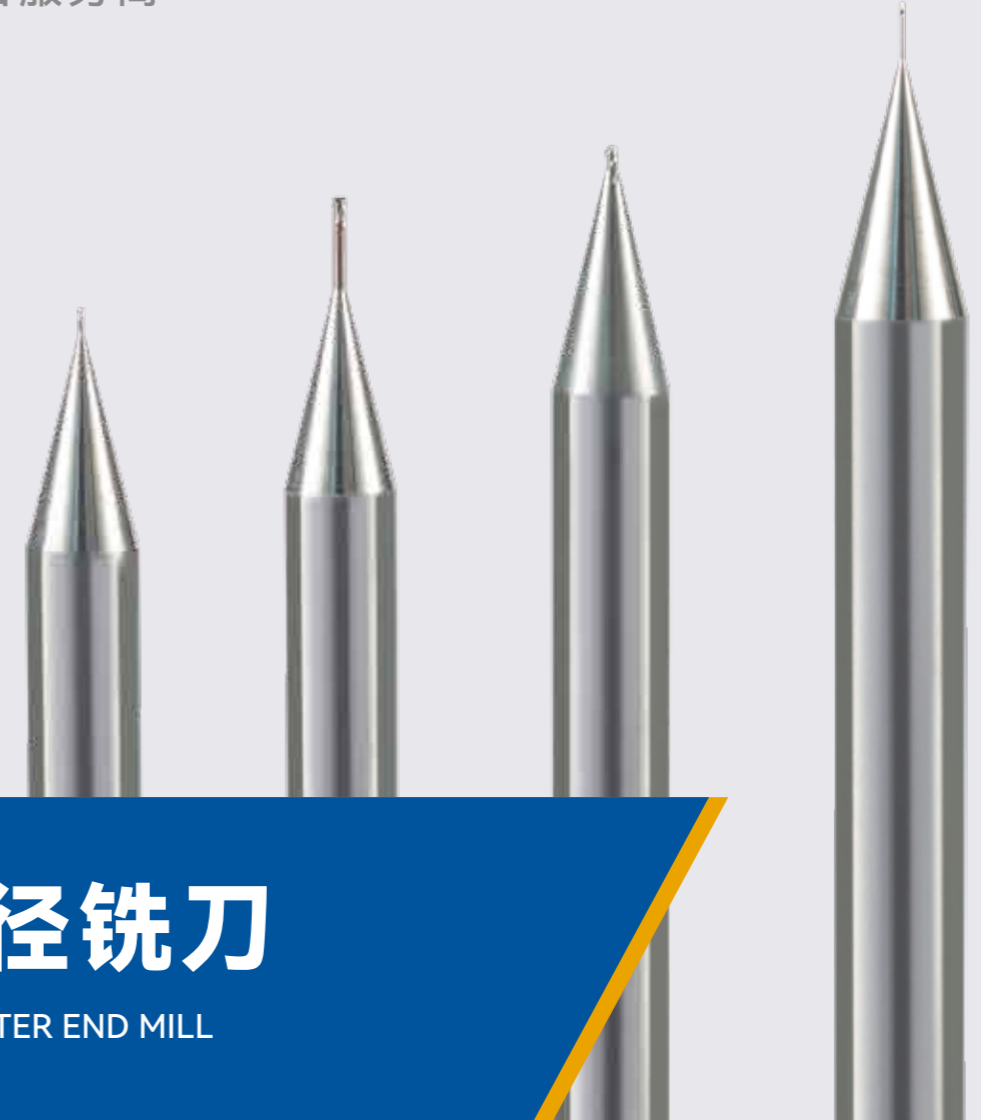


圆柄类刀具
一站式综合服务商



ROUND TOOLS ONE-STOP

GENERAL SERVICE PROVIDER

微小径铣刀

SAMLL DIAMETER END MILL



苏州用朴精密科技有限公司

地址：苏州市吴江经济开发区茂源路8号

电话：+86-512-6306 0818

邮箱：ypyx@yp-tec.com

网址：www.yp-tec.com

Suzhou Yongpu Precision Technology Co., Ltd.

Add: No. 8 Maoyuan Road, Wujiang Economic and Technological Development Zone, Suzhou City, Jiangsu Province

Tel: +86-512-6306 0818

Email: ypyx@yp-tec.com

Web: www.yp-tec.com

版本号：YP-Mill micro-202401



一站式服务
One-stop
service



非标定制
Customized
solution



百余年技术加持
Sandvik Coromant
technical support

www.yp-tec.com



1 Company
Introduction
公司介绍

03 About yongpu
用朴简介

2 Small diameter
end mill
微小径铣刀

05 Application area
应用范围

07 Ordering code &
symbol description
编号规则及图标说明

09 Reliable Series
end mill
坚韧系列产品介绍

19 High Hardness Series
end mill
高硬系列产品介绍

31 Super High Hardness Series
end mill
至硬系列产品介绍

43 Cutting data
切削参数

ABOUT YONGPU 关于用朴

圆柄类刀具一站式综合服务商 ROUND TOOLS ONE-STOP GENERAL SERVICE PROVIDER



一站式服务
One-stop
service



非标定制
Customized
solution



百余年技术加持
Sandvik Coromant
technical support

苏州用朴精密科技有限公司成立于2013年，是一家专注圆柄类精密刀具的研发生产和销售的高新技术企业，提供圆柄类棒材、精密刀具、涂层的全产业链一站式服务。现有苏州吴江和安徽滁州两处制造基地，拥有专业的技术团队，先进的生产设备和完善的质量管理体系，依托山特维克的技术支持以及完整的产业链打造客户值得信赖的圆柄类刀具一站式综合服务商。

Suzhou Yongpu Precision Technology Co., Ltd. was established in 2013 and is a high-tech enterprise specializing in the research, development, production, and sales of high precision solid carbide round tools. It provides one-stop services for the entire industry chain of round tool blanks, high precision cutting tools, and coatings. There are two production units in Wujiang, Suzhou and Chuzhou, Anhui, with professional technical teams, advanced production equipment, and a comprehensive quality control system. With Sandvik's technical support and a complete industrial chain, we aim to create a trustworthy one-stop general service provider for solid carbide round tools for our customers.



Round Tools One-stop General Service Provider

APPLICATION AREA 应用范围



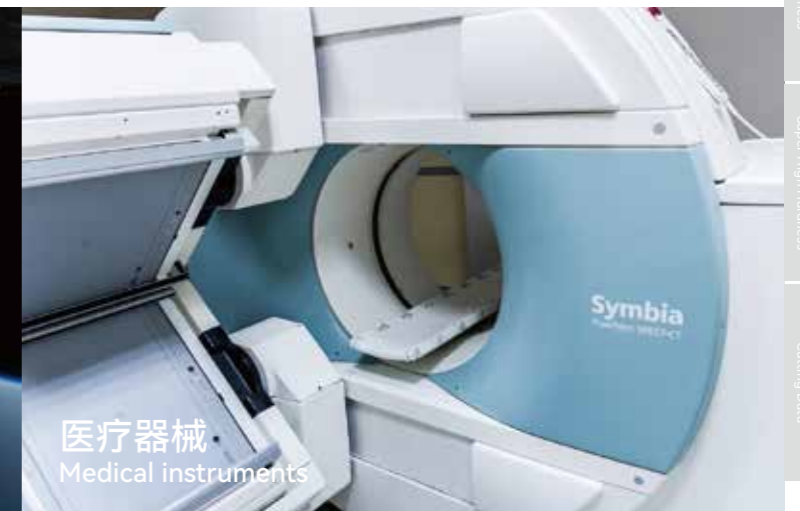
模具制造
Mold manufacturing



航空
Aviation



航天
Space flight



医疗器械
Medical instruments



汽车
Automotive



电子产品
3C



光学设备
Optical device



声学设备
Headset

A1 编号规则

ORDERING CODE



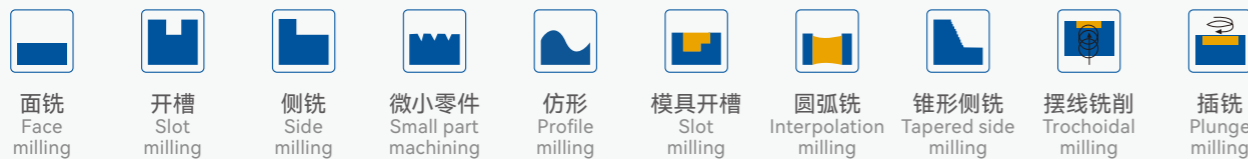
- ① YPR - 坚韧系列(HRC < 45) YPR - Reliable Series (HRC < 45)
YPH - 高硬系列(HRC45-55) YPH - High Hardness (HRC45-55)
YPS - 至硬系列(HRC > 55) YPS - Super High Hardness (HRC > 55)
- ② E - 平刀 End mill
R - 圆鼻刀 R corner end mill
B - 球刀 Ball nose end mill
- ③ 2 - 刃数 Edge number
- ④ 刃径 Dia.
- ⑤ R角 Comer radius
- ⑥ 有效长 Effective length
- ⑦ 柄径 Shank Dia
- ⑧ 总长 Overall length
- ⑨ S - 小径 Small diameter
L - 长颈 Long neck

A2 图标说明

SYMBOL DESCRIPTION

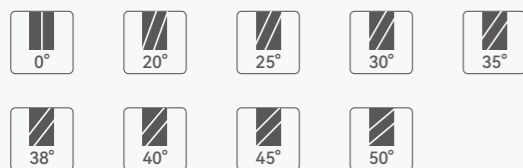
加工用途

Application area



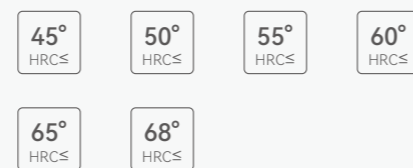
螺旋角度

Helical angle



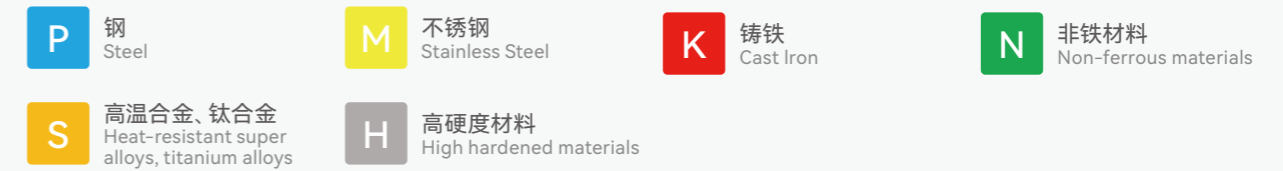
加工硬度

Workpiece hardness



被加工材料

Material group



A3 涂层说明

COATING DESCRIPTION

DXS HV3500 黑灰色 | SiCN 系列最新纳米强化覆膜
纳米超级强化涂层, 适合高硬度干切削刀具, 耐性极佳。
Dark grey | SiCN series latest nanometer reinforced mulch
Nano super reinforced coating, suitable for high hardness dry cutting tools, excellent wear resistance.

DXC HV3100 黑色 | DXCR 系列超高硬度复合覆膜
最新复合涂层技术高寿命耐磨涂层, 适合高硬度火钢模具钢材料加工。
Black | DXCR series ultra high hardness composite mulch
The latest composite coating technology is high life and wear resistant coating, suitable for high hardness quenched steel die steel material processing.

DXT HV3500 古铜色 | TiAlSiN 涂层
强耐磨性能, 强耐高温性能, 抗氧化性能好。适用于钛合金 镍基高温合金等材料加工。
Bronzed | TiAlSiN coating
Strong wear resistance, high temperature resistance, good oxidation resistance. Suitable for titanium alloy, nickel base superalloy and other materials processing.

ATX HV2800 金色 | TiAlN 系列纳米复合多层覆膜
适合加工一般钢件、铁系材料, 刀具红硬性能好, 耐性极佳。
Gold | TiAlN series nanocomposite multilayer mulch
Suitable for processing general steel parts, iron materials, tool red hardness can be good, excellent wear resistance.

CrN HV1800 银灰色 | CRN 系列覆膜
铝合金材料加工专用, 光洁度好、不粘刀、更耐磨, 寿命更长。
Silver | CRN series mulch
Aluminum alloy material processing special, good finish, non-stick knife, more wear-resistant, longer life.

DRL HV2000 黄色 | TiN 系列纳米覆膜
适用钻铣刀具涂层, 耐用不易磨损。
Yellow | TiN series nanocoated
Suitable for drilling and milling tool coating, durable and not easy to wear.

ISO材料组应用范围 ISO material groups



坚韧系列产品介绍

RELIABLE SERIES PRODUCT INTRODUCTION

坚韧系列，用于材料硬度HRC<45的材料，包括：
YPR series, suitable for component material hardness HRC<45,
contains three concepts:

P10 • YPRE – 坚韧系列平头铣刀
YPRE – Reliable Series end mill

P13 • YPRR – 坚韧系列圆鼻铣刀
YPRR – Reliable Series R corner end mill

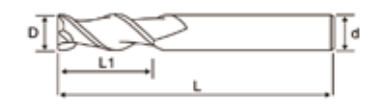
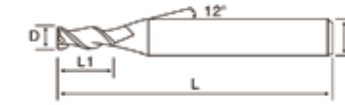
P16 • YPRB – 坚韧系列球头铣刀
YPRB – Reliable Series ball nose end mill

坚韧系列-2刃/4刃平底铣刀

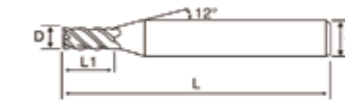
Reliable Series - 2/4 edges end mill



2刃 2 edges



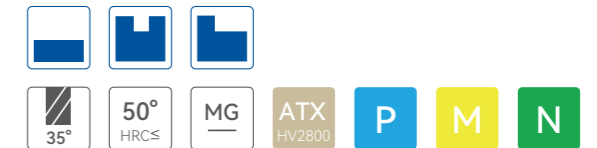
4刃 4 edges



- 复合纳米极细微粒耐高温涂层，增强耐用度排屑更顺畅；
- 超微粒钨钢棒材高硬度、超耐磨、高刚性；
- 适用于加工合金钢、碳素钢、工具钢、铜材等。

外径公差
D < 4.0 0 ~ -0.015
D > 4.0 0 ~ -0.02

- Multi-layer extra fine particles coating provides durability and good chips evacuation.
- High hardness, Super-wear resistance and high stiffness of ultra fine tungsten steel rods.
- For processing alloy steel, carbon steel, tool steel, copper, etc.



