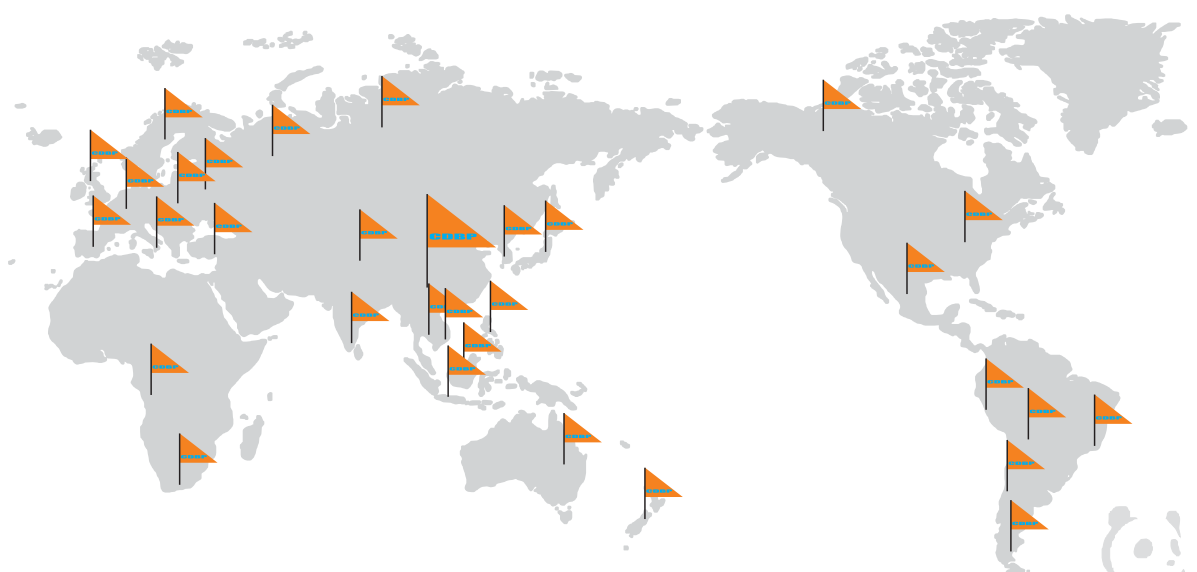


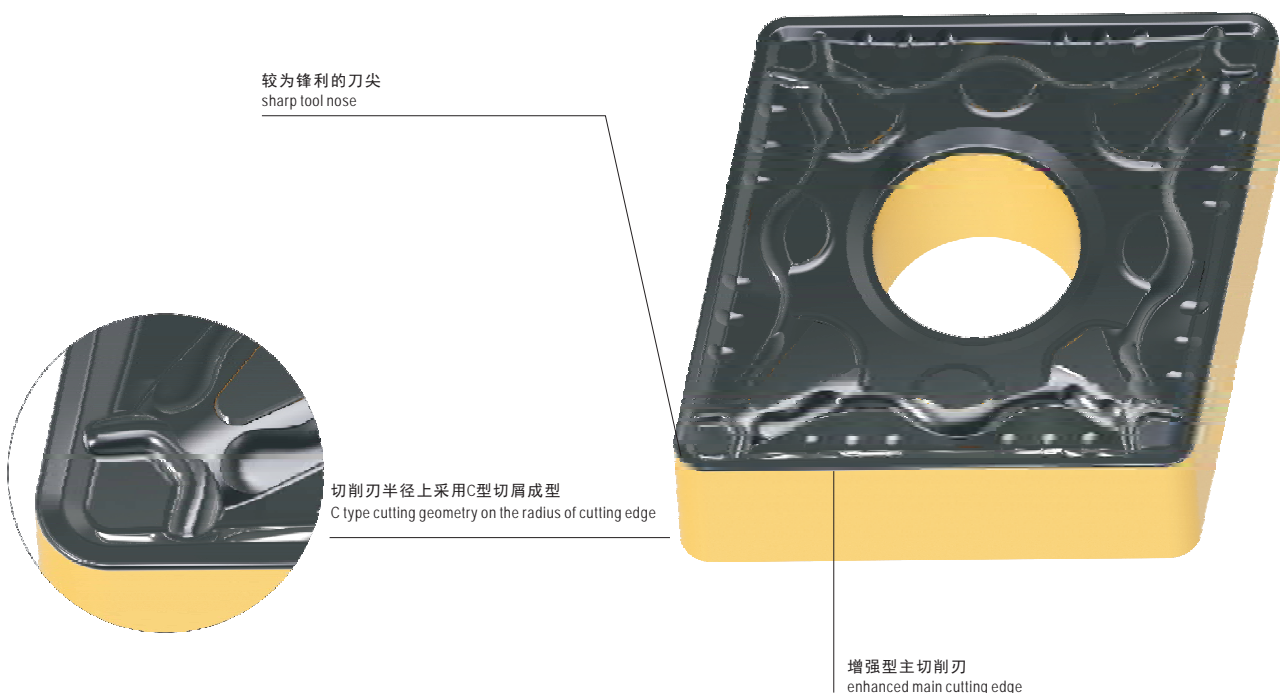
# CONTENTS 目录

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# 邦普FW\MD\RA\RB

## 全面提升钢件加工性能



可转位刀片槽型-MD  
indexable inserts geometry-MD

### MD 槽型

- 钢件半精加工通用槽型
- general geometry for semi-finishing machining on steel
- 增强型主切削刃
- enhanced main cutting edge
- . 主切削刃增强型设计可以在大进给和高进给率情况下进行半精加工
- . inserts can be used in semi-finishing machining with bigger cutting depth and bigger feed rate
- . apmax: 8mm, fmax: 0.6mm
- C型切屑成型
- C type cutting geometry
- . 即使是在切深较小且加工余量波动较大的情况下, 仍能实现完美的断屑
- . perfect working under small cutting depth and unstable allowance machining
- . 轮廓加工没有任何断屑问题
- . without any problem in contour machining
- . apmin: 0.4mm, fmin: 0.1mm
- 基本形状: CNMG、DNMG、SNMG、TNMG、WNMG
- basic type CNMG, DNMG, SNMG, TNMG, WNMG

### 应用 application

- 与原先的半精加工刀片相比, 具有更广泛的应用领域, 通用性更强
- with better working range
- 在加工余量波动幅度很大的情况下仍然能实现非常高效的加工
- high performance under unstable allowance machining
- 典型零件: 钢制轮轴、毂和齿轮等
- typical work piece: steel wheel and hub, gear

### 优势 advantage:

- 因采用了C型切屑成型而实现了完美的断屑, 从而保证了切屑能轻易排出
- perfect chip breaking performance with C type geometry, chips will be easily peel off
- 减小了生产中槽型的多样化, 因为MD槽型可涵盖较大的应用范围
- larger working range makes fewer geometry types
- 较为锋利的刀尖, 增强型主切削刃, 结合耐磨的涂层牌号获得最佳的生产效率
- sharp tool nose, enhanced main cutting edge, providing best work performance combine with good wear resistance coat grade



# 邦普全新推出钢加工系列

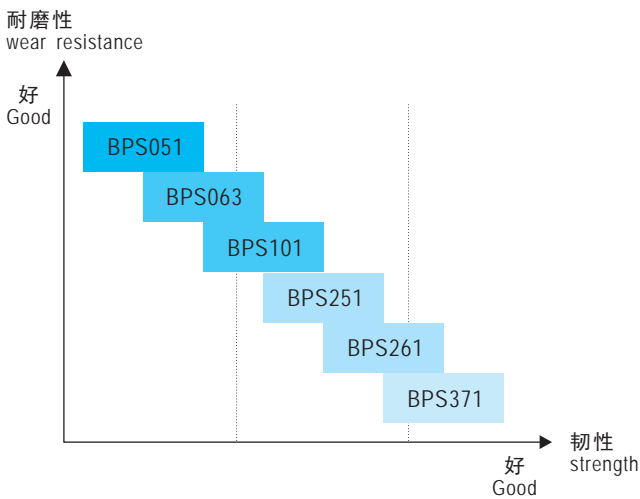
## 提高钢车削时的生产效率

### CDBP Newest steel processing inserts

### Better performance for steel processing



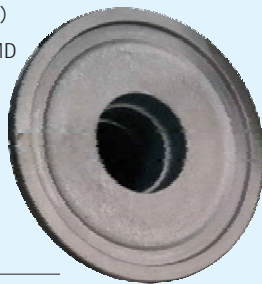
加工条件



半精加工 semi-finishing

汽车变速箱零件 automobile gearbox spare parts

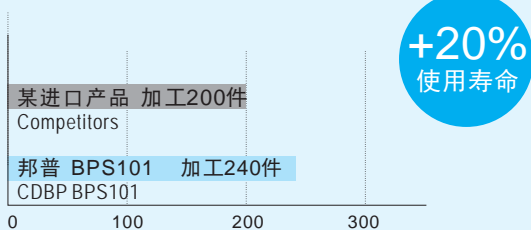
- 工件材料 work piece: 27MnCr5JV (锻件)
- 可转位刀片 inserts type: CNMG 120408-MD
- 刀具材料 grade: BPS 101
- 主偏角 entering angle: 75



切削参数 cutting data

切削速度 speed	350m/min
进给 feed rate	0.35-1.0mm/圈 0.35~1.00mm/rev
切深 cutting depth	3mm

备注：非常优良的断屑



采用了双槽/C型切屑成型而实现完美的断屑  
perfect chip break performance with double chip breaker/  
C type geometry



ap: 3mm, f:0.35mm



# RA 槽型

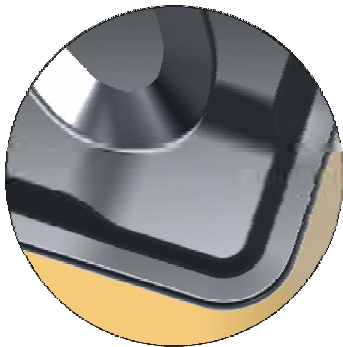
## 重切削加工领域

### RA geometry

### heavy cutting machining

#### 可转位刀片

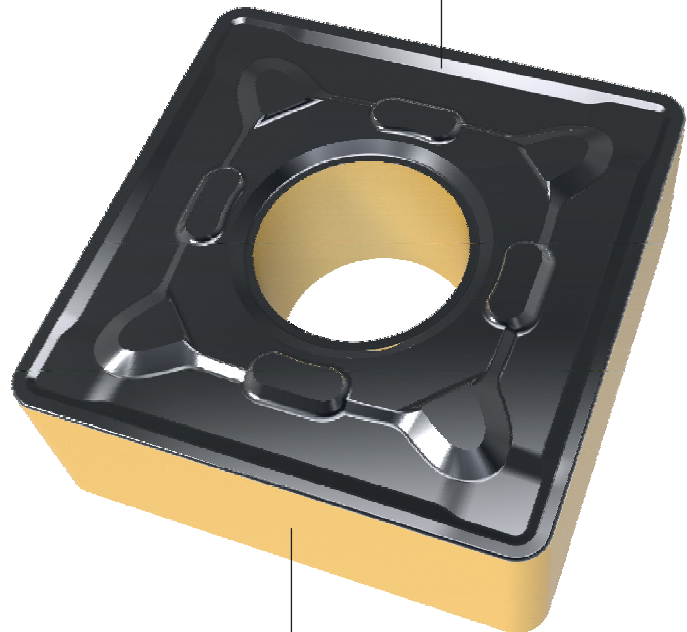
- 高强度刀尖在强断续及黑皮加工中发挥威力
- Suitable for heavy interrupted cutting and for workpiece with scale due to strong cutting edge
- 宽幅、浅底断屑槽设计即使在高进给条件下也能顺利进行切屑处理
- Smooth chip control by wide and shallow chipbreaker design
- 正角刀尖抑制凹坑磨损
- Prevents crater wear by positive land on insert corner
- 基本形状: C、S和T
- 推荐牌号: BPS101、BPS251、BPS371,
- 用于钢和铸铁切削加工



#### 应用 application

- 加工余量不同的锻件, 以及“第一刀”加工
- Cutting Different Margin Forgings, and "First Cutting" Machining
- 在重工业中经常出现的铸件砂皮
- Castings surface sand in heavy industry
- 以最大的进给量进行重切削粗加工
- Maximum feed rate in rough heavy cutting
- 车床使用最大驱动功率, 以实现最高加工效率
- Lathe can use maximum power to ensure maximum processing efficiency
- 典型的加工零件: 船用曲轴、发电机轴、列车车轮等
- Typical machining parts: Crankshaft for ship, Generator shaft, Train wheels, and so on

高强度加宽刃带-  
提高稳定性  
high strength widen cutting edge  
-better stability



直切削刃设计-  
最大刀片厚度  
straight cutting edge design  
biggest thickness of inserts

RA槽型

#### 优势 Advantages:

- 带台阶的负型保护倒角降低了切削力, 从而实现更长的刀刃寿命
- Negative chamfer with steps reduces the cutting force, extend the lifetime of the cutting edge
- 极为坚韧的BPS371切削牌号, 可在极限条件防止可转位刀片断裂, 从而节省刀具成本
- Strong Grade BPS 371 can be used in bad conditions, Blade won't broken, can save your machining cost.
- 切削引导设计可减小摩擦面积, 从而降低加工温度-提高刀刃寿命
- This kind of chip breaker can reduce friction area, Thus reducing the processing temperature, increase blade life.

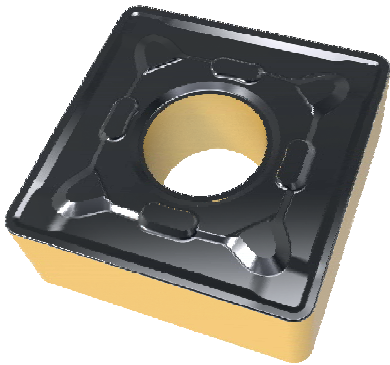


## RA断屑区域 RA chip breaker application

- RA槽型最适于在锻件上进行困难的粗加工。
- 它覆盖了为通用粗加工而设计的RB槽型以下的应用领域。
- 这样，仅用这两种槽型便能满足整个粗加工应用范围的要求。
- RA chip breaker is better use for forgings hard rough cutting.
- RA cover all the cutting area below RB chip breaker, RB is the interchangeable chip breaker for rough machining, so the RA and RB can meet all the requirements of rough cutting.



RA基本形状C型 C type inserts with RA chip breaker

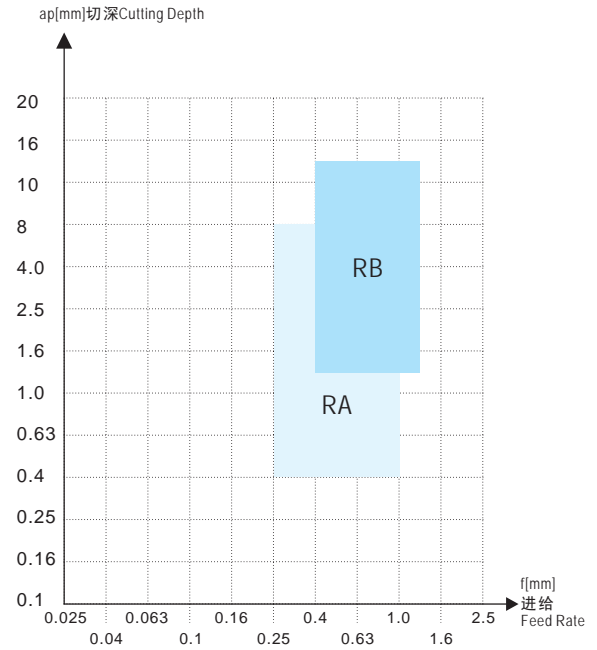


RA基本形状S型 S type inserts with RA chip breaker



RA基本形状T型 R type inserts with RA chip breaker

## 加工条件 Cutting Condition



### 钢铁行业用轧辊 Roll use in steel industry

#### 粗加工 Rough cutting

工件材料 Working materials: 42CrMo4  
 可转位刀片 CNC carbide inserts: SNMG190624-RA  
 刀具材料 Grade: BPS251  
 主偏角 Entering Angle: 75

#### 切削参数 Cutting Data

	竞争产品 Competitors	邦普 RA CDBP RA
Vc	80m/min	80m/min
f	1.0mm	1.0mm
ap	6-8mm	6-8mm

每个切削刃的刀刃寿命比较 [min]  
 Every cutting edge life time compare:



#### 备注 Remarks:

可转位刀片无断裂-刀具寿命可达1小时以上。  
 CNC carbide inserts life time can be more than 1 hours without split.  
 使用邦普BPS251刀具材料拥有更好的安全性和刀刃寿命，获得最佳的生产效率。  
 BPS251 make the cutting edge have better life time and security, can obtain best production efficiency.



# 邦普RB

## CDBP RB chip braker

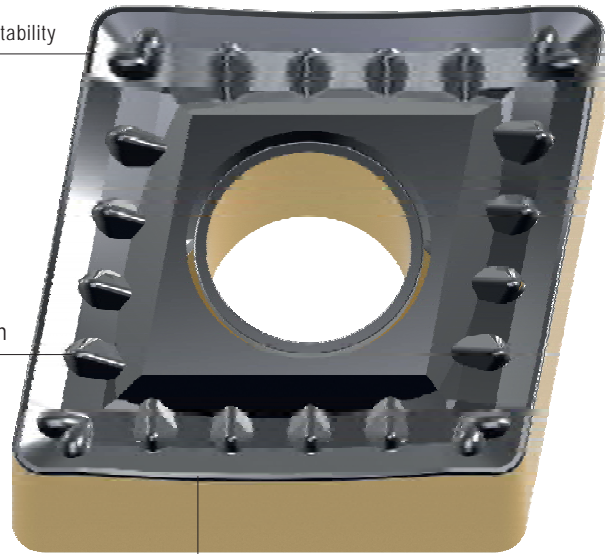
### 重切削粗加工领域

### Heavy machining roughing cutting applications

带台阶的负型保护倒角  
-提高稳定性  
Negative chamfer with steps to improve stability



切屑导向设计  
-降低摩擦  
Reduce friction cutting design



弯曲的切削刃  
Curved cutting edge

#### 可转位刀片槽型RB

#### CNC carbide inserts chip breaker-RB

RB槽型 RB chip breaker

- 用于重切削粗加工的单面可转位刀片
- Heavy machining single face rough cutting CNC carbide inserts
- 稳定的切削刃设计,带台阶的保护倒角
- Stability cutting edge design,negative chamfer with steps
- 切削引导设计减小摩擦
- Reduce friction cutting design
- 弯曲的切削刃
- . 较低的切削力
- . low cutting force
- . 大切深状况排屑仍然顺畅
- . high feed rate with perfect chip break performance
- . 功率 求低,可用于功率较小的车床
- . Low power requirements,can be used in low power lathe
- 基本形状: C、S和T
- Basic Type; C, S and T
- 邦普切削材质: BPS101、BPS251和BPS371,用于钢和铸铁切削加工
- CDBP Grade recommend:BPS101,BPS251 and BPS371
- better use for Steel and Cast Iron cutting.

应用 Applications:

- 与原先的粗加工刀片相比,具有更广泛的应用领域,不仅涵盖了重切削粗加工,而且还能在最后切削时毫无问题地通过车削进行轮廓精加工
- Compare with before rough cutting inserts,it have a widely applications,not only use for heavy machining roug cutting,but also better use for turning contour finishing.
- 锻件粗加工,如风力涡轮机、发电机轴等的轴承内外圈
- Forgings rough cutting,such as the bearing's inner and outer rings of Wind turbine or generator shaft.
- 在加工余量波动幅度很大的情况下仍然能实现非常高效的加工
- It also can achieve high efficient processing,when cutting depth have big fluctuations

优势 Advantages:

- 圆弧刀刃的低抵抗设计
- Low cutting force by curved cutting edge design
- 正角刀尖抑制凹坑磨损
- Prevents crater wear by positive land on insert corner
- 2段凸起有效防止溶着,减少对凸起部的负荷
- Prevents adhesion by 2-steps dots and reduces load on dots



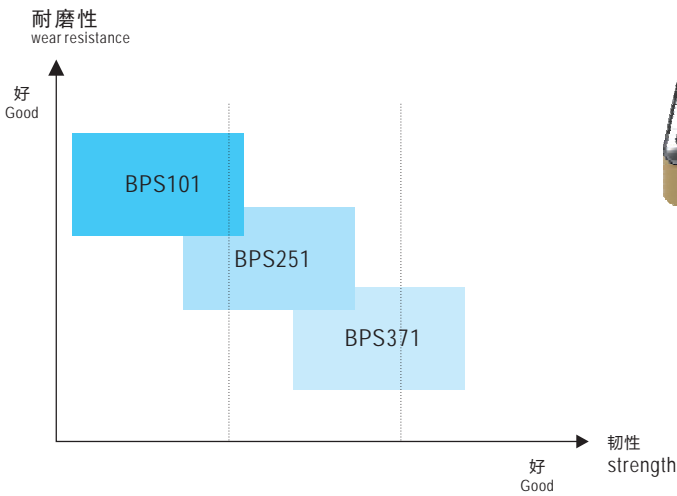
# 邦普重型切削- 提高钢车削生产效率

## CDBP heavy cutting

### To improve the steel turning production efficiency



加工条件  
Cutting Condition



#### 粗加工 Rough Cutting 风力发电机法兰盘 Wind turbine flange

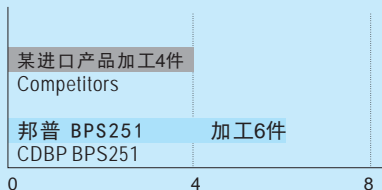
工件材料 Cutting Materials: Q345E+Z25  
 可转位刀片 CNC carbide inserts item: CNMM 190624-RB  
 刀具材料 BPS 251  
 Grade:  
 主偏角 95  
 Entering Angle:

切削参数 Cutting Data:

切削速度 Speed:	90-120m/min
进给 Feed Rate	0.9-1.1mm/rev
切深 Cutting Depth:	7-14mm

备注: 优良的断屑, 更高的寿命  
Remarks: perfect chip break performance, long life time.

每片加工零件数量比较  
Each inserts processing workpiece quantity compare



**+50%**  
使用寿命



采用了双槽/C型切屑成型而  
实现完美的断屑  
perfect chip break performance with  
double chip breaker/C type geometry



ap: 10mm, f:1.0mm



# 邦普SL、LHC和SN-

## 三种专门用于高温合金的新槽型

CDBP SL、LHC and SN chip breaker

New chip breaker specifically for heat-resistant alloys



### 应用 Applications:

LHC/SN 槽型 LHC/SN chip breaker

- 加工耐热合金 (例如Inconel718、Waspalloy)
- Cutting heat-resistant alloys (such as Incone1718 ,Waspalloy)
- 应用于航空和航天工业 (例如涡轮机体、涡轮盘)
- Used in aviation and aerospace industry (such as turbo body, turbine disc).
- 石油和天然气工业的测量仪器
- Oil and Gas Industry Measuring instruments
- 化学工业的阀门和泵零件
- Chemical industry valves and pumps parts
- 扩展应用于ISO S材料, 例如钴基和镍基耐热合金
- Widely use for ISO S type materials, such as Cobalt-based and nickel based heat-resistant alloys

SL/LHC 槽型SL/LH chip braker

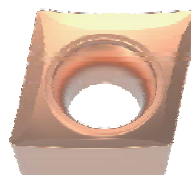
- 精加工
- 锋利的切削刃, 切削力低, 低切削力的轻切削槽型, 在加工耐高温的合金时产生的热量较少
- Sharp cutting edge, low cutting force, light cutting chip breaker. fewer calories when cutting heat-resistant alloys.
- 断屑性良好-避免切屑损伤
- Perfect chip break performance
- Avoid cutting damage
- 基本形状C、D、T、V、W
- Basic Type:C,D,T,V,W

SN 槽型 SN chip breaker

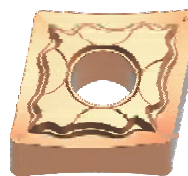
- 半精加工
- Semi-finishing
- 锋利的刃口, 具有一定强度的韧带, 适合加工高强度的ISO S类材料
- Sharp cutting edge with strong cutting edge, suitable for cutting high strength ISO S type materials
- 在铸造高温合金的断续加工中也有不错的表现
- Perfect performance for Intermittent processing cast superalloy.
- 基本形状C、D、S、W
- Basic Type:C,D,S,W

### 优势 Advantages:

- 切削力小, 能够可靠地加工不稳定的部件(例如涡轮机壳), 并且在加工耐高温的合金时产生的热量较少
- Low cutting force, can be reliably processing unstable parts (such as turbine housing), fewer calories when cutting heat-resistant alloys.
- 采用最新技术的PVD氧化铝刀具材料BPG118和BPG318 具有耐高温涂层, 可用于更高的切削速度
- BPG118 and BPG3318 use the newest technical PVD coated materials (Al2O3), With high temperature resistance coating, can be used for high cutting speed.
- LH和SN槽型能将刀刃寿命提高到150%
- LH and SN chip breaker will extend inserts 150% lifetime compare with before.



SL可转位刀片: 精加工  
SL CNC carbide inserts: Finishing

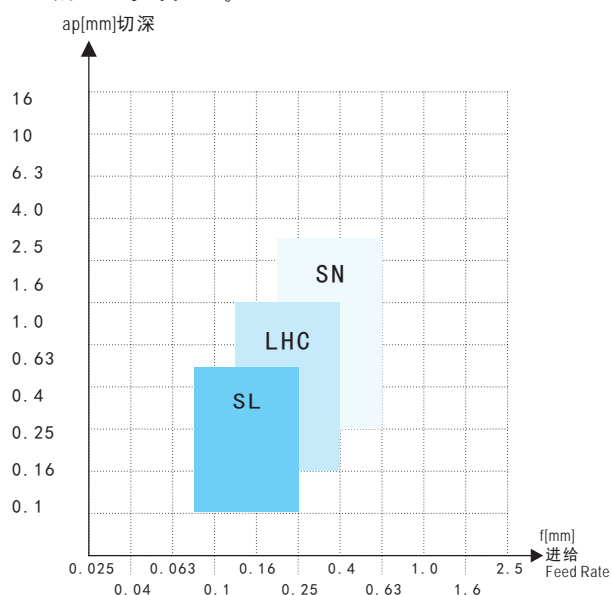


LHC可转位刀片: 精加工及半精加工  
LHC CNC carbide inserts: Finishing



SN可转位刀片: 半精加工  
SN CNC carbide inserts: Se-mi Finishing

### 加工条件 Cutting condition:





# \_ISO车刀 ISO Turning Inserts

## 邦普 BPG118、BPG218和BPG318-

稳定、可靠、独特

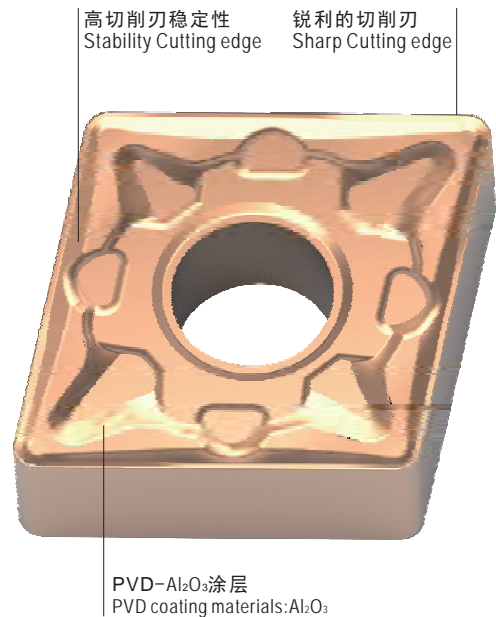
CDBP BPG118,BPG218,BPG318 Stable,Reliable,Unique

采用全球最新技术，成功地以PVD涂层处理技术将氧化铝 ( $Al_2O_3$ )附着到硬质合金可转位刀片上。

Using the world's latest technology,Successful combine  $Al_2O_3$  with CNC carbide inserts

### 刀具材料 Inserts Materials

- 由于采用了PVD氧化铝，因此与此前的所有PVD涂层相比，提高了耐磨性和耐高温性
- Use PVD  $Al_2O_3$  coating,compare with before PVD coating,the inserts's wear resistance and heat resistance improved.
- 由于PVD涂层的镀膜温度低，因而具有最高的工艺可靠性
- As PVD coating temperature is low,so the crafts reliable.
- 由于采用了先进工艺，因此具有非常平滑的前刀面和锋利的切削刃
- Use advanced technology,The blade has a smooth rake face and sharp cutting edge.
- 出色的韧性，良好的耐磨性
- Perfect strength and better wear resistance.



