

CORTOOL[®]

ISO 9001:2015

**SOLID CARBIDE
END MILLS**
整体硬质合金
立铣刀



大连托福科技发展有限公司
CORTOOL MANUFACTURING GROUP
SINCE 1999

产品目录

SELECTION CATALOG

ST 通用系列

ST Universal Processing Series

01-05

产品特点 Product Feature

ST100-4S 四刃平头立铣刀产品特点	01
ST100-4S 4-Flute Flat End Mill Product Features	

尺寸表 Size table

ST100-4S 标准型四刃平头立铣刀	03	ST100-4SL 加长型四刃平头立铣刀	04
ST100-4S Standard 4-Flute Flat End Mill		ST100-4SL Long Type 4-Flute Flat End Mill	

切削条件表 Cutting condition table

ST100-4S 标准型四刃平头立铣刀	05
ST100-4S Standard 4-Flute Flat End Mill	

HP 高效系列

HP High-Efficiency Processing Series

07-17

产品特点 Product Feature

HP100-4S 四刃平头立铣刀产品特点	07
HP100-4S 4-Flute Flat End Mill Product Features	

尺寸表 Size table

HP100-4S 标准型四刃平头立铣刀	11	HP100-4SL 加长型四刃平头立铣刀	12
HP100-4S Standard 4-Flute Flat End Mill		HP100-4SL Long Type 4-Flute Flat End Mill	
HP100-2B 标准型二刃球头立铣刀	13	HP100-2BL 加长型二刃球头立铣刀	14
HP100-2B Standard 2-Flute Ball Nose End Mill		HP100-2BL Long Type 2-Flute Ball Nose End Mill	
HP100-4R 标准型四刃圆鼻立铣刀	15	HP100-4RL 加长型四刃圆鼻立铣刀	16
HP100-4R Standard 4-Flute Corner Radius End Mill		HP100-4RL Long Type 4-Flute Corner Radius End Mill	

切削条件表 Cutting condition table

HP100-4S 标准型四刃平头立铣刀	17
HP100-4S Standard 4-Flute Flat End Mill	

ALS 铝合金系列

ALS Aluminum Alloy Processing Series

19-22

产品特点 Product Feature

ALS100-3S 三刃平头立铣刀产品特点	19
ALS100-3S 3-Flute Flat End Mill Product Features	

尺寸表 Size table

ALS100-3S 标准型三刃平头立铣刀	20	ALS100-3SL 加长型三刃平头立铣刀	21
ALS100-3S Standard 3-Flute Flat End Mill		ALS100-3SL Long Type 3-Flute Flat End Mill	

切削条件表 Cutting condition table

ALS100-3S 标准型三刃平头立铣刀	22
ALS100-3S Standard 3-Flute Flat End Mill	

HR 高硬系列

HR High-Hardness Processing Series

23-31

产品特点 Product Feature

HR100-4S 四刃平头立铣刀产品特点 23
HR100-4S 4-Flute Flat End Mill Product Features

尺寸表 Size table

HR100 标准型平头立铣刀	25	HR100-4SL 加长型四刃平头立铣刀	26
HR100-4S Standard 4-Flute Flat End Mill		HR100-4SL Long Type 4-Flute Flat End Mill	
HR100-2B 标准型二刃球头立铣刀	27	HR100-2BL 加长型二刃球头立铣刀	28
HR100-2B Standard 2-Flute Ball Nose End Mill		HR100-2BL Long Type 2-Flute Ball Nose End Mill	
HR100-4R 标准型四刃圆鼻立铣刀	29	HR100-4RL 加长型四刃圆鼻立铣刀	30
HR100-4R Standard 4-Flute Corner Radius End Mill		HR100-4RL Long Type 4-Flute Corner Radius End Mill	

切削条件表 Cutting condition table

HR100-4S 准型四刃平头立铣刀 31
HR100-4S Standard 4-Flute Flat End Mill

DR 孔加工系列

DR Drilling Processing Series

32-45

产品特点 Product Feature

DR 钨钢钻头产品特点 32
DR Tungsten Carbide Drill Bit Product Features

尺寸表 Size table

DRW 钨钢钻头 3D(外冷)	33	DRW 钨钢钻头 5D(外冷)	36
DRW Tungsten Carbide Drill Bit 3D (External Cooling)		DRW Tungsten Carbide Drill Bit 5D (External Cooling)	
DRN 钨钢钻头 3D(内冷)	39	DRN 钨钢钻头 5D(内冷)	42
DRN Tungsten Carbide Drill Bit 3D (Internal Cooling)		DRN Tungsten Carbide Drill Bit 5D (Internal Cooling)	
DRN 钨钢钻头 7D(内冷)	45		
DRN Tungsten Carbide Drill Bit 7D (Internal Cooling)			

刀具选型

TOOL SELECTION

参考页 Reference Page	用途 Use	型号 Type	特点 Peculiarity	形状 Shape	涂层 Coating	刃数 Number of Blades	螺旋角 Helical Angle	外径 External Diameter
03	适用于碳钢、铸铁、合金钢等材料的粗加工和半精加工 Suitable for Roughing and Semi-Finishing of Materials such as Carbon Steel, Cast Iron, and Alloy Steel	ST100-4S	通用加工 Universal processing		TA	4	35°	Φ1~Φ16
04		ST100-4SL				4	35°	Φ1~Φ16
11	适用于碳钢、铸铁、合金钢、预硬钢等材料的强力粗铣和高速加工 Suitable for High-Power Rough Milling and High-Speed Machining of Materials such as Carbon Steel, Cast Iron, Stainless, Alloy Steel, and Pre-Hardened Steel	HP100-4S	重切高效，金属去除率高 High efficiency in heavy cutting with a high metal removal rate.		TX	4	45°	Φ1~Φ16
12		HP100-4SL				4	45°	Φ1~Φ16
13		HP100-2B			TX	2	30°	Φ1~Φ12
14		HP100-2BL				2	30°	Φ1~Φ12
15		HP100-4R			TX	4	45°	Φ1~Φ16
16		HP100-4RL				4	45°	Φ1~Φ16
20	适用于铝合金材质的粗加工和半精加工 Suitable for rough and semi-finish machining of aluminum alloy materials.	ALS100-3S	高效高光 High efficiency and high surface finish		-	3	45°	Φ1~Φ16
21		ALS100-3SL						
25	适用于预硬钢、调制钢和高硬钢 (HRC<65°) 的高效加工 Suitable for efficient machining of pre-hardened steel, tempered steel, and high-hardness steel (HRC<65°)	HR100-4S	高硬度材料加工 Machining of high-hardness materials		DR	4	42°	Φ1~Φ16
26		HR100-4SL				4	42°	Φ1~Φ16
27		HR100-2B				2	30°	Φ1~Φ12
28		HR100-2BL				2	30°	Φ1~Φ12
29		HR100-4R				4	45°	Φ1~Φ16
30		HR100-4RL				4	45°	Φ1~Φ16
33	适用于碳钢、铸铁、合金钢等材料的钻孔 Suitable for Drilling Materials such as Carbon Steel, Cast Iron, and Alloy Steel	DRW3D	通用加工 Universal processing		TA	2	-	Φ3~Φ20
36		DRN3D				2	-	Φ3~Φ20
39		DRW5D				2	-	Φ3~Φ20
42		DRN5D				2	-	Φ3~Φ20
45		DRN7D				2	-	Φ3~Φ20

被加工材料适用表 Applicable Work Materials

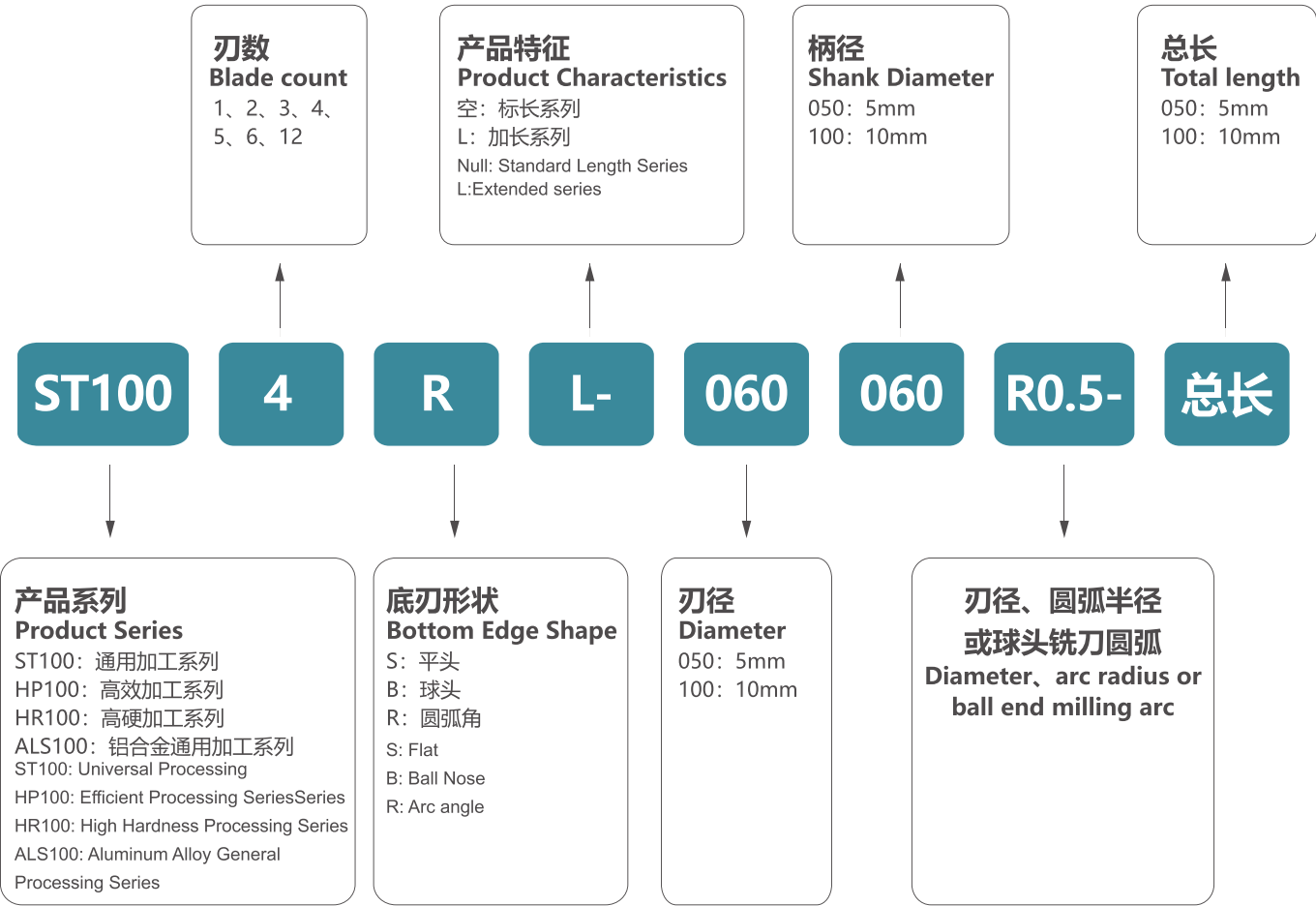
P				H	M	K	N		S	
碳素钢 Carbon steel	合金钢 Alloy Steel	预硬钢 Prehardening Steel	调制钢 Modulated Steel	高硬钢 Hardened Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铜合金 Copper Alloy	铝合金 Alumium Alloy	钛合金 Titanium Alloy	耐热合金 Heat Resistant Alloy
○	○	○	○		○	○				
○	○	○	○		○	○				
○	○	○	○		○	○			○	
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○	○	○	○		○	○				

○最适合加工 most suitable ○适合加工 suit

刀具选型

TOOL SELECTION

型号表示的确认方法 Unequal Spacing Teeth



图标的确认方法 Unequal Spacing Teeth

刀具原料 Tool Material

MG carbide	超微粒 Micro Grain	UMG carbide	极超微粒 Ultra Micro Grain	SMG carbide	特极超微粒 Super Micro Grain
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图层种类 Coating Type

TA TiAlN	高抗热性、高抗氧化性、低摩擦系数，奈米结构润滑性佳，适用钢铁硬度 <50HRC High heat resistance, high oxidation resistance, low friction coefficient, excellent nano-structured lubrication, suitable for steel with hardness <50 HRC
TX AlTiCrN	高硬度，超高抗氧化性，高耐磨性、隔热性，适用钢铁硬度 <55HRC High hardness, ultra-high oxidation resistance, high wear resistance, thermal insulation properties, suitable for steel with hardness < 55 HRC
DR AlCrN-X	优异的抗氧化性能、红硬性以及突出的耐磨损性能，适用钢铁硬度 <65HRC Excellent oxidation resistance, red hardness, and outstanding wear resistance, suitable for steel with hardness < 65 HRC

刃数 Coating



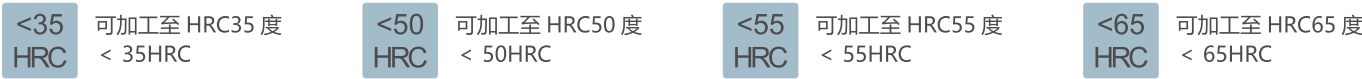
螺旋角 Helix Angle



切削边缘 Corner of Edges



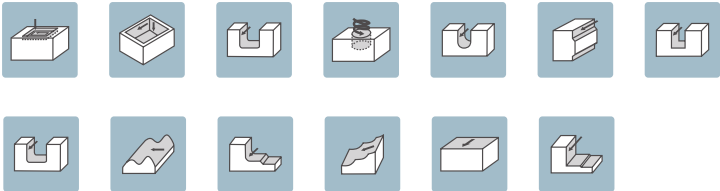
可加工硬度 Machinable Hardness



柄部 Shank



加工形态 Processing Pattern



ST100 系列通用型铣刀

ST100 Universal Processing End Mill Series



适用于 50HRC 以下 Suitable for temperatures below 50HRC
合金钢、碳素钢、铸铁 Alloy steel, carbon steel, cast iron

高抗折性的优良超微粒钨钢母材，提高热冲击性。
Excellent ultra-fine particle tungsten steel base material with high flexural resistance, improving thermal shock resistance.

加强端刃齿隙处强度设计，防止刀具产生崩刃。
Strengthen the strength design at the tooth gap of the end blade to prevent tool breakage.

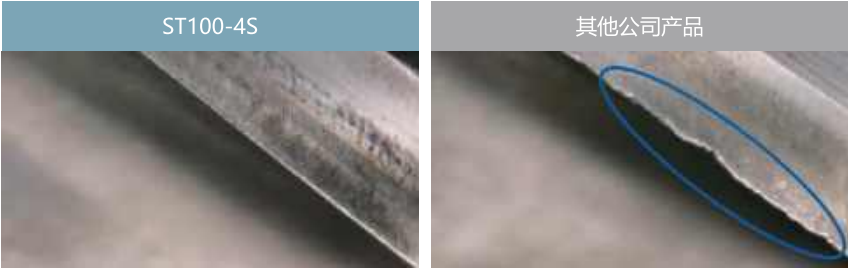
端刃齿隙处圆弧形设计增加刀具强度，有利于排屑。
The circular arc-shaped design at the end blade tooth gap increases tool strength and is beneficial for chip removal



差别在于可持续稳定加工

The difference lies in sustainable and stable processing

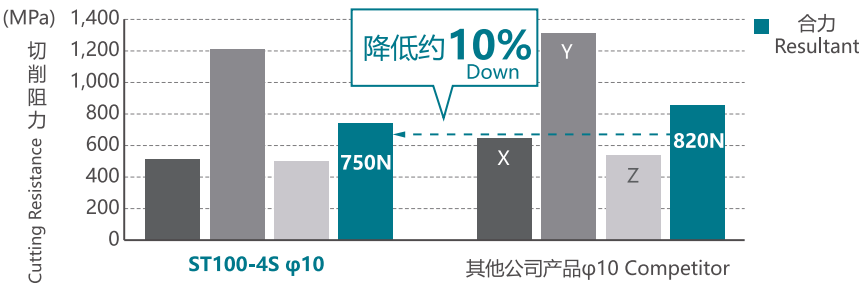
持续加工一小时后，外周刃磨损宽度只有市场上同类型铣刀的一半。
After one hour of continuous processing, the peripheral edge wear width is only half of the same type of milling cutter on the market.



使用工具 Tool	ST100-4S $\Phi 10$	其他公司产品 $\Phi 10$ Competitor
加工材料 Work Material	SUS304	
加工方法 Milling Method	槽铣 Slot Milling	
切削速度 Cutting Speed	70m/min(2,250min ⁻¹)	
进给速度 Feed	475mm/min(0.053mm/t)	
切削深度 Depth of Cut	ap=10mm	
切削油剂 Coolant	水溶性切削油剂 Water-Soluble	
使用机械 Machine	立式加工中心 (BT40) Vertical Machining Center	

低切削阻力 LOW CUTTING FORCE

- 锋利性优良的正前角刃形，可以降低切削阻力。
- 兼顾工具刚性与排屑性的新型排屑槽形状，可以实现稳定加工，并抑制毛刺产生。
- Sharp positive rake angle reduces cutting force.
- New flute form with high tool rigidity and excellent chip evacuation properties enables stable milling and the suppression of burrs.

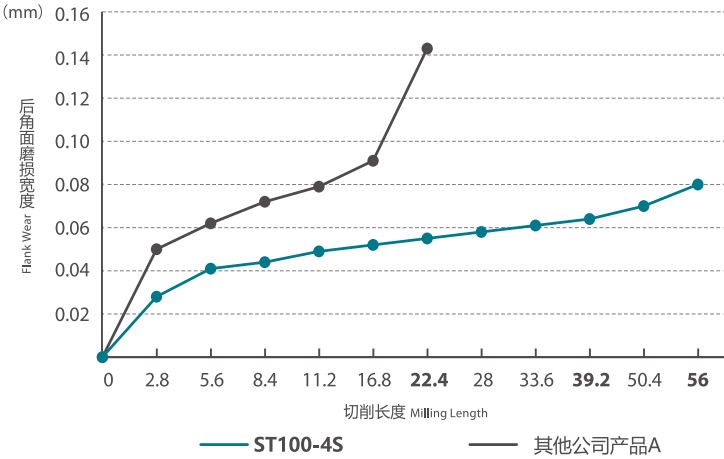


与其他公司产品相比
减少约 **10%** 切削阻力

10% lower cutting force versus the competitors

槽铣加工实测 MEASURED SLOT MILLING PROCESSING

使用工具 Tool	ST100- 4S φ10
加工材料 Work Material	SUS304
加工方法 Milling Method	槽铣 Slot Milling
切削速度 Cutting Speed	70m/min (2,250min ⁻¹)
进给速度 Feed	475mm/min (0.053mm/t)
切削深度 Depth of Cut	ap=10mm
切削油剂 Coolant	水溶性切削油剂 Water-Soluble
使用机械 Machine	立式加工中心 (BT40) Vertical Machining Center



即使是槽铣加工也只是正常的磨损，不会发生崩刃
Consistent tool wear with no chipping even in slot milling

TA 涂层 TA COATING

- 润滑性、耐磨损性、高温耐氧化性。优良的复合多层结构可以有效抑制裂纹传播。
- Provides excellent lubricity, superior friction-resistance and high oxidation temperature. Multi-layer construction minimizes the thermal cracks that often occurred while using watersoluble oil.
- 涂层表面进行了平滑处理以提高加工面精度。
- Smoothing surface coating treatment made an excellent quality of surface finishing.

