Jinyuchang Industrial Technology Co., Ltd

VIP+ HOTLINE 联系热线 86-0755-27955216

Whatsapp: 0086-189-2679-8587

carbide-factory.com

info@carbide-factory.com

Solid Carbide End Mill

Jinyuchang Industrial Technology Co., Ltd

2023年版
产品详情目录
Product details catalog

产品价值
PRODUCT VALUE

全产业链覆盖
Full industry chain coverage

氧化钨
Tungsten oxide
测粒度、杂质元素等。
Measure grain size,impurity elements,etc

钨粉
Tungsten powder
测粒度、杂质元素、氧含量等。
Measure grain size,impurity elements,oxygen contents,etc

碳化钨粉
Tungsten carbide powder
测粒度、杂质元素、碳氧含量等，检测碳化钨晶粒形貌
Measure grain size,impurity elements,Carbon and oxygen contents,celection grain morphology of tungsten carbide

混合料
Ready to press powder
测松比流动性、粒度分布，成型性能，碳量，合金性能等。
Specific fluidity,grain distribution,Molding property, carbon contents,alloying property,etc

硬质合金
Cemented carbide alloy
测磨性能，显微组织、物理性能（强度、硬度、韧性等）。
Specific fluidity,grain distribution,Molding property, carbon contents,alloying property,etc

深加产品
Deep processing products
测外观尺寸，跳动、圆度、表面精度等等。
Measure appearance size, bounce,roundness,surface accuracy and so on

精密刀具
Precision cutting tools
测刀具角度，刃厚，刀宽，跳动等。
Measure tool angle,flute thickness,flute width,beat, etc

稳定可靠的制造体系
A stable and reliable manufacturing system

生产设备
Production equipment

德国 WALTER 刀具磨床
German WALTER tool grinder

澳大利亚 ANCA 5轴工具磨床
Australia ANCA5 Axis Tool Grinder

瑞士 ROLLOMATIC 刀具磨床
Swiss ROLLOMATIC tool grinding machine

德国 ZOLLER 金属切削刀具测量设备
German ZOLLER metal cutting tool measuring equipment

完善的质量保障体系
A comprehensive quality assurance system

FEI扫描电镜
FEI scanning electron microscopy

激光外径检测仪
Laser outer diameter detector

显微镜
microscope

Zoller刀具检测仪
Zoller tool detector

产品目录 Product Catalog	刀具名称及外形 Tool name and profile	页码 Page	切削参数 Cutting Parameters	碳素钢 Carbon Steel	合金钢 Alloy Steel

通用加工系列

Universal processing series

NCG 系列

NCG-4E	A01	A44	◎	◎
NCG-4EL	A02	A44	◎	◎
NCG-2E	A03	A45	◎	◎
NCG-4R	A04	A46	◎	◎
NCG-4RL	A05	A46	◎	◎
NCG-2B	A06	A47	◎	◎
NCG-2BL	A07	A47	◎	◎
NCG-4B	A08	A48	◎	◎
NCG-4BL	A09	A48	◎	◎

高性能通用加工系列

High performance universal processing series

NCP 系列

NCP-4E	A10	A49	◎	◎
NCP-4EL	A11	A49	◎	◎
NCP-2E	A12	A50	◎	◎
NCP-4R	A13	A51	◎	◎
NCP-4RL	A14	A51	◎	◎
NCP-2B	A15	A52	◎	◎
NCP-2BL	A16	A52	◎	◎
NCP-4B	A17	A53	◎	◎
NCP-4BL	A18	A53	◎	◎

不锈钢、难加工材料专用加工系列

Special series for processing stainless steel and difficult- to -machine materials

NCPX 系列

NCPX-4E	A20	A55		
NCPX-4EL	A21	A55		

预硬钢 Prehardened Steel		淬硬钢 Hardened Steel		不锈钢 Stainless Steel	铸铁、球墨铸铁 Stainless steel cast iron ductile iron	铜合金 Copper Alloy	铝合金 Aluminiumalloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
~45HRC	~50HRC	~55HRC	~68HRC						
◎	○			○	◎				
◎	○			○	◎				
◎	○			○	◎				
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				◎				◎	◎
				◎				◎	◎

产品目录 Product Catalog	刀具名称及外形 Tool name and profile	页码 Page	切削参数 Cutting Parameters	碳素钢 Carbon Steel	合金钢 Alloy Steel

不锈钢、难加工材料专用加工系列

Special series for processing stainless steel and difficult- to -machine materials

NCPX 系列

NCPX-4R	A21	A55		
NCPX-4RL	A22	A55		

高硬度钢加工系列

Series for high hardness steel processing

NCH 系列

NCH-4E	A23	A56		
NCH-4EL	A24	A56		
NCH-2E	A25	A57		
NCH-4R	A26	A58		
NCH-4RL	A27	A58		
NCH-2B	A28	A59		
NCH-2BL	A29	A59		
NCH-4B	A30	A60		
NCH-4BL	A31	A60		

小径高精度加工系列

Series for small diameter and high-precision machining

NCJ 系列

NCJ-2ES	A32	A61	◎	◎
NCJ-2EP	A33-34	A62-63	◎	◎
NCJ-2BS	A35	A64	◎	◎
NCJ-2BP	A36-37	A65-66	◎	◎

铜、铝合金专用加工系列

Special series for copper and aluminum alloys

AU 系列

AU-2E	A38	A67		
AU-3E	A39	A68		
AU-3EL	A40	A68		
AU-2B	A41	A69		

预硬钢 Prehardened Steel		淬硬钢 Hardened Steel		不锈钢 Stainless Steel	铸铁、球墨铸铁 Stainless steel cast iron ductile iron	铜合金 Copper Alloy	铝合金 Aluminium alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
~45HRC	~50HRC	~55HRC	~68HRC						
				◎				◎	◎
				◎				◎	◎
	○	◎	◎		○				
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						◎	◎		
						◎	◎		
						◎	◎		
						◎	◎		

NCG 系列

NCG series

通用加工立铣刀

Universal machining vertical milling cutter

★HRC45以下材料的高效率切削加工。

★锋利的切削刃与刀具强度合理搭配，切削过程更轻快，刀具寿命更长。

★能实现从高金属去除量的粗加工到高精度，高表面质量的精加工。

★产品规格齐全D1.0-D20.0全部覆盖。

★High efficiency cutting of materials below HRC45.

★The sharp cutting edge and tool strength are reasonably matched, resulting in a lighter and faster cutting process and longer tool life.

★Can achieve rough machining with high metal removal to high-precision, high surface quality precision machining.

★The product specifications are complete, covering all D1.0-D20.0.

NCG-4E-D6.0铣削42CrMo(HRC35)应用情况

Application of NCG-4E-D6.0 Milling 42CrMo (HRC35)

刀具型号： NCG-4E-D6.0

直径尺寸： Φ6.0mm

被加工材料： 42CrMo(HRC35)

切削线速度： 200M/Min

进给速度： 0.24mm/r

轴向切深量： ap=6mm

径向切宽： 0.6mm

铣削方式： 侧铣加工(顺铣)

冷却方式： 乳化液

加工机床： MIKRON UCP 1000

Tool model: NCG-4E-D6.0

Diameter size: Medium 6.0mm

Machined material: 42CrMo (HRC35)

Cutting line speed: 200M/Min

Feed speed: 0.24mm/r

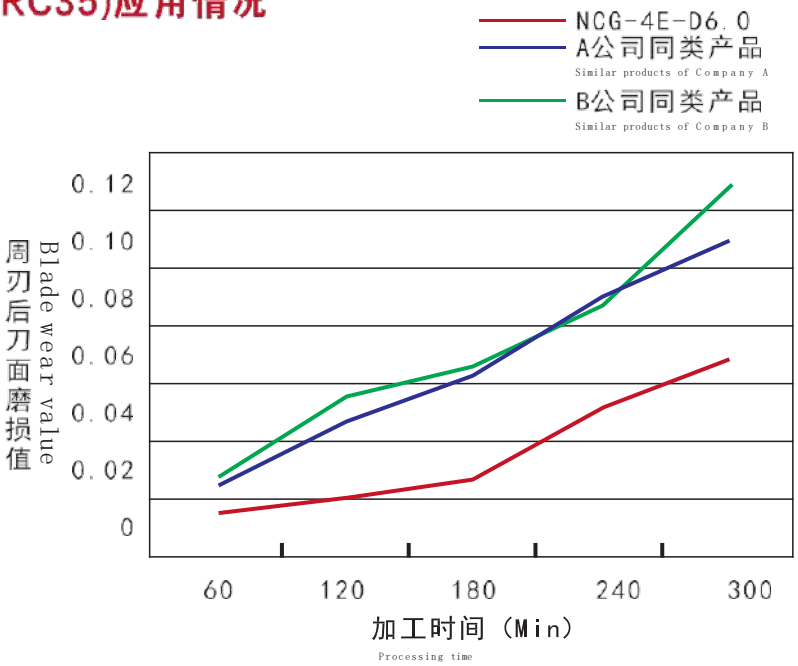
Axial cutting depth: ap=6mm

Radial cutting width: 0.6mm

Milling method: side milling (forward milling)

Cooling method: emulsion

Processing machine tool: MIKRONUCP1000



本实验中，我司刀具性能优于竞争对手同类型刀具。

In this experiment, our company's tool performance is superior to competitors in the same type.

NCP 系列

NCP series

不等齿高性能通用加工立铣刀

Multi-tooth high-performance universal machining end milling cutter

★ HRC55° 以下材料的通用高效加工。

★ 槽型过严格控制，能够更好的改善切屑流动和弯曲，以及降低切削力。

★ 特殊的刀具结构设计，高刚性、高稳定性的刃口处理，
刀具能承载更大的每齿进给，大幅提高了加工效率及金属去除量。

★ 全新超细颗粒基体材料搭配新一代的涂层技术，使得刀具获得
优异的耐磨性和抗崩缺性能，从而获得更长的刀具使用寿命。

★ Universal and efficient processing of materials below HRC55 °C.

★ Strict control of groove shape can better improve chip flow and bending, as well as reduce cutting force.

★ Special tool structure design, high rigidity and high stability blade processing, The tool can carry a larger feed per tooth, greatly improving machining efficiency and metal removal.

★ The new ultra-fine particle matrix material, combined with a new generation of coating technology, enables the tool to achieve excellent wear resistance and anti chipping performance, thereby obtaining a longer tool service life.

NCP-4E-D6.0铣削NAK80(HRC40)应用情况

Application of NCP-4E-D6.0 Milling NAK80 (HRC40)

刀具型号： NCP-4E-D6.0

直径尺寸： Φ6.0mm

被加工材料： NAK80(HRC40)

切削线速度： 120 m/min

进给速度： 0.2 mm/r

轴向切深量： ap=6mm

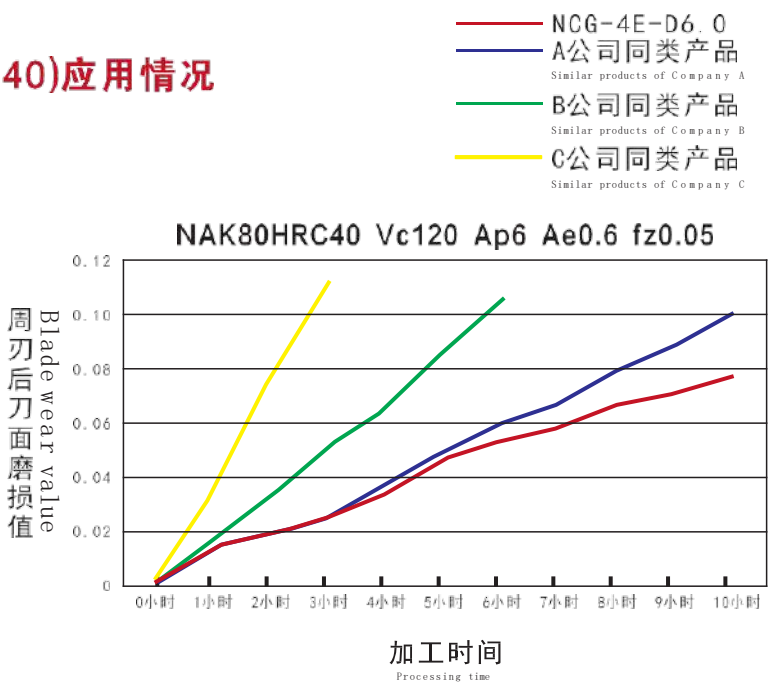
径向切宽： ae=0.6mm

铣削方式： 侧铣加工(顺铣)

冷却方式： 油冷

加工机床： 丽驰 DM800

Tool model: NCP-4E-D6.0
Diameter size: Medium 6.0mm
Machined material: NAK80 (HRC40)
Cutting line speed: 120 m/min
Feed rate: 0.2 mm/r
Axial cutting depth: ap=6mm
Radial cutting width: ae=0.6mm
Milling method: side milling (forward milling)
Cooling method: oil cooling
Processing machine tool: Lichi DM800



本实验中，我司刀具性能优于竞争对手同类型刀具。

In this experiment, our company's tool performance is superior to competitors in the same type.

NCPX 系列

NCPX series

不锈钢、难加工材料专用加工立铣刀

Special machining end mills for stainless steel and difficult to machine materials

- ★ 不锈钢及难加工材料的专用加工。
- ★ 不等齿距变刃倾角设计，刀具抗崩缺能力更强，加工更稳定，表面质量更好。
- ★ 特殊的刀口处理，有效解决了刀具的粘屑问题。
- ★ 新的不锈钢专用基体搭配新的涂层，专用效果更佳，刀具寿命更优。

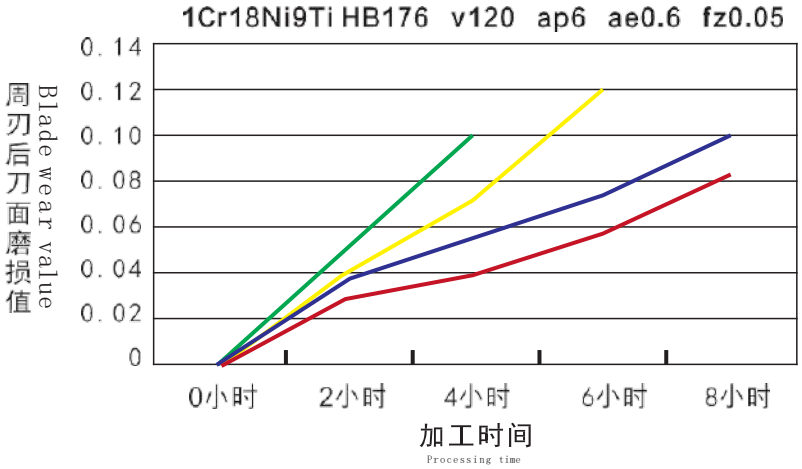
- ★ Special processing for stainless steel and difficult to machine materials.
- ★ Multi-tooth and variable blade inclination design, stronger tool anti chipping ability, more stable processing, and better surface quality.
- ★ Special knife edge treatment effectively solves the problem of tool sticking.
- ★ The new stainless steel specialized substrate paired with a new coating provides better specialized effects and longer tool life.

NCPX-4E-D6.0铣削1Cr18Ni9Ti(HB176)应用情况

Application of NCPX-4E-D6.0 Milling 1Cr18Ni9Ti (HB176)

刀具型号： NCPX-4E-D6.0
直径尺寸： Φ6.0mm
被加工材料： 1Cr18Ni9Ti(HB176)
切削线速度： 120 m/min
进给速度： 0.2mm/r
轴向切深量： ap=6mm
径向切宽： ae=0.6mm
铣削方式： 侧铣加工(顺铣)
冷却方式： 油冷
加工机床： 丽驰 DM800

Tool model: NCPX-4E-D6.0
Diameter size: medium 6.0mm
Machined material: 1Cr18N19Ti (HB176)
Cutting line speed: 120 m/min
Feed rate: 0.2mm/r
Axial cutting depth: ap=6mm
Radial cutting width: ae=0.6mm
Milling method: side milling (forward milling)
Cooling method: oil cooling
Processing machine tool: Lichi DM800



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AU 系列

AU series

铜、铝合金专用加工系列

Special series for processing copper and aluminum alloys

★超细颗粒硬质合金基体，刀具耐磨性和切削刃强度得到完美结合。

★特殊的容屑槽设计，实现刀具强度和排屑性能的完美统一，大幅度提高了切削稳定性。

★大前角设计，切削锋利，有效避免积屑瘤的产生。

★后刀面优化设计和特殊的表面处理，零件被加工表面质量优。

★The ultrafine particle hard alloy matrix perfectly combines tool wear resistance and cutting edge strength.

★The special groove design achieves a perfect unity of tool strength and chip removal performance, greatly improving cutting stability.

★Large front corner design, sharp cutting, effectively avoiding the generation of chip buildup.

★The optimized design and special surface treatment of the rear cutting surface ensure excellent surface quality of the processed parts.

复杂型腔加工案例

Complex cavity machining cases

刀具型号： AU-3E-D6.0
直径尺寸： Φ6.0mm
被加工材料： LC4
切削线速度： 13000 m/min (250m/min)
进给速度： 1950mm/min(0.15mm/r)
轴向切深量： ap=9.0mm
径向切宽： ae=1.0mm
铣削方式： 复杂型腔加工
冷却方式： 气冷
加工机床： MIKRON UCP 1000

Tool model: AU-3E-D6.0
Diameter size: medium 6.0mm
Processed material: LC4
Cutting line speed: 13000 m/min (250m/min)
Feed speed: 1950mm/min (0.15mm/r)
Axial cutting depth: ap=9.0mm
Radial cutting width: ae=1.0mm
Milling method: complex cavity processing
Cooling method: air cooling
Machine tool: MIKRON UCP 1000

加工表面质量对比

Comparison of processed surface quality

刀具型号： AU-3E-D8.0
直径尺寸： Φ8.0mm
被加工材料： 铝合金（HB110）
切削线速度： 13000 m/min
进给速度： 900mm/min
轴向切深量： ap=8.0mm
径向切宽： ae=0.5mm
铣削方式： 侧铣加工
冷却方式： 乳化液
加工机床： 加工中心

Tool model: AU-3E-D8.0
Diameter size: medium 8.0mm
Processed material: LC4
Machined material: aluminum alloy (HB110)
Cutting line speed: 13000 m/min
Feed speed: 900mm/min
Axial cutting depth: ap=8.0mm
Radial cutting width: ae=0.5mm
Milling method: side milling processing
Cooling method: emulsion
Machining machine tool: machining center

AU-3E-D8.0 加工表面
AU-3E-D8.0 machined surface

A公司产品
Company A's products

即使是复杂薄壁型腔零件的加工，也可轻松完成

Even the machining of complex thin-walled cavity parts can be easily completed

NCH 系列

NCH series

高硬材料加工立铣刀

High hardness material processing end milling cutter

- ★ 高的涂层硬度和优良的耐高温氧化性能，更适合高硬度材料和高速加工领域。
- ★ 优异的涂层处理技术，大幅提高了涂层与基体的结合力
- ★ 独特的刀具结构、合理的槽型设计，成就卓越的切削性能
- ★ 特殊的表面处理后处理，有效降低摩擦力，排屑更顺畅，加工表面质量更优。
- ★ High coating hardness and excellent high-temperature oxidation resistance make it more suitable for high hardness materials and high-speed machining fields
- ★ Excellent coating treatment technology significantly improves the adhesion between the coating and the substrate.
- ★ Unique tool structure and reasonable groove design achieve excellent cutting performance.
- ★ Special surface treatment can effectively reduce friction, smooth chip removal, and improve the quality of the processed surface.

