

钻头 Drills



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方瀚工具源头生产厂家

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



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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TiAlN 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，TiAlN 复合涂层，韧性极佳的基体材料。改善了抗崩刀性能，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

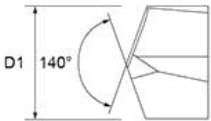
- FD2210 material, composite coating with TiAlN as the matrix material, can be used for high-speed cutting, especially suitable for steel material processing.
- FD2612 material, TiAlN composite coating, excellent toughness matrix material. Improved edge resistance, suitable for harsh processing conditions.
- 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切削刀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刃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。
- 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 TiAlN 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

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- 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
KMSJ2143YG	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
KMSJ2250YG	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 刀片·YG

KMSJ insert·YG



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● 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

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

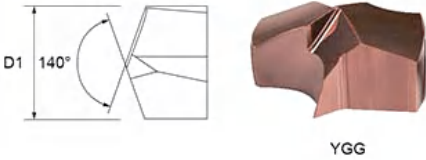
材料分组 Material grouping	切削速度 Cutting speed—vc 范围 Radius—m/min				公制 Metric						
	最小值 Minimum value	初始值 Initial value	最大值 Maximum value		根据直径推荐进给率 Recommended feed rate according to diameter (f)						
						12.5	16.0	20.0	25.4	32.0	40.0
P	1	70	90	110	mm/ 转	0, 15-0, 31	0, 17-0, 36	0, 19-0, 41	0, 25-0, 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 刀片·YGG

KMSJ insert·YGG



- KMSJ FD2210 YG 切削刀在钢材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.



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● 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 刀片·YGG

KMSJ insert·YGG



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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

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- 首选Preferred
- 备选Alternative

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

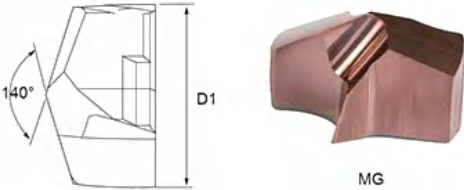
公差 YGG·公制	
D1 公制 Metric	公差 Allowance h8
12, 5-18	+0, 000/-0, 027
>18-30	+0, 000/-0, 033
>30-40	+0, 000/-0, 039

KMSJ 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，同时其钻尖和切削刀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.



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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

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- 首选Preferred
- 备选Alternative

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 刀片·MG

KMSJ insert·MG



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P	○
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- 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

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

- 模块化钴硬质合金刀片·KMSJ·MG 槽型·材质FD2210·内冷·公制

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

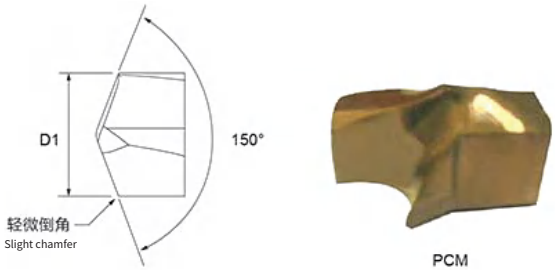
材料分组 Material grouping		切削速度 Cutting speed—vc 范围 Radius—m/min			公制 Metric						
					根据直径推荐进给率 Recommended feed rate according to diameter (f)						
		最小值 Minimum value	初始值 Initial value	最大值 Maximum value		12.5	16.0	20.0	25.4	32.0	40.0
P	1	110	140	170	mm/ 转	0, 15-0, 31	0, 17-0, 36	0, 19-0, 41	0, 25-0, 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 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.



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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

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

P	●
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- 首选Preferred
- 备选Alternative

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

KMSJ 刀片·PCM

KMSJ insert·PCM



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 L4 max				5xD L4 max				7xD L4 max				10xD L4 max			
mm	inch	L	L1	扳手	扳手	L	L1	扳手	扳手	L	L1	扳手	扳手	L	L1	扳手	扳手
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 T912 柄·1×D·公制

KMSJ T912 Shank·1×D·Metric

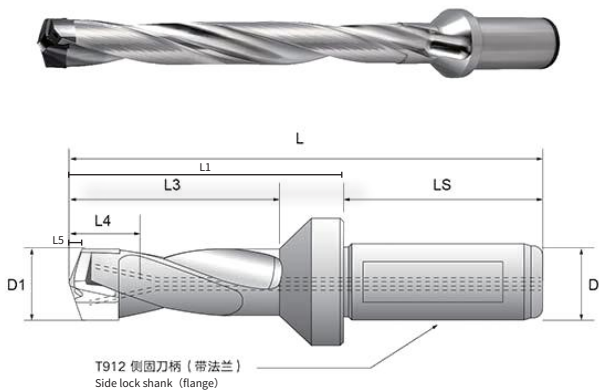


- 所有钻体应使用指定型号刀片。
- 与钻头产品一同发送中心锁紧螺钉、扳手。
- 单独定购刀片，参看P04-P11页内容。

• 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.



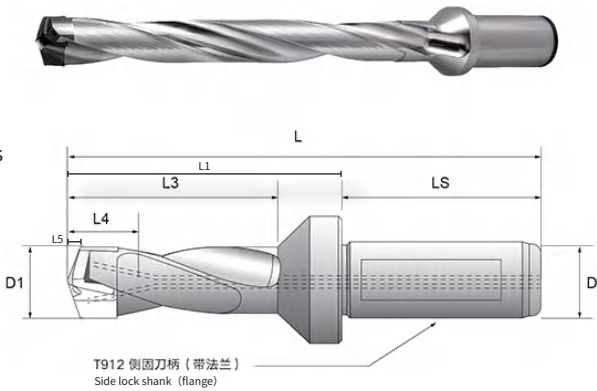
 1×D	D1		D1 max		L	L1	L4 max	L5	LS	D	刀座尺寸 Dimensions	中心锁紧 螺钉 Center locking screw	扳手 wrench
	mm	in	mm	in									
KMSJ125R1T16M	12, 500	.4921	13, 500	.5314	78	-	14	2, 0	48	16	-2	M017	KMSJ294
KMSJ136R1T16M	13, 510	.5319	14, 500	.5708	81	-	15	2, 2	48	16	B	M016	KMSJ289
KMSJ146R1T20M	14, 510	.5713	15, 874	.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 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		D1 max		L5	LS	D	刀座尺寸 Dimensions	中心锁紧 螺钉 Center locking screw
		mm	in	mm	in					
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 T912 柄·3×D/5×D·公制

KMSJ T912 Shank·3×D/5×D· Metric



 3×D	 5×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					
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