ST100-4S

4 刃平头 - 标准长

ST100-4S 4-Flute Flat End Mill Product Features

MG
carbide

TA
TiAlN

4

35°

h6
Shank Dia.

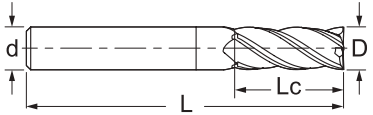




P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
☒	☒	☒ ☐

M	K
不锈钢 Stainless Steel	铸铁 Cast Iron
☐	☒

☒最适合 most suitable ☐适合 suit



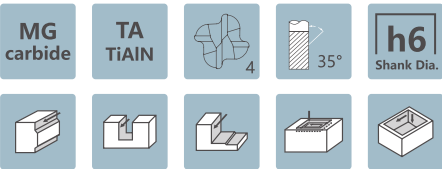
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
ST100-4S-010040-050	1	3	50	4	4	0~-0.015
ST100-4S-015040-050	1.5	5	50	4	4	0~-0.015
ST100-4S-020040-050	2	6	50	4	4	0~-0.015
ST100-4S-025040-050	2.5	8	50	4	4	0~-0.015
ST100-4S-030040-050	3	9	50	4	4	0~-0.015
ST100-4S-035040-050	3.5	11	50	4	4	0~-0.015
ST100-4S-040040-050	4	12	50	4	4	0~-0.015
ST100-4S-05060-050	5	13	50	6	4	0~-0.015
ST100-4S-060060-050	6	15	50	6	4	0~-0.015
ST100-4S-080080-060	8	20	60	8	4	0~-0.015
ST100-4S-100100-075	10	25	75	10	4	0~-0.015
ST100-4S-120120-075	12	30	75	12	4	0~-0.015
ST100-4S-140140-100	14	35	100	14	4	0~-0.025
ST100-4S-160160-100	16	45	100	16	4	0~-0.025
ST100-4S-180180-100	18	50	100	18	4	0~-0.025
ST100-4S-200200-100	20	50	100	20	4	0~-0.025

ST100-4SL

4 刃平头 - 加长

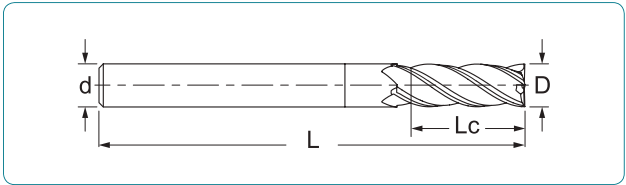
ST100-4SL Standard 4-Flute Flat End Mill



P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
☒	☒	☒

M	K
不锈钢 Stainless Steel	铸铁 Cast Iron
☐	☒

☒ 最适合 most suitable ☐ 适合 suit

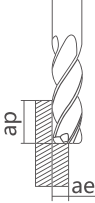


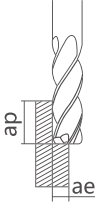
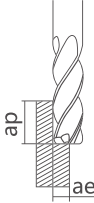
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
ST100-4SL-040040-075	4	16	75	4	4	0~-0.015
ST100-4SL-040040-100	4	20	75	4	4	0~-0.015
ST100-4SL-060060-075	6	25	75	6	4	0~-0.015
ST100-4SL-060060-100	6	30	75	6	4	0~-0.015
ST100-4SL-080080-075	8	32	75	8	4	0~-0.015
ST100-4SL-080080-100	8	32	100	8	4	0~-0.015
ST100-4SL-100100-100	10	40	100	10	4	0~-0.015
ST100-4SL-100100-150	10	50	100	10	4	0~-0.015
ST100-4SL-120120-100	12	50	150	12	4	0~-0.015
ST100-4SL-120120-150	12	60	150	12	4	0~-0.015

ST100-4S 四刃平头立铣刀加工参数参考表（侧铣）

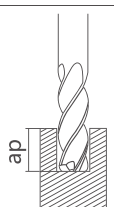
ST100-4S 4-Flute Flat End Mill Machining Parameters Reference Table (Side Milling)

被加工材料 Processed materials	铸铁、球墨铸铁（~750N/mm ² ） Cast iron, ductile iron (~750N/mm ²)		碳素钢、合金钢（~24HRC） Carbon steel, alloy steel (~24HRC)		碳素钢、合金钢（~30HRC） Carbon steel, alloy steel (~30HRC)	
切削速度 VC Cutting Speed VC	80~120m/min		80~120m/min		70~100m/min	
刃径 DC(mm) Blade diameter	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	20000	160	20000	160	20000	125
2	15000	250	15000	250	15000	230
3	14000	430	14000	430	13000	400
4	10800	440	10800	440	10000	400
5	8200	460	8200	460	7600	420
6	7000	470	7000	470	6400	435
8	5200	465	5200	465	4800	430
10	4200	460	4200	460	3800	420
12	3500	460	3500	460	3200	420
14	3000	430	3000	430	2700	400
16	2600	430	2600	430	2400	400
18	2300	420	2300	420	2100	390
20	2050	420	2050	420	1900	390
Maximum cutting depth 最大切深量	 ap=1.5D ae=0.1D					

被加工材料 Processed materials	预硬钢、调制钢（30~40HRC） Prehardening Steel,modulated steel		不锈钢 Stainless steel		预硬钢、调制钢（40~50HRC） Prehardening Steel,modulated steel(40~50HRC)	
切削速度 VC Cutting Speed VC	60~90m/min		60~90m/min		45~75m/min	
刃径 DC(mm) Blade diameter	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	20000	125	20000	55	20000	95
2	15000	220	11150	65	13000	140
3	10600	330	7500	80	8500	260
4	8000	335	5500	80	6500	265
5	6400	355	4500	80	5000	280
6	5300	360	3700	85	4200	285
8	4000	360	2800	85	3200	290
10	3200	355	2200	85	2500	275
12	2650	355	1850	80	2100	275
14	2300	330	1600	80	1800	260
16	2000	330	1400	80	1600	260
18	1800	325	1250	70	1400	255
20	1600	325	1100	70	1250	255
Maximum cutting depth 最大切深量	 ap=1.5D ae=0.1D				 ap=1.5D ae=0.05D	

ST100-4S 四刃平底铣刀加工参数参考表 (槽铣)

ST100-4S 4-Flute Flat End Mill Machining Parameters Reference Table (Slotting)

被加工材料 Processed materials	铸铁、球墨铸铁 (~750N/mm ²) Cast iron, ductile iron (~750N/mm ²)		碳素钢、合金钢 (~24HRC) Carbon steel, alloy steel (~24HRC)		碳素钢、合金钢 (~30HRC) Carbon steel, alloy steel (~30HRC)	
切削速度 VC Cutting Speed VC	30~70m/min		30~70m/min		30~60m/min	
刃径 DC (mm)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	10000	80	10000	80	10000	63
2	7500	125	7500	125	7500	115
3	7000	215	7000	215	6500	200
4	5400	220	5400	220	5000	200
5	4100	230	4100	230	3800	210
6	3500	235	3500	235	3200	215
8	2600	235	2600	235	2400	215
10	2100	230	2100	230	1900	210
12	3500	230	3500	230	1600	210
14	3000	215	3000	215	1350	200
16	1300	215	1300	215	1200	200
18	1150	210	1150	210	1050	195
20	1050	210	1050	210	950	195
Maximum cutting depth 最大切深量	 $D < 3, ap = 0.15D$ $D \geq 3, ap = 0.3D$					

被加工材料 Processed materials	预硬钢、调制钢 (30~40HRC) Prehardening Steel,modulated steel		不锈钢 Stainless steel		预硬钢、调制钢 (40~50HRC) Prehardening Steel,modulated steel(40~50HRC)	
切削速度 VC Cutting Speed VC	60~90m/min		60~90m/min		45~75m/min	
刃径 DC(mm) Blade diameter	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	10000	65	10000	30	10000	50
2	7500	110	5600	30	6500	70
3	5300	165	3700	40	4200	130
4	4000	175	2700	40	3200	130
5	3200	175	2250	40	2500	140
6	2650	180	1900	45	2100	140
8	2000	180	1400	45	1600	145
10	1600	175	1100	45	1200	140
12	1350	175	900	40	1100	135
14	1150	165	800	40	900	130
16	1000	165	700	40	800	130
18	900	160	600	35	1400	125
20	800	160	500	35	1250	125
最大切深量 Maximum cutting depth	 D<3,ap=0.15D D≥3,ap=0.3D				 ap=0.05D	

HP100 系列高效型铣刀

HP100 Series High-Efficiency Milling Cutter



采用不等分割设计，抑制高频震颤，在高效加工中保证其稳定性
It adopts unequal division design to suppress high-frequency tremor and ensure its stability in efficient machining

曲线型刃口经过钝化后增强了刃口强度和抗氧化性，降低切屑阻力，提高耐磨性和抗崩能力
After passivation, the curvilinear edge enhances the edge strength and oxidation resistance, reduces chip resistance, and improves wear resistance and collapse resistance

优质复合涂层 (TX)
High quality composite coating (TX)

优质硬质合金棒材
High quality carbide bars

产品优点

抗震设计，有效抑制振动及噪音。
Anti-seismic design, effectively suppress Vibration and noise.

几何学沟槽设计使排屑最佳化，适合重切加工。
Geometric groove design optimizes chip removal and is suitable for heavy cutting.

刃口表面质量优，能在加工时不易黏屑。
The edge surface quality is excellent, and it is not easy to stick shavings during processing.

采用高抗折性的优良超微粒钨钢母材。
The superfine tungsten steel base material with high flexural resistance is adopted.

材料去除率高，使用寿命长，适合大进给高效率加工。
High material removal rate, long service life, suitable for large feed high efficiency processing.

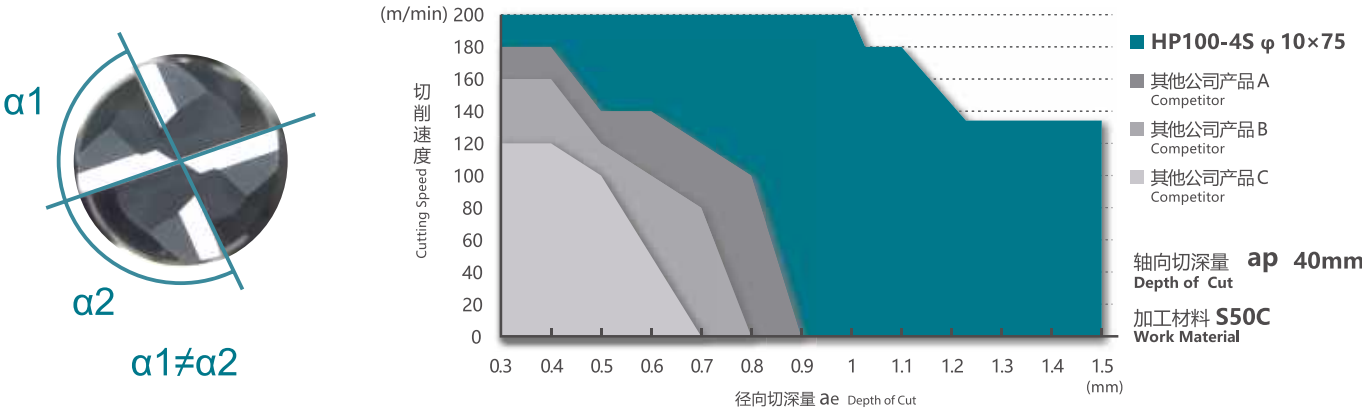
出色的精加工面 *Excellent precision machined surface*



使用工具 Tool	HP100-4S Φ10	其他公司产品 Φ10 Competitor
加工材料 Work Material	NAK80 (40HRC)	
切削速度 Cutting Speed	195m/min (5,175min-1)	
进给速度 Feed	600mm/min (0.03mm/t)	
切削深度 Depth of Cut	ap=36mm ae=0.3mm	
使用机械 Machine	立式加工中心 Vertical Machining Center	
表面粗糙度 Surface Roughness	Ra=0.09μm Rz=0.55μm	

抑制振动 SUPPRESSION OF VIBRATION

采用不等分割、精密铲背设计，可以实现稳定、高效的加工。
The combination of variable lead, unequal spacing teeth and microrelief geometry contributes to stable and high efficiency milling performance.



即使是高速·大切深加工也无振动，具有压倒性的高效率加工。
Chattering is greatly suppressed even during high-speed, high-depth milling, resulting in unrivaled high efficiency performance.

TX 涂层 TA COATING

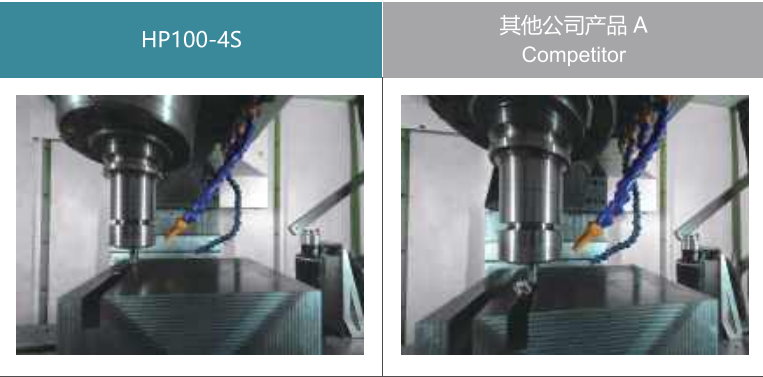
进口多层纳米涂层技术 (TX 涂层) Imported multi-layer nano coating technology (TX coating)	详细参数 Detailed parameters		特点 Characteristic
 (Al,Cr,Si)N 类 (Al,Ti,Si)N 极超微粒硬质合金	涂层颜色 Carbide, die steel	维氏硬度 Vickers hardness	高硬度：具有极高的硬度，能够显著提高工具的耐磨性 High hardness: With extremely high hardness, it can significantly improve the wear resistance of the tool
	黑色 Black	3500(HV)	
	涂层厚度 Coating thickness	最高工作温度 Maximum operating temperature	耐高温：在高温环境下具有优异的热稳定性 High temperature resistance: Excellent thermal stability in high temperature environments
	2-6μm	1100°C	
	应用范围 Scope of application	摩擦系数 Friction coefficient	低摩擦系数：涂层表面光滑，摩擦系数低 Low friction coefficient: Smooth coating surface, low friction coefficient
	硬质合金，模具钢 Carbide, die steel	0.4	

复合多层结构具有：润滑性、耐磨损性、高温抗氧化性，能有效抑制裂纹传播，同时表面进行了平滑处理，进一步提高加工面精度。
The composite multilayer structure has lubricity, wear resistance, and high-temperature oxidation resistance, which can effectively suppress crack propagation. At the same time, the surface has been smoothed to further improve the machining surface accuracy.

稳定排屑 TROUBLE-FREE CHIP EVACUATION

即使是高效率槽铣也能稳定排屑
Even high efficiency slot milling provides stable chip removal

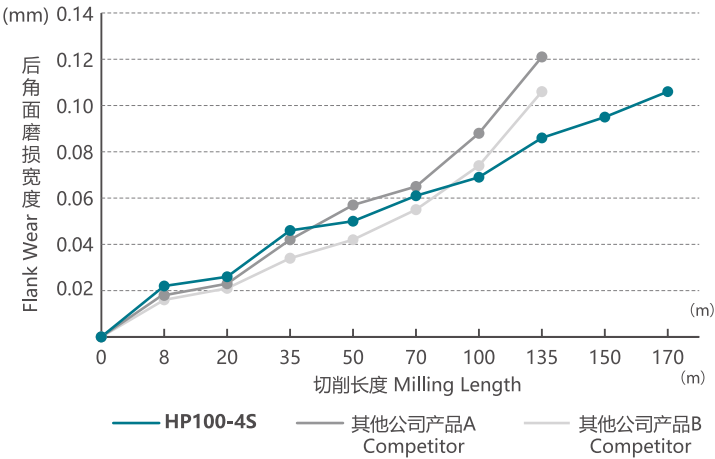
使用工具 Tool	HP100-4S Φ6
加工材料 Work Material	SCM440
加工方法 Milling Method	槽铣 Slot Milling
切削速度 Cutting Speed	90m/min (2,900min-1)
进给速度 Feed	660mm/min (0.057mm/t)
切削深度 Depth of Cut	ap=10mm
切削油剂 Coolant	无 None
使用机械 Machine	立式加工中心 (HSK63) Vertical Machining Center



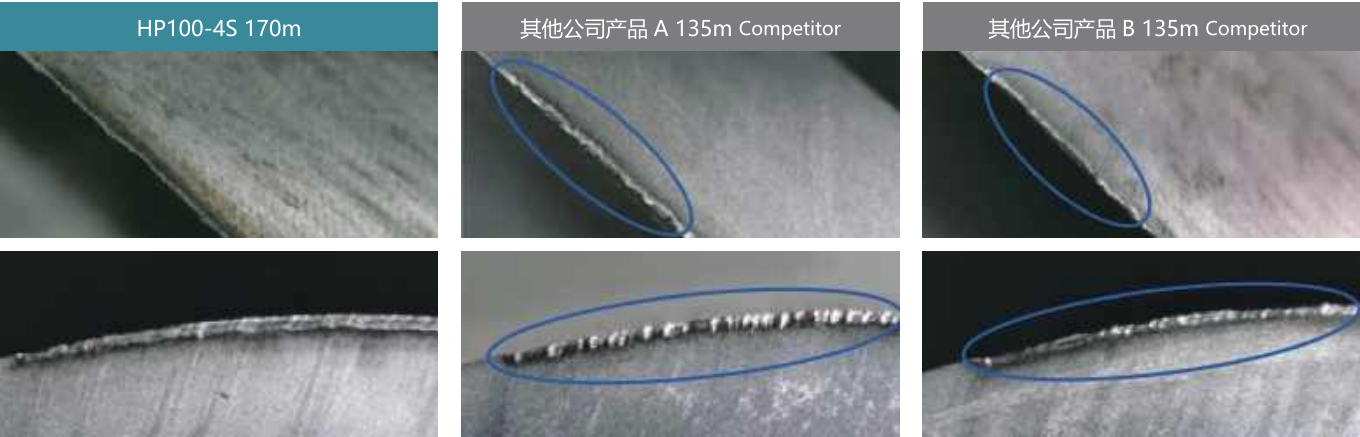
长寿命 LONG TOOL LIFE

采用 TA 涂层，即使使用水溶性切削油剂，刀具磨损量也能稳定进行。
TA coating greatly reduces tool wear progression even with the use of water-soluble coolant.

