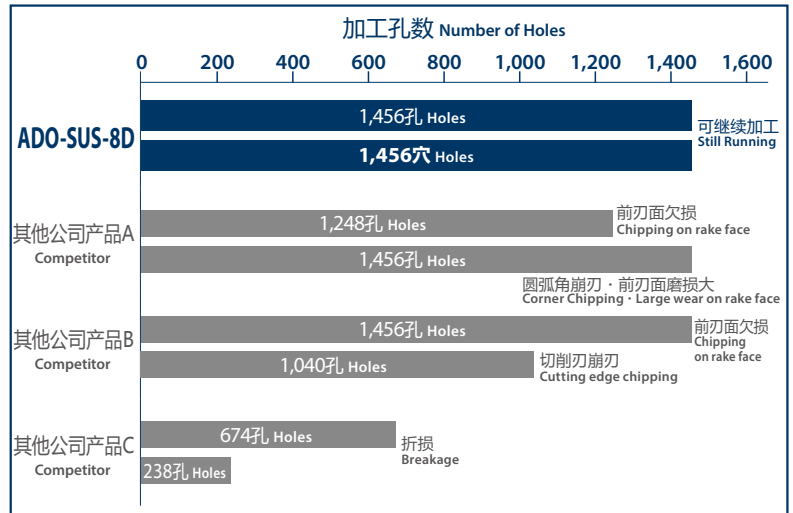
## 加工160孔后的磨损情况 Wear after drilling 160 holes



## 加工奥氏体不锈钢 Machining Austenitic Stainless Steel

|                    |   |                   |
|--------------------|---|-------------------|
| 使用工具 Tool          | ADO-SUS-8D  | 其他公司产品 Competitor |
| 尺寸 Size            | φ10   |                   |
| 加工材料 Work Material | SUS304  |                   |
| 切削速度 Cutting Speed | 70m/min (2,229min <sup>-1</sup> )                 |                   |
| 进给速度 Feed          | 669mm/min (0.30mm/rev)                            |                   |
| 孔深 Depth of Hole   | 78.5mm (盲孔)<br>(Blind)                            |                   |
| 切削油剂 Coolant       | 水溶性切削油剂 (内部给油 · 3MPa)<br>Water-Soluble (Internal) |                   |
| 使用机械 Machine       | 卧式加工中心 (HSK63)<br>Horizontal Machining Center     |                   |

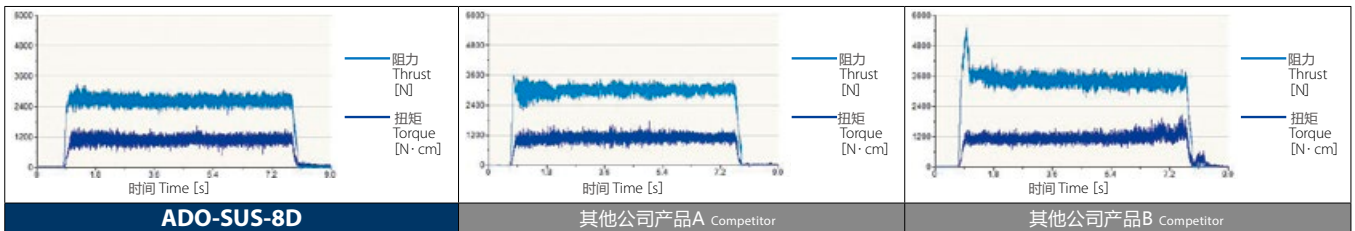
实现即使深孔加工也能高效率·长寿命!  
High efficiency and long tool life can be achieved even in deep-hole drilling!



加工1,456后 After drilling 1,456 holes

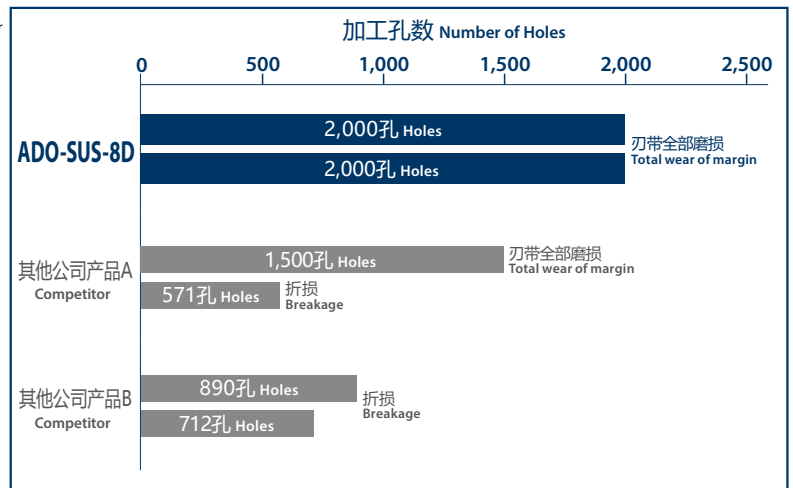
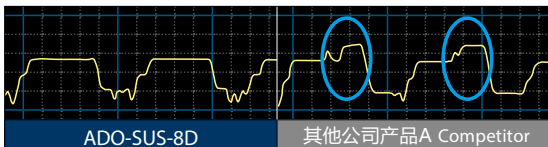


## 低阻力·稳定扭矩 Low thrust resistance and stable torque



## 加工铬钼钢 Machining Chrome Molybdenum Steel

|                    |   |                   |
|--------------------|---|-------------------|
| 使用工具 Tool          | ADO-SUS-8D  | 其他公司产品 Competitor |
| 尺寸 Size            | φ3  |                   |
| 加工材料 Work Material | SCM440  |                   |
| 切削速度 Cutting Speed | 75m/min (7,962min <sup>-1</sup> )                 |                   |
| 进给速度 Feed          | 717mm/min (0.09mm/rev)                            |                   |
| 孔深 Depth of Hole   | 78.5mm (盲孔)<br>(Blind)                            |                   |
| 切削油剂 Coolant       | 水溶性切削油剂 (内部给油 · 1MPa)<br>Water-Soluble (Internal) |                   |
| 使用机械 Machine       | 卧式加工中心 (BT40)<br>Horizontal Machining Center      |                   |

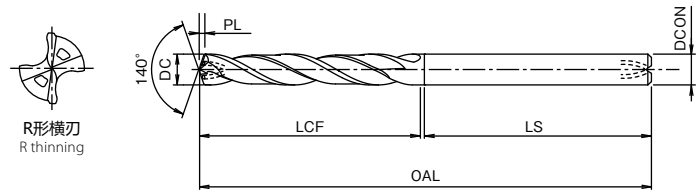


即使小径·冷却剂压力低也可稳定加工!

Stable performance can be achieved even with small diameter and low coolant pressure condition.



# ADO-SUS-3D



- \* 新型油孔形状适用于φ6以上的尺寸
- \* New coolant hole shape applies only to diameter sizes over 6mm



单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8665200        | 2 - 3                | 12        | 66        | 3          | 51.1     | 0.4      | B           |
| 8665210        | 2.1 - 3              | 13        | 66        | 3          | 51.3     | 0.4      | B           |
| 8665220        | 2.2 - 3              | 14        | 66        | 3          | 49.5     | 0.4      | B           |
| 8665230        | 2.3 - 3              | 14        | 66        | 3          | 49.7     | 0.4      | B           |
| 8665240        | 2.4 - 3              | 15        | 66        | 3          | 48.9     | 0.4      | B           |
| 8665250        | 2.5 - 3              | 15        | 66        | 3          | 49.1     | 0.5      | B           |
| 8665260        | 2.6 - 3              | 16        | 66        | 3          | 48.3     | 0.5      | B           |
| 8665270        | 2.7 - 3              | 17        | 66        | 3          | 47.4     | 0.5      | B           |
| 8665280        | 2.8 - 3              | 17        | 66        | 3          | 47.6     | 0.5      | B           |
| 8665283        | 2.83 - 3             | 17        | 66        | 3          | 47.7     | 0.5      | B           |
| 8665287        | 2.87 - 3             | 18        | 66        | 3          | 46.8     | 0.5      | B           |
| 8665290        | 2.9 - 3              | 18        | 66        | 3          | 46.8     | 0.5      | B           |
| 8665300        | 3 - 3                | 18        | 66        | 3          | 47       | 0.5      | B           |
| 8665310        | 3.1                  | 19        | 74        | 4          | 52.3     | 0.6      | B           |
| 8665315        | 3.15                 | 19        | 74        | 4          | 52.4     | 0.6      | B           |
| 8665320        | 3.2                  | 20        | 74        | 4          | 51.5     | 0.6      | B           |
| 8665326        | 3.26 (#30)           | 20        | 74        | 4          | 51.6     | 0.6      | B           |
| 8665330        | 3.3                  | 20        | 74        | 4          | 51.7     | 0.6      | B           |
| 8665340        | 3.4                  | 21        | 74        | 4          | 50.9     | 0.6      | B           |
| 8665350        | 3.5                  | 21        | 74        | 4          | 51.1     | 0.6      | B           |
| 8665360        | 3.6                  | 22        | 74        | 4          | 50.3     | 0.7      | B           |
| 8665370        | 3.7                  | 23        | 74        | 4          | 49.4     | 0.7      | B           |
| 8665373        | 3.73                 | 23        | 74        | 4          | 49.5     | 0.7      | B           |
| 8665375        | 3.75                 | 23        | 74        | 4          | 49.5     | 0.7      | B           |
| 8665380        | 3.8                  | 23        | 74        | 4          | 49.6     | 0.7      | B           |
| 8665390        | 3.9                  | 24        | 74        | 4          | 48.8     | 0.7      | B           |
| 8665400        | 4                    | 24        | 74        | 4          | 49       | 0.7      | B           |
| 8665410        | 4.1 - 5              | 25        | 80        | 5          | 52.3     | 0.7      | B           |

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8680410        | 4.1                  | 25        | 80        | 6          | 50.5     | 0.7      | B           |
| 8665420        | 4.2 - 5              | 26        | 80        | 5          | 51.5     | 0.8      | B           |
| 8680420        | 4.2                  | 26        | 80        | 6          | 49.6     | 0.8      | B           |
| 8665430        | 4.3 - 5              | 26        | 80        | 5          | 51.7     | 0.8      | B           |
| 8680430        | 4.3                  | 26        | 80        | 6          | 49.8     | 0.8      | B           |
| 8665440        | 4.4 - 5              | 27        | 80        | 5          | 50.9     | 0.8      | B           |
| 8680440        | 4.4                  | 27        | 80        | 6          | 49       | 0.8      | B           |
| 8680445        | 4.45                 | 27        | 80        | 6          | 49.1     | 0.8      | B           |
| 8665450        | 4.5 - 5              | 27        | 80        | 5          | 51.1     | 0.8      | B           |
| 8680450        | 4.5                  | 27        | 80        | 6          | 49.2     | 0.8      | B           |
| 8665460        | 4.6 - 5              | 28        | 80        | 5          | 50.3     | 0.8      | B           |
| 8680460        | 4.6                  | 28        | 80        | 6          | 48.4     | 0.8      | B           |
| 8680465        | 4.65                 | 28        | 80        | 6          | 48.5     | 0.8      | B           |
| 8665470        | 4.7 - 5              | 29        | 80        | 5          | 49.4     | 0.9      | B           |
| 8680470        | 4.7                  | 29        | 80        | 6          | 47.6     | 0.9      | B           |
| 8665480        | 4.8 - 5              | 29        | 80        | 5          | 49.6     | 0.9      | B           |
| 8680480        | 4.8                  | 29        | 80        | 6          | 47.8     | 0.9      | B           |
| 8665485        | 4.85 (#11)           | 29        | 80        | 6          | 47.9     | 0.9      | B           |
| 8665490        | 4.9 - 5              | 30        | 80        | 5          | 48.8     | 0.9      | B           |
| 8680490        | 4.9                  | 30        | 80        | 6          | 46.9     | 0.9      | B           |
| 8665500        | 5 - 5                | 25        | 80        | 5          | 54       | 0.9      | B           |
| 8680500        | 5                    | 25        | 80        | 6          | 52.1     | 0.9      | B           |
| 8665510        | 5.1                  | 26        | 82        | 6          | 53.3     | 0.9      | B           |
| 8665520        | 5.2                  | 26        | 82        | 6          | 53.5     | 0.9      | B           |
| 8665525        | 5.25                 | 27        | 82        | 6          | 52.6     | 1        | B           |
| 8665530        | 5.3                  | 27        | 82        | 6          | 52.7     | 1        | B           |
| 8665540        | 5.4                  | 27        | 82        | 6          | 52.9     | 1        | B           |
| 8665550        | 5.5                  | 28        | 82        | 6          | 52.1     | 1        | B           |

B=标准库存品 B=Standard stock item

- 标识说明请参考p.8.
- See p.8 for explanation of icons.

**NEXT**





## 标识说明 Guide for Icons

### 1 材质 Tool Materials

**CARBIDE** 硬质合金  
Tungsten Carbide

### 2 表面处理 Surface Treatment

**WXL** WXL 涂层  
WXL Coating

### 3 直径的许容差 Tolerance for Drill Diameter

**h8** 表示钻头直径的许容差  
Tolerance for drill diameter

### 4 螺旋角 Helix Angle

**30°** 表示钻头沟槽的螺旋角  
Helix angle of flute for drills

### 5 热缩 Shrink

**SHRINK FIT** 推荐使用热胀刀柄系列  
Suitable for the shrink holder system

### 6 切削条件 Cutting Conditions

**SPEED FEED P23** 表示该切削条件基准表所在页码  
Indicates page number for cutting conditions

## FROM

单位:mm Unit:mm

| 商品号<br>EDP No. | 直径-柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|--------------------|-----------|-----------|------------|----------|----------|-------------|
| 8680555        | 5.55               | 28        | 82        | 6          | 52.2     | 1        | B           |
| 8665560        | 5.6                | 28        | 82        | 6          | 52.3     | 1        | B           |
| 8665570        | 5.7                | 29        | 82        | 6          | 51.4     | 1        | B           |
| 8665580        | 5.8                | 29        | 82        | 6          | 51.6     | 1.1      | B           |
| 8665590        | 5.9                | 30        | 82        | 6          | 50.8     | 1.1      | B           |
| 8665600        | 6                  | 30        | 82        | 6          | 51       | 1.1      | B           |
| 8665610        | 6.1 - 7            | 31        | 88        | 7          | 56       | 1.1      | B           |
| 8680610        | 6.1                | 31        | 88        | 8          | 52.5     | 1.1      | B           |
| 8665620        | 6.2 - 7            | 31        | 88        | 7          | 56       | 1.1      | B           |
| 8680620        | 6.2                | 31        | 88        | 8          | 52.6     | 1.1      | B           |
| 8665625        | 6.25 - 7           | 32        | 88        | 7          | 55       | 1.1      | B           |
| 8665630        | 6.3 - 7            | 32        | 88        | 7          | 55       | 1.1      | B           |
| 8680630        | 6.3                | 32        | 88        | 8          | 51.8     | 1.1      | B           |
| 8665635        | 6.35(1/4") - 6.35  | 32        | 88        | 6.35       | 55       | 1.2      | B           |
| 8665640        | 6.4 - 7            | 32        | 88        | 7          | 55       | 1.2      | B           |
| 8680640        | 6.4                | 32        | 88        | 8          | 52       | 1.2      | B           |
| 8665650        | 6.5 - 7            | 33        | 88        | 7          | 54       | 1.2      | B           |
| 8680650        | 6.5                | 33        | 88        | 8          | 51.2     | 1.2      | B           |
| 8665660        | 6.6 - 7            | 33        | 88        | 7          | 54       | 1.2      | B           |
| 8680660        | 6.6                | 33        | 88        | 8          | 51.4     | 1.2      | B           |
| 8665670        | 6.7 - 7            | 34        | 88        | 7          | 53       | 1.2      | B           |
| 8680670        | 6.7                | 34        | 88        | 8          | 50.6     | 1.2      | B           |
| 8665675        | 6.75 - 7           | 34        | 88        | 7          | 53       | 1.2      | B           |
| 8665680        | 6.8 - 7            | 34        | 88        | 7          | 53       | 1.2      | B           |
| 8680680        | 6.8                | 34        | 88        | 8          | 50.8     | 1.2      | B           |
| 8665690        | 6.9 - 7            | 35        | 88        | 7          | 52       | 1.3      | B           |
| 8680690        | 6.9                | 35        | 88        | 8          | 49.9     | 1.3      | B           |
| 8665700        | 7 - 7              | 35        | 88        | 7          | 52       | 1.3      | B           |