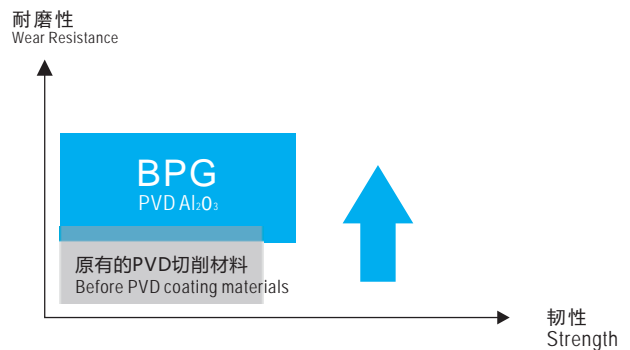
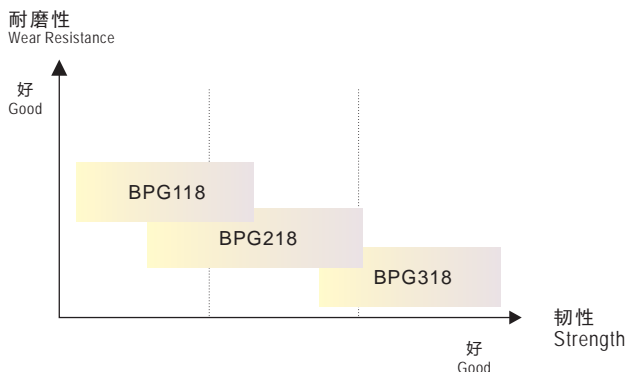
### 优势 Advantages:

- 由于采用了超细颗粒基材，并结合了氧化铝涂层，因此具有前所未有的工艺可靠性
- Use ultrafine particle substrates combine with  $Al_2O_3$  coating,leads the reliable crafts.
- 由于采用了耐高温的 $Al_2O_3$ 涂层而具有最好的热硬度，从而具有更高的耐磨性
- Use heat-resistance  $Al_2O_3$  coating has best hot hardness,so it has better wear resistance.
- 锋利的切屑刃-采用了PVD涂层-确保加工零件无毛，并减少积屑瘤的产生
- Sharp cutting edge with PVD coating,to ensure the workpiece don't have glitches,also reduce the built-up edge.

### 加工条件 Cutting Condition

邦普 BPG118/BPG218/BPG318  
CDBP BPG118/BPG218/BPG318

槽型: SN  
Chip Breaker: SN



机械工业难加工金属切削工具工程技术研究中心（筹）



面铣刀和台阶铣刀 Face milling and shoulder milling

# 邦普面铣系列

Face milling inserts

通用铣刀-经济且高效

Universal Milling inserts-economical and efficient

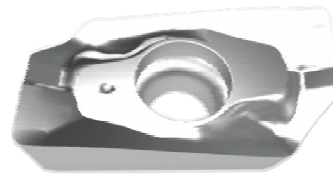


G2.5动平 高精度模块式或整体式刀体；  
采用等截面设计，可承担较大扭矩；  
德国SFS螺钉，保障可靠安装；  
刀柄尺寸有30、40和50；  
刀头直径有 $\phi 16$ 、 $\phi 20$ 、 $\phi 25$ 和 $\phi 32$ ；

G2.5 dynamic balancing high precision modular or integral cutter body  
Uniform cross section design, it can bear significant torque fluctuations.  
Germany SFS screws to ensure reliable installations.  
Holder shank size: 30mm, 40mm and 50mm;  
Cutter diameter:  $\phi 16$ ,  $\phi 20$ ,  $\phi 25$  and  $\phi 32$ ;

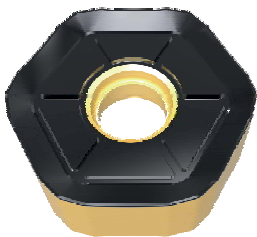
各类铝合金高速铣削用可转位刀片

All kinds of high speed milling aluminum alloy with indexable insert



特殊螺旋刃口设计，保障切削轻快；  
特别前后刀面设计，保障断屑及切削；  
高效切削，线速度600-1400m  
刃口特别处理，切深1.0mm-3.0mm；  
特别铝合金高速铣削，品质一流。

Special spiral cutting edge design to ensure the cutting light;  
Special design of the front and back cutting surfaces to help chip breaking and cutting;  
High efficiency cutting, linear velocity: 600-1400m;  
Cutting edge special treatment, cutting depth 1.0mm-3.0mm;  
Special aluminum alloy high speed milling, Top quality.



HNGX. . 面铣刀

-六边形，负型刀片  
-每个可转位刀片有12个切削刃. 实现刀片  
最大经济性  
-结构上带有平面修光刃

Face milling

-Hexagon, Negative Inserts  
-Each inserts have twelve cutting edge,  
to achieve maximum use.  
-Design with wiper

## 加工实例

Processing example

机床: HM635  
Machine tool  
刀柄: HSK-A100  
Inserts Shank  
功率: 15kw  
Power

Vc	226m/min
N	900min
Vf	0.24mm/min
ae	62.8mm
ap	2.5mm



HNGX面铣刀系列

-直径40-200mm  
-主偏角45°  
-用于面铣, 粗铣

HNGX Face milling  
-Dia: 40-200mm  
-Entering Angle: 45°  
-Use for face milling  
and rough milling

某进口产品 加工29件  
Competitors

邦普 BPS411 加工35件  
CDBP BPS411

0 30 50

+20%  
使用寿命



# 邦普面铣系列-

## 通用铣刀-经济且高效

Face milling inserts

Universal Milling inserts-economical and efficient

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended									
						CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade		
		I.C	S	d	r	BPC122	BPS321	BPS411	BPG108	BPG05B	BPG20B	BPG25B	BPG30B	BK10	BU810
	ONGX080608-L	20.2	6.00	5.3	0.8									☆	★
	ONGX080608-F	20.2	6.00	5.3	0.8	☆			★	★					
	ONGX080608-M	20.2	6.00	5.3	0.8		☆	★	☆		☆	☆			
	ONGX080608-R	20.2	6.00	5.3	0.8		☆	★				☆	☆		

加工用途		BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810
	P:钢	★	★	★	★	☆	
	M:不锈钢		☆	★	★	★	
	K:铸铁		★		☆		★
	N:有色金属						★



### SA45\*\*刀盘系列

45度主偏角，  
特殊的刀体处理使加工更可靠。  
刀片提供多种材质和槽型，  
应对各种材料的粗精加工。



# 邦普全新推出切槽系列

## 应用推荐

Grooving series.

Better performance in Grooving and parting.

全新拓展通用槽型

MGMN\*\*-H/M  
W:2-6  
T:10-28

全新拓展精加工槽型

MGMN\*\*-L/G  
W:2-6  
T:10-28

带主偏角切断系列

MGMN\*\*-6D/30B  
W:2-6  
T:10-28

仿形车削、圆弧槽

MRMN\*\*-M  
W:2-6  
T:10-28

超精加工及有色金属系列

MGMN\*\*-LH  
W:2-6  
T:10-28

单头大直径切断系列

BP\*\*  
W:2-5  
 $\Phi$  D<sub>max</sub>:35-125

全新端面切槽系列

GRIP\*\*-M  
W:3-5  
T<sub>max</sub>:12-22  
 $\Phi$  D<sub>max</sub>:25-800



详见P145

# 邦普全新推出切槽系列

提高切槽切断的生产效率

Grooving series.

Better performance in Grooving and parting.



-更加优秀的槽型

Better Geometry.

-配合出色的材质

Good Substrate.

-为用户提供更经济

More Efficiency.

-更高性价比的切槽切断系列

Higher cost performance.

LH-专为超精加工及有色金属加工设计

LH-For Superfinishing also for nonferrous metals.

L-锋利的刃口减小加工阻力，适用于精加工

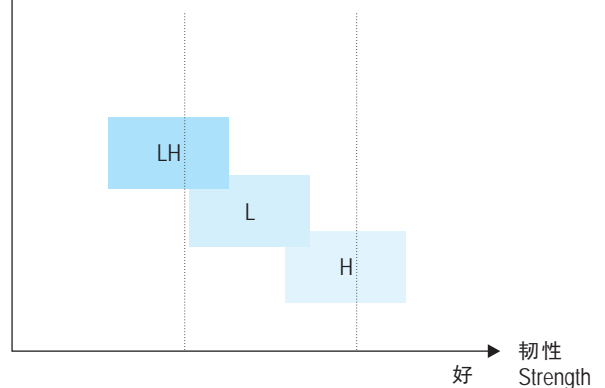
L-Sharp cutting edge reducing the resistance in machining. For finishing.

H-较强韧的刃口设计，适用于中等到精加工

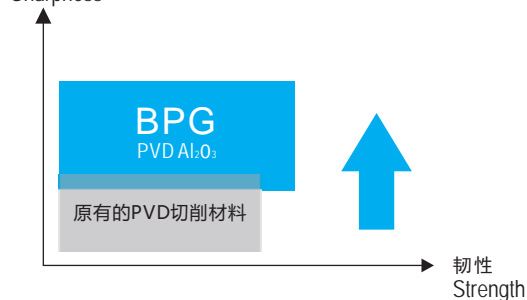
H-With strong cutting edge good for medium to roughing machining.

耐磨性  
Sharpness

好



耐磨性  
Sharpness

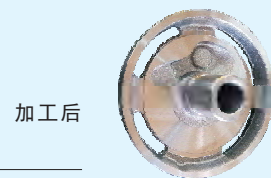


半精加工  
皮带轮

工件材料: HT250  
可转位刀片: MGMN 300-L  
刀具材料: BPG 20B



加工前

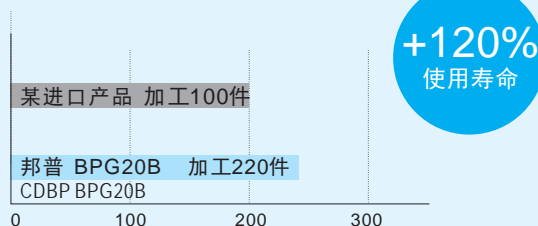


加工后

切削参数

切削速度 195m/min  
进给 0.35-1.0mm/圈 0.35~0.15mm/rev

备注：非常优良的断屑





## A 材质 Materials

**A1** 涂层材质特性  
Coating grades properties overview ..... 015

**A2** 硬质合金牌号材料特性  
Features of cemented carbide overview ..... 025




**A3** 金属陶瓷材质特性  
Features overview of cermet ..... 027

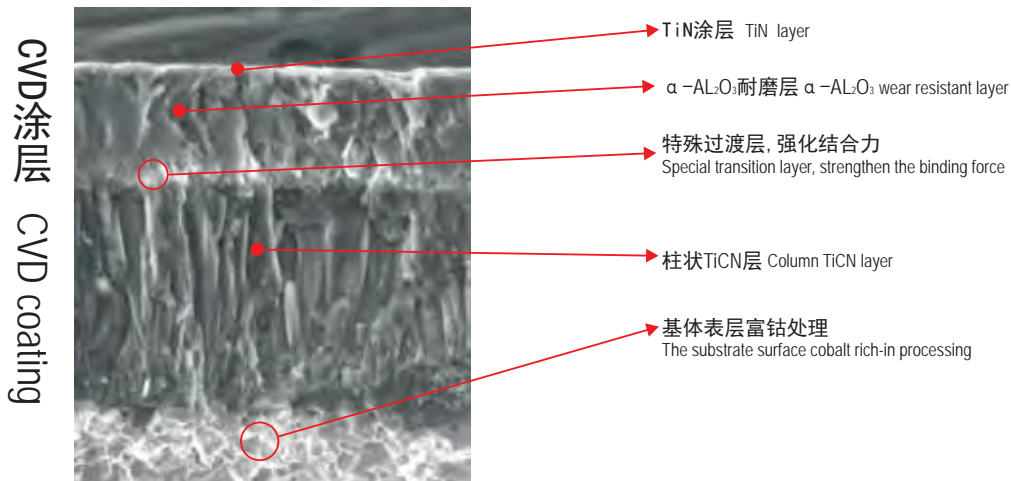
**A4** 牌号推荐一览表  
Recommended grade overview for carbide insert ..... 028



A1 涂层材质特性 Coating grades properties overview

A1-1 车削牌号 TURNING K

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPC102	K10-K20	黑 Black 	CVD涂层硬质合金，在硬基体上涂有光滑的耐磨涂层，能够耐受苛刻的间断切削工况。用于铸铁低到中等切削速度的粗加工。 CVD-coated cemented carbide, the hard substrate coated with a smooth and wear-resistant coating, can bear harsh intermittent cutting conditions. Universal grade for all cast iron roughing cutting at low to medium speed.
BPC102A	K15-K25	黑 Black 	CVD涂层硬质合金牌号，在硬度、韧性兼备的梯度烧结基体上涂有耐磨涂层。灰口和球墨铸铁的低到中等切削速度加工。在湿和干式加工中的安全性。 CVD-coated cemented carbide grades, thick abrasion resistant coating on the high intensity gradient sintered base. Machining of gray and ductile iron at low to medium cutting speed. Security in wet and dry machining.
BPC132	K15-K35	黑 Black 	CVD涂层硬质合金牌号。WC-Co较高强度的基体与TiN/TiCN/AL2O3厚膜结构化学涂层的结合，尤其适合于灰口铸铁、球墨铸铁的车削加工。 CVD coating carbide grade. It combines WC-Co high strength matrix and TiN/TiCN/AL2O3 thick chemical coating, especially suitable for turning of gray iron, ductile cast iron





# A1 涂层材质特性 Coating grades properties overview

## A1-2 车削牌号 TURNING P

A  
Materials





牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPS051	P05(P01-P10)	黑/黄 Black/yellow 	CVD涂层牌号: 在稳定工况下对钢材进行精加工时, 可获得高金属去除率。 出色的耐月牙洼磨损和抗塑性变形能力。推荐用于稳定工况。湿式和干式加工。 CVD coated grade: stable conditions for steel finishing can obtain high metal removal rate. Excellent resistance to crater wear and plastic deformation resistance. Recommended for stable conditions. Wet and dry processing.
BPS101	P15(P10-P20)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号, 在硬度、韧性兼备的梯度烧结基体上涂有耐磨涂层, 承受高温。 用于钢和钢铸件的精加工到半精加工, 连续切削到轻的间断切削。 灰口和球墨铸铁的低到中等切削速度加工。 硬材料连续切削到轻型间断切削的精加工到粗加工。湿式和干式加工。 CVD coated carbide grade, wear-resistance materials coated on the gradient sintered substrate which has both good hardness, toughness. Can bear high temperatures. For steel and steel castings finishing to roughing processing. Continue cutting to light interrupted cutting. Machining of gray and ductile iron at low to medium cutting speed. For hard materials continuous cutting and light interrupted cutting from finishing to roughing. Wet and dry processing.
BPS153	K15(K10-K20)	黄 Yellow 	
BPS251	P20(P15-P30)	黑/黄 Black/yellow 	梯度合金基体涂覆厚膜耐磨CVD牌号。通用性广的牌号。 适于钢和铸钢件上的精加工到粗加工连续切削以及间断切削。不锈钢材料连续切削和间断切削。 CVD coated carbide grade, Universal grade, suitable for steel and cast steel continuous cutting and interrupted cutting finishing to roughing. Grades with a wide range of applications. Stainless steel continuous cutting and interrupted cutting.
BPS253	M15(M10-M20)	黄 Yellow 	
BPS371	P30(P25-P40)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号, 高强度合金基体上厚膜耐磨涂层。在恶劣工况下加工钢和铸钢件。 刃线安全性, 用于高金属去除率的间断切削。 CVD coated carbide grade, high-strength alloy substrate with thick wear-resistant coating. Machining steel and cast steel in bad conditions. Edge line security for interrupted cutting high metal removal rate.
BPS373		黄 Yellow 	





# A1 涂层材质特性 Coating grades properties overview

## A1-3 车削牌号 TURNING M

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	M10(M05-M15)	青灰黑 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力, 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	M25(M10-M30)	青灰黑 Cyan-blue gray dark 	PVD涂层微晶粒硬质合金。使用中等到低切削速度, 进行各种不锈钢的精加工。要出色的刃口强度和高质量时, 可提供完美的平顺切削。很高的耐热冲击性能。适用于轻型间断切削。 PVD coated micro-grain carbide. Use for a variety of stainless steel finishing at medium to low cutting speed. When need excellent edge strength and high surface quality, provide the perfect ride cutting. A high thermal shock resistance. Suitable for light interrupted cuts.
BPG25B	M35(M25-M40)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号。WC-Co耐冲击的硬质合金基体与含Si的TiAlN纳米涂层的结合, 表层具有极高的纳米硬度, 尤其适合于碳钢、不锈钢通用型的车、铣削加工。 PVD coating carbide grades. WC-Co impact resistant cemented carbide matrix and TiAlN containing Si nano coating combination, the surface has a very high nano hardness, especially suitable for turning and milling of carbon steel, stainless steel.
BPG30C	M35(M25-M40)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金。用于以低至中等切削速度进行奥氏体不锈钢和双相不锈钢的半精加工到粗加工。很高的耐热冲击性能。非常适合快速间断切削。 PVD coated carbide. For austenitic stainless steels and duplex stainless steel semi-finishing to roughing at low to medium cutting speed. High thermal shock resistance. Ideal for quickly interrupted cutting.

涂层材质: TiAlN  
Coating materials: TiAlN

涂层显微硬度: HV3200  
Coating microhardness: HV3200

涂层温度: 400-500°C, 对超细合金基体没有影响  
Coating temperature: 450-480°C, without effect on ultra-grained alloy substrate.

涂层失效温度: 900°C, 高耐热  
Coating failure temperature: 900°C, high heat resistance.

涂层后仍能保证刃口锋利  
Guarantee the sharp cutting edge after coating.



PVD涂层 PVD coating








# A1 涂层材质特性 Coating grades properties overview

## A1-4 车削牌号 TURNING S

A  
材  
质  
Materials

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG118	S05-S15	紫黄 Purple yellow 	PVD涂层硬质合金牌号，用于耐热优质合金的中等速度铣削。 具有良好的抗积屑瘤和抗塑性变形能力。 PVD coated carbide grade for medium-speed milling of heat resistant alloys. With good ability to avoid built-up edge and good resistance to plastic deformation capacity.
BPG218	S15(S15-S30)	紫黄 Purple yellow 	PVD涂层硬质合金牌号，具有良好的抗积屑瘤和抗塑性变形能力。 用于不稳定工况，如长切削刃、切屑堵塞、深台肩和立铣、长悬伸、车铣工序等； 不锈钢的轻型铣削；结合周边磨削刀片，用于粘性和加工硬化材料；耐热优质合金的中等速度铣削； 淬硬零件的低进给和中速铣削。 PVD coated carbide grade have good ability to avoid built-up edge and good resistance to plastic deformation capacity. For unstable conditions, such as long cutting edge, clogging, deep shoulder milling, long overhang, milling processes. Light milling of stainless steel; combine grinding blade for viscous and hardening materials; moderate speed milling of heat resistant alloys; hardened parts milling at low feed and medium-speed.
BPG318	S25(S20-S30)	紫黄 Purple yellow 	PVD涂层超细晶粒硬质合金，可提供锋利的切削作用和出色的切削刃韧性，良好的抗沟槽磨损和热冲击能力。用于低进给量或低切削速度碳钢精加工。中等到低切削速度的各种不锈钢的精加工，也适用于轻型间断切削。耐热优质合金的低速加工，或轻型间断切削。 适用于短接触时间的一般加工工序及有很高强度要求或要锋利切削刃的工序。 PVD coated micro-grain carbide. Can provide a sharp cutting action and excellent toughness of the cutting edge, a good anti-the grooves wear and thermal shock resistance. For carbon steel finishing at low feed rate or low cutting speed. a variety of stainless steel finishing at low to medium cutting speed, but also suitable for light interrupted cutting. Low-speed machining of heat resistant alloys, or light interrupted cuts. General short contact time processing step and high strength requirements of sharp cutting edges processing step.

## 车削牌号 TURNING N

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPU109	N10(N01-N15)	金属色	DLC涂层，涂层可显著降低积屑瘤，从而获得更高表面质量。适于铝、镁、铜、黄铜、塑料等的精加工到粗加工。 DLC coating color, the coating can reduce BUE, obtain higher surface quality. Suitable for aluminum, magnesium, copper, brass, plastic finishing to roughing processing.
BU810	N10(N01-N15)	金属色	亚微细晶粒，适用于加工有色金属的连续和间断切削精加工。 Sub-micron grain, suitable for the continuous and interrupted finishing of non-ferrous metal
BU813	N10(N10-N30)	金属色	WC-Co硬质合金牌号，具有较高的硬度和强度，适合于有色金属的车削加工，也可用于涂层的基体材料。 WC - Co in cemented carbide grade, It has excellent hardness and strength, suitable for turning of non-ferrous metal and can also be used for coating substrate materials.



## A1 涂层材质特性 Coating grades properties overview

### A1-5 铣削牌号 MILLING K

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	K10(K05-K15)	青灰黑 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力, 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG108	K05-K15	紫黄 Purple yellow 	PVD涂层硬质合金牌号, 用于湿工况下灰口铸铁和球墨铸铁的中到粗加工铣削。在中等到高切削速度下, 具有可预期刀具寿命。 PVD coated carbide grade for gray cast iron and ductile iron medium to rough milling in wet conditions. In the medium to high cutting speeds, can predictor the tool-life.
BPC122	K15(K10-K25)	黑 Black 	CVD涂层硬质合金, 在硬基体上涂有光滑的耐磨涂层, 能够耐受苛刻的间断切削工况。用于铸铁低到中等切削速度的粗加工。 CVD-coated cemented carbide, the hard substrate coated with a smooth and wear-resistant coating, can bear harsh intermittent cutting conditions. Universal grade for all cast iron roughing cutting at low to medium speed.
BPS321	K30(K25-K35)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号, 用于在要求高韧性的工况下以低速进行的中等负荷和重载加工。 Coated carbide grade for toughness demanding operating conditions to work at low speed, medium load and reload processing.
BPS411	K30(K25-K35)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号。耐冲击、高强度的硬质合金基体与TiN/TiCN/AL2O3/TiN化学涂层的结合, 尤其适合于碳钢、不锈钢中等-重载的铣削加工。 "CVD coating carbide grades. Resistance to impact, high strength cemented carbide matrix and TiN/TiCN/AL2O3/TiN chemical coating combination, especially suitable for carbon steel, stainless steel medium-heavy milling:"





# A1 涂层材质特性 Coating grades properties overview

## A1-6 铣削牌号 MILLING P

A  
Materials

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	P05(P01-P15)	青灰黑 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力,适用于高速切削条件下,奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	P15(P10-P20)	青灰黑 Cyan-blue gray dark 	PVD涂层微晶粒硬质合金。使用中等到低切削速度,进行各种不锈钢的精加工。要出色的刃口强度和高质量时,可提供完美的平顺切削。很高的耐热冲击性能。适用于轻型间断切削。 PVD coated micro-grain carbide. Use for a variety of stainless steel finishing at medium to low cutting speed. When need excellent edge strength and high surface quality, provide the perfect ride cutting. A high thermal shock resistance. Suitable for light interrupted cuts.
BPG25B	M35(M25-M40)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号。WC-Co耐冲击的硬质合金基体与含Si的TiAlN纳米涂层的结合,表层具有极高的纳米硬度,尤其适合于碳钢、不锈钢通用型的车、铣削加工。 PVD coating carbide grades. WC-Co impact resistant cemented carbide matrix and TiAlN containing Si nano coating combination, the surface has a very high nano hardness, especially suitable for turning and milling of carbon steel, stainless steel.
BPG308	P20(P15-P30)	紫黄 Purple yellow 	PVD涂层硬质合金牌号,例如长切削刃、切屑堵塞、深台肩和立铣、长悬伸、车铣工序等。可作为韧性工序的备用选择。结合周边磨削刀片,首选用于粘性材料,例如低碳钢。 PVD coated carbide grade, for example, the long cutting edge, clogging, deep shoulder milling, long overhang, milling processes. or an alternative of toughness processes. Combining the peripheral-edge grinding blade, preferred for viscous material, such as low carbon steel.
BPS321 BPS322	P30(P25-P40)	黑/黄 Black/yellow  黑 Black 	高强度基体与AL2O3涂层结合,适于钢及铸铁的铣削加工。 High-strength matrix combined with AL2O3 coating suitable for steel and cast iron milling.
BPS411 BPS412	P40(P35-P50)	黑/黄 Black/yellow  黑 Black 	CVD涂层硬质合金牌号。耐冲击、高强度的硬质合金基体与TiN/TiCN/AL2O3/TiN化学涂层的结合,尤其适合于碳钢、不锈钢中等-重载的铣削加工。 "CVD coating carbide grades. Resistance to impact, high strength cemented carbide matrix and TiN/TiCN/AL2O3/TiN chemical coating combination, especially suitable for carbon steel, stainless steel medium-heavy milling."



# A1 涂层材质特性 Coating grades properties overview

## A1-7 铣削牌号 MILLING M

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	M10(M05-M15)	青灰黑 Cyan-blue gray dark 	PVD涂层牌号具有很高的热硬度和良好的抗塑性变形能力. 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	M15(M10-M25)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号, 用于不锈钢的轻型铣削。结合周边磨削刀片, 首选用于粘性和加工硬化材料。 PVD coated carbide grade for light milling of stainless steel. Combine grinding blade preferred for viscous and work hardening materials.
BPG30B	M25(M15-M30)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号, 用于中到高速的不锈钢(主要为奥氏体型)铣削。结合正前角槽形, 也适用于耐热材料和钛合金。 PVD coated carbide grade for medium to high-speed stainless steel (austenitic) milling. Combined with positive rake angle trough also applies to the heat-resistant materials and titanium alloys.
BPG25B	M35(M25-M40)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号。WC-Co耐冲击的硬质合金基体与含Si的TiAlN纳米涂层的结合, 表层具有极高的纳米硬度, 尤其适合于碳钢、不锈钢通用型的车、铣削加工。 PVD coating carbide grades. WC-Co impact resistant cemented carbide matrix and TiAlN containing Si nano coating combination, the surface has a very high nano hardness, especially suitable for turning and milling of carbon steel, stainless steel.
BPS411	M40(M30-M40)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号。耐冲击、高强度的硬质合金基体与TiN/TiCN/AL2O3/TiN化学涂层的结合, 尤其适合于碳钢、不锈钢中等-重载的铣削加工。 "CVD coating carbide grades. Resistance to impact, high strength cemented carbide matrix and TiN/TiCN/AL2O3/TiN chemical coating combination, especially suitable for carbon steel, stainless steel medium-heavy milling."








# A1 涂层材质特性 Coating grades properties overview

## A1-8 铣削牌号 MILLING S

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牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	S10(S05-S10)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号，用于极佳工况下的钛铣削。在高切削速度下具有出色的耐磨性。对失稳和振动敏感。 PVD coated carbide grade, for the excellent working conditions titanium milling. Has excellent abrasion resistance at high cutting speeds. Instability and vibration sensitive.
BPG20B	S15(S15-S30)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号，用于耐热优质合金的中等速度铣削。具有良好的抗积屑瘤和抗塑性变形能力。 PVD coated carbide grade for medium-speed milling of heat resistant alloys. With good ability to avoid built-up edge and good resistance to plastic deformation capacity.
BPG30C	S30(S30-S40)	青灰黑 Cyan-blue gray dark 	涂层硬质合金牌号，用于耐热铝铸件的铣削。 Coated carbide grade for heat-resistant aluminum castings milling.

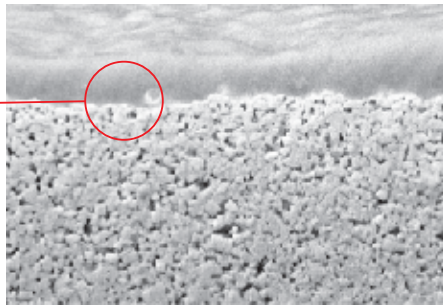
涂层材质: TiAlN  
Coating materials: TiAlN

涂层显微硬度: HV3200  
Coating microhardness: HV3200

涂层温度: 400-500°C, 对超细合金基体没有影响  
Coating temperature: 450-480°C, without effect on ultra-grained alloy substrate.

涂层失效温度: 900°C, 高耐热  
Coating failure temperature: 900°C, high heat resistance.

涂层后仍能保证刃口锋利  
Guarantee the sharp cutting edge after coating.