使用工具 Tool	HP100-4S Φ10×40
加工材料 Work Material	SCM440(30HRC)
加工方法 Milling Method	侧铣 Side Milling
切削速度 Cutting Speed	180m/min (5,700min ⁻¹)
进给速度 Feed	1,400mm/min(0.06mm/t)
切削深度 Depth of Cut	ap=25mm ae=1.0mm
切削油剂 Coolant	水溶性切削油剂 Water-Soluble
使用机械 Machine	立式加工中心 (BT40) Vertical Machining Center



外周刃的磨损状态
Wear comparison of the peripheral cutting edge

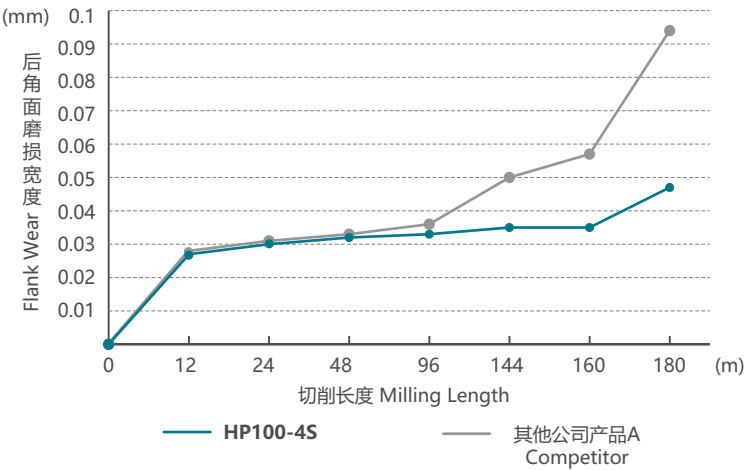


抑制磨损

MINIMIZES TOOL WEAR

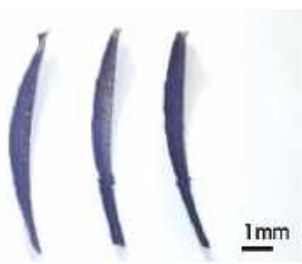
抑制切削热，最大限度地减少刀具磨损
Suppression of cutting heat, generation minimizes tool wear

使用工具 Tool	HP100-4S Φ6
加工材料 Work Material	SCM440
加工方法 Milling Method	侧铣 Side Milling
切削速度 Cutting Speed	140m/min (7,500min ⁻¹)
进给速度 Feed	1,800mm/min (0.06mm/t)
切削深度 Depth of Cut	ap=9mm ae=1.2mm
切削油剂 Coolant	气冷式 Air Blow
使用机械 Machine	立式加工中心 (BT40) Vertical Machining Center



加工 180m 后的状态

TOOL CONDITION AFTER MILLING 180M

	切屑状态 Cutting Chips	切削刃部的磨损状态 Wear Comparison of the Cutting Edge
HP100-4S	 褐色 约 500°C Brown about 500°C	 刃尖磨损无缺口 No Cutting Edge Recession
其他公司产品 A Competitor	 蓝色 约 700°C Blue about 700°C	 刃尖磨损缺口小 Minimal Cutting Edge Recession

HP100-4S

4 刃平头 - 标准长

HP100-4S Standard 4-Flute Flat End Mill

UMG
carbide

TX
AlTiCrN

不等
4

90°

45°

h6
Shank Dia.

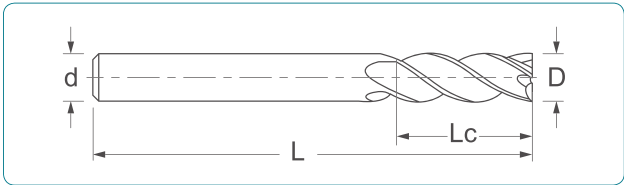




P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
○	○	○ ○

M	K	S
不锈钢 Stainless Steel	铸铁 Cast Iron	钛合金 Titanium
○	○	○

○最适合 most suitable ○适合 suit



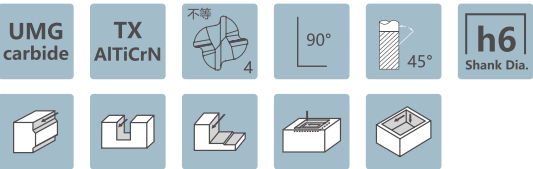
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
HP100-4S-010040-050	1	3	50	4	4	0 ~ -0.015
HP100-4S-015040-050	1.5	5	50	4	4	0 ~ -0.015
HP100-4S-020040-050	2	6	50	4	4	0 ~ -0.015
HP100-4S-025040-050	2.5	8	50	4	4	0 ~ -0.015
HP100-4S-030040-050	3	9	50	4	4	0 ~ -0.015
HP100-4S-035040-050	3.5	11	50	4	4	0 ~ -0.015
HP100-4S-040040-050	4	12	50	4	4	0 ~ -0.015
HP100-4S-050060-050	5	13	50	6	4	0 ~ -0.015
HP100-4S-060060-050	6	15	50	6	4	0 ~ -0.015
HP100-4S-080080-060	8	20	60	8	4	0 ~ -0.015
HP100-4S-100100-075	10	25	75	10	4	0 ~ -0.015
HP100-4S-120120-075	12	30	75	12	4	0 ~ -0.015
HP100-4S-140140-100	14	35	100	14	4	0 ~ -0.020
HP100-4S-160160-100	16	45	100	16	4	0 ~ -0.020

HP100-4SL

4 刃平头 - 加长

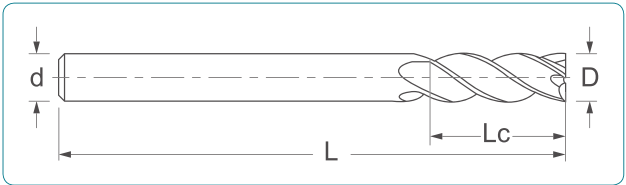
HP100-4SL Long Type 4-Flute Flat End Mill



P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
○	○	○ ○

M	K	S
不锈钢 Stainless Steel	铸铁 Cast Iron	钛合金 Titanium
○	○	○

● 最适合 most suitable ○ 适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
HP100-4SL-040040-075	4	16	75	4	4	0 ~ -0.015
HP100-4SL-040040-100	4	20	100	4	4	0 ~ -0.015
HP100-4SL-050060-075	5	20	75	6	4	0 ~ -0.015
HP100-4SL-060060-075	6	25	75	6	4	0 ~ -0.015
HP100-4SL-060060-100	6	30	100	6	4	0 ~ -0.015
HP100-4SL-080080-075	8	32	75	8	4	0 ~ -0.015
HP100-4SL-080080-100	8	32	100	8	4	0 ~ -0.015
HP100-4SL-100100-100	10	40	100	10	4	0 ~ -0.015
HP100-4SL-100100-150	10	50	150	10	4	0 ~ -0.015
HP100-4SL-120120-100	12	50	100	12	4	0 ~ -0.015
HP100-4SL-120120-150	12	60	150	12	4	0 ~ -0.015

HP100-2B

2 刃球头 - 标准长

HP100-2B Standard 2-Flute Ball Nose End Mill

UMG
carbide

TX
AlTiCrN

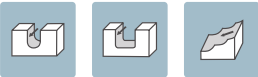
2



30°

h6

Shank Dia.

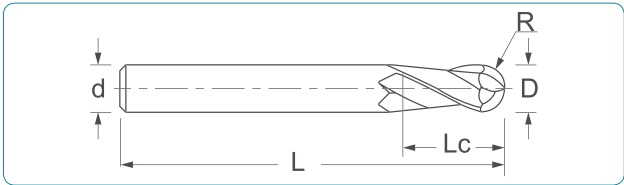




P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
☒	☒	☒ ☐

M	K	S
不锈钢 Stainless Steel	铸铁 Cast Iron	钛合金 Titanium
☒	☒	☐

☒最适合 most suitable ☐适合 suit



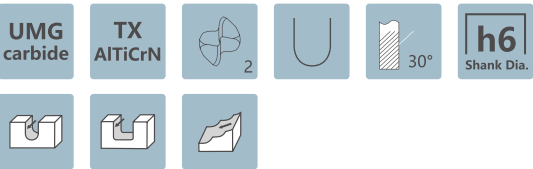
单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HP100-2B-010040R0.5-050	1	2	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-015040R0.75-050	1.5	3	0.75	4	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-020040R1-050	2	4	1	4	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-025040R1.25-050	2.5	5	1.25	4	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-030040R1.5-050	3	6	1.5	4	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-040040R2-050	4	8	2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-050060R2.5-050	5	10	2.5	6	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-060060R3-050	6	12	3	6	50	0 ~ -0.015	0 ~ -0.020
HP100-2B-080080R4-060	8	16	4	8	60	0 ~ -0.015	0 ~ -0.020
HP100-2B-100100R5-075	10	20	5	10	75	0 ~ -0.015	0 ~ -0.020
HP100-2B-120120R6-075	12	24	6	12	75	0 ~ -0.015	0 ~ -0.020
HP100-2B-140140R7-100	14	28	7	14	100	0 ~ -0.020	0 ~ -0.030
HP100-2B-160160R8-100	16	32	8	16	100	0 ~ -0.020	0 ~ -0.030

HP100-2BL

2 刃球头 - 加长

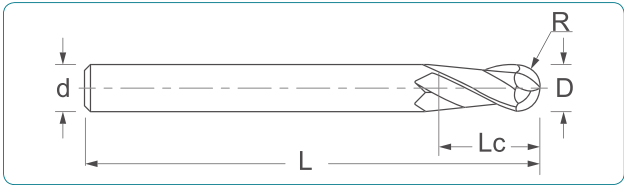
HP100-2BL Long Type 2-Flute Ball Nose End Mill



P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
○	○	○ ○

M	K	S
不锈钢 Stainless Steel	铸铁 Cast Iron	钛合金 Titanium
○	○	○

●最适合 most suitable ○适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HP100-2BL-040040R2-075	4	8	2	4	75	0 ~ -0.015	0 ~ -0.020
HP100-2BL-060060R3-075	6	12	3	6	75	0 ~ -0.015	0 ~ -0.020
HP100-2BL-060060R3-100	6	12	3	6	100	0 ~ -0.015	0 ~ -0.020
HP100-2BL-080080R4-075	8	16	4	8	75	0 ~ -0.015	0 ~ -0.020
HP100-2BL-080080R4-100	8	16	4	8	100	0 ~ -0.015	0 ~ -0.020
HP100-2BL-080080R4-150	8	16	4	8	150	0 ~ -0.015	0 ~ -0.020
HP100-2BL-100100R5-100	10	20	5	10	100	0 ~ -0.015	0 ~ -0.020
HP100-2BL-100100R5-150	10	20	5	10	150	0 ~ -0.015	0 ~ -0.020
HP100-2BL-120120R6-100	12	24	6	12	100	0 ~ -0.015	0 ~ -0.020
HP100-2BL-120120R6-150	12	24	6	12	150	0 ~ -0.015	0 ~ -0.020

HP100-4R

4 刃圆鼻刀 - 标准长
HP100-4R Standard 4-Flute Corner Radius End Mill

UMG
carbide

TX
AlTiCrN

不等
4

R

45°

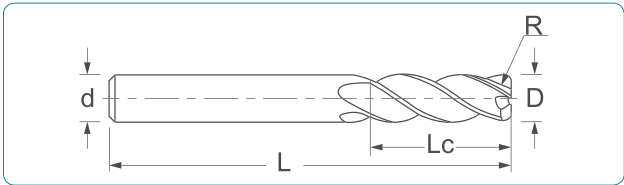
h6
Shank Dia.



P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
○	○	○ ○

M	K	S
不锈钢 Stainless Steel	铸铁 Cast Iron	钛合金 Titanium
○	○	○

○最适合 most suitable ○适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HP100-4R-010040R0.2-050	1	3	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-015040R0.2-050	1.5	4	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-020040R0.2-050	2	5	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-025040R0.2-050	2.5	7	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-025040R0.5-050	2.5	7	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-030040R0.2-050	3	8	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-030040R0.5-050	3	8	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-030040R1-050	3	8	1	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-040040R0.2-050	4	10	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-040040R0.5-050	4	10	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-040040R1-050	4	10	1	4	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-050060R0.5-050	5	13	0.5	6	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-050060R1-050	5	13	1	6	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-060060R0.5-050	6	15	0.5	6	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-060060R1-050	6	15	1	6	50	0 ~ -0.015	0 ~ -0.020
HP100-4R-080080R0.5-060	8	20	0.5	8	60	0 ~ -0.015	0 ~ -0.020
HP100-4R-080080R1-060	8	20	1	8	60	0 ~ -0.015	0 ~ -0.020
HP100-4R-100100R0.5-075	10	25	0.5	10	75	0 ~ -0.015	0 ~ -0.020
HP100-4R-100100R1-075	10	25	1	10	75	0 ~ -0.015	0 ~ -0.020
HP100-4R-120120R0.5-075	12	30	0.5	12	75	0 ~ -0.015	0 ~ -0.020
HP100-4R-120120R1-075	12	30	1	12	75	0 ~ -0.015	0 ~ -0.020
HP100-4R-160160R0.5-100	16	45	0.5	16	100	0 ~ -0.020	0 ~ -0.030

HP100-4RL

4 刃圆鼻刀 - 加长
HP100-4R L Long Type 4-Flute Corner Radius End Mill

UMG
carbide

TX
AlTiCrN

2



30°

h6
Shank Dia.

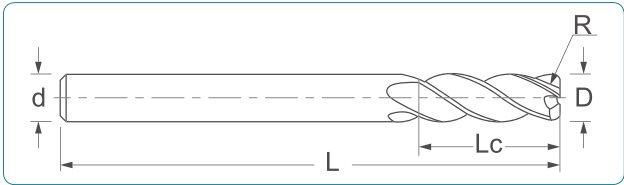




P	P	P
碳钢 ~24HRC Carbon Steel	合金钢 ~30HRC Alloyed Steel	预硬钢 40~50HRC Prehardening Steel
		 

M	K	S
不锈钢 Stainless Steel	铸铁 Cast Iron	钛合金 Titanium
		

 最适合 most suitable  适合 suit

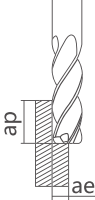


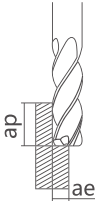
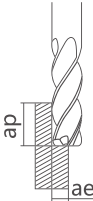
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HP100-4RL-040040R0.5-075	4	10	0.5	4	75	0 ~ -0.015	0 ~ -0.020
HP100-4RL-040040R0.5-100	4	20	0.5	4	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-040040R1-075	4	10	1	4	75	0 ~ -0.015	0 ~ -0.020
HP100-4RL-040040R1-100	4	20	1	4	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-060060R0.5-075	6	15	0.5	6	75	0 ~ -0.015	0 ~ -0.020
HP100-4RL-060060R0.5-100	6	24	0.5	6	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-060060R1-075	6	15	1	6	75	0 ~ -0.015	0 ~ -0.020
HP100-4RL-060060R1-100	6	24	1	6	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-080080R0.5-075	8	20	0.5	8	75	0 ~ -0.015	0 ~ -0.020
HP100-4RL-080080R0.5-100	8	32	0.5	8	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-080080R1-075	8	20	1	8	75	0 ~ -0.015	0 ~ -0.020
HP100-4RL-080080R1-100	8	32	1	8	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-100100R0.5-100	10	25	0.5	10	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-100100R1-100	10	25	1	10	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-120120R0.5-100	12	30	0.5	12	100	0 ~ -0.015	0 ~ -0.020
HP100-4RL-120120R1-100	12	30	1	12	100	0 ~ -0.015	0 ~ -0.020

HP100-4S 四刃平头立铣刀加工参数参考表 (侧铣)

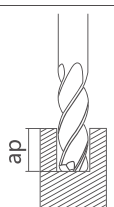
HP100-4S 4-Flute Flat End Mill Machining Parameters Reference Table (Side Milling)

被加工材料 Processed materials	铸铁、球墨铸铁 (~750N/mm²) Cast iron, ductile iron (~750N/mm²)		碳素钢、合金钢 (~24HRC) Carbon steel, alloy steel (~24HRC)		碳素钢、合金钢 (~30HRC) Carbon steel, alloy steel (~30HRC)	
切削速度 VC Cutting Speed VC	80~120m/min		80~120m/min		70~100m/min	
刃径 DC(mm) Blade diameter	转速 (min⁻¹) rotational speed (min⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min⁻¹) rotational speed (min⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min⁻¹) rotational speed (min⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	23850	1049	20670	1049	20670	827
2	11925	1049	10335	1049	10335	827
3	8480	1018	7950	1018	7950	859
4	7155	1288	6758	1288	6758	1081
5	6360	1526	5724	1526	5724	1145
6	6360	1781	5300	1781	5300	1272
8	4770	1717	3975	1717	3975	1272
10	3816	1679	3180	1679	3180	1208
12	3180	1526	2650	1526	2650	1166
14	2700	1390	2300	1390	2300	1000
16	2385	1240	1988	1240	1988	954
18	2100	2100	1760	1100	1760	870
20	1908	1908	1590	1068	1590	827
Maximum cutting depth 最大切深量	 ap≤1.5D ae≤0.3D					

被加工材料 Processed materials	预硬钢、调制钢 (30~40HRC) Prehardening Steel,modulated steel		碳素钢、合金钢 (~24HRC) Carbon steel, alloy steel (~24HRC)		碳素钢、合金钢 (~30HRC) Carbon steel, alloy steel (~30HRC)		钛合金、镍基合金 Titanium alloy, nickel based alloy	
切削速度 VC Cutting Speed VC	60~90m/min		60~90m/min		45~75m/min		35~70m/min	
刃径 DC(mm) Blade diameter	转速 (min⁻¹) rotational speed	进给速度 (mm/min) Feed Speed	转速 (min⁻¹) rotational speed	进给速度 (mm/min) Feed Speed	转速 (min⁻¹) rotational speed	进给速度 (mm/min) Feed Speed	转速 (min⁻¹) rotational speed	进给速度 (mm/min) Feed Speed
1	15900	509	15900	509	14000	400	11130	267
2	8745	560	8745	560	7000	450	5565	267
3	7420	712	7420	712	6300	550	4770	382
4	6360	890	6360	890	5700	650	4373	455
5	5406	930	5406	930	5000	800	4134	562
6	4770	1011	4770	1011	4300	900	3710	668
8	3578	973	3578	973	3200	800	2783	646
10	2862	916	2862	916	2500	750	2226	579
12	2385	954	2385	954	2000	700	1855	594
14	2000	855	2000	855	1800	680	1600	570
16	1789	787	1789	787	1500	650	1391	557
18	1600	737	1600	737	1400	630	1250	525
20	1431	687	1431	687	1200	600	1113	490
Maximum cutting depth 最大切深量	 ap≤1.5D ae≤0.2D				 ap≤1.5D ae≤0.05D		 ap≤1.5D ae≤0.1D	

HP100-4S 四刃平底铣刀加工参数参考表 (槽铣)

HP100-4S 4-Flute Flat End Mill Machining Parameters Reference Table (Slotting)

被加工材料 Processed materials	铸铁、球墨铸铁 (~750N/mm ²) Cast iron, ductile iron (~750N/mm ²)		碳素钢、合金钢 (~24HRC) Carbon steel, alloy steel (~24HRC)		碳素钢、合金钢 (~30HRC) Carbon steel, alloy steel (~30HRC)	
切削速度 VC Cutting Speed VC	30~70m/min		30~70m/min		30~60m/min	
刃径 DC (mm)	转速 (min ⁻¹) rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	9540	305	9540	305	7950	191
2	4770	305	4770	305	3975	223
3	4240	407	4240	407	4240	373
4	3975	509	3975	509	3578	429
5	3816	611	3816	611	3816	580
6	3445	661	3445	661	3180	572
8	2783	712	2783	712	2385	572
10	2226	712	2226	712	1908	550
12	1855	668	1855	668	1590	509
14	1500	600	1500	600	1400	470
16	1391	557	1391	557	1193	429
18	1250	540	1250	540	1070	400
20	1113	534	1113	534	954	382
Maximum cutting depth 最大切深量	 2≤D, ap=0.5D D>2, ap=1.0D					

被加工材料 Processed materials	预硬钢、调制钢 (30~40HRC) Prehardening Steel, modulated steel		碳素钢、合金钢 (~24HRC) Carbon steel, alloy steel (~24HRC)		碳素钢、合金钢 (~30HRC) Carbon steel, alloy steel (~30HRC)		钛合金、镍基合金 Titanium alloy, nickel based alloy	
切削速度 VC Cutting Speed VC	25~60m/min		25~60m/min		20~50m/min		20 ~ 50m/min	
刃径 DC (mm)	转速 (min ⁻¹) rotational speed	进给速度 (mm/min) Feed Speed	转速 (min ⁻¹) rotational speed	进给速度 (mm/min) Feed Speed	转速 (min ⁻¹) rotational speed	进给速度 (mm/min) Feed Speed	转速 (min ⁻¹) rotational speed	进给速度 (mm/min) Feed Speed
1	7950	191	7950	191	7000	175	7950	127
2	3975	223	3975	223	3500	200	3975	159
3	4240	373	4240	373	4000	350	3180	254
4	3578	429	3578	429	3300	400	2385	267
5	3816	580	3816	580	3500	530	2544	326
6	3180	572	3180	572	3000	540	2120	339
8	2385	572	2385	572	2000	550	1590	318
10	1908	550	1908	550	1800	530	1272	331
12	1590	509	1590	509	1450	480	1060	318
14	1400	470	1400	470	1300	450	930	305
16	1193	429	1193	429	1100	400	795	286
18	1070	400	1070	400	950	380	715	270
20	954	382	954	382	900	360	636	254
Maximum cutting depth 最大切深量	 2≤D, ap=0.3D D>2, ap=0.5D				 ap=0.05D		 2≤D, ap=0.2D D>2, ap=0.3D	

ALS100 系列通用铝加工立铣刀

ALS100 series universal aluminium end milling cutter



抑制毛刺 Inhibition of burr

大前角和小棱边实现优秀的切削效果。
Large front angle and small edge achieve excellent cutting effect.