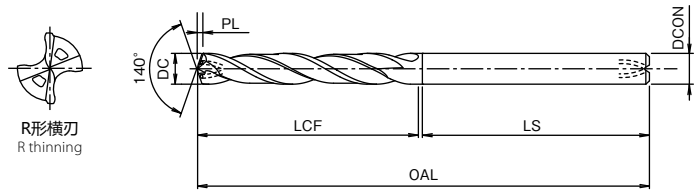
| 商品号<br>EDP No. | 直径-柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|--------------------|-----------|-----------|------------|----------|----------|-------------|
| 8680700        | 7                  | 35        | 88        | 8          | 50.1     | 1.3      | B           |
| 8665710        | 7.1                | 36        | 94        | 8          | 57       | 1.3      | B           |
| 8665720        | 7.2                | 36        | 94        | 8          | 57       | 1.3      | B           |
| 8665725        | 7.25               | 37        | 94        | 8          | 56       | 1.3      | B           |
| 8665730        | 7.3                | 37        | 94        | 8          | 56       | 1.3      | B           |
| 8665740        | 7.4                | 37        | 94        | 8          | 56       | 1.3      | B           |
| 8680745        | 7.45               | 38        | 94        | 8          | 55       | 1.4      | B           |
| 8665750        | 7.5                | 38        | 94        | 8          | 55       | 1.4      | B           |
| 8680755        | 7.55               | 38        | 94        | 8          | 55       | 1.4      | B           |
| 8665760        | 7.6                | 38        | 94        | 8          | 55       | 1.4      | B           |
| 8665770        | 7.7                | 39        | 94        | 8          | 54       | 1.4      | B           |
| 8665775        | 7.75               | 39        | 94        | 8          | 54       | 1.4      | B           |
| 8665780        | 7.8                | 39        | 94        | 8          | 54       | 1.4      | B           |
| 8665790        | 7.9                | 40        | 94        | 8          | 53       | 1.4      | B           |
| 8665800        | 8                  | 40        | 94        | 8          | 53       | 1.5      | B           |
| 8665810        | 8.1 - 9            | 41        | 101       | 9          | 59       | 1.5      | B           |
| 8680810        | 8.1                | 41        | 101       | 10         | 55.5     | 1.5      | B           |
| 8665820        | 8.2 - 9            | 41        | 101       | 9          | 59       | 1.5      | B           |
| 8680820        | 8.2                | 41        | 101       | 10         | 55.6     | 1.5      | B           |
| 8665825        | 8.25 - 9           | 42        | 101       | 9          | 58       | 1.5      | B           |
| 8665830        | 8.3 - 9            | 42        | 101       | 9          | 58       | 1.5      | B           |
| 8680830        | 8.3                | 42        | 101       | 10         | 54.8     | 1.5      | B           |
| 8665840        | 8.4 - 9            | 42        | 101       | 9          | 58       | 1.5      | B           |
| 8680840        | 8.4                | 42        | 101       | 10         | 55       | 1.5      | B           |
| 8665850        | 8.5 - 9            | 43        | 101       | 9          | 57       | 1.5      | B           |
| 8680850        | 8.5                | 43        | 101       | 10         | 54.2     | 1.5      | B           |
| 8665860        | 8.6 - 9            | 43        | 101       | 9          | 57       | 1.6      | B           |
| 8680860        | 8.6                | 43        | 101       | 10         | 54.4     | 1.6      | B           |

B=标准库存品 B=Standard stock item

NEXT



# ADO-SUS-3D



\* 新型油孔形状适用于φ6以上的尺寸  
\* New coolant hole shape applies only to diameter sizes over 6mm

FROM

| 商品号<br>EDP No. | 直径-柄径<br>DC-DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|------------------|-----------|-----------|------------|----------|----------|-------------|
| 8665870        | 8.7 - 9          | 44        | 101       | 9          | 56       | 1.6      | B           |
| 8680870        | 8.7              | 44        | 101       | 10         | 53.6     | 1.6      | B           |
| 8665875        | 8.75 - 9         | 44        | 101       | 9          | 56       | 1.6      | B           |
| 8665880        | 8.8 - 9          | 44        | 101       | 9          | 56       | 1.6      | B           |
| 8680880        | 8.8              | 44        | 101       | 10         | 53.8     | 1.6      | B           |
| 8665890        | 8.9 - 9          | 45        | 101       | 9          | 55       | 1.6      | B           |
| 8680890        | 8.9              | 45        | 101       | 10         | 52.9     | 1.6      | B           |
| 8665900        | 9 - 9            | 45        | 101       | 9          | 55       | 1.6      | B           |
| 8680900        | 9                | 45        | 101       | 10         | 53.1     | 1.6      | B           |
| 8665910        | 9.1              | 46        | 106       | 10         | 59       | 1.7      | B           |
| 8665920        | 9.2              | 46        | 106       | 10         | 59       | 1.7      | B           |
| 8665925        | 9.25             | 47        | 106       | 10         | 58       | 1.7      | B           |
| 8665930        | 9.3              | 47        | 106       | 10         | 58       | 1.7      | B           |
| 8665940        | 9.4              | 47        | 106       | 10         | 58       | 1.7      | B           |
| 8665950        | 9.5              | 48        | 106       | 10         | 57       | 1.7      | B           |
| 8680955        | 9.55             | 48        | 106       | 10         | 57       | 1.7      | B           |
| 8665960        | 9.6              | 48        | 106       | 10         | 57       | 1.7      | B           |
| 8665970        | 9.7              | 49        | 106       | 10         | 56       | 1.8      | B           |
| 8665975        | 9.75             | 49        | 106       | 10         | 56       | 1.8      | B           |
| 8665980        | 9.8              | 49        | 106       | 10         | 56       | 1.8      | B           |
| 8665990        | 9.9              | 50        | 106       | 10         | 55       | 1.8      | B           |
| 8666000        | 10               | 50        | 106       | 10         | 55       | 1.8      | B           |
| 8666010        | 10.1 - 11        | 51        | 113       | 11         | 61       | 1.8      | B           |
| 8681010        | 10.1             | 51        | 113       | 12         | 57.5     | 1.8      | B           |
| 8666020        | 10.2 - 11        | 51        | 113       | 11         | 61       | 1.9      | B           |
| 8681020        | 10.2             | 51        | 113       | 12         | 57.6     | 1.9      | B           |
| 8666025        | 10.25 - 11       | 52        | 113       | 11         | 60       | 1.9      | B           |
| 8666030        | 10.3 - 11        | 52        | 113       | 11         | 60       | 1.9      | B           |

单位:mm Unit:mm

| 商品号<br>EDP No. | 直径-柄径<br>DC-DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|------------------|-----------|-----------|------------|----------|----------|-------------|
| 8681030        | 10.3             | 52        | 113       | 12         | 56.8     | 1.9      | B           |
| 8666040        | 10.4 - 11        | 52        | 113       | 11         | 60       | 1.9      | B           |
| 8681040        | 10.4             | 52        | 113       | 12         | 57       | 1.9      | B           |
| 8666050        | 10.5 - 11        | 53        | 113       | 11         | 59       | 1.9      | B           |
| 8681050        | 10.5             | 53        | 113       | 12         | 56.2     | 1.9      | B           |
| 8666060        | 10.6 - 11        | 53        | 113       | 11         | 59       | 1.9      | B           |
| 8681060        | 10.6             | 53        | 113       | 12         | 56.4     | 1.9      | B           |
| 8666070        | 10.7 - 11        | 54        | 113       | 11         | 58       | 1.9      | B           |
| 8681070        | 10.7             | 54        | 113       | 12         | 55.6     | 1.9      | B           |
| 8666075        | 10.75 - 11       | 54        | 113       | 11         | 58       | 2        | B           |
| 8666080        | 10.8 - 11        | 54        | 113       | 11         | 58       | 2        | B           |
| 8681080        | 10.8             | 54        | 113       | 12         | 55.8     | 2        | B           |
| 8666090        | 10.9 - 11        | 55        | 113       | 11         | 57       | 2        | B           |
| 8681090        | 10.9             | 55        | 113       | 12         | 54.9     | 2        | B           |
| 8666100        | 11 - 11          | 55        | 113       | 11         | 57       | 2        | B           |
| 8681100        | 11               | 55        | 113       | 12         | 55.1     | 2        | B           |
| 8666110        | 11.1             | 56        | 120       | 12         | 63       | 2        | B           |
| 8666120        | 11.2             | 56        | 120       | 12         | 63       | 2        | B           |
| 8666130        | 11.3             | 57        | 120       | 12         | 62       | 2.1      | B           |
| 8666140        | 11.4             | 57        | 120       | 12         | 62       | 2.1      | B           |
| 8666150        | 11.5             | 58        | 120       | 12         | 61       | 2.1      | B           |
| 8666160        | 11.6             | 58        | 120       | 12         | 61       | 2.1      | B           |
| 8666170        | 11.7             | 59        | 120       | 12         | 60       | 2.1      | B           |
| 8666180        | 11.8             | 59        | 120       | 12         | 60       | 2.1      | B           |
| 8666190        | 11.9             | 60        | 120       | 12         | 59       | 2.2      | B           |
| 8666200        | 12               | 60        | 120       | 12         | 59       | 2.2      | B           |
| 8666210        | 12.1 - 13        | 61        | 128       | 13         | 66       | 2.2      | B           |
| 8681210        | 12.1             | 61        | 128       | 14         | 62.5     | 2.2      | B           |

B=标准库存品 B=Standard stock item

■ 标识说明请参考p.8。  
■ See p.8 for explanation of icons.

NEXT



FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8666220        | 12.2 -13             | 61        | 128       | 13         | 66       | 2.2      | B           |
| 8681220        | 12.2                 | 61        | 128       | 14         | 62.6     | 2.2      | B           |
| 8666230        | 12.3 -13             | 62        | 128       | 13         | 65       | 2.2      | B           |
| 8681230        | 12.3                 | 62        | 128       | 14         | 61.8     | 2.2      | B           |
| 8666240        | 12.4 -13             | 62        | 128       | 13         | 65       | 2.3      | B           |
| 8681240        | 12.4                 | 62        | 128       | 14         | 62       | 2.3      | B           |
| 8666250        | 12.5 -13             | 63        | 128       | 13         | 64       | 2.3      | B           |
| 8681250        | 12.5                 | 63        | 128       | 14         | 61.2     | 2.3      | B           |
| 8666260        | 12.6 -13             | 63        | 128       | 13         | 64       | 2.3      | B           |
| 8681260        | 12.6                 | 63        | 128       | 14         | 61.4     | 2.3      | B           |
| 8666270        | 12.7 -13             | 64        | 128       | 13         | 63       | 2.3      | B           |
| 8681270        | 12.7                 | 64        | 128       | 14         | 60.6     | 2.3      | B           |
| 8666275        | 12.75 -13            | 64        | 128       | 13         | 63       | 2.3      | B           |
| 8666280        | 12.8 -13             | 64        | 128       | 13         | 63       | 2.3      | B           |
| 8681280        | 12.8                 | 64        | 128       | 14         | 60.8     | 2.3      | B           |
| 8666290        | 12.9 -13             | 65        | 128       | 13         | 62       | 2.3      | B           |
| 8681290        | 12.9                 | 65        | 128       | 14         | 59.9     | 2.3      | B           |
| 8666300        | 13 -13               | 65        | 128       | 13         | 62       | 2.4      | B           |
| 8681300        | 13                   | 65        | 128       | 14         | 60.1     | 2.4      | B           |
| 8666310        | 13.1                 | 66        | 134       | 14         | 67       | 2.4      | B           |
| 8666320        | 13.2                 | 66        | 134       | 14         | 67       | 2.4      | B           |
| 8666330        | 13.3                 | 67        | 134       | 14         | 66       | 2.4      | B           |
| 8666340        | 13.4                 | 67        | 134       | 14         | 66       | 2.4      | B           |
| 8681343        | 13.43                | 68        | 134       | 14         | 65       | 2.4      | B           |
| 8666350        | 13.5                 | 68        | 134       | 14         | 65       | 2.5      | B           |
| 8681355        | 13.55                | 68        | 134       | 14         | 65       | 2.5      | B           |
| 8666360        | 13.6                 | 68        | 134       | 14         | 65       | 2.5      | B           |
| 8666370        | 13.7                 | 69        | 134       | 14         | 64       | 2.5      | B           |

单位:mm Unit:mm

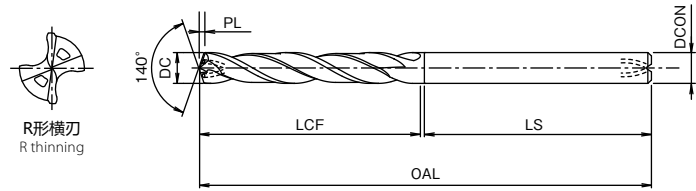
| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8666380        | 13.8                 | 69        | 134       | 14         | 64       | 2.5      | B           |
| 8666390        | 13.9                 | 70        | 134       | 14         | 63       | 2.5      | B           |
| 8666400        | 14                   | 70        | 134       | 14         | 63       | 2.5      | B           |
| 8666410        | 14.1 -15             | 71        | 140       | 15         | 68       | 2.6      | B           |
| 8681410        | 14.1                 | 71        | 140       | 16         | 64.5     | 2.6      | B           |
| 8666420        | 14.2 -15             | 71        | 140       | 15         | 68       | 2.6      | B           |
| 8681420        | 14.2                 | 71        | 140       | 16         | 64.6     | 2.6      | B           |
| 8666430        | 14.3 -15             | 72        | 140       | 15         | 67       | 2.6      | B           |
| 8681430        | 14.3                 | 72        | 140       | 16         | 63.8     | 2.6      | B           |
| 8666440        | 14.4 -15             | 72        | 140       | 15         | 67       | 2.6      | B           |
| 8681440        | 14.4                 | 72        | 140       | 16         | 64       | 2.6      | B           |
| 8666450        | 14.5 -15             | 73        | 140       | 15         | 66       | 2.6      | B           |
| 8681450        | 14.5                 | 73        | 140       | 16         | 63.2     | 2.6      | B           |
| 8666460        | 14.6 -15             | 73        | 140       | 15         | 66       | 2.7      | B           |
| 8681460        | 14.6                 | 73        | 140       | 16         | 63.4     | 2.7      | B           |
| 8666470        | 14.7 -15             | 74        | 140       | 15         | 65       | 2.7      | B           |
| 8681470        | 14.7                 | 74        | 140       | 16         | 62.6     | 2.7      | B           |
| 8666480        | 14.8 -15             | 74        | 140       | 15         | 65       | 2.7      | B           |
| 8681480        | 14.8                 | 74        | 140       | 16         | 62.8     | 2.7      | B           |
| 8666490        | 14.9 -15             | 75        | 140       | 15         | 64       | 2.7      | B           |
| 8681490        | 14.9                 | 75        | 140       | 16         | 61.9     | 2.7      | B           |
| 8666500        | 15 -15               | 75        | 140       | 15         | 64       | 2.7      | B           |
| 8681500        | 15                   | 75        | 140       | 16         | 62.1     | 2.7      | B           |
| 8666510        | 15.1                 | 76        | 145       | 16         | 68       | 2.7      | B           |
| 8666520        | 15.2                 | 76        | 145       | 16         | 68       | 2.8      | B           |
| 8666530        | 15.3                 | 77        | 145       | 16         | 67       | 2.8      | B           |
| 8666540        | 15.4                 | 77        | 145       | 16         | 67       | 2.8      | B           |
| 8666550        | 15.5                 | 78        | 145       | 16         | 66       | 2.8      | B           |

