

铣削刀具 *Milling Cutter*



江苏天工硬质合金科技有限公司

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公司简介

About TG

研发
R&D

生产
Production

制造
Manufacture

营销
Marketing

服务
Service

一流团队

专业技术研发团队,完整硬质合金生产链
professional technical R&D teama,
complete cemented carbide production chain,

尖端设备

国内外先进/行业顶尖的研发及生产设备
R&D and production equipments are advanced
at home and abroad.

江苏天工硬质合金科技有限公司成立于2021年,隶属于天工国际有限公司,是一家专注硬质合金棒料、整体硬质合金刀具、可转位刀具及数控刀片的专业制造商。

公司具备一支高素质的专业技术研发团队,拥有一条完整的硬质合金生产链,各工序骨干技术人员均有多年岗位工作经验;研发及生产设备均为国内外先进或行业顶尖水平,满足各类硬质合金产品研发生产需求;生产工艺及方法均为数字化并与生产设备互联,以确保产品品质稳定。

母公司天工国际有限公司成立于1981年,是中国重点发展先进基础材料、关键战略材料、前沿新材料及精密切削刀具生产制造商,于2007年在香港联交所主板上市,是国家重点高新技术企业,中国民营企业制造业500强,中国五金工具出口质量安全示范企业,世界工模具钢强企业前两强。建有中国首条工模具钢及钛合金粉末冶金工业化生产线,为刀具生产提供可靠的原材料支撑。

我司致力于在3C电子、模具、通用机械、汽车、航空航天及军工等行业领域为客户提供专业的整体解决方案和完善服务,一切以产品质量及服务质量为先。公司秉承“一切从诚信做起”的经营理念,与客户互利共赢,携手共进。

Jiangsu Tiangong Cemented Carbide Technology Co., Ltd. was established in 2021 and is affiliated to Tiangong International Co., Ltd. It is a professional manufacturer, focusing on cemented carbide rods, cemented carbide cutting tools and indexable inserts.

The company has a high-quality professional technical research and development team, a complete carbide production chain; The backbone technicians of each process have many years of work experience;R&D and production equipments are domestic and foreign advanced or industry top level. They meet the development and production needs of all kinds of cemented carbide products. Production processes and methods are digitized and connected to production equipments, to ensure stable product quality.

Parent company Tiangong International Co., Ltd. was established in 1981. It is a manufacturer that focus on the development of advanced basic materials, key strategic materials, cutting-edge new materials and precision cutting tool manufacturers. TG International was listed on the Main Board of the Hong Kong Stock Exchange in 2007. It is a national key high-tech enterprise, China's top 500 private enterprises in manufacturing, China hardware tools export quality safety demonstration enterprises and the world's top two tool steel enterprises. TG International has China's first industrial production line of die steel and titanium alloy powder metallurgy, provide reliable raw material support for tool production.

Our company is committed to providing customers with professional overall solutions and perfect services in 3C electronics, molds, general machinery, automobiles, aerospace, military industries and other industries. All to product quality and service quality first. The company adheres to the business philosophy of "everything starts from integrity", and works together with customers for mutual benefit and win-win results.

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整体硬质合金立铣刀
Solid carbide end mill



标记说明

Icon Guideline

01 材质 / Material

				
硬质合金 Cemented Carbide	金属陶瓷 Cermet	PCD Polycrystalline Diamond		

02 螺旋角 / Helix Angle

									
0° Helix Angle	15° Helix Angle	20° Helix Angle	30° Helix Angle	35° Helix Angle	35°/38° Helix Angle	39°/41° Helix Angle	38°/39°/40° Helix Angle	45° Helix Angle	48° Helix Angle

03 涂层 / Coating

					
TiAlN Coating	AlCrSiN Coating	AlCrN Coating	AlCrSiWN Coating	TiSiAlN Coating	TiAlCrSiN Coating

04 刃数 / Number of Flutes

				
2刃 2 Flutes	3刃 3 Flutes	4刃 4 Flutes	5刃 5 Flutes	6刃 6 Flutes

05 角部形状 / Corner

				
圆角 Corner Radius	直角 Square	球头 Ball Nose	倒角 Chamfer	

06 加工用途 / Applications

				
槽铣 Slot Milling	侧铣 Side Milling	仿形铣 Profile Milling	孔加工 Hole Machining	

整体硬质合金刀具订货号表示规则

Product Code (Order Number) Instruction
Of Solid Carbide Cutting tool

P20		
系列 Series	被加工材料 Workpiece Material	加工策略 Processing Strategy
P20	P、K、M	普通加工 General Machining
P40	P、K、M	高效加工 High-performance Machining
H20	P、K、H	普通加工 General Machining
H30	H	高速加工 High-speed Machining
H60	P、H	微加工 Micromachining
M30	P、M	高速加工 High-speed Machining
A40	N	高效加工 High-performance Machining

R2		
型号 Type	刃数 Number of Flute	
S 平头 Square	2	
R 圆角头 Corner Radius	3	
B 球头 Ball Nose	4	
C 刀尖倒角 Chamfer	5	
SN 长颈平头 Long neck and flat head	6	
RN 长颈圆角头 Long neck rounded head	8	
BN 长颈球头 Long-necked ball head	10	

10	
刃径 Diameter	
0.5mm	0.5
5mm	5
10mm	10

25	
刃长 Flute Length	
0.5mm	0.5
5mm	5
10mm	10

30	
避空 Neck Length	
5mm	5
20mm	5
30mm	10
若无避空，则缺省	

10	
柄径 Shank Diameter	
5mm	5
20mm	5
30mm	10

75	
全长 Shank Diameter	
75mm	150
100mm	100
25	150

0.5	
刀尖圆弧 刀尖倒角 Corner Radius/Chamfer	
0.05mm	0.05
0.5mm	0.5
1mm	1

DP20		
系列 Series	被加工材料 Workpiece Material	加工策略 Processing Strategy
DP20	P、K、M	孔加工 Hole Making

3N	
型号 Type	
3N	3D外冷 3D External Cooling
5N	5D外冷 5D External Cooling
3C	3D内冷 3D Internal Cooling
5C	5D内冷 5D Internal Cooling

0350	
刃径 Diameter	
3.5mm	0350
10.1mm	1010

涂层介绍

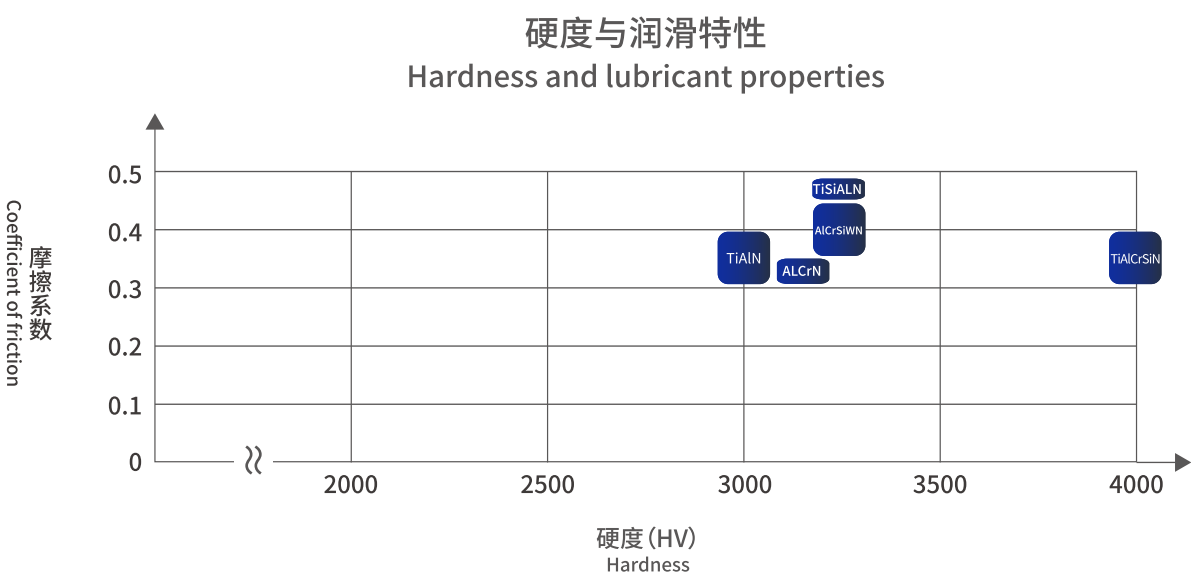
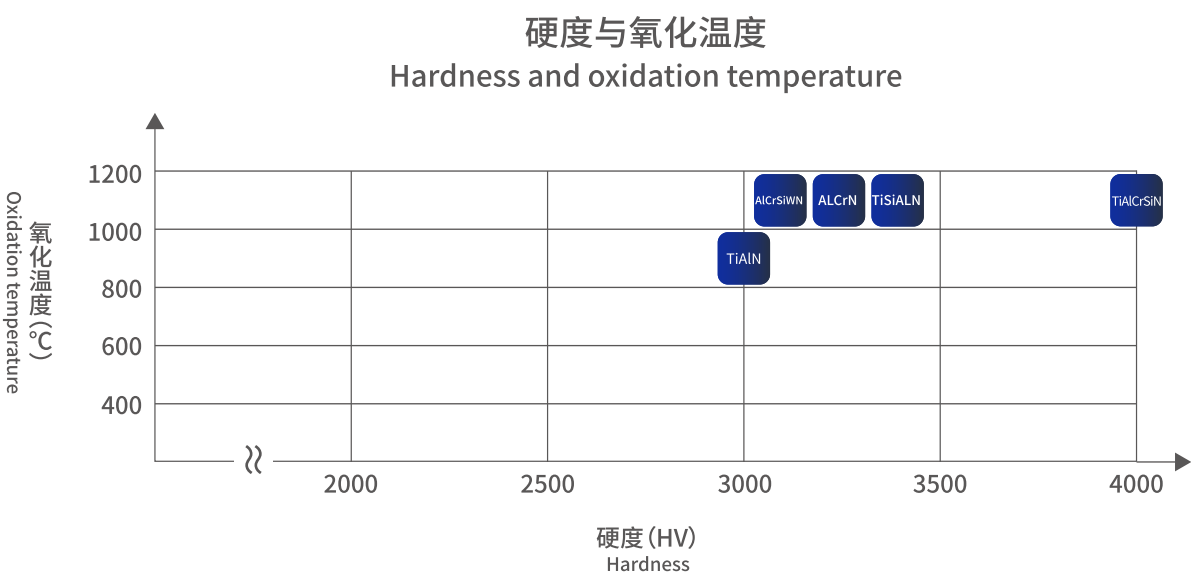
Coating Introduction

01 涂层特性 / Feature of Coating

涂层名称 Coating name	维氏硬度 (HV0.05) Vickers hardness	摩擦系数 Friction coefficient	最高适用温度(°C) Maximum applicable temperature	特点与功能 Features and function
AlCrSiWN	3300	0.4	1100	高抗氧化性和高附着强度, 适用于碳钢、合金钢、不锈钢、钛合金等材料 (55HRC以下) 的各种铣削加工, 通用性好。 High oxidation resistance and high adhesion, suitable for milling of carbon steel, alloy steel, stainless steel, titanium alloy etc. (under 55HRC). Good versatility. 干、湿式切削均可实现长寿命加工 Long life in both dry cutting and wet cutting.
TiAlN	2900	0.35	900	高抗氧化性和高附着强度, 适用于不锈钢铣削加工, 部分高硬度钢的干式加工, 钛合金钻削加工。 High oxidation resistance and high adhesion, suitable for milling of stainless steel, dry machining of hardened steel and drilling of titanium alloy.
TiAlCrSiN	4000	0.35	1100	高硬度和高抗氧化性, 实现了高硬度材料切削加工的长寿命化和高效率化。 High Hardness and high oxidation resistance. Enables long life and high efficiency in machining of high hardness materials. 在高硬度材料(55HRC以上) 的切削加工中发挥卓越性能。 Exhibits amazing performance when cutting high-hardness, materials(55HRC or higher).
AlCrN	3200	0.35	1100	PVD纳米涂层, 具有良好的耐磨性、韧性及热稳定性, 可以实现不同工况的稳定加工。适用于钢件和不锈钢材料的通用加工。 PVD nano coating has good wear resistance, toughness, and thermal stability, which can achieve stable processing under different working conditions. Suitable for general processing of steel parts and stainless steel materials.
TiSiAlN	3300	0.45	1100	含硅的高硬PVD纳米涂层, 具有良好的耐磨性和韧性, 适用于高硬材料的通用加工。 The high hardness PVD nano coating containing silicon has good wear resistance and toughness, and is suitable for universal processing of high hardness materials.

02 纳米PVD涂层定位 / Positioning of Nano PVD Coating

晶体颗粒控制在纳米量级, 因而大幅改善了硬度和抗氧化性
By controlling the crystalline structure at nano level, hardness and oxidization resistance are greatly improved.



刀具系列介绍

Introduction of Tool Series

P20系列 钢件通用加工立铣刀

P20 series general machining end mill for steel

- 基体：兼具耐磨性及抗崩性的基体；
- 刀型：**①**大螺旋角设计，保证锋利性；
②特殊前后角设计，保证刃口强度及耐磨性；
- 涂层：采用含Si的AlCr系涂层，耐磨性能、抗氧化性能、润滑性能优异；
- 应用：**①**能实现从普通钢到预硬钢的高效率切削加工；
②适用于普通钢（≤HRC48）、铸铁等材料的通用加工；
③适用于小切深、大切宽的面铣加工；大切深、小切宽的侧铣加工，也可用于浅槽铣加工；
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: **①** Large helix angle design ensures sharpness;
② Special front and rear corner design ensures blade strength and wear resistance;
- Coating: Adopting AlCr coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
- Application: **①** Can achieve efficient cutting from ordinary steel to pre hardened steel;
② Suitable for general processing of materials such as ordinary steel (≤ HRC48) and cast iron;
③ Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width can also be used for shallow groove milling;



P21系列 钢件通用加工立铣刀

P21 series general machining end mill for steel

- 基体：兼具耐磨性及抗崩性的基体；
- 刀型：**①**锋利的切削刃与刀具强度搭配合理；
②特殊前后角设计，保证刃口强度及耐磨性；
- 涂层：采用含Si的AlCr系涂层，耐磨性能、抗氧化性能、润滑性能优异；
- 应用：**①**能实现从普通钢到预硬钢的高效率切削加工；
②适用于普通钢（≤HRC48）、铸铁等材料的通用加工；
③适用于小切深、大切宽的面铣加工；大切深、小切宽的侧铣加工，也可用于浅槽铣加工；
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: **①** The combination of sharp cutting edges and tool strength is reasonable;
② Special front and rear corner design ensures blade strength and wear resistance;
- Coating: Adopting AlCr coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
- Application: **①** Can achieve efficient cutting from ordinary steel to pre hardened steel;
② Suitable for general processing of materials such as ordinary steel (≤ HRC48) and cast iron;
③ Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width can also be used for shallow groove milling;



P30系列 钢件高速加工立铣刀

P30 series high-speed machining end mill for steel

- 基体：兼具耐磨性及抗崩性的基体；
- 刀型：**①**圆弧铲磨后角及特殊刀尖保护，保证刃口强度；
- 涂层：采用含Si的AlCr系涂层，使用稳定、耐高温、耐磨损；
- 应用：**①**适用于普通钢、铸铁、不锈钢等（≤48HRC）、铝合金、铜合金等材料的半精加工、精加工；
②适用于小切深、大切宽的面铣；大切深、小切宽的侧铣；切深小于0.5D的浅槽铣；
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: Arc shovel grinding rear corner and special blade tip protection to ensure blade strength;
- Coating: Using Si containing AlCr coating, stable, high temperature resistant, and wear-resistant;
- Application: **①** Suitable for semi precision machining and precision machining of materials such as ordinary steel, cast iron, stainless steel (≤ 48HRC), aluminum alloy, copper alloy, etc;
② Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width; Shallow groove milling with a cutting depth less than 0.5D;



P40系列 钢件高效加工立铣刀

P40 series high-performance machining end mill for steel

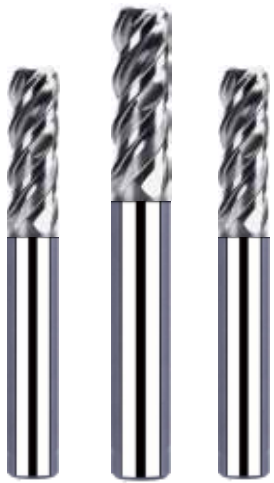
- 基体：兼具耐磨性及抗崩性的基体；
- 刀型：**①**采用不等齿距，不等螺旋设计，抗震性能优异；
②U型槽设计，排屑性能优异；
③特殊刃口处理，均匀钝化刃口，增强刃口强度；
- 涂层：采用最新高性能含Si的AlCr系涂层，保证刀具高耐磨性；
- 应用：适合普通钢（≤HRC48）、铸铁、不锈钢、钛合金等材料的槽铣、侧铣及动态铣等多种加工方式；适用于大切深大切宽的高效加工，以及切深1D以内的槽铣加工，也可以用于大切深、小切宽的侧铣精加工；
- Substrate: Goed wear resistance and fracture resistance;
- Geometry: **①** Adopting unequal tooth pitch and unequal spiral design, with excellent anti-vibration performance;
② U-shaped groove design, excellent chip removal performance;
③ Special edge treatment, uniformly passivate the edge, enhance the edge strength;
- Coating: Adopting the latest high-performance AlCr coating containing Si to ensure high wear resistance of cutting tools;
- Application: Suitable for groove milling, side milling, and dynamic milling of materials such as ordinary steel (≤ HRC48), cast iron, stainless steel, titanium alloy, etc; Suitable for efficient machining of large cutting depth and wide cutting width, as well as slot milling within a cutting depth of 1D. It can also be used for side milling precision machining of large cutting depth and small cutting width;



P45系列 钢件高效加工立铣刀

P45 series high-performance machining end mill for steel

- 基体：兼具耐磨性及抗崩性的基体；
- 刀型：**①**采用大螺旋设计，排屑性能优异；
②大小槽设计，适应高效加工同时能保证优秀的刚性；
③特殊刃口处理，均匀钝化刃口，增强刃口强度；
- 涂层：采用最新高性能含Si的AlCr系涂层，保证刀具高耐磨性；
- 应用：适合普通钢（≤HRC48）、铸铁、不锈钢、钛合金等材料的槽铣、侧铣及动态铣等多种加工方式；适用于大切深大切宽的高效加工，以及切深1D以内的槽铣加工，也可以用于大切深、小切宽的侧铣精加工；
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: **①** Adopting a large spiral design, it has excellent chip removal performance;
② Large and small groove design, suitable for efficient processing while ensuring excellent rigidity;
③ Special edge treatment, uniformly passivate the edge, and enhance the strength of the edge;
- Coating: Adopting the latest high-performance AlCr coating containing Si to ensure high wear resistance of cutting tools;
- Application: Suitable for groove milling, side milling, and dynamic milling of materials such as ordinary steel (≤ HRC48), cast iron, stainless steel, titanium alloy, etc; Suitable for efficient machining of large cutting depth and wide cutting width, as well as groove milling within a cutting depth of 1D. It can also be used for side milling precision machining of large cutting depth and small cutting width;



P50系列 钢件微加工立铣刀

P50 series micro machining end mill for steel

- 基体：采用超高硬度的超细晶基体，确保刀具加工寿命；
- 刀型：**①**高精度的刃径精度、球头轮廓、R弧轮廓及柄部精度(h5)；
②特殊的角度及长避空设计；
- 涂层：采用高性能AlCrSiN纳米涂层，耐高温、耐磨损；
- 应用：适用于精密模具行业碳钢、合金钢、淬硬钢、铜、铝合金等材料(硬度≤HRC55)的深沟槽微加工；
- Substrate: Using ultra-high hardness ultra-fine grain substrate to ensure tool processing life;
- Geometry: **①** High precision diameter accuracy, ball head contour, R-arc contour, and shank accuracy (h5);
② Special angles and long avoidance design;
- Coating: Adopting high-performance AlCrSiN nano coating, high temperature resistance and wear resistance;
- Application: Suitable for deep groove micro machining of carbon steel, alloy steel, quenched steel, copper, aluminum alloy and other materials (hardness ≤ HRC55) in the precision mold industry;



刀具系列介绍

Introduction of Tool Series

P60系列 钢件粗加工立铣刀

P60 series roughing end mill for steel

- 基体: 兼具耐磨性及抗崩性的基体
- 刀型: 采用标准型波形齿设计, 加工时产生细短切屑, 降低切削力, 排屑能优异;
- 涂层: 采用高性能含Si纳米涂层, 耐高温、耐磨损;
- 应用: 适用于普通钢($\leq 48\text{HRC}$)、铸铁等材料的粗加工, 金属去除率高

- Substrate: A substrate with both wear resistance and anti-chipping properties.
- Geometry: Features a standard wavy tooth design, generating fine and short chips during processing, reducing cutting force and offering excellent chip removal performance.
- Coating: Equipped with a high-performance nano-coating containing silicon, which is resistant to high temperatures and wear.
- Application: Suitable for rough machining of common steel ($\leq 48\text{HRC}$), cast iron and other materials, with a high metal removal rate.



M30系列 不锈钢高速加工立铣刀

M30 series high-speed machining end mill for stainless steel

- 基体: 采用良好耐磨性的超细颗粒基体
- 刀型结构: ①独特的刀口设计, 能有效预防刀屑粘结问题的产生
②不等螺旋不等分度设计, 优异抗震性能
- 涂层: 采用TiAlN涂层, 刀具切削阻力小, 而且抗高温和抗磨损性能优异
- 应用: 适合用于钢件($\leq \text{HRC}48$)、铸铁、不锈钢、钛合金等材料的高速精加工, 特别适合用于切削余量小且均匀的工况

- Substrate: Adopting ultrafine particle matrix with good wear resistance
- Geometry: ①Unique blade design can effectively prevent the occurrence of chip adhesion problems
②Unequal spiral and unequal pitch design, excellent seismic performance
- Coating: TiAlN coating is adopted, which reduces the cutting resistance of the tool and offers excellent high-temperature resistance and wear resistance.
- Application: Suitable for high-speed precision machining of steel parts ($\leq \text{HRC}48$), cast iron, stainless steel, titanium alloy and other materials, especially suitable for machining conditions with small and uniform cutting allowances.



H20系列 高硬钢通用加工立铣刀

H20 series general machining end mill for high-hardened steel

- 基体: 采用良好耐磨性的超细颗粒基体;
- 刀型: ①大螺旋角设计, 保证锋利性;
②特殊前后角设计, 保证刃口强度及耐磨性;
- 涂层: 采用含Si的AlCr系涂层, 耐磨性能、抗氧化性能、润滑性能优异;
- 应用: ①能实现从普通钢到预硬钢的高效率切削加工;
②适用于普通钢($\leq \text{HRC}55$)、铸铁等材料的通用加工;
③适用于小切深、大切宽的面铣加工; 大切深、小切宽的侧铣加工, 也可用于浅槽铣加工;

- Substrate: Adopting ultrafine particle matrix with good wear resistance;
- Geometry: ①Large helix angle design ensures sharpness;
②Special rake angle and relief angle design ensures cutting edge strength and wear resistance;
- Coating: Adopting AlCr coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
- Application: ①Can achieve efficient cutting from ordinary steel to pre hardened steel;
②Suitable for general processing of materials such as ordinary steel ($\leq \text{HRC}55$) and cast iron;
③Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width can also be used for shallow groove milling;



H30系列 高硬钢高速加工立铣刀

H30 series high-speed machining end mill for high-hardened steel

- 基体: 采用超高硬度的超细晶基体, 确保刀具加工寿命;
- 刀型: 独特的槽型设计结合精细磨削工艺, 实现了高硬钢的高品质加工;
- 涂层: 采用含Si的高硬度涂层, 耐磨性及抗高温磨损性能优异;
- 应用: 适用于45~62HRC预硬化钢、淬火钢、高硬钢的半精加工、精加工;
适用于大切深、小切宽侧铣加工, 小切深、小切宽精加工;

- Substrate: Using ultra-high hardness ultra-fine grain matrix to ensure tool processing life;
- Geometry: The unique groove design combined with fine grinding technology achieves high-quality processing of high hardness steel;
- Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance and high-temperature wear resistance;
- Application: Suitable for semi precision machining and precision machining of 45~62HRC pre hardened steel, quenched steel, and high hardness steel;
Suitable for side milling with large cutting depth and small cutting width, and precision machining with small cutting depth and small cutting width



H30+系列 高硬钢高速加工多刃立铣刀

H30+ series high-speed machining end mill for high-hardened steel

- 基体: 采用超高硬度的超细晶基体, 确保刀具加工寿命;
- 刀型: 多刃设计整体刚性较好, 适合进行高精度加工;
- 涂层: 采用含Si的高硬度涂层, 耐磨性及抗高温磨损性能优异;
- 应用: 适用于45~62HRC预硬化钢、淬火钢、高硬钢的半精加工、精加工;
适用于大切深、小切宽的侧铣精加工及小切深的面铣加工;

- Substrate: Using ultra-high hardness ultra-fine grain matrix to ensure tool processing life;
- Geometry: The multi blade design has good overall rigidity and is suitable for high-precision machining;
- Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance and high-temperature wear resistance;
- Application: Suitable for semi precision machining and precision machining of 45~62HRC pre hardened steel, quenched steel, and high hardness steel;
Suitable for side milling finish machining with large depth of cut and small width of cut, as well as face milling with small depth of cut.



H40系列 高硬钢快进给加工立铣刀

H40 series high-feed machining end mill for high-hardened steel

- 基体: 采用良好耐磨性的超细颗粒基体;
- 刀型: ①底刃大圆弧设计, 实现高进给加工;
②特殊刀尖保护设计, 确保刀具刃口强度及抗崩刃;
- 涂层: 采用含Si的高硬涂层, 耐磨性能及抗氧化性能优异;
- 应用: ①能实现从预硬钢到淬火高硬钢的高进给切削加工;
②适用于35~65HRC高硬度材料的粗加工;

- Substrate: Adopting ultrafine particle matrix with good wear resistance;
- Geometry: ①Large curved bottom edge design, achieving high feed processing;
②Special blade tip protection design ensures the strength of the cutting edge and resistance to chipping;
- Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance and oxidation resistance;
- Application: ①Can achieve high feed cutting from pre hardened steel to quenched high hardness steel;
②Suitable for rough machining of 35~65HRC high hardness materials;



刀具系列介绍

Introduction of Tool Series

H50系列 高硬钢微加工加工立铣刀

H50 series micro machining end mill for high-hardened steel

- 基体: 采用优异耐磨性的基体;
 - 刀型: ①超高的尺寸精度控制, 确保加工稳定性;
②特殊前后角设计, 保证刃口强度及耐磨性;
 - 涂层: 采用含Si的高硬涂层, 耐磨性能、抗氧化性能、润滑性能优异;
 - 应用: ①能实现从预硬钢到淬火高硬钢的高速切削加工;
②适用于45~65HRC高硬度材料的精加工、半精加工;
- Substrate: Using a matrix with excellent wear resistance;
 - Geometry: ① Superior dimensional accuracy control ensures processing stability;;
② Special front and rear corner design ensures blade strength and wear resistance;
 - Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
 - Application: ① Can achieve high-speed cutting processing from pre hardened steel to quenched high hardness steel;
② Suitable for precision machining and semi precision machining of 45~65HRC high hardness materials;



S40系列 高温合金高效加工立铣刀

S40 series high-performance machining end mill for heat-resistant super alloy

- 基体: 兼具耐磨性及抗崩性的基体;
 - 刀型: 采用不等齿距, 不等螺旋设计, 抗震性能优异;
 - 涂层: 采用ZrN涂层, 优异的抗粘结性能;
 - 应用: 适合普通钢(≤HRC48)、铸铁、不锈钢、高强度钢、高温合金等材料的槽铣、侧铣及动态铣等多种加工方式;
适用于大切深大切宽的高效加工, 以及切深0.5D以内的槽铣加工, 也可以用于大切深、小切宽的侧铣精加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
 - Geometry: Adopting unequal tooth pitch and unequal spiral design, with excellent seismic performance;
 - Coating: ZrN coating for excellent anti-adhesion properties;
 - Application: Suitable for groove milling, side milling, and dynamic milling of materials such as ordinary steel (≤ HRC48), cast iron, stainless steel, high-strength steel, and high-temperature alloys;
Suitable for efficient processing of large cutting depth and width, as well as groove milling processing with a cutting depth of less than 0.5D. It can also be used for side milling precision processing of large cutting depth and small cutting width;



T40系列 钛合金高效加工立铣刀

T40 series high-performance machining end mill for titanium alloy

- 基体: 兼具耐磨性及抗崩性的基体;
 - 刀型: ①采用不等齿距, 不等螺旋设计, 抗震性能优异;
②U型槽设计, 排屑性能优异;
③特殊刃口处理, 均匀钝化刃口, 增强刃口强度;
 - 涂层: 采用ZrN涂层, 优异的抗粘结性能;
 - 应用: 适合高强度钢、钛合金等材料的槽铣、侧铣及动态铣等多种加工方式;
适用于大切深大切宽的高效加工, 以及切深0.5D以内的槽铣加工, 也可以用于大切深、小切宽的侧铣精加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
 - Geometry: ① Adopting unequal tooth pitch and unequal spiral design, with excellent seismic performance;
② U-shaped groove design, excellent chip removal performance;
③ Special edge treatment, uniformly passivate the edge, and enhance the strength of the edge;
 - Coating: Employing ZrN coating, it exhibits excellent anti-adhesion performance.
 - Application: Suitable for various processing methods such as groove milling, side milling, and dynamic milling of high-strength steel, titanium alloys, and other materials;
Suitable for efficient processing of large cutting depth and width, as well as groove milling processing with a cutting depth of less than 0.5D. It can also be used for side milling precision processing of large cutting depth and small cutting width;



A40系列 铝合金高效加工立铣刀

A40 series high-performance machining end mill for aluminum alloy

- 基体: 兼具耐磨性及抗崩性的基体;
 - 刀型: ① 采用不等齿距, 不等螺旋设计, 抗震性能优异;
② U型槽设计, 排屑性能优异;
③ 清边留量设计, 保证被加工表面质量;
 - 涂层: 白刀及七彩涂层可选;
 - 应用: 适合铜合金、铝合金等材料的槽铣、侧铣及面铣加工; 可实现粗精一体化加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
 - Geometry: ① Adopting unequal tooth pitch and unequal spiral design, with excellent seismic performance;
② U-shaped groove design, excellent chip removal performance;
③ Clear edge margin design to ensure the quality of the processed surface;
 - Coating: White knife and rainbow coating are optional;
 - Application: Suitable for groove milling, side milling, and surface milling of copper alloys, aluminum alloys, and other materials;
Can achieve integrated processing of coarse and fine;



A60系列 铝合金粗加工立铣刀

A60 series roughing end mill for aluminum alloy

- 基体: 兼具耐磨性及抗崩性的基体;
 - 刀型: ①大前角设计, 确保刀具锋利性;
②后波刃设计, 降低切削力, 提高加工效率;
③前刀面抛光处理, 确保排屑顺畅;
 - 涂层: 无;
 - 应用: 适合铜合金、铝合金等材料的槽铣、侧铣及面铣等粗加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
 - Geometry: ① Large front angle design to ensure tool sharpness;
② Rear wave edge design reduces cutting force and improves machining efficiency;
③ The front blade surface is polished to ensure smooth chip removal;
 - Coating: None;
 - Application: Suitable for rough machining such as groove milling, side milling, and surface milling of copper alloys, aluminum alloys, and other materials;



产品选择目录表

Selection Criteria Table of Product

名称 Name	系列 Series	产品型号 Type	刀型 Knife shape	刃径范围 Blade Diameter Range	规格表 Dimension Page	切削参数页码 Cutting Parameters Page	工件材料 Workpieces Material											
							P			M	K	H			N			S
							1 2 3 4	5 6	1 2 3	1 2 3	1 2	3 4	5	1 2 3	4	5	1 2 3	4
							碳钢、合金钢 Carbon Steel Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel	高硬钢 Hardened Steel	高硬钢 淬硬刚 Hardened Steel	铝合金 Aluminium Alloy	铜合金 Copper Alloy	石墨、复材 Graphite Composite Material	高温合金 Heat Resistant Super Alloy	钛合金 Titanium Alloy
							<HRC35	<HRC48		<HRC35	HRC45~55	HRC55~65	>HRC65					
钢件通用加工立铣刀 Endmill for Steel General Machining	P20	P20-S2	2刃平头 2-Fulte, Square	D1-D12	P26	P102	●	●	○	●	○							
		P20-S4	4刃平头 4-Fulte, Square	D1-D20	P27	P109	●	●	○	●	○							
		P20-R2	2刃圆角头 2-Fulte, Corner Radius	D2-D10	P29	P102	●	●	○	●	○							
		P20-R4	4刃圆角头 4-Fulte, Corner Radius	D1.5-D20	P30	P109	●	●	○	●	○							
		P20-B2	2刃球头 2-Fulte, Ball Nose	D1-D12	P31	P110	●	●	○	●	○							
	P21	P21-S4	4刃平头 4-Fulte, Square	D1-D20	P33	P111	●	●	○	●	○							
	P30	P30-S2	2刃平头 2-Fulte, Square	D0.5-D20	P36	P112	●	●	●	●								
		P30-S4	4刃平头 4-Fulte, Square	D1-D20	P37	P113	●	●	●	●								
		P30-R2	2刃圆角头 2-Fulte, Corner Radius	D3-D12	P38	P112	●	●	●	●								
		P30-R4	4刃圆角头 4-Fulte, Corner Radius	D1-D20	P39	P113	●	●	●	●								
		P30-B2	2刃球头 2-Fulte, Ball Nose	D1-D12	P41	P114	●	●	●	●								
钢件高效加工立铣刀 Endmill for Steel High Performance Machining	P40	P40-S4	4刃平头 4-Fulte, Square	D1-D20	P44	P116	●	●	●	●							○	●
		P40-R4	4刃圆角头 4-Fulte, Corner Radius	D1-D20	P46	P116	●	●	●	●							○	●
	P45	P45-C4	4刃倒角 4-Fulte, Chamfer	D4-D20	P48	P117	●	●	●	●							○	●
		P45-R4	4刃圆角头 4-Fulte, Corner Radius	D6-D20	P49	P117	●	●	●	●							○	●
	P45+	P45+-C5	5刃倒角 5-Flute, Chamfer	D6-D12	P50	P118	●	●	●	●							○	●
		P45+-R5	5刃圆角头 5-Flute, Corner Radius	D6-D12	P51	P118	●	●	●	●							○	●

产品选择目录表

Selection Criteria Table of Product

名称 Name	系列 Series	产品型号 Type	刀型 Knife shape	刃径范围 Blade Diameter Range	规格表 Dimension Page	切削参数页码 Cutting Parameters Page	工件材料 Workpieces Material											
							P			M	K	H			N			S
							1 2 3 4	5 6	1 2 3	1 2 3	1 2	3 4	5	1 2 3	4	5	1 2 3	4
							碳钢、合金钢 Carbon Steel Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel	高硬钢 Hardened Steel	高硬钢 淬硬刚 Hardened Steel	铝合金 Aluminium Alloy	铜合金 Copper Alloy	石墨、复材 Graphite Composite Material	高温合金 Heat Resistant Super Alloy	钛合金 Titanium Alloy
							<HRC35	<HRC48		<HRC35	HRC45~55	HRC55~65	>HRC65					
钢件微加工立铣刀 Steel micro machining end mill	P50	P50-S2	2刃平头 2-Fulte,Square	D0.1-D0.9	P53	P119	●	●	●	●	○			●	●			
		P50-SN2	2刃深沟平头 2-blade deep groove Square	D0.2-D0.8	P54	P119	●	●	●	●	○			●	●			
		P50-S4	4刃深沟平头 4-blade deep groove Square	D1-D3	P55	P131	●	●	●	●	○			●	●			
		P50-B2	2刃球头 2-Fulte,Ball Nose	D0.1-D0.9	P57	P131	●	●	●	●	○			●	●			
		P50-BN2	2刃深沟球头 2-blade deep groove ball head	D0.2-D3	P58	P131	●	●	●	●	○			●	●			
		P50-RN4	4刃深沟圆角头 4-blade deep groove rounded head	D1-D3	P59	P122	●	●	●	●	○			●	●			
钢件粗加工立铣刀 Steel rough machining end mill	P60	P60-S4	4刃平头 4-Fulte,Square	D4-D20	P61	P137	●	●	●	●	○							
不锈钢高速加工立铣刀 Endmill for stainless steel high-speed machining	M30	M30-S4	4刃平头 4-Fulte,Square	D1-D20	P63	P138	●	●	●	○								
		M30-R4	4刃圆角头 4-Fulte,Corner Radius	D1.5-D20	P65	P138	●	●	●	○								
		M30-B2	2刃球头 2-Fulte,Ball Nose	D1-D12	P66		●	●	●	○								
钛合金高效加工立铣刀 High efficiency machining end mill for titanium alloy	T40	T40-S4	4刃平头 4-Fulte,Square	D1-D20	P99	P146			●								○	●
		T40-R4	4刃圆角头 4-Fulte,Corner Radius	D1-D12	P100	P146			●								○	●
高温合金高效加工立铣刀 High efficiency end milling cutter for high-temperature alloy processing	S40	S40-S4	4刃平头 4-Fulte,Square	D2-D12	P96	P144			●								●	○
		S40-R4	4刃圆角头 4-Fulte,Corner Radius	D2-D12	P97	P144			●								●	○
高硬钢通用加工立铣刀 Endmill for Hardened Steel General Machining	H20	P20-S4	4刃平头 4-Fulte,Square	D1-D16	P68	P139	●	●	○	●	●							
		P20-R4	4刃圆角头 4-Fulte,Corner Radius	D1.5-D20	P69	P139	●	●	○	●	●							
		P20-B2	2刃球头 2-Fulte,Ball Nose	D1-D12	P70	P139	●	●	○	●	●							

产品选择目录表

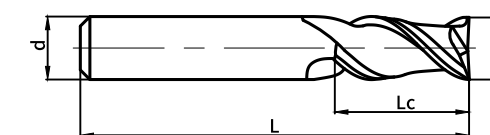
Selection Criteria Table of Product

名称 Name	系列 Series	产品型号 Type	刀型 Knife shape	刃径范围 Blade Diameter Range	规格表 Dimension Page	切削参数页码 Cutting Parameters Page	工件材料 Workpieces Material											
							P			M	K	H			N			S
							1 2 3 4	5 6	1 2 3	1 2 3	1 2	3 4	5	1 2 3	4	5	1 2 3	4
							碳钢、合金钢 Carbon Steel Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel	高硬钢 Hardened Steel	高硬钢 淬硬刚 Hardened Steel	铝合金 Aluminium Alloy	铜合金 Copper Alloy	石墨、复材 Graphite Composite Material	高温合金 Heat Resistant Super Alloy	钛合金 Titanium Alloy
							<HRC35	<HRC48		<HRC35	HRC45~55	HRC55~65	>HRC65					
高硬钢高速加工立铣刀 Endmill for Hardened Steel High Speed Machining	H30	H30-S4	4刃平头 4-Fulte,Square	D1-D16	P72	P140					●	●	○					
		H30-R4	4刃圆角头 4-Fulte,Corner Radius	D3-D12	P73	P140					●	●	○					
		H30-RN4	4刃长颈圆角头 4-Fulte,Corner Radius, with neck	D6-D12	P74	P140					●	●	○					
		H30-B2	2刃球头 2-Fulte,Ball Nose	D1-D16	P75	P141					●	●	○					
高硬钢高速加工立铣刀 High hardness steel high speed machining end mill	H30+	H30+-S6	6刃平头 6-Fulte,Square	D6-D20	P77	P142					●	●	○					
高硬钢高效加工立铣刀 Efficient processing of high hardness steel end mill	H40	H40-R6	6刃圆角头 6-Fulte,Corner Radius	D6-D12	P79	P143	●	●			●	●	○	●	●			●
高硬钢微加工立铣刀 High hardness steel micro machining end mill	H50	H50-S2	2刃平头 2-Fulte,Square	D0.2-D0.9	P81	P119	●	●			●	●	○	●	●			●
		H50-SN2	2刃深沟平头 2-blade deep groove Square	D0.2-D6	P82	P119	●	●			●	●	○	●	●			●
		H50-B2	2刃球头 2-Fulte,Corner Radius	D0.2-D0.9	P90	P131	●	●			●	●	○	●	●			●
		H50-BN2	2刃深沟球头 2-blade deep groove ball head	D0.2-D6	P91	P131	●	●			●	●	○	●	●			●
		H50-RN4	4刃深沟圆角头 4-blade deep groove Square	D1-D6	P86	P122	●	●			●	●	○	●	●			●
铝合金高效加工立铣刀 Endmill for Aluminium Alloy High Performance Machining	A40	A40-S3	3刃平头 3-Fulte,Square	D1-D20	P102	P148								●	●			
		A40-R3	3刃圆角头 3-Fulte,Corner Radius	D1-D20	P103	P148								●	●			
		A40-B2	2刃球头 2-Fulte,Ball Nose	D1-D12	P105	P149								●	●			
铝合金粗加工立铣刀 Aluminum alloy rough machining end mill	A60	A60-S3	3刃平头 3-Fulte,Square	D3-D20	P107	P150								●	●			

P20-S2

2刃平头通用加工立铣刀

2-Flute, Square Endmill for General Machining



P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P20-S2-1-3-4-50	1	3	4	50	○
P20-S2-1.5-4-4-50	1.5	4	4	50	○
P20-S2-2-6-4-50	2	6	4	50	○
P20-S2-2.5-7-4-50	2.5	7	4	50	○
P20-S2-3-8-4-50	3	8	4	50	○
P20-S2-4-11-4-50	4	11	4	50	○
P20-S2-3-8-6-50	3	8	6	50	○
P20-S2-4-11-6-50	4	11	6	50	○
P20-S2-5-13-6-50	5	13	6	50	○
P20-S2-6-15-6-50	6	15	6	50	○
P20-S2-8-20-8-60	8	20	8	60	○
P20-S2-10-25-10-75	10	25	10	75	○
P20-S2-12-30-12-75	12	30	12	75	○

● 标准库存Stock ○ 需预订Available Upon Order

P20系列

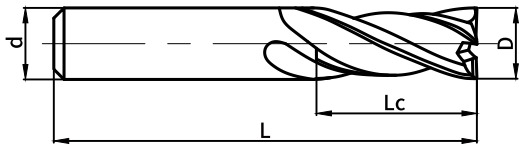
钢件通用加工立铣刀

P20 series general machining end mill for steel

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: ①大螺旋角设计, 保证锋利性;
②特殊前后角设计, 保证刃口强度及耐磨性;
- 涂层: 采用含Si的AlCr系涂层, 耐磨性能、抗氧化性能、润滑性能优异;
- 应用: ①能实现从普通钢到预硬钢的高效率切削加工;
②适用于普通钢 ($\leq$ HRC48)、铸铁等材料的通用加工;
③适用于小切深、大切宽的面铣加工; 大切深、小切宽的侧铣加工, 也可用于浅槽铣加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: ① Large helix angle design ensures sharpness;
② Special front and rear corner design ensures blade strength and wear resistance;
- Coating: Adopting AlCr coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
- Application: ① Can achieve efficient cutting from ordinary steel to pre hardened steel;
② Suitable for general processing of materials such as ordinary steel ($\leq$ HRC48) and cast iron;
③ Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width can also be used for shallow groove milling;

P20-S4

4刃平头通用加工立铣刀
4-Fluet,Square Endmill for General Machining

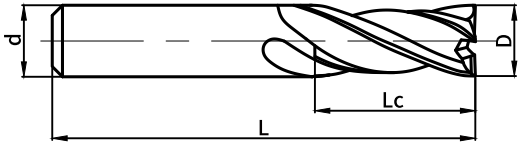


P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P20-S4-1-3-4-50	1	3	4	50	●
P20-S4-1.5-4-4-50	1.5	4	4	50	●
P20-S4-2-6-4-50	2	6	4	50	●
P20-S4-2.5-7-4-50	2.5	7	4	50	●
P20-S4-3-8-4-50	3	8	4	50	●
P20-S4-3-12-4-75	3	12	4	75	●
P20-S4-4-11-4-50	4	11	4	50	●
P20-S4-4-15-4-75	4	15	4	75	●
P20-S4-3-8-6-50	3	8	6	50	●
P20-S4-4-11-6-50	4	11	6	50	●
P20-S4-5-13-6-50	5	13	6	50	●
P20-S4-6-15-6-50	6	15	6	50	●
P20-S4-6-24-6-75	6	24	6	75	●
P20-S4-7-20-8-60	7	20	8	60	●
P20-S4-8-20-8-60	8	20	8	60	●
P20-S4-8-25-8-75	8	25	8	75	●
P20-S4-8-32-8-100	8	32	8	100	●
P20-S4-9-23-10-75	9	23	10	75	●
P20-S4-10-25-10-75	10	25	10	75	●
P20-S4-10-35-10-100	10	35	10	100	●
P20-S4-12-30-12-75	12	30	12	75	●
P20-S4-12-37-12-100	12	37	12	100	●
P20-S4-14-40-14-100	14	40	14	100	●
P20-S4-16-45-16-100	16	45	16	100	●
P20-S4-10-35-10-75	10	35	10	75	●
P20-S4-10-45-10-100	10	45	10	100	●
P20-S4-10-50-10-100	10	50	10	100	●
P20-S4-10-55-10-100	10	55	10	100	●
P20-S4-12-36-12-75	12	36	12	75	●
P20-S4-12-50-12-100	12	50	12	100	●
P20-S4-12-52-12-100	12	52	12	100	●
P20-S4-12-55-12-100	12	55	12	100	●

P20-S4

模架用 4刃平头立铣刀
4-Fluet, Square Endmill for Mold Frames



P	K	M	S	N	H
●	●	○			○

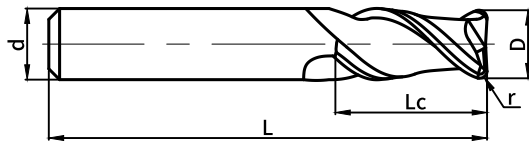
订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P20-S4-10-35-10-75	10	35	10	75	●
P20-S4-10-45-10-100	10	45	10	100	●
P20-S4-10-50-10-100	10	50	10	100	●
P20-S4-10-55-10-100	10	55	10	100	●
P20-S4-12-36-12-75	12	36	12	75	●
P20-S4-12-50-12-100	12	50	12	100	●
P20-S4-12-52-12-100	12	52	12	100	●
P20-S4-12-55-12-100	12	55	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order

P20-R2

2刃圆角头通用加工立铣刀

2-Flute, Corner Radius Endmill for General Machining



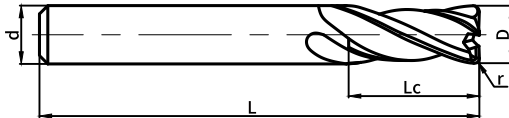
P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P20-R2-2-6-4-50-0.2	2	0.2	6	4	50	○
P20-R2-3-9-4-50-0.5	3	0.5	9	4	50	○
P20-R2-4-11-4-50-0.5	4	0.5	11	4	50	○
P20-R2-5-15-6-50-0.5	5	0.5	15	6	50	○
P20-R2-6-16-6-50-0.5	6	0.5	16	6	50	○
P20-R2-6-16-6-50-1	6	1	16	6	50	○
P20-R2-8-20-8-60-0.5	8	0.5	20	8	60	○
P20-R2-8-20-8-60-1	8	1	20	8	60	○
P20-R2-10-25-10-75-0.5	10	0.5	25	10	75	○
P20-R2-10-25-10-75-1	10	1	25	10	75	○
P20-R2-10-25-10-75-2	10	2	25	10	75	○

