上海方瀚精密工具有限公司
上海市金山工业区亭朱公路69号
201506
Info@fonhae.com
www.fonhae.com

Shanghai Fonhae Precision Tools Co.，Ltd.
No.69 Tingzhu Rd.Jinshan，Shanghai P.R.China
201506
Info@fonhae.com
www.fonhae.com

2024-2025样本

方瀚工具源头生产厂家



# 钻头
# Drills

## 上海方瀚精密工具有限公司
Shanghai Fonhae Precision Tools Co.，Ltd.

## 上海方瀚精密工具有限公司
## Shanghai Fonhae Precision Tools Co., Ltd

精密机械加工刀具制造商，成立于2016 年，专业提供硬质合金、金属陶瓷刀具研发、生产、销售和服务的企业。

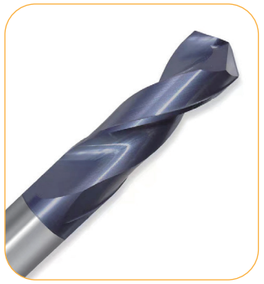
主要服务于航空航天、汽车、消费电子、液压气动、工程机械及精密机械等客户。

Manufacturer of precision machining tools, was established in 2016. The company specializes in providing tungsten carbide, cermet tools research and development, production, sales and service.
Mainly serve aerospace, automotive, consumer electronics, pneumatic hydraulic industry, engineering machinery and precision machinery customers.

## 公司提供的产品和服务
## Products and services provided by the company

- 研究开发硬质合金材料、几何结构、涂层和加工工艺
- 依据客户要求开发非标刀具
- 客户服务和产品培训
- OEM-项目和加工工艺解决方案
- 效率和成本计算

- Researches and develops solid carbide materials, geometries, coatings and machining processes
- Develops special tools according to customer requirements
- Provides customer service and product training
- OEM - projects and machining process solutions
- Efficiency and cost calculation



# KMSJ模块化钻刀具系统

KMSJ Modular drilling tool system

## 主要应用 Main application

KMSJ长度更长，直径更大，在多种应用中可以采用极高的进给率确保高生产率水平。该产品刀窝非常坚固，适合更换刀片，可延长钢质钻杆和硬质合金钻尖的使用寿命。该设计使得KMSJ 有极好的经济性，性能非常可靠，适合中等直径的钻孔加工。标准型产品的钻孔深度可达12xD，钻孔直径范围为12，5-40mm。多种钻削材质产品，几乎可用于各种类型，各种材料的加工应用。

The KMSJ is longer in length and larger in diameter, ensuring high productivity levels with extremely high feed rates in a wide range of applications. The tool socket is very strong for insert replacement and extends the service life of steel drill pipe and carbide drill tips. This design makes the KMSJ extremely economical, reliable and suitable for medium diameter drilling.

Standard products can drill up to 12xD depth, drilling diameter range of 12.5-40mm. A variety of drilling material products can be used for almost all types of processing applications of various materials.

## 特点及优势 Features and advantages

YG 钻尖类型

- 低钻入力，可避免工件出现弯曲现象。
- 卓越的定中心能力。
- 根据应用类型选择槽型，确保最佳加工性能。

坚固的刀窝设计，便于更换刀片

- 坚固的刀窝设计，延长刀片和钻杆的使用寿命。
- 四面封闭型刀窝确保刀片安装稳固。
- 在拆除刀片时只需一把简单的扳手即可。

可修磨刀片

- 所有刀具可提供修磨，从而提高刀具的经济性。

定制材质

- FD2210 材质，以TiAIN 为基体材料的复合涂层，可用于高速切削，特别适合钢材料加工。
- FD2612材质，TiAIN 复合涂层，韧性极佳的基体材料。改善了抗崩刃性能，适合苛刻加工条件的应用。
- K10 材质采用耐磨的合金基体，锋利的切削刃口，适合加工非铁材料以及耐热合金。

YG drill tip type

- Low drilling force to avoid bending of the workpiece.
- Excellent centering ability.
- Select the flute according to the application type to ensure the best machining performance.

Strong socket design for easy insert replacement

- Strong socket design for extended insert and drill pipe life.
- Four-sided closed socket ensures stable insert installation.
- A simple wrench is needed to remove the insert.

Repairable sharpening insert

- All tools can be grinding to improve tool economy.

Custom material

- FD2210 material, composite coating with TiAIN as the matrix material, can be used for high-speed cutting, especially suitable for steel material processing.
- FD2612 material, TiAIN composite coating, excellent toughness matrix material. Improved edge resistance, suitable for harsh processing conditions.
- K10 material adopts wear-resistant alloy matrix, sharp cutting edge, suitable for processing non-iron materials and heat-resistant alloys.

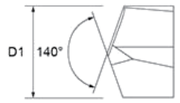


# KMSJ 刀片·YG

KMSJ insert·YG

- KMSJ FD2210 YG切削刃在钢材加工中有极高的金属去除率和超长的使用寿命。
- YG 槽型刀片有一个宽型并且坚固的YG 型横刃，可以避免芯部出现淬火，从而提高进给率。经过倒圆处理的镰刀形刀刃具有卓越的切屑控制性能和超长的刀具寿命，即使在长切屑材料加工中也有出色的表现。
- FD2210 是一种细晶粒硬质合金材质，采用TiAIN基体的PVD 复合涂层。它具有很高的耐磨性，在稳定工况下可以采用极高的切削速度参数。
- FD2612 YG 切削刃特别适合合金钢和高合金钢的钻孔加工。
- FD2210 YG 切削刃可作为铸铁材料加工的备选。

• KMSJ FD2210 YG cutting edge has extremely high metal removal rate and long service life in steel processing.
• The YG flute insert has a wide and strong YG chisel edge, which avoids hardening in the core and increases the feed rate. The rounded sickle-shaped insert has excellent chip control and long tool life, even in the processing of long chip materials.
• FD2210 is a fine grained solid carbide material with PVD composite coating on TiAIN matrix. It has high wear resistance and can use extremely high cutting speed parameters under stable conditions.
• FD2612YG cutting edge is especially suitable for drilling of alloy and high alloy steels.
• FD2210YG cutting edge can be used as an alternative for machining cast iron materials.




YG

| | |
|---|---|
| P | ● |
| M | |
| K | ● |
| N | |
| S | |
| H | |

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|---|---|
| P | ● |
| M | |
| K | ● |
| N | |
| S | |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ1250YG | 12，500 | .4921 | C |
| KMSJ1270YG | 12，700 | .5000 | C |
| KMSJ1280YG | 12，800 | .5039 | C |
| KMSJ1300YG | 13，000 | .5118 | C |
| KMSJ1310YG | 13，100 | .5160 | C |
| KMSJ1320YG | 13，200 | .5197 | C |
| KMSJ1350YG | 13，500 | .5310 | C |
| KMSJ1370YG | 13，700 | .5394 | B |
| KMSJ1380YG | 13，800 | .5433 | B |
| KMSJ1389YG | 13，890 | .5470 | B |
| KMSJ1400YG | 14，000 | .5512 | B |
| KMSJ1410YG | 14，100 | .5551 | B |
| KMSJ1420YG | 14，200 | .5591 | B |
| KMSJ1429YG | 14，290 | .5630 | B |
| KMSJ1440YG | 14，400 | .5669 | B |
| KMSJ1450YG | 14，500 | .5709 | B |
| KMSJ1468YG | 14，680 | .5780 | A |
| KMSJ1480YG | 14，800 | .5827 | A |
| KMSJ1500YG | 15，000 | .5906 | A |
| KMSJ1508YG | 15，080 | .5940 | A |
| KMSJ1530YG | 15，300 | .6024 | A |
| KMSJ1550YG | 15，500 | .6102 | A |
| KMSJ1560YG | 15，600 | .6142 | A |
| KMSJ1570YG | 15，700 | .6181 | A |
| KMSJ1580YG | 15，800 | .6220 | A |
| KMSJ1588YG | 15，880 | .6250 | 1 |
| KMSJ1600YG | 16，000 | .6299 | 1 |
| KMSJ1609YG | 16，090 | .6340 | 1 |
| KMSJ1620YG | 16，200 | .6378 | 1 |
| KMSJ1627YG | 16，270 | .6410 | 1 |
| KMSJ1650YG | 16，500 | .6496 | 1 |
| KMSJ1667YG | 16，670 | .6560 | 1 |
| KMSJ1700YG | 17，000 | .6693 | 1 |
| KMSJ1707YG | 17，070 | .6720 | 1 |
| KMSJ1746YG | 17，460 | .6875 | 1 |
| KMSJ1750YG | 17，500 | .6890 | 1 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ1786YG | 17，860 | .7030 | 1 |
| KMSJ1800YG | 18，000 | .7087 | 1 |
| KMSJ1826YG | 18，260 | .7190 | 2 |
| KMSJ1850YG | 18，500 | .7283 | 2 |
| KMSJ1865YG | 18，650 | .7340 | 2 |
| KMSJ1900YG | 19，000 | .7480 | 2 |
| KMSJ1905YG | 19，050 | .7500 | 2 |
| KMSJ1923YG | 19，228 | .7570 | 2 |
| KMSJ1927YG | 19，270 | .7590 | 2 |
| KMSJ1945YG | 19，450 | .7660 | 2 |
| KMSJ1950YG | 19，500 | .7677 | 2 |
| KMSJ1984YG | 19，840 | .7810 | 2 |
| KMSJ2000YG | 20，000 | .7874 | 3 |
| KMSJ2024YG | 20，240 | .7970 | 3 |
| KMSJ2050YG | 20，500 | .8071 | 3 |
| KMSJ2064YG | 20，640 | .8125 | 3 |
| KMSJ2100YG | 21，000 | .8268 | 3 |
| KMS12143YG | 21，430 | .8440 | 3 |
| KMSJ2150YG | 21，500 | .8460 | 3 |
| KMSJ2183YG | 21，830 | .8590 | 3 |
| KMSJ2200YG | 22，000 | .8661 | 3 |
| KMSJ2223YG | 22，230 | .8750 | 4 |
| KMSJ2244YG | 22，440 | .8840 | 4 |
| KMS12250YG | 22，500 | .8858 | 4 |
| KMSJ2300YG | 23，000 | .9055 | 4 |
| KMSJ2342YG | 23，420 | .9220 | 4 |
| KMSJ2350YG | 23，500 | .9252 | 4 |
| KMSJ2381YG | 23，810 | .9375 | 4 |
| KMSJ2400YG | 24，000 | .9449 | 4 |
| KMSJ2450YG | 24，500 | .9646 | 5 |
| KMSJ2461YG | 24，610 | .9690 | 5 |
| KMSJ2500YG | 25，000 | .9843 | 5 |
| KMSJ2540YG | 25，400 | 1.0000 | 5 |
| KMSJ2550YG | 25，500 | 1.0039 | 5 |
| KMSJ2560YG | 25，610 | 1.1180 | 5 |
| KMSJ2567YG | 25，670 | 1.0110 | 5 |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ 刀片·YG

KMSJ insert·YG

| | |
|---|---|
| P | ● |
| M | |
| K | ● |
| N | |
| S | |
| H | |

| | |
|---|---|
| P | ● |
| M | |
| K | ● |
| N | |
| S | |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ2600YG | 26，000 | 1.0236 | 5 |
| KMSJ2619YG | 26，190 | 1.0310 | 6 |
| KMSJ2650YG | 26，500 | 1.0433 | 6 |
| KMSJ2659YG | 26，590 | 1.0470 | 6 |
| KMSJ2700YG | 27，000 | 1.0630 | 6 |
| KMSJ2750YG | 27，500 | 1.0827 | 6 |
| KMSJ2778YG | 27，780 | 1.0940 | 6 |
| KMSJ2800YG | 28，000 | 1.1024 | 6 |
| KMSJ2818YG | 28，180 | 1.1090 | 7 |
| KMSJ2850YG | 28，500 | 1.1220 | 7 |
| KMSJ2858YG | 28，580 | 1.1250 | 7 |
| KMSJ2900YG | 29，000 | 1.1417 | 7 |
| KMSJ2937YG | 29，370 | 1.1563 | 7 |
| KMSJ2950YG | 29，500 | 1.1614 | 7 |
| KMSJ2977YG | 29，770 | 1.1720 | 7 |
| KMSJ3000YG | 30，000 | 1.1811 | 7 |
| KMSJ3016YG | 30，160 | 1.1875 | 8 |
| KMSJ3050YG | 30，500 | 1.2008 | 8 |
| KMSJ3096YG | 30，960 | 1.2190 | 8 |
| KMSJ3100YG | 31，000 | 1.2205 | 8 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ3150YG | 31，500 | 1.2402 | 8 |
| KMSJ3175YG | 31，750 | 1.2500 | 8 |
| KMSJ3200YG | 32，000 | 1.2598 | 8 |
| KMSJ3250YG | 32，500 | 1.2795 | 9 |
| KMSJ3300YG | 33，000 | 1.2992 | 9 |
| KMSJ3334YG | 33，340 | 1.3130 | 9 |
| KMSJ3400YG | 34，000 | 1.3386 | 9 |
| KMSJ3413YG | 34，130 | 1.3440 | 9 |
| KMSJ3493YG | 34，930 | 1.3750 | 9 |
| KMSJ3500YG | 35，000 | 1.3780 | 9 |
| KMSJ3550YG | 35，500 | 1.3976 | 9 |
| KMSJ3600YG | 36，000 | 1.4173 | 9 |
| KMSJ3750YG | 37，500 | 1.4764 | 10 |
| KMSJ3800YG | 38，000 | 1.4961 | 10 |
| KMSJ3810YG | 38，100 | 1.5000 | 10 |
| KMSJ3850YG | 38，500 | 1.5157 | 10 |
| KMSJ3900YG | 39，000 | 1.5354 | 10 |
| KMSJ3950YG | 39，500 | 1.5551 | 10 |
| KMSJ4000YG | 40，000 | 1.5748 | 10 |

| 公差 YG·公制 | |
|---|---|
| D1 公制 Metric | 公差 Allowance h8 |
| 12，5-18 | +0，000/-0，027 |
| >18-30 | +0，000/-0，033 |
| >30-40 | +0，000/-0，039 |

应用参数 Application parameter

• 模块化钻硬质合金刀片·KMSJ·YG 槽型·材质FD2210·内冷·公制

Modular drill solid carbide insert·KMSJ·YG flute·Material FD2210·Internal coolant·Metric

| 材料分组 Material grouping | | 切削速度 Cutting speed—vc 范围 Radius—m/min | | | 公制 Metric | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 根据直径推荐进给率 Recommended feed rate according to diameter（f） | | | | | | |
| | | 最小值 Minimum value | 初始值 Initial value | 最大值 Maximum value | | 12.5 | 16.0 | 20.0 | 25.4 | 32.0 | 40.0 |
| P | 1 | 70 | 90 | 110 | mm/ 转 | 0，15-0，31 | 0，17-0，36 | 0，19-0，41 | 0，25-0，53 | 0，29-0，60 | 0，33-0，69 |
| | 2 | 80 | 100 | 120 | mm/ 转 | 0，15-0，31 | 0，17-0，36 | 0，19-0，41 | 0，25-0，53 | 0，29-0，60 | 0，33-0，69 |
| | 3 | 65 | 75 | 80 | mm/ 转 | 0，15-0，28 | 0，17-0，31 | 0，19-0，36 | 0，25-0，46 | 0，23-0，53 | 0，33-0，60 |
| | 4 | 50 | 65 | 75 | mm/ 转 | 0，12-0，28 | 0，14-0，31 | 0，16-0，36 | 0，20-0，46 | 0，23-0，53 | 0，30-0，60 |
| | 5 | 45 | 50 | 65 | mm/ 转 | 0，09-0，15 | 0，11-0，18 | 0，12-0，21 | 0，15-0，25 | 0，17-0，29 | 0，20-0，33 |
| | 6 | 45 | 50 | 65 | mm/ 转 | 0，12-0，23 | 0，14-0，26 | 0，16-0，29 | 0，20-0，38 | 0，23-0，43 | 0，26-0，54 |
| K | 1 | 85 | 108 | 132 | mm/ 转 | 0，18-0，37 | 0，20-0，43 | 0，22-0，48 | 0，30-0，64 | 0，35-0，72 | 0，40-0，83 |
| | 2 | 82 | 120 | 144 | mm/ 转 | 0，18-0，37 | 0，20-0，43 | 0，22-0，48 | 0，30-0，64 | 0，35-0，72 | 0，40-0，83 |
| | 3 | 78 | 90 | 96 | mm/ 转 | 0，18-0，34 | 0，20-0，37 | 0，22-0，42 | 0，30-0，55 | 0，28-0，64 | 0，40-0，72 |
| | 4 | 60 | 78 | 90 | mm/ 转 | 0，15-0，34 | 0，17-0，37 | 0，19-0，42 | 0，24-0，55 | 0，28-0，64 | 0，36-0，72 |
| | 5 | 54 | 60 | 78 | mm/ 转 | 0，10-0，18 | 0，13-0，21 | 0，15-0，26 | 0，18-0，30 | 0，33-0，35 | 0，24-0，40 |
| | 6 | 54 | 60 | 78 | mm/ 转 | 0，15-0，28 | 0，17-0，31 | 0，19-0，36 | 0，24-0，46 | 0，27-0，52 | 0，31-0，65 |

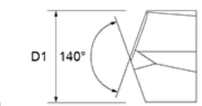


KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ 刀片·YGG

KMSJ insert·YGG

• KMSJ FD2210 YG 切削刃在钢材料加工中有极高的金属去除率和超长的使用寿命。
• YGG 槽型切削力和进给力低，并具有非常好的定中心性能。加强型切削刃，卓越的切削控制性能，并且可提高抗崩刃性能，可以延长刀具寿命。
• FD2210 是一种细晶硬质合金材质，采用TiAlN基体的PVD 复合涂层。它具有很高的耐磨性，在稳定工况下可以采用极高的切削速度参数。
• KMSJ FD2210 YG cutting edge has extremely high metal removal rate and long service life in steel material processing.
• YGG flute has low cutting force and feed force, and has very good centering performance. Enhanced cutting edge, excellent cutting control performance, and can improve the chipping resistance, can extend the tool life.
• FD2210 is a fine gained solid carbide material with PVD composite coating on TiAlN matrix. It has high wear resistance and can use extremely high cutting speed parameters under stable conditions.




YGG

| | |
|---|---|
| P | ● |
| M | |
| K | ○ |
| N | ● |
| S | |
| H | |

| | |
|---|---|
| P | ● |
| M | |
| K | ○ |
| N | ● |
| S | |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ1250YGG | 12，500 | .4921 | C |
| KMSJ1260YGG | 12，600 | .4961 | C |
| KMSJ1270YGG | 12，700 | .5000 | C |
| KMSJ1280YGG | 12，800 | .5039 | C |
| KMSJ1293YGG | 12，930 | .5090 | C |
| KMSJ1300YGG | 13，000 | .5118 | C |
| KMSJ1310YGG | 13，100 | .5160 | C |
| KMSJ1320YGG | 13，200 | .5197 | C |
| KMSJ1350YGG | 13，500 | .5310 | C |
| KMSJ1360YGG | 13，600 | .5354 | B |
| KMSJ1370YGG | 13，700 | .5394 | B |
| KMSJ1380YGG | 13，800 | .5433 | B |
| KMSJ1389YGG | 13，890 | .5470 | B |
| KMSJ1400YGG | 14，000 | .5512 | B |
| KMSJ1410YGG | 14，100 | .5551 | B |
| KMSJ1420YGG | 14，200 | .5591 | B |
| KMSJ1429YGG | 14，290 | .5630 | B |
| KMSJ1440YGG | 14，400 | .5669 | B |
| KMSJ1450YGG | 14，500 | .5709 | B |
| KMSJ1460YGG | 14，600 | .5748 | A |
| KMSJ1468YGG | 14，680 | .5780 | A |
| KMSJ1480YGG | 14，800 | .5827 | A |
| KMSJ1500YGG | 15，000 | .5906 | A |
| KMSJ1508YGG | 15，080 | .5940 | A |
| KMSJ1530YGG | 15，300 | .6024 | A |
| KMSJ1548YGG | 15，480 | .6090 | A |
| KMSJ1550YGG | 15，500 | .6102 | A |
| KMSJ1560YGG | 15，600 | .6142 | A |
| KMSJ1570YGG | 15，700 | .6181 | A |
| KMSJ1580YGG | 15，800 | .6220 | A |
| KMSJ1588YGG | 15，880 | .6250 | 1 |
| KMSJ1600YGG | 16，000 | .6299 | 1 |
| KMSJ1604YGG | 16，040 | .6315 | 1 |
| KMSJ1609YGG | 16，090 | .6340 | 1 |
| KMSJ1619YGG | 16，190 | .6374 | 1 |
| KMSJ1620YGG | 16，200 | .6378 | 1 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ1627YGG | 16，270 | .6410 | 1 |
| KMSJ1650YGG | 16，500 | .6496 | 1 |
| KMSJ1660YGG | 16，600 | .6535 | 1 |
| KMSJ1667YGG | 16，670 | .6560 | 1 |
| KMSJ1700YGG | 17，000 | .6693 | 1 |
| KMSJ1707YGG | 17，070 | .6720 | 1 |
| KMSJ1735YGG | 17，350 | .6831 | 1 |
| KMSJ1746YGG | 17，460 | .6875 | 1 |
| KMSJ1750YGG | 17，500 | .6890 | 1 |
| KMSJ1760YGG | 17，600 | .6929 | 1 |
| KMSJ1770YGG | 17，700 | .6969 | 1 |
| KMSJ1786YGG | 17，860 | .7030 | 1 |
| KMSJ1800YGG | 18，000 | .7087 | 1 |
| KMSJ1826YGG | 18，260 | .7190 | 2 |
| KMSJ1850YGG | 18，500 | .7283 | 2 |
| KMSJ1860YGG | 18，600 | .7323 | 2 |
| KMSJ1865YGG | 18，650 | .7340 | 2 |
| KMSJ1880YGG | 18，800 | .7402 | 2 |
| KMSJ1900YGG | 19，000 | .7480 | 2 |
| KMSJ1905YGG | 19，050 | .7500 | 2 |
| KMSJ1925YGG | 19，250 | .7579 | 2 |
| KMSJ1927YGG | 19，270 | .7590 | 2 |
| KMSJ1932YGG | 19，320 | .7606 | 2 |
| KMSJ1935YGG | 19，350 | .7618 | 2 |
| KMSJ1945YGG | 19，450 | .7660 | 2 |
| KMSJ1950YGG | 19，500 | .7677 | 2 |
| KMSJ1970YGG | 19，700 | .7756 | 2 |
| KMSJ1984YGG | 19，840 | .7810 | 2 |
| KMSJ2000YGG | 20，000 | .7874 | 3 |
| KMSJ2024YGG | 20，240 | .7969 | 3 |
| KMSJ2050YGG | 20，500 | .8071 | 3 |
| KMSJ2064YGG | 20，640 | .8125 | 3 |
| KMSJ2070YGG | 20，700 | .8150 | 3 |
| KMSJ2100YGG | 21，000 | .8268 | 3 |
| KMSJ2110YGG | 21，100 | .8307 | 3 |
| KMSJ2120YGG | 21，200 | .8346 | 3 |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ 刀片·YGG

## KMSJ insert·YGG

| | |
|---|---|
| P | ● |
| M | |
| K | ○ |
| N | ● |
| S | |
| H | |

| | |
|---|---|
| P | ● |
| M | |
| K | ○ |
| N | ● |
| S | |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ2133YGG | 21，330 | .8398 | 3 |
| KMSJ2143YGG | 21，430 | .8440 | 3 |
| KMSJ2150YGG | 21，500 | .8460 | 3 |
| KMSJ2170YGG | 21，700 | .8543 | 3 |
| KMSJ2183YGG | 21，830 | .8590 | 3 |
| KMSJ2200YGG | 22，000 | .8661 | 3 |
| KMSJ2210YGG | 22，100 | .8701 | 4 |
| KMSJ2215YGG | 22，150 | .8720 | 4 |
| KMSJ2223YGG | 22，230 | .8750 | 4 |
| KMSJ2244YGG | 22，440 | .8840 | 4 |
| KMSJ2250YGG | 22，500 | .8858 | 4 |
| KMSJ2262YGG | 22，620 | .8906 | 4 |
| KMSJ2300YGG | 23，000 | .9055 | 4 |
| KMSJ2305YGG | 23，050 | .9075 | 4 |
| KMSJ2310YGG | 23，100 | .9094 | 4 |
| KMSJ2325YGG | 23，250 | .9154 | 4 |
| KMSJ2330YGG | 23，300 | .9173 | 4 |
| KMSJ2342YGG | 23，420 | .9220 | 4 |
| KMSJ2350YGG | 23，500 | .9252 | 4 |
| KMSJ2381YGG | 23，810 | .9375 | 4 |
| KMSJ2400YGG | 24，000 | .9449 | 4 |
| KMSJ2430YGG | 24，300 | .9567 | 5 |
| KMSJ2450YGG | 24，500 | .9646 | 5 |
| KMSJ2461YGG | 24，610 | .9690 | 5 |
| KMSJ2470YGG | 24，700 | .9724 | 5 |
| KMSJ2500YGG | 25，000 | .9843 | 5 |
| KMSJ2540YGG | 25，400 | 1.0000 | 5 |
| KMSJ2550YGG | 25，500 | 1.0039 | 5 |
| KMSJ2554YGG | 25，540 | 1.0055 | 5 |
| KMSJ2560YGG | 25，600 | 1.0080 | 5 |
| KMSJ2565YGG | 25，654 | 1.0100 | 5 |
| KMSJ2567YGG | 25，670 | 1.0106 | 5 |
| KMSJ2600YGG | 26，000 | 1.0236 | 5 |
| KMSJ2619YGG | 26，190 | 1.0310 | 6 |
| KMSJ2650YGG | 26，500 | 1.0433 | 6 |
| KMSJ2653YGG | 26，530 | 1.0445 | 6 |
| KMSJ2659YGG | 26，590 | 1.0470 | 6 |
| KMSJ2670YGG | 26，700 | 1.0512 | 6 |
| KMSJ2700YGG | 27，000 | 1.0630 | 6 |
| KMSJ2750YGG | 27，500 | 1.0827 | 6 |
| KMSJ2778YGG | 27，780 | 1.0940 | 6 |
| KMSJ2800YGG | 28，000 | 1.1024 | 6 |
| KMSJ2818YGG | 28，180 | 1.1090 | 7 |
| KMSJ2850YGG | 28，500 | 1.1220 | 7 |
| KMSJ2858YGG | 28，580 | 1.1250 | 7 |
| KMSJ2900YGG | 29，000 | 1.1417 | 7 |
| KMSJ2937YGG | 29，370 | 1.1563 | 7 |
| KMSJ2950YGG | 39，500 | 1.1614 | 7 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ2955YGG | 29，550 | 1.1634 | 7 |
| KMSJ2973YGG | 29，730 | 1.1705 | 7 |
| KMSJ2977YGG | 29，770 | 1.1720 | 7 |
| KMSJ3000YGG | 30，000 | 1.1811 | 7 |
| KMSJ3016YGG | 30，160 | 1.1875 | 8 |
| KMSJ3050YGG | 30，500 | 1.2008 | 8 |
| KMSJ3056YGG | 30，560 | 1.2030 | 8 |
| KMSJ3096YGG | 30，960 | 1.2190 | 8 |
| KMSJ3100YGG | 31，000 | 1.2205 | 8 |
| KMSJ3125YGG | 31，250 | 1.2303 | 8 |
| KMSJ3150YGG | 31，500 | 1.2402 | 8 |
| KMSJ3175YGG | 31，750 | 1.2500 | 8 |
| KMSJ3200YGG | 32，000 | 1.2598 | 8 |
| KMSJ3220YGG | 32，200 | 1.2677 | 9 |
| KMSJ3234YGG | 32，340 | 1.2732 | 9 |
| KMSJ3250YGG | 32，500 | 1.2795 | 9 |
| KMSJ3254YGG | 32，540 | 1.2810 | 9 |
| KMSJ3294YGG | 32，940 | 1.2970 | 9 |
| KMSJ3300YGG | 33，000 | 1.2992 | 9 |
| KMSJ3334YGG | 33，340 | 1.3130 | 9 |
| KMSJ3350YGG | 33，500 | 1.3189 | 9 |
| KMSJ3373YGG | 33，730 | 1.3280 | 9 |
| KMSJ3400YGG | 34，000 | 1.3386 | 9 |
| KMSJ3413YGG | 34，130 | 1.3440 | 9 |
| KMSJ3450YGG | 34，500 | 1.3583 | 9 |
| KMSJ3493YGG | 34，930 | 1.3750 | 9 |
| KMSJ3500YGG | 35，000 | 1.3780 | 9 |
| KMSJ3550YGG | 35，500 | 1.3976 | 9 |
| KMSJ3572YGG | 35，720 | 1.4060 | 9 |
| KMSJ3600YGG | 36，000 | 1.4173 | 9 |
| KMSJ3612YGG | 36，120 | 1.4220 | 10 |
| KMSJ3650YGG | 36，500 | 1.4375 | 10 |
| KMSJ3651YGG | 36，510 | 1.4375 | 10 |
| KMSJ3700YGG | 37，000 | 1.4567 | 10 |
| KMSJ3731YGG | 27，310 | 1.4690 | 10 |
| KMSJ3750YGG | 37，500 | 1.4764 | 10 |
| KMSJ3800YGG | 38，000 | 1.4961 | 10 |
| KMSJ3810YGG | 38，100 | 1.5000 | 10 |
| KMSJ3846YGG | 38，460 | 1.5142 | 10 |
| KMSJ3850YGG | 37，500 | 1.5157 | 10 |
| KMSJ3900YGG | 39，000 | 1.5354 | 10 |
| KMSJ3950YGG | 39，500 | 1.5551 | 10 |
| KMSJ3975YGG | 39，750 | 1.5650 | 10 |
| KMSJ4000YGG | 40，000 | 1.5748 | 10 |

| 公差 YGG·公制 | |
|---|---|
| D1 公制 Metric | 公差 Allowance h8 |
| 12，5-18 | +0，000/-0，027 |
| >18-30 | +0，000/-0，033 |
| >30-40 | +0，000/-0，039 |