B=标准库存品 B=Standard stock item

NEXT



# ADO-SUS-3D



\* 新型油孔形状适用于φ6以上的尺寸  
\* New coolant hole shape applies only to diameter sizes over 6mm

FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8681555        | 15.55                | 78        | 145       | 16         | 66       | 2.8      | B           |
| 8666560        | 15.6                 | 78        | 145       | 16         | 66       | 2.8      | B           |
| 8666570        | 15.7                 | 79        | 145       | 16         | 65       | 2.9      | B           |
| 8666580        | 15.8                 | 79        | 145       | 16         | 65       | 2.9      | B           |
| 8666590        | 15.9                 | 80        | 145       | 16         | 64       | 2.9      | B           |
| 8666600        | 16                   | 80        | 145       | 16         | 64       | 2.9      | B           |
|                | 16.1                 | 81        | 150       | 18         | 64.5     | 2.9      | □           |
|                | 16.2                 | 81        | 150       | 18         | 64.6     | 2.9      | □           |
|                | 16.3                 | 82        | 150       | 18         | 63.8     | 3        | □           |
|                | 16.4                 | 82        | 150       | 18         | 64       | 3        | □           |
| 8666650        | 16.5 -17             | 83        | 150       | 17         | 66       | 3        | B           |
| 8681650        | 16.5                 | 83        | 150       | 18         | 63.2     | 3        | B           |
|                | 16.6                 | 83        | 150       | 18         | 63.4     | 3        | □           |
| 8681670        | 16.7                 | 84        | 150       | 18         | 62.6     | 3        | B           |
|                | 16.8                 | 84        | 150       | 18         | 62.8     | 3.1      | □           |
|                | 16.9                 | 85        | 150       | 18         | 61.9     | 3.1      | □           |
| 8666700        | 17 -17               | 85        | 150       | 17         | 64       | 3.1      | B           |
| 8681700        | 17                   | 85        | 150       | 18         | 62.1     | 3.1      | B           |
|                | 17.1                 | 86        | 155       | 18         | 68       | 3.1      | □           |
|                | 17.2                 | 86        | 155       | 18         | 68       | 3.1      | □           |
| 8681730        | 17.3                 | 87        | 155       | 18         | 67       | 3.1      | B           |
|                | 17.4                 | 87        | 155       | 18         | 67       | 3.2      | □           |
| 8666750        | 17.5                 | 88        | 155       | 18         | 66       | 3.2      | B           |
| 8681755        | 17.55                | 88        | 155       | 18         | 66       | 3.2      | B           |
|                | 17.6                 | 88        | 155       | 18         | 66       | 3.2      | □           |
|                | 17.7                 | 89        | 155       | 18         | 65       | 3.2      | □           |

■ 标识说明请参考p.8。  
■ See p.8 for explanation of icons.

单位:mm Unit:mm

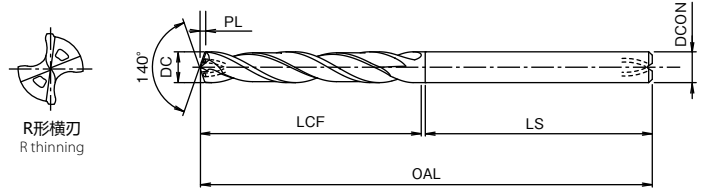
| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
|                | 17.8                 | 89        | 155       | 18         | 65       | 3.2      | □           |
|                | 17.9                 | 90        | 155       | 18         | 64       | 3.3      | □           |
| 8666800        | 18                   | 90        | 155       | 18         | 64       | 3.3      | B           |
|                | 18.1                 | 91        | 160       | 20         | 64.5     | 3.3      | □           |
|                | 18.2                 | 91        | 160       | 20         | 64.6     | 3.3      | □           |
|                | 18.3                 | 92        | 160       | 20         | 63.8     | 3.3      | □           |
|                | 18.4                 | 92        | 160       | 20         | 64       | 3.3      | □           |
| 8666850        | 18.5 -19             | 93        | 160       | 19         | 66       | 3.4      | B           |
| 8681850        | 18.5                 | 93        | 160       | 20         | 63.2     | 3.4      | B           |
|                | 18.6                 | 93        | 160       | 20         | 63.4     | 3.4      | □           |
| 8681870        | 18.7                 | 94        | 160       | 20         | 62.6     | 3.4      | B           |
|                | 18.8                 | 94        | 160       | 20         | 62.8     | 3.4      | □           |
|                | 18.9                 | 95        | 160       | 20         | 61.9     | 3.4      | □           |
| 8666900        | 19 -19               | 95        | 160       | 19         | 64       | 3.5      | B           |
| 8681900        | 19                   | 95        | 160       | 20         | 62.1     | 3.5      | B           |
|                | 19.1                 | 96        | 165       | 20         | 68       | 3.5      | □           |
|                | 19.2                 | 96        | 165       | 20         | 68       | 3.5      | □           |
| 8681930        | 19.3                 | 97        | 165       | 20         | 67       | 3.5      | B           |
|                | 19.4                 | 97        | 165       | 20         | 67       | 3.5      | □           |
| 8666950        | 19.5                 | 98        | 165       | 20         | 66       | 3.5      | B           |
| 8681955        | 19.55                | 98        | 165       | 20         | 66       | 3.6      | B           |
|                | 19.6                 | 98        | 165       | 20         | 66       | 3.6      | □           |
|                | 19.7                 | 99        | 165       | 20         | 65       | 3.6      | □           |
|                | 19.8                 | 99        | 165       | 20         | 65       | 3.6      | □           |
|                | 19.9                 | 100       | 165       | 20         | 64       | 3.6      | □           |
| 8667000        | 20                   | 100       | 165       | 20         | 64       | 3.6      | B           |

B=标准库存品 B=Standard stock item  
□=特定代理店库存品

□=Stocked by specific distributors. Contact us for price & availability.



# ADO-SUS-5D



\* 新型油孔形状适用于φ6以上的尺寸  
\* New coolant hole shape applies only to diameter sizes over 6mm



单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8667200        | 2 - 3                | 18        | 70        | 3          | 49.1     | 0.4      | B           |
| 8667210        | 2.1 - 3              | 19        | 70        | 3          | 48.3     | 0.4      | B           |
| 8667220        | 2.2 - 3              | 20        | 70        | 3          | 47.5     | 0.4      | B           |
| 8667230        | 2.3 - 3              | 21        | 70        | 3          | 46.7     | 0.4      | B           |
| 8667240        | 2.4 - 3              | 22        | 70        | 3          | 45.9     | 0.4      | B           |
| 8667250        | 2.5 - 3              | 23        | 70        | 3          | 45.1     | 0.5      | B           |
| 8667260        | 2.6 - 3              | 24        | 78        | 3          | 52.3     | 0.5      | B           |
| 8667270        | 2.7 - 3              | 25        | 78        | 3          | 51.4     | 0.5      | B           |
| 8667276        | 2.76 - 3             | 25        | 78        | 3          | 51.6     | 0.5      | B           |
| 8667278        | 2.78 - 3             | 26        | 78        | 3          | 50.6     | 0.5      | B           |
| 8667280        | 2.8 - 3              | 26        | 78        | 3          | 50.6     | 0.5      | B           |
| 8667283        | 2.83 - 3             | 26        | 78        | 3          | 50.7     | 0.5      | B           |
| 8667287        | 2.87 - 3             | 26        | 78        | 3          | 50.8     | 0.5      | B           |
| 8667290        | 2.9 - 3              | 27        | 78        | 3          | 49.8     | 0.5      | B           |
| 8667300        | 3 - 3                | 27        | 78        | 3          | 50       | 0.5      | B           |
| 8667310        | 3.1                  | 28        | 86        | 4          | 55.3     | 0.6      | B           |
| 8667315        | 3.15                 | 29        | 86        | 4          | 54.4     | 0.6      | B           |
| 8667320        | 3.2                  | 29        | 86        | 4          | 54.5     | 0.6      | B           |
| 8667326        | 3.26 (#30)           | 29        | 86        | 4          | 54.6     | 0.6      | B           |
| 8667330        | 3.3                  | 30        | 86        | 4          | 53.7     | 0.6      | B           |
| 8667340        | 3.4                  | 31        | 86        | 4          | 52.9     | 0.6      | B           |
| 8667350        | 3.5                  | 32        | 86        | 4          | 52.1     | 0.6      | B           |
| 8667360        | 3.6                  | 33        | 86        | 4          | 51.3     | 0.7      | B           |
| 8667366        | 3.66                 | 33        | 86        | 4          | 51.4     | 0.7      | B           |
| 8667368        | 3.68                 | 34        | 86        | 4          | 50.4     | 0.7      | B           |

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8667370        | 3.7                  | 34        | 86        | 4          | 50.4     | 0.7      | B           |
| 8667373        | 3.73                 | 34        | 86        | 4          | 50.5     | 0.7      | B           |
| 8667375        | 3.75                 | 34        | 86        | 4          | 50.5     | 0.7      | B           |
| 8667380        | 3.8                  | 35        | 86        | 4          | 49.6     | 0.7      | B           |
| 8667390        | 3.9                  | 36        | 86        | 4          | 48.8     | 0.7      | B           |
| 8667400        | 4                    | 36        | 86        | 4          | 49       | 0.7      | B           |
| 8667410        | 4.1 - 5              | 37        | 95        | 5          | 55.3     | 0.7      | B           |
| 8682410        | 4.1                  | 37        | 95        | 6          | 53.5     | 0.7      | B           |
| 8667420        | 4.2 - 5              | 38        | 95        | 5          | 54.5     | 0.8      | B           |
| 8682420        | 4.2                  | 38        | 95        | 6          | 52.6     | 0.8      | B           |
| 8667430        | 4.3 - 5              | 39        | 95        | 5          | 53.7     | 0.8      | B           |
| 8682430        | 4.3                  | 39        | 95        | 6          | 51.8     | 0.8      | B           |
| 8667440        | 4.4 - 5              | 40        | 95        | 5          | 52.9     | 0.8      | B           |
| 8682440        | 4.4                  | 40        | 95        | 6          | 51       | 0.8      | B           |
| 8682445        | 4.45                 | 41        | 95        | 6          | 50.1     | 0.8      | B           |
| 8667450        | 4.5 - 5              | 41        | 95        | 5          | 52.1     | 0.8      | B           |
| 8682450        | 4.5                  | 41        | 95        | 6          | 50.2     | 0.8      | B           |
| 8667460        | 4.6 - 5              | 42        | 95        | 5          | 51.3     | 0.8      | B           |
| 8682460        | 4.6                  | 42        | 95        | 6          | 49.4     | 0.8      | B           |
| 8667462        | 4.62 - 5             | 42        | 95        | 5          | 51.3     | 0.8      | B           |
| 8667464        | 4.64 - 5             | 42        | 95        | 5          | 51.3     | 0.8      | B           |
| 8682464        | 4.64                 | 42        | 95        | 6          | 49.5     | 0.8      | B           |
| 8667470        | 4.7 - 5              | 43        | 95        | 5          | 50.4     | 0.9      | B           |
| 8682470        | 4.7                  | 43        | 95        | 6          | 48.6     | 0.9      | B           |
| 8667480        | 4.8 - 5              | 44        | 95        | 5          | 49.6     | 0.9      | B           |

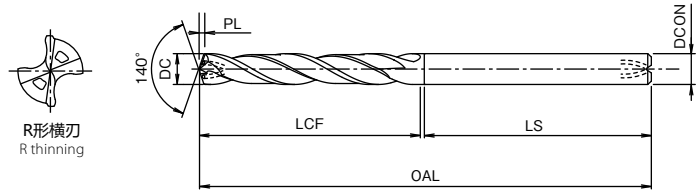
■ 标识说明请参考p.8。  
■ See p.8 for explanation of icons.

B= 标准库存品 B=Standard stock item

NEXT



# ADO-SUS-5D



\* 新型油孔形状适用于φ6以上的尺寸  
\* New coolant hole shape applies only to diameter sizes over 6mm

## FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8682480        | 4.8                  | 44        | 95        | 6          | 47.8     | 0.9      | B           |
| 8667485        | 4.85 (#11)           | 44        | 95        | 6          | 47.9     | 0.9      | B           |
| 8667490        | 4.9 - 5              | 45        | 95        | 5          | 48.8     | 0.9      | B           |
| 8682490        | 4.9                  | 45        | 95        | 6          | 46.9     | 0.9      | B           |
| 8667500        | 5 - 5                | 45        | 95        | 5          | 49       | 0.9      | B           |
| 8682500        | 5                    | 45        | 95        | 6          | 47.1     | 0.9      | B           |
| 8667510        | 5.1                  | 41        | 100       | 6          | 56.3     | 0.9      | B           |
| 8667520        | 5.2                  | 42        | 100       | 6          | 55.5     | 0.9      | B           |
| 8667525        | 5.25                 | 42        | 100       | 6          | 55.6     | 1        | B           |
| 8667530        | 5.3                  | 43        | 100       | 6          | 54.7     | 1        | B           |
| 8667540        | 5.4                  | 44        | 100       | 6          | 53.9     | 1        | B           |
| 8667550        | 5.5                  | 44        | 100       | 6          | 54.1     | 1        | B           |
| 8667552        | 5.52                 | 45        | 100       | 6          | 53.1     | 1        | B           |
| 8667554        | 5.54                 | 45        | 100       | 6          | 53.1     | 1        | B           |
| 8667560        | 5.6                  | 45        | 100       | 6          | 53.3     | 1        | B           |
| 8667570        | 5.7                  | 46        | 100       | 6          | 52.4     | 1        | B           |
| 8667580        | 5.8                  | 47        | 100       | 6          | 51.6     | 1.1      | B           |
| 8667590        | 5.9                  | 48        | 100       | 6          | 50.8     | 1.1      | B           |
| 8667600        | 6                    | 48        | 100       | 6          | 51       | 1.1      | B           |
| 8667610        | 6.1 - 7              | 49        | 109       | 7          | 59       | 1.1      | B           |
| 8682610        | 6.1                  | 49        | 109       | 8          | 55.5     | 1.1      | B           |
| 8667620        | 6.2 - 7              | 50        | 109       | 7          | 58       | 1.1      | B           |
| 8682620        | 6.2                  | 50        | 109       | 8          | 54.6     | 1.1      | B           |
| 8667625        | 6.25 - 7             | 50        | 109       | 7          | 58       | 1.1      | B           |
| 8667630        | 6.3 - 7              | 51        | 109       | 7          | 57       | 1.1      | B           |

■ 标识说明请参考p.8.  
■ See p.8 for explanation of icons.