P20-R4

4刃圆角头通用加工立铣刀

4-Flute, Corner Radius Endmill for General Machining



P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P20-R4-1.5-4-4-50-0.2	1.5	0.2	4	4	50	●
P20-R4-2-6-4-50-0.2	2	0.2	6	4	50	●
P20-R4-3-9-4-50-0.2	3	0.2	9	4	50	●
P20-R4-3-9-4-50-0.5	3	0.5	9	4	50	●
P20-R4-4-10-4-50-0.2	4	0.2	10	4	50	●
P20-R4-4-10-4-50-0.5	4	0.5	10	4	50	●
P20-R4-4-12-4-75-0.5	4	0.5	12	4	75	●
P20-R4-4-10-4-50-1	4	1	10	4	50	●
P20-R4-5-15-6-50-0.5	5	0.5	15	6	50	●
P20-R4-5-15-6-50-1	5	1	15	6	50	●
P20-R4-6-15-6-50-0.2	6	0.2	15	6	50	●
P20-R4-6-15-6-50-0.5	6	0.5	15	6	50	●
P20-R4-6-18-6-75-0.5	6	0.5	18	6	75	●
P20-R4-6-15-6-50-1	6	1	15	6	50	●
P20-R4-6-18-6-75-1	6	1	18	6	75	●
P20-R4-8-20-8-60-0.5	8	0.5	20	8	60	●
P20-R4-8-24-8-75-0.5	8	0.5	24	8	75	●
P20-R4-8-35-8-100-0.5	8	0.5	35	8	100	●
P20-R4-8-20-8-60-1	8	1	20	8	60	●
P20-R4-8-35-8-100-1	8	1	35	8	100	●
P20-R4-10-25-10-75-0.5	10	0.5	25	10	75	●
P20-R4-10-35-10-100-0.5	10	0.5	35	10	100	●
P20-R4-10-25-10-75-1	10	1	25	10	75	●
P20-R4-10-35-10-100-1	10	1	35	10	100	●
P20-R4-10-25-10-75-2	10	2	25	10	75	●
P20-R4-12-30-12-75-0.5	12	0.5	30	12	75	●
P20-R4-12-35-12-100-0.5	12	0.5	35	12	100	●
P20-R4-12-30-12-75-1	12	1	30	12	75	●
P20-R4-12-35-12-100-1	12	1	35	12	100	●
P20-R4-12-30-12-75-1.5	12	1.5	30	12	75	●
P20-R4-12-30-12-75-2	12	2	30	12	75	●
P20-R4-16-40-16-100-1	16	1	45	16	100	●
P20-R4-20-45-20-100-1	20	1	45	20	100	●

P20-B2

2刃球头通用加工立铣刀
2-Flute, Ball Nose Endmill for General Machining



订货号 Ordering Code	刃径 (D) Dia.	圆角(R) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P20-B2-1-2-4-50	1	0.5	2	4	50	●
P20-B2-1.5-3-4-50	1.5	0.75	3	4	50	●
P20-B2-2-4-4-50	2	1	4	4	50	●
P20-B2-2.5-5-4-50	2.5	1.25	5	4	50	●
P20-B2-3-6-4-50	3	1.5	6	4	50	●
P20-B2-4-8-4-50	4	2	8	4	50	●
P20-B2-4-8-4-75	4	2	8	4	75	●
P20-B2-5-10-6-50	5	2.5	10	6	50	●
P20-B2-6-12-6-50	6	3	12	6	50	●
P20-B2-6-12-6-75	6	3	12	6	75	●
P20-B2-7-14-8-60	7	3.5	14	8	60	●
P20-B2-8-16-8-60	8	4	16	8	60	●
P20-B2-8-16-8-75	8	4	16	8	75	●
P20-B2-9-16-10-75	9	4.5	16	10	75	●
P20-B2-10-20-10-75	10	5	20	10	75	●
P20-B2-10-20-10-100	10	5	20	10	100	●
P20-B2-12-24-12-75	12	6	24	12	75	●
P20-B2-12-24-12-100	12	6	24	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order



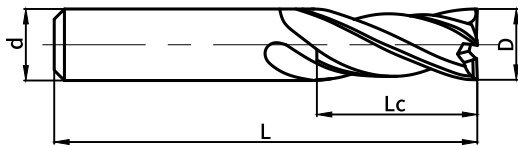
P21系列

钢件通用加工立铣刀
P21 series general machining end mill for steel

- 基体:兼具耐磨性及抗崩性的基体;
- 刀型: ①锋利的切削刃与刀具强度搭配合理;
②特殊前后角设计, 保证刃口强度及耐磨性;
- 涂层: 采用含Si的AlCr系涂层, 耐磨性能、抗氧化性能、润滑性能优异;
- 应用: ①能实现从普通钢到预硬钢的高效率切削加工;
②适用于普通钢 ($\leq$ HRC48)、铸铁等材料的通用加工;
③适用于小切深、大切宽的面铣加工; 大切深、小切宽的侧铣加工, 也可用于浅槽铣加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: ①The combination of sharp cutting edges and tool strength is reasonable;
②Special front and rear corner design ensures blade strength and wear resistance;
- Coating: Adopting AlCr coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
- Application: ① Can achieve efficient cutting from ordinary steel to pre hardened steel;
② Suitable for general processing of materials such as ordinary steel ($\leq$ HRC48) and cast iron;
③ Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width can also be used for shallow groove milling;

P21-S4

4刃平头高速加工立铣刀
4-Flute, Square Endmill for High-speed machining

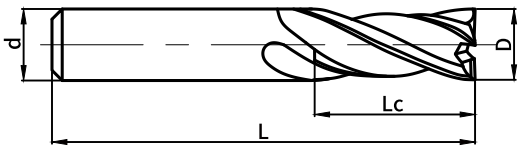


P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P21-S4-1-3-4-50	1	3	4	50	●
P21-S4-1-4-4-75	1	4	4	75	●
P21-S4-1.5-4-4-50	1.5	4	4	50	●
P21-S4-1.5-4-6-50	1.5	4	6	50	●
P21-S4-2-6-4-50	2	6	4	50	●
P21-S4-2-6-6-50	2	6	6	50	●
P21-S4-2.5-7-4-50	2.5	7	4	50	●
P21-S4-2.5-7-6-50	2.5	7	6	50	●
P21-S4-3-8-3-50	3	8	3	50	●
P21-S4-3-8-4-50	3	8	4	50	●
P21-S4-3-8-6-50	3	8	6	50	●
P21-S4-3-9-4-50	3	9	4	50	●
P21-S4-3-9-6-50	3	9	6	50	●
P21-S4-3-12-4-75	3	12	4	75	●
P21-S4-4-11-4-50	4	11	4	50	●
P21-S4-4-11-6-50	4	11	6	50	●
P21-S4-4-15-4-75	4	15	4	75	●
P21-S4-4-16-4-100	4	16	4	100	●
P21-S4-5-13-6-50	5	13	6	50	●
P21-S4-5-18-5-75	5	18	5	75	●
P21-S4-5-20-5-100	5	20	5	100	●
P21-S4-6-15-6-50	6	15	6	50	●
P21-S4-6-24-6-100	6	24	6	100	●
P21-S4-6-24-6-75	6	24	6	75	●
P21-S4-6-45-6-150	6	45	6	150	●
P21-S4-6.5-15-5-50	6.5	15	5	50	●
P21-S4-6.5-15-8-60	6.5	15	8	60	●
P21-S4-7-20-8-60	7	20	8	60	●
P21-S4-8-20-8-60	8	20	8	60	●
P21-S4-8-25-8-100	8	25	8	100	●
P21-S4-8-25-8-75	8	25	8	75	●
P21-S4-8-30-8-75	8	30	8	75	●
P21-S4-8-32-8-100	8	32	8	100	●
P21-S4-8-32-8-75	8	32	8	75	●

P21-S4

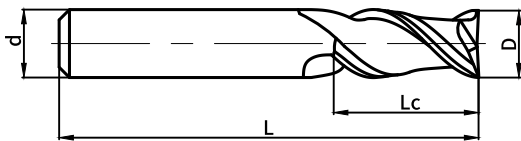
4刃平头高速加工立铣刀
4-Flute, Square Endmill for High-speed machining



P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P21-S4-8-50-8-150	8	50	8	150	●
P21-S4-9-23-10-75	9	23	10	75	●
P21-S4-9-25-10-75	9	25	10	75	●
P21-S4-10-25-10-75	10	25	10	75	●
P21-S4-10-30-10-75	10	30	10	75	●
P21-S4-10-35-10-100	10	35	10	100	●
P21-S4-10-40-10-100	10	40	10	100	●
P21-S4-10-50-10-100	10	50	10	100	●
P21-S4-10-55-10-150	10	55	10	150	●
P21-S4-11-28-12-75	11	28	12	75	●
P21-S4-11-30-12-75	11	30	12	75	●
P21-S4-12-30-12-75	12	30	12	75	●
P21-S4-12-37-12-100	12	37	12	100	●
P21-S4-12-40-12-100	12	40	12	100	●
P21-S4-12-45-12-100	12	45	12	100	●
P21-S4-12-50-12-100	12	50	12	100	●
P21-S4-12-55-12-150	12	55	12	150	●
P21-S4-13-32-14-100	13	32	14	100	●
P21-S4-14-35-14-100	14	35	14	100	●
P21-S4-14-40-14-100	14	40	14	100	●
P21-S4-14-55-14-100	14	55	14	100	●
P21-S4-15-36-16-100	15	36	16	100	●
P21-S4-16-45-16-100	16	45	16	100	●
P21-S4-16-55-16-100	16	55	16	100	●
P21-S4-16-70-16-150	16	70	16	150	●
P21-S4-16-80-16-150	16	80	16	150	●
P21-S4-17-38-18-100	17	38	18	100	●
P21-S4-18-45-18-100	18	45	18	100	●
P21-S4-18-55-18-100	18	55	18	100	●
P21-S4-19-45-20-100	19	45	20	100	●
P21-S4-20-45-20-100	20	45	20	100	●
P21-S4-20-55-20-100	20	55	20	100	●
P21-S4-20-70-20-150	20	70	20	150	●
P21-S4-20-80-20-150	20	80	20	150	●

P30-S2
2刃平头高速加工立铣刀
2-Flute, Square Endmill for High-speed Machining



P	K	M	S	N	H
●	●	●	○		

P30系列
钢件高速加工立铣刀
P30 series high-speed machining end mill for steel

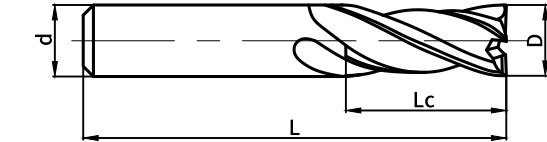
- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: 圆弧铲磨后角及特殊刀尖保护, 保证刃口强度;
- 涂层: 采用含Si的AlCr系涂层, 使用稳定、耐高温、耐磨损;
- 应用: ① 适用于普通钢、铸铁、不锈钢等 ($\leq 48\text{HRC}$)、铝合金、铜合金等材料的半精加工、精加工;
② 适用于小切深、大切宽的面铣; 大切深、小切宽的侧铣; 切深小于0.5D的浅槽铣;
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: Arc shovel grinding rear corner and special blade tip protection to ensure blade strength;
- Coating: Using Si containing AlCr coating, stable, high temperature resistant, and wear-resistant;
- Application: ① Suitable for semi precision machining and precision machining of materials such as ordinary steel, cast iron, stainless steel ($\leq 48\text{HRC}$), aluminum alloy, copper alloy, etc;
② Suitable for surface milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width; Shallow groove milling with a cutting depth less than 0.5D;

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-S2-0.5-1-4-50	0.5	1	4	50	○
P30-S2-0.8-2-4-50	0.8	2	4	50	○
P30-S2-1-3-4-50	1	3	4	50	○
P30-S2-1.5-4-4-50	1.5	4	4	50	○
P30-S2-2-6-4-50	2	6	4	50	○
P30-S2-2.5-7-4-50	2.5	7	4	50	○
P30-S2-3-9-4-50	3	9	4	50	○
P30-S2-4-11-4-50	4	11	4	50	○
P30-S2-4-15-4-75	4	15	4	75	○
P30-S2-2-6-6-50	2	6	6	50	○
P30-S2-3-9-6-50	3	9	6	50	○
P30-S2-4-11-6-50	4	11	6	50	○
P30-S2-5-15-6-50	5	15	6	50	○
P30-S2-6-16-6-50	6	16	6	50	○
P30-S2-6-24-6-75	6	24	6	75	○
P30-S2-7-20-8-60	7	20	8	60	○
P30-S2-8-20-8-60	8	20	8	60	○
P30-S2-8-25-8-75	8	25	8	75	○
P30-S2-9-25-10-75	9	25	10	75	○
P30-S2-10-25-10-75	10	25	10	75	○
P30-S2-10-35-10-100	10	35	10	100	○
P30-S2-12-30-12-75	12	30	12	75	○
P30-S2-12-35-12-100	12	35	12	100	○
P30-S2-14-45-14-100	14	45	14	100	○
P30-S2-16-45-16-100	16	45	16	100	○
P30-S2-20-45-20-100	20	45	20	100	○

● 标准库存Stock ○ 需预订Available Upon Order

P30-S4

4刃平头高速加工立铣刀
4-Flute, Square Endmill for High Speed Machining

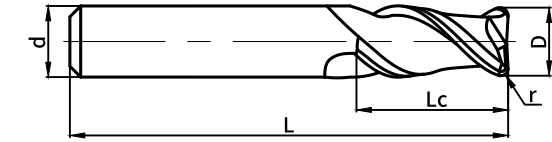


P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-S4-1-3-4-50	1	3	4	50	●
P30-S4-1.5-4.5-4-50	1.5	4.5	4	50	●
P30-S4-2-6-4-50	2	6	4	50	●
P30-S4-2.5-7-4-50	2.5	7	4	50	●
P30-S4-3-9-4-50	3	9	4	50	●
P30-S4-3.5-10-4-50	3.5	10	4	50	●
P30-S4-4-11-4-50	4	11	4	50	●
P30-S4-4-15-4-75	4	15	4	75	●
P30-S4-2-6-6-50	2	6	6	50	●
P30-S4-3-9-6-50	3	9	6	50	●
P30-S4-4-11-6-50	4	11	6	50	●
P30-S4-5-15-6-50	5	15	6	50	●
P30-S4-6-16-6-50	6	16	6	50	●
P30-S4-6-24-6-75	6	24	6	75	●
P30-S4-6-30-6-100	6	30	6	100	●
P30-S4-8-20-8-60	8	20	8	60	●
P30-S4-8-30-8-75	8	30	8	75	●
P30-S4-8-40-8-100	8	40	8	100	●
P30-S4-10-25-10-75	10	25	10	75	●
P30-S4-10-35-10-100	10	35	10	100	●
P30-S4-10-50-10-150	10	50	10	150	●
P30-S4-12-30-12-75	12	30	12	75	●
P30-S4-12-40-12-100	12	40	12	100	●
P30-S4-12-50-12-150	12	50	12	150	●
P30-S4-14-45-14-100	14	45	14	100	●
P30-S4-14-60-14-150	14	60	14	150	●
P30-S4-16-45-16-100	16	45	16	100	●
P30-S4-16-60-16-150	16	60	16	150	●
P30-S4-18-45-18-100	18	45	18	100	●
P30-S4-18-60-18-150	18	60	18	150	●
P30-S4-20-45-20-100	20	45	20	100	●
P30-S4-20-60-20-150	20	60	20	150	●

P30-R2

2刃圆角头高速加工立铣刀
2-Flute, Corner Radius Endmill for High Speed Machining



P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-R2-3-9-4-50-0.2	3	0.2	9	4	50	○
P30-R2-3-9-4-50-0.5	3	0.5	9	4	50	○
P30-R2-4-10-4-50-0.5	4	0.5	10	4	50	○
P30-R2-4-10-6-50-0.3	4	0.3	10	6	50	○
P30-R2-4-10-6-50-0.5	4	0.5	10	6	50	○
P30-R2-4-10-6-50-1	4	1	10	6	50	○
P30-R2-5-15-6-50-0.5	5	0.5	15	6	50	○
P30-R2-6-16-6-50-0.2	6	0.2	16	6	50	○
P30-R2-6-16-6-50-0.5	6	0.5	16	6	50	○
P30-R2-6-16-6-50-1	6	1	16	6	50	○
P30-R2-8-20-8-60-0.5	8	0.5	20	8	60	○
P30-R2-8-20-8-60-1	8	1	20	8	60	○
P30-R2-10-25-10-75-0.5	10	0.5	25	10	75	○
P30-R2-12-30-12-75-0.5	12	0.5	30	12	75	○

● 标准库存Stock ○ 需预订Available Upon Order

P30-R4

4刃圆角头高速加工立铣刀
4-Flute, Corner Radius Endmill for High Speed Machining



订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-R4-1-3-4-50-0.1	1	0.1	3	4	50	●
P30-R4-1-3-4-50-0.2	1	0.2	3	4	50	●
P30-R4-1-3-4-50-0.3	1	0.3	3	4	50	●
P30-R4-2-6-4-50-0.1	2	0.1	6	4	50	●
P30-R4-2-6-4-50-0.2	2	0.2	6	4	50	●
P30-R4-2-6-4-50-0.3	2	0.3	6	4	50	●
P30-R4-3-6-4-50-0.1	3	0.1	6	4	50	●
P30-R4-3-6-4-50-0.2	3	0.2	6	4	50	●
P30-R4-3-9-4-50-0.3	3	0.3	9	4	50	●
P30-R4-3-6-4-50-0.5	3	0.5	6	4	50	●
P30-R4-4-10-4-50-0.1	4	0.1	10	4	50	●
P30-R4-4-10-4-50-0.2	4	0.2	10	4	50	●
P30-R4-4-10-4-50-0.3	4	0.3	10	4	50	●
P30-R4-4-10-4-50-0.5	4	0.5	10	4	50	●
P30-R4-4-12-4-75-0.5	4	0.5	12	4	75	●
P30-R4-4-10-4-50-1	4	1	10	4	50	●
P30-R4-4-10-6-50-0.3	4	0.3	10	6	50	●
P30-R4-4-10-6-50-0.5	4	0.5	10	6	50	●
P30-R4-4-12-6-75-0.5	4	0.5	12	6	75	●
P30-R4-5-15-6-50-0.5	5	0.5	15	6	50	●
P30-R4-6-15-6-50-0.1	6	0.1	15	6	50	●
P30-R4-6-15-6-50-0.2	6	0.2	15	6	50	●
P30-R4-6-15-6-50-0.3	6	0.3	15	6	50	●
P30-R4-6-16-6-50-0.5	6	0.5	16	6	50	●
P30-R4-6-18-6-75-0.5	6	0.5	18	6	75	●
P30-R4-6-18-6-100-0.5	6	0.5	18	6	100	●
P30-R4-6-15-6-50-1	6	1	15	6	50	●
P30-R4-6-15-6-50-1.5	6	1.5	15	6	50	●

● 标准库存Stock ○ 需预订Available Upon Order

P30-R4

4刃圆角头高速加工立铣刀
4-Flute, Corner Radius Endmill for High Speed Machining

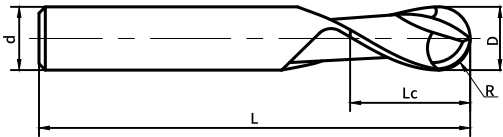


订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-R4-6-15-6-50-2	6	2	15	6	50	●
P30-R4-8-20-8-60-0.2	8	0.2	20	8	60	●
P30-R4-8-20-8-60-0.5	8	0.5	20	8	60	●
P30-R4-8-25-8-75-0.5	8	0.5	25	8	75	●
P30-R4-8-35-8-100-0.5	8	0.5	35	8	100	●
P30-R4-8-20-8-60-1	8	1	20	8	60	●
P30-R4-8-20-8-60-1.5	8	1.5	20	8	60	●
P30-R4-8-20-8-60-2	8	2	20	8	60	●
P30-R4-10-25-10-75-0.5	10	0.5	25	10	75	●
P30-R4-10-35-10-100-0.5	10	0.5	35	10	100	●
P30-R4-10-40-10-150-0.5	10	0.5	40	10	150	●
P30-R4-10-25-10-75-1	10	1	25	10	75	●
P30-R4-10-25-10-75-1.5	10	1.5	25	10	75	●
P30-R4-10-25-10-75-2	10	2	25	10	75	●
P30-R4-10-25-10-75-2.5	10	2.5	25	10	75	●
P30-R4-12-30-12-75-0.5	12	0.5	30	12	75	●
P30-R4-12-36-12-100-0.5	12	0.5	36	12	100	●
P30-R4-12-45-12-150-0.5	12	0.5	45	12	150	●
P30-R4-12-30-12-75-1	12	1	30	12	75	●
P30-R4-12-30-12-75-1.5	12	1.5	30	12	75	●
P30-R4-12-30-12-75-2	12	2	30	12	75	●
P30-R4-12-30-12-75-2.5	12	2.5	30	12	75	●
P30-R4-14-40-14-100-0.5	14	0.5	40	14	100	●
P30-R4-14-60-14-150-0.5	14	0.5	60	14	150	●
P30-R4-16-40-16-100-0.5	16	0.5	40	16	100	●
P30-R4-16-50-16-150-0.5	16	0.5	50	16	150	●
P30-R4-20-45-16-100-0.5	20	0.5	45	20	100	●
P30-R4-20-60-16-150-0.5	20	0.5	60	20	150	●

● 标准库存Stock ○ 需预订Available Upon Order

P30-B2

2刃球头高速加工立铣刀
2-Flute, Ball Nose Endmill for High Speed Machining



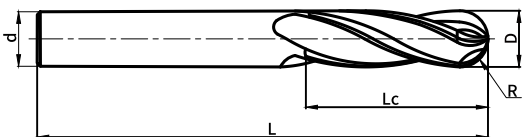
P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(R) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-B2-1-2-4-50	1	0.5	2	4	50	●
P30-B2-1.5-3-4-50	1.5	0.75	3	4	50	●
P30-B2-2-4-4-50	2	1	4	4	50	●
P30-B2-3-6-4-50	3	1.5	6	4	50	●
P30-B2-4-8-4-50	4	2	8	4	50	●
P30-B2-4-8-4-75	4	2	8	4	75	●
P30-B2-3-6-6-50	3	1.5	6	6	50	●
P30-B2-4-8-6-50	4	2	8	6	50	●
P30-B2-5-10-6-50	5	2.5	10	6	50	●
P30-B2-6-12-6-50	6	3	12	6	50	●
P30-B2-6-12-6-75	6	3	12	6	75	●
P30-B2-6-12-6-100	6	3	12	6	100	●
P30-B2-8-16-8-60	8	4	16	8	60	●
P30-B2-8-16-8-75	8	4	16	8	75	●
P30-B2-8-16-8-100	8	4	16	8	100	●
P30-B2-10-20-10-75	10	5	20	10	75	●
P30-B2-10-20-10-100	10	5	20	10	100	●
P30-B2-12-24-12-75	12	6	24	12	75	●
P30-B2-12-24-12-100	12	6	24	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order

P30-B4

4刃球头高速加工立铣刀
4-Flute, Ball Nose Endmill for High Speed Machining



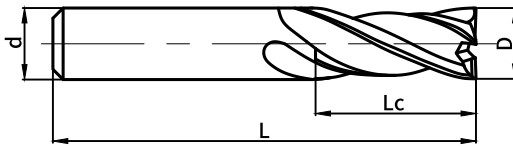
P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(R) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P30-B4-4-8-4-50	4	2	8	4	50	●
P30-B4-6-12-6-50	6	3	12	6	50	●
P30-B4-8-16-8-60	8	4	16	8	60	●
P30-B4-10-18-10-75	10	5	18	10	75	●
P30-B4-12-22-12-75	12	6	22	12	75	●

● 标准库存Stock ○ 需预订Available Upon Order

P40-S4

4刃平头高效加工立铣刀
4-Flute, Square Endmill for High Performance Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P40-S4-1-3-4-50	1	3	4	50	●
P40-S4-1.5-4-4-50	1.5	4	4	50	●
P40-S4-1.5-5-4-50	1.5	5	4	50	●
P40-S4-2-6-4-50	2	6	4	50	●
P40-S4-2.5-7-4-50	2.5	7	4	50	●
P40-S4-2.5-8-4-50	2.5	8	4	50	●
P40-S4-3-8-4-50	3	8	4	50	●
P40-S4-3-9-4-50	3	9	4	50	●
P40-S4-3-12-4-75	3	12	4	75	●
P40-S4-4-11-4-50	4	11	4	50	●
P40-S4-4-15-4-75	4	15	4	75	●
P40-S4-4-16-4-75	4	16	4	75	●
P40-S4-3-8-6-50	3	8	6	50	●
P40-S4-4-11-6-50	4	11	6	50	●
P40-S4-4.5-12-6-50	4.5	12	6	50	●
P40-S4-4.5-13-6-50	4.5	13	6	50	●
P40-S4-5-13-6-50	5	13	6	50	●
P40-S4-5-25-5-100	5	25	5	100	●
P40-S4-5-25-6-100	5	25	6	100	●
P40-S4-6-15-6-50	6	15	6	50	●
P40-S4-6-18-6-50	6	18	6	50	●
P40-S4-6-24-6-75	6	24	6	75	●
P40-S4-7-20-8-60	7	20	8	60	●
P40-S4-8-20-8-60	8	20	8	60	●
P40-S4-8-25-8-75	8	25	8	75	●

● 标准库存Stock ○ 需预订Available Upon Order

P40系列

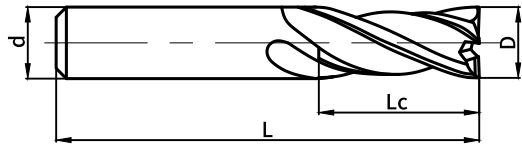
钢件高效加工立铣刀

P40 series high-performance machining end mill for steel

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: ①采用不等齿距, 不等螺旋设计, 抗震性能优异;
②U型槽设计, 排屑性能优异;
③特殊刃口处理, 均匀钝化刃口, 增强刃口强度;
- 涂层: 采用最新高性能含Si的AlCr系涂层, 保证刀具高耐磨性;
- 应用: 适合普通钢 (≤HRC48)、铸铁、不锈钢、钛合金等材料的槽铣、侧铣及动态铣等多种加工方式; 适用于大切深、大切宽的高效加工, 以及切深1D以内的槽铣加工, 也可以用于大切深、小切宽的侧铣精加工;
- Substrate: Goed wear resistance and fracture resistance;
- Geometry: ① Adopting unequal tooth pitch and unequal spiral design, with excellent anti-vibration performance;
② U-shaped groove design, excellent chip removal performance;
③ Special edge treatment, uniformly passivate the edge, enhance the edge strength;
- Coating: Adopting the latest high-performance AlCr coating containing Si to ensure high wear resistance of cutting tools;
- Application: Suitable for groove milling, side milling, and dynamic milling of materials such as ordinary steel (≤ HRC48), cast iron, stainless steel, titanium alloy, etc; Suitable for efficient machining of large cutting depth and wide cutting width, as well as slot milling within a cutting depth of 1D. It can also be used for side milling precision machining of large cutting depth and small cutting width;

P40-S4

4刃平头高效加工立铣刀
4-Flute, Square Endmill for High Performance Machining



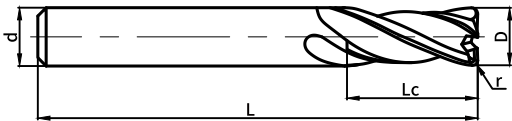
P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P40-S4-8-32-8-100	8	32	8	100	●
P40-S4-9-23-10-75	9	23	10	75	●
P40-S4-10-25-10-75	10	25	10	75	●
P40-S4-10-30-10-75	10	30	10	75	●
P40-S4-10-35-10-100	10	35	10	100	●
P40-S4-11-35-12-75	11	35	12	75	●
P40-S4-12-30-12-75	12	30	12	75	●
P40-S4-12-36-12-75	12	36	12	75	●
P40-S4-12-37-12-100	12	37	12	100	●
P40-S4-13-45-14-100	13	45	14	100	●
P40-S4-14-45-14-100	14	45	14	100	●
P40-S4-15-45-16-100	15	45	16	100	●
P40-S4-16-45-16-100	16	45	16	100	●
P40-S4-16-80-16-150	16	80	16	150	●
P40-S4-18-45-18-100	18	45	18	100	●
P40-S4-18-80-18-150	18	80	18	150	●
P40-S4-20-45-20-100	20	45	20	100	●
P40-S4-20-80-20-150	20	80	20	150	●

● 标准库存Stock ○ 需预订Available Upon Order

P40-R4

4刃圆角头高效加工立铣刀
4-Flute, Corner Radius Endmill for High Performance Machining



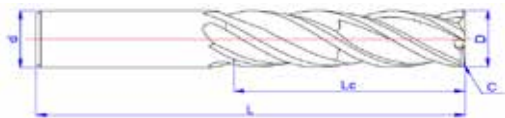
P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P40-R4-1.5-4-4-50-0.2	1.5	0.2	4	4	50	●
P40-R4-2-6-4-50-0.2	2	0.2	6	4	50	●
P40-R4-3-9-4-50-0.2	3	0.2	9	4	50	●
P40-R4-3-9-4-50-0.5	3	0.5	9	4	50	●
P40-R4-4-10-4-50-0.2	4	0.2	10	4	50	●
P40-R4-4-10-4-50-0.5	4	0.5	10	4	50	●
P40-R4-4-10-4-50-1	4	1	10	4	50	●
P40-R4-4-12-4-75-0.5	4	0.5	12	4	75	●
P40-R4-5-15-6-50-0.5	5	0.5	15	6	50	●
P40-R4-5-15-6-50-1	5	1	15	6	50	●
P40-R4-6-15-6-50-0.2	6	0.2	15	6	50	●
P40-R4-6-15-6-50-0.5	6	0.5	15	6	50	●
P40-R4-6-15-6-50-1	6	1	15	6	50	●
P40-R4-6-18-6-75-0.5	6	0.5	18	6	75	●
P40-R4-6-18-6-75-1	6	1	18	6	75	●
P40-R4-8-20-8-60-0.5	8	0.5	20	8	60	●
P40-R4-8-20-8-60-1	8	1	20	8	60	●
P40-R4-8-24-8-75-0.5	8	0.5	24	8	75	●
P40-R4-8-24-8-75-1	8	1	24	8	75	●
P40-R4-8-35-8-100-0.5	8	0.5	35	8	100	●
P40-R4-8-35-8-100-1	8	1	35	8	100	●
P40-R4-10-25-10-75-0.5	10	0.5	25	10	75	●
P40-R4-10-25-10-75-1	10	1	25	10	75	●
P40-R4-10-25-10-75-2	10	2	25	10	75	●
P40-R4-10-35-10-100-0.5	10	0.5	35	10	100	●
P40-R4-10-35-10-100-1	10	1	35	10	100	●
P40-R4-12-30-12-75-0.5	12	0.5	30	12	75	●
P40-R4-12-30-12-75-1	12	1	30	12	75	●
P40-R4-12-30-12-75-1.5	12	1.5	30	12	75	●
P40-R4-12-30-12-75-2	12	2	30	12	75	●
P40-R4-12-35-12-100-0.5	12	0.5	35	12	100	●
P40-R4-12-35-12-100-1	12	1	35	12	100	●
P40-R4-16-40-16-100-1	16	1	40	16	100	●
P40-R4-20-45-20-100-1	20	1	45	20	100	●

● 标准库存Stock ○ 需预订Available Upon Order

P45-C4

4刃平头倒角高效加工立铣刀
4-Flute, Square Endmill for High Performance Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	倒角 (C) Chamfering (C)	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P45-C4-4-11-4-50-0.04	4	0.04	11	4	50	●
P45-C4-5-13-6-50-0.05	5	0.05	13	6	50	●
P45-C4-6-16-6-50-0.06	6	0.06	16	6	50	●
P45-C4-8-20-8-60-0.08	8	0.08	20	8	60	●
P45-C4-10-25-10-75-0.1	10	0.1	25	10	75	●
P45-C4-12-30-12-75-0.12	12	0.12	30	12	75	●
P45-C4-14-45-14-100-0.14	14	0.14	45	14	100	●
P45-C4-16-45-16-100-0.15	16	0.15	45	16	100	●
P45-C4-18-45-18-100-0.15	18	0.15	45	18	100	●
P45-C4-20-45-20-100-0.15	20	0.15	45	20	100	●
P45-C4-6-20-6-75-0.06	6	0.06	20	6	75	○
P45-C4-8-25-8-75-0.08	8	0.08	25	8	75	○
P45-C4-10-30-10-100-0.1	10	0.1	30	10	100	○
P45-C4-12-35-12-100-0.12	12	0.12	35	12	100	○
P45-C4-14-55-14-150-0.14	14	0.14	55	14	150	○
P45-C4-16-55-16-150-0.15	16	0.15	55	16	150	○
P45-C4-18-55-18-150-0.15	18	0.15	55	18	150	○
P45-C4-20-55-20-150-0.15	20	0.15	55	20	150	○

● 标准库存Stock ○ 需预订Available Upon Order

P45系列

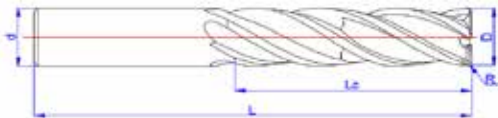
钢件高效加工立铣刀

P45 series high-performance machining end mill for steel

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: ①采用大螺旋设计, 排屑性能优异;
②大小槽设计, 适应高效加工同时能保证优秀的刚性;
③特殊刃口处理, 均匀钝化刃口, 增强刃口强度;
- 涂层: 采用最新高性能含Si的AlCr系涂层, 保证刀具高耐磨性;
- 应用: 适合普通钢 (≤HRC48)、铸铁、不锈钢、钛合金等材料的槽铣、侧铣及动态铣等多种加工方式; 适用于大切深、大切宽的高效加工, 以及切深1D以内的槽铣加工, 也可以用于大切深、小切宽的侧铣精加工;
- Substrate: A matrix that combines wear resistance and fracture resistance;
- Geometry: ①Adopting a large spiral design, it has excellent chip removal performance;
② Large and small groove design, suitable for efficient processing while ensuring excellent rigidity;
③Special edge treatment, uniformly passivate the edge, and enhance the strength of the edge;
- Coating: Adopting the latest high-performance AlCr coating containing Si to ensure high wear resistance of cutting tools;
- Application: Suitable for groove milling, side milling, and dynamic milling of materials such as ordinary steel (≤ HRC48), cast iron, stainless steel, titanium alloy, etc; Suitable for efficient machining of large cutting depth and wide cutting width, as well as groove milling within a cutting depth of 1D. It can also be used for side milling precision machining of large cutting depth and small cutting width;

P45-R4

4刃圆角头高效加工立铣刀
4-Flute, Corner Radius Endmill for High Performance Machining



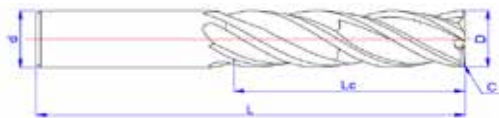
P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P45-R4-4-11-4-50-0.2	4	0.2	11	4	50	●
P45-R4-5-13-6-50-0.2	5	0.2	13	6	50	●
P45-R4-6-16-6-50-0.2	6	0.2	16	6	50	●
P45-R4-8-20-8-60-0.2	8	0.2	20	8	60	●
P45-R4-10-25-10-75-0.2	10	0.2	25	10	75	●
P45-R4-12-30-12-75-0.2	12	0.2	30	12	75	●
P45-R4-14-45-14-100-0.2	14	0.2	45	14	100	●
P45-R4-16-45-16-100-0.2	16	0.2	45	16	100	●
P45-R4-18-45-18-100-0.2	18	0.2	45	18	100	●
P45-R4-20-45-20-100-0.2	20	0.2	45	20	100	●
P45-R4-4-11-4-50-0.5	4	0.5	11	4	50	●
P45-R4-5-13-6-50-0.5	5	0.5	13	6	50	●
P45-R4-6-16-6-50-0.5	6	0.5	16	6	50	●
P45-R4-8-20-8-60-0.5	8	0.5	20	8	60	●
P45-R4-10-25-10-75-0.5	10	0.5	25	10	75	●
P45-R4-12-30-12-75-0.5	12	0.5	30	12	75	●
P45-R4-14-45-14-100-0.5	14	0.5	45	14	100	●
P45-R4-16-45-16-100-0.5	16	0.5	45	16	100	●
P45-R4-18-45-18-100-0.5	18	0.5	45	18	100	●
P45-R4-20-45-20-100-0.5	20	0.5	45	20	100	●
P45-R4-4-11-4-50-1	4	1	11	4	50	●
P45-R4-5-13-6-50-1	5	1	13	6	50	●
P45-R4-6-16-6-50-1	6	1	16	6	50	●
P45-R4-8-20-8-60-1	8	1	20	8	60	●
P45-R4-10-25-10-75-1	10	1	25	10	75	●
P45-R4-12-30-12-75-1	12	1	30	12	75	●
P45-R4-14-45-14-100-1	14	1	45	14	100	●
P45-R4-16-45-16-100-1	16	1	45	16	100	●
P45-R4-18-45-18-100-1	18	1	45	18	100	●
P45-R4-20-45-20-100-1	20	1	45	20	100	●

● 标准库存Stock ○ 需预订Available Upon Order

P45+-C5

5刃平头倒角高效加工立铣刀
5-Flute, Square Endmill for High Performance Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	倒角 (C) Chamfering (C)	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P45+-C5-6-15-6-50-0.06	6	0.06	15	6	50	●
P45+-C5-8-20-8-60-0.08	8	0.08	20	8	60	●
P45+-C5-10-25-10-75-0.1	10	0.1	25	10	75	●
P45+-C5-12-30-12-75-0.12	12	0.12	30	12	75	●
P45+-C5-14-45-14-100-0.14	14	0.14	45	14	100	●
P45+-C5-16-45-16-100-0.16	16	0.16	45	16	100	●
P45+-C5-18-45-18-100-0.18	18	0.18	45	18	100	●
P45+-C5-20-45-20-100-0.2	20	0.2	45	20	100	●
P45+-C5-6-20-6-75-0.06	6	0.06	20	6	75	●
P45+-C5-8-30-8-75-0.08	8	0.08	30	8	75	●
P45+-C5-10-40-10-100-0.1	10	0.1	40	10	100	●
P45+-C5-12-45-12-100-0.12	12	0.12	45	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order

P45+-R5

5刃圆角头高效加工立铣刀
5-Flute, Corner Radius Endmill for High Performance Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P45+-R5-6-15-6-50-R0.5	6	0.5	15	6	50	●
P45+-R5-8-20-8-60-R0.5	8	0.5	20	8	60	●
P45+-R5-10-25-10-75-R0.5	10	0.5	25	10	75	●
P45+-R5-12-30-12-75-R0.5	12	0.5	30	12	75	●
P45+-R5-14-45-14-100-R0.5	14	0.5	45	14	100	●
P45+-R5-16-45-16-100-R0.5	16	0.5	45	16	100	●
P45+-R5-18-45-18-100-R0.5	18	0.5	45	18	100	●
P45+-R5-20-45-20-100-R0.5	20	0.5	45	20	100	●
P45+-R5-6-20-6-75-R0.5	6	0.5	20	6	75	●
P45+-R5-8-30-8-75-R0.5	8	0.5	30	8	75	●
P45+-R5-10-40-10-100-R0.5	10	0.5	40	10	100	●
P45+-R5-12-45-12-100-R0.5	12	0.5	45	12	100	●
P45+-R5-6-15-6-50-R1	6	1	15	6	50	●
P45+-R5-8-20-8-60-R1	8	1	20	8	60	●
P45+-R5-10-25-10-75-R1	10	1	25	10	75	●
P45+-R5-12-30-12-75-R1	12	1	30	12	75	●
P45+-R5-14-45-14-100-R1	14	1	45	14	100	●
P45+-R5-16-45-16-100-R1	16	1	45	16	100	●
P45+-R5-18-45-18-100-R1	18	1	45	18	100	●
P45+-R5-20-45-20-100-R1	20	1	45	20	100	●
P45+-R5-6-20-6-75-R1	6	1	20	6	75	●
P45+-R5-8-30-8-75-R1	8	1	30	8	75	●
P45+-R5-10-40-10-100-R1	10	1	40	10	100	●
P45+-R5-12-45-12-100-R1	12	1	45	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order

P50系列

钢件微加工立铣刀
P50 series micro machining end mill for steel

- 基体: 采用超高硬度的超细晶基体, 确保刀具加工寿命;
- 刀型: ①高精度的刃径精度、球头轮廓、R弧轮廓及柄部精度(h5);
②特殊的角度及长避空设计;
- 涂层: 采用高性能AlCrSiN纳米涂层, 耐高温、耐磨损;
- 应用: 适用于精密模具行业碳钢、合金钢、淬硬钢、铜、铝合金等材料 (硬度≤HRC55) 的深沟槽微加工;
- Substrate: Using ultra-high hardness ultra-fine grain substrate to ensure tool processing life;
- Geometry: ①High precision diameter accuracy, ball head contour, R-arc contour, and shank accuracy (h5);
② Special angles and long avoidance design;
- Coating: Adopting high-performance AlCrSiN nano coating, high temperature resistance and wear resistance;
- Application: Suitable for deep groove micro machining of carbon steel, alloy steel, quenched steel, copper, aluminum alloy and other materials (hardness ≤ HRC55) in the precision mold industry;

P50-S2

2刃平头微加工立铣刀
2-Flute, Square Endmill for Micro Machining



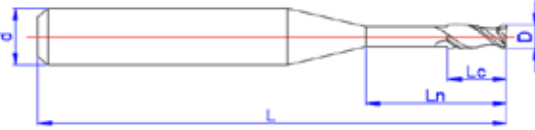
P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-S2-0.1-0.2-4-50	0.1	0.2	4	50	●
P50-S2-0.15-0.3-4-50	0.15	0.3	4	50	●
P50-S2-0.2-0.4-4-50	0.2	0.4	4	50	●
P50-S2-0.3-0.6-4-50	0.3	0.6	4	50	●
P50-S2-0.4-0.8-4-50	0.4	0.8	4	50	●
P50-S2-0.5-1-4-50	0.5	1	4	50	●
P50-S2-0.6-1.2-4-50	0.6	1.2	4	50	●
P50-S2-0.7-1.4-4-50	0.7	1.4	4	50	●
P50-S2-0.8-1.6-4-50	0.8	1.6	4	50	●
P50-S2-0.9-1.8-4-50	0.9	1.8	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

P50-SN2

2刃深沟平头微加工立铣刀
2-Flute, Square Endmill for Micro Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-SN2-0.2-0.3-1-4-50	0.2	0.3	1	4	50	●
P50-SN2-0.2-0.3-2-4-50	0.2	0.3	2	4	50	●
P50-SN2-0.3-0.45-1-4-50	0.3	0.45	1	4	50	●
P50-SN2-0.3-0.45-2-4-50	0.3	0.45	2	4	50	●
P50-SN2-0.3-0.45-3-4-50	0.3	0.45	3	4	50	●
P50-SN2-0.3-0.45-4-4-50	0.3	0.45	4	4	50	●
P50-SN2-0.4-0.6-2-4-50	0.4	0.6	2	4	50	●
P50-SN2-0.4-0.6-3-4-50	0.4	0.6	3	4	50	●
P50-SN2-0.4-0.6-4-4-50	0.4	0.6	4	4	50	●
P50-SN2-0.4-0.6-6-4-50	0.4	0.6	6	4	50	●
P50-SN2-0.5-0.75-2-4-50	0.5	0.75	2	4	50	●
P50-SN2-0.5-0.75-3-4-50	0.5	0.75	3	4	50	●
P50-SN2-0.5-0.75-4-4-50	0.5	0.75	4	4	50	●
P50-SN2-0.5-0.75-5-4-50	0.5	0.75	5	4	50	●
P50-SN2-0.5-0.75-6-4-50	0.5	0.75	6	4	50	●
P50-SN2-0.5-0.75-8-4-50	0.5	0.75	8	4	50	●
P50-SN2-0.6-0.9-2-4-50	0.6	0.9	2	4	50	●
P50-SN2-0.6-0.9-3-4-50	0.6	0.9	3	4	50	●
P50-SN2-0.6-0.9-4-4-50	0.6	0.9	4	4	50	●
P50-SN2-0.6-0.9-5-4-50	0.6	0.9	5	4	50	●
P50-SN2-0.6-0.9-6-4-50	0.6	0.9	6	4	50	●
P50-SN2-0.6-0.9-8-4-50	0.6	0.9	8	4	50	●
P50-SN2-0.7-1.05-3-4-50	0.7	1.05	3	4	50	●
P50-SN2-0.7-1.05-4-4-50	0.7	1.05	4	4	50	●
P50-SN2-0.7-1.05-5-4-50	0.7	1.05	5	4	50	●
P50-SN2-0.7-1.05-6-4-50	0.7	1.05	6	4	50	●
P50-SN2-0.7-1.05-8-4-50	0.7	1.05	8	4	50	●
P50-SN2-0.7-1.05-10-4-50	0.7	1.05	10	4	50	●
P50-SN2-0.8-1.2-3-4-50	0.8	1.2	3	4	50	●
P50-SN2-0.8-1.2-4-4-50	0.8	1.2	4	4	50	●
P50-SN2-0.8-1.2-5-4-50	0.8	1.2	5	4	50	●
P50-SN2-0.8-1.2-6-4-50	0.8	1.2	6	4	50	●
P50-SN2-0.8-1.2-8-4-50	0.8	1.2	8	4	50	●
P50-SN2-0.8-1.2-10-4-50	0.8	1.2	10	4	50	●

P50-SN4

4刃深沟平头微加工立铣刀
4-Flute, Square Endmill for Micro Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-SN4-1-2.5-8-4-50	1	3	8	4	50	●
P50-SN4-1-2.5-12-4-50	1	3	12	4	50	●
P50-SN4-1-2.5-16-4-50	1	3	16	4	50	●
P50-SN4-1-2.5-20-4-50	1	3	20	4	50	●
P50-SN4-1-2.5-25-4-50	1	3	25	4	50	●
P50-SN4-1.5-3.75-8-4-50	1.5	4	8	4	50	●
P50-SN4-1.5-3.75-12-4-50	1.5	4	12	4	50	●
P50-SN4-1.5-3.75-16-4-50	1.5	4	16	4	50	●
P50-SN4-1.5-3.75-20-4-50	1.5	4	20	4	50	●
P50-SN4-1.5-3.75-25-4-50	1.5	4	25	4	50	●
P50-SN4-2-5-8-4-50	2	5	8	4	50	●
P50-SN4-2-5-12-4-50	2	5	12	4	50	●
P50-SN4-2-5-16-4-50	2	5	16	4	50	●
P50-SN4-2-5-20-4-50	2	5	20	4	50	●
P50-SN4-2-5-25-4-50	2	5	25	4	50	●
P50-SN4-3-7.5-8-4-50	3	8	8	4	50	●
P50-SN4-3-7.5-12-4-50	3	8	12	4	50	●
P50-SN4-3-7.5-16-4-50	3	8	16	4	50	●
P50-SN4-3-7.5-20-4-50	3	8	20	4	50	●
P50-SN4-3-7.5-25-4-50	3	8	25	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