大容屑槽 Large Chip flute

在高进给加工中，刀具的切削与排屑更加流畅。
The cutting and chip removal are more smooth and stable in the high feed processing.

锋利切削刃 Sharp cutting edge

锋利的切削刃及大螺旋角设计有效防止机屑瘤的产生。
Sharp cutting edge and large spiral angle design can effectively prevent the generation of built-up edge.

高光 • HIGHLIGHT

适用于铝合金材料的粗加工和半精细加工。
Suitable for rough and semi fine machining of aluminum alloy materials.

特殊的刃型设计，配合先进的抛光钝化工艺，有效防止振动并解决粘屑问题。
Special blade design, combined with advanced polishing and passivation technology, effectively prevents vibration and solves chip sticking problems.

特殊的刃口设计，有效解决刀具刃口沾屑问题

Special blade design effectively solves the problem of chip sticking at the cutting edge of the tool

特殊的容屑槽形状，即使在沟槽及型腔加工中也能表现出优异的性能。
Special chip flute shape, can show excellent performance even in groove and cavity machining.



大排屑空间，不易积屑。
Large chip removal space, not easy to accumulate chips.

抗震工艺，锋利月牙刃口。
Anti-seismic technology, sharp crescent end.

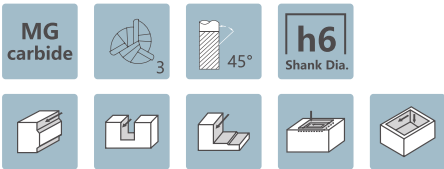
全刃口抗震设计，能抑制加工过程中的颤振，提高加工表面质量。
Full-edge anti-vibration design can suppress vibration during processing and improve the quality of the processed surface.



ALS100-3S

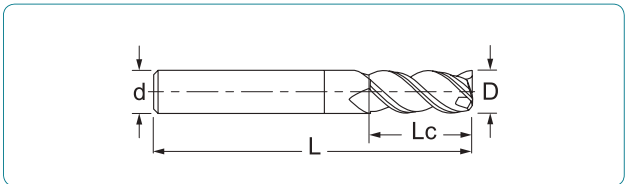
3 刃平头 - 标准长

ALS100-3S Standard 3-Flute Flat End Mill



N	
铜合金 Copper	铝合金 Alumium
○	●

● 最适合 most suitable ○ 适合 suit



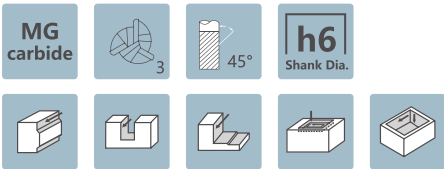
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
ALS100-3S-010040-050	1	3	50	4	3	0 ~ 0.015
ALS100-3S-015040-050	1.5	5	50	4	3	0 ~ 0.015
ALS100-3S-020040-050	2	6	50	4	3	0 ~ 0.015
ALS100-3S-025040-050	2.5	8	50	4	3	0 ~ 0.015
ALS100-3S-030030-050	3	9	50	3	3	0 ~ 0.015
ALS100-3S-030040-050	3	9	50	4	3	0 ~ 0.015
ALS100-3S-035040-050	3.5	11	50	4	3	0 ~ 0.015
ALS100-3S-040040-050	4	12	50	4	3	0 ~ 0.015
ALS100-3S-050050-050	5	15	50	5	3	0 ~ 0.015
ALS100-3S-050060-050	5	15	50	6	3	0 ~ 0.015
ALS100-3S-060060-050	6	18	50	6	3	0 ~ 0.015
ALS100-3S-080080-060	8	24	60	8	3	0 ~ 0.015
ALS100-3S-100100-075	10	30	75	10	3	0 ~ 0.015
ALS100-3S-120120-075	12	35	75	12	3	0 ~ 0.015
ALS100-3S-140140-100	14	45	100	14	3	0 ~ 0.020
ALS100-3S-160160-100	16	45	100	16	3	0 ~ 0.020

ALS100-3SL

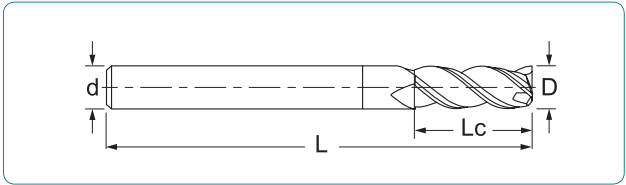
3 刃平头 - 加长

ALS100-3SL Long Type 3-Flute Flat End Mill



N	
铜合金 Copper	铝合金 Aluminium
○	●

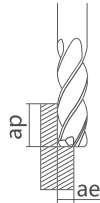
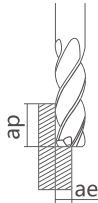
● 最适合 most suitable ○ 适合 suit



单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
ALS100-3SL-030030-075	3	12	75	3	3	0 ~ 0.015
ALS100-3SL-030040-750	3	12	75	4	3	0 ~ 0.015
ALS100-3SL040040-075	4	16	75	4	3	0 ~ 0.015
ALS100-3SL-60060-075	6	25	75	6	3	0 ~ 0.015
ALS100-3SL-080080-100	8	35	100	8	3	0 ~ 0.015
ALS100-3SL-100100-100	10	40	100	10	3	0 ~ 0.015
ALS100-3SL-120120-100	12	45	100	12	3	0 ~ 0.015
ALS100-3SL-140140-150	14	70	150	14	3	0 ~ 0.020
ALS100-3SL-160160-150	16	80	150	16	3	0 ~ 0.020

ALS100-3S 三刃平底立铣刀加工参数参考表 (侧铣)
 ALS100-3S Machining Parameter Reference Table (Side Milling)

被加工材料 Processed materials	铝合金 Aluminum alloy		硅铝合金 Si=10% Silicon aluminum alloy Si=10%	
刃径 DC(mm) Diameter	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) Rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	40000	800	40000	600
2	40000	1200	40000	900
3	26500	1500	21000	1200
4	20000	1650	16000	1300
5	16000	1750	13000	1300
6	13000	1800	10600	1300
8	10000	1900	8000	1500
10	8000	1950	6500	1500
12	6600	2000	5300	1550
14	5700	2000	4600	1600
16	5000	2000	40000	1600
18	4400	2000	3500	1600
20	4000	2000	3200	1600
Maximum cutting depth 最大切深量	 ap=1.5D ae=0.1D		 ap=0.5D ae=1.0D	

1. 上表是侧铣加工的标准值，刀具切槽时，转速要以上表的 50%~70%，进给速度要以 40%~60% 为标准值。
 2. 请使用高精度的机床和刀柄。
 3. 请使用空气冷却或不易产生烟雾的切削液。
 4. 侧面铣削推荐顺铣加工。
 5. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
 6. 在不干涉的条件下尽可能使刀具悬长最短。
1. The above table shows the standard values for side milling machining. When cutting grooves with the tool, the speed should be 50%~70% of the above table, and the feed rate should be 40%~60% as the standard value.
 2. Please use high-precision machine tools and tool holders.
 3. Please use air cooling or cutting fluid that is less likely to produce smoke.
 4. Side milling is recommended for sequential milling.
 5. When the rigidity of the machine tool and workpiece installation is poor, vibration and abnormal sound may occur. In this case, the speed and feed rate in the table above should be reduced year-on-year.
 6. Minimize the tool suspension length as much as possible without interference.

HR100 系列高硬型铣刀

HR100 Series High hardness milling cutter



特殊的刃口处理工艺，有效减少切削粘接，延缓刀具磨损
Special cutting edge treatment technology effectively reduces cutting adhesion and delays tool wear

独特的槽型设计，兼顾刀具刚性与容屑空间
Unique groove design, taking into account tool rigidity and chip space

DR 纳米涂层，耐高温，高抗氧化性，高耐磨性
DR Nano coating, high temperature resistance, high oxidation resistance, high wear resistance

优质硬质合金棒材
High quality carbide bars.

产品优点

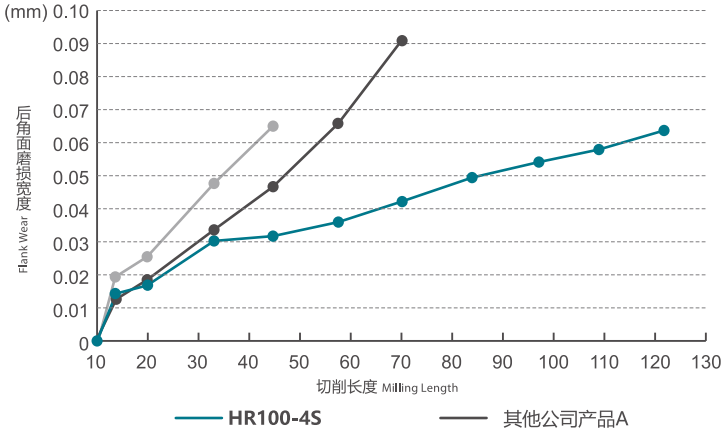
采用 0.2UM 的超细微粒晶体的钨钢母材，具有极高的硬度和韧性。
Tungsten steel base material with ultra-fine particle crystal of 0.2UM is used, which has extremely high hardness and toughness.

高性能涂层，具有高耐热性和高耐磨损性能，在高硬加工时可抑制崩刀，增强刀具使用寿命。
Tungsten steel base material with ultra-fine particle crystal of 0.3UM is used, which has extremely high hardness and toughness.

适用于 45~65HRC 高硬度材料的粗精加工、半精加工。
Suitable for rough and semi precision machining of 45~65HRC high hardness materials.

在高硬度钢的高速加工中，发挥优秀的耐久性
Demonstrates excellent durability in high-speed machining of high-hardness steel

使用工具 Tool	HR100-4S Φ10	其他公司产品 Φ10 Competitor
加工材料 Work Material	SKD11(60HRC)	
切削速度 Cutting Speed	125m/min (9950min ⁻¹)	
进给速度 Feed	1,200mm/min (0.03mm/t)	
切削深度 Depth of Cut	ap=4mm ae=0.08mm	
切削油剂 Coolant	气冷 Air Blow	
使用机械 Machine	立式加工中心 Vertical Machining Center	



涂层构造 COATING STRUCTURE

支持高硬度钢加工的创新涂层 Innovative coating that supports high-hardness steel machining



超耐热层 Super Heat Resistant Layer

通过含有 SiC 的超耐热材料和结晶微小化，实现表面平滑化、高硬化化、高韧性及耐溶着强化。
Smoothering of surface, high toughness and adhesion resistance due to the SiC containing ultra-heat-resistance material and crystal miniaturization.

超微细纳米周期积层结构 Ultra-Fine Periodic Nano-Layered Structure

含有 SiC 的超耐热层和超微细纳米周期积层结构，具有高耐热性和耐磨损性的同时，发挥优异的韧性。
Super heat resistant layer and ultra-fine periodic nano-layered structure provide superior toughness while maintaining high heat resistance and abrasion resistance.

DR 涂层具有优异的抗氧化性能、红硬性以及突出的耐磨损性能，能够降低切削中因积屑瘤引起刀具的磨粒磨损，即使在高硬度加工中也可抑制崩刃，实现工具的长寿命化。
DR Coating has excellent oxidation resistance, red hardness and outstanding wear resistance, which can reduce the abrasive wear of the tool caused by chip nodules in cutting, even in high hardness processing, can inhibit the edge breakage, and achieve the long life of the tool

涂层色 Coating Color	涂层构造 Coating Structure	硬度 (GPa) Hardness	氧化开始温度 (°C) Oxidation Temperature	耐热性 Heat Resistance
古铜色 Bronze-Colored	超微细纳米周期积层 Ultra-Fine Periodic Nano-Layered	41	1,300	☆
附着力 Adhesion Strength	表面粗糙度 Surface Roughness	耐磨损性 Wear Resistance	耐溶着性 Welding Resistance	韧性 Toughness
◎	○	☆	◎	◎

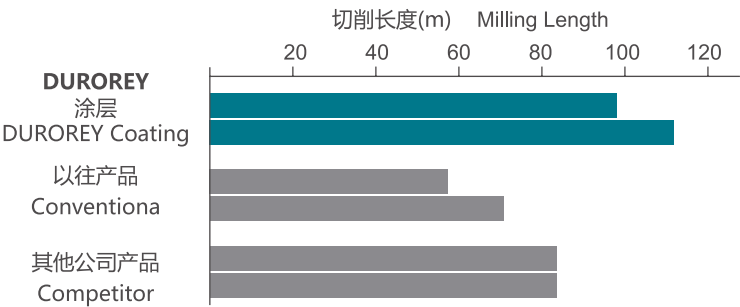
(标准 Fair) ○→◎→☆ (最佳 Best)

涂层性能 COATING PERFORMANCE

硬度 60HRC SKD11 加工数据。
Cutting data of SKD11 60 HRC.

使用工具 Tool	HR100-4S Φ10
加工材料 Work Material	SKD11(60HRC)
加工方法 Milling Method	侧铣 Side Milling
切削速度 Cutting Speed	250m/min(7,950min ⁻¹)
进给速度 Feed	4,800mm/min(0.1mm/t)
切削深度 Depth of Cut	ap=10mm ae=0.1mm
切削油剂 Coolant	气冷 Air Blow

外周磨损宽度达 0.1mm 时的切削长度
Cutting length up to 0.1mm outer circumference wear width



HR100-4S

4 刃平刀 - 标准长
HR100-4S Standard 4-Flute Flat End Mill

SMG
carbide

DR
AlCrN-X







h6

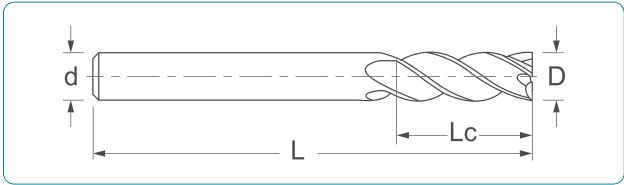
Shank Dia.





P		H
预硬钢 40~45HRC Prehardening Steel	调制钢 45~50HRC Modulated steel	高硬钢 50~65HRC Hardened Steel
☐	☒	☒

☒ 最适合 most suitable ☐ 适合 suit



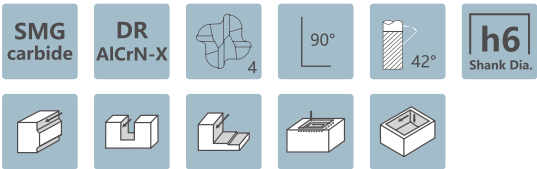
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
HR100-4S-010040-050	1	3	50	4	4	0 ~ -0.015
HR100-4S-015040-050	1.5	5	50	4	4	0 ~ -0.015
HR100-4S-020040-050	2	6	50	4	4	0 ~ -0.015
HR100-4S-025040-050	2.5	8	50	4	4	0 ~ -0.015
HR100-4S-030040-050	3	9	50	4	4	0 ~ -0.015
HR100-4S-035040-050	3.5	11	50	4	4	0 ~ -0.015
HR100-4S-040040-050	4	12	50	4	4	0 ~ -0.015
HR100-4S-050060-050	5	13	50	6	4	0 ~ -0.015
HR100-4S-060060-050	6	15	50	6	4	0 ~ -0.015
HR100-4S-080080-060	8	20	60	8	4	0 ~ -0.015
HR100-4S-100100-075	10	25	75	10	4	0 ~ -0.015
HR100-4S-120120-075	12	30	75	12	4	0 ~ -0.015
HR100-4S-140140-100	14	35	100	14	4	0 ~ -0.020
HR100-4S-160160-100	16	45	100	16	4	0 ~ -0.020

HR100-4SL

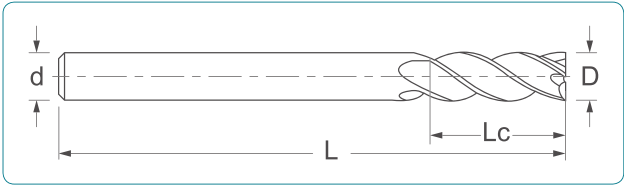
4 刃平刀 - 加长

HR100-4SL Long Type 4-Flute Flat End Mill



P		H
预硬钢 40~45HRC Prehardening Steel	调制钢 45~50HRC Modulated steel	高硬钢 50~65HRC Hardened Steel
☐	☒	☒

☒ 最适合 most suitable ☐ 适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	全长 (L) Total length	柄径 (d) Shank diameter	刃数 Blade count	外径公差 Outer diameter tolerance
HR100-4SL-040040-075	4	16	75	4	4	0 ~ -0.015
HR100-4SL-040040-100	4	20	100	4	4	0 ~ -0.015
HR100-4SL-050060-075	5	20	75	6	4	0 ~ -0.015
HR100-4SL-060060-075	6	25	75	6	4	0 ~ -0.015
HR100-4SL-060060-100	6	30	100	6	4	0 ~ -0.015
HR100-4SL-080080-075	8	32	75	8	4	0 ~ -0.015
HR100-4SL-080080-100	8	32	100	8	4	0 ~ -0.015
HR100-4SL-100100-100	10	40	100	10	4	0 ~ -0.015
HR100-4SL-100100-150	10	50	150	10	4	0 ~ -0.015
HR100-4SL-120120-100	12	50	100	12	4	0 ~ -0.015
HR100-4SL-120120-150	12	60	150	12	4	0 ~ -0.015

HR100-2B

2 刃球刀 - 标准长
HR100-2B Standard 2-Flute Ball Nose End Mill

SMG
carbide

DR
AlCrN-X

2



30°

h6

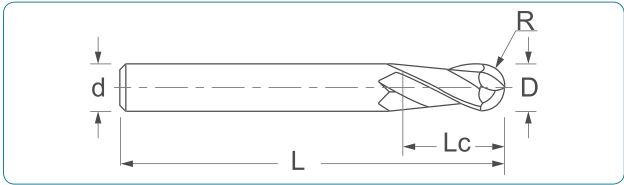
Shank Dia.