刀具寿命更长

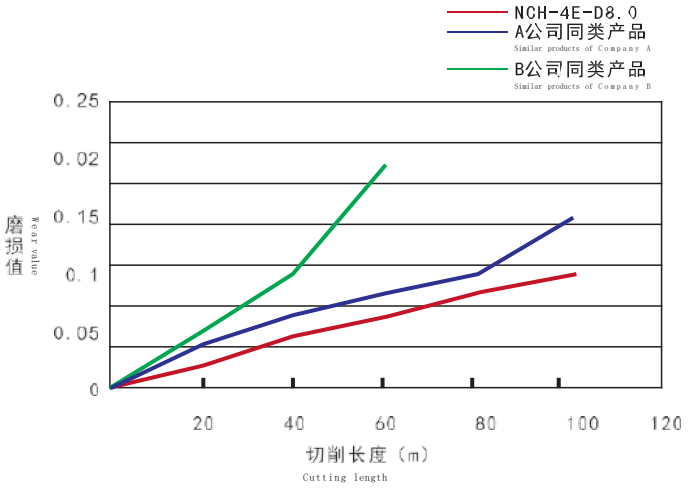
Longer tool life

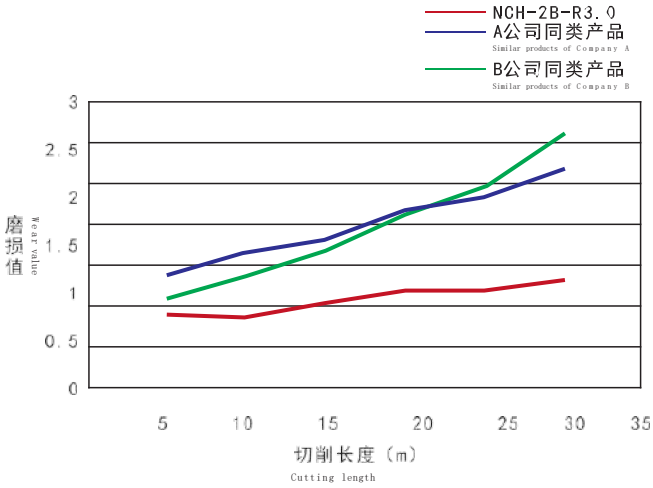
加工刀具：	NCH-4E-D8.0	Processing tool: NCH-4E-D8.0
工件材料：	SKD11(62HRC)	Workpiece material: SKD11 (62HRC)
切削速度：	90m/min	Cutting speed: 90m/min
每转进给：	0.2mm/r	Feed per revolution: 0.2mm/r
轴向切深：	ap=12mm	Axial cutting depth: ap=12mm
径向切深：	ae=0.2mm	Radial cutting depth: ae=0.2mm
冷却方式：	气冷	Cooling method: air cooling

加工质量更优

Better processing quality

加工刀具：	NCH-2B-R3.0	Processing tool: NCH-2B-R3.0
工件材料：	SKD11(HRC62)	Workpiece material: SKD11 (HRC62)
切削速度：	200m/min	Cutting speed: 200m/min
每转进给：	0.18mm/r	Feed per revolution: 0.18mm/r
轴向切深：	0.2mm	Axial cutting depth: 0.2mm
径向切深：	0.3mm	Radial cutting depth: 0.3mm
冷却方式：	气冷	Cooling method: air cooling





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命名规则

Naming rules

NCG:通用加工
NCP:不等齿高性能通用加工
NCPX:不锈钢、难加工材料专用刀具
NCH:高硬材料加工
NCJ:小径高精度加工
AU:铜、铝合金专用加工系列
AUR:铝合金超高速铣刀

NCG: General machining
NCP: Multi-Teeth High Performance Universal Machining
NCPX: Special cutting tools for stainless steel and difficult to machine materials
NCH: High hardness material processing
NCJ: Small diameter high-precision machining
AU: Special processing series for copper and aluminum alloys
AUR: Aluminum alloy ultra high speed milling cutter

E:尖角保护型平头铣刀
F:尖角型平头铣刀
B:球头铣刀
R:圆弧铣刀
W:波刃型铣刀

E: Sharp angle protective flat end milling cutter
F: Sharp angle flat end milling cutter
B: Ball end milling cutter
R: Circular arc milling cutter
W: Wave edge milling cutter

S:微小径
P:直颈
C:锥颈
缺省:标准型

S: Micropath
P: Straight neck
C: Cone neck
Default: Standard

刀尖圆弧半径
或球实圆弧

Knife tip radius or spherical solid arc

刀具 tool

刀具类型 Tool Type

结构类型 structure type

NCG - 2 E L P - D12 R0.5 - M08

刀数 Blade count

长度系列 Length series

L:长柄/长刃型
x:特长刃型
F:短刃型
缺省:标准长度系列

L: Long handle/long blade type
x: Extra long blade shape
F: Short blade type
Default: Standard length series

刀具直径 Tool Diameter

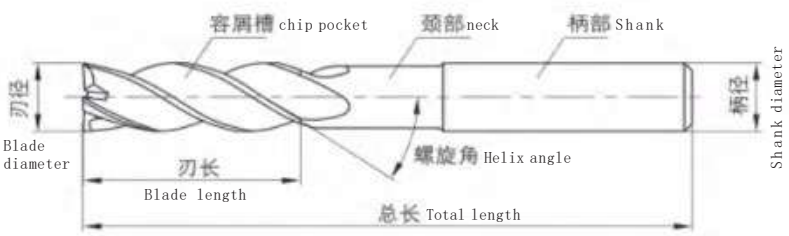
其它 other

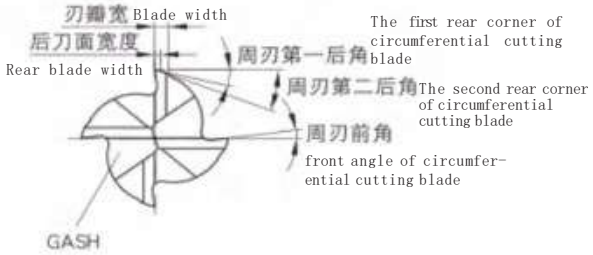
G:30度螺旋角四刃平头铣刀
M:颈长
S:刀具柄径4mm

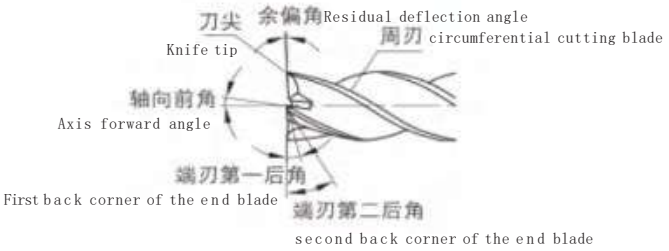
G: 30 degree spiral angle four edge flat end milling cutter
M: Neck length
S: Tool shank diameter 4mm

立铣刀各部分名称

Name of each part of the end milling cutter





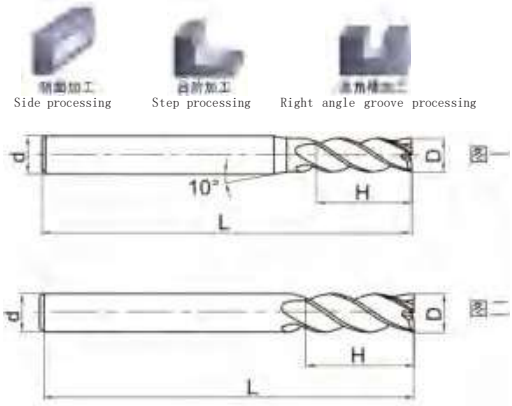


NCG-4E

4刃直柄平头立铣刀

Four blade straight shank flat end milling cutter

Sharp corner protection



- 最适宜侧面铣削，浅槽加工。
  Most suitable for side milling and shallow groove processing
- 适用范围广泛
  Widely used

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCG-4E-D1.0S	1.0	4	3	50	4	图一	●
NCG-4E-D2.0S	2.0	4	6	50	4	图一	●
NCG-4E-D3.0S	3.0	4	8	50	4	图一	●
NCG-4E-D1.0	1.0	6	3	50	4	图一	●
NCG-4E-D2.0	2.0	6	6	50	4	图一	●
NCG-4E-D3.0	3.0	6	8	50	4	图一	●
NCG-4E-D4.0	4.0	6	11	50	4	图一	●
NCG-4E-D5.0	5.0	6	13	50	4	图一	●
	5.5						
NCG-4E-D6.0	6.0	6	16	50	4	图二	●
	7.0						
NCG-4E-D8.0	8.0	8	20	60	4	图二	●
	9.0						
NCG-4E-D10.0	10.0	10	25	75	4	图二	●
	11.0		26				
NCG-4E-D12.0	12.0	12	30	75	4	图二	●
	14.0		32				
NCG-4E-D16.0	16.0	16	45	100	4	图二	●
	18.0		45				
NCG-4E-D20.0	20.0	20	45	100	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

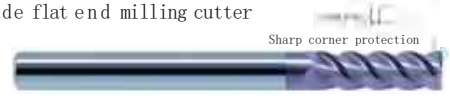
被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

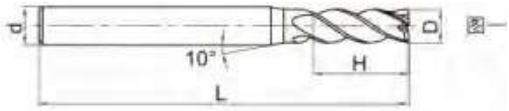
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

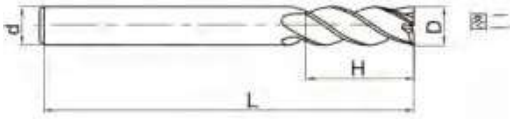
NCG-4EL

4刃直柄长刃平头立铣刀

Four blade straight shank long blade flat end milling cutter







● NCG-4E的长刃系列

NCG-4E Long Blade Series

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCG-4EL-D3.0	3.0	6	12	75	4	图一	○
NCG-4EL-D5.0	5.0	6	20	75	4	图一	○
NCG-4EL-D8.0	8.0	8	25	100	4	图二	○
NCG-4EL-D12.0	12.0	12	35	100	4	图二	○
NCG-4EL-D16.0	16.0	16	50	150	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

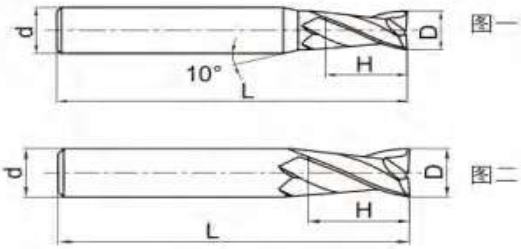
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-2E

2刃直柄平头立铣刀

Two blade straight shank flat end milling cutter

- 最适宜浅槽铣削。
  Most suitable for shallow groove milling
- 适用范围广泛
  Widely used



订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCG-2E-D1.0S	1.0	4	3	50	2	图一	●
NCG-2E-D2.0S	2.0	4	6	50	2	图一	●
NCG-2E-D3.0S	3.0	4	8	50	2	图一	●
NCG-2E-D1.0	1.0	6	3	50	2	图一	●
NCG-2E-D2.0	2.0	6	6	50	2	图一	●
NCG-2E-D3.0	3.0	6	8	50	2	图一	●
NCG-2E-D4.0	4.0	6	11	50	2	图一	●
NCG-2E-D5.0	5.0	6	13	50	2	图一	●
	5.5						
NCG-2E-D6.0	6.0	6	16	50	2	图二	●
	7.0						
NCG-2E-D8.0	8.0	8	20	60	2	图二	●
	9.0						
NCG-2E-D10.0	10.0	10	25	75	2	图二	●
	11.0		26				
NCG-2E-D12.0	12.0	12	30	75	2	图二	●
	14.0		32				
NCG-2E-D16.0	16.0	16	45	100	2	图二	●
	18.0		45				
NCG-2E-D20.0	20.0	20	45	100	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

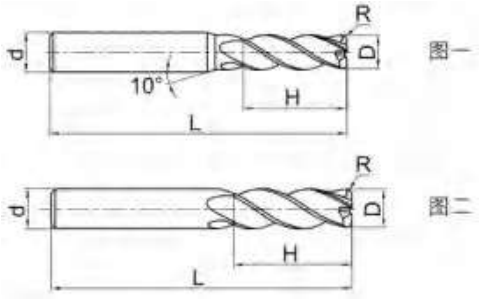
被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-4R

4刃直柄圆弧立铣刀

Four blade straight shank arc end milling cutter



● 适用范围广泛，可实现多种形态的加工。

Wide application range, capable of achieving various forms of processing

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCG-4R-D3.0R0.2S	3.0	0.2	4	8	50	4	图一	●
NCG-4R-D4.0R0.5S	4.0	0.5	4	10	50	4	图二	●
NCG-4R-D5.0R1.0	5.0	1.0	6	13	50	4	图一	●
NCG-4R-D6.0R1.0	6.0	1.0	6	16	50	4	图二	●
NCG-4R-D8.0R1.0	8.0	1.0	8	20	60	4	图二	●
NCG-4R-D10.0R1.0	10.0	1.0	10	25	75	4	图二	●
NCG-4R-D10.0R3.0	10.0	3.0	10	25	75	4	图二	●
		0.5					图二	
NCG-4R-D12.0R1.0	12.0	1.0	12	30	75	4	图二	●
		2.0		30			图二	
NCG-4R-D12.0R3.0	12.0	3.0	12	30	75	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

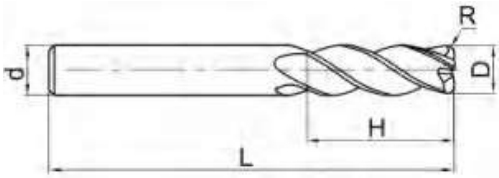
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-4RL

4刃直柄长柄圆弧立铣刀

Four blade straight shank long shank arc end milling cutter



● NCG-4R的长柄系列

NCG-4R long shank series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCG-4RL-D6.0R0.5	6.0	0.5	6	16	75	4	图一	○
NCG-4RL-D8.0R0.5	8.0	0.5	8	20	100	4	图一	○
NCG-4RL-D10.0R0.5	10.0	0.5	10	25	100	4	图一	○
NCG-4RL-D10.0R2.0	10.0	2.0	10	25	100	4	图一	○
NCG-4RL-D12.0R1.0	12.0	1.0	12	30	100	4	图一	○
NCG-4RL-D16.0R1.0	16.0	1.0	16	45	150	4	图一	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

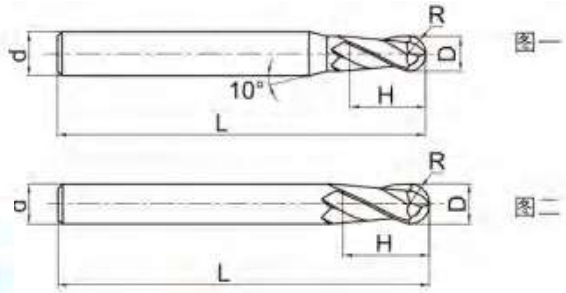
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-2B

2刃直柄球头立铣刀

Two edge straight shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



- 适用于仿形铣削，可作高速加工。
  Suitable for profile milling and can be used for high-speed machining.
- 适用范围广泛。
  Wide used

订货号 Material code	基本尺寸(mm)Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCG-2B-R0.5S	1.0	0.5	4	2	50	2	图一	●
NCG-2B-R1.0S	2.0	1.0	4	4	50	2	图一	●
NCG-2B-R1.5S	3.0	1.5	4	6	50	2	图一	●
NCG-2B-R0.5	1.0	0.5	6	2	50	2	图一	●
NCG-2B-R1.0	2.0	1.0	6	4	50	2	图一	●
NCG-2B-R1.5	3.0	1.5	6	6	50	2	图一	●
NCG-2B-R2.0	4.0	2.0	6	8	50	2	图一	●
NCG-2B-R2.75	5.5	2.75	6	12	50	2	图一	●
NCG-2B-R3.5	7.0	3.5	8	14	60	2	图一	●
NCG-2B-R4.5	9.0	4.5	10	18	75	2	图一	●
NCG-2B-R6.0	12	6.0	12	24	75	2	图二	●
NCG-2B-R8.0	16	8.0	16	32	100	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-2BL

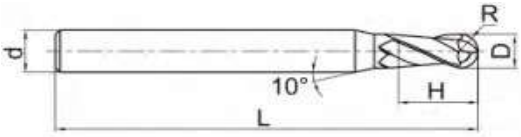
2刃直柄长柄球头立铣刀

Two edge straight shank ball end milling cutter

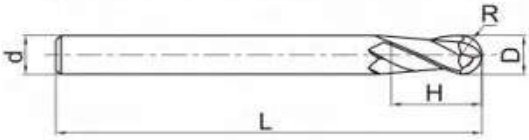
Profiling processing

Cavity processing

Spherical groove machining



图一



图二

● NCG-2B长柄系列。
NCP-2B long shank series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCG-2BL-R1.0	2.0	1.0	6	4	75	2	图一	○
NCG-2BL-R1.5	3.0	1.5	6	6	75	2	图一	○
NCG-2BL-R2.0	4.0	2.0	6	8	75	2	图一	○
NCG-2BL-R2.75	5.5	2.75	6	12	75	2	图一	○
NCG-2BL-R3.5	7.0	3.5	8	14	75	2	图一	○
NCG-2BL-R4.5	9.0	4.5	10	18	100	2	图一	○
NCG-2BL-R6.0	12.0	6.0	12	24	100	2	图二	○
NCG-2BL-R8.0	16.0	8.0	16	32	150	2	图二	○

● 常备库存 Standard stock　　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

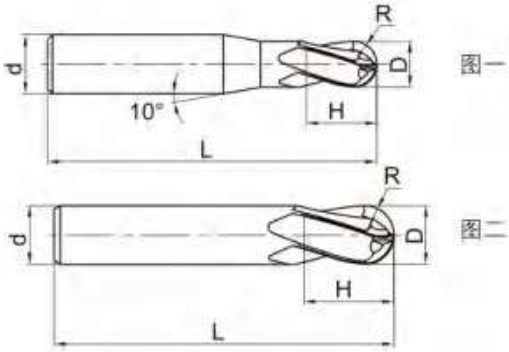
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-4B

4刃直柄球头立铣刀

Four blade straight shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



- 四刃球头铣刀可实现较高的进给速度，实现较高的切削加工效率。
  Can achieve higher feed speed and achieve higher cutting efficiency

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCG-4B-R1.5	3.0	1.5	6	6	50	4	图一	●
NCG-4B-R2.5	5.0	2.5	6	10	50	4	图一	●
NCG-4B-R4.0	8.0	4.0	8	16	60	4	图二	●
NCG-4B-R6.0	12.0	6.0	12	24	75	4	图二	●
NCG-4B-R8.0	16.0	8.0	16	32	100	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

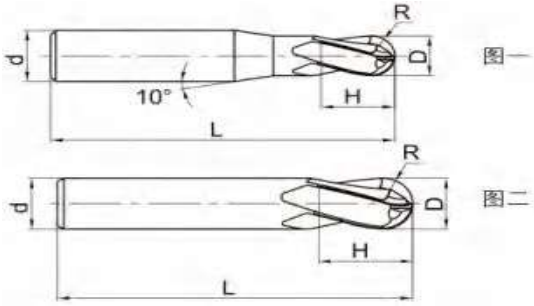
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

NCG-4BL

4刃直柄长柄球头立铣刀

Four blade straight shank long shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