P50-RN4

4刃深沟圆角头微加工立铣刀
4-Flute, Corner Radius Endmill for Micro Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角 (r) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-RN4-1-2.5-8-4-50-0.2	1	0.2	3	8	4	50	●
P50-RN4-1-2.5-12-4-50-0.2	1	0.2	3	12	4	50	●
P50-RN4-1-2.5-16-4-50-0.2	1	0.2	3	16	4	50	●
P50-RN4-1-2.5-20-4-50-0.2	1	0.2	3	20	4	50	●
P50-RN4-1-2.5-25-4-50-0.2	1	0.2	3	25	4	50	●
P50-RN4-1.5-3.75-8-4-50-0.2	1.5	0.2	4	8	4	50	●
P50-RN4-1.5-3.75-12-4-50-0.2	1.5	0.2	4	12	4	50	●
P50-RN4-1.5-3.75-16-4-50-0.2	1.5	0.2	4	16	4	50	●
P50-RN4-1.5-3.75-20-4-50-0.2	1.5	0.2	4	20	4	50	●
P50-RN4-1.5-3.75-25-4-50-0.2	1.5	0.2	4	25	4	50	●
P50-RN4-2-5-8-4-50-0.2	2	0.2	5	8	4	50	●
P50-RN4-2-5-12-4-50-0.2	2	0.2	5	12	4	50	●
P50-RN4-2-5-16-4-50-0.2	2	0.2	5	16	4	50	●
P50-RN4-2-5-20-4-50-0.2	2	0.2	5	20	4	50	●
P50-RN4-2-5-25-4-50-0.2	2	0.2	5	25	4	50	●
P50-RN4-3-7.5-8-4-50-0.2	3	0.2	8	8	4	50	●
P50-RN4-3-7.5-12-4-50-0.2	3	0.2	8	12	4	50	●
P50-RN4-3-7.5-16-4-50-0.2	3	0.2	8	16	4	50	●
P50-RN4-3-7.5-20-4-50-0.2	3	0.2	8	20	4	50	●
P50-RN4-3-7.5-25-4-50-0.2	3	0.2	8	25	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

P50-B2

2刃球头微加工立铣刀
2-Flute, Ball Nose Endmill for Micro Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	球头 (R) Ball Nose	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-B2-0.1-0.2-4-50	0.1	0.05	0.2	4	50	●
P50-B2-0.15-0.3-4-50	0.15	0.075	0.3	4	50	●
P50-B2-0.2-0.4-4-50	0.2	0.1	0.4	4	50	●
P50-B2-0.3-0.6-4-50	0.3	0.15	0.6	4	50	●
P50-B2-0.4-0.8-4-50	0.4	0.2	0.8	4	50	●
P50-B2-0.5-1-4-50	0.5	0.25	1	4	50	●
P50-B2-0.6-1.2-4-50	0.6	0.3	1.2	4	50	●
P50-B2-0.7-1.4-4-50	0.7	0.35	1.4	4	50	●
P50-B2-0.8-1.6-4-50	0.8	0.4	1.6	4	50	●
P50-B2-0.9-1.8-4-50	0.9	0.45	1.8	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

P50-BN2

2刃深沟球头微加工立铣刀
2-Flute, Ball Nose Endmill for Micro Machining

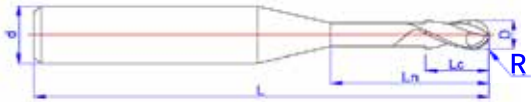


P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	球头 (R) Ball Nose	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-BN2-0.2-0.2-1-4-50	0.2	0.1	0.2	1	4	50	●
P50-BN2-0.2-0.2-2-4-50	0.2	0.1	0.2	2	4	50	●
P50-BN2-0.3-0.3-1-4-50	0.3	0.15	0.3	1	4	50	●
P50-BN2-0.3-0.3-2-4-50	0.3	0.15	0.3	2	4	50	●
P50-BN2-0.3-0.3-3-4-50	0.3	0.15	0.3	3	4	50	●
P50-BN2-0.4-0.4-2-4-50	0.4	0.2	0.4	2	4	50	●
P50-BN2-0.4-0.4-3-4-50	0.4	0.2	0.4	3	4	50	●
P50-BN2-0.4-0.4-4-4-50	0.4	0.2	0.4	4	4	50	●
P50-BN2-0.4-0.4-6-4-50	0.4	0.2	0.4	6	4	50	●
P50-BN2-0.5-0.5-2-4-50	0.5	0.25	0.5	2	4	50	●
P50-BN2-0.5-0.5-3-4-50	0.5	0.25	0.5	3	4	50	●
P50-BN2-0.5-0.5-4-4-50	0.5	0.25	0.5	4	4	50	●
P50-BN2-0.5-0.5-5-4-50	0.5	0.25	0.5	5	4	50	●
P50-BN2-0.5-0.5-6-4-50	0.5	0.25	0.5	6	4	50	●
P50-BN2-0.5-0.5-8-4-50	0.5	0.25	0.5	8	4	50	●
P50-BN2-0.6-0.6-2-4-50	0.6	0.3	0.6	2	4	50	●
P50-BN2-0.6-0.6-3-4-50	0.6	0.3	0.6	3	4	50	●
P50-BN2-0.6-0.6-4-4-50	0.6	0.3	0.6	4	4	50	●
P50-BN2-0.6-0.6-5-4-50	0.6	0.3	0.6	5	4	50	●
P50-BN2-0.6-0.6-6-4-50	0.6	0.3	0.6	6	4	50	●
P50-BN2-0.6-0.6-8-4-50	0.6	0.3	0.6	8	4	50	●
P50-BN2-0.7-0.7-3-4-50	0.7	0.35	0.7	3	4	50	●
P50-BN2-0.7-0.7-4-4-50	0.7	0.35	0.7	4	4	50	●
P50-BN2-0.7-0.7-5-4-50	0.7	0.35	0.7	5	4	50	●
P50-BN2-0.7-0.7-6-4-50	0.7	0.35	0.7	6	4	50	●
P50-BN2-0.7-0.7-8-4-50	0.7	0.35	0.7	8	4	50	●
P50-BN2-0.7-0.7-10-4-50	0.7	0.35	0.7	10	4	50	●
P50-BN2-0.8-0.8-3-4-50	0.8	0.4	0.8	3	4	50	●
P50-BN2-0.8-0.8-4-4-50	0.8	0.4	0.8	4	4	50	●
P50-BN2-0.8-0.8-5-4-50	0.8	0.4	0.8	5	4	50	●
P50-BN2-0.8-0.8-6-4-50	0.8	0.4	0.8	6	4	50	●
P50-BN2-0.8-0.8-8-4-50	0.8	0.4	0.8	8	4	50	●
P50-BN2-0.8-0.8-10-4-50	0.8	0.4	0.8	10	4	50	●
P50-BN2-1-2-8-4-50	1	0.5	2	8	4	50	●

P50-BN2

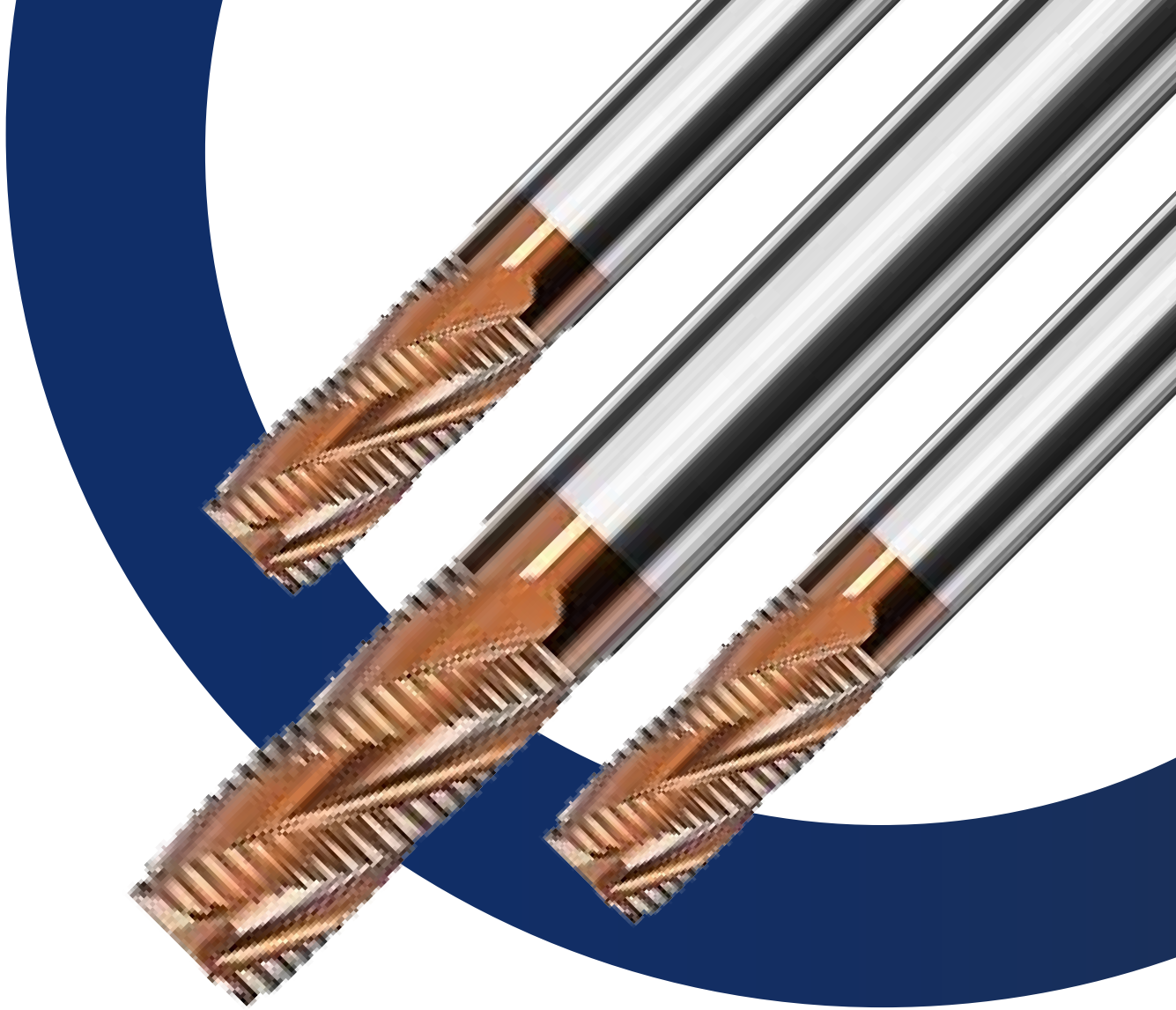
2刃深沟球头微加工立铣刀
2-Flute, Ball Nose Endmill for Micro Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	球头 (R) Ball Nose	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P50-BN2-1-2-12-4-50	1	0.5	2	12	4	50	●
P50-BN2-1-2-16-4-50	1	0.5	2	16	4	50	●
P50-BN2-1-2-20-4-50	1	0.5	2	20	4	50	●
P50-BN2-1-2-25-4-50	1	0.5	2	25	4	50	●
P50-BN2-1.5-3-8-4-50	1.5	0.75	3	8	4	50	●
P50-BN2-1.5-3-12-4-50	1.5	0.75	3	12	4	50	●
P50-BN2-1.5-3-16-4-50	1.5	0.75	3	16	4	50	●
P50-BN2-1.5-3-20-4-50	1.5	0.75	3	20	4	50	●
P50-BN2-1.5-3-25-4-50	1.5	0.75	3	25	4	50	●
P50-BN2-2-4-8-4-50	2	1	4	8	4	50	●
P50-BN2-2-4-12-4-50	2	1	4	12	4	50	●
P50-BN2-2-4-16-4-50	2	1	4	16	4	50	●
P50-BN2-2-4-20-4-50	2	1	4	20	4	50	●
P50-BN2-2-4-25-4-50	2	1	4	25	4	50	●
P50-BN2-3-6-8-4-50	3	1.5	6	8	4	50	●
P50-BN2-3-6-12-4-50	3	1.5	6	12	4	50	●
P50-BN2-3-6-16-4-50	3	1.5	6	16	4	50	●
P50-BN2-3-6-20-4-50	3	1.5	6	20	4	50	●
P50-BN2-3-6-25-4-50	3	1.5	6	25	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order



P60系列

钢件粗加工立铣刀
P60 series roughing end mill for steel

- 基体: 兼具耐磨性及抗崩性的基体
- 刀型: 采用标准型波形齿设计, 加工时产生细短切屑, 降低切削力, 排屑能优异;
- 涂层: 采用高性能含Si纳米涂层, 耐高温、耐磨损;
- 应用: 适用于普通钢(≤48HRC)、铸铁等材料的粗加工, 金属去除率高
- Substrate: A substrate with both wear resistance and anti-chipping properties.
- Geometry: Features a standard wavy tooth design, generating fine and short chips during processing, reducing cutting force and offering excellent chip removal performance.
- Coating: Equipped with a high-performance nano-coating containing silicon, which is resistant to high temperatures and wear.
- Application: Suitable for rough machining of common steel (≤ 48HRC), cast iron and other materials, with a high metal removal rate.

P60-S4

4刃平头粗加工立铣刀
4-Fluet,Square Endmill for Rough Machining



P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
P60-S4-3-8-4-50	3	8	4	50	●
P60-S4-4-10-4-50	4	10	4	50	●
P60-S4-5-12-6-50	5	12	6	50	●
P60-S4-6-15-6-50	6	15	6	50	●
P60-S4-6-18-6-75	6	18	6	75	●
P60-S4-6-24-6-100	6	24	6	100	●
P60-S4-8-20-8-60	8	20	8	60	●
P60-S4-8-24-8-60	8	24	8	60	●
P60-S4-8-24-8-75	8	24	8	75	●
P60-S4-8-35-8-100	8	35	8	100	●
P60-S4-10-25-10-75	10	25	10	75	●
P60-S4-10-30-10-75	10	30	10	75	●
P60-S4-10-40-10-100	10	40	10	100	●
P60-S4-12-30-12-75	12	30	12	75	●
P60-S4-12-36-12-75	12	36	12	75	●
P60-S4-12-45-12-100	12	45	12	100	●
P60-S4-14-40-14-100	14	40	14	100	●
P60-S4-16-45-16-100	16	45	16	100	●
P60-S4-18-45-18-100	18	45	18	100	●
P60-S4-20-45-20-100	20	45	20	100	●
P60-S4-20-75-20-150	20	75	20	150	●

● 标准库存Stock ○ 需预订Available Upon Order

M30系列

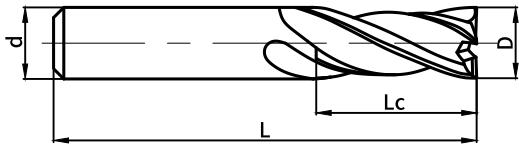
不锈钢高速加工立铣刀

M30 series high-speed machining end mill for stainless steel

- 基体:采用良好耐磨性的超细颗粒基体
- 刀型结构: ①独特的刃口设计,能有效预防刀屑粘结问题的产生
②不等螺旋不等分度设计,优异抗震性能
- 涂层:采用TiAlN涂层,刀具切削阻力小,而且抗高温和抗磨损性能优异
- 应用:适合用于钢件(≤HRC48)、铸铁、不锈钢、钛合金等材料的高速精加工,特别适合用于切削余量小且均匀的工况
- Substrate: Adopting ultrafine particle matrix with good wear resistance
- Geometry: ①Unique blade design can effectively prevent the occurrence of chip adhesion problems
②Unequal spiral and unequal pitch design, excellent seismic performance
- Coating: TiAlN coating is adopted, which reduces the cutting resistance of the tool and offers excellent high-temperature resistance and wear resistance.
- Application: Suitable for high-speed precision machining of steel parts (≤HRC48), cast iron, stainless steel, titanium alloy and other materials, especially suitable for machining conditions with small and uniform cutting allowances.

M30-S4

4刃平头高速加工立铣刀
4-Flute, Square Endmill for High Speed Machining



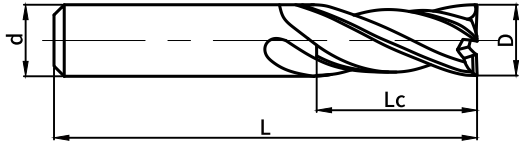
P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
M30-S4-1-3-4-50	1	3	4	50	●
M30-S4-1.5-4-4-50	1.5	4	4	50	●
M30-S4-1.5-4-6-50	1.5	4	6	50	●
M30-S4-2-6-4-50	2	6	4	50	●
M30-S4-2-6-6-50	2	6	6	50	●
M30-S4-2.5-7-4-50	2.5	7	4	50	●
M30-S4-2.5-7-6-50	2.5	7	6	50	●
M30-S4-3-12-4-75	3	12	4	75	●
M30-S4-3-8-4-50	3	8	4	50	●
M30-S4-3-8-6-50	3	8	6	50	●
M30-S4-3.5-10-4-50	3.5	10	4	50	●
M30-S4-4-11-4-50	4	11	4	50	●
M30-S4-4-11-6-50	4	11	6	50	●
M30-S4-4-15-4-75	4	15	4	75	●
M30-S4-4-16-4-100	4	16	4	100	●
M30-S4-5-13-6-50	5	13	6	50	●
M30-S4-5-20-6-100	5	20	6	100	●
M30-S4-6-15-6-50	6	15	6	50	●
M30-S4-6-24-6-100	6	24	6	100	●

● 标准库存Stock ○ 需预订Available Upon Order

M30-S4

4刃平头高速加工立铣刀
4-Flute, Square Endmill for High Speed Machining



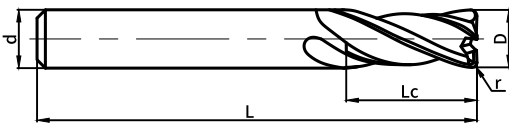
P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
M30-S4-6-24-6-75	6	24	6	75	●
M30-S4-7-20-8-60	7	20	8	60	●
M30-S4-8-20-8-60	8	20	8	60	●
M30-S4-8-25-8-75	8	25	8	75	●
M30-S4-8-32-8-100	8	32	8	100	●
M30-S4-9-23-10-75	9	23	10	75	●
M30-S4-10-25-10-75	10	25	10	75	●
M30-S4-10-35-10-100	10	35	10	100	●
M30-S4-11-28-12-75	11	28	12	75	●
M30-S4-12-30-12-75	12	30	12	75	●
M30-S4-12-37-12-100	12	37	12	100	●
M30-S4-13-32-14-100	13	32	14	100	●
M30-S4-14-40-14-100	14	40	14	100	●
M30-S4-15-36-16-100	15	36	16	100	●
M30-S4-16-45-16-100	16	45	16	100	●
M30-S4-17-38-18-100	17	38	18	100	●
M30-S4-18-45-18-100	18	45	18	100	●
M30-S4-19-45-20-100	19	45	20	100	●
M30-S4-20-45-20-100	20	45	20	100	●

● 标准库存Stock ○ 需预订Available Upon Order

M30-R4

4刃圆角头高速加工立铣刀
4-Flute, Corner Radius Endmill for High Speed Machining



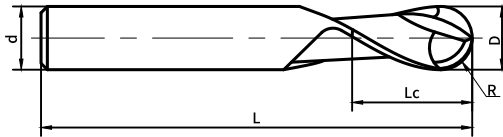
P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
M30-R4-1-3-4-50-0.2	1	0.2	3	4	50	●
M30-R4-1.5-4-4-50-0.2	1.5	0.2	4	4	50	●
M30-R4-2-6-4-50-0.2	2	0.2	6	4	50	●
M30-R4-2-6-4-50-0.5	2	0.5	6	4	50	●
M30-R4-3-9-4-50-0.2	3	0.2	9	4	50	●
M30-R4-3-9-4-50-0.5	3	0.5	9	4	50	●
M30-R4-4-10-4-50-0.2	4	0.2	10	4	50	●
M30-R4-4-12-4-75-0.2	4	0.2	12	4	75	●
M30-R4-4-10-4-50-0.5	4	0.5	10	4	50	●
M30-R4-4-12-4-75-0.5	4	0.5	12	4	75	●
M30-R4-4-12-6-75-0.5	4	0.5	12	6	75	●
M30-R4-4-10-4-50-1	4	1	10	4	50	●
M30-R4-5-15-6-50-0.5	5	0.5	15	6	560	●
M30-R4-5-15-6-50-1	5	1	15	6	50	●
M30-R4-6-15-6-50-0.2	6	0.2	15	6	50	●
M30-R4-6-15-6-50-0.5	6	0.5	15	6	50	●
M30-R4-6-18-6-75-0.5	6	0.5	18	6	75	●
M30-R4-6-15-6-50-1	6	1	15	6	50	●
M30-R4-6-18-6-75-1	6	1	18	6	75	●
M30-R4-8-20-8-60-0.5	8	0.5	20	8	60	●
M30-R4-8-24-8-75-0.5	8	0.5	24	8	75	●
M30-R4-8-35-8-100-0.5	8	0.5	35	8	100	●
M30-R4-10-25-10-75-0.5	10	0.5	25	10	75	●
M30-R4-10-35-10-100-0.5	10	0.5	35	10	100	●
M30-R4-10-25-10-75-1	10	1	25	10	75	●
M30-R4-10-35-10-100-1	10	1	35	10	100	●
M30-R4-10-25-10-75-2	10	2	25	10	75	●
M30-R4-12-30-12-75-0.5	12	0.5	30	12	75	●
M30-R4-12-35-12-100-0.5	12	0.5	35	12	100	●
M30-R4-12-30-12-75-1.5	12	1.5	30	12	75	●
M30-R4-12-30-12-75-1	12	1	30	12	75	●
M30-R4-12-35-12-100-1	12	1	35	12	100	●
M30-R4-12-30-12-75-2	12	2	30	12	75	●
M30-R4-16-40-16-100-1	16	1	40	16	100	●
M30-R4-20-45-20-100-1	20	1	45	20	100	●

● 标准库存Stock ○ 需预订Available Upon Order

M30-B2

2刃球头高速加工立铣刀
2-Flute, Ball Nose Endmill for High Speed Machining



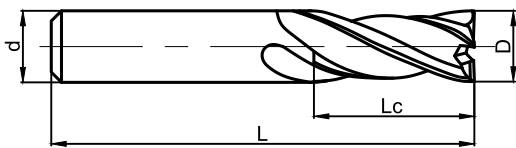
P	K	M	S	N	H
●	●	●	○		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
M30-B2-1-2-4-50	1	2	4	50	●
M30-B2-1.5-3-4-50	1.5	3	4	50	●
M30-B2-2-4-4-50	2	4	4	50	●
M30-B2-2.5-5-4-50	2.5	5	4	50	●
M30-B2-3-6-4-50	3	6	4	50	●
M30-B2-4-8-4-50	4	8	4	50	●
M30-B2-4-8-4-75	4	8	4	75	●
M30-B2-5-10-6-50	5	10	6	50	●
M30-B2-6-12-6-50	6	12	6	50	●
M30-B2-6-12-6-75	6	12	6	75	●
M30-B2-6-12-6-100	6	12	6	100	●
M30-B2-7-14-8-60	7	14	8	60	●
M30-B2-8-16-8-60	8	16	8	60	●
M30-B2-8-16-8-75	8	16	8	75	●
M30-B2-8-16-8-100	8	16	8	100	●
M30-B2-9-18-10-75	9	18	10	75	●
M30-B2-10-20-10-75	10	20	10	75	●
M30-B2-10-20-10-100	10	20	10	100	●
M30-B2-10-20-10-100	10	20	10	100	●
M30-B2-12-24-12-75	12	24	12	75	●
M30-B2-12-24-12-100	12	24	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order

H20-S4

4刃平头通用加工立铣刀
4-Flute, Square Endmill for General Machining



P	K	M	S	N	H
●	●	○			○

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H20-S4-1-3-4-50	1	3	4	50	●
H20-S4-1.5-4-4-50	1.5	4	4	50	●
H20-S4-2-6-4-50	2	6	4	50	●
H20-S4-2.5-7-4-50	2.5	7	4	50	●
H20-S4-3-8-4-50	3	8	4	50	●
H20-S4-3-12-4-75	3	12	4	75	●
H20-S4-4-11-4-50	4	11	4	50	●
H20-S4-4-15-4-75	4	15	4	75	●
H20-S4-3-8-6-50	3	8	6	50	●
H20-S4-4-11-6-50	4	11	6	50	●
H20-S4-5-13-6-50	5	13	6	50	●
H20-S4-6-15-6-50	6	15	6	50	●
H20-S4-6-24-6-75	6	24	6	75	●
H20-S4-7-20-8-60	7	20	8	60	●
H20-S4-8-20-8-60	8	20	8	60	●
H20-S4-8-25-8-75	8	25	8	75	●
H20-S4-8-32-8-100	8	32	8	100	●
H20-S4-9-23-10-75	9	23	10	75	●
H20-S4-10-25-10-75	10	25	10	75	●
H20-S4-10-35-10-100	10	35	10	100	●
H20-S4-12-30-12-75	12	30	12	75	●
H20-S4-12-37-12-100	12	37	12	100	●
H20-S4-14-40-14-100	14	40	14	100	●
H20-S4-16-45-16-100	16	45	16	100	●

H20系列

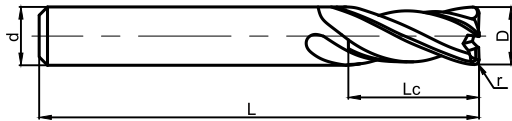
高硬钢通用加工立铣刀
H20 series general machining end mill for high-hardened steel

- 基体:采用良好耐磨性的超细颗粒基体;
 - 刀型:①大螺旋角设计,保证锋利性;
②特殊前后角设计,保证刃口强度及耐磨性;
 - 涂层:采用含Si的AlCr系涂层,耐磨性能、抗氧化性能、润滑性能优异;
 - 应用:①能实现从普通钢到预硬钢的高效率切削加工;
②适用于普通钢(≤HRC55)、铸铁等材料的通用加工;
③适用于小切深、大切宽的面铣加工;大切深、小切宽的侧铣加工,也可用于浅槽铣加工;
- Substrate: Adopting ultrafine particle substrate with good wear resistance;
● Geometry: ① Large helix angle design ensures sharpness;
② Special front and rear corner design ensures blade strength and wear resistance;
● Coating: Adopting AlCr coating containing Si, it has excellent wear resistance, oxidation resistance, and lubrication performance;
● Application: ① Can achieve efficient cutting from steel to pre hardened steel;
② Suitable for general processing of materials such as steel (≤ HRC55) and cast iron;
③ Suitable for face milling with small cutting depth and large cutting width; Side milling with large cutting depth and small cutting width can also be used for shallow slot milling;

● 标准库存Stock ○ 需预订Available Upon Order

H20-R4

4刃圆角头通用加工立铣刀
4-Flute, Corner Radius Endmill for General Machining



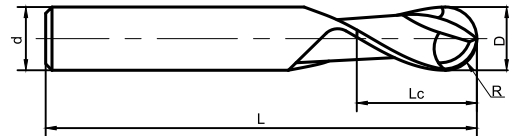
P	K	M	S	N	H
●	●	○	○		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H20-R4-1.5-4-4-50-0.2	1.5	0.2	4	4	50	●
H20-R4-2-6-4-50-0.2	2	0.2	6	4	50	●
H20-R4-3-9-4-50-0.2	3	0.2	9	4	50	●
H20-R4-3-9-4-50-0.5	3	0.5	9	4	50	●
H20-R4-4-10-4-50-0.2	4	0.2	10	4	50	●
H20-R4-4-10-4-50-0.5	4	0.5	10	4	50	●
H20-R4-4-12-4-75-0.5	4	0.5	12	4	75	●
H20-R4-4-10-4-50-1	4	1	10	4	50	●
H20-R4-5-15-6-50-0.5	5	0.5	15	6	50	●
H20-R4-5-15-6-50-1	5	1	15	6	50	●
H20-R4-6-15-6-50-0.2	6	0.2	15	6	50	●
H20-R4-6-15-6-50-0.5	6	0.5	15	6	50	●
H20-R4-6-18-6-75-0.5	6	0.5	18	6	75	●
H20-R4-6-15-6-50-1	6	1	15	6	50	●
H20-R4-6-18-6-75-1	6	1	18	6	75	●
H20-R4-8-20-8-60-0.5	8	0.5	20	8	60	●
H20-R4-8-24-8-75-0.5	8	0.5	24	8	75	●
H20-R4-8-35-8-100-0.5	8	0.5	35	8	100	●
H20-R4-8-20-8-60-1	8	1	20	8	60	●
H20-R4-8-35-8-100-1	8	1	35	8	100	●
H20-R4-10-25-10-75-0.5	10	0.5	25	10	75	●
H20-R4-10-35-10-100-0.5	10	0.5	35	10	100	●
H20-R4-10-25-10-75-1	10	1	25	10	75	●
H20-R4-10-35-10-100-1	10	1	35	10	100	●
H20-R4-10-25-10-75-2	10	2	25	10	75	●
H20-R4-12-30-12-75-0.5	12	0.5	30	12	75	●
H20-R4-12-35-12-100-0.5	12	0.5	35	12	100	●
H20-R4-12-30-12-75-1	12	1	30	12	75	●
H20-R4-12-35-12-100-1	12	1	35	12	100	●
H20-R4-12-30-12-75-1.5	12	1.5	30	12	75	●
H20-R4-12-30-12-75-2	12	2	30	12	75	●
H20-R4-16-40-16-100-1	16	1	45	16	100	●
H20-R4-20-45-20-100-1	20	1	45	20	100	●

● 标准库存Stock ○ 需预订Available Upon Order

H20-B2

2刃球头通用加工立铣刀
2-Flute, Ball Nose Endmill for General Machining



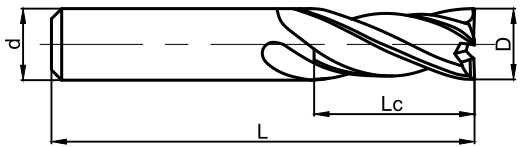
P	K	M	S	N	H
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订货号 Ordering Code	刃径 (D) Dia.	圆角(R) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H20-B2-1-2-4-50	1	0.5	2	4	50	●
H20-B2-1.5-3-4-50	1.5	0.75	3	4	50	●
H20-B2-2-4-4-50	2	1	4	4	50	●
H20-B2-2.5-5-4-50	2.5	1.25	5	4	50	●
H20-B2-3-6-4-50	3	1.5	6	4	50	●
H20-B2-4-8-4-50	4	2	8	4	50	●
H20-B2-4-8-4-75	4	2	8	4	75	●
H20-B2-5-10-6-50	5	2.5	10	6	50	●
H20-B2-6-9-6-50	6	3	9	6	50	●
H20-B2-6-9-6-60	6	3	9	6	60	●
H20-B2-6-9-6-75	6	3	9	6	75	●
H20-B2-6-12-6-50	6	3	12	6	50	●
H20-B2-6-12-6-75	6	3	12	6	75	●
H20-B2-7-14-8-60	7	3.5	14	8	60	●
H20-B2-8-12-8-60	8	4	12	8	60	●
H20-B2-8-12-8-75	8	4	12	8	75	●
H20-B2-8-16-8-60	8	4	16	8	60	●
H20-B2-8-16-8-75	8	4	16	8	75	●
H20-B2-9-18-10-75	9	4.5	18	10	75	●
H20-B2-10-20-10-75	10	5	20	10	75	●
H20-B2-10-20-10-100	10	5	20	10	100	●
H20-B2-12-24-12-75	12	6	24	12	75	●
H20-B2-12-24-12-100	12	6	24	12	100	●

● 标准库存Stock ○ 需预订Available Upon Order

H30-S4

4刃平头高速加工立铣刀
4-Flute, Square Endmill for High Speed Machining



P	K	M	S	N	H
○	○	○	○		●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H30-S4-1-3-4-50	1	3	4	50	●
H30-S4-1.5-4-4-50	1.5	4	4	50	●
H30-S4-2-6-4-50	2	6	4	50	●
H30-S4-2.5-7-4-50	2.5	7	4	50	●
H30-S4-3-9-4-50	3	9	4	50	●
H30-S4-4-11-4-50	4	11	4	50	●
H30-S4-4-15-4-75	4	15	4	75	●
H30-S4-2-6-6-50	2	6	6	50	●
H30-S4-3-9-6-50	3	9	6	50	●
H30-S4-4-11-6-50	4	11	6	50	●
H30-S4-5-13-6-50	5	13	6	50	●
H30-S4-6-15-6-50	6	15	6	50	●
H30-S4-6-20-6-75	6	20	6	75	●
H30-S4-8-20-8-60	8	20	8	60	●
H30-S4-8-25-8-75	8	25	8	75	●
H30-S4-10-25-10-75	10	25	10	75	●
H30-S4-10-30-10-100	10	30	10	100	●
H30-S4-12-30-12-75	12	30	12	75	●
H30-S4-12-35-12-100	12	35	12	100	●
H30-S4-14-35-14-100	14	35	14	100	●
H30-S4-16-45-16-100	16	45	16	100	●

● 标准库存Stock ○ 需预订Available Upon Order

H30系列

高硬钢高速加工立铣刀

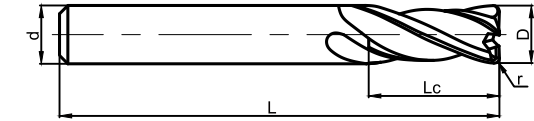
H30 series high-speed machining end mill for high-hardened steel

- 基体:采用超高硬度的超细晶基体,确保刀具加工寿命;
- 刀型:独特的槽型设计结合精细磨削工艺,实现了高硬钢的高品质加工;
- 涂层:采用含Si的高硬度涂层,耐磨性及抗高温磨损性能优异;
- 应用:适用于45~62HRC预硬化钢、淬火钢、高硬钢的半精加工、精加工;
适用于大切深、小切宽侧铣加工,小切深、小切宽精加工;

- Substrate: Using ultra-high hardness ultra-fine grain substrate to ensure tool processing life;
- Geometry: The unique groove design combined with fine grinding technology achieves high-quality processing of high hardness steel;
- Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance and high-temperature wear resistance;
- Application: Suitable for semi-finishing and finishing of 45~62HRC pre hardened steel, quenched steel, and high hardness steel;
Suitable for side milling with large cutting depth and small cutting width, and finishing with small cutting depth and small cutting width

H30-R4

4刃圆角头高速加工立铣刀
4-Flute, Corner Radius Endmill for High Speed Machining



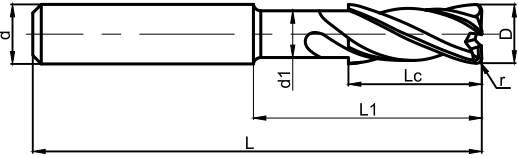
P	K	M	S	N	H
○	○	○	○		●

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H30-R4-3-6-4-50-0.2	3	0.2	6	4	50	●
H30-R4-4-8-4-50-0.3	4	0.3	8	4	50	●
H30-R4-4-8-4-50-0.5	4	0.5	8	4	50	●
H30-R4-4-12-75-0.5	4	0.5	12	4	75	●
H30-R4-5-10-6-50-0.5	5	0.5	10	6	50	●
H30-R4-6-12-6-50-0.5	6	0.5	12	6	50	●
H30-R4-6-12-75-0.5	6	0.5	12	6	75	●
H30-R4-6-12-6-50-1	6	1	12	6	50	●
H30-R4-8-16-8-60-0.5	8	0.5	16	8	60	●
H30-R4-8-16-75-0.5	8	0.5	16	8	75	●
H30-R4-8-16-8-60-1	8	1	16	8	60	●
H30-R4-10-20-10-75-0.5	10	0.5	20	10	75	●
H30-R4-10-20-10-100-0.5	10	0.5	20	10	100	●
H30-R4-10-20-10-75-1	10	1	20	10	75	●
H30-R4-12-24-12-75-0.5	12	0.5	24	12	75	●
H30-R4-12-24-12-100-0.5	12	0.5	24	12	100	●
H30-R4-12-24-12-75-1	12	1	24	12	75	●
H30-R4-12-24-12-75-2	12	2	24	12	75	●

● 标准库存Stock ○ 需预订Available Upon Order

H30-RN4

4刃长颈圆角头高速加工立铣刀
4-Flute, Corner Radius Endmill with
Reduced Neck for High Speed Machining



P	K	M	S	N	H
○	○	○	○		●

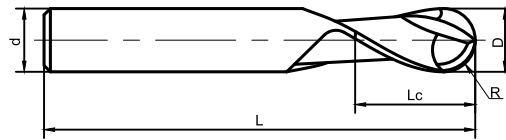
订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	颈长 (L1) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	颈径 (d1) Neck Length
H30-RN4-6-6-6-75-0.5	6	0.5	6	18	6	75	5.8
H30-RN4-6-6-6-75-1	6	1	6	18	6	75	5.8
H30-RN4-8-8-8-100-0.5	8	0.5	8	24	8	100	7.8
H30-RN4-8-8-8-100-1	8	1	8	24	8	100	7.8
H30-RN4-10-8-10-100-0.5	10	0.5	8	30	10	100	9.6
H30-RN4-10-8-10-100-1	10	1	8	30	10	100	9.6
H30-RN4-10-8-10-100-2	10	2	8	30	10	100	9.6
H30-RN4-12-12-12-100-0.5	12	0.5	12	36	12	100	11.5
H30-RN4-12-12-12-100-1	12	1	12	36	12	100	11.5
H30-RN4-12-12-12-100-2	12	2	12	36	12	100	11.5

● 标准库存Stock ○ 需预订Available Upon Order

H30-B2

2刃球头高速加工立铣刀

2-Flute, Ball Nose Endmill for High Speed Machining



P	K	M	S	N	H
○	○	○	○		●

订货号 Ordering Code	刃径 (D) Dia.	圆角(R) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H30-B2-1-1.5-4-50	1	0.5	1.5	4	50	●
H30-B2-1.5-2.5-4-50	1.5	0.75	2.5	4	50	●
H30-B2-2-3-4-50	2	1	3	4	50	●
H30-B2-2.5-4-4-50	2.5	1.25	4	4	50	●
H30-B2-3-5-4-50	3	1.5	5	4	50	●
H30-B2-4-6-4-50	4	2	6	4	50	●
H30-B2-3-5-6-50	3	1.5	5	6	50	●
H30-B2-3-4.5-6-75	3	1.5	4.5	6	75	●
H30-B2-4-6-6-50	4	2	6	6	50	●
H30-B2-4-6-6-75	4	2	6	6	75	●
H30-B2-5-7.5-6-50	5	2.5	7.5	6	50	●
H30-B2-5-7.5-6-75	5	2.5	7.5	6	75	●
H30-B2-6-9-6-50	6	3	9	6	50	●
H30-B2-6-9-6-75	6	3	9	6	75	●
H30-B2-8-12-8-60	8	4	12	8	60	●
H30-B2-8-12-8-75	8	4	12	8	75	●
H30-B2-8-12-8-100	8	4	12	8	100	●
H30-B2-10-15-10-75	10	5	15	10	75	●
H30-B2-10-15-10-100	10	5	15	10	100	●
H30-B2-12-18-12-75	12	6	18	12	75	●
H30-B2-12-18-12-100	12	6	18	12	100	●
H30-B2-16-24-16-100	16	8	24	16	100	●

● 标准库存Stock ○ 需预订Available Upon Order

H30+系列 高硬钢高速加工多刃立铣刀

H30+ series high-speed machining end mill for high-hardened steel

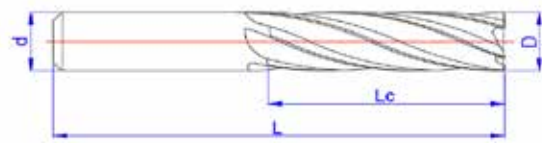
- 基体: 采用超高硬度的超细晶基体, 确保刀具加工寿命;
- 刀型: 多刃设计整体刚性较好, 适合进行高精度加工;
- 涂层: 采用含Si的高硬度涂层, 耐磨性及抗高温磨损性能优异;
- 应用: 适用于45~62HRC预硬化钢、淬火钢、高硬钢的半精加工、精加工;
适合浅切深、大切宽的加工方式, 尤其在大面积铣削时表现出色;

- Substrate: Using ultra-high hardness ultra-fine grain substrate to ensure tool processing life;
- Geometry: The multi flute design has good overall rigidity and is suitable for high-precision machining;
- Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance and high-temperature wear resistance;
- Application: Suitable for semi-finishing and finishing of 45~62HRC pre hardened steel, quenched steel, and high hardness steel;
Suitable for shallow cutting depth and large cutting width processing methods, especially performing well in large-area milling;

H30+-S6

6刃平头通用加工立铣刀

6-Flute, Square Endmill for High Speed Machining



P	K	M	S	N	H
○	○	○	○		●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H30+-S6-6-16-6-50	6	16	6	50	●
H30+-S6-6-24-6-75	6	24	6	75	●
H30+-S6-6-30-6-100	6	30	6	100	●
H30+-S6-8-20-8-60	8	20	8	60	●
H30+-S6-8-32-8-75	8	32	8	75	●
H30+-S6-10-30-10-75	10	30	10	75	●
H30+-S6-10-40-10-100	10	40	10	100	●
H30+-S6-12-32-12-75	12	32	12	75	●
H30+-S6-12-45-12-100	12	45	12	100	●
H30+-S6-16-40-16-100	16	40	16	100	●
H30+-S6-16-45-16-150	16	45	16	150	●
H30+-S6-20-45-20-100	20	45	20	100	●
H30+-S6-20-75-20-150	20	75	20	150	●

● 标准库存Stock ○ 需预订Available Upon Order



H40系列

高硬钢快进给加工立铣刀

H40 series high-feed machining end mill for high-hardened steel

- 基体: 采用良好耐磨性的超细颗粒基体;
- 刀型: ①底刃大圆弧设计, 实现高进给加工;
②特殊刀尖保护设计, 确保刀具刃口强度及抗崩刃;
- 涂层: 采用含Si的高硬涂层, 耐磨性能及抗氧化性能优异;
- 应用: ①能实现从预硬钢到淬火高硬钢的高进给切削加工;
②适用于35~65HRC高硬度材料的粗加工;
- Substrate: Adopting ultrafine particle substrate with good wear resistance;
- Geometry: ① Large curved bottom edge design, achieving high feed processing;
② Special blade tip protection design ensures the strength of the cutting edge and resistance to chipping;
- Coating: Adopting a high hardness coating containing Si, it has excellent wear resistance and oxidation resistance;
- Application: ① Can achieve high feed cutting from pre hardened steel to quenched high hardness steel;
② Suitable for rough machining of 35~65HRC high hardness materials;

H40-R6

6刃圆角头高进给加工立铣刀
6-Flute, Corner Radius Endmill for High-feed Machining



P	K	M	S	N	H
●	●	○	○		●

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H40-R6-6-6-5.7-18-6-60-0.581	6	0.581	6	6	60	●
H40-R6-6-6-5.7-30-6-70-0.581	6	0.581	6	6	70	●
H40-R6-8-8-7.6-24-8-75-0.849	8	0.849	8	8	75	●
H40-R6-8-8-7.6-40-8-80-0.849	8	0.849	8	8	80	●
H40-R6-10-10-9.5-30-10-75-0.968	10	0.968	10	10	75	●
H40-R6-10-10-9.5-50-10-100-0.968	10	0.968	10	10	100	●
H40-R6-12-12-11.5-36-12-100-1.088	12	1.088	12	12	100	●
H40-R6-12-12-11.5-60-12-110-1.088	12	1.088	12	12	110	●

● 标准库存Stock ○ 需预订Available Upon Order

H50系列

高硬钢微加工加工立铣刀
H50 series micro machining end mill for high-hardened steel

- 基体:采用优异耐磨性的基体;
- 刀型:①超高的尺寸精度控制,确保加工稳定性;
②特殊前后角设计,保证刃口强度及耐磨性;
- 涂层:采用含Si的高硬涂层,耐磨性能、抗氧化性能、润滑性能优异;
- 应用:①能实现从预硬钢到淬火高硬钢的高速切削加工;
②适用于45~65HRC高硬度材料的精加工、半精加工;
- Substrate: Using a substrate with excellent wear resistance;
- Geometry: ① Ultra-high dimensional accuracy control ensures processing stability;
② Special Rake and relief angle design enhances blade strength and wear resistance;
- Coating:Adopting a high hardness coating containing Si, it has excellent wear resistance, oxidation resistance, and superior lubricity;
- Application:① capable of high-speed cutting processing from pre hardened steel to quenched high hardness steel;
② Suitable for finish and semi-finishing of 45~65HRC high hardness materials;

H50-S2

2刃平头微加工立铣刀
2-Fluet,Square Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-S2-0.2-0.4-4-50	0.2	0.4	4	50	●
H50-S2-0.3-0.6-4-50	0.3	0.6	4	50	●
H50-S2-0.4-0.8-4-50	0.4	0.8	4	50	●
H50-S2-0.5-1-4-50	0.5	1	4	50	●
H50-S2-0.6-1.2-4-50	0.6	1.2	4	50	●
H50-S2-0.7-1.4-4-50	0.7	1.4	4	50	●
H50-S2-0.8-1.6-4-50	0.8	1.6	4	50	●
H50-S2-0.9-1.8-4-50	0.9	1.8	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-SN2

2刃深沟平头微加工立铣刀
2-Fluet,Deep Groove Square Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