P		H
预硬钢 40~45HRC Prehardening Steel	调制钢 45~50HRC Modulated steel	高硬钢 50~65HRC Hardened Steel
☐	☒	☒

☒ 最适合 most suitable ☐ 适合 suit



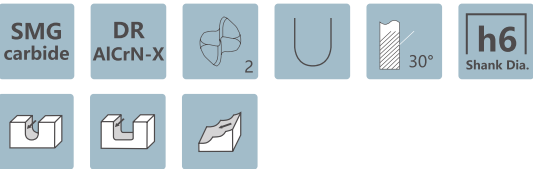
单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HR100-2B-010040R0.5-050	1	2	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-015040R0.75-050	1.5	3	0.75	4	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-020040R1-050	2	4	1	4	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-025040R1.25-050	2.5	5	1.25	4	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-030040R1.5-050	3	6	1.5	4	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-040040R2-050	4	8	2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-050060R2.5-050	5	10	2.5	6	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-060060R3-050	6	12	3	6	50	0 ~ -0.015	0 ~ -0.020
HR100-2B-080080R4-060	8	16	4	8	60	0 ~ -0.015	0 ~ -0.020
HR100-2B-100100R5-075	10	20	5	10	75	0 ~ -0.015	0 ~ -0.020
HR100-2B-120120R6-075	12	24	6	12	75	0 ~ -0.015	0 ~ -0.020
HR100-2B-140140R7-100	14	28	7	14	100	0 ~ -0.020	0 ~ -0.030
HR100-2B-160160R8-100	16	32	8	16	100	0 ~ -0.020	0 ~ -0.030

HR100-2BL

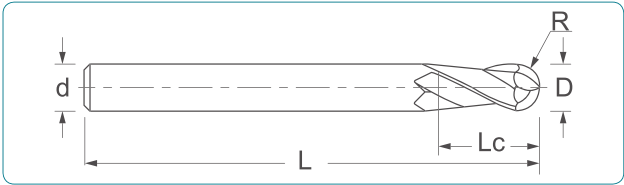
2 刃球刀 - 加长

HR100-2BL Long Type 2-Flute Ball Nose End Mill



P		H
预硬钢 40~45HRC Prehardening Steel	调制钢 45~50HRC Modulated steel	高硬钢 50~65HRC Hardened Steel
○	●	●

● 最适合 most suitable ○ 适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HR100-2BL-040040R2-075	4	8	2	4	75	0 ~ -0.015	0 ~ -0.020
HR100-2BL-060060R3-075	6	12	3	6	75	0 ~ -0.015	0 ~ -0.020
HR100-2BL-060060R3-100	6	12	3	6	100	0 ~ -0.015	0 ~ -0.020
HR100-2BL-080080R4-075	8	16	4	8	75	0 ~ -0.015	0 ~ -0.020
HR100-2BL-080080R4-100	8	16	4	8	100	0 ~ -0.015	0 ~ -0.020
HR100-2BL-080080R4-150	8	16	4	8	150	0 ~ -0.015	0 ~ -0.020
HR100-2BL-100100R5-100	10	20	5	10	100	0 ~ -0.015	0 ~ -0.020
HR100-2BL-100100R5-150	10	20	5	10	150	0 ~ -0.015	0 ~ -0.020
HR100-2BL-120120R6-100	12	24	6	12	100	0 ~ -0.015	
HR100-2BL-120120R6-150	12	24	6	12	150	0 ~ -0.015	0 ~ -0.020

HR100-4R

4 刃圆鼻刀 - 标准长
HR100-4R Standard 4-Flute Corner Radius End Mill

SMG
carbide

DR
AlCrN-X

不等
4

R

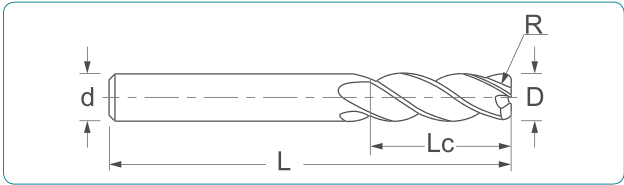
45°

h6
Shank Dia.



P		H
预硬钢 40~45HRC Prehardening Steel	调制钢 45~50HRC Modulated steel	高硬钢 50~65HRC Hardened Steel
○	◎	◎

◎ 最适合 most suitable ○ 适合 suit

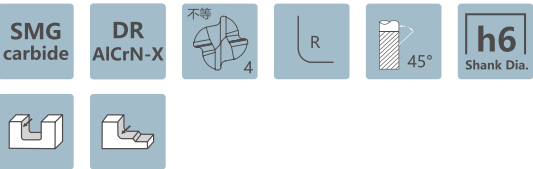


单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HR100-4R-010040R0.2-050	1	3	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-015040R0.2-050	1.5	4	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-020040R0.2-050	2	5	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-025040R0.2-050	2.5	7	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-025040R0.5-050	2.5	7	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-030040R0.2-050	3	8	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-030040R0.5-050	3	8	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-030040R1-050	3	8	1	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-040040R0.2-050	4	10	0.2	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-040040R0.5-050	4	10	0.5	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-040040R1-050	4	10	1	4	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-050060R0.5-050	5	13	0.5	6	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-050060R1-050	5	13	1	6	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-060060R0.5-050	6	15	0.5	6	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-060060R1-050	6	15	1	6	50	0 ~ -0.015	0 ~ -0.020
HR100-4R-080080R0.5-060	8	20	0.5	8	60	0 ~ -0.015	0 ~ -0.020
HR100-4R-080080R1-060	8	20	1	8	60	0 ~ -0.015	0 ~ -0.020
HR100-4R-100100R0.5-075	10	25	0.5	10	75	0 ~ -0.015	0 ~ -0.020
HR100-4R-100100R1-075	10	25	1	10	75	0 ~ -0.015	0 ~ -0.020
HR100-4R-120120R0.5-075	12	30	0.5	12	75	0 ~ -0.015	0 ~ -0.020
HR100-4R-120120R1-075	12	30	1	12	75	0 ~ -0.015	0 ~ -0.020
HR100-4R-160160R0.5-100	16	45	0.5	16	100	0 ~ -0.020	0 ~ -0.030

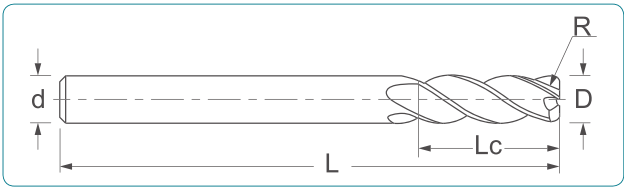
HR100-4RL

4 刃圆鼻刀 - 加长
HR100-4RL Long Type 4-Flute Corner Radius End Mill



P		H
预硬钢 40~45HRC Prehardening Steel	调制钢 45~50HRC Modulated steel	高硬钢 50~65HRC Hardened Steel
○	●	●

● 最适合 most suitable ○ 适合 suit

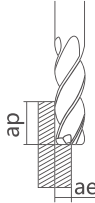
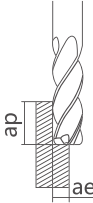
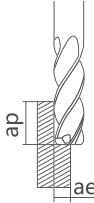


单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	刃长 (Lc) Blade length	角半径 (R) Angular radius	柄径 (d) Shank diameter	全长 (L) Total length	圆弧角精度 Arc angle accuracy	外径公差 Outer diameter tolerance
HR100-4RL-040040R0.5-075	4	10	0.5	4	75	0 ~ -0.015	0 ~ -0.020
HR100-4RL-040040R0.5-100	4	20	0.5	4	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-040040R1-075	4	10	1	4	75	0 ~ -0.015	0 ~ -0.020
HR100-4RL-040040R1-100	4	20	1	4	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-060060R0.5-075	6	15	0.5	6	75	0 ~ -0.015	0 ~ -0.020
HR100-4RL-060060R0.5-100	6	24	0.5	6	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-060060R1-075	6	15	1	6	75	0 ~ -0.015	0 ~ -0.020
HR100-4RL-060060R1-100	6	24	1	6	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-080080R0.5-075	8	20	0.5	8	75	0 ~ -0.015	0 ~ -0.020
HR100-4RL-080080R0.5-100	8	32	0.5	8	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-080080R1-075	8	20	1	8	75	0 ~ -0.015	0 ~ -0.020
HR100-4RL-080080R1-100	8	32	1	8	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-100100R0.5-100	10	25	0.5	10	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-100100R1-100	10	25	1	10	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-120120R0.5-100	12	30	0.5	12	100	0 ~ -0.015	0 ~ -0.020
HR100-4RL-120120R1-100	12	30	1	12	100	0 ~ -0.015	0 ~ -0.020

HR100-4S 四刃平底铣刀加工参数参考表 (侧铣)

HR100-4S Four-Edge Flat End Milling Cutter Machining Parameters Reference Table (Side Milling)

加工参数参考表 (侧铣) Processing parameter reference table (side milling)						
被加工材料 Processed materials	预硬钢、淬硬钢 (40~50HRC) Pre-hardened steel, hardened steel (40~50HRC)		淬硬钢 (50~60HRC) Hardened steel (50~60HRC)		淬硬钢 (60~65HRC) Hardened steel (60~65HRC)	
刃径 DC(mm) Blade diameter	转速 (min ⁻¹) rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)	转速 (min ⁻¹) rotational speed (min ⁻¹)	进给速度 (mm/min) Feed Speed (mm/min)
1	40000	320	40000	320	32000	260
2	40000	800	24000	480	16000	320
3	32000	1020	16000	510	11000	350
4	24000	1250	12000	620	8000	420
5	19000	1360	9500	680	6400	460
6	16000	1540	8000	770	5300	510
8	12000	1540	6000	770	4000	510
10	9600	1540	4800	770	3200	510
12	8000	1600	4000	800	2700	540
14	6800	1340	3400	680	2300	460
16	6000	1200	3000	600	2000	400
18	5300	1060	2700	530	1800	360
20	4800	960	2400	480	1600	320
Maximum cutting depth 最大切深量	 ap≤1.5D ae≤0.05D		 ap≤1.0D ae≤0.03D		 ap≤1.0D ae≤0.02D	

1. 上表是侧铣加工的标准值，刀具切槽时，转速要以上表的 50%~70%，进给速度要以 40%~60% 为标准值。
2. 请使用高精度的机床和刀柄。
3. 请使用空气冷却或不易产生烟雾的切削液。
4. 侧面铣削推荐顺铣加工。
5. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
6. 在不干涉的条件下尽可能使刀具悬长最短。

1. The above table shows the standard values for side milling machining. When cutting grooves with the tool, the speed should be 50%~70% of the above table, and the feed rate should be 40%~60% as the standard value.
2. Please use high-precision machine tools and tool holders.
3. Please use air cooling or cutting fluid that is less likely to produce smoke.
4. Side milling is recommended for sequential milling.
5. When the rigidity of the machine tool and workpiece installation is poor, vibration and abnormal sound may occur. In this case, the speed and feed rate in the table above should be reduced year-on-year.
6. Minimize the tool suspension length as much as possible without interference.

DR 孔加工系列

DR hole processing series



直线型切削刃，强度高
Linear cutting edge with high strength

优化的钻尖结构，切削性能更佳
Optimized drill tip structure for better cutting performance

抗震刃带设计，提高了加工稳定性
Anti seismic blade design improves machining stability

专业的涂层后处理技术，保证低阻高效加工
Professional coating post-treatment technology ensures low resistance and efficient processing



内冷孔设计，冷却更快
Internal cooling hole design for faster cooling.

应用范围 Application scope

通用性强，能实现对 P 类（钢）、M 类（不锈钢）、K 类（铸铁）等多种材料的高效加工。
Strong universality, able to achleve efficient processing of various materials such as P class (steel), M ciass (stainless steel), K ciass (cast Iron), etc.

DRW 钨钢钻头

3D 外冷
DRW Tungsten Carbide Drill Bit 3D (External Cooling)

MG
carbide

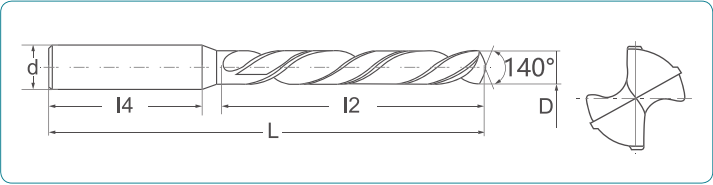
TA
TiAlN

h6
Shank Dia.



P	M
钢 Steel	不锈钢 Stainless Steel
○	○
K	N
铸铁 Cast Iron	有色金属 Non-ferrous metal
○	○

○最适合 most suitable ○适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRW30300	3.000	6.00	62.00	20.00	36.00
DRW30310	3.100	6.00	62.00	20.00	36.00
DRW30317	3.170	6.00	62.00	20.00	36.00
DRW30320	3.200	6.00	62.00	20.00	36.00
DRW30325	3.250	6.00	62.00	20.00	36.00
DRW30330	3.300	6.00	62.00	20.00	36.00
DRW30340	3.400	6.00	62.00	20.00	36.00
DRW30350	3.500	6.00	62.00	20.00	36.00
DRW30357	3.570	6.00	62.00	20.00	36.00
DRW30360	3.600	6.00	62.00	20.00	36.00
DRW30370	3.700	6.00	62.00	20.00	36.00
DRW30380	3.800	6.00	66.00	24.00	36.00
DRW30390	3.900	6.00	66.00	24.00	36.00
DRW30397	3.970	6.00	66.00	24.00	36.00
DRW30400	4.000	6.00	66.00	24.00	36.00
DRW30410	4.100	6.00	66.00	24.00	36.00
DRW30420	4.200	6.00	66.00	24.00	36.00
DRW30430	4.300	6.00	66.00	24.00	36.00
DRW30437	4.370	6.00	66.00	24.00	36.00
DRW30440	4.400	6.00	66.00	24.00	36.00
DRW30450	4.500	6.00	66.00	24.00	36.00
DRW30460	4.600	6.00	66.00	24.00	36.00
DRW30465	4.650	6.00	66.00	24.00	36.00
DRW30470	4.700	6.00	66.00	24.00	36.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRW30476	4.760	6.00	66.00	28.00	36.00
DRW30480	4.800	6.00	66.00	28.00	36.00
DRW30490	4.900	6.00	66.00	28.00	36.00
DRW30500	5.000	6.00	66.00	28.00	36.00
DRW30510	5.100	6.00	66.00	28.00	36.00
DRW30516	5.160	6.00	66.00	28.00	36.00
DRW30520	5.200	6.00	66.00	28.00	36.00
DRW30530	5.300	6.00	66.00	28.00	36.00
DRW30540	5.400	6.00	66.00	28.00	36.00
DRW30550	5.500	6.00	66.00	28.00	36.00
DRW30555	5.550	6.00	66.00	28.00	36.00
DRW30556	5.560	6.00	66.00	28.00	36.00
DRW30560	5.600	6.00	66.00	28.00	36.00
DRW30570	5.700	6.00	66.00	28.00	36.00
DRW30580	5.800	6.00	66.00	28.00	36.00
DRW30590	5.900	6.00	66.00	28.00	36.00
DRW30595	5.950	6.00	66.00	28.00	36.00
DRW30600	6.000	6.00	66.00	28.00	36.00
DRW30610	6.100	8.00	79.00	34.00	36.00
DRW30620	6.200	8.00	79.00	34.00	36.00
DRW30630	6.300	8.00	79.00	34.00	36.00
DRW30635	6.350	8.00	79.00	34.00	36.00
DRW30640	6.400	8.00	79.00	34.00	36.00
DRW30650	6.500	8.00	79.00	34.00	36.00

单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length	产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRW30660	6.600	8.00	79.00	34.00	36.00	DRW30950	9.500	10.00	89.00	47.00	40.00
DRW30670	6.700	8.00	79.00	34.00	36.00	DRW30952	9.520	10.00	89.00	47.00	40.00
DRW30675	6.750	8.00	79.00	34.00	36.00	DRW30960	9.600	10.00	89.00	47.00	40.00
DRW30680	6.800	8.00	79.00	34.00	36.00	DRW30970	9.700	10.00	89.00	47.00	40.00
DRW30690	6.900	8.00	79.00	34.00	36.00	DRW30980	9.800	10.00	89.00	47.00	40.00
DRW30700	7.000	8.00	79.00	34.00	36.00	DRW30990	9.900	10.00	89.00	47.00	40.00
DRW30710	7.100	8.00	79.00	41.00	36.00	DRW30992	9.920	10.00	89.00	47.00	40.00
DRW30714	7.140	8.00	79.00	41.00	36.00	DRW31000	10.000	10.00	89.00	47.00	40.00
DRW30720	7.200	8.00	79.00	41.00	36.00	DRW31010	10.100	12.00	102.00	55.00	45.00
DRW30730	7.300	8.00	79.00	41.00	36.00	DRW31020	10.200	12.00	102.00	55.00	45.00
DRW30740	7.400	8.00	79.00	41.00	36.00	DRW31030	10.300	12.00	102.00	55.00	45.00
DRW30750	7.500	8.00	79.00	41.00	36.00	DRW31032	10.320	12.00	102.00	55.00	45.00
DRW30754	7.540	8.00	79.00	41.00	36.00	DRW31040	10.400	12.00	102.00	55.00	45.00
DRW30760	7.600	8.00	79.00	41.00	36.00	DRW31050	10.500	12.00	102.00	55.00	45.00
DRW30770	7.700	8.00	79.00	41.00	36.00	DRW31060	10.600	12.00	102.00	55.00	45.00
DRW30780	7.800	8.00	79.00	41.00	36.00	DRW31070	10.700	12.00	102.00	55.00	45.00
DRW30790	7.900	8.00	79.00	41.00	36.00	DRW31080	10.800	12.00	102.00	55.00	45.00
DRW30794	7.940	8.00	79.00	41.00	36.00	DRW31090	10.900	12.00	102.00	55.00	45.00
DRW30800	8.000	8.00	79.00	41.00	36.00	DRW31100	11.000	12.00	102.00	55.00	45.00
DRW30810	8.100	10.00	89.00	47.00	40.00	DRW31111	11.110	12.00	102.00	55.00	45.00
DRW30820	8.200	10.00	89.00	47.00	40.00	DRW31120	11.200	12.00	102.00	55.00	45.00
DRW30830	8.300	10.00	89.00	47.00	40.00	DRW31130	11.300	12.00	102.00	55.00	45.00
DRW30833	8.330	10.00	89.00	47.00	40.00	DRW31140	11.400	12.00	102.00	55.00	45.00
DRW30840	8.400	10.00	89.00	47.00	40.00	DRW31150	11.500	12.00	102.00	55.00	45.00
DRW30850	8.500	10.00	89.00	47.00	40.00	DRW31160	11.600	12.00	102.00	55.00	45.00
DRW30860	8.600	10.00	89.00	47.00	40.00	DRW31170	11.700	12.00	102.00	55.00	45.00
DRW30870	8.700	10.00	89.00	47.00	40.00	DRW31180	11.800	12.00	102.00	55.00	45.00
DRW30873	8.730	10.00	89.00	47.00	40.00	DRW31190	11.900	12.00	102.00	55.00	45.00
DRW30880	8.800	10.00	89.00	47.00	40.00	DRW31191	11.910	12.00	102.00	55.00	45.00
DRW30890	8.900	10.00	89.00	47.00	40.00	DRW31200	12.000	12.00	102.00	55.00	45.00
DRW30900	9.000	10.00	89.00	47.00	40.00	DRW31210	12.100	14.00	107.00	60.00	45.00
DRW30910	9.100	10.00	89.00	47.00	40.00	DRW31220	12.200	14.00	107.00	60.00	45.00
DRW30913	9.130	10.00	89.00	47.00	40.00	DRW31230	12.300	14.00	107.00	60.00	45.00
DRW30920	9.200	10.00	89.00	47.00	40.00	DRW31240	12.400	14.00	107.00	60.00	45.00
DRW30925	9.250	10.00	89.00	47.00	40.00	DRW31250	12.500	14.00	107.00	60.00	45.00
DRW30930	9.300	10.00	89.00	47.00	40.00	DRW31260	12.600	14.00	107.00	60.00	45.00
DRW30940	9.400	10.00	89.00	47.00	40.00	DRW31270	12.700	14.00	107.00	60.00	45.00