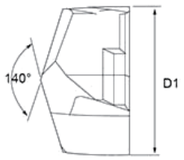
KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

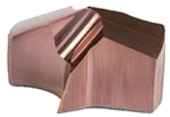
# KMSJ 刀片·MG

## KMSJ insert·MG

- KMSJ MG 槽型在不锈钢、高温合金、以及其它苛刻条件下的应用中具备卓越的钻削性能。
- KMSJ MG 槽型具有很好的加工可靠性，在难加工材料加工应用中可确保更长的刀具寿命和更高的生产率。其先进的钻尖及钻心设计方案可以显著降低切削力。
- KMSJ 采用韧性极佳的细晶粒硬质合金基体，同时采用Al含量高的TiAlN涂层。这种材质具有很好的耐磨性和氧化安定性，同时其钻尖和切削刃部位具有卓越的抗崩刃性。
- 这种刀片形式特别适合重载加工应用，以及耐腐蚀端部管板和其它热交换装置配件的加工。

• The KMSJ MG flute provides excellent drilling performance in stainless steel, superalloy, and other demanding applications.
• The KMSJ MG flute has excellent machining reliability and ensures longer tool life and higher productivity in difficult material machining applications. Its advanced drill tip and drill core design significantly reduces cutting forces.
• KMSJ adopts fine grain solid carbide matrix with excellent toughness and TiAlN coating with high Al content. This material has good wear resistance and oxidation stability, while its drill tip and cutting edge parts have excellent chipping resistance.
• This insert form is particularly suitable for heavy-duty machining applications, as well as the machining of corrosion-resistant end tubes and other heat exchange device accessories.



MG

| | |
|---|---|
| P | ○ |
| M | ● |
| K | ○ |
| N | ○ |
| S | ● |
| H | |

| | |
|---|---|
| P | ○ |
| M | ● |
| K | ○ |
| N | ○ |
| S | ● |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ1250MG | 12，500 | .4921 | c |
| KMSJ1270MG | 12，700 | .5000 | c |
| KMSJ1300MG | 13，000 | .5118 | c |
| KMSJ1350MG | 13，500 | .5315 | c |
| KMSJ1400MG | 14，000 | .5512 | B |
| KMSJ1429MG | 14，290 | .5626 | B |
| KMSJ1450MG | 14，500 | .5729 | B |
| KMSJ1500MG | 15，000 | .5906 | A |
| KMSJ1550MG | 15，500 | .6102 | A |
| KMSJ1588MG | 15，880 | .6252 | 1 |
| KMSJ1600MG | 16，000 | .6299 | 1 |
| KMSJ1609MG | 16，090 | .6335 | 1 |
| KMSJ1615MG | 16，150 | .6358 | 1 |
| KMSJ1627MG | 16，270 | .6406 | 1 |
| KMSJ1650MG | 16，500 | .6496 | 1 |
| KMSJ1667MG | 16，670 | .6563 | 1 |
| KMSJ1700MG | 17，000 | .6693 | 1 |
| KMSJ1746MG | 17，460 | .6874 | 1 |
| KMSJ1750MG | 17，500 | .6890 | 1 |
| KMSJ1800MG | 18，000 | .7087 | 1 |
| KMSJ1830MG | 18，300 | .7205 | 2 |
| KMSJ1850MG | 18，500 | .7283 | 2 |
| KMSJ1900MG | 19，000 | .7480 | 2 |
| KMSJ1905MG | 19，050 | .7500 | 2 |
| KMSJ1920MG | 19，200 | .7559 | 2 |
| KMSJ1923MG | 19，230 | .7571 | 2 |
| KMSJ1925MG | 19，250 | .7579 | 2 |
| KMSJ1927MG | 19，270 | .7587 | 2 |
| KMSJ1935MG | 19，350 | .7618 | 2 |
| KMSJ1945MG | 19，450 | .7657 | 2 |
| KMSJ1950MG | 19，500 | .7677 | 2 |
| KMSJ1984MG | 19，840 | .7811 | 2 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ2000MG | 20，000 | .7874 | 3 |
| KMSJ2024MG | 20，240 | .7969 | 3 |
| KMSJ2050MG | 20，500 | .8071 | 3 |
| KMSJ2064MG | 20，640 | .8126 | 3 |
| KMSJ2100MG | 21，000 | .8268 | 3 |
| KMSJ2150MG | 21，500 | .8465 | 3 |
| KMSJ2200MG | 22，000 | .8661 | 3 |
| KMSJ2223MG | 22，230 | .8752 | 4 |
| KMSJ2250MG | 22，500 | .8858 | 4 |
| KMSJ2300MG | 23，000 | .9055 | 4 |
| KMSJ2350MG | 23，500 | .9252 | 4 |
| KMSJ2381MG | 23，810 | .9374 | 4 |
| KMSJ2400MG | 34，000 | .9449 | 4 |
| KMSJ2450MG | 24，500 | .9646 | 5 |
| KMSJ2500MG | 25，000 | .9843 | 5 |
| KMSJ2525MG | 25，250 | .9941 | 5 |
| KMSJ2530MG | 25，300 | .9961 | 5 |
| KMSJ2540MG | 25，400 | 1.0000 | 5 |
| KMSJ2550MG | 25，500 | 1.0039 | 5 |
| KMSJ2560MG | 25，600 | 1.0079 | 5 |
| KMSJ2565MG | 25，650 | 1.0098 | 5 |
| KMSJ2567MG | 25，670 | 1.0106 | 5 |
| KMSJ2581MG | 25，810 | 1.0161 | 5 |
| KMSJ2600MG | 26，000 | 1.0236 | 5 |
| KMSJ2619MG | 26，190 | 1.0311 | 6 |
| KMSJ2630MG | 26，300 | 1.0354 | 6 |
| KMSJ2650MG | 26，500 | 1.0433 | 6 |
| KMSJ2659MG | 26，590 | 1.0469 | 6 |
| KMSJ2700MG | 27，000 | 1.0630 | 6 |
| KMSJ2750MG | 27，500 | 1.0827 | 6 |
| KMSJ2800MG | 28，000 | 1.1024 | 6 |
| KMSJ2850MG | 28，500 | 1.1220 | 7 |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ 刀片·MG

KMSJ insert·MG

| | |
|---|---|
| P | ○ |
| M | ● |
| K | ○ |
| N | ○ |
| S | ● |
| H | |

| | |
|---|---|
| P | ○ |
| M | ● |
| K | ○ |
| N | ○ |
| S | ● |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ2858MG | 28，580 | 1.1252 | 7 |
| KMSJ2900MG | 29，000 | 1.1417 | 7 |
| KMSJ2950MC | 29，500 | 1.1614 | 7 |
| KMSJ3000MG | 30，000 | 1.1811 | 7 |
| KMSJ3050MG | 30，500 | 1.2008 | 8 |
| KMSJ3100MG | 31，000 | 1.2205 | 8 |
| KMSJ3150MG | 31，500 | 1.2402 | 8 |
| KMSJ3175MG | 31，750 | 1.2500 | 8 |
| KMSJ3200MG | 32，000 | 1.2598 | 8 |
| KMSJ3250MG | 32，500 | 1.2795 | 9 |
| KMSJ3350MG | 33，500 | 1.3189 | 9 |
| KMSJ3400MG | 34，000 | 1.3386 | 9 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ3450MG | 34，500 | 1.3583 | 9 |
| KMSJ3500MG | 35，000 | 1.3780 | 9 |
| KMSJ3550MG | 35，500 | 1.3976 | 9 |
| KMSJ3600MG | 36，000 | 1.4173 | 9 |
| KMSJ3650MG | 36，500 | 1.4370 | 10 |
| KMSJ3700MG | 37，000 | 1.4567 | 10 |
| KMSJ3750MG | 37，500 | 1.4764 | 10 |
| KMSJ3800MG | 38，000 | 1.4961 | 10 |
| KMSJ3846MG | 38，460 | 1.5142 | 10 |
| KMSJ3850MG | 38，500 | 1.5157 | 10 |
| KMSJ3900MG | 39，000 | 1.5354 | 10 |
| KMSJ3950MG | 39，500 | 1.5551 | 10 |
| KMSJ4000MG | 40，000 | 1.5748 | 10 |

| 公差 MG·公制 | |
|---|---|
| D1 英寸 Inch | 公差 Allowance h8 |
| 12，5-18 | +0，000/-0，027 |
| >18-30 | +0，000/-0，033 |
| >30-40 | +0，000/-0，039 |

## 应用参数 Application parameters

• 模块化钻硬质合金刀片·KMSJ·MG 槽型·材质FD2210·内冷·公制

Modular drill solid carbide insert·KMSJ·MG flute·Material FD2210·Internal coolant·Metric

| 材料分组 Material grouping | | 切削速度 Cutting speed—vc 范围 Radius—m/min | | | 公制 Metric | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 根据直径推荐进给率 Recommended feed rate according to diameter（f） | | | | | | |
| | | 最小值 Minimum value | 初始值 Initial value | 最大值 Maximum value | | 12.5 | 16.0 | 20.0 | 25.4 | 32.0 | 40.0 |
| P | 1 | 110 | 140 | 170 | mm/ 转 | 0，15-0，31 | 0，17-0，36 | 0，19-0，41 | 0，25-0，53 | 0，29-0，60 | 0，33-0，69 |
| | 2 | 100 | 120 | 140 | mm/ 转 | 0，15-0，31 | 0，17-0，36 | 0，19-0，41 | 0，25-0，53 | 0，29-0，60 | 0，33-0，69 |
| | 3 | 80 | 100 | 120 | mm/ 转 | 0，15-0，31 | 0，17-0，36 | 0，19-0，41 | 0，25-0，53 | 0，29-0，60 | 0，33-0，69 |
| M | 1 | 40 | 60 | 80 | mm/ 转 | 0，09-0，14 | 0，11-0，17 | 0，13-0，20 | 0，16-0，25 | 0，18-0，28 | 0，21-0，31 |
| | 2 | 35 | 55 | 70 | mm/ 转 | 0，09-0，14 | 0，11-0，17 | 0，13-0，20 | 0，16-0，25 | 0，18-0，28 | 0，21-0，31 |
| | 3 | 20 | 40 | 60 | mm/ 转 | 0，09-0，14 | 0，11-0，17 | 0，13-0，20 | 0，16-0，25 | 0，18-0，28 | 0，21-0，31 |
| N | 1 | 90 | 155 | 220 | mm/ 转 | 0，19-0，40 | 0，25-0，50 | 0，28-0，56 | 0，32-0，63 | 0，32-0，70 | 0，32-0，70 |
| | 2 | 90 | 155 | 220 | mm/ 转 | 0，19-0，40 | 0，25-0，50 | 0，28-0，56 | 0，32-0，63 | 0，32-0，70 | 0，32-0，70 |
| | 3 | 80 | 120 | 160 | mm/ 转 | 0，19-0，40 | 0，25-0，50 | 0，28-0，56 | 0，32-0，63 | 0，32-0，70 | 0，32-0，70 |
| | 4 | 90 | 155 | 220 | mm/ 转 | 0，19-0，40 | 0，25-0，50 | 0，28-0，56 | 0，32-0，63 | 0，32-0，70 | 0，32-0，70 |
| S | 1 | 20 | 40 | 60 | mm/ 转 | 0，05-0，10 | 0，07-0，12 | 0，09-0，14 | 0，11-0，17 | 0，13-0，20 | 0，16-0，25 |
| | 2 | 15 | 30 | 45 | mm/ 转 | 0，05-0，10 | 0，07-0，12 | 0，09-0，14 | 0，11-0，17 | 0，13-0，20 | 0，16-0，25 |
| | 3 | 15 | 30 | 45 | mm/ 转 | 0，05-0，10 | 0，07-0，12 | 0，09-0，14 | 0，11-0，17 | 0，13-0，20 | 0，16-0，25 |
| | 4 | 10 | 25 | 40 | mm/ 转 | 0，05-0，10 | 0，07-0，12 | 0，13-0，20 | 0，16-0，25 | 0，18-0，28 | 0，21-0，31 |

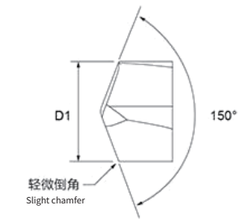


KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ 刀片·PCM

KMSJ insert·PCM

• KMSJ PCM 切削刃主要作为预定中心用途，但也可以在苛刻加工条件下使用。
• 150°大角度设计，刀尖轻微倒角。非常好的定中心性能以及抗崩刃性能。
• FD2210 采用TiCN-TiN PVD涂层，具有极好的耐磨性。
• The KMSJ PCM cutting edge is mainly used as a predetermined center, but can also be used under harsh machining conditions.
• 150° large angle design, slightly chamfered insert tip. Very good centering performance and chipping resistance.
• FD2210 is coated with TiCN-TiN PVD for excellent wear resistance.




PCM

| | |
|---|---|
| P | ● |
| M | |
| K | ● |
| N | |
| S | |
| H | |

| | |
|---|---|
| P | ● |
| M | |
| K | ● |
| N | |
| S | |
| H | |

● 首选Preferred
○ 备选Alternative

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ1250PCM | 12，500 | .4921 | C |
| KMSJ1280PCM | 12，800 | .5039 | C |
| KMSJ1300PCM | 13，000 | .5118 | C |
| KMSJ1350PCM | 13，500 | .5310 | C |
| KMSJ1380PCM | 13，800 | .5433 | B |
| KMSJ1400PCM | 14，000 | .5512 | B |
| KMSJ1410PCM | 14，100 | .5551 | B |
| KMSJ1450PCM | 14，500 | .5709 | B |
| KMSJ1460PCM | 14，600 | .5748 | A |
| KMSJ1480PCM | 14，800 | .5827 | A |
| KMSJ1500PCM | 15，000 | .5906 | A |
| KMSJ1550PCM | 15，500 | .6102 | A |
| KMSJ1560PCM | 15，600 | .6142 | A |
| KMSJ1580PCM | 15，800 | .6220 | A |
| KMSJ1600PCM | 16，000 | .6299 | 1 |
| KMSJ1620PCM | 16，200 | .6378 | 1 |
| KMSJ1650PCM | 16，500 | .6496 | 1 |
| KMSJ1700PCM | 17，000 | .6693 | 1 |
| KMSJ1750PCM | 17，500 | .6890 | 1 |
| KMSJ1800PCM | 18，000 | .7087 | 1 |
| KMSJ1850PCM | 18，500 | .7283 | 2 |
| KMSJ1900PCM | 19，000 | .7480 | 2 |
| KMSJ1950PCM | 19，500 | .7677 | 2 |
| KMSJ2000PCM | 20，000 | .7874 | 3 |
| KMSJ2050PCM | 20，500 | .8071 | 3 |
| KMSJ2100PCM | 21，000 | .8268 | 3 |
| KMSJ2150PCM | 21，500 | .8460 | 3 |

| SC3015 | D1 | | 刀座尺寸 Dimensions |
|---|---|---|---|
| | mm | in | |
| KMSJ2200PCM | 22，000 | .8661 | 3 |
| KMSJ2250PCM | 22，500 | .8858 | 4 |
| KMSJ2300PCM | 23，000 | .9055 | 4 |
| KMSJ2350PCM | 23，500 | .9252 | 4 |
| KMSJ2400PCM | 24，000 | .9449 | 4 |
| KMSJ2450PCM | 24，500 | .9646 | 5 |
| KMSJ2500PCM | 25，000 | .9843 | 5 |
| KMSJ2550PCM | 25，500 | 1.0039 | 5 |
| KMSJ2600PCM | 26，000 | 1.0236 | 5 |
| KMSJ2650PCM | 26，500 | 1.0433 | 6 |
| KMSJ2700PCM | 27，000 | 1.0630 | 6 |
| KMSJ2800PCM | 28，000 | 1.1024 | 6 |
| KMSJ2850PCM | 28，500 | 1.1220 | 7 |
| KMSJ2900PCM | 29，000 | 1.1417 | 7 |
| KMSJ2950PCM | 29，500 | 1.1614 | 7 |
| KMSJ3000PCM | 30，000 | 1.1811 | 7 |
| KMSJ3050PCM | 30，500 | 1.2008 | 8 |
| KMSJ3100PCM | 31，000 | 1.2205 | 8 |
| KMSJ3200PCM | 32，000 | 1.2598 | 8 |
| KMSJ3300PCM | 33，000 | 1.2992 | 9 |
| KMSJ3400PCM | 34，000 | 1.3386 | 9 |
| KMSJ3500PCM | 35，000 | 1.3780 | 9 |
| KMSJ3600PCM | 36，000 | 1.4173 | 9 |
| KMSJ3700PCM | 37，000 | 1.4567 | 10 |
| KMSJ3800PCM | 38，000 | 1.4961 | 10 |
| KMSJ3900PCM | 39，000 | 1.5354 | 10 |
| KMSJ4000PCM | 40，000 | 1.5748 | 10 |

| 公差 PCM·公制 | |
|---|---|
| D1 公制 Metric | 公差 Allowance K7 |
| 12，5-18 | +0，001/-0，019 |
| >18-30 | +0，002/-0，023 |
| >30-40 | +0，002/-0，027 |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ 刀片·PCM

**KMSJ insert·PCM**

FONHAE 方瀚

应用参数 Application parameters

- 模块化钻硬质合金刀片·KMSJ·PCM 槽型·材质FD2210·内冷·公制

Modular drill solid carbide insert·KMSJ·PCM flute·Material FD2210·Internal coolant·Metric

| 材料分组 Material grouping | | 切削速度 Cutting speed—vc 范围 Radius—m/min | | | 公制 Metric | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 根据直径推荐进给率 Recommended feed rate according to diameter（f） | | | | | |
| | | 最小值 Minimum value | 初始值 Initial value | 最大值 Maximum value | | 12.5 | 16.0 | 20.0 | 25.4 | 32.0 |
| P | 1 | 90 | 100 | 110 | mm/ 转 | 0，14-0，23 | 0，17-0，25 | 0，19-0，29 | 0，23-0，38 | 0，26-0，43 |
| | 2 | 80 | 90 | 100 | mm/ 转 | 0，17-0，23 | 0，19-0，25 | 0，22-0，29 | 0，29-0，38 | 0，32-0，43 |
| | 3 | 55 | 65 | 75 | mm/ 转 | 0，14-0，20 | 0，15-0，23 | 0，17-0，25 | 0，23-0，34 | 0，26-0，38 |
| | 4 | 50 | 60 | 70 | mm/ 转 | 0，11-0，20 | 0，13-0，23 | 0，14-0，25 | 0，18-0，34 | 0，21-0，38 |
| | 5 | 45 | 50 | 60 | mm/ 转 | 0，08-0，11 | 0，10-0，13 | 0，11-0，14 | 0，14-0，18 | 0，15-0，20 |
| | 6 | 45 | 55 | 65 | mm/ 转 | 0，11-0，17 | 0，13-0，18 | 0，14-0，20 | 0，18-0，28 | 0，21-0，31 |
| K | 1 | 60 | 60 | 90 | mm/ 转 | 0，08-0，24 | 0，09-0，28 | 0，11-0，31 | 0，14-0，43 | 0，15-0，48 |
| | 2 | 60 | 60 | 75 | mm/ 转 | 0，18-0，24 | 0，21-0，28 | 0，23-0，31 | 0，28-0，37 | 0，32-0，42 |
| | 3 | 40 | 40 | 75 | mm/ 转 | 0，15-0，24 | 0，19-0，26 | 0，21-0，29 | 0，23-0，37 | 0，25-0，42 |