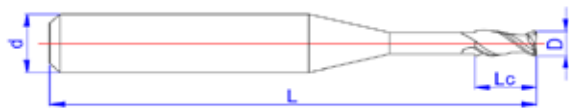
订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-SN2-0.2-0.3-0.5-4-50	0.2	0.3	0.5	4	50	●
H50-SN2-0.2-0.3-1-4-50	0.2	0.3	1	4	50	●
H50-SN2-0.2-0.3-1.5-4-50	0.2	0.3	1.5	4	50	●
H50-SN2-0.2-0.3-2-4-50	0.2	0.3	2	4	50	●
H50-SN2-0.2-0.3-3-4-50	0.2	0.3	3	4	50	●
H50-SN2-0.3-0.45-1-4-50	0.3	0.45	1	4	50	●
H50-SN2-0.3-0.45-1.5-4-50	0.3	0.45	1.5	4	50	●
H50-SN2-0.3-0.45-2-4-50	0.3	0.45	2	4	50	●
H50-SN2-0.3-0.45-2.5-4-50	0.3	0.45	2.5	4	50	●
H50-SN2-0.3-0.45-3-4-50	0.3	0.45	3	4	50	●
H50-SN2-0.4-0.6-1-4-50	0.4	0.6	1	4	50	●
H50-SN2-0.4-0.6-1.5-4-50	0.4	0.6	1.5	4	50	●
H50-SN2-0.4-0.6-2-4-50	0.4	0.6	2	4	50	●
H50-SN2-0.4-0.6-2.5-4-50	0.4	0.6	2.5	4	50	●
H50-SN2-0.4-0.6-3-4-50	0.4	0.6	3	4	50	●
H50-SN2-0.4-0.6-3.5-4-50	0.4	0.6	3.5	4	50	●
H50-SN2-0.4-0.6-4-4-50	0.4	0.6	4	4	50	●
H50-SN2-0.4-0.6-5-4-50	0.4	0.6	5	4	50	●
H50-SN2-0.4-0.6-6-4-50	0.4	0.6	6	4	50	●
H50-SN2-0.4-0.6-8-4-50	0.4	0.6	8	4	50	●
H50-SN2-0.4-0.6-10-4-50	0.4	0.6	10	4	50	●
H50-SN2-0.5-0.75-1.5-4-50	0.5	0.75	1.5	4	50	●
H50-SN2-0.5-0.75-2-4-50	0.5	0.75	2	4	50	●
H50-SN2-0.5-0.75-2.5-4-50	0.5	0.75	2.5	4	50	●
H50-SN2-0.5-0.75-3-4-50	0.5	0.75	3	4	50	●
H50-SN2-0.5-0.75-4-4-50	0.5	0.75	4	4	50	●
H50-SN2-0.5-0.75-5-4-50	0.5	0.75	5	4	50	●
H50-SN2-0.5-0.75-6-4-50	0.5	0.75	6	4	50	●
H50-SN2-0.5-0.75-8-4-50	0.5	0.75	8	4	50	●
H50-SN2-0.5-0.75-10-4-50	0.5	0.75	10	4	50	●
H50-SN2-0.6-0.9-2-4-50	0.6	0.9	2	4	50	●
H50-SN2-0.6-0.9-3-4-50	0.6	0.9	3	4	50	●
H50-SN2-0.6-0.9-4-4-50	0.6	0.9	4	4	50	●
H50-SN2-0.6-0.9-5-4-50	0.6	0.9	5	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-SN2

2刃深沟平头微加工立铣刀

2-Fluet,Deep Groove Square Endmill for Micro Machining



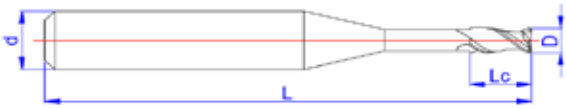
P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-SN2-0.6-0.9-6-4-50	0.6	0.9	6	4	50	●
H50-SN2-0.6-0.9-7-4-50	0.6	0.9	7	4	50	●
H50-SN2-0.6-0.9-8-4-50	0.6	0.9	8	4	50	●
H50-SN2-0.6-0.9-9-4-50	0.6	0.9	9	4	50	●
H50-SN2-0.6-0.9-10-4-50	0.6	0.9	10	4	50	●
H50-SN2-0.7-1.05-2-4-50	0.7	1.05	2	4	50	●
H50-SN2-0.7-1.05-4-4-50	0.7	1.05	4	4	50	●
H50-SN2-0.7-1.05-6-4-50	0.7	1.05	6	4	50	●
H50-SN2-0.7-1.05-8-4-50	0.7	1.05	8	4	50	●
H50-SN2-0.7-1.05-10-4-50	0.7	1.05	10	4	50	●
H50-SN2-0.8-1.2-4-4-50	0.8	1.2	4	4	50	●
H50-SN2-0.8-1.2-6-4-50	0.8	1.2	6	4	50	●
H50-SN2-0.8-1.2-8-4-50	0.8	1.2	8	4	50	●
H50-SN2-0.8-1.2-10-4-50	0.8	1.2	10	4	50	●
H50-SN2-0.8-1.2-12-4-50	0.8	1.2	12	4	50	●
H50-SN2-0.9-1.2-6-4-50	0.9	1.2	6	4	50	●
H50-SN2-0.9-1.2-8-4-50	0.9	1.2	8	4	50	●
H50-SN2-0.9-1.2-10-4-50	0.9	1.2	10	4	50	●
H50-SN2-1-3-3-4-50	1	3	3	4	50	●
H50-SN2-1-3-4-4-50	1	3	4	4	50	●
H50-SN2-1-3-5-4-50	1	3	5	4	50	●
H50-SN2-1-3-6-4-50	1	3	6	4	50	●
H50-SN2-1-3-7-4-50	1	3	7	4	50	●
H50-SN2-1-3-8-4-50	1	3	8	4	50	●
H50-SN2-1-3-9-4-50	1	3	9	4	50	●
H50-SN2-1-3-10-4-50	1	3	10	4	50	●
H50-SN2-1.5-4-4-4-50	1.5	4	4	4	50	●
H50-SN2-1.5-4-6-4-50	1.5	4	6	4	50	●
H50-SN2-1.5-4-8-4-50	1.5	4	8	4	50	●
H50-SN2-1.5-4-10-4-50	1.5	4	10	4	50	●
H50-SN2-2-5-6-4-50	2	5	6	4	50	●
H50-SN2-2-5-8-4-50	2	5	8	4	50	●
H50-SN2-2-5-10-4-50	2	5	10	4	50	●
H50-SN2-2.5-7-6-4-50	2.5	7	6	4	50	●

H50-SN2

2刃深沟平头微加工立铣刀

2-Fluet,Deep Groove Square Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-SN2-2.5-7-8-4-50	2.5	7	8	4	50	●
H50-SN2-2.5-7-10-4-50	2.5	7	10	4	50	●
H50-SN2-3-8-10-4-50	3	8	10	4	50	●
H50-SN2-4-8-10-4-50	4	8	10	4	50	●
H50-SN2-2-5-6-6-50	2	5	6	6	50	●
H50-SN2-2-5-8-6-50	2	5	8	6	50	●
H50-SN2-2-5-10-6-50	2	5	10	6	50	●
H50-SN2-2-5-6-6-75	2	5	6	6	75	●
H50-SN2-2-5-8-6-75	2	5	8	6	75	●
H50-SN2-2-5-10-6-75	2	5	10	6	75	●
H50-SN2-2-5-12-6-75	2	5	12	6	75	●
H50-SN2-2-5-14-6-75	2	5	14	6	75	●
H50-SN2-2-5-16-6-75	2	5	16	6	75	●
H50-SN2-2-5-18-6-75	2	5	18	6	75	●
H50-SN2-2-5-20-6-75	2	5	20	6	75	●
H50-SN2-2-5-25-6-75	2	5	25	6	75	●
H50-SN2-2-5-30-6-75	2	5	30	6	75	●
H50-SN2-2-5-35-6-75	2	5	35	6	75	●
H50-SN2-3-8-10-6-50	3	8	10	6	50	●
H50-SN2-3-8-12-6-75	3	8	12	6	75	●
H50-SN2-3-8-16-6-75	3	8	16	6	75	●
H50-SN2-3-8-25-6-75	3	8	25	6	75	●
H50-SN2-3-8-30-6-75	3	8	30	6	75	●
H50-SN2-4-8-10-6-50	4	8	10	6	50	●
H50-SN2-4-8-12-6-75	4	8	12	6	75	●
H50-SN2-4-8-16-6-75	4	8	16	6	75	●
H50-SN2-4-8-20-6-75	4	8	20	6	75	●
H50-SN2-4-8-25-6-75	4	8	25	6	75	●
H50-SN2-4-8-30-6-75	4	8	30	6	75	●
H50-SN2-5-10-20-6-75	5	10	20	6	75	●
H50-SN2-5-10-25-6-75	5	10	25	6	75	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-SN2

2刃深沟平头微加工立铣刀
2-Fluet,Deep Groove Square Endmill for Micro Machining

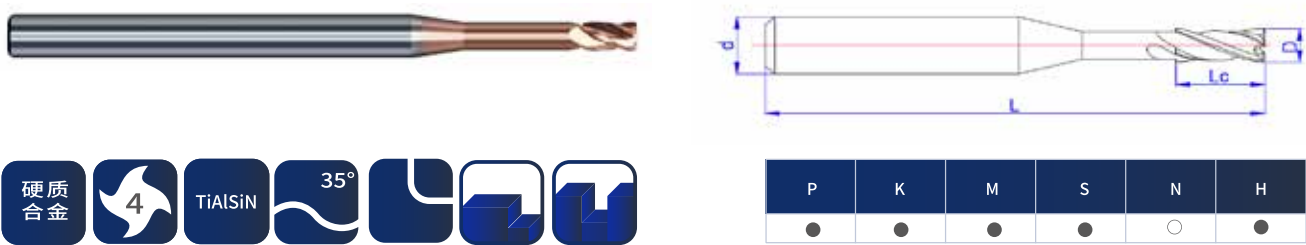


订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-SN2-5-10-30-6-75	5	10	30	6	75	●
H50-SN2-6-12-20-6-75	6	12	20	6	75	●
H50-SN2-6-12-25-6-75	6	12	25	6	75	●
H50-SN2-6-12-30-6-75	6	12	30	6	75	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-RN4

4刃深沟圆角头微加工立铣刀
4-Fluet,Deep Groove Corner Radius Endmill for Micro Machining

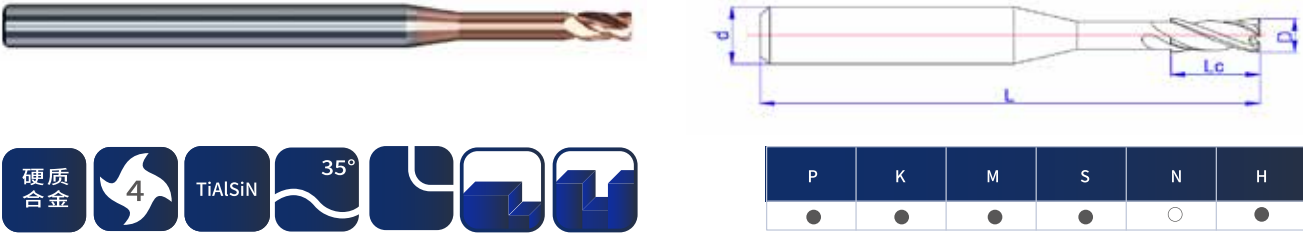


订货号 Ordering Code	刃径 (D) Dia.	圆角 (r) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-RN4-1-3-4-4-50-0.05	1	0.05	3	4	4	50	●
H50-RN4-1-3-6-4-50-0.05	1	0.05	3	6	4	50	●
H50-RN4-1-3-8-4-50-0.05	1	0.05	3	8	4	50	●
H50-RN4-1-3-10-4-50-0.05	1	0.05	3	10	4	50	●
H50-RN4-1-3-4-4-50-0.1	1	0.1	3	4	4	50	●
H50-RN4-1-3-6-4-50-0.1	1	0.1	3	6	4	50	●
H50-RN4-1-3-8-4-50-0.1	1	0.1	3	8	4	50	●
H50-RN4-1-3-10-4-50-0.1	1	0.1	3	10	4	50	●
H50-RN4-1.5-4-4-4-50-0.05	1.5	0.05	4	4	4	50	●
H50-RN4-1.5-4-6-4-50-0.05	1.5	0.05	4	6	4	50	●
H50-RN4-1.5-4-8-4-50-0.05	1.5	0.05	4	8	4	50	●
H50-RN4-1.5-4-10-4-50-0.05	1.5	0.05	4	10	4	50	●
H50-RN4-1.5-4-4-4-50-0.1	1.5	0.1	4	4	4	50	●
H50-RN4-1.5-4-6-4-50-0.1	1.5	0.1	4	6	4	50	●
H50-RN4-1.5-4-8-4-50-0.1	1.5	0.1	4	8	4	50	●
H50-RN4-1.5-4-10-4-50-0.1	1.5	0.1	4	10	4	50	●
H50-RN4-2-5-6-4-50-0.05	2	0.05	5	6	4	50	●
H50-RN4-2-5-8-4-50-0.05	2	0.05	5	8	4	50	●
H50-RN4-2-5-10-4-50-0.05	2	0.05	5	10	4	50	●
H50-RN4-2-5-6-4-50-0.1	2	0.1	5	6	4	50	●
H50-RN4-2-5-8-4-50-0.1	2	0.1	5	8	4	50	●
H50-RN4-2-5-10-4-50-0.1	2	0.1	5	10	4	50	●
H50-RN4-2-5-6-4-50-0.2	2	0.2	5	6	4	50	●
H50-RN4-2-5-8-4-50-0.2	2	0.2	5	8	4	50	●
H50-RN4-2-5-10-4-50-0.2	2	0.2	5	10	4	50	●
H50-RN4-2-5-6-4-50-0.3	2	0.3	5	6	4	50	●
H50-RN4-2-5-8-4-50-0.3	2	0.3	5	8	4	50	●
H50-RN4-2-5-10-4-50-0.3	2	0.3	5	10	4	50	●
H50-RN4-2-5-6-4-50-0.5	2	0.5	5	6	4	50	●
H50-RN4-2-5-8-4-50-0.5	2	0.5	5	8	4	50	●
H50-RN4-2-5-10-4-50-0.5	2	0.5	5	10	4	50	●
H50-RN4-2.5-6-8-4-50-0.1	2.5	0.1	6	8	4	50	●
H50-RN4-2.5-6-10-4-50-0.1	2.5	0.1	6	10	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-RN4

4刃深沟圆角头微加工立铣刀
4-Fluet,Deep Groove Corner Radius Endmill for Micro Machining

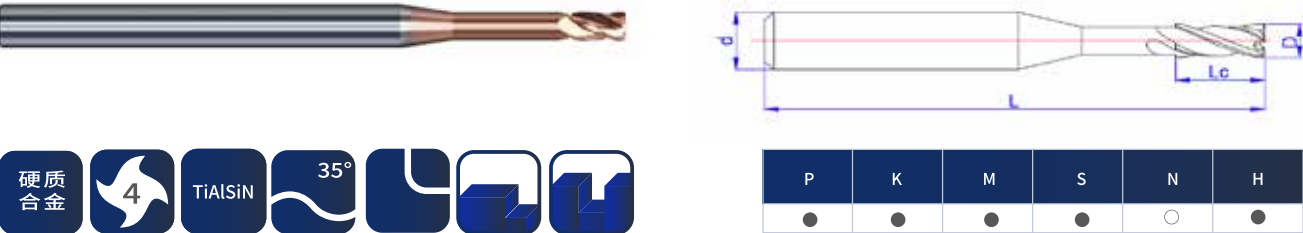


订货号 Ordering Code	刃径 (D) Dia.	圆角 (r) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-RN4-4-8-10-4-50-0.1	4	0.1	8	10	4	50	●
H50-RN4-4-8-10-4-50-0.2	4	0.2	8	10	4	50	●
H50-RN4-4-8-10-4-50-0.3	4	0.3	8	10	4	50	●
H50-RN4-4-8-10-4-50-0.5	4	0.5	8	10	4	50	●
H50-RN4-2-5-6-6-60-0.05	2	0.05	5	6	6	60	●
H50-RN4-2-5-8-6-60-0.05	2	0.05	5	8	6	60	●
H50-RN4-2-5-16-6-60-0.05	2	0.05	5	16	6	60	●
H50-RN4-2-5-20-6-60-0.05	2	0.05	5	20	6	60	●
H50-RN4-2-5-6-6-60-0.1	2	0.1	5	6	6	60	●
H50-RN4-2-5-8-6-60-0.1	2	0.1	5	8	6	60	●
H50-RN4-2-5-16-6-60-0.1	2	0.1	5	16	6	60	●
H50-RN4-2-5-20-6-60-0.1	2	0.1	5	20	6	60	●
H50-RN4-2-5-6-6-60-0.2	2	0.2	5	6	6	60	●
H50-RN4-2-5-8-6-60-0.2	2	0.2	5	8	6	60	●
H50-RN4-2-5-16-6-60-0.2	2	0.2	5	16	6	60	●
H50-RN4-2-5-20-6-60-0.2	2	0.2	5	20	6	60	●
H50-RN4-2-5-6-6-60-0.3	2	0.3	5	6	6	60	●
H50-RN4-2-5-8-6-60-0.3	2	0.3	5	8	6	60	●
H50-RN4-2-5-16-6-60-0.3	2	0.3	5	16	6	60	●
H50-RN4-2-5-20-6-60-0.3	2	0.3	5	20	6	60	●
H50-RN4-2-5-6-6-60-0.5	2	0.5	5	6	6	60	●
H50-RN4-2-5-8-6-60-0.5	2	0.5	5	8	6	60	●
H50-RN4-2-5-16-6-60-0.5	2	0.5	5	16	6	60	●
H50-RN4-2-5-20-6-60-0.5	2	0.5	5	20	6	60	●
H50-RN4-2-5-30-6-60-0.5	2	0.5	5	30	6	60	●
H50-RN4-2-5-35-6-75-0.05	2	0.5	5	35	6	75	●
H50-RN4-2-5-35-6-75-0.1	2	0.5	5	35	6	75	●
H50-RN4-2-5-35-6-75-0.2	2	0.5	5	35	6	75	●
H50-RN4-2-5-35-6-75-0.3	2	0.5	5	35	6	75	●
H50-RN4-2-5-35-6-75-0.5	2	0.5	5	35	6	75	●
H50-RN4-3-6-8-6-60-0.1	3	0.1	6	8	6	60	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-RN4

4刃深沟圆角头微加工立铣刀
4-Fluet,Deep Groove Corner Radius Endmill for Micro Machining

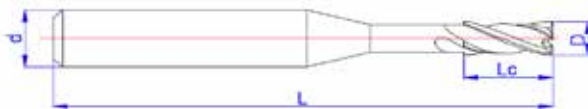


订货号 Ordering Code	刃径 (D) Dia.	圆角 (r) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-RN4-3-8-12-6-60-0.1	3	0.1	8	12	6	60	●
H50-RN4-3-8-12-6-60-0.2	3	0.2	8	12	6	60	●
H50-RN4-3-8-12-6-60-0.3	3	0.3	8	12	6	60	●
H50-RN4-3-8-12-6-60-0.5	3	0.5	8	12	6	60	●
H50-RN4-3-8-16-6-75-0.1	3	0.1	8	16	6	75	●
H50-RN4-3-8-25-6-75-0.1	3	0.1	8	25	6	75	●
H50-RN4-3-8-16-6-75-0.2	3	0.2	8	16	6	75	●
H50-RN4-3-8-25-6-75-0.2	3	0.2	8	25	6	75	●
H50-RN4-3-8-16-6-75-0.3	3	0.3	8	16	6	75	●
H50-RN4-3-8-25-6-75-0.3	3	0.3	8	25	6	75	●
H50-RN4-3-8-16-6-75-0.5	3	0.5	8	16	6	75	●
H50-RN4-3-8-25-6-75-0.5	3	0.5	8	25	6	75	●
H50-RN4-4-8-12-6-60-0.1	4	0.1	8	12	6	60	●
H50-RN4-4-8-12-6-60-0.2	4	0.2	8	12	6	60	●
H50-RN4-4-8-12-6-60-0.3	4	0.3	8	12	6	60	●
H50-RN4-4-8-12-6-60-0.5	4	0.5	8	12	6	60	●
H50-RN4-4-8-15-6-60-0.1	4	0.1	8	15	6	60	●
H50-RN4-4-8-15-6-60-0.2	4	0.2	8	15	6	60	●
H50-RN4-4-8-15-6-60-0.3	4	0.3	8	15	6	60	●
H50-RN4-4-8-15-6-60-0.5	4	0.5	8	15	6	60	●
H50-RN4-4-8-20-6-75-0.1	4	0.1	8	20	6	75	●
H50-RN4-4-8-20-6-75-0.2	4	0.2	8	20	6	75	●
H50-RN4-4-8-20-6-75-0.3	4	0.3	8	20	6	75	●
H50-RN4-4-8-20-6-75-0.5	4	0.5	8	20	6	75	●
H50-RN4-4-8-30-6-75-0.1	4	0.1	8	30	6	75	●
H50-RN4-4-8-30-6-75-0.2	4	0.2	8	30	6	75	●
H50-RN4-4-8-30-6-75-0.3	4	0.3	8	30	6	75	●
H50-RN4-4-8-30-6-75-0.5	4	0.5	8	30	6	75	●
H50-RN4-5-10-12-6-60-0.1	5	0.1	10	12	6	60	●
H50-RN4-5-10-12-6-60-0.2	5	0.2	10	12	6	60	●
H50-RN4-5-10-12-6-60-0.3	5	0.3	10	12	6	60	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-RN4

4刃深沟圆角头微加工立铣刀
4-Fluet,Deep Groove Corner Radius Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	圆角 (r) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-RN4-5-10-12-6-60-0.5	5	0.5	10	12	6	60	●
H50-RN4-5-10-12-6-60-1	5	1	10	12	6	60	●
H50-RN4-5-10-15-6-60-0.1	5	0.1	10	15	6	60	●
H50-RN4-5-10-15-6-60-0.2	5	0.2	10	15	6	60	●
H50-RN4-5-10-15-6-60-0.3	5	0.3	10	15	6	60	●
H50-RN4-5-10-15-6-60-0.5	5	0.5	10	15	6	60	●
H50-RN4-5-10-15-6-60-1	5	1	10	15	6	60	●
H50-RN4-5-10-20-6-75-0.1	5	0.1	10	20	6	75	●
H50-RN4-5-10-20-6-75-0.2	5	0.2	10	20	6	75	●
H50-RN4-5-10-20-6-75-0.3	5	0.3	10	20	6	75	●
H50-RN4-5-10-20-6-75-0.5	5	0.5	10	20	6	75	●
H50-RN4-5-10-20-6-75-1	5	1	10	20	6	75	●
H50-RN4-5-10-30-6-75-0.1	5	0.1	10	30	6	75	●
H50-RN4-5-10-30-6-75-0.2	5	0.2	10	30	6	75	●
H50-RN4-5-10-30-6-75-0.3	5	0.3	10	30	6	75	●
H50-RN4-5-10-30-6-75-0.5	5	0.5	10	30	6	75	●
H50-RN4-5-10-30-6-75-1	5	1	10	30	6	75	●
H50-RN4-6-12-15-6-60-0.2	6	0.2	12	15	6	60	●
H50-RN4-6-12-15-6-60-0.3	6	0.3	12	15	6	60	●
H50-RN4-6-12-15-6-60-0.5	6	0.5	12	15	6	60	●
H50-RN4-6-12-15-6-60-1	6	1	12	15	6	60	●
H50-RN4-6-12-20-6-75-0.2	6	0.2	12	20	6	75	●
H50-RN4-6-12-20-6-75-0.3	6	0.3	12	20	6	75	●
H50-RN4-6-12-20-6-75-0.5	6	0.5	12	20	6	75	●
H50-RN4-6-12-20-6-75-0.1	6	0.1	12	20	6	75	●
H50-RN4-1-3-4-4-50-0.2	1	0.2	3	4	4	50	●
H50-RN4-1-3-6-4-50-0.2	1	0.2	3	6	4	50	●
H50-RN4-1-3-8-4-50-0.2	1	0.2	3	8	4	50	●
H50-RN4-1-3-10-4-50-0.2	1	0.2	3	10	4	50	●
H50-RN4-1.5-4-6-4-50-0.2	1.5	0.2	4	6	4	50	●
H50-RN4-1.5-4-8-4-50-0.2	1.5	0.2	4	8	4	50	●
H50-RN4-1.5-4-10-4-50-0.2	1.5	0.2	4	10	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-B2

2刃球头微加工立铣刀
2-Flute, Ball Nose Endmill for Micro Machining



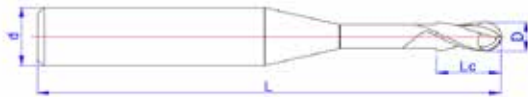
P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-B2-0.2-0.4-4-50	0.2	0.4	4	50	●
H50-B2-0.3-0.6-4-50	0.3	0.6	4	50	●
H50-B2-0.4-0.8-4-50	0.4	0.8	4	50	●
H50-B2-0.5-1-4-50	0.5	1	4	50	●
H50-B2-0.6-1.2-4-50	0.6	1.2	4	50	●
H50-B2-0.7-1.4-4-50	0.7	1.4	4	50	●
H50-B2-0.8-1.6-4-50	0.8	1.6	4	50	●
H50-B2-0.9-1.8-4-50	0.9	1.8	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-BN2

2刃深沟球头微加工立铣刀
2-Flute, Deep Groove Ball Nose Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	圆角 (R) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-BN2-0.2-0.2-0.5-4-50	0.2	0.1	0.2	0.5	4	50	●
H50-BN2-0.2-0.2-1-4-50	0.2	0.1	0.2	1	4	50	●
H50-BN2-0.2-0.2-1.5-4-50	0.2	0.1	0.2	1.5	4	50	●
H50-BN2-0.2-0.2-2-4-50	0.2	0.1	0.2	2	4	50	●
H50-BN2-0.2-0.2-3-4-50	0.2	0.1	0.2	3	4	50	●
H50-BN2-0.3-0.3-1-4-50	0.3	0.1	0.3	1	4	50	●
H50-BN2-0.3-0.3-1.5-4-50	0.3	0.1	0.3	1.5	4	50	●
H50-BN2-0.3-0.3-2-4-50	0.3	0.1	0.3	2	4	50	●
H50-BN2-0.3-0.3-2.5-4-50	0.3	0.15	0.3	2.5	4	50	●
H50-BN2-0.3-0.3-3-4-50	0.3	0.15	0.3	3	4	50	●
H50-BN2-0.4-0.4-1-4-50	0.4	0.15	0.4	1	4	50	●
H50-BN2-0.4-0.4-1.5-4-50	0.4	0.15	0.4	1.5	4	50	●
H50-BN2-0.4-0.4-2-4-50	0.4	0.15	0.4	2	4	50	●
H50-BN2-0.4-0.4-2.5-4-50	0.4	0.2	0.4	2.5	4	50	●
H50-BN2-0.4-0.4-3-4-50	0.4	0.2	0.4	3	4	50	●
H50-BN2-0.4-0.4-3.5-4-50	0.4	0.2	0.4	3.5	4	50	●
H50-BN2-0.4-0.4-4-4-50	0.4	0.2	0.4	4	4	50	●
H50-BN2-0.4-0.4-5-4-50	0.4	0.2	0.4	5	4	50	●
H50-BN2-0.5-0.5-1-4-50	0.5	0.25	0.5	1	4	50	●
H50-BN2-0.5-0.5-5-4-50	0.5	0.25	0.5	5	4	50	●
H50-BN2-0.5-0.5-2-4-50	0.5	0.25	0.5	2	4	50	●
H50-BN2-0.5-0.5-5-4-50	0.5	0.25	0.5	5	4	50	●
H50-BN2-0.5-0.5-3-4-50	0.5	0.25	0.5	3	4	50	●
H50-BN2-0.5-0.5-4-4-50	0.5	0.25	0.5	4	4	50	●
H50-BN2-0.5-0.5-5-4-50	0.5	0.25	0.5	5	4	50	●
H50-BN2-0.5-0.5-6-4-50	0.5	0.25	0.5	6	4	50	●
H50-BN2-0.5-0.5-8-4-50	0.5	0.25	0.5	8	4	50	●
H50-BN2-0.5-0.5-10-4-50	0.5	0.25	0.5	10	4	50	●
H50-BN2-0.6-0.6-2-4-50	0.6	0.3	0.6	2	4	50	●
H50-BN2-0.6-0.6-3-4-50	0.6	0.3	0.6	3	4	50	●
H50-BN2-0.6-0.6-4-4-50	0.6	0.3	0.6	4	4	50	●
H50-BN2-0.6-0.6-5-4-50	0.6	0.3	0.6	5	4	50	●
H50-BN2-0.6-0.6-6-4-50	0.6	0.3	0.6	6	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-BN2

2刃深沟球头微加工立铣刀
2-Flute, Deep Groove Ball Nose Endmill for Micro Machining



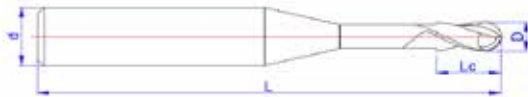
P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	圆角 (R) Corner Radius	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-BN2-0.6-0.6-7-4-50	0.6	0.3	0.6	7	4	50	●
H50-BN2-0.6-0.6-8-4-50	0.6	0.3	0.6	8	4	50	●
H50-BN2-0.6-0.6-9-4-50	0.6	0.3	0.6	9	4	50	●
H50-BN2-0.6-0.6-10-4-50	0.6	0.3	0.6	10	4	50	●
H50-BN2-0.7-0.7-2-4-50	0.7	0.35	0.7	2	4	50	●
H50-BN2-0.7-0.7-4-4-50	0.7	0.35	0.7	4	4	50	●
H50-BN2-0.7-0.7-6-4-50	0.7	0.35	0.7	6	4	50	●
H50-BN2-0.7-0.7-8-4-50	0.7	0.35	0.7	8	4	50	●
H50-BN2-0.7-0.7-10-4-50	0.7	0.35	0.7	10	4	50	●
H50-BN2-0.8-0.8-4-4-50	0.8	0.35	0.8	4	4	50	●
H50-BN2-0.8-0.8-6-4-50	0.8	0.4	0.8	6	4	50	●
H50-BN2-0.8-0.8-8-4-50	0.8	0.4	0.8	8	4	50	●
H50-BN2-0.8-0.8-10-4-50	0.8	0.4	0.8	10	4	50	●
H50-BN2-0.8-0.8-12-4-50	0.8	0.4	0.8	12	4	50	●
H50-BN2-0.9-0.9-6-4-50	0.9	0.45	0.9	6	4	50	●
H50-BN2-0.9-0.9-8-4-50	0.9	0.45	0.9	8	4	50	●
H50-BN2-0.9-0.9-10-4-50	0.9	0.45	0.9	10	4	50	●
H50-BN2-1-2-3-4-50	1	0.5	2	3	4	50	●
H50-BN2-1-2-4-4-50	1	0.5	2	4	4	50	●
H50-BN2-1-2-5-4-50	1	0.5	2	5	4	50	●
H50-BN2-1-2-6-4-50	1	0.5	2	6	4	50	●
H50-BN2-1-2-7-4-50	1	0.5	2	7	4	50	●
H50-BN2-1-2-8-4-50	1	0.5	2	8	4	50	●
H50-BN2-1-2-9-4-50	1	0.5	2	9	4	50	●
H50-BN2-1-2-10-4-50	1	0.5	2	10	4	50	●
H50-BN2-1.5-3-4-4-50	1.5	0.75	3	4	4	50	●
H50-BN2-1.5-3-6-4-50	1.5	0.75	3	6	4	50	●
H50-BN2-1.5-3-8-4-50	1.5	0.75	3	8	4	50	●
H50-BN2-1.5-3-10-4-50	1.5	0.75	3	10	4	50	●
H50-BN2-2-6-50-4-50	2	0.75	4	50	4	50	●
H50-BN2-2-8-50-4-50	2	0.75	4	50	4	50	●
H50-BN2-2-10-50-4-50	2	0.75	4	50	4	50	●
H50-BN2-2.5-5-6-4-50	2.5	1.25	5	6	4	50	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-BN2

2刃深沟球头微加工立铣刀
2-Flute, Deep Groove Ball Nose Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-BN2-2.5-5-8-4-50	2.5	5	8	4	50	●
H50-BN2-2.5-5-10-4-50	2.5	5	10	4	50	●
H50-BN2-3-6-8-4-50	3	6	8	4	50	●
H50-BN2-3-6-10-4-50	3	6	10	4	50	●
H50-BN2-4-8-10-4-50	4	6	10	4	50	●
H50-BN2-2-4-6-6-50	2	8	6	6	50	●
H50-BN2-2-4-8-6-50	2	4	8	6	50	●
H50-BN2-2-4-10-6-50	2	4	10	6	50	●
H50-BN2-2-4-6-6-75	2	4	6	6	75	●
H50-BN2-2-4-8-6-75	2	4	8	6	75	●
H50-BN2-2-4-10-6-75	2	4	10	6	75	●
H50-BN2-2-4-12-6-75	2	4	12	6	75	●
H50-BN2-2-4-14-6-75	2	4	14	6	75	●
H50-BN2-2-4-16-6-75	2	4	16	6	75	●
H50-BN2-2-4-18-6-75	2	4	18	6	75	●
H50-BN2-2-4-20-6-75	2	4	20	6	75	●
H50-BN2-2-4-25-6-75	2	4	25	6	75	●
H50-BN2-2-4-30-6-75	2	4	30	6	75	●
H50-BN2-2-4-35-6-75	2	4	35	6	75	●
H50-BN2-3-6-8-6-50	3	6	8	6	50	●
H50-BN2-3-6-10-6-50	3	6	10	6	50	●
H50-BN2-3-6-8-6-75	3	6	8	6	75	●
H50-BN2-3-6-12-6-75	3	6	12	6	75	●
H50-BN2-3-6-16-6-75	3	6	16	6	75	●
H50-BN2-3-6-25-6-75	3	6	25	6	75	●
H50-BN2-3-6-30-6-75	3	6	30	6	75	●
H50-BN2-4-8-10-6-50	4	8	10	6	50	●
H50-BN2-4-8-12-6-75	4	8	12	6	75	●
H50-BN2-4-8-16-6-75	4	8	16	6	75	●
H50-BN2-4-8-20-6-75	4	8	20	6	75	●
H50-BN2-4-8-25-6-75	4	8	25	6	75	●
H50-BN2-4-8-30-6-75	4	8	30	6	75	●
H50-BN2-5-10-20-6-75	5	10	20	6	75	●

● 标准库存Stock ○ 需预订Available Upon Order

H50-BN2

2刃深沟球头微加工立铣刀
2-Flute, Deep Groove Ball Nose Endmill for Micro Machining



P	K	M	S	N	H
●	●	●	●	○	●

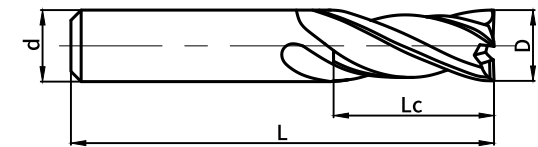
订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	避空(Ln) Neck Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
H50-BN2-5-10-25-6-75	5	10	25	6	75	●
H50-BN2-5-10-30-6-75	5	10	30	6	75	●
H50-BN2-6-12-20-6-75	6	12	20	6	75	●
H50-BN2-6-12-25-6-75	6	12	25	6	75	●
H50-BN2-6-12-30-6-75	6	12	30	6	75	●

● 标准库存Stock ○ 需预订Available Upon Order

S40-S4

4刃平头高效加工立铣刀

4-Flute, Square Endmill for High Performance Machining



P	K	M	S	N	H
●	○	●	●	○	

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
S40-S4-2-5-4-50	2	5	4	50	○
S40-S4-3-8-4-50	3	8	4	50	○
S40-S4-4-10-4-50	4	10	4	50	○
S40-S4-6-15-6-50	6	15	6	50	○
S40-S4-8-20-8-60	8	20	8	60	○
S40-S4-10-25-10-75	10	25	10	75	○
S40-S4-12-30-12-75	12	30	12	75	○
S40-S4-8-20-8-100	8	20	8	100	○
S40-S4-10-25-10-100	10	25	10	100	○
S40-S4-12-30-12-100	12	30	12	100	○

● 标准库存Stock ○ 需预订Available Upon Order

S40系列

高温合金高效加工立铣刀

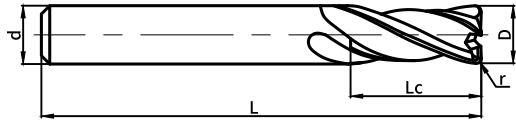
S40 series high-performance machining end mill heat-resistant super alloy

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: 采用不等齿距, 不等螺旋设计, 抗震性能优异;
- 涂层: 采用ZrN涂层, 优异的抗粘结性能;
- 应用: 适合普通钢 ($\leq$ HRC48)、铸铁、不锈钢、高强度钢、高温合金等材料的槽铣、侧铣及动态铣等多种加工方式;
适用于大切深大切宽的高效加工, 以及切深0.5D以内的槽铣加工, 也可以用于大切深、小切宽的侧铣精加工;

- Substrate: A matrix that combines wear resistance and chipping resistance;
- Geometry: Employing unequal tooth pitch and unequal helix design, with endmills it with outstanding, anti-seismic performance
- Coating: By employing ZrN coating, it exhibits outstanding anti-adhesion performance;
- Application: Suitable for groove milling, side milling, and dynamic milling of materials such as ordinary steel ($\leq$ HRC48), cast iron, stainless steel, high-strength steel, and high-temperature superalloys;
optimized for efficient processing of large cutting depth and width, as well as groove milling processing with a cutting depth of less than 0.5D. It can also be used for side milling precision processing of large cutting depth and small cutting width;

S40-R4

4刃圆角头高效加工立铣刀
4-Flute, Corner Radius Endmill for High Performance Machining



P	K	M	S	N	H
●	○	●	●	○	

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
S40-R4-2-5-4-50-0.2	2	0.2	5	4	50	○
S40-R4-3-8-4-50-0.2	3	0.2	8	4	50	○
S40-R4-4-10-4-50-0.2	4	0.2	10	4	50	○
S40-R4-6-15-6-50-0.2	6	0.2	15	6	50	○
S40-R4-8-20-8-60-0.2	8	0.2	20	8	60	○
S40-R4-10-25-10-75-0.2	10	0.2	25	10	75	○
S40-R4-12-30-12-75-0.2	12	0.2	30	12	75	○
S40-R4-8-20-8-100-0.2	8	0.2	20	8	100	○
S40-R4-10-25-10-100-0.2	10	0.2	25	10	100	○
S40-R4-12-30-12-100-0.2	12	0.2	30	12	100	○
S40-R4-2-5-4-50-0.5	2	0.5	5	4	50	○
S40-R4-3-8-4-50-0.5	3	0.5	8	4	50	○
S40-R4-4-10-4-50-0.5	4	0.5	10	4	50	○
S40-R4-6-15-6-50-0.5	6	0.5	15	6	50	○
S40-R4-8-20-8-60-0.5	8	0.5	20	8	60	○
S40-R4-10-25-10-75-0.5	10	0.5	25	10	75	○
S40-R4-12-30-12-75-0.5	12	0.5	30	12	75	○
S40-R4-8-20-8-100-0.5	8	0.5	20	8	100	○
S40-R4-10-25-10-100-0.5	10	0.5	25	10	100	○
S40-R4-12-30-12-100-0.5	12	0.5	30	12	100	○
S40-R4-2-5-4-50-1	2	1	5	4	50	○
S40-R4-3-8-4-50-1	3	1	8	4	50	○
S40-R4-4-10-4-50-1	4	1	10	4	50	○
S40-R4-6-15-6-50-1	6	1	15	6	50	○
S40-R4-8-20-8-60-1	8	1	20	8	60	○
S40-R4-10-25-10-75-1	10	1	25	10	75	○
S40-R4-12-30-12-75-1	12	1	30	12	75	○
S40-R4-8-20-8-100-1	8	1	20	8	100	○
S40-R4-10-25-10-100-1	10	1	25	10	100	○
S40-R4-12-30-12-100-1	12	1	30	12	100	○

● 标准库存Stock ○ 需预订Available Upon Order



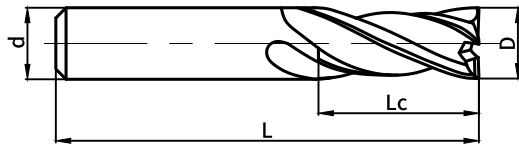
T40系列

钛合金高效加工立铣刀
T40 series high-performance machining end mill titanium alloy

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: ①采用不等齿距, 不等螺旋设计, 抗震性能优异;
②U型槽设计, 排屑性能优异;
③特殊刃口处理, 均匀钝化刃口, 增强刃口强度;
- 涂层: 采用ZrN涂层, 优异的抗粘结性能;
- 应用: 适合高强度钢、不锈钢、钛合金等材料的槽铣、侧铣及动态铣等多种加工方式;
适用于大切深大切宽的高效加工, 以及切深0.5D以内的槽铣加工, 也可以用于大切深、小切宽的侧铣精加工;
- Substrate: A substrate that combines wear resistance and fracture resistance;
- Geometry: ① Adopting unequal tooth pitch and unequal helix design, with excellent anti-vibration;
② U-shaped groove design, excellent chip removal performance;
③ with special edge treatment the cutting edge uniformdy, passswated to enhance its strength;
- Coating: Employing ZrN coating, it exhibits excellent anti-adhesion performance.
- Application: Suitable for various processing methods such as groove milling, stainless steel, side milling, and dynamic milling of high-strength steel stainless, titanium alloys, and other materials;
Suitable for efficient processing of large cutting depth and width, as well as groove milling processing with a cutting depth of less than 0.5D. It can also be used for side milling precision processing of large cutting depth and small cutting width;

T40-S4

4刃平头高效加工立铣刀
4-Flute, Square Endmill for High Performance Machining



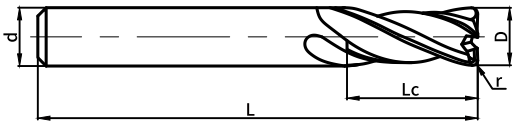
P	K	M	S	N	H
●	○	○	●		

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
T40-S4-1-3-4-50	1	3	4	50	○
T40-S4-1.5-4-4-50	1.5	4	4	50	○
T40-S4-2-6-4-50	2	6	4	50	○
T40-S4-2.5-7-4-50	2.5	7	4	50	○
T40-S4-3-8-4-50	3	8	4	50	○
T40-S4-3-12-4-75	3	12	4	75	○
T40-S4-4-11-4-50	4	11	4	50	○
T40-S4-4-15-4-75	4	15	4	75	○
T40-S4-3-8-6-50	3	8	6	50	○
T40-S4-4-11-6-50	4	11	6	50	○
T40-S4-5-13-6-50	5	13	6	50	○
T40-S4-6-15-6-50	6	15	6	50	○
T40-S4-6-24-6-75	6	24	6	75	○
T40-S4-7-20-8-60	7	20	8	60	○
T40-S4-8-20-8-60	8	20	8	60	○
T40-S4-8-25-8-75	8	25	8	75	○
T40-S4-8-32-8-100	8	32	8	100	○
T40-S4-9-23-10-75	9	23	10	75	○
T40-S4-10-25-10-75	10	25	10	75	○
T40-S4-10-35-10-100	10	35	10	100	○
T40-S4-12-30-12-75	12	30	12	75	○
T40-S4-12-37-12-100	12	37	12	100	○
T40-S4-14-45-14-100	14	45	14	100	○
T40-S4-16-45-16-100	16	45	16	100	○
T40-S4-20-45-20-100	20	45	20	100	○

● 标准库存Stock ○ 需预订Available Upon Order

T40-R4

4刃圆角头高效加工立铣刀
4-Flute, Corner Radius Endmill for High Performance Machining



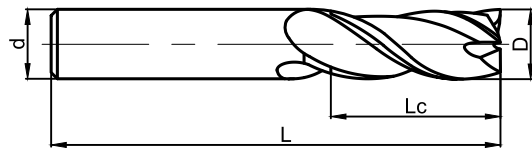
P	K	M	S	N	H
●	○	○	●		

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
T40-R4-1.5-4-4-50-0.2	1.5	0.2	4	4	50	○
T40-R4-2-6-4-50-0.2	2	0.2	6	4	50	○
T40-R4-3-9-4-50-0.2	3	0.2	9	4	50	○
T40-R4-3-9-4-50-0.5	3	0.5	9	4	50	○
T40-R4-4-10-4-50-0.2	4	0.2	10	4	50	○
T40-R4-4-10-4-50-0.5	4	0.5	10	4	50	○
T40-R4-4-10-4-50-1	4	1	10	4	50	○
T40-R4-4-12-4-75-0.5	4	0.5	12	4	75	○
T40-R4-5-15-6-50-0.5	5	0.5	15	6	50	○
T40-R4-5-15-6-50-1	5	1	15	6	50	○
T40-R4-6-15-6-50-0.2	6	0.2	15	6	50	○
T40-R4-6-15-6-50-0.5	6	0.5	15	6	50	○
T40-R4-6-15-6-50-1	6	1	15	6	50	○
T40-R4-6-18-6-75-0.5	6	0.5	18	6	75	○
T40-R4-6-18-6-75-1	6	1	18	6	75	○
T40-R4-8-20-8-60-0.5	8	0.5	20	8	60	○
T40-R4-8-20-8-60-1	8	1	20	8	60	○
T40-R4-8-24-8-75-0.5	8	0.5	24	8	75	○
T40-R4-8-24-8-75-1	8	1	24	8	75	○
T40-R4-8-35-8-100-0.5	8	0.5	35	8	100	○
T40-R4-8-35-8-100-1	8	1	35	8	100	○
T40-R4-10-25-10-75-0.5	10	0.5	25	10	75	○
T40-R4-10-25-10-75-1	10	1	25	10	75	○
T40-R4-10-25-10-75-2	10	2	25	10	75	○
T40-R4-10-35-10-100-0.5	10	0.5	35	10	100	○
T40-R4-10-35-10-100-1	10	1	35	10	100	○
T40-R4-12-30-12-75-0.5	12	0.5	30	12	75	○
T40-R4-12-30-12-75-1	12	1	30	12	75	○
T40-R4-12-30-12-75-1.5	12	1.5	30	12	75	○
T40-R4-12-30-12-75-2	12	2	30	12	75	○
T40-R4-12-35-12-100-0.5	12	0.5	35	12	100	○
T40-R4-12-35-12-100-1	12	1	35	12	100	○
T40-R4-16-40-16-100-1	16	1	40	16	100	○
T40-R4-20-45-20-100-1	20	1	45	20	100	○

● 标准库存Stock ○ 需预订Available Upon Order

A40-S3

3刃平头高效加工立铣刀
3-Flute, Square Endmill for High Performance Machining



P	K	M	S	N	H
				●	

A40系列

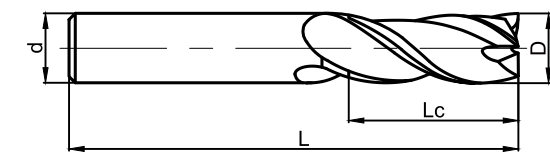
铝合金高效加工立铣刀
A40 series high-performance machining end mill aluminum alloy

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: ① 采用不等齿距, 不等螺旋设计, 抗震性能优异;
② U型槽设计, 排屑性能优异;
③ 清边留量设计, 保证被加工表面质量;
- 涂层: 白刀及七彩涂层可选;
- 应用: 适合铜合金、铝合金等材料的槽铣、侧铣及面铣加工; 可实现粗精一体化加工;
- Substrate: A substrate that combines wear resistance and fracture resistance;
- Geometry: ① Adopting unequal tooth pitch and unequal spiral design, with excellent anti-vibration;
② U-shaped groove design, excellent chip removal performance;
③ Clear edge margin design to ensure the quality of the processed surface;
- Coating: Uncoated knife and DLC are optional;
- Application :Suitable for groove milling, side milling, and surface milling of copper alloys, aluminum alloys, and other materials;
Can achieve integrated processing of roughing and finishing;