● NCG-4B的长柄系列

NCP-4B long shank series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCG-4BL-R1.5	3.0	1.5	6	6	75	4	图一	○
NCG-4BL-R2.5	5.0	2.5	6	10	75	4	图一	○
NCG-4BL-R4.0	8.0	4.0	8	16	100	4	图二	○
NCG-4BL-R6.0	12.0	6.0	12	24	100	4	图二	○
NCG-4BL-R8.0	16.0	8.0	16	32	150	4	图二	○
NCG-4BL-R10.0	20.0	10.0	20	40	150	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

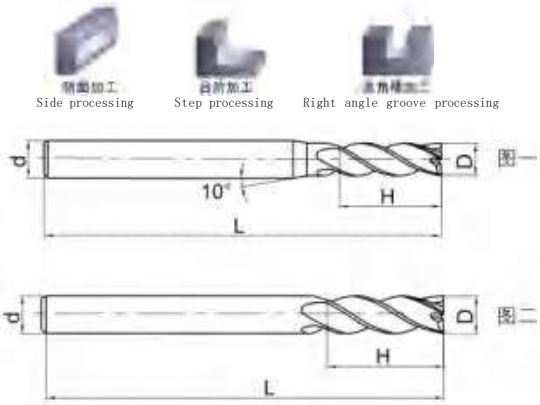
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎				○	◎				

NCP-4E

4刃直柄平头立铣刀

Four blade straight shank flat end milling cutter

Sharp corner protection



- 最适宜侧面铣削，浅槽加工。
  Most suitable for side milling and shallow groove processing
- 适用范围广泛。
  Widely used

订货号 Material code	基本尺寸(mm)Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCP-4E-D1.0S	1.0	4	3	50	4	图一	●
NCP-4E-D2.0S	2.0	4	6	50	4	图一	●
NCP-4E-D3.0S	3.0	4	8	50	4	图一	●
NCP-4E-D1.0	1.0	6	3	50	4	图一	●
NCP-4E-D2.0	2.0	6	6	50	4	图一	●
NCP-4E-D3.0	3.0	6	8	50	4	图一	●
NCP-4E-D4.0	4.0	6	11	50	4	图一	●
NCP-4E-D5.0	5.0	6	13	50	4	图一	●
	5.5						
NCP-4E-D6.0	6.0	6	16	50	4	图二	●
	7.0						
NCP-4E-D8.0	8.0	8	20	60	4	图二	●
	9.0						
NCP-4E-D10.0	10.0	10	25	75	4	图二	●
	11.0		26				
NCP-4E-D12.0	12.0	12	30	75	4	图二	●
	14.0		32				
NCP-4E-D16.0	16.0	16	45	100	4	图二	●
	18.0		45				
NCP-4E-D20.0	20.0	20	45	100	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

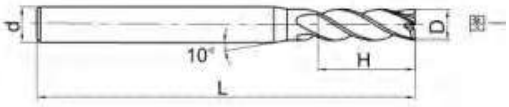
NCP-4EL

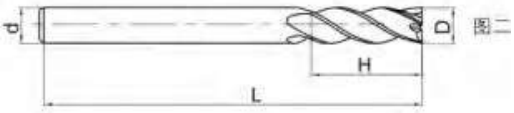
4刃直柄长刃平头立铣刀

Four blade straight shank long blade flat end milling cutter

Sharp corner protection

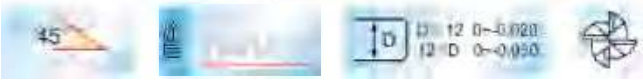
Side processing　Step processing　Right angle groove processing





● NCP-4E的长刃系列

NCP-4E Long Blade Series



订货号 Material code	基本尺寸(mm)Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCP-4EL-D3.0	3.0	6	12	75	4	图一	○
NCP-4EL-D5.0	5.0	6	20	75	4	图一	○
NCP-4EL-D8.0	8.0	8	25	100	4	图二	○
NCP-4EL-D12.0	12.0	12	35	100	4	图二	○
NCP-4EL-D16.0	16.0	16	50	150	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

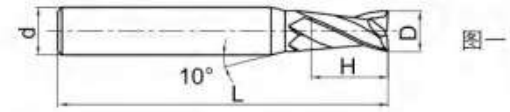
Applicability for Materials　Perfect for　suit

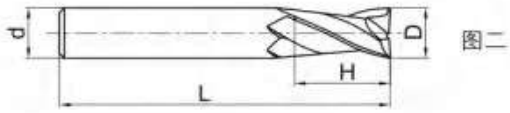
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-2E

2刃直柄平头立铣刀

Two blade straight shank flat end milling cutter





- 适用于沟槽铣削。 Suitable for groove milling
- 最适于高速切削，干式切削。 Most commonly used for high-speed cutting and dry cutting

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D		d	H	L			
NCP-2E-D1.0S	1.0	4	3	3	50	2	图一	●
NCP-2E-D2.0S	2.0	4	6	6	50	2	图一	●
NCP-2E-D3.0S	3.0	4	8	8	50	2	图一	●
NCP-2E-D1.0	1.0	6	3	3	50	2	图一	●
NCP-2E-D2.0	2.0	6	6	6	50	2	图一	●
NCP-2E-D3.0	3.0	6	8	8	50	2	图一	●
NCP-2E-D4.0	4.0	6	11	11	50	2	图一	●
NCP-2E-D5.0	5.0	6	13	13	50	2	图一	●
	5.5							
NCP-2E-D6.0	6.0	6	16	16	50	2	图二	●
	7.0							
NCP-2E-D8.0	8.0	8	20	20	60	2	图二	●
	9.0							
NCP-2E-D10.0	10.0	10	25	25	75	2	图二	●
	11.0		26	26				
NCP-2E-D12.0	12.0	12	30	30	75	2	图二	●
	14.0		32	32				
NCP-2E-D16.0	16.0	16	45	45	100	2	图二	●
	18.0		45	45				
NCP-2E-D20.0	20.0	20	45	45	100	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

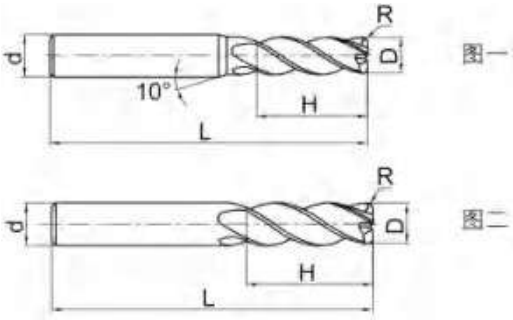
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-4R

4刃直柄圆弧立铣刀

Four blade straight shank arc end milling cutter



● 适用范围广泛，可实现多种形态的加工。
Wide application range, capable of achieving various forms of processing

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCP-4R-D3.0R0.2	3.0	0.2	6	8	50	4	图一	●
NCP-4R-D4.0R0.5	4.0	0.5	6	10	50	4	图一	●
NCP-4R-D5.0R1.0	5.0	1.0	6	13	50	4	图一	●
NCP-4R-D6.0R1.0	6.0	1.0	6	16	50	4	图二	●
NCP-4R-D8.0R1.0	8.0	1.0	8	20	60	4	图二	●
NCP-4R-D10.0R1.0	10.0	1.0	10	25	75	4	图二	●
NCP-4R-D10.0R3.0	10.0	3.0	10	25	75	4	图二	●
		0.5						
NCP-4R-D12.0R1.0	12.0	1.0	12	30	75	4	图二	●
		2.0		30				
NCP-4R-D12.0R3.0	12.0	3.0	12	30	75	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

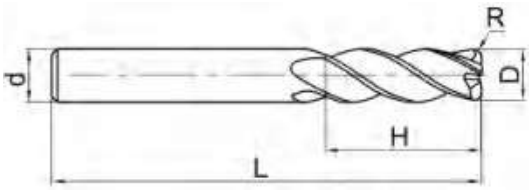
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-4RL

4刃直柄长柄圆弧立铣刀

Four blade straight shank long shank arc end milling cutter

R-type machining　Profiling processing　R-groove processing



● NCP-4R的长刃系列

NCP-4R Long Blade Series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCP-4RL-D6.0R0.5	6.0	0.5	6	16	75	4	图一	○
NCP-4RL-D8.0R0.5	8.0	0.5	8	20	100	4	图一	○
NCP-4RL-D10.0R0.5	10.0	0.5	10	25	100	4	图一	○
NCP-4RL-D10.0R2.0	10.0	2.0	10	25	100	4	图一	○
NCP-4RL-D12.0R1.0	12.0	1.0	12	30	100	4	图一	○
NCP-4RL-D16.0R1.0	16.0	1.0	16	45	150	4	图一	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

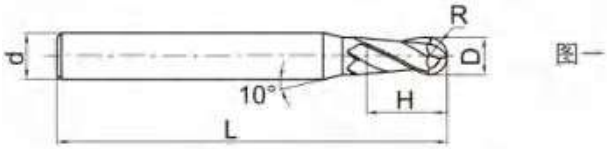
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-2B

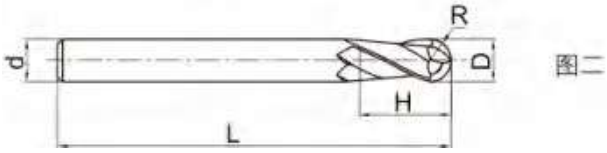
2刃直柄球头立铣刀

Two edge straight shank ball end milling cutter

仿形加工 Profiling processing　型腔加工 Cavity processing　球形槽加工 Spherical groove machining



图一



图二

- 适用于仿形铣削，可作高速加工。 Suitable for profile milling and can be used for high-speed machining.
- 适用范围广泛。 Wide used

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCP-2B-R0.5S	1.0	0.5	4	2	50	2		●
NCP-2B-R1.0S	2.0	1.0	4	4	50	2		●
NCP-2B-R1.5S	3.0	1.5	4	6	50	2		●
NCP-2B-R0.5	1.0	0.5	6	2	50	2		●
NCP-2B-R1.0	2.0	1.0	6	4	50	2		●
NCP-2B-R1.5	3.0	1.5	6	6	50	2		●
NCP-2B-R2.0	4.0	2.0	6	8	50	2		●
NCP-2B-R2.75	5.5	2.75	6	12	50	2		●
NCP-2B-R3.5	7.0	3.5	8	14	60	2		●
NCP-2B-R4.5	9.0	4.5	10	18	75	2		●
NCP-2B-R6.0	12.0	6.0	12	24	75	2		●
NCP-2B-R8.0	16.0	8.0	16	32	100	2		●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

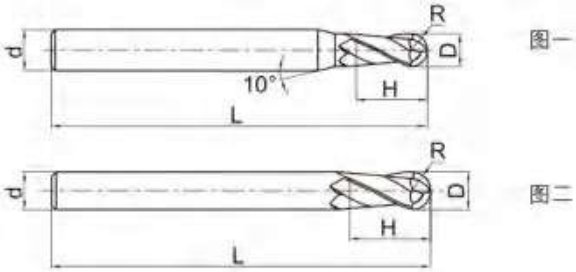
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-2BL

2刃直柄长柄球头立铣刀

Two blade straight shank long shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



● NCP-2B的长柄系列

NCP-2B long shank series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCP-2BL-R1.0	2.0	1.0	6	4	75	2	图一	○
NCP-2BL-R1.5	3.0	1.5	6	6	75	2	图一	○
NCP-2BL-R2.0	4.0	2.0	6	8	75	2	图一	○
NCP-2BL-R2.75	5.5	2.75	6	12	75	2	图一	○
NCP-2BL-R3.5	7.0	3.5	8	14	75	2	图一	○
NCP-2BL-R4.5	9.0	4.5	10	18	100	2	图一	○
NCP-2BL-R6.0	12.0	6.0	12	24	100	2	图二	○
NCP-2BL-R8.0	16.0	8.0	16	32	150	2	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

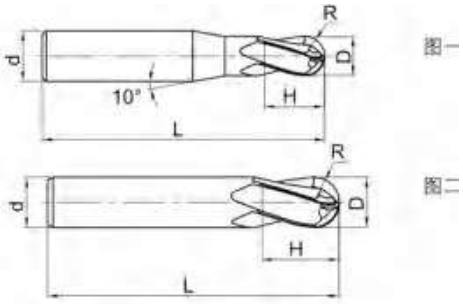
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-4B

4刃直柄球头立铣刀

Four blade straight shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



- 四刃球头铣刀可实现较高的进给速度，实现较高的切加工效率。
  Can achieve higher feed speed and achieve higher cutting efficiency

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCP-4B-R1.5	3.0	1.5	6	6	50	4	图一	●
NCP-4B-R2.5	5.0	2.5	6	10	50	4	图一	●
NCP-4B-R4.0	8.0	4.0	8	16	60	4	图二	●
NCP-4B-R6.0	12.0	6.0	12	24	75	4	图二	●
NCP-4B-R8.0	16.0	8.0	16	32	100	4	图二	●
NCP-4B-R10.0	20.0	10.0	20	40	100	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

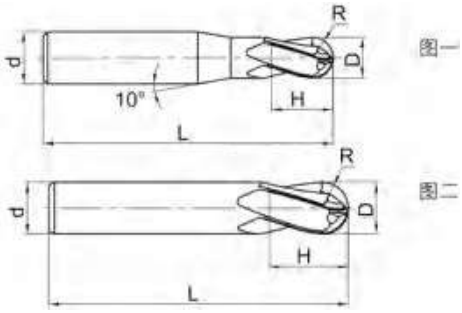
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCP-4BL

4刃直柄长柄球头立铣刀

Four blade straight shank long shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



● NCP-4B的长柄系列

NCP-4B long shank series

订货号 Material code	基本尺寸(mm)Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCP-4BL-R1.5	3.0	1.5	6	6	75	4	图一	○
NCP-4BL-R2.5	5.0	2.5	6	10	75	4	图一	○
NCP-4BL-R4.0	8.0	4.0	8	16	100	4	图二	○
NCP-4BL-R6.0	12.0	6.0	12	24	100	4	图二	○
NCP-4BL-R8.0	16.0	8.0	16	32	150	4	图二	○
NCP-4BL-R10.0	20.0	10.0	20	40	150	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

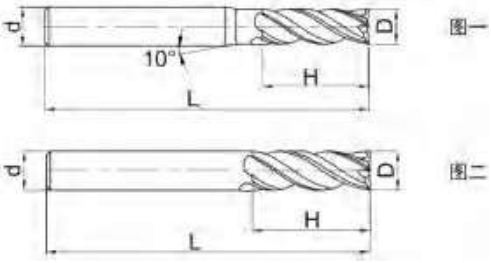
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎	◎		○	◎			○	○

NCPX-4E

4刃直柄平头立铣刀

Four blade straight shank flat end milling cutter

Side processing　Step processing　Right angle groove processing



- 不等螺旋角设计，大幅提高刀具的抗振性能，获得良好的表面质量。
- 最适合不锈钢，耐热合金和钛合金等难切削材料加工。

Unequal helix angle design greatly improves the vibration performance of the cutting tool and achieves good surface quality
Most suitable for machining difficult to cut materials such as stainless steel, heat-resistant alloys, and titanium alloys

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCPX-4E-D4.0S	4.0	4	11	50	4	图二	●
NCPX-4E-D6.0	6.0	6	16	50	4	图二	●
NCPX-4E-D10.0	10.0	10	25	75	4	图二	●
NCPX-4E-D16.0	16.0	16	45	100	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

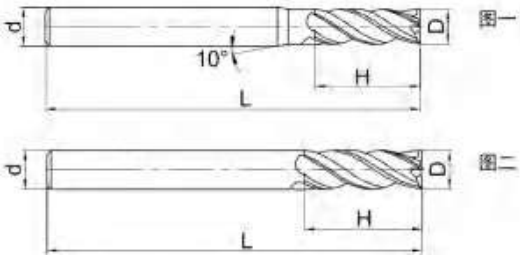
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
						◎				◎	◎

NCPX-4EL

4刃直柄长刃平头立铣刀

Four blade straight shank long blade flat end milling cutter

Side processing　Step processing　Right angle groove processing



● NCPX-4E的长刃系列

NCPX-4E Long Blade Series

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCPX-4EL-D4.0S	4.0	4	15	75	4	图二	○
NCPX-4EL-D6.0	6.0	6	20	100	4	图二	○
NCPX-4EL-D10.0	10.0	10	30	120	4	图二	○
NCPX-4EL-D16.0	16.0	16	50	150	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

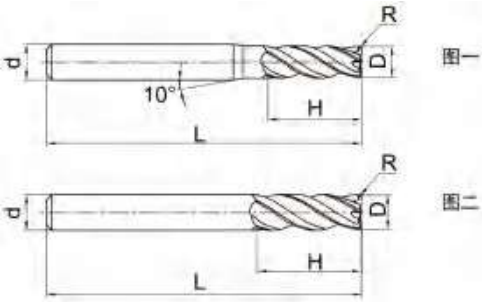
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
						◎				◎	◎

NCPX-4R

4刃直柄圆弧立铣刀

Four blade straight shank arc end milling cutter



- 不等螺旋角设计，大幅提高刀具的抗振性能，获得良好的表面质量。
- 最适合不锈钢，耐热合金和钛合金等难切削材料加工。

Unequal helix angle design greatly improves the vibration performance of the cutting tool and achieves good surface quality
Most suitable for machining difficult to cut materials such as stainless steel, heat-resistant alloys, and titanium alloys

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCPX-4R-D4.0R0.5S	4.0	0.5	4	11	50	4	图二	●
NCPX-4R-D6.0R0.5	6.0	1.0	6	16	50	4	图二	●
NCPX-4R-D8.0R0.5	8.0	0.5	8	20	60	4	图二	●
NCPX-4R-D8.0R2.0	8.0	2.0	8	20	60	4	图二	●
NCPX-4R-D10.0R1.0	10.0	1.0	10	25	75	4	图二	●
NCPX-4R-D10.0R2.0	10.0	2.0	10	25	75	4	图二	●
	12.0							
NCPX-4R-D12.0R1.0	12.0	1.0	12	30	75	4	图二	●
	12.0						图二	
NCPX-4R-D12.0R2.0	12.0	2.0	12	30	75	4	图二	●
	12.0			30			图二	

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
						◎				◎	◎

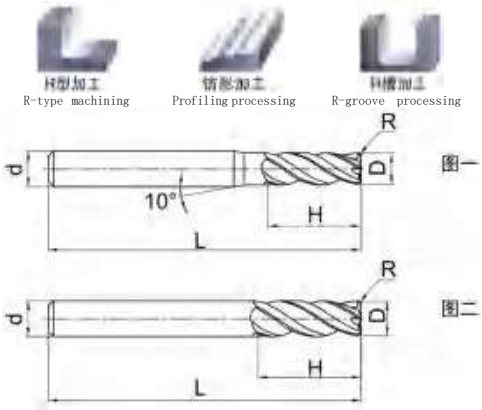
NCPX-4RL

4刃直柄长柄圆弧立铣刀

Four blade straight shank long shank arc end milling cutter

● NCPX-4R的长柄系列

NCPX-4R long shank series



订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCPX-4RL-D4.0R0.5S	4.0	0.5	4	11	75	4	图二	○
NCPX-4RL-D6.0R0.5	6.0	1.0	6	16	100	4	图二	○
NCPX-4RL-D8.0R0.5	8.0	0.5	8	20	100	4	图二	○
NCPX-4RL-D8.0R2.0	8.0	2.0	8	20	100	4	图二	○
NCPX-4RL-D10.0R1.0	10.0	1.0	10	25	120	4	图二	○
NCPX-4RL-D10.0R2.0	10.0	2.0	10	25	120	4	图二	○
	12.0							
NCPX-4RL-D12.0R1.0	12.0	1.0	12	30	120	4	图二	○
	12.0						图二	
NCPX-4RL-D12.0R2.0	12.0	2.0	12	30	120	4	图二	○
	12.0	3.0		30			图二	