PVD涂层 PVD coating



# A1 涂层材质特性 Coating grades properties overview

## A1-9 车削涂层牌号分类及推荐 ISO packet turning

ISO类别 ISO classification	ISO分组 ISO packet	加工类别 Processing category	涂层牌号 Coating grade	表面颜色 Surface color	基体性能 Substrate properties			涂层类别 Coating type	涂层描述 Coating description	厚度 Thickness	推荐切削速度 Recommended cutting speed (m/min)
					密度 Density (g/cm <sup>3</sup> )	硬度 Hardness (HRA)	抗弯强度 Bending strength (N/mm <sup>2</sup> )				
K	K05-K10	精加工 Finishing	BPC132	黑色 Black	14.9	91.6	2500	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	300 (200-400)
	K10-K20	半精加工 Semi finishing	BPC102	黑色 Black	14.9	91.3	2000	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	250 (180-300)
	K10-K20	半精加工 Semi finishing	BPC102A	黑色 Black	14.9	90.5	2200	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	250 (180-300)
M	M01-M10	精加工 Finishing	BPG05B	青灰黑 Cyan-blue gray dark	14.9	92.5	3000	PVD	TiALN	薄膜 Film	120 (100-150)
	M10-M20	半精加工 Semi finishing	BPG20B	青灰黑 Cyan-blue gray dark	14.4	91.3	2500	PVD	TiALN	厚膜 Thick film	120 (100-150)
	M20-M35	粗加工 Rough machining	BPG25B	青灰黑 Cyan-blue gray dark	14.5	90.5	2200	PVD	TiALN	薄膜 Film	120 (100-150)
	M30-M40	粗加工 Rough machining	BPG30C	青灰黑 Cyan-blue gray dark	14.2	90	2800	PVD	TiALN	薄膜 Film	120 (100-150)
P	P01-P15	精加工 Finishing	BPS051	黄/黑色 Black/yellow	13.9	92	2000	MT-CVD/CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	250 (180-300)
	P10-P20	精加工 Finishing	BPS101	黄/黑色 Black/yellow	13.7	91.4	2000	MT-CVD/CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	250 (180-300)
	P20-P30	半精加工 Semi finishing	BPS251	黄/黑色 Black/yellow	13.6	91	2200	MT-CVD/CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	220 (180-280)
	P25-P35	粗加工 Rough machining	BPS371	黄/黑色 Black/yellow	13.6	91	2500	MT-CVD/CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	130 (100-240)
S	S01-S10	精加工 Finishing	BPG118	紫黄 Purple yellow	14.9	92.5	2800	PVD	TiALN + TiN	薄膜 Film	60 (40-90)
	S10-S20	半精加工 Semi finishing	BPG218	紫黄 Purple yellow	14.4	91.4	3000	PVD	TiALN + TiN	薄膜 Film	50 (30-70)
	S20-S30	粗加工 Rough machining	BPG318	紫黄 Purple yellow	14.4	91.4	2500	PVD	TiALN + TiN	薄膜 Film	30 (20-60)
N	N01-N10	精加工 Finishing	BU810	金属色	14.9	92.5	3000				
	N10-N20	精加工 Finishing	BU813	金属色	14.9	91.4	2500				





# A1 涂层材质特性 Coating grades properties overview

## A1-10 铣削涂层牌号分类及推荐 ISO packet MILLING



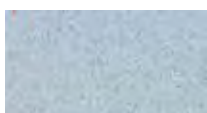

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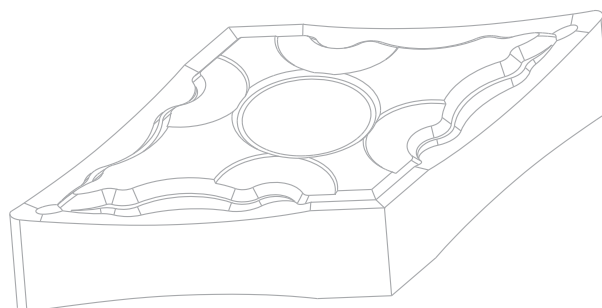
ISO类别 ISO classification	ISO分组 ISO packet	加工类别 Processing category	涂层牌号 Coating grade	表面颜色 Surface color	基体性能 Substrate properties			涂层类别 Coating type	涂层描述 Coating description	厚度 Thickness	推荐切削速度 Recommended cutting speed (m/min)
					密度 Density (g/cm <sup>3</sup> )	硬度 Hardness (HRA)	抗弯强度 Bending strength (N/mm <sup>2</sup> )				
K	K10-K20	精加工 Finishing	BPG108	紫黄 Purple yellow	14.9	93	2500	PVD	TiAlN	薄膜 Film	300 (200-400)
	K10-K20	半精加工 Semi finishing	BPC122	黑色 Black	14.8	91.4	2000	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	薄膜 Film	250 (180-300)
	K20-K30	半精加工 Semi finishing	BPC132	黑色 Black	14.9	91.6	2500	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	厚膜 Thick film	300 (200-400)
	K30-K40	粗加工 Rough machining	BPS411	黑色 / 黄色 Black / yellow	14.2	89.5	3000	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	薄膜 Film	120 (100-150)
M	M05-M10	精加工 Finishing	BPG05B	青灰黑 Cyan-blue gray dark	14.9	92.5	3000	PVD	TiAlN	薄膜 Film	150 (120-200)
	M20-M30	半精加工 Semi finishing	BPG20B	青灰黑 Cyan-blue gray dark	14.4	91.8	2900	PVD	TiAlN	薄膜 Film	120 (100-150)
	M20-M35	半精加工 Semi finishing	BPG30B	青灰黑 Cyan-blue gray dark	14.4	91.4	2900	PVD	TiAlN	薄膜 Film	120 (100-150)
	M30-M40	粗加工 Rough machining	BPS411	黑色 / 黄色 Black / yellow	14.2	89.5	2900	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	薄膜 Film	120 (100-150)
P	M05-M10	精加工 Finishing	BPG05B	青灰黑 Cyan-blue gray dark	14.9	92.5	3000	PVD	TiAlN	薄膜 Film	250 (180-300)
	M20-M30	半精加工 Semi finishing	BPG20B	青灰黑 Cyan-blue gray dark	14.5	91.8	2900	PVD	TiAlN	薄膜 Film	220 (180-280)
	P20-P30	半精加工 Semi finishing	BPG308	紫黄 Purple yellow	14.5	91.8	2900	PVD	TiAlN + TiN	薄膜 Film	150 (120-200)
	P25-P35	半精加工 Semi finishing	BPG25B	青灰黑 Cyan-blue gray dark	14.5	90	2000	PVD	TiAlN	薄膜 Film	120 (100-150)
	P30-P40	粗加工 Rough machining	BPS321	黑色 / 黄色 Black / yellow	14.5	90	2000	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	薄膜 Film	120 (100-150)
	P30-P40	粗加工 Rough machining	BPS411	黑色 / 黄色 Black / yellow	14.2	89.5	3000	MT-CVD	TiCN-AL <sub>2</sub> O <sub>3</sub>	薄膜 Film	120 (100-150)





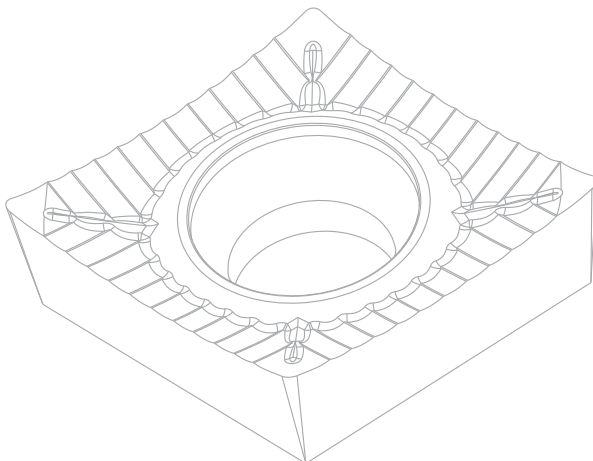
## A2 硬质合金牌号材料特性 Features overview of cemented carbide

	牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm3)	硬度 Hardness HRA	抗弯强度 Bending strength (N/mm2)	使用性能及用途 Usage and performance
	BP20	P20-P25 M20	12.3	≥91.5	1910	红硬性高，具有很高的抗热震裂和抗热塑性变形能力，适用合金结构钢、合金工具钢和高锰钢、不锈钢的加工。 Excellent in red hardness, anti-heat crack, anti-deformation. Suitable for processing the structural alloy steel, alloy tool steel, high manganese steel and stainless steel
	BP35	P30-P40	12.7	≥91.0	2220	红硬性高，并具有良好很高的抗热震性和高的使用强度，是通用性良好的牌号。适用于钢及铸钢的粗加工 Excellent red hardness anti-thermal deformation . high strength. common grade. Suitable for the roughing of steel, cast iron
	BU810	K05-K15	14.8	92.8	3000	亚微细晶粒，适用于加工有色金属的连续和间断切削精加工。 Sub-micron grain, suitable for the continuous and interrupted finishing of non-ferrous metal
	BU820	K10-K25	14.4	91.8	3500	亚微细晶粒，适用于各种铣刀及孔加工刀具。 Sub-micro grain, suitable for the milling and drilling tools
	BK20UF	K15-K25	14.7	92.3	2600	超细晶粒合金，耐磨性好，使用强度高。适用于各种高硬冷硬铸铁、堆焊喷焊等高耐磨材料，硬橡胶、硬纸板及有色金属的半精加工和精加工。 Ultra-fine grain alloy, good wear resistance and high strength. suitable for the semi-finishing, finishing of abrasive materials (like high-hard . chilled-hard cast iron, piled welding, spray welding hard rubber, card board and non-ferrous metal.) hard rubber, card board and non-ferrous metal
	B245	K25-K30	14.4	91.5	2800	PVD涂层基体牌号。WC-Co硬质合金牌号，具有较高的硬度和强度，较适合于有冲击的加工场合。 Substrate grade for PVD coating. WC - Co cemented carbide grades, It has excellent hardness and strength, more suitable for the impact processing.
	BU813	K10-K20	14.9	91.5	2500	WC-Co硬质合金牌号，具有较高的硬度和强度，适合于有色金属的车削加工，也可用于涂层的基体材料。 WC - Co in cemented carbide grade, It has excellent hardness and strength, suitable for turning of non-ferrous metal and can also be used for coating substrate materials.





## A2 硬质合金牌号材料特性 Features overview of cemented carbide

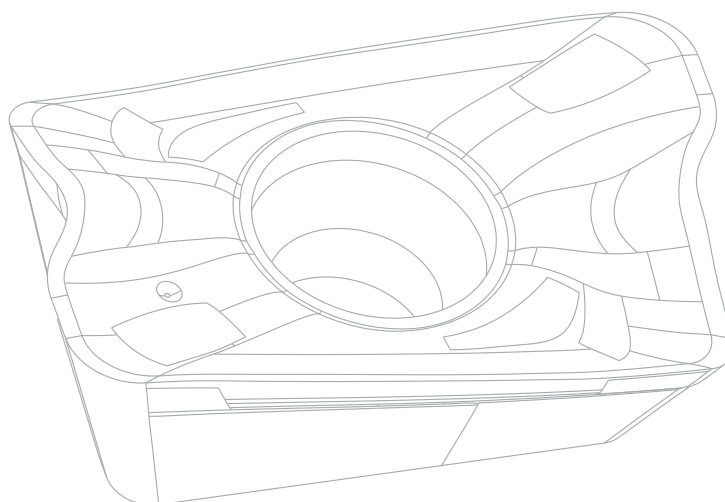
	牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm <sup>3</sup> )	抗弯强度 Bending strength (N/mm <sup>2</sup> )	硬度 Hardness HRA	使用性能及用途 Usage and performance
	YG6	K15-K20	14.85-15.05	2050	90.5-91.5	耐磨性较高、抗冲击和震动较好。适用铸铁，有色金属及合金、非金属材料中等切削速度的半精加工和精加工。 High wear resistance, good resistance to shock and vibration. Application of cast iron, non-ferrous metals and alloys, non-metallic materials medium cutting speed for semi-finishing and finishing.
	YG8	K30	14.6-14.85	2520	89.5-90.5	使用强度高，抗冲击、抗震性好，但耐磨性和允许的切削速度较低。适于铸铁，有色金属及合金、非金属材料低速的粗加工。The use of high strength, impact resistance, good shock resistance, but wear resistance and allows the cutting speed is low. For cast iron, non-ferrous metals and alloys, non-metallic materials low speed roughing.
	YT5	P30	12.7-13.1	2200	89.5-90.5	具有较好的强度、抗冲击性及热震性；适于碳素钢与合金钢的粗加工。 High strength, impact resistance and thermal shock resistance; suitable for carbon and alloy steel rough machining.
	YT14	P20	11.2-11.6	1750	91.5-92.5	使用强度高，抗冲击、抗震性好，适于碳素钢与合金钢的精加工、半精加工。 The use of high strength, impact resistance, good shock resistance, suitable for carbon and alloy steel finishing, semi finishing.
	YT15	P10	11.1-11.5	1650	92-93.2	耐磨性较好。适用于钢、铸钢、合金钢等的精加工、半精加工。 Good wear resistance. Suitable for steel, cast steel, alloy steel finishing, semi finishing.
	YW1	M10	13.5-13.7	1710	92-93	红硬性好、能承受一定的冲击负荷，是通用性较好的合金。适用于耐热钢、高锰钢、不锈钢等难加工钢材的加工，也适用于普通钢和铸铁的加工。Good red hardness, it can withstand a certain degree of impact load, is general better alloy. Suitable for heat resistant steel, high manganese steel, stainless steel and other hard processing steel processing, applicable to ordinary steel and iron processing.
	YW2	M20	13.35-13.55	1880	91.5-92.5	耐磨性较好，使用强度较高，能承受较大的冲击负荷。适用于耐热钢、高锰钢、不锈钢及高级合金钢等的粗加工、半精加工，也适于普通钢和铸铁。Good wear resistance, the use of higher strength, can bear larger impact load. Suitable for heat resistant steel, high manganese steel, stainless steel and high alloy steel roughing, semi-finishing, and is also suitable for ordinary steel and cast iron.



### A3 金属陶瓷材质特性 Features overview of cermet

	ISO分类 ISO classification	K05-K20 P10-P30 M10-M30
	密度 Density (g/cm <sup>3</sup> )	6.1~7.2
	硬度 Hardness HRA	>91
	抗弯强度 Bending strength (N/mm <sup>2</sup> )	>2000
	使用性能及用途 Usage and performance	适用于钢、不锈钢半精加工、精加工 Suitable for the finishing ,semi-finishing of stainless steel
BN201		

	ISO分类 ISO classification	K01-K10 P01-P20 M01-M20
	密度 Density (g/cm <sup>3</sup> )	6.5~7.2
	硬度 Hardness HRA	>92
	抗弯强度 Bending strength (N/mm <sup>2</sup> )	>1800
	使用性能及用途 Usage and performance	适用于钢、不锈钢半精加工、精加工 Suitable for the finishing ,semi-finishing of stainless steel
BN301		



# A4 牌号推荐一览表 Recommended grade overview for carbide insert

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ISO分组ISO Standard	P钢 Steel					M不锈钢 Stainless steel					K铸铁 Cast Iron					N有色金属 Non-ferrous metals					S耐热合金 Heat Resistant alloys				
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	N01	N10	N20	S01	S10	S20					
CVD涂层 CVD coating	BPS051											BPC052	BPC132	BPC102						BPG363					
	BPS101		BPS251		BPS371													BPG118		BPG363					
PVD涂层 PVD coating		BPG20A				BPG05B		BPG20B	BPG25B	BPG30B									BPG118	BPG218					
金属陶瓷 Cermet	BN201					BN201				BN301															
硬质合金 Cemented carbide												BK10													
CVD涂层 CVD coating			BPS263										BPS253												
				BPS373																					
PVD涂层 PVD coating		BPG20B				BPG05B		BPG20B		BPG30B								BPG118		BPG218					
硬质合金 Cemented carbide																									
						BU810												BU810	BK10	BK10					



ISO分组ISO Standard	P钢 Steel						M不锈钢 Stainless steel						K铸铁 Cast iron				N有色金属 Non-ferrous metals			S耐热合金 Heat Resistant alloys			
	P01	P10	P20	P30	P40		M01	M10	M20	M30	M40		K01	K10	K20	K30	N01	N10	N20	S01	S10	S20	
CVD涂层 CVD coating			BPS321	BPS411						BPS411				BPC122	BPC132	BPS411							
PVD涂层 PVD coating	BPG05B		BPG20B	BPG25B			BPG05B	BPG20B	BPG30B	BPG45B			BPG108										
金属陶瓷 Cermets																							
硬质合金 Cemented carbide		BP20	BP35				BP35						BK10				BU810			BU810		BK10	



## B 车削刀具 Cutting tools





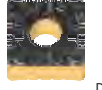


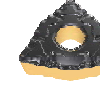

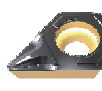




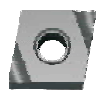
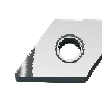
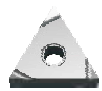


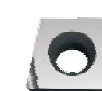






































## B 普通车削 General turning

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# B1-1 车削刀片一览表 Turning inserts overview
















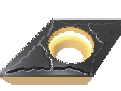


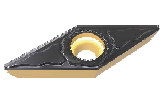













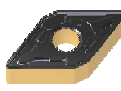







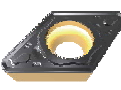



**B**  
普通车削  
General Turning

钢的精细加工 Finishing of steel	 P52页 CNMG**FW	 P52页 DNMG**FW	 P52页 SNMG**FW	 P52页 TNMG**FW	 P52页 VNMG**FW	 P52页 WNMG**FW	
	 P53页 CCMT**FW	 P53页 DCMT**FW	 P53页 SCMT**FW	 P53页 TCMT**FW	 P53页 VBMT**FW	 P53页 VCMT**FW	
	 P54页 CNGG**L/R-S	 P54页 DNMG**L/R-S	 P54页 TNGG**L/R-S	 P54页 WNGG**L/R-S			
	 P55页 CCGT**L/R-S	 P55页 CCGH**L/R-S	 P55页 DCET**L/R-S				
	 P56页 DCGT**L/R-S	 P56页 DPET**L/R-S	 P56页 SCGT**L/R-S	 P56页 SPGH**L/R-S	 P56页 SPGT**L/R-S	 P56页 TCGT**L/R-S	 P56页 TPGH
	 P57页 TPGR**L-S	 P57页 TPET**L-S	 P57页 TPGX**L-S	 P57页 VBET**L-S			
	 P58页 VBGT**L/R-S	 P58页 VCGT**L/R-S	 P58页 VDGX**L/R-S	 P58页 VPET**L/R-S	 P58页 WPGT**L/R-S	 P58页 DCET**L/R-E	 P58页 TNGG**L/R-E
	 P59页 CNMG**MD	 P59页 DNMG**MD	 P59页 SNMG**MD	 P59页 TNMG**MD	 P59页 VNMG**MD	 P59页 WNMG**MD	
	 P61页 CNMG**MA	 P61页 DNMG**MA	 P61页 SNMG**MA	 P61页 TNMG**MA	 P61页 VNMG**MA	 P61页 WNMG**MA	
	 P62页 CNMG**TM	 P62页 DNMG**TM	 P62页 TNMG**TM	 P62页 VNMG**TM	 P62页 WNMG**TM	 P62页 VNMG**UX	 P62页 WNMG**UX





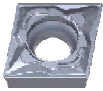
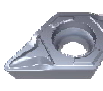
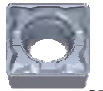




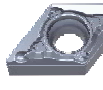

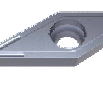
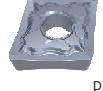



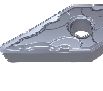
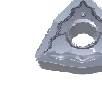

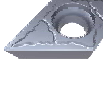













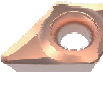
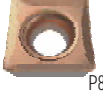

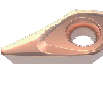







## B1-1 车削刀片一览表 Turning inserts overview

钢的半精加工 Semi Finishing of steel							
	P63页 CNGM**U	P63页 DNMG**U	P63页 SNMG**U	P63页 TNMG**U	P63页 VNMG**U	P63页 WNMG**U	
							
	P64页 SNMG**LR-N	P64页 SNGG**LR-N	P64页 TNGG**LR-N	P64页 VNGG**LR-N	P64页 WNGG**LR-N		
							
	P65页 CNGG**LR-H	P65页 DNGG**LR-H	P65页 VNGG**LR-H				
							
	P66页 CCMT**MD	P66页 DCMT**MD	P66页 SCMT**MD	P66页 TCMT**MD	P66页 VCMT**MD	P66页 RCMT**MOE-R'	
							
	P68页 CPMH**LR-N	P68页 DCGT**LR-N	P68页 TPGH**LR-N	P68页 VBGT**LR-N	P68页 WPGT**LR-N		
							
	P69页 CCET**LR-E	P69页 CCGT**LR-E	P69页 SPGT**LR-E	P69页 TPET**LR-E	P69页 TCGT**LR-E	P69页 DCET**LR-E	
	钢、铸铁的粗加工 Rough machining of steel, cast iron						
		P70页 CNGM**RA	P70页 DNMG**RA	P70页 SNMG**RA	P70页 TNMG**RA	P70页 WNMG**RA	
							
P71页 CNMM**RB		P71页 SNMM**RB	P71页 TNMM**RB				
							
P72页 CCMT**RA	P72页 DCMT**RA	P72页 SCMT**RA	P72页 TCMT**RA	P72页 RCGT**HP			



















































# B1-1 车削刀片一览表 Turning inserts overview

**B**  
 普通车削  
 General Turning

不锈钢的精细加工 Finishing of stainless steel	 P74页 CCMT**FW	 P74页 DCMT**FW	 P74页 SCMT**FW	 P74页 TCMT**FW	 P74页 VBMT**FW	 P74页 VCMT**FW		
	 P75页 CCMT**MX	 P75页 DCMT**MV	 P75页 TCMT**MX	 P75页 VBMT**MX				
	 P76页 CNMG**E-LH	 P76页 DNMG**E-LH	 P76页 SNMG**E-LH	 P76页 TNMG**E-LH	 P76页 VNMG**E-LH	 P76页 CNMG**E-LH		
	 P77页 CCMT**MD	 P77页 DCMT**MD	 P77页 SCMT**MD	 P77页 TCMT**MD	 P77页 VCMT**MD			
	 P78页 CNMG**MA	 P78页 DNMG**MA	 P78页 SNMG**MA	 P78页 TNMG**MA	 P78页 VNMG**MA	 P78页 WNMG**MA		
	 P79页 CNMG**SA	 P79页 TNMG**SA	 P79页 WNMG**SA					
耐热合金精细加工 Finishing of Heat Resistant alloys	 P81页 CCGT**SL	 P81页 DCGT**SL	 P81页 SCGT**SL	 P81页 TCGT**SL	 P81页 VCGT**SL	 P81页 VBGT**SL		
耐热合金精细加工及半精细加工 The semi-Finishing of Heat Resistant alloys	 P82页 CNGG**E-LHC	 P82页 DNNG**E-LHC	 P82页 SNGG**E-LHC	 P82页 TNNG**E-LHC	 P82页 VNGG**E-LHC	 P82页 WNGG**E-LHC		





































## B1-1 车削刀片一览表 Turning inserts overview

耐热合金半精加工及粗加工 The heat resistant alloys semi-finishing and roughing process	 P83页	 P83页	 P83页	 P83页	 P83页	 P83页	
	CNMG**SN	DNMG**SN	SNMG**SN	TNMG**SN	VNMG**SN	WNMG**SN	
铝的加工 Aluminum processing	 P85页	 P85页	 P85页	 P85页	 P85页	 P85页	 P85页
	CCGT**LHC	DCGT**LHC	SCGT**LHC	TCGT**LHC	VBGT**LHC	VCGT**LHC	RCGT**LHC
	 P87页	 P87页	 P87页	 P87页	 P87页		
	CCGT**LH2	DCGT**LH2	TCGT**LH2	VCGT**LH2	VPGT**LH2		
	 P88页	 P88页	 P88页	 P88页			
	CCGT**LZC	DCGT**LZC	TCGT**LZC	VCGT**LZC			
	 P89页	 P89页	 P89页	 P89页	 P89页	 P89页	
	CNGG**LHC	DNMG**LHC	SNGG**LHC	TNGG**LHC	VNGG**LHC	WNGG**LHC	
	 P92页	 P92页	 P92页	 P92页	 P92页	 P92页	 P93页
	CNMG**LH	DNMG**LH	SNMG**LH	TNMG**LH	VNMG**LH	WNMG**LH	SEKT**AFFN-LH2
	 P93页	 P93页	 P93页	 P93页	 P170页	 P197页	 P197页
	APKT**T4PDFR-LHC	APKT**PDFR-G2C	APEX**FR-LHC	APKT**FR-LHC	ADGT1135**PDFR-LHC	ADGT1504**PDFR-LHC	ADGT1904**LHC
	 P94页	 P94页	 P94页	 P94页	 P94页	 P94页	
	GDMA840-LHC	GIPATYZ-35V-1.2-LHC	GIP600E-3.00-LHC	MRGN	VCGT	VPGT	
车削刀 Inserts for processing wheel							



# B1-1 车削刀片一览表 Turning inserts overview

**B**  
普通车削  
General Turning

铸铁的精加工 Finishing of cast iron	 P96页 CNMG**CX	 P96页 DNMG**CX	 P96页 SNMG**CX	 P96页 TNMG**CX	 P96页 WNMG**CX		
铸铁的半精加工 The semi-Finishing of cast iron	 P97页 CNMG**CQ	 P97页 DNMG**CQ	 P97页 SNMG**CQ	 P97页 TNMG**CQ	 P97页 WNMG**CQ	 P97页 VNMG**CQ	
	 P98页 CNMG**U	 P98页 DNMG**U	 P98页 SNMG**U	 P98页 TNMG**U	 P98页 VNMG**U	 P98页 WNMG**U	
	 P99页 CNMG**GH	 P99页 DNMG**GH	 P99页 TNMG**GH	 P99页 WNMG**GH			
	 P100页 CNMA**	 P100页 DNMA**	 P100页 SNMA**	 P100页 TNMA**	 P100页 WNMA**		
	 P102页 LPUC	 P102页 LNUC	 P102页 XNGX				
	 P102页 LNGF	 P102页 LNGF					
仿形车刀 Turning inserts for profile	 P103页 KNUX	 P103页 KNUX					
	 P103页 KNUX						



## B1-2 车削刀片槽型说明 Description of chipbreaker

### A 负角刀片 Negative inserts

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
P	FW 	$a_p=0.15-1.5 \text{ mm}$ $f_n=0.07-0.5 \text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于钢精加工车削；For steel finishing turning. 在钢件加工中，切屑控制能力好于其他槽型 Cutting control ability is better than other chipbreakers in steel process 工序：纵向车削、车端面、背车和仿形切削 Operations: longitudinal cutting, facing, back-turning and profiling. 优势：轻切削槽型、低切削力、适合加工细长轴、薄壁和不稳定夹紧零件。与耐磨牌号组合以活动更佳生产效率。Advantages: light cutting geometry, low cutting forces suitable for slender Shafts, thin walled and unstably clamped components. This chipbreaker matches with wear-resisting Grade will be better. 局限性：切削深度和进给范围。Limitations: depth of cut and feed range. 典型零件：轮轴、齿轮，优先考虑的是优良的表面质量。Components typically: axles, gears where good surface finish is a priority.</p> 
P	MD 	$a_p=0.2-8.6 \text{ mm}$ $f_n=0.1-0.65 \text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削；For medium turning. 对于钢具有宽广的应用范围。With broad applied range for steel. 工序：纵向切削、车端面和仿形切削。Operations: longitudinal cutting, facing and profiling 优势：可靠性和通用性强，并实现了无故障切削。与耐磨牌号组合能获得更好的生产效率。Advantages: High reliability and universality with fault-free cutting. This chipbreaker matches with wear-resisting Grade will be better. 典型零件：钢制轮轴、毂和齿轮等。Components typically: axles, hubs, gears, etc in steel.</p> 
P M	MA 	$a_p=0.2-6.0 \text{ mm}$ $f_n=0.15-0.5 \text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削。For semi-finishing turning. 应用于钢和铸铁的中型切削。For semi-finishing of steel and cast iron; 工序：车削、车端面和仿形车削。Operations: Turning, facing and profiling. 优势：适合通用领域。正棱边形刃形，切削锋利性高。Advantages: Suitable for general field. Positive edge shape of blade, performance of Sharp cutting. 典型零件：普通钢件和铸铁件。Typical parts: Ordinary steel parts and cast iron parts.</p> 
P K	U 	$a_p=0.25-4.0 \text{ mm}$ $f_n=0.15-0.5 \text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精到精加工车削；For semi-finishing to finishing turning. 对于铸铁工具有广泛的应用 With broad applied range for cast iron. 工序：车削、车端面。Operations: turning, facing. 优势：刃口强度高，阻力低，排屑流畅，与更耐磨的涂层牌号可获得更佳的生产效率。Advantages: high cutting edge hardness, low cutting resistance force, easy chip-flow. Combined with more abrasive grade can get better efficiency. 局限性：对铸件、锻造硬皮以及间断切削敏感。Limitations: Sensitive to casting, forging and discontinuous cutting. 典型零件：普通铸铁零件。Typical parts: pieces of cast iron.</p> 