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎				○	○	○	○		◎	

2刃 2 edges

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPRE2010 0450	1	2.5	50	4	2	●
YPRE2015 0450	1.5	3.75	50	4	2	●
YPRE2020 0450	2	5	50	4	2	●

4刃 4 edges

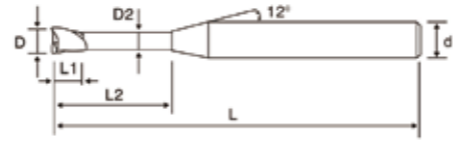
订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPRE4010 0450	1	2.5	50	4	4	●
YPRE4015 0450	1.5	3.75	50	4	4	●
YPRE4020 0450	2	5	50	4	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码，产品代码标示方法例：YPRE2010 0450
Ordering example: YPRE2010 0450

坚韧系列-长颈平底铣刀

Reliable Series - long neck end mill



- 颈部稍细可以加工深槽;
- 复合纳米极细微粒耐高温涂层, 增强耐用度排屑更顺畅;
- 适用于加工合金钢、碳素钢、工具钢、铜材等。

- Slightly fine neck can be processed deep groove.
- Multi-layer extra fine particles coating provides durability and good chips evacuation.
- For processing alloy steel, carbon steel, tool steel, copper, etc.

外径公差
D 0 ~ -0.015



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎				○	○	○	○		◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPRE2001030 0450L	0.1	0.3	0.08	0.085	50	4	2
YPRE2001050 0450L	0.1	0.5	0.08	0.085	50	4	2
YPRE2001075 0450L	0.1	0.75	0.08	0.085	50	4	2
YPRE20015050 0450L	0.15	0.5	0.12	0.13	50	4	2
YPRE20015075 0450L	0.15	0.75	0.12	0.13	50	4	2
YPRE20015100 0450L	0.15	1	0.12	0.13	50	4	2
YPRE2002075 0450L	0.2	0.75	0.16	0.18	50	4	2
YPRE2002100 0450L	0.2	1	0.16	0.18	50	4	2
YPRE2002150 0450L	0.2	1.5	0.16	0.18	50	4	2
YPRE2003100 0450L	0.3	1	0.24	0.28	50	4	2
YPRE2003150 0450L	0.3	1.5	0.24	0.28	50	4	2
YPRE2003200 0450L	0.3	2	0.24	0.28	50	4	2
YPRE2003300 0450L	0.3	3	0.24	0.28	50	4	2
YPRE2004150 0450L	0.4	1.5	0.32	0.37	50	4	2
YPRE2004200 0450L	0.4	2	0.32	0.37	50	4	2
YPRE2004300 0450L	0.4	3	0.32	0.37	50	4	2
YPRE2004400 0450L	0.4	4	0.32	0.37	50	4	2
YPRE2005200 0450L	0.5	2	0.8	0.46	50	4	2
YPRE2005300 0450L	0.5	3	0.8	0.46	50	4	2
YPRE2005400 0450L	0.5	4	0.8	0.46	50	4	2
YPRE4005200 0450L	0.5	2	0.8	0.46	50	4	4
YPRE4005300 0450L	0.5	3	0.8	0.46	50	4	4
YPRE4005400 0450L	0.5	4	0.8	0.46	50	4	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRE2001030 0450L
Ordering example: YPRE2001030 0450L

坚韧系列-长颈平底铣刀

Reliable Series - long neck end mill



单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPRE2006200 0450L	0.6	2	0.96	0.56	50	4	2
YPRE2006300 0450L	0.6	3	0.96	0.56	50	4	2
YPRE2006400 0450L	0.6	4	0.96	0.56	50	4	2
YPRE2006600 0450L	0.6	6	0.96	0.56	50	4	2
YPRE4006200 0450L	0.6	2	0.96	0.56	50	4	4
YPRE4006300 0450L	0.6	3	0.96	0.56	50	4	4
YPRE4006400 0450L	0.6	4	0.96	0.56	50	4	4
YPRE4006600 0450L	0.6	6	0.96	0.56	50	4	4
YPRE2008300 0450L	0.8	3	1.28	0.76	50	4	2
YPRE2008400 0450L	0.8	4	1.28	0.76	50	4	2
YPRE2008600 0450L	0.8	6	1.28	0.76	50	4	2
YPRE2008800 0450L	0.8	8	1.28	0.76	50	4	2
YPRE4008300 0450L	0.8	3	1.28	0.76	50	4	4
YPRE4008400 0450L	0.8	4	1.28	0.76	50	4	4
YPRE4008600 0450L	0.8	6	1.28	0.76	50	4	4
YPRE4008800 0450L	0.8	8	1.28	0.76	50	4	4
YPRE2010400 0450L	1	4	2	0.95	50	4	2
YPRE2010600 0450L	1	6	2	0.95	50	4	2
YPRE2010800 0450L	1	8	2	0.95	50	4	2
YPRE20101000 0450L	1	10	2	0.95	50	4	2
YPRE20101200 0450L	1	12	2	0.95	50	4	2
YPRE4010400 0450L	1	4	2	0.95	50	4	4
YPRE4010600 0450L	1	6	2	0.95	50	4	4
YPRE4010800 0450L	1	8	2	0.95	50	4	4
YPRE40101000 0450L	1	10	2	0.95	50	4	4
YPRE40101200 0450L	1	12	2	0.95	50	4	4
YPRE4015600 0450L	1.5	6	3	1.43	50	4	4
YPRE4015800 0450L	1.5	8	3	1.43	50	4	4
YPRE40151000 0450L	1.5	10	3	1.43	50	4	4
YPRE40151200 0450L	1.5	12	3	1.43	50	4	4
YPRE4020600 0450L	2	6	4		50	4	4
YPRE4020800 0450L	2	8	4	1.91	50	4	4
YPRE40201000 0450L	2	10	4	1.91	50	4	4
YPRE40201200 0450L	2	12	4	1.91	50	4	4
YPRE40201400 0450L	2	14	4	1.91	50	4	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRE2001030 0450L
Ordering example: YPRE2001030 0450L

坚韧系列-2刃/4刃圆鼻立铣刀

Reliable Series - 2/4 edges R corner end mill



2刃 2 edges



4刃 4 edges



- 复合纳米极细微粒耐高温涂层，增强耐用度排屑更顺畅；
- 圆弧角可防止高速切削时崩刃；
- 适用于加工合金钢、碳素钢、工具钢、铜材等。

外径公差 D ≤ 4.0 0 ~ -0.015
D > 4.0 0 ~ -0.02

R公差 R ≤ 1.0 ± 0.005
R > 1.0 ± 0.008



- Multi-layer extra fine particles coating provides durability and good chips evacuation.
- The arc angle prevents breakage during high-speed cutting.
- For processing alloy steel, carbon steel, tool steel, copper, etc.

加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎				○	○	○	○		◎	

2刃 2 edges

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPRR2010R0.1 0450	1	R0.1	2.5	50	4	●
YPRR2010R0.2 0450	1	R0.2	2.5	50	4	●
YPRR2015R0.1 0450	1.5	R0.1	3.75	50	4	●
YPRR2015R0.2 0450	1.5	R0.2	3.75	50	4	●
YPRR2020R0.1 0450	2	R0.1	5	50	4	●
YPRR2020R0.2 0450	2	R0.2	5	50	4	●
YPRR2020R0.5 0450	2	R0.5	5	50	4	●

4刃 4 edges

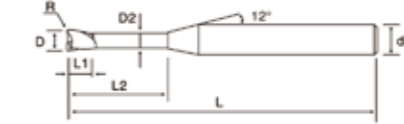
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPRR4010R0.1 0450	1	R0.1	2.5	50	4	●
YPRR4010R0.2 0450	1	R0.2	2.5	50	4	●
YPRR4015R0.1 0450	1.5	R0.1	3.75	50	4	●
YPRR4015R0.2 0450	1.5	R0.2	3.75	50	4	●
YPRR4020R0.1 0450	2	R0.1	5	50	4	●
YPRR4020R0.2 0450	2	R0.2	5	50	4	●
YPRR4020R0.5 0450	2	R0.5	5	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRR2010R0.1 0450
Ordering example: YPRR2010R0.1 0450

坚韧系列-长颈圆鼻立铣刀

Reliable Series - long neck R corner end mill



- 颈部稍细可以加工深槽；
- 复合纳米极细微粒耐高温涂层，增强耐用度排屑更顺畅；
- 适用于加工合金钢、碳素钢、工具钢、铜材等。

外径公差 D 0 ~ -0.015

R公差 R ± 0.005

- Slightly fine neck can be processed deep groove.
- Multi-layer extra fine particles coating provides durability and good chips evacuation.
- For processing alloy steel, carbon steel, tool steel, copper, etc.



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎				○	○	○	○		◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPRR2002R0.02100 0450L	0.2	R0.02	1	0.16	0.18	50	4	2
YPRR2002R0.02150 0450L	0.2	R0.02	1.5	0.16	0.18	50	4	2
YPRR2002R0.05100 0450L	0.2	R0.05	1	0.16	0.18	50	4	2
YPRR2002R0.05200 0450L	0.2	R0.05	2	0.16	0.18	50	4	2
YPRR2003R0.05150 0450L	0.3	R0.05	1.5	0.24	0.28	50	4	2
YPRR2003R0.05200 0450L	0.3	R0.05	2	0.24	0.28	50	4	2
YPRR2003R0.05300 0450L	0.3	R0.05	3	0.24	0.28	50	4	2
YPRR2004R0.05200 0450L	0.4	R0.05	2	0.32	0.37	50	4	2
YPRR2004R0.05300 0450L	0.4	R0.05	3	0.32	0.37	50	4	2
YPRR2004R0.05400 0450L	0.4	R0.05	4	0.32	0.37	50	4	2
YPRR2004R0.1200 0450L	0.4	R0.1	2	0.32	0.37	50	4	2
YPRR2004R0.1300 0450L	0.4	R0.1	3	0.32	0.37	50	4	2
YPRR2004R0.1400 0450L	0.4	R0.1	4	0.32	0.37	50	4	2
YPRR2005R0.05200 0450L	0.5	R0.05	2	0.8	0.46	50	4	2
YPRR2005R0.05300 0450L	0.5	R0.05	3	0.8	0.46	50	4	2
YPRR2005R0.05400 0450L	0.5	R0.05	4	0.8	0.46	50	4	2
YPRR2005R0.1200 0450L	0.5	R0.1	2	0.8	0.46	50	4	2
YPRR2005R0.1300 0450L	0.5	R0.1	3	0.8	0.46	50	4	2
YPRR2005R0.1400 0450L	0.5	R0.1	4	0.8	0.46	50	4	2
YPRR2006R0.05300 0450L	0.6	R0.05	3	0.96	0.56	50	4	2
YPRR2006R0.05400 0450L	0.6	R0.05	4	0.96	0.56	50	4	4
YPRR2006R0.05600 0450L	0.6	R0.05	6	0.96	0.56	50	4	4
YPRR2006R0.1300 0450L	0.6	R0.1	3	0.96	0.56	50	4	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRR2002R0.02100 0450L
Ordering example: YPRR2002R0.02100 0450L

坚韧系列-长颈圆鼻立铣刀

Reliable Series - long neck R corner end mill



单位 unit (mm)

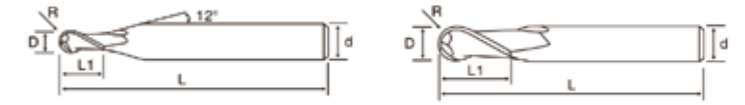
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPRR2006R0.1400 0450L	0.6	R0.1	4	0.96	0.56	50	4	2
YPRR2006R0.1600 0450L	0.6	R0.1	6	0.96	0.56	50	4	2
YPRR2008R0.05400 0450L	0.8	R0.05	4	1.28	0.76	50	4	2
YPRR2008R0.05600 0450L	0.8	R0.05	6	1.28	0.76	50	4	2
YPRR2008R0.05800 0450L	0.8	R0.05	8	1.28	0.76	50	4	2
YPRR2008R0.1400 0450L	0.8	R0.1	4	1.28	0.76	50	4	2
YPRR2008R0.1600 0450L	0.8	R0.1	6	1.28	0.76	50	4	2
YPRR2008R0.1800 0450L	0.8	R0.1	8	1.28	0.76	50	4	2
YPRR2008R0.2400 0450L	0.8	R0.2	4	1.28	0.76	50	4	2
YPRR2008R0.2600 0450L	0.8	R0.2	6	1.28	0.76	50	4	2
YPRR2008R0.2800 0450L	0.8	R0.2	8	1.28	0.76	50	4	2
YPRR4010R0.05400 0450L	1	R0.05	4	2	0.95	50	4	2
YPRR4010R0.05600 0450L	1	R0.05	6	2	0.95	50	4	2
YPRR4010R0.05800 0450L	1	R0.05	8	2	0.95	50	4	2
YPRR4010R0.1400 0450L	1	R0.1	4	2	0.95	50	4	2
YPRR4010R0.1600 0450L	1	R0.1	6	2	0.95	50	4	2
YPRR4010R0.1800 0450L	1	R0.1	8	2	0.95	50	4	2
YPRR4010R0.2400 0450L	1	R0.2	4	2	0.95	50	4	2
YPRR4010R0.2600 0450L	1	R0.2	6	2	0.95	50	4	2
YPRR4010R0.2800 0450L	1	R0.2	8	2	0.95	50	4	2
YPRR4015R0.1400 0450L	1.5	R0.1	4	3	1.43	50	4	4
YPRR4015R0.1600 0450L	1.5	R0.1	6	3	1.43	50	4	4
YPRR4015R0.1800 0450L	1.5	R0.1	8	3	1.43	50	4	4
YPRR4015R0.2400 0450L	1.5	R0.2	4	3	1.43	50	4	4
YPRR4015R0.2600 0450L	1.5	R0.2	6	3	1.43	50	4	4
YPRR4015R0.2800 0450L	1.5	R0.2	8	3	1.43	50	4	4
YPRR4020R0.11000 0450L	2	R0.1	10	4	1.91	50	4	4
YPRR4020R0.11200 0450L	2	R0.1	12	4	1.91	50	4	4
YPRR4020R0.1600 0450L	2	R0.1	6	4	1.91	50	4	4
YPRR4020R0.1800 0450L	2	R0.1	8	4	1.91	50	4	4
YPRR4020R0.21000 0450L	2	R0.2	10	4	1.91	50	4	4
YPRR4020R0.21200 0450L	2	R0.2	12	4	1.91	50	4	4
YPRR4020R0.2600 0450L	2	R0.2	6	4	1.91	50	4	4
YPRR4020R0.2800 0450L	2	R0.2	8	4	1.91	50	4	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRR2002R0.02100 0450L
Ordering example: YPRR2002R0.02100 0450L

坚韧系列-2刃球头铣刀

Reliable Series - 2 edges ball nose end mill



- 复合纳米级微粒耐高温涂层, 增强耐用度排屑更顺畅;
- 超微粒钨钢棒材高硬度、超耐磨、高刚性;
- 适用于加工合金钢、碳素钢、工具钢、铜材等。

R 公差
R ≤ 2.0 ± 0.005
R > 2.0 ± 0.008

- Multi-layer extra fine particles coating provides durability and good chips evacuation.
- High hardness, Super-wear resistance and high stiffness of ultra fine tungsten steel rods.
- For processing alloy steel, carbon steel, tool steel, copper, etc.