单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRW31280	12.800	14.00	107.00	60.00	45.00
DRW31290	12.900	14.00	107.00	60.00	45.00
DRW31300	13.000	14.00	107.00	60.00	45.00
DRW31310	13.100	14.00	107.00	60.00	45.00
DRW31320	13.200	14.00	107.00	60.00	45.00
DRW31330	13.300	14.00	107.00	60.00	45.00
DRW31340	13.400	14.00	107.00	60.00	45.00
DRW31350	13.500	14.00	107.00	60.00	45.00
DRW31360	13.600	14.00	107.00	60.00	45.00
DRW31370	13.700	14.00	107.00	60.00	45.00
DRW31380	13.800	14.00	107.00	60.00	45.00
DRW31390	13.900	14.00	107.00	60.00	45.00
DRW31400	14.000	14.00	107.00	60.00	45.00
DRW31410	14.100	16.00	115.00	65.00	48.00
DRW31420	14.200	16.00	115.00	65.00	48.00
DRW31429	14.290	16.00	115.00	65.00	48.00
DRW31430	14.300	16.00	115.00	65.00	48.00
DRW31440	14.400	16.00	115.00	65.00	48.00
DRW31450	14.500	16.00	115.00	65.00	48.00
DRW31460	14.600	16.00	115.00	65.00	48.00
DRW31470	14.700	16.00	115.00	65.00	48.00
DRW31480	14.800	16.00	115.00	65.00	48.00
DRW31490	14.900	16.00	115.00	65.00	48.00
DRW31500	15.000	16.00	115.00	65.00	48.00
DRW31510	15.100	16.00	115.00	65.00	48.00
DRW31520	15.200	16.00	115.00	65.00	48.00
DRW31530	15.300	16.00	115.00	65.00	48.00
DRW31540	15.400	16.00	115.00	65.00	48.00
DRW31550	15.500	16.00	115.00	65.00	48.00
DRW31560	15.600	16.00	115.00	65.00	48.00
DRW31570	15.700	16.00	115.00	65.00	48.00
DRW31580	15.800	16.00	115.00	65.00	48.00
DRW31590	15.900	16.00	115.00	65.00	48.00
DRW31600	16.000	16.00	115.00	65.00	48.00
DRW31610	16.100	18.00	123.00	73.00	48.00
DRW31620	16.200	18.00	123.00	73.00	48.00
DRW31630	16.300	18.00	123.00	73.00	48.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRW31640	16.400	18.00	123.00	73.00	48.00
DRW31650	16.500	18.00	123.00	73.00	48.00
DRW31660	16.600	18.00	123.00	73.00	48.00
DRW31670	16.700	18.00	123.00	73.00	48.00
DRW31680	16.800	18.00	123.00	73.00	48.00
DRW31690	16.900	18.00	123.00	73.00	48.00
DRW31700	17.000	18.00	123.00	73.00	48.00
DRW31710	17.100	18.00	123.00	73.00	48.00
DRW31720	17.200	18.00	123.00	73.00	48.00
DRW31730	17.300	18.00	123.00	73.00	48.00
DRW31740	17.400	18.00	123.00	73.00	48.00
DRW31750	17.500	18.00	123.00	73.00	48.00
DRW31760	17.600	18.00	123.00	73.00	48.00
DRW31770	17.700	18.00	123.00	73.00	48.00
DRW31780	17.800	18.00	123.00	73.00	48.00
DRW31790	17.900	18.00	123.00	73.00	48.00
DRW31800	18.000	18.00	123.00	73.00	48.00
DRW31810	18.100	20.00	131.00	79.00	50.00
DRW31820	18.200	20.00	131.00	79.00	50.00
DRW31830	18.300	20.00	131.00	79.00	50.00
DRW31840	18.400	20.00	131.00	79.00	50.00
DRW31850	18.500	20.00	131.00	79.00	50.00
DRW31860	18.600	20.00	131.00	79.00	50.00
DRW31870	18.700	20.00	131.00	79.00	50.00
DRW31880	18.800	20.00	131.00	79.00	50.00
DRW31890	18.900	20.00	131.00	79.00	50.00
DRW31900	19.000	20.00	131.00	79.00	50.00
DRW31910	19.100	20.00	131.00	79.00	50.00
DRW31920	19.200	20.00	131.00	79.00	50.00
DRW31930	19.300	20.00	131.00	79.00	50.00
DRW31940	19.400	20.00	131.00	79.00	50.00
DRW31950	19.500	20.00	131.00	79.00	50.00
DRW31960	19.600	20.00	131.00	79.00	50.00
DRW31970	19.700	20.00	131.00	79.00	50.00
DRW31980	19.800	20.00	131.00	79.00	50.00
DRW31990	19.900	20.00	131.00	79.00	50.00
DRW32000	20.000	20.00	131.00	79.00	50.00

DRN 钨钢钻头

3D 内冷

DRN Tungsten Carbide Drill Bit 3D (Internal Cooling)

MG
carbide

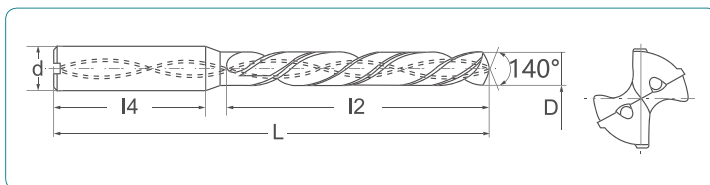
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P	M
钢 Steel	不锈钢 Stainless Steel
☒	☐
K	N
铸铁 Cast Iron	有色金属 Non-ferrous metal
☒	☐

☒ 最适合 most suitable ☐ 适合 suit



单位: mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN30300	3.000	6.00	62.00	20.00	36.00
DRN30310	3.100	6.00	62.00	20.00	36.00
DRN30317	3.170	6.00	62.00	20.00	36.00
DRN30320	3.200	6.00	62.00	20.00	36.00
DRN30325	3.250	6.00	62.00	20.00	36.00
DRN30330	3.300	6.00	62.00	20.00	36.00
DRN30340	3.400	6.00	62.00	20.00	36.00
DRN30350	3.500	6.00	62.00	20.00	36.00
DRN30357	3.570	6.00	62.00	20.00	36.00
DRN30360	3.600	6.00	62.00	20.00	36.00
DRN30370	3.700	6.00	62.00	20.00	36.00
DRN30380	3.800	6.00	66.00	24.00	36.00
DRN30390	3.900	6.00	66.00	24.00	36.00
DRN30397	3.970	6.00	66.00	24.00	36.00
DRN30400	4.000	6.00	66.00	24.00	36.00
DRN30410	4.100	6.00	66.00	24.00	36.00
DRN30420	4.200	6.00	66.00	24.00	36.00
DRN30430	4.300	6.00	66.00	24.00	36.00
DRN30437	4.370	6.00	66.00	24.00	36.00
DRN30440	4.400	6.00	66.00	24.00	36.00
DRN30450	4.500	6.00	66.00	24.00	36.00
DRN30460	4.600	6.00	66.00	24.00	36.00
DRN30465	4.650	6.00	66.00	24.00	36.00
DRN30470	4.700	6.00	66.00	24.00	36.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN30476	4.760	6.00	66.00	28.00	36.00
DRN30480	4.800	6.00	66.00	28.00	36.00
DRN30490	4.900	6.00	66.00	28.00	36.00
DRN30500	5.000	6.00	66.00	28.00	36.00
DRN30510	5.100	6.00	66.00	28.00	36.00
DRN30516	5.160	6.00	66.00	28.00	36.00
DRN30520	5.200	6.00	66.00	28.00	36.00
DRN30530	5.300	6.00	66.00	28.00	36.00
DRN30540	5.400	6.00	66.00	28.00	36.00
DRN30550	5.500	6.00	66.00	28.00	36.00
DRN30555	5.550	6.00	66.00	28.00	36.00
DRN30556	5.560	6.00	66.00	28.00	36.00
DRN30560	5.600	6.00	66.00	28.00	36.00
DRN30570	5.700	6.00	66.00	28.00	36.00
DRN30580	5.800	6.00	66.00	28.00	36.00
DRN30590	5.900	6.00	66.00	28.00	36.00
DRN30595	5.950	6.00	66.00	28.00	36.00
DRN30600	6.000	6.00	66.00	28.00	36.00
DRN30610	6.100	8.00	79.00	34.00	36.00
DRN30620	6.200	8.00	79.00	34.00	36.00
DRN30630	6.300	8.00	79.00	34.00	36.00
DRN30635	6.350	8.00	79.00	34.00	36.00
DRN30640	6.400	8.00	79.00	34.00	36.00
DRN30650	6.500	8.00	79.00	34.00	36.00

单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN30660	6.600	8.00	79.00	34.00	36.00
DRN30670	6.700	8.00	79.00	34.00	36.00
DRN30675	6.750	8.00	79.00	34.00	36.00
DRN30680	6.800	8.00	79.00	34.00	36.00
DRN30690	6.900	8.00	79.00	34.00	36.00
DRN30700	7.000	8.00	79.00	34.00	36.00
DRN30710	7.100	8.00	79.00	41.00	36.00
DRN30714	7.140	8.00	79.00	41.00	36.00
DRN30720	7.200	8.00	79.00	41.00	36.00
DRN30730	7.300	8.00	79.00	41.00	36.00
DRN30740	7.400	8.00	79.00	41.00	36.00
DRN30750	7.500	8.00	79.00	41.00	36.00
DRN30754	7.540	8.00	79.00	41.00	36.00
DRN30760	7.600	8.00	79.00	41.00	36.00
DRN30770	7.700	8.00	79.00	41.00	36.00
DRN30780	7.800	8.00	79.00	41.00	36.00
DRN30790	7.900	8.00	79.00	41.00	36.00
DRN30794	7.940	8.00	79.00	41.00	36.00
DRN30800	8.000	8.00	79.00	41.00	36.00
DRN30810	8.100	10.00	89.00	47.00	40.00
DRN30820	8.200	10.00	89.00	47.00	40.00
DRN30830	8.300	10.00	89.00	47.00	40.00
DRN30833	8.330	10.00	89.00	47.00	40.00
DRN30840	8.400	10.00	89.00	47.00	40.00
DRN30850	8.500	10.00	89.00	47.00	40.00
DRN30860	8.600	10.00	89.00	47.00	40.00
DRN30870	8.700	10.00	89.00	47.00	40.00
DRN30873	8.730	10.00	89.00	47.00	40.00
DRN30880	8.800	10.00	89.00	47.00	40.00
DRN30890	8.900	10.00	89.00	47.00	40.00
DRN30900	9.000	10.00	89.00	47.00	40.00
DRN30910	9.100	10.00	89.00	47.00	40.00
DRN30913	9.130	10.00	89.00	47.00	40.00
DRN30920	9.200	10.00	89.00	47.00	40.00
DRN30925	9.250	10.00	89.00	47.00	40.00
DRN30930	9.300	10.00	89.00	47.00	40.00
DRN30940	9.400	10.00	89.00	47.00	40.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN30950	9.500	10.00	89.00	47.00	40.00
DRN30952	9.520	10.00	89.00	47.00	40.00
DRN30960	9.600	10.00	89.00	47.00	40.00
DRN30970	9.700	10.00	89.00	47.00	40.00
DRN30980	9.800	10.00	89.00	47.00	40.00
DRN30990	9.900	10.00	89.00	47.00	40.00
DRN30992	9.920	10.00	89.00	47.00	40.00
DRN31000	10.000	10.00	89.00	47.00	40.00
DRN31010	10.100	12.00	102.00	55.00	45.00
DRN31020	10.200	12.00	102.00	55.00	45.00
DRN31030	10.300	12.00	102.00	55.00	45.00
DRN31032	10.320	12.00	102.00	55.00	45.00
DRN31040	10.400	12.00	102.00	55.00	45.00
DRN31050	10.500	12.00	102.00	55.00	45.00
DRN31060	10.600	12.00	102.00	55.00	45.00
DRN31070	10.700	12.00	102.00	55.00	45.00
DRN31080	10.800	12.00	102.00	55.00	45.00
DRN31090	10.900	12.00	102.00	55.00	45.00
DRN31100	11.000	12.00	102.00	55.00	45.00
DRN31111	11.110	12.00	102.00	55.00	45.00
DRN31120	11.200	12.00	102.00	55.00	45.00
DRN31130	11.300	12.00	102.00	55.00	45.00
DRN31140	11.400	12.00	102.00	55.00	45.00
DRN31150	11.500	12.00	102.00	55.00	45.00
DRN31160	11.600	12.00	102.00	55.00	45.00
DRN31170	11.700	12.00	102.00	55.00	45.00
DRN31180	11.800	12.00	102.00	55.00	45.00
DRN31190	11.900	12.00	102.00	55.00	45.00
DRN31191	11.910	12.00	102.00	55.00	45.00
DRN31200	12.000	12.00	102.00	55.00	45.00
DRN31210	12.100	14.00	107.00	60.00	45.00
DRN31220	12.200	14.00	107.00	60.00	45.00
DRN31230	12.300	14.00	107.00	60.00	45.00
DRN31240	12.400	14.00	107.00	60.00	45.00
DRN31250	12.500	14.00	107.00	60.00	45.00
DRN31260	12.600	14.00	107.00	60.00	45.00
DRN31270	12.700	14.00	107.00	60.00	45.00

单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length	产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN31280	12.800	14.00	107.00	60.00	45.00	DRN31640	16.400	18.00	123.00	73.00	48.00
DRN31290	12.900	14.00	107.00	60.00	45.00	DRN31650	16.500	18.00	123.00	73.00	48.00
DRN31300	13.000	14.00	107.00	60.00	45.00	DRN31660	16.600	18.00	123.00	73.00	48.00
DRN31310	13.100	14.00	107.00	60.00	45.00	DRN31670	16.700	18.00	123.00	73.00	48.00
DRN31320	13.200	14.00	107.00	60.00	45.00	DRN31680	16.800	18.00	123.00	73.00	48.00
DRN31330	13.300	14.00	107.00	60.00	45.00	DRN31690	16.900	18.00	123.00	73.00	48.00
DRN31340	13.400	14.00	107.00	60.00	45.00	DRN31700	17.000	18.00	123.00	73.00	48.00
DRN31350	13.500	14.00	107.00	60.00	45.00	DRN31710	17.100	18.00	123.00	73.00	48.00
DRN31360	13.600	14.00	107.00	60.00	45.00	DRN31720	17.200	18.00	123.00	73.00	48.00
DRN31370	13.700	14.00	107.00	60.00	45.00	DRN31730	17.300	18.00	123.00	73.00	48.00
DRN31380	13.800	14.00	107.00	60.00	45.00	DRN31740	17.400	18.00	123.00	73.00	48.00
DRN31390	13.900	14.00	107.00	60.00	45.00	DRN31750	17.500	18.00	123.00	73.00	48.00
DRN31400	14.000	14.00	107.00	60.00	45.00	DRN31760	17.600	18.00	123.00	73.00	48.00
DRN31410	14.100	16.00	115.00	65.00	48.00	DRN31770	17.700	18.00	123.00	73.00	48.00
DRN31420	14.200	16.00	115.00	65.00	48.00	DRN31780	17.800	18.00	123.00	73.00	48.00
DRN31429	14.290	16.00	115.00	65.00	48.00	DRN31790	17.900	18.00	123.00	73.00	48.00
DRN31430	14.300	16.00	115.00	65.00	48.00	DRN31800	18.000	18.00	123.00	73.00	48.00
DRN31440	14.400	16.00	115.00	65.00	48.00	DRN31810	18.100	20.00	131.00	79.00	50.00
DRN31450	14.500	16.00	115.00	65.00	48.00	DRN31820	18.200	20.00	131.00	79.00	50.00
DRN31460	14.600	16.00	115.00	65.00	48.00	DRN31830	18.300	20.00	131.00	79.00	50.00
DRN31470	14.700	16.00	115.00	65.00	48.00	DRN31840	18.400	20.00	131.00	79.00	50.00
DRN31480	14.800	16.00	115.00	65.00	48.00	DRN31850	18.500	20.00	131.00	79.00	50.00
DRN31490	14.900	16.00	115.00	65.00	48.00	DRN31860	18.600	20.00	131.00	79.00	50.00
DRN31500	15.000	16.00	115.00	65.00	48.00	DRN31870	18.700	20.00	131.00	79.00	50.00
DRN31510	15.100	16.00	115.00	65.00	48.00	DRN31880	18.800	20.00	131.00	79.00	50.00
DRN31520	15.200	16.00	115.00	65.00	48.00	DRN31890	18.900	20.00	131.00	79.00	50.00
DRN31530	15.300	16.00	115.00	65.00	48.00	DRN31900	19.000	20.00	131.00	79.00	50.00
DRN31540	15.400	16.00	115.00	65.00	48.00	DRN31910	19.100	20.00	131.00	79.00	50.00
DRN31550	15.500	16.00	115.00	65.00	48.00	DRN31920	19.200	20.00	131.00	79.00	50.00
DRN31560	15.600	16.00	115.00	65.00	48.00	DRN31930	19.300	20.00	131.00	79.00	50.00
DRN31570	15.700	16.00	115.00	65.00	48.00	DRN31940	19.400	20.00	131.00	79.00	50.00
DRN31580	15.800	16.00	115.00	65.00	48.00	DRN31950	19.500	20.00	131.00	79.00	50.00
DRN31590	15.900	16.00	115.00	65.00	48.00	DRN31960	19.600	20.00	131.00	79.00	50.00
DRN31600	16.000	16.00	115.00	65.00	48.00	DRN31970	19.700	20.00	131.00	79.00	50.00
DRN31610	16.100	18.00	123.00	73.00	48.00	DRN31980	19.800	20.00	131.00	79.00	50.00
DRN31620	16.200	18.00	123.00	73.00	48.00	DRN31990	19.900	20.00	131.00	79.00	50.00
DRN31630	16.300	18.00	123.00	73.00	48.00	DRN32000	20.000	20.00	131.00	79.00	50.00

DRW 钨钢钻头

5D 外冷
DRW Tungsten Carbide Drill Bit 5D (External Cooling)

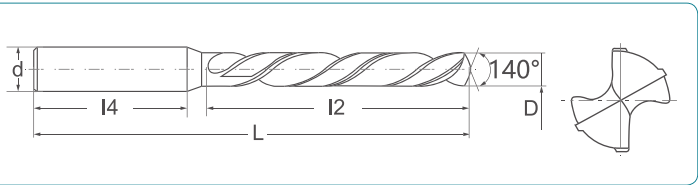
MG
carbide

TA
TiAlN

h6
Shank Dia.