## B1-2 车削刀片槽型说明 Description of chipbreaker

### A 负角刀片 Negative inserts

B  
普通车削  
General Turning

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
P	<p>TM</p> 	$a_p=0.15-4.5\text{ mm}$ $f_n=0.2-0.5\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削； For semi-finishing machining;            适用于钢的半精加工； For semi finishing turning Of steel.            工序：车削、车端面和仿形车削 Operations: turning, facing, profiling.            优势：通用性强，排屑流畅，刀尖旁独特形状的突起和大前角，使断屑槽保持锋刃的切削性能和低切削应力。 Advantages: High universality, easy chip-flow, special bulge close to the nose radius and big rake angle generate the cutting ability and low cutting force of chipbreaker            局限性：切削深度和进给速度受限。 Limitations: the depth of cutting and feed.            典型零件：普通钢件 Typical parts: ordinary steel parts.</p> 
P	<p>RA</p> 	$a_p=0.7-15\text{ mm}$ $f_n=0.2-1\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于粗加工车削。 For rough turning.            加工钢和不锈钢时具有高金属去除率。 With high metal removal rate when process steel and stainless steel.            工序：纵向切削、车端面和仿形切削。 Operations: longitudinal turning, facing and profiling            优势：通用功能，具有较高的粗加工能力，可提供良好的加工经济性。 Advantages: High universality, with high roughing process ability.            局限性：切削刃过载的风险，当使用杠杆夹紧型的刀柄并应用高切削参数的时候，有刀片在刀片座移动的风险。 Limitations: risk of overloading cutting edge, risk of insert movement in seat at high cutting data when used with lever-type toolholder.            典型零件：轮轴、毂和齿轮等。 Components typically: axles, hubs, gears, etc. in steel.</p> 
P	<p>RB 单面</p> 	$a_p=0.7-15\text{ mm}$ $f_n=0.2-1\text{ mm/r}$		<p>用于粗加工车削。 For rough turning.            加工钢和不锈钢时具有高金属去除率。            With high removal rate in steel with double and single sided insert alternatives.            优势：通用功能，具有较高的粗加工能力，可提供良好的加工经济性。 Advantages: universal capability, double-sided insert geometry with high Roughing capability contributing towards good machining economy.            典型零件：轮轴、风电法兰和齿轮等。 Components typically: axles, flange, gears, etc.</p> 
M S N	<p>LH</p> 	$a_p=0.08-3.5\text{ mm}$ $f_n=0.1-0.4\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于精加工车削； Used for finish turning;            适用于不锈钢精加工和铝合金等金属材料加工 Suitable for stainless steel and non-ferrous metals such as aluminum alloy materials processing;            工序：车削、车端面； Operations: turning and facing;            优势：具有低切削力的轻切削槽形可靠性和通用性强，实现了无故障切削。 Advantages: with a lower cutting force light cutting groove, reliability and versatility, achieved without fault cutting;            局限性：在进给率和切削深度方面应用范围受限 Limitations: the feed rate and cutting depth limitation of application scope;            典型零件：铝合金零件。 Typical parts: aluminum alloy parts.</p> 



## B1-2 车削刀片槽型说明 Description of chipbreaker





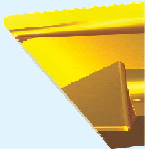

### A 负角刀片 Negative inserts

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
S	SN 	$a_p=0.05-4.5\text{ mm}$ $f_n=0.12-0.65\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削；For semi-finishing turning.</p> <p>对于耐热合金/钛合金具有广泛的应用范围。widely used for Resistance alloy/titanium alloy.</p> <p>工序：纵向车削、车端面和仿形切削。Operations: longitudinal turning, facing and profiling</p> <p>优势：可靠，并实现了无故障切削。加工不锈钢的通用槽型。Advantages: reliable giving problem-free machining general chipbreaker for stainless steel.</p> <p>局限性：可能会受铸件、锻件硬皮以及间断切削的影响。Limitations: can be affected by casting and forging skin as well as Intermittent cuts.</p> 
K	CX 	$a_p=0.15-2.0\text{ mm}$ $f_n=0.08-0.30\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于精加工车削。For finish turning;</p> <p>灰口和球墨铸铁。Gray and nodular cast iron.</p> <p>工序：纵向车削、车端面和仿形切削。 Operations:Longitudinal Turning,facing and profiling.</p> <p>优势：具有低切削力的轻切削槽形，对于对振动敏感的零件和不稳定夹紧的零件加工有许多优点。当车削通孔时，可提供更高和更一致的工件质量。</p> <p>Advantages:Light cutting groove with lower cutting force.Have many advantages for the machining of parts vibration sensitive and unstable clamping.When turning the through hole, can provide a higher and more consistent quality of workpiece.</p> <p>局限性：切削深度和进给。Limitations: The depth of cutting and feed.</p> <p>典型零件：普通铸铁零件。Typical parts:Ordinary parts of cast iron.</p> 
K	CQ 	$a_p=0.2-6.0\text{ mm}$ $f_n=0.15-0.50\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削。For semi-finish turning;</p> <p>灰口和球墨铸铁。Gray and nodular cast iron.</p> <p>工序：纵向车削、车端面和仿形切削。Operations:Longitudinal Turning,facing and profiling.</p> <p>优势：可靠并实现了无故障切削。Advantages:Reliable giving trouble-free machining.</p> <p>局限性：在间断切削时切削刃强度偏低。Limitations: Lower strength of Cutting edge in the intermittent cutting.</p> <p>典型零件：普通铸铁零件。Typical parts:Ordinary parts of cast iron.</p> 
K	GH 	$a_p=1.0-8.0\text{ mm}$ $f_n=0.3-0.85\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于粗加工。For rough turning.</p> <p>灰口和球墨铸铁。Gray and nodular cast iron.</p> <p>工序：车削、车端面和仿形切削。Operations:Turning,facing and profiling.</p> <p>优势：宽广的铸铁粗加工范围，提供了良好的加工经济性。Advantages: A wide range of rough machining of cast iron, provides good economy of machining.</p> <p>典型零件：铸铁件。Typical parts:Parts of cast iron.</p> 



## B1-2 车削刀片槽型说明 Description of chipbreaker

### A 负角刀片 Negative inserts

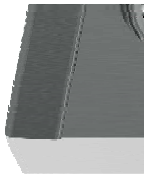
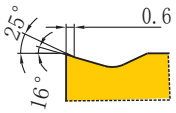
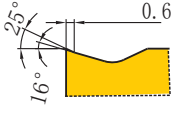

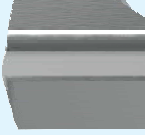
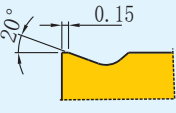
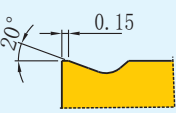


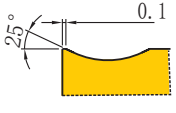
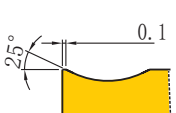

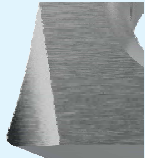
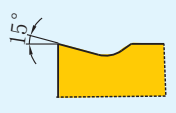
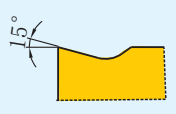

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
K	无槽 No slot 	$a_p=0.2-12.0\text{ mm}$ $f_n=0.1-1.19\text{ mm/r}$	刀尖部分 $0^\circ$  主切削刃部分 $0^\circ$ 	无槽 用于粗加工车削。For rough turning. 用于加工灰口和球墨铸铁。For grey and nodular cast-iron. 工序：纵向车削、车端面 and 一定程度的仿形切削。Operations: longitudinal turning, facing and to some extent profiling. 优势：宽广的粗加工应用范围。Advantages: broad application range for roughing. 局限性：会生成较高的径向切削力，可能影响零件和夹紧。Limitations: can generate high radial cutting forces which may effect component and clamping. 典型零件：普通铸铁零件。Components typically: cast-iron components in general. 
P	KNUX 	$a_p=1-6\text{ mm}$ $f_n=0.2-0.7\text{ mm/r}$		工序：仿形车削、车削。用于钢、不锈钢的精和半精加工。 典型零件：轴轮、薄壁、轮毂等。 优势：轻切削槽型、低切削力，适用于加工细长轴、薄壁和不稳定加紧零件。低进给小切深是，切屑控制能力好。 For fine to medium turning of steel and stainless steel. Operations: Profiling turning and turning. For finishing and semi-finishing of steel and stainless steel Typical parts: arbor wheel, thin wall and wheel. Advantages: light cutting chip breaker, low cutting forces, suitable for processing slender shafts, thin wall and unstable clamped components. 





## B1-2 车削刀片槽型说明 Description of chipbreaker

### A 负角刀片 Negative inserts

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
P		$ap=0.08-2.6\text{ mm}$ $fn=0.1-0.25\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于精加工车削。For finish machining. 适用于钢的精加工车削。Apply to steel finish machining. 工序：车削、车端面。Operations: turning, facing. 优势：刃口锋利，抗粘附性强，加工尺寸精度高、表面质量好，排屑流畅 Advantage: a sharp edge, resistance to strong adhesion, processing size and high precision, good surface quality, smooth chip removal. 典型零件：普通钢件。Typical parts: ordinary steel parts.</p> 
P		$ap=0.3-1.2\text{ mm}$ $fn=0.03-0.18\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>工序：车削、车端面。Operations: turning, facing. 适用于钢的精加工、半精加工车削。 Apply to steel semi finish machining, finish machining. 优势：刃口强度高，抗粘附性强，加工尺寸精度高、表面质量好，排屑流畅。 Edge: edge tough, resistant to strong adhesion, processing size and high precision, good surface quality, smooth chip removal. 局限性：一般只适用于普通钢件的一般加工。 Limitations: generally used only for steel parts general machining. 典型零件：普通钢件。 Typical parts: ordinary steel parts.</p> 
K		$ap=0.08-3.2\text{ mm}$ $fn=0.18-0.38\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工、精加工车削。For semi-finishing machining, finish machining. 适用于铸铁零件的半精加工、精加工车削 Used for semi-finishing and finishing of cast iron parts. 工序：车削、车端面。Operations: turning, facing. 优势：刃口强悍，平缓的槽型提供了良好的容屑范围，排屑流畅，抗粘附性强，加工是能够保证表面质量和精度。Strong cutting edge, flat chip breaker with good chip space, smooth chip removal, high adhesion-resisting. Make sure the cutting surface quality and precision. 局限性：多用于铸铁零件加工。Limitations: used for processing of cast iron parts. 典型零件：普通铸铁零件。Typical parts: pieces of cast iron.</p> 
N		$ap=0.06-2.0\text{ mm}$ $fn=0.05-0.2\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于精加工、半精加工车削。For finishing, semi finish turning. 对有色金属和普通钢件有广泛的应用范围。 Wide application range for non-ferrous metal and steel 工序：车削、仿形车削。Operations: cutting, copying turning. 优势：刃口锋利，切削阻力小，排屑流畅，具有良好的切屑控制力，可获得更高表面光洁度。Advantage: a sharp edge, small cutting resistance, smooth chip removal, with good chip control force, has wide application range. 典型零件：普通钢件、有色金属零件。Typical parts: ordinary steel, non-ferrous metal parts.</p> 



## B1-2 车削刀片槽型说明 Description of chipbreaker

### B 正角刀片 Positive inserts

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
P	N 	$a_p=0.06-3.6$ mm $f_n=0.2-0.36$ mm/r	<p>刀尖部分</p> <p>主切削刃部分</p>	<p>适用于钢的半精加工、精加工车削。 Apply to steel semi finish machining, finish machining 工序：车削、车端面。Operations: turning, facing. 优势：刃口强悍，抗粘附性强，加工尺寸精度高、表面质量好，排屑流畅 Advantages: high toughness of cutting edge, high adhesion-resisting, high accuracy of processing size, good surface quality and smooth chip removal. 局限性：一般只用于普通钢件的一般加工 Limitations: generally used only for ordinary steel parts general machining. 典型零件：普通钢件。Typical parts: ordinary steel parts.</p>
P	E 	$a_p=0.08-2.6$ mm $f_n=0.1-0.25$ mm/r	<p>刀尖部分</p> <p>主切削刃部分</p>	<p>用于半精加工、精加工车削。For semi-finishing machining, finish machining . 适用于钢的半精加工。Apply to steel semi finishing. 工序：车削、车端面。Operations: turning, facing. 优势：刃口锋利，抗粘附性强，加工尺寸精度高、表面质量好，排屑流畅 Advantages: high toughness of cutting edge, high adhesion-resisting, high accuracy of processing size, good surface quality and smooth chip removal. 局限性：切削深度和进给速度。Limitations: the cutting depth and feed rate. 典型零件：普通钢件。Typical parts: ordinary steel parts.</p>
P	H 	$a_p=0.08-3.2$ mm $f_n=0.1-0.3$ mm/r	<p>刀尖部分</p> <p>主切削刃部分</p>	<p>适用于钢的精加工、半精加工 Apply to steel finishing, semi finish turning. 工序：车削、车端面和仿形车削 Operations: turning, facing and copying turning. 优势：通槽提供了良好的切削范围，切削阻力小，刃口锋利，排屑流畅，具有良好的加工尺寸精度和表面质量，更适合仿形加工。provided good range, small cutting resistance, sharp blade, smooth chip removal, has good processing dimensional accuracy and surface quality. 局限性：切削速度。Limitations: the cutting speed. 典型零件：普通钢件。Typical parts: common steel .</p>
N	S 	<p>钢： <math>a_p=0.06-2.3</math> mm <math>f_n=0.05-0.18</math> mm/r</p> <p>有色金属： <math>a_p=0.08-2.5</math> mm <math>f_n=0.06-0.2</math> mm/r</p>	<p>刀尖部分</p> <p>主切削刃部分</p>	<p>用于精加工、半精加工车削；For finishing, semi finish turning; 对有色金属和低碳钢有广泛的应用范围 Wide application range for ordinary steel and low carbon steel. 工序：车削、仿形车削；Operations: turning, copying turning; 优势：刃口锋利，切削阻力小，排屑流畅，具有良好的切屑控制力，可获得更高的表面光洁度。Advantage: a sharp edge, small cutting resistance, smooth chip removal, with good chip control force, has wide application range; 局限性：刃口有过载风险，切削深度和进给速度受限。Limitations: cutting edge has overload risk, cutting depth and feed rate restriction; 典型零件：普通钢件、有色金属零件。Typical parts: ordinary steel, non-ferrous metal parts.</p>

B  
普通车削  
General Turning



## B1-2 车削刀片槽型说明 Description of chipbreaker

### B 正角刀片 Positive inserts

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
P M	FW 	$a_p=0.15-2.0\text{ mm}$ $f_n=0.01-0.3\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于精加工车削。For finishing turning.</p> <p>在钢、不锈钢、铸铁加工中，切屑控制能力好于其他槽形。with good chip control above all in steel, stainless steel, grey and nodular cast-iron.</p> <p>工序：车削、车端面仿形切削和背车加工。Operations: turning, facing, profiling and back-facing.</p> <p>优点：正前角的轻型切削槽形可产生低切削力，适合于加工细长轴、薄壁零件或不稳定夹紧零件。Advantages: Light cutting chip breaker with low cutting force. Suitable for processing slender shaft, thin-walled parts and unstable clamped parts.</p> <p>局限性：切削深度和进给。Limitations: depth of cut and feed.</p> <p>典型零件：轮轴、轴、毂和齿轮，优先考虑表面质量的零件。Typical parts: shaft, wheel and gear hub</p> 
P M	MD 	$a_p=0.2-4.5\text{ mm}$ $f_n=0.1-0.35\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削。For medium-duty turning.</p> <p>对于钢件、不锈钢、铸铁应用非常广泛。With broad capability for steel, stainless steel, grey and nodular cast-iron.</p> <p>工序：车削、车端面和仿形切削。Operations: turning, facing and profiling.</p> <p>优点：通用性强、可靠并且无故障切削。Advantages: high universality, reliable and problem-free cutting</p> <p>局限性：切削深度和进给，切削刃过载的风险。Limitations: depth of cut and feed, risk of overloading the cutting edge.</p> <p>典型零件：轮轴、轴、毂和齿轮。Components typically: axles, shafts, hubs, gears, etc.</p> 
P	R 	$a_p=0.15-12.8\text{ mm}$ $f_n=0.05-3.5\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精加工车削。For semi-finishing turning.</p> <p>适用于钢、不锈钢和铸铁加工。Used for steel, stainless steel and cast-iron.</p> <p>工序：端面、外圆和仿形加工。Operations: turning, facing and profiling.</p> <p>优点：具有高可靠性。Advantages: high reliability.</p> <p>局限性：通过圆刀片进行断屑。Limitations: chip breaking via round insert.</p> <p>典型零件：轴、轮轴等。Components typically: shafts, axles, etc.</p> 
P	RA 	$a_p=0.2-14.5\text{ mm}$ $f_n=0.1-1.2\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于粗加工车削。For rough turning.</p> <p>加工钢时具有高金属去除率。With high removal rate in steel, stainless steel, grey and nodular cast-iron.</p> <p>工序：端面、外圆和仿形加工。Operations: turning, facing and profiling.</p> <p>优点：通用。正前角槽型可提供良好的粗加工能力和金属去除率与最小振动趋势之间的平衡。Advantages: all-round, positive geometry giving good roughing capability with good balance between high removal rate and minimum vibration tendencies.</p> <p>局限性：切削深度和进给，切削刃过载的风险。Limitations: depth of cut and feed, risk of overloading the cutting edge.</p> <p>典型零件：轮轴、轴和齿轮等。Components typically: axles, shafts, hubs, gears, etc.</p> 



## B1-2 车削刀片槽型说明 Description of chipbreaker

### B 正角刀片 Positive inserts

B  
普通车削  
General Turning

ISO 分类	断屑槽 Chip breaker	推荐切削用量 Recommended cutting parameter	刃口形状 Cutting edge shape	刀片外形和槽型特点 Chipbreaker features
N	LH 	$ap=0.1-5.0\text{ mm}$ $fn=0.03-0.5\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于通用车削加工。Used for finish turning. 铝合金和其他有色金属。Aluminum alloy and other non-ferrous metals. 工序：车削、车端面和仿形切削。Operations: turning, facing and copying cutting. 优点：开放的正前角槽形可在高切削速度下切削轻快。使用尽可能高的切削可获得更多的生产效率。速度高达(2500m/min)。Advantages: open positive rake angle groove in high cutting speed cutting light. Used as far as possible the high cutting speed (high2500m / min) can obtain more production efficiency. 局限性：多用于有色金属材料加工。Limitations : used for nonferrous metal material processing. 典型零件：普通的铝材零件。Typical parts: ordinary aluminum parts.</p> 
N	LH2 	$ap=0.1-6.5\text{ mm}$ $fn=0.13-0.6\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于半精到粗车削加工。Used for finish turning. 铝合金和其他有色金属。Aluminum alloy and other non-ferrous metals. 工序：车削、车端面和仿形切削。Operations: turning, facing and copying cutting. 优点：开放的正前角槽形可在高切削速度下切削轻快。使用尽可能高的切削速度可获得更多的生产效率。Advantages: open positive rake angle groove in high cutting speed cutting light. Used as far as the high cutting speed can be obtained more production efficiency. 局限性：多用于有色金属材料加工。Limitations : used for nonferrous metal material processing. 典型零件：普通的铝材零件。Typical parts: ordinary aluminum parts.</p> 
S	SL 	$ap=0.06-1.7\text{ mm}$ $fn=0.03-0.3\text{ mm/r}$	<p>刀尖部分</p>  <p>主切削刃部分</p> 	<p>用于精加工车削；Used for finish turning; 适用于耐热合金和钛合金等航空航天零件材料精加工 suitable for finishing machining of heat resistance alloy, titanium alloy and other aerospace parts 工序：车削、车端面；Operations: turning, facing; 优势：具有低切削力的轻切削槽形可靠性和通用性强，实现了无故障切削。 Advantages: Light cutting chip breaker with low cutting force. High reliability and universality. Problem free cutting . 局限性：在进给率和切削深度方面应用范围受限 Limitations: the feed rate and cutting depth limitation of application scope;</p> 



## B1-3牌号与槽型推荐 Recommended grade and chipbreaker

**P** 钢加工 Process steel




	加工类型 Process type	断屑槽 Chip breaker	精度 Tolerance	槽型示意图 Chipbreaker diagram	推荐切削用量 Recommended cutting parameter	CVD涂层 CVD coating	PVD涂层 PVD coating
负前角刀片 Negative Angle blade before	精加工 Finishing	FW	M		ap=0.3-1.5 mm、fn=0.07-0.5 mm/r	BPS051、BPS101	
		N	G		ap=0.3-1.2 mm、fn=0.03-0.18 mm/r		BU810、BPG05B
		E	G		ap=0.8-2.6 mm、fn=0.1-0.25 mm/r		BU810、BPG05B
		H	G		ap=0.8-3.2 mm、fn=0.1-0.3 mm/r		BU810、BPG05B
		S	G		ap=0.6-2.0 mm、fn=0.05-0.2 mm/r		BU810、BPG05B
	半精加工 Semi-finishing	TM	M		ap=1.5-4.5 mm、fn=0.2-0.5 mm/r	BPS101、BPS251	BPG308
		MD	M		ap=0.4-8.6 mm、fn=0.1-0.65 mm/r	BPS101、BPS251	BPG308
		MA	M		ap=0.8-3.2 mm、fn=0.1-0.3 mm/r		BU810、BPG05B
		U	M		ap=0.8-2.6 mm、fn=0.1-0.3 mm/r		BU810、BPG05B
		UX	M		ap=0.8-3.2 mm、fn=0.1-0.3 mm/r		BU810、BPG05B
		S	G		ap=0.6-2.0 mm、fn=0.05-0.2 mm/r		BU810、BPG05B
粗加工 Rough finish	RA	M		ap=0.7-15 mm、fn=0.2-1 mm/r	BPS373		
正前角刀片 Is the former angle blade	精加工 Finishing	N	G		ap=0.3-1.2 mm、fn=0.03-0.18 mm/r		BU810、BPG05B
		H	G		ap=0.8-3.2 mm、fn=0.1-0.3 mm/r		BU810、BPG05B
		E	G		ap=0.8-2.6 mm、fn=0.1-0.3 mm/r		BU810、BPG05B
		S	G		ap=0.6-2.0 mm、fn=0.05-0.2 mm/r		BU810、BPG05B
		FW	M		ap=0.5-2.0 mm、fn=0.01-0.3 mm/r	BPS051、BPS101	
	半精加工 Semi-finishing	N	G		ap=0.3-1.2 mm、fn=0.03-0.18 mm/r		BU810、BPG05B
		MD	M		ap=0.2-4.5 mm、fn=0.1-0.35 mm/r	BPS101、BPS251	BPG308
		R	M		ap=0.5-12.8 mm	BPS101、BPS251	BPG308
	粗加工 Rough finish	RA	M		ap=0.2-4.5 mm、fn=0.1-0.35 mm/r	BPS373	

**B**  
General Turning  
普通车削





## B1-3牌号与槽型推荐 Recommended grade and chipbreaker




**M** 不锈钢加工 Process on stainless steel

ISO 分类组	加工类型 Process type	断屑槽 Chip breaker	精度 Tolerance	槽型示意图 Chipbreaker diagram	推荐切削用量 Recommended cutting parameter	CVD涂层 CVD coating	PVD涂层 PVD coating
Negative Angle blade before 负前角刀片	精加工 Finishing	LH	M		$ap=0.8-3.5\text{ mm}$ 、 $fn=0.1-0.4\text{ mm/r}$		BPG05B
		MX	M		$ap=0.1-1.5\text{ mm}$ 、 $fn=0.05-0.4\text{ mm/r}$		BPG05B
	半精加工 Semi-finishing	MD	M		$ap=0.4-8.6\text{ mm}$ 、 $fn=0.1-0.65\text{ mm/r}$		BPG20B、BPG25B
		MA	M		$ap=0.5-8.5\text{ mm}$ 、 $fn=0.12-0.65\text{ mm/r}$		BPG20B、BPG25B

**B**  
普通车削  
General Turning






**N** 有色金属 Non-ferrous metals

Negative Angle blade before 负前角刀片	加工类型 Process type	断屑槽 Chip breaker	精度 Tolerance	槽型示意图 Chipbreaker diagram	推荐切削用量 Recommended cutting parameter	硬质合金 Carbide grade
	精加工 Finishing	LH	M		$ap=0.8-3.5\text{ mm}$ 、 $fn=0.1-0.4\text{ mm/r}$	BU810 BU813
	半精加工、精加工 Semi-finishing, finishing	S	G		$ap=0.8-2.5\text{ mm}$ 、 $fn=0.06-0.2\text{ mm/r}$	BU810

Is the former Angle blade 正前角刀片	加工类型 Process type	断屑槽 Chip breaker	精度 Tolerance	槽型示意图 Chipbreaker diagram	推荐切削用量 Recommended cutting parameter	硬质合金 Carbide grade
	半精到粗车削加工 Semi-finishing, roughing turning	LH	G		$ap=0.1-5.0\text{ mm}$ 、 $fn=0.03-0.5\text{ mm/r}$	BU810 BU813
		LH2	G		$ap=0.4-6.5\text{ mm}$ 、 $fn=0.13-0.6\text{ mm/r}$	BU810 BU813
半精加工 Semi-finishing	S	G		$ap=0.6-2.0\text{ mm}$ 、 $fn=0.05-0.2\text{ mm/r}$	BU810	



**K** 铸铁加工 Process on cast iron

	加工类型 Process type	断屑槽 Chip breaker	精度 Tolerance	槽型示意图 Chipbreaker diagram	推荐切削用量 Recommended cutting parameter	CVD涂层 CVD coating
负前角刀片 Negative Angle blade before	精加工 Finishing	CX	M		$ap=0.06-1.7\text{ mm}$ 、 $fn=0.03-0.3\text{ mm/r}$	BPC132
	半精加工 Semi-finishing	CQ	M		$ap=0.2-6.0\text{ mm}$ 、 $fn=0.15-0.5\text{ mm/r}$	BPC132
		U	M		$ap=1-4.0\text{ mm}$ 、 $fn=0.15-0.5\text{ mm/r}$	BPC132
	粗加工 Rough finish	GH	M		$ap=0.4-14\text{ mm}$ 、 $fn=0.19-0.85\text{ mm/r}$	BPC132
		无槽 No slot	M		$ap=0.2-12.0\text{ mm}$ 、 $fn=0.1-1.19\text{ mm/r}$	BPC132





# B1-4 普通车削刀片命名规则 General turning inserts code key

刀片形状 / 代号 Insert Shape/Code			公制 Metric				
代号 Code	有无孔 With/Without hole	有无断屑槽 With/Without chipbreaker	刀片剖面 Section plane of insert	代号 Code	有无孔 With/Without hole	有无断屑槽 With/Without chipbreaker	刀片剖面 Section plane of insert
	有 With	无 Without		<b>N</b>	无 Without	无 Without	
	有 With	无 Without		<b>R</b>	无 Without	单面 Single-side	
	有 With	无 Without		<b>F</b>	无 Without	双面 Double-side	
	有 With	无 Without		<b>A</b>	有 With	无 Without	
	有 With	无 Without		<b>M</b>	有 With	单面 Single-side	
	有 With	无 Without		<b>G</b>	有 With	双面 Double-side	
	有 With	无 Without		<b>X</b>	---	---	特殊 Special
	有 With	双面 Double-side					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	单面 Single-side					
	有 With	单面 Single-side					
	有 With	无 Without					
	有 With	无 Without					
	有 With	双面 Double-side					

**B**  
普通车削  
General Turning

**T N M G**

主切削刃后角 Clearance angle of main cutting edge			
代号 Code	后角 Clearance angle	代号 Code	后角 Clearance angle
<b>A</b>		<b>B</b>	
<b>C</b>		<b>D</b>	
<b>E</b>		<b>F</b>	
<b>G</b>		<b>N</b>	
<b>P</b>		<b>O</b>	其他的后角 Other clearance angle

允许偏差 Allowed tolerance										
代号 Code	m允许偏差 (mm) tolerance range	内切圆ØI.C 允许偏差 (mm) Inscribed circle Tolerance (mm)	厚度S 允许偏差 (mm) Thickness S Tolerance (mm)	(参考) M级精度详细情况 (按形状、大小分) (Reference) Details of M-class tolerance (Identified by shape and size) 刀尖高度允许偏差 (mm) Nose height tolerance (mm)						
<b>A</b>	±0.005	±0.025	±0.025	内切圆 Inscribed circle						
<b>F</b>	±0.005	±0.013	±0.025	6.35	±0.08	±0.08	±0.08	±0.11	±0.16	---
<b>C</b>	±0.013	±0.025	±0.025	9.525	±0.08	±0.08	±0.08	±0.11	±0.16	---
<b>H</b>	±0.013	±0.013	±0.025	12.7	±0.13	±0.13	±0.13	±0.15	---	---
<b>E</b>	±0.025	±0.025	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	---	---
<b>G</b>	±0.025	±0.025	±0.13	19.05	±0.15	±0.15	±0.15	±0.18	---	---
<b>J</b>	±0.005	±0.05±0.13	±0.025	25.4	---	±0.18	---	---	---	---
<b>K</b>	±0.013	±0.05±0.13	±0.025	内切圆ØI.C允许公差 (mm) Tolerance of inscribed circle						
<b>L</b>	±0.025	±0.05±0.13	±0.025	内切圆 Inscribed circle						
<b>M</b>	±0.08±0.18	±0.05±0.13	±0.13	6.35	±0.05	±0.05	±0.05	±0.05	±0.05	---
<b>N</b>	±0.08±0.18	±0.05±0.13	±0.025	9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
<b>U</b>	±0.13±0.38	±0.08±0.25	±0.13	12.7	±0.08	±0.08	±0.08	±0.08	---	±0.08
				15.875	±0.10	±0.10	±0.10	±0.10	---	±0.10
				19.05	±0.10	±0.10	±0.10	±0.10	---	±0.10
				25.4	---	±0.13	---	---	---	±0.13

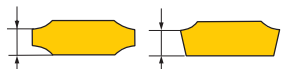




# B1-4 普通车削刀片命名规则 General turning inserts code key

内切圆直径 (mm) Diameter of IC	刀片形状 Insert shape							
	C	D	R	S	T	V	W	K
3.97					06			
5.0			05					
5.56					09			
6.0			06					
6.35	06	07			11	11		
8.0			08					
9.525	09	11	09	09	16	16	06	16
10.0			10					
12.0			12					
12.7	12	15	12	12	22	22	08	
15.875	16	19	15	15	27		10	
16.0			16					
19.05	19		19	19	33			
20.0			20					
25.0			25					
25.4	25		25	25				
31.75			31					
32			32					

**切削刃长度 Length of cutting edge**



厚度指刀片底面与切削刃最高部分之间的高度  
Thickness is defined as height from bottom of insert to the highest part of cutting edge.