KMSJ模块化钻头尺寸●公制

| D1 | | WN/WD 刀柄公制 | | | | | | | | WN 刀柄公制 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3xD | | | | 5xD | | | | 7xD | | | 10xD | | |
| | | L | L1 | L4 max | 扳手 | L | L1 | L4 max | 扳手 | L | L4 max | 扳手 | L | L4 max | 扳手 |
| mm | inch | | | | | | | | | | | | | | |
| 12,50 | .4921 | 111 | - | 42 | 170.294 | 139 | - | 70 | 170.294 | 167 | 98 | 170.295 | 195 | 125 | 170.296 |
| 13,00 | .5118 | 111 | - | 42 | 170.294 | 139 | - | 70 | 170.294 | 167 | 98 | 170.295 | 200 | 130 | 170.296 |
| 13,50 | .5315 | 111 | - | 42 | 170.294 | 139 | - | 70 | 170.294 | 167 | 98 | 170.295 | 205 | 135 | 170.296 |
| 13,51 | .5319 | 111 | - | 42 | 170.289 | 139 | - | 70 | 170.289 | 167 | 98 | 170.290 | 205 | 135 | 170.291 |
| 14,00 | .5512 | 111 | - | 42 | 170.289 | 139 | - | 70 | 170.289 | 167 | 98 | 170.290 | 210 | 140 | 170.291 |
| 14,50 | .5709 | 122 | - | 48 | 170.289 | 154 | - | 80 | 170.289 | 186 | 112 | 170.290 | 220 | 145 | 170.291 |
| 14,51 | .5713 | 122 | - | 48 | 170.289 | 154 | - | 80 | 170.289 | 186 | 112 | 170.290 | 220 | 145 | 170.291 |
| 15,00 | .5906 | 122 | - | 48 | 170.289 | 154 | - | 80 | 170.289 | 186 | 112 | 170.290 | 225 | 150 | 170.291 |
| 15,50 | .6102 | 122 | - | 48 | 170.289 | 154 | - | 80 | 170.289 | 186 | 112 | 170.290 | 230 | 155 | 170.291 |
| 16,00 | .6299 | 122 | - | 48 | 170.270 | 154 | - | 80 | 170.270 | 186 | 112 | 170.270 | 234 | 160 | 170.271 |
| 16,50 | .6496 | 130 | - | 54 | 170.270 | 166 | - | 90 | 170.270 | 202 | 126 | 170.271 | 241 | 165 | 170.281 |
| 17,00 | .6693 | 130 | - | 54 | 170.270 | 166 | - | 90 | 170.270 | 202 | 126 | 170.271 | 246 | 170 | 170.281 |
| 17,50 | .6890 | 130 | - | 54 | 170.270 | 166 | - | 90 | 170.270 | 202 | 126 | 170.271 | 251 | 175 | 170.281 |
| 18,00 | .7087 | 130 | - | 54 | 170.270 | 166 | - | 90 | 170.270 | 202 | 126 | 170.271 | 256 | 180 | 170.281 |
| 18,01 | .7091 | - | - | - | - | 184 | - | 100 | 170.270 | - | - | 170.271 | 269 | 185 | 170.281 |
| 18,50 | .7283 | 144 | - | 60 | 170.270 | 184 | - | 100 | 170.270 | 224 | 140 | 170.271 | 269 | 185 | 170.281 |
| 19,00 | .7480 | 144 | - | 60 | 170.270 | 184 | - | 100 | 170.270 | 224 | 140 | 170.271 | 274 | 190 | 170.281 |
| 19,50 | .7677 | 144 | - | 60 | 170.270 | 184 | - | 100 | 170.270 | 224 | 140 | 170.271 | 279 | 195 | 170.281 |
| 20,00 | .7874 | 153 | - | 60 | 170.272 | 197 | - | 100 | 170.272 | 241 | 140 | 170.273 | 297 | 200 | 170.282 |
| 20,50 | .8071 | 153 | - | 66 | 170.272 | 197 | - | 110 | 170.272 | 241 | 154 | 170.273 | 297 | 205 | 170.282 |
| 21,00 | .8268 | 153 | - | 66 | 170.272 | 197 | - | 110 | 170.272 | 241 | 154 | 170.273 | 297 | 210 | 170.282 |
| 21,50 | .8465 | 153 | - | 66 | 170.272 | 197 | - | 110 | 170.272 | 241 | 154 | 170.273 | 307 | 215 | 170.282 |
| 22,00 | .8661 | 153 | - | 66 | 170.272 | 197 | - | 110 | 170.272 | 241 | 154 | 170.273 | 307 | 220 | 170.282 |
| 22,01 | .8665 | - | - | - | - | 209 | - | 120 | 170.272 | - | - | 170.273 | 319 | 225 | 170.282 |
| 22,50 | .8858 | 161 | - | 72 | 170.272 | 209 | - | 120 | 170.272 | 257 | 168 | 170.273 | 319 | 225 | 170.282 |
| 23,00 | .9055 | 161 | - | 72 | 170.272 | 209 | - | 120 | 170.272 | 257 | 168 | 170.273 | 319 | 230 | 170.282 |
| 23,50 | .9252 | 161 | - | 72 | 170.272 | 209 | - | 120 | 170.272 | 257 | 168 | 170.273 | 329 | 235 | 170.282 |
| 24,00 | .9449 | 161 | - | 72 | 170.272 | 209 | - | 120 | 170.272 | 257 | 168 | 170.273 | 329 | 240 | 170.282 |
| 24,01 | .9453 | - | - | - | - | 226 | - | 130 | 170.274 | - | - | - | 346 | 245 | 170.283 |
| 24,50 | .9646 | 174 | - | 78 | 170.274 | 226 | - | 130 | 170.274 | 278 | 182 | 170.275 | 346 | 245 | 170.283 |
| 25,00 | .9843 | 174 | - | 78 | 170.274 | 226 | - | 130 | 170.274 | 278 | 182 | 170.275 | 346 | 250 | 170.283 |
| 25,50 | 10.039 | 174 | - | 78 | 170.274 | 226 | - | 130 | 170.274 | 278 | 182 | 170.275 | 356 | 255 | 170.283 |
| 26,00 | 10.236 | 174 | - | 78 | 170.274 | 226 | - | 130 | 170.274 | 278 | 182 | 170.275 | 356 | 260 | 170.283 |
| 26,01 | 10.240 | - | - | - | - | 238 | - | 140 | 170.274 | - | - | 170.275 | 363 | 265 | 170.283 |
| 26,50 | 10.433 | 182 | - | 84 | 170,274 | 238 | - | 140 | 170.274 | 294 | 196 | 170.275 | 363 | 265 | 170.283 |
| 27,00 | 10.630 | 182 | - | 84 | 170.274 | 238 | - | 140 | 170.274 | 294 | 196 | 170.275 | 368 | 270 | 170.283 |
| 27,50 | 10.827 | 182 | - | 84 | 170.274 | 238 | - | 140 | 170.274 | 294 | 196 | 170.275 | 378 | 275 | 170.283 |
| 28,00 | 11.024 | 182 | - | 84 | 170.274 | 238 | - | 140 | 170.274 | 294 | 196 | 170.275 | 378 | 280 | 170.283 |
| 28,02 | 11.028 | - | - | - | - | 250 | - | 150 | 170.276 | - | - | - | 390 | 285 | 170.284 |
| 28,50 | 11.220 | 190 | - | 90 | 170.276 | 250 | - | 150 | 170.276 | 310 | 210 | 170.277 | 390 | 285 | 170.284 |
| 29,00 | 11.417 | 190 | - | 90 | 170.276 | 250 | - | 150 | 170.276 | 310 | 210 | 170.277 | 390 | 290 | 170.284 |
| 29,50 | 11.614 | 190 | - | 90 | 170.276 | 250 | - | 150 | 170.276 | 310 | 210 | 170.277 | 400 | 295 | 170.284 |
| 30,00 | 11.811 | 190 | - | 90 | 170.276 | 250 | - | 150 | 170.276 | 310 | 210 | 170.277 | 400 | 300 | 170.284 |
| 30,01 | 11.815 | - | - | - | - | 264 | - | 160 | 170.276 | - | - | 170.277 | 414 | 305 | 170.284 |
| 30,50 | 12.008 | 200 | - | 96 | 170.276 | 264 | - | 160 | 170.276 | 328 | 224 | 170.277 | - | - | - |
| 31,00 | 12.205 | 200 | - | 96 | 170.276 | 264 | - | 160 | 170.276 | 328 | 224 | 170.277 | 414 | 310 | 170.284 |
| 31,50 | 12.402 | 200 | - | 96 | 170.276 | 264 | - | 160 | 170.276 | 328 | 224 | 170.277 | - | - | - |
| 32,00 | 12.598 | 200 | - | 96 | 170.276 | 264 | - | 160 | 170.276 | 328 | 224 | 170.277 | 424 | 320 | 170.284 |
| 32,01 | 12.602 | 220 | 159 | 99 | 170.276 | 293 | 225 | 165 | 170.277 | - | - | - | - | - | - |
| 33,00 | 12.992 | 227 | 159 | 99 | 170.276 | 293 | 225 | 165 | 170.277 | - | - | - | - | - | - |
| 34,00 | 13.386 | 225 | 157 | 102 | 170.276 | 293 | 225 | 170 | 170.277 | - | - | - | - | - | - |
| 35,00 | 13.780 | 235 | 167 | 105 | 170.276 | 305 | 237 | 175 | 170.277 | - | - | - | - | - | - |
| 36,00 | 14.173 | 233 | 165 | 108 | 170.276 | 305 | 237 | 180 | 170.277 | - | - | - | - | - | - |
| 36,01 | 14.177 | 237 | 176 | 111 | 170.276 | 318 | 250 | 185 | 170.277 | - | - | - | - | - | - |
| 37,00 | 14.567 | 244 | 176 | 111 | 170.276 | 318 | 250 | 185 | 170.277 | - | - | - | - | - | - |
| 38,00 | 14.961 | 242 | 174 | 114 | 170.276 | 318 | 250 | 190 | 170.277 | - | - | - | - | - | - |
| 39,00 | 15.354 | 252 | 184 | 117 | 170.276 | 330 | 262 | 195 | 170.277 | - | - | - | - | - | - |
| 40,00 | 15.748 | 250 | 182 | 120 | 170.276 | 330 | 262 | 200 | 170.277 | - | - | - | - | - | - |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

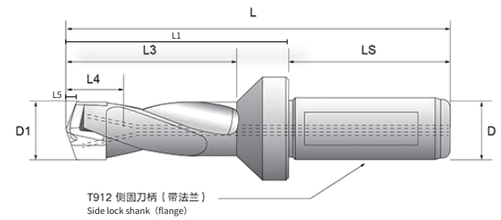
# KMSJ T912 柄·1×D·公制

**KMSJ T912 Shank·1×D· Metric**

FONHAE 方瀚

- 所有钻体应使用指定型号刀片。
- 与钻头产品一同发送中心锁紧螺钉、扳手。
- 单独定购刀片，参看P04-P11页内容。

- All drills shall use the specified type of insert.
- Send center locking screws and wrenches together with drill products.
- To order insert separately, see pages P04-P11.




| 1×D | D1 | | D1 max | | L | L1 | L4 max | L5 | LS | D | 刀座尺寸 Dimensions | 中心锁紧螺钉 Center locking screw | 扳手 wrench |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm | in | mm | in | | | | | | | | | |
| KMSJ125R1T16M | 12，500 | .4921 | 13，500 | .5314 | 78 | - | 14 | 2，0 | 48 | 16 | -2 | M017 | KMSJ294 |
| KMSJ136R1T16M | 13，510 | .5319 | 14，500 | .5708 | 81 | - | 15 | 2，2 | 48 | 16 | B | M016 | KMSJ289 |
| KMSJ146R1T20M | 14，510 | .5713 | 15，874 | .6249 | 85 | - | 16 | 2，3 | 50 | 20 | A | M016 | KMSJ289 |
| KMSJ160R1T20M | 16，000 | .6299 | 18，000 | .7086 | 88 | - | 18 | 2，5 | 50 | 20 | 1 | M010 | KMSJ270 |
| KMSJ181R1T25M | 18，010 | .7091 | 19，999 | .7873 | 99 | - | 20 | 2，9 | 56 | 25 | 2 | M010 | KMSJ270 |
| KMSJ200R1T25M | 20，000 | .7874 | 22，000 | .8661 | 102 | - | 22 | 3，2 | 56 | 25 | 3 | M011 | KMSJ272 |
| KMSJ221R1T25M | 22，010 | .8665 | 24，000 | .9448 | 107 | - | 24 | 3，5 | 56 | 25 | 4 | M011 | KMSJ272 |
| KMSJ241R1T32M | 24，010 | .9453 | 26，000 | 1.0236 | 115 | - | 26 | 3，8 | 60 | 32 | 5 | M012 | KMSJ274 |
| KMSJ261R1T32M | 26，010 | 1.0240 | 28，000 | 1.1023 | 119 | - | 28 | 4，0 | 60 | 32 | 6 | M012 | KMSJ274 |
| KMSJ281R1T32M | 28，016 | 1.1030 | 30，000 | 1.1811 | 123 | - | 30 | 4，3 | 60 | 32 | 7 | M013 | KMSJ276 |
| KMSJ301R1T32M | 30，010 | 1.1815 | 32，000 | 1.2598 | 127 | - | 32 | 4，6 | 60 | 32 | 8 | M013 | KMSJ276 |
| KMSJ321R1T32M | 32，010 | 1.2602 | 36，000 | 1.4173 | 147 | 79 | 36 | 4，9 | 68 | 50 | 9 | M015 | KMSJ276 |
| KMSJ361R1T32M | 36，010 | 1.4177 | 40，000 | 1.5748 | 155 | 87 | 40 | 5，5 | 68 | 50 | 10 | M015 | KMSJ276 |

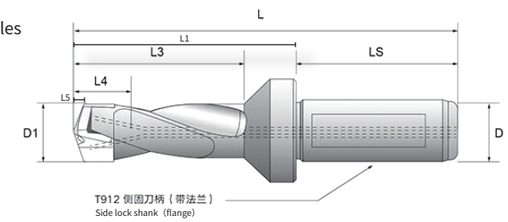
KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ T912 柄·3×D/5×D·公制

**KMSJ T912 Shank·3×D/5×D· Metric**

- 所有钻体应使用指定型号刀片。
- 与钻头产品一同发送中心锁紧螺钉、扳手，以及侧边内冷接管。
- 单独定购刀片，参看P04-P11页内容。

• All drills shall use the specified type of insert.
• Send center locking screws, wrenches, and side internal coolant nozzles together with the drill product.
• To order insert separately, see pages P04-P11.




| 3×D | 5×D | D1 mm | D1 in | D1 max mm | D1 max in | L5 | LS | D | 刀座尺寸 Dimensions | 中心锁紧螺钉 Center locking screw |
|---|---|---|---|---|---|---|---|---|---|---|
| KMSJ125R3T16M | KMSJ125R5T16M | 12，500 | .4921 | 13，000 | .5118 | 2，0 | 48 | 16 | C | M017 |
| KMSJ130R3T16M | KMSJ130R5T16M | 13，000 | .5118 | 13，500 | .5314 | 2，1 | 48 | 16 | C | M017 |
| KMSJ135R3T16M | KMSJ135R5T16M | 13，500 | .5315 | 13，500 | .5314 | 2，1 | 48 | 16 | C | M017 |
| KMSJ136R3T16M | KMSJ136R5T16M | 13，510 | .5319 | 14，000 | .5512 | 2，2 | 48 | 16 | B | M016 |
| KMSJ140R3T16M | KMSJ140R5T16M | 14，000 | .5512 | 14，500 | .5708 | 2，2 | 48 | 16 | B | M016 |
| KMSJ145R3T20M | KMSJ145R5T20M | 14，500 | .5709 | 14，500 | .5708 | 2，3 | 50 | 20 | B | M016 |
| KMSJ146R3T20M | KMSJ146R5T20M | 14，510 | .5713 | 15，000 | .5906 | 2，3 | 50 | 20 | A | M016 |
| KMSJ150R3T20M | KMSJ150R5T20M | 15，000 | .5906 | 15，500 | .6102 | 2，4 | 50 | 20 | A | M016 |
| KMSJ155R3T20M | KMSJ155R5T20M | 15，500 | .6102 | 15，874 | .6249 | 2，5 | 50 | 20 | A | M016 |
| KMSJ160R3T20M | KMSJ160R5T20M | 16，000 | .6299 | 16，500 | .6496 | 2，5 | 50 | 20 | 1 | M010 |
| KMSJ165R3T20M | KMSJ165R5T20M | 16，500 | .6496 | 17，000 | .6693 | 2，6 | 50 | 20 | 1 | M010 |
| KMSJ170R3T20M | KMSJ170R5T20M | 17，000 | .6693 | 17，500 | .6890 | 2，7 | 50 | 20 | 1 | M010 |
| KMSJ175R3T20M | KMSJ175R5T20M | 17，500 | .6890 | 18，000 | .7086 | 2，8 | 50 | 20 | 1 | M010 |
| KMSJ180R3T20M | KMSJ180R5T20M | 18，000 | .7087 | 18，000 | .7086 | 2，9 | 50 | 20 | 1 | M010 |
| - | KMSJ181R5T25M | 18，010 | .7091 | 18，500 | .7283 | 2，9 | 56 | 25 | 2 | M010 |
| KMSJ185R3T25M | KMSJ185R5T25M | 18，500 | .7283 | 19，000 | .7480 | 2，9 | 56 | 25 | 2 | M010 |
| KMSJ190R3T25M | KMSJ190R5T25M | 19，000 | .7480 | 19，500 | .7677 | 3，0 | 56 | 25 | 2 | M010 |
| KMSJ195R3T25M | KMSJ195R5T25M | 19，500 | .7677 | 19，999 | .7873 | 3，1 | 56 | 25 | 2 | M010 |
| KMSJ200R3T25M | KMSJ200R5T25M | 20，000 | .7874 | 20，500 | .8071 | 3，2 | 56 | 25 | 3 | M011 |
| KMSJ205R3T25M | KMSJ205R5T25M | 20，500 | .8071 | 21，000 | .8268 | 3，3 | 56 | 25 | 3 | M011 |
| KMSJ210R3T25M | KMSJ210R5T25M | 21，000 | .8268 | 21，500 | .8465 | 3，3 | 56 | 25 | 3 | M011 |
| KMSJ215R3T25M | KMSJ215R5T25M | 21，500 | .8465 | 22，000 | .8661 | 3，4 | 56 | 25 | 3 | M011 |
| KMSJ220R3T25M | KMSJ220R5T25M | 22，000 | .8661 | 22，000 | .8661 | 3，5 | 56 | 25 | 3 | M011 |
| - | KMSJ221R5T25M | 22，010 | .8665 | 22，500 | .8858 | 3，5 | 56 | 25 | 4 | M011 |
| KMSJ225R3T25M | KMSJ225R5T25M | 22，500 | .8858 | 23，000 | .9055 | 3，6 | 56 | 25 | 4 | M011 |
| KMSJ230R3T25M | KMSJ230R5T25M | 23，000 | .9055 | 23，500 | .9252 | 3，7 | 56 | 25 | 4 | M011 |
| KMSJ235R3T25M | KMSJ235R5T25M | 23，500 | .9252 | 24，000 | .9448 | 3，7 | 56 | 25 | 4 | M011 |
| KMSJ240R3T25M | KMSJ240R5T25M | 24，000 | .9449 | 24，000 | .9448 | 3，8 | 56 | 25 | 4 | M011 |
| - | KMSJ241R5T32M | 24，010 | .9453 | 24，500 | .9646 | 3，8 | 60 | 32 | 5 | M012 |
| KMSJ245R3T32M | KMSJ245R5T32M | 24，500 | .9646 | 25，000 | .9843 | 3，9 | 60 | 32 | 5 | M012 |
| KMSJ250R3T32M | KMSJ250R5T32M | 25，000 | .9843 | 25，500 | 1.0039 | 3，8 | 60 | 32 | 5 | M012 |
| KMSJ255R3T32M | KMSJ255R5T32M | 25，500 | 1.0039 | 26，000 | 4.0236 | 3，9 | 60 | 32 | 5 | M012 |
| KMSJ260R3T32M | KMSJ260R5T32M | 26，000 | 1.0236 | 26，000 | 1.0236 | 4，0 | 60 | 32 | 5 | M012 |
| - | KMSJ261R5T32M | 26，010 | 1.0240 | 26，500 | 1.0433 | 4，0 | 60 | 32 | 6 | M012 |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ T912 柄·3×D/5×D·公制

**KMSJ T912 Shank·3×D/5×D· Metric**

| 3×D | 5×D | D1 mm | D1 in | D1 max mm | D1 max in | L5 | LS | D | 刀座尺寸 Dimensions | 中心锁紧螺钉 Center locking screw |
|---|---|---|---|---|---|---|---|---|---|---|
| KMSJ265R3T32M | KMSJ265R5T32M | 26，500 | 1.0433 | 27，000 | 1.0630 | 4，1 | 60 | 32 | 6 | M012 |
| KMSJ270R3T32M | KMSJ270R5T32M | 27，000 | 1.0630 | 27，500 | 1.0827 | 4，2 | 60 | 32 | 6 | M012 |
| KMSJ275R3T32M | KMSJ275R5T32M | 27，500 | 1.0827 | 28，000 | 1.1023 | 4，2 | 60 | 32 | 6 | M012 |
| KMSJ280R3T32M | KMSJ280R5T32M | 28，000 | 1.1024 | 28，000 | 1.1023 | 4，3 | 60 | 32 | 6 | M012 |
| - | KMSJ281R5T32M | 28，016 | 1.1030 | 28，500 | 1.1220 | 4，3 | 60 | 32 | 7 | M013 |
| KMSJ285R3T32M | KMSJ285R5T32M | 28，500 | 1.1220 | 29，000 | 1.1412 | 4，4 | 60 | 32 | 7 | M013 |
| KMSJ290R3T32M | KMSJ290R5T32M | 29，000 | 1.1417 | 29，500 | 1.1614 | 4，5 | 60 | 32 | 7 | M013 |
| KMSJ295R3T32M | KMSJ295R5T32M | 29，500 | 1.1614 | 30，000 | 1.1811 | 4，5 | 60 | 32 | 7 | M013 |
| KMSJ300R3T32M | KMSJ300R5T32M | 30，000 | 1.1811 | 30，000 | 1.1811 | 4，6 | 60 | 32 | 7 | M013 |
| - | KMSJ300R5T32M | 30，010 | 1.1815 | 30，500 | 1.2008 | 4，6 | 60 | 32 | 8 | M013 |
| KMSJ305R3T32M | KMSJ305R5T32M | 30，500 | 1.2008 | 31，000 | 1.2205 | 4，7 | 60 | 32 | 8 | M013 |
| KMSJ310R3T32M | KMSJ310R5T32M | 31，000 | 1.2205 | 31，500 | 1.2402 | 4，8 | 60 | 32 | 8 | M013 |
| KMSJ315R3T32M | KMSJ315R5T32M | 31，500 | 1.2402 | 32，000 | 1.2598 | 4，8 | 60 | 32 | 8 | M013 |
| KMSJ320R3T32M | KMSJ320R5T32M | 32，000 | 1.2598 | 32，000 | 1.2598 | 4，9 | 60 | 32 | 8 | M013 |
| KMSJ321R3T40M | KMSJ321R5T40M | 32，010 | 1.2602 | 33，000 | 4.2992 | 4，9 | 68 | 50 | 9 | M015 |
| KMSJ330R3T40M | KMSJ330R5T40M | 33，000 | 1.2992 | 34，000 | 1.3386 | 5，1 | 68 | 50 | 9 | M015 |
| KMSJ340R3T40M | KMSJ340R5T40M | 34，000 | 1.3386 | 25，000 | 1.3780 | 5，2 | 68 | 50 | 6 | M015 |
| KMSJ350R3T40M | KMSJ350R5T40M | 35，000 | 1.3780 | 36，000 | 1.4173 | 5，4 | 68 | 50 | 6 | M015 |
| KMSJ360R3T40M | KMSJ360R5T40M | 36，000 | 1.4173 | 36，000 | 1.4173 | 5，5 | 68 | 50 | 9 | M015 |
| KMSJ361R3T40M | KMSJ361R5T40M | 36，010 | 1.4177 | 37，000 | 1.4567 | 5，5 | 68 | 50 | 10 | M015 |
| KMSJ370R3T40M | KMSJ370R5T40M | 37，000 | 1.4567 | 38，000 | 1.4961 | 5，7 | 68 | 50 | 10 | M015 |
| KMSJ380R3T40M | KMSJ380R5T40M | 38，000 | 1.4961 | 39，000 | 1.5354 | 5，8 | 68 | 50 | 10 | M015 |
| KMSJ390R3T40M | KMSJ390R5T40M | 39，000 | 1.5354 | 40，000 | 1.5748 | 6，0 | 68 | 50 | 10 | M015 |
| KMSJ400R3T40N | KMSJ400R5T40M | 40，000 | 1.5748 | 40，000 | 1.5748 | 6，2 | 68 | 50 | 10 | M015 |

| 3×D | 5×D | D1 mm | D1 in | L5 | LS | D | 刀座尺寸 Dimensions | 中心锁紧螺钉 Center locking screw |
|---|---|---|---|---|---|---|---|---|
| KMSJ321R3T40M | KMSJ321R5T40M | 32，010 | 1.2602 | 5，6 | 68 | 40 | 9 | M015 |
| KMSJ330R3T40M | KMSJ330R5T40M | 33，000 | 1.2992 | 5，8 | 68 | 40 | 9 | M015 |
| KMSJ340R3T40M | KMSJ340R5T40M | 34，000 | 1.3386 | 6，0 | 68 | 40 | 9 | M015 |
| KMSJ350R3T40M | KMSJ350R5T40M | 35，000 | 1.3780 | 6，1 | 68 | 40 | 9 | M015 |
| KMSJ360R3T40M | KMSJ360R5T40M | 36，000 | 1.4173 | 6，3 | 68 | 40 | 9 | M015 |
| KMSJ361R3T40M | KMSJ361R5T40M | 36，010 | 1.4177 | 6，3 | 68 | 40 | 10 | M015 |
| KMSJ370R3T40M | KMSJ370R5T40M | 37，000 | 1.4567 | 6，5 | 68 | 40 | 10 | M015 |
| KMSJ380R3T40M | KMSJ380R5T40M | 38，000 | 1.4961 | 6，7 | 68 | 40 | 10 | M015 |
| KMSJ390R3T40M | KMSJ390R5T40M | 39，000 | 1.5354 | 6，9 | 68 | 40 | 10 | M015 |
| KMSJ400R3T40M | KMSJ400R5T40M | 40，000 | 1.5748 | 7，0 | 68 | 40 | 10 | M015 |

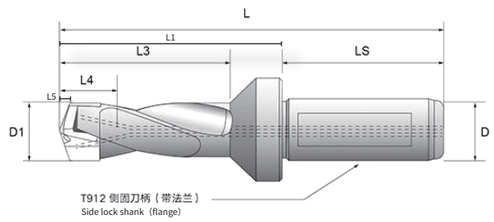
KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ T912 柄·7×D/10×D·公制

**KMSJ T912 Shank·7×D/10×D· Metric**

- 所有钻体应使用指定型号刀片。
- 与钻头产品一同发送中心锁紧螺钉、扳手。
- 单独定购刀片，参看P04-P11 页内容。

• All drills shall use the specified type of insert.
• Send center locking screws and wrenches together with drill products.
• To order insert separately, see pages P04-P11.




| 7×D | 10×D | D1 | | D1 max | | L5 | LS | D | 刀座尺寸 Dimensions | 中心锁紧螺钉 Center locking screw |
|---|---|---|---|---|---|---|---|---|---|---|
| | | mm | in | mm | in | | | | | |
| KMSJ125R7T16M | KMSJ125R10T16M | 12，500 | .4921 | 13，000 | .5118 | 2，0 | 48 | 16 | C | M017 |
| KMSJ130R7T16M | KMSJ130R10T16M | 13，000 | .5118 | 13，500 | .5314 | 2，1 | 48 | 16 | C | M017 |
| KMSJ135R7T16M | KMSJ135R10T16M | 13，500 | .5315 | 13，500 | .5314 | 2，1 | 48 | 16 | C | M017 |
| KMSJ136R7T16M | KMSJ136R10T16M | 13，510 | .5319 | 14，000 | .5512 | 2，2 | 48 | 16 | B | M016 |
| KMSJ140R7T16M | KMSJ140R10T16M | 14，000 | .5512 | 14，500 | .5708 | 2，2 | 48 | 16 | B | M016 |
| KMSJ145R7T20M | KMSJ145R10T20M | 14，500 | .5709 | 14，500 | .5708 | 2，3 | 50 | 20 | B | M016 |
| KMSJ146R7T20M | KMSJ146R10T20M | 14，510 | .5713 | 15，000 | .5906 | 2，3 | 50 | 20 | A | M016 |
| KMSJ150R7T20M | KMSJ150R10T20M | 15，000 | .5906 | 15，500 | .6102 | 2，4 | 50 | 20 | A | M016 |
| KMSJ155R7T20M | KMSJ155R10T20M | 15，500 | .6102 | 15，874 | .6249 | 2，5 | 50 | 20 | A | M016 |
| KMSJ160R7T20M | KMSJ160R10T20M | 16，000 | .6299 | 16，500 | .6496 | 2，5 | 50 | 20 | 1 | M010 |
| KMSJ165R7T20M | KMSJ165R10T20M | 16，500 | .6496 | 17，000 | .6693 | 2，6 | 50 | 20 | 1 | M010 |
| KMSJ170R7T20M | KMSJ170R10T20M | 17，000 | .6693 | 17，500 | .6890 | 2，7 | 50 | 20 | 1 | M010 |
| KMSJ175R7T20M | KMSJ175R10T20M | 17，500 | .6890 | 18，000 | .7086 | 2，8 | 50 | 20 | 1 | M010 |
| KMSJ180R7T20M | KMSJ180R10T20M | 18，000 | .7087 | 18，000 | .7086 | 2，9 | 50 | 20 | 1 | M010 |
| - | - | 18，010 | .7091 | 18，500 | .7283 | 2，9 | 56 | 25 | 2 | M010 |
| KMSJ185R7T25M | KMSJ185R10T25M | 18，500 | .7283 | 19，000 | .7480 | 2，9 | 56 | 25 | 2 | M010 |
| KMSJ190R7T25M | KMSJ190R10T25M | 19，000 | .7480 | 19，500 | .7677 | 3，0 | 56 | 25 | 2 | M010 |
| KMSJ195R7T25M | KMSJ195R10T25M | 19，500 | .7677 | 19，999 | .7873 | 3，1 | 56 | 25 | 2 | M010 |
| KMSJ200R7T25M | KMSJ200R10T25M | 20，000 | .7874 | 20，500 | .8071 | 3，2 | 56 | 25 | 3 | M011 |
| KMSJ205R7T25M | KMSJ205R10T25M | 20，500 | .8071 | 21，000 | .8268 | 3，3 | 56 | 25 | 3 | M011 |
| KMSJ210R7T25M | KMSJ210R10T25M | 21，000 | .8268 | 21，500 | .8465 | 3，3 | 56 | 25 | 3 | M011 |
| KMSJ215R7T25M | KMSJ215R10T25M | 21，500 | .8465 | 22，000 | .8661 | 3，4 | 56 | 25 | 3 | M011 |
| KMSJ220R7T25M | KMSJ220R10T25M | 22，000 | .8661 | 22，000 | .8661 | 3，5 | 56 | 25 | 3 | M011 |
| - | - | 22，010 | .8665 | 22，500 | .8858 | 3，5 | 56 | 25 | 4 | M011 |
| KMSJ225R7T25M | KMSJ225R10T25M | 22，500 | .8858 | 23，000 | .9055 | 3，6 | 56 | 25 | 4 | N011 |
| KMSJ230R7T25M | KMSJ230R10T25M | 23，000 | .9055 | 23，500 | .9252 | 3，7 | 56 | 25 | 4 | M011 |
| KMSJ235R7T25M | KMSJ235R10T25M | 23，500 | .9252 | 24，000 | .9448 | 3，7 | 56 | 25 | 4 | M011 |
| KMSJ240R7T25M | KMSJ240R10T25M | 24，000 | .9449 | 24，000 | .9448 | 3，8 | 56 | 25 | 4 | M011 |
| - | - | 24，010 | .9453 | 24，500 | .9646 | 3，8 | 60 | 32 | 5 | M012 |
| KMSJ245R7T32M | KMSJ245R10T32M | 24，500 | .9646 | 25，000 | .9843 | 3，9 | 60 | 32 | 5 | M012 |
| KMSJ250R7T32M | KMSJ250R10T32M | 25，000 | .9843 | 25，500 | 1.0039 | 3，8 | 60 | 32 | 5 | M012 |
| KMSJ255R7T32M | KMSJ255R10T32M | 25，500 | 1.0039 | 26，000 | 1.0236 | 3，9 | 60 | 32 | 5 | M012 |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# KMSJ T912 柄·7×D/10×D·公制-续