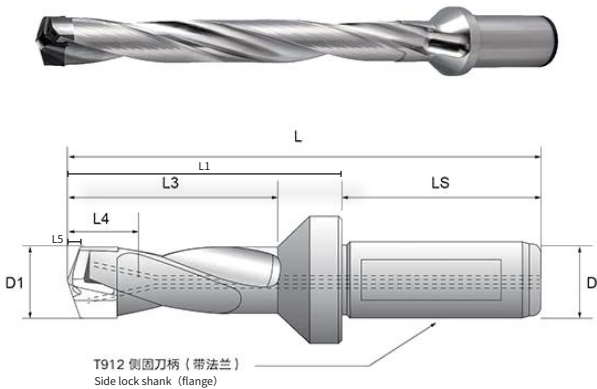
 3×D	 5×D	D1		L5	LS	D	刀座尺寸 Dimensions	中心锁紧 螺钉 Center locking screw
		mm	in					
KMSJ321R3T40M	KMSJ321R5T40M	32, 010	1.2602	5, 6	68	40	9	M015
KMSJ330R3T40M	KMSJ330R5T40M	33, 000	1.2992	5, 8	68	40	9	M015
KMSJ340R3T40M	KMSJ340R5T40M	34, 000	1.3386	6, 0	68	40	9	M015
KMSJ350R3T40M	KMSJ350R5T40M	35, 000	1.3780	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 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 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

硬质合金麻花钻3×D

Solid carbide twist drill 3×D



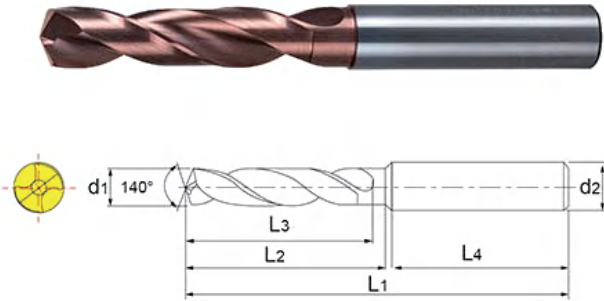
使用特点Usage characteristics

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：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	●

硬质合金麻花钻3×D

Solid carbide twist drill 3×D



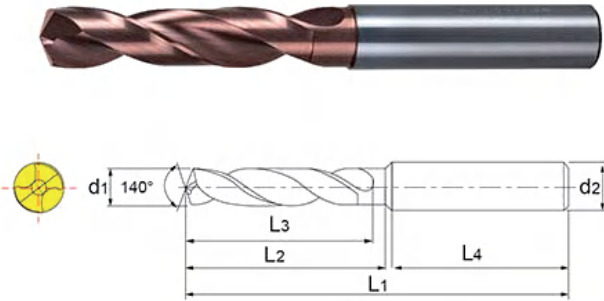
使用特点Usage characteristics

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：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	●

硬质合金麻花钻3×D

Solid carbide twist drill 3×D



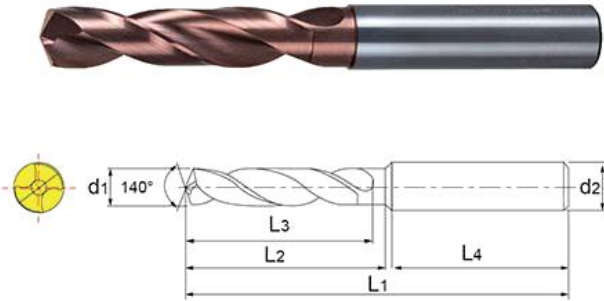
使用特点Usage characteristics

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所。

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

硬质合金麻花钻3×D

Solid carbide twist drill 3×D



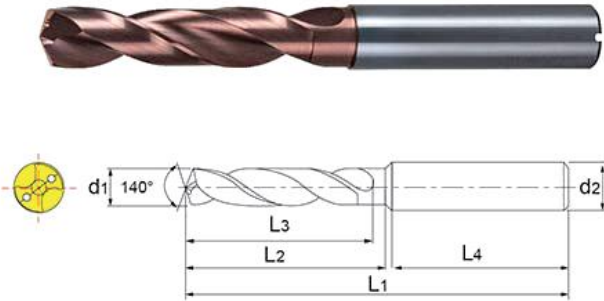
使用特点Usage characteristics

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所。

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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	●

硬质合金麻花钻3×D

Solid carbide twist 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所。

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

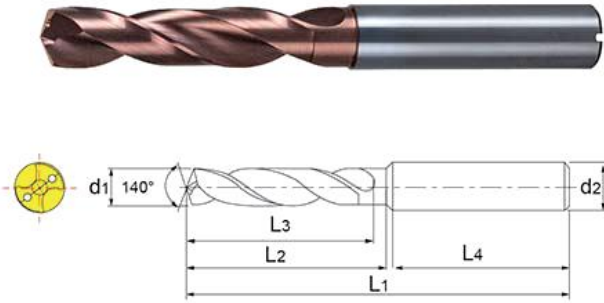
Bit Angle：140°

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	●

硬质合金麻花钻3×D

Solid carbide twist 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所。

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

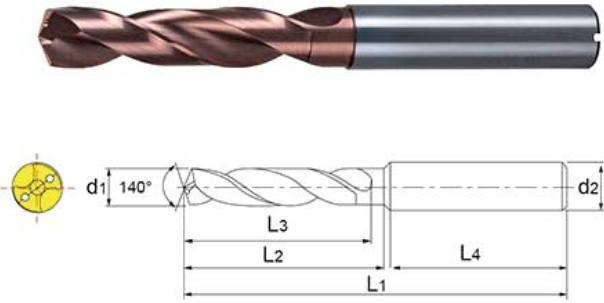
Bit Angle：140°

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

硬质合金麻花钻5×D

Solid carbide twist drill 5×D



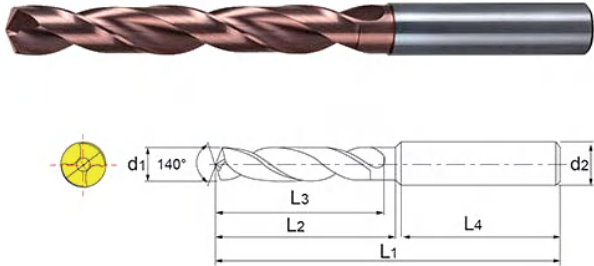
使用特点Usage characteristics

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所。

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	●

硬质合金麻花钻5×D

Solid carbide twist drill 5×D



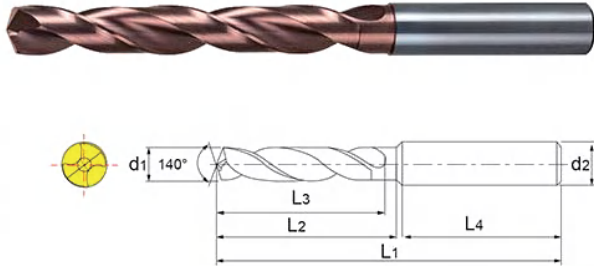
使用特点Usage characteristics

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所。

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	●

硬质合金麻花钻5×D

Solid carbide twist drill 5×D



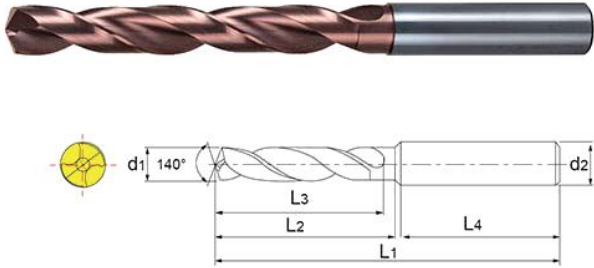
使用特点Usage characteristics

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
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