单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8682630        | 6.3                  | 51        | 109       | 8          | 53.8     | 1.1      | B           |
| 8667635        | 6.35(1/4") - 6.35    | 52        | 109       | 6.35       | 56       | 1.2      | B           |
| 8667640        | 6.4 - 7              | 52        | 109       | 7          | 56       | 1.2      | B           |
| 8682640        | 6.4                  | 52        | 109       | 8          | 53       | 1.2      | B           |
| 8667650        | 6.5 - 7              | 52        | 109       | 7          | 56       | 1.2      | B           |
| 8682650        | 6.5                  | 52        | 109       | 8          | 53.2     | 1.2      | B           |
| 8667660        | 6.6 - 7              | 53        | 109       | 7          | 55       | 1.2      | B           |
| 8682660        | 6.6                  | 53        | 109       | 8          | 52.4     | 1.2      | B           |
| 8667670        | 6.7 - 7              | 54        | 109       | 7          | 54       | 1.2      | B           |
| 8682670        | 6.7                  | 54        | 109       | 8          | 51.6     | 1.2      | B           |
| 8667675        | 6.75 - 7             | 54        | 109       | 7          | 54       | 1.2      | B           |
| 8667680        | 6.8 - 7              | 55        | 109       | 7          | 53       | 1.2      | B           |
| 8682680        | 6.8                  | 55        | 109       | 8          | 50.8     | 1.2      | B           |
| 8667690        | 6.9 - 7              | 56        | 109       | 7          | 52       | 1.3      | B           |
| 8682690        | 6.9                  | 56        | 109       | 8          | 49.9     | 1.3      | B           |
| 8667700        | 7 - 7                | 56        | 109       | 7          | 52       | 1.3      | B           |
| 8682700        | 7                    | 56        | 109       | 8          | 50.1     | 1.3      | B           |
| 8667710        | 7.1                  | 57        | 118       | 8          | 60       | 1.3      | B           |
| 8667720        | 7.2                  | 58        | 118       | 8          | 59       | 1.3      | B           |
| 8667725        | 7.25                 | 58        | 118       | 8          | 59       | 1.3      | B           |
| 8667730        | 7.3                  | 59        | 118       | 8          | 58       | 1.3      | B           |
| 8667736        | 7.36                 | 59        | 118       | 8          | 58       | 1.3      | B           |
| 8667738        | 7.38                 | 60        | 118       | 8          | 57       | 1.3      | B           |
| 8667740        | 7.4                  | 60        | 118       | 8          | 57       | 1.3      | B           |
| 8682745        | 7.45                 | 60        | 118       | 8          | 57       | 1.4      | B           |

B= 标准库存品 B=Standard stock item



FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8667750        | 7.5                  | 60        | 118       | 8          | 57       | 1.4      | B           |
| 8667752        | 7.52                 | 61        | 118       | 8          | 56       | 1.4      | B           |
| 8667754        | 7.54                 | 61        | 118       | 8          | 56       | 1.4      | B           |
| 8667760        | 7.6                  | 61        | 118       | 8          | 56       | 1.4      | B           |
| 8667770        | 7.7                  | 62        | 118       | 8          | 55       | 1.4      | B           |
| 8667775        | 7.75                 | 62        | 118       | 8          | 55       | 1.4      | B           |
| 8667780        | 7.8                  | 63        | 118       | 8          | 54       | 1.4      | B           |
| 8667790        | 7.9                  | 64        | 118       | 8          | 53       | 1.4      | B           |
| 8667800        | 8                    | 64        | 118       | 8          | 53       | 1.5      | B           |
| 8667810        | 8.1 - 9              | 65        | 128       | 9          | 62       | 1.5      | B           |
| 8682810        | 8.1                  | 65        | 128       | 10         | 58.5     | 1.5      | B           |
| 8667820        | 8.2 - 9              | 66        | 128       | 9          | 61       | 1.5      | B           |
| 8682820        | 8.2                  | 66        | 128       | 10         | 57.6     | 1.5      | B           |
| 8667825        | 8.25 - 9             | 66        | 128       | 9          | 61       | 1.5      | B           |
| 8667830        | 8.3 - 9              | 67        | 128       | 9          | 60       | 1.5      | B           |
| 8682830        | 8.3                  | 67        | 128       | 10         | 56.8     | 1.5      | B           |
| 8667840        | 8.4 - 9              | 68        | 128       | 9          | 59       | 1.5      | B           |
| 8682840        | 8.4                  | 68        | 128       | 10         | 56       | 1.5      | B           |
| 8667850        | 8.5 - 9              | 68        | 128       | 9          | 59       | 1.5      | B           |
| 8682850        | 8.5                  | 68        | 128       | 10         | 56.2     | 1.5      | B           |
| 8667860        | 8.6 - 9              | 69        | 128       | 9          | 58       | 1.6      | B           |
| 8682860        | 8.6                  | 69        | 128       | 10         | 55.4     | 1.6      | B           |
| 8667870        | 8.7 - 9              | 70        | 128       | 9          | 57       | 1.6      | B           |
| 8682870        | 8.7                  | 70        | 128       | 10         | 54.6     | 1.6      | B           |
| 8667875        | 8.75 - 9             | 70        | 128       | 9          | 57       | 1.6      | B           |

单位:mm Unit:mm

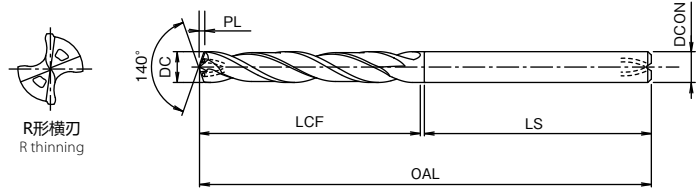
| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8667880        | 8.8 - 9              | 71        | 128       | 9          | 56       | 1.6      | B           |
| 8682880        | 8.8                  | 71        | 128       | 10         | 53.8     | 1.6      | B           |
| 8667890        | 8.9 - 9              | 72        | 128       | 9          | 55       | 1.6      | B           |
| 8682890        | 8.9                  | 72        | 128       | 10         | 52.9     | 1.6      | B           |
| 8667900        | 9 - 9                | 72        | 128       | 9          | 55       | 1.6      | B           |
| 8682900        | 9                    | 72        | 128       | 10         | 53.1     | 1.6      | B           |
| 8667910        | 9.1                  | 73        | 136       | 10         | 62       | 1.7      | B           |
| 8667920        | 9.2                  | 74        | 136       | 10         | 61       | 1.7      | B           |
| 8667924        | 9.24                 | 74        | 136       | 10         | 61       | 1.7      | B           |
| 8667925        | 9.25                 | 74        | 136       | 10         | 61       | 1.7      | B           |
| 8667926        | 9.26                 | 75        | 136       | 10         | 60       | 1.7      | B           |
| 8667930        | 9.3                  | 75        | 136       | 10         | 60       | 1.7      | B           |
| 8667936        | 9.36                 | 75        | 136       | 10         | 60       | 1.7      | B           |
| 8667938        | 9.38                 | 76        | 136       | 10         | 59       | 1.7      | B           |
| 8667940        | 9.4                  | 76        | 136       | 10         | 59       | 1.7      | B           |
| 8667950        | 9.5                  | 76        | 136       | 10         | 59       | 1.7      | B           |
| 8667952        | 9.52                 | 77        | 136       | 10         | 58       | 1.7      | B           |
| 8667954        | 9.54                 | 77        | 136       | 10         | 58       | 1.7      | B           |
| 8667960        | 9.6                  | 77        | 136       | 10         | 58       | 1.7      | B           |
| 8667970        | 9.7                  | 78        | 136       | 10         | 57       | 1.8      | B           |
| 8667975        | 9.75                 | 78        | 136       | 10         | 57       | 1.8      | B           |
| 8667980        | 9.8                  | 79        | 136       | 10         | 56       | 1.8      | B           |
| 8667990        | 9.9                  | 80        | 136       | 10         | 55       | 1.8      | B           |
| 8668000        | 10                   | 80        | 136       | 10         | 55       | 1.8      | B           |
| 8668010        | 10.1 -11             | 81        | 146       | 11         | 64       | 1.8      | B           |

B=标准库存品 B=Standard stock item

NEXT



# ADO-SUS-5D



\* 新型油孔形状适用于φ6以上的尺寸  
\* New coolant hole shape applies only to diameter sizes over 6mm

## FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8683010        | 10.1                 | 81        | 146       | 12         | 60.5     | 1.8      | B           |
| 8668020        | 10.2 -11             | 82        | 146       | 11         | 63       | 1.9      | B           |
| 8683020        | 10.2                 | 82        | 146       | 12         | 59.6     | 1.9      | B           |
| 8668025        | 10.25 -11            | 82        | 146       | 11         | 63       | 1.9      | B           |
| 8668030        | 10.3 -11             | 83        | 146       | 11         | 62       | 1.9      | B           |
| 8683030        | 10.3                 | 83        | 146       | 12         | 58.8     | 1.9      | B           |
| 8668040        | 10.4 -11             | 84        | 146       | 11         | 61       | 1.9      | B           |
| 8683040        | 10.4                 | 84        | 146       | 12         | 58       | 1.9      | B           |
| 8668050        | 10.5 -11             | 84        | 146       | 11         | 61       | 1.9      | B           |
| 8683050        | 10.5                 | 84        | 146       | 12         | 58.2     | 1.9      | B           |
| 8668060        | 10.6 -11             | 85        | 146       | 11         | 60       | 1.9      | B           |
| 8683060        | 10.6                 | 85        | 146       | 12         | 57.4     | 1.9      | B           |
| 8668070        | 10.7 -11             | 86        | 146       | 11         | 59       | 1.9      | B           |
| 8683070        | 10.7                 | 86        | 146       | 12         | 56.6     | 1.9      | B           |
| 8668075        | 10.75 -11            | 86        | 146       | 11         | 59       | 2        | B           |
| 8668080        | 10.8 -11             | 87        | 146       | 11         | 58       | 2        | B           |
| 8683080        | 10.8                 | 87        | 146       | 12         | 55.8     | 2        | B           |
| 8668090        | 10.9 -11             | 88        | 146       | 11         | 57       | 2        | B           |
| 8683090        | 10.9                 | 88        | 146       | 12         | 54.9     | 2        | B           |
| 8668100        | 11 -11               | 88        | 146       | 11         | 57       | 2        | B           |
| 8683100        | 11                   | 88        | 146       | 12         | 55.1     | 2        | B           |
| 8668110        | 11.1                 | 89        | 156       | 12         | 66       | 2        | B           |
| 8668120        | 11.2                 | 90        | 156       | 12         | 65       | 2        | B           |
| 8668122        | 11.22                | 90        | 156       | 12         | 65       | 2        | B           |
| 8668124        | 11.24                | 90        | 156       | 12         | 65       | 2        | B           |

■ 标识说明请参考p.8。  
■ See p.8 for explanation of icons.

单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8668130        | 11.3                 | 91        | 156       | 12         | 64       | 2.1      | B           |
| 8668136        | 11.36                | 91        | 156       | 12         | 64       | 2.1      | B           |
| 8668138        | 11.38                | 92        | 156       | 12         | 63       | 2.1      | B           |
| 8668140        | 11.4                 | 92        | 156       | 12         | 63       | 2.1      | B           |
| 8668150        | 11.5                 | 92        | 156       | 12         | 63       | 2.1      | B           |
| 8668160        | 11.6                 | 93        | 156       | 12         | 62       | 2.1      | B           |
| 8668170        | 11.7                 | 94        | 156       | 12         | 61       | 2.1      | B           |
| 8668180        | 11.8                 | 95        | 156       | 12         | 60       | 2.1      | B           |
| 8668190        | 11.9                 | 96        | 156       | 12         | 59       | 2.2      | B           |
| 8668200        | 12                   | 96        | 156       | 12         | 59       | 2.2      | B           |
| 8668210        | 12.1 -13             | 97        | 167       | 13         | 69       | 2.2      | B           |
| 8683210        | 12.1                 | 97        | 167       | 14         | 65.5     | 2.2      | B           |
| 8668220        | 12.2 -13             | 98        | 167       | 13         | 68       | 2.2      | B           |
| 8683220        | 12.2                 | 98        | 167       | 14         | 64.6     | 2.2      | B           |
| 8668230        | 12.3 -13             | 99        | 167       | 13         | 67       | 2.2      | B           |
| 8683230        | 12.3                 | 99        | 167       | 14         | 63.8     | 2.2      | B           |
| 8668240        | 12.4 -13             | 100       | 167       | 13         | 66       | 2.3      | B           |
| 8683240        | 12.4                 | 100       | 167       | 14         | 63       | 2.3      | B           |
| 8668250        | 12.5 -13             | 100       | 167       | 13         | 66       | 2.3      | B           |
| 8683250        | 12.5                 | 100       | 167       | 14         | 63.2     | 2.3      | B           |
| 8668260        | 12.6 -13             | 101       | 167       | 13         | 65       | 2.3      | B           |
| 8683260        | 12.6                 | 101       | 167       | 14         | 62.4     | 2.3      | B           |
| 8668270        | 12.7 -13             | 102       | 167       | 13         | 64       | 2.3      | B           |
| 8683270        | 12.7                 | 102       | 167       | 14         | 61.6     | 2.3      | B           |
| 8668275        | 12.75 -13            | 102       | 167       | 13         | 64       | 2.3      | B           |

B= 标准库存品 B=Standard stock item

NEXT





FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8668280        | 12.8 -13             | 103       | 167       | 13         | 63       | 2.3      | B           |
| 8683280        | 12.8                 | 103       | 167       | 14         | 60.8     | 2.3      | B           |
| 8668290        | 12.9 -13             | 104       | 167       | 13         | 62       | 2.3      | B           |
| 8683290        | 12.9                 | 104       | 167       | 14         | 59.9     | 2.3      | B           |
| 8668300        | 13 -13               | 104       | 167       | 13         | 62       | 2.4      | B           |
| 8683300        | 13                   | 104       | 167       | 14         | 60.1     | 2.4      | B           |
| 8668310        | 13.1                 | 105       | 176       | 14         | 70       | 2.4      | B           |
| 8668320        | 13.2                 | 106       | 176       | 14         | 69       | 2.4      | B           |
| 8668325        | 13.25                | 106       | 176       | 14         | 69       | 2.4      | B           |
| 8668330        | 13.3                 | 107       | 176       | 14         | 68       | 2.4      | B           |
| 8668340        | 13.4                 | 108       | 176       | 14         | 67       | 2.4      | B           |
| 8683343        | 13.43                | 108       | 176       | 14         | 67       | 2.4      | B           |
| 8668350        | 13.5                 | 108       | 176       | 14         | 67       | 2.5      | B           |
| 8683355        | 13.55                | 109       | 176       | 14         | 66       | 2.5      | B           |
| 8668360        | 13.6                 | 109       | 176       | 14         | 66       | 2.5      | B           |
| 8668370        | 13.7                 | 110       | 176       | 14         | 65       | 2.5      | B           |
| 8668380        | 13.8                 | 111       | 176       | 14         | 64       | 2.5      | B           |
| 8668390        | 13.9                 | 112       | 176       | 14         | 63       | 2.5      | B           |
| 8668400        | 14                   | 112       | 176       | 14         | 63       | 2.5      | B           |
| 8668410        | 14.1 -15             | 113       | 185       | 15         | 71       | 2.6      | B           |
| 8683410        | 14.1                 | 113       | 185       | 16         | 67.5     | 2.6      | B           |
| 8668420        | 14.2 -15             | 114       | 185       | 15         | 70       | 2.6      | B           |
| 8683420        | 14.2                 | 114       | 185       | 16         | 66.6     | 2.6      | B           |
| 8668430        | 14.3 -15             | 115       | 185       | 15         | 69       | 2.6      | B           |
| 8683430        | 14.3                 | 115       | 185       | 16         | 65.8     | 2.6      | B           |