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

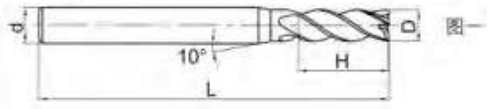
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
						◎				◎	◎

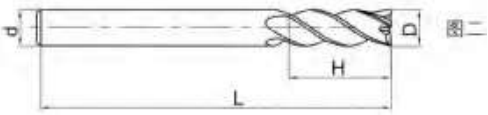
NCH-4E

4刃直柄平头立铣刀

Four blade straight shank flat end milling cutter



- 适用于侧面铣削，浅槽加工。
  Most suitable for side milling and shallow groove processing
- 最适于高速切削，干式切削。
  Most commonly used for high-speed cutting and dry cutting



订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCH-4E-D1.0S	1.0	4	3	50	4	图一	●
NCH-4E-D2.0S	2.0	4	6	50	4	图一	●
NCH-4E-D3.0S	3.0	4	8	50	4	图一	●
NCH-4E-D1.0	1.0	6	3	50	4	图一	●
NCH-4E-D2.0	2.0	6	6	50	4	图一	●
NCH-4E-D3.0	3.0	6	8	50	4	图一	●
NCH-4E-D4.0	4.0	6	11	50	4	图一	●
NCH-4E-D5.0	5.0	6	13	50	4	图一	●
	5.5					图一	
NCH-4E-D6.0	6.0	6	16	50	4	图二	●
	7.0					图一	
NCH-4E-D8.0	8.0	8	20	60	4	图二	●
	9.0					图一	
NCH-4E-D10.0	10.0	10	25	75	4	图二	●
	11.0		26			图一	
NCH-4E-D12.0	12.0	12	30	75	4	图二	●
	14.0		32			图二	
NCH-4E-D16.0	16.0	16	45	100	4	图二	●
	18.0		45			图二	
NCH-4E-D20.0	20.0	20	45	100	4	图二	●

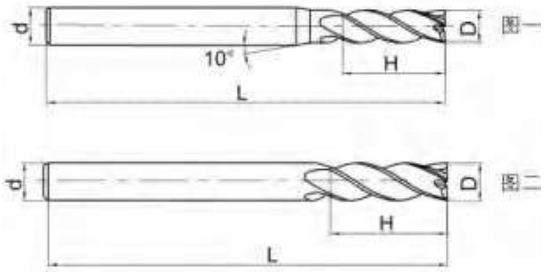
被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials Perfect for suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-4EL

4刃直柄长刃平头立铣刀

Four blade straight shank long blade flat end milling cutter



● NCH-4E的长刃系列

NCH-4E Long Blade Series

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCH-4EL-D3.0	3.0	6	12	75	4	图一	○
NCH-4EL-D5.0	5.0	6	20	75	4	图一	○
NCH-4EL-D8.0	8.0	8	25	100	4	图二	○
NCH-4EL-D12.0	12.0	12	35	100	4	图二	○
NCH-4EL-D16.0	16.0	16	50	150	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

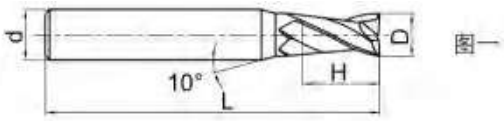
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

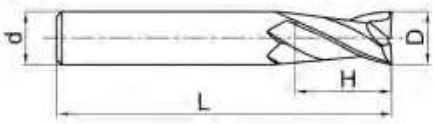
NCH-2E

2刃直柄平头立铣刀

Two blade straight shank flat end milling cutter



图一



图二

- 适用于沟槽铣削。 Suitable for groove milling
- 最适于高速切削，干式切削。 Most commonly used for high-speed cutting and dry cutting

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
NCH-2E-D1.0S	1.0	4	3	50	2	图一	●
NCH-2E-D2.0S	2.0	4	6	50	2	图一	●
NCH-2E-D3.0S	3.0	4	8	50	2	图一	●
NCH-2E-D1.0	1.0	6	3	50	2	图一	●
NCH-2E-D2.0	2.0	6	6	50	2	图一	●
NCH-2E-D3.0	3.0	6	8	50	2	图一	●
NCH-2E-D4.0	4.0	6	11	50	2	图一	●
NCH-2E-D5.0	5.0	6	13	50	2	图一	●
	5.5						
NCH-2E-D6.0	6.0	6	16	50	2	图二	●
	7.0						
NCH-2E-D8.0	8.0	8	20	60	2	图二	●
	9.0						
NCH-2E-D10.0	10.0	10	25	75	2	图二	●
	11.0		26				
NCH-2E-D12.0	12.0	12	30	75	2	图二	●
	14.0		32				
NCH-2E-D16.0	16.0	16	45	100	2	图二	●
	18.0		45				
NCH-2E-D20.0	20.0	20	45	100	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

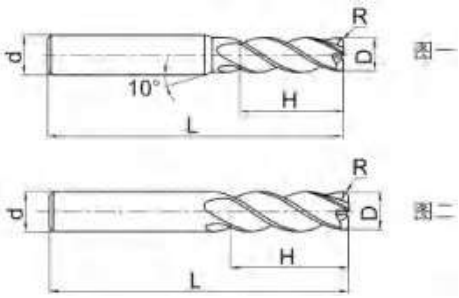
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-4R

4刃直柄圆弧立铣刀

Four blade straight shank arc end milling cutter

Side processing　Step processing　Right angle groove processing



● 适用范围广泛，可实现多种形态的加工。

Wide application range, capable of achieving various forms of processing

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCH-4R-D3.0R0.2S	3.0	0.2	4	8	50	4	图一	●
NCH-4R-D4.0R0.5S	4.0	0.5	4	10	50	4	图二	●
NCH-4R-D5.0R1.0	5.0	1.0	6	13	50	4	图一	●
NCH-4R-D6.0R1.0	6.0	1.0	6	16	50	4	图二	●
NCH-4R-D8.0R1.0	8.0	1.0	8	20	60	4	图二	●
NCH-4R-D10.0R1.0	10.0	1.0	10	25	75	4	图二	●
NCH-4R-D10.0R3.0	10.0	3.0	10	25	75	4	图二	●
		0.5					图二	
NCH-4R-D12.0R1.0	12.0	1.0	12	30	75	4	图二	●
		2.0		30			图二	
NCH-4R-D12.0R3.0	12.0	3.0	12	30	75	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

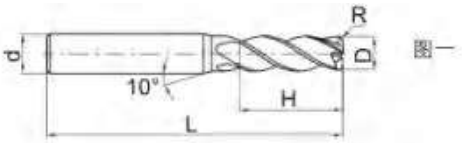
Applicability for Materials　Perfect for　suit

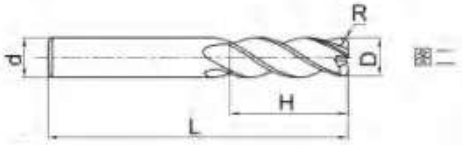
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-4RL

4刃直柄长柄圆弧立铣刀

Four blade straight shank long shank arc end milling cutter





● NCH-4R的长柄系列

NCH-4R long shank series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCH-4RL-D3.0R0.2S	3.0	0.2	4	8	50	4	图一	○
NCH-4RL-D4.0R0.5S	4.0	0.5	4	10	50	4	图二	○
NCH-4RL-D5.0R1.0	5.0	1.0	6	13	50	4	图一	○
NCH-4RL-D6.0R1.0	6.0	1.0	6	16	50	4	图二	○
NCH-4RL-D8.0R1.0	8.0	1.0	8	20	60	4	图二	○
NCH-4RL-D10.0R1.0	10.0	1.0	10	25	75	4	图二	○
NCH-4RL-D10.0R3.0	10.0	3.0	10	25	75	4	图二	○
		0.5					图二	
NCH-4RL-D12.0R1.0	12.0	1.0	12	30	75	4	图二	○
		2.0		30			图二	
NCH-4RL-D12.0R3.0	12.0	3.0	12	30	75	4	图二	○

● 常备库存 Standard stock　　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

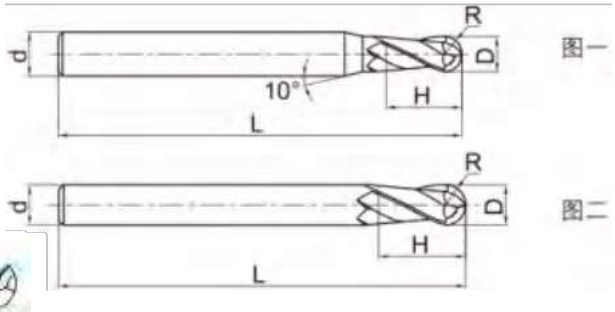
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-2B

2刃直柄球头立铣刀

Two edge straight shank ball end milling cutter



- 适用于仿形铣削。 Suitable for profile milling
- 最适于高速切削，干式切削。 Most commonly used for high-speed cutting and dry cutting

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCH-2B-R0.5S	1.0	0.5	4	2	50	2	图一	●
NCH-2B-R1.0S	2.0	1.0	4	4	50	2	图一	●
NCH-2B-R1.5S	3.0	1.5	4	6	50	2	图一	●
NCH-2B-R0.5	1.0	0.5	6	2	50	2	图一	●
NCH-2B-R1.0	2.0	1.0	6	4	50	2	图一	●
NCH-2B-R1.5	3.0	1.5	6	6	50	2	图一	●
NCH-2B-R2.0	4.0	2.0	6	8	50	2	图一	●
NCH-2B-R2.75	5.5	2.75	6	12	50	2	图一	●
NCH-2B-R3.5	7.0	3.5	8	14	60	2	图一	●
NCH-2B-R4.5	9.0	4.5	10	18	75	2	图一	●
NCH-2B-R6.0	12.0	6.0	12	24	75	2	图二	●
NCH-2B-R8.0	16.0	8.0	16	32	100	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-2BL

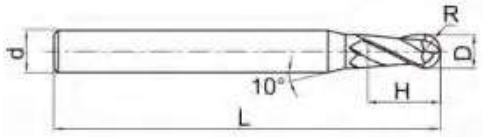
2刃直柄长柄球头立铣刀

Two blade straight shank long shank ball end milling cutter

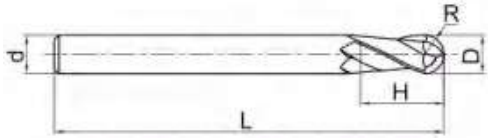
Profiling processing

Cavity processing

Spherical groove machining



图一



图二

● NCH-2B的长柄系列

NCH-2B long shank series

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCH-2BL-R1.0	2.0	1.0	6	4	75	2	图一	○
NCH-2BL-R1.5	3.0	1.5	6	6	75	2	图一	○
NCH-2BL-R2.0	4.0	2.0	6	8	75	2	图一	○
NCH-2BL-R2.75	5.5	2.75	6	12	75	2	图一	○
NCH-2BL-R3.5	7.0	3.5	8	14	75	2	图一	○
NCH-2BL-R4.5	9.0	4.5	10	18	100	2	图一	○
NCH-2BL-R6.0	12.0	6.0	12	24	100	2	图二	○
NCH-2BL-R8.0	16.0	8.0	16	32	150	2	图二	○

● 常备库存 Standard stock　　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-4B

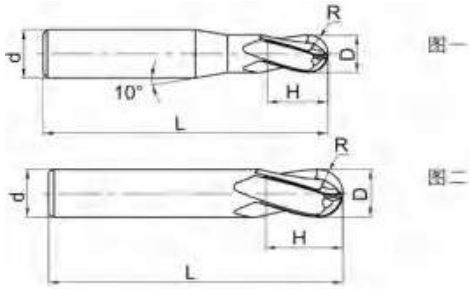
4刃直柄球头立铣刀

Four blade straight shank ball end milling cutter

Profiling processing

Cavity processing

Spherical groove machining



- 四刃球头铣刀可实现较高的进给速度，实现较高的切削加工效率。

  Can achieve higher feed speed and achieve higher cutting efficiency

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCH-4B-R1.5	3.0	1.5	6	6	50	4	图一	●
NCH-4B-R2.5	5.0	2.5	6	10	50	4	图一	●
NCH-4B-R4.0	8.0	4.0	8	16	60	4	图二	●
NCH-4B-R6.0	12.0	6.0	12	24	75	4	图二	●
NCH-4B-R8.0	16.0	8.0	16	32	100	4	图二	●
NCH-4B-R10.0	20.0	10.0	20	40	100	4	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

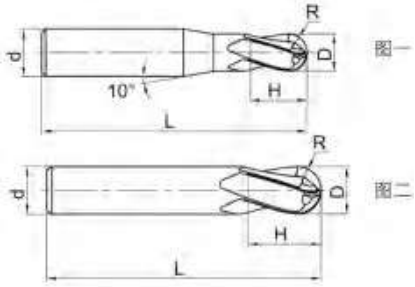
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCH-4BL

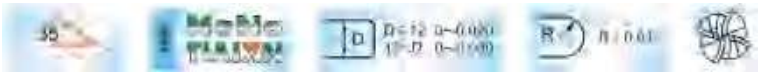
4刃直柄长柄球头立铣刀

Four blade straight shank long shank ball end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



● NCH-4B的长柄系列
NCH-4B long shank series



订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCH-4BL-R1.5	3.0	1.5	6	6	50	4	图一	○
NCH-4BL-R2.0	4.0	2.0	6	8	50	4	图一	○
NCH-4BL-R2.5	5.0	2.5	6	10	50	4	图一	○
NCH-4BL-R3.0	6.0	3.0	6	12	50	4	图二	○
NCH-4BL-R4.0	8.0	4.0	8	16	60	4	图二	○
NCH-4BL-R5.0	10.0	5.0	10	20	75	4	图二	○
NCH-4BL-R6.0	12.0	6.0	12	24	75	4	图二	○
NCH-4BL-R7.0	14.0	7.0	14	28	75	4	图二	○
NCH-4BL-R8.0	16.0	8.0	16	32	100	4	图二	○
NCH-4BL-R9.0	18.0	9.0	18	36	100	4	图二	○
NCH-4BL-R10.0	20.0	10.0	20	40	100	4	图二	○

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
			○	◎	◎		○				

NCJ-2ES

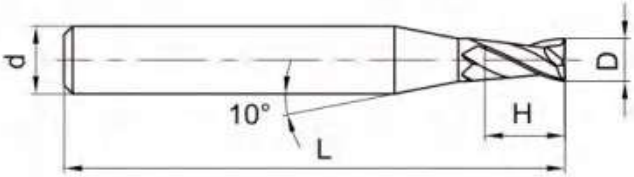
2刃直柄微小径平头立铣刀

Two blade straight shank micro small diameter flat end milling cutter

侧面加工
Side processing

台阶加工
Step processing

直角槽加工
Right angle groove processing



- 微小径铣刀可充分发挥加工中心高速，高精度性能，常用于电子零件等精密零件的加工。

Micro diameter milling cutters can fully utilize the high-speed and high progress performance of machining centers, and are commonly used for the processing of precision parts such as electronic parts

订货号	基本尺寸(mm)				齿数 Z	形式	库存
	D	d	H	L			
NCJ-2ES-D0.3	0.3	4	0.6	50	2	图一	●
NCJ-2ES-D0.5	0.5	4	1.0	50	2	图一	●
NCJ-2ES-D0.7	0.7	4	1.4	50	2	图一	●
NCJ-2ES-D0.9	0.9	4	1.8	50	2	图一	●
NCJ-2ES-D1.1	1.1	4	2.0	50	2	图一	●
NCJ-2ES-D1.3	1.3	4	2.5	50	2	图一	●
NCJ-2ES-D1.5	1.5	4	3.0	50	2	图一	●
NCJ-2ES-D1.7	1.7	4	3.5	50	2	图一	●
NCJ-2ES-D1.9	1.9	4	4.0	50	2	图一	●
NCJ-2ES-D2.1	2.1	4	4.0	50	2	图一	●
	2.2						
NCJ-2ES-D2.3	2.3	4	4.5	50	2	图一	●
	2.4						
NCJ-2ES-D2.5	2.5	4	5.0	50	2	图一	●
	2.6			50			
NCJ-2ES-D2.7	2.7	4	5.5	50	2	图一	●
	2.8			50			
NCJ-2ES-D2.9	2.9	4	6.0	50	2	图一	●
	3			50			

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合
Applicability for Materials　Perfect for　suit

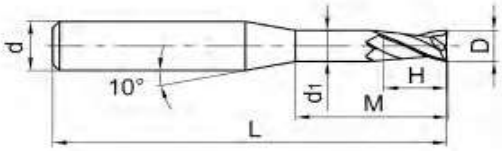
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎			○	○

NCJ-2EP

2刃直柄长颈短刃平头立铣刀

Two blade straight shank long neck short blade flat end milling cutter

Flat deep groove processing



● 适用于细槽加工或会产生干涉的细微部分的加工。

Suitable for machining fine grooves or small parts that may cause interference

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCJ-2EP-D0.5-M04	0.5	4	0.7	4	0.45	50	2	●
NCJ-2EP-D0.5-M08	0.5	4	0.7	8	0.45	50	2	●
NCJ-2EP-D0.8-M06	0.8	4	1.2	6	0.75	50	2	●
NCJ-2EP-D0.8-M10	0.8	4	1.2	10	0.75	50	2	●
NCJ-2EP-D1.0-M06	1.0	4	1.5	6	0.95	50	2	●
NCJ-2EP-D1.0-M10	1.0	4	1.5	10	0.95	50	2	●
NCJ-2EP-D1.0-M14	1.0	4	1.5	14	0.95	50	2	●
NCJ-2EP-D1.2-M08	1.2	4	1.8	8	1.15	50	2	●
NCJ-2EP-D1.2-M12	1.2	4	1.8	12	1.15	50	2	●
NCJ-2EP-D1.5-M08	1.5	4	2.3	8	1.45	50	2	●
NCJ-2EP-D1.5-M12	1.5	4	2.3	12	1.45	50	2	●
NCJ-2EP-D2.0-M06	2.0	4	3.0	6	1.95	50	2	●
				8		50		
NCJ-2EP-D2.0-M10	2.0	4	3.0	10	1.95	50	2	●
				12		50		

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

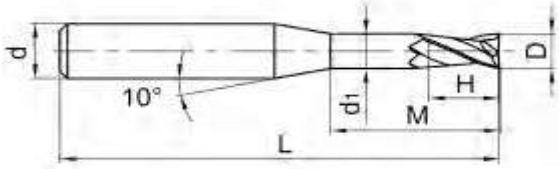
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎			○	○

NCJ-2EP

2刃直柄长颈短刃平头立铣刀

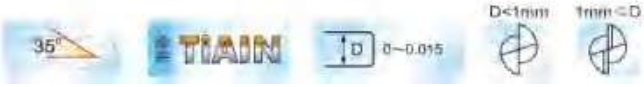
Two blade straight shank long neck short blade flat end milling cutter

Flat deep groove processing



● 适用于细槽加工或会产生干涉的细微部分的加工。

Suitable for machining fine grooves or small parts that may cause interference



订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	R	d	H	L			
NCJ-2EP-D2.0-M14	2.0	4	3.0	14	1.95	50	2	●
NCJ-2EP-D2.5-M08	2.5	4	3.7	8	2.4	50	2	●
NCJ-2EP-D2.5-M12	2.5	4	3.7	12	2.4	50	2	●
NCJ-2EP-D2.5-M16	2.5	4	3.7	16	2.4	60	2	●
NCJ-2EP-D2.5-M20	2.5	4	3.7	20	2.4	60	2	●
NCJ-2EP-D3.0-M08	3.0	6	4.5	8	2.85	50	2	●
NCJ-2EP-D3.0-M12	3.0	6	4.5	12	2.85	50	2	●
NCJ-2EP-D3.0-M16	3.0	6	4.5	16	2.85	60	2	●
NCJ-2EP-D3.0-M20	3.0	6	4.5	20	2.85	60	2	●
NCJ-2EP-D4.0-M16	4.0	6	6.0	16	3.85	60	2	●
					3.85			
NCJ-2EP-D4.0-M25	4.0	6	6.0	25	3.85	60	2	●
					4.85			
NCJ-2EP-D5.0-M25	5.0	6	7.5	25	4.85	70	2	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