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎				○	○	○	○		◎	

单位 unit (mm)

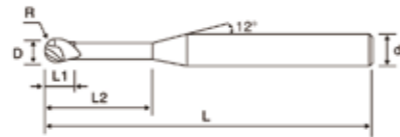
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPRB2010R0.5 0450	1	R0.5	2	50	4	●
YPRB2015R0.75 0450	1.5	R0.75	3	50	4	●
YPRB2020R1.0 0450	2	R1.0	4	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRB2010R0.5 0450
Ordering example: YPRB2010R0.5 0450

坚韧系列-长颈2刃球头铣刀

Reliable Series - 2 edges long neck ball nose end mill



- 颈部稍细可以加工深槽;
- 复合纳米级微粒耐高温涂层, 增强耐用度排屑更顺畅;
- 适用于加工合金钢、碳素钢、工具钢、铜材等。

- Slightly fine neck can be processed deep groove.
- Multi-layer extra fine particles coating provides durability and good chips evacuation.
- For processing alloy steel, carbon steel, tool steel, copper, etc.



加工材料 Material group

碳素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎				○	○	○	○		◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPRB20R0.1050 0450L	0.2	R0.1	0.5	0.16	50	4	●
YPRB20R0.1100 0450L	0.2	R0.1	1	0.16	50	4	●
YPRB20R0.1150 0450L	0.2	R0.1	1.5	0.16	50	4	●
YPRB20R0.15100 0450L	0.3	R0.15	1	0.24	50	4	●
YPRB20R0.15150 0450L	0.3	R0.15	1.5	0.24	50	4	●
YPRB20R0.15200 0450L	0.3	R0.15	2	0.24	50	4	●
YPRB20R0.20100 0450L	0.4	R0.2	1	0.32	50	4	●
YPRB20R0.20200 0450L	0.4	R0.2	2	0.32	50	4	●
YPRB20R0.20300 0450L	0.4	R0.2	3	0.32	50	4	●
YPRB20R0.25200 0450L	0.5	R0.25	2	0.4	50	4	●
YPRB20R0.25300 0450L	0.5	R0.25	3	0.4	50	4	●
YPRB20R0.25400 0450L	0.5	R0.25	4	0.4	50	4	●
YPRB20R0.3200 0450L	0.6	R0.3	2	0.48	50	4	●
YPRB20R0.3300 0450L	0.6	R0.3	3	0.48	50	4	●
YPRB20R0.3400 0450L	0.6	R0.3	4	0.48	50	4	●
YPRB20R0.3600 0450L	0.6	R0.3	6	0.48	50	4	●
YPRB20R0.4200 0450L	0.8	R0.4	2	0.64	50	4	●
YPRB20R0.4400 0450L	0.8	R0.4	4	0.64	50	4	●
YPRB20R0.4600 0450L	0.8	R0.4	6	0.64	50	4	●
YPRB20R0.5200 0450L	1	R0.5	2	1	50	4	●
YPRB20R0.5400 0450L	1	R0.5	4	1	50	4	●
YPRB20R0.5600 0450L	1	R0.5	6	1	50	4	●
YPRB20R0.75400 0450L	1.5	R0.75	4	1.5	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRB20R0.1050 0450L
Ordering example: YPRB20R0.1050 0450L

坚韧系列-长颈2刃球头铣刀

Reliable Series - 2 edges long neck ball nose end mill



单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPRB20R0.75600 0450L	1.5	R0.75	6	1.5	50	4	●
YPRB20R0.75800 0450L	1.5	R0.75	8	1.5	50	4	●
YPRB20R1.0400 0450L	2	R1.0	4	2	50	4	●
YPRB20R1.0600 0450L	2	R1.0	6	2	50	4	●
YPRB20R1.0800 0450L	2	R1.0	8	2	50	4	●
YPRB20R1.01000 0450L	2	R1.0	10	2	50	4	●
YPRB20R1.01000 0660L	2	R1.0	10	2	60	6	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPRB20R0.1050 0450L
Ordering example: YPRB20R0.1050 0450L

ISO材料组应用范围 ISO material groups



高硬系列产品介绍

HIGH HARDNESS PRODUCT INTRODUCTION

高硬系列，用于材料硬度HRC45-55的材料，包括：
YPH series, suitable for component material hardness HRC45-55, contains three concepts:

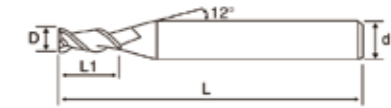
P20 • YPHE - 高硬系列平头铣刀
YPHE - High Hardness end mill

P24 • YPHR - 高硬系列圆鼻铣刀
YPHR - High Hardness R corner end mill

P27 • YPHB - 高硬系列球头铣刀
YPHB - High Hardness ball nose end mill

高硬系列-微小径平底铣刀

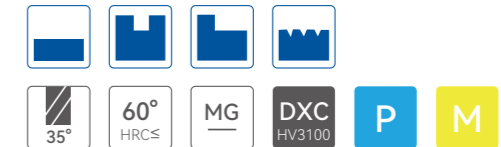
High Hardness - small diameter end mill



- 适合钢、铜合金、合金钢 HRC55°和机器零件模具；
- 油雾冷却时性能优越；
- 卓越的高硬度钢切削性能。

- Suitable for steel, copper alloy, alloy steel HRC55° and machine parts die.
- Oil Mist Cooling performance superior.
- The excellent high hardness steel cutting performance.

外径公差
D 0 ~ -0.008



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○		○	○		○		◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory	订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPHE20005 0450S	0.05	0.1	50	4	2	●	YPHE4005 0450S	0.5	1	50	4	4	●
YPHE2001 0450S	0.1	0.2	50	4	2	●	YPHE2006 0450S	0.6	1.2	50	4	2	●
YPHE20015 0450S	0.15	0.3	50	4	2	●	YPHE4006 0450S	0.6	1.2	50	4	4	●
YPHE2002 0450S	0.2	0.4	50	4	2	●	YPHE2007 0450S	0.7	1.4	50	4	2	●
YPHE2003 0450S	0.3	0.6	50	4	2	●	YPHE2008 0450S	0.8	1.6	50	4	2	●
YPHE2004 0450S	0.4	0.8	50	4	2	●	YPHE4008 0450S	0.8	1.6	50	4	4	●
YPHE2005 0450S	0.5	1	50	4	2	●	YPHE2009 0450S	0.9	1.8	50	4	2	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

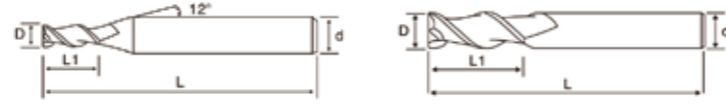
② 下单订购请参考产品代码, 产品代码标示方法例: YPHE20005 0450S
Ordering example: YPHE20005 0450S

高硬系列-2刃/4刃平底铣刀

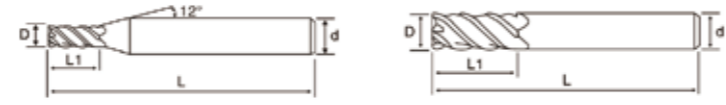
High Hardness - 2/4 edges end mill



2刃 2 edges

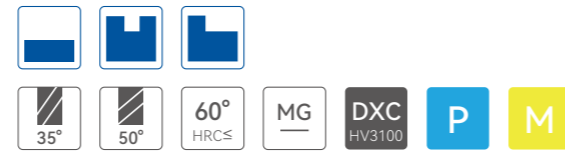


4刃 4 edges



- 为加工工具钢，合金钢，模具钢和其他高硬度材料设计；
- 2刃可获得卓越的表面光洁度，4刃可获得较高表面粗糙度；
- 提高生产效率。

外径公差
D ≤ 4.0 0 ~ -0.01
D > 4.0 0 ~ -0.015



- Designed for processing tool steel, alloy steel, die steel and other high hardness materials.
- 2 edges tool can generate excellent workpiece surface finish, 4 edges tool can generate high quality surface finish.
- Improve productivity.

加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○	○	○	○		○		◎	

2刃 2 edges

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPHE2010 0450	1	2.5	50	4	2	●
YPHE2015 0450	1.5	3.75	50	4	2	●
YPHE2020 0450	2	5	50	4	2	●

4刃 4 edges

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPHE4010 0450	1	2.5	50	4	4	●
YPHE4015 0450	1.5	3.75	50	4	4	●
YPHE4020 0450	2	5	50	4	4	●

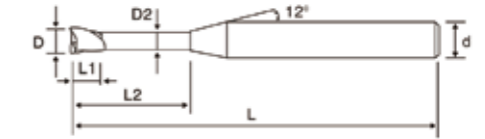
单位 unit (mm)

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码，产品代码标示方法例: YPHE2010 0450
Ordering example: YPHE2010 0450

高硬系列-长颈平底铣刀

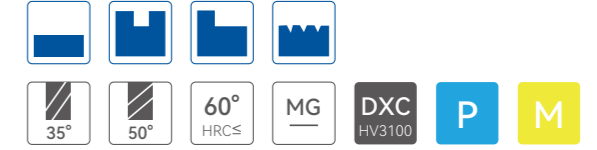
High Hardness - long neck end mill



- 设计用于加工工具钢，合金钢，碳钢和其他高硬度材料；
- 卓越的工作表面粗糙度；
- 延伸的颈部可进行深槽加工。

外径公差
D 0 ~ -0.01

- It is designed for processing tool steel, alloy steel, carbon steel and other high hardness materials.
- Excellent workpiece surface finish.
- Long neck design end mill can be used in deep slot milling.



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○	○	○	○		○		◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPHE2001030 0450L	0.1	0.3	0.08	0.085	50	4	2
YPHE2001050 0450L	0.1	0.5	0.08	0.085	50	4	2
YPHE2001075 0450L	0.1	0.75	0.08	0.085	50	4	2
YPHE20015050 0450L	0.15	0.5	0.12	0.13	50	4	2
YPHE20015075 0450L	0.15	0.75	0.12	0.13	50	4	2
YPHE20015100 0450L	0.15	1	0.12	0.13	50	4	2
YPHE2002075 0450L	0.2	0.75	0.16	0.18	50	4	2
YPHE2002100 0450L	0.2	1	0.16	0.18	50	4	2
YPHE2002150 0450L	0.2	1.5	0.16	0.18	50	4	2
YPHE2003100 0450L	0.3	1	0.24	0.28	50	4	2
YPHE2003150 0450L	0.3	1.5	0.24	0.28	50	4	2
YPHE2003200 0450L	0.3	2	0.24	0.28	50	4	2
YPHE2003300 0450L	0.3	3	0.24	0.28	50	4	2
YPHE2004150 0450L	0.4	1.5	0.32	0.37	50	4	2
YPHE2004200 0450L	0.4	2	0.32	0.37	50	4	2
YPHE2004300 0450L	0.4	3	0.32	0.37	50	4	2
YPHE2004400 0450L	0.4	4	0.32	0.37	50	4	2
YPHE2004600 0450L	0.4	6	0.32	0.37	50	4	2
YPHE2005200 0450L	0.5	2	0.8	0.46	50	4	2
YPHE2005300 0450L	0.5	3	0.8	0.46	50	4	2
YPHE2005400 0450L	0.5	4	0.8	0.46	50	4	2
YPHE4006200 0450L	0.6	2	0.96	0.56	50	4	4
YPHE4006300 0450L	0.6	3	0.96	0.56	50	4	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码，产品代码标示方法例: YPHE2001030 0450L
Ordering example: YPHE2001030 0450L

高硬系列-长颈平底铣刀

High Hardness - long neck end mill



单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPHE4006400 0450L	0.6	4	0.96	0.56	50	4	4
YPHE4006600 0450L	0.6	6	0.96	0.56	50	4	4
YPHE4008300 0450L	0.8	3	1.28	0.76	50	4	4
YPHE4008400 0450L	0.8	4	1.28	0.76	50	4	4
YPHE4008600 0450L	0.8	6	1.28	0.76	50	4	4
YPHE4008800 0450L	0.8	8	1.28	0.76	50	4	4
YPHE4010400 0450L	1	4	2	0.95	50	4	4
YPHE4010600 0450L	1	6	2	0.95	50	4	4
YPHE4010800 0450L	1	8	2	0.95	50	4	4
YPHE40101000 0450L	1	10	2	0.95	50	4	4
YPHE40101200 0450L	1	12	2	0.95	50	4	4
YPHE4015400 0450L	1.5	4	3	1.43	50	4	4
YPHE4015600 0450L	1.5	6	3	1.43	50	4	4
YPHE4015800 0450L	1.5	8	3	1.43	50	4	4
YPHE40151000 0450L	1.5	10	3	1.43	50	4	4
YPHE40151200 0450L	1.5	12	3	1.43	50	4	4
YPHE40151600 0450L	1.5	16	3	1.43	50	4	4
YPHE4020600 0450L	2	6	4	1.91	50	4	4
YPHE4020800 0450L	2	8	4	1.91	50	4	4
YPHE40201000 0450L	2	10	4	1.91	50	4	4
YPHE40201200 0450L	2	12	4	1.91	50	4	4
YPHE40201400 0450L	2	14	4	1.91	50	4	4
YPHE40201600 0450L	2	16	4	1.91	50	4	4
YPHE4030800 0450L	3	8	6	2.9	50	4	4
YPHE40301000 0450L	3	10	6	2.9	50	4	4
YPHE40301200 0450L	3	12	6	2.9	50	4	4
YPHE40301400 0450L	3	14	6	2.9	50	4	4
YPHE40301600 0450L	3	16	6	2.9	50	4	4
YPHE4010400 0660L	1	4	2	0.95	60	6	4
YPHE4010600 0660L	1	6	2	0.95	60	6	4
YPHE4015400 0660L	1.5	4	3	1.43	60	6	4
YPHE4015600 0660L	1.5	6	3	1.43	60	6	4
YPHE4015800 0660L	1.5	8	3	1.43	60	6	4
YPHE4020600 0660L	2	6	4	1.91	60	6	4
YPHE4020800 0660L	2	8	4	1.91	60	6	4
YPHE40201000 0660L	2	10	4	1.91	60	6	4