硬质合金麻花钻5×D

Solid carbide twist drill 5×D



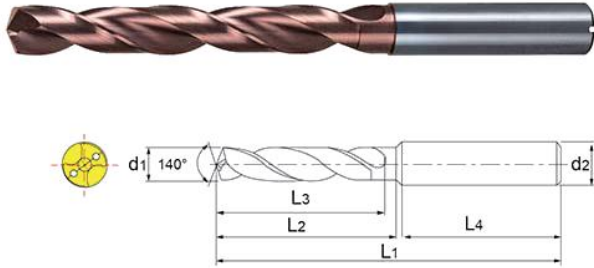
使用特点Usage characteristics

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
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	●

硬质合金麻花钻5×D

Solid carbide twist drill 5×D



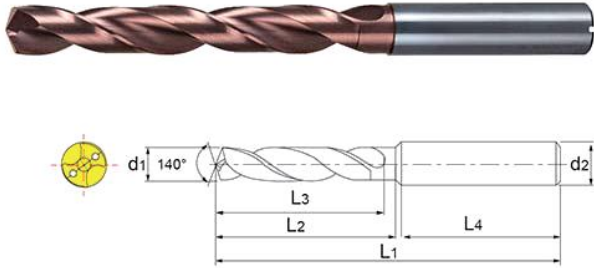
使用特点Usage characteristics

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所。

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	●

硬质合金麻花钻5×D

Solid carbide twist drill 5×D



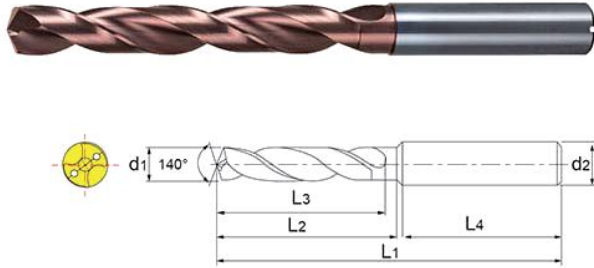
使用特点Usage characteristics

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所。

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

硬质合金麻花钻8×D

Solid carbide twist drill 8×D



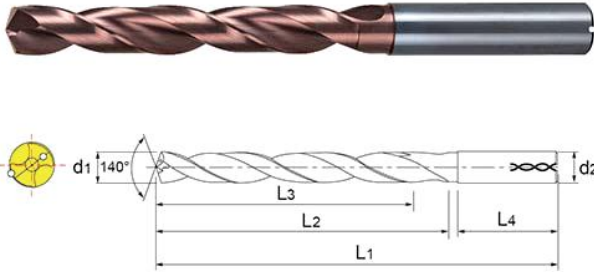
使用特点Usage characteristics

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所。

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	●

硬质合金麻花钻8×D

Solid carbide twist drill 8×D



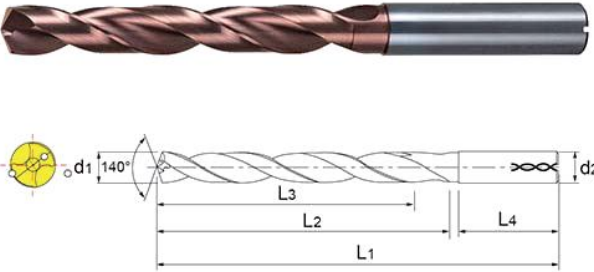
使用特点Usage characteristics

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所。

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

硬质合金双刃带麻花钻5×D

Solid carbide double edge twist drill 5×D



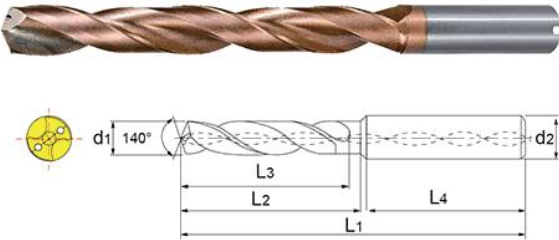
使用特点Usage characteristics

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所。

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

硬质合金深孔钻20×D

Solid carbide deep hole drill 20×D



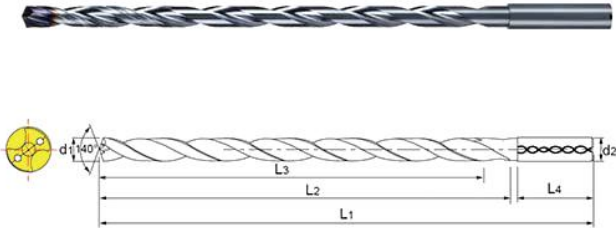
使用特点Usage characteristics

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所。
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

不锈钢用硬质合金麻花钻5×D

Solid carbide twist drill for stainless steel 5×D



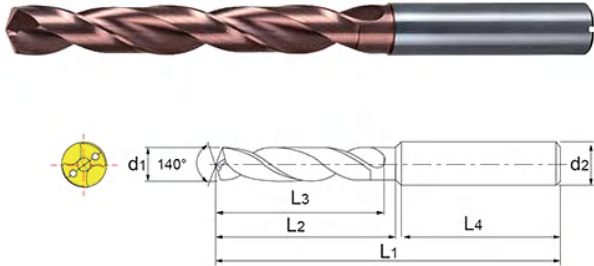
使用特点Usage characteristics

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-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	●

不锈钢用硬质合金麻花钻5×D

Solid carbide twist drill for stainless steel 5×D



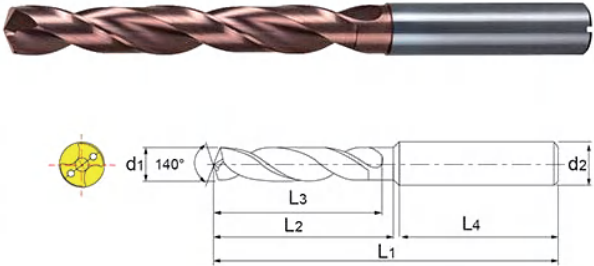
使用特点Usage characteristics

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-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	●