P	M
钢 Steel	不锈钢 Stainless Steel
	
K	N
铸铁 Cast Iron	有色金属 Non-ferrous metal
	

 最适合 most suitable  适合 suit



单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRW50300	3.000	6.00	66.00	28.00	36.00
DRW50310	3.100	6.00	66.00	28.00	36.00
DRW50317	3.170	6.00	66.00	28.00	36.00
DRW50320	3.200	6.00	66.00	28.00	36.00
DRW50325	3.250	6.00	66.00	28.00	36.00
DRW50330	3.300	6.00	66.00	28.00	36.00
DRW50340	3.400	6.00	66.00	28.00	36.00
DRW50350	3.500	6.00	66.00	28.00	36.00
DRW50357	3.570	6.00	66.00	28.00	36.00
DRW50360	3.600	6.00	66.00	28.00	36.00
DRW50370	3.700	6.00	66.00	28.00	36.00
DRW50380	3.800	6.00	66.00	36.00	36.00
DRW50390	3.900	6.00	74.00	36.00	36.00
DRW50397	3.970	6.00	74.00	36.00	36.00
DRW50400	4.000	6.00	74.00	36.00	36.00
DRW50410	4.100	6.00	74.00	36.00	36.00
DRW50420	4.200	6.00	74.00	36.00	36.00
DRW50430	4.300	6.00	74.00	36.00	36.00
DRW50437	4.370	6.00	74.00	36.00	36.00
DRW50440	4.400	6.00	74.00	36.00	36.00
DRW50450	4.500	6.00	74.00	36.00	36.00
DRW50460	4.600	6.00	74.00	36.00	36.00
DRW50465	4.650	6.00	74.00	36.00	36.00
DRW50470	4.700	6.00	74.00	36.00	36.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRW50476	4.760	6.00	82.00	44.00	36.00
DRW50480	4.800	6.00	82.00	44.00	36.00
DRW50490	4.900	6.00	82.00	44.00	36.00
DRW50500	5.000	6.00	82.00	44.00	36.00
DRW50510	5.100	6.00	82.00	44.00	36.00
DRW50516	5.160	6.00	82.00	44.00	36.00
DRW50520	5.200	6.00	82.00	44.00	36.00
DRW50530	5.300	6.00	82.00	44.00	36.00
DRW50540	5.400	6.00	82.00	44.00	36.00
DRW50550	5.500	6.00	82.00	44.00	36.00
DRW50555	5.550	6.00	82.00	44.00	36.00
DRW50556	5.560	6.00	82.00	44.00	36.00
DRW50560	5.600	6.00	82.00	44.00	36.00
DRW50570	5.700	6.00	82.00	44.00	36.00
DRW50580	5.800	6.00	82.00	44.00	36.00
DRW50590	5.900	6.00	82.00	44.00	36.00
DRW50595	5.950	6.00	82.00	44.00	36.00
DRW50600	6.000	6.00	82.00	44.00	36.00
DRW50610	6.100	8.00	91.00	53.00	36.00
DRW50620	6.200	8.00	91.00	53.00	36.00
DRW50630	6.300	8.00	91.00	53.00	36.00
DRW50635	6.350	8.00	91.00	53.00	36.00
DRW50640	6.400	8.00	91.00	53.00	36.00
DRW50650	6.500	8.00	91.00	53.00	36.00

单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length	产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRW50660	6.600	8.00	91.00	53.00	36.00	DRW50940	9.400	10.00	103.00	61.00	40.00
DRW50670	6.700	8.00	91.00	53.00	36.00	DRW50950	9.500	10.00	103.00	61.00	40.00
DRW50675	6.750	8.00	91.00	53.00	36.00	DRW50952	9.520	10.00	103.00	61.00	40.00
DRW50680	6.800	8.00	91.00	53.00	36.00	DRW50960	9.600	10.00	103.00	61.00	40.00
DRW50690	6.900	8.00	91.00	53.00	36.00	DRW50970	9.700	10.00	103.00	61.00	40.00
DRW50700	7.000	8.00	91.00	53.00	36.00	DRW50980	9.800	10.00	103.00	61.00	40.00
DRW50710	7.100	8.00	91.00	53.00	36.00	DRW50990	9.900	10.00	103.00	61.00	40.00
DRW50714	7.140	8.00	91.00	53.00	36.00	DRW50992	9.920	10.00	103.00	61.00	40.00
DRW50720	7.200	8.00	91.00	53.00	36.00	DRW51000	10.000	10.00	103.00	61.00	40.00
DRW50730	7.300	8.00	91.00	53.00	36.00	DRW51010	10.100	12.00	118.00	71.00	45.00
DRW50740	7.400	8.00	91.00	53.00	36.00	DRW51020	10.200	12.00	118.00	71.00	45.00
DRW50750	7.500	8.00	91.00	53.00	36.00	DRW51030	10.300	12.00	118.00	71.00	45.00
DRW50754	7.540	8.00	91.00	53.00	36.00	DRW51040	10.400	12.00	118.00	71.00	45.00
DRW50760	7.600	8.00	91.00	53.00	36.00	DRW51050	10.500	12.00	118.00	71.00	45.00
DRW50770	7.700	8.00	91.00	53.00	36.00	DRW51060	10.600	12.00	118.00	71.00	45.00
DRW50780	7.800	8.00	91.00	53.00	36.00	DRW51070	10.700	12.00	118.00	71.00	45.00
DRW50790	7.900	8.00	91.00	53.00	36.00	DRW51080	10.800	12.00	118.00	71.00	45.00
DRW50794	7.940	8.00	91.00	53.00	36.00	DRW51090	10.900	12.00	118.00	71.00	45.00
DRW50800	8.000	8.00	91.00	53.00	36.00	DRW51100	11.000	12.00	118.00	71.00	45.00
DRW50810	8.100	10.00	103.00	61.00	40.00	DRW51111	11.110	12.00	118.00	71.00	45.00
DRW50820	8.200	10.00	103.00	61.00	40.00	DRW51120	11.200	12.00	118.00	71.00	45.00
DRW50830	8.300	10.00	103.00	61.00	40.00	DRW51130	11.300	12.00	118.00	71.00	45.00
DRW50833	8.330	10.00	103.00	61.00	40.00	DRW51140	11.400	12.00	118.00	71.00	45.00
DRW50840	8.400	10.00	103.00	61.00	40.00	DRW51150	11.500	12.00	118.00	71.00	45.00
DRW50850	8.500	10.00	103.00	61.00	40.00	DRW51160	11.600	12.00	118.00	71.00	45.00
DRW50860	8.600	10.00	103.00	61.00	40.00	DRW51170	11.700	12.00	118.00	71.00	45.00
DRW50870	8.700	10.00	103.00	61.00	40.00	DRW51180	11.800	12.00	118.00	71.00	45.00
DRW50873	8.730	10.00	103.00	61.00	40.00	DRW51190	11.900	12.00	118.00	71.00	45.00
DRW50880	8.800	10.00	103.00	61.00	40.00	DRW51200	12.000	12.00	118.00	71.00	45.00
DRW50890	8.900	10.00	103.00	61.00	40.00	DRW51210	12.100	14.00	124.00	77.00	45.00
DRW50900	9.000	10.00	103.00	61.00	40.00	DRW51220	12.200	14.00	124.00	77.00	45.00
DRW50910	9.100	10.00	103.00	61.00	40.00	DRW51230	12.300	14.00	124.00	77.00	45.00
DRW50913	9.130	10.00	103.00	61.00	40.00	DRW51240	12.400	14.00	124.00	77.00	45.00
DRW50920	9.200	10.00	103.00	61.00	40.00	DRW51250	12.500	14.00	124.00	77.00	45.00
DRW50925	9.250	10.00	103.00	61.00	40.00	DRW51260	12.600	14.00	124.00	77.00	45.00
DRW50930	9.300	10.00	103.00	61.00	40.00	DRW51270	12.700	14.00	124.00	77.00	45.00
DRW50934	9.340	10.00	103.00	61.00	40.00	DRW51280	12.800	14.00	124.00	77.00	45.00

单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRW51290	12.900	14.00	124.00	77.00	45.00
DRW51300	13.000	14.00	124.00	77.00	45.00
DRW51310	13.100	14.00	124.00	77.00	45.00
DRW51320	13.200	14.00	124.00	77.00	45.00
DRW51330	13.300	14.00	124.00	77.00	45.00
DRW51340	13.400	14.00	124.00	77.00	45.00
DRW51350	13.500	14.00	124.00	77.00	45.00
DRW51360	13.600	14.00	124.00	77.00	45.00
DRW51370	13.700	14.00	124.00	77.00	45.00
DRW51380	13.800	14.00	124.00	77.00	45.00
DRW51390	13.900	14.00	124.00	77.00	45.00
DRW51400	14.000	14.00	124.00	77.00	45.00
DRW51410	14.100	16.00	133.00	83.00	48.00
DRW51420	14.200	16.00	133.00	83.00	48.00
DRW51429	14.290	16.00	133.00	83.00	48.00
DRW51440	14.400	16.00	133.00	83.00	48.00
DRW51450	14.500	16.00	133.00	83.00	48.00
DRW51460	14.600	16.00	133.00	83.00	48.00
DRW51470	14.700	16.00	133.00	83.00	48.00
DRW51480	14.800	16.00	133.00	83.00	48.00
DRW51490	14.900	16.00	133.00	83.00	48.00
DRW51500	15.000	16.00	133.00	83.00	48.00
DRW51510	15.100	16.00	133.00	83.00	48.00
DRW51520	15.200	16.00	133.00	83.00	48.00
DRW51530	15.300	16.00	133.00	83.00	48.00
DRW51540	15.400	16.00	133.00	83.00	48.00
DRW51550	15.500	16.00	133.00	83.00	48.00
DRW51560	15.600	16.00	133.00	83.00	48.00
DRW51570	15.700	16.00	133.00	83.00	48.00
DRW51580	15.800	16.00	133.00	83.00	48.00
DRW51590	15.900	16.00	133.00	83.00	48.00
DRW51600	16.000	16.00	133.00	83.00	48.00
DRW51610	16.100	18.00	143.00	93.00	48.00
DRW51620	16.200	18.00	143.00	93.00	48.00
DRW51630	16.300	18.00	143.00	93.00	48.00
DRW51640	16.400	18.00	143.00	93.00	48.00
DRW51650	16.500	18.00	143.00	93.00	48.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRW51660	16.600	18.00	143.00	93.00	48.00
DRW51670	16.700	18.00	143.00	93.00	48.00
DRW51680	16.800	18.00	143.00	93.00	48.00
DRW51690	16.900	18.00	143.00	93.00	48.00
DRW51700	17.000	18.00	143.00	93.00	48.00
DRW51710	17.100	18.00	143.00	93.00	48.00
DRW51720	17.200	18.00	143.00	93.00	48.00
DRW51730	17.300	18.00	143.00	93.00	48.00
DRW51740	17.400	18.00	143.00	93.00	48.00
DRW51750	17.500	18.00	143.00	93.00	48.00
DRW51760	17.600	18.00	143.00	93.00	48.00
DRW51770	17.700	18.00	143.00	93.00	48.00
DRW51780	17.800	18.00	143.00	93.00	48.00
DRW51790	17.900	18.00	143.00	93.00	48.00
DRW51800	18.000	18.00	143.00	93.00	48.00
DRW51810	18.100	20.00	153.00	101.00	50.00
DRW51820	18.200	20.00	153.00	101.00	50.00
DRW51830	18.300	20.00	153.00	101.00	50.00
DRW51840	18.400	20.00	153.00	101.00	50.00
DRW51850	18.500	20.00	153.00	101.00	50.00
DRW51860	18.600	20.00	153.00	101.00	50.00
DRW51870	18.700	20.00	153.00	101.00	50.00
DRW51880	18.800	20.00	153.00	101.00	50.00
DRW51890	18.900	20.00	153.00	101.00	50.00
DRW51900	19.000	20.00	153.00	101.00	50.00
DRW51905	19.050	20.00	153.00	101.00	50.00
DRW51910	19.100	20.00	153.00	101.00	50.00
DRW51920	19.200	20.00	153.00	101.00	50.00
DRW51930	19.300	20.00	153.00	101.00	50.00
DRW51940	19.400	20.00	153.00	101.00	50.00
DRW51950	19.500	20.00	153.00	101.00	50.00
DRW51960	19.600	20.00	153.00	101.00	50.00
DRW51970	19.700	20.00	153.00	101.00	50.00
DRW51980	19.800	20.00	153.00	101.00	50.00
DRW51990	19.900	20.00	153.00	101.00	50.00
DRW52000	20.000	20.00	153.00	101.00	50.00

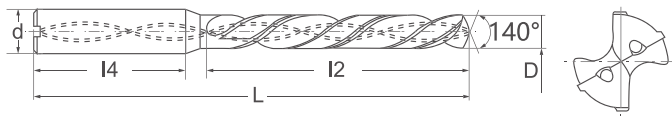
DRN 钨钢钻头

5D 内冷
DRN Tungsten Carbide Drill Bit 5D (Internal Cooling)



P	M
钢 Steel	不锈钢 Stainless Steel
☒	☐
K	N
铸铁 Cast Iron	有色金属 Non-ferrous metal
☒	☐

☒ 最适合 most suitable ☐ 适合 suit



单位: mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN50300	3.000	6.00	66.00	28.00	36.00
DRN50310	3.100	6.00	66.00	28.00	36.00
DRN50317	3.170	6.00	66.00	28.00	36.00
DRN50320	3.200	6.00	66.00	28.00	36.00
DRN50325	3.250	6.00	66.00	28.00	36.00
DRN50330	3.300	6.00	66.00	28.00	36.00
DRN50340	3.400	6.00	66.00	28.00	36.00
DRN50350	3.500	6.00	66.00	28.00	36.00
DRN50357	3.570	6.00	66.00	28.00	36.00
DRN50360	3.600	6.00	66.00	28.00	36.00
DRN50370	3.700	6.00	66.00	28.00	36.00
DRN50380	3.800	6.00	66.00	36.00	36.00
DRN50390	3.900	6.00	74.00	36.00	36.00
DRN50397	3.970	6.00	74.00	36.00	36.00
DRN50400	4.000	6.00	74.00	36.00	36.00
DRN50410	4.100	6.00	74.00	36.00	36.00
DRN50420	4.200	6.00	74.00	36.00	36.00
DRN50430	4.300	6.00	74.00	36.00	36.00
DRN50437	4.370	6.00	74.00	36.00	36.00
DRN50440	4.400	6.00	74.00	36.00	36.00
DRN50450	4.500	6.00	74.00	36.00	36.00
DRN50460	4.600	6.00	74.00	36.00	36.00
DRN50465	4.650	6.00	74.00	36.00	36.00
DRN50470	4.700	6.00	74.00	36.00	36.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN50476	4.760	6.00	82.00	44.00	36.00
DRN50480	4.800	6.00	82.00	44.00	36.00
DRN50490	4.900	6.00	82.00	44.00	36.00
DRN50500	5.000	6.00	82.00	44.00	36.00
DRN50510	5.100	6.00	82.00	44.00	36.00
DRN50516	5.160	6.00	82.00	44.00	36.00
DRN50520	5.200	6.00	82.00	44.00	36.00
DRN50530	5.300	6.00	82.00	44.00	36.00
DRN50540	5.400	6.00	82.00	44.00	36.00
DRN50550	5.500	6.00	82.00	44.00	36.00
DRN50555	5.550	6.00	82.00	44.00	36.00
DRN50556	5.560	6.00	82.00	44.00	36.00
DRN50560	5.600	6.00	82.00	44.00	36.00
DRN50570	5.700	6.00	82.00	44.00	36.00
DRN50580	5.800	6.00	82.00	44.00	36.00
DRN50590	5.900	6.00	82.00	44.00	36.00
DRN50595	5.950	6.00	82.00	44.00	36.00
DRN50600	6.000	6.00	82.00	44.00	36.00
DRN50610	6.100	8.00	91.00	53.00	36.00
DRN50620	6.200	8.00	91.00	53.00	36.00
DRN50630	6.300	8.00	91.00	53.00	36.00
DRN50635	6.350	8.00	91.00	53.00	36.00
DRN50640	6.400	8.00	91.00	53.00	36.00
DRN50650	6.500	8.00	91.00	53.00	36.00

单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRN50660	6.600	8.00	91.00	53.00	36.00
DRN50670	6.700	8.00	91.00	53.00	36.00
DRN50675	6.750	8.00	91.00	53.00	36.00
DRN50680	6.800	8.00	91.00	53.00	36.00
DRN50690	6.900	8.00	91.00	53.00	36.00
DRN50700	7.000	8.00	91.00	53.00	36.00
DRN50710	7.100	8.00	91.00	53.00	36.00
DRN50714	7.140	8.00	91.00	53.00	36.00
DRN50720	7.200	8.00	91.00	53.00	36.00
DRN50730	7.300	8.00	91.00	53.00	36.00
DRN50740	7.400	8.00	91.00	53.00	36.00
DRN50750	7.500	8.00	91.00	53.00	36.00
DRN50754	7.540	8.00	91.00	53.00	36.00
DRN50760	7.600	8.00	91.00	53.00	36.00
DRN50770	7.700	8.00	91.00	53.00	36.00
DRN50780	7.800	8.00	91.00	53.00	36.00
DRN50790	7.900	8.00	91.00	53.00	36.00
DRN50794	7.940	8.00	91.00	53.00	36.00
DRN50800	8.000	8.00	91.00	53.00	36.00
DRN50810	8.100	10.00	103.00	61.00	40.00
DRN50820	8.200	10.00	103.00	61.00	40.00
DRN50830	8.300	10.00	103.00	61.00	40.00
DRN50833	8.330	10.00	103.00	61.00	40.00
DRN50840	8.400	10.00	103.00	61.00	40.00
DRN50850	8.500	10.00	103.00	61.00	40.00
DRN50860	8.600	10.00	103.00	61.00	40.00
DRN50870	8.700	10.00	103.00	61.00	40.00
DRN50873	8.730	10.00	103.00	61.00	40.00
DRN50880	8.800	10.00	103.00	61.00	40.00
DRN50890	8.900	10.00	103.00	61.00	40.00
DRN50900	9.000	10.00	103.00	61.00	40.00
DRN50910	9.100	10.00	103.00	61.00	40.00
DRN50913	9.130	10.00	103.00	61.00	40.00
DRN50920	9.200	10.00	103.00	61.00	40.00
DRN50925	9.250	10.00	103.00	61.00	40.00
DRN50930	9.300	10.00	103.00	61.00	40.00
DRN50934	9.340	10.00	103.00	61.00	40.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (l2) Slot length	柄长 (l4) Handle length
DRN50940	9.400	10.00	103.00	61.00	40.00
DRN50950	9.500	10.00	103.00	61.00	40.00
DRN50952	9.520	10.00	103.00	61.00	40.00
DRN50960	9.600	10.00	103.00	61.00	40.00
DRN50970	9.700	10.00	103.00	61.00	40.00
DRN50980	9.800	10.00	103.00	61.00	40.00
DRN50990	9.900	10.00	103.00	61.00	40.00
DRN50992	9.920	10.00	103.00	61.00	40.00
DRN51000	10.000	10.00	103.00	61.00	40.00
DRN51010	10.100	12.00	118.00	71.00	45.00
DRN51020	10.200	12.00	118.00	71.00	45.00
DRN51030	10.300	12.00	118.00	71.00	45.00
DRN51040	10.400	12.00	118.00	71.00	45.00
DRN51050	10.500	12.00	118.00	71.00	45.00
DRN51060	10.600	12.00	118.00	71.00	45.00
DRN51070	10.700	12.00	118.00	71.00	45.00
DRN51080	10.800	12.00	118.00	71.00	45.00
DRN51090	10.900	12.00	118.00	71.00	45.00
DRN51100	11.000	12.00	118.00	71.00	45.00
DRN51111	11.110	12.00	118.00	71.00	45.00
DRN51120	11.200	12.00	118.00	71.00	45.00
DRN51130	11.300	12.00	118.00	71.00	45.00
DRN51140	11.400	12.00	118.00	71.00	45.00
DRN51150	11.500	12.00	118.00	71.00	45.00
DRN51160	11.600	12.00	118.00	71.00	45.00
DRN51170	11.700	12.00	118.00	71.00	45.00
DRN51180	11.800	12.00	118.00	71.00	45.00
DRN51190	11.900	12.00	118.00	71.00	45.00
DRN51200	12.000	12.00	118.00	71.00	45.00
DRN51210	12.100	14.00	124.00	77.00	45.00
DRN51220	12.200	14.00	124.00	77.00	45.00
DRN51230	12.300	14.00	124.00	77.00	45.00
DRN51240	12.400	14.00	124.00	77.00	45.00
DRN51250	12.500	14.00	124.00	77.00	45.00
DRN51260	12.600	14.00	124.00	77.00	45.00
DRN51270	12.700	14.00	124.00	77.00	45.00
DRN51280	12.800	14.00	124.00	77.00	45.00