订购说明: ① 标识说明请参阅 A1-3

For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPHE2001030 0450L

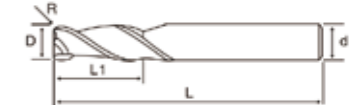
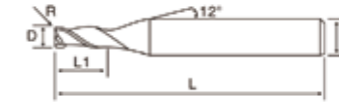
Ordering example: YPHE2001030 0450L

高硬系列-2刃/4刃圆鼻立铣刀

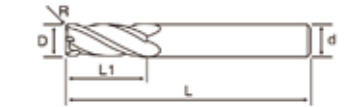
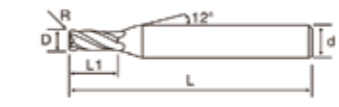
High Hardness - 2/4 edges R corner end mill



2刃 2 edges



4刃 4 edges

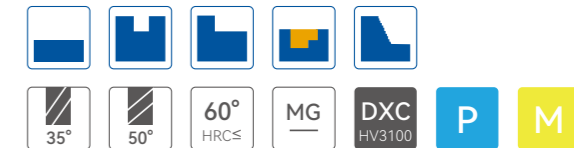


- 为加工工具钢, 合金钢, 模具钢和其他高硬度材料设计;
- 2刃可获得卓越的表面光洁度, 4刃可获得较高表面粗糙度;
- 提高生产效率。

- Designed for processing tool steel, alloy steel, die steel and other high hardness materials.
- 2 edges tool can generate excellent workpiece surface finish, 4 edges tool can generate high quality surface finish.
- Improve productivity.

外径公差 D ≤ 4.0 0 ~ -0.01
D > 4.0 0 ~ -0.015

R公差 R ≤ 1.0 ± 0.003
R > 1.0 ± 0.005



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○		○	○		○		◎	

2刃 2 edges

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPHR2010R0.1 0450	1	R0.1	2	50	4	●
YPHR2010R0.2 0450	1	R0.2	2	50	4	●
YPHR2015R0.1 0450	1.5	R0.1	3	50	4	●
YPHR2015R0.2 0450	1.5	R0.2	3	50	4	●
YPHR2020R0.1 0450	2	R0.1	4	50	4	●
YPHR2020R0.2 0450	2	R0.2	4	50	4	●
YPHR2020R0.5 0450	2	R0.5	4	50	4	●

订购说明: ① 标识说明请参阅 A1-3

For the description of the identification, please refer to the A1-3

4刃 4 edges

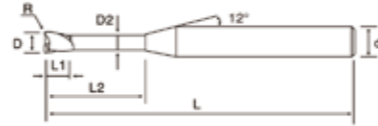
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPHR4010R0.1 0450	1	R0.1	2	50	4	●
YPHR4010R0.2 0450	1	R0.2	2	50	4	●
YPHR4015R0.1 0450	1.5	R0.1	3	50	4	●
YPHR4015R0.2 0450	1.5	R0.2	3	50	4	●
YPHR4020R0.1 0450	2	R0.1	4	50	4	●
YPHR4020R0.2 0450	2	R0.2	4	50	4	●
YPHR4020R0.5 0450	2	R0.5	4	50	4	●

订购说明: ② 下单订购请参考产品代码, 产品代码标示方法例: YPHR2010R0.1 0450

Ordering example: YPHR2010R0.1 0450

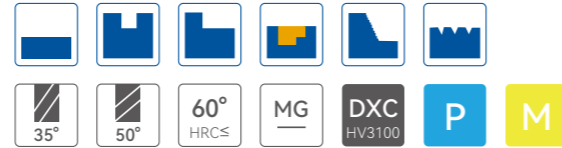
高硬系列-长颈圆鼻立铣刀

High Hardness - long neck R corner end mill



- 设计用于加工工具钢，合金钢，碳钢和其他高硬度材料；
- 卓越的表面粗糙度；
- 延伸的颈部可进行深槽加工。

- It is designed for processing tool steel, alloy steel, carbon steel and other high hardness materials.
- Excellent surface roughness.
- The extended neck can be deeply grooved.



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○	○	○	○	○	○	○	◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPHR2002R0.02100 0450L	0.2	R0.02	1	0.16	0.18	50	4	2
YPHR2002R0.02150 0450L	0.2	R0.02	1.5	0.16	0.18	50	4	2
YPHR2002R0.05100 0450L	0.2	R0.05	1	0.16	0.18	50	4	2
YPHR2002R0.05200 0450L	0.2	R0.05	2	0.16	0.18	50	4	2
YPHR2003R0.05150 0450L	0.3	R0.05	1.5	0.24	0.28	50	4	2
YPHR2003R0.05200 0450L	0.3	R0.05	2	0.24	0.28	50	4	2
YPHR2003R0.05300 0450L	0.3	R0.05	3	0.24	0.28	50	4	2
YPHR2004R0.05200 0450L	0.4	R0.05	2	0.32	0.37	50	4	2
YPHR2004R0.05300 0450L	0.4	R0.05	3	0.32	0.37	50	4	2
YPHR2004R0.05400 0450L	0.4	R0.05	4	0.32	0.37	50	4	2
YPHR2004R0.1200 0450L	0.4	R0.1	2	0.32	0.37	50	4	2
YPHR2004R0.1300 0450L	0.4	R0.1	3	0.32	0.37	50	4	2
YPHR2004R0.1400 0450L	0.4	R0.1	4	0.32	0.37	50	4	2
YPHR2005R0.05200 0450L	0.5	R0.05	2	0.8	0.46	50	4	2
YPHR2005R0.05300 0450L	0.5	R0.05	3	0.8	0.46	50	4	2
YPHR2005R0.05400 0450L	0.5	R0.05	4	0.8	0.46	50	4	2
YPHR2005R0.1200 0450L	0.5	R0.1	2	0.8	0.46	50	4	2
YPHR2005R0.1300 0450L	0.5	R0.1	3	0.8	0.46	50	4	2
YPHR2005R0.1400 0450L	0.5	R0.1	4	0.8	0.46	50	4	2
YPHR2006R0.05120 0450L	0.6	R0.05	1.2	0.96	0.56	50	4	2
YPHR2006R0.05200 0450L	0.6	R0.05	2	0.96	0.56	50	4	2
YPHR2006R0.05300 0450L	0.6	R0.05	3	0.96	0.56	50	4	2
YPHR2006R0.05400 0450L	0.6	R0.05	4	0.96	0.56	50	4	2

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码，产品代码标示方法例：YPHR2002R0.02100 0450L
Ordering example: YPHR2002R0.02100 0450L

高硬系列-长颈圆鼻立铣刀

High Hardness - long neck R corner end mill



单位 unit (mm)

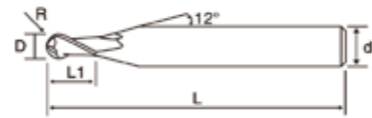
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPHR2006R0.05600 0450L	0.6	R0.05	6	0.96	0.56	50	4	2
YPHR2006R0.1300 0450L	0.6	R0.1	3	0.96	0.56	50	4	2
YPHR2006R0.1400 0450L	0.6	R0.1	4	0.96	0.56	50	4	2
YPHR2006R0.1600 0450L	0.6	R0.1	6	0.96	0.56	50	4	2
YPHR2008R0.05160 0450L	0.8	R0.05	1.6	1.28	0.76	50	4	2
YPHR2008R0.05300 0450L	0.8	R0.05	3	1.28	0.76	50	4	2
YPHR2008R0.05400 0450L	0.8	R0.05	4	1.28	0.76	50	4	2
YPHR2008R0.05600 0450L	0.8	R0.05	6	1.28	0.76	50	4	2
YPHR2008R0.05800 0450L	0.8	R0.05	8	1.28	0.76	50	4	2
YPHR2008R0.1160 0450L	0.8	R0.1	1.6	1.28	0.76	50	4	2
YPHR2008R0.1300 0450L	0.8	R0.1	3	1.28	0.76	50	4	2
YPHR2008R0.1400 0450L	0.8	R0.1	4	1.28	0.76	50	4	2
YPHR2008R0.1600 0450L	0.8	R0.1	6	1.28	0.76	50	4	2
YPHR2008R0.1800 0450L	0.8	R0.1	8	1.28	0.76	50	4	2
YPHR2008R0.2400 0450L	0.8	R0.2	4	1.28	0.76	50	4	2
YPHR2008R0.2600 0450L	0.8	R0.2	6	1.28	0.76	50	4	2
YPHR2008R0.2800 0450L	0.8	R0.2	8	1.28	0.76	50	4	2
YPHR4010R0.05400 0450L	1	R0.05	4	2	0.95	50	4	4
YPHR4010R0.05600 0450L	1	R0.05	6	2	0.95	50	4	4
YPHR4010R0.05800 0450L	1	R0.05	8	2	0.95	50	4	4
YPHR4010R0.1400 0450L	1	R0.1	4	2	0.95	50	4	4
YPHR4010R0.1600 0450L	1	R0.1	6	2	0.95	50	4	4
YPHR4010R0.1800 0450L	1	R0.1	8	2	0.95	50	4	4
YPHR4010R0.11000 0450L	1	R0.1	10	2	0.95	50	4	4
YPHR4010R0.11200 0450L	1	R0.1	12	2	0.95	50	4	4
YPHR4010R0.2400 0450L	1	R0.2	4	2	0.95	50	4	4
YPHR4010R0.2600 0450L	1	R0.2	6	2	0.95	50	4	4
YPHR4010R0.2800 0450L	1	R0.2	8	2	0.95	50	4	4
YPHR4015R0.1400 0450L	1.5	R0.1	4	2	0.95	50	4	4
YPHR4015R0.1600 0450L	1.5	R0.1	6	2	0.95	50	4	4
YPHR4015R0.1800 0450L	1.5	R0.1	8	2	0.95	50	4	4
YPHR4015R0.2400 0450L	1.5	R0.2	4	2	0.95	50	4	4
YPHR4015R0.2600 0450L	1.5	R0.2	6	2	0.95	50	4	4
YPHR4015R0.2800 0450L	1.5	R0.2	8	2	0.95	50	4	4
YPHR4015R0.21000 0450L	1.5	R0.2	10	2	0.95	50	4	4
YPHR4015R0.21400 0450L	1.5	R0.2	14	2	0.95	50	4	4
YPHR4020R0.1600 0450L	2	R0.1	6	4	1.91	50	4	4
YPHR4020R0.1800 0450L	2	R0.1	8	4	1.91	50	4	4
YPHR4020R0.11000 0450L	2	R0.1	10	4	1.91	50	4	4
YPHR4020R0.11200 0450L	2	R0.1	12	4	1.91	50	4	4
YPHR4020R0.2600 0450L	2	R0.2	6	4	1.91	50	4	4
YPHR4020R0.2800 0450L	2	R0.2	8	4	1.91	50	4	4
YPHR4020R0.21000 0450L	2	R0.2	10	4	1.91	50	4	4
YPHR4020R0.21200 0450L	2	R0.2	12	4	1.91	50	4	4
YPHR4020R0.21400 0450L	2	R0.2	14	4	1.91	50	4	4
YPHR4020R0.21600 0450L	2	R0.2	16	4	1.91	50	4	4
YPHR4020R0.2800 0660L	2	R0.2	8	4	1.91	60	6	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码，产品代码标示方法例：YPHR2002R0.02100 0450L
Ordering example: YPHR2002R0.02100 0450L

高硬系列-微小径2刃球头铣刀

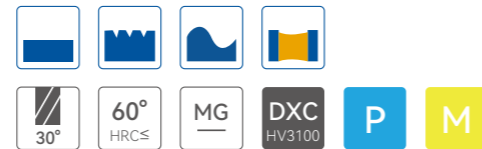
High Hardness - small diameter 2 edges ball nose end mill



- 在医学, 光学, 电子和航空航天工业做高精度铣削;
- 油雾冷却时性能优越;
- 卓越的高硬度钢切削性能。

- High precision milling in the medical, optical, electronic and aerospace industries.
- Oil Mist Cooling performance superior.
- The excellent high hardness steel cutting performance.

R 公差
R ± 0.002



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○		○	○		○		◎	

单位 unit (mm)

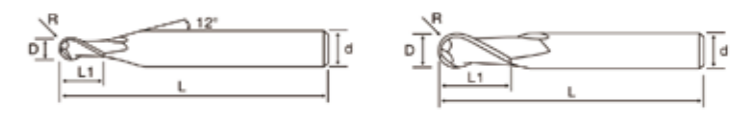
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPHB20R0.05 0450S	0.1	R0.05	0.15	50	4	●
YPHB20R0.075 0450S	0.15	R0.075	0.23	50	4	●
YPHB20R0.1 0450S	0.2	R0.1	0.3	50	4	●
YPHB20R0.15 0450S	0.3	R0.15	0.45	50	4	●
YPHB20R0.2 0450S	0.4	R0.2	0.6	50	4	●
YPHB20R0.25 0450S	0.5	R0.25	0.75	50	4	●
YPHB20R0.3 0450S	0.6	R0.3	0.9	50	4	●
YPHB20R0.35 0450S	0.7	R0.35	1.05	50	4	●
YPHB20R0.4 0450S	0.8	R0.4	1.2	50	4	●
YPHB20R0.45 0450S	0.9	R0.45	1.35	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPHB20R0.05 0450S
Ordering example: YPHB20R0.05 0450S

高硬系列-2刃球头铣刀

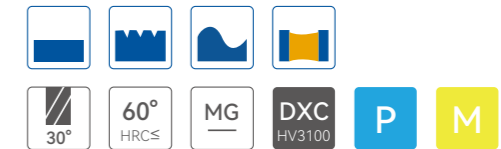
High Hardness - 2 edges ball nose end mill



- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 卓越的工作表面粗糙度;
- 为高精度铣削设计;
- 极高的耐磨性。

- High-speed cutting, the latest development of raw materials and coatings, recommended the use of Oil Mist Cooling.
- Excellent work piece Surface roughness.
- A high precision milling designed.
- Great tool edge wear resistance.