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
A40-S3-1-3-4-50	1	3	4	50	●
A40-S3-1.5-5-4-50	1.5	5	4	50	●
A40-S3-2-6-4-50	2	6	4	50	●
A40-S3-2.5-8-4-50	2.5	8	4	50	●
A40-S3-3-12-3-75	3	12	3	75	●
A40-S3-3-12-3-100	3	12	3	100	●
A40-S3-3-9-4-50	3	9	4	50	●
A40-S3-3.5-11-4-50	3.5	11	4	50	●
A40-S3-4-12-4-50	4	12	4	50	●
A40-S3-4-16-4-75	4	16	4	75	●
A40-S3-4-20-4-100	4	20	4	100	●
A40-S3-5-20-5-75	5	20	5	75	●
A40-S3-5-30-5-100	5	30	5	100	●
A40-S3-5-15-6-50	5	15	6	50	●
A40-S3-6-18-6-50	6	18	6	50	●
A40-S3-6-25-6-75	6	25	6	75	●
A40-S3-6-30-6-100	6	30	6	100	●
A40-S3-6-45-6-150	6	45	6	150	●
A40-S3-8-24-8-60	8	24	8	60	●
A40-S3-8-30-8-75	8	30	8	75	●
A40-S3-8-35-8-100	8	35	8	100	●
A40-S3-8-50-8-150	8	50	8	150	●
A40-S3-10-30-10-75	10	30	10	75	●
A40-S3-10-40-10-100	10	40	10	100	●
A40-S3-10-55-10-150	10	55	10	150	●
A40-S3-12-35-12-75	12	35	12	75	●
A40-S3-12-45-12-100	12	45	12	100	●
A40-S3-12-55-12-150	12	55	12	150	●
A40-S3-14-45-14-100	14	45	14	100	●
A40-S3-14-70-14-150	14	70	14	150	●
A40-S3-16-45-16-100	16	45	16	100	●
A40-S3-16-80-16-150	16	80	16	150	●
A40-S3-18-80-18-150	18	80	18	150	●
A40-S3-20-45-20-100	20	45	20	100	●
A40-S3-20-80-20-150	20	80	20	150	●

A40-R3

3刃圆角头高效加工立铣刀
3-Flute, Corner Radius Endmill for High Performance Machining



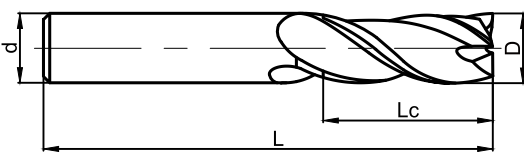
P	K	M	S	N	H
				●	

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
A40-R3-1-3-4-50-0.2	1	0.2	3	4	50	●
A40-R3-1.5-5-4-50-0.2	1.5	0.2	5	4	50	●
A40-R3-2-6-4-50-0.2	2	0.2	6	4	50	●
A40-R3-2-6-4-50-0.5	2	0.5	6	4	50	●
A40-R3-2.5-8-4-50-0.2	2.5	0.2	8	4	50	●
A40-R3-2.5-8-4-50-0.5	2.5	0.5	8	4	50	●
A40-R3-3-9-4-50-0.2	3	0.2	9	4	50	●
A40-R3-3-9-4-50-0.5	3	0.5	9	4	50	●
A40-R3-3.5-11-4-50-0.2	3.5	0.2	11	4	50	●
A40-R3-3.5-11-4-50-0.5	3.5	0.5	11	4	50	●
A40-R3-4-12-4-50-0.2	4	0.2	12	4	50	●
A40-R3-4-12-4-50-0.5	4	0.5	12	4	50	●
A40-R3-4-12-4-50-1	4	1	12	4	50	●
A40-R3-5-15-6-50-0.2	5	0.2	15	6	50	●
A40-R3-5-15-6-50-0.5	5	0.5	15	6	50	●
A40-R3-5-15-6-50-1	5	1	15	6	50	●
A40-R3-6-18-6-50-0.2	6	0.2	18	6	50	●
A40-R3-6-18-6-50-0.5	6	0.5	18	6	50	●
A40-R3-6-18-6-50-1	6	1	18	6	50	●
A40-R3-8-24-8-60-0.2	8	0.2	24	8	60	●
A40-R3-8-24-8-60-0.5	8	0.5	24	8	60	●
A40-R3-8-24-8-60-1	8	1	24	8	60	●
A40-R3-10-30-10-75-0.2	10	0.2	30	10	75	●
A40-R3-10-30-10-75-0.5	10	0.5	30	10	75	●
A40-R3-10-30-10-75-1	10	1	30	10	75	●
A40-R3-10-30-10-75-1.5	10	1.5	30	10	75	●
A40-R3-10-30-10-75-2	10	2	30	10	75	●
A40-R3-10-30-10-75-3	10	3	30	10	75	●
A40-R3-10-40-10-100-0.5	10	0.5	40	10	100	●
A40-R3-10-40-10-100-1	10	1	40	10	100	●

● 标准库存Stock ○ 需预订Available Upon Order

A40-R3

3刃圆角头高效加工立铣刀
3-Flute, Corner Radius Endmill for High Performance Machining



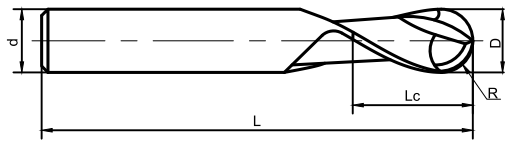
P	K	M	S	N	H
				●	

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
A40-R3-10-40-10-100-2	10	2	40	10	100	●
A40-R3-10-40-10-100-3	10	3	40	10	100	●
A40-R3-12-35-12-75-0.2	12	0.2	35	12	75	●
A40-R3-12-35-12-75-0.5	12	0.5	35	12	75	●
A40-R3-12-35-12-75-1	12	1	35	12	75	●
A40-R3-12-35-12-75-1.5	12	1.5	35	12	75	●
A40-R3-12-35-12-75-2	12	2	35	12	75	●
A40-R3-12-35-12-75-3	12	3	35	12	75	●
A40-R3-12-45-12-100-0.5	12	0.5	45	12	100	●
A40-R3-12-45-12-100-1	12	1	45	12	100	●
A40-R3-12-45-12-100-2	12	2	45	12	100	●
A40-R3-12-45-12-100-3	12	3	45	12	100	●
A40-R3-14-45-14-100-0.5	14	0.5	45	14	100	●
A40-R3-14-45-14-100-1	14	1	45	14	100	●
A40-R3-14-45-14-100-2	14	2	45	14	100	●
A40-R3-14-45-14-100-3	14	3	45	14	100	●
A40-R3-16-45-16-100-0.5	16	0.5	45	16	100	●
A40-R3-16-45-16-100-1	16	1	45	16	100	●
A40-R3-16-45-16-100-2	16	2	45	16	100	●
A40-R3-16-45-16-100-3	16	3	45	16	100	●
A40-R3-20-45-20-100-0.5	20	0.5	45	20	100	●
A40-R3-20-45-20-100-1	20	1	45	20	100	●
A40-R3-20-45-20-100-2	20	2	45	20	100	●
A40-R3-20-45-20-100-3	20	3	45	20	100	●

● 标准库存Stock ○ 需预订Available Upon Order

A40-B2

2刃球头通用加工立铣刀
2-Flute, Ball Nose Nose Endmill for General Machining



P	K	M	S	N	H
				●	

订货号 Ordering Code	刃径 (D) Dia.	圆角(r) Corner Radius	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
A40-B2-1-2-4-50	1	0.5	2	4	50	●
A40-B2-2-4-4-50	2	1	4	4	50	●
A40-B2-3-6-4-50	3	1.5	6	4	50	●
A40-B2-4-8-4-50	4	2	8	4	50	●
A40-B2-4-8-6-50	4	2	8	6	50	●
A40-B2-6-12-6-50	6	3	12	6	50	●
A40-B2-8-16-8-60	8	4	16	8	60	●
A40-B2-10-20-10-75	10	5	20	10	75	●
A40-B2-12-24-12-75	12	6	24	12	75	●
A40-B2-6-12-6-100	6	3	12	6	100	●
A40-B2-8-16-8-100	8	4	16	8	100	●
A40-B2-10-20-10-100	10	5	20	10	100	●
A40-B2-12-24-12-100	12	6	24	12	100	●
A40-B2-14-28-14-100	14	7	28	14	100	●
A40-B2-16-32-16-100	16	8	32	16	100	●
A40-B2-18-36-18-100	18	9	36	18	100	●
A40-B2-20-40-20-100	20	10	40	20	100	●

A60系列

铝合金粗加工立铣刀
A60 series roughing end mill for aluminum alloy

- 基体: 兼具耐磨性及抗崩性的基体;
- 刀型: ①大前角设计, 确保刀具锋利性;
②后波刃设计, 降低切削力, 提高加工效率;
③前刀面抛光处理, 确保排屑顺畅;
- 涂层: 无;
- 应用: 适合铜合金、铝合金等材料的槽铣、侧铣及面铣等粗加工;
- Substrate: A substrate that combines wear resistance and chipping resistance;
- Geometry: ① Large rake angle design to ensure tool sharpness;
② Rear wave edge design reduces cutting force and improves machining efficiency;
③ The front blade surface is polished to ensure smooth chip removal;
- Coating: None;
- Application: Suitable for roughing machining such as groove milling, side milling, and surface milling of copper alloys, aluminum alloys, and other materials;

A60-S3

3刃平头高效加工立铣刀
3-Flute, Square Endmill for High Performance Machining



P	K	M	S	N	H
				●	

订货号 Ordering Code	刃径 (D) Dia.	刃长 (Lc) Flute Length	柄径(d) Shank Dia.	全长(L) Overall Length	库存 Stock
A60-S3-3-8-4-50	3	8	4	50	●
A60-S3-4-10-4-50	4	10	4	50	●
A60-S3-5-12-6-50	5	12	6	50	●
A60-S3-6-15-6-50	6	15	6	50	●
A60-S3-6-18-6-75	6	18	6	75	●
A60-S3-6-24-6-100	6	24	6	100	●
A60-S3-8-20-8-60	8	20	8	60	●
A60-S3-8-24-8-60	8	24	8	60	●
A60-S3-8-24-8-75	8	24	8	75	●
A60-S3-8-35-8-100	8	35	8	100	●
A60-S3-10-25-10-75	10	25	10	75	●
A60-S3-10-30-10-75	10	30	10	75	●
A60-S3-10-40-10-100	10	40	10	100	●
A60-S3-12-30-12-75	12	30	12	75	●
A60-S3-12-36-12-75	12	36	12	75	●
A60-S3-12-45-12-100	12	45	12	100	●
A60-S3-14-40-14-100	14	40	14	100	●
A60-S3-16-45-16-100	16	45	16	100	●
A60-S3-18-45-18-100	18	45	18	100	●
A60-S3-20-45-20-100	20	45	20	100	●
A60-S3-20-75-20-150	20	75	20	150	●

● 标准库存Stock ○ 需预订Available Upon Order

P20-S2/R2 切削参数推荐表

P20-S2/R2 Recommended Cutting Parameters

侧铣 Side Milling

工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	20060	900	14490	570	14490	510
4	15040	860	10860	550	10860	480
6	10020	760	7240	500	7240	450
8	7520	770	5430	540	5430	520
10	6010	760	4340	510	4340	460

槽铣 Slotting

工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤0.8D		ap≤0.3D		ap≤0.3D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	8910	360	6130	110	6680	220
4	6680	450	4590	120	5010	250
6	4460	360	3060	160	3340	220
8	3340	330	2290	160	2500	190
10	2670	300	1830	160	2000	180

注意

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

NOTE

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adjust the parameters when chatter or abnormal vibration occurs.

P20-S4/R4 切削参数推荐表

P20-S4/R4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	20060	1790	14490	1150	14490	1020
4	15040	1730	10860	1110	10860	970
6	10020	1530	7240	990	7240	920
8	7520	1560	5430	1090	5430	1040
10	6010	1530	4340	1030	4340	940

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P20-B2 切削参数推荐表

P20-B2 Recommended Cutting Parameters

仿形铣 Profilling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤0.2D ae≤0.3D		ap≤0.2D ap≤0.2D		ap≤0.15D ae≤0.15D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
4	13370	850	9190	510	10020	510
5	10690	850	7360	530	8020	530
6	8910	850	6130	530	6680	550
7	7640	850	5260	530	5730	530
8	6680	850	4590	530	5010	520
9	5940	850	4080	520	4460	510
10	5350	850	3670	530	4010	510

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P21-S4 切削参数推荐表

P21-S4 Recommended Cutting Parameters

侧铣

Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	20060	900	14490	570	14490	510
4	15040	860	10860	550	10860	480
6	10020	760	7240	500	7240	450
8	7520	770	5430	540	5430	520
10	6010	760	4340	510	4340	460

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adjust the parameters when chatter or abnormal vibration occurs.

P30-S2/R2 切削参数推荐表

P30-S2/R2 Recommended Cutting Parameters

侧铣

Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	20060	1120	14490	720	14490	640
4	15040	1080	10860	690	10860	600
6	10020	960	7240	610	7240	570
8	7520	970	5430	680	5430	650
10	6010	960	4340	640	4340	580
12	5010	900	3620	610	3620	520
16	3750	900	2710	510	2710	430
20	3010	900	2170	480	2170	380

槽铣

Slotting



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤0.8D		ap≤0.3D		ap≤0.3D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	8910	450	6130	140	6680	270
4	6680	560	4590	160	5010	320
6	4460	460	3060	210	3340	280
8	3340	420	2290	210	2500	240
10	2670	380	1830	210	2000	230
12	2220	360	1530	190	1660	230
16	1660	420	1150	170	1240	240
20	1330	430	920	160	1000	240

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adjust the parameters when chatter or abnormal vibration occurs.

P30-S4/R4 切削参数推荐表

P30-S4/R4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	20060	2240	14490	1440	14490	1270
4	15040	2160	10860	1390	10860	1210
6	10020	1920	7240	1240	7240	1150
8	7520	1950	5430	1360	5430	1300
10	6010	1920	4340	1290	4340	1180
12	5010	1800	3620	1220	3620	1060
16	3750	1800	2710	1020	2710	870
20	3010	1800	2170	950	2170	780

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

P30-B2 切削参数推荐表

P30-B2 Recommended Cutting Parameters

仿形铣 Profiling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steels, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤0.2D ae≤0.3D		ap≤0.2D ap≤0.2D		ap≤0.15D ae≤0.15D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
4	13370	1070	9190	640	10020	640
5	10690	1070	7360	660	8020	670
6	8910	1070	6130	670	6680	690
7	7640	1070	5260	660	5730	660
8	6680	1070	4590	660	5010	650
9	5940	1070	4080	650	4460	640
10	5350	1070	3670	660	4010	640
11	4860	1070	3340	670	3640	640
12	4460	1070	3060	670	3340	640

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

P30-B4 切削参数推荐表

P30-B4 Recommended Cutting Parameters

仿形铣 Profilling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤0.2D ae≤0.3D		ap≤0.2D ap≤0.2D		ap≤0.15D ae≤0.15D	
外径 Mill Dia.(mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
4	13370	2140	9190	1290	10020	1280
5	10690	2140	7360	1320	8020	1340
6	8910	2140	6130	1350	6680	1390
7	7640	2140	5260	1320	5730	1330
8	6680	2140	4590	1320	5010	1300
9	5940	2140	4080	1310	4460	1280
10	5350	2140	3670	1320	4010	1280
11	4860	2140	3340	1330	3640	1270
12	4460	2140	3060	1350	3340	1270

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P40-S4/R4 切削参数推荐表

P40-S4/R4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径 Mill Dia.(mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	22290	2850	16710	2200	16710	1800
4	16710	2740	12530	1850	12530	1650
6	11150	2360	8350	1600	8350	1500
8	8350	2340	6260	1700	6260	1620
10	6680	2270	5010	1580	5010	1470
12	5570	2220	4170	1500	4170	1300
16	4170	2080	3130	1240	3130	1070
20	3340	2070	2500	1150	2500	950

槽铣 Slotting



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1D		ap≤0.3D		ap≤0.5D	
外径 Mill Dia.(mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	8910	1100	6130	440	6680	690
4	6680	1280	4590	440	5010	760
6	4460	1010	3060	490	3340	630
8	3340	890	2290	470	2500	520
10	2670	820	1830	450	2000	490
12	2220	790	1530	450	1660	500
16	1660	890	1150	390	1240	510
20	1330	910	920	360	1000	520

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P45-C4/R4 切削参数推荐表

P45-C4/R4 Recommended Cutting Parameters

侧铣

Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径 Mill Dia.(mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	22290	2850	16710	2200	16710	1800
4	16710	2740	12530	1850	12530	1650
6	11150	2360	8350	1600	8350	1500
8	8350	2340	6260	1700	6260	1620
10	6680	2270	5010	1580	5010	1470
12	5570	2220	4170	1500	4170	1300
16	4170	2080	3130	1240	3130	1070
20	3340	2070	2500	1150	2500	950

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P45+-C5/R5 切削参数推荐表

P45+-C5/R5 Recommended Cutting Parameters

侧铣

Side Milling



工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels,Alloy Steels,Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels,Tool Steels		预硬化钢 (35-48HRC) Pre-Hardened Steels	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.15D		ap≤1.5D ae≤0.15D		ap≤1D ae≤0.12D	
外径 Mill Dia.(mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	22290	2850	16710	2200	16710	1800
4	16710	2740	12530	1850	12530	1650
6	11150	2360	8350	1600	8350	1500
8	8350	2340	6260	1700	6260	1620
10	6680	2270	5010	1580	5010	1470
12	5570	2220	4170	1500	4170	1300
16	4170	2080	3130	1240	3130	1070
20	3340	2070	2500	1150	2500	950

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-S2/SN2/SN4 切削参数推荐表

P50/H50-SN2 Recommended Cutting Parameters

侧铣 Side Milling

工件材料 Workpiece Materials			碳钢, 合金钢 (180~250HB) Carbon Steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient			1		0.9		0.7		1.2		0.5		0.45	
外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
0.2	1	0.014	574	36450	36450	517	34425	363	45000	637	30375	271	28350	218
	2	0.005	378	29160	29160	340	27540	257	38880	454	24300	193	22680	155
0.3	1	0.021	510	32400	32400	459	30600	322	43200	612	27000	240	25200	194
	2	0.012	420	29160	29160	378	27540	290	38880	504	24300	217	22680	175
	3	0.008	420	29160	29160	378	27540	290	38880	504	24300	217	22680	175
0.4	2	0.028	635	25920	25920	572	24480	401	34560	762	21600	300	20160	241
	3	0.016	523	23328	23328	471	22032	361	31104	627	19440	269	18144	217
	4	0.010	523	23328	23328	471	22032	361	31104	627	19440	269	18144	217
	6	0.006	407	20736	20736	365	19584	234	27648	488	17280	207	16128	163
0.5	2	0.035	635	25920	25920	572	24480	482	34560	762	21600	300	20160	241
	3	0.020	523	23328	23328	471	22032	397	31104	627	19440	269	18144	217
	4	0.020	523	23328	23328	471	22032	361	31104	627	19440	269	18144	217
	5	0.013	523	23328	23328	471	22032	361	31104	627	19440	269	18144	217
	6	0.013	407	20736	20736	365	19584	234	27648	488	17280	207	16128	163
	8	0.008	348	20736	20736	313	19584	222	27648	418	17280	175	16128	132
0.6	2	0.042	907	25920	25920	816	24480	572	34560	1089	21600	428	20160	345
	3	0.035	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	4	0.024	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	5	0.020	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	6	0.015	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	8	0.015	581	20736	20736	523	19584	335	27648	697	17280	295	16128	232
0.7	2	0.070	907	25920	25920	816	24480	572	34560	1089	21600	428	20160	346
	4	0.049	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	6	0.018	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	8	0.018	581	20736	20736	523	19584	335	27648	697	17280	295	16128	232
	10	0.018	581	20736	20736	523	19584	335	27648	697	17280	295	16128	232
0.8	4	0.056	907	25920	25920	816	24480	702	34560	1089	21600	619	20160	380
	6	0.032	746	23328	23328	671	22032	610	31104	896	21600	599	18144	341
	8	0.020	746	23328	23328	671	22032	516	31104	896	19440	385	18144	311
	10	0.020	581	20736	20736	523	19584	335	27648	697	17280	295	16128	232
	12	0.012	581	20736	20736	523	19584	335	27648	697	17280	295	16128	232

注意

请尽可能使用高刚性、高精度的机床和卡盘。

此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。

发生颤动和异常振动时，请调整切削条件。

NOTE

1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.

2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.

3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-S2/SN2/SN4 切削参数推荐表

P50/H50-SN2 Recommended Cutting Parameters

侧铣 Side Milling

工件材料 Workpiece Materials			碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient			1		0.9		0.7		1.2		0.5		0.45	
外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
0.9	6	0.036	25920	895	23328	806	22032	618	31104	985	19440	500	18144	373
	8	0.023	25920	820	23328	738	22032	567	31104	985	19440	462	18144	341
	10	0.023	23040	581	20736	523	19584	335	27648	697	17280	295	16128	232
1	4	0.070	25920	1220	23328	1098	22032	969	31104	1465	20637	867	18144	689
	5	0.055	25920	1220	23328	1098	22032	925	31104	1465	20637	784	18144	617
	6	0.040	23328	1008	20995	907	19829	813	27994	1210	18630	671	16330	419
	7	0.040	23328	1008	20995	907	19829	753	27994	1210	18630	633	16330	419
	8	0.040	23328	1008	20995	907	19829	753	27994	1210	18630	560	16330	419
	9	0.033	23328	1008	20995	907	19829	696	27994	1210	17496	519	16330	419
	10	0.025	23328	1008	20995	907	19829	696	27994	1210	17496	519	16330	419
1.5	4	0.110	20160	1047	18144	943	17136	721	24192	1257	15120	583	14112	434
	6	0.110	20160	1047	18144	943	17136	721	24192	1257	15120	561	14112	434
	8	0.080	18144	862	16330	846	15422	649	21773	1034	13608	484	12701	374
	10	0.060	18144	784	16330	776	15422	649	21773	1034	13608	484	12701	374
2	6	0.200	15120	1057	13608	943	12852	661	18144	1257	11340	493	10584	399
	8	0.140	15120	1057	13608	943	12852	661	18144	1257	11340	493	10584	399
	10	0.140	15120	1057	13608	943	12852	661	18144	1257	11340	493	10584	399
	12	0.100	13608	862	12247	776	11567	595	16330	1034	10206	444	9526	358
	14	0.080	13608	862	12247	776	11567	595	16330	1034	10206	444	9526	326
	16	0.080	13608	823	12247	776	11567	541	16330	941	10206	404	9526	326
	18	0.050	13608	823	12247	776	11567	541	16330	941	10206	404	9526	326
	20	0.050	13608	784	12247	706	11567	541	16330	941	10206	404	9526	326
	25	0.050	12096	609	10886	549	10282	352	14515	732	9072	311	8467	244
	30	0.030	12096	609	10886	549	10282	352	14515	732	9072	311	8467	244
	35	0.020	10584	437	9526	393	8996	254	12701	525	7938	205	7409	167
	40	0.010	10584	437	9526	393	8996	254	12701	525	7938	205	7409	167
	50	0.005	9072	266	8165	239	7711	155	10886	320	6804	125	6350	101

注意

请尽可能使用高刚性、高精度的机床和卡盘。

此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。

发生颤动和异常振动时，请调整切削条件。

NOTE

1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.

2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.

3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-SN2 切削参数推荐表

P50/H50-SN2 Recommended Cutting Parameters

侧铣

Side Milling

工件材料 Workpiece Materials			碳钢, 合金钢 (180~250HB) Carbon Steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient			1		0.9		0.7		1.2		0.5		0.45	
外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2.5	8	0.180	12960	1122	11664	1011	11016	708	15552	1347	9720	578	9072	427
	12	0.180	12960	1122	11664	1011	11016	644	15552	1134	9720	529	9072	388
	16	0.100	11664	966	10498	869	9914	580	13997	1008	8748	476	8165	349
	20	0.100	11664	840	10498	756	9914	580	13997	1008	8748	476	8165	349
	30	0.060	10368	653	9331	588	8813	392	12442	783	7776	307	7258	248
	40	0.030	9072	469	8165	422	7711	282	10886	563	6804	221	6350	178
	50	0.010	9072	469	8165	422	7711	282	10886	563	6804	221	6350	178
3.0	8	0.300	11520	997	10368	897	9792	629	13824	1198	9540	513	8064	380
	12	0.210	11520	997	10368	897	9792	629	13824	1198	9540	513	8064	380
	16	0.150	10368	895	9331	738	8813	567	12442	1030	8505	462	7258	341
	20	0.120	10368	820	9331	738	8813	567	12442	896	8505	462	7258	341
	25	0.080	10368	820	9331	738	8813	567	12442	896	8505	462	7258	341
	30	0.080	10368	746	9331	671	8813	567	12442	896	8505	462	7258	312
	40	0.050	9216	663	8294	597	7834	458	11059	796	6912	342	6451	276
4.0	50	0.020	8064	417	7258	375	6854	250	9677	500	6048	196	5645	158
	12	0.400	8460	1692	7614	1372	7191	1222	10350	2070	6345	812	5922	655
	16	0.280	8460	1692	7614	1372	7191	1222	10350	2070	6345	812	5922	655
	20	0.280	7614	1523	6853	1234	6472	1100	9315	1863	5711	731	5330	590
	25	0.160	7614	1372	6853	1110	6472	990	9315	1677	5711	731	5330	590
	30	0.160	7614	1372	6853	1110	6472	990	9315	1677	5711	731	5330	590
	35	0.100	6853	1234	6168	999	5825	891	8223	1481	5140	658	4797	530
5	40	0.100	6853	1234	6168	999	5825	891	8223	1481	5140	658	4797	530
	50	0.060	5922	846	5330	761	5034	592	7106	1015	4442	398	4145	321
	20	0.300	6761	1487	6085	1338	5747	946	8113	1622	5071	635	4732	514
	25	0.300	6084	1216	5476	1094	5171	851	7301	1459	4563	572	4259	462
	30	0.200	6084	1095	5476	985	5171	766	7301	1315	4563	516	4259	416
	40	0.150	5476	986	4928	887	4654	690	6571	1184	4107	464	3833	374
	50	0.100	5476	986	4928	887	4654	690	6571	1184	4107	464	3833	374
6	20	0.500	5564	1333	5008	1200	4730	932	6676	1466	4173	689	3894	506
	30	0.400	5058	1211	4552	1091	4299	848	6070	1332	3794	626	3541	460
	40	0.300	5058	998	4552	898	4299	762	6070	1199	3794	563	3541	413
	50	0.200	4500	887	4050	798	3825	621	5400	981	3375	464	3150	341

| 注意 |

▲ 请尽可能使用高刚性、高精度的机床和卡盘。

▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。

▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣

Side Milling

工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1	0.02	2	0.016	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		4	0.013	32400	1941	29160	1747	27540	1485	38880	2329	24300	1165	22680	951
		6	0.010	26244	1415	26369	1581	22307	1202	31493	1698	19683	943	18371	770
		8	0.008	23328	1257	23620	1274	19829	1069	27994	1509	17496	839	16330	685
		10	0.006	20412	1101	20995	1132	17350	935	24494	1320	15309	734	14288	599
		12	0.005	18144	869	18371	990	15422	647	21773	1043	13608	571	12701	456
	0.05	2	0.046	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		3	0.035	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		4	0.027	32400	1941	29160	1747	27540	1485	38880	2329	24300	1165	22680	951
		5	0.021	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		6	0.017	26244	1415	23620	1274	22307	1202	31493	1698	19683	943	18371	770
		8	0.016	23328	1257	20995	1132	19829	1069	27994	1509	17496	839	16330	685
		10	0.011	20412	1101	18371	990	17350	935	24494	1320	15309	734	14288	599
		12	0.010	18144	869	16330	783	15422	647	21773	1043	13608	571	12701	456
		16	0.006	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381
		20	0.004	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285
	0.1	2	0.065	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		3	0.050	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		4	0.038	32400	1941	29160	1747	27540	1485	38880	2329	24300	1165	22680	951
		5	0.030	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		6	0.024	26244	1415	23620	1274	22307	1202	31493	1698	19683	943	18371	770
		8	0.024	23328	1257	20995	1132	19829	1069	27994	1509	17496	839	16330	685
		10	0.015	20412	1101	18371	990	17350	935	24494	1320	15309	734	14288	599
		12	0.015	18144	869	16330	783	15422	647	21773	1043	13608	571	12701	456
16		0.009	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381	
20		0.006	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285	

| 注意 |

▲ 请尽可能使用高刚性、高精度的机床和卡盘。

▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。

▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1	0.2	2	0.110	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		3	0.090	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		4	0.070	32400	1941	29160	1747	27540	1485	38880	2329	24300	1165	22680	951
		5	0.050	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		6	0.040	26244	1415	23620	1274	22307	1202	31493	1698	19683	943	18371	770
		8	0.040	23328	1257	20995	1132	19829	1069	27994	1509	17496	839	16330	685
		10	0.025	20412	1101	18371	990	17350	935	24494	1320	15309	734	14288	599
		12	0.025	18144	869	16330	783	15422	647	21773	1043	13608	571	12701	456
		16	0.015	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381
		20	0.010	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285
	0.3	2	0.110	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		3	0.090	35541	2132	32101	1926	30095	1625	42993	2579	26655	1279	24936	1047
		4	0.070	32400	1941	29160	1747	27540	1485	38880	2329	24300	1165	22680	951
		5	0.050	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		6	0.040	26244	1415	23620	1274	22307	1202	31493	1698	19683	943	18371	770
		8	0.040	23328	1257	20995	1132	19829	1069	27994	1509	17496	839	16330	685
		10	0.025	20412	1101	18371	990	17350	935	24494	1320	15309	734	14288	599
		12	0.025	18144	869	16330	783	15422	647	21773	1043	13608	571	12701	456
		16	0.015	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381
		20	0.010	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285
1.25	0.1	5	0.030	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		10	0.015	23328	1257	18371	990	17350	935	24494	1320	15309	734	14288	599
		15	0.010	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381
		20	0.006	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285
	0.2	5	0.050	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		10	0.025	23328	1257	18371	990	17350	935	24494	1320	15309	734	14288	599
		15	0.016	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381
		20	0.010	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285
	0.3	5	0.050	28662	1719	26369	1581	24936	1346	35827	2149	22070	1059	20636	867
		10	0.025	23328	1257	18371	990	17350	935	24494	1320	15309	734	14288	599
		15	0.016	18144	761	16330	685	15422	600	21773	913	13608	489	12701	381
		20	0.010	13608	571	12247	514	11567	450	16330	685	10206	367	9526	285

注意

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

NOTE

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1.5	0.1	4	0.042	24930	1614	22453	1453	20957	1240	29938	1938	18711	968	17364	795
		6	0.040	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		8	0.036	22680	1467	20412	1320	19278	1141	27216	1760	17010	881	15876	726
		12	0.036	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.023	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.018	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385
	0.2	4	0.070	24930	1614	22453	1453	20957	1240	29938	1938	18711	968	17364	795
		6	0.065	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		8	0.060	22680	1467	20412	1320	19278	1141	27216	1760	17010	881	15876	726
		12	0.060	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.038	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.030	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385
	0.3	4	0.070	24930	1614	22453	1453	20957	1240	29938	1938	18711	968	17364	795
		6	0.065	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		8	0.060	22680	1467	20412	1320	19278	1141	27216	1760	17010	881	15876	726
		12	0.060	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.038	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.030	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385
	0.5	4	0.085	24930	1614	22453	1453	20957	1240	29938	1938	18711	968	17364	795
		6	0.080	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		8	0.070	22680	1467	20412	1320	19278	1141	27216	1760	17010	881	15876	726
		12	0.065	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.045	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.035	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385
1.75	0.1	5	0.040	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		10	0.036	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.023	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.018	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385

注意

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

NOTE

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣

Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1.75	0.2	5	0.065	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		10	0.060	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.038	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.030	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385
	0.3	5	0.065	23885	1543	21401	1382	20255	1199	28662	1851	17961	930	16624	761
		10	0.060	18144	1174	16330	1057	15422	913	21773	1409	13608	705	12701	581
		15	0.038	14112	812	12701	731	11995	604	16934	974	10584	533	9878	426
		20	0.030	14112	734	12701	660	11995	552	16934	880	10584	486	9878	385
	0.1	4	0.080	21783	2448	19634	2207	18487	2077	25796	2899	16337	1467	15334	1205
		6	0.070	20790	2336	18711	2102	17672	1985	24948	2803	15593	1401	14553	1144
		8	0.055	18900	2123	17010	1911	16065	1805	22680	2547	14175	1274	13230	1040
		12	0.030	15309	1548	13778	1393	13013	1316	18371	1857	11482	1031	10716	842
		16	0.030	13608	1375	12247	1238	11567	1169	16330	1651	10206	917	9526	749
		20	0.025	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		25	0.015	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		30	0.010	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
2	0.2	4	0.100	21783	2448	19634	2207	18487	2077	25796	2899	16337	1467	15334	1205
		6	0.080	20790	2336	18711	2102	17672	1985	24948	2803	15593	1401	14553	1144
		8	0.070	18900	2123	17010	1911	16065	1805	22680	2547	14175	1274	13230	1040
		12	0.040	15309	1548	13778	1393	13013	1316	18371	1857	11482	1031	10716	842
		16	0.040	13608	1375	12247	1238	11567	1169	16330	1651	10206	917	9526	749
		20	0.035	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		25	0.025	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		30	0.017	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
	0.3	4	0.130	21783	2448	19634	2207	18487	2077	25796	2899	16337	1467	15334	1205
		6	0.110	20790	2336	18711	2102	17672	1985	24948	2803	15593	1401	14553	1144
		8	0.090	18900	2123	17010	1911	16065	1805	22680	2547	14175	1274	13230	1040
		12	0.060	15309	1548	13778	1393	13013	1316	18371	1857	11482	1031	10716	842
		16	0.060	13608	1375	12247	1238	11567	1169	16330	1651	10206	917	9526	749
		20	0.037	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		25	0.030	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		30	0.021	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣

Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	0.5	6	0.170	20790	2336	18711	2102	17672	1985	24948	2803	15593	1401	14553	1144
		8	0.140	18900	2123	17010	1911	16065	1805	22680	2547	14175	1274	13230	1040
		12	0.080	15309	1548	13778	1393	13013	1316	18371	1857	11482	1031	10716	842
		16	0.080	13608	1375	12247	1238	11567	1169	16330	1651	10206	917	9526	749
		20	0.050	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		25	0.050	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		30	0.030	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
	0.8	6	0.220	20790	2336	18711	2102	17672	1985	24948	2803	15593	1401	14553	1144
		8	0.200	18900	2123	17010	1911	16065	1805	22680	2547	14175	1274	13230	1040
		12	0.130	15309	1548	13778	1393	13013	1316	18371	1857	11482	1031	10716	842
		16	0.100	13608	1375	12247	1238	11567	1169	16330	1651	10206	917	9526	749
		20	0.060	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		25	0.057	11907	1203	10716	1084	10121	1023	14288	1445	8931	721	8335	588
		30	0.045	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
		2.5	0.1	10	0.050	15309	1548	13778	1393	13013	1316	18371	2064	11482	1031
20	0.030			11907	1203	10716	1084	10121	1023	14288	1605	8931	721	8335	588
30	0.015			11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
10	0.070			15309	1548	13778	1393	13013	1316	18371	2064	11482	1031	10716	842
0.2	20		0.040	11907	1203	10716	1084	10121	1023	14288	1605	8931	721	8335	588
	30		0.025	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
	10		0.090	15309	1548	13778	1393	13013	1316	18371	2064	11482	1031	10716	842
0.3	20		0.060	11907	1203	10716	1084	10121	1023	14288	1605	8931	721	8335	588
	30		0.030	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559
0.5	10		0.120	15309	1548	13778	1393	13013	1316	18371	2064	11482	1031	10716	842
	20	0.080	11907	1203	10716	1084	10121	1023	14288	1605	8931	721	8335	588	
	30	0.050	11312	1144	10181	1029	9615	972	13574	1373	8483	685	7918	559	

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	0.1	6	0.080	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		8	0.070	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		12	0.050	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		16	0.035	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		18	0.035	12898	1811	11464	1609	10987	1543	15287	2146	9554	1074	9076	893
		20	0.035	11664	1638	10498	1474	9914	1392	13997	1966	8748	983	8165	803
		30	0.027	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
		35	0.020	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
	0.2	6	0.100	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		8	0.090	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		12	0.070	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		16	0.050	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		18	0.050	12898	1811	11464	1609	10987	1543	15287	2146	9554	1074	9076	893
		20	0.050	11664	1638	10498	1474	9914	1392	13997	1966	8748	983	8165	803
		30	0.040	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
		35	0.035	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
	0.3	6	0.145	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		8	0.130	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		12	0.100	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		16	0.075	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		18	0.075	12898	1811	11464	1609	10987	1543	15287	2146	9554	1074	9076	893
		20	0.075	11664	1638	10498	1474	9914	1392	13997	1966	8748	983	8165	803
		30	0.060	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
		35	0.050	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
	0.5	8	0.180	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		12	0.130	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		16	0.100	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		18	0.100	12898	1811	11464	1609	12240	1718	15287	2146	9554	1074	9076	893
		20	0.100	11664	1638	10498	1474	9914	1392	13997	1966	8748	983	8165	803
		30	0.080	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
		35	0.065	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- 发生颤动和异常振动时, 请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	1	8	0.200	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		12	0.150	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		16	0.120	14400	2021	12960	1820	12240	1718	17280	2426	10800	1213	10080	991
		18	0.110	12898	1811	11464	1609	12240	1718	15287	2146	9554	1074	9076	893
		20	0.110	11664	1638	10498	1474	9914	1392	13997	1966	8748	983	8165	803
		30	0.090	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
		35	0.075	9072	1143	8165	1029	7711	971	10886	1372	6804	694	6350	559
4	0.1	8	0.080	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		12	0.065	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		16	0.060	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		20	0.055	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		30	0.045	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		35	0.040	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		45	0.030	6592	825	5933	743	5603	702	7910	990	4945	499	4614	401
	0.2	8	0.160	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		12	0.140	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		16	0.130	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		20	0.110	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		30	0.100	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		35	0.080	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		45	0.060	6592	825	5933	743	5603	702	7910	990	4945	499	4614	401
	0.3	8	0.240	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		12	0.220	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		16	0.200	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		20	0.180	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		30	0.160	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		35	0.140	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		45	0.120	6592	825	5933	743	5603	702	7910	990	4945	499	4614	401

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- 发生颤动和异常振动时, 请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
4	0.5	12	0.350	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		16	0.250	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		20	0.200	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		30	0.150	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		35	0.100	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		45	0.050	6592	825	5933	743	5603	702	7910	990	4945	499	4614	401
	1	12	0.400	12420	2160	11178	1944	10557	1836	14904	2592	9315	1296	8694	1058
		16	0.290	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		20	0.230	10301	1791	9064	1576	8652	1504	12360	2149	7416	1031	7004	852
		30	0.170	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		35	0.120	8239	1290	7415	1161	7003	1096	9887	1547	6179	774	5767	632
		45	0.060	6592	825	5933	743	5603	702	7910	990	4945	499	4614	401
5	0.1	20	0.080	9885	2149	8896	1934	8402	1826	11861	2579	7413	1290	6919	1053
		40	0.060	8901	1733	8011	1561	7566	1473	10681	2081	6676	1040	6231	850
	0.2	20	0.160	9885	2149	8896	1934	8402	1826	11861	2579	7413	1290	6919	1053
		40	0.130	8901	1733	8011	1561	7566	1473	10681	2081	6676	1040	6231	850
	0.3	20	0.240	9885	2149	8896	1934	8402	1826	11861	2579	7413	1290	6919	1053
		40	0.200	8901	1733	8011	1561	7566	1473	10681	2081	6676	1040	6231	850
	0.5	20	0.350	9885	2149	8896	1934	8402	1826	11861	2579	7413	1290	6919	1053
		40	0.135	8901	1733	8011	1561	7566	1473	10681	2081	6676	1040	6231	850
	1	20	0.400	9885	2149	8896	1934	8402	1826	11861	2579	7413	1290	6919	1053
		40	0.150	8901	1733	8011	1561	7566	1473	10681	2081	6676	1040	6231	850
6	0.1	12	0.080	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		18	0.065	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		24	0.060	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		35	0.050	7411	1740	6670	1566	6299	1479	8893	2088	5558	1044	5188	852
		55	0.040	5765	1354	5189	1219	4901	1150	6918	1625	4325	812	4036	663
	0.2	12	0.160	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		18	0.140	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		24	0.130	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		35	0.110	7411	1740	6670	1566	6299	1479	8893	2088	5558	1044	5188	852
		55	0.080	5765	1354	5189	1219	4901	1150	6918	1625	4325	812	4036	663

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- 发生颤动和异常振动时, 请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-RN4 切削参数推荐表

P50/H50-RN4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
外径D (mm)	圆角半径r (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
6	0.3	12	0.240	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		18	0.220	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		24	0.200	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		35	0.180	7411	1740	6670	1566	6299	1479	8893	2088	5558	1044	5188	852
		55	0.140	5765	1354	5189	1219	4901	1150	6918	1625	4325	812	4036	663
		18	0.350	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
	0.5	24	0.290	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		35	0.240	7411	1740	6670	1566	6299	1479	8893	2088	5558	1044	5188	852
		55	0.165	5765	1354	5189	1219	4901	1150	6918	1625	4325	812	4036	663
		18	0.400	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
	1	24	0.350	8239	2149	7415	1934	7003	1827	9887	2579	6179	1290	5767	1053
		35	0.280	7411	1740	6670	1566	6299	1479	8893	2088	5558	1044	5188	852
		55	0.200	5765	1354	5189	1219	4901	1150	6918	1625	4325	812	4036	663

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- 发生颤动和异常振动时, 请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-BN2 切削参数推荐表

P50/H50-BN2 Recommended Cutting Parameters

仿形铣

Profiling Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
球半径R (mm)	外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
0.1	0.2	1	0.020	45000	315	45000	315	45000	293	45000	378	40950	246	37800	189
		1	0.017	45000	315	45000	315	45000	293	45000	378	40950	246	37800	189
		1	0.014	45000	315	45000	315	45000	293	45000	378	40950	246	37800	189
		1	0.011	45000	284	43740	275	41310	242	45000	340	36450	197	34020	153
		2	0.008	45000	284	43740	275	41310	242	45000	340	36450	197	34020	153
		2	0.008	45000	284	43740	275	41310	242	45000	340	36450	197	34020	153
		3	0.006	43200	242	38880	218	36720	191	43200	291	32400	156	30240	121
		3	0.004	43200	242	38880	218	36720	191	43200	291	32400	156	30240	121
		3	0.004	43200	242	38880	218	36720	191	43200	291	32400	156	30240	121
0.15	0.3	1	0.027	45000	450	45000	450	45000	405	45000	540	40500	345	37800	302
		1	0.024	45000	450	45000	450	45000	405	45000	540	40500	345	37800	302
		1	0.021	45000	450	45000	450	45000	405	45000	540	40500	345	37800	302
		1	0.019	45000	450	45000	450	45000	405	45000	540	40500	345	37800	302
		2	0.016	45000	450	45000	450	45000	405	45000	540	40500	345	37800	302
		2	0.012	45000	405	43740	393	41310	335	45000	486	36450	279	34020	245
		3	0.010	45000	405	43740	393	41310	335	45000	486	36450	279	34020	245
		3	0.008	45000	405	43740	393	41310	335	45000	486	36450	279	34020	245
		3	0.008	45000	405	43740	393	41310	335	45000	486	36450	279	34020	245
0.2	0.4	1	0.043	45000	756	45000	755	45000	693	45000	870	42120	590	39312	551
		1	0.040	45000	756	45000	755	45000	693	45000	870	42120	590	39312	551
		2	0.034	45000	648	45000	647	45000	594	45000	746	42120	421	39312	393
		2	0.028	45000	540	45000	540	45000	495	45000	622	42120	421	39312	393
		3	0.022	38880	420	34992	378	33048	328	45000	504	29160	263	32659	245
		3	0.016	38880	420	34992	378	33048	328	45000	504	29160	263	32659	245
		4	0.012	38880	420	34992	378	33048	328	45000	504	29160	263	32659	245
		4	0.010	38880	420	34992	378	33048	328	45000	504	29160	263	32659	245
		5	0.008	34560	353	31104	318	29376	275	41472	423	25920	221	24192	205
		5	0.008	34560	353	31104	318	29376	275	41472	423	25920	221	24192	205
		5	0.008	34560	353	31104	318	29376	275	41472	423	25920	221	24192	205

| 注意 |

- ⚠ 请尽可能使用高刚性、高精度的机床和卡盘。
- ⚠ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- ⚠ 发生颤动和异常振动时, 请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-BN2 切削参数推荐表

P50/H50-BN2 Recommended Cutting Parameters

仿形铣

Profiling Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
球半径R (mm)	外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
0.25	0.5	1	0.045	45000	1350	42120	1264	39780	1074	45000	1350	35100	948	32760	669
		2	0.040	45000	1350	42120	1264	39780	1074	45000	1350	35100	948	32760	613
		2	0.035	45000	1080	42120	1011	39780	860	45000	1080	35100	758	32760	613
		3	0.033	45000	900	37908	682	35802	581	45000	973	31590	511	29484	452
		3	0.030	42120	758	37908	682	35802	581	45000	810	31590	511	22680	347
		4	0.020	32400	583	29160	525	27540	446	38880	700	29160	472	22680	347
		5	0.018	32400	583	29160	525	27540	446	38880	700	29160	472	22680	347
		6	0.015	28800	490	25920	441	24480	374	34560	588	21600	330	20160	292
		6	0.013	28800	490	25920	441	24480	374	34560	588	21600	330	20160	292
0.3	0.6	8	0.008	28800	490	25920	441	24480	374	34560	588	21600	330	20160	292
		1	0.075	45000	2025	45000	2025	45000	1755	45000	2025	43200	1555	40320	1210
		2	0.063	45000	2025	45000	2025	45000	1755	45000	2025	43200	1555	40320	1210
		3	0.046	45000	1620	45000	1620	45000	1404	45000	1620	43200	1244	40320	887
		3	0.041	45000	1620	45000	1620	45000	1404	45000	1620	43200	1244	40320	887
		4	0.035	45000	1539	45000	1538	44064	1307	45000	1539	38880	1065	36288	759
		4	0.026	45000	1539	45000	1538	44064	1307	45000	1539	38880	1065	36288	689
		5	0.022	45000	1215	43740	1182	41310	967	45000	1215	36450	788	34020	613
		5	0.020	42120	1138	37908	1024	35802	838	45000	1215	31590	682	29484	531
		6	0.017	42120	1138	37908	1024	35802	838	45000	1215	31590	682	29484	531
		6	0.015	42120	1138	37908	1024	35802	838	45000	1215	31590	682	29484	531
		7	0.015	28800	734	25920	793	24480	541	34560	881	21600	441	20160	446
0.35	0.7	8	0.015	28800	734	25920	661	24480	541	34560	881	21600	441	20160	343
		9	0.012	28800	734	25920	661	24480	541	34560	881	21600	441	20160	343
		10	0.009	25200	643	22680	579	21420	473	30240	771	18900	385	17640	300
		12	0.007	21600	518	19440	466	18360	382	25920	622	16200	311	15120	242
		2	0.092	45000	2228	45000	2228	45000	1940	45000	2228	43200	1739	37800	1069
		4	0.041	45000	1692	45000	1692	44064	1443	45000	1692	38880	1189	34020	761
		6	0.027	42120	1251	37908	1126	35802	925	45000	1337	31590	763	27216	577
		8	0.020	28800	760	25920	684	24480	563	34560	912	21600	464	20160	380

| 注意 |

- ⚠ 请尽可能使用高刚性、高精度的机床和卡盘。
- ⚠ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- ⚠ 发生颤动和异常振动时, 请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-BN2 切削参数推荐表