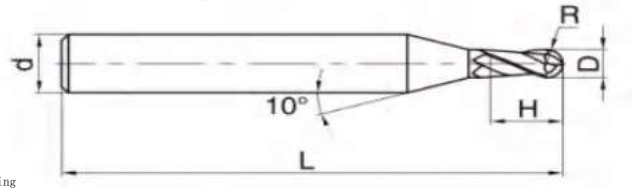
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎			○	○

NCJ-2BS

2刃直柄微小径球头立铣刀

Two blade straight shank micro small diameter flat end milling cutter

Profiling processing　Cavity processing　Spherical groove machining



- 微小径铣刀可充分发挥加工中心高速，高精度性能，常用于电子零件等精密零件的加工。

Micro diameter milling cutters can fully utilize the high-speed and high progress performance of machining centers, and are commonly used for the processing of precision parts such as electronic parts

订货号 Material code	基本尺寸(mm) Basic dimensions					齿数 Z Number of teeth	库存 inventory
	D	R	d	H	L		
NCJ-2BS-R0.15	0.3	0.15	4	0.5	50	2	◆
NCJ-2BS-D0.25	0.5	0.25	4	0.8	50	2	◆
NCJ-2BS-D0.35	0.7	0.35	4	1.0	50	2	◆
NCJ-2BS-D0.45	0.9	0.45	4	1.3	50	2	◆
NCJ-2BS-D0.60	1.2	0.60	4	1.8	50	2	◆
NCJ-2BS-D0.75	1.5	0.75	4	2.3	50	2	◆
NCJ-2BS-D0.90	1.8	0.90	4	2.7	50	2	◆
NCJ-2BS-D1.25	2.5	1.25	4	3.7	50	2	◆
	3.0						

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

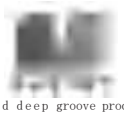
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎			○	○

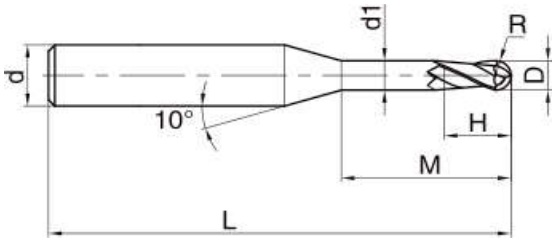
NCJ-2BP

2刃直柄长颈短刃球头立铣刀

Two blade straight shank long neck short blade ball end milling cutter



Ball head deep groove processing



● 适用于细槽加工以及自由曲面加工。

Suitable for fine groove machining and free form surface machining

订货号 Material code	基本尺寸(mm) Basic dimensions							齿数 Z Number of teeth	库存 inventory
	D	R	H	d_1	M	d	L		
NCJ-2BP-R0.25-M04	0.5	0.25	0.7	0.45	4	4	50	2	●
NCJ-2BP-R0.3-M04	0.6	0.3	0.9	0.55	4	4	50	2	●
NCJ-2BP-R0.3-M08	0.6	0.3	0.9	0.55	8	4	50	2	●
NCJ-2BP-R0.4-M06	0.8	0.4	1.2	0.75	6	4	50	2	●
NCJ-2BP-R0.4-M10	0.8	0.4	1.2	0.75	10	4	50	2	●
NCJ-2BP-R0.5-M06	1.0	0.5	1.5	0.95	6	4	50	2	●
NCJ-2BP-R0.5-M10	1.0	0.5	1.5	0.95	10	4	50	2	●
NCJ-2BP-R0.6-M06	1.2	0.6	1.8	1.15	6	4	50	2	●
NCJ-2BP-R0.6-M12	1.2	0.6	1.8	1.15	12	4	50	2	●
NCJ-2BP-R0.75-M08	1.5	0.75	2.3	1.45	8	4	50	2	●
NCJ-2BP-R0.75-M16	1.5	0.75	2.3	1.45	16	4	50	2	●
NCJ-2BP-R1.0-M08	2.0	1.0	3.0	1.95	8	4	50	2	●
							50		

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

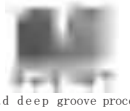
Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎			○	○

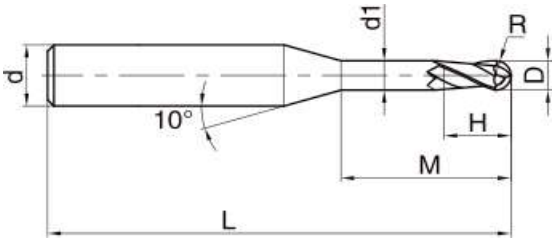
NCJ-2BP

2刃直柄长颈短刃球头立铣刀

Two blade straight shank long neck short blade ball end milling cutter



Ball head deep groove processing



● 适用于细槽加工以及自由曲面加工。

Suitable for fine groove machining and free form surface machining

订货号 Material code	基本尺寸(mm) Basic dimensions							齿数 Z Number of teeth	库存 inventory
	D	R	H	d_1	M	d	L		
NCJ-2BP-R1.0-M12	2.0	1.0	3.0	1.95	12	4	50	2	●
NCJ-2BP-R1.0-M20	2.0	1.0	3.0	1.95	20	4	50	2	●
NCJ-2BP-R1.25-M12	2.5	1.25	3.7	2.4	12	4	50	2	●
NCJ-2BP-R1.25-M20	2.5	1.25	3.7	2.4	20	4	60	2	●
NCJ-2BP-R1.5-M10	3.0	1.5	4.5	2.85	10	6	50	2	●
NCJ-2BP-R1.5-M16	3.0	1.5	4.5	2.85	16	6	60	2	●
NCJ-2BP-R2.0-M10	4.0	2.0	6.0	3.85	10	6	60	2	●
NCJ-2BP-R2.0-M20	4.0	2.0	6.0	3.85	20	6	60	2	●
NCJ-2BP-R2.5-M16	5.0	2.5	7.5	4.85	16	6	60	2	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

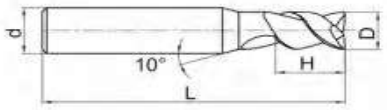
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎			○	○

AU-2E

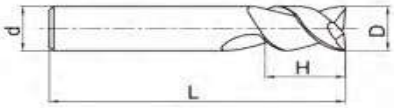
2刃直柄平头立铣刀

Two blade straight shank flat end milling cutter

Side processing　Step processing　Right angle groove processing



图一



图二

- 排屑性能良好，可进行高效率加工。

  Good chip removal performance for efficient processing

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
AU-2E-D1.0S	1.0	4	3	50	2	图一	●
AU-2E-D2.0S	2.0	4	6	50	2	图一	●
AU-2E-D3.0S	3.0	4	9	50	2	图一	●
AU-2E-D3.0	3.0	6	9	50	2	图一	●
AU-2E-D5.0	5.0	6	15	50	2	图一	●
AU-2E-D8.0	8.0	8	20	60	2	图二	●
AU-2E-D12.0	12.0	12	32	75	2	图二	●
AU-2E-D20.0	20.0	20	45	100	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

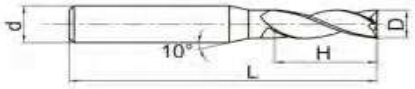
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
								◎	◎		

AU-3E

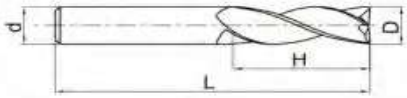
3刃直柄平头立铣刀

Three blade straight shank flat end milling cutter

Side processing　Step processing　Right angle groove processing



图一



图二

- 切削性能优异，无颤振，可实现高精度的加工。

Excellent cutting performance, no chatter, enabling high-precision machining

订货号 Material code	基本尺寸(mm)Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
AU-3E-D1.0S	1.0	4	3	50	3	图一	●
AU-3E-D2.0S	2.0	4	6	50	3	图一	●
AU-3E-D3.0S	3.0	4	9	50	3	图一	●
AU-3E-D3.0	3.0	6	9	50	3	图一	●
AU-3E-D5.0	5.0	6	15	50	3	图一	●
AU-3E-D8.0	8.0	8	20	60	3	图二	●
AU-3E-D12.0	12.0	12	32	75	3	图二	●
AU-3E-D20.0	20.0	20	45	100	3	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

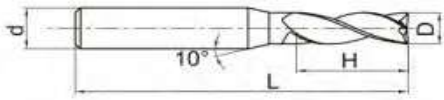
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
								◎	◎		

AU-3EL

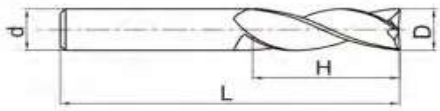
3刃直柄长刃平头立铣刀

Three blade straight shank long blade flat end milling cutter

Side processing　Step processing　Right angle groove processing



图一



图二

● AU-E的长刃系列

AU-E Long Blade Series

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
AU-3E-D2.0S	2.0	4	10	50	3	图一	●
AU-3E-D4.0 S	4.0	4	18	50	3	图二	●
AU-3E-D4.0	4.0	6	18	60	3	图一	●
AU-3E-D6.0	6.0	6	25	75	3	图二	●
AU-3E-D10.0	10.0	10	45	100	3	图二	●
AU-3E-D16.0	16.0	16	65	150	3	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

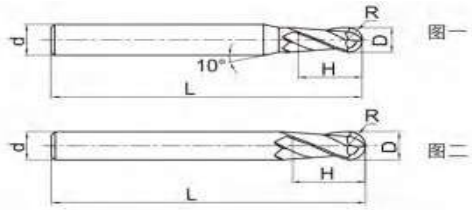
碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
								◎	◎		

AU-2B

2刃直柄球头立铣刀

Two edge straight shank ball end milling cutter

Side processing　Step processing　Right angle groove processing



● 适用于铝合金的仿形铣削。

Suitable for profile milling of aluminum alloys

订货号 Material code	基本尺寸(mm) Basic dimensions				齿数 Z Number of teeth	形式 Shape	库存 inventory
	D	d	H	L			
AU-2B-R1.0S	2.0	4	4	50	2	图一	●
AU-2B-R2.0S	4.0	4	8	50	2	图二	●
AL-2B-R2.5	5.0	6	10	50	2	图一	●
AL-2B-R4.0	8.0	6	16	60	2	图二	●
AL-2B-R6.0	12.0	6	24	75	2	图二	●

● 常备库存 Standard stock　○ 按订单生产 Production according to order

被加工材料适用表 ◎非常适合 ○适合

Applicability for Materials　Perfect for　suit

碳素钢 carbon steel	合金钢 alloy steel	预硬钢、淬硬钢 Pre-hardened steel, hardened steel				不锈钢 Stainless steel	铸铁球墨铸铁 Castiron, nodular castiron	铜合金 copper alloy	铝合金 aluminium alloy	钛合金 titanium alloy	耐热合金 Heat-resistant alloy
		~45HRC	~50HRC	~55HRC	~68HRC						
								◎	◎		

专用刀具非标定制

Customization of specialized tools

客户名称： Customer Name:			
传真： Fax:			
电话： Phone:		传真： Fax:	
E-MAIL:		邮编： Postal Code:	邮箱： Email:

当样本上的直径规格或者长度规格不能满足您的需求的时候，我们提供更加专业，更加精确的非标定制，您只需轻轻松松选择您需要的系列即可。

When the diameter or length specifications on the catalogue cannot meet your needs, we provide more professional and precise customization. You only need to easily choose the series you need.

直径范围 Diameter Range	Φ0.3~20.0mm
刀具刃数 Number of cutting blades	

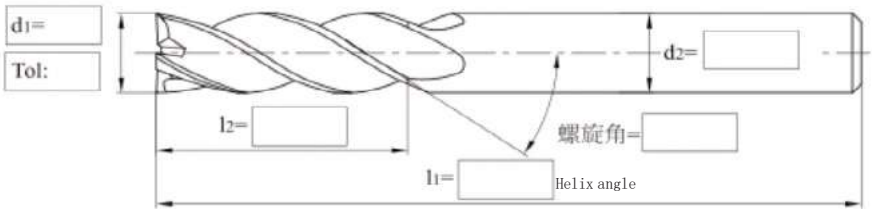
Selection of shape

刀具形式的选择

☐ 平头铣刀 flat end milling cutter

☐ 球头铣刀 ball end milling cutter

☐ 圆弧铣刀 Arc end milling cutter



备注：
Remarks:

订购数量 Order quantity	支 Piece	期望交货日期： Expected delivery date:	年 (Y)	月 (M)	日 (D)
供方报价 Price		需方确认： Confirmed by the purchaser:			
		日期： Date:	年 (Y)	月 (M)	日 (D)

专用刀具非标定制

Customization of specialized tools

客户名称： Customer Name:			
传真： Fax:			
电话： Phone:		传真：	
E-MAIL:		邮编： Postal Code:	邮箱： Email:

当样本上的直径规格或者长度规格不能满足您的需求的时候，我们提供更加专业，更加精确的非标定制，您只需轻轻松松选择您需要的系列即可。

When the diameter or length specifications on the catalogue cannot meet your needs, we provide more professional and precise customization. You only need to easily choose the series you need.

工件材料信息

Processed Material information

- ☐ 碳素钢 Carbon steel
- ☐ 合金钢 Alloy steel
- ☐ 预硬钢 Pre-hardened steel
- ☐ 淬火钢 Hardened Steel
- ☐ 不锈钢 Stainless steelt
- ☐ 灰铸铁 Grey cast iron
- ☐ 球墨铸铁 Ductile iron
- ☐ 钢合金 Ductile iron
- ☐ 铝合金 Aluminium alloy
- ☐ 钛合金 Titanium alloy
- ☐ 耐热合金 Heat resistant alloy

被加工材料号：Material number:

拉伸强度= N/mm²

Tonsile strength

硬度= 单位：（HRC，HB等等）

hardness

直径范围 Diameter Range	Φ0.2-2.5mm	
刀具刃数 Number of cutting blades	Φ0.2-2.5mm	
端刃过中心 End edge passing through the center	☐ 是 Yes	☐ 否 No

刀具信息

Tool Information

Selection of tool Shape 刀具形式的选择

☐ 锋刃平头铣刀 CuttingBlade flat end milling cutter ☐ 倒角平头铣刀 Chamfer flat end milling cutter ☐ 球头铣刀 Ball end milling cutter ☐ 圆弧铣刀 Arc milling cutter

d1=

Tol:

d2=

l2=

螺旋角=

l1= Helix angle

Shank type 柄部形式

DIN6535

☐ Form HA

☐ Form HB

☐ 普通直柄 Straight shank

特殊形状 Special Shapes

Processing method 加工方式

☐ 槽铣 Slot milling ☐ 侧铣 Side milling ☐ 仿形铣 Profile milling

coating 涂层

是 Yes ☐

否 No ☐

备注：

Remarks:

订购数量 Order quantity	支 Piece	期望交货日期： Expected delivery date:	年 (Y)	月 (M)	日 (D)
供方报价 Price		需方确认： Confirmed by the purchaser:			
		日期： Date:	年 (Y)	月 (M)	日 (D)

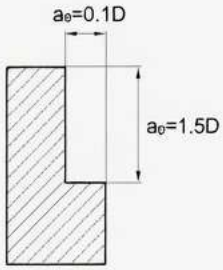
NCG系列刀具切削参数

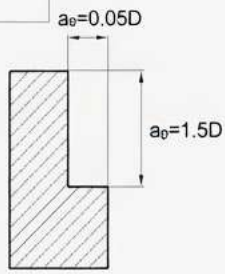
Parameters of NCG series cutting tools

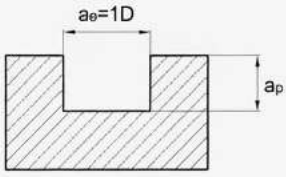
NCG-4E/NCG-4EL

被加工材料 Processed material	铸铁 cast iron 球墨铸铁 Ductile iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	20000	225	20000	225	20000	180	20000	180	20000	80	20000	135
2	15000	360	15000	360	15000	325	15000	315	11150	90	13000	200
3	14000	610	14000	610	13000	570	10600	470	7500	110	8500	370
4	10800	630	10800	630	10000	575	8000	480	5500	115	6500	380
5	8200	660	8200	660	7600	600	6400	505	4500	115	5000	400
6	7000	675	7000	675	6400	620	5300	515	3700	120	4200	405
8	5200	665	5200	665	4800	610	4000	510	2800	120	3200	415
10	4200	660	4200	660	3800	600	3200	505	2200	120	2500	390
12	3500	660	3500	660	3200	600	2650	505	1850	120	2100	390
14	3000	610	3000	610	2700	570	2300	470	1600	115	1800	370
16	2600	610	2600	610	2400	570	2000	470	1400	110	1600	370
18	2300	600	2300	600	2100	560	1800	460	1250	95	1400	365
20	2050	600	2050	600	1900	560	1600	460	1100	95	1250	365

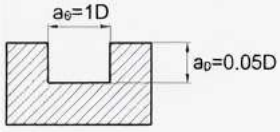
最大切深量 Maximum cutting depth







Tool Diameter 刀具直径	cutting depth 切深ap
Ø1<D<Ø3	0.15D
Ø3<D	0.3D



1. The above table is the standard value for side milling processing. When cutting grooves with a tool, the rotational speed should be 50% -70% of the above table, and the feed speed should be 40% -60% of the above table.
2. Please use high-precision machine and tool handles.
3. Please use air cooling or cooling liquid that is not prone to producing smoke.
4. Forward milling processing is recommended for Side milling。
5. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
6. Try to minimize the overhang length of the tools without affecting the using.

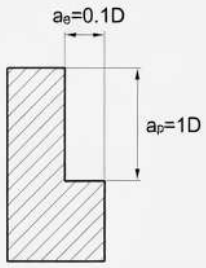
NCG系列刀具切削参数

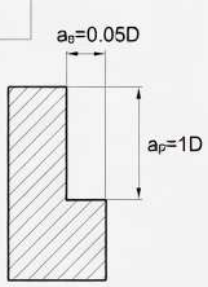
Parameters of NCG series cutting tools

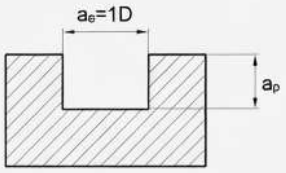
NCG-2E

被加工材料 Processed material	铸铁 cast Iron 球墨铸铁 Ductile Iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	20000	165	20000	165	20000	135	20000	135	20000	50	20000	100
2	15000	265	15000	265	15000	240	15000	235	11150	70	13000	150
3	14000	455	14000	455	13000	420	10600	350	7500	100	8500	275
4	10800	465	10800	465	10000	430	8000	355	5500	110	6500	280
5	8200	485	8200	465	7600	450	6400	370	4500	115	5000	295
6	7000	500	7000	500	6400	460	5300	385	3700	115	4200	300
8	5200	495	5200	495	4800	455	4000	380	2800	115	3200	305
10	4200	485	4200	485	3800	450	3200	370	2200	115	2500	290
12	3500	485	3500	485	3200	450	2650	370	1850	115	2100	290
14	3000	455	3000	455	2700	420	2300	350	1600	110	1800	275
16	2600	455	2600	455	2400	420	2000	350	1400	100	1600	275
18	2300	445	2300	445	2100	410	1800	345	1250	100	1400	270
20	2050	445	2050	445	1900	410	1600	345	1100	100	1250	270

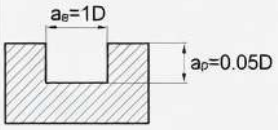
最大切深量 Maximum cutting depth







Tool Diameter 刀具直径	cutting depth 切深ap
Ø1<D<Ø3	0.15D
Ø3<D	0.3D



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 is the standard value for side milling processing. When cutting grooves with a tool, the rotational speed should be 50% -70% of the above table, and the feed speed should be 40% -60% of the above table.
2. Please use high-precision machine and tool handles.
3. Please use air cooling or cooling liquid that is not prone to producing smoke.
4. Forward milling processing is recommended for Side milling。
5. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
6. Try to minimize the overhang length of the tools without affecting the using.