不锈钢用硬质合金麻花钻5×D

Solid carbide twist drill for stainless steel 5×D



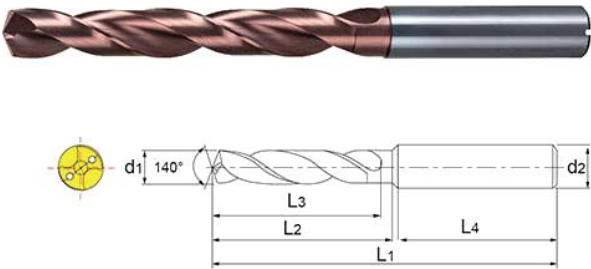
使用特点Usage characteristics

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

硬质合金铝用钻头

Solid carbide aluminum drill

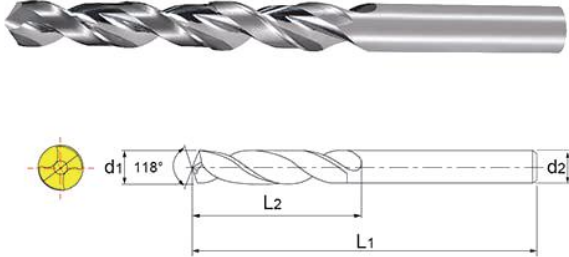


使用特点Usage characteristics

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	TiAlN	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

硬质合金三刃钻5×D

Solid carbide triple flute drill 5×D

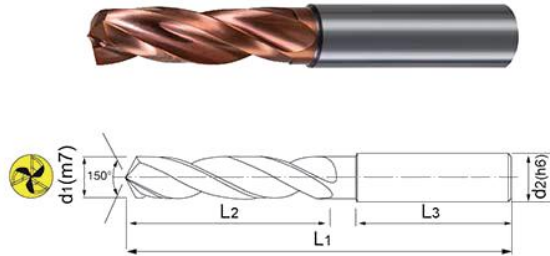


使用特点Usage characteristics

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

硬质合金三刃钻5×D

Solid carbide triple flute drill 5×D

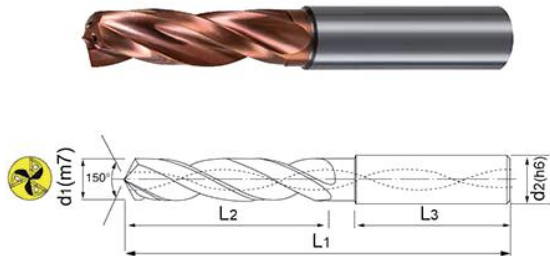


使用特点Usage characteristics

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

硬质合金强力钻3×D

Solid carbide power drill 3×D



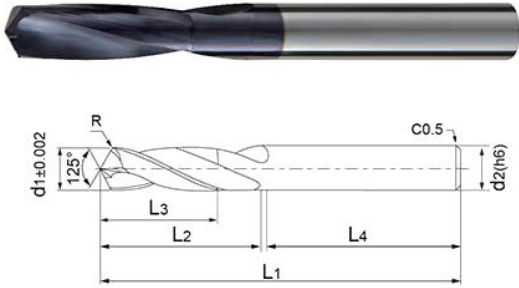
使用特点Usage characteristics

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

硬质合金直槽钻3×D

Solid carbide power drill 3×D



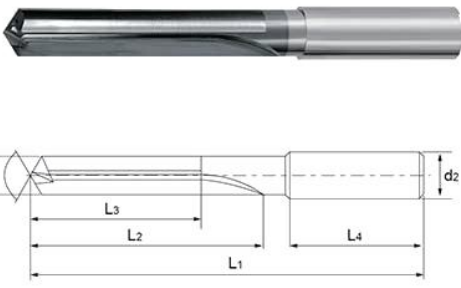
使用特点Usage characteristics

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所，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	●

硬质合金直槽钻3×D

Solid carbide straight flute drill 3×D



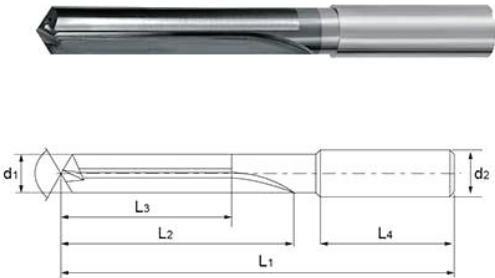
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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	●

硬质合金直槽钻3×D

Solid carbide straight flute drill 3×D



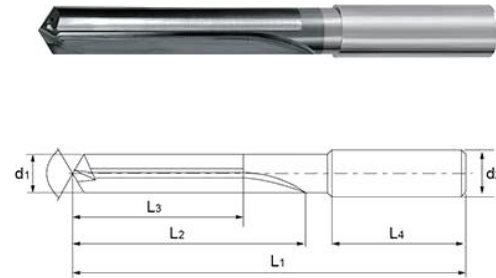
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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

硬质合金直槽钻5×D

Solid carbide straight flute drill 3×D



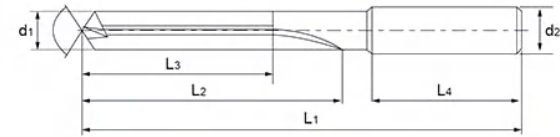
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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。

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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	●

硬质合金直槽钻5×D

Solid carbide straight flute drill 3×D



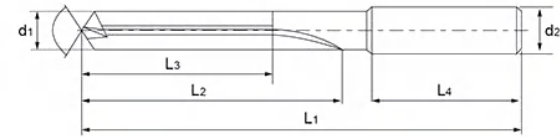
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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。

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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	●

硬质合金直槽钻5×D

Solid carbide straight flute drill 5×D

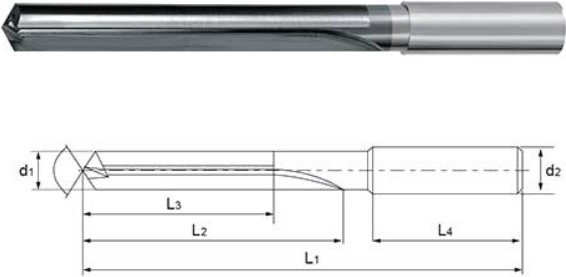


使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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

硬质合金直槽钻8×D

Solid carbide straight flute drill 8×D

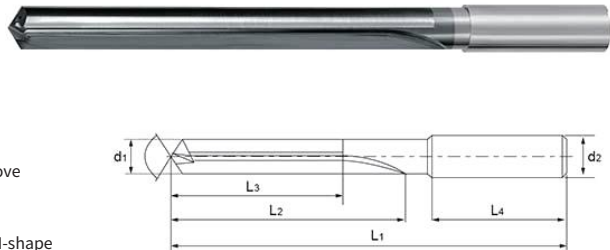


使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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	●

硬质合金直槽钻8×D

Solid carbide straight flute drill 8×D



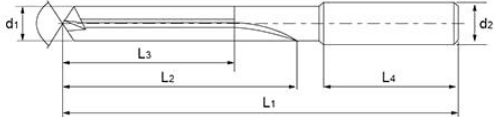
使用特点Usage characteristics

用于：灰铸铁，球墨铸铁，高硅铝合金，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所，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