代号 Code	刀片厚度(mm) Insert thickness (mm)
00	0.79
T0	0.99
01	1.59
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
T4	4.96
05	5.56
T5	5.95
06	6.35
T6	6.75
07	7.94
09	9.52
T9	9.72
11	11.11
12	12.70

**刀片厚度 Insert thickness**

# 22 04 08 - FW (ISO)

# 4 3 2 (inch)

内切圆 Inscribed circle	
代号 Code	内切圆直径(mm) Diameter of IC (mm)
2	6.35
3	9.525
4	12.7
5	15.875
6	19.05
8	25.4

厚度 Thickness	
代号 Code	厚度(mm) Thickness
2	3.18
3	4.76
4	6.35
5	7.94
6	9.52

刀尖圆弧半径 Nose radius	
代号 Code	刀尖圆弧半径(mm) Nose radius
0	0.2
1	0.4
2	0.8
3	1.2
4	1.6
5	2.0
6	2.4

刀尖圆弧代号 Nose radius Code	
代号 Code	刀尖圆弧半径(mm) Nose radius
00	无圆角 No radius
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	其他
Mo(公制) (Metric)	圆形刀片 Round insert

断屑槽型代号 Chipbreaker code			
FW	CX	FW	SL
MD	CQ	MX	LHC
TM	U	MD	SN
RA	GH	MA	LH

★ 厚度指刀片底面与切削刃最高部分之间的高度  
Thickness is defined as height from bottom of insert to the highest part of cutting edge.





# B1-5 钢加工刀片 Inserts for processing steel ..... 材质 Grades

**P** 钢加工 Process steel

**a** 涂层牌号 Grade for coating

B  
普通车削  
General Turning



牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPS051	P05(P01-P10)	黑/黄 Black/yellow 	CVD涂层牌号: 在稳定工况下对钢材进行精加工时, 可获得高金属去除率。 出色的耐月牙洼磨损和抗塑性变形能力。推荐用于稳定工况。湿式和干式加工。 CVD coated grade: stable conditions for steel finishing can obtain high metal removal rate. Excellent resistance to crater wear and plastic deformation resistance. Recommended for stable conditions. Wet and dry processing.
BPS101	P15(P10-P20)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号, 在硬度、韧性兼备的梯度烧结基体上涂有耐磨涂层, 承受高温。 用于钢和钢铸件的精加工到半精加工, 连续切削到轻的间断切削。 灰口和球墨铸铁的低到中等切削速度加工。 硬材料连续切削到轻型间断切削的精加工到粗加工。湿式和干式加工。 CVD coated carbide grade, wear-resistance materials coated on the gradient sintered substrate which has both good hardness, toughness. Can bear high temperatures. For steel and steel castings finishing to roughing processing. Continue cutting to light interrupted cutting. Machining of gray and ductile iron at low to medium cutting speed. For hard materials continuous cutting and light interrupted cutting from finishing to roughing. Wet and dry processing.
BPS153	K15(K10-K20)	黄 Yellow 	
BPS251	P20(P15-P30)	黑/黄 Black/yellow 	梯度合金基体涂覆厚膜耐磨CVD牌号。通用性广的牌号。 适于钢和铸钢件上的精加工到粗加工连续切削以及间断切削。不锈钢材料连续切削和间断切削。 CVD coated carbide grade, Universal grade, suitable for steel and cast steel continuous cutting and interrupted cutting finishing to roughing. Grades with a wide range of applications. Stainless steel continuous cutting and interrupted cutting.
BPS253	M15(M10-M20)	黄 Yellow 	
BPS371	P30(P25-P40)	黑/黄 Black/yellow 	CVD涂层硬质合金牌号, 高强度合金基体上厚膜耐磨涂层。在恶劣工况下加工钢和铸钢件。 刃线安全性, 用于高金属去除率的间断切削。 CVD coated carbide grade, high-strength alloy substrate with thick wear-resistant coating. Machining steel and cast steel in bad conditions. Edge line security for interrupted cutting high metal removal rate.
BPS373		黄 Yellow 	



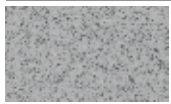





## B1-5 钢加工刀片 Inserts for processing steel ..... 材质 Grades

**P** 钢加工 Process steel

### b 金属陶瓷 Cermet

	牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm <sup>3</sup> )	硬度 Hardness HRA	抗弯强度 Bending strength (N/mm <sup>2</sup> )	使用性能及用途 Usage and performance
	BN201	K01-K10 P01-P20 M01-M20	6.5~7.2	>92	>1800	适用于钢、不锈钢半精加工、精加工 Suitable for the finishing ,semi-finishing of stainless steel
	BN301	K05-K20 P10-P30 M10-M30	6.1~7.2	>91	>2000	适用于钢、不锈钢半精加工、精加工 Suitable for the finishing ,semi-finishing of stainless steel

### c 非涂层牌号 Grade for uncoating

	牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm <sup>3</sup> )	硬度 Hardness HRA	抗弯强度 Bending strength (N/mm <sup>2</sup> )	使用性能及用途 Usage and performance
	YT5	P30	12.7~13.1	89.5~90.5	2200	具有较好的强度、抗冲击性及热震性；适于碳素钢与合金钢的粗加工。 High strength, impact resistance and thermal shock resistance; suitable for carbon and alloy steel rough machining.
	YT14	P20	11.2~11.6	91.5~92.5	1750	使用强度高，抗冲击、抗震性好，适于碳素钢与合金钢的精加工、半精加工。 The use of high strength, impact resistance, good shock resistance, suitable for carbon and alloy steel finishing, semi finishing.
	YT15	P10	11.1~11.5	92~93.2	1650	耐磨性较好。适用于钢、铸钢、合金钢等的精加工、半精加工。 Good wear resistance. Suitable for steel, cast steel, alloy steel finishing, semi finishing.
	BP10	P05~P15	10.0~11.0	≥92.0	1760	红硬性高，抗热震裂和抗热塑性变形能力强适用于钢和铸钢的精加工、半精加工。 Excellent in red hardness.anti-heat crack, anti -plastic deformatio. Suitablefor thefinishing semi finishing of steel castiron .
	BP20	P20~P25 M20	12.3	≥91.5	1910	红硬性高，具有很高的抗热震裂和抗热塑性变形能力，适用合金结构钢、合金工具钢和高锰钢、不锈钢的加工。 Excellent in red handness, anti-heat crak, anti xformation.Suitable for processing the structural alloy steel, alloy tool steel, high manganese steel and stainless steel
	BP35	P30~P40	12.7	≥91.0	2220	红硬性高，并具有良好的抗热震性和高的使用强度，是通用性良好的牌号。适用于钢及铸钢的粗加工 Excellention red hardness anti-thermal deformation . high strength. common grage. Suitable for the roughing of steel, castiron





# B1-5 钢加工负型刀片 Inserts for processing steel ..... 精加工 Finishing

Negative inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of blade		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended									
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic			
				ΦI.C	S	Φd	R	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301		
		CNMG	090304-FW	9.525	3.18	3.81	0.4		★	☆							
			090308-FW	9.525	3.18	3.81	0.8		★	☆							
			120404-FW	12.7	4.76	5.16	0.4		★	☆							
			120408-FW	12.7	4.76	5.16	0.8		★	☆							
			120412-FW	12.7	4.76	5.16	1.2		★	☆							
		DNMG	110404-FW	9.525	4.76	3.81	0.4		★	☆							
			110408-FW	9.525	4.76	3.81	0.8		★	☆							
			150404-FW	12.7	4.76	5.16	0.4		★	☆							
			150408-FW	12.7	4.76	5.16	0.8		★	☆							
			150604-FW	12.7	6.35	5.16	0.4		★	☆							
			150608-FW	12.7	6.35	5.16	0.8		★	☆							
			150612-FW	12.7	6.35	5.16	1.2		★	☆							
		SNMG	120404-FW	12.7	4.76	5.16	0.4		★	☆							
			120408-FW	12.7	4.76	5.16	0.8		★	☆							
			120412-FW	12.7	4.76	5.16	1.2		★	☆							
		TNMG	160404-FW	9.525	4.76	3.81	0.4		★	☆							
			160408-FW	9.525	4.76	3.81	0.8		★	☆							
			160412-FW	9.525	4.76	3.81	1.2		★	☆							
			220404-FW	12.7	4.76	5.16	0.4		★	☆							
			220408-FW	12.7	4.76	5.16	0.8		★	☆							
		VNMG	160404-FW	9.525	4.76	3.81	0.4		★	☆							
			160408-FW	9.525	4.76	3.81	0.8		★	☆							
		WNMG	060404-FW	9.525	4.76	3.81	0.4		★	☆							
			060408-FW	9.525	4.76	3.81	0.8		★	☆							
			060412-FW	9.525	4.76	3.81	1.2		★	☆							
			080404-FW	12.7	4.76	5.16	0.4		★	☆							
			080408-FW	12.7	4.76	5.16	0.8		★	☆							
			080412-FW	12.7	4.76	5.16	1.2		★	☆							



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工正型刀片 Inserts for processing steel ..... 精加工 Finishing

Positive inserts

刀片基本形状The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended									
			ΦI.C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic			
								BPS051	BPS101	BPS251	BPS371	BPG05B	BPG30B	BN201	BN301		
		060202-FW	6.35	2.38	2.8	0.2	7	☆	★								
		060204-FW	6.35	2.38	2.8	0.4	7	☆	★								
		060208-FW	6.35	2.38	2.8	0.8	7	☆	★								
		09T302-FW	9.525	3.97	4.4	0.2	7	☆	★								
		09T304-FW	9.525	3.97	4.4	0.4	7	☆	★								
		09T308-FW	9.525	3.97	4.4	0.8	7	☆	★								
		120404-FW	12.7	4.76	5.5	0.4	7	☆	★								
		120408-FW	12.7	4.76	5.5	0.8	7	☆	★								
		070202-FW	6.35	2.38	2.8	0.2	7	☆	★								
		070204-FW	6.35	2.38	2.8	0.4	7	☆	★								
		11T302-FW	9.525	3.97	4.4	0.2	7	☆	★								
		11T304-FW	9.525	3.97	4.4	0.4	7	☆	★								
		11T308-FW	9.525	3.97	4.4	0.8	7	☆	★								
		09T304-FW	9.525	3.97	4.4	0.4	7	☆	★								
		09T308-FW	9.525	3.97	4.4	0.8	7	☆	★								
		090204-FW	5.56	2.38	2.5	0.4	7	☆	☆								
		090208-FW	5.56	2.38	2.5	0.8	7	☆	☆								
		110304-FW	6.35	3.18	2.8	0.4	7	☆	☆								
		110308-FW	6.35	3.18	2.8	0.8	7	☆	☆								
		110312-FW	6.35	3.18	2.8	1.2	7	☆	★								
		16T304-FW	9.525	3.97	4.4	0.4	7	☆	☆								
		16T308-FW	9.525	3.97	4.4	0.8	7	☆	☆								
		16T312-FW	9.525	3.97	4.4	1.2	7	☆	☆								
		110304-FW	6.35	3.18	2.8	0.4	5	☆	☆								
		110308-FW	6.35	3.18	2.8	0.8	5	☆	☆								
		160404-FW	9.525	4.76	4.4	0.4	5	☆	★								
		160408-FW	9.525	4.76	4.4	0.8	5	☆	★								
		110304-FW	6.35	3.18	2.8	0.4	7	☆	☆								
		110308-FW	6.35	3.18	2.8	0.8	7	☆	☆								
		160404-FW	9.525	4.76	4.4	0.4	7	☆	☆								
		160408-FW	9.525	4.76	4.4	0.8	7	☆	☆								

**B**  
General Turning  
普通车削

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade





B1-5 钢加工负型刀片 Inserts for processing steel ..... 精加工 Finishing

Negative inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of blade	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended									
		ΦI.C	S	Φd	R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic		非涂层牌号 Uncoated grade	
						BPS051	BPS101	BPS251	BPS371	BPC05B	BPC308	BN201	BN301	BU810	
	CNGG	090402L/R-S	9.525	4.76	3.81	0.2								☆	★
		090404L/R-S	9.525	4.76	3.81	0.4								☆	★
		090408L/R-S	9.525	4.76	3.81	0.8								☆	★
	DNGG	110402L/R-S	9.525	4.76	3.81	0.2								☆	★
		110404L/R-S	9.525	4.76	3.81	0.4								☆	★
		110408L/R-S	9.525	4.76	3.81	0.8								☆	★
	TNGG	110402L/R-S	6.35	4.76	2.4	0.2								☆	★
		110404L/R-S	6.35	4.76	2.4	0.4								☆	★
		110408L/R-S	6.35	4.76	2.4	0.8								☆	★
		160402L/R-S	9.525	4.76	3.81	0.2								☆	★
		160404L/R-S	9.525	4.76	3.81	0.4								☆	★
		160408L/R-S	9.525	4.76	3.81	0.8								☆	★
	WNGG	060402L/R-S	9.525	4.76	3.81	0.2								☆	★
		060404L/R-S	9.525	4.76	3.81	0.4								☆	★
		060408L/R-S	9.525	4.76	3.81	0.8								☆	★



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工正型刀片 Inserts for processing steel ..... 精加工 Finishing

Positive inserts

刀片基本形状The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended							
			ΦI.C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	非涂层牌号 Uncoated grade
								BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301
 	CCGT	060202L/R-S	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
		060204L/R-S	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
		09T302L/R-S	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
		09T304L/R-S	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
		09T308L/R-S	9.525	3.97	4.4	0.8	7					☆	☆	☆	★
		120402L/R-S	12.7	4.76	5.5	0.2	7					☆	☆	☆	★
		120404L/R-S	12.7	4.76	5.5	0.4	7					☆	☆	☆	★
		120408L/R-S	12.7	4.76	5.5	0.8	7					☆	☆	☆	★
 	CCGH	060202L/R-S	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
		060204L/R-S	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
 	DCET	070201L/R-S	6.35	2.38	2.8	0.1	7					☆	☆	☆	★
		070202L/R-S	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
		070204L/R-S	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
		11T301L/R-S	9.525	3.97	4.4	0.1	7					☆	☆	☆	★
		11T302L/R-S	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
		11T304L/R-S	9.525	3.97	4.4	0.4	7					☆	☆	☆	★

**B**  
普通车削  
General Turning

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade





B1-5 钢加工正型刀片 Inserts for processing steel ..... 精加工 Finishing  
Positive inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended						
									CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic		非涂层牌号 Uncoated grade
				φI.C	S	φd	R	α	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201
	DCGT	070202L/R-S	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
		070204L/R-S	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
		11T302L/R-S	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
		11T304L/R-S	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
	DPET	070201L/R-S	6.35	2.38	2.8	0.1	11					☆	☆	☆	★
		070202L/R-S	6.35	2.38	2.8	0.2	11					☆	☆	☆	★
		11T301L/R-S	9.525	3.97	4.4	0.1	11					☆	☆	☆	★
		11T302L/R-S	9.525	3.97	4.4	0.2	11					☆	☆	☆	★
	SCGT	09T304L/R-S	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
		09T308L/R-S	9.525	3.97	4.4	0.8	7					☆	☆	☆	★
	SPGH	090304L/R-S	9.525	3.18	4.4	0.4	11					☆	☆	☆	★
		090308L/R-S	9.525	3.18	4.4	0.8	11					☆	☆	☆	★
		120304L/R-S	12.7	3.18	5.5	0.4	11					☆	☆	☆	★
		120308L/R-S	12.7	3.18	5.5	0.8	11					☆	☆	☆	★
	SPGT	090304L/R-S	9.525	3.18	4.4	0.4	11					☆	☆	☆	★
		090308L/R-S	9.525	3.18	4.4	0.8	11					☆	☆	☆	★
		120304L/R-S	12.7	3.18	5.5	0.4	11					☆	☆	☆	★
		120308L/R-S	12.7	3.18	5.5	0.8	11					☆	☆	☆	★
	TCGT	110302L/R-S	6.35	3.18	2.8	0.2	7					☆	☆	☆	★
		110304L/R-S	6.35	3.18	2.8	0.4	7					☆	☆	☆	★
	TPGH	090202L/R-S	5.56	2.38	2.5	0.2	11					☆	☆	☆	★
		090204L/R-S	5.56	2.38	2.5	0.4	11					☆	☆	☆	★
		110202L/R-S	6.35	2.38	3.4	0.2	11					☆	☆	☆	★
		110204L/R-S	6.35	2.38	3.4	0.4	11					☆	☆	☆	★
		110302L/R-S	6.35	3.18	3.4	0.2	11					☆	☆	☆	★
		110304L/R-S	6.35	3.18	3.4	0.4	11					☆	☆	☆	★
		110308L/R-S	6.35	3.18	3.4	0.8	11					☆	☆	☆	★
		160302L/R-S	9.525	3.18	4.4	0.2	11					☆	☆	☆	★
		160304L/R-S	9.525	3.18	4.4	0.4	11					☆	☆	☆	★
160308L/R-S	9.525	3.18	4.4	0.8	11					☆	☆	☆	★		



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



# B1-5 钢加工正型刀片 Inserts for processing steel ..... 精加工 Finishing

Positive inserts

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended								
		ΦI.C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				金属陶瓷 ceramic		非涂层牌号 Uncoated grade		
							BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301	BU810
	TPGR	090202L/R-S	5.56	2.38		0.2	11					☆	☆	☆	★
		090204L/R-S	5.56	2.38		0.4	11					☆	☆	☆	★
		090208L/R-S	5.56	2.38		0.8	11					☆	☆	☆	★
	TPET	110301L-S	6.35	3.18	3.4	0.1	11					☆	☆	☆	★
		110302L-S	6.35	3.18	3.4	0.2	11					☆	☆	☆	★
	TPGX	090202L-S	5.56	2.38	2.5	0.2	11					☆	☆	☆	★
		090204L-S	5.56	2.38	2.5	0.4	11					☆	☆	☆	★
		090208L-S	5.56	2.38	2.5	0.8	11					☆	☆	☆	★
		110302L-S	6.35	3.18	3.4	0.2	11					☆	☆	☆	★
		110304L-S	6.35	3.18	3.4	0.4	11					☆	☆	☆	★
		110308L-S	6.35	3.18	3.4	0.8	11					☆	☆	☆	★
	VBET	110301L-S	6.35	3.18	2.8	0.1	5					☆	☆	☆	★
		110302L-S	6.35	3.18	2.8	0.2	5					☆	☆	☆	★

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-5 钢加工正型刀片 Inserts for processing steel ..... 精加工 Finishing  
Positive inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended						
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic
				ΦI.C	S	Φd	R	α	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201
	VBGT	110301L/R-S	6.35	3.18	2.8	0.1	5					☆	☆	☆	★
		110302L/R-S	6.35	3.18	2.8	0.2	5					☆	☆	☆	★
		110304L/R-S	6.35	3.18	2.8	0.4	5					☆	☆	☆	★
		160402L/R-S	9.525	4.76	4.4	0.2	5					☆	☆	☆	★
		160404L/R-S	9.525	4.76	4.4	0.4	5					☆	☆	☆	★
	VCGT	160404L/R-S	9.525	4.76	4.4	0.4	7					☆	☆	☆	★
		160408L/R-S	9.525	4.76	4.4	0.8	7					☆	☆	☆	★
	VDGX	160302L/R-S	9.525	3.18	4.4	0.2	15					☆	☆	☆	★
		160304L/R-S	9.525	3.18	4.4	0.4	15					☆	☆	☆	★
	VPET	110301L/R-S	6.35	3.18	2.8	0.1	11					☆	☆	☆	★
		110302L/R-S	6.35	3.18	2.8	0.2	11					☆	☆	☆	★
	WPGT	060304L/R-S	9.525	4.76	3.18	0.4	11					☆	☆	☆	★
		060308L/R-S	9.525	4.76	3.18	0.8	11					☆	☆	☆	★
	DCET	070204L/R-E	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
		11T302L/R-E	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
		11T304L/R-E	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
	TNGG	160404L/R-E	9.525	4.76	3.81	0.4	-					☆	☆	☆	★
		160408L/R-E	9.525	4.76	3.81	0.8	-					☆	☆	☆	★



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Negative inserts

刀片基本形状 The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
			ΦI.C	S	Φd	R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	
							BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301
		CNMG	090304-MD	9.525	3.18	3.81	0.4	★	★	☆				
			090308-MD	9.525	3.18	3.81	0.8	★	★	☆				
			120404-MD	12.7	4.76	5.16	0.4	★	★	☆				
			120408-MD	12.7	4.76	5.16	0.8	★	★	☆				
			120412-MD	12.7	4.76	5.16	1.2	★	★	☆				
			160608-MD	15.875	6.35	6.35	0.8	★	★	☆				
			160612-MD	15.875	6.35	6.35	1.2	★	★	☆				
			190608-MD	19.05	6.35	7.93	0.8	★	★	☆				
			190612-MD	19.05	6.35	7.93	1.2	★	★	☆				
			190616-MD	19.05	6.35	7.93	1.6	★	★	☆				
		DNMG	110404-MD	9.525	4.76	3.81	0.4	★	★	☆				
			110408-MD	9.525	4.76	3.81	0.8	★	★	☆				
			150404-MD	12.7	4.76	5.16	0.4	★	★	☆				
			150408-MD	12.7	4.76	5.16	0.8	★	★	☆				
			150412-MD	12.7	4.76	5.16	1.2	★	★	☆				
			150604-MD	12.7	6.35	5.16	0.4	★	★	☆				
			150608-MD	12.7	6.35	5.16	0.8	★	★	☆				
			150612-MD	12.7	6.35	5.16	1.2	★	★	☆				
		SNMG	090304-MD	9.525	3.18	3.81	0.4	★	★	☆				
			120404-MD	12.7	4.76	5.16	0.4	★	★	☆				
			120408-MD	12.7	4.76	5.16	0.8	★	★	☆				
			120412-MD	12.7	4.76	5.16	1.2	★	★	☆				
			150608-MD	15.875	6.35	6.35	0.8	★	★	☆				
			150612-MD	15.875	6.35	6.35	1.2	★	★	☆				
			190608-MD	19.05	6.35	7.93	0.8	★	★	☆				
			190612-MD	19.05	6.35	7.93	1.2	★	★	☆				
			190616-MD	19.05	6.35	7.93	1.6	★	★	☆				
		TNMG	160404-MD	9.525	4.76	3.81	0.4	★	★	☆				
			160408-MD	9.525	4.76	3.81	0.8	★	★	☆				
			160412-MD	9.525	4.76	3.81	1.2	★	★	☆				
			220404-MD	12.7	4.76	5.16	0.4	★	★	☆				
			220408-MD	12.7	4.76	5.16	0.8	★	★	☆				
			220412-MD	12.7	4.76	5.16	1.2	★	★	☆				

**B**  
General Turning  
普通车削


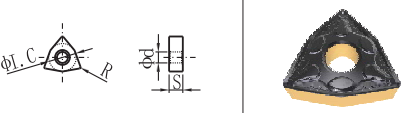
★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing  
Negative inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	
				ΦI.C	S	Φd	R	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301
	VNMG	160404-MD	9.525	4.76	3.81	0.4		★	★	☆					
		160408-MD	9.525	4.76	3.81	0.8		★	★	☆					
		160412-MD	9.525	4.76	3.81	1.2		★	★	☆					
	WNMG	060404-MD	9.525	4.76	3.81	0.4		★	★	☆					
		060408-MD	9.525	4.76	3.81	0.8		★	★	☆					
		060412-MD	9.525	4.76	3.81	1.2		★	★	☆					
		080404-MD	12.7	4.76	5.16	0.4		★	★	☆					
		080408-MD	12.7	4.76	5.16	0.8		★	★	☆					
		080412-MD	12.7	4.76	5.16	1.2		★	★	☆					



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Negative inserts

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	
				φI.C	S	φd	R	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301
		CNMG	120404-MA	12.7	4.76	5.16	0.4	★	★	☆					
			120408-MA	12.7	4.76	5.16	0.8	★	★	☆					
			120412-MA	12.7	4.76	5.16	1.2	★	★	☆					
			160604-MA	15.875	6.35	6.35	0.4	☆	☆	☆					
			160608-MA	15.875	6.35	6.35	0.8	★	★	☆					
		DNMG	150404-MA	12.7	4.76	5.16	0.4	★	★	☆					
			150408-MA	12.7	4.76	5.16	0.8	★	★	☆					
			150604-MA	12.7	6.35	5.16	0.4	★	★	☆					
			150608-MA	12.7	6.35	5.16	0.8	★	★	☆					
		SNMG	120404-MA	12.7	4.76	5.16	0.4	☆	☆	☆					
			120408-MA	12.7	4.76	5.16	0.8	★	★	☆					
		TNMG	160404-MA	9.525	4.76	5.16	0.4	★	★	☆					
			160408-MA	9.525	4.76	5.16	0.8	★	★	☆					
			160412-MA	9.525	4.76	5.16	1.2	★	★	☆					
		VNMG	160404-MA	9.525	4.76	5.16	0.4	★	★	☆					
			160408-MA	9.525	4.76	5.16	0.8	★	★	☆					
		WNMG	080404-MA	12.7	4.76	5.16	0.4	★	★	☆					
			080408-MA	12.7	4.76	5.16	0.8	★	★	☆					

**B**  
普通车削  
General Turning

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





# B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Negative inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	
				ΦI.C	S	Φd	R	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301
		CNMG	120404-TM	12.7	4.76	5.16	0.4		★	★	☆				
			120408-TM	12.7	4.76	5.16	0.8		★	★	☆				
			120412-TM	12.7	4.76	5.16	1.2		★	★	☆				
		DNMG	150404-TM	12.7	4.76	5.16	0.4		★	★	☆				
			150408-TM	12.7	4.76	5.16	0.8		★	★	☆				
			150412-TM	12.7	4.76	5.16	1.2		★	★	☆				
			150604-TM	12.7	6.35	5.16	0.4		★	★	☆				
			150608-TM	12.7	6.35	5.16	0.8		★	★	☆				
			150612-TM	12.7	6.35	5.16	1.2		★	★	☆				
		TNMG	160404-TM	9.525	4.76	3.81	0.4		★	★	☆				
			160408-TM	9.525	4.76	3.81	0.8		★	★	☆				
			160412-TM	9.525	4.76	3.81	1.2		★	★	☆				
			220404-TM	12.7	4.76	5.16	0.4		★	★	☆				
			220408-TM	12.7	4.76	5.16	0.8		★	★	☆				
			220412-TM	12.7	4.76	5.16	1.2		★	★	☆				
		VNMG	160404-TM	9.525	4.76	3.81	0.4		★	★	☆				
			160408-TM	9.525	4.76	3.81	0.8		★	★	☆				
			160412-TM	9.525	4.76	3.81	1.2		★	★	☆				
		WNMG	080404-TM	12.7	4.76	5.16	0.4		★	★	☆				
			080408-TM	12.7	4.76	5.16	0.8		★	★	☆				
			080412-TM	12.7	4.76	5.16	1.2		★	★	☆				
		VNMG	160408-UX	9.525	4.76	3.81	0.8		★	★	☆				
			160412-UX	9.525	4.76	3.81	1.2		★	★	☆				
		WNMG	080408-UX	12.7	4.76	5.16	0.8		★	★	☆				
			080412-UX	12.7	4.76	5.16	1.2		★	★	☆				