单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length	产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN51290	12.900	14.00	124.00	77.00	45.00	DRN51660	16.600	18.00	143.00	93.00	48.00
DRN51300	13.000	14.00	124.00	77.00	45.00	DRN51670	16.700	18.00	143.00	93.00	48.00
DRN51310	13.100	14.00	124.00	77.00	45.00	DRN51680	16.800	18.00	143.00	93.00	48.00
DRN51320	13.200	14.00	124.00	77.00	45.00	DRN51690	16.900	18.00	143.00	93.00	48.00
DRN51330	13.300	14.00	124.00	77.00	45.00	DRN51700	17.000	18.00	143.00	93.00	48.00
DRN51340	13.400	14.00	124.00	77.00	45.00	DRN51710	17.100	18.00	143.00	93.00	48.00
DRN51350	13.500	14.00	124.00	77.00	45.00	DRN51720	17.200	18.00	143.00	93.00	48.00
DRN51360	13.600	14.00	124.00	77.00	45.00	DRN51730	17.300	18.00	143.00	93.00	48.00
DRN51370	13.700	14.00	124.00	77.00	45.00	DRN51740	17.400	18.00	143.00	93.00	48.00
DRN51380	13.800	14.00	124.00	77.00	45.00	DRN51750	17.500	18.00	143.00	93.00	48.00
DRN51390	13.900	14.00	124.00	77.00	45.00	DRN51760	17.600	18.00	143.00	93.00	48.00
DRN51400	14.000	14.00	124.00	77.00	45.00	DRN51770	17.700	18.00	143.00	93.00	48.00
DRN51410	14.100	16.00	133.00	83.00	48.00	DRN51780	17.800	18.00	143.00	93.00	48.00
DRN51420	14.200	16.00	133.00	83.00	48.00	DRN51790	17.900	18.00	143.00	93.00	48.00
DRN51429	14.290	16.00	133.00	83.00	48.00	DRN51800	18.000	18.00	143.00	93.00	48.00
DRN51440	14.400	16.00	133.00	83.00	48.00	DRN51810	18.100	20.00	153.00	101.00	50.00
DRN51450	14.500	16.00	133.00	83.00	48.00	DRN51820	18.200	20.00	153.00	101.00	50.00
DRN51460	14.600	16.00	133.00	83.00	48.00	DRN51830	18.300	20.00	153.00	101.00	50.00
DRN51470	14.700	16.00	133.00	83.00	48.00	DRN51840	18.400	20.00	153.00	101.00	50.00
DRN51480	14.800	16.00	133.00	83.00	48.00	DRN51850	18.500	20.00	153.00	101.00	50.00
DRN51490	14.900	16.00	133.00	83.00	48.00	DRN51860	18.600	20.00	153.00	101.00	50.00
DRN51500	15.000	16.00	133.00	83.00	48.00	DRN51870	18.700	20.00	153.00	101.00	50.00
DRN51510	15.100	16.00	133.00	83.00	48.00	DRN51880	18.800	20.00	153.00	101.00	50.00
DRN51520	15.200	16.00	133.00	83.00	48.00	DRN51890	18.900	20.00	153.00	101.00	50.00
DRN51530	15.300	16.00	133.00	83.00	48.00	DRN51900	19.000	20.00	153.00	101.00	50.00
DRN51540	15.400	16.00	133.00	83.00	48.00	DRN51905	19.050	20.00	153.00	101.00	50.00
DRN51550	15.500	16.00	133.00	83.00	48.00	DRN51910	19.100	20.00	153.00	101.00	50.00
DRN51560	15.600	16.00	133.00	83.00	48.00	DRN51920	19.200	20.00	153.00	101.00	50.00
DRN51570	15.700	16.00	133.00	83.00	48.00	DRN51930	19.300	20.00	153.00	101.00	50.00
DRN51580	15.800	16.00	133.00	83.00	48.00	DRN51940	19.400	20.00	153.00	101.00	50.00
DRN51590	15.900	16.00	133.00	83.00	48.00	DRN51950	19.500	20.00	153.00	101.00	50.00
DRN51600	16.000	16.00	133.00	83.00	48.00	DRN51960	19.600	20.00	153.00	101.00	50.00
DRN51610	16.100	18.00	143.00	93.00	48.00	DRN51970	19.700	20.00	153.00	101.00	50.00
DRN51620	16.200	18.00	143.00	93.00	48.00	DRN51980	19.800	20.00	153.00	101.00	50.00
DRN51630	16.300	18.00	143.00	93.00	48.00	DRN51990	19.900	20.00	153.00	101.00	50.00
DRN51640	16.400	18.00	143.00	93.00	48.00	DRN52000	20.000	20.00	153.00	101.00	50.00
DRN51650	16.500	18.00	143.00	93.00	48.00						

DRN 钨钢钻头

7D 内冷
DRN Tungsten Carbide Drill Bit 7D (Internal Cooling)

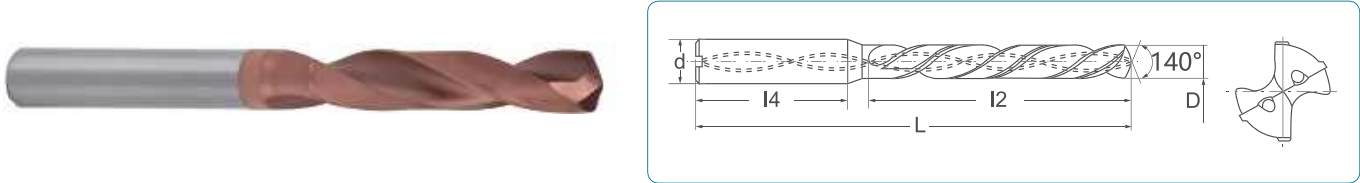
MG
carbide

TA
TiAlN

h6
Shank Dia.

P	M
钢 Steel	不锈钢 Stainless Steel
☒	☐
K	N
铸铁 Cast Iron	有色金属 Non-ferrous metal
☒	☐

☒最适合 most suitable ☐适合 suit



单位 : mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (L2) Slot length	柄长 (L4) Handle length
DRN70300	3.000	4.00	70.00	30.00	36.00
DRN70310	3.100	4.00	70.00	30.00	36.00
DRN70320	3.200	4.00	70.00	30.00	36.00
DRN70330	3.300	4.00	70.00	30.00	36.00
DRN70340	3.400	4.00	75.00	35.50	36.00
DRN70350	3.500	4.00	75.00	35.50	36.00
DRN70360	3.600	4.00	75.00	35.50	36.00
DRN70370	3.700	4.00	75.00	35.50	36.00
DRN70380	3.800	4.00	75.00	37.50	36.00
DRN70390	3.900	4.00	75.00	37.50	36.00
DRN70400	4.000	4.00	75.00	37.50	36.00
DRN70410	4.100	6.00	75.00	37.50	36.00
DRN70420	4.200	6.00	75.00	37.50	36.00
DRN70430	4.300	6.00	85.00	45.00	36.00
DRN70440	4.400	6.00	85.00	45.00	36.00
DRN70450	4.500	6.00	85.00	45.00	36.00
DRN70460	4.600	6.00	85.00	45.00	36.00
DRN70470	4.700	6.00	85.00	45.00	36.00
DRN70480	4.800	6.00	90.00	50.00	36.00
DRN70490	4.900	6.00	90.00	50.00	36.00
DRN70500	5.000	6.00	90.00	50.00	36.00
DRN70510	5.100	6.00	90.00	50.00	36.00
DRN70520	5.200	6.00	90.00	50.00	36.00
DRN70530	5.300	6.00	90.00	50.00	36.00

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (L2) Slot length	柄长 (L4) Handle length
DRN70540	5.400	6.00	97.00	57.00	36.00
DRN70550	5.500	6.00	97.00	57.00	36.00
DRN70560	5.600	6.00	97.00	57.00	36.00
DRN70570	5.700	6.00	97.00	57.00	36.00
DRN70580	5.800	6.00	97.00	57.00	36.00
DRN70590	5.900	6.00	97.00	57.00	36.00
DRN70600	6.000	6.00	97.00	57.00	36.00
DRN70610	6.100	8.00	106.00	66.00	36.00
DRN70620	6.200	8.00	106.00	66.00	36.00
DRN70630	6.300	8.00	106.00	66.00	36.00
DRN70650	6.500	8.00	106.00	66.00	36.00
DRN70660	6.600	8.00	106.00	66.00	36.00
DRN70670	6.700	8.00	106.00	66.00	36.00
DRN70680	6.800	8.00	106.00	66.00	36.00
DRN70690	6.900	8.00	116.00	76.00	36.00
DRN70700	7.000	8.00	116.00	76.00	36.00
DRN70710	7.100	8.00	116.00	76.00	36.00
DRN70720	7.200	8.00	116.00	76.00	36.00
DRN70730	7.300	8.00	116.00	76.00	36.00
DRN70740	7.400	8.00	116.00	76.00	36.00
DRN70750	7.500	8.00	116.00	76.00	36.00
DRN70760	7.600	8.00	116.00	76.00	36.00
DRN70770	7.700	8.00	116.00	76.00	36.00
DRN70780	7.800	8.00	116.00	76.00	36.00

单位：mm Unit: mm

产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length	产品编号 Product number	刃径 (D) Diameter	柄径 (d) Shank diameter	全长 (L) Total length	槽长 (I2) Slot length	柄长 (I4) Handle length
DRN70800	8.000	8.00	116.00	76.00	36.00	DRN71650	16.500	18.00	223.00	171.00	48.00
DRN70810	8.100	10.00	131.00	87.00	40.00	DRN71700	17.000	18.00	223.00	171.00	48.00
DRN70820	8.200	10.00	131.00	87.00	40.00	DRN71750	17.500	18.00	223.00	171.00	48.00
DRN70840	8.400	10.00	131.00	87.00	40.00	DRN71800	18.000	18.00	223.00	171.00	48.00
DRN70850	8.500	10.00	131.00	87.00	40.00	DRN71850	18.500	20.00	244.00	190.00	50.00
DRN70860	8.600	10.00	131.00	87.00	40.00	DRN71900	19.000	20.00	244.00	190.00	50.00
DRN70870	8.700	10.00	131.00	87.00	40.00	DRN71950	19.500	20.00	244.00	190.00	50.00
DRN70880	8.800	10.00	131.00	87.00	40.00	DRN72000	20.000	20.00	244.00	190.00	50.00
DRN70900	9.000	10.00	131.00	87.00	40.00						
DRN70910	9.100	10.00	139.00	95.00	40.00						
DRN70920	9.200	10.00	139.00	95.00	40.00						
DRN70930	9.300	10.00	139.00	95.00	40.00						
DRN70940	9.400	10.00	139.00	95.00	40.00						
DRN70950	9.500	10.00	139.00	95.00	40.00						
DRN70970	9.700	10.00	139.00	95.00	40.00						
DRN70980	9.800	10.00	139.00	95.00	40.00						
DRN70990	9.900	10.00	139.00	95.00	40.00						
DRN71000	10.000	10.00	139.00	95.00	40.00						
DRN71020	10.200	12.00	155.00	106.00	45.00						
DRN71050	10.500	12.00	155.00	106.00	45.00						
DRN71070	10.700	12.00	155.00	106.00	45.00						
DRN71080	10.800	12.00	155.00	106.00	45.00						
DRN71100	11.000	12.00	155.00	106.00	45.00						
DRN71120	11.200	12.00	163.00	114.00	45.00						
DRN71150	11.500	12.00	163.00	114.00	45.00						
DRN71180	11.800	12.00	163.00	114.00	45.00						
DRN71200	12.000	12.00	163.00	114.00	45.00						
DRN71220	12.200	14.00	182.00	133.00	45.00						
DRN71250	12.500	14.00	182.00	133.00	45.00						
DRN71300	13.000	14.00	182.00	133.00	45.00						
DRN71350	13.500	14.00	182.00	133.00	45.00						
DRN71400	14.000	14.00	182.00	133.00	45.00						
DRN71420	14.200	16.00	204.00	152.00	48.00						
DRN71450	14.500	16.00	204.00	152.00	48.00						
DRN71500	15.000	16.00	204.00	152.00	48.00						
DRN71550	15.500	16.00	204.00	152.00	48.00						
DRN71600	16.000	16.00	204.00	152.00	48.00						

硬度对照表 (黑色金属硬度及强度近似换算值)
Hardness Comparison Table (Approximate Conversion Values of Hardness and Strength of Black Metals)

硬度 Hardness				抗拉强度 N/mm2 Tensile strength	硬度 Hardness				抗拉强度 N/mm2 Tensile strength
洛氏 Rockwell		维氏 Vickers	布氏 Brinell		洛氏 Rockwell		维氏 Vickers	布氏 Brinell	
HRC	HRA	HV	HB		HRC	HRA	HV	HB	
70.0	86.6	1037	-	-	51.5	76.6	534	-	1815
69.5	86.3	1017	-	-	51.0	76.3	525	501	1780
69.0	86.1	997	-	-	50.5	76.1	517	494	1750
68.5	85.8	978	-	-	50.0	75.8	509	488	1720
68.0	85.5	959	-	-	49.5	75.5	501	481	1690
67.5	85.2	941	-	-	49.0	75.3	493	474	1660
67.0	85.0	923	-	-	48.5	75.0	485	468	1630
66.5	84.7	906	-	-	48.0	74.7	478	461	1605
66.0	84.4	889	-	-	47.5	74.5	470	455	1575
65.5	84.1	872	-	-	47.0	74.2	463	449	1550
65.0	83.9	856	-	-	46.5	73.9	456	442	1525
64.5	83.6	840	-	-	46.0	73.7	449	436	1500
64.0	83.3	825	-	-	45.5	73.4	443	430	1475
63.5	83.1	810	-	-	45.0	73.2	436	424	1450
63.0	82.8	795	-	-	44.5	72.9	429	418	1430
62.5	82.5	780	-	-	44.0	72.6	423	413	1405
62.0	82.2	766	-	-	43.5	72.4	417	407	1385
61.5	82.0	752	-	-	43.0	72.1	411	401	1360
61.0	81.7	739	-	-	42.5	71.8	405	396	1340
60.5	81.4	726	-	-	42.0	71.6	399	391	1320
60.0	81.2	713	-	2555	41.5	71.3	393	385	1300
59.5	80.9	700	-	2500	41.0	71.1	388	380	1280
59.0	80.6	688	-	2450	40.5	70.8	382	375	1260
58.5	80.3	676	-	2395	40.0	70.5	377	370	1245
58.0	80.1	664	-	2345	39.5	70.3	372	365	1225
57.5	79.8	653	-	2295	39.0	70.0	367	360	1210
57.0	79.5	642	-	2250	38.5	-	362	355	1190
56.5	79.3	631	-	2205	38.0	-	357	350	1175
56.0	79.3	620	-	2160	37.5	-	352	345	1160
55.5	79.0	609	-	2115	37.0	-	347	341	1140
55.0	78.7	599	-	2075	36.5	-	342	336	1125
54.5	78.2	589	-	2035	36.0	-	338	332	1110
54.0	77.9	579	-	1995	35.5	-	333	327	1095
53.5	77.7	570	-	1955	35.0	-	329	323	1080
53.0	77.4	561	-	1920	34.5	-	324	318	1065
52.5	77.1	551	-	1885	34.0	-	320	314	1035
52.0	76.9	543	-	1850	33.5	-	316	310	1035

硬度对照表 (黑色金属硬度及强度近似换算值)

Hardness Comparison Table (Approximate Conversion Values of Hardness and Strength of Black Metals)

硬度 Hardness				抗拉强度 N/mm2 Tensile strength
洛氏 Rockwell		维氏 Vickers	布氏 Brinell	
HRC	HRA	HV	HB	
33.0	-	312	306	1020
32.5	-	308	302	1010
32.0	-	304	298	995
31.5	-	300	294	980
31.0	-	296	291	970
30.5	-	292	287	960
30.0	-	289	283	950
29.5	-	285	280	935
29.0	-	281	276	920
28.5	-	278	273	910
28.0	-	274	269	900
27.5	-	271	266	890
27.0	-	268	263	880
26.5	-	264	260	870
26.0	-	261	257	860
25.5	-	258	254	850
25.0	-	255	251	835

硬度 Hardness				抗拉强度 N/mm2 Tensile strength
洛氏 Rockwell		维氏 Vickers	布氏 Brinell	
HRC	HRA	HV	HB	
24.5	-	252	248	830
24.0	-	249	245	820
23.5	-	246	242	810
23.0	-	243	240	800
22.5	-	243	237	790
22.0	-	237	234	785
21.5	-	234	232	775
21.0	-	231	229	765
20.5	-	229	227	760
20.0	-	226	225	750
19.5	-	223	222	745
19.0	-	221	220	735
18.5	-	218	218	730
18.0	-	216	216	725
17.5	-	214	214	715
17.0	-	211	211	710
	-			

专注 · 务实

FOCUS · PRAGMATIC

高效 · 包容

EFFICIENCY · INCLUSIVENESS

大连托福科技发展有限公司 CORTOOL MANUFACTURING GROUP

Email 邮箱 : denny.zhao@cortool.cn

Website 网址 : www.cortool.cn



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