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所。

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

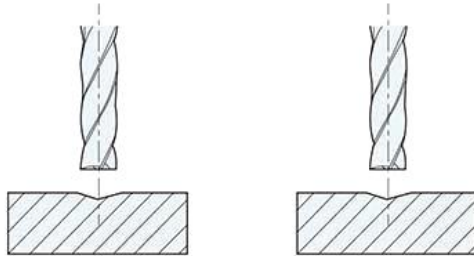
Unique drilling tip design, two effective cutting edges can improve the feed rate, drill a real flat bottom hole from the outer circle to the center, front angle correction to strengthen cutting control, four edge with chamfering design, improve the straightness and roundness of the hole, drilling cross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

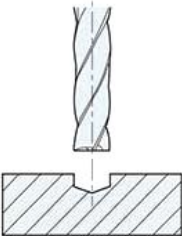
Manufacturing characteristics

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

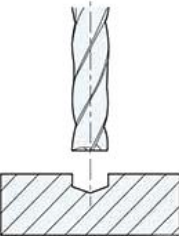


无需减小进给量
No need to reduce the feed

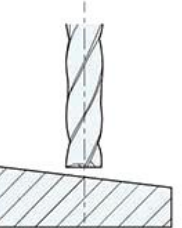
将进给量减少50%
Reduce the feed by 50%



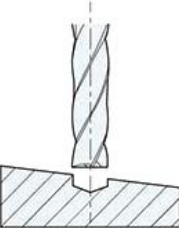
对于粗糙或硬化表面，无需减少进给量
For rough or hardened surfaces, there is no need to reduce the feed



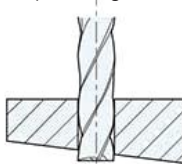
定位孔要完整。无需减小进给量
The positioning hole should be complete without reducing the feed



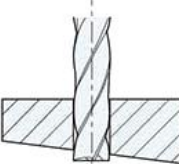
钻头完全进入工件之前将进给量减少30%，或者使用定位孔
Reduce feed by 30% before the drill is fully into the workpiece, or use positioning holes



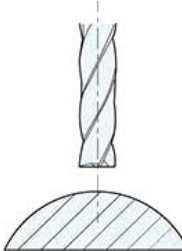
定位孔要完整。无需减小进给量
The positioning hole should be complete without reducing the feed



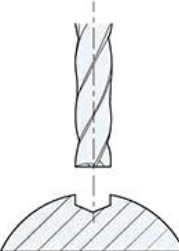
将进给量减小30%
Reduce the feed by 30%



将进给量减小30%
Reduce the feed by 30%



无需减小进给量
No need to reduce the feed



钻头完全进入工件之前将进给量减少30%，或者使用定位孔
Reduce feed by 30% before the drill is fully into the workpiece, or use positioning holes

硬质合金平底钻3×D

Solid carbide flat bottom drill 3×D



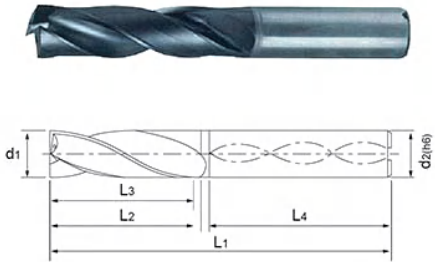
使用特点Usage characteristics

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所。

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	●

硬质合金平底钻3×D

Solid carbide flat bottom drill 3×D



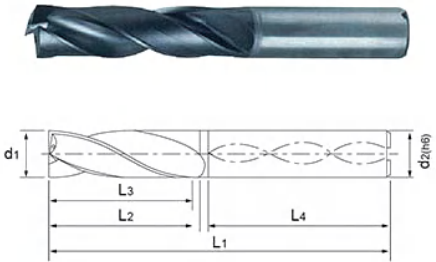
使用特点Usage characteristics

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所。

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	●

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所。

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

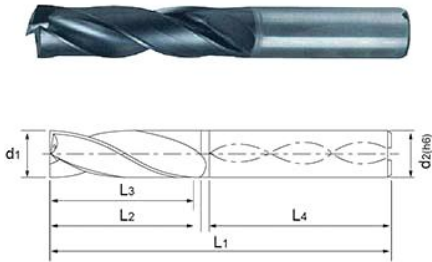
Bit Angle：180°

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

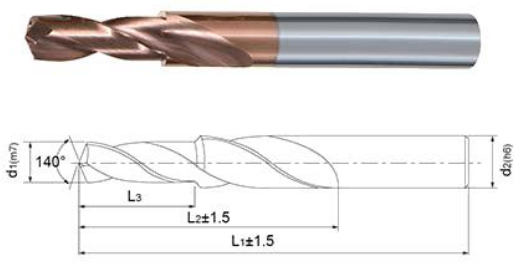
- (1) Tool diameter, flute length, total length, can accept non-standard customization
- (2) The shank form can be customized according to DIN6535HA/HB/HE

2. Customization example FBD03-1000 or FBD03-1000HE

Internal coolant customization example FBD03C-1000 or FBD03C-1000HE

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：

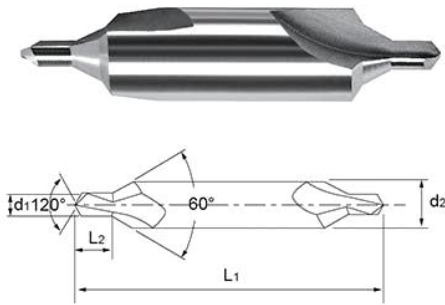
1. Accept non-standard customization

- (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

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

直槽铰刀（内冷/外冷）

Straight flute reamer (internal/external coolant)

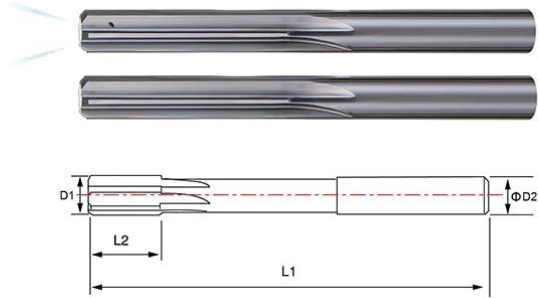


制造特点Manufacturing characteristics

- 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

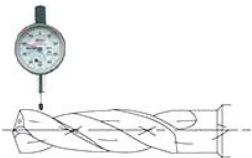
钻头切削参数（推荐）

Drill cutting parameters (recommended)