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Negative inserts

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
		ΦI.C	S	Φd	R	CVD涂层牌号 CVD coating grade					
						BPS051	BPS101	BPS251	BPS371		
		CNMG	120404-U	12.7	4.76	5.16	0.4		☆	☆	
			120408-U	12.7	4.76	5.16	0.8		☆	★	
			120412-U	12.7	4.76	5.16	1.2		☆	☆	
			160604-U	15.875	6.35	6.35	0.4		☆	☆	
			160608-U	15.875	6.35	6.35	0.8		☆	★	
			160612-U	15.875	6.35	6.35	1.2		☆	☆	
		DNMG	150404-U	12.7	4.76	5.16	0.4		☆	☆	
			150408-U	12.7	4.76	5.16	0.8		☆	☆	
			150604-U	12.7	6.35	5.16	0.4		☆	☆	
			150608-U	12.7	6.35	5.16	0.8		☆	☆	
		SNMG	120404-U	12.7	4.76	5.16	0.4		☆	☆	
			120408-U	12.7	4.76	5.16	0.8		☆	☆	
			150608-U	15.875	6.35	5.16	0.8		☆	☆	
			150612-U	15.87	6.35	5.16	1.2		☆	☆	
		TNMG	160404-U	9.525	4.76	5.16	0.4		☆	☆	
			160408-U	9.525	4.76	5.16	0.8		☆	★	
			160412-U	9.525	4.76	5.16	1.2		☆	★	
		VNMG	160404-U	9.525	4.76	5.16	0.4		☆	☆	
			160408-U	9.525	4.76	5.16	0.8		☆	★	
			160412-U	9.525	4.76	5.16	1.2		☆	★	
		WNMG	080404-U	12.7	4.76	5.16	0.4		☆	☆	
			080408-U	12.7	4.76	5.16	0.8		☆	★	
			080412-U	12.7	4.76	5.16	1.2		☆	★	

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





# B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Negative inserts

**B**  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended								
			ΦI.C	S	Φd	R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic		非涂层牌号 Uncoated grade
							BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301	
	SNMG	120404L/R-N	12.7	4.76	5.16	0.4					☆	☆	☆	★	
		120408L/R-N	12.7	4.76	5.16	0.8					☆	☆	☆	★	
												☆	☆	☆	★
	SNGG	090304L/R-N	9.525	3.18	3.81	0.4					☆	☆	☆	★	
		090308L/R-N	9.525	3.18	3.81	0.8					☆	☆	☆	★	
		120404L/R-N	12.7	4.76	5.16	0.4					☆	☆	☆	★	
		120408L/R-N	12.7	4.76	5.16	0.8					☆	☆	☆	★	
	TNGG	110302L/R-N	6.35	3.18	2.4	0.2					☆	☆	☆	★	
		110304L/R-N	6.35	3.18	2.4	0.4					☆	☆	☆	★	
		110308L/R-N	6.35	3.18	2.4	0.8					☆	☆	☆	★	
		160304L/R-N	9.525	3.18	3.81	0.4					☆	☆	☆	★	
		160402L/R-N	9.525	4.76	3.81	0.2					☆	☆	☆	★	
		160404L/R-N	9.525	4.76	3.81	0.4					☆	☆	☆	★	
		160408L/R-N	9.525	4.76	3.81	0.8					☆	☆	☆	★	
		160412L/R-N	9.525	4.76	3.81	1.2					☆	☆	☆	★	
		160416L/R-N	9.525	4.76	3.81	1.6					☆	☆	☆	★	
		220404L/R-N	12.7	4.76	5.16	0.4					☆	☆	☆	★	
	VNGG	110302L/R-N	6.35	3.18	2.4	0.2					☆	☆	☆	★	
		110304L/R-N	6.35	3.18	2.4	0.4					☆	☆	☆	★	
		160402L/R-N	9.525	4.76	3.81	0.2					☆	☆	☆	★	
		160404L/R-N	9.525	4.76	3.81	0.4					☆	☆	☆	★	
	WNGG	060404L/R-N	9.525	4.76	3.81	0.4					☆	☆	☆	★	
		060408L/R-N	9.525	4.76	3.81	0.8					☆	☆	☆	★	

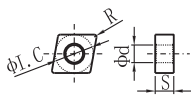

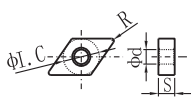

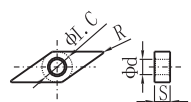



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



# B1-5 钢加工负型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Negative inserts

刀片基本形状 The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended									
			ΦI.C	S	Φd	R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic		非涂层牌号 Uncoated grade	
							BPS051	BPS101	BPS251	BPS371	BPG05B	BPG30B	BN201	BN301	BU810	
		CNGG	090404L/R-H	9.525	4.76	3.81	0.4					☆	☆	☆	★	
		090408L/R-H	9.525	4.76	3.81	0.8					☆	☆	☆	★		
		120404L/R-H	12.7	4.76	5.16	0.4					☆	☆	☆	★		
		120408L/R-H	12.7	4.76	5.16	0.8					☆	☆	☆	★		
		DNGG	110404L/R-H	9.525	4.76	3.81	0.4					☆	☆	☆	★	
		110408L/R-H	9.525	4.76	3.81	0.8					☆	☆	☆	★		
		150404L/R-H	12.7	4.76	5.16	0.4					☆	☆	☆	★		
		150408L/R-H	12.7	4.76	5.16	0.8					☆	☆	☆	★		
		VNGG	160402L/R-H	9.525	4.76	3.81	0.2					☆	☆	☆	★	
		160404L/R-H	9.525	4.76	3.81	0.4					☆	☆	☆	★		
		160408L/R-H	9.525	4.76	3.81	0.8					☆	☆	☆	★		

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-5 钢加工正型刀片 Inserts for processing steel ..... 半精加工 Semi finishing  
Positive inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended							
			ΦL/C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	
								BPS051	BPS101	BPS251	BPS371	BPC05B	BPC308	BN201	BN301
		CCMT	060204-MD	6.35	2.38	2.8	0.4	7	★	★			☆		
			060208-MD	6.35	2.38	2.8	0.8	7	★	★			☆		
			09T302-MD	9.525	3.97	4.4	0.2	7	★	★			☆		
			09T304-MD	9.525	3.97	4.4	0.4	7	★	★			☆		
			09T308-MD	9.525	3.97	4.4	0.8	7	★	★			☆		
			120404-MD	12.7	4.76	5.5	0.4	7	★	★			☆		
			120408-MD	12.7	4.76	5.5	0.8	7	★	★			☆		
			120412-MD	12.7	4.76	5.5	1.2	7	★	★			☆		
		DCMT	070204-MD	6.35	2.38	2.8	0.4	7	★	★			☆		
			070208-MD	6.35	2.38	2.8	0.8	7	★	★			☆		
			11T302-MD	9.525	3.97	4.4	0.2	7	★	★			☆		
			11T304-MD	9.525	3.97	4.4	0.4	7	★	★			☆		
			11T308-MD	9.525	3.97	4.4	0.8	7	★	★			☆		
			11T312-MD	9.525	3.97	4.4	1.2	7	★	★			☆		
		SCMT	09T302-MD	9.525	3.97	4.4	0.2	7	★	★			☆		
			09T304-MD	9.525	3.97	4.4	0.4	7	★	★			☆		
			09T308-MD	9.525	3.97	4.4	0.8	7	★	★			☆		
			09T312-MD	9.525	3.97	4.4	1.2	7	★	★			☆		
			120404-MD	12.7	4.76	5.5	0.4	7	★	★			☆		
			120408-MD	12.7	4.76	5.5	0.8	7	★	★			☆		
			120412-MD	12.7	4.76	5.5	1.2	7	★	★			☆		
		TCMT	090204-MD	5.56	2.38	2.5	0.4	7	★	★			☆		
			090208-MD	5.56	2.38	2.5	0.8	7	★	★			☆		
			110304-MD	6.35	3.18	2.8	0.4	7	★	★			☆		
			110308-MD	6.35	3.18	2.8	0.8	7	★	★			☆		
			110312-MD	6.35	3.18	2.8	1.2	7	★	★			☆		
			16T304-MD	9.525	3.97	4.4	0.4	7	★	★			☆		
			16T308-MD	9.525	3.97	4.4	0.8	7	★	★			☆		
			16T312-MD	9.525	3.97	4.4	1.2	7	★	★			☆		



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

B1-5 钢加工正型刀片 Inserts for processing steel ..... 半精加工 Semi finishing  
Positive inserts

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade	
				$\Phi$ LC	S	$\Phi$ d	R	$\alpha$	BPS051	BPS101	BPS251	BPS371	BPC05B	BPC308
	VCMT	110304-MD	6.35	3.18	2.8	0.4	7	★	★			☆		
		110308-MD	6.35	3.18	2.8	0.8	7	★	★			☆		
		160404-MD	9.525	4.76	4.4	0.4	7	★	★			☆		
		160408-MD	9.525	4.76	4.4	0.8	7	★	★			☆		
	VBMT	110304-MD	6.35	3.18	2.8	0.4	5	☆	☆			☆		
		110308-MD	6.35	3.18	2.8	0.8	5	☆	☆			☆		
		160404-MD	9.525	4.76	4.4	0.4	5	★	★			☆		
		160408-MD	9.525	4.76	4.4	0.8	5	★	★			☆		
	RCMT	0803MOE-R1	8	2.38	3.3	-	7	★	★			☆		
		10T3MOE-R1	10	3.97	4.5	-	7	★	★			☆		
		1204MOE-R2	12	4.76	4.4	-	7	★	★			☆		
		1606MOE-R3	16	6.35	5.5	-	7	★	★			☆		
		2006MOE-R4	20	6.35	6.5	-	7	★	★			☆		

**B**  
General Turning  
普通车削

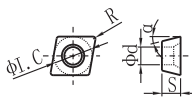

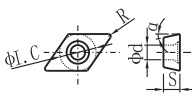
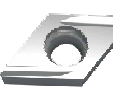
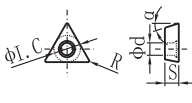

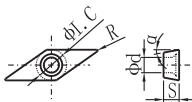

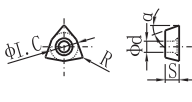

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade





B1-5 钢加工正型刀片 Inserts for processing steel ..... 半精加工 Semi finishing  
Positive inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended							
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	
				ΦI.C	S	Φd	R	α	BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301
		CPMH	090304L/R-N	9.525	3.18	4.4	0.4	11					☆	☆	☆	★
			090308L/R-N	9.525	3.18	4.4	0.8	11					☆	☆	☆	★
													☆	☆	☆	★
		DCGT	070201L/R-N	6.35	2.38	2.8	0.1	7					☆	☆	☆	★
			070202L/R-N	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
			11T301L/R-N	9.525	3.97	4.4	0.1	7					☆	☆	☆	★
			11T302L/R-N	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
			11T304L/R-N	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
		TPGH	110302L/R-N	6.35	3.18	3.4	0.2	11					☆	☆	☆	★
			110304L/R-N	6.35	3.18	3.4	0.4	11					☆	☆	☆	★
			110308L/R-N	6.35	3.18	3.4	0.8	11					☆	☆	☆	★
			160304L/R-N	9.525	3.18	4.4	0.4	11					☆	☆	☆	★
			160308L/R-N	9.525	3.18	4.4	0.8	11					☆	☆	☆	★
		VBGT	110301L/R-N	6.35	3.18	2.8	0.1	5					☆	☆	☆	★
			110302L/R-N	6.35	3.18	2.8	0.2	5					☆	☆	☆	★
			110304L/R-N	6.35	3.18	2.8	0.4	5					☆	☆	☆	★
			110308L/R-N	6.35	3.18	2.8	0.8	5					☆	☆	☆	★
			160402L/R-N	9.525	4.76	4.4	0.2	5					☆	☆	☆	★
			160404L/R-N	9.525	4.76	4.4	0.4	5					☆	☆	☆	★
			160408L/R-N	9.525	4.76	4.4	0.8	5					☆	☆	☆	★
		WPGT	060304L/R-N	9.525	4.76	4.4	0.4	11					☆	☆	☆	★
			060308L/R-N	9.525	4.76	4.4	0.8	11					☆	☆	☆	★



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工正型刀片 Inserts for processing steel ..... 半精加工 Semi finishing

Positive inserts

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended									
		ΦI.C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 ceramic	非涂层牌号 Uncoated grade		
							BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301	BU810	
		CCET	060201L/R-E	6.35	2.38	2.8	0.1	7					☆	☆	☆	★
			060202L/R-E	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
			060204L/R-E	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
			09T301L/R-E	9.525	3.97	4.4	0.1	7					☆	☆	☆	★
			09T302L/R-E	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
			09T304L/R-E	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
		CCGT	060201L/R-E	6.35	2.38	2.8	0.1	7					☆	☆	☆	★
			060202L/R-E	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
			060204L/R-E	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
			09T301L/R-E	9.525	3.97	4.4	0.1	7					☆	☆	☆	★
			09T302L/R-E	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
			09T304L/R-E	9.525	3.97	4.4	0.4	7					☆	☆	☆	★
		SPGT	090304L/R-E	9.525	3.18	4.4	0.4	11					☆	☆	☆	★
			090308L/R-E	9.525	3.18	4.4	0.8	11					☆	☆	☆	★
			120304L/R-E	12.7	3.18	5.5	0.4	11					☆	☆	☆	★
			120308L/R-E	12.7	3.18	5.5	0.8	11					☆	☆	☆	★
		TPET	110302L/R-E	6.35	3.18	2.8	0.2	11					☆	☆	☆	★
		TCGT	110302L/R-E	6.35	3.18	2.8	0.2	7					☆	☆	☆	★
		DCET	070202L/R-H	6.35	2.38	2.8	0.2	7					☆	☆	☆	★
			070204L/R-H	6.35	2.38	2.8	0.4	7					☆	☆	☆	★
			11T302L/R-H	9.525	3.97	4.4	0.2	7					☆	☆	☆	★
			11T304L/R-H	9.525	3.97	4.4	0.4	7					☆	☆	☆	★

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-5 钢加工负型刀片 Inserts for processing steel .....粗加工 Rough machining

Negative inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of blade		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		非涂层牌号 Uncoated grade	
				ΦI.C	S	Φd	R	BPS051	BPS101	BPS251	BPS371	BPC05B	BPC308	BN201	BN301
		CNMG	120408-RA	12.7	4.76	5.16	0.8		☆	★	☆				
			120412-RA	12.7	4.76	5.16	1.2		☆	★	☆				
			120416-RA	12.7	4.76	5.16	1.6		☆	☆	☆				
			160608-RA	15.875	6.35	6.35	0.8		☆	☆	☆				
			160612-RA	15.875	6.35	6.35	1.2		☆	☆	★				
			160616-RA	15.875	6.35	6.35	1.6		☆	☆	☆				
			190612-RA	19.05	6.35	7.93	1.2		☆	☆	★				
		DNMG	150408-RA	12.7	4.76	5.16	0.8		☆	☆	★				
			150412-RA	12.7	4.76	5.16	1.2		☆	☆	★				
			150416-RA	12.7	4.76	5.16	1.6		☆	☆	☆				
			150608-RA	12.7	6.35	5.16	0.8		☆	☆	★				
			150612-RA	12.7	6.35	5.16	1.2		☆	☆	★				
			150616-RA	12.7	6.35	5.16	1.6		☆	☆	☆				
		SNMG	120408-RA	12.7	4.76	5.16	0.8		☆	★	☆				
			120412-RA	12.7	4.76	5.16	1.2		☆	★	☆				
			120416-RA	12.7	4.76	5.16	1.6		☆	☆	☆				
			150608-RA	15.875	6.35	6.35	0.8		☆	☆	★				
			150612-RA	15.875	6.35	6.35	1.2		☆	☆	★				
			150616-RA	15.875	6.35	6.35	1.6		☆	☆	★				
			190608-RA	19.05	6.35	7.93	0.8		☆	☆	★				
			190612-RA	19.05	6.35	7.93	1.2		☆	☆	★				
			190616-RA	19.05	6.35	7.93	1.6		☆	☆	☆				
		TNMG	160408-RA	9.525	4.76	3.81	0.8		☆	★	☆				
			160412-RA	9.525	4.76	3.81	1.2		☆	★	☆				
			220408-RA	12.7	4.76	5.16	0.8		☆	☆	★				
			220412-RA	12.7	4.76	5.16	1.2		☆	☆	★				
			220416-RA	12.7	4.76	5.16	1.6		☆	☆	☆				
		WNMG	060408-RA	9.525	4.76	3.81	0.8		☆	★	★				
			060412-RA	9.525	4.76	3.81	1.2		☆	★	★				
			080408-RA	12.7	4.76	5.16	0.8		☆	☆	★				
			080412-RA	12.7	4.76	5.16	1.2		☆	☆	★				
			080416-RA	12.7	4.76	5.16	1.6		☆	☆	☆				



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-5 钢加工负型刀片 Inserts for processing steel .....粗加工 Rough machining

Negative inserts

刀片基本形状 The basic shape of blade		型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended										
			ΦI.C	S	Φd	R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		非涂层牌号 Uncoated grade				
							BPS051	BPS101	BPS251	BPS371	BPG05B	BPG308	BN201	BN301			
		CNMM	120408-RB	12.7	4.76	5.16	0.8			☆	☆						
			120412-RB	12.7	4.76	5.16	1.2			★	☆						
			120416-RB	12.7	4.76	5.16	1.6			☆	☆						
			160608-RB	15.875	6.35	6.35	0.8			☆	☆						
			160612-RB	15.875	6.35	6.35	1.2			☆	★						
			160616-RB	15.875	6.35	6.35	1.6			☆	★						
			190612-RB	19.05	6.35	7.93	1.2			☆	★						
			190616-RB	19.05	6.35	7.93	1.6			☆	★						
			190624-RB	19.05	6.35	7.93	2.4			☆	☆						
			250724-RB	25.4	7.94	9.12	2.4			☆	☆						
			250924-RB	25.4	9.52	9.12	2.4			☆	☆						
		SNMM	120408-RB	12.7	4.76	5.16	0.8			☆	☆						
			120412-RB	12.7	4.76	5.16	1.2			☆	☆						
			120416-RB	12.7	4.76	5.16	1.6			☆	☆						
			150608-RB	15.875	6.35	6.35	0.8			☆	★						
			150612-RB	15.875	6.35	6.35	1.2			☆	★						
			150616-RB	15.875	6.35	6.35	1.6			☆	☆						
			190608-RB	19.05	6.35	7.93	0.8			☆	★						
			190612-RB	19.05	6.35	7.93	1.2			☆	★						
			190616-RB	19.05	6.35	7.93	1.6			☆	★						
			190624-RB	19.05	6.35	7.93	2.4			☆	★						
			250724-RB	25.4	7.94	9.12	2.4			☆	★						
250924-RB	25.4	9.52	9.12	2.4			☆	★									
250932-RB	25.4	9.52	9.12	3.2			☆	☆									
		TNMM	160408-RB	9.525	4.76	3.81	0.8			★	☆						
			160412-RB	9.525	4.76	3.81	1.2			★	☆						
			220408-RB	12.7	4.76	5.16	0.8			☆	★						
			220412-RB	12.7	4.76	5.16	1.2			☆	★						
			220416-RB	12.7	4.76	5.16	1.6			☆	☆						

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-5 钢加工正型刀片 Inserts for processing steel .....粗加工 Rough machining  
Positive inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
									CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade		非涂层牌号 Uncoated grade	
				$\Phi$ l.C	S	$\Phi$ d	R	$\alpha$	BPS051	BPS101	BPS251	BPS371	BPC05B	BPC308
 	CCMT	09T308-RA	9.525	3.97	4.4	0.8	7	★	★	☆				
		120408-RA	12.7	4.76	5.5	0.8	7	☆	★	☆				
		120412-RA	12.7	4.76	5.5	1.2	7	☆	★	☆				
 	DCMT	11T308-RA	9.525	3.97	4.4	0.8	7	☆	★	☆				
 	SCMT	120412-RA	12.7	4.76	5.5	1.2	7	☆	★	☆				
 	TCMT	16T308-RA	9.525	3.97	4.4	0.8	7	☆	★	☆				
 	RCGT	2006MOS-HP	20	6.35	6.5	-	7	★	★	☆				
		2507MOS-HP	25	7.94	7.2	-	7	★	★	☆				
		3209MOS-HP	32	9.525	9.5	-	7	★	★	☆				







★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## B1-6 不锈钢加工刀片 Inserts for processing stainless steel ..... 材质 Grades



### M 不锈钢加工 Process on stainless steel

#### a 涂层牌号 Grade for coating

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	M10(M05-M15)	青灰黑 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力, 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	M25(M10-M30)	青灰黑 Cyan-blue gray dark 	PVD涂层微晶粒硬质合金。使用中等到低切削速度, 进行各种不锈钢的精加工。要出色的刃口强度和高表面质量时, 可提供完美的平顺切削。很高的耐热冲击性能。适用于轻型间断切削。 PVD coated micro-grain carbide. Use for a variety of stainless steel finishing at medium to low cutting speed. When need excellent edge strength and high surface quality, provide the perfect ride cutting. A high thermal shock resistance. Suitable for light interrupted cuts.
BPG25B	M35(M25-M40)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金牌号。WC-Co耐冲击的硬质合金基体与含Si的TiAlN纳米涂层的结合, 表层具有极高的纳米硬度, 尤其适合于碳钢、不锈钢通用型的车、铣削加工。 PVD coating carbide grades. WC-Co impact resistant cemented carbide matrix and TiAlN containing Si nano coating combination, the surface has a very high nano hardness, especially suitable for turning and milling of carbon steel, stainless steel.
BPG30C	M35(M25-M40)	青灰黑 Cyan-blue gray dark 	PVD涂层硬质合金。用于以低至中等切削速度进行奥氏体不锈钢和双相不锈钢的半精加工到粗加工。很高的耐热冲击性能。非常适合快速间断切削。 PVD coated carbide. For austenitic stainless steels and duplex stainless steel semi-finishing to roughing at low to medium cutting speed. High thermal shock resistance. Ideal for quickly interrupted cutting.

B  
General Turning  
普通车削

#### b 金属陶瓷 Cermet

	牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm <sup>3</sup> )	硬度 Hardness HRA	抗弯强度 Bending strength (N/mm <sup>2</sup> )	使用性能及用途 Usage and performance
	BN201	M01-M20	6.5-7.2	>92	>1800	适用于钢、不锈钢半精加工、精加工 Suitable for the finishing, semi-finishing of stainless steel
	BN301	M10-M30	6.1-7.2	>91	>2000	适用于钢、不锈钢半精加工、精加工 Suitable for the finishing, semi-finishing of stainless steel





# B1-6 不锈钢正型刀片 Inserts for processing stainless steel ..... 精加工 Finishing

Positive inserts

B  
General Turning  
普通车削

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended								
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		金属陶瓷 Cermet		
				ΦI.C	S	Φd	R	α	BPS051	BPS101	BPS251	BPG371	BPC05B	BPC20B	BPC30B	BPC25B	BU810
		CCMT	060202-FW	6.35	2.38	2.8	0.2	7					☆	★	☆		
		060204-FW	6.35	2.38	2.8	0.4	7					☆	★	☆			
		09T302-FW	9.525	3.97	4.4	0.2	7					☆	★	☆			
		09T304-FW	9.525	3.97	4.4	0.4	7					☆	★	☆			
		09T308-FW	9.525	3.97	4.4	0.8	7					☆	★	☆			
		120404-FW	12.7	4.76	5.5	0.4	7					☆	★	☆			
		DCMT	070202-FW	6.35	2.38	2.8	0.2	7					☆	★	☆		
		070204-FW	6.35	2.38	2.8	0.4	7					☆	★	☆			
		11T302-FW	9.525	3.97	4.4	0.2	7					☆	★	☆			
		11T304-FW	9.525	3.97	4.4	0.4	7					☆	★	☆			
		11T308-FW	9.525	3.97	4.4	0.8	7					☆	★	☆			
		SCMT	09T304-FW	9.525	3.18	4.4	0.4	7					☆	★	☆		
		09T308-FW	9.525	3.18	4.4	0.8	7					☆	★	☆			
		120404-FW	12.7	4.76	5.5	0.4	7					☆	★	☆			
		120408-FW	12.7	4.76	5.5	0.8	7					☆	★	☆			
		120412-FW	12.7	4.76	5.5	1.2	7					☆	★	☆			
		TCMT	090202-FW	5.56	2.38	2.5	0.2	7					☆	★	☆		
		090204-FW	5.56	2.38	2.5	0.4	7					☆	★	☆			
		110302-FW	6.35	3.18	2.8	0.2	7					☆	★	☆			
		110304-FW	6.35	3.18	2.8	0.4	7					☆	★	☆			
		110308-FW	6.35	3.18	2.8	0.8	7					☆	★	☆			
		16T304-FW	9.525	3.97	4.4	0.4	7					☆	★	☆			
		VBMT	110302-FW	6.35	3.18	2.8	0.2	5					☆	☆	☆		
		110304-FW	6.35	3.18	2.8	0.4	5					☆	☆	☆			
		110308-FW	6.35	3.18	2.8	0.8	5					☆	☆	☆			
		160402-FW	9.525	4.76	4.4	0.2	5					☆	★	☆			
		160404-FW	9.525	4.76	4.4	0.4	5					☆	★	☆			
		160408-FW	9.525	4.76	4.4	0.8	5					☆	★	☆			
		VCMT	110302-FW	6.35	3.18	2.8	0.2	7					☆	☆	☆		
		110304-FW	6.35	3.18	2.8	0.4	7					☆	☆	☆			
		110308-FW	6.35	3.18	2.8	0.8	7					☆	☆	☆			
		160402-FW	9.525	4.76	4.4	0.2	7					☆	☆	☆			
		160404-FW	9.525	4.76	4.4	0.4	7					☆	☆	☆			
		160408-FW	9.525	4.76	4.4	0.8	7					☆	☆	☆			



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-6 不锈钢正型刀片 Inserts for processing stainless steel ..... 精加工 Finishing

Positive inserts

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended										
		ΦI.C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				金属陶瓷 Cermet		
							BPS051	BPS101	BPS251	BPG371	BPC05B	BPC20B	BPC30B	BPC25B	BU810	BK10	
		CCMT	060202-MX	6.35	2.38	2.8	0.2	7					☆	☆	☆		
			060204-MX	6.35	2.38	2.8	0.4	7					☆	★	☆		
			060208-MX	6.35	2.38	2.8	0.8	7					☆	★	☆		
			09T302-MX	9.525	3.97	4.4	0.2	7					☆	☆	☆		
			09T304-MX	9.525	3.97	4.4	0.4	7					☆	★	☆		
			09T308-MX	9.525	3.97	4.4	0.8	7					☆	★	☆		
			120404-MX	12.7	4.76	5.5	0.4	7					☆	☆	☆		
		DCMT	070202-MV	6.35	2.38	2.8	0.2	7					☆	☆	☆		
			070204-MV	6.35	2.38	2.8	0.4	7					☆	★	☆		
			11T302-MV	9.525	3.97	4.4	0.2	7					☆	☆	☆		
			11T304-MV	9.525	3.97	4.4	0.4	7					☆	★	☆		
			11T308-MV	9.525	3.97	4.4	0.8	7					☆	★	☆		
		TCMT	090202-MX	5.56	2.38	2.5	0.2	7					☆	★	☆		
			090204-MX	5.56	2.38	2.5	0.4	7					☆	★	☆		
			110302-MX	6.35	3.18	2.8	0.2	7					☆	★	☆		
			110304-MX	6.35	3.18	2.8	0.4	7					☆	★	☆		
			110308-MX	6.35	3.18	2.8	0.8	7					☆	☆	☆		
			16T304-MX	9.525	3.97	4.4	0.4	7					☆	★	☆		
			16T308-MX	9.525	3.97	4.4	0.8	7					☆	★	☆		
		VBMT	110302-MX	6.35	3.18	2.8	0.2	5					☆	☆	☆		
			110304-MX	6.35	3.18	2.8	0.4	5					☆	★	☆		
			110308-MX	6.35	3.18	2.8	0.8	5					☆	★	☆		
			160402-MX	9.525	4.76	4.4	0.2	5					☆	☆	☆		
			160404-MX	9.525	4.76	4.4	0.4	5					☆	★	☆		
			160408-MX	9.525	4.76	4.4	0.8	5					☆	★	☆		