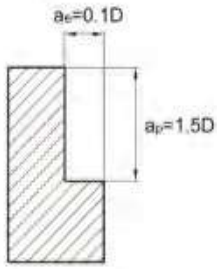
NCG系列刀具切削参数

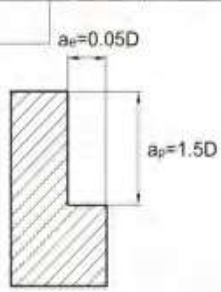
Parameters of NCG series cutting tools

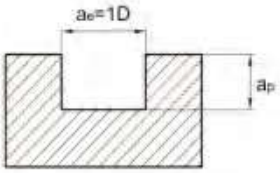
NCG-4R/NCG-4RL

被加工材料 Processed material	铸铁 cast iron 球墨铸铁 Ductile iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
3	14000	820	14000	820	13000	755	10600	630	7500	145	8500	490
4	10800	840	10800	840	10000	770	8000	640	5500	145	6500	500
5	8200	880	8200	880	7600	810	6400	670	4500	145	5000	530
6	7000	900	7000	900	6400	830	5300	690	3700	160	4200	540
8	5200	890	5200	890	4800	815	4000	680	2800	160	3200	550
10	4200	880	4200	880	3800	810	3200	670	2200	160	2500	520
12	3500	880	3500	880	3200	810	2650	670	1850	160	2100	520
16	2600	680	2600	680	2400	630	2000	525	1400	120	1600	490

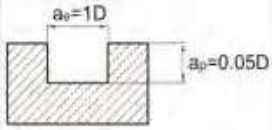
最大切深量 Maximum cutting depth







Tool Diameter 刀具直径	cutting depth 切深a_p
Ø1<D<Ø3	0.15D
Ø3<D	0.3D



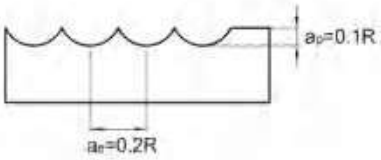
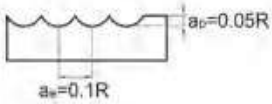
1. 上表是侧铣加工的标准值，刀具切槽时，转速要以上表的50%~70%，进给速度要以40%~60%为标准值。
2. 请使用高精度的机床和刀柄。
3. 请使用空气冷却或不易产生烟雾的切削液。
4. 侧面铣削推荐顺铣加工。
5. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
6. 在不干涉的条件下尽可能使刀具悬长最短。

1. The above table is the standard value for side milling processing. When cutting grooves with a tool, the rotational speed should be 50% -70% of the above table, and the feed speed should be 40% -60% of the above table.
2. Please use high-precision machine and tool handles.
3. Please use air cooling or cooling liquid that is not prone to producing smoke.
4. Forward milling processing is recommended for Side milling。
5. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
6. Try to minimize the overhang length of the tools without affecting the using.

NCG系列刀具切削参数

Parameters of NCG series cutting tools

NCG-2B/NCG-2BL

被加工材料 Processed material	铸铁 cast iron 球墨铸铁 Ductile iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
R0.5	40000	800	40000	800	38000	700	32000	320	22300	200	25000	275
R1.0	24000	900	24000	900	19000	760	16000	400	11150	230	13000	275
R1.5	15500	950	15500	950	12750	760	10600	450	7400	290	8500	280
R2.0	11500	950	11500	950	9550	760	8000	550	5550	370	6500	370
R2.5	9500	1050	9500	1050	7650	800	6400	550	4450	370	5000	375
R3.0	8000	1050	8000	1050	6400	800	5300	580	3700	390	4200	390
R4.0	6000	1300	6000	1300	4800	950	4000	700	2750	455	3200	440
R5.0	4800	1200	4800	1200	3800	900	3200	650	2200	430	2500	440
R6.0	4000	1100	4000	1100	3200	840	2650	610	1850	430	2100	420
R8.0	3000	1050	3000	1050	2400	800	2000	600	1350	380	1600	375
R10.0	2400	950	2400	950	1900	680	1600	560	1100	370	1250	330
最大切深量 Maximum cutting depth												

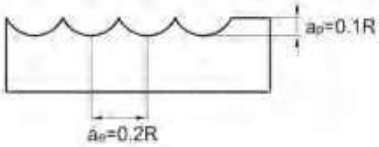
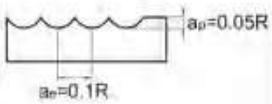
1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
4. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
4. Try to minimize the overhang length of the tools without affecting the using.

NCG系列刀具切削参数

Parameters of NCG series cutting tools

NCG-4B/NCG-4BL

被加工材料 Processed material	铸铁 cast iron 球墨铸铁 Ductile iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC	
切削速度 cutting speed	150 m/min		150m/min		120m/min		100m/min		70m/min		80m/min	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
R1.5	15500	1710	15500	1710	12750	1340	10600	810	7400	520	8500	500
R2.0	11500	1710	11500	1710	9550	1340	8000	990	5550	660	6500	665
R2.5	9500	1890	9500	1890	7650	1440	6400	990	4450	660	5000	675
R3.0	8000	1890	8000	1890	6400	1440	5300	1040	3700	700	4200	700
R4.0	6000	2340	6000	2340	4800	1710	4000	1260	2750	820	3200	790
R5.0	4800	2160	4800	2160	3800	1620	3200	1170	2200	770	2500	790
R6.0	4000	1980	4000	1980	3200	1510	2650	1100	1850	770	2100	755
R8.0	3000	1890	3000	1890	2400	1440	2000	1080	1350	680	1600	675
R10.0	2400	1710	2400	1710	1900	1220	1600	1000	1100	660	1250	595
最大切深量 Maximum cutting depth												

1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 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。
4. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
4. Try to minimize the overhang length of the tools without affecting the using.

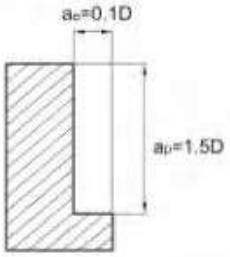
NCP系列刀具切削参数

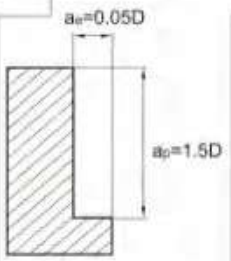
Parameters of NCP series cutting tools

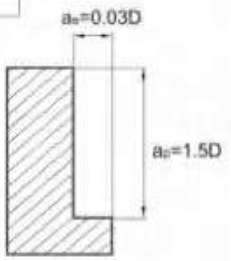
NCP-4E/NCP-4EL

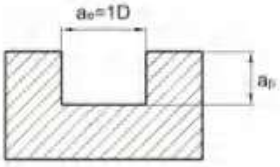
被加工材料 Processed material	铸铁，碳素钢，合金钢 cast iron, Carbon steel, alloy steel ~30HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC		淬硬钢 hardened steel ~55HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	20000	300	20000	108	20000	240	20000	180	20000	135
2	15000	480	11150	120	15000	420	13000	270	11140	195
3	14000	815	7500	145	10600	630	8500	495	7430	360
4	10800	840	5500	150	8000	645	6500	505	5570	370
5	8200	875	4500	150	6400	675	5000	530	4460	390
6	7000	900	3700	165	5300	690	4200	540	3710	390
8	5200	890	2800	165	4000	680	3200	555	2785	405
10	4200	875	2200	165	3200	675	2500	525	2230	375
12	3500	875	1850	165	2650	675	2100	525	1855	375
14	3000	815	1600	150	2300	630	1800	495	1590	360
16	2600	815	1400	145	2000	630	1600	495	1390	360
18	2300	805	1250	125	1800	620	1400	485	1240	350
20	2050	805	1100	125	1600	620	1250	485	1115	350

最大切深量 Maximum cutting depth









Tool Diameter 刀具直径	cutting depth 切深ap
Ø1≤D<Ø3	0.15D
Ø3≤D<Ø6	0.3D
Ø6≤D<Ø20	0.5D

Tool Diameter 刀具直径	cutting depth 切深ap
Ø1≤D<Ø3	0.1D
Ø3≤D	0.2D

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 is the standard value for side milling processing. When cutting grooves with a tool, the rotational speed should be 50% -70% of the above table, and the feed speed should be 40% -60% of the above table.
2. Please use high-precision machine and tool handles.
3. Please use air cooling or cooling liquid that is not prone to producing smoke.
4. Forward milling processing is recommended for Side milling。
5. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
6. Try to minimize the overhang length of the tools without affecting the using.

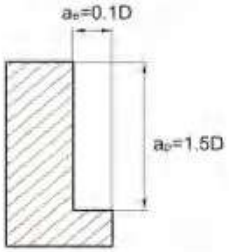
NCP系列刀具切削参数

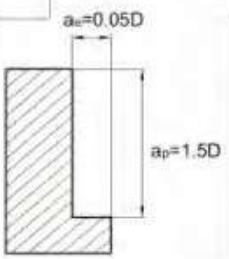
Parameters of NCP series cutting tools

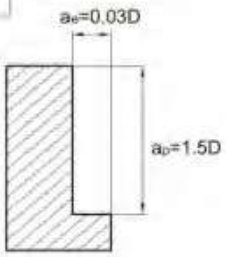
NCP-2E

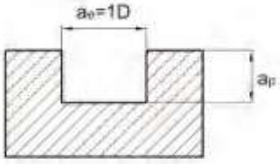
被加工材料 Processed material	铸铁，碳素钢，合金钢 cast iron, Carbon steel, alloy steel ~30HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC		淬硬钢 hardened steel ~55HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	20000	200	20000	60	20000	165	20000	120	20000	90
2	15000	320	11150	85	15000	285	13000	180	11140	130
3	14000	545	7500	120	10600	420	8500	330	7430	240
4	10800	560	5500	135	8000	425	6500	335	5570	245
5	8200	585	4500	135	6400	445	5000	355	4460	260
6	7000	600	3700	140	5300	465	4200	360	3710	260
8	5200	595	2800	140	4000	455	3200	365	2785	270
10	4200	585	2200	140	3200	445	2500	350	2230	250
12	3500	585	1850	140	2650	445	2100	350	1855	250
14	3000	545	1600	135	2300	420	1800	330	1590	240
16	2600	545	1400	120	2000	420	1600	330	1390	240
18	2300	535	1250	120	1800	415	1400	325	1240	235
20	2050	535	1100	120	1600	415	1250	325	1115	235

最大切深量 Maximum cutting depth









Tool Diameter cutting depth

刀具直径	切深a_p
Ø1≤D<Ø3	0.15D
Ø3≤D<Ø6	0.3D
Ø6≤D<Ø20	0.5D

Tool Diameter cutting depth

刀具直径	切深a_p
Ø1≤D<Ø3	0.1D
Ø3≤D	0.2D

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 is the standard value for side milling processing. When cutting grooves with a tool, the rotational speed should be 50% -70% of the above table, and the feed speed should be 40% -60% of the above table.
2. Please use high-precision machine and tool handles.
3. Please use air cooling or cooling liquid that is not prone to producing smoke.
4. Forward milling processing is recommended for Side milling。
5. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
6. Try to minimize the overhang length of the tools without affecting the using.

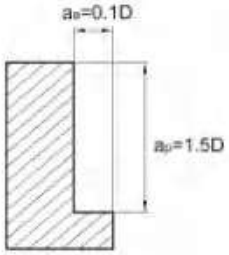
NCP系列刀具切削参数

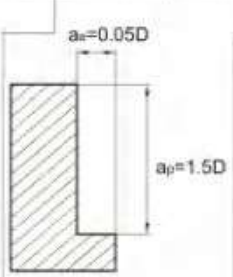
Parameters of NCP series cutting tools

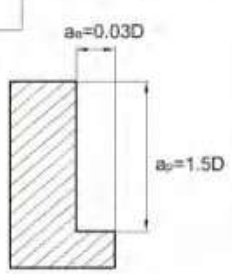
NCP-4R/NCP-4RL

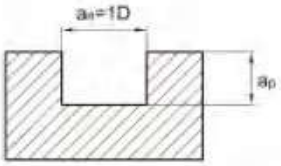
被加工材料 Processed material	铸铁，碳素钢，合金钢 cast iron, Carbon steel, alloy steel ~30HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC		淬硬钢 hardened steel ~55HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
3	14000	985	7500	175	10600	755	8500	590	7430	435
4	10800	1010	5500	175	8000	770	6500	600	5570	445
5	8200	1055	4500	175	6400	805	5000	640	4460	470
6	7000	1080	3700	195	5300	830	4200	650	3710	470
8	5200	1070	2800	195	4000	815	3200	660	2785	485
10	4200	1055	2200	195	3200	805	2500	625	2230	450
12	3500	1055	1850	195	2650	805	2100	625	1855	450
16	2600	985	1400	175	2000	755	1600	590	1390	435

最大切深量 Maximum cutting depth









Tool Diameter 刀具直径	cutting depth 切深a_p
Ø1≤D<Ø3	0.15D
Ø3≤D<Ø6	0.3D
Ø6≤D<Ø20	0.5D

Tool Diameter 刀具直径	cutting depth 切深a_p
Ø1≤D<Ø3	0.1D
Ø3≤D	0.2D

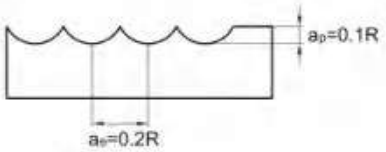
1. 上表是侧铣加工的标准值，刀具切槽时，转速要以上表的50%~70%，进给速度要以40%~60%为标准值。
2. 请使用高精度的机床和刀柄。
3. 请使用空气冷却或不易产生烟雾的切削液。
4. 侧面铣削推荐顺铣加工。
5. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
6. 在不干涉的条件下尽可能使刀具悬长最短。

1. The above table is the standard value for side milling processing. When cutting grooves with a tool, the rotational speed should be 50% -70% of the above table, and the feed speed should be 40% -60% of the above table.
2. Please use high-precision machine and tool handles.
3. Please use air cooling or cooling liquid that is not prone to producing smoke.
4. Forward milling processing is recommended for Side milling。
5. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
6. Try to minimize the overhang length of the tools without affecting the using.

NCP系列刀具切削参数

Parameters of NCP series cutting tools

NCP-2B/NCP-2BL

被加工材料 Processed material	铸铁、碳素钢、合金钢 cast iron, Carbon steel, alloy steel ~30HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC		淬硬钢 hardened steel ~55HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
R0.5	40000	960	22300	240	32000	385	25000	330	22280	295
R1.0	24000	1080	11150	275	16000	480	13000	330	11140	295
R1.5	15500	1150	7400	350	10600	545	8500	335	7430	295
R2.0	11500	1150	5550	445	8000	665	6500	450	5570	385
R2.5	9500	1270	4450	445	6400	665	5000	455	4455	405
R3.0	8000	1270	3700	470	5300	700	4200	470	3715	420
R4.0	6000	1575	2750	550	4000	850	3200	535	2785	465
R5.0	4800	1455	2200	520	3200	785	2500	535	2230	465
R6.0	4000	1330	1850	520	2650	740	2100	505	1855	450
R8.0	3000	1270	1350	455	2000	725	1600	455	1395	395
R10.0	2400	1150	1100	445	1600	675	1250	400	1115	360
最大切深量 Maximum cutting depth										

1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 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。
4. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
4. Try to minimize the overhang length of the tools without affecting the using.

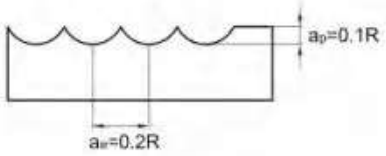
NCP系列刀具切削参数

Parameters of NCP series cutting tools

NCP-4B/NCP-4BL

被加工材料 Processed material	铸铁，碳素钢，合金钢 cast iron, Carbon steel, alloy steel ~30HRC		不锈钢 Stainless steel		预硬钢，调质钢 Pre-hardened steel, hardened steel ~40HRC		预硬钢，调质钢 Pre-hardened steel, hardened steel ~50HRC		淬硬钢 hardened steel ~55HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
R1.5	15500	2055	7400	625	10600	975	8500	600	7430	525
R2.0	11500	2055	5550	795	8000	1190	6500	800	5570	685
R2.5	9500	2270	4450	795	6400	1190	5000	810	4455	720
R3.0	8000	2270	3700	840	5300	1245	4200	840	3715	745
R4.0	6000	2810	2750	985	4000	1515	3200	950	2785	825
R5.0	4800	2595	2200	925	3200	1405	2500	950	2230	825
R6.0	4000	2375	1850	925	2650	1320	2100	905	1855	800
R8.0	3000	2270	1350	815	2000	1295	1600	810	1395	705
R10.0	2400	2055	1100	795	1600	1200	1250	715	1115	640

最大切深量 Maximum cutting depth



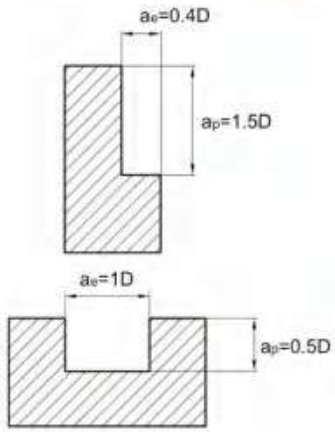
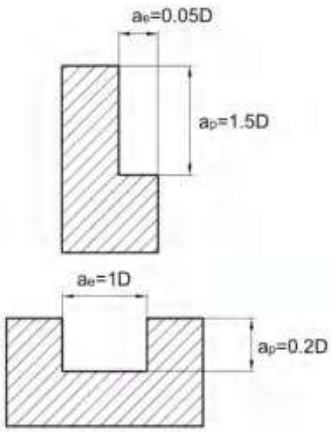
1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
4. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
4. Try to minimize the overhang length of the tools without affecting the using.