P50/H50-BN2 Recommended Cutting Parameters

仿形铣

Profiling Milling

工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
球半径R (mm)	外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
0.4		2	0.120	45000	2430	45000	2430	45000	2160	45000	2430	43200	2333	40320	1694
		4	0.078	45000	2430	45000	2430	45000	2160	45000	2430	43200	2333 ^{1.2}	40320	1694
		5	0.059	45000	2186	45000	2188	44064	1903	45000	2188	38880	1911	36288	1372
		6	0.042	45000	2040	40824	1852	38556	1554	45000	2042	34020	1286	31752	1121
		8	0.020	37440	1213	33696	1092	31824	916	44928	1455	28080	758	26208	660
		10	0.020	28800	881	25920	793	24480	666	34560	1058	21600	551.4	20160	480
0.45		2	0.135	45000	2877	45000	2877	45000	2539	45000	2877	41040	2170	38304	1924
		4	0.081	45000	2494	45000	2494	43605	2132	45000	2494	38475	1763	35910	1563
		6	0.050	43092	1818	38783	1636	36628	1364	45000	2072	32319	1128	30164	1000
0.5		8	0.036	32832	1259	29549	1133	27907	944	39398	1511	24624	781	22982	693
		2	0.200	45000	3375	43740	3281	41310	2788	45000	3375	38880	2450	34020	2041
		3	0.200	45000	3375	43740	3281	41310	2788	45000	3375	38880	2450 ^{0.5}	34020	2041
		4	0.140	45000	3375	43740	3281	41310	2788	45000	3375	38880	2450	34020	2041
		5	0.090	42120	2948	37908	2653	35802	2336	45000	3150	38880	2286	29484	1652
		6	0.060	37908	2389	36742	2302	34700	2087	45000	2836	34992	2118	26536	1241
		7	0.060	34992	1575	31493	1417	29743	1204	41990	1890	28431	1191	24494	955
		8	0.060	34992	1575	31493	1417	29743	1204	41990	1890	28431	1191	24494	881
		9	0.045	34992	1575	31493	1417	29743	1204	41990	1890	28431	1191 ^{0.6}	24494	881
		10	0.038	34992	1575	31493	1417	29743	1204	41990	1890	28431	1191 ^{1.6}	24494	881
		12	0.025	25920	1102	23328	992	22032	842	31104	1322	19440	694	18144	617
		13	0.023	25920	1102	23328	992	22032	842	31104	1322	19440	694	18144	617
		14	0.020	25920	1102	23328	992	22032	842	31104	1322	19440	694	18144	617
		16	0.015	25920	1102	23328	992	22032	842	31104	1322	19440	694 ^{1.8}	18144	617
		18	0.012	22680	907	20412	816	19278	694	27216 ^{0.7}	1089	17010	572	15876	508
		20	0.010	19440	778	17496	700	16524	595	23328	933	14580	490	13608	436
0.55		2	0.200	45000	3532	40824	3204	38556	2634	45000	3532	34020	2207	31752	1958
		4	0.140	45000	3532	40824	3204	38556	2634	45000	3532	34020	2207	31752	1958
		6	0.060	35802	2075	32222	1868	30432	1535	42962	2490	26852	1287	25061	1141
		8	0.060	35802	2075	32222	1556	28091	1181	42962	2075	24786	990	23134	878
		10	0.038	35802	1597	32222	1556	28091	1181	42962	2075	24786	990	23134	878



| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- ▲ 发生颤动和异常振动时, 请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-BN2 切削参数推荐表

P50/H50-BN2 Recommended Cutting Parameters

仿形铣

Profiling Milling

工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
球半径R (mm)	外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
0.6		4	0.160	41539	3369	37384	2934	35307	2445	45000	3532	33231	2300	29076	1674
		8	0.060	33696	1928	30326	1893	28642	1862	40435	2313	27216	1856	23587	943
		10	0.053	31104	1537	27994	1310	26438	1190	37325	1746	24300	962	21773	784
		12	0.045	31104	1456	27994	1310	26438	1190	37325	1746	23328	923	21773	784
		8	0.110	29484	2123	26536	1911	25061	1625	35381	2547	22113	1380	20639	1238
0.7		12	0.053	27216	1470	24494	1323	23134	1124	32659	1764	20412	956	19051	858
		16	0.035	20160	1028	18144	925	17136	787	24192	1234	15120	669	14112	599
0.75		4	0.200	37800	3742	34020	3368	32130	2892	45000	4456	28350	2297	26460	1985
		6	0.200	37800	3742	34020	3368	32130	2892	45000	4456	28350	2297	26460	1985
		8	0.090	29484	2364	26536	1891	25061	1625	35381	2522	22113	1291	20639	1115
		10	0.090	27216	1940	24494	1746	23134	1499	32659	2327	20412	1191	19051	1029
		12	0.090	27216	1616	24494	1454	23134	1249	32659	1940	20412	993	19051	858
		14	0.075	27216	1616	21773	1221	20563	1049	29030	1629	18144	833	16934	719
		16	0.038	20160	1131	18144	1018	17136	874	24192	1357	15120	694	14112	599
		18	0.038	20160	1131	18144	1018	17136	874	24192	1357	15120	694	14112	599
		20	0.038	20160	1131	18144	1018	17136	874	24192	1357	15120	694	14112	599
0.8		8	0.220	32760	2752	29484	2477	27846	2244	39312	3302	24570	1916	21294	1431
		12	0.098	29484	2600	26536	2341	25061	1958	35381	3120	22113	1672	19165	1160
		16	0.060	25272	1592	22745	1433	21481	1199	30326	1911	18954	1024	17690	892
		20	0.040	18720	1114	16848	1003	15912	839	22464	1337	14040	716	13104	624
0.9		8	0.260	30420	2921	27378	2628	25857	2172	36504	3505	22815	1807	21294	1534
		12	0.105	25272	1820	22745	1637	21481	1354	30326	2183	18954	1125	17690	956
		16	0.068	25272	1820	22745	1637	21481	1354	30326	2183	18954	1125	17690	956
		20	0.045	18720	1273	16848	1146	15912	947	22464	1527	14040	788	13104	669



| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
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- ▲ 发生颤动和异常振动时, 请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-BN2 切削参数推荐表

P50/H50-BN2 Recommended Cutting Parameters

仿形铣

Profiling Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
球半径R (mm)	外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1		3	0.400	28350	4253	25515	3828	24098	3254	34020	5103	21263	2744	19845	2381
		4	0.400	28350	4253	25515	3828	24098	3254	34020	5103	21263	2744	19845	2381
		6	0.400	28350	3828	25515	3444	24098	2892	34020	4593	21263	2424	19845	2143
		8	0.280	28350	3828	25515	3444	24098	2892	34020	4593	21263	2424	19845	2143
		10	0.210	26460	3175	23814	2858	22491	2429	31752	3811	19845	2024	17199	1321
		12	0.120	23814	2858	21433	2572	20242	2187	28577	3428	17861	1846	15479	1189
		13	0.120	23814	2858	21433	2572	20242	2187	28577	3428	17861	1822	14288	914
		14	0.120	23814	2477	21433	2229	20242	1895	28577	2971	16585	1466	14288	914
		16	0.120	22113	1592	19902	1434	18797	1218	26536	1911	16585	1320	14288	823
		18	0.090	20412	1470	18371	1323	17350	1124	24494	1764	16585	1219	14288	823
		20	0.075	20412	1470	18371	1323	17350	1124	24494	1764	16585	1015	14288	823
		22	0.050	16065	1093	14459	983	13656	836	19278	1311	12049	697	13495	734
		25	0.050	15120	1028	13608	925	12852	787	18144	1234	11340	655	12701	691
		30	0.030	15120	1028	13608	925	12852	787	18144	1234	11340	655	12701	691
		35	0.025	13230	847	11907	762	11246	648	15876	1016	9923	540	9261	474
1.25		40	0.022	11340	725	10206	653	9639	555	13608	871	8505	463	7938	407
		6	0.500	24975	4557	22478	4100	21229	3417	29970	5468	18732	2779	17483	2278
		10	0.340	24975	4557	22478	4100	21229	3417	29970	5468	18732	2779	17483	2278
		15	0.150	19481	2558	17533	2302	16558	1919	23377	3070	14611	1821	13637	1279
		20	0.120	17982	1967	16184	1771	15285	1476	21578	2362	14611	1301	12587	984
		25	0.098	17982	1770	16184	1593	15285	1328	21578	2124	13487	1080	12587	885
1.5		30	0.055	13320	1377	11988	1239	11322	1033	15984	1652	9990	840	9324	689
		8	0.600	21600	4860	19440	4374	18360	3690	25920	5832	16200	3062	15120	2722
		10	0.420	21600	4860	19440	4374	18360	3690	25920	5832	16200	3062	15120	2722
		13	0.315	20160	3629	18144	3266	17136	2755	24192	4354	15120	2286	14112	2032
		16	0.315	20160	3266	18144	2939	17136	2480	24192	3920	15120	2057	13104	1699
		20	0.180	16848	2274	15163	2048	14321	1727	20218	2730	12636	1434	10886	1176
		25	0.120	16848	2274	15163	2048	14321	1727	20218	2730	12636	1434	10886	1176
		30	0.120	15552	2100	13997	1890	13219	1594	18662	2520	11664	1323	10886	1176
		35	0.080	11520	1469	10368	1322	9792	1115	13824	1762	8640	925	9677	987

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- ▲ 发生颤动和异常振动时, 请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P50/H50-BN2 切削参数推荐表

P50/H50-BN2 Recommended Cutting Parameters

仿形铣

Profiling Milling



工件材料 Workpiece Materials				碳钢, 合金钢 (180~250HB) Carbon steel, Alloy Steel		合金钢, 工具钢 (25~35HRC) Alloy Steel, Tool Steel		PH与铁素体/马氏体钢 (35~45HRC) PH And Ferrite /Martensitic Steel		铜, 铜合金 Copper, Copper Alloy		淬硬钢 (45~55HRC) Hardened Steel		淬硬钢 (55~65HRC) Hardened Steel	
切削深度比例系数 Cutting depth ratio coefficient				1		0.9		0.8		1.2		0.65		0.6	
球半径R (mm)	外径D (mm)	颈长N (mm)	切削宽度 ap	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1.75		15	0.360	16088	3299	14479	2969	13675	2475	19305	3959	12065	2012	11262	1650
		25	0.210	13365	2052	12029	1847	11361	1539	16038	2462	10024	1252	9356	1026
		35	0.090	13365	2052	12029	1847	11361	1539	16038	2462	10024	1252	9356	1026
		45	0.090	9900	1438	8910	1294	8415	1079	11880	1726	7425	878	6930	719
		10	0.600	15525	4658	13973	4192	13197	3564	18630	5589	11644	2969	10868	2608
2		13	0.480	15525	4658	13973	4192	13197	3564	18630	5589	11644	2969	10868	2608
		16	0.420	15525	4658	13973	4192	13197	3564	18630	5589	11644	2969	10868	2608
		20	0.420	13455	3229	12110	2906	11437	2471	16146	3875	10092	2058	9419	1808
		25	0.240	12110	2615	10899	2354	10293	2001	14531	3139	9083	1946	8477	1464
		30	0.160	11178	2012	10060	1811	9502	1539	13414	2415	8384	1283	7825	1127
		35	0.100	11178	2012	10060	1811	9502	1539	13414	2415	8384	1283	7825	1127
		40	0.100	11178	2012	10060	1811	9502	1539	13414	2415	8384	1283	7825	1127
		45	0.100	8280	1408	7452	1267	7038	1076	9936	1689	6210	897	5796	788
		50	0.100	8280	1408	7452	1267	7038	1076	9936	1689	6210	897	5796	788
		20	0.525	11340	4082	10206	3674	9639	2892	13608	4899	8505	2552	7938	2143
2.5		25	0.525	10530	3285	9477	3412	8951	2686	12636	4549	7898	2370	7371	1990
		30	0.300	9477	2502	8529	3072	8056	2417	11372	4094	7108	2132	6634	1792
		40	0.200	8748	1890	7873	1701	7436	1338	10498	2268	6561	1182	6124	993
3		12	0.600	12150	5103	10935	4593	10328	3828	14580	6124	9113	3113	8505	2552
		20	0.500	11475	4476	10328	4028	9754	3356	13770	5370	8607	2730	8033	2237
		30	0.420	9360	2696	8424	2426	7956	1910	11232	3235	7020	1825	6552	1415
		50	0.150	7776	2015	6998	1814	6610	1428	9331	2418	5832	1260	5443	1058

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- ▲ 发生颤动和异常振动时, 请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

P60-S4 切削参数推荐表

P60-S4 Recommended Cutting Parameters

侧铣 Side Milling

工件材料 Workpiece Materials	碳钢, 合金钢 (<35HRC) Carbon Steel, Alloy Steel		合金钢, 工具钢 (35-48HRC) Alloy Steel, Tool Steel		不锈钢 Stainless Steel		灰铸铁, 球墨铸铁 (<32HRC) Gray Cast Iron Nodular Cast Iron		高合金铸铁 (35-45HRC) High Alloy Cast Iron		合金钢, 淬硬钢 (<55HRC) Hardened Steel	
切削深度 Depth of cut (mm)	p≤1.5D ae≤0.3D		ap≤1D ae≤0.25D		ap≤1.5D ae≤0.3D		ap≤1.5D ae≤0.3D		ap≤1D ae≤0.25D		ap≤1D ae≤0.125D	
切削速度 Vc(m/min)	140		120		110		140		120		100	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
6	7430	1070	6370	630	5840	580	7430	1070	6370	630	5300	530
8	5570	1070	4780	660	4380	610	5570	1070	4780	660	3980	480
10	4460	1070	3820	690	3500	630	4460	1070	3820	690	3190	450
12	3720	1070	3190	700	2920	640	3720	1070	3190	700	2650	420
16	2790	1000	2390	570	2190	525	2790	1000	2390	570	1990	400
20	2230	900	1910	535	1750	490	2230	900	1910	535	1590	380



注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- 发生颤动和异常振动时, 请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

M30-S4/R4 切削参数推荐表

M30-S4/R4 Recommended Cutting Parameters

侧铣 Side Milling

工件材料 Workpiece Materials	不锈钢 Stainless Steel		钛合金 Titanium Alloy	
切削深度 Depth of cut (mm)	ap≤1.5D ae≤0.25D		ap≤1.5D ae≤0.25D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	10000	700	7960	398
3	7430	595	6399	350
4	6730	510	4780	285
5	5095	510	3821	270
6	4245	510	3185	320
8	3185	510	2390	335
10	3545	510	1910	354
12	2020	485	1590	350
16	1590	445	1195	310
20	1275	430	955	305



注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时, 请考虑加工条件、目的、使用机床等因素, 对切削条件进行调整。
- 发生颤动和异常振动时, 请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

H20-S4/R4 切削参数推荐表

H20-S4/R4 Recommended Cutting Parameters



侧铣 Side Milling

工件材料 Workpiece Materials	合金钢·预硬化钢 (30-45HRC) Alloy steel, Pre-Hardened Steel		淬硬钢 (45-55HRC) Hardened Steel	
切削深度 Depth of cut (mm)	ap≤1.2D ae≤0.08D		ap≤1.0D ae≤0.04D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	14700	840	13130	530
4	7560	950	6720	630
6	5040	1050	4410	740
8	3780	1160	3360	840
10	3050	1100	2630	740
12	2520	1050	2210	670

H20-B2 切削参数推荐表

H20-B2 Recommended Cutting Parameters



仿形铣 Profiling Milling

工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (180-250HB) Carbon Steels, Alloy Steel, Cast Iron		不锈钢·工具钢 (25-35HRC) Stainless Steels, Tool Steel		预硬化钢 (35-48HRC) Pre-Hardened Steel	
切削深度 Depth of cut (mm)	ap≤0.04D ae≤0.04D		ap≤0.04D ae≤0.04D		ap≤0.02D ae≤0.02D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1	52500	2940	52500	2640	52500	2040
2	36780	2940	36780	2570	30090	2110
3	24520	2940	24520	2690	20060	2080
4	18390	2940	18390	2760	15040	2110
6	12260	2940	12260	2690	10020	2110
8	9190	2940	9190	2660	7520	2110
10	7360	2940	7360	2640	6010	2100
12	6130	2940	6130	2650	5010	2100

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

H30-S4/R4/RN4 切削参数推荐表

H30-S4/R4/RN4 Recommended Cutting Parameters



高速侧铣 High-speed Side Milling

工件材料 Workpiece Materials	合金钢·预硬化钢 (30-45HRC) Alloy Steel, Pre-Hardened Steel		淬硬钢 (45-55HRC) Hardened Steel		淬硬钢 (55-60HRC) Hardened Steel	
切削深度 Depth of Cut (mm)	ap≤1.2D ae≤0.08D		ap≤1.0D ae≤0.04D		ap≤0.8D ae≤0.02D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	21000	1260	18900	950	15750	830
4	10500	1470	9660	1210	8400	950
6	7350	1680	6410	1370	5570	1090
8	5460	1890	4830	1470	4200	1160
10	4410	1680	3780	1370	3360	1050
12	3780	1580	3150	1260	2840	950

标准侧铣

Standard Side Milling



工件材料 Workpiece Materials	合金钢·预硬化钢 (30-45HRC) Alloy Steel, Pre-Hardened Steel		淬硬钢 (45-55HRC) Hardened Steel		淬硬钢 (55-60HRC) Hardened Steel	
切削深度 Depth of Cut (mm)	ap≤1.2D ae≤0.08D		ap≤1.0D ae≤0.04D		ap≤0.8D ae≤0.02D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	14700	840	13130	530	11550	460
4	7560	950	6720	630	5880	530
6	5040	1050	4410	740	3890	610
8	3780	1160	3360	840	2940	660
10	3050	1100	2630	740	2310	600
12	2520	1050	2210	670	2000	580

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

H30-B2 切削参数推荐表

H30-B2 Recommended Cutting Parameters

高速仿型铣 High-peed Profiling Milling



工件材料 Workpiece Materials	合金钢·预硬化钢 (30-45HRC) Alloy steel, Pre-Hardened Steel		淬硬钢 (45-55HRC) Hardened Steel		淬硬钢 (55-60HRC) Hardened Steel	
切削深度 Depth of Cut(mm)	ap≤0.05-0.1D ae≤0.02D		ap≤0.05-0.1D ae≤0.04D		ap≤0.05-0.1D ae≤0.02D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	36750	2730	30030	2310	26670	1890
4	18380	2840	15020	2420	13340	1890
6	12180	2840	9980	2420	8930	1890
8	9140	2990	7560	2470	6720	1580
10	7350	2990	5990	2470	5250	1580
12	6300	3050	4730	2520	2000	1580

标准仿型铣 Standard Profiling Milling



工件材料 Workpiece Materials	合金钢·预硬化钢 (30-45HRC) Alloy steel, Pre-Hardened Steel		淬硬钢 (45-55HRC) Hardened Steel		淬硬钢 (55-60HRC) Hardened Steel	
切削深度 Depth of Cut(mm)	ap≤0.05-0.1D ae≤0.02D		ap≤0.05-0.1D ae≤0.04D		ap≤0.05-0.1D ae≤0.02D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
3	21000	1580	16700	1260	12600	950
4	10820	1730	8400	1370	6300	1010
6	7250	1730	5570	1370	4200	1010
8	5360	1790	4200	1420	3050	970
10	4310	1790	3360	1420	2520	970
12	3570	1840	2730	1470	2210	950

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adiust the parameters when chatter or abnormal vibration occurs.

H30+-S6/R6 切削参数推荐表

H30+-S6/R6 Recommended Cutting Parameters

高速侧铣 High-speed Side Milling



工件材料 Workpiece Materials	合金钢·预硬化钢 (30-45HRC) Alloy steel, Pre-Hardened Steels		淬硬钢 (45-55HRC) Hardened Steel		淬硬钢 (55-65HRC) Hardened Steel	
切削深度 Depth of Cut(mm)	ap≤1.5D ae≤0.05D		ap≤1.5D ae≤0.03D		ap≤1.5D ae≤0.02D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
6	6200	1674	4500	1215	3100	744
8	4800	1584	3600	1188	2400	720
10	4000	1560	3000	1170	2000	720
12	3200	1440	2400	1080	1600	627
16	2400	1296	1800	972	1200	576
20	1600	960	1200	720	800	432

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adiust the parameters when chatter or abnormal vibration occurs.

H40-R6 切削参数推荐表

H40-R6 Recommended Cutting Parameters

面铣

Facing Milling

工件材料 Workpiece Materials	碳钢·合金钢·铸铁 (30-45HRC) Carbon Steels, Alloy Steels, Cast Iron		淬硬钢 (45-65HRC) Hardened Steel	
切削深度 Depth of Cut(mm)	ap≤0.035D ae≤0.5D		ap≤0.035D ae≤0.5D	
切削速度 Vc(m/min)	60-90		60-90	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
6	32000-4800	2200-3000	32000-4800	1920-2880
8	2400-3600	2200-3000	2400-3600	1950-2920
10	1900-2900	2200-3000	1900-2900	1950-2950
12	1600-2400	2200-3000	1600-2400	1920-2880
16	1200-1800	2500-3500	1200-1800	2160-3240
20	950-1450	2500-3500	950-1450	2280-3480

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

S40-S4/R4 切削参数推荐表

S40-S4/R4 Recommended Cutting Parameters

侧铣

Side Milling

工件材料 Workpiece Materials	铁基高温合金 Iron-base Superalloy		钴基高温合金 Cobalt-base Superalloy		镍基高温合金 Nickel Base Superalloy	
切削深度 Depth of Cut(mm)	ap≤1D ae≤0.1D		ap≤1D ae≤0.1D		ap≤1D ae≤0.1D	
切削速度 Vc(m/min)	25 (15-35)		20 (15-30)		25 (15-30)	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1	7900	550	6370	470	7900	550
2	3980	280	3180	240	3980	280
3	2650	210	2100	170	2650	210
4	1990	160	1590	130	1990	160
5	1592	125	1270	120	1592	125
6	1325	160	1060	125	1325	160
8	995	160	795	125	995	160
10	795	190	635	150	795	190
12	660	185	530	145	660	185
16	495	160	400	125	495	160
20	400	160	320	140	400	160

| 注意 |

- ▲ 请尽可能使用高刚性、高精度的机床和卡盘。
- ▲ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- ▲ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

S40-S4/R4 切削参数推荐表

S40-S4/R4 Recommended Cutting Parameters

侧铣 Side Milling



工件材料 Workpiece Materials	铁基高温合金 Iron-base Superalloy		钴基高温合金 Cobalt-base Superalloy		镍基高温合金 Nickel Base Superalloy	
切削深度 Depth of Cut(mm)	ap≤0.5D ae≤1D		ap≤0.5D ae≤1D		ap≤0.5D ae≤1D	
切削速度 Vc(m/min)	20 (10-30)		15 (10-25)		20 (10-30)	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
1	6370	280	4750	220	6370	280
2	3180	230	2380	200	3180	230
3	2100	160	1590	120	2100	160
4	1590	120	1190	80	1590	120
5	1270	120	950	80	1270	120
6	1060	105	795	65	1060	105
8	795	95	600	60	795	95
10	635	90	475	60	635	90
12	530	95	400	60	530	95
16	400	80	300	60	400	80
20	320	65	240	55	320	65

| 注意 |

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

T40-S4/R4 切削参数推荐表

T40-S4/R4 Recommended Cutting Parameters

侧铣 Side milling



工件材料 Workpiece Materials	钛合金 Titanium alloy		不锈钢 Stainless steel	
切削深度 Depth of Cut(mm)	ap≤1.5D ae≤0.25D		ap≤1.5D ae≤0.25D	
切削速度 Vc(m/min)	60 (40-100)		80 (60-110)	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	9555	380	12740	760
3	6370	305	8490	575
4	4780	285	6370	510
5	3820	305	5095	510
6	3185	320	4245	510
8	2390	335	3185	510
10	1910	345	2545	510
12	1590	350	2020	485
16	1195	310	1590	445
20	955	305	1275	430

| 注意 |

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

T40-S4/R4 切削参数推荐表

T40-S4/R4 Recommended Cutting Parameters

槽铣 Slot Milling



工件材料 Workpiece Materials	钛合金 Titanium alloy		不锈钢 Stainless steel	
切削深度 Depth of cut (mm)	ap≤1D ae≤1D		ap≤1D ae≤1D	
切削速度 Vc(m/min)	40 (30-60)		60 (50-70)	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	6370	255	9555	380
3	4245	200	6370	305
4	3185	190	4775	285
5	2545	170	3820	305
6	2120	170	3185	320
8	1590	190	2390	335
10	1270	200	1910	345
12	1060	210	1590	350
16	795	190	1195	310
20	635	190	955	305

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

A40-S3/R3 切削参数推荐表

A40-S3/R3 Recommended Cutting Parameters

侧铣 Side milling



工件材料 Workpiece Materials	锻造铝合金、铸造铝合金(Si<12%) Forging and Casting Aluminum Alloy(Si<12%)		铜合金(HB<200) Copper Alloy(HB<200)	
切削深度 Depth of Cut(mm)	ap≤1D ae≤0.1D		ap≤1D ae≤0.1D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	12700	900	13000	850
4	12000	1430	12000	1200
6	10600	1530	10600	1200
8	10000	1670	10000	1500
10	9500	2050	9500	1800
12	9280	2800	9280	2225

槽铣 Slot Milling



工件材料 Workpiece Materials	锻造铝合金、铸造铝合金(Si<12%) Forging and Casting Aluminum Alloy(Si<12%)		铜合金(HB<200) Copper Alloy(HB<200)	
切削深度 Depth of Cut(mm)	ap≤1D ae≤0.1D		ap≤1D ae≤0.1D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	10000	570	10000	520
4	9000	960	9000	860
6	8000	1050	8000	830
8	7800	1300	7800	960
10	8000	1500	8000	1240
12	6800	1620	6800	1500

注意

- 请尽可能使用高刚性、高精度的机床和卡盘。
- 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- 发生颤动和异常振动时，请调整切削条件。

NOTE

- Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- Please adjust the parameters when chatter or abnormal vibration occurs.

A40-B2 切削参数推荐表

A40-B2 Recommended Cutting Parameters

仿形铣 Profiling



工件材料 Workpiece Materials	锻造铝合金、铸造铝合金(Si<12%) Forging and Casting Aluminum Alloy(Si<12%)		铜合金(HB<200) Copper Alloy(HB<200)	
切削深度 Depth of Cut(mm)	ap≤1D ae≤0.1D		ap≤1D ae≤0.1D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
2	12700	900	13000	850
4	12000	1430	12000	1200
6	10600	1530	10600	1200
8	10000	1670	10000	1500
10	9500	2050	9500	1800
12	9280	2800	9280	2225

| 注意 |

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

A60-S4 切削参数推荐表

A60-S4 Recommended Cutting Parameters

侧铣 Side milling 槽铣 Slot Milling



工件材料 Workpiece Materials	铝合金 aluminum alloy			
切削深度 Depth of Cut(mm)	ap≤1D ae≤0.7D		ap≤0.75D ae≤1D	
外径D (mm)	转速(n) (r/min)	进给速度(Vf) (mm/min)	转速(n) (r/min)	进给速度(Vf) (mm/min)
12	14000	6300	14000	4200
16	17000	7650	17000	5100
20	20000	9000	20000	6000

| 注意 |

- △ 请尽可能使用高刚性、高精度的机床和卡盘。
- △ 此切削参数推荐表中的数值为切削条件的基准值。实际加工时，请考虑加工条件、目的、使用机床等因素，对切削条件进行调整。
- △ 发生颤动和异常振动时，请调整切削条件。

| NOTE |

- 1.Prefer to use the machine and chuck with high-rigidity and high accuracy machine.
- 2.Recommended Cutting parameters are for your reference. Please adjust the parameter to fulfill your own purpose.
- 3.Please adiust the parameters when chatter or abnormal vibration occurs.

附录

Appendix

Cutting Parameters and General Formula For Milling

铣削加工的切削参数与通用计算公式

常用参数及其单位				Parameter and Unit			
D	铣刀直径	Diameter	(mm)		fn	每转进给量	Feeding per Revolution (mm/rev)
ap	切削深度	Cutting Depth	(mm)		fz	每刃进给量	Feeding per Tooth (mm/tooth)
ae	切削宽度	Cutting Width	(mm)		Z	刀刃数	Teeth Number
Vf	进给速度	Feed Speed	(mm/min)		n	主轴转速	Spindle Speed (rev/min)
Vc	切削速度	Cutting Speed	(m/min)		L	工作台总进给长度 Length: (工件长度+ 铣刀直径: l+D)	(mm)
Tc	加工时间	Processing Time	(min)		Q	金属切削率	Metal Removal Rate (cm ³ /min)

通用计算公式				General Formula			
n	主轴转速	Spindle Speed		$n = \frac{Vc \times 1000}{\pi \times D}$ (r/min)			
Vc	切削速度	Cutting Speed		$Vc = \frac{\pi \times D \times n}{1000}$ (m/min)			
fz	每刃进给量	Feeding per Tooth		$fz = \frac{Vf}{z \times n}$ (mm)			
Vf	进给速度	Feed Speed		$Vf = n \times fz \times Z$ (mm/min)			
Q	金属切削率	Metal Removal Rate		$Q = \frac{ae \times ap \times Vf}{1000}$ (mm)			
Tc	加工时间	Processing Time		$Tc = \frac{L}{Vf}$ (min)			

Workpiece code table

工件材料代码表

材料组 ISO Material Group	MC TAIFENG	工件材料 Workpiece Material	含量 Content	抗拉强度 Tensile Strength (N/mm2)	布氏硬度 Brinell Hardness (HB)	洛氏硬度 Rockwell Hardness (HRC)
P 钢 Steel	P1	低碳钢, 长切屑 Low-carbon Steel, Long Chipping	C<0.25%	<530	<125	—
	P2	低碳钢, 短切屑, 易切钢 Low-carbon Steel, Short Chipping, Free-cutting Steel	C<0.25%	<530	<125	—
	P3	高碳钢及中碳钢 High-carbon Steel, Medium-carbon Steel	C>0.25%	>530	<220	<25
	P4	合金钢, 工具钢 Alloy Steel, Tool Steel	C>0.25%	600-850	<330	<35
	P5	合金钢, 工具钢 Alloy Steel, Tool Steel	C>0.25%	850-1400	340-450	35-48
	P6	铁素体不锈钢, 马氏体不锈钢, PH不锈钢 Ferritic Stainless Steel, Martensitic Stainless Steel, Ph Stainless Steel	C=(0-0.4)%	600-900	<330	<35
	P7	高强度铁素体不锈钢, 马氏体不锈钢, PH不锈钢, High-strength Ferritic Stainless Steel, Martensitic Stainless Steel, Ph Stainless Steel	C=(0.1-0.6)%	900-1350	330-450	35-48
M 不锈钢 Stainless Steel	M1	奥氏体不锈钢 Austenitic Stainless Steel	C=(0.05-0.15)%	<600	130-200	—
	M2	高强度的奥氏体和铸造不锈钢 High-strength Austenitic Stainless Steel And Cast Stainless Steel	C=(0.05-0.15)%	600-800	150-230	<25
	M3	双相不锈钢 Duplex Stainless Steel	C=(0.05-0.20)%	<800	135-275	<30
K 铸铁 Cast Iron	K1	灰铸铁 Grey Cast Iron	—	125-500	120-290	<32
	K2	中等加工难度的合金铸铁, 球墨铸铁 Moderately Difficult Alloy Cast Iron, Nodular Cast Iron	—	<600	130-260	<28
	K3	难加工的高合金铸铁, 球墨铸铁 Difficult High-alloy Cast Iron, Nodular Cast Iron	—	>600	180-350	<43
N 有色材料 Non-ferrous Material	N1	锻造铝合金 Wrought Aluminium Alloy	—	<520	60-90	—
	N2	铸造铝合金 Cast Aluminium Alloy	Si<12%	<350	70-100	—
	N3	铸造铝合金 Cast Aluminium Alloy	Si>12%	200-320	60-120	—
	N4	铜, 铜合金 Copper, Copper Alloy	—	200-650	60-200	—
	N5	石墨, 复合材料 Graphite, CFK, CFRP Graphite, Composite Material	—	600-1500	—	—
	N6	铝基复合材料(MMCs) GFK, CFK Aluminium-based Composite Material	—	<700	<210	—
S 耐热合金 钛合金 Heat-resistant Alloy, Titanium Alloy	S1	铁基高温合金 Iron-based Heat-resistant Alloy	—	500-1200	160-260	25-48
	S2	钴基高温合金 Cobalt-based Heat-resistant Alloy	—	1000-1450	250-450	25-48
	S3	镍基高温合金 Nickel-based Heat-resistant Alloy	—	600-1700	160-450	<48
	S4	钛及钛合金 Titanium And Titanium Alloy	—	900-1600	300-400	33-48
H 高硬度材料 High Hardened Material	H1	淬硬钢 Hardened Steel	—	—	—	45-55
	H2	淬硬钢 Hardened Steel	—	—	—	55-60
	H3	淬硬钢 Hardened Steel	—	—	—	60-65
	H4	淬硬钢 Hardened Steel	—	—	—	>65

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P1	15	1.0401	C 15	S 15 C	1015	C 12	080 M 15	C 15
P1	20; ML20	1.0402	C 22	S 22 C	1020	C 20	050 A 20	1 C 22
P1	15	1.1141	Ck 15	S 15 C	1015	XC 15	080 M 15	2 C 15
P2	Y15	1.0715	9 SMn 28; 11 SMn 30	SUM 22	1213	S 250	230 M 07	11 SMn 28
P2	Y15Pb	1.0718	9 SMnPb 28	SUM 22 L	12L13	S 250 Pb	—	11 SMnPb 28
P2	Y13	1.0736	9 SMn 36; 11 S Mn 37	SUM 25	1215	S 300	240 M 07	11 SMn 37
P2	—	1.0737	9 SMnPb 36; 11 SMnPb 37	—	12L14	S 300 Pb SMnPb 36	—	11 SMnPb 37
P3	35	1.0501	C 35	S 35 C	1035	CC 35	060 A 35	1 C 35
P3	45	1.0503	C 45	S 45 C	1045	CC 45	080 M 46	1 C 45
P3	ZG340-640;55	1.0535	C 55	S 55 C	1055	C 55	070 M 55	1 C 55
P3	60	1.0601	C 60	S 60 C- CSP	1060	AF 70 C 55	080 A 62	1 C 60
P3	Y35; Y30	1.0726	35 S 20	—	1140	35 MF 4	212 M 36	35 S 20
P3	60Si2CrA; 60Si2Mn	1.0961	60 SiCr 7	SUP 7	9262	60 SC 7	250 A 61	60 SiCr 8
P3	40Mn	1.1157	40 Mn 4	—	1039	35 M 5	150 M 36	—
P3	25; ML25	1.1158	Ck 25	S 25 C	1025	XC 25	070 M 26	2 C 25
P3	35Mn2	1.1167	36 Mn 5	SMn 438 (H)	1335	40 M 5	150 M 36	—
P3	30Mn2	1.1170	28 Mn 6	SCMn 1	1330	35 M 5	150 M 28	28 Mn 6
P3	35Mn	1.1183	Cf 35	S 35 C	1035	XC 38 TS	060 A 35	C 35 G
P3	Ck45; 45; Mn45Mn; ZG310-570	1.1191	Ck 45	S 45 C	1045	XC 42	080 M 46	2 C 45
P3	55	1.1203	Ck 55	S 55 C	1055	XC 55 H1	070 M 55	2 C 55
P3	50	1.1213	Cf 53	S 50 C	1050	XC 48 TS	060 A 57	C 53 G
P3	60Mn; 60	1.1221	Ck 60	S 58 C	1060	XC 60	060 A 62	2 C 60

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P3	—	1.1274	Ck 101	SUP_4	1095	XC 100	060 A 96	C 100 S
P3	T10	1.1545	C 105 W1	—	W 110	Y 105	B W 1 A	C 105 U
P3	CrV; 9SiCr; Cr2; 9Cr2	1.2067	100 Cr 6	—	L3	Y 100 C 6	B L 3	102 Cr 6
P3	CrWMo; CrWMn; 9CrWMn	1.2419	105 WCr 6	SKS 31	—	(107 WCr 13)	—	105 WCr 5
P3	5CrNiMo; 5CrW2Si	1.2542	45 WCrV 7	—	S1	45 WCr V 8	BS 1	45 WCrV 8
P3	5CrNiMo	1.2713	55 NiCrMoV 6	SKT 4	L6	55 NCDV 7	BH 224/5	55 NiCrMoV 7
P3	—	1.5415	15 Mo 3	STFA 12-240	A 204 Gr. A	15 D3	1501	16 Mo 3
P3	—	1.5622	14 Ni 6	SL2N26	A 350-LF 5	15 N 6	—	FeE 285 Ni 6
P3	—	1.6511	36 CrNiMo 4	—	9840	40 NCD 3	816 M 40	36 CrNiMo 4
P3	40CrNiMoA	1.6582	34 CrNiMo 6	SNCM 447	4340	35 NCD 6	817 M 40	34 CrNiMo 6
P3	—	1.6587	17 CrNiMo 6	SNCM 815	—	18 NCD 6	820 A 16	17 CrNiMo 7
P3	15Cr	1.7015	15 Cr 3	SCr 415 H	5015	12 C 3	523 M15	15 Cr 2
P3	35Cr	1.7033	34 Cr 4	SCr 430 H	5130 H	32 C 4	530 A 32	34 Cr 4 KD
P3	40Cr	1.7045	42 Cr 4	SCr 440	5140	42 C 4 TS	530 A 40	40 NiCrMo 3
P3	—	1.7035	41Cr4	SCr440(H)	5140	42C4	530M40	24
P3	—	1.7380	Mo910	—	ASTM A182 F.22	12CD9; 12CD10	1501-622 Cr31, 45	—
P3	40Cr	1.7045	42 Cr 4	SCr 440	5140	42 C 4 TS	530 A 40	40 NiCrMo 3
P3	18CrMn	1.7131	16 MnCr 5	SCR 415	5115	16 MC 5	527 M 17	16 MnCr 5 KD
P3	20CrMn; 50CrMn	1.7176	55 Cr 3	SUP 9 (A)	5155	55 C 3	527 A 60	55 Cr 3
P3	30CrMn	1.7218	25 CrMo 4	SCM 420	4130	25 CD 4	708 A 25	25 CrMo 4 KD
P3	50CrVA	1.8159	—	SUP 10	6150	50 CV 4	735 A 50	51 CrV 4
P3	35CrMo	1.7220	34CrMo4	SCm432; SCCrM3	4137; 4135	35CD4	708A37	—

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P3	40CrMoA	1.7223	41 CrMo 4	SCM 440	4142	42 CD 4 TS	708 M 40	41 CrMo 4
P3	42CrMo; 42CrMnMo	1.7225	42 CrMo 4	SCM 440 H	4140	42 CD 4	708 A 42	42 CrMo 4
P3	15CrMo	1.7262	15 CrMo 5	SCM 415 H	—	12 CD 4	—	—
P3	12CrMo	1.7335	13 CrMo 4 4	SFVA F 12	A182-F11	15 CD 4.05	1501-621	13 CrMo 4-5
P3	—	1.7361	32 CrMo 12	—	—	30 CD 12	722 M 24	32 CrMo 12
P4	55Si2Mn	1.0904	55 Si 7	SKH 1; SKT 4	9255	55 S 7	250 A 53	55 NiCrMoV 7
P4	V	1.2833	100 V 1	SKS 43	W 210	Y1 105 V	BW 2	100 V 2
P4	12CrNi2	1.5732	14 NiCr 10	SNC 415 H	3415	14 NC 12	—	—
P4	12CrNi3	1.5752	14 NiCr 14	SNC	E	16 NC 11	655 M 13	13 NiCr 12
P4	20CrNiMo	1.6523	21 NiCrMo 2	SNCM 220 H	8620	20 NCD 2	805 M 20	20 NiCrMo 2 KD
P4	—	1.6546	40 NiCrMo 7 2 KB	SNCM 240	8640	40 NCD 2	—	40 NiCrMo 2 KD
P4	—	1.8523	39 CrMoV 13 9	—	—	—	897 M 39	39 CrMoV 13 9
P4	—	1.5710	36NiCr6	SNC236	3135	35NC6	640A35	111A
P6	ZGMn13-1; ZGMn13-2	1.3401	X 120 Mn 12	SCMnH 1	A 128	Z 120 M 12	BW 10	—
P6	Cr6WV; 100CrMoV5	1.2363	X 100 CrMoV	SKD 12	A-2 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1
P6	Cr12W	1.2436	X 210 CrW 12	SKD 2	—	Z 210 CW 1 2	—	X 210 CrW 12
P6	3Cr2W8V; 30WCrV9; 5CrMnMo	1.2581	X 30 WCrV 93	SKD 5	H 21	Z 30 WCV 9	BH 21	X 30 WCrV 9 3
P6	4Cr5MoVSi1; 40CrMoV5	1.2344	X 40 CrMoV 5 1	SKD 61	H 13	Z 40 CDV 5	BH 13	X 40 CrMoV 5 1
P6	W18Cr4V	1.3355	S 1-8-0-1	SKH 2	T 1	Z80WCV 18-04-01	BT 1	HS 1-8-0-1
P6	W18Cr4VCo5	1.3255	S 1-8-1-2-5	SKH 3	T 4	Z80 WKCV 18-05-04-01	BT 4	(HS18-1-1-5)
P6	W6Mo5Cr4V 2Co5	1.3243	S 6-5-2-5	SKH 55	M 35	KCV 06-05- 05-04-02	BM 35	(HS6-5-2-5)
P6	—	1.5662	X 8 Ni 9	SL 9 N 53	A 353	9 Ni	509	FeE 490 Ni 36

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P6	Cr12MoV	1.2601	X 165 CrMoV 12	—	—	—	—	X 165 CrMoV 12
P6	Cr12	1.2080	X210Cr12	SKD1	D3 ASTM D3	Z200C12	BD3	—
P6	—	1.3343	S6-5-2	SUH3	D3	Z40CSD10	4959BA2	—
P6	M7	1.3348	S 2-9-2	—	M 7	Z100DCWV 09-04-02-02	—	HS 2-9-2
M1	—	1.4408	GX 6 CrNiMo 18 10	SCS 14	CF-8M	GX5CrNiMo 19-11-2	316 C 16	GX 5 CrNiMo 19-11-2
M1	OCr27Ni12 Mo3	1.4435	X 2 CrNiMo 18 14 3	SCS 16	316 L	Z 2 CND 17.13	316 S 11	X 2 CrNiMo 18 16
M1	1Cr18Ni12 Mo2Ti	1.4581	GX 5 CrNi MoNb 18 10	SCS 22	—	Z 4 CNDNb 18.12 M	318 C 17	GX 5 CrNiMo Nb 19-11-2
M1	1Cr23Ni13; 2Cr23Ni13	1.4828	X 15 CrNiSi 20 12	SUH 309	309	Z 15 CNS 20.12	309 S 24	X 15 CrNiSi 20 12
M1	00Cr18Ni10N; 0Cr19Ni9	1.4311	X 2 CrNiN 18 10	SUS 304 LN	304	Z 8 CN 18.12	304 S 62	X 2 CrNiN 18 10
M1	0Cr25Ni20; 2Cr25Ni21	1.4845	X 12 CrNi 25 21	SUS 310 S	310 S	Z 12 CN 25.20	310 S 24	X 8 CrNi 25 21
M1	0Cr17Ni11Mo2; 0Cr17Ni12Mo2	1.4401	X 5 CrNiMo 17 12 2	SUS 316	316	Z 6 CND 17.11	316 S 16	X6 CrNiMo 17 X 12 2 KD
M1	0Cr17Ni12 Mo2	1.4436	X 5 CrNiMo 17 1 3 3	SUS 316	316	Z 6 CND 17.12	316 S 16	X6 CrNiMo 18 13 3 KD
M1	00Cr17Ni14 Mo2	1.4404	X 2 CrNiMo 17 13 2	SUS 316 L	316 L	Z 3 CND 19.10 M	316 S 12	GX 3 CrNiMo 17 12 2 KD
M1	OCr17Ni13Mo; 00Cr17Ni13Mo2N	1.4429	X 2 CrNiMoN 17 13 3	SUS 316 LN	316 LN	Z 2 CND 17.13 Az	316 S 62	X 3 CrNiMoN 17 13 3
M1	—	1.4406	X 2 CrNiMoN 17	SUS 316 LN 12 2	316	Z 2 CND 17.12 Az	316 S 61 LN	X 3 CrNiMoN 17 12 2
M1	Cr18Ni12 Mo2Ti	1.4571	X 6 CrNiMoTi 17 12 2	SUS 316 Ti	316 Ti	Z 6 CNDT 17.12	320 S 31	X 6 CrNiMoTi 17 12 2
M1	00Cr19Ni13 Mo3	1.4438	X 2 CrNiMo 18 16 4	SUS 317 L	317 L	Z 2 CND 19.15	317 S 12	X 3 CrNiMo 18 16 4
M1	1Cr18Ni9Ti	1.4541	X 6 CrNiTi 18 10	SUS 321	321	Z 6 CNT 18.10	321 S 12	X 6 CrNiTi 18
M1	1Cr18Ni10Ti; 1Cr18Ni9Ti	1.4878	X 12 CrNiTi 18 9	SUS 321	321	Z 6 CNT 18.12	321 S 20	X 10 CrNiTi 18 10
M1	Cr17Ni12Mo3 Nb	1.4583	X 10 CrNi MoNb 18 12	—	318	—	—	—
M1	—	1.4539	X 1 NiCrMo CuN	—	—	Z 1 NCDU 25-20-5	904 S 13 25 20	X 1 NiCrMoCu
M1	—	1.4003	—	—	405	Z8CA12	405S17	—