R 公差
R ≤ 2.0 ± 0.003
R > 2.0 ± 0.005



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○		○	○		○		◎	

单位 unit (mm)

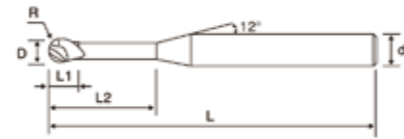
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPHB20R0.5 0450	1	R0.5	1.5	50	4	●
YPHB20R0.75 0450	1.5	R0.75	2.25	50	4	●
YPHB20R1.0 0450	2	R1.0	3	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPHB20R0.5 0450
Ordering example: YPHB20R0.5 0450

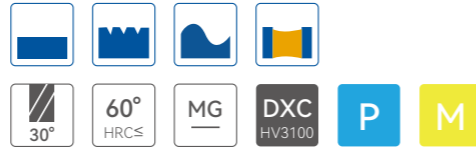
高硬系列-长颈2刃球头铣刀

High Hardness - 2 edges long neck ball nose end mill



- 设计用于加工工具钢，合金钢，碳钢和其他高硬度材料；
- 卓越的工作表面粗糙度；
- 延伸的颈部可进行深槽加工。

- It is designed for processing tool steel, alloy steel, carbon steel and other high hardness materials.
- Excellent surface roughness.
- The extended neck can be deeply grooved.



加工材料 Material group

碳素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
◎	◎	◎	◎	◎	○		○	○		○		◎	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPHB20R0.04025 0450L	0.08	R0.04	0.25	0.064	50	4	●
YPHB20R0.05050 0450L	0.1	R0.05	0.5	0.08	50	4	●
YPHB20R0.05075 0450L	0.1	R0.05	0.75	0.08	50	4	●
YPHB20R0.1050 0450L	0.2	R0.1	0.5	0.16	50	4	●
YPHB20R0.1075 0450L	0.2	R0.1	0.75	0.16	50	4	●
YPHB20R0.1100 0450L	0.2	R0.1	1	0.16	50	4	●
YPHB20R0.1150 0450L	0.2	R0.1	1.5	0.16	50	4	●
YPHB20R0.1200 0450L	0.2	R0.1	2	0.16	50	4	●
YPHB20R0.15050 0450L	0.3	R0.15	0.5	0.24	50	4	●
YPHB20R0.15060 0450L	0.3	R0.15	0.6	0.24	50	4	●
YPHB20R0.15100 0450L	0.3	R0.15	1	0.24	50	4	●
YPHB20R0.15150 0450L	0.3	R0.15	1.5	0.24	50	4	●
YPHB20R0.15200 0450L	0.3	R0.15	2	0.24	50	4	●
YPHB20R0.15300 0450L	0.3	R0.15	3	0.24	50	4	●
YPHB20R0.2060 0450L	0.4	R0.2	0.6	0.32	50	4	●
YPHB20R0.2100 0450L	0.4	R0.2	1	0.32	50	4	●
YPHB20R0.2150 0450L	0.4	R0.2	1.5	0.32	50	4	●
YPHB20R0.2200 0450L	0.4	R0.2	2	0.32	50	4	●
YPHB20R0.2300 0450L	0.4	R0.2	3	0.32	50	4	●
YPHB20R0.2400 0450L	0.4	R0.2	4	0.32	50	4	●
YPHB20R0.25100 0450L	0.5	R0.25	1	0.4	50	4	●
YPHB20R0.25200 0450L	0.5	R0.25	2	0.4	50	4	●
YPHB20R0.25300 0450L	0.5	R0.25	3	0.4	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPHB20R0.04025 0450L
Ordering example: YPHB20R0.04025 0450L

高硬系列-长颈2刃球头铣刀

High Hardness - 2 edges long neck ball nose end mill



单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPHB20R0.25400 0450L	0.5	R0.25	4	0.4	50	4	●
YPHB20R0.3100 0450L	0.6	R0.3	1	0.48	50	4	●
YPHB20R0.3120 0450L	0.6	R0.3	1.2	0.48	50	4	●
YPHB20R0.3300 0450L	0.6	R0.3	3	0.48	50	4	●
YPHB20R0.3400 0450L	0.6	R0.3	4	0.48	50	4	●
YPHB20R0.3600 0450L	0.6	R0.3	6	0.48	50	4	●
YPHB20R0.3800 0450L	0.6	R0.3	8	0.48	50	4	●
YPHB20R0.4200 0450L	0.8	R0.4	2	0.64	50	4	●
YPHB20R0.4300 0450L	0.8	R0.4	3	0.64	50	4	●
YPHB20R0.4400 0450L	0.8	R0.4	4	0.64	50	4	●
YPHB20R0.4600 0450L	0.8	R0.4	6	0.64	50	4	●
YPHB20R0.5200 0450L	1	R0.5	2	1	50	4	●
YPHB20R0.5400 0450L	1	R0.5	4	1	50	4	●
YPHB20R0.5600 0450L	1	R0.5	6	1	50	4	●
YPHB20R0.5800 0450L	1	R0.5	8	1	50	4	●
YPHB20R0.51000 0450L	1	R0.5	10	1	50	4	●
YPHB20R0.51200 0450L	1	R0.5	12	1	50	4	●
YPHB20R0.75400 0450L	1.5	R0.75	4	1.5	50	4	●
YPHB20R0.75600 0450L	1.5	R0.75	6	1.5	50	4	●
YPHB20R0.75800 0450L	1.5	R0.75	8	1.5	50	4	●
YPHB20R1.0400 0450L	2	R1.0	4	2	50	4	●
YPHB20R1.0600 0450L	2	R1.0	6	2	50	4	●
YPHB20R1.0800 0450L	2	R1.0	8	2	50	4	●
YPHB20R1.01000 0450L	2	R1.0	10	2	50	4	●
YPHB20R1.01200 0450L	2	R1.0	12	3	50	4	●
YPHB20R0.5400 0660L	1	R0.5	4	1	60	6	●
YPHB20R0.5600 0660L	1	R0.5	6	1	60	6	●
YPHB20R0.75400 0660L	1.5	R0.75	4	1.5	60	6	●
YPHB20R0.75500 0660L	1.5	R0.75	5	1.5	60	6	●
YPHB20R0.75600 0660L	1.5	R0.75	6	1.5	60	6	●
YPHB20R0.75900 0660L	1.5	R0.75	9	1.5	60	6	●
YPHB20R1.0400 0660L	2	R1.0	4	2	60	6	●
YPHB20R1.0600 0660L	2	R1.0	6	2	60	6	●
YPHB20R1.0800 0660L	2	R1.0	8	2	60	6	●
YPHB20R1.01000 0660L	2	R1.0	10	2	60	6	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPHB20R0.04025 0450L
Ordering example: YPHB20R0.04025 0450L

ISO材料组应用范围 ISO material groups

H



至硬系列产品介绍

SUPER HIGH HARDNESS PRODUCT INTRODUCTION

至硬系列，用于材料硬度HRC>55的材料，包括：
YPS series, suitable for component material hardness HRC>55,
contains three concepts:

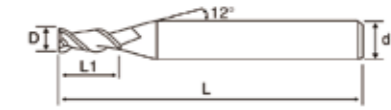
P32 • YPSE - 至硬系列平头铣刀
YPSE - Super High Hardness end mill

P35 • YPSR - 至硬系列圆鼻铣刀
YPSR - Super High Hardness R corner end mill

P39 • YPSB - 至硬系列球头铣刀
YPSB - Super High Hardness ball nose end mill

至硬系列-微小径平底铣刀

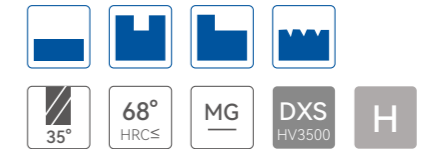
Super High Hardness - small diameter end mill



- 为加工高硬度材料设计;
- 高速切削，最新开发的原材料和涂层，建议使用油雾冷却;
- 卓越的工件表面粗糙度;
- 极高的耐磨性。

- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- Excellent surface roughness.
- Great tool edge wear resistance.

外径公差 D 0 ~ -0.008



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○		○	○		○	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory	订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPSE20005 0450S	0.05	0.1	50	4	2	●	YPSE4005 0450S	0.5	1	50	4	4	●
YPSE2001 0450S	0.1	0.2	50	4	2	●	YPSE2006 0450S	0.6	1.2	50	4	2	●
YPSE20015 0450S	0.15	0.3	50	4	2	●	YPSE4006 0450S	0.6	1.2	50	4	4	●
YPSE2002 0450S	0.2	0.4	50	4	2	●	YPSE2007 0450S	0.7	1.4	50	4	2	●
YPSE2003 0450S	0.3	0.6	50	4	2	●	YPSE2008 0450S	0.8	1.6	50	4	2	●
YPSE2004 0450S	0.4	0.8	50	4	2	●	YPSE4008 0450S	0.8	1.6	50	4	4	●
YPSE2005 0450S	0.5	1	50	4	2	●	YPSE2009 0450S	0.9	1.8	50	4	2	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

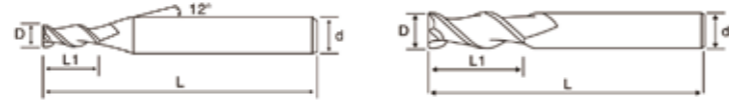
② 下单订购请参考产品代码，产品代码标示方法例：YPSE20005 0450S
Ordering example: YPSE20005 0450S

至硬系列-2刃/4刃平底铣刀

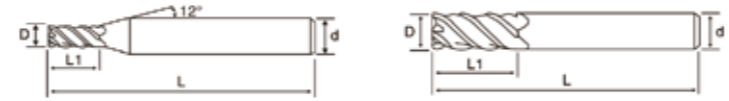
Super High Hardness - 2/4 edges end mill



2刃 2 edges

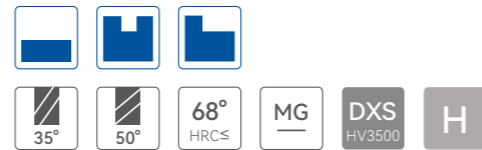


4刃 4 edges



- 为加工高硬度材料设计;
- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 卓越的工件表面粗糙度;
- 极高的耐磨性。

外径公差
D ≤ 4.0 0 ~ -0.01
D > 4.0 0 ~ -0.015



- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- Excellent surface roughness.
- Great tool edge wear resistance.

加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○	○	○	○	○	○	○

2刃 2 edges

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPSE2010 0450	1	2.5	50	4	2	●
YPSE2015 0450	1.5	3.75	50	4	2	●
YPSE2020 0450	2	5	50	4	2	●

4刃 4 edges

订货号 Ordering code	(D) 刃径 Dia.	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	库存 Inventory
YPSE4010 0450	1	2.5	50	4	4	●
YPSE4015 0450	1.5	3.75	50	4	4	●
YPSE4020 0450	2	5	50	4	4	●

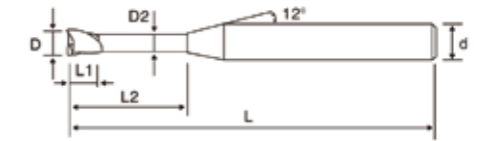
单位 unit (mm)

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSE2010 0450
Ordering example: YPSE2010 0450

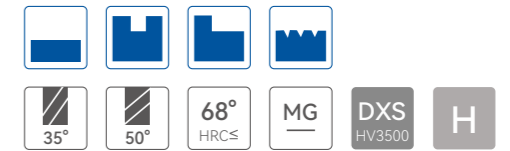
至硬系列-长颈平底铣刀

Super High Hardness - long neck end mill



- 为加工高硬度材料设计;
- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 由于颈部稍细可以加工深槽;
- 卓越的工件表面粗糙度, 极高的耐磨性。

外径公差
D 0 ~ -0.01



- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- Long neck design end mill can be used in deep slot milling.
- Excellent surface roughness, great tool edge wear resistance.