NCPX系列刀具切削参数

Parameters of NCPX series cutting tools

NCPX-4E/NCPX-4EL

被加工材料 Processed material	碳钢，合金钢 carbon steel, alloy steel		不锈钢 Stainless steel		耐热合金、钛合金 heat-resisting alloy, titanium alloy	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
4	6400	690	3700	160	3055	90
5	5800	710	3000	190	2470	90
6	5300	750	2700	200	2470	120
8	3900	700	2000	210	1820	130
10	3100	640	1600	210	1430	130
12	2600	600	1300	170	1235	110
16	1900	520	1000	150	935	90
20	1500	445	800	140	740	90
最大切深量 Maximum cutting depth						

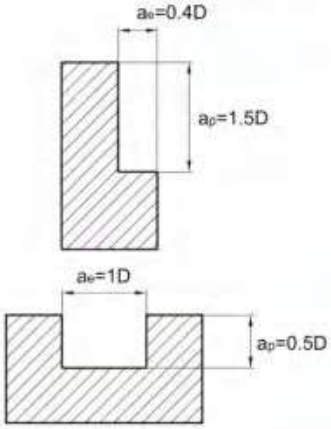
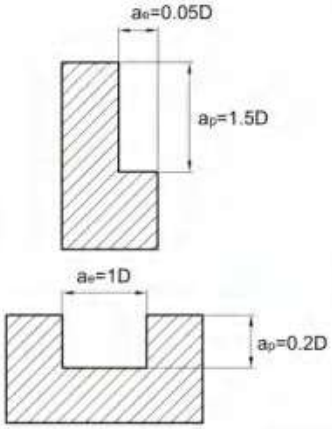
1. 上表是侧铣加工的标准值，切槽时，转速要以上表的80%~100%，进给速度要以60%~80%为标准值。
2. 切削不锈钢,钛合金和耐热合金时，推荐使用非水溶性切削液。
3. 请使用高刚性、高精度的机床和刀柄。
4. 根据切深量和机床刚性调整转速和进给速度。
5. 推荐顺铣加工。
6. 在不干涉的条件下尽可能使刀具悬长最短。
7. 上表是基于L/D≤4时的推荐值，当L/D＞4时，请将转速和进给速度同比降低70%。

1. The above table is the standard value for side milling processing. When cutting grooves, the speed should be 80% -100% of the above table, and the feed speed should be 60% -80% of the above table.
2. When cutting stainless steel, ferroalloys, and heat-resistant alloys, it is recommended to use non- water-soluble cooling liquid.
3. Please use high rigidity and high precision machine tools and tool handles.
4. Adjust the speed and feed rate based on the cutting depth and machine rigidity.
5. Forward milling processing is Recommended.
6. Try to minimize the overhang length of the tools without affecting the using.
7. The above table is based on the recommended values for L/D ≤ 4. When L/D>4, please reduce the speed and feed rate by 70%.

NCPX系列刀具切削参数

Parameters of NCPX series cutting tools

NCPX-4R/NCPX-4RL

被加工材料 Processed material	碳钢，合金钢 carbon steel, alloy steel		不锈钢 Stainless steel		耐热合金、钛合金 heat-resisting alloy, titanium alloy	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
6	5300	900	2700	240	2470	145
8	3900	840	2000	255	1820	155
10	3100	770	1600	255	1430	155
12	2600	720	1300	205	1235	135
16	1900	625	1000	180	935	110
最大切深量 Maximum cutting depth						

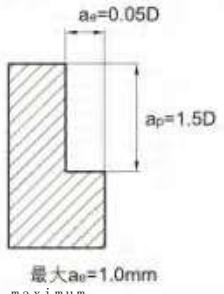
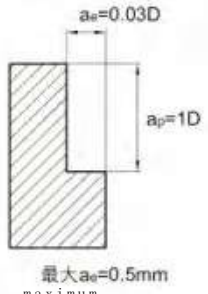
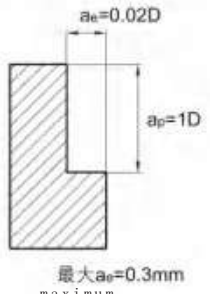
1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
4. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
4. Try to minimize the overhang length of the tools without affecting the using.

NCH系列刀具切削参数

Parameters of NCH series cutting tools

NCH-4E/NCH-4EL

被加工材料 Processed material	预硬钢，淬硬钢 Pre-hardened steel，hardened steel 40~50HRC		预硬钢，淬硬钢 Pre-hardened steel，hardened steel 50~60HRC		预硬钢，淬硬钢 Pre-hardened steel，hardened steel 60~68HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
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
最大切深量 Maximum cutting depth						

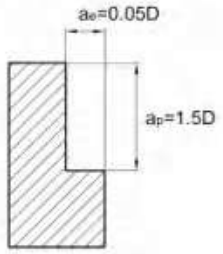
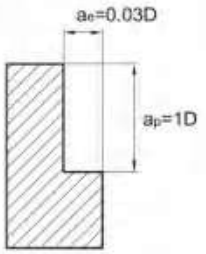
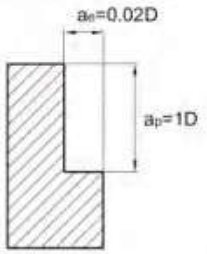
1. 请使用高精度、高刚性的设备及夹具。
2. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
3. 请使用空气冷却或MQL(最小量油雾冷却)。
4. 侧面铣削推荐顺铣加工。
5. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision and highly rigid equipment and fixtures.
2. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
3. Please use air cooling or MQL (minimum-oilmist cooling liquid).
4. Forward milling processing is recommended for side milling
5. Try to minimize the overhang length of the tools without affecting the using.

NCH系列刀具切削参数

Parameters of NCH series cutting tools

NCH-2E

被加工材料 Processed material	预硬钢，淬硬钢 Pre-hardened steel, hardened steel 40~50HRC		预硬钢，淬硬钢 Pre-hardened steel, hardened steel 50~60HRC		预硬钢，淬硬钢 Pre-hardened steel, hardened steel 60~68HRC	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	40000	160	40000	160	32000	130
2	40000	400	24000	240	16000	160
3	32000	510	16000	255	11000	175
4	24000	625	12000	310	8000	210
5	19000	685	9500	340	6400	230
6	16000	770	8000	385	5300	255
8	12000	770	6000	385	4000	255
10	9600	770	4800	385	3200	255
12	8000	800	4000	400	2700	270
14	6800	680	3400	340	2300	230
16	6000	600	3000	300	2000	200
18	5300	530	2700	270	1800	180
20	4800	480	2400	240	1600	160
最大切深量 Maximum cutting depth	 最大ae=1.0mm maximum		 最大ae=0.5mm maximum		 最大ae=0.3mm maximum	

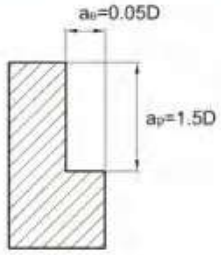
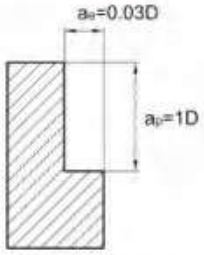
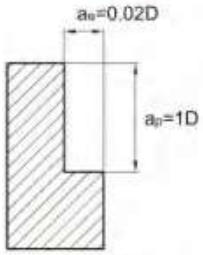
1. 请使用高精度、高刚性的设备及夹具。
2. 机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
3. 请使用空气冷却或MQL（最小量油雾冷却）。
4. 侧面铣削推荐顺铣加工。
5. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision and highly rigid equipment and fixtures.
2. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
3. Please use air cooling or MQL (minimum-oilmist cooling liquid).
4. Forward milling processing is recommended for side milling
5. Try to minimize the overhang length of the tools without affecting the using.

NCH系列刀具切削参数

Parameters of NCH series cutting tools

NCH-4R/NCH-4RL

被加工材料 Processed material	预硬钢，淬硬钢 Pre-hardened steel, hardened steel 40~50HRC		预硬钢，淬硬钢 Pre-hardened steel, hardened steel 50~60HRC		预硬钢，淬硬钢 Pre-hardened steel, hardened steel 60~68HRC	
切削速度 Cutting Speed	300m/min		150m/min		100m/min	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
3	32000	1225	16000	610	11000	420
4	24000	1500	12000	745	8000	500
5	19000	1630	9500	815	6400	550
6	16000	1850	8000	925	5300	610
8	12000	1850	6000	925	4000	610
10	9600	1850	4800	925	3200	610
12	8000	1920	4000	960	2700	648
16	6000	1440	3000	720	2000	480
最大切深量 Maximum cutting depth	 最大ae=1.0mm maximum		 最大ae=0.5mm maximum		 最大ae=0.3mm maximum	

1. 请使用高精度、高刚性的设备及夹具。
2. 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。
3. 请使用空气冷却或MQL（最小量油雾冷却）。
4. 侧面铣削推荐顺铣加工。
5. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision and highly rigid equipment and fixtures.
2. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
3. Please use air cooling or MQL (minimum-oilmist cooling liquid).
4. Forward milling processing is recommended for side milling
5. Try to minimize the overhang length of the tools without affecting the using.

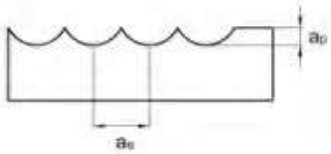
NCH系列刀具切削参数

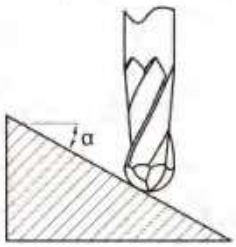
Parameters of NCH series cutting tools

NCH-2B/NCH-2BL

被加工材料 Processed material	预硬钢，淬硬钢 Pre-hardened steel, hardened steel 40~50HRC				预硬钢，淬硬钢 Pre-hardened steel, hardened steel 50~60HRC				预硬钢，淬硬钢 Pre-hardened steel, hardened steel 60~68HRC			
球头半径 (mm) Ballhead radius	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)
R0.5	40000	1900	0.01	0.05	36000	1500	0.01	0.05	32000	1400	0.01	0.05
R1.0	33000	3100	0.02	0.075	26000	2100	0.02	0.075	24000	2000	0.02	0.075
R1.5	29000	4100	0.03	0.1	23000	2900	0.03	0.1	21000	2600	0.03	0.1
R2.0	22000	3900	0.04	0.15	17000	2500	0.04	0.15	15500	2100	0.04	0.15
R2.5	17500	3500	0.05	0.15	13500	2200	0.05	0.15	13000	2000	0.05	0.15
R3.0	15000	3100	0.06	0.2	11500	1700	0.06	0.2	10500	1500	0.06	0.2
R4.0	11000	2500	0.08	0.25	8600	1600	0.08	0.25	8000	1400	0.08	0.25
R5.0	9000	2000	0.1	0.3	7000	1400	0.1	0.3	6000	1200	0.1	0.3
R6.0	7500	1800	0.1	0.35	5700	1300	0.1	0.35	5300	1200	0.1	0.35
R8.0	5500	1800	0.1	0.4	4300	1300	0.1	0.4	4000	1200	0.1	0.4
R10.0	4500	1800	0.1	0.5	3500	1300	0.1	0.5	3200	1200	0.1	0.5

最大切深量 Maximum cutting depth





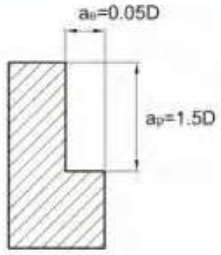
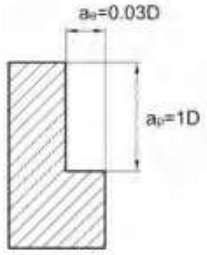
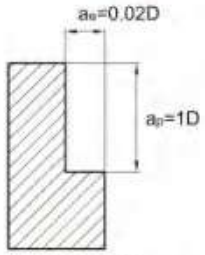
1. 请使用高精度、高刚性的设备及夹具。
2. 上表是等高线加工等负荷变化较小时的基准。机床与工件安装刚性较差的情况下，会产生振动和异常声音，此时应将上表的转速与进给速度同比降低。
3. 请使用空气冷却或MQL（最小量油雾冷却）。
4. 倾斜角度a超过15° 时，请将上表的转速，进给速度下调至50%~80%。
5. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision and highly rigid equipment and fixtures.
2. The above table is the standard for contour machining with small changes in load. When the installation rigidity of the machine tool and workpiece is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
3. Please use air cooling or MQL (minimum-oilmist cooling liquid).
4. When the tilt angle is more than 15°, please lower the speed and feed rate to 50% -80% of the table.
5. Try to minimize the overhang length of the tools without affecting the using.

NCH系列刀具切削参数

Parameters of NCH series cutting tools

NCH-4B/NCH-4BL

被加工材料 Processed material	预硬钢，淬硬钢 Pre-hardened steel, hardened steel 40~50HRC		预硬钢，淬硬钢 Pre-hardened steel, hardened steel 50~60HRC		预硬钢，淬硬钢 Pre-hardened steel, hardened steel 60~68HRC	
切削速度 Cutting Speed	300m/min		150m/min		100m/min	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
3	32000	1225	16000	610	11000	420
4	24000	1500	12000	745	8000	500
5	19000	1630	9500	815	6400	550
6	16000	1850	8000	925	5300	610
8	12000	1850	6000	925	4000	610
10	9600	1850	4800	925	3200	610
12	8000	1920	4000	960	2700	648
16	6000	1440	3000	720	2000	480
最大切深量 Maximum cutting depth	 最大ae=1.0mm maximum		 最大ae=0.5mm maximum		 最大ae=0.3mm maximum	

1. 请使用高精度、高刚性的设备及夹具。
2. 上表是等高线加工等负荷变化较小时的基准。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。
3. 请使用空气冷却或MQL(最小量油雾冷却)。
4. 倾斜角度a超过15° 时，请将上表的转速，进给速度下调至50%~80%。
5. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision and highly rigid equipment and fixtures.
2. The above table is the standard for contour machining with small changes in load. When the installation rigidity of the machine tool and workpiece is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
3. Please use air cooling or MQL (minimum-oilmist cooling liquid).
4. When the tilt angle is more than 15 °, please lower the speed and feed rate to 50% -80% of the table.
5. Try to minimize the overhang length of the tools without affecting the using.

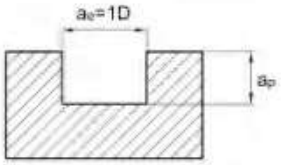
NCJ系列刀具切削参数

Parameters of NCJ series cutting tools

NCJ-2ES

被加工材料 Processed material	铸铁 cast iron / 球墨铸铁 Ductile iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Carbon steel, alloy steel ~40HRC		不锈钢 Stainless steel	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
0.3	32000	115	32000	115	32000	115	32000	80	32000	40
0.4	32000	125	32000	125	32000	125	32000	90	27500	50
0.5	32000	125	32000	125	29500	125	25000	90	22000	50
0.6	32000	125	32000	125	24500	125	21000	90	18500	50
0.7	32000	125	32000	125	24500	125	21000	90	18500	50
0.8	24500	125	24500	125	18500	125	15500	90	13500	50
0.9	24500	125	24500	125	18500	125	15500	90	13500	50
1.0	21000	140	25000	165	16800	130	14500	90	10000	50
1.5	13000	140	15000	165	11800	130	10000	90	7000	50
2.0	13000	160	15000	185	11800	145	10000	100	7000	60
2.5	8700	200	10000	240	8200	185	6600	100	4700	60
3.0	8700	235	10000	270	8200	220	6600	100	4700	75

最大切深量 Maximum cutting depth



Tool Diameter 刀具直径	cutting depth 切深ap
D<Ø1	0.05D
Ø1≤D≤Ø3	0.15D

1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 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。
4. 在不干涉的条件下尽可能使刀具悬长最短。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly.
4. Try to minimize the overhang length of the tools without affecting the using.

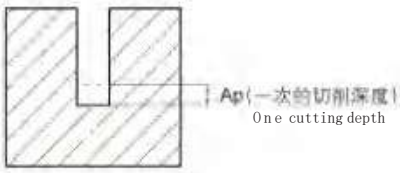
NCJ系列刀具切削参数

Parameters of NCJ series cutting tools

NCJ-2EP

被加工材料 Processed material		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²			碳素钢，合金钢 Carbon steel, alloy steel ~30HRC			预硬钢，调质钢 Carbon steel, alloy steel ~40HRC			不锈钢 Stainless steel		
直径 (mm) diameter	有效长度 (mm) Length	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth
0.5	4	28000	500	0.023	28000	400	0.021	28000	250	0.018	25000	200	0.014
	6	22000	400	0.007	22000	350	0.06	22000	150	0.005	20000	150	0.004
	8	18000	300	0.005	18000	300	0.005	18000	150	0.004	20000	150	0.003
0.8	4	32000	900	0.057	32000	600	0.053	32000	600	0.044	25000	400	0.035
	6	26000	700	0.036	26000	450	0.034	26000	400	0.028	21000	300	0.022
	8	22000	500	0.026	22000	350	0.024	22000	300	0.02	18000	200	0.016
	10	22000	500	0.01	22000	350	0.01	22000	300	0.008	18000	200	0.006
1.0	4	2900	1300	0.08	27000	1000	0.08	26000	900	0.07	20000	600	0.05
	6	29000	1300	0.07	27000	1000	0.07	26000	900	0.06	20000	600	0.04
	8	24000	900	0.05	23000	800	0.04	22000	700	0.04	18000	400	0.03
	10	20000	700	0.03	19000	600	0.03	18000	500	0.03	15000	300	0.02
	12	20000	700	0.02	19000	600	0.02	18000	500	0.02	15000	300	0.01
	14	18000	500	0.015	15000	400	0.01	15000	360	0.01	12000	200	0.008
1.2	6	25000	1100	0.09	23000	1000	0.08	22000	900	0.07	17000	600	0.05
	8	21000	900	0.07	20000	700	0.07	19000	700	0.05	14000	400	0.04
	10	21000	900	0.06	20000	700	0.05	19000	700	0.04	14000	400	0.03
	12	18000	700	0.04	17000	600	0.04	16000	500	0.03	11000	300	0.02
1.5	6	20000	1200	0.15	18000	1000	0.14	18000	900	0.11	14000	600	0.09
	8	19000	900	0.11	16000	800	0.1	15000	700	0.08	12000	400	0.07
	10	19000	900	0.09	16000	800	0.08	15000	700	0.06	12000	400	0.05
	12	19000	900	0.07	16000	800	0.06	15000	700	0.05	12000	400	0.04
	14	19000	700	0.06	16000	650	0.05	15000	630	0.04	12000	360	0.03
2.0	6	16000	1300	0.34	15000	1100	0.31	14000	1000	0.26	11000	700	0.21
	8	16000	1300	0.29	15000	1100	0.26	14000	1000	0.22	11000	700	0.18
	10	14000	900	0.26	1300	800	0.24	12000	700	0.20	9000	500	0.16
	12	14000	900	0.14	13000	800	0.13	12000	700	0.11	9000	500	0.09
	14	14000	900	0.10	13000	800	0.11	12000	700	0.09	9000	500	0.07
	16	14000	900	0.08	13000	800	0.08	12000	700	0.07	9000	500	0.06

最大切深量 Maximum cutting depth



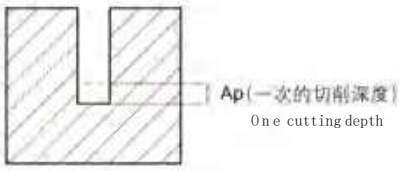
NCJ系列刀具切削参数

Parameters of NCJ series cutting tools

NCJ-2EP

被加工材料 Processed material		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²			碳素钢，合金钢 Carbon steel, alloy steel ~30HRC			预硬钢，调质钢 Carbon steel, alloy steel ~40HRC			不锈钢 Stainless steel		
直径 (mm) diameter	有效长度 (mm) Length	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	切深a_p (mm) cutting depth
2.5	8	13000	1300	0.42	12000	1100	0.39	11000	1000	0.33	9000	700	0.26
	10	13000	1300	0.36	12000	1100	0.33	11000	1000	0.28	9000	700	0.22
	12	13000	1300	0.24	12000	1100	0.23	11000	1000	0.19	9000	700	0.15
	14	12000	900	0.18	10000	800	0.17	9000	700	0.14	7000	500	0.11
	16	12000	900	0.13	10000	800	0.12	9000	700	0.09	7000	500	0.08
	18	12000	800	0.11	10000	720	0.10	9000	630	0.07	7000	450	0.07
	20	12000	800	0.09	10000	720	0.08	9000	630	0.05	7000	450	0.05
3.0	6	11000	1300	0.42	10000	1100	0.39	10000	1000	0.32	8000	700	0.27
	8	11000	1300	0.39	10000	1100	0.36	10000	1000	0.30	8000	700	0.24
	10	11000	1300	0.31	10000	1100	0.29	10000	1000	0.24	8000	700	0.19
	12	11000	1100	0.29	10000	1000	0.27	10000	900	0.22	8000	650	0.16
	14	11000	1100	0.27	10000	1000	0.25	10000	900	0.20	8000	650	0.15
	16	10000	850	0.22	10000	750	0.20	9000	650	0.17	6000	450	0.13
	18	10000	850	0.16	10000	750	0.14	9000	650	0.12	6000	450	0.10
	20	10000	850	0.12	10000	750	0.10	9000	650	0.08	6000	450	0.07
4.0	12	8000	1300	0.42	7000	1100	0.38	7000	1000	0.32	6000	700	0.26
	16	8000	1100	0.39	7000	1000	0.35	7000	900	0.30	6000	650	0.24
	20	7000	900	0.34	7000	800	0.30	6000	700	0.27	5000	500	0.20
	25	7000	900	0.30	7000	800	0.27	6000	700	0.24	5000	500	0.15
5.0	16	6000	1200	0.49	6000	1000	0.45	5000	1000	0.38	5000	600	0.30
	25	5000	800	0.45	5000	720	0.42	5000	700	0.35	5000	600	0.25

最大切深量 Maximum cutting depth



1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 在不干涉的条件下尽可能使刀具悬长最短。
4. 在转速不足时，进给速度应该同比降低。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. Try to minimize the overhang length of the tools without affecting the using.
4. When the speed is low, feed rate should be reduced accordingly.