单位:mm Unit:mm

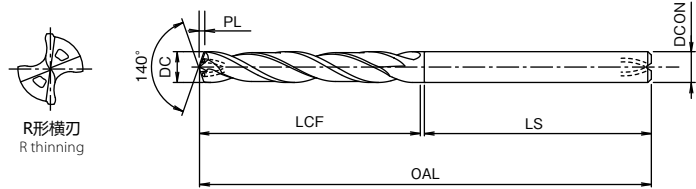
| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8668440        | 14.4 -15             | 116       | 185       | 15         | 68       | 2.6      | B           |
| 8683440        | 14.4                 | 116       | 185       | 16         | 65       | 2.6      | B           |
| 8668450        | 14.5 -15             | 116       | 185       | 15         | 68       | 2.6      | B           |
| 8683450        | 14.5                 | 116       | 185       | 16         | 65.2     | 2.6      | B           |
| 8668460        | 14.6 -15             | 117       | 185       | 15         | 67       | 2.7      | B           |
| 8683460        | 14.6                 | 117       | 185       | 16         | 64.4     | 2.7      | B           |
| 8668470        | 14.7 -15             | 118       | 185       | 15         | 66       | 2.7      | B           |
| 8683470        | 14.7                 | 118       | 185       | 16         | 63.6     | 2.7      | B           |
| 8668480        | 14.8 -15             | 119       | 185       | 15         | 65       | 2.7      | B           |
| 8683480        | 14.8                 | 119       | 185       | 16         | 62.8     | 2.7      | B           |
| 8668490        | 14.9 -15             | 120       | 185       | 15         | 64       | 2.7      | B           |
| 8683490        | 14.9                 | 120       | 185       | 16         | 61.9     | 2.7      | B           |
| 8668500        | 15 -15               | 120       | 185       | 15         | 64       | 2.7      | B           |
| 8683500        | 15                   | 120       | 185       | 16         | 62.1     | 2.7      | B           |
| 8668510        | 15.1                 | 121       | 193       | 16         | 71       | 2.7      | B           |
| 8668520        | 15.2                 | 122       | 193       | 16         | 70       | 2.8      | B           |
| 8668525        | 15.25                | 122       | 193       | 16         | 70       | 2.8      | B           |
| 8668530        | 15.3                 | 123       | 193       | 16         | 69       | 2.8      | B           |
| 8668540        | 15.4                 | 124       | 193       | 16         | 68       | 2.8      | B           |
| 8668550        | 15.5                 | 124       | 193       | 16         | 68       | 2.8      | B           |
| 8683555        | 15.55                | 125       | 193       | 16         | 67       | 2.8      | B           |
| 8668560        | 15.6                 | 125       | 193       | 16         | 67       | 2.8      | B           |
| 8668570        | 15.7                 | 126       | 193       | 16         | 66       | 2.9      | B           |
| 8668580        | 15.8                 | 127       | 193       | 16         | 65       | 2.9      | B           |
| 8668590        | 15.9                 | 128       | 193       | 16         | 64       | 2.9      | B           |

B=标准库存品 B=Standard stock item

NEXT



# ADO-SUS-5D



\* 新型油孔形状适用于φ6以上的尺寸  
\* New coolant hole shape applies only to diameter sizes over 6mm

FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8668600        | 16                   | 128       | 193       | 16         | 64       | 2.9      | B           |
|                | 16.1                 | 113       | 184       | 18         | 66.5     | 2.9      | □           |
|                | 16.2                 | 114       | 184       | 18         | 65.6     | 2.9      | □           |
|                | 16.3                 | 115       | 184       | 18         | 64.8     | 3        | □           |
|                | 16.4                 | 115       | 184       | 18         | 65       | 3        | □           |
| 8668650        | 16.5 -17             | 116       | 184       | 17         | 67       | 3        | B           |
| 8683650        | 16.5                 | 116       | 184       | 18         | 64.2     | 3        | B           |
|                | 16.6                 | 117       | 184       | 18         | 63.4     | 3        | □           |
| 8683670        | 16.7                 | 117       | 184       | 18         | 63.6     | 3        | B           |
|                | 16.8                 | 118       | 184       | 18         | 62.8     | 3.1      | □           |
|                | 16.9                 | 119       | 184       | 18         | 61.9     | 3.1      | □           |
| 8668700        | 17 -17               | 119       | 184       | 17         | 64       | 3.1      | B           |
| 8683700        | 17                   | 119       | 184       | 18         | 62.1     | 3.1      | B           |
|                | 17.1                 | 120       | 191       | 18         | 70       | 3.1      | □           |
|                | 17.2                 | 121       | 191       | 18         | 69       | 3.1      | □           |
| 8683730        | 17.3                 | 122       | 191       | 18         | 68       | 3.1      | B           |
|                | 17.4                 | 122       | 191       | 18         | 68       | 3.2      | □           |
| 8668750        | 17.5                 | 123       | 191       | 18         | 67       | 3.2      | B           |
| 8683755        | 17.55                | 123       | 191       | 18         | 67       | 3.2      | B           |
|                | 17.6                 | 124       | 191       | 18         | 66       | 3.2      | □           |
|                | 17.7                 | 124       | 191       | 18         | 66       | 3.2      | □           |
|                | 17.8                 | 125       | 191       | 18         | 65       | 3.2      | □           |
|                | 17.9                 | 126       | 191       | 18         | 64       | 3.3      | □           |
| 8668800        | 18                   | 126       | 191       | 18         | 64       | 3.3      | B           |

■ 标识说明请参考p.8。  
■ See p.8 for explanation of icons.

单位:mm Unit:mm

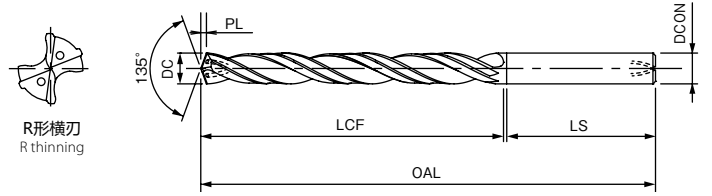
| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
|                | 18.1                 | 127       | 198       | 20         | 66.5     | 3.3      | □           |
|                | 18.2                 | 128       | 198       | 20         | 65.6     | 3.3      | □           |
|                | 18.3                 | 129       | 198       | 20         | 64.8     | 3.3      | □           |
|                | 18.4                 | 129       | 198       | 20         | 65       | 3.3      | □           |
| 8668850        | 18.5 -19             | 130       | 198       | 19         | 67       | 3.4      | B           |
| 8683850        | 18.5                 | 130       | 198       | 20         | 64.2     | 3.4      | B           |
|                | 18.6                 | 131       | 198       | 20         | 63.4     | 3.4      | □           |
| 8683870        | 18.7                 | 131       | 198       | 20         | 63.6     | 3.4      | B           |
|                | 18.8                 | 132       | 198       | 20         | 62.8     | 3.4      | □           |
|                | 18.9                 | 133       | 198       | 20         | 61.9     | 3.4      | □           |
| 8668900        | 19 -19               | 133       | 198       | 19         | 64       | 3.5      | B           |
| 8683900        | 19                   | 133       | 198       | 20         | 62.1     | 3.5      | B           |
|                | 19.1                 | 134       | 205       | 20         | 70       | 3.5      | □           |
|                | 19.2                 | 135       | 205       | 20         | 69       | 3.5      | □           |
| 8683930        | 19.3                 | 136       | 205       | 20         | 68       | 3.5      | B           |
|                | 19.4                 | 136       | 205       | 20         | 68       | 3.5      | □           |
| 8668950        | 19.5                 | 137       | 205       | 20         | 67       | 3.5      | B           |
| 8683955        | 19.55                | 137       | 205       | 20         | 67       | 3.6      | B           |
|                | 19.6                 | 138       | 205       | 20         | 66       | 3.6      | □           |
|                | 19.7                 | 138       | 205       | 20         | 66       | 3.6      | □           |
|                | 19.8                 | 139       | 205       | 20         | 65       | 3.6      | □           |
|                | 19.9                 | 140       | 205       | 20         | 64       | 3.6      | □           |
| 8669000        | 20                   | 140       | 205       | 20         | 64       | 3.6      | B           |

B=标准库存品 B=Standard stock item  
□=特定代理店库存品

□=Stocked by specific distributors. Contact us for price & availability.



# ADO-SUS-8D



单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8686200        | 2 - 3                | 22        | 75        | 3          | 50.1     | 0.4      | B           |
| 8686210        | 2.1 - 3              | 24        | 75        | 3          | 48.3     | 0.4      | B           |
| 8686220        | 2.2 - 3              | 25        | 75        | 3          | 47.5     | 0.5      | B           |
| 8686230        | 2.3 - 3              | 26        | 75        | 3          | 46.7     | 0.5      | B           |
| 8686240        | 2.4 - 3              | 27        | 75        | 3          | 45.9     | 0.5      | B           |
| 8686250        | 2.5 - 3              | 28        | 75        | 3          | 45.1     | 0.5      | B           |
| 8686260        | 2.6 - 3              | 29        | 80        | 3          | 49.3     | 0.5      | B           |
| 8686270        | 2.7 - 3              | 30        | 80        | 3          | 48.4     | 0.6      | B           |
| 8686280        | 2.8 - 3              | 31        | 80        | 3          | 47.6     | 0.6      | B           |
| 8686290        | 2.9 - 3              | 32        | 80        | 3          | 46.8     | 0.6      | B           |
| 8686300        | 3 - 3                | 33        | 80        | 3          | 46       | 0.6      | B           |
| 8684310        | 3.1                  | 34        | 95        | 4          | 58.3     | 0.6      | B           |
| 8684320        | 3.2                  | 35        | 95        | 4          | 57.5     | 0.7      | B           |
| 8684330        | 3.3                  | 36        | 95        | 4          | 56.7     | 0.7      | B           |
| 8684340        | 3.4                  | 37        | 95        | 4          | 55.9     | 0.7      | B           |
| 8684350        | 3.5                  | 39        | 95        | 4          | 54.1     | 0.7      | B           |
| 8684360        | 3.6                  | 40        | 95        | 4          | 53.3     | 0.7      | B           |
| 8684370        | 3.7                  | 41        | 95        | 4          | 52.4     | 0.8      | B           |
| 8684380        | 3.8                  | 42        | 95        | 4          | 51.6     | 0.8      | B           |
| 8684390        | 3.9                  | 43        | 95        | 4          | 50.8     | 0.8      | B           |
| 8684400        | 4                    | 44        | 95        | 4          | 50       | 0.8      | B           |
| 8686410        | 4.1 - 5              | 45        | 105       | 5          | 57.3     | 0.8      | B           |
| 8684410        | 4.1                  | 45        | 105       | 6          | 55.5     | 0.8      | B           |
| 8686420        | 4.2 - 5              | 46        | 105       | 5          | 56.5     | 0.9      | B           |

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8684420        | 4.2                  | 46        | 105       | 6          | 54.6     | 0.9      | B           |
| 8686430        | 4.3 - 5              | 47        | 105       | 5          | 55.7     | 0.9      | B           |
| 8684430        | 4.3                  | 47        | 105       | 6          | 53.8     | 0.9      | B           |
| 8686440        | 4.4 - 5              | 48        | 105       | 5          | 54.9     | 0.9      | B           |
| 8684440        | 4.4                  | 48        | 105       | 6          | 53       | 0.9      | B           |
| 8686450        | 4.5 - 5              | 50        | 105       | 5          | 53.1     | 0.9      | B           |
| 8684450        | 4.5                  | 50        | 105       | 6          | 51.2     | 0.9      | B           |
| 8686460        | 4.6 - 5              | 51        | 105       | 5          | 52.3     | 1        | B           |
| 8684460        | 4.6                  | 51        | 105       | 6          | 50.4     | 1        | B           |
| 8686470        | 4.7 - 5              | 52        | 105       | 5          | 51.4     | 1        | B           |
| 8684470        | 4.7                  | 52        | 105       | 6          | 49.6     | 1        | B           |
| 8686480        | 4.8 - 5              | 53        | 105       | 5          | 50.6     | 1        | B           |
| 8684480        | 4.8                  | 53        | 105       | 6          | 48.8     | 1        | B           |
| 8686490        | 4.9 - 5              | 54        | 105       | 5          | 49.8     | 1        | B           |
| 8684490        | 4.9                  | 54        | 105       | 6          | 47.9     | 1        | B           |
| 8686500        | 5 - 5                | 55        | 105       | 5          | 49       | 1        | B           |
| 8684500        | 5                    | 55        | 105       | 6          | 47.1     | 1        | B           |
| 8684510        | 5.1                  | 56        | 115       | 6          | 56.3     | 1.1      | B           |
| 8684520        | 5.2                  | 57        | 115       | 6          | 55.5     | 1.1      | B           |
| 8684530        | 5.3                  | 58        | 115       | 6          | 54.7     | 1.1      | B           |
| 8684540        | 5.4                  | 59        | 115       | 6          | 53.9     | 1.1      | B           |
| 8684550        | 5.5                  | 61        | 115       | 6          | 52.1     | 1.1      | B           |
| 8684560        | 5.6                  | 62        | 115       | 6          | 51.3     | 1.2      | B           |
| 8684570        | 5.7                  | 63        | 115       | 6          | 50.4     | 1.2      | B           |

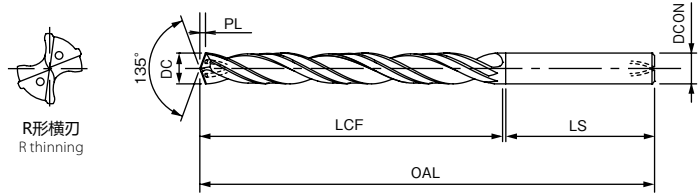
■ 标识说明请参考p.8。  
■ See p.8 for explanation of icons.

B=标准库存品 B=Standard stock item

NEXT



# ADO-SUS-8D



FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8684580        | 5.8                  | 64        | 115       | 6          | 49.6     | 1.2      | B           |
| 8684590        | 5.9                  | 65        | 115       | 6          | 48.8     | 1.2      | B           |
| 8684600        | 6                    | 66        | 115       | 6          | 48       | 1.2      | B           |
| 8686610        | 6.1 - 7              | 67        | 125       | 7          | 57       | 1.3      | B           |
| 8684610        | 6.1                  | 67        | 125       | 8          | 53.5     | 1.3      | B           |
| 8686620        | 6.2 - 7              | 68        | 125       | 7          | 56       | 1.3      | B           |
| 8684620        | 6.2                  | 68        | 125       | 8          | 52.6     | 1.3      | B           |
| 8686630        | 6.3 - 7              | 69        | 125       | 7          | 55       | 1.3      | B           |
| 8684630        | 6.3                  | 69        | 125       | 8          | 51.8     | 1.3      | B           |
| 8686640        | 6.4 - 7              | 70        | 125       | 7          | 54       | 1.3      | B           |
| 8684640        | 6.4                  | 70        | 125       | 8          | 51       | 1.3      | B           |
| 8686650        | 6.5 - 7              | 72        | 125       | 7          | 52       | 1.3      | B           |
| 8684650        | 6.5                  | 72        | 125       | 8          | 49.2     | 1.3      | B           |
| 8686660        | 6.6 - 7              | 73        | 125       | 7          | 51       | 1.4      | B           |
| 8684660        | 6.6                  | 73        | 125       | 8          | 48.4     | 1.4      | B           |
| 8686670        | 6.7 - 7              | 74        | 125       | 7          | 50       | 1.4      | B           |
| 8684670        | 6.7                  | 74        | 125       | 8          | 47.6     | 1.4      | B           |
| 8686680        | 6.8 - 7              | 75        | 125       | 7          | 49       | 1.4      | B           |
| 8684680        | 6.8                  | 75        | 125       | 8          | 46.8     | 1.4      | B           |
| 8686690        | 6.9 - 7              | 76        | 125       | 7          | 48       | 1.4      | B           |
| 8684690        | 6.9                  | 76        | 125       | 8          | 45.9     | 1.4      | B           |
| 8686700        | 7 - 7                | 77        | 125       | 7          | 47       | 1.4      | B           |
| 8684700        | 7                    | 77        | 125       | 8          | 45.1     | 1.4      | B           |
| 8684710        | 7.1                  | 78        | 140       | 8          | 61       | 1.5      | B           |

■ 标识说明请参考p.8.