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





# B1-6 不锈钢负型刀片 Inserts for processing stainless steel ..... 精加工 Finishing

Negative inserts

B

普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended							
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade
				ΦI.C	S	Φd	R		BPS051	BPS101	BPS251	BPG371	BPC05B	BPC20B	BPC30B	BPC25B
		CNMG	120402E-LH	12.7	4.76	5.16	0.2					☆	☆	☆		
			120404E-LH	12.7	4.76	5.16	0.4					★	☆	☆		
			120408E-LH	12.7	4.76	5.16	0.8					★	☆	☆		
		DNMG	150404E-LH	12.7	4.76	5.16	0.4					★	☆	☆		
			150408E-LH	12.7	4.76	5.16	0.8					★	☆	☆		
			150604E-LH	12.7	6.35	5.16	0.4					★	☆	☆		
			150608E-LH	12.7	6.35	5.16	0.8					★	☆	☆		
		SNMG	120404E-LH	12.7	4.76	5.16	0.4					★	☆	☆		
			120408E-LH	12.7	4.76	5.16	0.8					★	☆	☆		
			120412E-LH	12.7	4.76	5.16	1.2					★	☆	☆		
		TNMG	160404E-LH	9.525	4.76	3.81	0.4					★	☆	☆		
			160408E-LH	9.525	4.76	3.81	0.8					★	☆	☆		
			160412E-LH	9.525	4.76	3.81	1.2					★	☆	☆		
			220408E-LH	12.7	4.76	5.16	0.8					★	☆	☆		
		VNMG	160402E-LH	9.525	4.76	3.81	0.2					☆	☆	☆		
			160404E-LH	9.525	4.76	3.81	0.4					★	☆	☆		
			160408E-LH	9.525	4.76	3.81	0.8					★	☆	☆		
		WNMG	060404E-LH	9.525	4.76	3.81	0.4					★	☆	☆		
			060408E-LH	9.525	4.76	3.81	0.8					★	☆	☆		
			080404E-LH	12.7	4.76	5.16	0.4					★	☆	☆		
			080408E-LH	12.7	4.76	5.16	0.8					★	☆	☆		
			080412E-LH	12.7	4.76	5.16	1.2					★	☆	☆		



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-6 不锈钢正型刀片 Inserts for processing stainless steel .....半精加工 Semi finishing

Positive inserts

刀片基本形状The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended										
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				金属陶瓷 Cermet		
			$\Phi$ I.C	S	$\Phi$ d	R	$\alpha$	BPS051	BPS101	BPS251	BPG371	BPC05B	BPC20B	BPC30B	BPC25B	BU810	BK10	
		CCMT	060204-MD	6.35	2.38	2.8	0.4	7					☆	★	☆	☆		
		060208-MD	6.35	2.38	2.8	0.8	7					☆	★	☆	☆			
		09T302-MD	9.525	3.97	4.4	0.2	7					☆	★	☆	☆			
		09T304-MD	9.525	3.97	4.4	0.4	7					☆	★	☆	☆			
		09T308-MD	9.525	3.97	4.4	0.8	7					☆	★	☆	☆			
		120404-MD	12.7	4.76	5.5	0.4	7					☆	★	☆	☆			
		120408-MD	12.7	4.76	5.5	0.8	7					☆	★	☆	☆			
		120412-MD	12.7	4.76	5.5	1.2	7					☆	★	☆	☆			
		DCMT	070204-MD	6.35	2.38	2.8	0.4	7					☆	★	☆	☆		
		070208-MD	6.35	2.38	2.8	0.8	7					☆	★	☆	☆			
		11T302-MD	9.525	3.97	4.4	0.2	7					☆	★	☆	☆			
		11T304-MD	9.525	3.97	4.4	0.4	7					☆	★	☆	☆			
		11T308-MD	9.525	3.97	4.4	0.8	7					☆	★	☆	☆			
		11T312-MD	9.525	3.97	4.4	1.2	7					☆	★	☆	☆			
		SCMT	09T302-MD	9.525	3.97	4.4	0.2	7					☆	★	☆	☆		
		09T304-MD	9.525	3.97	4.4	0.4	7					☆	★	☆	☆			
		09T308-MD	9.525	3.97	4.4	0.8	7					☆	★	☆	☆			
		09T312-MD	9.525	3.97	4.4	1.2	7					☆	★	☆	☆			
		120404-MD	12.7	4.76	5.5	0.4	7					☆	★	☆	☆			
		120408-MD	12.7	4.76	5.5	0.8	7					☆	★	☆	☆			
		120412-MD	12.7	4.76	5.5	1.2	7					☆	★	☆	☆			
		TCMT	090204-MD	5.56	2.38	2.5	0.4	7					☆	★	☆	☆		
		090208-MD	5.56	2.38	2.5	0.8	7					☆	★	☆	☆			
		110304-MD	6.35	3.18	2.8	0.4	7					☆	★	☆	☆			
		110308-MD	6.35	3.18	2.8	0.8	7					☆	★	☆	☆			
		110312-MD	6.35	3.18	2.8	1.2	7					☆	★	☆	☆			
		16T304-MD	9.525	3.97	4.4	0.4	7					☆	★	☆	☆			
		16T308-MD	9.525	3.97	4.4	0.8	7					☆	★	☆	☆			
		16T312-MD	9.525	3.97	4.4	1.2	7					☆	★	☆	☆			
		VCMT	110304-MD	6.35	3.18	2.8	0.4	7					☆	★	☆	☆		
		110308-MD	6.35	3.18	2.8	0.8	7					☆	★	☆	☆			
		160404-MD	9.525	4.76	4.4	0.4	7					☆	★	☆	☆			
		160408-MD	9.525	4.76	4.4	0.8	7					☆	★	☆	☆			
		VBMT	110304-MD	6.35	3.18	2.8	0.4	5					☆	★	☆	☆		
		110308-MD	6.35	3.18	2.8	0.8	5					☆	★	☆	☆			
		160404-MD	9.525	4.76	4.4	0.4	5					☆	★	☆	☆			
		160408-MD	9.525	4.76	4.4	0.8	5					☆	★	☆	☆			

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade





# B1-6 不锈钢负型刀片 Inserts for processing stainless steel ..... 半精加工 Semi finishing

Negative inserts

B  
普通车削  
General Turning

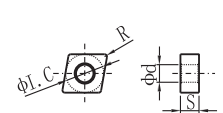

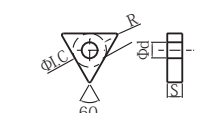

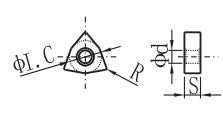

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended								
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoated grade
				ΦI.C	S	Φd	R		BPS051	BPS101	BPS251	BPS371	BPC05B	BPC20B	BPC30B	BPC25B	BU810
		CNMG	120404-MA	12.7	4.76	5.16	0.4					☆	★	☆	☆		
			120408-MA	12.7	4.76	5.16	0.8					☆	★	☆	☆		
			120412-MA	12.7	4.76	5.16	1.2					☆	★	☆	☆		
			160604-MA	15.875	6.35	6.35	0.4					☆	☆	☆	☆		
			160608-MA	15.875	6.35	6.35	0.8					☆	★	☆	☆		
		DNMG	150404-MA	12.7	4.76	5.16	0.4					☆	★	☆	☆		
			150408-MA	12.7	4.76	5.16	0.8					☆	★	☆	☆		
			150604-MA	12.7	6.35	5.16	0.4					☆	★	☆	☆		
			150608-MA	12.7	6.35	5.16	0.8					☆	★	☆	☆		
		SNMG	120404-MA	12.7	4.76	5.16	0.4					☆	☆	☆	☆		
			120408-MA	12.7	4.76	5.16	0.8					☆	★	☆	☆		
		TNMG	160404-MA	9.525	4.76	5.16	0.4					☆	★	☆	☆		
			160408-MA	9.525	4.76	5.16	0.8					☆	★	☆	☆		
			160412-MA	9.525	4.76	5.16	1.2					☆	★	☆	☆		
		VNMG	160404-MA	9.525	4.76	5.16	0.4					☆	★	☆	☆		
			160408-MA	9.525	4.76	5.16	0.8					☆	★	☆	☆		
		WNMG	080404-MA	12.7	4.76	5.16	0.4					☆	★	☆	☆		
			080408-MA	12.7	4.76	5.16	0.8					☆	★	☆	☆		
			080412-MA	12.7	4.76	5.16	1.2					☆	☆	☆	☆		



★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade

# B1-6 不锈钢负型刀片 Inserts for processing stainless steel ..... 精加工 Finishing

Negative inserts

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended							
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade
				ΦI.C	S	Φd	R		BPS051	BPS101	BPS251	BPG371	BPC05B	BPC20B	BPC30B	BPC25B
		CNMG	120404-SA	12.7	4.76	5.16	0.4					☆	★	☆		
			120408-SA	12.7	4.76	5.16	0.8					☆	★	☆		
			120412-SA	12.7	4.76	5.16	1.2					☆	★	☆		
		TNMG	160404-SA	12.7	4.76	5.16	0.4					☆	★	☆		
			160408-SA	12.7	4.76	5.16	0.8					☆	★	☆		
		WNMG	080404-SA	12.7	4.76	5.16	0.4					☆	★	☆		
			080408-SA	12.7	4.76	5.16	0.8					☆	★	☆		

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade








## B1-7 耐热合金加工刀片 Inserts for Heat-resisting alloy ..... 材质 Grades

### S 耐热合金加工 Heat-resisting alloy process

B  
普通车削  
General Turning

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG118	S05-S15	紫黄 Purple yellow 	PVD涂层硬质合金牌号，用于耐热优质合金的中等速度铣削。 具有良好的抗积屑瘤和抗塑性变形能力。 PVD coated carbide grade for medium-speed milling of heat resistant alloys. With good ability to avoid built-up edge and good resistance to plastic deformation capacity.
BPG218	S15(S15-S30)	紫黄 Purple yellow 	PVD涂层硬质合金牌号，具有良好的抗积屑瘤和抗塑性变形能力。 用于不稳定工况，如长切削刃、切屑堵塞、深台肩和立铣、长悬伸、车铣工序等； 不锈钢的轻型铣削；结合周边磨削刀片，用于粘性和加工硬化材料；耐热优质合金的中等速度铣削； 淬硬零件的低进给和中速铣削。 PVD coated carbide grade have good ability to avoid built-up edge and good resistance to plastic deformation capacity. For unstable conditions, such as long cutting edge, clogging, deep shoulder milling, long overhang, milling processes. Light milling of stainless steel; combine grinding blade for viscous and hardening materials; moderate speed milling of heat resistant alloys; hardened parts milling at low feed and medium-speed.
BPG318	S25(S20-S30)	紫黄 Purple yellow 	PVD涂层超细晶粒硬质合金，可提供锋利的切削作用和出色的切削刃韧性，良好的抗沟槽磨损和热冲击能力。用于低进给量或低切削速度碳钢精加工。中等到低切削速度的各种不锈钢的精加工，也适用于轻型间断切削。耐热优质合金的低速加工，或轻型间断切削。 适用于短接触时间的一般加工工序及有很高强度要求或要锋利切削刃的工序。 PVD coated micro-grain carbide. Can provide a sharp cutting action and excellent toughness of the cutting edge, a good anti-the grooves wear and thermal shock resistance. For carbon steel finishing at low feed rate or low cutting speed. a variety of stainless steel finishing at low to medium cutting speed, but also suitable for light interrupted cutting. Low-speed machining of heat resistant alloys, or light interrupted cuts. General short contact time processing step and high strength requirements of sharp cutting edges processing step.





# B1-7 耐热合金正型刀片 Inserts for Heat-resisting alloy ..... 精加工 Finishing

Positive inserts

刀片基本形状 The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended									
			ΦI.C	S	Φd	R	α	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade		非涂层牌号 Uncoated grade			
								BPS051	BPS101	BPS251	BPG371	BPG118	BPG218	BPG318	BPG40A	BU810	
		060202-SL	6.35	2.38	2.8	0.2	7					★	☆				
		060204-SL	6.35	2.38	2.8	0.4	7					★	☆				
		09T302-SL	9.525	3.97	4.4	0.2	7					★	☆				
		09T304-SL	9.525	3.97	4.4	0.4	7					★	☆				
		09T308-SL	9.525	3.97	4.4	0.8	7					★	☆				
		120404-SL	12.7	4.76	5.5	0.4	7					★	☆				
		120408-SL	12.7	4.76	5.5	0.8	7					★	☆				
		070202-SL	6.35	2.38	2.8	0.2	7					★	☆				
		070204-SL	6.35	2.38	2.8	0.4	7					★	☆				
		11T302-SL	9.525	3.97	4.4	0.2	7					★	☆				
		11T304-SL	9.525	3.97	4.4	0.4	7					★	☆				
		11T308-SL	9.525	3.97	4.4	0.8	7					★	☆				
		09T304-SL	9.525	3.18	4.4	0.4	7					★	☆				
		09T308-SL	9.525	3.18	4.4	0.8	7					★	☆				
		120404-SL	12.7	4.76	5.5	0.4	7					★	☆				
		120408-SL	12.7	4.76	5.5	0.8	7					★	☆				
		090202-SL	5.56	2.38	2.5	0.2	7					★	☆				
		090204-SL	5.56	2.38	2.5	0.4	7					★	☆				
		110302-SL	6.35	3.18	2.8	0.2	7					★	☆				
		110304-SL	6.35	3.18	2.8	0.4	7					★	☆				
		110308-SL	6.35	3.18	2.8	0.8	7					★	☆				
		16T304-SL	9.525	3.97	4.4	0.4	7					★	☆				
		110302-SL	6.35	3.18	2.8	0.2	7					★	☆				
		110304-SL	6.35	3.18	2.8	0.4	7					★	☆				
		110308-SL	6.35	3.18	2.8	0.8	7					★	☆				
		160402-SL	9.525	4.76	4.4	0.2	7					★	☆				
		160404-SL	9.525	4.76	4.4	0.4	7					★	☆				
		160408-SL	9.525	4.76	4.4	0.8	7					★	☆				
		110302-SL	6.35	3.18	2.8	0.2	5					★	☆				
		110304-SL	6.35	3.18	2.8	0.4	5					★	☆				
		110308-SL	6.35	3.18	2.8	0.8	5					★	☆				
		160402-SL	9.525	4.76	4.4	0.2	5					★	☆				
		160404-SL	9.525	4.76	4.4	0.4	5					★	☆				
		160408-SL	9.525	4.76	4.4	0.8	5					★	☆				

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





# B1-7 耐热合金负型刀片 Inserts for Heat-resisting alloy .....半精加工 Semi finishing

Negative inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended								
			φI.C	S	φd	R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade	
							BPS051	BPS101	BPS251	BPG371	BPG118	BPG218	BPG318	BPG40A	BU810
	CNGG	120402E-LHC	12.7	4.76	5.16	0.2					★	☆	☆		
		120404E-LHC	12.7	4.76	5.16	0.4					★	☆	☆		
		120408E-LHC	12.7	4.76	5.16	0.8					★	☆	☆		
	DNGG	150404E-LHC	12.7	4.76	5.16	0.4					★	☆	☆		
		150408E-LHC	12.7	4.76	5.16	0.8					★	☆	☆		
		150604E-LHC	12.7	6.35	5.16	0.4					★	☆	☆		
		150608E-LHC	12.7	6.35	5.16	0.8					★	☆	☆		
	SNGG	120404E-LHC	12.7	4.76	5.16	0.4					★	☆	☆		
		120408E-LHC	12.7	4.76	5.16	0.8					★	☆	☆		
		120412E-LHC	12.7	4.76	5.16	1.2					★	☆	☆		
	TNGG	160404E-LHC	9.525	4.76	3.81	0.4					★	☆	☆		
		160408E-LHC	9.525	4.76	3.81	0.8					★	☆	☆		
		160412E-LHC	9.525	4.76	3.81	1.2					★	☆	☆		
		220408E-LHC	12.7	4.76	5.16	0.8					★	☆	☆		
	VNGG	160401E-LHC	9.525	4.76	3.81	0.1					★	☆	☆		
		160402E-LHC	9.525	4.76	3.81	0.2					★	☆	☆		
		160404E-LHC	9.525	4.76	3.81	0.4					★	☆	☆		
		160408E-LHC	9.525	4.76	3.81	0.8					★	☆	☆		
	WNGG	060404E-LHC	9.525	4.76	3.81	0.4					★	☆	☆		
		060408E-LHC	9.525	4.76	3.81	0.8					★	☆	☆		
		080404E-LHC	12.7	4.76	5.16	0.4					★	☆	☆		
		080408E-LHC	12.7	4.76	5.16	0.8					★	☆	☆		
		080412E-LHC	12.7	4.76	5.16	1.2					★	☆	☆		



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-7 耐热合金正型刀片 Inserts for Heat-resisting alloy .....粗加工 Rough machining

Positive inserts

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended								
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade	
				$\Phi$ I.C	S	$\Phi$ d	R	BPS051	BPS101	BPS251	BPG371	BPG118	BPG218	BPG318	BPG40A	BU810
		CNMG	120408-SN	12.7	4.76	5.16	0.8					☆	★	☆		
			120412-SN	12.7	4.76	5.16	1.2					☆	☆	☆		
			160608-SN	15.875	6.35	6.35	0.8					☆	☆	☆		
			160612-SN	15.875	6.35	6.35	1.2					☆	☆	☆		
			190608-SN	19.05	6.35	7.93	0.8					☆	☆	☆		
			190612-SN	19.05	6.35	7.93	1.2					☆	☆	☆		
		DNMG	110408-SN	9.525	4.76	3.81	0.8					☆	★	☆		
			110412-SN	9.525	4.76	3.81	1.2					☆	☆	☆		
			150408-SN	12.7	4.76	5.16	0.8					☆	☆	☆		
			150412-SN	12.7	4.76	5.16	1.2					☆	☆	☆		
			150608-SN	12.7	6.35	5.16	0.8					☆	☆	☆		
			150612-SN	12.7	6.35	5.16	1.2					☆	☆	☆		
		SNMG	120408-SN	12.7	4.76	5.16	0.8					☆	☆	☆		
			120412-SN	12.7	4.76	5.16	1.2					☆	☆	☆		
			150612-SN	15.875	6.35	6.35	1.2					☆	☆	☆		
		TNMG	160408-SN	9.525	4.76	3.81	0.8					☆	★	☆		
			160412-SN	9.525	4.76	3.81	1.2					☆	☆	☆		
			220404-SN	12.7	4.76	5.16	0.4					☆	☆	☆		
			220408-SN	12.7	4.76	5.16	0.8					☆	☆	☆		
			220412-SN	12.7	4.76	5.16	1.2					☆	☆	☆		
		VNMG	160408-SN	9.525	4.76	3.81	0.8					☆	☆	☆		
			160412-SN	9.525	4.76	3.81	1.2					☆	☆	☆		
		WNMG	060408-SN	9.525	4.76	3.81	0.8					☆	★	☆		
			060412-SN	9.525	4.76	3.81	1.2					☆	☆	☆		
			080408-SN	12.7	4.76	5.16	0.8					☆	☆	☆		
			080412-SN	12.7	4.76	5.16	1.2					☆	☆	☆		

**B**  
General Turning  
普通车削

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade







# B1-8 铝的加工刀片 Aluminum processing ..... 材质 Grades

## N 铝的加工刀片 Aluminum processing

### a 涂层牌号 Grade for coating

牌号 Grade	ISO分类 ISO classification	表面颜色 Surface color	应用推荐 Applications Recommended
BPU109	N10(N01-N15)	DLC色 DLC color	金刚石涂层牌号, 涂层可显著降低积屑瘤, 从而获得更高表面质量。适于铝、镁、铜、黄铜、塑料等的精加工到粗加工。 Diamond coating grade, the coating can reduce BUE, obtain higher surface quality. Suitable for aluminum, magnesium, copper, brass, plastic finishing to roughing processing.

### b 非涂层牌号 Grade for uncoating

	牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm3)	硬度 Hardness HRA	抗弯强度 Bending strength (N/mm2)	使用性能及用途 Application and performance
	BU810	K05~K15	14.7~15	92.8-93.1	2700	亚微细晶粒, 适用于加工有色金属的连续和间断切削精加工。 Sub-micron grain, suitable for the continuous and interrupted finishing of non-ferrous metal
	BU813	K10~K20	14.8~15	91.5~92.5	2500	WC-Co硬质合金牌号, 具有较高的硬度和强度, 适合于有色金属的车削加工, 也可用于涂层的基体材料。 WC - Co in cemented carbide grade, It has excellent hardness and strength, suitable for turning of non-ferrous metal and can also be used for coating substrate materials.

B  
普通车削  
General Turning



# B1-8 铝加工正型刀片 Aluminum processing

# 高精度系列

Positive inserts

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
				ΦL.C	S	Φd	R	α	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
									BPC05B	BPC308	BPJ109	BU810	BU813	BK10
		CCGT	060202-LHC	6.35	2.38	2.8	0.2	7			☆	★	★	
			060204-LHC	6.35	2.38	2.8	0.4	7			☆	★	★	
			060208-LHC	6.35	2.38	2.8	0.8	7			☆	☆	☆	
			09T302-LHC	9.525	3.97	4.4	0.2	7			☆	★	★	
			09T304-LHC	9.525	3.97	4.4	0.4	7			☆	★	★	
			09T308-LHC	9.525	3.97	4.4	0.8	7			☆	★	★	
			120402-LHC	12.7	4.76	5.5	0.2	7			☆	☆	☆	
			120404-LHC	12.7	4.76	5.5	0.4	7			☆	★	★	
			120408-LHC	12.7	4.76	5.5	0.8	7			☆	★	★	
		DCGT	070202-LHC	6.35	2.38	2.8	0.2	7			☆	★	★	
			070204-LHC	6.35	2.38	2.8	0.4	7			☆	★	★	
			070208-LHC	6.35	2.38	2.8	0.8	7			☆	☆	☆	
			11T302-LHC	9.525	3.97	4.4	0.2	7			☆	★	★	
			11T304-LHC	9.525	3.97	4.4	0.4	7			☆	★	★	
			11T308-LHC	9.525	3.97	4.4	0.8	7			☆	★	★	
			11T312-LHC	9.525	3.97	4.4	1.2	7			☆	☆	☆	
		SCGT	09T302-LHC	9.525	3.97	4.4	0.2	7			☆	★	★	
			09T304-LHC	9.525	3.97	4.4	0.4	7			☆	★	★	
			09T308-LHC	9.525	3.97	4.4	0.8	7			☆	★	★	
			120402-LHC	12.7	4.76	5.5	0.2	7			☆	☆	☆	
			120404-LHC	12.7	4.76	5.5	0.4	7			☆	★	★	
			120408-LHC	12.7	4.76	5.5	0.8	7			☆	★	★	
			120412-LHC	12.7	4.76	5.5	1.2	7			☆	★	★	
			120416-LHC	12.7	4.76	5.5	1.6	7			☆	☆	☆	
		TCGT	090202-LHC	5.56	2.38	2.5	0.2	7			☆	★	★	
			090204-LHC	5.56	2.38	2.5	0.4	7			☆	★	★	
			090208-LHC	5.56	2.38	2.5	0.8	7			☆	☆	☆	
			110202-LHC	6.35	2.38	2.8	0.2	7			☆	★	★	
			110204-LHC	6.35	2.38	2.8	0.4	7			☆	★	★	
			110208-LHC	6.35	2.38	2.8	0.8	7			☆	☆	☆	
			16T302-LHC	9.525	3.97	4.4	0.2	7			☆	★	★	
			16T304-LHC	9.525	3.97	4.4	0.4	7			☆	★	★	
			16T308-LHC	9.525	3.97	4.4	0.8	7			☆	★	★	
			16T312-LHC	9.525	3.97	4.4	1.2	7			☆	☆	☆	

**B**  
普通车削  
General Turning

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-8 铝加工正型刀片 Aluminum processing

高精度系列

Positive inserts

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
									PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
				ΦL.C	S	Φd	R	α	BPC05B	BPC308	BPJ109	BU810	BU813	BK10
	VBGT	110302-LHC	6.35	3.18	2.8	0.2	5			☆	★	★		
		110304-LHC	6.35	3.18	2.8	0.4	5			☆	★	★		
		110308-LHC	6.35	3.18	2.8	0.8	5			☆	★	★		
		160402-LHC	9.525	4.76	4.4	0.2	5			☆	★	★		
		160404-LHC	9.525	4.76	4.4	0.4	5			☆	★	★		
		160408-LHC	9.525	4.76	4.4	0.8	5			☆	★	★		
		160412-LHC	9.525	4.76	4.4	1.2	5			☆	★	★		
		220516-LHC	12.7	5.96	5.5	1.6	5			☆	☆	☆		
		220525-LHC	12.7	5.96	5.5	2.5	5			☆	☆	☆		
220530-LHC	12.7	5.96	5.5	3	5			☆	☆	☆				
	VCGT	110302-LHC	6.35	3.18	2.8	0.2	7			☆	★	★		
		110304-LHC	6.35	3.18	2.8	0.4	7			☆	★	★		
		110308-LHC	6.35	3.18	2.8	0.8	7			☆	★	★		
		130302-LHC	7.86	3.18	3.4	0.2	7			☆	☆	☆		
		130304-LHC	7.86	3.18	3.4	0.4	7			☆	☆	☆		
		160402-LHC	9.525	4.76	4.4	0.2	7			☆	★	★		
		160404-LHC	9.525	4.76	4.4	0.4	7			☆	★	★		
		160408-LHC	9.525	4.76	4.4	0.8	7			☆	★	★		
		160412-LHC	9.525	4.76	4.4	1.2	7			☆	★	★		
		220520-LHC	12.7	5.96	5.5	2	7			☆	☆	☆		
220530-LHC	12.7	5.96	5.5	3	7			☆	☆	☆				
	RCGT	0602MO-LHC	6	2.38	2.5	-	7			☆	☆	☆		
		0803MO-LHC	8	3.18	3.4	-	7			☆	★	★		
		1003MO-LHC	10	3.18	4.4	-	7			☆	★	★		
		10T3MO-LHC	10	3.97	4.4	-	7			☆	★	★		
		1204MO-LHC	12	4.76	5.5	-	7			☆	★	★		



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-8 铝加工正型刀片 Aluminum processing

# 高精度系列

Positive inserts

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
		ΦI.C	S	Φd	R	α	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
							BPC05B	BPC308	BPU109	BU810	BU813	BK10
	09T302-LH2C	9.525	3.97	4.4	0.2	7			☆	☆	☆	
	09T304-LH2C	9.525	3.97	4.4	0.4	7			☆	☆	☆	
	11T302-LH2C	9.525	3.97	4.4	0.2	7			☆	★	★	
	11T304-LH2C	9.525	3.97	4.4	0.4	7			☆	★	★	
	11T308-LH2C	9.525	3.97	4.4	0.8	7			☆	★	★	
	16T304-LH2C	9.525	3.97	4.4	0.4	7			☆	★	★	
	16T308-LH2C	9.525	3.97	4.4	0.8	7			☆	★	★	
	160404-LH2C	9.525	4.76	4.4	0.4	7			☆	★	★	
	160408-LH2C	9.525	4.76	4.4	0.8	7			☆	★	★	
	220530-LH2C	12.7	5.96	5.5	3	7			☆	★	★	
	220530-LH2C	12.7	5.96	5.5	3	11			☆	★	★	

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-8 铝加工正型刀片 Aluminum processing

高精度系列

Positive inserts

B  
普通车削  
General Turning

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸Dimension (mm)					材质推荐 Grade recommendation					
				Φl.C	S	Φd	R	α	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
									BPG05B	BPG308	BPU109	BU810	BU813	B331
			060202-LZC	6.35	2.38	2.8	0.2	7			☆	★	★	
			060204-LZC	6.35	2.38	2.8	0.4	7			☆	★	★	
		CCGT	09T302-LZC	9.53	3.97	4.4	0.2	7			☆	★	★	
			09T304-LZC	9.53	3.97	4.4	0.4	7			☆	★	★	
			09T308-LZC	9.53	3.97	4.4	0.8	7			☆	★	★	
			120404-LZC	12.7	4.76	5.5	0.4	7			☆	★	★	
	120408-LZC	12.7	4.76	5.5	0.8	7			☆	☆	★			
			070202-LZC	6.35	2.38	2.8	0.2	7			☆	★	★	
			070204-LZC	6.35	2.38	2.8	0.4	7			☆	★	★	
		DCGT	11T302-LZC	9.53	3.97	4.4	0.2	7			☆	★	★	
			11T304-LZC	9.53	3.97	4.4	0.4	7			☆	★	★	
			110204-LZC	6.35	2.38	2.8	0.4	7			☆	★	★	
		TCGT	16T304-LZC	9.53	3.97	4.4	0.4	7			☆	★	★	
			16T308-LZC	9.53	3.97	4.4	0.8	8			☆	☆	★	
			110302-LZC	6.35	3.18	2.8	0.2	7			☆	★	★	
			110304-LZC	6.35	3.18	2.8	0.4	7			☆	★	★	
		VCGT	160402-LZC	9.53	4.76	4.4	0.2	7			☆	★	★	
			160404-LZC	9.53	4.76	4.4	0.4	7			☆	★	★	
			160408-LZC	9.53	4.76	4.4	0.8	7			☆	★	★	