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M1	—	1.4521	X1CrMoTi182	—	S44400	—	—	—
M1	—	1.4542	—	—	630	Z7CNU17-04	—	—
M1	00Cr19Ni13Mo3	1.4438	X 2 CrNiMo 18 16 4	SUS 317 L	317 L	Z 2 CND 19.15	317 S 12	X 3 CrNiMo 18 16 4
M1	1Cr18Ni9Ti	1.4541	X 6 CrNiTi 18 10	SUS 321	321	Z 6 CNT 18.10	321 S 12	X 6 CrNiTi 18
M1	1Cr18Ni10Ti; 1Cr18Ni9Ti	1.4878	X 12 CrNiTi 18 9	SUS 321	321	Z 6 CNT 18.12	321 S 20	X 10 CrNiTi 18 10
M1	1Cr18Ni11Nb	1.4550	X 6 CrNiNb 18 10	SUS 347	347	Z 6 CNNb 18.10	347 S 17	X 6 CrNiNb 18 10
M1	1Cr17	1.4016	X6Cr17	SUS 430	430	—	430 S 17; 430 S 18	
M1	0Cr15NiMo2Al	1.4532	X 8 CrNiMoAl 15 7 2	—	15-7 PH	X15D2	—	X 8 CrNiMoAl 15-7-2
M1	Cr17Ni12Mo3Nb	1.4583	X 10 CrNiMoNb 18 12	—	318	—	—	—
M1	—	1.4539;52662	X 1 NiCrMo CuN	—	—	Z 1 NCDU 25-20-5	904 S 13 25 20	X 1 NiCrMoCu
M1	0Cr17Ni4Cu4Nb	1.4542	X 5 CrNiCuNb 16 4	SUS 630	630	Z6CNU17.04		X 5 CrNiCuNb 16-4
M2	0Cr17Ni7Al	1.4568	X 7 CrNiAl 17 7	SUS 631	—	X7CrNiAl17-7; Z9CNA17-07	301 S 81	X 7 CrNiAl 17-7
M2	—	1.4504	—	—	—	—	—	—
M2	—	1.4504	—	—	—	—	—	—
M2	0Cr17Ni7Al	1.4568	X 7 CrNiAl 17 7	SUS 631	—	X7CrNiAl1-7; Z9CNA17-07	301 S 81	X 7 CrNiAl 17-7
M3	0Cr26Ni5Mo2	1.4460	X 4 CrNiMo 27 5 2	SUS 329 J1	329	X 2 CrNiMo 25-7-3	—	X 3 CrNiMo 27 5 2
M3	—	1.4462	X 2 CrNiMoN 22 5 3	SUS 329J 3L	S318 03	Z 3 CND 22.05 AZ	318 S 13	X 2 CrNiMoN 22 5 3
K1	HT300	0.6030	GG- 30	FC 300	A48-45 B	FGL 300	Grade 300	GJL-300
K1	HT350	0.6035	GG- 35	FC 350	A48-50 B	FGL 350	Grade 350	GJL-350
K1	HT400	0.6040	GG- 40	—	A48-55 B	FGL 400	Grade 400	GJL-400
K2	—	0.7033	GGG-35.3	—	—	—	—	GJS-350-22
K2 槽铣系列	QT400-18	0.7040	GGG-40	FCD400	60-40-18	FCS 400-12	SNG 420/12	—

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K2	—	—	GGG-40.3	—	—	FGS 370-17	SNG 370/17	—
K2	QT500-7	0.7050	GGG-50	FCD500	80-55-06	FGS 500-7	SNG 500/7	—
K2	—	0.7660	GGG-NiCr202	—	A43D2	S-NC202	Grade S6	—
K2	—	—	GGG-NiMo137	—	—	L-MN 137	L-NiMn 137	—
K2	QT600-3	—	GGG-60	FCD600	—	FGS 600-3	SNG 600/3	—
K2	QT700-18	0.7070	GGG-70	FCD700	100-70-03	FGS 700-2	SNG 700/2	—
K3	—	0.8145	GTS-45-06	FCMP440	40010	P 45-06	P 440/7	MN 450 - 6
K3	—	0.8155	GTS-55-04	FCMP490	50005	P 55-04	P 510/4	MN 550-4
K3	—	0.8165	GTS-65-02	FCMP540	70003	P 65-02	P 570/3	MN 650-3
K3	—	—	—	FCMB310	—	MN 32-8	56 1/3	—
K3	—	—	GTS-35	FCMW330	GTS-35	MN 35-10	B 340/12	—
K3	—	—	GTS-65	FCMP540	GTS-65	MP60-3	P 570/3	—
K3	—	—	GTS-70-02	FCMP690	GTS-70-02	MN 700-2	P 690/2	—
K3	—	0.8145	GTS-45-06	FCMP440	40010	P 45-06	P 440/7	MN 450 - 6
K3	—	0.8155	GTS-55-04	FCMP490	50005	P 55-04	P 510/4	MN 550-4
K3	—	0.8165	GTS-65-02	FCMP 540	70003	P 65-02	P 570/3	MN 650-3
H	—	0.9620	GX 260 NiCr 42	0512-00	A 532 IB NiCr-LC	—	—	GJH-X260Ni Cr 4-2
	—	0.9625	G-X 330 NiCr 42	0513-00	A 532 IA NiCr-HC	FB Ni 4 Cr2 HC	—	GJH-X330Ni Cr 4-2
	—	0.9630	G-X 300 CrNiSi 95 2	0457-00	A 532 ID Ni-HiCr	—	—	GJH-X300 Cr NiSi 9-5-2
	—	0.9635	G-X 300 CrMo 15 3	—	A 532 IIC15% CrMo-HC	—	—	GJH-X300 CrMo 15-3
	—	0.9640	G-X 300 CrMoNi 15 2 1	—	—	—	—	GJH-X300 CrMoNi 15-2-1
	—	0.9645	GX 260 CrMoNi 20 2 1	—	A 532 IID20% CrMo-HC	—	—	GJH-X260 CrMoNi 20-2-1
	—	0.9650	GX 260 Cr 27	0466-00	A 532 IIA25% Cr	—	—	GJH-X260 Cr 27
	—	0.9655	G-X 300 CrMo 27 1	—	A 532 IIA25% Cr	—	—	GJH-X300 CrMo 27-1

AISI/SA—美国钢铁学会/美国汽车工程师协会
AISI/SA—Americal Iron and Steel Institute
Society of Automotive Engineer

BS—英国标准
BS—British Standards

EN—欧洲标准
EN—European Standards



可转位铣削刀片

Indexable Inserts



模具行业解决方案

Mold industry solutions

粗铣平面
Rough milling plane
——MFSN45系列面铣刀
MFSN45 series face milling cutter disc

粗铣轮廓及型腔
Rough milling contour and cavity
——MFSD16系列快进给铣刀
MFSD16 series fast feed milling cutter

精铣产品面
Precision milling product surface
——H20系列球头立铣刀
H20 series ball-nose end mill

清根加工
Clean-up machining
——MPRD00系列小直径仿形铣刀
MPRD00 series small diameter imitation milling cutter

清根加工
Clean-up machining
——P20系列圆角头立铣刀
P20 series corner radius end mill

精铣平面
Precision milling plane
——MFSE45系列面铣刀
MFSE45 series face milling cutter

粗钻孔
Coarse hole drill
——TH系列U钻
TH series U-drill

汽车行业解决方案

Automotive Industry Solutions

端面铣削
Face milling
SNEU+MFSN45
高精度刀盘搭配磨制刀片
实现粗精加工
SNEU+MFSN45
High precision disc with grinding blades
Realize rough and fine machining

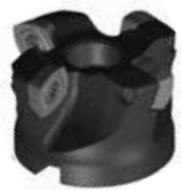
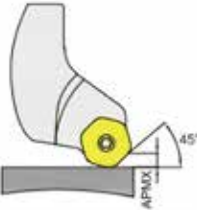
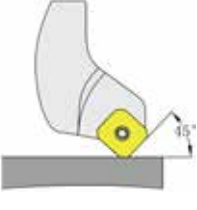
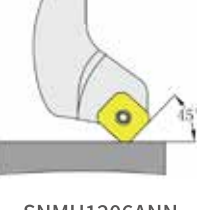
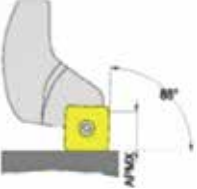
车车拉
Turn-broaching tool
高刚性、高精度模块化刀模块化，
刀夹可灵活布置，确保加工时刀位
最近实现高效加工
High rigidity, high-precision modular knife.
Modularization and flexible arrangement of tool
holders ensure efficient machining of the tool
position during processing.

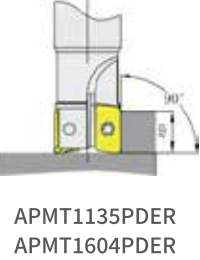
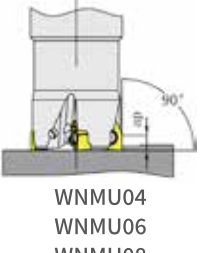
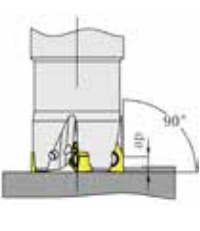
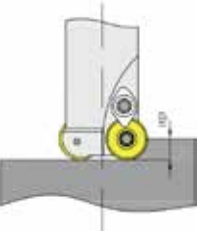
孔加工
Hole processing
D20通用加工钻头高性能丝锥
D20 universal machining drill High performance tap

油孔加工
Oil hole processing
非标定制
深孔内冷麻花钻，全槽抛光，内
冷孔加大排屑顺畅。
Non standard customization
Deep hole internal cooling Fried Dough Twists drill,
full groove polishing, internal cooling hole enlargement
and smooth chip removal.

外铣
External milling
高精度超密齿刀盘，高精度磨制刀片，
保证尺寸稳定。
寿命更高，减少换刀次数，降低成本
High precision ultra dense tooth disc, high-precision grinding
blades, ensuring dimensional stability.
Longer lifespan, reduced tool changes, and lower costs

可转位铣削刀具一览表
List of Indexable Milling Tools

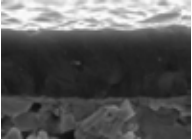
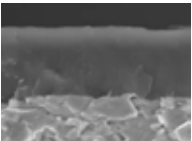
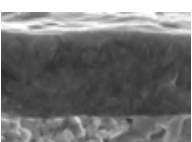
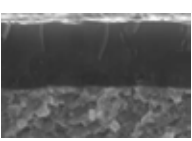
加工类型 Type	刀具系列 Cutter	图示 Shape	适用刀片及应用 Inserts and Approach angle	用途及特征 Application	页码 Page
面铣 Face milling	MFSD16		 SDMT120512 SDMT150512	适宜于P、K等材料的型腔铣、面铣等加工, 能实现较大的进给量, 也可用于螺旋插补铣削加工。 Suitable for cavity milling, surface milling, and other processing of materials such as P and K, It can also be used for spiral interpolation milling machining.	P192
	MFHN45		 HNGX0907ANSN	1.高经济型面铣刀具系列。 2.双面六边形刀片, 共12个切削刃, 同时刀片具有高的强度。 1.High economic surface milling tool series. 2.Double sided hexagonal insert with atotal of 12 cutting edges and high strength.	P208
	MFSE45		 SE□T13T3AGEN	1.搭配精密模压级四边形20°后角刀片, 切削力小。 2.螺钉式压紧结构, 刀具装夹方便, 适宜于轻切削加工。 1.Equipped with precision molded quadrilateral 20° back angle inserts, the cutting force is small; 2.Screw type compression structure, convenient tool clamping, suitable for light cutting processing.	P203
	MFSN45		 SNMU1206ANN	1.搭配精密模压级四边形负角刀片, 切削轻快; 2.适宜于P、M、K类等材料的面铣加工, 是通用加工的首选刀具系列。 1.Equipped with precision molded quadrilateral negative angle inserts, cutting is light and fast; 2.Suitable for surface milling of materials such as P, M, K and so on, it is the preferred tool series for general machining.	P205
	MFSN88		 SNMU1206ZNEN	1.搭配精密模压级四边形负角刀片, 切削过程稳定。 2.兼顾经济型和通用性, 适宜于P、M、K等材料的通用面铣加工。 1.Equipped with precision molded quadrilateral negative angle inserts, cutting is stable; 2. Balancing economy and versatility, suitable for surface milling of materials such as P, M, K and so on.	P206

加工类型 Type	刀具系列 Cutter	图示 Shape	适用刀片及应用 Inserts and Approach angle	用途及特征 Application	页码 Page
方肩铣 Shoulder milling	MSAP90		 APMT1135PDER APMT1604PDER	1.通用型方肩铣削刀具系列。 2.适用于P、K、N等材料的方肩铣、槽铣、坡走铣、平面铣等加工。 1.Universal shoulder milling tool series. 2.Suitable for square shoulder milling, slot milling, slope milling, flat milling and other processing of materials such as P, K, and N.	P172
	MSWN90		 WNMU04 WNMU06 WNMU08	1.经济型方肩铣刀系列, 搭配精密模压级双面6刃刀片。 2.刀具定位稳定, 切削过程可靠拥有杆状、套式刀盘刀具可选。 1.Economical shoulder milling cutter series, paired with precision molded grade double-sided 6-blade inserts. 2.The tool positioning is stable, and the cutting process is reliable. There are rod shaped and sleeve shaped tool options available.	P183
	MSXN90		 XNEN08	1.经济型方肩铣刀系列, 搭配精密研磨级双面6刃刀片。 2.刀具定位稳定, 切削过程可靠。 1.Economical shoulder milling cutter series, paired with precision grinding grade double-sided 6-blade inserts.	P185
仿形铣削 Profile Milling	MPRD00		 RDMW	1.适宜于P、K类材料及淬硬材料的加工。 2.刀具直径丰富, 可用于平面、曲面及型腔加工。 1.Suitable for processing P, K type materials and hardened materials. 2.The tool diameter is rich and can be used for machining flat surfaces, curved surfaces, and cavities	P188
	MPRP00		 RPMT	1.适宜于P、M、K等材料的加工。 2.刀具直径丰富, 可用于平面、曲面及型腔加工。 1.Suitable for processing materials such as P, M, K, etc. 2.The tool diameter is rich and can be used for machining flat surfaces, curved surfaces, and cavities.	P190

牌号一览表

List of brand names

工件材质 Workpiece material	ISO	涂层硬质合金 Coated Carbides	
		CVD	PVD
P 钢 Steel	P01		
	P10		
	P20		
	P30		TU5250
	P40		TP5250
	P50		
M 不锈钢 Stainless steel	M01		
	M10		
	M20		
	M30		TU5250
	M40		TM5250
	M50		
K 铸铁 Cast iron	K01	TK6150	
	K10		
	K20		TU5250
	K30		
	K40		
N 有色金属 Non-ferrous metal	N01		
	N10		
	N20		
	N30		
	N40		
S 高温合金 High temperature alloy	S01		
	S10		
	S20		
	S30		
	S40		
H 高硬合金 High hardness alloy	H01		TH5150
	H10		
	H20		
	H30		

牌号 Grade	涂层类型 Coating Type	加工用途 Processing Purpose	材质结构 Material Structure	特点 Characteristic	颜色 Coating Colour
TU5250	PVD	P M K		采用高耐磨性的硬质合金基体和 PVD TiAlN纳米涂层, 兼顾高强度和高耐磨性, 应用范围广。 适用于钢材、不锈钢和铸铁等材料的通用加工。 Adopting a hard alloy substrate with high wear resistance and PVD TiAlN nano coating, it balances high strength and high wear resistance, and has a wide range of applications. Suitable for general processing of materials such as steel, stainless steel, and cast iron.	
TP5250	PVD	P		采用抗变形能力极好的基体材料和PVD AlCrN纳米涂层, 具有良好的耐磨性、韧性及热稳定性, 可以实现不同工况的稳定加工。 适用于钢件材料的通用加工。 By using a matrix material with excellent deformation resistance and PVD AlCrN nano coating, it has good wear resistance, toughness, and thermal stability, and can achieve stable processing under different working conditions. Suitable for general processing of steel materials.	
TM5250	PVD	M		采用高强度细晶硬质合金基体和PVD TiAlN/TiSiN纳米多层涂层, 具有良好的耐磨性、韧性及热稳定性, 可以实现不同工况的稳定加工。 适用于不锈钢材料的通用加工。 The use of high-strength fine-grained hard alloy matrix and PVD TiAlN/TiSiN nano multilayer coating has good wear resistance, toughness, and thermal stability, which can achieve stable processing under different working conditions. Suitable for general processing of stainless steel materials.	
TK6150	CVD	K		采用精细中温TiCN、中厚Al ₂ O ₃ 和TiN涂层, 搭配专用细晶硬质合金基体, 兼顾耐磨损性和抗崩刃性, 保证加工的稳定性与高效性; 适用于铸铁材料的通用加工。 Using fine medium temperature TiCN, medium thickness Al ₂ O ₃ , and TiN coatings, combined with a dedicated fine-grained hard alloy substrate, to balance wear resistance and anti chipping performance, ensuring stability and efficiency in processing; Suitable for general processing of cast iron materials.	
TH5150	PVD	H		超细晶粒硬质合金基体搭配PVD纳米复合硬质涂层, 兼备高抗氧化性与红硬性; 适用于 55HRC 以上的高硬钢精到半精加工铣削。 Ultra fine grain hard alloy substrate combined with PVD nanocomposite hard coating, possessing high oxidation resistance and red hardness; Suitable for precision to semi precision milling of high hardness steel above 55HRC.	

可转位铣削刀片型号表示规则

ISO Milling Indexable Inserts Identification System

① 形状符号 Shape symbol	
符号 Symbol	形状 Shape
C	菱形顶角80° Rhombic apex angle 80
D	菱形顶角55° Rhombic apex angle 55
E	菱形顶角75° Rhombic apex angle 75
F	菱形顶角50° Rhombic apex angle 50
M	菱形顶角86° Rhombic apex angle 86
V	菱形顶角35° Rhombic apex angle 35
W	六角形顶角:Hexagonal apex angle
H	正六角形 Regular hexagon
O	正八角形 Regular octagon
P	正五角形 Regular pentagon
T	正三角形 Equilateral triangle
S	正方形 Square
L	长方形 Rectangle
A	平行四边形85° Parallelogram85
B	平行四边形82° Parallelogram82
K	平行四边形55° Parallelogram55
R	圆形 Circular
X	其他 Other
菱形及平行四边形顶角为锐角 Diamonds and parallelograms with acute apex angles	

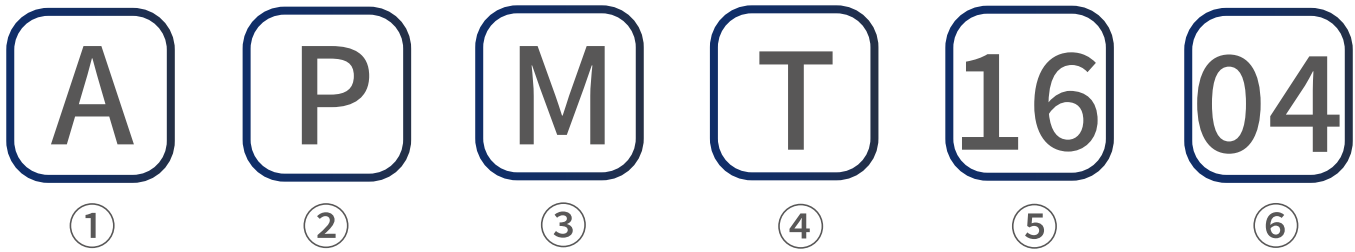
② 后角符号 Relief angle symbol		
符号 Symbol	后角 Relief angle	
A	3°	
B	5°	
C	7°	
D	15°	
E	20°	
F	25°	
G	30°	
N	0°	
P	11°	
O	其他Other	

③ 精度符号 Precision symbol			
符号 Symbol	刀尖高度公差 Corner Height Tolerance	厚度公差 Thickness Tolerance	内接圆公差 I.C.dia. Tolerance
A	±0.005	±0.025	±0.025
F			±0.13
C	±0.013		±0.025
H			±0.13
E	±0.025	±0.13	±0.025
G			
J	±0.005	±0.025	±0.05~±0.15
K	±0.013		
L	±0.025		
M	±0.08~±0.18	±0.13	
N		±0.025	
U	±0.13~±0.38	±0.13	±0.08~±0.25

⑦ 主偏角符号 Lead Angle symbol		⑧ 修光刀后角符号 Wiper relief angle symbol	
符号 Symbol	主偏角 Lead Angle	符号 Symbol	修光刀后角符号 Wiper relief angle
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	80°	D	15°
P	90°	E	20°
Z	其他 Other	F	25°
7、8 刀尖R tool nose		G	30°
		N	0°
		P	11°
		Z	其他Other
符号 symbol	圆角 corner radius	符号 symbol	圆角 corner radius
02	0.2	16	1.6
04	0.4	20	2.0
08	0.8	24	2.4
12	1.2	30	3.0

⑨ 刀尖规格符号 Major cutting edge symbol	
F	 锋利刀尖 Sharp edge
E	 R研磨 R angle grinding
T	 倒棱 chamfering
S	 倒棱+R研磨 chamfering+R angle grinding

⑩ 方向符号 direction symbol	
符号 symbol	方向 direction
R	右 right
L	左 left
N	无方向 no direction



④ 槽、孔符号 Hole/Chip breaker Symbol				
符号 Symbol	有无孔 Hole	孔的形状 Hole Shape	断屑槽 Chipbreaker	形状 Shape
N	无 Without		无 Without	
R			单面 Singlesided	
F			双面 Doublesided	
A	有 With	圆柱孔 Cylindrical hole	无 Without	
M			单面 Singlesided	
G			双面 Doublesided	
W		圆柱孔单面40°-60° With Hole and One Countersink40°-60°	无 Without	
T			单面 Singlesided	
Q		圆柱孔双面40°-60° With Hole and Doublesided40°-60°	无 Without	
U			双面 Doublesided	
B		圆柱孔单面70°-90° With Hole and One Countersink70°-90°	无 Without	
H			单面 Singlesided	
C		圆柱孔双面70°-90° With Hole and Doublesided70°-90°	无 Without	
J			双面 Doublesided	
X				

⑤ 切削长度符号 Edge Length Symbol	
S	
O	
T	
P	
R	
W	
A,N	

⑥ 厚度符号 Thickness Symbol	
符号 Symbol	厚度 Thickness
01	1.59
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.525

⑪ 应用场合 Application Occasions	
H	重型加工 Heavy load cutting
R	粗加工 Rough cutting
M	中等加工 Medium cutting
F	精加工 Fine machining

⑫ 槽型类别 Type of Chip Breaker	
1	主前角 0°, 平板型 front rake angle, flat plate type
2	主前角 1°至10° front rake angle 1°to10°
3	主前角 11°至19° front rake angle 11°to19°
4	主前角 20°至25° front rake angle 20°to25°
5	主前角大于25° front rake angle 25°

⑬ 刃口类型 Cutting Edge Type	
1	负角倒棱 Negative chamfer
2	零度倒棱 Zero degree chamfer
3	正角倒棱 Positive Chamfer
4	无倒棱 No chamfer
5	减震刃口 Shock-absorbing blade edge

可转位铣削刀盘型号表示规则

Milling Toos Identification System

①加工方式Milling Tool Type	
面铣 Face Milling	MF
方肩铣 Shoulder Milling	MS
仿形铣 Profile Milling	MP
槽铣 Slot Milling	MG
倒角铣 Chamfer Milling	MC
螺旋立铣 Helical Milling	MH

② 刀片形状 Insert Shape	
A	85°Rhombic
C	80°Rhombic
H	正六边形 Hexagonal
L	长方形 Rectangle
O	正八边形 Octagon
R	圆形 Round
T	正三角形 Triangle
W	桃型 Hexagonal

③刀片后角 Insert Clearance Angle	
N	0°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°

⑦ 接口类型 Type of Coupling	
A	A型接口A Type
B	B型接口B Type
C	C型接口CType
D	D型接口D Type
M	螺纹接口 Threaded Interface

⑧ 接口直径 Coupling Size	
22	22mm

⑪切削刃长度 Cutting Edge Length	
12	12mm

⑨内冷结构 Internal cooling structure	
C	带内冷 With
不带内冷省略 Without (default)	

⑫刀垫结构 Pad structure	
X	带刀垫 With
不带刀垫省略 Without (default)	

⑩ 齿数 No. of teeth	
5T	5齿

MF

①

S

②

N

③

45

④

063

⑤

L

⑥

④ 主偏角 Lead Angle	
45	45
三面刃:槽宽度 Three sided blade: slot width	

⑤刀具工作直径 Cutting Diameter	
063	63mm

⑥ 切削方向 Cutting Direction	
L	左切削 Left Hand
右切削省略 Right Hand(Default)	

A

⑦

22

⑧

C

⑨

5T

⑩

12

⑪

X

⑫

可转位铣削刀杆型号表示规则

Milling Toos Identification System

①加工方式Milling Tool Type	
面铣 Face Milling	MF
方肩铣 Shoulder Milling	MS
仿形铣 Profile Milling	MP
槽铣 Slot Milling	MG
倒角铣 Chamfer Milling	MC
螺旋立铣 Helical Milling	MH

② 刀片形状 Insert Shape	
A	85°Rhombic
C	80°Rhombic
H	正六边形 Hexagonal
L	长方形 Rectangle
O	正八边形 Octagon
R	圆形 Round
T	正三角形 Triangle
W	桃型 Hexagonal

③刀片后角 Insert Clearance Angle	
N	0°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°

⑦ 接口类型 Type of Coupling	
P	直柄 Straight Shank
W	削平直柄 Weldon Shank
BT	BT型接口 BT Type

⑨ 齿数 No. of teeth	
3T	3齿

⑩切削刃长度 Cutting Edge Length	
12	12mm

⑪内冷结构 Internal cooling structure	
C	带内冷 With
不带内冷省略 Without (default)	

⑧ 接口直径 Coupling Size	
20	20mm



④ 主偏角 Lead Angle	
90	90
三面刃:槽宽度 Three sided blade: slot width	

⑤刀具工作直径 Cutting Diameter	
063	63mm

⑥有效长度 Working Length	
50	50mm



铣削刀片一览表

List of Milling inserts

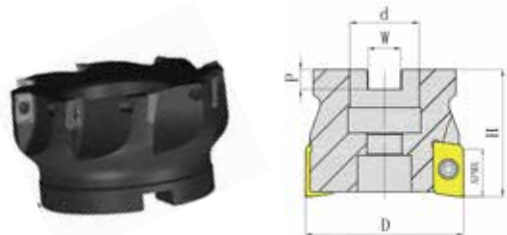
产品分类 classification	型号系列 Model series							
单面方肩铣系列 Single sided square shoulder milling series	APMT-H33 刃长:11/16	APMT-M20 刃长:11/16	APMT-H20 刃长:11/16	APMT-H10 刃长:11/16	JDMT-M32 刃长:07	BPMT-M23 刃长:11	BPMT-M23 刃长:16	APGT-G2 刃长:11/16
								
	TPKT-M42 刃长:10/15	TPGT-M32 刃长:15	YPHW 刃长:10	ADKT-32 刃长:05	SDKT 刃长:13			
								
双面方肩铣系列 Double sided square shoulder milling series	ANKT-M42 刃长:04/06/10	WNMU-M43 刃长:04/06/08	WNMU-M42 刃长:04	XNEX-M53 刃长:04/08	LNPU-M42 刃长:11	LNHU 刃长:09/13/16	TNGX 刃长:16	
								
仿形铣系列 Profile milling series	RCMT-R11 刃长:06	RDMW-R11 刃长:05	RDMW-R11 刃长:10	RDMW-R11 刃长:12/16	RPMW-H33 刃长:10	RPMT-M32 刃长:10/12	RPMT-H33 刃长:12	RCET 刃长:12
								
单面快进给系列 Single Sided High- feed Milling Series	SDMT-M32 刃长:12/15	SOMT-M30 刃长:10/14	SBMT 刃长:13	PDMT 刃长:09	EPNW 刃长:06	LPGT 刃长:01		
								
双面快进给系列 Double Sided High- feed Milling Series	LNMU-M42 刃长:02/03	BLMP-M42 刃长:06/09	LOGU-M32 刃长:03					
								
单面面铣系列 Single sided face milling series	SEGR-M33 刃长:12/15	SEMR-M33 刃长:12/15	SEET-M31 刃长:13	SEKT-M33 刃长:12	SEMT-M33 刃长:13	OFMT-M32 刃长:07		
								
双面面铣系列 Double sided face milling series	SNMU-M32 刃长:13	SNMU-M31 刃长:12	SNMU-M33 刃长:12	PNMU-M33 刃长:09	HNMU-M32 刃长:09	HNGU-M32 刃长:09	ONMX-M42 刃长:06	ONGU-M42 刃长:08
								
	SNEU-M13 刃长:12	XNMX 刃长:07	LNMT 刃长:11/15					
								
槽铣系列 Slot milling series	MPHT-M32 刃长:06/08/12							
								

方肩铣削

Shoulder Milling

MSAP90系列铣刀盘

MFSAP90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		D	d	H	W	P						
MSAP90-040A16-4T11	4	40	16	40	8.4	5.6	9	A	APMT1135 PDER	M2.5*7	T8	●
MSAP90-050A22-5T11	5	50	22	40	10.4	6.3	9	A				●
MSAP90-063A22-6T11	6	63	22	50	10.4	6.3	9	A				●
MSAP90-050A22-4T16	4	50	22	40	10.4	6.3	14	A	APMT1604 PDER	M4*9	T15	●
MSAP90-063A22-5T16	5	63	22	50	10.4	6.3	14	A				●
MSAP90-080A27-6T16	6	80	27	50	12.4	7.0	14	A				●
MSAP90-100B32-7T16	7	100	32	63	14.4	8.0	14	B				●
MSAP90-125B40-8T16	8	125	40	63	16.4	9.0	14	B				●
MSAP90-160C40-10T16	10	160	40	63	16.4	9.0	14	C				●

● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削
Shoulder Milling

MSAP90系列铣刀杆
MSAP90 series

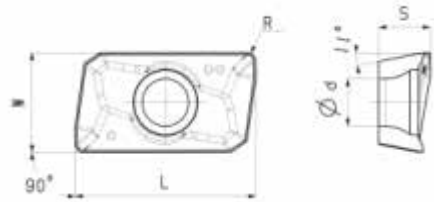


型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		dc	dm	L1	L					
MSAP90-1640P16-2T11	2	16	16	40	120	9	APMT1135 PDER	M2.5*7	T8	●
MSAP90-1655P16-2T11	2	16	16	55	160	9				●
MSAP90-2040P20-3T11	3	20	20	40	120	9				●
MSAP90-2055P20-3T11	3	20	20	55	160	9				●
MSAP90-2155P20-3T11	3	21	20	55	160	9				●
MSAP90-2180P20-3T11	3	21	20	80	200	9				●
MSAP90-2555P25-4T11	4	25	25	55	160	9				●
MSAP90-2580P25-4T11	4	25	25	80	200	9	APMT1604 PDER	M4*9	T15	●
MSAP90-2555P25-2T16	2	25	25	55	160	14				●
MSAP90-2580P25-2T16	2	25	25	80	200	14				●
MSAP90-3255P32-3T16	3	32	32	55	160	14				●
MSAP90-3280P32-3T16	3	32	32	80	200	14				●

● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削
Shoulder Milling

AP□T



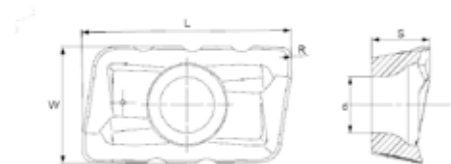
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD	无涂层
		L	W	S	D	R	TU5250	TP5250	TM5250	TK6150	
	APMT113504R-H2	11.29	6.15	3.5	2.8	0.4	●	●	●		
	APMT1135PDER-H20	11.29	6.15	3.5	2.8	0.8	●	●	●		
	APMT113512R-H2	11.29	6.15	3.5	2.8	1.2	●	●	●		
	APMT113516R-H2	11.29	6.15	3.5	2.8	1.6	●	●	●		
	APMT113520R-H2	11.29	6.15	3.5	2.8	2	●	●	●		
	APMT160404R-H2	17.25	9.25	4.76	4.4	0.4	●	●	●		
	APMT1604PDER-H20	17.25	9.25	4.76	4.4	0.8	●	●	●		
	APMT160412R-H2	17.25	9.25	4.76	4.4	1.2	●	●	●		
	APMT160416R-H2	17.25	9.25	4.76	4.4	1.6	●	●	●		
	APMT160420R-H2	17.25	9.25	4.76	4.4	2	●	●	●		
	APMT1135PDER-H33	11.29	6.17	3.5	2.8	0.8	●	●	●		
	APMT1604PDER-H33	17.32	9.32	5.25	4.4	0.8	●	●	●		
	APMT1135PDER-M20	11.27	6.16	3.5	2.8	0.8	●	●	●		
	APMT1604PDER-M20	17.25	9.24	4.75	4.4	0.8	●	●	●		
	APMT1135PDER-H10	11.16	6.26	3.5	2.85	0.8	●	●	●		
	APMT1604PDER-H10	17.25	9.31	4.76	4.5	0.8	●	●	●		
	APGT1135PDER-G2	11.26	6.16	3.5	2.8	0.8					●
	APGT1604PDER-G2	17.16	9.26	4.76	4.6	0.8					●

● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

BPMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	TK6150
	BPMT113508ER-M23	11.16	6.34	3.5	2.85	0.8	●	●	●	
	BPMT160408ER-M23	15.5	12.7	4.76	5.16	0.8	●	●	●	
	BPMT160412ER-M23	15.5	12.7	4.76	5.16	1.2	●	●	●	
	BPMT160416ER-M23	15.5	12.7	6.35	5.16	1.2	●	●	●	
	BPMT160420ER-M23	15.5	12.7	6.35	5.16	2	●	●	●	
	BPMT160430ER-M23	15.5	12.7	6.35	5.16	3	●	●	●	

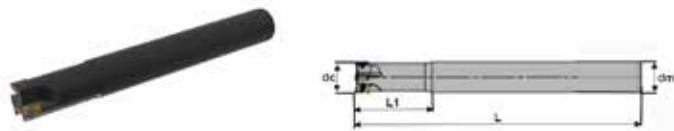
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSJD90系列铣刀杆

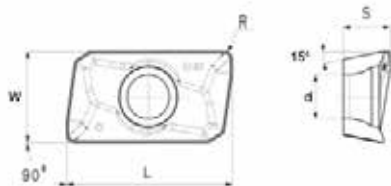
MSJD90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		dc	dm	L1	L					
MSJD90-0820P10-1T07	1	8	10	20	120	7	JDMT0702	M1.8*4	T5	○
MSJD90-0920P10-1T07	1	9	10	20	120	7				○
MSJD90-1020P10-2T07	2	10	10	20	120	7				○
MSJD90-1120P11-2T07	2	11	10	20	120	7				○
MSJD90-1225P12-2T07	2	12	12	25	120	7				○
MSJD90-1225P12-3T07	3	12	12	25	120	7				○
MSJD90-1325P12-2T07	2	13	12	25	120	7				○
MSJD90-1325P12-3T07	3	13	12	25	120	7				○
MSJD90-1430P14-3T07	3	14	14	30	150	7				○
MSJD90-1560P15-3T07	3	15	15	60	150	7				○
MSJD90-1660P16-4T07	4	16	16	60	150	7				○
MSJD90-1730P16-4T07	4	17	16	30	160	7				○
MSJD90-2060P20-5T07	5	20	20	60	160	7				○
MSJD90-2130P20-5T07	5	21	20	30	160	7				○

● 标准库存Stock ○ 需预订Available Upon Order

JDMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	TK6150
	JDMT070204R-M32	7.1	4.25	2.46	2	0.4	●	●	●	
	JDMT070208R-M32	7.1	4.25	2.46	2	0.8	●	●	●	

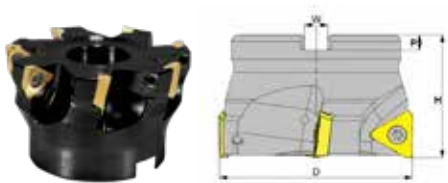
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSTP90系列铣刀盘

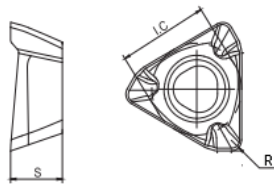
MSTP90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		D	d	H	W	P						
MSTP90-040A16-5T10	5	40	16	40	8.4	5.6	7	A	TP□□ 100408	M2.5*7	T8	○
MSTP90-050A22-5T10	5	50	22	40	10.4	6.3	7	A				○
MSTP90-063A22-8T10	8	63	22	40	10.4	6.3	7	A				○
MSTP90-050A22-5T15	5	50	22	45	10.4	6.3	11	A	TP□□ 150508	M4*9	T15	○
MSTP90-063A22-6T15	6	63	22	45	10.4	6.3	11	A				○
MSTP90-080A27-8T15	8	80	27	50	12.4	7.0	11	A				○
MSTP90-100B32-8T15	8	100	32	55	14.4	8.0	11	B				○
MSTP90-125B40-12T15	12	125	40	55	16.4	9.0	11	B				○
MSTP90-160C40-14T15	14	160	40	55	16.4	9.0	11	C				○
MSTP90-200C60-16T15	16	200	60	63	25.7	14	11	C				○

● 标准库存Stock ○ 需预订Available Upon Order

TP□T



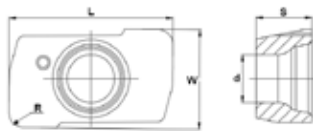
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)			PVD			CVD
		IC	S	R	TU5250	TP5250	TM5250	
	TPKT100408-M42	6.9	4	0.8	●	●	●	
	TPKT150508-M42	10.7	5	0.8	●	●	●	
	TPGT100408-M32	6.9	4	0.8	●	●	●	
	TPGT150508-M32	10.7	5	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

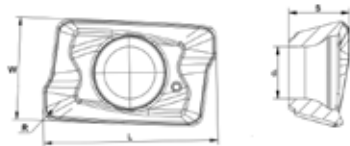
YPHW



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	TK6150
	YPHW100308ZER-M42	10.38	6.2	3.45	3	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

ADKT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	TK6150
	ADKT050204PDER-M32	6.5	3.74	2.15	1.9	0.4	●	●	●	

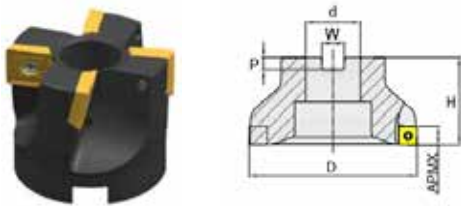
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSSD90系列铣刀盘

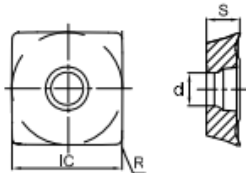
MSSD90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		D	d	H	W	P						
MSSD90-050A22-4T13	4	50	22	40	10.4	6.3	13	A	SDKT 13T3PEER	M4*11	T15	○
MSSD90-063A22-5T13	5	63	22	40	10.4	6.3	13	A				○
MSSD90-080B27-6T13	6	80	27	50	12.4	7	13	B				○
MSSD90-100B32-8T13	8	100	32	50	14.4	8	13	B				○
MSSD90-125B40-10T13	10	125	40	63	16.4	9	13	B				○
MSSD90-160B40-10T13	10	160	40	63	16.4	9	13	B				○

● 标准库存Stock ○ 需预订Available Upon Order

SDKT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	TK6150
	SDKT13T3PEER-M32	13.6	4	4.4	0.8	●	●	●	

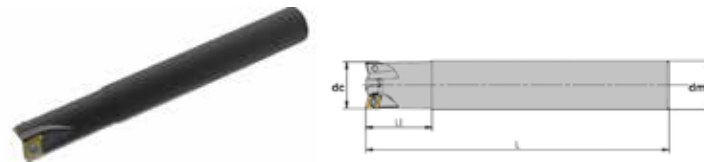
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSAN90系列铣刀杆

MSAN90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		dc	dm	L1	L					
MSAN90-0920P10-2T04	2	9	10	20	100	4	ANKT 040204R	M2*4	T6	○
MSAN90-1022P10-2T04	2	10	10	22	100	4				○
MSAN90-1120P10-2T04	2	11	10	20	75	4				○
MSAN90-1120P10-2T04	2	11	10	20	100	4				○
MSAN90-1220P10-2T04	2	12	10	20	75	4				○
MSAN90-1225P12-3T04	3	12	12	25	100	4				○
MSAN90-1320P10-3T04	3	13	10	20	100	4				○
MSAN90-1325P12-3T04	3	13	12	25	100	4				○
MSAN90-1420P10-3T04	3	14	10	20	75	4				○
MSAN90-1430P14-3T04	3	14	14	30	100	4				○
MSAN90-1520P10-3T04	3	15	10	20	75	4				○
MSAN90-1535P16-3T04	3	15	16	35	100	4				○
MSAN90-1620P10-4T04	4	16	10	20	75	4				○
MSAN90-1635P16-4T04	4	16	16	35	100	4				○
MSAN90-1630P15-2T06	2	16	15	30	120	6	ANKT 060308R	M3*8	T8	○
MSAN90-1635P16-2T06	2	16	16	35	160	6				○
MSAN90-1630P16-2T06	2	16	16	30	120	6				○
MSAN90-1635P16-2T06	2	16	16	35	150	6				○
MSAN90-1730P16-2T06	2	17	16	30	120	6				○
MSAN90-1735P16-2T06	2	17	16	35	160	6				○
MSAN90-1835P16-2T06	2	18	16	35	160	6				○
MSAN90-2030P16-3T06	3	20	16	30	120	6				○
MSAN90-2035P16-3T06	3	20	16	35	160	6				○
MSAN90-2030P20-3T06	3	20	20	30	120	6				○

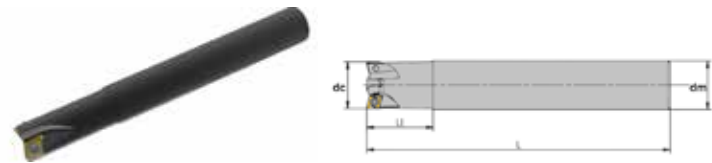
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSAN90系列铣刀杆

MSAN90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		dc	dm	L1	L					
MSAN90-2035P20-3T06	3	20	20	35	160	6	ANKT 060308R	M3*8	T8	○
MSAN90-2040P20-3T06	3	20	20	40	200	6				○
MSAN90-2130P20-3T06	3	21	20	30	120	6				○
MSAN90-2135P20-3T06	3	21	20	35	160	6				○
MSAN90-2140P20-3T06	3	21	20	40	200	6				○
MSAN90-2235P20-3T06	3	22	20	35	160	6				○
MSAN90-2335P20-3T06	3	23	20	35	160	6				○
MSAN90-2435P20-3T06	3	24	20	35	160	6				○
MSAN90-2535P20-4T06	4	25	20	35	160	6				○
MSAN90-2535P24-4T06	4	25	24	35	160	6				○
MSAN90-2540P24-4T06	4	25	24	40	200	6				○
MSAN90-2535P25-4T06	4	25	25	35	160	6				○
MSAN90-2540P25-4T06	4	25	25	40	200	6				○
MSAN90-2635P25-4T06	4	26	25	35	160	6				○
MSAN90-2640P25-4T06	4	26	25	40	200	6				○
MSAN90-2835P25-4T06	4	28	25	35	160	6				○
MSAN90-3035P25-4T06	4	30	25	35	160	6				○
MSAN90-3240P32-4T06	4	32	32	35	150	6				○
MSAN90-3240P32-4T06	4	32	32	40	200	6				○
MSAN90-3535P32-4T06	4	35	32	35	160	6				○
MSAN90-3540P32-4T06	4	35	32	40	200	6				○
MSAN90-4035P32-5T06	5	40	32	35	160	6				○
MSAN90-4040P32-5T06	5	40	32	40	200	6				○

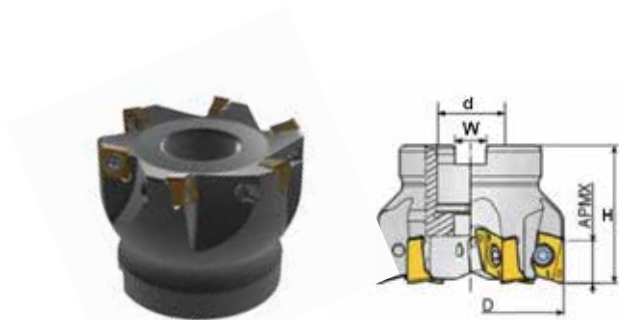
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSAN90系列铣刀盘

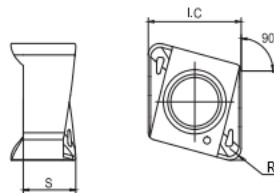
MSAN90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		D	d	H	W	P						
MSAN90-035A16-5T06	5	35	16	40	8.4	7	6	A	ANKT060308R	M3*8	T8	○
MSAN90-040A16-6T06	6	40	16	40	8.4	7	6	A				○
MSAN90-050A22-6T06	6	50	22	40	10.4	7	6	A				○
MSAN90-063A22-8T06	8	63	22	40	10.4	7	6	A				○
MSAN90-080A27-10T06	10	80	27	50	12.4	7	6	A				○
MSAN90-100A32-12T06	12	100	32	50	14.4	9	6	A				○

● 标准库存Stock ○ 需预订Available Upon Order

ANKT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)			PVD			CVD
		IC	S	R	TU5250	TP5250	TM5250	TK6150
	ANKT040204R-M42	4	2.57	0.4	●	●	●	
	ANKT060308R-M42	6.6	3.65	0.8	●	●	●	
	ANKT100507R-M42	9.5	5.76	0.7	●	●	●	

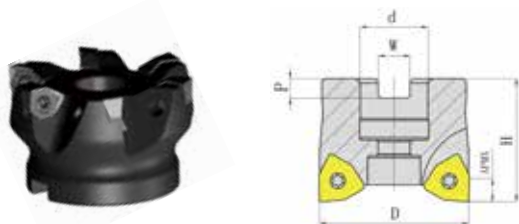
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSWN90系列铣刀盘

MSWN90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		D	d	H	W	P						
MSWN90-040A16-5T04	5	40	16	40	8.4	5.6	4	A	WNMU 040304	M2.5*7	T8	●
MSWN90-050A22-6T04	6	50	22	40	10.4	6.3	4	A				●
MSWN90-063A22-8T04	8	63	22	40	10.4	6.3	4	A				●
MSWN90-050A22-5T06	5	50	22	40	10.4	6.3	6	A	WNMU 060408	M3.5*8	T15	●
MSWN90-063A22-6T06	6	63	22	40	10.4	6.3	6	A				●
MSWN90-080A27-7T06	7	80	27	50	12.4	7	6	A				●
MSWN90-050A22-4T08	4	50	22	40	10.4	6.3	8	A	WNMU 080608	M5*13	T20	●
MSWN90-063A22-5T08	5	63	22	40	10.4	6.3	8	A				●
MSWN90-080A27-6T08	6	80	27	50	12.4	7	8	A				●
MSWN90-100B32-7T08	7	100	32	50	14.4	8	8	B				●
MSWN90-125B40-8T08	8	125	40	63	16.4	9	8	B				●
MSWN90-160B40-10T08	10	160	40	63	16.4	9	8	B				●
MSWN90-200C60-12T08	12	200	60	63	25.7	14	8	C				●
MSWN90-250C60-14T08	14	250	60	63	25.7	14	8	C				●

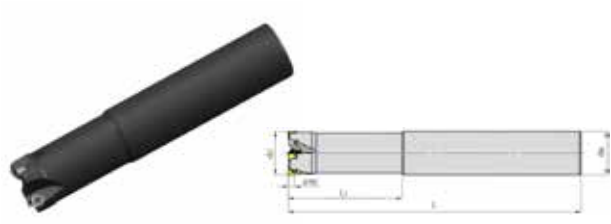
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSWN90系列铣刀杆

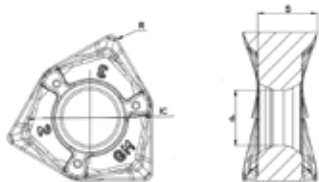
MSWN90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 wrench	库存 Stock
		dc	dm	L1	L					
MSWN90-1640P16-2T04	2	16	16	40	120	4	WNMU040304	M2.5*7	T8	●
MSWN90-2040P20-3T04	3	20	20	40	120	4				●
MSWN90-2555P25-4T04	4	25	25	55	160	4				●
MSWN90-3255P32-5T04	5	32	32	55	160	4				●
MSWN90-2555P25-2T06	2	25	25	55	160	6				●
MSWN90-3255P32-3T06	3	32	32	55	160	6	WNMU060408	M3.5*8	T15	●