**KMSJ T912 Shank·7×D/10×D· Metric**

| 7×D | 10×D | D1 | | D1 max | | L5 | LS | D | 刀座尺寸 Dimensions | 中心锁紧螺钉 Center locking screw |
|---|---|---|---|---|---|---|---|---|---|---|
| | | mm | in | mm | in | | | | | |
| KMSJ260R7T32M | KMSJ260R10T32M | 26，000 | 1.0236 | 26，000 | 1.0236 | 4，0 | 60 | 32 | 5 | M012 |
| - | KMSJ261R10T32M | 26，010 | 1.0240 | 26，500 | 1.0433 | 4，0 | 60 | 32 | 6 | M012 |
| KMSJ265R7T32M | KMSJ265R10T32M | 26，500 | 1.0433 | 27，000 | 1.0630 | 4，1 | 60 | 32 | 6 | M012 |
| KMSJ270R7T32M | KMSJ270R10T32M | 27，000 | 1.0630 | 27，500 | 1.0827 | 4，2 | 60 | 32 | 6 | M012 |
| KMSJ275R7T32M | KMSJ275R10T32M | 27，500 | 1.0827 | 28，000 | 1.1023 | 4，2 | 60 | 32 | 6 | M012 |
| KMSJ280R7T32M | KMSJ280R10T32M | 28，000 | 1.1024 | 28，000 | 1.1023 | 4，3 | 60 | 32 | 6 | M012 |
| - | KMSJ281R10T32M | 28，016 | 1.1030 | 28，500 | 1.1220 | 4，3 | 60 | 32 | 7 | M013 |
| KMSJ285R7T32M | KMSJ285R10T32M | 28，500 | 1.1220 | 29，000 | 1.1417 | 4，4 | 60 | 32 | 7 | M013 |
| KMSJ290R7T32M | KMSJ290R10T32M | 29，000 | 1.1417 | 29，500 | 1.1614 | 4，5 | 60 | 32 | 7 | M013 |
| KMSJ295R7T32M | KMSJ295R10T32M | 29，500 | 1.1614 | 30，000 | 1.1811 | 4，5 | 60 | 32 | 7 | M013 |
| KMSJ300R7T32M | KMSJ300R10T32M | 30，000 | 1.1811 | 30，000 | 1.1811 | 4，6 | 60 | 32 | 7 | M013 |
| - | KMSJ301R10T32M | 30，010 | 1.1815 | 30，500 | 1.2008 | 4，6 | 60 | 32 | 8 | M013 |
| KMSJ305R7T32M | - | 30，500 | 1.2008 | 31，000 | 1.2205 | 4，7 | 60 | 32 | 8 | M013 |
| KMSJ310R7T32M | KMSJ310R10T32M | 31，000 | 1.2205 | 31，500 | 1.2402 | 4，8 | 60 | 32 | 8 | M013 |
| KMSJ315R7T32M | - | 31，500 | 1.2402 | 32，000 | 1.2598 | 4，8 | 60 | 32 | 8 | M013 |
| KMSJ320R7T32M | KMSJ320R10T32M | 32，000 | 1.2598 | 32，000 | 1.2598 | 4，9 | 60 | 32 | 8 | M013 |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻3×D

## Solid carbide twist drill 3×D

FONHAE 方瀚

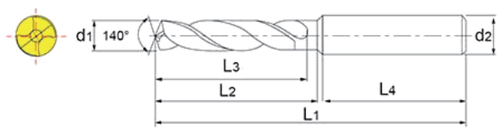
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2534SU03-0300 | 3.00 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03-0325 | 3.25 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03-0330 | 3.30 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03-0340 | 3.40 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03-0350 | 3.50 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03-0370 | 3.70 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03-0400 | 4.00 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03-0420 | 4.20 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03-0430 | 4.30 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03-0450 | 4.50 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03-0465 | 4.65 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03-0480 | 4.80 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0500 | 5.00 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0510 | 5.10 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0520 | 5.20 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0550 | 5.50 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0555 | 5.55 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0580 | 5.80 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0600 | 6.00 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03-0610 | 6.10 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0620 | 6.20 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0630 | 6.30 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0650 | 6.50 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0660 | 6.60 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0675 | 6.75 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0690 | 6.90 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0700 | 7.00 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03-0710 | 7.10 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03-0740 | 7.40 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03-0750 | 7.50 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03-0780 | 7.80 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03-0800 | 8.00 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03-0810 | 8.10 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0840 | 8.40 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU 3-0850 | 8.50 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0860 | 8.60 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0870 | 8.70 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0880 | 8.80 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0900 | 9.00 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0930 | 9.30 | 10 | 89 | 47 | 35 | 40 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.


# 硬质合金麻花钻3×D

## Solid carbide twist drill 3×D

FONHAE 方瀚

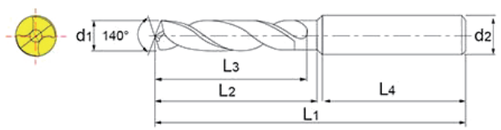
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo


| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2534SU03-0950 | 9.50 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0960 | 9.60 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-0980 | 9.80 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-1000 | 10.00 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03-1025 | 10.25 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1040 | 10.40 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1050 | 10.50 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1060 | 10.60 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1080 | 10.80 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1100 | 11.00 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1120 | 11.20 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1150 | 11.50 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1180 | 11.80 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1200 | 12.00 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03-1225 | 12.25 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1250 | 12.50 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1270 | 12.70 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1275 | 12.75 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1280 | 12.80 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1300 | 13.00 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1310 | 13.10 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1350 | 13.50 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1380 | 13.80 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1400 | 14.00 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03-1425 | 14.25 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1450 | 14.50 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1475 | 14.75 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1480 | 14.80 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1500 | 15.00 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1510 | 15.10 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1550 | 15.50 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1580 | 15.80 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1600 | 16.00 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03-1650 | 16.50 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1675 | 16.75 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1680 | 16.80 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1700 | 17.00 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1780 | 17.80 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1800 | 18.00 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1850 | 18.50 | 20 | 131 | 79 | 55 | 50 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻3×D

## Solid carbide twist drill 3×D

FONHAE 方瀚

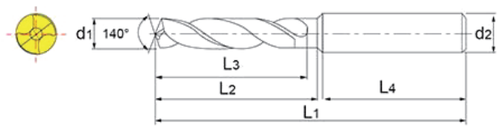
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2534SU03-1800 | 18.00 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03-1850 | 18.50 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03-1880 | 18.80 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03-1900 | 19.00 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03-1950 | 19.50 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03-1980 | 19.80 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03-2000 | 20.00 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03-2050 | 20.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2100 | 21.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2150 | 21.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2200 | 22.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2250 | 22.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2300 | 23.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2350 | 23.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2400 | 24.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2450 | 24.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03-2500 | 25.00 | 25 | 140 | 85 | 60 | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例2534SU03-1000 或2534SU03-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example 2534SU03-1000 or 2534SU03-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻3×D

## Solid carbide twist drill 3×D

FONHAE 方瀚

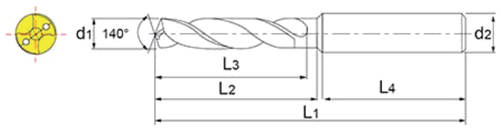
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2534SU03C-0300 | 3.00 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03C-0325 | 3.25 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03C-0330 | 3.30 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03C-0340 | 3.40 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03C-0350 | 3.50 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03C-0370 | 3.70 | 6 | 62 | 20 | 14 | 36 | ● |
| 2534SU03C-0400 | 4.00 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03C-0420 | 4.20 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03C-0430 | 4.30 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03C-0450 | 4.50 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03C-0465 | 4.65 | 6 | 66 | 24 | 17 | 36 | ● |
| 2534SU03C-0480 | 4.80 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0500 | 5.00 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0510 | 5.10 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0520 | 5.20 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0550 | 5.50 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0555 | 5.55 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0580 | 5.80 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0600 | 6.00 | 6 | 66 | 28 | 20 | 36 | ● |
| 2534SU03C-0610 | 6.10 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0620 | 6.20 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0630 | 6.30 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0650 | 6.50 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0660 | 6.60 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0675 | 6.75 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0690 | 6.90 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0700 | 7.00 | 8 | 79 | 34 | 24 | 36 | ● |
| 2534SU03C-0710 | 7.10 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03C-0740 | 7.40 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03C-0750 | 7.50 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03C-0780 | 7.80 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03C-0800 | 8.00 | 8 | 79 | 41 | 29 | 36 | ● |
| 2534SU03C-0810 | 8.10 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0840 | 8.40 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0850 | 8.50 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0860 | 8.60 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0870 | 8.70 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0880 | 8.80 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0900 | 9.00 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0930 | 9.30 | 10 | 89 | 47 | 35 | 40 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻3×D

## Solid carbide twist drill 3×D

FONHAE 方瀚

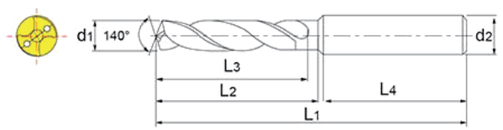
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2534SU03C-0950 | 9.50 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0960 | 9.60 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-0980 | 9.80 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-1000 | 10.00 | 10 | 89 | 47 | 35 | 40 | ● |
| 2534SU03C-1025 | 10.25 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1040 | 10.40 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1050 | 10.50 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1060 | 10.60 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1080 | 10.80 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1100 | 11.00 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1120 | 11.20 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1150 | 11.50 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1180 | 11.80 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1200 | 12.00 | 12 | 102 | 55 | 40 | 45 | ● |
| 2534SU03C-1225 | 12.25 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1250 | 12.50 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1270 | 12.70 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1275 | 12.75 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1280 | 12.80 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1300 | 13.00 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1310 | 13.10 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1350 | 13.50 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1380 | 13.80 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1400 | 14.00 | 14 | 107 | 60 | 43 | 45 | ● |
| 2534SU03C-1425 | 14.25 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1450 | 14.50 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1475 | 14.75 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1480 | 14.80 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1500 | 15.00 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1510 | 15.10 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1550 | 15.50 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1580 | 15.80 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1600 | 16.00 | 16 | 115 | 65 | 45 | 48 | ● |
| 2534SU03C-1650 | 16.50 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1675 | 16.75 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1680 | 16.80 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1700 | 17.00 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1780 | 17.80 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1800 | 18.00 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1850 | 18.50 | 20 | 131 | 79 | 55 | 50 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻3×D

## Solid carbide twist drill 3×D

FONHAE 方瀚

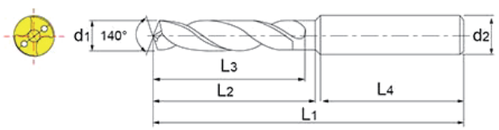
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2534SU03C-1800 | 18.00 | 18 | 123 | 73 | 51 | 48 | ● |
| 2534SU03C-1850 | 18.50 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03C-1880 | 18.80 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03C-1900 | 19.00 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03C-1950 | 19.50 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03C-1980 | 19.80 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03C-2000 | 20.00 | 20 | 131 | 79 | 55 | 50 | ● |
| 2534SU03C-2050 | 20.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2100 | 21.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2150 | 21.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2200 | 22.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2250 | 22.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2300 | 23.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2350 | 23.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2400 | 24.00 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2450 | 24.50 | 25 | 140 | 85 | 60 | 56 | ● |
| 2534SU03C-2500 | 25.00 | 25 | 140 | 85 | 60 | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例2534SU03C-1000 或2534SU03C-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example 2534SU03C-1000 or 2534SU03C-1000HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻5×D

## Solid carbide twist drill 5×D

FONHAE 方瀚

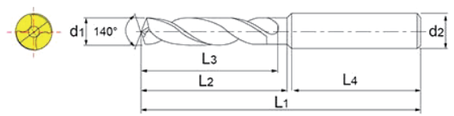
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05-0300 | 3.00 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05-0325 | 3.25 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05-0330 | 3.30 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05-0340 | 3.40 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05-0350 | 3.50 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05-0370 | 3.70 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05-0400 | 4.00 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05-0420 | 4.20 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05-0430 | 4.30 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05-0450 | 4.50 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05-0465 | 4.65 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05-0480 | 4.80 | 6 | 74 | 44 | 35 | 36 | ● |
| 2536SU05-0500 | 5.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0510 | 5.10 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0520 | 5.20 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0550 | 5.50 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0555 | 5.55 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0580 | 5.80 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0600 | 6.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05-0610 | 6.10 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0620 | 6.20 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0630 | 6.30 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0650 | 6.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0660 | 6.60 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0675 | 6.75 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0690 | 6.90 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0700 | 7.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0710 | 7.10 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0740 | 7.40 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0750 | 7.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0780 | 7.80 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0800 | 8.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05-0810 | 8.10 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0840 | 8.40 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0850 | 8.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0860 | 8.60 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0870 | 8.70 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0880 | 8.80 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0900 | 9.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SL05-0930 | 9.30 | 10 | 103 | 61 | 49 | 40 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.


# 硬质合金麻花钻5×D

## Solid carbide twist drill 5×D

FONHAE 方瀚

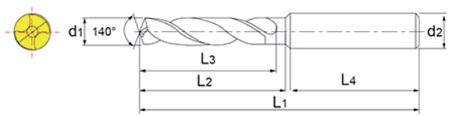
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo


| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05-0950 | 9.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0960 | 9.60 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-0980 | 9.80 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-1000 | 10.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05-1025 | 10.25 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1040 | 10.40 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1050 | 10.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1060 | 10.60 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1080 | 10.80 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1100 | 11.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1120 | 11.20 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1150 | 11.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1180 | 11.80 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1200 | 12.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05-1220 | 12.20 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1225 | 12.25 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1250 | 12.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1270 | 12.70 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1275 | 12.75 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1280 | 12.80 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1300 | 13.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1350 | 13.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1380 | 13.80 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1400 | 14.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05-1425 | 14.25 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1450 | 14.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1475 | 14.75 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1480 | 14.80 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1500 | 15.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1510 | 15.10 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1550 | 15.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1580 | 15.80 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1600 | 16.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05-1650 | 16.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05-1675 | 16.75 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05-1680 | 16.80 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05-1700 | 17.00 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05-1750 | 17.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05-1780 | 17.80 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05-1800 | 18.00 | 18 | 143 | 93 | 71 | 48 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻5×D

## Solid carbide twist drill 5×D

FONHAE 方瀚

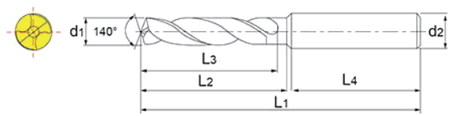
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05-1850 | 18.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05-1900 | 19.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05-1950 | 19.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05-1980 | 19.80 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05-2000 | 20.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05-2050 | 20.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2100 | 21.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2150 | 21.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2200 | 22.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2250 | 22.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2300 | 23.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2350 | 23.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2400 | 24.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2450 | 24.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05-2500 | 25.00 | 25 | 163 | 110 | 83 | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例2536SU05-1000 或2536SU05-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example 2536SU05-1000 or 2536SU05-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻5×D

## Solid carbide twist drill 5×D

FONHAE 方瀚

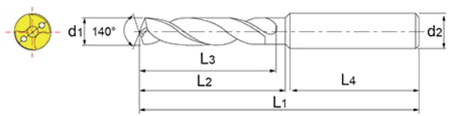
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05C-0300 | 3.00 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05C-0325 | 3.25 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05C-0330 | 3.30 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05C-0340 | 3.40 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05C-0350 | 3.50 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05C-0370 | 3.70 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536SU05C-0400 | 4.00 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05C-0420 | 4.20 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05C-0430 | 4.30 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05C-0450 | 4.50 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05C-0465 | 4.65 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05C-0480 | 4.80 | 6 | 74 | 44 | 35 | 36 | ● |
| 2536SU05C-0500 | 5.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0510 | 5.10 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0520 | 5.20 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0550 | 5.50 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0555 | 5.55 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0580 | 5.80 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0600 | 6.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05C-0610 | 6.10 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0620 | 6.20 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0630 | 6.30 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0650 | 6.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0660 | 6.60 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0675 | 6.75 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0690 | 6.90 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0700 | 7.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0710 | 7.10 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0740 | 7.40 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0750 | 7.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0780 | 7.80 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0800 | 8.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05C-0810 | 8.10 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0840 | 8.40 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0850 | 8.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0860 | 8.60 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0870 | 8.70 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0880 | 8.80 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0900 | 9.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0930 | 9.30 | 10 | 103 | 61 | 49 | 40 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻5×D

## Solid carbide twist drill 5×D

FONHAE 方瀚

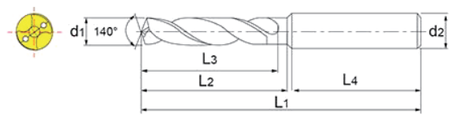
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05C-0950 | 9.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0960 | 9.60 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-0980 | 9.80 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-1000 | 10.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05C-1025 | 10.25 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1040 | 10.40 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1050 | 10.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1060 | 10.60 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1080 | 10.80 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1100 | 11.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1120 | 11.20 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1150 | 11.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1180 | 11.80 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1200 | 12.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05C-1220 | 12.20 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1225 | 12.25 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1250 | 12.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1270 | 12.70 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1275 | 12.75 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1280 | 12.80 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1300 | 13.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1350 | 13.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1380 | 13.80 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1400 | 14.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05C-1425 | 14.25 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1450 | 14.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1475 | 14.75 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1480 | 14.80 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1500 | 15.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1510 | 15.10 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1550 | 15.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1580 | 15.80 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1600 | 16.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05C-1650 | 16.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05C-1675 | 16.75 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05C-1680 | 16.80 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05C-1700 | 17.00 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05C-1750 | 17.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05C-1780 | 17.80 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05C-1800 | 18.00 | 18 | 143 | 93 | 71 | 48 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻5×D

## Solid carbide twist drill 5×D

FONHAE 方瀚

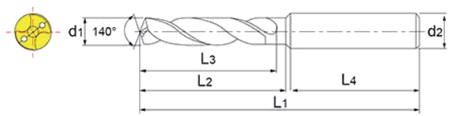
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05C-1850 | 18.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05C-1900 | 19.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05C-1950 | 19.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05C-1980 | 19.80 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05C-2000 | 20.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05C-2050 | 20.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2100 | 21.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2150 | 21.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2200 | 22.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2250 | 22.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2300 | 23.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2350 | 23.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2400 | 24.00 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2450 | 24.50 | 25 | 163 | 110 | 83 | 56 | ● |
| 2536SU05C-2500 | 25.00 | 25 | 163 | 110 | 83 | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例2536SU05C-1000 或2536SU05C-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example 2536SU05C-1000 or 2536SU05C-1000HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻8×D

## Solid carbide twist drill 8×D

FONHAE 方瀚

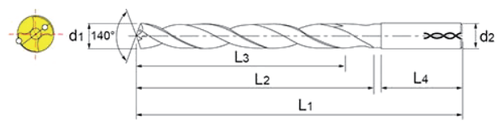
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU08C-0400 | 4.00 | 4 | 75 | 45 | 42 | 28 | ● |
| 2536SU08C-0450 | 4.50 | 6 | 90 | 54 | 50 | 36 | ● |
| 2536SU08C-0500 | 5.00 | 6 | 90 | 54 | 50 | 36 | ● |
| 2536SU08C-0550 | 5.50 | 6 | 97 | 60 | 57 | 36 | ● |
| 2536SU08C-0600 | 6.00 | 6 | 97 | 60 | 57 | 36 | ● |
| 2536SU08C-0650 | 6.50 | 8 | 106 | 69 | 66 | 36 | ● |
| 2536SU08C-0700 | 7.00 | 8 | 116 | 79 | 76 | 36 | ● |
| 2536SU08C-0750 | 7.50 | 8 | 116 | 79 | 76 | 36 | ● |
| 2536SU08C-0800 | 8.00 | 8 | 116 | 79 | 76 | 36 | ● |
| 2536SU08C-0850 | 8.50 | 10 | 131 | 90 | 87 | 40 | ● |
| 2536SU08C-0900 | 9.00 | 10 | 131 | 90 | 87 | 40 | ● |
| 2536SU08C-0950 | 9.50 | 10 | 139 | 98 | 95 | 40 | ● |
| 2536SU08C-1000 | 10.00 | 10 | 139 | 98 | 95 | 40 | ● |
| 2536SU08C-1050 | 10.50 | 12 | 155 | 109 | 106 | 45 | ● |
| 2536SU08C-1100 | 11.00 | 12 | 155 | 109 | 106 | 45 | ● |
| 2536SU08C-1150 | 11.50 | 12 | 163 | 117 | 114 | 45 | ● |
| 2536SU08C-1200 | 12.00 | 12 | 163 | 117 | 114 | 45 | ● |
| 2536SU08C-1250 | 12.50 | 14 | 182 | 136 | 133 | 45 | ● |
| 2536SU08C-1300 | 13.00 | 14 | 182 | 136 | 133 | 45 | ● |
| 2536SU08C-1350 | 13.50 | 14 | 182 | 136 | 133 | 45 | ● |
| 2536SU08C-1400 | 14.00 | 14 | 182 | 136 | 133 | 45 | ● |
| 2536SU08C-1450 | 14.50 | 16 | 204 | 155 | 152 | 48 | ● |
| 2536SU08C-1500 | 15.00 | 16 | 204 | 155 | 152 | 48 | ● |
| 2536SU08C-1550 | 15.50 | 16 | 204 | 155 | 152 | 48 | ● |
| 2536SU08C-1600 | 16.00 | 16 | 204 | 155 | 152 | 48 | ● |
| 2536SU08C-1650 | 16.50 | 18 | 223 | 174 | 171 | 48 | ● |
| 2536SU08C-1700 | 17.00 | 18 | 223 | 174 | 171 | 48 | ● |
| 2536SU08C-1750 | 17.50 | 18 | 223 | 174 | 171 | 48 | ● |
| 2536SU08C-1800 | 18.00 | 18 | 223 | 174 | 171 | 48 | ● |
| 2536SU08C-1850 | 18.50 | 20 | 244 | 193 | 190 | 50 | ● |
| 2536SU08C-1900 | 19.00 | 20 | 244 | 193 | 190 | 50 | ● |
| 2536SU08C-1950 | 19.50 | 20 | 244 | 193 | 190 | 50 | ● |
| 2536SU08C-2000 | 20.00 | 20 | 244 | 193 | 190 | 50 | ● |
| 2536SU08C-2050 | 20.50 | 25 | | | | 56 | ● |
| 2536SU08C-2100 | 21.00 | 25 | | | | 56 | ● |
| 2536SU08C-2150 | 21.50 | 25 | | | | 56 | ● |
| 2536SU08C-2200 | 22.00 | 25 | | | | 56 | ● |
| 2536SU08C-2250 | 22.50 | 25 | | | | 56 | ● |
| 2536SU08C-2300 | 23.00 | 25 | | | | 56 | ● |
| 2536SU08C-2350 | 23.50 | 25 | | | | 56 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金麻花钻8×D

## Solid carbide twist drill 8×D

FONHAE 方瀚

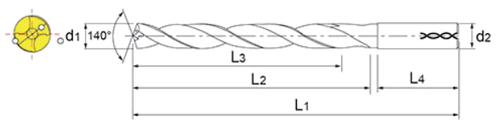
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU08C-2350 | 23.50 | 25 | | | | 56 | ● |
| 2536SU08C-2400 | 24.00 | 25 | | | | 56 | ● |
| 2536SU08C-2500 | 25.00 | 25 | | | | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例2536SU08C-1000 或2536SU08C-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example 2536SU08C-1000 or 2536SU08C-1000HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金双刃带麻花钻5×D

## Solid carbide double edge twist drill 5×D

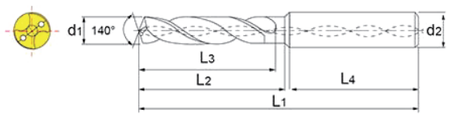
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑，双棱边具有铰削能力
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips, double edges have the ability to ream
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU05CS-0400 | 4.00 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536SU05CS-0450 | 4.50 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05CS-0500 | 5.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05CS-0550 | 5.50 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05CS-0600 | 6.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536SU05CS-0650 | 6.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05CS-0700 | 7.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05CS-0750 | 7.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05CS-0800 | 8.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536SU05CS-0850 | 8.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05CS-0900 | 9.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05CS-0950 | 9.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05CS-1000 | 10.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536SU05CS-1050 | 10.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05CS-1100 | 11.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05CS-1150 | 11.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05CS-1200 | 12.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536SU05CS-1250 | 12.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05CS-1300 | 13.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05CS-1350 | 13.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05CS-1400 | 14.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536SU05CS-1450 | 14.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05CS-1500 | 15.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05CS-1550 | 15.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05CS-1600 | 16.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536SU05CS-1650 | 16.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05CS-1700 | 17.00 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05CS-1750 | 17.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05CS-1800 | 18.00 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536SU05CS-1850 | 18.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05CS-1900 | 19.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05CS-1950 | 19.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536SU05CS-2000 | 20.00 | 20 | 153 | 101 | 77 | 50 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例2536SU05CS-1000 或2536SU05CS-1000HE
Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example 2536SU05CS-1000 or 2536SU05CS-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金深孔钻20×D

## Solid carbide deep hole drill 20×D

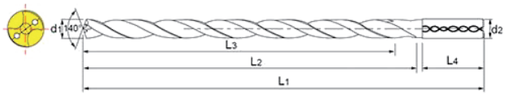
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。
深孔钻加工时，先必须用引导钻预钻1XD 引导孔。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.
When deep hole drilling is processed, the 1×D guide hole must be pre-drilled with the guide drill.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536SU20C-0300 | 3.00 | 3.00 | 101 | 68 | 63 | 30 | ● |
| 2536SU20C-0350 | 3.50 | 4.00 | 125 | 79 | 74 | 32 | ● |
| 2536SU20C-0400 | 4.00 | 4.00 | 125 | 90 | 84 | 32 | ● |
| 2536SU20C-0450 | 4.50 | 5.00 | 149 | 101 | 95 | 34 | ● |
| 2536SU20C-0500 | 5.00 | 5.00 | 149 | 112 | 105 | 34 | ● |
| 2536SU20C-0550 | 5.50 | 6.00 | 173 | 123 | 116 | 36 | ● |
| 2536SU20C-0600 | 6.00 | 6.00 | 173 | 134 | 126 | 36 | ● |
| 2536SU20C-0650 | 6.50 | 7.00 | 197 | 145 | 137 | 38 | ● |
| 2536SU20C-0700 | 7.00 | 7.00 | 197 | 158 | 147 | 38 | ● |
| 2536SU20C-0750 | 7.50 | 8.00 | 221 | 167 | 158 | 40 | ● |
| 2536SU20C-0800 | 8.00 | 8.00 | 221 | 178 | 169 | 40 | ● |
| 2536SU20C-0850 | 8.50 | 9.00 | 245 | 189 | 183 | 42 | ● |
| 2536SU20C-0900 | 9.00 | 9.00 | 245 | 200 | 189 | 42 | ● |
| 2536SU20C-0950 | 9.50 | 10.00 | 269 | 211 | 200 | 44 | ● |
| 2536SU20C-1000 | 10.00 | 10.00 | 269 | 222 | 210 | 44 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例2536SU20C-1000 或2536SU20C-1000HE
Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, double edge band at the edge, non-standard customization is acceptable
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example 2536SU20C-1000 or 2536SU20C-1000HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 不锈钢用硬质合金麻花钻5×D

## Solid carbide twist drill for stainless steel 5×D

FONHAE 方瀚

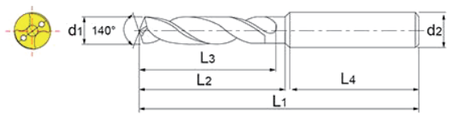
使用特点Usage characteristics

用于：不锈钢，钛合金，铁基 耐热合金，镍铬，镍钼，镍钴合金，镍铬合金等难加工材料 的加工，定心能力强，稳定的 切削刃形状特殊槽型处理，适用高速大进给切削。

Used for stainless steel, titanium alloy, iron based heat resistant alloy, nickel chromium, nickel molybdenum, nickel cobalt alloy, and other difficult materials processing, centering ability, stable cutting edge shape special flute processing, suitable for high speed large feed cutting.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536ST05C-0300 | 3.00 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536ST05C-0325 | 3.25 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536ST05C-0330 | 3.30 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536ST05C-0340 | 3.40 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536ST05C-0350 | 3.50 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536ST05C-0370 | 3.70 | 6 | 66 | 28 | 23 | 36 | ● |
| 2536ST05C-0400 | 4.00 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536ST05C-0420 | 4.20 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536ST05C-0430 | 4.30 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536ST05C-0450 | 4.50 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536ST05C-0465 | 4.65 | 6 | 74 | 36 | 29 | 36 | ● |
| 2536ST05C-0480 | 4.80 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0500 | 5.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0510 | 5.10 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0520 | 5.20 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0550 | 5.50 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0555 | 5.55 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0580 | 5.80 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0600 | 6.00 | 6 | 82 | 44 | 35 | 36 | ● |
| 2536ST05C-0610 | 6.10 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0620 | 6.20 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0630 | 6.30 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0650 | 6.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0660 | 6.60 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0675 | 6.75 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0690 | 6.90 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0700 | 7.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0710 | 7.10 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0740 | 7.40 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0750 | 7.50 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0780 | 7.80 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0800 | 8.00 | 8 | 91 | 53 | 43 | 36 | ● |
| 2536ST05C-0810 | 8.10 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0840 | 8.40 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0850 | 8.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0860 | 8.60 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0870 | 8.70 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0880 | 8.80 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0900 | 9.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0930 | 9.30 | 10 | 103 | 61 | 49 | 40 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.