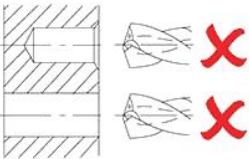


进给系列 Feed series mm/r									
	A	B	C	D	E	F	G	H	
直径 Diameter mm	3.0	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.15
	4.0	0.04	0.05	0.06	0.08	0.10	0.12	0.15	0.18
	5.0	0.05	0.06	0.07	0.09	0.10	0.12	0.16	0.18
	6.0	0.05	0.07	0.08	0.10	0.12	0.15	0.18	0.20
	8.0	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.25
	10.0	0.08	0.10	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	硬度 Hardness		强度 Strength	材料举例 Materials example	
	Processed materials	HB	HRC	N/mm ²	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
	合金结构级（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
2.M 不锈钢（Stainless steel）	铁素体不锈钢（Fente stantess ste）	<200		<700	0Cr13Al.1Cr17	X6CrAl13, X6Cr17-1
	马氏体不锈钢（Martenste stairless steel）	<240		<820	2Cr13, 1Cr17Ni2	X20Cr13, X17CrNi16-2
3.K 铸铁（Cast iron）	奥氏体不锈钢（Austenitic stainless steel）	<250		<850	0Cr19Ni9 0Cr17Ni17Mo2	X5CrNiCrMo17-12-2 X5CrNi18-10
	双相不锈钢（Duplex stainless steel）	<250		<850	0Cr26Ni5Mo2	
4.N 铝及铝合金（A lum in ium and aluminium alloys）	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
	可锻铸铁（Malleable cast iron）	<300			KTH350-10, KT400-05	B35-10, W40-05
5.N 铜及铜合金（Copper and copper a lloys）	纯铝（Pure aluminum）	<120		<400	1A50/L3	Al99.5
	变形铝合金（Wugt alminum alloy）≤ 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
6.S 难加工材料 优质耐热合金（Difficult to machine materials, high-quality heat-resistant alloys）	紫铜，低合金钢（Copper, low alloy 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
7.H 高硬材料（High hard materials）	结针 钛合金（Pre ftanium earimaloy）			<400	TA2	Ti99.5
	Alpha+beta 钛合金（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（Nickel chromium, nickel molybdenum, nickel cobalt alloy, cobalt chromium alloy）	<350		<1200		Hastelloy, Monel, Inconel
8.G 石墨（Graphite）	济硬钢（Hardened steel）		<48			
	冷硬铸铁（Chilled cast iron）		<62			
8.G 石墨（Graphite）	冷硬铸铁（Chilled cast iron）		<55			

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.

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	50 B		45 B		41 B	36 B	45 B
45 B	50 B		45 B		41 B	36 B	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

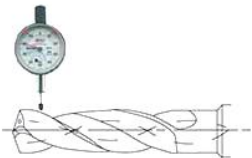
钻头切削参数（推荐）

Drill cutting parameters (recommended)

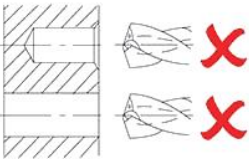


进给系列 Feed series mm/r									
		A	B	C	D	E	F	G	H
直径 Diameter mm	3.0	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.15
	4.0	0.04	0.05	0.06	0.08	0.10	0.12	0.15	0.18
	5.0	0.05	0.06	0.07	0.09	0.10	0.12	0.16	0.18
	6.0	0.05	0.07	0.08	0.10	0.12	0.15	0.18	0.20
	8.0	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.25
	10.0	0.08	0.10	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	硬度 Hardness		强度 Strength	材料举例 Materials example	
	Processed materials	HB	HRC	N/mm ²	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
	合金结构级（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
	工具钢（Tool steel）	<300	<31	<1000	9SiCr, Cr2	-, 100Cr2
2.M 不锈钢（Stainless steel）	铁素体不锈钢（Fente stantess ste）	<200		<700	0Cr13Al.1Cr17	X6CrAl13, X6Cr17-1
	马氏体不锈钢（Martenste stairress steel）	<240		<820	2Cr13, 1Cr17Ni2	X20Cr13, X17CrNi16-2
3.K 铸铁（Cast iron）	奥氏体不锈钢（Austenitic stainless steel）	<250		<850	0Cr19Ni9 0Cr17Ni17Mo2	X5CrNiCrMo17-12-2 X5CrNi18-10
	双相不锈钢（Duplex stainless steel）	<250		<850	0Cr26Ni5Mo2	
4.N 铝及铝合金（A lum in ium and aluminium alloys）	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
	可锻铸铁铁（Malleable cast iron）	<300			KTH350-10, KT400-05	B35-10, W40-05
5.N 铜及铜合金（Copper and copper a lloys）	纯铝（Pure aluminum）	<120		<400	1A50/L3	Al99.5
	变形铝合金（Wugt alminum alloy）≤ 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
6.S 难加工材料 优质耐热合金（Difficult to machine materials, high-quality heat-resistant alloys）	紫铜，低合金钢（Copper, low alloy 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
7.H 高硬材料（High hard materials）	结针 钛合金（Pre ftanium earimaloy）			<400	TA2	Ti99.5
	Alpha+beta 钛合金（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（Nickel chromium, nickel molybdenum, nickel cobalt alloy, cobalt chromium alloy）	<350		<1200		Hastelloy, Monel, Inconel
8.G 石墨（Graphite）	济硬钢（Hardened steel）		<48			
	冷硬铸铁（Chilled cast iron）		<62			
			<55			

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.

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 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

钻头切削参数（推荐）

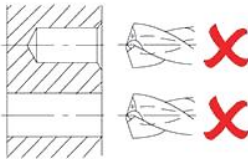
Drill cutting parameters (recommended)



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		被加工材料		硬度 Hardness	强度 Strength	材料举例 Materials example	
ISO		Processed materials	HB	HRC	N/mm ²	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	
	合金结构级 (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 stairss 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 0Cr17Ni17Mo2	X5CrNiCrMo17-12-2 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 alloy) ≤ 0.5Si	<120		<400	LF5-1, LD30	AlMg5, AlMg1SiCu	
	铸造铝合金 (Cast alminum alloy) ≤ 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 alloy 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 ttanium earimaloy)			<400	TA2	Ti99.5	
	Alpha+beta 钛合金 (Apha+beta ttanium akoy)			<1050	TC4, -	TiAl6V4, TiAl6Zr5	
	铁基耐热合金 (Fe based heat estant alloy)	<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，应保证内冷压力大小于： $\phi 5$ 时 20kgf/cm²， $\phi 10$ 时 15kgf/cm²， $\phi 15$ 时 10kgf/cm²， $\phi 20$ 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 $\phi 5$, 15kgf/cm² at $\phi 10$, 10kgf/cm² at $\phi 15$, 7kgf/cm² at $\phi 20$; 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.