加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○	○	○	○	○	○	○

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number	订货号 Ordering code	(D) 刃径 Dia.	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPSE2001030 0450L	0.1	0.3	0.08	50	4	2	YPSE4006200 0450L	0.6	2	0.96	50	4	4
YPSE2001050 0450L	0.1	0.5	0.08	50	4	2	YPSE4006300 0450L	0.6	3	0.96	50	4	4
YPSE2001075 0450L	0.1	0.75	0.08	50	4	2	YPSE4006400 0450L	0.6	4	0.96	50	4	4
YPSE20015050 0450L	0.15	0.5	0.12	50	4	2	YPSE4006600 0450L	0.6	6	0.96	50	4	4
YPSE20015075 0450L	0.15	0.75	0.12	50	4	2	YPSE4008300 0450L	0.8	3	1.28	50	4	4
YPSE20015100 0450L	0.15	1	0.12	50	4	2	YPSE4008400 0450L	0.8	4	1.28	50	4	4
YPSE2002050 0450L	0.2	0.5	0.16	50	4	2	YPSE4008600 0450L	0.8	6	1.28	50	4	4
YPSE2002075 0450L	0.2	0.75	0.16	50	4	2	YPSE4008800 0450L	0.8	8	1.28	50	4	4
YPSE2002100 0450L	0.2	1	0.16	50	4	2	YPSE4010400 0450L	1	4	2	50	4	4
YPSE2002150 0450L	0.2	1.5	0.16	50	4	2	YPSE4010600 0450L	1	6	2	50	4	4
YPSE2002200 0450L	0.2	2	0.16	50	4	2	YPSE4010800 0450L	1	8	2	50	4	4
YPSE2003100 0450L	0.3	1	0.24	50	4	2	YPSE40101000 0450L	1	10	2	50	4	4
YPSE2003150 0450L	0.3	1.5	0.24	50	4	2	YPSE40101200 0450L	1	12	2	50	4	4
YPSE2003200 0450L	0.3	2	0.24	50	4	2	YPSE4015600 0450L	1.5	6	3	50	4	4
YPSE2003300 0450L	0.3	3	0.24	50	4	2	YPSE4015800 0450L	1.5	8	3	50	4	4
YPSE2004100 0450L	0.4	1	0.32	50	4	2	YPSE40151000 0450L	1.5	10	3	50	4	4
YPSE2004150 0450L	0.4	1.5	0.32	50	4	2	YPSE40151200 0450L	1.5	12	3	50	4	4
YPSE2004200 0450L	0.4	2	0.32	50	4	2	YPSE4020600 0450L	2	6	4	50	4	4
YPSE2004300 0450L	0.4	3	0.32	50	4	2	YPSE4020800 0450L	2	8	4	50	4	4
YPSE2004400 0450L	0.4	4	0.32	50	4	2	YPSE40201000 0450L	2	10	4	50	4	4
YPSE2005200 0450L	0.5	2	0.8	50	4	2	YPSE40201200 0450L	2	12	4	50	4	4
YPSE2005300 0450L	0.5	3	0.8	50	4	2	YPSE40201400 0450L	2	14	4	50	4	4
YPSE2005400 0450L	0.5	4	0.8	50	4	2							

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSE2001030 0450L
Ordering example: YPSE2001030 0450L

至硬系列-2刃/4刃圆鼻立铣刀

Super High Hardness - 2/4 edges R corner end mill



2刃 2 edges



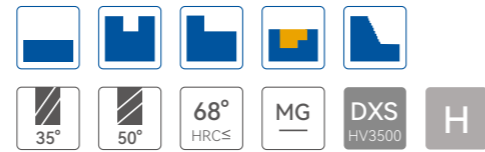
4刃 4 edges



- 为加工高硬度材料设计;
- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 卓越的工件表面粗糙度;
- 极高的耐磨性。

外径公差 D ≤ 4.0 0 ~ -0.01
D > 4.0 0 ~ -0.015

R公差 R ≤ 1.0 ± 0.003
R > 1.0 ± 0.005



- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- Excellent surface roughness.
- Great tool edge wear resistance.

加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○	○	○	○	○	○	○

2刃 2 edges

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPSR2010R.1 0450	1	R0.1	2	50	4	●
YPSR2010R.2 0450	1	R0.2	2	50	4	●
YPSR2015R.1 0450	1.5	R0.1	3	50	4	●
YPSR2015R.2 0450	1.5	R0.2	3	50	4	●
YPSR2020R.1 0450	2	R0.1	4	50	4	●
YPSR2020R.2 0450	2	R0.2	4	50	4	●
YPSR2020R.5 0450	2	R0.5	4	50	4	●

4刃 4 edges

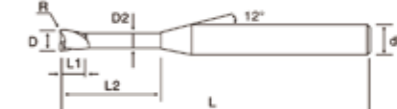
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPSR4010R.1 0450	1	R0.1	2	50	4	●
YPSR4010R.2 0450	1	R0.2	2	50	4	●
YPSR4015R.1 0450	1.5	R0.1	3	50	4	●
YPSR4015R.2 0450	1.5	R0.2	3	50	4	●
YPSR4020R.1 0450	2	R0.1	4	50	4	●
YPSR4020R.2 0450	2	R0.2	4	50	4	●
YPSR4020R.5 0450	2	R0.5	4	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSR2010R.1 0450
Ordering example: YPSR2010R.1 0450

至硬系列-长颈圆鼻立铣刀

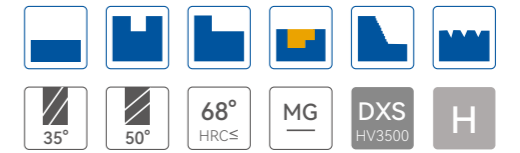
Super High Hardness - long neck R corner end mill



- 为加工高硬度材料设计;
- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 由于颈部稍细可以加工深槽;
- 卓越的工件表面粗糙度, 极高的耐磨性。

外径公差 D 0 ~ -0.01

R公差 R ± 0.003



- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- Long neck design end mill can be used in deep slot milling.
- Excellent surface roughness, great tool edge wear resistance.

加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○	○	○	○	○	○	○

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Corner Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPSR2002R0.02100 0450L	0.2	R0.02	1	0.16	0.18	50	4	2
YPSR2002R0.02150 0450L	0.2	R0.02	1.5	0.16	0.18	50	4	2
YPSR2002R0.05100 0450L	0.2	R0.05	1	0.16	0.18	50	4	2
YPSR2002R0.05200 0450L	0.2	R0.05	2	0.16	0.18	50	4	2
YPSR2003R0.05150 0450L	0.3	R0.05	1.5	0.24	0.28	50	4	2
YPSR2003R0.05200 0450L	0.3	R0.05	2	0.24	0.28	50	4	2
YPSR2003R0.05300 0450L	0.3	R0.05	3	0.24	0.28	50	4	2
YPSR2004R0.02100 0450L	0.4	R0.02	1	0.32	0.37	50	4	2
YPSR2004R0.02200 0450L	0.4	R0.02	2	0.32	0.37	50	4	2
YPSR2004R0.02300 0450L	0.4	R0.02	3	0.32	0.37	50	4	2
YPSR2004R0.02400 0450L	0.4	R0.02	4	0.32	0.37	50	4	2
YPSR2004R0.05100 0450L	0.4	R0.05	1	0.32	0.37	50	4	2
YPSR2004R0.05200 0450L	0.4	R0.05	2	0.32	0.37	50	4	2
YPSR2004R0.05300 0450L	0.4	R0.05	3	0.32	0.37	50	4	2
YPSR2004R0.05400 0450L	0.4	R0.05	4	0.32	0.37	50	4	2
YPSR2004R0.1100 0450L	0.4	R0.1	1	0.32	0.37	50	4	2
YPSR2004R0.1200 0450L	0.4	R0.1	2	0.32	0.37	50	4	2
YPSR2004R0.1300 0450L	0.4	R0.1	3	0.32	0.37	50	4	2
YPSR2004R0.1400 0450L	0.4	R0.1	4	0.32	0.37	50	4	2
YPSR2005R0.02200 0450L	0.5	R0.02	2	0.8	0.46	50	4	2
YPSR2005R0.02300 0450L	0.5	R0.02	3	0.8	0.46	50	4	2
YPSR2005R0.02400 0450L	0.5	R0.02	4	0.8	0.46	50	4	2
YPSR2005R0.05100 0450L	0.5	R0.05	1	0.8	0.46	50	4	2

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSR2002R0.02100 0450L
Ordering example: YPSR2002R0.02100 0450L

至硬系列-长颈圆鼻立铣刀

Super High Hardness - long neck R corner end mill



单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPSR2005R0.05200 0450L	0.5	R0.05	2	0.8	0.46	50	4	2
YPSR2005R0.05300 0450L	0.5	R0.05	3	0.8	0.46	50	4	2
YPSR2005R0.05400 0450L	0.5	R0.05	4	0.8	0.46	50	4	2
YPSR2005R0.1200 0450L	0.5	R0.1	2	0.8	0.46	50	4	2
YPSR2005R0.1300 0450L	0.5	R0.1	3	0.8	0.46	50	4	2
YPSR2005R0.1400 0450L	0.5	R0.1	4	0.8	0.46	50	4	2
YPSR2006R0.05120 0450L	0.6	R0.05	1.2	0.96	0.56	50	4	2
YPSR2006R0.05200 0450L	0.6	R0.05	2	0.96	0.56	50	4	2
YPSR2006R0.05300 0450L	0.6	R0.05	3	0.96	0.56	50	4	2
YPSR2006R0.05400 0450L	0.6	R0.05	4	0.96	0.56	50	4	2
YPSR2006R0.05600 0450L	0.6	R0.05	6	0.96	0.56	50	4	2
YPSR2006R0.1200 0450L	0.6	R0.1	2	0.96	0.56	50	4	2
YPSR2006R0.1300 0450L	0.6	R0.1	3	0.96	0.56	50	4	2
YPSR2006R0.1400 0450L	0.6	R0.1	4	0.96	0.56	50	4	2
YPSR2006R0.1600 0450L	0.6	R0.1	6	0.96	0.56	50	4	2
YPSR2008R0.05200 0450L	0.8	R0.05	2	1.28	0.76	50	4	2
YPSR2008R0.05400 0450L	0.8	R0.05	4	1.28	0.76	50	4	2
YPSR2008R0.05600 0450L	0.8	R0.05	6	1.28	0.76	50	4	2
YPSR2008R0.05800 0450L	0.8	R0.05	8	1.28	0.76	50	4	2
YPSR2008R0.1160 0450L	0.8	R0.1	1.6	1.28	0.76	50	4	2
YPSR2008R0.1200 0450L	0.8	R0.1	2	1.28	0.76	50	4	2
YPSR2008R0.1300 0450L	0.8	R0.1	3	1.28	0.76	50	4	2
YPSR2008R0.1400 0450L	0.8	R0.1	4	1.28	0.76	50	4	2
YPSR2008R0.1600 0450L	0.8	R0.1	6	1.28	0.76	50	4	2
YPSR2008R0.1800 0450L	0.8	R0.1	8	1.28	0.76	50	4	2
YPSR2008R0.2400 0450L	0.8	R0.2	4	1.28	0.76	50	4	2
YPSR2008R0.2600 0450L	0.8	R0.2	6	1.28	0.76	50	4	2
YPSR2008R0.2800 0450L	0.8	R0.2	8	1.28	0.76	50	4	2
YPSR4010R0.02200 0450L	1	R0.02	2	2	0.95	50	4	4
YPSR4010R0.02400 0450L	1	R0.02	4	2	0.95	50	4	4
YPSR4010R0.05200 0450L	1	R0.05	2	2	0.95	50	4	4
YPSR4010R0.05400 0450L	1	R0.05	4	2	0.95	50	4	4
YPSR4010R0.05600 0450L	1	R0.05	6	2	0.95	50	4	4
YPSR4010R0.05800 0450L	1	R0.05	8	2	0.95	50	4	4
YPSR4010R0.1400 0450L	1	R0.1	4	2	0.95	50	4	4
YPSR4010R0.1600 0450L	1	R0.1	6	2	0.95	50	4	4
YPSR4010R0.1800 0450L	1	R0.1	8	2	0.95	50	4	4
YPSR4010R0.11500 0450L	1	R0.1	15	2	0.95	50	4	4
YPSR4010R0.2400 0450L	1	R0.2	4	2	0.95	50	4	4
YPSR4010R0.2600 0450L	1	R0.2	6	2	0.95	50	4	4
YPSR4010R0.2800 0450L	1	R0.2	8	2	0.95	50	4	4
YPSR4015R0.1400 0450L	1.5	R0.1	4	3	1.43	50	4	4
YPSR4015R0.1600 0450L	1.5	R0.1	6	3	1.43	50	4	4
YPSR4015R0.1800 0450L	1.5	R0.1	8	3	1.43	50	4	4
YPSR4015R0.2400 0450L	1.5	R0.2	4	3	1.43	50	4	4
YPSR4015R0.2600 0450L	1.5	R0.2	6	3	1.43	50	4	4
YPSR4015R0.2800 0450L	1.5	R0.2	8	3	1.43	50	4	4
YPSR4020R0.1600 0450L	2	R0.1	6	4	1.91	50	4	4
YPSR4020R0.1800 0450L	2	R0.1	8	4	1.91	50	4	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSR2002R0.02100 0450L
Ordering example: YPSR2002R0.02100 0450L

至硬系列-长颈圆鼻立铣刀

Super High Hardness - long neck R corner end mill



单位 unit (mm)

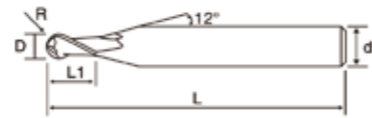
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(D2) 颈径 Neck Dia	(L) 全长 Overall Length	(d) 柄径 Shank Dia	刃数 Edge Number
YPSR4020R0.11000 0450L	2	R0.1	10	4	1.91	50	4	4
YPSR4020R0.11200 0450L	2	R0.1	12	4	1.91	50	4	4
YPSR4020R0.2600 0450L	2	R0.2	6	4	1.91	50	4	4
YPSR4020R0.2800 0450L	2	R0.2	8	4	1.91	50	4	4
YPSR4020R0.21000 0450L	2	R0.2	10	4	1.91	50	4	4
YPSR4020R0.21200 0450L	2	R0.2	12	4	1.91	50	4	4
YPSR4020R0.21300 0450L	2	R0.2	13	4	1.91	50	4	4
YPSR4010R0.1400 0660L	1	R0.1	4	2	0.95	60	6	4
YPSR4010R0.1600 0660L	1	R0.1	6	2	0.95	60	6	4
YPSR4010R0.1800 0660L	1	R0.1	8	2	0.95	60	6	4
YPSR4010R0.2400 0660L	1	R0.2	4	2	0.95	60	6	4
YPSR4010R0.2600 0660L	1	R0.2	6	2	0.95	60	6	4
YPSR4010R0.2800 0660L	1	R0.2	8	2	0.95	60	6	4
YPSR4015R0.1400 0660L	1.5	R0.1	4	3	1.43	60	6	4
YPSR4015R0.1600 0660L	1.5	R0.1	6	3	1.43	60	6	4
YPSR4015R0.1800 0660L	1.5	R0.1	8	3	1.43	60	6	4
YPSR4015R0.2400 0660L	1.5	R0.2	4	3	1.43	60	6	4
YPSR4015R0.2600 0660L	1.5	R0.2	6	3	1.43	60	6	4
YPSR4015R0.2800 0660L	1.5	R0.2	8	3	1.43	60	6	4
YPSR4020R0.1600 0660L	2	R0.1	6	4	1.91	60	6	4
YPSR4020R0.1800 0660L	2	R0.1	8	4	1.91	60	6	4
YPSR4020R0.11000 0660L	2	R0.1	10	4	1.91	60	6	4
YPSR4020R0.11200 0660L	2	R0.1	12	4	1.91	60	6	4
YPSR4020R0.2600 0660L	2	R0.2	6	4	1.91	60	6	4
YPSR4020R0.2800 0660L	2	R0.2	8	4	1.91	60	6	4
YPSR4020R0.21000 0660L	2	R0.2	10	4	1.91	60	6	4
YPSR4020R0.21200 0660L	2	R0.2	12	4	1.91	60	6	4

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSR2002R0.02100 0450L
Ordering example: YPSR2002R0.02100 0450L

至硬系列-微小径2刃球头铣刀

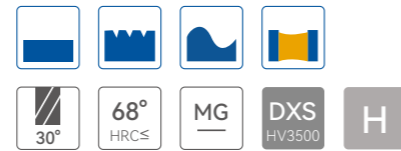
Super High Hardness - small diameter 2 edges ball nose end mill



- 为加工高硬度钢而设计;
- 在医学, 光学, 电子和航空航天工业做高精度铣削;
- 油雾冷却时性能优越;
- 卓越的高硬度钢切削性能。

- Design for extra high hardness material machining.
- High precision milling in the medical, optical, electronic and aerospace industries.
- Perform better under MQL coolant.
- The excellent high hardness steel cutting performance.