# 不锈钢用硬质合金麻花钻5×D

## Solid carbide twist drill for stainless steel 5×D

FONHAE 方瀚

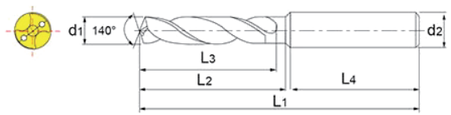
使用特点Usage characteristics

用于：不锈钢，钛合金，铁基 耐热合金，镍铬，镍钼，镍钴合金，镍铬合金等难加工材料 的加工，定心能力强，稳定的 切削刃形状特殊槽型处理，适用高速大进给切削。

Used for stainless steel, titanium alloy, iron based heat resistant alloy, nickel chromium, nickel molybdenum, nickel cobalt alloy, and other difficult materials processing, centering ability, stable cutting edge shape special flute processing, suitable for high speed large feed cutting.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo


| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536ST05C-0950 | 9.50 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0960 | 9.60 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-0980 | 9.80 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-1000 | 10.00 | 10 | 103 | 61 | 49 | 40 | ● |
| 2536ST05C-1025 | 10.25 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1040 | 10.40 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1050 | 10.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1060 | 10.60 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1080 | 10.80 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1100 | 11.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1120 | 11.20 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST 5C-1150 | 11.50 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1180 | 11.80 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1200 | 12.00 | 12 | 118 | 71 | 56 | 45 | ● |
| 2536ST05C-1220 | 12.20 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1225 | 12.25 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1250 | 12.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1270 | 12.70 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1275 | 12.75 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1280 | 12.80 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1300 | 43.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1350 | 13.50 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1380 | 13.80 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1400 | 14.00 | 14 | 124 | 77 | 60 | 45 | ● |
| 2536ST05C-1425 | 14.25 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1450 | 14.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1475 | 14.75 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1480 | 14.80 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1500 | 15.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1510 | 15.10 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1550 | 15.50 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1580 | 15.80 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1600 | 16.00 | 16 | 133 | 83 | 63 | 48 | ● |
| 2536ST05C-1650 | 16.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536ST05C-1675 | 16.75 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536ST05C-1680 | 16.80 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536ST05C-1700 | 17.00 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536ST05C-1750 | 17.50 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536ST05C-1780 | 17.80 | 18 | 143 | 93 | 71 | 48 | ● |
| 2536ST05C-1800 | 18.00 | 18 | 143 | 93 | 71 | 48 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 不锈钢用硬质合金麻花钻5×D

## Solid carbide twist drill for stainless steel 5×D

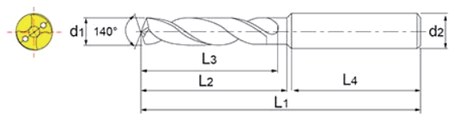
使用特点Usage characteristics

用于：不锈钢，钛合金，铁基 耐热合金，镍铬，镍钼，镍钴合金，镍铬合金等难加工材料 的加工，定心能力强，稳定的 切削刃形状特殊槽型处理，适用高速大进给切削。

Used for stainless steel, titanium alloy, iron based heat resistant alloy, nickel chromium, nickel molybdenum, nickel cobalt alloy, and other difficult materials processing, centering ability, stable cutting edge shape special flute processing, suitable for high speed large feed cutting.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：140°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：140°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| 2536ST05C-1850 | 18.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536ST05C-1900 | 19.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536ST05C-1950 | 19.50 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536ST05C-1980 | 19.80 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536ST05C-2000 | 20.00 | 20 | 153 | 101 | 77 | 50 | ● |
| 2536ST05C-2050 | 20.50 | 20 | 158 | 102 | 100 | 50 | ● |
| 2536ST05C-2100 | 21.00 | 20 | 158 | 102 | 100 | 50 | ● |
| 2536ST05C-2150 | 21.50 | 20 | 158 | 102 | 100 | 50 | ● |
| 2536ST05C-2200 | 22.00 | 20 | 158 | 102 | 100 | 50 | ● |
| 2536ST05C-2250 | 22.50 | 25 | 160 | 102 | 100 | 56 | ● |
| 2536ST05C-2300 | 23.00 | 25 | 160 | 102 | 100 | 56 | ● |
| 2536ST05C-2350 | 23.50 | 25 | 160 | 102 | 100 | 56 | ● |
| 2536ST05C-2400 | 24.00 | 25 | 160 | 102 | 100 | 56 | ● |
| 2536ST05C-2450 | 24.50 | 25 | 160 | 102 | 100 | 56 | ● |
| 2536ST05C-2500 | 25.00 | 25 | 160 | 102 | 100 | 56 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例2536ST05C-1000 或2536ST05C-1000HE

Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example 2536ST05C-1000 or 2536ST05C-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金铝用钻头

## Solid carbide aluminum drill

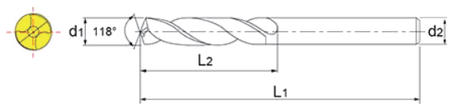
使用特点Usage characteristics

用于：铝合金，铜合金等加工材料的加工。

Used for processing aluminum alloy, copper alloy and other processing materials.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：118°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：118°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | | 尺寸系列 Size series | 尺寸特征 Dimensional feature | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|
| 不涂层 uncoated | TiAIN | d1 | d2 | L1 | L2 | |
| 006D-0300 | 006D-0300C | 3 | 3 | 48 | 16 | ● |
| 006D-0350 | 006D-0350C | 3.5 | 4 | 52 | 20 | ● |
| 006D-0400 | 006D-0400C | 4 | 4 | 54 | 22 | ● |
| 006D-0450 | 006D-0450C | 4.5 | 6 | 68 | 24 | ● |
| 006D-0500 | 006D-0500C | 5 | 6 | 70 | 26 | ● |
| 006D-0550 | 006D-0550C | 5.5 | 6 | 72 | 28 | ● |
| 006D-0600 | 006D-0600C | 6 | 6 | 72 | 28 | ● |
| 006D-0650 | 006D-0650C | 6.5 | 8 | 75 | 31 | ● |
| 006D-0700 | 006D-0700C | 7 | 8 | 78 | 34 | ● |
| 006D-0750 | 006D-0750C | 7.5 | 8 | 78 | 34 | ● |
| 006D-0800 | 006D-0800C | 8 | 8 | 81 | 37 | ● |
| 006D-0850 | 006D-0850C | 8.5 | 10 | 87 | 37 | ● |
| 006D-0900 | 006D-0900C | 9 | 10 | 91 | 40 | ● |
| 006D-0950 | 006D-0950C | 9.5 | 10 | 91 | 40 | ● |
| 006D-1000 | 006D-1000C | 10 | 10 | 93 | 43 | ● |
| 006D-1100 | 006D-1100C | 11 | 12 | 104 | 47 | ● |
| 006D-1200 | 006D-1200C | 12 | 12 | 108 | 51 | ● |
| 006D-1300 | 006D-1300C | 13 | 14 | 110 | 51 | ● |
| 006D-1500 | 006D-1500C | 15 | 16 | 136 | 76 | ● |
| 006D-1700 | 006D-1700C | 17 | 18 | 150 | 84 | ● |
| 006D-2000 | 006D-2000C | 20 | 20 | 160 | 94 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，刃部双刃带，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例006D-0300 或006D-0300C

Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, double insert belt, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example 006D-0300 or 006D-0300C

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金三刃钻5×D

## Solid carbide triple flute drill 5×D

FONHAE 方瀚

使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高 硅铝，铜合金等材料的加工，定心能力强，稳定的加工尺寸 和表面质量，可用于预制孔和 断续孔加工，适用高速大进给切削。

Used for gray cast iron, ductile cast iron, high silicon aluminum, copper alloy and other materials processing, centering ability, stable processing size and surface quality, can be used for prefabricated holes and intermittent hole processing, suitable for high-speed large feed cutting.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：150°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：150°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo


| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | |
| 2566PA05-0500 | 5.00 | 6 | 82 | 44 | 36 | ● |
| 2566PA05-0550 | 5.50 | 6 | 82 | 44 | 36 | ● |
| 2566PA05-0600 | 6.00 | 6 | 82 | 44 | 36 | ● |
| 2566PA05-0650 | 6.50 | 8 | 91 | 53 | 36 | ● |
| 2566PA05-0700 | 7.00 | 8 | 91 | 53 | 36 | ● |
| 2566PA05-0750 | 7.50 | 8 | 91 | 53 | 36 | ● |
| 2566PA05-0800 | 8.00 | 8 | 91 | 53 | 36 | ● |
| 2566PA05-0850 | 8.50 | 10 | 103 | 61 | 40 | ● |
| 2566PA05-0900 | 9.00 | 10 | 103 | 61 | 40 | ● |
| 2566PA05-0950 | 9.50 | 10 | 103 | 61 | 40 | ● |
| 2566PA05-1000 | 10.00 | 10 | 103 | 61 | 40 | ● |
| 2566PA05-1050 | 10.50 | 12 | 118 | 71 | 45 | ● |
| 2566PA05-1100 | 11.00 | 12 | 118 | 71 | 45 | ● |
| 2566PA05-1150 | 11.50 | 12 | 118 | 71 | 45 | ● |
| 2566PA05-1200 | 12.00 | 12 | 118 | 71 | 45 | ● |
| 2566PA05-1250 | 12.50 | 14 | 124 | 77 | 45 | ● |
| 2566PA05-1300 | 13.00 | 14 | 124 | 77 | 45 | ● |
| 2566PA05-1350 | 13.50 | 14 | 124 | 77 | 45 | ● |
| 2566PA05-1400 | 14.00 | 14 | 124 | 77 | 45 | ● |
| 2566PA05-1450 | 14.50 | 16 | 133 | 83 | 48 | ● |
| 2566PA05-1500 | 15.00 | 16 | 133 | 83 | 48 | ● |
| 2566PA05-1550 | 15.50 | 16 | 133 | 83 | 48 | ● |
| 2566PA05-1600 | 16.00 | 16 | 133 | 83 | 48 | ● |
| 2566PA05-1650 | 16.50 | 18 | 143 | 93 | 48 | ● |
| 2566PA05-1700 | 17.00 | 18 | 143 | 93 | 48 | ● |
| 2566PA05-1750 | 17.50 | 18 | 143 | 93 | 48 | ● |
| 2566PA05-1800 | 18.00 | 18 | 143 | 93 | 48 | ● |
| 2566PA05-1850 | 18.50 | 20 | 153 | 101 | 50 | ● |
| 2566PA05-1900 | 19.00 | 20 | 153 | 101 | 50 | ● |
| 2566PA05-1950 | 19.50 | 20 | 153 | 101 | 50 | ● |
| 2566PA05-2000 | 20.00 | 20 | 153 | 101 | 50 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例2566PA05-1000 或2566PA05-1000HE
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example 2566PA05-1000 or 2566PA05-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金三刃钻5×D

## Solid carbide triple flute drill 5×D

FONHAE 方瀚

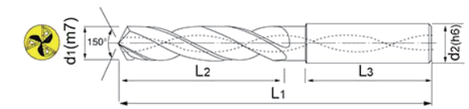
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高 硅铝，铜合金等材料的加工，定心能力强，稳定的加工尺寸 和表面质量，可用于预制孔和 断续孔加工，适用高速大进给切削。

Used for gray cast iron, ductile cast iron, high silicon aluminum, copper alloy and other materials processing, centering ability, stable processing size and surface quality, can be used for prefabricated holes and intermittent hole processing, suitable for high-speed large feed cutting.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：150°
横刃制造：横刃修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：150°
Chisel edge manufacture：chisel edge correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | |
| 2566PA05C-0500 | 5.00 | 6 | 82 | 44 | 36 | ● |
| 2566PA05C-0550 | 5.50 | 6 | 82 | 44 | 36 | ● |
| 2566PA05C-0600 | 6.00 | 6 | 82 | 44 | 36 | ● |
| 2566PA05C-0650 | 6.50 | 8 | 91 | 53 | 36 | ● |
| 2566PA05C-0700 | 7.00 | 8 | 91 | 53 | 36 | ● |
| 2566PA05C-0750 | 7.50 | 8 | 91 | 53 | 36 | ● |
| 2566PA05C-0800 | 8.00 | 8 | 91 | 53 | 36 | ● |
| 2566PA05C-0850 | 8.50 | 10 | 103 | 61 | 40 | ● |
| 2566PA05C-0900 | 9.00 | 10 | 103 | 61 | 40 | ● |
| 2566PA05C-0950 | 9.50 | 10 | 103 | 61 | 40 | ● |
| 2566PA05C-1000 | 10.00 | 10 | 103 | 61 | 40 | ● |
| 2566PA05C-1050 | 10.50 | 12 | 118 | 71 | 45 | ● |
| 2566PA05C-1100 | 11.00 | 12 | 118 | 71 | 45 | ● |
| 2566PA05C-1150 | 11.50 | 12 | 118 | 71 | 45 | ● |
| 2566PA05C-1200 | 12.00 | 12 | 118 | 71 | 45 | ● |
| 2566PA05C-1250 | 12.50 | 14 | 124 | 77 | 45 | ● |
| 2566PA05C-1300 | 13.00 | 14 | 124 | 77 | 45 | ● |
| 2566PA05C-1350 | 13.50 | 14 | 124 | 77 | 45 | ● |
| 2566PA05C-1400 | 14.00 | 14 | 124 | 77 | 45 | ● |
| 2566PA05C-1450 | 14.50 | 16 | 133 | 83 | 48 | ● |
| 2566PA05C-1500 | 15.00 | 16 | 133 | 83 | 48 | ● |
| 2566PA05C-1550 | 15.50 | 16 | 133 | 83 | 48 | ● |
| 2566PA05C-1600 | 16.00 | 16 | 133 | 83 | 48 | ● |
| 2566PA05C-1650 | 16.50 | 18 | 143 | 93 | 48 | ● |
| 2566PA05C-1700 | 17.00 | 18 | 143 | 93 | 48 | ● |
| 2566PA05C-1750 | 17.50 | 18 | 143 | 93 | 48 | ● |
| 2566PA05C-1800 | 18.00 | 18 | 143 | 93 | 48 | ● |
| 2566PA05C-1850 | 18.50 | 20 | 153 | 101 | 50 | ● |
| 2566PA05C-1900 | 19.00 | 20 | 153 | 101 | 50 | ● |
| 2566PA05C-1950 | 19.50 | 20 | 153 | 101 | 50 | ● |
| 2566PA05C-2000 | 20.00 | 20 | 153 | 101 | 50 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例2566PA05-1000 或2566PA05-1000HE
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example 2566PA05-1000 or 2566PA05-1000HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金强力钻3×D

## Solid carbide power drill 3×D

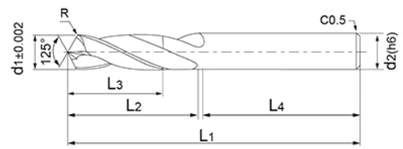
使用特点Usage characteristics

用于：HRC48~56高碳钢和合金钢稳定的尺寸精度和良好的表面质量，孔深≤1.5D时，孔精度≤IT7，圆度≤0.005，Ra≤1.2μ。

Used for HRC48-56 high carbon and alloy steels with stable dimensional accuracy and good surface quality, with hole depth ≤ 1.5D, hole accuracy ≤ IT7, roundness ≤ 0.005, Ra≤1.2 μ。

制造特点Manufacturing characteristics

尺寸形式：参考DIN6539
刃部公差：±0.002
排屑槽型：特殊设计，便于排屑
主刃顶角：125°
刀尖R：按照方瀚标准
横刃制造：横刃S型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He或NaNo
Size form：refer to DIN6539
Edge tolerance：±0.002
Geometry：special design,easy to remove chips
Bit angle：125°
Tip R：according to Fonhae standard
Chisel edge manufacture：chisel edge S-shape correction, Fonhae standard
Shank form：refer to DIN6235HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| QHD03-0400 | 4.00 | 4 | 55 | 22 | 12 | 33 | ● |
| QHD03-0500 | 5.00 | 5 | 62 | 26 | 16 | 36 | ● |
| QHD03-0600 | 6.00 | 6 | 66 | 28 | 18 | 36 | ● |
| QHD03-0700 | 7.00 | 7 | 74 | 34 | 22 | 36 | ● |
| QHD03-0800 | 8.00 | 8 | 79 | 37 | 24 | 36 | ● |
| QHD03-0900 | 9.00 | 9 | 84 | 40 | 29 | 40 | ● |
| QHD03-1000 | 10.00 | 10 | 90 | 43 | 31 | 40 | ● |
| QHD03-1100 | 11.00 | 11 | 95 | 47 | 35 | 40 | ● |
| QHD03-1200 | 12.00 | 12 | 102 | 51 | 39 | 45 | ● |
| QHD03-1300 | 13.00 | 13 | 102 | 51 | 39 | 45 | ● |
| QHD03-1400 | 14.00 | 14 | 107 | 54 | 42 | 45 | ● |
| QHD03-1500 | 15.00 | 15 | 111 | 56 | 42 | 45 | ● |
| QHD03-1600 | 16.00 | 16 | 115 | 58 | 45 | 48 | ● |
| QHD03-1700 | 17.00 | 17 | 119 | 60 | 48 | 48 | ● |
| QHD03-1800 | 18.00 | 18 | 123 | 62 | 50 | 48 | ● |
| QHD03-1900 | 19.00 | 19 | 127 | 64 | 52 | 48 | ● |
| QHD03-2000 | 20.00 | 20 | 131 | 66 | 54 | 50 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例2566PA05-1000 或2566PA05-1000HE
Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example QHD03-1000 or QHD03-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻3×D

## Solid carbide power drill 3×D

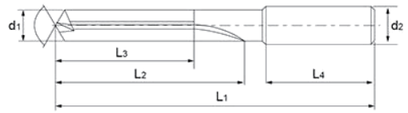
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD03-0300 | 3.00 | 6 | 62 | 20 | 14 | 36 | ● |
| TXD03-0325 | 3.25 | 6 | 62 | 20 | 14 | 36 | ● |
| TXD03-0330 | 3.30 | 6 | 62 | 20 | 14 | 36 | ● |
| TXD03-0340 | 3.40 | 6 | 62 | 20 | 14 | 36 | ● |
| TXD03-0350 | 3.50 | 6 | 62 | 20 | 14 | 36 | ● |
| TXD03-0370 | 3.70 | 6 | 62 | 20 | 14 | 36 | ● |
| TXD03-0400 | 4.00 | 6 | 66 | 24 | 17 | 36 | ● |
| TXD03-0420 | 4.20 | 6 | 66 | 24 | 17 | 36 | ● |
| TXD03-0430 | 4.30 | 6 | 66 | 24 | 17 | 36 | ● |
| TXD03-0450 | 4.50 | 6 | 66 | 24 | 17 | 36 | ● |
| TXD03-0465 | 4.65 | 6 | 66 | 24 | 17 | 36 | ● |
| TXD03-0480 | 4.80 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0500 | 5.00 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0510 | 5.10 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0520 | 5.20 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0550 | 5.50 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0555 | 5.55 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0580 | 5.80 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0600 | 6.00 | 6 | 66 | 28 | 20 | 36 | ● |
| TXD03-0610 | 6.10 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0620 | 6.20 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0630 | 6.30 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0650 | 6.50 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0660 | 6.60 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0675 | 6.75 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0690 | 6.90 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0700 | 7.00 | 8 | 79 | 34 | 24 | 36 | ● |
| TXD03-0710 | 7.10 | 8 | 79 | 41 | 29 | 36 | ● |
| TXD03-0740 | 7.40 | 8 | 79 | 41 | 29 | 36 | ● |
| TXD03-0750 | 7.50 | 8 | 79 | 41 | 29 | 36 | ● |
| TXD03-0780 | 7.80 | 8 | 79 | 41 | 29 | 36 | ● |
| TXD03-0800 | 8.00 | 8 | 79 | 41 | 29 | 36 | ● |
| TXD03-0810 | 8.10 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0840 | 8.40 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0850 | 8.50 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0860 | 8.60 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0870 | 8.70 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0880 | 8.80 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0900 | 9.00 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0930 | 9.30 | 10 | 89 | 47 | 35 | 40 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻3×D

## Solid carbide straight flute drill 3×D

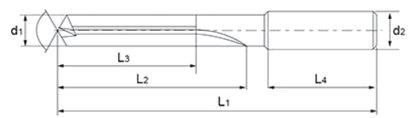
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD03-0950 | 9.50 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0960 | 9.60 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-0980 | 9.80 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-1000 | 10.00 | 10 | 89 | 47 | 35 | 40 | ● |
| TXD03-1025 | 10.25 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1040 | 10.40 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1050 | 10.50 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1060 | 10.60 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1080 | 10.80 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1100 | 11.00 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1120 | 11.20 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1150 | 11.50 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1180 | 11.80 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1200 | 12.00 | 12 | 102 | 55 | 40 | 45 | ● |
| TXD03-1225 | 12.25 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1250 | 12.50 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1270 | 12.70 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1275 | 12.75 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1280 | 12.80 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1300 | 13.00 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1310 | 13.10 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1350 | 13.50 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1380 | 13.80 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1400 | 14.00 | 14 | 107 | 60 | 43 | 45 | ● |
| TXD03-1425 | 14.25 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1450 | 14.50 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1475 | 14.75 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1480 | 14.80 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1500 | 15.00 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1510 | 15.10 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1550 | 15.50 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1580 | 15.80 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1600 | 16.00 | 16 | 115 | 65 | 45 | 48 | ● |
| TXD03-1650 | 16.50 | 18 | 123 | 73 | 51 | 48 | ● |
| TXD03-1675 | 16.75 | 18 | 123 | 73 | 51 | 48 | ● |
| TXD03-1680 | 16.80 | 18 | 123 | 73 | 51 | 48 | ● |
| TXD03-1700 | 17.00 | 1 | 123 | 73 | 51 | 48 | ● |
| TXD03-1780 | 17.80 | 18 | 123 | 73 | 51 | 48 | ● |
| TXD03-1800 | 18.00 | 18 | 123 | 73 | 51 | 48 | ● |
| TXD03-1850 | 18.50 | 20 | 131 | 79 | 55 | 50 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻3×D

## Solid carbide straight flute drill 3×D

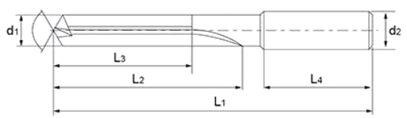
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD03-1880 | 18.80 | 20 | 131 | 79 | 55 | 50 | ● |
| TXD03-1900 | 19.00 | 20 | 131 | 79 | 55 | 50 | ● |
| TXD03-1950 | 19.50 | 20 | 131 | 79 | 55 | 50 | ● |
| TXD03-1980 | 19.80 | 25 | 131 | 79 | 55 | 50 | ● |
| TXD03-2000 | 20.00 | 25 | 131 | 79 | 55 | 50 | ● |
| TXD03-2050 | 20.50 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2100 | 21.00 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2150 | 21.50 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2200 | 22.00 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2250 | 2250 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2300 | 23.00 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2350 | 23.50 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2400 | 24.00 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2450 | 24.50 | 25 | 140 | 85 | 60 | 56 | ● |
| TXD03-2500 | 25.00 | 25 | 140 | 85 | 60 | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例TXD03-1000 或TXD03-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example TXD03-1000 or TXD03-1000HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻5×D

## Solid carbide straight flute drill 3×D

FONHAE 方瀚

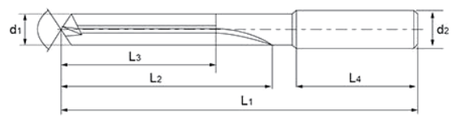
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD05-0300 | 3.00 | 6 | 66 | 28 | 23 | 36 | ● |
| TXD05-0325 | 3.25 | 6 | 66 | 28 | 23 | 36 | ● |
| TXD05-0330 | 3.30 | 6 | 66 | 28 | 23 | 36 | ● |
| TXD05-0340 | 3.40 | 6 | 66 | 28 | 23 | 36 | ● |
| TXD05-0350 | 3.50 | 6 | 66 | 28 | 23 | 36 | ● |
| TXD05-0370 | 3.70 | 6 | 66 | 28 | 23 | 36 | ● |
| TXD05-0400 | 4.00 | 6 | 74 | 36 | 29 | 36 | ● |
| TXD05-0420 | 4.20 | 6 | 74 | 36 | 29 | 36 | ● |
| TXD05-0430 | 4.30 | 6 | 74 | 36 | 29 | 36 | ● |
| TXD05-0450 | 4.50 | 6 | 74 | 36 | 29 | 36 | ● |
| TXD05-0465 | 4.65 | 6 | 74 | 36 | 29 | 36 | ● |
| TXD05-0480 | 4.80 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0500 | 5.00 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0510 | 5.10 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0520 | 5.20 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0550 | 5.50 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0555 | 5.55 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0580 | 5.80 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0600 | 6.00 | 6 | 82 | 44 | 35 | 36 | ● |
| TXD05-0610 | 6.10 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0620 | 6.20 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0630 | 6.30 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0650 | 6.50 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0660 | 6.60 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0675 | 6.75 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0690 | 6.90 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0700 | 7.00 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0710 | 7.10 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0740 | 7.40 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0750 | 7.50 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0780 | 7.80 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0800 | 8.00 | 8 | 91 | 53 | 43 | 36 | ● |
| TXD05-0810 | 8.10 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0840 | 8.40 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0850 | 8.50 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0860 | 8.60 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0870 | 8.70 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0880 | 8.80 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0900 | 9.00 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0930 | 9.30 | 10 | 103 | 61 | 49 | 40 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.