■ See p.8 for explanation of icons.

单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8684720        | 7.2                  | 79        | 140       | 8          | 60       | 1.5      | B           |
| 8684730        | 7.3                  | 80        | 140       | 8          | 59       | 1.5      | B           |
| 8684740        | 7.4                  | 81        | 140       | 8          | 58       | 1.5      | B           |
| 8684750        | 7.5                  | 83        | 140       | 8          | 56       | 1.6      | B           |
| 8684760        | 7.6                  | 84        | 140       | 8          | 55       | 1.6      | B           |
| 8684770        | 7.7                  | 85        | 140       | 8          | 54       | 1.6      | B           |
| 8684780        | 7.8                  | 86        | 140       | 8          | 53       | 1.6      | B           |
| 8684790        | 7.9                  | 87        | 140       | 8          | 52       | 1.6      | B           |
| 8684800        | 8                    | 88        | 140       | 8          | 51       | 1.7      | B           |
| 8686810        | 8.1 - 9              | 89        | 150       | 9          | 60       | 1.7      | B           |
| 8684810        | 8.1                  | 89        | 150       | 10         | 56.5     | 1.7      | B           |
| 8686820        | 8.2 - 9              | 90        | 150       | 9          | 59       | 1.7      | B           |
| 8684820        | 8.2                  | 90        | 150       | 10         | 55.6     | 1.7      | B           |
| 8686830        | 8.3 - 9              | 91        | 150       | 9          | 58       | 1.7      | B           |
| 8684830        | 8.3                  | 91        | 150       | 10         | 54.8     | 1.7      | B           |
| 8686840        | 8.4 - 9              | 92        | 150       | 9          | 57       | 1.7      | B           |
| 8684840        | 8.4                  | 92        | 150       | 10         | 54       | 1.7      | B           |
| 8686850        | 8.5 - 9              | 94        | 150       | 9          | 55       | 1.8      | B           |
| 8684850        | 8.5                  | 94        | 150       | 10         | 52.2     | 1.8      | B           |
| 8686860        | 8.6 - 9              | 95        | 150       | 9          | 54       | 1.8      | B           |
| 8684860        | 8.6                  | 95        | 150       | 10         | 51.4     | 1.8      | B           |
| 8686870        | 8.7 - 9              | 96        | 150       | 9          | 53       | 1.8      | B           |
| 8684870        | 8.7                  | 96        | 150       | 10         | 50.6     | 1.8      | B           |
| 8686880        | 8.8 - 9              | 97        | 150       | 9          | 52       | 1.8      | B           |

B= 标准库存品 B=Standard stock item

NEXT



FROM

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8684880        | 8.8                  | 97        | 150       | 10         | 49.8     | 1.8      | B           |
| 8686890        | 8.9 - 9              | 98        | 150       | 9          | 51       | 1.8      | B           |
| 8684890        | 8.9                  | 98        | 150       | 10         | 48.9     | 1.8      | B           |
| 8686900        | 9 - 9                | 99        | 150       | 9          | 50       | 1.9      | B           |
| 8684900        | 9                    | 99        | 150       | 10         | 48.1     | 1.9      | B           |
| 8684910        | 9.1                  | 100       | 160       | 10         | 59       | 1.9      | B           |
| 8684920        | 9.2                  | 101       | 160       | 10         | 58       | 1.9      | B           |
| 8684930        | 9.3                  | 102       | 160       | 10         | 57       | 1.9      | B           |
| 8684940        | 9.4                  | 103       | 160       | 10         | 56       | 1.9      | B           |
| 8684950        | 9.5                  | 105       | 160       | 10         | 54       | 2        | B           |
| 8684960        | 9.6                  | 106       | 160       | 10         | 53       | 2        | B           |
| 8684970        | 9.7                  | 107       | 160       | 10         | 52       | 2        | B           |
| 8684980        | 9.8                  | 108       | 160       | 10         | 51       | 2        | B           |
| 8684990        | 9.9                  | 109       | 160       | 10         | 50       | 2.1      | B           |
| 8685000        | 10                   | 110       | 160       | 10         | 49       | 2.1      | B           |
| 8687010        | 10.1 - 11            | 111       | 182       | 11         | 70       | 2.1      | B           |
| 8685010        | 10.1                 | 111       | 182       | 12         | 66.5     | 2.1      | B           |
| 8687020        | 10.2 - 11            | 112       | 182       | 11         | 69       | 2.1      | B           |
| 8685020        | 10.2                 | 112       | 182       | 12         | 65.6     | 2.1      | B           |
| 8687030        | 10.3 - 11            | 113       | 182       | 11         | 68       | 2.1      | B           |
| 8685030        | 10.3                 | 113       | 182       | 12         | 64.8     | 2.1      | B           |
| 8687040        | 10.4 - 11            | 114       | 182       | 11         | 67       | 2.2      | B           |
| 8685040        | 10.4                 | 114       | 182       | 12         | 64       | 2.2      | B           |

单位:mm Unit:mm

| 商品号<br>EDP No. | 直径 - 柄径<br>DC - DCON | 槽长<br>LCF | 全长<br>OAL | 柄径<br>DCON | 柄长<br>LS | 先端<br>PL | 库存<br>Stock |
|----------------|----------------------|-----------|-----------|------------|----------|----------|-------------|
| 8687050        | 10.5 - 11            | 116       | 182       | 11         | 65       | 2.2      | B           |
| 8685050        | 10.5                 | 116       | 182       | 12         | 62.2     | 2.2      | B           |
| 8687060        | 10.6 - 11            | 117       | 182       | 11         | 64       | 2.2      | B           |
| 8685060        | 10.6                 | 117       | 182       | 12         | 61.4     | 2.2      | B           |
| 8687070        | 10.7 - 11            | 118       | 182       | 11         | 63       | 2.2      | B           |
| 8685070        | 10.7                 | 118       | 182       | 12         | 60.6     | 2.2      | B           |
| 8687080        | 10.8 - 11            | 119       | 182       | 11         | 62       | 2.2      | B           |
| 8685080        | 10.8                 | 119       | 182       | 12         | 59.8     | 2.2      | B           |
| 8687090        | 10.9 - 11            | 120       | 182       | 11         | 61       | 2.3      | B           |
| 8685090        | 10.9                 | 120       | 182       | 12         | 58.9     | 2.3      | B           |
| 8687100        | 11 - 11              | 121       | 182       | 11         | 60       | 2.3      | B           |
| 8685100        | 11                   | 121       | 182       | 12         | 58.1     | 2.3      | B           |
| 8685110        | 11.1                 | 122       | 194       | 12         | 71       | 2.3      | B           |
| 8685120        | 11.2                 | 123       | 194       | 12         | 70       | 2.3      | B           |
| 8685130        | 11.3                 | 124       | 194       | 12         | 69       | 2.3      | B           |
| 8685140        | 11.4                 | 125       | 194       | 12         | 68       | 2.4      | B           |
| 8685150        | 11.5                 | 127       | 194       | 12         | 66       | 2.4      | B           |
| 8685160        | 11.6                 | 128       | 194       | 12         | 65       | 2.4      | B           |
| 8685170        | 11.7                 | 129       | 194       | 12         | 64       | 2.4      | B           |
| 8685180        | 11.8                 | 130       | 194       | 12         | 63       | 2.4      | B           |
| 8685190        | 11.9                 | 131       | 194       | 12         | 62       | 2.5      | B           |
| 8685200        | 12                   | 132       | 194       | 12         | 61       | 2.5      | B           |

B=标准库存品 B=Standard stock item



# 丝锥的寿命由底孔加工决定!

The tool life of a tap is determined by the drill used before tapping process!

不同的2种钻头进行钻孔加工后，用A-POT 进行攻丝加工。  
ADO-SUS 加工出的底孔可以使丝锥的寿命差命最大达到1,570个孔。

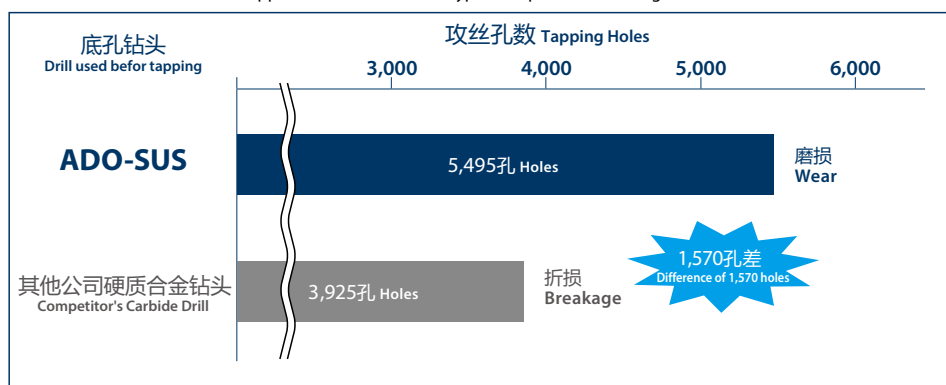
Two different drills were used for the pre-tapped hole. Result demonstrates that with the use of ADO-SUS, tool life of A-POT can be extended by as many as 1,570 holes.

\*底孔加工钻头：3D、φ8.5、孔深19mm(通孔)  
\*Drills：3D, φ8.5, Depth of Hole 19mm (Through)  
ADO-SUS 钻头：70m/min (2,630min<sup>-1</sup>), 526mm/min (0.2mm/rev)  
其他公司硬质合金钻头：60m/min (2,250min<sup>-1</sup>), 450mm/min (0.2mm/rev) Competitor's Carbide Drill

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

## ■底孔加工用钻头的不同导致攻丝孔数的差异

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



## ■丝锥受损状态 (加工3,500孔时)

Wear on cutting edge after tapping 3,500 holes



## 加工要点 (油性切削油剂时)

Operational Guideline for ADO-SUS (when machining with non-water-soluble coolant)

切削温度易较高的环境下，容易发生下述问题。

Under conditions where cutting temperature tends to rise easily, the following machining troubles are likely to occur.

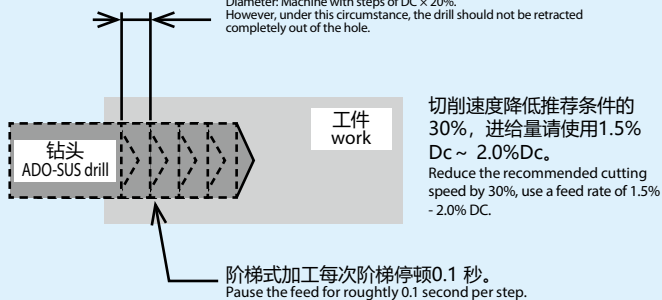
- 溶着导致切削刃崩刃  
Chipping due to welding
- 切屑尺寸增大使切屑堵塞导致折损  
Chip packing due to the increase size of chip shape, which leads to tool wear

为了避免问题的发生，我们推荐以下加工方法。

To eliminate the above problems the following machining procedure is recommended.

直径：DC × 20% 的无退刀阶梯式加工。

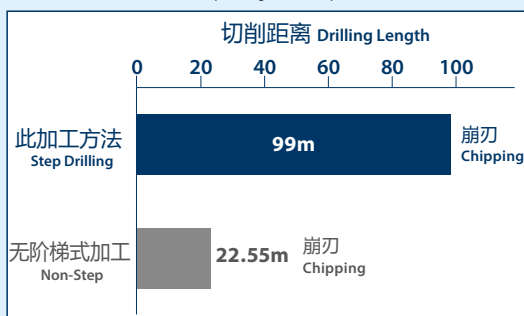
Diameter: Machine with steps of DC × 20%.  
However, under this circumstance, the drill should not be retracted completely out of the hole.



## ■此加工方法的案例 Cutting Data of Step Drilling

|                       |   |
|-----------------------|---|
| 使用工具<br>Tool          | ADO-SUS-3D φ11.6                              |
| 加工材料<br>Work Material | SUS304L                                       |
| 切削速度<br>Cutting Speed | 55m/min (1,510min <sup>-1</sup> )             |
| 进给速度<br>Feed          | 226mm/min (0.15mm/rev)                        |
| 孔深<br>Depth of Hole   | 25mm (盲孔)<br>(Blind)                          |
| 切削油剂<br>Coolant       | 油性切削油剂 (内部供油)<br>Non-Water-Soluble (Internal) |
| 使用机械<br>Machine       | 全自动车床<br>Full Automatic Lathe Machine         |

此加工方法 (每2mm 停顿0.1秒) VS 无阶梯式加工  
Step Drilling VS Non-Step



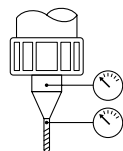
| 加工材料<br>Work Material   | 钢型<br>No.<br>Steel<br>Type | 日本工业规格<br>Japan<br>JIS | 国际规格<br>International Standard<br>ISO 15510 | 欧标<br>Europe | 美标<br>U.S.A. |                | 国标<br>China |
|---|----------------------------|------------------------|---|--------------|--------------|----------------|-------------|
|   |                            |                        |   | EN           | UNS          | (AISI)         | GB          |
| 铁素体·<br>马氏体不锈钢<br>Ferritic Stainless Steel·<br>Martensitic<br>Stainless Steel | 1                          | SUS405                 | X6CrAl13                                    | 1.4002       | S40500       | 405            | S11348      |
|   |                            | SUS430                 | X6Cr17                                      | 1.4016       | S43000       | 430            | S11710      |
|   |                            | SUS410                 | X12Cr13                                     | 1.4006       | S41000       | 410            | S41010      |
|   |                            | SUS410S                | X6Cr13                                      | 1.4          | S41008       |                | S41008      |
|   | 2                          | SUS420J1               | X20Cr13                                     | 1.4021       | S42000       | 420            | S42020      |
|   |                            | SUS420J2               | X30Cr13                                     | 1.4028       | S42000       | 420            | S42030      |
| 奥氏体不锈钢<br>Austenitic<br>Stainless Steel                                       | 3                          | SUS303                 | X10CrNiS18-9                                | 1.4305       | S30300       | 303            | S30317      |
|   |                            | SUS304                 | X5CrNi18-10                                 | 1.4301       | S30400       | 304            | S30408      |
|   |                            | SUS304L                | X2CrNi18-9                                  | 1.4307       | S30403       | 304L           | S30403      |
|   |                            | SUS305                 | X6CrNi18-12                                 | 1.4303       | S30500       | 305            | S30510      |
|   |                            | SUS309S                | X6CrNi23-13                                 | 1.495        | S30908       | 309S           | S30908      |
|   |                            | SUS310S                | X6CrNi25-20                                 | 1.4951       | S31008       | 310S           | S31008      |
|   |                            | SUS316                 | X5CrNiMo17-12-2                             | 1.4401       | S31600       | 316            | S31608      |
|   |                            | SUS316L                | X2CrNiMo17-12-2                             | 1.4404       | S31603       | 316L           | S31603      |
|   |                            | SUS316Ti               | X6CrNiMoTi17-12-2                           | 1.4571       | S31635       |                | S31668      |
|   |                            | SUS317L                | X2CrNiMo19-14-4                             | 1.4438       | S31703       | 317L           | S31703      |
|   | SUS347                     | X6CrNiNb18-10          | 1.455                                       | S34700       | 347          | S34778         |             |
|   | 4                          | SUS301                 | X5CrNi17-7                                  | 1.4319       | S30100       | 301            | S30110      |
|   |                            | SUS301L                | X2CrNiN18-7                                 | 1.4318       | S30153       |                | S30153      |
|   |                            | SUS304N1               | X5CrNiN19-9                                 | 1.4315       | S30451       | 304N           | S30458      |
| SUS304N2  |                            |                        |   | S30452       |              |                |             |
| 二相体不锈钢<br>Duplex Stainless Steel  | 5                          | SUS329J1               | X6CrNiMo26-4-2                              |              | S32900       | 329            |             |
|   | 6                          | SUS329J3L              | X2CrNiMoN22-5-3                             | 1.4462       | S32205       |                | S22053      |
|   |                            | SUS329J4L              | X2CrNiMoN25-7-3                             |              | S31260       |                | S22583      |
|   |                            |                        |   | S32750       |              |                |             |
| 析出硬化体不锈钢<br>Precipitation<br>Stainless Steel                                  | 7                          | SUS630                 | X5CrNiCuNb16-4                              | 1.4542       | S17400       | 17-4PH(S17400) | S51740      |
|   |                            |                        |   |              |              | 15-5PH(S15500) |             |
|   |                            | SUS631                 | X7CrNiAl17-7                                | 1.4568       | S17700       | 17-7PH(S17700) | S51700      |