R 公差
R ± 0.002



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○		○	○		○	

单位 unit (mm)

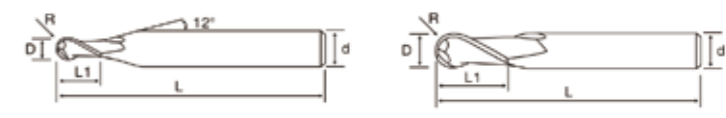
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPSB20R0.05 0450S	0.1	R0.05	0.15	50	4	●
YPSB20R0.075 0450S	0.15	R0.075	0.23	50	4	●
YPSB20R0.1 0450S	0.2	R0.1	0.3	50	4	●
YPSB20R0.15 0450S	0.3	R0.15	0.45	50	4	●
YPSB20R0.2 0450S	0.4	R0.2	0.6	50	4	●
YPSB20R0.25 0450S	0.5	R0.25	0.75	50	4	●
YPSB20R0.3 0450S	0.6	R0.3	0.9	50	4	●
YPSB20R0.35 0450S	0.7	R0.35	1.05	50	4	●
YPSB20R0.4 0450S	0.8	R0.4	1.2	50	4	●
YPSB20R0.45 0450S	0.9	R0.45	1.35	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSB20R0.05 0450S
Ordering example: YPSB20R0.05 0450S

至硬系列-2刃球头铣刀

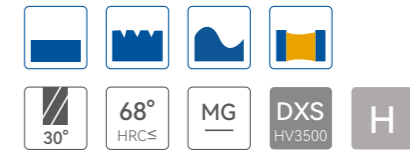
Super High Hardness - 2 edges ball nose end mill



- 为加工高硬度材料设计;
- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 为高精度铣削设计;
- 卓越的工作表面粗糙度, 极高的耐磨性。

- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- A high precision milling design.
- Excellent surface roughness, great tool edge wear resistance.

R 公差
R ≤ 2.0 ± 0.003
R > 2.0 ± 0.005



加工材料 Material group

炭素钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○		○	○		○	

单位 unit (mm)

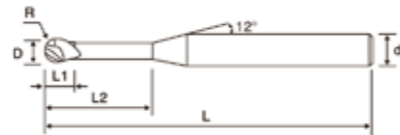
订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPSB20R0.5 0450	1	R0.5	1.5	50	4	●
YPSB20R0.75 0450	1.5	R0.75	2.25	50	4	●
YPSB20R1.0 0450	2	R1.0	3	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSB20R0.5 0450
Ordering example: YPSB20R0.5 0450

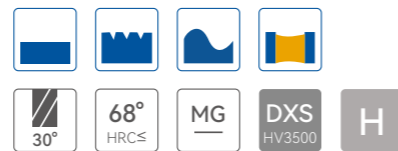
至硬系列-长颈2刃球头铣刀

Super High Hardness - 2 edges long neck ball nose end mill



- 为加工高硬度材料设计;
- 高速切削, 最新开发的原材料和涂层, 建议使用油雾冷却;
- 由于颈部稍细可以加工深槽;
- 卓越的工件表面粗糙度, 极高的耐磨性。

- Design for extra high hardness material machining.
- New development of substrate and coating, recommend to be applied under high cutting speed & MQL coolant.
- Long neck design end mill can be used in deep slot milling.
- Excellent surface roughness, great tool edge wear resistance.



加工材料 Material group

碳钢 Carbon Steels	合金钢 Alloy Steels 工具钢 Tool Steels	调质钢 Prehardened Steels		淬火钢 Hardened Steels			不锈钢 Stainless Steels	镍合金 Inconel	钛合金 Titanium Alloys	铸铁 Cast Iron	铝合金 Aluminum Alloys	铜合金 Copper	树脂 Resin
		~HRC35	HRC35~45	HRC45~55	HRC55~62	HRC62~70							
○	○	○	○	◎	◎	○	○		○	○		○	

单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPSB20R0.05030 0450L	0.1	R0.05	0.3	0.08	50	4	●
YPSB20R0.05050 0450L	0.1	R0.05	0.5	0.08	50	4	●
YPSB20R0.05075 0450L	0.1	R0.05	0.75	0.08	50	4	●
YPSB20R0.075050 0450L	0.15	R0.075	0.5	0.12	50	4	●
YPSB20R0.075075 0450L	0.15	R0.075	0.75	0.12	50	4	●
YPSB20R0.075100 0450L	0.15	R0.075	1	0.12	50	4	●
YPSB20R0.1050 0450L	0.2	R0.1	0.5	0.16	50	4	●
YPSB20R0.1075 0450L	0.2	R0.1	0.75	0.16	50	4	●
YPSB20R0.1100 0450L	0.2	R0.1	1	0.16	50	4	●
YPSB20R0.1150 0450L	0.2	R0.1	1.5	0.16	50	4	●
YPSB20R0.1200 0450L	0.2	R0.1	2	0.16	50	4	●
YPSB20R0.15050 0450L	0.3	R0.15	0.5	0.24	50	4	●
YPSB20R0.15075 0450L	0.3	R0.15	0.75	0.24	50	4	●
YPSB20R0.15100 0450L	0.3	R0.15	1	0.24	50	4	●
YPSB20R0.15150 0450L	0.3	R0.15	1.5	0.24	50	4	●
YPSB20R0.15200 0450L	0.3	R0.15	2	0.24	50	4	●
YPSB20R0.15300 0450L	0.3	R0.15	3	0.24	50	4	●
YPSB20R0.2100 0450L	0.4	R0.2	1	0.32	50	4	●
YPSB20R0.2150 0450L	0.4	R0.2	1.5	0.32	50	4	●
YPSB20R0.2200 0450L	0.4	R0.2	2	0.32	50	4	●
YPSB20R0.2300 0450L	0.4	R0.2	3	0.32	50	4	●
YPSB20R0.2400 0450L	0.4	R0.2	4	0.32	50	4	●
YPSB20R0.25100 0450L	0.5	R0.25	1	0.4	50	4	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSB20R0.05030 0450L
Ordering example: YPSB20R0.05030 0450L

至硬系列-长颈2刃球头铣刀

Super High Hardness - 2 edges long neck ball nose end mill



单位 unit (mm)

订货号 Ordering code	(D) 刃径 Dia.	(R) 角半径 Comer Radius	(L2) 有效长 Effective Length	(L1) 刃长 Length of cut	(L) 全长 Overall Length	(d) 柄径 Shank Dia	库存 Inventory
YPSB20R0.25200 0450L	0.5	R0.25	2	0.4	50	4	●
YPSB20R0.25400 0450L	0.5	R0.25	4	0.4	50	4	●
YPSB20R0.3100 0450L	0.6	R0.3	1	0.48	50	4	●
YPSB20R0.3120 0450L	0.6	R0.3	1.2	0.48	50	4	●
YPSB20R0.3200 0450L	0.6	R0.3	2	0.48	50	4	●
YPSB20R0.3300 0450L	0.6	R0.3	3	0.48	50	4	●
YPSB20R0.3400 0450L	0.6	R0.3	4	0.48	50	4	●
YPSB20R0.3600 0450L	0.6	R0.3	6	0.48	50	4	●
YPSB20R0.4200 0450L	0.8	R0.4	2	0.64	50	4	●
YPSB20R0.4400 0450L	0.8	R0.4	4	0.64	50	4	●
YPSB20R0.4600 0450L	0.8	R0.4	6	0.64	50	4	●
YPSB20R0.5200 0450L	1	R0.5	2	1	50	4	●
YPSB20R0.5300 0450L	1	R0.5	3	1	50	4	●
YPSB20R0.5400 0450L	1	R0.5	4	1	50	4	●
YPSB20R0.5600 0450L	1	R0.5	6	1	50	4	●
YPSB20R0.5800 0450L	1	R0.5	8	1	50	4	●
YPSB20R0.75400 0450L	1.5	R0.75	4	1.5	50	4	●
YPSB20R0.75600 0450L	1.5	R0.75	6	1.5	50	4	●
YPSB20R0.75800 0450L	1.5	R0.75	8	1.5	50	4	●
YPSB20R1.0400 0450L	2	R1.0	4	2	50	4	●
YPSB20R1.0600 0450L	2	R1.0	6	2	50	4	●
YPSB20R1.0800 0450L	2	R1.0	8	2	50	4	●
YPSB20R1.01000 0450L	2	R1.0	10	2	50	4	●
YPSB20R0.5300 0660L	1	R0.5	3	1	60	6	●
YPSB20R0.5400 0660L	1	R0.5	4	1	60	6	●
YPSB20R0.5600 0660L	1	R0.5	6	1	60	6	●
YPSB20R0.75400 0660L	1.5	R0.75	4	1.5	60	6	●
YPSB20R0.75500 0660L	1.5	R0.75	5	1.5	60	6	●
YPSB20R0.75600 0660L	1.5	R0.75	6	1.5	60	6	●
YPSB20R1.0400 0660L	2	R1.0	4	2	60	6	●
YPSB20R1.0600 0660L	2	R1.0	6	2	60	6	●
YPSB20R1.0800 0660L	2	R1.0	8	2	60	6	●
YPSB20R1.01000 0660L	2	R1.0	10	2	60	6	●

订购说明: ① 标识说明请参阅 A1-3
For the description of the identification, please refer to the A1-3

② 下单订购请参考产品代码, 产品代码标示方法例: YPSB20R0.05030 0450L
Ordering example: YPSB20R0.05030 0450L

高硬系列-2刃/4刃平底铣刀加工参数

High Hardness - 2/4 edges end mill processing parameters



切削参数 Cutting data

加工材料 Material Group	炭素钢 Carbon Steels 550C	合金钢 Alloy Steels SCM·SKD·SUS	调质钢 Prehardened Steels HPM·NAK	淬硬钢 Hardened Steels SKD61(~52HRC)	铜合金 Copper						
切削速度 Cutting Speed	50~80m/min	50~70m/min	40~60m/min	20~40m/min	50~80m/min						
刃径 Dia.	侧面 Side Milling		侧面 Side Milling		侧面 Side Milling		侧面 Side Milling		侧面 Side Milling		
	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	
	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	
1	20700	320	19100	230	15900	200	9500	120	22300	410	
1.5	13800	320	12700	230	10600	200	6400	120	14900	450	
2	10300	320	9500	260	8000	230	4800	120	11100	500	
切深量 Depth Of Cut (D:刃径 Dia.)	侧面 Side Milling				侧面 Side Milling		侧面 Side Milling				
	ae Φ1~2.5=0.07D Φ3~6=0.15D Φ8~12=0.2D				0.02D		0.2D				
备注 Notes	<p>请使用发烟性低的油冷却方式； 切削淬硬钢时，建议使用油雾冷却方式； 仅限于侧面切削； 请以相同的比率调整主轴转速和进给速度； 加工参数会因切深量和机床刚性的状况而有所不同，请每次调整后在使用。 Use cutting fluid with smoke retardant. Recommend to use oil mist coolant for machining hardened steels. Available only for side cutting. Adjust both spindle speed and feed at the same rate. Adjust milling conditions according to the volume of Depth of Cut and rigidity of the machine.</p>										

高硬系列-长颈平底铣刀加工参数

High Hardness - long neck end mill processing parameters



切削参数 Cutting data

加工材料 Material Group	不锈钢 Stainless Steel SUS304	钛合金 Titanium Alloy Ti-6Al1-4V	超耐热合金 Heat Resistance Alloy Inconel718	淬硬钢 Hardened Steels SKD61(~52HRC)								
刃径 Dia.	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed				
	mm/min		mm/min		mm/min		mm/min					
	侧面 Side Milling	沟槽 Slotting	侧面 Side Milling	沟槽 Slotting	侧面 Side Milling	沟槽 Slotting	侧面 Side Milling	沟槽 Slotting				
min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min			
0.1	50000	30	15	40000	30	15	25000	10	10	50000	-	15
0.2	50000	50	25	40000	50	25	25000	15	10	39800	-	20
0.3	50000	90	35	40000	90	35	25000	30	15	26500	-	20
0.4	43800	120	50	35000	120	50	22000	40	20	19900	-	20
0.5	35000	120	50	28000	120	50	17000	40	20	15900	50	25
0.6	31500	120	50	25000	120	50	15000	40	20	13300	50	25
0.7	28000	120	50	22500	120	50	14000	40	20	11400	50	25
0.8	24500	130	50	19600	130	50	12000	45	20	10000	50	25
0.9	21000	130	50	17000	130	50	10500	45	20	8900	50	25
1	17500	140	50	14000	140	50	8700	45	20	8000	65	30
1.1	16400	140	50	13000	140	50	8200	45	20	7300	65	30
1.2	15300	140	50	12000	140	50	7500	45	20	6700	65	30
1.3	14100	140	50	11000	140	50	7000	45	20	6200	65	30
1.4	12900	140	50	10000	140	50	6400	45	20	5700	65	30
1.5	11700	140	50	9400	140	50	5800	45	20	5300	65	30
1.6	11200	140	50	8900	140	50	5500	45	20	5000	65	30
1.7	10600	140	50	8500	140	50	5300	45	20	4700	65	30
1.8	10000	150	50	8000	150	50	5000	50	20	4500	65	30
1.9	9400	160	55	7500	160	55	4700	50	25	4200	65	30
2	8800	160	55	7000	160	55	4400	50	25	4000	65	30
切深量 Depth Of Cut (D:刃径 Dia.)	侧面 Side Milling		侧面 Side Milling		侧面 Side Milling							
	ae Φ0.1~0.9=0.04D Φ0.1~2.9=0.05D Φ3~6=0.1D		ae Φ0.1~0.9=0.01D Φ0.1~2.9=0.02D Φ3~6=0.5D		0.02D							
备注 Notes	<p>请根据机床刚性和工件的夹持状态等调整切削参数； 请使用发烟性低的油冷却方式； 请使用刚性较大的铣刀刀柄和机床； 使用油冷冷却方式进行加工时，根据排屑和发烟的状况调整切削参数。 Adjust milling condition conforming to machine rigidity and clamping condition. Use cutting fluid with smoke retardant. Use rigid and precise machine and chuck holder. Adjust milling condition with caution for chip evacuation and smoke generation when milling with waterinsoluble cutting fluid.</p>											