# 硬质合金直槽钻5×D

## Solid carbide straight flute drill 3×D

FONHAE 方瀚

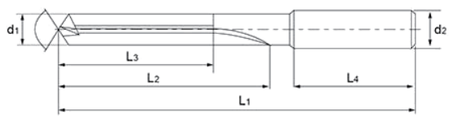
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN


| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD05-0950 | 9.50 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0960 | 9.60 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-0980 | 9.80 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-1000 | 10.00 | 10 | 103 | 61 | 49 | 40 | ● |
| TXD05-1025 | 10.25 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1040 | 10.40 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1050 | 10.50 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1060 | 10.60 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1080 | 10.80 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1100 | 11.00 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1120 | 11.20 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1150 | 11.50 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1180 | 11.80 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1200 | 12.00 | 12 | 118 | 71 | 56 | 45 | ● |
| TXD05-1220 | 12.20 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1225 | 12.25 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1250 | 12.50 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1270 | 42.70 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1275 | 12.75 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1280 | 12.80 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1300 | 13.00 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1350 | 13.50 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1380 | 13.80 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1400 | 44.00 | 14 | 124 | 77 | 60 | 45 | ● |
| TXD05-1425 | 14.25 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1450 | 14.50 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1475 | 14.75 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1480 | 14.80 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1500 | 15.00 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1510 | 15.10 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1550 | 15.50 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1580 | 15.80 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1600 | 16.00 | 16 | 133 | 83 | 63 | 48 | ● |
| TXD05-1650 | 16.50 | 18 | 143 | 93 | 71 | 48 | ● |
| TXD05-1675 | 16.75 | 18 | 143 | 93 | 71 | 48 | ● |
| TXD05-1680 | 16.80 | 18 | 143 | 93 | 71 | 48 | ● |
| TXD05-1700 | 17.00 | 18 | 143 | 93 | 71 | 48 | ● |
| TXD05-1750 | 17.50 | 18 | 143 | 93 | 71 | 48 | ● |
| TXD05-1780 | 17.80 | 18 | 143 | 93 | 71 | 48 | ● |
| TXD05-1800 | 18.00 | 18 | 143 | 93 | 71 | 48 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻5×D

## Solid carbide straight flute drill 5×D

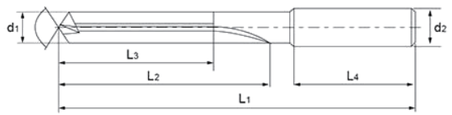
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD05-1850 | 18.50 | 20 | 153 | 101 | 77 | 50 | ● |
| TXD05-1900 | 19.00 | 20 | 153 | 101 | 77 | 50 | ● |
| TXD05-1950 | 19.50 | 20 | 153 | 101 | 77 | 50 | ● |
| TXD05-1980 | 19.80 | 20 | 153 | 101 | 77 | 50 | ● |
| TXD05-2000 | 20.00 | 20 | 153 | 101 | 77 | 50 | ● |
| TXD05-2050 | 20.50 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2100 | 21.00 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2150 | 21.50 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2200 | 22.00 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2250 | 22.50 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2300 | 23.00 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2350 | 23.50 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2400 | 24.00 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2450 | 24.50 | 25 | 163 | 110 | 83 | 56 | ● |
| TXD05-2500 | 25.00 | 25 | 163 | 110 | 83 | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例TXD05-1000 或TXD05-1000HE

内冷定制举例TXD05C-1000 或TXD05C-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example TXD05C-1000 or TXD05C-1000HE

Internal coolant customization example TXD05C-1000 or TXD05C-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻8×D

## Solid carbide straight flute drill 8×D

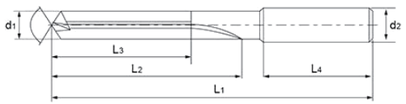
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD08-0400 | 4.00 | 4 | 75 | 45 | 42 | 28 | ● |
| TXD08-0450 | 4.50 | 6 | 90 | 54 | 50 | 36 | ● |
| TXD08-0500 | 5.00 | 6 | 90 | 54 | 50 | 36 | ● |
| TXD08-0550 | 5.50 | 6 | 97 | 60 | 57 | 36 | ● |
| TXD08-0600 | 6.00 | 6 | 97 | 60 | 57 | 36 | ● |
| TXD08-0650 | 6.50 | 8 | 106 | 69 | 66 | 36 | ● |
| TXD08-0700 | 7.00 | 8 | 116 | 79 | 76 | 36 | ● |
| TXD08-0750 | 7.50 | 8 | 116 | 79 | 76 | 36 | ● |
| TXD08-0800 | 8.00 | 8 | 116 | 79 | 76 | 36 | ● |
| TXD08-0850 | 8.50 | 10 | 131 | 90 | 87 | 40 | ● |
| TXD08-0900 | 9.00 | 10 | 131 | 90 | 87 | 40 | ● |
| TXD08-0950 | 9.50 | 10 | 139 | 98 | 95 | 40 | ● |
| TXD08-1000 | 10.00 | 10 | 139 | 98 | 95 | 40 | ● |
| TXD08-1050 | 10.50 | 12 | 155 | 109 | 106 | 45 | ● |
| TXD08-1100 | 11.00 | 12 | 155 | 109 | 106 | 45 | ● |
| TXD08-1150 | 11.50 | 12 | 163 | 117 | 114 | 45 | ● |
| TXD08-1200 | 12.00 | 12 | 163 | 117 | 114 | 45 | ● |
| TXD08-1250 | 42.50 | 14 | 182 | 136 | 133 | 45 | ● |
| TXD08-1300 | 13.00 | 14 | 182 | 136 | 133 | 45 | ● |
| TXD08-1350 | 13.50 | 14 | 182 | 136 | 133 | 45 | ● |
| TXD08-1400 | 14.00 | 14 | 182 | 136 | 133 | 45 | ● |
| TXD08-1450 | 14.50 | 16 | 204 | 155 | 152 | 48 | ● |
| TXD08-1500 | 15.00 | 16 | 204 | 155 | 152 | 48 | ● |
| TXD08-1550 | 15.50 | 16 | 204 | 155 | 152 | 48 | ● |
| TXD08-1600 | 16.00 | 16 | 204 | 155 | 152 | 48 | ● |
| TXD08-1650 | 16.50 | 18 | 223 | 174 | 171 | 48 | ● |
| TXD08-1700 | 17.00 | 18 | 223 | 174 | 171 | 48 | ● |
| TXD08-1750 | 17.50 | 18 | 223 | 174 | 171 | 48 | ● |
| TXD08-1800 | 18.00 | 18 | 223 | 174 | 171 | 48 | ● |
| TXD08-1850 | 18.50 | 20 | 244 | 193 | 190 | 50 | ● |
| TXD08-1900 | 19.00 | 20 | 244 | 193 | 190 | 50 | ● |
| TXD08-1950 | 19.50 | 20 | 244 | 193 | 190 | 50 | ● |
| TXD08-2000 | 20.00 | 20 | 244 | 193 | 190 | 50 | ● |
| TXD08-2050 | 20.50 | 25 | | | | 56 | ● |
| TXD08-2100 | 21.00 | 25 | | | | 56 | ● |
| TXD08-2150 | 21.50 | 25 | | | | 56 | ● |
| TXD08-2200 | 22.00 | 25 | | | | 56 | ● |
| TXD08-2250 | 22.50 | 25 | | | | 56 | ● |
| TXD08-2300 | 23.00 | 25 | | | | 56 | ● |
| TXD08-2350 | 23.50 | 25 | | | | 56 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金直槽钻8×D

## Solid carbide straight flute drill 8×D

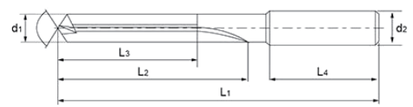
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合钢，铜合金等短切削材料的加工，对于变形铝，纯铜必须采用内冷强制排屑，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合，高速大进给。

Used for gray cast iron, ductile cast iron, high silicon aluminum alloy, copper alloy and other short cutting materials processing, for deformed aluminum, pure copper must use internal cold forced chip removal, centering ability, stable dimensional accuracy and good surface quality, suitable for processing system rigidity excellent occasions, high speed and large feed.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：130°
横刃制造：横刃H 型修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：NaNo/TIN
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：130°
Chisel edge manufacture：chisel edge H-shape correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：NaNo/TIN




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| TXD08-2400 | 24.00 | 25 | | | | 56 | ● |
| TXD08-2500 | 25.00 | 25 | | | | 56 | ● |

注：

1.接受非标定制

（1）刀具直径，槽长，总长，可接受非标定制

（2）柄部形式可按DIN6535HA/HB/HE 定制

2.定制举例TXD08-1000 或TXD08-1000HE

内冷定制举例TXD08C-1000 或TXD08C-1000HE

Note：

1. Accept non-standard customization

（1）Tool diameter, flute length, total length, can accept non-standard customization

（2）The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example TXD08-1000 or TXD08-1000HE

Internal coolant customization example TXD08C-1000 or TXD08C-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 平底钻FB-DRILL

## Flat bottom drill

主要应用

平底钻系列整体硬质合金钻是 一种高效率的工具，其将两种加工工程合二为 一，在钻平底孔或者在斜面，曲面上钻孔时，无需再使用180°立铣刀，在钻尖完全 进入工件后，钻头可用正常的整体硬质合金钻孔参数运转。

特点和优势

独特的钻尖设计，两个有效切削刃可提高进给率，从外圆到中心钻出真正的平底孔，前角修正加强切削控 制，四刃带倒棱设计，提高孔的直线度和圆度，钻交叉孔也能有很好的垂直度。

使用特点

用于灰铸铁，球墨铸铁，结构钢，合金钢，不锈钢，有色金属等常见材料的加工。
稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

制造特点

尺寸形式：参考 DIN6537 标准制造
刃部公差：m7
排屑槽型：抛物线槽型，排屑顺畅
主刃顶角：180°
横刃制造：横刃修正，前角修正
采用方瀚工具制造标准
柄径形式采用DIN6535HA h6
涂层：He/ALTiN

Main applications

Flat bottom drill series solid carbide drill is a high-efficiency tool, which combines two kinds of processing engineering in one, no longer need to use 180° end mill when drilling flat bottom holes or drilling on inclined surfaces or curved surfaces, after the drill tip is fully into the workpiece, the drill can operate with normal integral solid carbide drilling parameters.

Characteristics and advantages

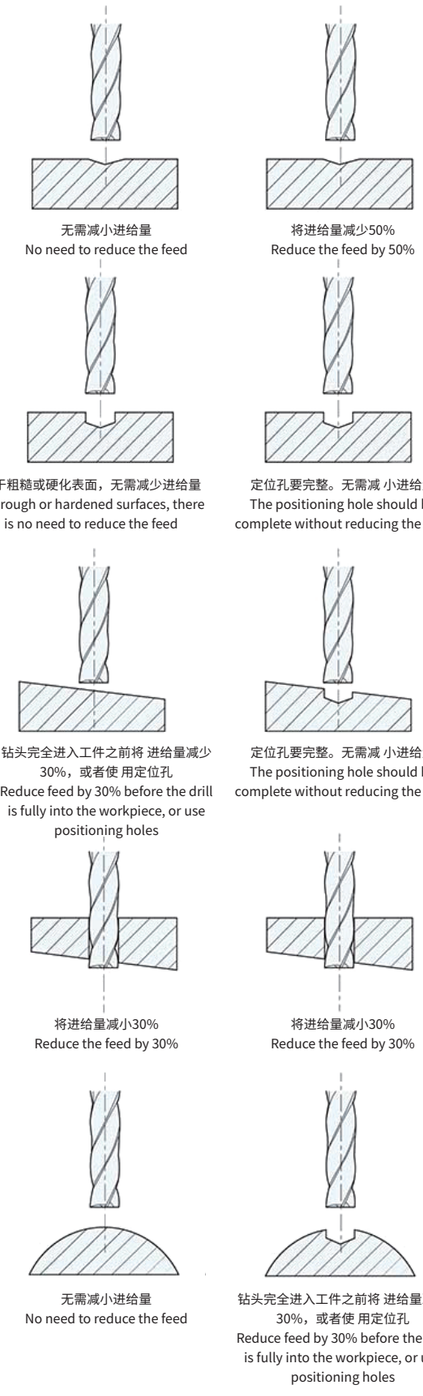
Unique drilling tip design, two effective cutting edges can improve the feed rate, drill a real flat bottom hole from the outer circle to the center, front angle correction to strengthen cutting control, four edge with chamfering design, improve the straightness and roundness of the hole, drilling cross holes can also have a good perpendicularity.

Usage characteristics

Used for gray cast iron, ductile cast iron, structural steel, alloy steel, stainless steel, nonferrous metals and other common materials processing.
Stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

Manufacturing characteristics

Size form：reference DIN6537 standard manufacturing
Edge tolerance：m7
Geometry：parabolic flute, smooth chip discharge
Bit Angle：180°
Chisel edge manufacture：chisel edge correction, front angle correction
Adopt Fonhae tool manufacturing standard
The shank diameter form is DIN6535HA h6
Coating：He/ALTiN




KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金平底钻3×D

## Solid carbide flat bottom drill 3×D

FONHAE 方瀚

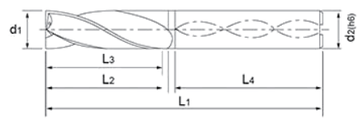
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：180°
横刃制造：前角修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：180°
Chisel edge manufacture：Front Angle correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| FBD03-0300 | 3.00 | 6 | 62 | 20 | 14 | 36 | ● |
| FBD03-0325 | 3.25 | 6 | 62 | 20 | 14 | 36 | ● |
| FBD03-0330 | 3.30 | 6 | 62 | 20 | 14 | 36 | ● |
| FBD03-0340 | 3.40 | 6 | 62 | 20 | 14 | 36 | ● |
| FBD03-0350 | 3.50 | 6 | 62 | 20 | 14 | 36 | ● |
| FBD03-0370 | 3.70 | 6 | 62 | 20 | 14 | 36 | ● |
| FBD03-0400 | 4.00 | 6 | 66 | 24 | 17 | 36 | ● |
| FBD03-0420 | 4.20 | 6 | 66 | 24 | 17 | 36 | ● |
| FBD03-0430 | 4.30 | 6 | 66 | 24 | 17 | 36 | ● |
| FBD03-0450 | 4.50 | 6 | 66 | 24 | 17 | 36 | ● |
| FBD03-0465 | 4.65 | 6 | 66 | 24 | 17 | 36 | ● |
| FBD03-0480 | 4.80 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0500 | 5.00 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0510 | 5.10 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0520 | 5.20 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0550 | 5.50 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0555 | 5.55 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0580 | 5.80 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0600 | 6.00 | 6 | 66 | 28 | 20 | 36 | ● |
| FBD03-0610 | 6.10 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0620 | 6.20 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0630 | 6.30 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0650 | 6.50 | 8 | 79 | 34 | 24 | 36 | ● |
| EBD 3-0660 | 6.60 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0675 | 6.75 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0690 | 6.90 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0700 | 7.00 | 8 | 79 | 34 | 24 | 36 | ● |
| FBD03-0710 | 7.10 | 8 | 79 | 41 | 29 | 36 | ● |
| FBD03-0740 | 7.40 | 8 | 79 | 41 | 29 | 36 | ● |
| EBD 3-0750 | 7.50 | 8 | 79 | 41 | 29 | 36 | ● |
| FBD03-0780 | 7.80 | 8 | 79 | 41 | 29 | 36 | ● |
| FBD03-0800 | 8.00 | 8 | 79 | 41 | 29 | 36 | ● |
| FBD03-0810 | 8.10 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0840 | 8.40 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0850 | 8.50 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0860 | 8.60 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0870 | 8.70 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0880 | 8.80 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0900 | 9.00 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0930 | 9.30 | 10 | 89 | 47 | 35 | 40 | ● |



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.


# 硬质合金平底钻3×D

## Solid carbide flat bottom drill 3×D

FONHAE 方瀚

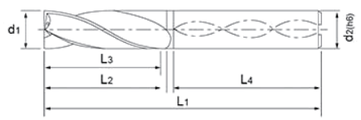
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：180°
横刃制造：前角修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：180°
Chisel edge manufacture：Front Angle correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo


| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| FBD03-0950 | 9.50 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0960 | 9.60 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-0980 | 9.80 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-1000 | 10.00 | 10 | 89 | 47 | 35 | 40 | ● |
| FBD03-1025 | 10.25 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1040 | 10.40 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1050 | 10.50 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1060 | 10.60 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1080 | 10.80 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1100 | 11.00 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1120 | 11.20 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD 3-1150 | 11.50 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1180 | 11.80 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1200 | 12.00 | 12 | 102 | 55 | 40 | 45 | ● |
| FBD03-1225 | 12.25 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1250 | 12.50 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1270 | 12.70 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1275 | 12.75 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1280 | 12.80 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1300 | 13.00 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1310 | 13.10 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1350 | 13.50 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1380 | 13.80 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1400 | 14.00 | 14 | 107 | 60 | 43 | 45 | ● |
| FBD03-1425 | 14.25 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1450 | 14.50 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1475 | 14.75 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1480 | 14.80 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1500 | 15.00 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1510 | 15.10 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1550 | 15.50 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1580 | 15.80 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1600 | 16.00 | 16 | 115 | 65 | 45 | 48 | ● |
| FBD03-1650 | 16.50 | 18 | 123 | 73 | 51 | 48 | ● |
| FBD03-1675 | 16.75 | 18 | 123 | 73 | 51 | 48 | ● |
| FBD03-1680 | 16.80 | 18 | 123 | 73 | 51 | 48 | ● |
| FBD03-1700 | 17.00 | 18 | 123 | 73 | 51 | 48 | ● |
| FBD03-1780 | 17.80 | 18 | 123 | 73 | 51 | 48 | ● |
| FBD03-1800 | 18.00 | 18 | 123 | 73 | 51 | 48 | ● |
| FBD03-1850 | 18.50 | 20 | 131 | 79 | 55 | 50 | ● |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金平底钻3×D

## Solid carbide flat bottom drill 3×D

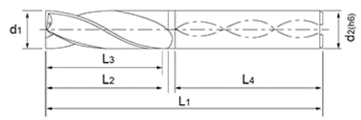
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，不锈钢，结构钢，合金钢等常见材料的加工，定心能力强，稳定的尺寸精度和良好的表面质量，适用于加工系统刚性优异的场合。

Used for gray cast iron, ductile iron, stainless steel, structural steel, alloy steel and other common materials processing, strong centering ability, stable dimensional accuracy and good surface quality, suitable for occasions with excellent rigidity of processing system.

制造特点Manufacturing characteristics

尺寸形式：参考DIN6537
刃部公差：m7
排屑槽型：特殊设计，便于排屑
主刃顶角：180°
横刃制造：前角修正，方瀚标准
柄部形式：参考DIN6535HA h6
涂层：He 或NaNo
Size form：refer to DIN6537
Edge tolerance：m7
Geometry：special design, easy to remove chips
Bit Angle：180°
Chisel edge manufacture：Front Angle correction, Fonhae standard
Shank form：refer to DIN6535HA h6
Coating：He or NaNo




| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | L4 | |
| FBD03-1880 | 18.80 | 20 | 131 | 79 | 55 | 50 | ● |
| FBD03-1900 | 19.00 | 20 | 131 | 79 | 55 | 50 | ● |
| FBD03-1950 | 19.50 | 20 | 131 | 79 | 55 | 50 | ● |
| FBD03-1980 | 19.80 | 20 | 131 | 79 | 55 | 50 | ● |
| FBD03-2000 | 20.00 | 20 | 131 | 79 | 55 | 50 | ● |
| FBD03-2050 | 20.50 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2100 | 21.00 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2200 | 22.00 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2250 | 22.50 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2300 | 23.00 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2350 | 23.50 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2400 | 24.00 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2450 | 24.50 | 25 | 140 | 85 | 60 | 56 | ● |
| FBD03-2500 | 25.00 | 25 | 140 | 85 | 60 | 56 | ● |

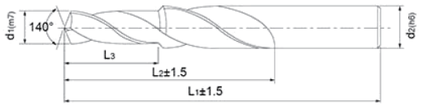
注：
1.接受非标定制
（1）刀具直径，槽长，总长，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例FBD03-1000 或FBD03-1000HE
内冷定制举例FBD03C-1000 或FBD03C-1000HE
Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example FBD03-1000 or FBD03-1000HE
Internal coolant customization example FBD03C-1000 or FBD03C-1000HE



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金台阶钻

## Solid carbide step drill



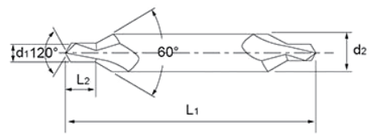

| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | | | 刀具材料 Tool material |
|---|---|---|---|---|---|---|---|
| | | d2 | L1 | L2 | L3 | 螺纹规格 | |
| YJZ034-M4 | 3.4 | 6 | 66 | 28 | 11.4 | M4 | ● |
| YJZ043-M5 | 4.3 | 6 | 66 | 28 | 13.6 | M5 | ● |
| YJZ050-M6 | 5 | 6.6 | 79 | 41 | 16.5 | M6 | ● |
| YJZ063-M8 | 6.9 | 10 | 89 | 47 | 21 | M8 | ● |
| YJZ087-M10 | 8.7 | 12 | 102 | 55 | 25.5 | M10 | ● |
| YJZ1040-M12 | 10.4 | 14 | 107 | 60 | 30 | M12 | ● |
| YJZ1225-M14 | 12.25 | 16 | 115 | 65 | 34.5 | M14 | ● |
| YJZ1425-M16 | 14.25 | 18 | 123 | 73 | 38.5 | M16 | ● |

注：
1.接受非标定制
（1）刀具直径，槽长，总长，可接受非标定制
（2）柄部形式可按DIN6535HA/HB/HE 定制
2.定制举例YJZ034-M4 或YJZ034-M4HE
Note：
1. Accept non-standard customization
（1）Tool diameter, flute length, total length, can accept non-standard customization
（2）The shank form can be customized according to DIN6535HA/HB/HE
2. Customization example YJZ034-M4 or YJZ034-M4HE

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 硬质合金中心钻

**Solid carbide center drill**




单位（Unit）：mm

| 订购号 Order number | 尺寸系列 Size series d1 | 尺寸特征 Dimensional feature | | | 刀具材料 Tool material |
|---|---|---|---|---|---|
| | | d2 | L1 | L2 | |
| YZX-A1 | 1 | 3.15 | 40 | 1.6 | ● |
| YZX-A1.25 | 1.25 | 3.15 | 40 | 1.8 | ● |
| YZX-A1.6 | 1.6 | 4 | 40 | 2.4 | ● |
| YZX-A2 | 2 | 5 | 40 | 2.8 | ● |
| YZX-A2.5 | 2.5 | 6.3 | 50 | 3.4 | ● |
| YZX-A3.15 | 3.15 | 8 | 50 | 4.1 | ● |
| YZX-A4 | 4 | 10 | 60 | 5.2 | ● |
| YZX-A5 | 5 | 12.5 | 70 | 6.5 | ● |
| YZX-A6.3 | 6.3 | 16 | 70 | 8.2 | ● |
| YZX-A8 | 8 | 20 | 80 | 10.5 | ● |

型号规格举例：A 型，d1=2.5 整体硬质合金中心钻的型号规格为YZX-A2.5

Model specifications example：Type A, d1=2.5 The model specifications of the solid carbide centering drill are YZX-A2.5



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 直槽铰刀（内冷/外冷）

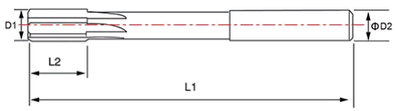
**Straight flute reamer (internal/external coolant)**

制造特点Manufacturing characteristics

1.尺寸形式：按标准制造
2.排屑槽形：直槽
3.刃径公差：±0.002
4.柄径形式：参考DIN6535HA h6
5.表面处理：超T涂层
1.Size form：manufactured according to standard
2.Geometry：Straight flute
3.Edge diameter tolerance：±0.002
4.Shank diameter form：refer to DIN6535HA h6
5.Surface treatment：superT coating

使用特点Usage characteristics

能保证较高表面粗糙度和尺寸公差
High surface roughness and dimensional tolerance are guaranteed




单位（Unit）：mm

| 订购号 Order number | 刃径 D1 | 刃长 L2 | 总长 L1 | 柄径 D2 |
|---|---|---|---|---|
| YC-Z-L-0300 | 3.00 | 20 | 56 | 4 |
| YC-Z-L-0400 | 4.00 | 20 | 56 | 4 |
| YC-Z-L-0450 | 4.50 | 22 | 63 | 6 |
| YC-Z-L-0500 | 5.00 | 22 | 63 | 6 |
| YC-Z-L-0550 | 5.50 | 22 | 63 | 6 |
| YC-Z-L-0600 | 6.00 | 22 | 63 | 6 |
| YC-Z-L-0650 | 6.50 | 22 | 63 | 8 |
| YC-7-L-0700 | 7.00 | 25 | 71 | 8 |
| YC-Z-L-0750 | 7.50 | 25 | 71 | 8 |
| YC-Z-L-0800 | 8.00 | 25 | 71 | 8 |
| YC-Z-L-0850 | 8.50 | 25 | 71 | 10 |
| YC-Z-L-0900 | 9.00 | 25 | 71 | 10 |
| YC-Z-L-0950 | 9.50 | 25 | 71 | 10 |
| YC-Z-L-1000 | 10.00 | 25 | 71 | 10 |
| YC-Z-L-1050 | 10.50 | 28 | 80 | 12 |
| YC-Z-L-1100 | 11.00 | 28 | 80 | 12 |
| YC-Z-L-1200 | 12.00 | 28 | 80 | 12 |
| YC-Z-L-1300 | 13.00 | 28 | 80 | 14 |
| YC-Z-L-1400 | 14.00 | 32 | 90 | 14 |
| YC-Z-L-1500 | 15.00 | 32 | 90 | 16 |
| YC-Z-L-1600 | 16.00 | 32 | 90 | 16 |
| YC-Z-L-1700 | 17.00 | 32 | 90 | 18 |
| YC-Z-L-1800 | 18.00 | 36 | 100 | 18 |
| YC-Z-L-1900 | 19.00 | 36 | 100 | 20 |
| YC-Z-L-2000 | 20.00 | 36 | 100 | 20 |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