● 标准库存Stock ○ 需预订Available Upon Order

WNMU



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	TK6150
	WNMU040304R-M43	6.7	3.06	3.15	0.4	●	●	●	
	WNMU060408R-M43	10.15	4.36	4.2	0.8	●	●	●	
	WNMU080608EN-M43	14.02	6.63	6.2	0.8	●	●	●	
	WNMU040304EN-M42	6.7	3.06	3.15	0.4	●	●	●	

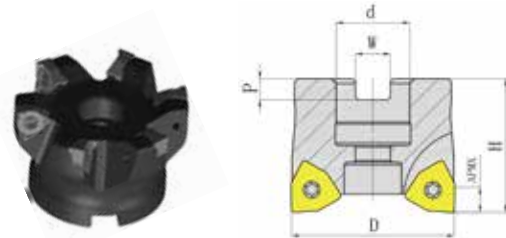
● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

MSXN90系列铣刀盘

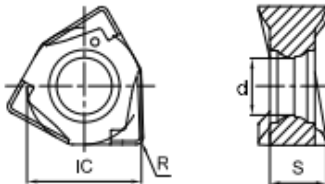
MSXN90 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MSXN90-050A22-4T08	4	50	22	40	10.4	6.3	7.5	A	XNEX 080608R	M4*11	T15	●
MSXN90-063A22-5T08	5	63	22	40	10.4	6.3	7.5	A				●
MSXN90-080A27-6T08	6	80	27	50	12.4	7	7.5	A				●
MSXN90-100B32-7T08	7	100	32	50	14.4	8	7.5	B				●
MSXN90-125B40-8T08	8	125	40	63	16.4	9	7.5	B				●
MSXN90-160B40-10T08	10	160	40	63	16.4	9	7.5	B				●
MSXN90-200C60-12T08	12	200	60	63	25.7	14	7.5	C				●
MSXN90-250C60-14T08	14	250	60	63	25.7	14	7.5	C				●

● 标准库存Stock ○ 需预订Available Upon Order

XNEX



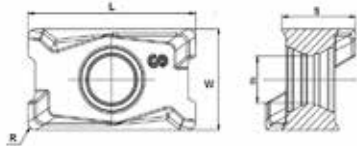
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	XNEX040304R-M53	6.7	3.06	3.15	0.4	●	●	●	
	XNEX080608R-M53	14.02	6.63	6.2	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

方肩铣削

Shoulder Milling

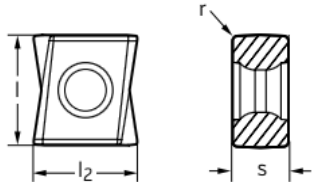
LNPU



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	
	LNPU110408-M42	12.1	6.6	4.83	3.5	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

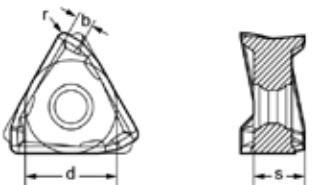
LNHU



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		l	l2	S	R	TU5250	TP5250	TM5250	
	LNHU090408ER-	9	8.5	4.5	0.8	●	●	●	
	LNHU130608ER-	13	12	6.8	0.8	●	●	●	
	LNHU160708ER-	16	15.5	7.2	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

TNGX



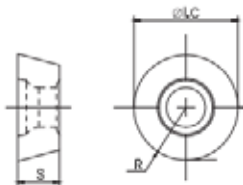
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	TNGX160408SR	9.525	0.8	6.58	4.4	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

仿形铣系列

Profile milling series

RCMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	R	d	TU5250	TP5250	TM5250	TK6150
	RCMT0602M0TN-R11	6	2.38	3	2.8	●	●	●	
	RCMT1204M0TN	12	4.76	6	4.4	●	●	●	

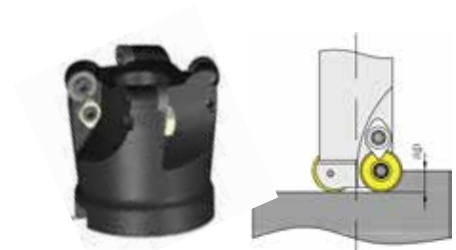
● 标准库存Stock ○ 需预订Available Upon Order

仿形铣系列

Profile milling series

MPRD00系列铣刀盘

MPRD00 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	压板 platen	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P							
MPRD00-050A22-4T10	4	50	22	50	10.4	6.3	5	A	RDMW10T3M0	CR-05	M4*9	T15	●
MPRD00-063A22-5T10	5	63	22	50	10.4	6.3	5	A					●
MPRD00-080A27-6T10	6	80	27	50	12.4	7	5	A					●
MPRD00-050A22-4T12	4	50	22	50	10.4	6.3	6	A	RDMW1204M0	CR-06	M4*9	T15	●
MPRD00-063A22-4T12	4	63	22	50	10.4	6.3	6	A					●
MPRD00-080A27-5T12	5	80	27	50	12.4	7	6	A					●

● 标准库存Stock ○ 需预订Available Upon Order

MPRD00系列铣刀杆

MPRD00 series



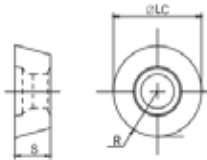
型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		dc	dm	L1	L					
MPRD00-2055P20-2T10	2	20	20	55	160	5	RDMW10T3M0	M4*9	T15	●
MPRD00-2555P25-2T10	2	25	25	55	160	5				●
MPRD00-3255P32-3T12	3	32	32	55	160	6	RDMW1204M0	M4*9	T15	●
MPRD00-3280P32-3T12	3	32	32	80	200	6				●

● 标准库存Stock ○ 需预订Available Upon Order

仿形铣系列

Profile milling series

RDMW



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	R	d	TU5250	TP5250	TM5250	TK6150
	RDMW0501M0-R11	5	1.7	2.5	2.4	●	●	●	
	RDMW10T3M0-R11	10.03	3.97	5	4.5	●	●	●	
	RDMW1204M0-R11	12	4.76	6	4.4	●	●	●	
	RDMW1604M0-R11	16	4.76	8	5.5	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

仿形铣系列

Profile milling series

MPRP00系列铣刀盘

MPRP00 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	压板 platen	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P							
MPRP00-040A22-4T10	4	40	16	40	8.4	5.6	5	A	RPMW/T 1003M0	CR-05	M4*9	T15	●
MPRP00-050A22-4T10	4	50	22	50	10.4	6.3	5	A					●
MPRP00-063A22-5T10	5	63	22	50	10.4	6.3	5	A					●
MPRP00-050A22-4T12	4	50	22	50	10.4	6.3	6	A	RPMT 1204M0	CR-06	M4*9	T15	●
MPRP00-063A22-5T12	5	63	22	50	10.4	6.3	6	A					●
MPRP00-080A27-6T12	6	80	27	50	12.4	7	6	A					●

● 标准库存Stock ○ 需预订Available Upon Order

MPRP00系列铣刀杆

MPRP00 series



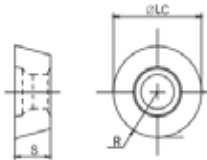
型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		dc	dm	L1	L					
MPRP00-2055P20-2T10	2	20	20	55	160	5	RPMW/T1003M0	M4*9	T15	●
MPRP00-2555P25-2T10	2	25	20	55	160	5				●
MPRP00-3255P32-2T12	3	32	32	55	160	6	RDMW1204M0	M4*9	T15	●
MPRP00-3280P32-2T12	3	32	32	80	200	6				●

● 标准库存Stock ○ 需预订Available Upon Order

仿形铣系列

Profile milling series

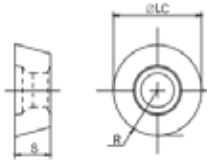
RPMW



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	R	d	TU5250	TP5250	TM5250	
	RPMW1003M0-H33	10	3.18	5	4.6	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

RPMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	R	d	TU5250	TP5250	TM5250	
	RPMT10T3M0-M32	10	3.97	5	4.4	●	●	●	
	RPMT1204M0-H33	12	4.76	6	4.4	●	●	●	

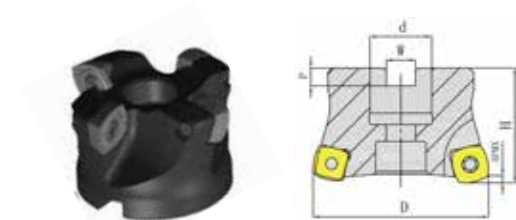
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MFSD16系列铣刀盘

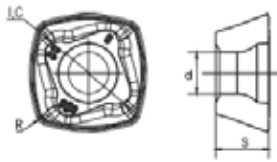
MFSD16 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFSD16-050A22-4T12	4	50	22	40	10.4	6.3	2	A	SDMT1205	M4*11	T15	●
MFSD16-063A22-5T12	5	63	22	40	10.4	6.3	2	A				●
MFSD16-080A27-6T12	6	80	27	50	12.4	7.0	2	A				●
MFSD16-063A22-4T15	4	63	22	40	10.4	6.3	3	A	SDMT1505	M5*12	T20	●
MFSD16-080A27-5T15	5	80	27	50	12.4	7.0	3	A				●
MFSD16-100B32-6T15	6	100	32	50	14.4	8.0	3	B				●

● 标准库存Stock ○ 需预订Available Upon Order

SDMT



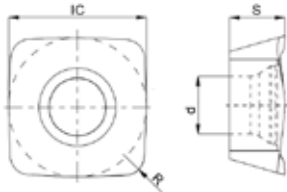
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	SDMT09T320-M32	9.525	3.97	3.9	2	●	●	●	
	SDMT120512-M32	12.7	5.56	4.4	1.2	●	●	●	
	SDMT150512-M32	15.88	5.56	5.6	1.2	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

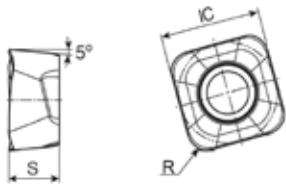
SOMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	SOMT100420ER-M30	10.3	4.58	4.7	2	●	●	●	
	SOMT140520ER-M30	14.14	5.56	5.85	2	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

SBMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	SBMT130625	13.1	6.7	3.18	2.5	●	●	●	

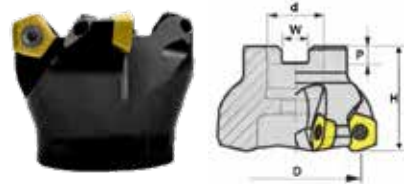
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MFPD19系列铣刀盘

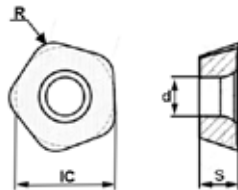
MFPD19 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFPD19-050A22-4T09	4	50	22	40	10.4	6.3	9	A	PDMT 090530	M4*9	T15	○
MFPD19-050A22-5T09	5	50	22	40	10.4	6.3	9	A				○
MFPD19-063A22-5T09	5	63	22	40	10.4	6.3	9	A				○
MFPD19-080A27-5T09	5	80	27	50	12.4	7.0	9	A				○
MFPD19-080A27-6T09	6	80	27	50	12.4	7.0	9	A				○
MFPD19-100B32-7T09	7	100	32	50	14.4	8.0	9	A				○

● 标准库存Stock ○ 需预订Available Upon Order

PDMT



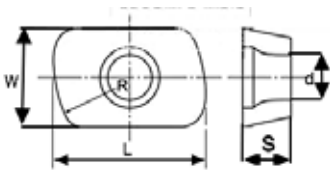
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	PDMT090530	13.5	5.47	5.5	3	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

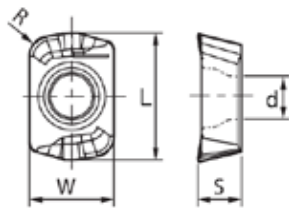
EPNW



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	
	EPNW0603TN	10	6.35	3.18	2.8	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

LPGT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	d	R	TU5250	TP5250	TM5250	
	LPGT010210ER	6.15	4.19	2.19	1.9	0.4	●	●	●	

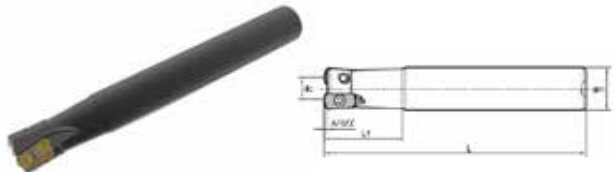
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MKLN18系列铣刀杆

MKLN18 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		dc	dm	L1	L					
MKLN18-0825P10-1T02	1	8	10	25	100	2	LNMU 020209ZNER	M2*4	T6	○
MKLN18-0925P10-1T02	1	9	10	25	100	2				○
MKLN18-1025P10-2T02	2	10	10	25	100	2				○
MKLN18-1120P10-2T02	2	11	10	20	100	2				○
MKLN18-1225P12-3T02	3	12	12	25	80	2				○
MKLN18-1235P12-3T02	3	12	12	35	120	2				○
MKLN18-1320P12-3T02	3	13	12	20	80	2				○
MKLN18-1325P12-3T02	3	13	12	25	120	2				○
MKLN18-1435P14-3T02	3	14	14	35	120	2				○
MKLN18-1435P14-3T02	3	14	14	35	150	2				○
MKLN18-1525P14-3T02	3	15	14	25	120	2				○
MKLN18-1525P14-3T02	3	15	14	25	160	2				○
MKLN18-1640P16-4T02	4	16	16	40	120	2				○
MKLN18-1640P16-4T02	4	16	16	40	160	2				○
MKLN18-1725P16-4T02	4	17	16	25	120	2				○
MKLN18-1630P15-2T03	2	16	15	30	150	3	LNMU 0303ZER	M2*6	T8	○
MKLN18-1630P16-2T03	2	16	16	30	120	3				○
MKLN18-1640P16-2T03	2	16	16	40	150	3				○
MKLN18-1660P16-2T03	2	16	16	60	200	3				○
MKLN18-1730P16-2T03	2	17	16	30	120	3				○
MKLN18-1730P16-2T03	2	17	16	30	150	3				○
MKLN18-1730P16-2T03	2	17	16	30	200	3				○
MKLN18-2035P19-3T03	3	17	19	35	150	3				○
MKLN18-2035P19-3T03	3	20	19	35	200	3				○

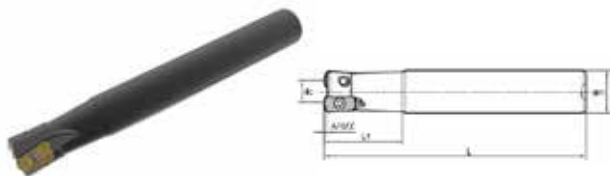
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MKLN18系列铣刀杆

MKLN18 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		dc	dm	L1	L					
MKLN18-2050P20-3T03	3	20	20	50	150	3	LNMU 0303ZER	M2*6	T8	○
MKLN18-2070P20-3T03	3	20	20	70	200	3				○
MKLN18-2135P20-3T03	3	21	20	35	150	3				○
MKLN18-2135P20-3T03	3	21	20	35	200	3				○
MKLN18-2535P24-4T03	4	25	24	35	150	3				○
MKLN18-2560P25-4T03	4	25	25	60	150	3				○
MKLN18-2590P25-4T03	4	25	25	90	200	3				○
MKLN18-2635P25-4T03	4	26	25	35	150	3				○
MKLN18-2635P25-4T03	4	26	25	35	200	3				○
MKLN18-2635P25-4T03	4	26	25	35	250	3				○
MKLN18-2835P25-4T03	4	28	25	35	150	3				○
MKLN18-2835P25-4T03	4	28	25	35	200	3				○
MKLN18-3035P25-4T03	4	30	25	35	150	3				○
MKLN18-3035P25-4T03	4	30	25	35	200	3				○
MKLN18-3270P32-5T03	5	32	32	70	160	3				○
MKLN18-32120P32-5T03	5	32	32	120	200	3				○
MKLN18-32120P32-5T03	5	32	32	120	250	3				○
MKLN18-3340P32-5T03	5	33	32	40	160	3				○
MKLN18-3340P32-5T03	5	33	32	40	200	3				○
MKLN18-3340P32-5T03	5	33	32	40	250	3				○
MKLN18-3545P32-5T03	5	35	32	45	160	3				○
MKLN18-3545P32-5T03	5	35	32	45	200	3				○
MKLN18-3545P32-5T03	5	35	32	45	250	3				○

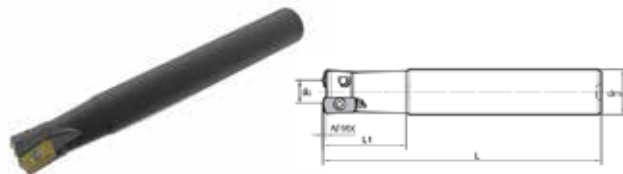
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MKLN16系列铣刀杆

MKLN16 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		dc	dm	L1	L					
MKLN16-1630P15-2T03	2	16	15	30	120	2	LOGU 030310ER	M3*8	T8	○
MKLN16-1630P15-2T03	2	16	15	30	150	2				○
MKLN16-1630P15-2T03	2	16	15	30	200	2				○
MKLN16-1630P16-2T03	2	16	16	30	120	2				○
MKLN16-1640P16-2T03	2	16	16	40	150	2				○
MKLN16-1660P16-2T03	2	16	16	60	200	2				○
MKLN16-1730P16-2T03	2	17	16	30	120	2				○
MKLN16-1730P16-2T03	2	17	16	30	150	2				○
MKLN16-1730P16-2T03	2	17	16	30	200	2				○
MKLN16-2035P19-3T03	3	20	19	35	150	2				○
MKLN16-2035P19-3T03	3	20	19	35	200	2				○
MKLN16-2035P19-3T03	3	20	19	35	250	2				○
MKLN16-2030P20-3T03	3	20	20	30	120	2				○
MKLN16-2050P20-3T03	3	20	20	50	150	2				○
MKLN16-2070P20-3T03	3	20	20	70	200	2				○
MKLN16-2090P20-3T03	3	20	20	90	250	3				○
MKLN16-2135P20-3T03	3	21	20	35	120	3				○
MKLN16-2135P20-3T03	3	21	20	35	150	3				○
MKLN16-2135P20-3T03	3	21	20	35	200	3				○
MKLN16-2135P20-3T03	3	21	20	35	250	3				○
MKLN16-2235P20-3T03	3	22	20	35	150	3				○
MKLN16-2235P20-3T03	3	22	20	35	200	3				○
MKLN16-2235P20-3T03	3	22	20	35	250	3				○
MKLN16-2560P24-4T03	4	25	24	60	150	3				○

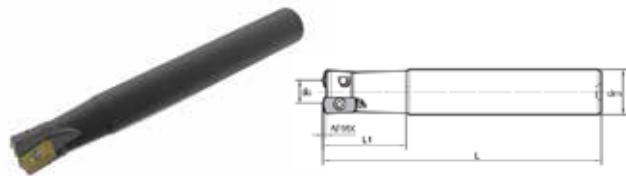
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MKLN16系列铣刀杆

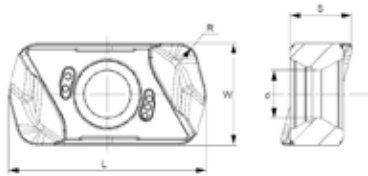
MKLN16 series



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)				APMX (mm)	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		dc	dm	L1	L					
MKLN16-2590P24-4T03	4	25	24	90	200	3	LOGU 030310ER	M3*8	T8	○
MKLN16-25120P24-4T03	4	25	24	120	250	3				○
MKLN16-2560P25-4T03	4	25	25	60	150	3				○
MKLN16-2590P25-4T03	4	25	25	90	200	3				○
MKLN16-25120P25-4T03	4	25	25	120	250	3				○
MKLN16-2635P25-4T03	4	26	25	35	160	3				○
MKLN16-2635P25-4T03	4	26	25	35	200	3				○
MKLN16-2635P25-4T03	4	26	25	35	250	3				○
MKLN16-3270P32-5T03	5	32	32	70	150	3				○
MKLN16-32120P32-5T03	5	32	32	120	200	3				○
MKLN16-32120P32-5T03	5	32	32	120	250	3				○
MKLN16-3340P32-5T03	5	33	32	40	150	3				○
MKLN16-3340P32-5T03	5	33	32	40	200	3				○
MKLN16-3340P32-5T03	5	35	32	45	150	3				○
MKLN16-3545P32-5T03	5	35	32	45	200	3				○
MKLN16-3545P32-5T03	5	35	32	45	250	3				○

● 标准库存Stock ○ 需预订Available Upon Order

LNMU



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	D	R	TU5250	TP5250	TM5250	TK6150
	LNMU020209ZNER-M42	6.1	4	2.7	2.1	1.2	●	●	●	
	LNMU0303ZER-M42	10.88	5	2.7	2.81	1.2	●	●	●	
	LOGU030310ER-M32	10.88	5	2.7	2.81	1.2	●	●	●	

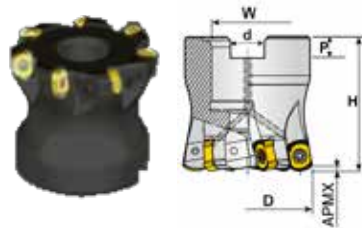
● 标准库存Stock ○ 需预订Available Upon Order

快进给系列

High-speed milling series

MFBN13系列铣刀盘

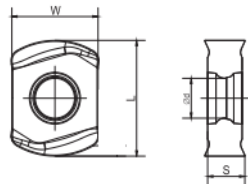
MFBN13 Series Milling Cutte Head



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MKBN13-035A16-4T06	4	35	16	40	8.4	5.6	4	A	BLMP0603R	M2*6	T8	○
MKBN13-040A16-5T06	5	40	16	40	8.4	5.6	4	A				○
MKBN13-050A22-6T06	6	50	22	40	10.4	6.3	4	A				○
MKBN13-063A22-8T06	8	63	22	40	10.4	6.3	4	A				○
MKBN13-080A27-10T06	10	80	27	50	12.4	6.3	4	A				○
MKBN13-040A16-5T09	5	40	16	40	8.4	7	7	A	BLMP0904R	M3.5*8	T15	○
MKBN13-050A22-5T09	5	50	22	45	10.4	6.3	7	A				○
MKBN13-050A22-6T09	6	50	22	45	10.4	6.3	7	A				○
MKBN13-063A22-6T09	6	63	22	45	10.4	6.3	7	A				○
MKBN13-080A27-8T09	8	80	27	50	12.4	7	7	A				○
MKBN13-100A32-9T09	9	100	32	55	14.4	8	7	A				○
MKBN13-125A40-12T09	12	125	40	55	16.4	9.5	7	A				○

● 标准库存Stock ○ 需预订Available Upon Order

BLMP



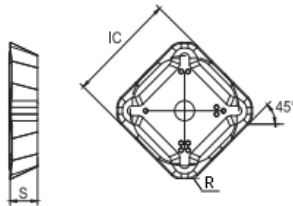
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)					PVD			CVD
		L	W	S	D	R	TU5250	TP5250	TM5250	TK6150
	BLMP0603R-M42	9.05	6.45	3.37	3.22	1	●	●	●	
	BLMP0904R-M42	11.94	9.15	4.07	4.2	1.2	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

SE□R



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)			PVD			CVD
		IC	S	R	TU5250	TP5250	TM5250	TK6150
	SEGR1203AFTN-M33	12.6	3.18	3.18	●	●	●	
	SEGR1504AFTN-M33	15.8	4.75	4.75	●	●	●	
	SEMR1203AFTN-M33	12.6	3.18	3.18	●	●	●	
	SEMR1504AFTN-M33	15.8	4.75	4.75	●	●	●	

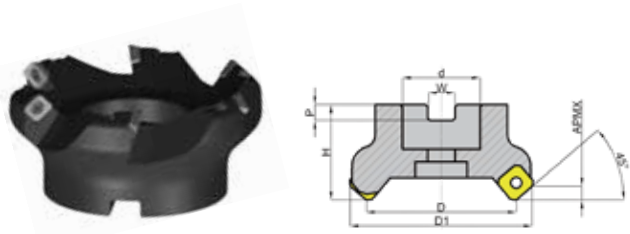
● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

MFSE45系列铣刀盘

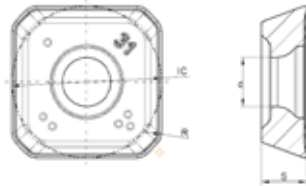
MFSE45 Series Milling Cutte Head



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFSE45-050A22-4T13	4	50	22	40	10.4	6.3	6	A	SEET 13T3AGEN	M5*13	T20	●
MFSE45-063A22-4T13	4	63	22	40	10.4	6.3	6	A				●
MFSE45-080A27-5T13	5	80	27	50	12.4	7.0	6	A				●
MFSE45-100B32-5T13	5	100	32	50	14.4	8.0	6	B				●
MFSE45-125B40-6T13	6	125	40	63	16.4	9.0	6	B				●
MFSE45-160C40-8T13	8	160	40	63	16.4	9.0	6	C				●
MFSE45-200C60-9T13	9	200	60	63	25.7	14.0	6	C				●

● 标准库存Stock ○ 需预订Available Upon Order

SEET



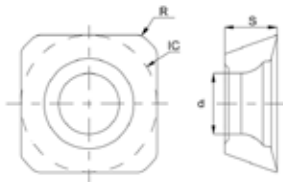
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	TK6150
	SEET13T3AGEN-M31	13.6	4	4.4	1.55	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

SEKT

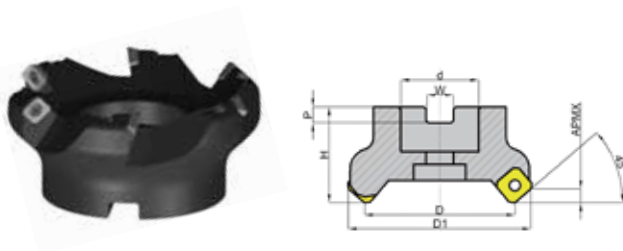


刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	SEKT1204AFTN-M33	12.66	4.21	5.6	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

MFSE45系列铣刀盘

MFSE45 Series Milling Cutte Head



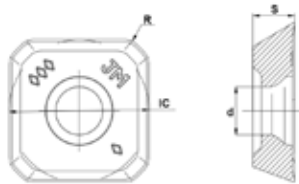
型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFSE45-050A22-4T13	4	50	22	40	10.4	6.3	6	A	SEET 13T3AGEN	M5*13	T20	●
MFSE45-063A22-4T13	4	63	22	40	10.4	6.3	6	A				●
MFSE45-080A27-5T13	5	80	27	50	12.4	7.0	6	A				●
MFSE45-100B32-5T13	5	100	32	50	14.4	8.0	6	B				●
MFSE45-125B40-6T13	6	125	40	63	16.4	9.0	6	B				●
MFSE45-160C40-8T13	8	160	40	63	16.4	9.0	6	C				●
MFSE45-200C60-9T13	9	200	60	63	25.7	14.0	6	C				●

● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

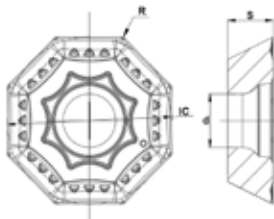
SEMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	SEMT13T3AGEN-M33	13.55	3.97	4.5	1.4	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

OFMT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	OFMT070405EN-M32	17.97	4.96	5.75	0.5	●	●	●	

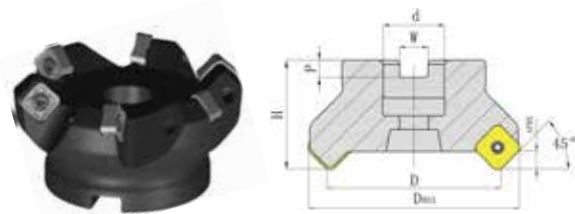
● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

MFSN45系列铣刀盘

MFSN45 Series Milling Cutte Head



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFSN45-050A22-4T12	4	50	22	40	10.4	6.3	3	A	SNMU1206 ANN	M5*12	T20	●
MFSN45-063A22-5T12	5	63	22	40	10.4	6.3	3	A				●
MFSN45-080A27-6T12	6	80	27	50	12.4	7.0	3	A				●
MFSN45-100B32-7T12	7	100	32	50	14.4	8.0	3	B				●
MFSN45-125B40-9T12	9	125	40	63	16.4	9.0	3	B				●
MFSN45-160C40-11T12	11	160	40	63	16.4	9.0	3	C				●
MFSN45-200C60-13T12	13	200	60	63	25.7	14.0	3	C				●

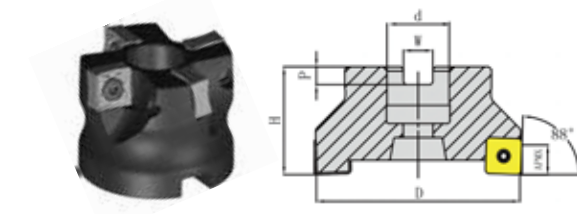
● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

MFSN88系列铣刀盘

MFSN88 Series Milling Cutte Head



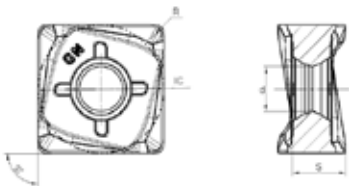
型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFSN88-050A22-4T12	4	50	22	40	10.4	6.3	7	A	SNMU1206 ZNN	M5*12	T20	●
MFSN88-063A22-5T12	5	63	22	40	10.4	6.3	7	A				●
MFSN88-080A27-6T12	6	80	27	50	12.4	7.0	7	A				●
MFSN88-100B32-7T12	7	100	32	50	14.4	8.0	7	B				●
MFSN88-125B40-9T12	9	125	40	63	16.4	9.0	7	B				●
MFSN88-160C40-11T12	11	160	40	63	16.4	9.0	7	C				●
MFSN88-200C60-13T12	13	200	60	63	25.7	14.0	7	C				●

● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

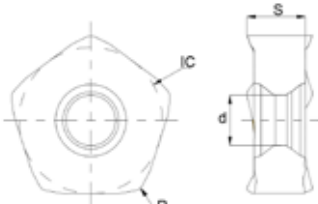
SN□U



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	SNMU1206ANN-M31	12.7	5.8	5.85	0.8	●	●	●	
	SNMU1206ANN-X	12.7	5.8	5.85	0.8	○	○	○	
	SNEU1206ANN-M31	12.7	5.8	5.85	0.8	○	○	○	
	SNMU1206ZNN-M33	12.7	5.8	5.85	0.8	●	●	●	
	SNEU1206ZNN-M33	12.7	5.8	5.85	0.8	○	○	○	
	SNMU1307ZNER-M32	12.7	5.77	4.75	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

PNMU



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	PNMU0905GNER-M33	13.46	5.48	4.65	0.8	●	●	●	

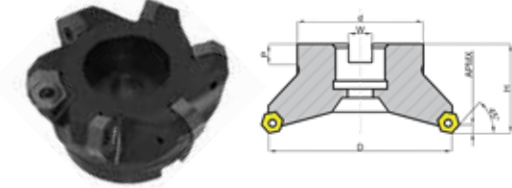
● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

MFHN45系列铣刀盘

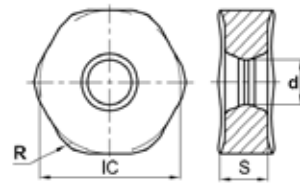
MFHN45 Series Milling Cutte Head



型号 Ordering Code	刃数 Teeth	基本尺寸Dimension (mm)					APMX (mm)	接口形式 Type of Coupling	适用刀片 Insert	刀片螺丝 Screw	扳手 Wrench	库存 Stock
		D	d	H	W	P						
MFHN45-050A22-4T09	4	50	22	40	10.4	6.3	5	A	HN□ U0905 GNER	M4*11	T15	●
MFHN45-063A22-5T09	5	63	22	40	10.4	6.3	5	A				●
MFHN45-080A27-6T09	6	80	27	50	12.4	7.0	5	A				●
MFHN45-100B32-7T09	7	100	32	50	14.4	8.0	5	B				●
MFHN45-125B40-8T09	8	125	40	63	16.4	9.0	5	B				●
MFHN45-160C40-10T09	10	160	40	63	16.4	9.0	5	C				●
MFHN45-200C60-12T09	12	200	60	63	25.7	14.0	5	C				●

● 标准库存Stock ○ 需预订Available Upon Order

HN□U



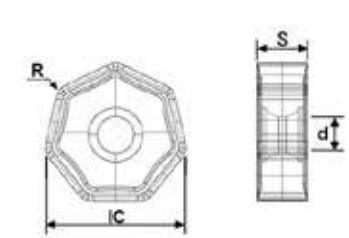
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	
	HNMU0907ANSN-M32	16.5	6.3	4.85	1.1	●	●	●	
	HNGU0907ANSN-M32	16.5	6.3	4.85	1.1	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

面铣系列

Surface milling series

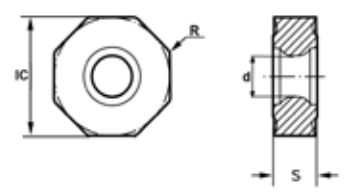
XNMX



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	TK6150
	XNMX070508	14.5	5.36	3.99	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

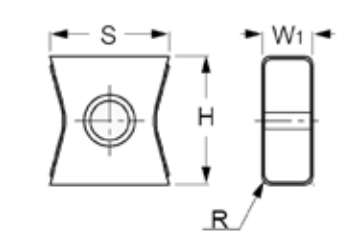
ON



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	TK6150
	ONMX060408-M42	12.7	4.86	5.75	0.8	●	●	●	
	ONGU080608-M42	12.7	4.86	5.75	0.8	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

LNMT



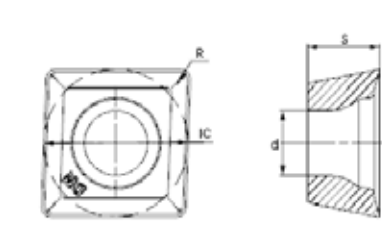
刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		H	S	R	W1	TU5250	TP5250	TM5250	TK6150
	LNMT150608	15	13.95	0.8	6	●	●	●	
	LNMT110608	11.16	11	0.8	6	●	●	●	

● 标准库存Stock ○ 需预订Available Upon Order

槽铣系列

Slot milling series

MPHT



刀片外形 Insert shape	刀片型号 Specification/Item	基本尺寸 Dimensions (mm)				PVD			CVD
		IC	S	d	R	TU5250	TP5250	TM5250	TK6150
	MPHT060304-M32	6.35	3.18	2.8	0.4	●		●	
	MPHT080305-M32	8.28	3.18	3.4	0.5	●		●	
	MPHT120408-M32	12.7	4.76	5.5	0.8	●		●	

● 标准库存Stock ○ 需预订Available Upon Order

切削中的问题及解决方案

Problems and Solutions in Cutting

切削中的问题 Problems in cutting		问题项目 Problem project	确认项目	刀具材质的选定				切削参数							
			Confirm project	Selection of tool material				Cutting parameters							
			对策 Countermeasure	改为更硬的刀片材质 Change to a harder blade material	改为高韧性材质 Change to high toughness material	改为耐热冲击性良好的材质 Change to a material with good heat and shock resistance	改为耐粘着性好的材质 Change to a material with good adhesion resistance	切削速度	进给	切深	改变刀盘径与切削宽度 Change the cutting parameters of the cutterhead diameter	走刀路线修正 Correction of Cutting tools	冷却液		
								Cutting Speed	Feed	Cutting depth			使用喷雾	干式	
								高(低) ↑ 大(小) ↓ High (Low) ↑ Large (Small) ↓							
切刃损伤 Blade damage	后刀面磨损大 Singnificant wear on flank face	切削参数不合适 Inappropriate cutting parameters						● ↓						●	
		刀具的切刃形状不合适 Imappropripte blade shape	●												
	前刀面磨损大 Singnificant wear on rake face	切削参数不合适 Inappropriate cutting parameters						● ↓	● ↓	● ↓				●	
		刀具的切刃形状不合适 Imappropripte blade shape	●												
	切刃崩损 Cutting edge breakage	切削参数不合适 Inappropriate cutting parameters							● ↓	● ↓	●	●			
		刀具的切刃形状不合适 Imappropripte blade shape		●											
	因热冲击引发的切刃损坏 Blade damage caused by thermal shock	切削参数不合适 Inappropriate cutting parameters						● ↓	● ↓	● ↓					
		刀具的切刃形状不合适 Imappropripte blade shape				●									
	积屑附着刃口 Debris attached to the edge	切削参数不合适 Inappropriate cutting parameters						● ↑	● ↑					●	
		刀具的切刃形状不合适 Imappropripte blade shape					●								
加工精度 Machining accuracy	完成面不良 Poor Completion surface	切削参数不合适 Inappropriate cutting parameters						● ↑	● ↓	● ↓			●		
		刀具的切刃形状不合适 Imappropripte blade shape	●				●								
	发生毛刺 Burr occurrence	切削参数不合适 Inappropriate cutting parameters						● ↓	● ↓	● ↓	●	●			
		刀具的切刃形状不合适 Imappropripte blade shape													
	发生边缘剥落 Edge peeling occurs	切削参数不合适 Inappropriate cutting parameters							● ↓	● ↓		●			
		刀具的切刃形状不合适 Imappropripte blade shape													
平面度・平行度差 Flatness and parallelism poor difference	刀具、工件的偏离 Deviation of cutting tools and workpieces							● ↓	● ↓				⑤		
其他 Other	振刀・振动较大 Large vibrating cutter and vibration	切削参数・计划不适当 Inappropriate cutting parameters and plans.						● ↓	① ↓	② ↓	●	④			
	咬屑・积屑 Bites and debris accumulation	切削参数不合适 Inappropriate cutting parameters						● ↑	③ ↓		●		⑥	●	
		刀具的切刃形状不合适 Imappropripte blade shape													

注①为抑制振刀,有时可以通过提高进给(高速)解决。 Note 1: To suppress tool vibration, sometimes it can be solved by increasing the feed rate (high speed).

注②为抑制振刀,有时可以通过加大切深解决。 Note 2: To suppress blade vibration, sometimes it can be solved by increasing the cutting depth.

注③有时可以通过提高进给(高速)解决。 Note 3: Sometimes it can be solved by increasing the feed rate (high speed).

注④螺旋立铣刀推荐顺铣。 Note 4: Spiral end mills are recommended for dimb milling.

注⑤因切削热造成工件变形时。 Note 5: When the workpiece is deformed due to cutting heat.

注⑥推荐使用压缩空气。 Note 6: It is recommended to use compressed air.

切削中的问题 Problems in cutting		问题项目 Problem project	确认项目	刀具形状										安装		机械
			Confirm project	Tool shape										Install	Machinery	
			对策 Countermeasure	有无断屑槽 are there any chip-breaking grooves	刀片后角 Rear corner of blade	刀尖角 Nose angle	切削刃强度 Cutting edge strength honing	刀盘刃数 Number of blades of cutter head	容屑槽 Chip pocket	检查修光刃形状后角 Check the shape of the polishing blade rear corner	刀尖跳动精度的确认 Confirmation of the accuracy of blade tip jumping	刀具刚性提升 Enhancement of tool rigidity	工件刀具的安装 Installation of Workpiecetoo	刀具的悬伸 Cutter overhang	动力机械 松动 power mechanical looseness	
切刃损伤 Blade damage	后刀面磨损大 Singnificant wear on flank face	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape		●↑		●↑			●							
	前刀面磨损大 Singnificant wear on rake face	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape		●↑	●↑	●↑										
	切刃崩损 Cutting edge breakage	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape		●	●	●			●	●	●	●	●	●		
	因热冲击引发的切刃损坏 Blade damage caused by thermal shock	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape		●↑		●↑										
积屑附着刃口 Debris attached to the edge	切削参数不合适 Inappropriate cutting parameters															
	刀具的切刃形状不合适 Imappropripte blade shape		●↑		●↑											
加工精度 Machining accuracy	完成面不良 Poor Completion surface	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape					●↓		●	●						
	发生毛刺 Burr occurrence	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape		●↑	●↓	●↑			●							
	发生边缘剥落 Edge peeling occurs	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape		●↑	●↑	●↑	●↑		●							
平面度·平行度差 Flatness and parallelism poor difference	刀具、工件的偏离 Deviation of cutting tools and workpieces	●	●↑	●↓	●↑	●↓		●	●	●	●	●	●			
其他 Other	振刀·振动较大 Large vibrating cutter and vibration	切削参数·计划不适当 Inappropriate cutting parameters and plans.	●	●↑	●↓	●↑	●↓			●	●	●	●			
	咬屑·积屑 Bites and debris accumulation	切削参数不合适 Inappropriate cutting parameters														
		刀具的切刃形状不合适 Imappropripte blade shape	●	●↑			●↓	●↑								

注①为抑制振刀,有时可以通过提高进给(高速)解决。 Note 1: To suppress tool vibration, sometimes it can be solved by increasing the feed rate (high speed).

注②为抑制振刀,有时可以通过加大切深解决。 Note 2: To suppress blade vibration, sometimes it can be solved by increasing the cutting depth.

注③有时可以通过提高进给(高速)解决。 Note 3: Sometimes it can be solved by increasing the feed rate (high speed).

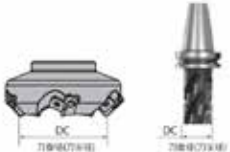
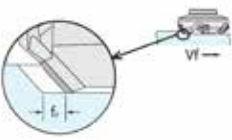
注④螺旋立铣刀推荐顺铣。 Note 4: Spiral end mills are recommended for sequential milling.

注⑤因切削热造成工件变形时。 Note 5: When the workpiece is deformed due to cutting heat.

注⑥推荐使用压缩空气。 Note 6: It is recommended to use compressed air.

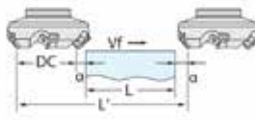
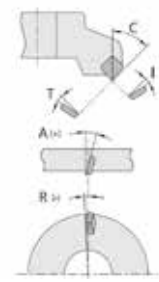
铣削计算公式

Milling calculation formula

切削速度 Cutting Speed	$V_c = \frac{\pi \times DC \times n}{1000}$	VC :切削速度 m/min DC :刀盘径 mm n :主轴转速 min ⁻¹	
工作台进给量和每刃进给量 Workbench feed rate and feed rate per blade	$f_z = \frac{V_f}{Z \times n}$	fz :每刃进给 mm/t Vf :工作台进给量 mm/min Z :刀盘刃数 枚 n :主轴转速 min ⁻¹	
所需动力 Required power	$P_c = \frac{K_s \times Q}{6120 \times \eta} = \frac{K_s \times ae \times Vf \times ap}{6120000 \times \eta}$ $= \frac{K_s \times ae \times fz \times Z \times n \times ap}{6120000 \times \eta}$ $P_{HP} = \frac{6120}{4500} \times P_c$	Pc :所需动力 kW PHP :所需动力(马力) HP ae :切削宽度 mm Vf :工作台进给量 mm/min fz :每刃进给 mm/t Z :刀盘刃数 枚 n :主轴转速 min ⁻¹ ap :切深 mm Ks :单位切削力 kgf/mm ² η :机械效率 0.7-0.8 Q :排屑量 cm ³ /min=cc/min	Ks :单位切削力 kgf/mm ² 软钢:190 中碳钢:210 高碳钢:240 低合金钢:190 高合金钢:245 铸铁:93 可锻铸铁:120 青铜*黄铜:70

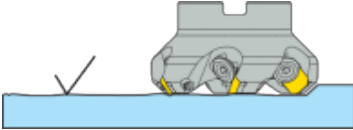
铣削计算公式

Milling calculation formula

排屑量 Chip removal amount	$Q = \frac{ae \times Vf \times ap}{1000} = \frac{ae \times fz \times Z \times n \times ap}{1000}$	Q :排屑量 cm ³ /min=cc/min ae :切削宽度(横向切深) mm Vf :工作台进给量 mm/min fz :每刃进给 mm/t Z :刀盘刃数 枚 n :主轴转速 min ⁻¹ ap :切深 mm	
加工时间 Processing time	$T = \frac{60 \times L'}{Vf} = \frac{60 \times L'}{fz \times Z \times n}$	T :加工时间 秒 L' :工作台的总进给长度 mm =L+DC+2α" L :加工材料长度 mm DC :刀盘径 mm α :空转距离 mm Vf :工作台进给量 mm/min fz :每刃进给 mm/t Z :刀盘刃数 枚 n :主轴转速 min ⁻¹	
实际前角 Practical rake angle	$\tan T = \tan R \times \cos C + \tan A \times \sin C$		
刃倾角 Blade inclination angle	$\tan I = \tan A \times \cos C - \tan R \times \sin C$		

硬质合金铣削问题与对策

Cemented carbide milling problems and Countermeasures

振动 Vibration			
	- 提高刀体与工件的稳定性 - 改变刀体位置 - 最小化刀具悬伸量 - 降低切削速度 - 提快进给量 - 减小切削深度 - 选用不同的刀片槽型, 参见刀片槽型页面 - 使用 Steadyline 减振刀杆	- Improve the stability of the cutter body and workpiece - Change the position of the cutter body - Minimize tool overhang - Reduce cutting speed - Increase feed rate - Reduce cutting depth - Choose different blade slot types, refer to the blade slot type page - Use Steadyline damping tool holder	
	- 提高刀体与工件的稳定性 - 最小化刀具悬伸量 - 降低进给量 - 提高切削速度 - 使用冷却液 - 使用修光刃刀片 - 保持每转进给量不超过修光刃宽度 - 使用 Steadyline 减振刀杆	- Improve the stability of the cutter body and workpiece - Minimize tool overhang - Reduce feed rate - Increase cutting speed - Use coolant - Use wiper inserts - Keep the feed rate per revolution not exceeding the width of the wiper inserts - Use Steadyline damping tool holder	
刀具寿命问题 The issue of tool life			
后刀面快速磨损 Rapid wear of the flank face 	- 降低切削速度 - 提快进给量 - 顺铣 - Reduce cutting speed - Increase feed rate - Forward milling	梳状裂纹 Comb-shaped crack 	- 降低切削速度 - 降低进给量 - 不使用冷却液 - 改变刀体位置 - Reduce cutting speed - Reduce feed rate - Do not use coolant - Change the position of the cutter body
快速沟槽磨损 Rapid groove wear 	- 降低切削速度 - 提快进给量 - 增加切削深度 - 顺铣 - 改变刀体位置 - Reduce cutting speed - Increase speed and quantity - Increase cutting depth - Forward milling - Change the position of the cutter-body	积屑瘤 (BUE) Tumowr of cutting 	- 提高切削速度 - 提快进给量 - 不使用冷却液 - 顺铣 - 改变刀体位置 - Increase cutting speed - Increase feed rate - Do not use coolant - Forward milling - Change the position of the cutter body
切削刃微崩 Micro chipping of cutting edge 	- 提高切削速度 - 降低进给量 - 逆铣 - 改善排屑 - 改变刀体位置 - 最小化刀具悬伸量 - 提高稳定性 - Increase cutting speed - Reduce feed rate - Reverse milling - Improve chip removal - Change the position of the cutter body - Minimize tool overhang - Improve stability		

NOTE