# ADO-SUS-3D·5D·8D

| 加工材料<br>Work Material    | 铁素体·马氏体不锈钢<br>Ferritic Stainless Steel · Martensitic Stainless Steel |                              |                                     |                              | 奥氏体不锈钢<br>Austenitic Stainless Steel |                              |                                     |                              |
|--------------------------|--|------------------------------|-------------------------------------|------------------------------|--------------------------------------|------------------------------|-------------------------------------|------------------------------|
|                          | ≤200HB   |                              | >200HB                              |                              | ≤200HB                               |                              | >200HB                              |                              |
| 钢型No.<br>Steel Type      | 1  |                              | 2                                   |                              | 3                                    |                              | 4                                   |                              |
| 切削速度<br>Cutting Speed    | 60~80~100 m/min  |                              | 40~60~80 m/min                      |                              | 60~80~100 m/min                      |                              | 40~60~80 m/min                      |                              |
| 直径<br>Drill Dia.<br>(mm) | 转速<br>Speed<br>(min <sup>-1</sup> )                                  | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> )  | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) |
|                          | 2  | 12,700                       | 0.04 ~ 0.08                         | 9,500                        | 0.04 ~ 0.08                          | 12,700                       | 0.04 ~ 0.08                         | 9,500                        |
| 3                        | 8,500  | 0.06 ~ 0.12                  | 6,400                               | 0.06 ~ 0.12                  | 8,500                                | 0.06 ~ 0.12                  | 6,400                               | 0.06 ~ 0.12                  |
| 4                        | 6,400  | 0.08 ~ 0.16                  | 4,800                               | 0.08 ~ 0.16                  | 6,400                                | 0.08 ~ 0.16                  | 4,800                               | 0.08 ~ 0.16                  |
| 6                        | 4,200  | 0.12 ~ 0.21                  | 3,200                               | 0.12 ~ 0.21                  | 4,200                                | 0.12 ~ 0.21                  | 3,200                               | 0.12 ~ 0.21                  |
| 8                        | 3,200  | 0.16 ~ 0.24                  | 2,400                               | 0.16 ~ 0.24                  | 3,200                                | 0.16 ~ 0.24                  | 2,400                               | 0.16 ~ 0.24                  |
| 10                       | 2,500  | 0.17 ~ 0.27                  | 1,900                               | 0.17 ~ 0.27                  | 2,500                                | 0.2 ~ 0.3                    | 1,900                               | 0.17 ~ 0.27                  |
| 12                       | 2,100  | 0.19 ~ 0.3                   | 1,600                               | 0.19 ~ 0.3                   | 2,100                                | 0.21 ~ 0.31                  | 1,600                               | 0.19 ~ 0.3                   |
| 16                       | 1,600  | 0.22 ~ 0.32                  | 1,200                               | 0.22 ~ 0.32                  | 1,600                                | 0.22 ~ 0.32                  | 1,200                               | 0.22 ~ 0.32                  |
| 20                       | 1,300  | 0.28 ~ 0.4                   | 1,000                               | 0.28 ~ 0.4                   | 1,300                                | 0.28 ~ 0.4                   | 1,000                               | 0.28 ~ 0.4                   |

| 加工材料<br>Work Material    | 二相体不锈钢<br>Duplex Stainless Steel    |                              |                                     |                              | 析出硬化体不锈钢<br>Precipitation Stainless Steel |                              | 钛合金<br>Titanium Alloy               |                              |
|--------------------------|-------------------------------------|------------------------------|-------------------------------------|------------------------------|---|------------------------------|-------------------------------------|------------------------------|
|                          | ≤290HB                              |                              | >290HB                              |                              | ≤340HB                                    |                              | 280HB~340HB                         |                              |
| 钢型No.<br>Steel Type      | 5                                   |                              | 6                                   |                              | 7   |                              | —                                   |                              |
| 切削速度<br>Cutting Speed    | 40~60~80 m/min                      |                              | 30~40~50 m/min                      |                              | 40~50~60 m/min                            |                              | 30~40~50 m/min                      |                              |
| 直径<br>Drill Dia.<br>(mm) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> )       | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) |
|                          | 2                                   | 9,500                        | 0.04 ~ 0.08                         | 6,400                        | 0.04 ~ 0.08                               | 8,000                        | 0.04 ~ 0.08                         | 6,400                        |
| 3                        | 6,400                               | 0.06 ~ 0.12                  | 4,200                               | 0.06 ~ 0.12                  | 5,300                                     | 0.06 ~ 0.12                  | 4,200                               | 0.06 ~ 0.12                  |
| 4                        | 4,800                               | 0.08 ~ 0.16                  | 3,200                               | 0.08 ~ 0.16                  | 4,000                                     | 0.08 ~ 0.16                  | 3,200                               | 0.08 ~ 0.16                  |
| 6                        | 3,200                               | 0.12 ~ 0.21                  | 2,100                               | 0.12 ~ 0.21                  | 2,700                                     | 0.12 ~ 0.21                  | 2,100                               | 0.12 ~ 0.21                  |
| 8                        | 2,400                               | 0.16 ~ 0.24                  | 1,600                               | 0.16 ~ 0.24                  | 2,000                                     | 0.16 ~ 0.24                  | 1,600                               | 0.16 ~ 0.24                  |
| 10                       | 1,900                               | 0.2 ~ 0.3                    | 1,300                               | 0.17 ~ 0.27                  | 1,600                                     | 0.2 ~ 0.3                    | 1,300                               | 0.17 ~ 0.27                  |
| 12                       | 1,600                               | 0.21 ~ 0.31                  | 1,100                               | 0.19 ~ 0.3                   | 1,300                                     | 0.21 ~ 0.31                  | 1,100                               | 0.19 ~ 0.3                   |
| 16                       | 1,200                               | 0.22 ~ 0.32                  | 800                                 | 0.22 ~ 0.32                  | 1,000                                     | 0.22 ~ 0.32                  | 800                                 | 0.22 ~ 0.32                  |
| 20                       | 1,000                               | 0.28 ~ 0.4                   | 600                                 | 0.28 ~ 0.4                   | 800                                       | 0.28 ~ 0.4                   | 600                                 | 0.28 ~ 0.4                   |

1. 此切削条件基准表适用于水溶性切削油剂及内冷的方式。
2. 请使用稀释20 ~ 30 倍的优质水溶性切削油剂。
3. 使用油性切削油剂或是超过20倍的水溶性切削油剂时，切削速度请下调30%。
4. 安装钻头时，请使用无损伤、无油污的夹具，钻头振动控制在0.02mm以下。
5. 加工材料夹持请确保在无变形、无弯曲、无振动的状态下。
6. 油孔堵塞是造成折损问题的原因，请务必安装供油装置的过滤器。



1. The above speeds and feeds are for drilling with water-soluble coolant and internal coolant supply.
2. Suitable cutting fluid is water-soluble high density coolant (20 - 30 times dilution).
3. When using non-water-soluble or water-soluble coolant (over 20times dilution), reduce cutting speed by 30%.
4. Equip the drill with a scratch-and dust-free collet and minimize drill deflection to less than 0.02mm.
5. Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
6. A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.

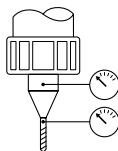




| 加工材料<br>Work Material    | 软钢·低碳素钢<br>Mild Steel · Low Carbon Steel<br>SS400 · S10C |                              | 碳素钢<br>Carbon Steel<br>S35C · S50C  |                              | 合金钢<br>Alloy Steel<br>SCM · SCr · SNCM   |                              | 镍基合金※<br>Nickel Alloy<br>Inconel 718 |                              | 铜合金<br>Copper Alloy<br>C1020 · 2600 |                              |
|--------------------------|--|------------------------------|-------------------------------------|------------------------------|--|------------------------------|--------------------------------------|------------------------------|-------------------------------------|------------------------------|
| 硬度<br>Hardness           | ~ 150HB<br>~ 500N/mm <sup>2</sup>                        |                              | ~ 210HB<br>~ 710N/mm <sup>2</sup>   |                              | 16 ~ 28HRC<br>710 ~ 900N/mm <sup>2</sup> |                              | 38 ~ 45HRC                           |                              | —                                   |                              |
| 钢型No.<br>Steel Type      | —  |                              | —                                   |                              | —  |                              | —                                    |                              | —                                   |                              |
| 切削速度<br>Cutting Speed    | 80~100~120 m/min   |                              | 80~100~120 m/min                    |                              | 60~75~90 m/min                           |                              | 10~20~30 m/min                       |                              | 140~170~200 m/min                   |                              |
| 直径<br>Drill Dia.<br>(mm) | 转速<br>Speed<br>(min <sup>-1</sup> )                      | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> )      | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> )  | 进给量<br>Feed Rate<br>(mm/rev) | 转速<br>Speed<br>(min <sup>-1</sup> ) | 进给量<br>Feed Rate<br>(mm/rev) |
| 2                        | 12,700   | 0.04 ~ 0.08                  | 12,700                              | 0.04 ~ 0.08                  | 11,900                                   | 0.04 ~ 0.08                  | 3,200                                | 0.03 ~ 0.05                  | 22,300                              | 0.03 ~ 0.05                  |
| 3                        | 10,600   | 0.06 ~ 0.12                  | 10,600                              | 0.06 ~ 0.12                  | 8,000                                    | 0.06 ~ 0.12                  | 2,100                                | 0.05 ~ 0.08                  | 18,000                              | 0.05 ~ 0.08                  |
| 4                        | 8,000  | 0.08 ~ 0.16                  | 8,000                               | 0.08 ~ 0.16                  | 6,000                                    | 0.08 ~ 0.16                  | 1,600                                | 0.06 ~ 0.1                   | 13,500                              | 0.06 ~ 0.1                   |
| 6                        | 5,300  | 0.12 ~ 0.24                  | 5,300                               | 0.12 ~ 0.24                  | 4,000                                    | 0.12 ~ 0.24                  | 1,100                                | 0.09 ~ 0.15                  | 9,000                               | 0.09 ~ 0.15                  |
| 8                        | 4,000  | 0.16 ~ 0.28                  | 4,000                               | 0.16 ~ 0.28                  | 3,000                                    | 0.16 ~ 0.28                  | 800                                  | 0.12 ~ 0.2                   | 6,800                               | 0.12 ~ 0.2                   |
| 10                       | 3,200  | 0.2 ~ 0.3                    | 3,200                               | 0.2 ~ 0.3                    | 2,400                                    | 0.2 ~ 0.3                    | 640                                  | 0.15 ~ 0.2                   | 5,500                               | 0.15 ~ 0.25                  |
| 12                       | 2,700  | 0.21 ~ 0.3                   | 2,700                               | 0.21 ~ 0.3                   | 2,000                                    | 0.21 ~ 0.3                   | 530                                  | 0.15 ~ 0.2                   | 4,500                               | 0.18 ~ 0.3                   |
| 16                       | 2,000  | 0.25 ~ 0.36                  | 2,000                               | 0.25 ~ 0.36                  | 1,500                                    | 0.25 ~ 0.36                  | 400                                  | 0.15 ~ 0.24                  | 3,400                               | 0.24 ~ 0.32                  |
| 20                       | 1,600  | 0.3 ~ 0.4                    | 1,600                               | 0.3 ~ 0.4                    | 1,200                                    | 0.3 ~ 0.4                    | 320                                  | 0.15 ~ 0.3                   | 2,700                               | 0.3 ~ 0.4                    |

1. 此切削条件基准表适用于水溶性切削油剂及内冷的方式。
2. 请使用稀释20 ~ 30 倍的优质水溶性切削油剂。
3. 使用油性切削油剂或是超过20倍的水溶性切削油剂时，切削速度请下调30%。
4. 安装钻头时，请使用无损伤、无油污的夹具，钻头振动控制在0.02mm以下。
5. 加工材料夹持请确保在无变形，无弯曲，无振动的状态下。
6. 油孔堵塞是造成折损问题的原因，请务必安装供油装置的过滤器。
7. 加工铜合金时，根据切屑形状，请适当调整切削速度及进给量。

※ 关于以Inconel 718为首的耐热合金，上述条件表仅适用于加工孔深3D 以下的情况。如果超过3D 的情况，则需要根据实际情况进行阶梯式加工。



1. The above speeds and feeds are for drilling with water-soluble coolant and internal coolant supply.
  2. Suitable cutting fluid is water-soluble high density coolant (20 - 30 times dilution).
  3. When using non-water-soluble or water-soluble coolant (over 20times dilution), reduce cutting speed by 30%.
  4. Equip the drill with a scratch-and dust-free collet and minimize drill deflection to less than 0.02mm.
  5. Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
  6. A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.
  7. Adjust the speed and feed accordingly based on chip shape when machining copper alloy.
- ※ The above cutting conditions are applicable to hole depth under 3D for heat-resistant alloys such as Inconel 718. When necessary please consider step drilling.