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							
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				

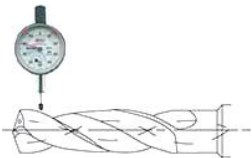
钻头切削参数 (推荐)

Drill cutting parameters (recommended)

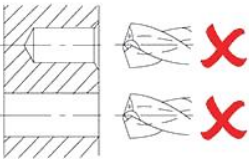


进给系列 Feed series mm/r									
		A	B	C	D	E	F	G	H
直径 Diameter mm	3.0	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.15
	4.0	0.04	0.05	0.06	0.08	0.10	0.12	0.15	0.18
	5.0	0.05	0.06	0.07	0.09	0.10	0.12	0.16	0.18
	6.0	0.05	0.07	0.08	0.10	0.12	0.15	0.18	0.20
	8.0	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.25
	10.0	0.08	0.10	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	被加工材料	硬度 Hardness		强度 Strength	材料举例 Materials example	
ISO	Processed materials	HB	HRC	N/mm ²	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
	合金结构级 (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 stairssess 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 0Cr17Ni17Mo2	X5CrNiCrMo17-12-2 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 alloy) ≤ 0.5Si	<120		<400	LF5-1, LD30	AlMg5, AlMg1SiCu
	铸造铝合金 (Cast alminum alloy) ≤ 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 alloy 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 ttanium earimaloy)			<400	TA2	Ti99.5
	Alpha+beta 钛合金 (Apha+beta ttanium akoy)			<1050	TC4, -	TiAl6V4, TiAl6Zr5
	铁基耐热合金 (Fe based heat estant alloy)	<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，应保证内冷压力大小于： $\phi 5$ 时 20kgf/cm²， $\phi 10$ 时 15kgf/cm²， $\phi 15$ 时 10kgf/cm²， $\phi 20$ 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 $\phi 5$, 15kgf/cm² at $\phi 10$, 10kgf/cm² at $\phi 15$, 7kgf/cm² at $\phi 20$; 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.

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	
							

[illegible]

平底钻（FBD 系列）推荐切削参数

Flat bottom drill（FBD series）cutting data parameters



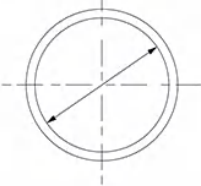
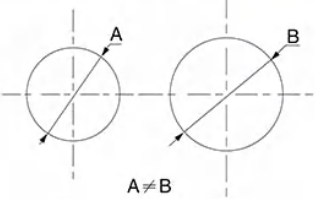
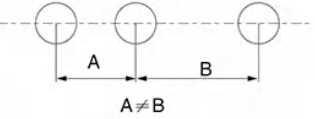
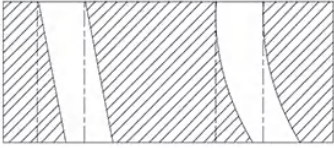
切削速度（Cutting speed）			刀具直径（Cutter diameter）								
初始 值	sfm 米 / 分钟 (M/min)	49 98 164 262 328 394 492 656 820 984 1148	英寸 (Inch)	0.118	0.157	0.236	0.315	0.394	0.472	0.630	0.787
		15 30 50 80 100 120 150 200 250 300 350	毫米 (mm)	3.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0
M ¹ 奥氏体不锈钢（M1 austenitic stainless steel） 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

被加工孔常见问题及解决方法

Problem and solving method for machining hole

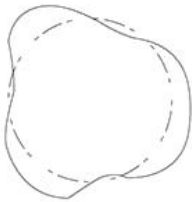
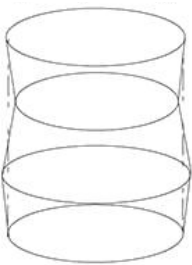


	问题 Problem	原因 Reason	解决方法 Solution
孔 Hole	孔径扩大 Hole size expansion 	钻头装夹不好，主轴本身跳动量过大 Drill holding is not good, the machine spindle run-out is large	选择精度高的刀柄及夹具，校正主轴，每次装夹钻头时，仔细测量与调整 Use rigid and precise machine and tool holder, when clamping drill, carefully measurement and adjustment
		顶角不对称，钻头跳动过大，横刃偏心 Spot angle asymmetry, drill run-out is large, the chisel edge eccentric	修磨刀具，修磨后检查精度 Re-grinding tool, inspect precision after re-grinding
	孔径的一致性较差 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 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 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 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 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 Changing the fluid supply method, increasing the flow rate
	孔的位置精度较差 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 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 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 Feed direction and processed surface is not vertical	将被加工表面调整成与进给方向垂直 Adjust the processed surface
		顶尖与轴心不重合（车床） The centre and the lathe axis are not coincident（lathe）	加工前仔细调整 Carefully adjustment before processing
	直线度不良 Bad straightness 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 Improve the position accuracy of the center bore
		顶角不对称，钻头跳动过大，横刃偏心 Spot angle asymmetry, drill run-out is large, the chisel edge eccentric	修磨刀具，修磨后检查精度 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） 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 Adjust the processed surface, or pre-drill the center bore