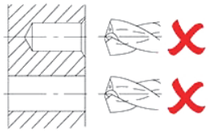
# 钻头切削参数（推荐）

**Drill cutting parameters (recommended)**

| 进给系列 Feed series mm/r | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| 直径 Diameter mm | 3.0 | 0.03 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 |
| | 4.0 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 |
| | 5.0 | 0.05 | 0.06 | 0.07 | 0.09 | 0.10 | 0.12 | 0.16 | 0.18 |
| | 6.0 | 0.05 | 0.07 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 |
| | 8.0 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 |
| | 10.0 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 |
| | 12.0 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 |
| | 16.0 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 |
| | 20.0 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.50 |

稳定的夹持（Stable clip）TIR<0.02

不得扩孔（3 刃钻除外）
Not use for expanding hole
（except 3 blade drill hole）



| 加工材料组 Processing Material Group ISO | 被加工材料 Processed materials | 硬度 Hardness HB | 硬度 Hardness HRC | 强度 Strength N/mm² | 材料举例 Materials example 中国 China | 材料举例 Materials example 国际 Internation |
|---|---|---|---|---|---|---|
| 1.P 钢（Steel） | 易切钢（Easy cutting steel） | <150 | | <700 | Y12，Y15Pb | 10S20，11SMnPb36 |
| | | >150 | | >700 | Y35，Y40Mn | 35S20，44SMn28 |
| | 碳素结构钢（Carbon structural steel） | <200 | | <700 | Q235A，Q275 | S235JR，S275J2G3 |
| | | <250 | | <850 | 35#，45# | C35E4，C45E4 |
| | | <300 | <31 | <1000 | 55#，65 | C55E4，C60E4 |
| | 合全结构级（Alloy structural steel） | <300 | <31 | <1000 | 20Cr，20CrMo | 20Cr4.18CrMo4 |
| | | <350 | <37 | <1200 | 40Cr.42CrMo | 41Cr4，42CrMo4 |
| | 模具钢（Die steel） | <300 | <31 | <1000 | Cr12，Cr12MoV1 | 210Cr12，160CrMoV12 |
| | | <350 | <37 | <1200 | CrWMn，3CrW8V | 105WCr1，30WCrV9 |
| | 工目钢（Tool steel） | <300 | <31 | <1000 | 9SiCr，Cr2 | -，100Cr2 |
| | 铁素体不锈钢（Fente stantess ste） | <200 | | <700 | 0Cr13Al.1Cr17 | X6CrAl13，X6Cr17-1 |
| | 马氏体不锈钢（Martenste stairiess steel） | <240 | | <820 | 2Cr13，1Cr17Ni2 | X20Cr13，X17CrNi16-2 |
| 2.M 不锈钢（Stainless steel） | 奥氏体不锈钢（Austenitic stainless steel） | <250 | | <850 | 0Cr19Ni9<br>0Cr17Ni17Mo2 | X5CrNiCrMo17-12-2<br>X5CrNi18-10 |
| | 双相不锈钢（Duplex stainless steel） | <250 | | <850 | 0Cr26Ni5Mo2 | |
| 3.K 铸铁（Cast iron） | 灰铸铁（Gray cast iron） | <240 | | | HT250，HT350 | 250，350 |
| | 球墨铸铁（Nodular cast iron） | <300 | | | QT500，QT600 | 500-7，600-3 |
| | 可锻铸铸铁（Malleable cast iron） | <300 | | | KTH350-10，KT400-05 | B35-10，W40-05 |
| 4.N 铝及铝合金（A lum in ium and aluminium alloys） | 纯铝（Pure aluminum） | <120 | | <400 | 1A50/L3 | Al99.5 |
| | 变形铝合金（Wugt alminum aloy）≤ 0.5Si | <120 | | <400 | LF5-1，LD30 | AlMg5，AlMg1SiCu |
| | 铸造铝合金（Cast alminum aloy）≤ 10Si | <160 | | <550 | ZL101，ZL104 | AlSi7Mg，AlSi9Cu3 |
| | 铸造铝合金（Cast aluminum akoy）>10Si | <160 | | <550 | ZL102.ZL109 | AlSi12，AlSi12Cu |
| 5.N 铜及铜合金（Copper and copper a lloys） | 紫铜，低合金钢（Copper，low aloy steel） | <120 | | <400 | Tu2，H96 | Cu-0F，CuSn5 |
| | 黄铜（Brass） | <160 | | <550 | HPb63，HPb59 | CuZn35Pb1，CuZn39Pb3 |
| | 青铜（Bronze） | <160 | | <550 | QSn8，BSn18-26 | CuSn8，CuNi18Zn27 |
| 6.S 难加工材料 优质耐热合金（Difficult to machine materials，high-quality heat-resistant alloys） | 结针 针合全（Pre ftanium earimaloy） | | | <400 | TA2 | Ti99.5 |
| | Alpha+beta 钛合全（Apha+beta ttanium akoy） | | | <1050 | TC4，- | TiAl6V4，TiAl6Zr5 |
| | 铁基耐热合金（Fe based heat estant aloy） | <280 | | <950 | | |
| | 镍铬、镍钼、镍钴合金、钴铬合金（Nickel chromium，nickel molybdenum，nickel cobalt alloy，cobalt chromium alloy） | <350 | | <1200 | | Hastelloy，Monel，Inconel |
| 7.H 高硬材料（High hard materials） | 济硬钢（Hardened steel） | | <48 | | | |
| | | | <62 | | | |
| | 冷硬铸铁（Chilled cast iron） | | <55 | | | |
| 8.G 石墨（Graphite） | 石墨（Graphite） | | | | | |

注：
1. 硬质合金钻头应在高刚性大功率机床上使用。
2. 应保证主轴——刀柄——刀尖跳动误差在 0.02 范围。
3. 使用内冷麻花钻头时，应保证内冷压力不小于：ϕ5 时 20kgf/cm²，ϕ10 时 15kgf/cm²，ϕ15 时 10kgf/cm²，ϕ20 时 7kgf/cm²；内冷直槽钻由于排屑困难，内冷压力还应相应提高。
4. 本推荐参数需根据实际加工情况进行调整。

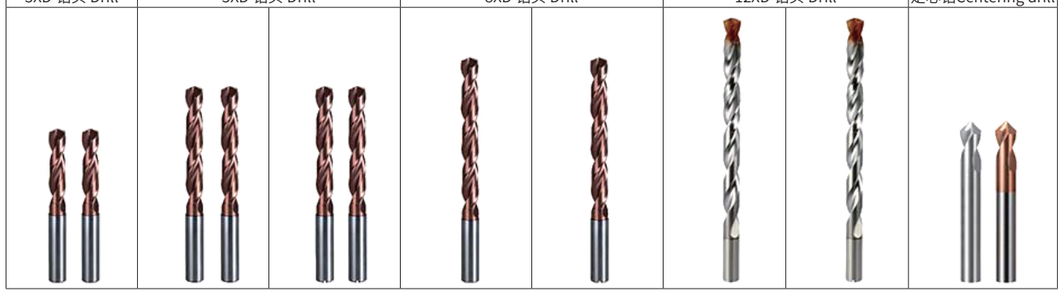
Note：
1.Solid carbide drills should be used on high-rigidity and high-power machine tools.
2.It should be ensured that the run-out error of the spindle, tool shank and tool tip is in the range of 0.02.
3.When using the internal coolant twist drill, the internal coolant pressure should be not less than：20kgf/cm² at ϕ5, 15kgf/cm² at ϕ10, 10kgf/cm² at ϕ15, 7kgf/cm² at ϕ20; Because of the difficulty of chip removal, the internal coolant pressure should be increased accordingly.
4.The recommended parameters need to be adjusted according to the actual processing conditions.



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 麻花钻/定心钻

**Twist drill/Centering drill**

| 3XD 钻头 Drill | | 5XD 钻头 Drill | | 8XD 钻头 Drill | | 12XD 钻头 Drill | | 定心钻Centering drill |
|---|---|---|---|---|---|---|---|---|
|  | | | | | | | | |

| Vc f | | | | | | | |
|---|---|---|---|---|---|---|---|
| m/min mm/r | | | | | | | |
| 130 E | 150 E | 117 E | 135 E | 104 E | 117 E | 104 E | 130 C |
| 110 D | 125 D | 99 D | 113 D | 88 D | 99 D | 88 D | 110 C |
| 105 E | 120 E | 95 E | 108 E | 84 E | 95 E | 84 E | 105 C |
| 90 E | 105 E | 81 E | 95 E | 72 E | 81 E | 72 E | 90 C |
| 80 E | 90 E | 72 E | 81 E | 64 E | 72 E | 64 E | 80 C |
| 85 E | 100 E | 77 E | 90 E | 68 E | 77 E | 68 E | 85 C |
| 75 D | 85 D | 68 D | 77 D | 60 D | 68 D | 60 D | 75 C |
| 85 D | 100 D | 77 D | 90 D | 68 D | 77 D | 68 D | 85 B |
| 75 D | 85 D | 68 D | 77 D | 60 D | 68 D | 60 D | 75 B |
| 60 D | 70 D | 54 D | 63 D | 48 D | 54 D | 48 D | 60 B |
| 55 C | 63 C | 50 C | 57 C | 44 C | 50 C | 44 C | 55 C |
| 55 C | 63 C | 50 C | 57 C | 44 C | 50 C | 44 C | 55 B |
| 45 B<br>45 B | 50 B<br>50 B | | 45 B<br>45 B | | 41 B<br>41 B | 36 B<br>36 B | 45 B<br>45 B |
| 160 G | 180 G | 144 G | 162 G | 128 G | 144 G | 128 G | 160 C |
| 120 F | 135 F | 108 F | 122 F | 96 F | 108 F | 96 F | 120 C |
| 90 F | 105 F | 81 F | 95 F | 72 F | 81 F | 72 F | 90 C |
| | | | | | 207 F | 184 F | 230 C |
| | | | | | 207 F | 184 F | 230 C |
| 160 G | 180 G | 144 G | 162 G | 128 G | 144 G | 128 G | 160 D |
| 140 G | 160 G | 126 G | 144 G | 112 G | 126 G | 112 G | 140 D |
| | | | | | 81 F | 184 F | 90 C |
| 160 G | 180 G | 144 G | 162 G | 128 G | 144 G | 128 G | 160 D |
| 90 G | 105 G | 81 G | 95 G | 72 G | 81G | 72 G | 90 C |
| | | | | | | | 40 B |
| | | | | | | | 35 B |
| | | | | | | | 32 B |
| | | | | | | | 30 B |
| | | | | | | | 30 B |
| | | | | | | | 30 B |
| | | | | | | | 27 B |
| | | | | | | | |

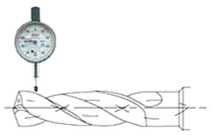
KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 钻头切削参数（推荐）

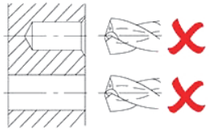
**Drill cutting parameters (recommended)**

| 进给系列 Feed series mm/r | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| 直径 Diameter mm | 3.0 | 0.03 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 |
| | 4.0 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 |
| | 5.0 | 0.05 | 0.06 | 0.07 | 0.09 | 0.10 | 0.12 | 0.16 | 0.18 |
| | 6.0 | 0.05 | 0.07 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 |
| | 8.0 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 |
| | 10.0 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 |
| | 12.0 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 |
| | 16.0 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 |
| | 20.0 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.50 |

稳定的夹持（Stable clip）TIR<0.02



不得扩孔（3 刃钻除外）
Not use for expanding hole
（except 3 blade drill hole）



| 加工材料组 Processing Material Group ISO | 被加工材料 Processed materials | 硬度 Hardness HB | HRC | 强度 Strength N/mm² | 材料举例 Materials example 中国 China | 国际 Internation |
|---|---|---|---|---|---|---|
| 1.P 钢（Steel） | 易切钢（Easy cutting steel） | <150 | | <700 | Y12，Y15Pb | 10S20，11SMnPb36 |
| | | >150 | | >700 | Y35，Y40Mn | 35S20，44SMn28 |
| | 碳素结构钢（Carbon structural steel） | <200 | | <700 | Q235A，Q275 | S235JR，S275J2G3 |
| | | <250 | | <850 | 35#，45# | C35E4，C45E4 |
| | | <300 | <31 | <1000 | 55#，65 | C55E4，C60E4 |
| | 合全结构级（Alloy structural steel） | <300 | <31 | <1000 | 20Cr，20CrMo | 20Cr4.18CrMo4 |
| | | <350 | <37 | <1200 | 40Cr.42CrMo | 41Cr4，42CrMo4 |
| | 模具钢（Die steel） | <300 | <31 | <1000 | Cr12，Cr12MoV1 | 210Cr12，160CrMoV12 |
| | | <350 | <37 | <1200 | CrWMn，3CrW8V | 105WCr1，30WCrV9 |
| | 工目钢（Tool steel） | <300 | <31 | <1000 | 9SiCr，Cr2 | -，100Cr2 |
| | 铁素体不锈钢（Fente stantess ste） | <200 | | <700 | 0Cr13Al.1Cr17 | X6CrAl13，X6Cr17-1 |
| | 马氏体不锈钢（Martenste stairiess steel） | <240 | | <820 | 2Cr13，1Cr17Ni2 | X20Cr13，X17CrNi16-2 |
| 2.M 不锈钢（Stainless steel） | 奥氏体不锈钢（Austenitic stainless steel） | <250 | | <850 | 0Cr19Ni9<br>0Cr17Ni17Mo2 | X5CrNiCrMo17-12-2<br>X5CrNi18-10 |
| | 双相不锈钢（Duplex stainless steel） | <250 | | <850 | 0Cr26Ni5Mo2 | |
| 3.K 铸铁（Cast iron） | 灰铸铁（Gray cast iron） | <240 | | | HT250，HT350 | 250，350 |
| | 球墨铸铁（Nodular cast iron） | <300 | | | QT500，QT600 | 500-7，600-3 |
| | 可锻铸铸铁（Malleable cast iron） | <300 | | | KTH350-10，KT400-05 | B35-10，W40-05 |
| 4.N 铝及铝合金（A lum in ium and aluminium alloys） | 纯铝（Pure aluminum） | <120 | | <400 | 1A50/L3 | Al99.5 |
| | 变形铝合金（Wugt alminum aloy）≤ 0.5Si | <120 | | <400 | LF5-1，LD30 | AlMg5，AlMg1SiCu |
| | 铸造铝合金（Cast alminum aloy）≤ 10Si | <160 | | <550 | ZL101，ZL104 | AlSi7Mg，AlSi9Cu3 |
| | 铸造铝合金（Cast aluminum akoy）>10Si | <160 | | <550 | ZL102.ZL109 | AlSi12，AlSi12Cu |
| 5.N 铜及铜合金（Copper and copper a lloys） | 紫铜，低合金钢（Copper，low aloy steel） | <120 | | <400 | Tu2，H96 | Cu-0F，CuSn5 |
| | 黄铜（Brass） | <160 | | <550 | HPb63，HPb59 | CuZn35Pb1，CuZn39Pb3 |
| | 青铜（Bronze） | <160 | | <550 | QSn8，BSn18-26 | CuSn8，CuNi18Zn27 |
| 6.S 难加工材料 优质耐热合金（Difficult to machine materials，high-quality heat-resistant alloys） | 结针 针合全（Pre ftanium earimaloy） | | | <400 | TA2 | Ti99.5 |
| | Alpha+beta 钛合全（Apha+beta ttanium akoy） | | | <1050 | TC4，- | TiAl6V4，TiAl6Zr5 |
| | 铁基耐热合金（Fe based heat estant aloy） | <280 | | <950 | | |
| | 镍铬、镍钼、镍钴合金、钴铬合金（Nickel chromium，nickel molybdenum，nickel cobalt alloy，cobalt chromium alloy） | <350 | | <1200 | | Hastelloy，Monel，Inconel |
| 7.H 高硬材料（High hard materials） | 济硬钢（Hardened steel） | | <48 | | | |
| | | | <62 | | | |
| | 冷硬铸铁（Chilled cast iron） | | <55 | | | |
| 8.G 石墨（Graphite） | 石墨（Graphite） | | | | | |

注：
1. 硬质合金钻头应在高刚性大功率机床上使用。
2. 应保证主轴——刀柄——刀尖跳动误差在 0.02 范围。
3. 使用内冷麻花钻头时，应保证内冷压力不小于：φ5 时 20kgf/cm²，φ10 时 15kgf/cm²，φ15 时 10kgf/cm²，φ20 时 7kgf/cm²；内冷直槽钻由于排屑困难，内冷压力还应相应提高。
4. 本推荐参数需根据实际加工情况进行调整。

Note：
1.Solid carbide drills should be used on high-rigidity and high-power machine tools.
2.It should be ensured that the run-out error of the spindle, tool shank and tool tip is in the range of 0.02.
3.When using the internal coolant twist drill, the internal coolant pressure should be not less than：20kgf/cm² at φ5, 15kgf/cm² at φ10, 10kgf/cm² at φ15, 7kgf/cm² at φ20; Because of the difficulty of chip removal, the internal coolant pressure should be increased accordingly.
4.The recommended parameters need to be adjusted according to the actual processing conditions.



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 直槽钻/三刃钻

**Straight flute drill/Triple flute drill**

| 4XD 直槽钻 Straight flute drill | 4XD 直槽钻 Straight flute drill | 7XD 直槽钻 Straight flute drill | 7XD 直槽钻 Straight flute drill | 10XD 直槽钻 Straight flute drill | 15XD 直槽钻 Straight flute drill | 5XD 麻花钻 Twist drill（3 刃） | |
|---|---|---|---|---|---|---|---|
|  | | | | | | | |
| Vc f | | | | | | | |
| m/min mm/r | | | | | | | |
| | | | | | | | 104 E |
| | | | | | | | 88 D |
| | | | | | | | 84 E |
| | | | | | | | 72 E |
| | | | | | | | 64 E |
| | | | | | | | 68 E |
| | | | | | | | 60 D |
| | | | | | | | 68 D |
| | | | | | | | 60 D |
| | | | | | | | 48 D |
| | | | | | | | 44 C |
| | | | | | | | 44 C |
| | | | | | | | 36 B<br>36 B |
| 120 G | 150 H | 120 G | 150 H | 112 F | 112 F | 110 F | 125 F |
| 100 F | 120 G | 100 F | 120 G | 96 E | 96 E | 85 E | 100 E |
| 75 F | 90 G | 75 F | 90 G | 72 E | 72 E | 65 E | 75 E |
| | | | | | | 160 F | 185 E |
| | | | | | | 160 F | 185 E |
| 160 F | 200 H | 160 F | 200 H | 180 F | 180 F | 110 G | 130 G |
| 160 F | 200 H | 160 F | 200 H | 180 F | 180 F | 100 G | 115 G |
| | | | | | | 160 F | 185 F |
| 136 F | 160 G | 136 F | 160 G | 128 E | 128 E | 110 G | 130 G |
| | 100 E | | 100 E | 80 C | 80 C | 65 E | 75 E |

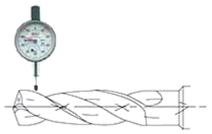
KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 钻头切削参数（推荐）

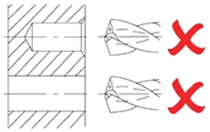
**Drill cutting parameters (recommended)**

| 进给系列 Feed series mm/r | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| 直径 Diameter mm | 3.0 | 0.03 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 |
| | 4.0 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 |
| | 5.0 | 0.05 | 0.06 | 0.07 | 0.09 | 0.10 | 0.12 | 0.16 | 0.18 |
| | 6.0 | 0.05 | 0.07 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 |
| | 8.0 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 |
| | 10.0 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 |
| | 12.0 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 |
| | 16.0 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 |
| | 20.0 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.50 |

稳定的夹持（Stable clip）TIR<0.02



不得扩孔（3 刃钻除外）
Not use for expanding hole
（except 3 blade drill hole）



| 加工材料组 Processing Material Group ISO | 被加工材料 Processed materials | 硬度 Hardness HB | 硬度 Hardness HRC | 强度 Strength N/mm² | 材料举例 Materials example 中国 China | 材料举例 Materials example 国际 Internation |
|---|---|---|---|---|---|---|
| 1.P 钢（Steel） | 易切钢（Easy cutting steel） | <150 | | <700 | Y12，Y15Pb | 10S20，11SMnPb36 |
| | | >150 | | >700 | Y35，Y40Mn | 35S20，44SMn28 |
| | 碳素结构钢（Carbon structural steel） | <200 | | <700 | Q235A，Q275 | S235JR，S275J2G3 |
| | | <250 | | <850 | 35#，45# | C35E4，C45E4 |
| | | <300 | <31 | <1000 | 55#，65 | C55E4，C60E4 |
| | 合全结构级（Alloy structural steel） | <300 | <31 | <1000 | 20Cr，20CrMo | 20Cr4.18CrMo4 |
| | | <350 | <37 | <1200 | 40Cr.42CrMo | 41Cr4，42CrMo4 |
| | 模具钢（Die steel） | <300 | <31 | <1000 | Cr12，Cr12MoV1 | 210Cr12，160CrMoV12 |
| | | <350 | <37 | <1200 | CrWMn，3CrW8V | 105WCr1，30WCrV9 |
| | 工目钢（Tool steel） | <300 | <31 | <1000 | 9SiCr，Cr2 | -，100Cr2 |
| | 铁素体不锈钢（Fente stantess ste） | <200 | | <700 | 0Cr13Al.1Cr17 | X6CrAl13，X6Cr17-1 |
| | 马氏体不锈钢（Martenste stairiess steel） | <240 | | <820 | 2Cr13，1Cr17Ni2 | X20Cr13，X17CrNi16-2 |
| 2.M 不锈钢（Stainless steel） | 奥氏体不锈钢（Austenitic stainless steel） | <250 | | <850 | 0Cr19Ni9<br>0Cr17Ni17Mo2 | X5CrNiCrMo17-12-2<br>X5CrNi18-10 |
| | 双相不锈钢（Duplex stainless steel） | <250 | | <850 | 0Cr26Ni5Mo2 | |
| 3.K 铸铁（Cast iron） | 灰铸铁（Gray cast iron） | <240 | | | HT250，HT350 | 250，350 |
| | 球墨铸铁（Nodular cast iron） | <300 | | | QT500，QT600 | 500-7，600-3 |
| | 可锻铸铸铁（Malleable cast iron） | <300 | | | KTH350-10，KT400-05 | B35-10，W40-05 |
| 4.N 铝及铝合金（A lum in ium and aluminium alloys） | 纯铝（Pure aluminum） | <120 | | <400 | 1A50/L3 | Al99.5 |
| | 变形铝合金（Wugt alminum aloy）≤ 0.5Si | <120 | | <400 | LF5-1，LD30 | AlMg5，AlMg1SiCu |
| | 铸造铝合金（Cast alminum aloy）≤ 10Si | <160 | | <550 | ZL101，ZL104 | AlSi7Mg，AlSi9Cu3 |
| | 铸造铝合金（Cast aluminum akoy）>10Si | <160 | | <550 | ZL102.ZL109 | AlSi12，AlSi12Cu |
| 5.N 铜及铜合金（Copper and copper a lloys） | 紫铜，低合金钢（Copper，low aloy steel） | <120 | | <400 | Tu2，H96 | Cu-0F，CuSn5 |
| | 黄铜（Brass） | <160 | | <550 | HPb63，HPb59 | CuZn35Pb1，CuZn39Pb3 |
| | 青铜（Bronze） | <160 | | <550 | QSn8，BSn18-26 | CuSn8，CuNi18Zn27 |
| 6.S 难加工材料 优质耐热合金（Difficult to machine materials，high-quality heat-resistant alloys） | 结针 针合全（Pre ftanium earimaloy） | | | <400 | TA2 | Ti99.5 |
| | Alpha+beta 钛合全（Apha+beta ttanium akoy） | | | <1050 | TC4，- | TiAl6V4，TiAl6Zr5 |
| | 铁基耐热合金（Fe based heat estant aloy） | <280 | | <950 | | |
| | 镍铬、镍钼、镍钴合金、钴铬合金（Nickel chromium，nickel molybdenum，nickel cobalt alloy，cobalt chromium alloy） | <350 | | <1200 | | Hastelloy，Monel，Inconel |
| 7.H 高硬材料（High hard materials） | 济硬钢（Hardened steel） | | <48 | | | |
| | | | <62 | | | |
| | 冷硬铸铁（Chilled cast iron） | | <55 | | | |
| 8.G 石墨（Graphite） | 石墨（Graphite） | | | | | |

注：
1. 硬质合金钻头应在高刚性大功率机床上使用。
2. 应保证主轴——刀柄——刀尖跳动误差在 0.02 范围。
3. 使用内冷麻花钻头时，应保证内冷压力不小于：φ5 时 20kgf/cm²，φ10 时 15kgf/cm²，φ15 时 10kgf/cm²，φ20 时 7kgf/cm²；内冷直槽钻由于排屑困难，内冷压力还应相应提高。
4. 本推荐参数需根据实际加工情况进行调整。

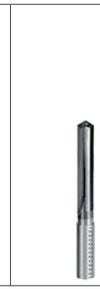
Note:
1.Solid carbide drills should be used on high-rigidity and high-power machine tools.
2.It should be ensured that the run-out error of the spindle, tool shank and tool tip is in the range of 0.02.
3.When using the internal coolant twist drill, the internal coolant pressure should be not less than：20kgf/cm² at φ5, 15kgf/cm² at φ10, 10kgf/cm² at φ15, 7kgf/cm² at φ20; Because of the difficulty of chip removal, the internal coolant pressure should be increased accordingly.
4.The recommended parameters need to be adjusted according to the actual processing conditions.