## 公制螺纹 Metric screw threads

JIS B 0209-1: 2007(单位: mm)  
JIS B 8031- 2007(Unit: mm)

单位:mm Unit:mm

| 螺纹尺寸<br>Thread size | 推荐底孔径<br>Recommended<br>drill hole dia. | 最大底孔径<br>Max. drill hole dia.          |          |       |
|---------------------|---|--|----------|-------|
|                     |   | 最小底孔径<br>Min. drill hole dia.<br>各精度通用 | 旧 JIS2级用 | 6H用   |
| 2.5 × 0.45          | 2.05                                    | 2.02                                   | 2.13     | 2.13  |
| 2.5 × 0.35          | 2.15                                    | 2.13                                   | 2.22     | 2.22  |
| ※ 2.6 × 0.45        | 2.15                                    | —                                      | —        | 2.23  |
| ※ 2.6 × 0.35        | 2.25                                    | —                                      | —        | 2.32  |
| ※ 3 × 0.6           | 2.4                                     | 2.35                                   | 2.42     | 2.51  |
| 3 × 0.5             | 2.5                                     | 2.46                                   | 2.59     | 2.59  |
| 3 × 0.35            | 2.65                                    | 2.63                                   | 2.72     | 2.72  |
| 3.5 × 0.6           | 2.9                                     | 2.85                                   | 3.01     | 3.01  |
| ※ 3.5 × 0.5         | 3                                       | 2.96                                   | —        | 3.09  |
| 3.5 × 0.35          | 3.15                                    | 3.13                                   | 3.22     | 3.22  |
| 4 × 0.75            | 3.25                                    | 3.19                                   | 3.32     | 3.37  |
| 4 × 0.7             | 3.3                                     | 3.25                                   | 3.42     | 3.42  |
| 4 × 0.5             | 3.5                                     | 3.46                                   | 3.59     | 3.59  |
| 4.5 × 0.75          | 3.75                                    | 3.69                                   | 3.87     | 3.87  |
| 4.5 × 0.5           | 4                                       | 3.96                                   | 4.09     | 4.09  |
| ※ 5 × 0.9           | 4.1                                     | —                                      | —        | 4.23  |
| 5 × 0.8             | 4.2                                     | 4.14                                   | 4.33     | 4.33  |
| ※ 5 × 0.75          | 4.25                                    | 4.19                                   | —        | 4.37  |
| 5 × 0.5             | 4.5                                     | 4.46                                   | 4.59     | 4.59  |
| ※ 5.5 × 0.9         | 4.6                                     | —                                      | —        | 4.73  |
| ※ 5.5 × 0.75        | 4.75                                    | —                                      | —        | 4.87  |
| 5.5 × 0.5           | 5                                       | 4.96                                   | 5.09     | 5.09  |
| 6 × 1               | 5                                       | 4.92                                   | 5.15     | 5.15  |
| 6 × 0.75            | 5.25                                    | 5.19                                   | 5.37     | 5.37  |
| ※ 6 × 0.5           | 5.5                                     | —                                      | —        | 5.59  |
| 7 × 1               | 6                                       | 5.92                                   | 6.15     | 6.15  |
| 7 × 0.75            | 6.25                                    | 6.19                                   | 6.37     | 6.37  |
| ※ 7 × 0.5           | 6.5                                     | —                                      | —        | 6.59  |
| 8 × 1.25            | 6.75                                    | 6.65                                   | 6.91     | 6.91  |
| 8 × 1               | 7                                       | 6.92                                   | 7.15     | 7.15  |
| 8 × 0.75            | 7.25                                    | 7.19                                   | 7.37     | 7.37  |
| ※ 8 × 0.5           | 7.5                                     | —                                      | —        | 7.59  |
| 9 × 1.25            | 7.75                                    | 7.65                                   | 7.91     | 7.91  |
| 9 × 1               | 8                                       | 7.92                                   | 8.15     | 8.15  |
| 9 × 0.75            | 8.25                                    | 8.19                                   | 8.37     | 8.37  |
| ※ 9 × 0.5           | 8.5                                     | —                                      | —        | 8.59  |
| 10 × 1.5            | 8.5                                     | 8.38                                   | 8.67     | 8.67  |
| 10 × 1.25           | 8.75                                    | 8.65                                   | 8.91     | 8.91  |
| 10 × 1              | 9                                       | 8.92                                   | 9.15     | 9.15  |
| 10 × 0.75           | 9.25                                    | 9.19                                   | 9.37     | 9.37  |
| ※ 10 × 0.5          | 9.5                                     | —                                      | —        | 9.59  |
| 11 × 1.5            | 9.5                                     | 9.38                                   | 9.67     | 9.67  |
| 11 × 1.25           | 9.75                                    | 9.65                                   | 9.8      | 9.91  |
| 11 × 1              | 10                                      | 9.92                                   | 10.15    | 10.15 |
| 11 × 0.75           | 10.25                                   | 10.19                                  | 10.37    | 10.37 |
| ※ 11 × 0.5          | 10.5                                    | —                                      | —        | 10.59 |
| 12 × 1.75           | 10.25                                   | 10.11                                  | 10.44    | 10.44 |
| 12 × 1.5            | 10.5                                    | 10.38                                  | 10.67    | 10.67 |
| 12 × 1.25           | 10.75                                   | 10.65                                  | 10.91    | 10.91 |
| 12 × 1              | 11                                      | 10.92                                  | 11.15    | 11.15 |
| ※ 12 × 0.75         | 11.25                                   | —                                      | —        | 11.37 |
| ※ 12 × 0.5          | 11.5                                    | —                                      | —        | 11.59 |
| ※ 13 × 1.75         | 11.25                                   | —                                      | —        | 11.44 |
| ※ 13 × 1.5          | 11.5                                    | —                                      | —        | 11.67 |

| 螺纹尺寸<br>Thread size | 推荐底孔径<br>Recommended<br>drill hole dia. | 最大底孔径<br>Max. drill hole dia.          |          |       |
|---------------------|---|--|----------|-------|
|                     |   | 最小底孔径<br>Min. drill hole dia.<br>各精度通用 | 旧 JIS2级用 | 6H用   |
| ※ 13 × 1.25         | 11.75                                   | —                                      | —        | 11.91 |
| ※ 13 × 1            | 12                                      | —                                      | —        | 12.15 |
| ※ 13 × 0.75         | 12.3                                    | —                                      | —        | 12.37 |
| ※ 13 × 0.5          | 12.5                                    | —                                      | —        | 12.59 |
| 14 × 2              | 12                                      | 11.84                                  | 12.21    | 12.21 |
| 14 × 1.5            | 12.5                                    | 12.38                                  | 12.67    | 12.67 |
| 14 × 1.25           | 12.75                                   | 12.65                                  | —        | 12.91 |
| 14 × 1              | 13                                      | 12.92                                  | 13.15    | 13.15 |
| ※ 14 × 0.75         | 13.3                                    | —                                      | —        | 13.37 |
| ※ 14 × 0.5          | 13.5                                    | —                                      | —        | 13.59 |
| ※ 15 × 2            | 13                                      | —                                      | —        | 13.21 |
| 15 × 1.5            | 13.5                                    | 13.4                                   | 13.6     | 13.67 |
| 15 × 1.25           | 13.8                                    | 13.7                                   | 13.9     | 13.91 |
| 15 × 1              | 14                                      | 13.95                                  | 14.15    | 14.15 |
| ※ 15 × 0.75         | 14.3                                    | —                                      | —        | 14.37 |
| ※ 15 × 0.5          | 14.5                                    | —                                      | —        | 14.59 |
| 16 × 2              | 14                                      | 13.9                                   | 14.2     | 14.21 |
| 16 × 1.5            | 14.5                                    | 14.4                                   | 14.6     | 14.67 |
| ※ 16 × 1.25         | 14.75                                   | 14.65                                  | —        | 14.91 |
| 16 × 1              | 15                                      | 14.95                                  | 15.15    | 15.15 |
| ※ 16 × 0.75         | 15.25                                   | 15.19                                  | —        | 15.37 |
| 16 × 0.5            | 15.5                                    | 15.46                                  | 15.52    | 15.59 |
| ※ 17 × 2            | 15                                      | —                                      | —        | 15.21 |
| 17 × 1.5            | 15.5                                    | 15.4                                   | 15.68    | 15.67 |
| ※ 17 × 1.25         | 15.8                                    | —                                      | —        | 15.91 |
| 17 × 1              | 16                                      | 15.95                                  | 16.15    | 16.15 |
| ※ 17 × 0.75         | 16.3                                    | —                                      | —        | 16.37 |
| ※ 17 × 0.5          | 16.5                                    | —                                      | —        | 16.59 |
| 18 × 2.5            | 15.5                                    | 15.3                                   | 15.7     | 15.74 |
| 18 × 2              | 16                                      | 15.9                                   | 16.2     | 16.21 |
| 18 × 1.5            | 16.5                                    | 16.4                                   | 16.6     | 16.67 |
| ※ 18 × 1.25         | 16.75                                   | 16.65                                  | —        | 16.91 |
| 18 × 1              | 17                                      | 16.95                                  | 17.15    | 17.15 |
| ※ 18 × 0.75         | 17.25                                   | 17.19                                  | —        | 17.37 |
| 18 × 0.5            | 17.5                                    | 17.46                                  | 17.52    | 17.59 |
| ※ 19 × 2.5          | 16.5                                    | —                                      | —        | 16.74 |
| ※ 19 × 2            | 17                                      | —                                      | —        | 17.21 |
| ※ 19 × 1.5          | 17.5                                    | —                                      | —        | 17.67 |
| ※ 19 × 1.25         | 17.8                                    | —                                      | —        | 17.91 |
| 19 × 1              | 18                                      | —                                      | —        | 18.15 |
| ※ 19 × 0.75         | 18.3                                    | —                                      | —        | 18.37 |
| ※ 19 × 0.5          | 18.5                                    | —                                      | —        | 18.59 |
| 20 × 2.5            | 17.5                                    | 17.3                                   | 17.7     | 17.74 |
| 20 × 2              | 18                                      | 17.9                                   | 18.2     | 18.21 |
| 20 × 1.5            | 18.5                                    | 18.4                                   | 18.6     | 18.67 |
| ※ 20 × 1.25         | 18.75                                   | 18.65                                  | —        | 18.91 |
| 20 × 1              | 19                                      | 18.95                                  | 19.15    | 19.15 |
| 20 × 0.5            | 19.5                                    | 19.46                                  | 19.52    | 19.59 |
| ※ 21 × 2.5          | 18.5                                    | —                                      | —        | 18.74 |
| ※ 21 × 1.5          | 19.5                                    | —                                      | —        | 19.67 |
| ※ 21 × 1            | 20                                      | —                                      | —        | 20.15 |
| 22 × 2.5            | 19.5                                    | 19.3                                   | 19.7     | 19.74 |
| 22 × 2              | 20                                      | 19.9                                   | 20.2     | 20.21 |

推荐底孔径为旧JIS2级用。

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

※ JIS规格中没有的内螺纹底孔径为参考值。 ※ Recommended drill hole diameters that are not listed in JIS are reference values.



# 公制螺纹 (Nu-Roll丝锥)

Metric  
screw threads (Nu-Roll tap)

单位:mm Unit:mm

| 螺纹尺寸<br>Thread size | 旧 JIS2级螺纹<br>for JIS class 2 drill hole dia. |   | 6H                 |   |
|---------------------|--|---|--------------------|---|
|                     | RH 精度<br>RH Limits                           | 最小~最大 (咬合率)<br>Min. ~ Max. (Thread Overlap Ratio) | RH 精度<br>RH Limits | 最小~最大 (咬合率)<br>Min. ~ Max. (Thread Overlap Ratio) |
| 2.5 × 0.45          | 4  | 2.28 ~ 2.33 (100%~75%)                            | 4                  | 2.280 ~ 2.324 (100%~75%)                          |
| ※ 2.6 × 0.45        | 4  | * 2.38 ~ 2.43 //                                  | —                  | —   |
| ※ 3 × 0.6           | 5  | 2.70 ~ 2.73 (100%~90%)                            | —                  | —   |
| 3 × 0.5             | 5  | 2.76 ~ 2.81 (100%~75%)                            | 5                  | 2.762 ~ 2.812 (100%~75%)                          |
| 3.5 × 0.6           | 5  | 3.20 ~ 3.26 //                                    | 5                  | 3.202 ~ 3.250 (100%~80%)                          |
| ※ 4 × 0.75          | 6  | 3.62 ~ 3.67 (100%~85%)                            | —                  | —   |
| 4 × 0.7             | 6  | 3.65 ~ 3.70 //                                    | 6                  | 3.66 ~ 3.69 (100%~85%)                            |
| 4.5 × 0.75          | 6  | 4.12 ~ 4.18 (100%~80%)                            | 6                  | 4.13 ~ 4.18 (100%~80%)                            |
| ※ 5 × 0.9           | 6  | 4.53 ~ 4.59 (100%~85%)                            | —                  | —   |
| 5 × 0.8             | 6  | 4.59 ~ 4.66 (100%~80%)                            | 6                  | 4.60 ~ 4.65 (100%~80%)                            |
| 6 × 1               | 7  | 5.48 ~ 5.57 //                                    | 7                  | 5.49 ~ 5.56 //                                    |
| 7 × 1               | 7  | 6.48 ~ 6.57 //                                    | 7                  | 6.49 ~ 6.56 //                                    |
| 8 × 1.25            | 7  | 7.34 ~ 7.41 (100%~85%)                            | 7                  | 7.34 ~ 7.41 (100%~85%)                            |
| 8 × 1               | 7  | 7.48 ~ 7.57 (100%~80%)                            | 7                  | 7.49 ~ 7.56 (100%~80%)                            |
| 10 × 1.5            | 7  | 9.18 ~ 9.28 (100%~85%)                            | 7                  | 9.19 ~ 9.27 (100%~85%)                            |
| 10 × 1.25           | 7  | 9.34 ~ 9.41 //                                    | 7                  | 9.34 ~ 9.41 //                                    |
| 10 × 1              | 7  | 9.48 ~ 9.57 (100%~80%)                            | 7                  | 9.49 ~ 9.56 (100%~80%)                            |
| 12 × 1.75           | 8  | 11.05 ~ 11.15 (100%~85%)                          | 8                  | 11.05 ~ 11.15 (100%~85%)                          |
| 12 × 1.5            | 7  | 11.18 ~ 11.28 //                                  | 7                  | 11.19 ~ 11.27 //                                  |
| 12 × 1.25           | 7  | 11.34 ~ 11.41 //                                  | 7                  | 11.34 ~ 11.41 //                                  |
| 12 × 1              | 7  | 11.48 ~ 11.57 (100%~80%)                          | 7                  | 11.49 ~ 11.56 (100%~80%)                          |
| 14 × 2              | 10   | 12.92 ~ 13.04 (100%~85%)                          | 10                 | 12.93 ~ 13.04 (100%~85%)                          |
| 14 × 1.5            | 9  | 13.21 ~ 13.30 //                                  | 9                  | 13.21 ~ 13.30 //                                  |
| 16 × 2              | 10   | 14.92 ~ 15.04 //                                  | 10                 | 14.93 ~ 15.04 //                                  |
| 16 × 1.5            | 9  | 15.21 ~ 15.30 (100%~85%)                          | 9                  | 15.21 ~ 15.30 //                                  |

6H对应JIS B 0209-2001。  
粗牙尺寸对应JIS B 0209-1982附录1。  
细牙尺寸对应JIS B 0211-1982附录。  
印\*对应JIS B 0209-1982附录2。

印※是JIS废番尺寸。

1. 上表的底孔径根据材料不同会有差异, 请视作估计值。
2. 底孔径会根据加工材料·硬度·形状尺寸等多少会有改变, 请在试加工后再做决定。
3. 考虑到耐久性, 底孔径越大越有利。请结合目的进行选定。
4. 请注意, 如发生底孔弯曲, 变形, 偏移等将会导致加工困难。

6H corresponds to JIS B 0209-2001.  
Coarse thread sizes correspond to the appendix 1 of JIS B 0209-1982.  
Fine pitch thread sizes correspond to the appendix of JIS B 0211-1982.  
\*Corresponds to the appendix 2 of JIS B 0209-1982.  
※Size abolished by JIS.

1. The proper drill hole size may change due to material variety. Use the recommended drill hole size as a benchmark.
2. As the hole diameter may vary by behavior of plasticity depending on the material, hardness and shapes of workpiece, the hole diameter should be determined through trial tapping prior to final machining.
3. A larger drill hole size is better for extending tool life. Select a drill hole size based on your particular application.
4. To avoid tapping trouble, correct hole must be maintained free from warp, deformation, stagger and the like.





shaping your dreams

## 欧士机（上海）精密工具有限公司

## OSG Corporation

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