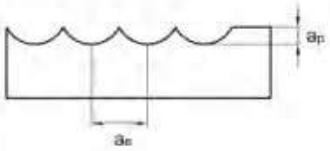
NCJ系列刀具切削参数

Parameters of NCJ series cutting tools

NCJ-2BS

被加工材料 Processed material	铸铁 cast iron / 球墨铸铁 Ductile iron		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²		碳素钢，合金钢 Carbon steel, alloy steel ~30HRC		预硬钢，调质钢 Carbon steel, alloy steel ~40HRC		不锈钢 Stainless steel	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
R0.15	32000	300	32000	300	32000	270	32000	250	32000	150
R0.2	32000	380	32000	380	32000	320	32000	300	32000	175
R0.25	32000	460	32000	460	32000	410	32000	330	32000	205
R0.3	32000	535	32000	535	32000	500	32000	420	32000	265
R0.35	32000	550	32000	550	32000	520	32000	440	32000	270
R0.4	32000	610	32000	610	32000	560	32000	460	27500	285
R0.45	32000	700	32000	700	32000	600	25000	400	27500	285
R0.5	32000	765	32000	765	32000	640	25000	400	22000	285
R1.0	24000	900	24000	900	19000	760	16000	400	11150	230
R1.5	15500	950	15500	950	12750	760	10600	450	7400	290

最大切深量 Maximum cutting depth



Tool Diameter 刀具直径	cutting depth 切深ap	Cut width 切宽ae
D<Ø1	0.05R	0.2R
Ø1≤D≤Ø3	0.1R	0.2R

1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 在不干涉的条件下尽可能使刀具悬长最短。
4. 在转速不足时，进给速度应该同比降低。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. Try to minimize the overhang length of the tools without affecting the using.
4. When the speed is low, feed rate should be reduced accordingly.

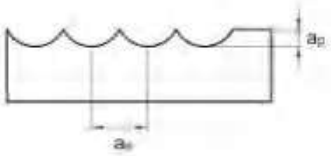
NCJ系列刀具切削参数

Parameters of NCJ series cutting tools

NCJ-2BP

被加工材料 Processed material		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²				碳素钢，合金钢 Carbon steel, alloy steel ~30HRC				预硬钢，调质钢 Carbon steel, alloy steel ~40HRC				不锈钢 Stainless steel			
直径 (mm) diameter	有效长度 (mm) Length	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)
R0.25	4	27000	400	0.02	0.025	27000	380	0.02	0.025	27000	300	0.02	0.025	27000	200	0.02	0.025
	6	21000	200	0.01	0.015	21000	180	0.01	0.015	21000	160	0.01	0.015	21000	150	0.01	0.015
R0.3	4	27000	400	0.03	0.12	27000	380	0.03	0.12	25000	250	0.03	012	24000	200	0.03	0.12
	6	25000	300	0.03	0.12	25000	280	0.03	0.12	20000	150	0.03	0.12	20000	140	0.03	0.12
	8	25000	240	0.03	0.12	25000	225	0.03	0.12	20000	120	0.03	0.12	20000	110	0.03	0.12
R0.4	4	27000	600	0.04	0.16	27000	550	0.04	0.16	23000	450	0.04	0.16	21000	300	0.04	0.16
	6	24000	400	0.04	0.12	24000	360	0.04	0.12	21000	250	0.04	0.12	19000	200	0.04	0.12
	8	22000	300	0.04	0.12	22000	270	0.04	0.12	19000	150	0.04	0.12	19000	140	0.04	0.12
	10	22000	270	0.03	0.09	22000	250	0.03	0.09	19000	135	0.03	0.09	19000	120	0.03	0.09
R0.5	4	28000	600	0.05	0.20	28000	550	0.05	0.20	25000	500	0.05	0.20	21000	300	0.05	0.20
	6	21000	400	0.05	0.20	21000	360	0.05	0.20	19000	300	0.05	0.20	16000	200	0.05	0.2
	8	21000	360	0.05	0.15	21000	320	0.05	0.15	19000	270	0.05	0.15	16000	180	0.05	0.15
	10	18000	300	0.03	0.10	18000	270	0.03	0.10	17000	200	0.03	0.10	14000	150	0.03	0.10
	12	18000	270	0.03	0.10	18000	250	0.03	0.10	17000	180	0.03	0.10	14000	135	0.03	0.10
R0.6	6	20000	600	0.06	0.24	20000	540	0.06	0.24	17000	300	0.06	0.24	14000	200	0.06	0.24
	8	20000	540	0.06	0.24	20000	500	0.06	0.24	17000	270	0.06	0.24	14000	170	0.06	0.24
	12	16000	300	0.06	0.18	16000	270	0.06	0.18	14000	200	0.06	0.18	11000	150	0.06	0.18
	16	16000	270	0.03	0.12	16000	230	0.03	0.12	14000	175	0.03	0.12	11000	135	0.03	0.12
R0.75	8	17000	600	0.08	0.30	17000	540	0.08	0.30	15000	300	0.08	0.30	12000	250	0.08	0.30
	12	17000	540	0.06	0.24	17000	500	0.06	0.24	15000	275	0.06	0.24	12000	225	0.06	0.24
	16	13000	300	0.04	0.16	13000	275	0.04	0.16	12000	200	0.04	0.16	9500	150	0.04	0.16
R1.0	6	16500	800	0.10	0.40	16500	750	0.10	0.40	16500	560	0.10	0.40	13500	450	0.10	0.40
	8	16500	800	0.10	0.32	16500	750	0.10	0.32	16500	560	0.10	0.32	13500	450	0.10	0.32
	10	14000	630	0.08	0.30	14000	600	0.08	0.30	13000	450	0.08	0.30	10000	270	0.08	0.30
	12	14000	630	0.06	0.30	14000	600	0.06	0.30	13000	450	0.06	0.30	10000	270	0.06	0.30
	16	14000	550	0.06	0.24	14000	530	0.06	0.24	13000	400	0.06	0.24	10000	270	0.06	0.24
	20	11000	360	0.06	0.16	11000	330	0.06	0.16	10000	225	0.06	0.16	8000	175	0.06	0.16

最大切深量 Maximum cutting depth



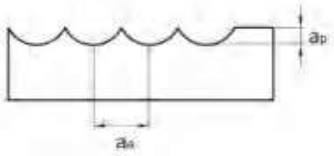
NCJ系列刀具切削参数

Parameters of NCJ series cutting tools

NCJ-2BP

被加工材料 Processed material		碳素钢，合金钢 Carbon steel, alloy steel ~750N/mm²				碳素钢，合金钢 Carbon steel, alloy steel ~30HRC				预硬钢，调质钢 Carbon steel, alloy steel ~40HRC				不锈钢 Stainless steel			
直径 (mm) diameter	有效长度 (mm) Length	转速 (min⁻¹) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min⁻¹) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min⁻¹) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)	转速 (min⁻¹) speed	进给速度 (mm/min) Feed rate	a_p (mm)	a_e (mm)
R1.25	8	14000	800	0.10	0.32	14000	750	0.10	0.32	14000	560	0.10	0.32	12500	450	0.10	0.32
	12	13000	630	0.06	0.30	13000	600	0.06	0.30	12000	450	0.06	0.30	10000	270	0.06	0.30
	16	13000	550	0.06	0.24	13000	530	0.06	0.24	12000	400	0.06	0.24	10000	270	0.06	0.24
	20	10000	360	0.06	0.16	10000	330	0.06	0.16	8000	225	0.06	0.16	7000	175	0.06	0.16
R1.5	10	12000	800	0.15	0.40	12000	720	0.15	0.40	9500	600	0.15	0.40	7500	400	0.15	0.40
	12	12000	720	0.15	0.40	12000	650	0.15	0.40	9500	540	0.15	0.40	7500	360	0.15	0.40
	16	10000	600	0.15	0.40	10000	540	0.15	0.40	8500	300	0.15	0.40	6500	250	0.15	0.40
	20	10000	600	0.10	0.32	10000	540	0.10	0.32	8500	300	0.10	0.32	6500	250	0.10	0.32
R2.0	10	9000	800	0.20	0.80	9000	720	0.20	0.80	7500	600	0.20	0.80	6000	400	0.20	0.80
	16	9000	600	0.20	0.60	9000	720	0.20	0.60	7500	600	0.20	0.60	6000	400	0.20	0.60
	20	7000	600	0.20	0.40	7000	540	0.20	0.40	6000	400	0.20	0.40	5000	250	0.20	0.40
	25	7000	600	0.15	0.40	7000	540	0.15	0.40	6000	400	0.15	0.40	5000	250	0.15	0.40
R2.5	16	7000	600	0.25	1.00	7000	540	0.25	0.10	6500	500	0.25	1.0	5000	400	0.25	1.00
	25	6000	500	0.25	1.00	6000	450	0.25	1.00	5000	500	0.25	1.00	4000	250	0.25	1.00

最大切深量 Maximum cutting depth



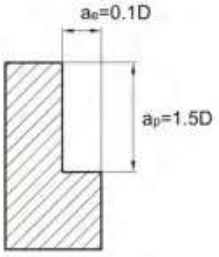
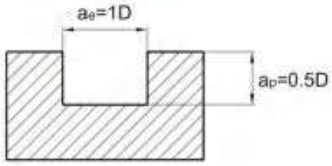
1. 请使用高精度的机床和刀柄。
2. 请使用空气冷却或不易产生烟雾的切削液。
3. 在不干涉的条件下尽可能使刀具悬长最短。
4. 在转速不足时，进给速度应该同比降低。

1. Please use high-precision machine and tool handles.
2. Please use air cooling or cooling liquid that is not prone to producing smoke.
3. Try to minimize the overhang length of the tools without affecting the using.
4. When the speed is low, feed rate should be reduced accordingly.

AU系列刀具切削参数

Parameters of AU series cutting tools

AU-2E

被加工材料 Processed material	铝合金 aluminum alloy		硅铝合金Si≤10% Silicon aluminum alloy	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	40000	650	40000	500
2	40000	950	32000	750
3	26500	1500	21000	1100
4	20000	1600	16000	1250
5	16000	1500	13000	1100
6	13000	1250	10600	1000
8	10000	1400	8000	1100
10	8000	1600	6500	1250
12	6600	1650	5300	1300
14	5700	1700	4600	1350
16	5000	1700	4000	1350
18	4400	1700	3500	1350
20	4000	1700	3200	1350
最大切深量 Maximum cutting depth				

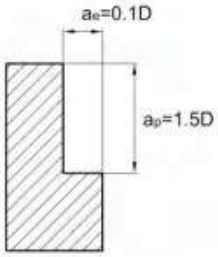
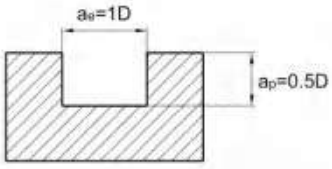
1. 上表是基于侧面铣削的基准值。槽铣切削条件以上表进给速度的70%为基准。
2. 请使用刚性精度高的机床和刀柄，当机床和工件安装刚性较差时，会产生振动和异常声音，此时应将上表推荐的转速和进给同比降低。
3. 切削深度较小时，转速和进给速度可以同比提高。
4. 请使用水溶性切削液。
5. 侧铣推荐顺铣加工。
6. 在不干涉的条件下尽可能使刀具悬长最短。

1. The above table is based on the standard values for side milling. The groove milling shall reduce the feed speed to 70% of the table above.
2. Please use a machine tool and tool handle with high rigidity and precision. When the rigidity is poor, vibration or abnormal sound may occur. In this case, the recommended speed and feed rate in the above table should be reduced accordingly.
3. When the cutting depth is small, the speed and feed rate can be increased.
4. Please use water-soluble cooling liquid.
5. Forward milling processing is recommended for side milling
6. Try to minimize the overhang length of the tools without affecting the using.

AU系列刀具切削参数

Parameters of AU series cutting tools

AU-3E/AU-3EL

被加工材料 Processed material	铝合金 aluminum alloy		硅铝合金Si≤10% Silicon aluminum alloy	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
1	40000	800	40000	600
2	40000	1200	32000	900
3	26500	1800	21000	1300
4	20000	2000	16000	1500
5	16000	1750	13000	1300
6	13000	1500	10600	1200
8	10000	1650	8000	1300
10	8000	1900	6500	1500
12	6600	1950	5300	1550
14	5700	2000	4600	1600
16	5000	2000	4000	1600
18	4400	2000	3500	1600
20	4000	2000	3200	1600
最大切深量 Maximum cutting depth				

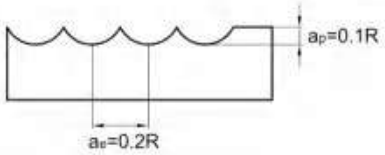
1. 上表是基于侧面铣削的基准值。槽铣切削条件以上表进给速度的70%为基准。
2. 请使用刚性精度高的机床和刀柄，当机床和工件安装刚性较差时，会产生振动和异常声音，此时应将上表推荐的转速和进给同比降低。
3. 切削深度较小时，转速和进给速度可以同比提高。
4. 请使用水溶性切削液。
5. 侧铣推荐顺铣加工。
6. 在不干涉的条件下尽可能使刀具悬长最短。

1. The above table is based on the standard values for side milling. The groove milling shall reduce the feed speed to 70% of the table above.
2. Please use a machine tool and tool handle with high rigidity and precision. When the rigidity is poor, vibration or abnormal sound may occur. In this case, the recommended speed and feed rate in the above table should be reduced accordingly.
3. When the cutting depth is small, the speed and feed rate can be increased.
4. Please use water-soluble cooling liquid.
5. Forward milling processing is recommended for side milling
6. Try to minimize the overhang length of the tools without affecting the using.

AU系列刀具切削参数

Parameters of AU series cutting tools

AU-2B

被加工材料 Processed material	铝合金 aluminum alloy		硅铝合金Si≤10% Silicon aluminum alloy	
直径 (mm) diameter	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate	转速 (min^{-1}) speed	进给速度 (mm/min) Feed rate
R1.0	40000	2000	32000	1600
R1.5	26500	1950	21000	1550
R2.0	20000	1950	16000	1550
R2.5	16000	1950	13000	1550
R3.0	13000	2000	10600	1600
R4.0	10000	2450	8000	2000
R5.0	8000	2200	6500	1750
R6.0	6600	2050	5300	1650
最大切深量 Maximum cutting depth				

1. 请使用刚性精度高的机床和刀柄，当机床和工件安装刚性较差时，会产生振动和异常声音，此时应将上表推荐的转速和进给同比降低。
2. 切削深度较小时，转速和进给速度可以同比提高。
3. 请使用水溶性切削液。
4. 在不干涉的条件下尽可能使刀具悬长最短。

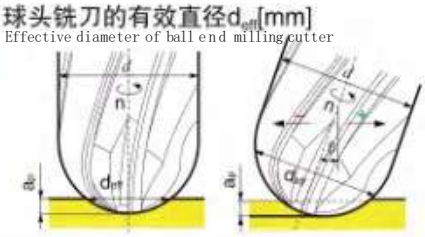
1. Please use high-precision machine and tool handles. When the rigidity of the machine or workpiece installation is poor, vibration and abnormal sound may occur. At this time, the speed and feed speed in the above table should be reduced accordingly
2. When the cutting depth is small, the speed and feed rate can be increased.
3. Please use water-soluble cooling liquid.
4. Try to minimize the overhang length of the tools without affecting the using.

技术信息

Technical Information

切削参数的计算

Calculation of cutting parameters

符号 symbol	描述 description	公式 formula
n	每分钟转速n[min^{-1}]r/min Rate Per Minute	$n=\frac{v_c \cdot 1000}{d \cdot \pi}$
v_c	切削速度Vc[m/min] cutting speed	$v_c=\frac{d \cdot \pi \cdot n}{1000}$
f_z	每齿进给量f_z[mm/tooth] Feed rate per tooth	$f_z=\frac{V_f}{z \cdot n}$
f	每转进给量f[mm/rev.] Feed rate per circle	$f=f_z \cdot z$
V_f	进给速度V_f[mm/min] Feed rate	$V_f=f_z \cdot z \cdot n=f \cdot n$
Q	切削切除率Q[cm^3/min] Cutting rate	$Q=\frac{a_e \cdot a_p \cdot v_f}{1000}$
d_{eff}	球头铣刀的有效直径d_{eff}[mm] Effective diameter of ball end milling cutter 	当 β = 0时 $d_{eff}=2 \cdot \sqrt{d \cdot a_p - a_p^2}$ 当 β ≠ 0时 $d_{eff}=d \cdot sin[\beta \pm arccos(\frac{d-2a_p}{d})]$
V_{eff}	铣刀的有效切削速度V_{eff}[m/min] Effective cutting speed of milling cutter	$V_{eff}=\frac{d_{eff} \cdot \pi \cdot n}{1000}$
a_e	径向切宽a_e[mm] Radial cutting width	
a_p	轴向切深a_p[mm] Axial cutting depth	
d	铣刀直径[mm] Milling cutter diameter	
z	齿数 Number of teeth	
β	刃倾角 Blade inclination angle	

Jinyuchang Industrial Technology Co., Ltd

HongKong Office

- Add: FLAT C, 9/F WINNING HOUSE NO.72 AND74 WING LOK STREET HONG KONG
- Contact: John
- Tel:00852-3611 9359
- Fax:00852-8340 8598

Shenzhen Office

- Add: R1118, Galaxy building A,Caitian Rd, Futian, Shenzhen,CN
- Contact : Maria
- Tel: 0086-0755-2795 5216
- Fax:0086-0755-2795 5216-818
- Email: Info@carbide-factory.com

Jiangxi Factory

- Add: Economic and Technological Development Zone, Nanchang, Jiangxi Province, China
- Contact : Amanda
- Tel: 0086-189-2679 8587
- Email: Amanda@carbide-factory.com