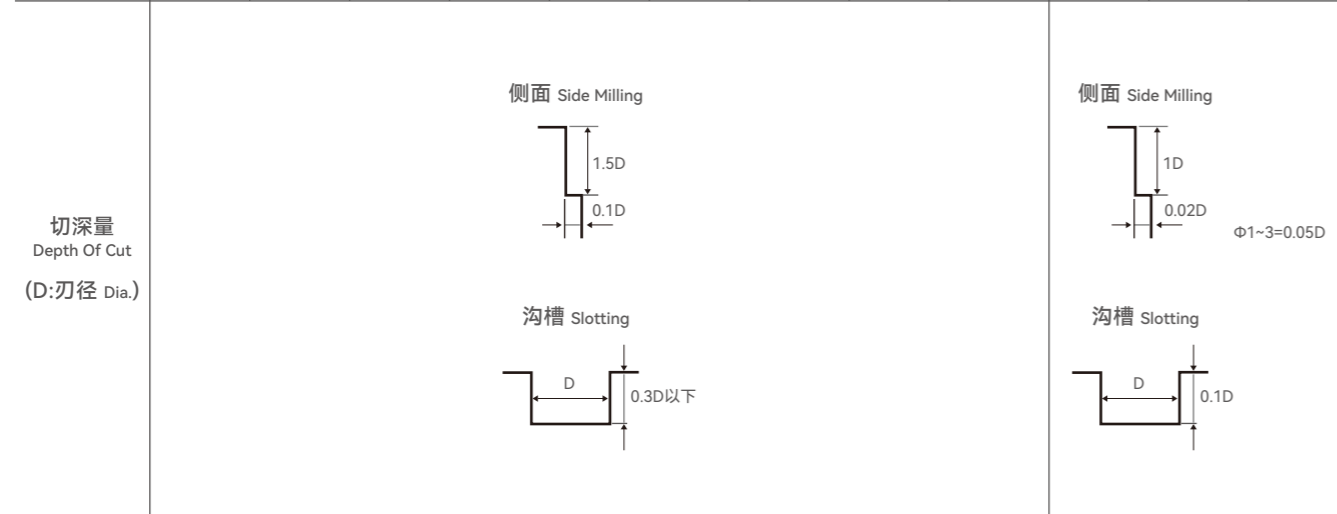
高硬系列-2刃/4刃圆鼻立铣刀加工参数

High Hardness - 2/4 edges R corner end mill processing parameters



切削参数 Cutting data

加工材料 Material Group	不锈钢 Stainless Steel SUS304			钛合金 Titanium Alloy Ti-6Al-4V			超耐热合金 Heat Resistance Alloy Inconel718			淬硬钢 Hardened Steels SKD61(~52HRC)		
	主轴转速 Spindle Speed	进给速度 Feed		主轴转速 Spindle Speed	进给速度 Feed		主轴转速 Spindle Speed	进给速度 Feed		主轴转速 Spindle Speed	进给速度 Feed	
		mm/min	mm/min		mm/min	mm/min		mm/min	mm/min			
刃径 Dia.	min ⁻¹	侧面 Side Milling	沟槽 Slotting	min ⁻¹	侧面 Side Milling	沟槽 Slotting	min ⁻¹	侧面 Side Milling	沟槽 Slotting	min ⁻¹	侧面 Side Milling	沟槽 Slotting
1	25500	200	100	19200	130	50	12800	80	40	6400	60	30
1.5	17100	340	120	12800	180	60	8500	90	45	4200	70	35
2	12800	400	150	9600	210	70	6400	110	55	3200	80	40



切深量
Depth Of Cut
(D:刃径 Dia.)

备注
Notes

请根据加工面的倾斜角调整进给速度；
在进行 R 角加工时，进给速度须降低 30-50%；
主轴转速无法上升时，请以相同的比率调整进给速度与切深量。
Adjust feed according to indined angle.
When corner processing, reduce the feed by approximately 30%-50%.
Adjust spindle speed and feed at the same rate also reduce depth of cut, if the machine spindle speed insufficient.

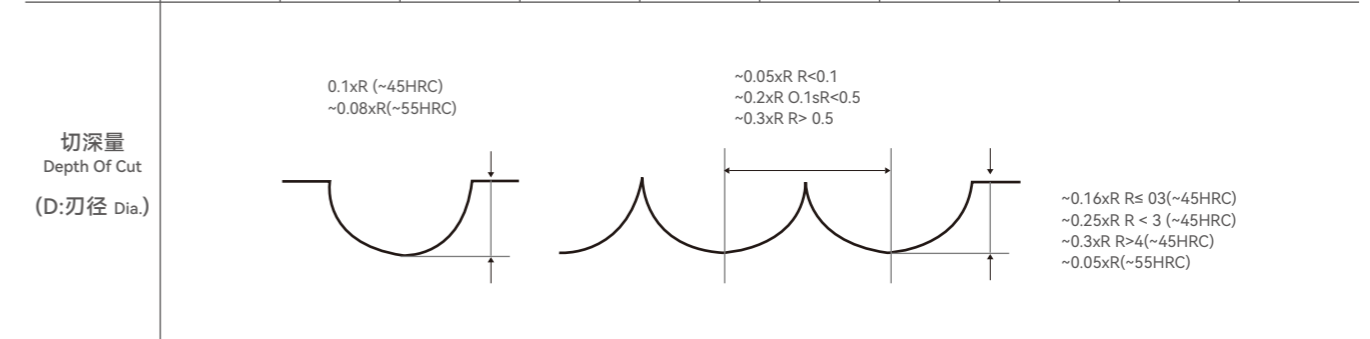
高硬系列-2刃球头铣刀加工参数

High Hardness - 2 edges ball nose end mill processing parameters



切削参数 Cutting data

加工材料 Material Group	炭素钢 Carbon Steels 550C		合金钢·调质钢 Alloy Steels·Prehardened Steels SCM·SKD·SUS·HPM·NAK		淬硬钢 Hardened Steels SKD61(~52HRC)		铝合金 Aluminum Alloy		铜合金 Copper	
	切削速度 Cutting Speed		切削速度 Cutting Speed		切削速度 Cutting Speed		切削速度 Cutting Speed		切削速度 Cutting Speed	
	50~80m/min	50~70m/min	40~60m/min	20~40m/min	50~80m/min					
(R)球头半径 Radius	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed	主轴转速 Spindle Speed	进给速度 Feed
	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min	min ⁻¹	mm/min
0.05	50000	200	50000	150	50000	100	50000	250	50000	250
0.1	50000	400	50000	340	50000	200	50000	500	50000	500
0.2	50000	630	50000	600	50000	630	50000	600	50000	600
0.3	50000	930	50000	940	48000	900	50000	750	50000	750
0.4	50000	1200	48000	1200	36000	900	50000	1000	50000	1000
0.5	48000	1430	38000	1200	29000	900	50000	1250	48000	1080
0.6	40000	1430	32000	1200	24000	810	50000	1480	40000	1160
0.8	30000	1270	24000	1000	18000	670	50000	1900	30000	1200
1	24000	1160	19000	800	14300	600	48000	2400	24000	1200



切深量
Depth Of Cut
(D:刃径 Dia.)

备注
Notes

沟槽加工时，请将进给速度调为上述参数的 60%；
刀具伸出量请以 4D 为标准，伸出量超出该标准时请调整切削参数；
建议使用吹气或油雾冷却方式；
请以相同的比率调整主轴转速和进给速度。
When slotting reduce the fees by 60% from the above values.
Length of overhang is 4 times Dia as standard.
When it is Longer than 4 times Dia Adjust the conditions listed above Use oilmist coolant or air blow.
Adjust both spindle speed and feed at the same rate.

坚韧系列-铜电极加工参数

Reliable Series - Copper electrode processing parameters



切削参数 Cutting data

加工材料 Material Group	开粗 Rough				精光平面 Polished Plane				精光侧壁 Polished Sidewall		
	刃径 Dia.	加工深度 Processing Depth	步距 Step	转速 Speed	进给 Feed	加工深度 Processing Depth	步距 Step	转速 Speed	切削速度 Cutting Speed	加工深度 Processing Depth	转速 Speed
D2	0.2	1	12000	2000	0.08	1	12000	1000	0.06	12000	1600
D1.5	0.15	0.75	14000	1600	0.06	0.75	14000	1000	0.05	14000	1200
D1	0.1	0.5	16000	1000	0.05	0.5	16000	800	0.04	16000	1000
R1	0.2	0.8	18000	2000	0.06	0.07	16000	1600	0.06	16000	1600
R0.75	0.15	0.5	20000	1600	0.05	0.06	18000	1200	0.05	18000	1200
R0.5	0.1	0.3	20000	1000	0.03	0.04	20000	1000	0.03	20000	1000
D2R0.2	0.2	1	12000	2000	0.08	1	12000	1000	0.06	12000	1600
D1.5R0.2	0.15	0.75	14000	1600	0.06	0.75	14000	1000	0.05	14000	1200
D1R0.2	0.1	0.5	16000	1000	0.05	0.5	16000	800	0.04	16000	1000

备注
Notes

请使用刚性好，精度高的机床和夹具；
加工参数会因切深量和机床刚性的状况而有所不同，请每次调整后再使用；
请以相同的比率调整主轴转速和进给速度；
建议用油雾冷却方式。
Use a rigid and precise machine and chuck holder.
Adjust milling conditions according to the volume of Depth of Cut and rigidity of the machine.
Adjust both spindle speed and feed at the same rate.
Use Oil mist cooling method is recommended.

高硬系列-调质钢加工参数

High Hardness - Prehardened steels processing parameters



切削参数 Cutting data

加工材料 Material Group	开粗 Rough				精光平面 Polished Plane				精光侧壁 Polished Sidewall		
	刃径 Dia.	加工深度 Processing Depth	步距 Step	转速 Speed	进给 Feed	加工深度 Processing Depth	步距 Step	转速 Speed	切削速度 Cutting Speed	加工深度 Processing Depth	转速 Speed
D2	0.1	1	12000	2000	0.05	1	15000	800	0.06	15000	1600
D1.5	0.08	0.75	14000	1600	0.05	0.75	15000	800	0.05	15000	1200
D1	0.05	0.5	16000	1000	0.05	0.5	16000	800	0.04	16000	1000
R1	0.1	0.8	14000	2000	0.05	0.06	14000	1600	0.06	14000	1600
R0.75	0.08	0.5	15000	1600	0.05	0.05	16000	1200	0.05	16000	1200
R0.5	0.05	0.3	16000	1000	0.05	0.04	18000	1000	0.04	18000	1000
D2R0.2	0.1	1	12000	2000	0.05	1	15000	800	0.06	15000	1600
D1.5R0.2	0.08	0.75	14000	1600	0.05	0.75	15000	800	0.05	15000	1200
D1R0.2	0.05	0.5	16000	1000	0.05	0.5	16000	800	0.04	16000	1000

备注
Notes

请使用刚性好，精度高的机床和夹具；
加工参数会因切深量和机床刚性的状况而有所不同，请每次调整后再使用；
请以相同的比率调整主轴转速和进给速度；
建议用油雾冷却方式。
Use a rigid and precise machine and chuck holder.
Adjust milling conditions according to the volume of Depth of Cut and rigidity of the machine.
Adjust both spindle speed and feed at the same rate.
Use Oil mist cooling method is recommended.

至硬系列-淬火钢加工参数

Super High Hardness - Hardened steel processing parameters



微小径铣刀 SMALL DIAMETER END MILL

圆柄类刀具
一站式综合服务商



切削参数 Cutting data

加工材料 Material Group	开粗 Rough				精光平面 Polished Plane				精光侧壁 Polished Sidewall		
	刃径 Dia.	加工深度 Processing Depth	步距 Step	转速 Speed	进给 Feed	加工深度 Processing Depth	步距 Step	转速 Speed	切削速度 Cutting Speed	加工深度 Processing Depth	转速 Speed
D2	0.05	1	12000	1200	0.04	1	12000	800	0.06	12000	1200
D1.5	0.05	0.75	13000	1000	0.04	0.75	13000	800	0.05	13000	1000
D1	0.03	0.5	15000	800	0.04	0.5	15000	800	0.04	15000	800
R1	0.05	0.6	12700	1200	0.04	0.06	14000	1000	0.06	14000	1200
R0.75	0.05	0.45	14800	1000	0.04	0.05	16000	1200	0.05	16000	1000
R0.5	0.03	0.3	16000	800	0.04	0.04	18000	600	0.04	18000	600
D2R0.2	0.05	1	12000	1200	0.04	1	12000	800	0.06	12000	1200
D1.5R0.2	0.05	0.75	13000	1000	0.04	0.75	13000	800	0.05	13000	1000
D1R0.2	0.03	0.5	15000	800	0.04	0.5	15000	800	0.04	15000	800

备注
Notes

请使用刚性好，精度高的机床和夹具；
加工参数会因切深量和机床刚性的状况而有所不同，请每次调整后再使用；
请以相同的比率调整主轴转速和进给速度；
建议用油雾冷却方式。
Use a rigid and precise machine and chuck holder.
Adjust milling conditions according to the volume of Depth of Cut and rigidity of the machine.
Adjust both spindle speed and feed at the same rate.
Use Oil mist cooling method is recommended.

MEMO

公司介绍
Company Introduction

应用范围
Application Area

编号规则及图标说明
Ordering Code & Symbol Description

坚韧系列产品
Reliable Series

高硬系列产品
High Hardness

至硬系列产品
Super High Hardness

切削参数
Cutting Data