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 强力钻/铝合金专用钻头

**Power drill/Aluminum alloy special drill tip**

| 3XD 强力钻 Power drill | | | | 5XD 铝合金专用钻头 Aluminum alloy special drill tip | | 8XD 铝合金专用钻头 Aluminum alloy special drill tip | |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |

| Vc f m/min mm/r | | | | | | | |
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| | | | | | | | |
| 160 G | 180 G | 162 G | 144 G | | | | |
| 120 F | 135 F | 122 F | 108 F | | | | |
| 90 F | 105 F | 95 F | 81 F | | | | |
| | | | | 170 F | 265 G | 170 F | 265 G |
| | | | | 170 F | 265 G | 170 F | 265 G |
| | | | | 120 G | 180 H | 120 G | 180 H |
| | | | | 105 G | 160 H | 105 G | 160 H |
| | | | | 80 E | 105 F | 80 E | 105 F |
| | | | | 120 F | 180 G | 120 F | 180 G |
| 120 F | 135 F | 122 F | 108 F | 80 E | 105 E | 80 E | 105 E |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 38 C | 42 C | 28 B | 38 C | | | | |
| 30 A | 35 A | 28 A | 28 C | | | | |
| 36 B | 40 B | 32 B | 32 B | | | | |
| | | | | | | | |

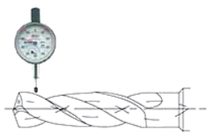
KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 钻头切削参数（推荐）

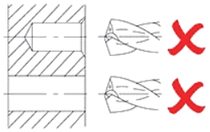
## Drill cutting parameters (recommended)

| 进给系列 Feed series mm/r | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| 直径 Diameter mm | 3.0 | 0.03 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 |
| | 4.0 | 0.04 | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 |
| | 5.0 | 0.05 | 0.06 | 0.07 | 0.09 | 0.10 | 0.12 | 0.16 | 0.18 |
| | 6.0 | 0.05 | 0.07 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 |
| | 8.0 | 0.06 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 |
| | 10.0 | 0.08 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 |
| | 12.0 | 0.10 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 |
| | 16.0 | 0.12 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 |
| | 20.0 | 0.15 | 0.18 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.50 |

稳定的夹持（Stable clip）TIR<0.02



不得扩孔（3 刃钻除外）
Not use for expanding hole
（except 3 blade drill hole）



| 加工材料组 Processing Material Group ISO | 被加工材料 Processed materials | 硬度 Hardness HB | 硬度 Hardness HRC | 强度 Strength N/mm² | 材料举例 Materials example 中国 China | 材料举例 Materials example 国际 Internation |
|---|---|---|---|---|---|---|
| 1.P 钢（Steel） | 易切钢（Easy cutting steel） | <150 | | <700 | Y12，Y15Pb | 10S20，11SMnPb36 |
| | | >150 | | >700 | Y35，Y40Mn | 35S20，44SMn28 |
| | 碳素结构钢（Carbon structural steel） | <200 | | <700 | Q235A，Q275 | S235JR，S275J2G3 |
| | | <250 | | <850 | 35#，45# | C35E4，C45E4 |
| | | <300 | <31 | <1000 | 55#，65 | C55E4，C60E4 |
| | 合全结构级（Alloy structural steel） | <300 | <31 | <1000 | 20Cr，20CrMo | 20Cr4.18CrMo4 |
| | | <350 | <37 | <1200 | 40Cr.42CrMo | 41Cr4，42CrMo4 |
| | 模具钢（Die steel） | <300 | <31 | <1000 | Cr12，Cr12MoV1 | 210Cr12，160CrMoV12 |
| | | <350 | <37 | <1200 | CrWMn，3CrW8V | 105WCr1，30WCrV9 |
| | 工目钢（Tool steel） | <300 | <31 | <1000 | 9SiCr，Cr2 | -，100Cr2 |
| | 铁素体不锈钢（Fente stantess ste） | <200 | | <700 | 0Cr13Al.1Cr17 | X6CrAl13，X6Cr17-1 |
| | 马氏体不锈钢（Martenste stairiess steel） | <240 | | <820 | 2Cr13，1Cr17Ni2 | X20Cr13，X17CrNi16-2 |
| 2.M 不锈钢（Stainless steel） | 奥氏体不锈钢（Austenitic stainless steel） | <250 | | <850 | 0Cr19Ni9<br>0Cr17Ni17Mo2 | X5CrNiCrMo17-12-2<br>X5CrNi18-10 |
| | 双相不锈钢（Duplex stainless steel） | <250 | | <850 | 0Cr26Ni5Mo2 | |
| 3.K 铸铁（Cast iron） | 灰铸铁（Gray cast iron） | <240 | | | HT250，HT350 | 250，350 |
| | 球墨铸铁（Nodular cast iron） | <300 | | | QT500，QT600 | 500-7，600-3 |
| | 可锻铸铸铁（Malleable cast iron） | <300 | | | KTH350-10，KT400-05 | B35-10，W40-05 |
| 4.N 铝及铝合金（A lum in ium and aluminium alloys） | 纯铝（Pure aluminum） | <120 | | <400 | 1A50/L3 | Al99.5 |
| | 变形铝合金（Wugt aliminum aloy）≤ 0.5Si | <120 | | <400 | LF5-1，LD30 | AlMg5，AlMg1SiCu |
| | 铸造铝合金（Cast alminum aloy）≤ 10Si | <160 | | <550 | ZL101，ZL104 | AlSi7Mg，AlSi9Cu3 |
| | 铸造铝合金（Cast aluminum akoy）>10Si | <160 | | <550 | ZL102.ZL109 | AlSi12，AlSi12Cu |
| 5.N 铜及铜合金（Copper and copper a lloys） | 紫铜，低合金钢（Copper，low aloy steel） | <120 | | <400 | Tu2，H96 | Cu-0F，CuSn5 |
| | 黄铜（Brass） | <160 | | <550 | HPb63，HPb59 | CuZn35Pb1，CuZn39Pb3 |
| | 青铜（Bronze） | <160 | | <550 | QSn8，BSn18-26 | CuSn8，CuNi18Zn27 |
| 6.S 难加工材料 优质耐热合金（Difficult to machine materials，high-quality heat-resistant alloys） | 结钛 针合全（Pre ftanium earimaloy） | | | <400 | TA2 | Ti99.5 |
| | Alpha+beta 钛合全（Apha+beta ttanium akoy） | | | <1050 | TC4，- | TiAl6V4，TiAl6Zr5 |
| | 铁基耐热合金（Fe based heat estant aloy） | <280 | | <950 | | |
| | 镍铬、镍钼、镍钴合金、钴铬合金（Nickel chromium，nickel molybdenum，nickel cobalt alloy，cobalt chromium alloy） | <350 | | <1200 | | Hastelloy，Monel，Inconel |
| 7.H 高硬材料（High hard materials） | 济硬钢（Hardened steel） | | <48 | | | |
| | | | <62 | | | |
| | 冷硬铸铁（Chilled cast iron） | | <55 | | | |
| 8.G 石墨（Graphite） | 石墨（Graphite） | | | | | |

注：
1. 硬质合金钻头应在高刚性大功率机床上使用。
2. 应保证主轴——刀柄——刀尖跳动误差在 0.02 范围。
3. 使用内冷麻花钻头时，应保证内冷压力不小于：φ5 时 20kgf/cm²，φ10 时 15kgf/cm²，φ15 时 10kgf/cm²，φ20 时 7kgf/cm²；内冷直槽钻由于排屑困难，内冷压力还应相应提高。
4. 本推荐参数需根据实际加工情况进行调整。

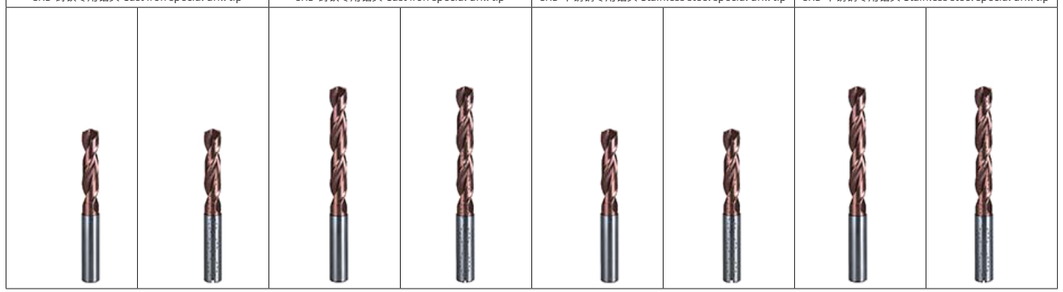
Note:
1.Solid carbide drills should be used on high-rigidity and high-power machine tools.
2.It should be ensured that the run-out error of the spindle, tool shank and tool tip is in the range of 0.02.
3.When using the internal coolant twist drill, the internal coolant pressure should be not less than：20kgf/cm² at φ5, 15kgf/cm² at φ10, 10kgf/cm² at φ15, 7kgf/cm² at φ20; Because of the difficulty of chip removal, the internal coolant pressure should be increased accordingly.
4.The recommended parameters need to be adjusted according to the actual processing conditions.



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 铸铁/不锈钢专用钻头

## Cast iron/Stainless steel special drill tip

| 3XD 铸铁专用钻头 Cast iron special drill tip | | 5XD 铸铁专用钻头 Cast iron special drill tip | | 3XD 不锈钢专用钻头 Stainless steel special drill tip | | 5XD 不锈钢专用钻头 Stainless steel special drill tip | |
|---|---|---|---|---|---|---|---|
|  | | | | | | | |

| Vc f m/min mm/r | | | | | | | |
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| | | | | | | | |
| | | | | 55 C | 63 C | 50 C | 57 C |
| | | | | 65 C | 63 C | 50 C | 57 C |
| | | | | 45 B<br>45 B | 50 B<br>50 B | 41 B<br>41 B | 45 B<br>45 B |
| 160 G | 180 G | 144 G | 162 G | | | | |
| 120 F | 135 F | 108 F | 122 F | | | | |
| 90 F | 105 F | 81 F | 95 F | | | | |
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| | | | | 45 B | | 41 B | |
| | | | | 40 B | | 36 B | |
| | | | | 38 C | | 38 C | |
| | | | | 35 C | | 32 C | |
| 38 C | 42 C | | | | | | |
| 30 A | 35 A | | | | | | |
| 36 B | 40 B | | | | | | |
| | | | | | | | |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 平底钻（FBD 系列）推荐切削参数

**Flat bottom drill（FBD series）cutting data parameters**

| 切削速度（Cutting speed） | | | 刀具直径（Cutter diameter） | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 初始值 | sfm 米 / 分钟 (M/min) | 49 98 164 262 328 394 492 656 820 984 1148 | 英寸（Inch） | 0.118 | 0.157 | 0.236 | 0.315 | 0.394 | 0.472 | 0.630 | 0.787 |
| | | 15 30 50 80 100 120 150 200 250 300 350 | 毫米（mm） | 3.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 16.0 | 20.0 |
| M[1] 奥氏体不锈钢（M1 austenitic stainless steel）含量（Content）C=.05%-.15% 抗拉强度（Tensile strength）RM（MPa）": <650 硬度（HB）：130-200 | | | | | | | | | | | |
| | | | 不同直径的进给率（Feed rate of different diameters） | | | | | | | | |
| 246 | sfm 米 / 分钟 (M/min) | 197 295 | ipr | .001-.003 | .002-.005 | .003-.007 | .004-.008 | .005-.008 | .005-.009 | .006-.010 | .007-.011 |
| 75 | | 60 90 | 毫米 / 转 (Mm/rev) | 0.03-0.08 | 0.06-0.13 | 0.08-0.18 | 0.10-0.20 | 0.12-0.22 | 0.13-0.23 | 0.15-0.25 | 0.18-0.28 |
| M2 高强度奥氏体不锈钢和铸造不锈钢（M2 high strength austenitic stainless steel and cast stainless steel）含量（Content）C=.05%-.15% 抗拉强度（Tensile strength）RM（MPa）': 500-700 硬质（HB）：150-230 | | | | | | | | | | | |
| | | | 不同直径的进给率（Feed rate of different diameters） | | | | | | | | |
| 197 | sfm 米 / 分钟 (M/min) | 164 262 | ipr | .001-.003 | .002-.005 | .003-.007 | .004-.008 | .005-.008 | .005-.009 | .006-.010 | .007-.011 |
| 60 | | 50 80 | 毫米 / 转 (Mm/rev) | 0.03-0.08 | 0.06-0.13 | 0.08-0.18 | 0.10-0.20 | 0.12-0.22 | 0.13-0.23 | 0.15-0.25 | 0.18-0.28 |
| M3 双相钢不锈钢（M3 duplex stainless steel）含量（Content）C=.05%-.2% 抗拉强度（Tensile strength）RM（MPa）': <900 硬质（HB）：135-275 | | | | | | | | | | | |
| | | | 不同直径的进给率（Feed rate of different diameters） | | | | | | | | |
| 180 | sfm 米 / 分钟 (M/min) | 131 230 | ipr | .001-.003 | .002-.005 | .003-.007 | .004-.008 | .005-.008 | .005-.009 | .006-.010 | .007-.011 |
| 55 | | 40 70 | 毫米 / 转 (Mm/rev) | 0.03-0.08 | 0.06-0.13 | 0.08-0.18 | 0.10-0.20 | 0.12-0.22 | 0.13-0.23 | 0.15-0.25 | 0.18-0.28 |
| S1 铁基耐热合金（S1 based heat resistant alloy）抗拉强度（Tensile strength）RM（MPa）': 500-1200 硬质 | | | | | | | | | | | |
| | | | 不同直径的进给率（Feed rate of different diameters） | | | | | | | | |
| 56 | sfm 米 / 分钟 (M/min) | 49 66 | ipr | .001-.003 | .002-.005 | .002-.004 | .002-.004 | .003-.005 | .004-.006 | .005-.007 | .006-.008 |
| 17 | | 15 20 | 毫米 / 转 (Mm/rev) | 0.03-0.08 | 0.04-0.09 | 0.05-0.10 | 0.05-0.10 | 0.08-0.13 | 0.10-0.15 | 0.13-0.18 | 0.15-0.20 |
| S2 镍基或钴基耐热合金（S2 nickel based or cobalt based heat resistant alloys）抗拉强度（Tensile strength）RM（MPa）': 1000-1450 硬质 | | | | | | | | | | | |
| | | | 不同直径的进给率（Feed rate of different diameters） | | | | | | | | |
| 66 | sfm 米 / 分钟 (M/min) | 33 98 | ipr | .001-.004 | .002-.004 | .002-.004 | .002-.004 | .003-.005 | .004-.006 | .005-.007 | .006-.008 |
| 20 | | 10 30 | 毫米 / 转 (Mm/rev) | 0.03-0.10 | 0.04-0.10 | 0.05-0.10 | 0.05-0.10 | 0.08-0.13 | 0.10-0.15 | 0.13-0.18 | 0.15-0.20 |
| S4 钛合金（S4 titanium alloy）抗拉强度（Tensile strength）RM（MPa）：900-1600 硬质（HB）：300-400 | | | | | | | | | | | |
| | | | 不同直径的进给率（Feed rate of different diameters） | | | | | | | | |
| 148 | sfm 米 / 分钟 (M/min) | 98 180 | ipr | .001-.002 | 001-.002 | .002-.003 | 002-.003 | 003-.004 | 003-.004 | 004-，005 | 004-.005 |
| 45 | | 30 55 | 毫米 / 转 (Mm/rev) | 0.02-04 | 0.04-0.06 | 0.05-0.07 | 0.05-0.07 | 0.07-0.10 | 0.07-0.10 | 0.10-0.12 | 0.10-0.12 |

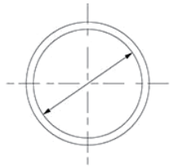
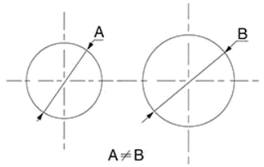
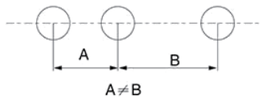
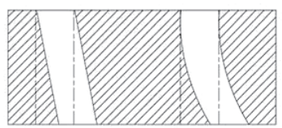
1 MPa=145psi



KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 被加工孔常见问题及解决方法

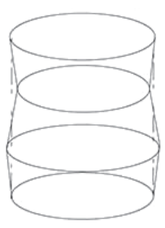
**Problem and solving method for machining hole**

| | 问题 Problem | 原因 Reason | 解决方法 Solution |
|---|---|---|---|
| 孔 Hole | 孔径扩大 Hole size expansion  | 钻头装夹不好，主轴本身跳动量过大<br>Drill holding is not good, the machine spindle run-out is large | 选择精度高的刀柄及夹具，校正主轴，每次装夹钻头时，仔细测量与调整<br>Use rigid and precise machine and tool holder, when clamping drill, carefully measurement and adjustment |
| | | 顶角不对称，钻头跳动过大，横刃偏心<br>Spot angle asymmetry, drill run-out is large, the chisel edge eccentric | 修磨刀具，修磨后检查精度<br>Re-grinding tool, inspect precision after re-grinding |
| | 孔径的一致性较差<br>Poor uniformity of hole size   | 顶角不对称，钻头跳动过大，横刃偏心，刃带棱面磨损过大<br>Spot angle asymmetry, drill run-out is large, the chisel edge eccentric, the wear of the edge of the drill is large | 修磨刀具，修磨后检查精度<br>Re-grinding tool, inspect precision after re-grinding |
| | | 钻头装夹不好，主轴本身跳动量过大，工件装夹不牢固<br>Drill holding is not good, the machine spindle run-out is large, the workpiece clamping is not strong | 选择精度高的刀柄及夹具，校正主轴，每次装夹钻头时，仔细测量与调整<br>Use rigid and precise machine and tool holder, when clamping drill, carefully measurement and adjustment |
| | | 进给量过大 Large feed rate | 降低进给速度 Reduce feed rate |
| | | 切削液供给不足 Low fluid supply | 改变切削液供给方法，增加流量<br>Changing the fluid supply method, increasing the flow rate |
| | 孔的位置精度较差<br>Bad hole location accuracy   | 机床主轴重复定位精度低，钻头装夹不好，主轴本身跳动量大<br>Low machine tool repeatability, drill holding is not good, the machine spindle run-out is large | 提高机床重复定位精度，选择精度高的刀柄及夹具，校正主轴，每次装夹钻头时，仔细测量与调整<br>Improved the machine tool repeatability, use rigid and precise machine and tool holder, when clamping drill, carefully measurement and adjustment |
| | | 被加工表面与进给方向不垂直<br>Feed direction and processed surface is not vertical | 将被加工表面调整成与进给方向垂直<br>Adjust the processed surface |
| | | 顶尖与轴心不重合（车床）<br>The centre and the lathe axis are not coincident（lathe） | 加工前仔细调整<br>Carefully adjustment before processing |
| | 直线度不良 Bad straightness<br>垂直度不良 Bad verticality  | 刀具磨损过大 Large tool wear | 重新修磨 Re-grinding |
| | | 中心孔精度不好 Bad central bore accuracy | 提高中心孔位置精度<br>Improve the position accuracy of the center bore |
| | | 顶角不对称，钻头跳动过大，横刃偏心<br>Spot angle asymmetry, drill run-out is large, the chisel edge eccentric | 修磨刀具，修磨后检查精度<br>Re-grinding tool, inspect precision after re-grinding |
| | | 钻头刚性不足 Bad drill rigidity | 提高钻头刚性 Improve drill rigidity |
| | | 被切削平面不平，顶尖与轴心不重合（车床）<br>The cutting surface is un-vertical, the centre and the lathe axis are not coincide(lathe) | 调整为水平面或预加工为水平面，预钻中心孔<br>Adjust the processed surface, or pre-drill the center bore |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

# 被加工孔常见问题及解决方法

**Problem and solving method for machining hole**

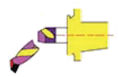
| | 问题 Problem | 原因 Reason | 解决方法 Solution |
|---|---|---|---|
| 孔<br>Hole | 圆度较差<br>Bad roundness<br>  | 顶角不对称，钻头跳动过大，横刃偏心<br>Spot angle asymmetry, drill run-out is large, the chisel edge eccentric | 修磨刀具，修磨后检查精度<br>Re-grinding tool, inspect precision after re-grinding |
| | | 钻头装夹不好，主轴本身跳动量过大，工件装夹不牢固<br>Drill holding is not good, the machine spindle run-out is large, the workpiece clamping is not strong | 选择精度高的刀柄及夹具，校正主轴，每次装夹钻头时，仔细测量与调整<br>Use rigid and precise machine and tool holder, when clamping drill, carefully measurement and adjustment |
| | | 后角过大 Large rear angle | 重新修磨 Re-grinding |
| | | 钻头刚性不足 Bad drill rigidity | 提高钻头刚性 Improve drill rigidity |
| | 被加工工件表面质量差<br>Bad processed surface quality | 修磨不当 Improper grinding | 重新修磨校正 Re-grinding, adjustment |
| | | 切削液供给不足或型号不匹配<br>Low fluid supply, wrong fluid model | 改变切削液供给方法，增加流量，采用润滑性好的切削油<br>Changing the fluid supply method, increasing the flow rate, select the suitable fluid |
| | | 钻头装夹不好，主轴本身跳动量过大<br>Drill holding is not good, the machine spindle run-out is large | 选择精度高的刀柄及夹具，校正主轴<br>Use rigid and precise machine and tool holder |
| | | 进给速度过大 Large feed rate | 降低进给速度 Reduce feed rate |
| | | 切削刃磨损过大，刃带棱面粘结严重<br>The cutting edge wear is too large, the bonded edge of the cutting tool is serious | 重新修磨切削刃，使用涂层钻头<br>Re-grinding drill, use the coating drill |
| | | 切削阻塞 Cutting obstruction | 重选钻头（容器槽型、螺旋角等），重选加工方法（进给速度的调整，采用分步阶梯方式等）<br>Select new drill(chip groove,helic,etc.), select the new processing method(feed adjustment, the step drilling method,etc.) |
| | 圆柱度较差<br>Bad cylindricity<br>  | 顶角不对称，钻头跳动过大，横刃偏心，刃带棱面磨损过大<br>Spot angle asymmetry, drill run-out is large, the chisel edge eccentric, the wear of the edge of the drill is large | 修磨刀具，修磨后检查加大<br>Re-grinding tool, inspect precision after re-grinding |
| | | 进给速度过低 Low feed rate | 提高进给速度 Improve feed speed |





# 钻头失效分析

**Drill failure analysis**

| | 问题 Issue | 可能原因 Possible cause | | 对策 Countermeasure |
|---|---|---|---|---|
| | | 客户 Client | 硬质合金钻头 Solid carbide drill tip | |
| 钻头失效<br>Drill bit failure | 积屑瘤 Built-up edge<br>  | 切削速度过低 Cutting speed is too low | | 选择合理的切削参数<br>Choose reasonable cutting parameters |
| | | 冷却不充分 Insufficient cooling | 切削刃不锋利<br>The cutting edge is not sharp | |
| | | | 无涂层 Uncoated | 正确修磨 Correct grinding |
| | | | | 选择涂层钻头 Select coated drill tip |
| | 崩横刃 Broken chisel edge<br>  | 进给太快 Too fast feed | | 选择合理的切削参数<br>Choose reasonable cutting parameters |
| | | 切削速度过低 Cutting speed is too low | | 选择合理的切削参数<br>Choose reasonable cutting parameters |
| | | | 选型不当，横刃虚<br>Improper selection,chisel edge is empty | 正确选型，加强横刃<br>Correct selection, strength the chisel edge |
| | 崩刀尖 Broken tip<br>  | 刀尖跳动过大，单刃切削<br>Excessive tip runout, single edge cutting | | 改善系统刚性，跳动小于 0.02<br>Improve system rigidity, runout less than 0.02 |
| | | 切削速度过高 Cutting speed too high | | 选择合理的切削参数<br>Choose reasonable cutting parameters |
| | | 冷却不充分 Insufficient cooling | | 采用内冷，调整外冷却方向<br>Adopt internal coolant and adjust the cooling direction |
| | 崩主刃 Broken main edge<br>  | 钻孔工艺不稳定<br>Unstable drilling process | | 改善系统刚性，跳动小于 0.02<br>Improve system rigidity, runout less than 0.02 |
| | | 已到寿命 使用过度<br>Reached the end of life, overuse | | 正确修磨 Correct grinding |
| | | 钻孔工艺不稳定<br>Unstable drilling process | 选型不当，主刃虚<br>Improper selection, main edge is empty | 正确选型，加强主刃<br>Correct selection, strength the chisel edge |
| | 崩棱边有缠绕<br>The side edge is twisted<br>  | 主轴刀柄连接精度低，刀尖跳动大<br>Spindle shank connection accuracy is low, excessive tip runout | | 改善系统刚性，跳动小于 0.02<br>Improve system rigidity, runout less than 0.02 |
| | | 切削速度过高<br>Cutting speed too high | | 选择合理的切削参数<br>Choose reasonable cutting parameters |
| | | | | 采用内冷，调整外冷却方向<br>Adopt internal coolant and adjust the cooling direction |
| | | 冷却不充分<br>Insufficient cooling | 选型不当，棱边过宽<br>Improper selection, edge too wide | 正确选型，减小棱边<br>Correct selection, reduce edge |
| | | | 选型不当，棱边过小<br>Improper selection, edge too small | 正确选型，加大棱边<br>Correct selection, increase edge |
| | 断刀 Broken<br>  | 缠刀 Winding of tool | | 减少操作失误 Reduce operation errors |
| | | 进给过大，切削速度过低<br>The feed is too large, cutting speed is too low | | 选择合理的切削参数<br>Choose reasonable cutting parameters |
| | | 已到寿命 使用过度<br>Reached the end of life, overuse | | 正确修磨 Correct grinding |
| | | 排屑槽堵塞 Geometry is blocked | | 选择合适钻头、啄钻、改善冷却<br>Select the right drill tip, peck, improve cooling |
| | | | 选型不当 Improper selection | 正确选型 Correct selection |
| | | | 棱边破损，铁屑导致缠绕<br>Broken edge, iron fillings cause entanglement | 及时修磨，避免棱边崩损<br>Timely grinding to avoid edge breakage |
| 加工不合格<br>Unqualified processing | 负载大 Heavy load | | 选型不当，芯厚大<br>Improper selection, large core thickness | 正确选型、减少芯厚<br>Correct selection, reduce core thickness |
| | | | 选型不当，刃口处理不当<br>Improper selection, improper handing of cutting edge | 正确选型、刃口锋利<br>Correct selection, sharp cutting edge |
| | 孔偏小 Small hole | 钻孔工艺不稳定，孔斜，直线度差<br>Unstable drilling process, the hole is inclined, the straightness is bad | | 改善系统刚性，跳动小于 0.02，改善工件支撑<br>Improve system rigidity, runout less than 0.02, improve workpiece support |
| | | 进给过快，孔斜<br>Too fast feed, the hole is inclined | | 减小进给 Reduce feed |
| | 孔偏大 Oversize hole | 钻孔工艺不稳定<br>Unstable drilling process | | 改善系统刚性，跳动小于 0.02，改善工件支撑<br>Improve system rigidity, runout less than 0.02, improve workpiece support |
| | | 主轴刀柄连接精度低，刀尖跳动大<br>Spindle shank connection accuracy is low, excessive tip runout | | |
| | | | 横刃、主刃不对称<br>The chisel edge and main edge are asymmetrical | 正确制造和修磨<br>Correct manufacturing and grinding |
| | | | 钻头直径公差大<br>Large tolerance of drill tip diameter | 减小钻头直径 Reduce drill tip diameter |
| | 表面质量差 Bad surface quality | 主轴刀柄连接精度低，刀尖跳动大<br>Spindle shank connection accuracy is low, excessive tip runout | | 改善系统刚性，跳动小于 0.02<br>Improve system rigidity, runout less than 0.02 |
| | | 冷却不充分 Insufficient cooling | | 采用内冷，调整外冷却方向<br>Adopt internal coolant and adjust the cooling direction |
| | | 润滑不充分 Inadequate lubrication | | 提高冷却液含油量，或者采用切削油<br>Increase the oil content of the coolant or use cutting oil |
| | | 进给过快 Too fast feed | | 减少进给 Reduce feed |
| | | 切削缠绕 Cutting winding | | 及时修磨 Timely grinding |
| | | | 选型不当，无涂层<br>Improper selection, uncoated | 正确选型，钻头涂层<br>Correct selection, drill tip coating |

KMSJ模块化钻头尺寸●公制,参看P11页内容。KMSJ Modular drilling tool size●Metric, see pages P11.

FONHAE 方瀚

应用技术是检验刀具性能的关键一步，设计制造的刀具是否可以满足客户要求，是否可以提升客户的加工效率，降低成本，都需要应用技术的支持。同样一把刀具，不同的加工参数和策略，结果可能会差异巨大。
如有任何需要请联系我们，期待与您合作!

Application technology is a key step to test tool performance. Whether the tool designed and manufactured can meet customer requirements, whether it can improve customer processing efficiency and reduce costs, all need the support of application technology. The same tool, different processing parameters and strategies, the results may be very different.
If you have any needs, please contact us and look forward to cooperating with you.