被加工孔常见问题及解决方法

Problem and solving method for machining hole

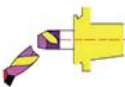


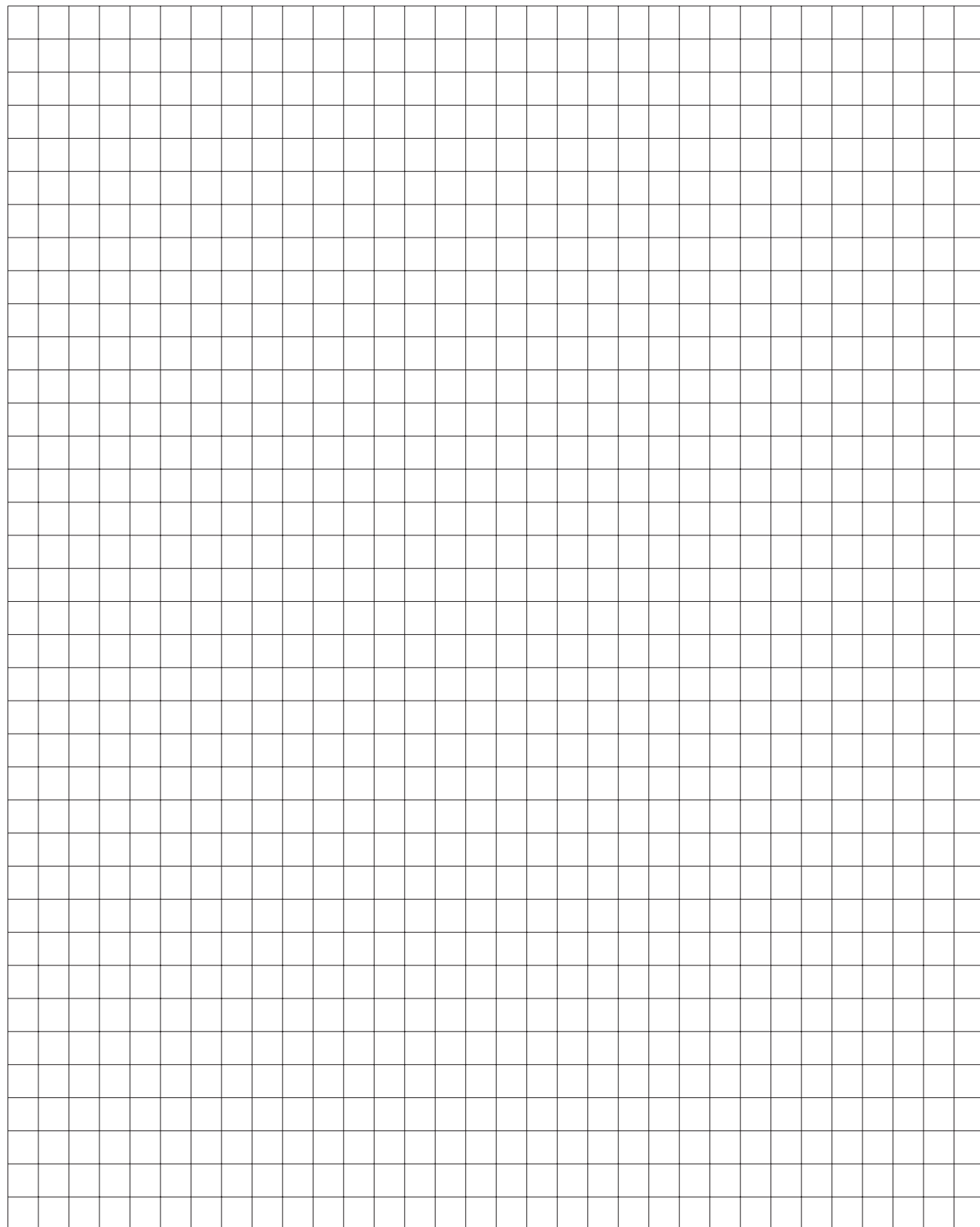
	问题 Problem	原因 Reason	解决方法 Solution
孔 Hole	圆度较差 Bad roundness 	顶角不对称，钻头跳动过大，横刃偏心 Spot angle asymmetry, drill run-out is large, the chisel edge eccentric	修磨刀具，修磨后检查精度 Re-grinding tool, inspect precision after re-grinding
		钻头装夹不好，主轴本身跳动量过大，工件装夹不牢固 Drill holding is not good, the machine spindle run-out 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 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 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 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 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 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 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 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 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） Select new drill(chip groove,helic,etc.), select the new processing method(feed adjustment, the step drilling method,etc.)
	圆柱度较差 Bad cylindricity 	顶角不对称，钻头跳动过大，横刃偏心，刃带棱面磨损过大 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 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 Drill bit failure	积屑瘤 Built-up edge 	切削速度过低 Cutting speed is too low		选择合理的切削参数 Choose reasonable cutting parameters
		冷却不充分 Insufficient cooling	切削刃不锋利 The cutting edge is not sharp	
			无涂层 Uncoated	正确修磨 Correct grinding
	崩横刃 Broken chisel edge 	进给太快 Too fast feed		选择合理的切削参数 Choose reasonable cutting parameters
		切削速度过低 Cutting speed is too low		选择合理的切削参数 Choose reasonable cutting parameters
	崩刀尖 Broken tip 	刀尖跳动过大，单刃切削 Excessive tip runout, single edge cutting		正确选型，加强横刃 Correct selection, strength the chisel edge
		切削速度过高 Cutting speed too high		改善系统刚性，跳动小于 0.02 Improve system rigidity, runout less than 0.02
	崩主刃 Broken main edge 	冷却不充分 Insufficient cooling		选择合理的切削参数 Choose reasonable cutting parameters
				采用内冷，调整外冷却方向 Adopt internal coolant and adjust the cooling direction
	崩棱边有缠绕 The side edge is twisted 	钻孔工艺不稳定 Unstable drilling process		改善系统刚性，跳动小于 0.02 Improve system rigidity, runout less than 0.02
		已到寿命 使用过度 Reached the end of life, overuse		正确修磨 Correct grinding
	断刀 Broken 	钻孔工艺不稳定 Unstable drilling process	选型不当，主刃虚 Improper selection, main edge is empty	正确选型，加强主刃 Correct selection, strength the chisel edge
		主轴刀柄连接精度低，刀尖跳动大 Spindle shank connection accuracy is low, excessive tip runout		改善系统刚性，跳动小于 0.02 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 Choose reasonable cutting parameters
		冷却不充分 Insufficient cooling	选型不当，棱边过宽 Improper selection, edge too wide	采用内冷，调整外冷却方向 Adopt internal coolant and adjust the cooling direction
加工不合格 Unqualified processing	负载大 Heavy load		选型不当，棱边过小 Improper selection, edge too small	正确选型，减小棱边 Correct selection, reduce edge
				正确选型，加大棱边 Correct selection, increase edge
				减少操作失误 Reduce operation errors
				选择合理的切削参数 Choose reasonable cutting parameters
	孔偏小 Small hole	已到寿命 使用过度 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 Select the right drill tip, peck, improve cooling
	孔偏大 Oversize hole		选型不当 Improper selection	正确选型 Correct selection
			棱边破损，铁屑导致缠绕 Broken edge, iron fillings cause entanglement	及时修磨，避免棱边崩损 Timely grinding to avoid edge breakage
			选型不当，芯厚大 Improper selection, large core thickness	正确选型、减少芯厚 Correct selection, reduce core thickness
			选型不当，刃口处理不当 Improper selection, improper handing of cutting edge	正确选型、刃口锋利 Correct selection, sharp cutting edge
	表面质量差 Bad surface quality	钻孔工艺不稳定，孔斜，直线度差 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 Improve system rigidity, runout less than 0.02, improve workpiece support
		进给过快，孔斜 Too fast feed, the hole is inclined		减小进给 Reduce feed
		钻孔工艺不稳定 Unstable drilling process		改善系统刚性，跳动小于 0.02，改善工件支撑 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 Spindle shank connection accuracy is low, excessive tip runout	横刃、主刃不对称 The chisel edge and main edge are asymmetrical	正确制造和修磨 Correct manufacturing and grinding
			钻头直径公差大 Large tolerance of drill tip diameter	减小钻头直径 Reduce drill tip diameter
		冷却不充分 Insufficient cooling		改善系统刚性，跳动小于 0.02 Improve system rigidity, runout less than 0.02
		润滑不充分 Inadequate lubrication		采用内冷，调整外冷却方向 Adopt internal coolant and adjust the cooling direction
		进给过快 Too fast feed		提高冷却液含油量，或者采用切削油 Increase the oil content of the coolant or use cutting oil
		切削缠绕 Cutting winding		减少进给 Reduce feed
				及时修磨 Timely grinding
			选型不当，无涂层 Improper selection, uncoated	正确选型，钻头涂层 Correct selection, drill tip coating



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.