★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade



# B1-8 铝加工负型刀片 Aluminum processing

# 高精度系列

Negative inserts

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
				φI.C	S	φd	R	BPG05B	BPG308	BPU109	BU810	BU813	BK10
		CNGG	120402-LHC	12.7	4.76	5.16	0.2			☆	★	★	
			120404-LHC	12.7	4.76	5.16	0.4			☆	★	★	
			120408-LHC	12.7	4.76	5.16	0.8			☆	★	★	
			120412-LHC	12.7	4.76	5.16	1.2			☆	☆	☆	
		DNGG	150404-LHC	12.7	4.76	5.16	0.4			☆	★	★	
			150408-LHC	12.7	4.76	5.16	0.8			☆	★	★	
			150604-LHC	12.7	6.35	5.16	0.4			☆	★	★	
			150608-LHC	12.7	6.35	5.16	0.8			☆	★	★	
		SNGG	120404-LHC	12.7	4.76	5.16	0.4			☆	★	★	
			120408-LHC	12.7	4.76	5.16	0.8			☆	★	★	
			120412-LHC	12.7	4.76	5.16	1.2			☆	☆	☆	
		TNGG	160404-LHC	9.525	4.76	3.81	0.4			☆	★	★	
			160408-LHC	9.525	4.76	3.81	0.8			☆	★	★	
			160412-LHC	9.525	4.76	3.81	1.2			☆	☆	☆	
			220408-LHC	12.7	4.76	5.16	0.8			☆	★	★	
			220412-LHC	12.7	4.76	5.16	1.2			☆	☆	☆	
		VNGG	160401-LHC	9.525	4.76	3.81	0.1			☆	☆	☆	
			160402-LHC	9.525	4.76	3.81	0.2			☆	☆	☆	
			160404-LHC	9.525	4.76	3.81	0.4			☆	★	★	
			160408-LHC	9.525	4.76	3.81	0.8			☆	★	★	
		WNGG	060404-LHC	9.525	4.76	3.81	0.4			☆	★	★	
			060408-LHC	9.525	4.76	3.81	0.8			☆	★	★	
			080404-LHC	12.7	4.76	5.16	0.4			☆	★	★	
			080408-LHC	12.7	4.76	5.16	0.8			☆	★	★	
			080412-LHC	12.7	4.76	5.16	1.2			☆	☆	☆	

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





# B1-8 铝加工正型刀片 Aluminum processing

# 普通精度系列

Positive inserts

B  
普通精度系列  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended						
				ΦL.C	S	Φd	R	α	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade			
									BPC05B	BPC308	BPU109	BU810	BU813	BK10	
	CCGT	060202-LH	6.35	2.38	2.8	0.2	7			☆	★	★			
		060204-LH	6.35	2.38	2.8	0.4	7			☆	★	★			
		060208-LH	6.35	2.38	2.8	0.8	7			☆	☆	☆			
		09T302-LH	9.525	3.97	4.4	0.2	7			☆	★	★			
		09T304-LH	9.525	3.97	4.4	0.4	7			☆	★	★			
		09T308-LH	9.525	3.97	4.4	0.8	7			☆	★	★			
		120402-LH	12.7	4.76	5.5	0.2	7			☆	☆	☆			
		120404-LH	12.7	4.76	5.5	0.4	7			☆	★	★			
120408-LH	12.7	4.76	5.5	0.8	7			☆	★	★					
	DCGT	070202-LH	6.35	2.38	2.8	0.2	7			☆	★	★			
		070204-LH	6.35	2.38	2.8	0.4	7			☆	★	★			
		070208-LH	6.35	2.38	2.8	0.8	7			☆	☆	☆			
		11T302-LH	9.525	3.97	4.4	0.2	7			☆	★	★			
		11T304-LH	9.525	3.97	4.4	0.4	7			☆	★	★			
		11T308-LH	9.525	3.97	4.4	0.8	7			☆	★	★			
	TCGT	090202-LH	5.56	2.38	2.5	0.2	7			☆	★	★			
		090204-LH	5.56	2.38	2.5	0.4	7			☆	★	★			
		090208-LH	5.56	2.38	2.5	0.8	7			☆	☆	☆			
	VCGT	110302-LH	6.35	3.18	2.8	0.2	7			☆	★	★			
		110304-LH	6.35	3.18	2.8	0.4	7			☆	★	★			
		110308-LH	6.35	3.18	2.8	0.8	7			☆	★	★			
		130302-LH	7.86	3.18	3.4	0.2	7			☆	☆	☆			
		130304-LH	7.86	3.18	3.4	0.4	7			☆	☆	☆			
		160402-LH	9.525	4.76	4.4	0.2	7			☆	★	★			
		160404-LH	9.525	4.76	4.4	0.4	7			☆	★	★			
160408-LH	9.525	4.76	4.4	0.8	7			☆	★	★					
	VBGT	110302-LH	6.35	3.18	2.8	0.2	5			☆	★	★			
		110304-LH	6.35	3.18	2.8	0.4	5			☆	★	★			
		110308-LH	6.35	3.18	2.8	0.8	5			☆	★	★			
		160402-LH	9.525	4.76	4.4	0.2	5			☆	★	★			
		160404-LH	9.525	4.76	4.4	0.4	5			☆	★	★			
		160408-LH	9.525	4.76	4.4	0.8	5			☆	★	★			



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

# B1-8 铝加工正型刀片 Aluminum processing

普通精度系列

Positive inserts

刀片基本形状The basic shape of inserts		型号 Type	基本尺寸Dimension (mm)					材质推荐 Grade recommendation					
			ΦI.C	S	Φd	R	α	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
								BPG05B	BPG308	BPU109	BU810	BU813	B331
		060202-LZ	6.35	2.38	2.8	0.2	7			☆	★	★	
		060204-LZ	6.35	2.38	2.8	0.4	7			☆	★	★	
		09T302-LZ	9.53	3.97	4.4	0.2	7			☆	★	★	
		09T304-LZ	9.53	3.97	4.4	0.4	7			☆	★	★	
		09T308-LZ	9.53	3.97	4.4	0.8	7			☆	★	★	
		120404-LZ	12.7	4.76	5.5	0.4	7			☆	★	★	
		120408-LZ	12.7	4.76	5.5	0.8	7			☆	☆	★	
		070202-LZ	6.35	2.38	2.8	0.2	7			☆	★	★	
		070204-LZ	6.35	2.38	2.8	0.4	7			☆	★	★	
		11T302-LZ	9.53	3.97	4.4	0.2	7			☆	★	★	
		11T304-LZ	9.53	3.97	4.4	0.4	7			☆	★	★	
		110204-LZ	6.35	2.38	2.8	0.4	7			☆	★	★	
		16T304-LZ	9.53	3.97	4.4	0.4	7			☆	★	★	
		16T308-LZ	9.53	3.97	4.4	0.8	8			☆	☆	★	
		110302-LZ	6.35	3.18	2.8	0.2	7			☆	★	★	
		110304-LZ	6.35	3.18	2.8	0.4	7			☆	★	★	
		160402-LZ	9.53	4.76	4.4	0.2	7			☆	★	★	
		160404-LZ	9.53	4.76	4.4	0.4	7			☆	★	★	
		160408-LZ	9.53	4.76	4.4	0.8	7			☆	★	★	

**B**  
General Turning  
普通车削

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade





B1-8 铝加工负型刀片 Aluminum processing

普通精度系列

Negative inserts

B  
普通精度系列  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
				$\phi$ I.C	S	$\phi$ d	R	BPC05B	BPC308	BP109	BU810	BU813	BK10
		CNMG	120402-LH	12.7	4.76	5.16	0.2			☆	★	★	
			120404-LH	12.7	4.76	5.16	0.4			☆	★	★	
			120408-LH	12.7	4.76	5.16	0.8			☆	★	★	
			120412-LH	12.7	4.76	5.16	1.2			☆	★	★	
		DNMG	150404-LH	12.7	4.76	5.16	0.4			☆	★	★	
			150408-LH	12.7	4.76	5.16	0.8			☆	★	★	
			150604-LH	12.7	6.35	5.16	0.4			☆	★	★	
			150608-LH	12.7	6.35	5.16	0.8			☆	★	★	
		SNMG	120404-LH	12.7	4.76	5.16	0.4			☆	★	★	
			120408-LH	12.7	4.76	5.16	0.8			☆	★	★	
			120412-LH	12.7	4.76	5.16	1.2			☆	★	★	
		TNMG	160404-LH	9.525	4.76	3.81	0.4			☆	★	★	
			160408-LH	9.525	4.76	3.81	0.8			☆	★	★	
			160412-LH	9.525	4.76	3.81	1.2			☆	★	★	
			220408-LH	12.7	4.76	5.16	0.8			☆	★	★	
			220412-LH	12.7	4.76	5.16	1.2			☆	☆	☆	
		VNMG	160404-LH	9.525	4.76	3.81	0.4			☆	★	★	
			160408-LH	9.525	4.76	3.81	0.8			☆	★	★	
		WNMG	060404-LH	9.525	4.76	3.81	0.4			☆	★	★	
			060408-LH	9.525	4.76	3.81	0.8			☆	★	★	
			080404-LH	12.7	4.76	5.16	0.4			☆	★	★	
			080408-LH	12.7	4.76	5.16	0.8			☆	★	★	
			080412-LH	12.7	4.76	5.16	1.2			☆	★	★	



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended										
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade		
								BPS153	BPS253	BPC05B	BPG108	BPG20B	BPG308	BPC25B	BPG30A	BP20	BP35	BK10
	APKT11T304-LHC	6.5	12.24	3.6	2.8	0.4					☆	☆	☆				★	★
	APKT11T308-LHC	6.5	12.24	3.6	2.8	0.8					☆	☆	☆				★	★
	APKT1135PDFR-G2C	6.2	11.3	3.5	2.8	0.8					☆	☆	☆				★	★
	APKT1604PDFR-G2C	9.26	17	4.76	4.4	0.8					☆	☆	☆				★	★
	APEX100304FR-LHC	6.6	10.3	3.18	2.8	0.4					☆	☆	☆				★	★
	APKT160402FR-LHC	9.8	16.88	4.76	4.4	0.2					☆	☆	☆				★	★
	APKT160404PDFR-LHC	9.8	16.88	4.76	4.4	0.4					☆	☆	☆				★	★
	APKT160408FR-LHC	9.8	16.88	4.76	4.4	0.8					☆	☆	☆				★	★
	APKT160416FR-LHC	9.8	16.88	4.76	4.4	1.6					☆	☆	☆				★	★
	APKT16T4PDFR-LH1C	9.5	17	4.96	4.4	0.8					☆	☆	☆				★	★
	APKT1652PDFR-LH2C	9.8	16.88	4.76	4.4	3.2					☆	☆	☆				★	★
	ADGT113504PDFR-LHC	6.6	12.58	3.55	2.8	0.4					☆	☆	☆				☆	★
	ADGT113508PDFR-LHC	6.6	12.58	3.55	2.8	0.8					☆	☆	☆				☆	★
	ADGT113510PDFR-LHC	6.6	12.58	3.55	2.8	1.0					☆	☆	☆				☆	★
	ADGT150404PDFR-LHC	9.7	15.58	4.76	4.4	0.4					☆	☆	☆				☆	★
	ADGT150408PDFR-LHC	9.7	15.58	4.76	4.4	0.8					☆	☆	☆				☆	★
	ADGT150412PDFR-LHC	9.7	15.58	4.76	4.4	1.2					☆	☆	☆				☆	★
	SEKT13T3AEFN-LH	13.4	3.97	4.4	20						☆	☆	☆				★	★
	SEKT13T3AEFN-LHC	13.4	3.97	4.4	20						☆	☆	☆				★	★
	SDKT0903AEFN-LH	9.525	3.18	3.4	15						☆	☆	☆				★	★
	SDKT0903AEFN-LH1	9.525	3.18	3.4	15						☆	☆	☆				★	★
	SDKT0903AEFN-LHC	9.525	3.18	3.4	15						☆	☆	☆				★	★
	SDKT0903AEFN-LH1C	9.525	3.18	3.4	15						☆	☆	☆				★	★
	SEKT1204AFN-LH2	12.7	4.76	5.5	20	16					☆	☆	☆				★	★
	SDHT1204AEFN-LH2	12.7	4.76	5.5	15	15.76					☆	☆	☆				★	★
	SEKT1204AFN-LH2C	12.7	4.76	5.5	20	16					☆	☆	☆				★	★
	SDHT1204AEFN-LH2C	12.7	4.76	5.5	15	15.76					☆	☆	☆				★	★





# B1-8 轮毂加工 Inserts For Wheel Turning

高精度系列

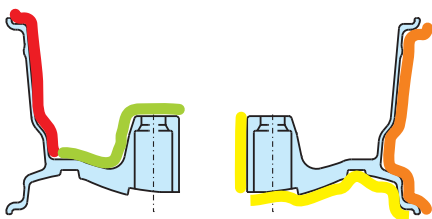
B  
普通件  
General Turning

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended						
		L	R	B1	S	R	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade			
							BPG05B	BPC308	BPU109	BK10	BU810	BK200F	BK10
	GDMA840-LHC	30	8	5.6	8.2	4			☆	☆	★		
	GIPATYZ-35V-1.2-LHC	30	7.2	6	8.2	1.2			☆	☆	★		
	GIP600E-3.00-LHC	18	6	4.8	6.5	3			☆	☆	★		
	400-A-LHC	21	4	3.3	4.8	2			☆	☆	☆		
	500-A-LHC	26	5	4.1	5.8	2.5			☆	☆	☆		
	600-A-LHC	26	6	5	5.8	3			☆	☆	★		
	800-A-LHC	31	8	6	6.5	4			☆	☆	☆		
	160412-LHC	9.525	4.76	4.4	1.2	7			☆	☆	★		
	220520-LHC	12.7	5.96	5.5	2	7			☆	☆	★		
	220530-LHC	12.7	5.96	5.5	3	7			☆	☆	★		
	220612-LH2C	12.7	6.35	5.5	1.2	11			☆	☆	★		
	220530-LH2C	12.7	5.96	5.5	3	11			☆	☆	★		
					R	α							

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

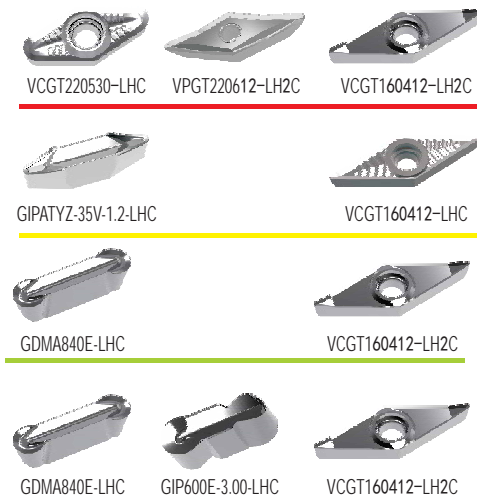
## B1-8 铝合金轮毂加工方案

高精度系列



提供全套解决方案及技术服务




详情请咨询当地销售经理



## B1-7 铸铁加工刀片 Inserts for processing cast iron ..... 材质 Grades

### **K** 铸铁加工 Process on cast iron

#### a 涂层牌号 Grade for coating

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPC102	K10-K20	黑 Black 	CVD涂层硬质合金，在硬基体上涂有光滑的耐磨涂层，能够耐受苛刻的间断切削工况。用于铸铁低到中等切削速度的粗加工。 CVD-coated cemented carbide, the hard substrate coated with a smooth and wear-resistant coating, can bear harsh intermittent cutting conditions. Universal grade for all cast iron roughing cutting at low to medium speed.
BPC102A	K15-K25	黑 Black 	CVD涂层硬质合金牌号，在硬度、韧性兼备的梯度烧结基体上涂有耐磨涂层。灰口和球墨铸铁的低到中等切削速度加工。在湿和干式加工中的安全性。 CVD-coated cemented carbide grades, thick abrasion resistant coating on the high intensity gradient sintered base. Machining of gray and ductile iron at low to medium cutting speed. Security in wet and dry machining.
BPC132	K15-K35	黑 Black 	CVD涂层硬质合金牌号。WC-Co较高强度的基体与TiN/TiCN/Al <sub>2</sub> O <sub>3</sub> 厚膜结构化学涂层的结合，尤其适合于灰口铸铁、球墨铸铁的车削加工。 CVD coating carbide grade. It combines WC-Co high strength matrix and TiN/TiCN/Al <sub>2</sub> O <sub>3</sub> thick chemical coating, especially suitable for turning of gray iron, ductile cast iron

B  
General Turning  
普通车削

#### b 非涂层牌号 Grade for uncoating

牌号 Grade	ISO分类 ISO classification	密度 Density (g/cm <sup>3</sup> )	抗弯强度 Bending strength (N/mm <sup>2</sup> )	硬度 Hardness HRA	应用推荐 Applications Recommended
YG6	K15-K20	14.85-15.05	2050	90.5-91.5	耐磨性较高、抗冲击和震动较好。适用铸铁，有色金属及合金、非金属材料中等切削速度的半精加工和精加工。 High wear resistance, good resistance to shock and vibration. Application of cast iron, non-ferrous metals and alloys, non-metallic materials medium cutting speed for semi-finishing and finishing.
YG8	K30	14.6-14.85	2520	89.5-90.5	使用强度高，抗冲击、抗震性好，但耐磨性和允许的切削速度较低。适于铸铁，有色金属及合金、非金属材料低速的粗加工。The use of high strength, impact resistance, good shock resistance, but wear resistance and allows the cutting speed is low. For cast iron, non-ferrous metals and alloys, non-metallic materials low speed roughing.
BK10	K10-K20	14.8-15	2000	91.5-92.5	耐磨性高，使用强度较好，适用于加工冷硬合金铸铁与耐热合金钢，及普通铸铁加工。 High wear resistance, the use of high strength, suitable for machining of chilled alloy cast iron and steel, and ordinary cast iron processing.

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





B1-7 铸铁加工负型刀片 Inserts for processing cast iron ..... 精加工 Finishing

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
								CVD涂层牌号 CVD coating grade			非涂层牌号 Uncoated grade				
				ΦL.C	S	Φd	R	BPC102	BPC131	BPC132	BPS101	YG8	BU810	BU813	
		CNMG	120404-CX	12.7	4.76	5.16	0.4		☆	☆				☆	
			120408-CX	12.7	4.76	5.16	0.8		☆	★					☆
			120412-CX	12.7	4.76	5.16	1.2		☆	★					☆
			160604-CX	15.875	6.35	6.35	0.4		☆	☆					☆
			160608-CX	15.875	6.35	6.35	0.8		☆	☆					☆
			160612-CX	15.875	6.35	6.35	1.2		☆	☆					☆
		DNMG	110404-CX	9.525	4.76	3.81	0.4		☆	☆				☆	
			110408-CX	9.525	4.76	3.81	0.8		☆	☆					☆
			150404-CX	12.7	4.76	5.16	0.4		☆	☆					☆
			150408-CX	12.7	4.76	5.16	0.8		☆	★					☆
			150412-CX	12.7	4.76	5.16	1.2		☆	★					☆
			150604-CX	12.7	6.35	5.16	0.4		☆	☆					☆
			150608-CX	12.7	6.35	5.16	0.8		☆	★					☆
			150612-CX	12.7	6.35	5.16	1.2		☆	★					☆
		SNMG	090304-CX	9.525	3.18	3.81	0.4		☆	☆				☆	
			090308-CX	9.525	3.18	3.81	0.8		☆	☆					☆
			120404-CX	12.7	4.76	5.16	0.4		☆	☆					☆
			120408-CX	12.7	4.76	5.16	0.8		☆	★					☆
			120412-CX	12.7	4.76	5.16	1.2		☆	☆					☆
			150608-CX	15.875	6.35	6.35	0.8		☆	☆					☆
			150612-CX	15.875	6.35	6.35	1.2		☆	☆					☆
		TNMG	160404-CX	9.525	4.76	3.81	0.4		☆	★				☆	
			160408-CX	9.525	4.76	3.81	0.8		☆	★					☆
			160412-CX	9.525	4.76	3.81	1.2		☆	★					☆
		WNMG	060404-CX	9.525	4.76	5.16	0.4		☆	★				☆	
			060408-CX	9.525	4.76	5.16	0.8		☆	★					☆
			080404-CX	12.7	4.76	5.16	0.4		☆	★					☆
			080408-CX	12.7	4.76	5.16	0.8		☆	★					☆
			080412-CX	12.7	4.76	5.16	1.2		☆	★					☆



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



B1-7 铸铁加工负型刀片 Inserts for processing cast iron .....半精加工 Semi finishing

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								CVD涂层牌号 CVD coating grade				非涂层牌号 Uncoated grade	
				ΦI.C	S	Φd	R	BPC102	BPC131	BPC132	BPS101	YCB	BU810
		CNMG	120404-CQ	12.7	4.76	5.16	0.4		☆	★			☆
			120408-CQ	12.7	4.76	5.16	0.8		☆	★			☆
			120412-CQ	12.7	4.76	5.16	1.2		☆	★			☆
			120416-CQ	12.7	4.76	5.16	1.6		☆	★			☆
			160608-CQ	15.875	6.35	6.35	0.8		☆	☆			☆
			160612-CQ	15.875	6.35	6.35	1.2		☆	☆			☆
			160616-CQ	15.875	6.35	6.35	1.6		☆	☆			☆
		DNMG	110408-CQ	9.525	4.76	3.81	0.8		☆	★			☆
			110412-CQ	9.525	4.76	3.81	1.2		☆	☆			☆
			150404-CQ	12.7	4.76	5.16	0.4		☆	★			☆
			150408-CQ	12.7	4.76	5.16	0.8		☆	★			☆
			150412-CQ	12.7	4.76	5.16	1.2		☆	★			☆
			150604-CQ	12.7	6.35	5.16	0.4		☆	★			☆
			150608-CQ	12.7	6.35	5.16	0.8		☆	★			☆
			150612-CQ	12.7	6.35	5.16	1.2		☆	★			☆
		SNMG	120408-CQ	12.7	4.76	5.16	0.8		☆	★			☆
			120412-CQ	12.7	4.76	5.16	1.2		☆	☆			☆
			120416-CQ	12.7	4.76	5.16	1.6		☆	☆			☆
			150612-CQ	15.875	6.35	6.35	1.2		☆	☆			☆
			150616-CQ	15.875	6.35	6.35	1.6		☆	☆			☆
		TNMG	160408-CQ	9.525	4.76	3.81	0.8		☆	★			☆
			160412-CQ	9.525	4.76	3.81	1.2		☆	★			☆
			220408-CQ	12.7	4.76	5.16	0.8		☆	☆			☆
			220412-CQ	12.7	4.76	5.16	1.2		☆	☆			☆
		WNMG	060404-CQ	9.525	4.76	3.81	0.4		☆	★			☆
			060408-CQ	9.525	4.76	3.81	0.8		☆	★			☆
			060412-CQ	9.525	4.76	3.81	1.2		☆	★			☆
			080404-CQ	12.7	4.76	5.16	0.4		☆	★			☆
			080408-CQ	12.7	4.76	5.16	0.8		☆	★			☆
			080412-CQ	12.7	4.76	5.16	1.2		☆	☆			☆
			080416-CQ	12.7	4.76	5.16	1.6		☆	☆			☆
		VNMG	160404-CQ	9.525	4.76	3.81	0.4		☆	☆			☆
			160408-CQ	9.525	4.76	3.81	0.8		☆	★			☆
			160412-CQ	9.525	4.76	3.81	1.2		☆	☆			☆

B  
General Turning  
普通车削

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade





B1-7 铸铁加工负型刀片 Inserts for processing cast iron .....半精加工 Semi finishing

B  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								CVD涂层牌号 CVD coating grade			非涂层牌号 Uncoated grade		
				ΦI.C	S	Φd	R	BPC102	BPC131	BPC132	BPS101	YG8	BU810
	CNMG	120404-U	12.7	4.76	5.16	0.4			☆		☆	☆	
		120408-U	12.7	4.76	5.16	0.8			★		☆	★	
		120412-U	12.7	4.76	5.16	1.2			☆		☆	☆	
		160604-U	15.875	6.35	6.35	0.4			☆		☆	☆	
		160608-U	15.875	6.35	6.35	0.8			★		☆	★	
		160612-U	15.875	6.35	6.35	1.2			☆		☆	☆	
	DNMG	150404-U	12.7	4.76	5.16	0.4			☆		☆	☆	
		150408-U	12.7	4.76	5.16	0.8			☆		☆	☆	
		150604-U	12.7	6.35	5.16	0.4			☆		☆	☆	
		150608-U	12.7	6.35	5.16	0.8			☆		☆	☆	
	SNMG	120404-U	12.7	4.76	5.16	0.4			☆		☆	☆	
		120408-U	12.7	4.76	5.16	0.8			☆		☆	☆	
		150608-U	15.875	6.35	5.16	0.8			☆		☆	☆	
		150612-U	15.875	6.35	5.16	1.2			☆		☆	☆	
	TNMG	160404-U	9.525	4.76	5.16	0.4			☆		☆	☆	
		160408-U	9.525	4.76	5.16	0.8			★		☆	★	
		160412-U	9.525	4.76	5.16	1.2			★		☆	★	
	VNMG	160404-U	9.525	4.76	5.16	0.4			☆		☆	☆	
		160408-U	9.525	4.76	5.16	0.8			★		☆	★	
		160412-U	9.525	4.76	5.16	1.2			★		☆	★	
	WNMG	080404-U	12.7	4.76	5.16	0.4			☆		☆	☆	
		080408-U	12.7	4.76	5.16	0.8			★		☆	★	
		080412-U	12.7	4.76	5.16	1.2			★		☆	★	



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

B1-7 铸铁加工负型刀片 Inserts for processing cast iron .....半精加工 Semi finishing

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								CVD涂层牌号 CVD coating grade			非涂层牌号 Uncoated grade		
				$\Phi$ I.C	S	$\Phi$ d	R	BPC102	BPC131	BPC132	BPS101	YG8	BU810
		CNMG	120408-GH	12.7	4.76	5.16	0.8		☆	★			★
			120412-GH	12.7	4.76	5.16	1.2		☆	★			★
			120416-GH	12.7	4.76	5.16	1.6		☆	☆			☆
			160608-GH	15.875	6.35	6.35	0.8		☆	☆			☆
			160612-GH	15.875	6.35	6.35	1.2		☆	☆			☆
			190608-GH	19.05	6.35	7.93	0.8		☆	☆			☆
			190612-GH	19.05	6.35	7.93	1.2		☆	☆			☆
		DNMG	110408-GH	9.525	4.76	3.81	0.8		☆	☆			☆
			150408-GH	12.7	4.76	5.16	0.8		☆	★			★
			150608-GH	12.7	6.35	5.16	0.8		☆	☆			☆
		TNMG	160408-GH	9.525	4.76	3.81	0.8		☆	★			★
			160412-GH	9.525	4.76	3.81	1.2		☆	★			★
			220408-GH	12.7	4.76	5.16	0.8		☆	★			★
			220412-GH	12.7	4.76	5.16	1.2		☆	★			★
		WNMG	060408-GH	9.525	4.76	3.81	0.8		☆	☆			☆
			060412-GH	9.525	4.76	3.81	1.2		☆	☆			☆
			080408-GH	12.7	4.76	5.16	0.8		☆	★			★
			080412-GH	12.7	4.76	5.16	1.2		☆	★			★
			080416-GH	12.7	4.76	5.16	1.6		☆	☆			☆

**B**  
General Turning  
普通车削

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade



B1-7 铸铁加工负型刀片 Inserts for processing cast iron .....半精加工 Semi finishing

**B**  
普通车削  
General Turning

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								CVD涂层牌号 CVD coating grade			非涂层牌号 Uncoated grade		
				ΦI.C	S	Φd	R	BPC102	BPC131	BPC132	BPS101	YCB	BU810
		CNMA	120404	12.7	4.76	5.16	0.4		☆	★			☆
			120408	12.7	4.76	5.16	0.8		☆	★			☆
			120412	12.7	4.76	5.16	1.2		☆	★			☆
			120416	12.7	4.76	5.16	1.6		☆	★			☆
			160604	15.875	6.35	6.35	0.4		☆	☆			☆
			160608	15.875	6.35	6.35	0.8		☆	★			☆
			160612	15.875	6.35	6.35	1.2		☆	★			☆
			160616	15.875	6.35	6.35	1.6		☆	★			☆
			190612	19.05	6.35	7.94	1.2		☆	★			☆
			190616	19.05	6.35	7.94	1.6		☆	★			☆
190624	19.05	6.35	7.94	2.4		☆	★			☆			
		DNMA	110404	9.525	4.76	3.81	0.4		☆	★			☆
			110408	9.525	4.76	3.81	0.8		☆	★			☆
			110412	9.525	4.76	3.81	1.2		☆	★			☆
			150404	12.7	4.76	5.16	0.4		☆	★			☆
			150408	12.7	4.76	5.16	0.8		☆	★			☆
			150412	12.7	4.76	5.16	1.2		☆	★			☆
			150604	12.7	6.35	5.16	0.4		☆	★			☆
			150608	12.7	6.35	5.16	0.8		☆	★			☆
150612	12.7	6.35	5.16	1.2		☆	★			☆			
		SNMA	090304	9.525	3.18	3.81	0.4		☆	☆			☆
			090308	9.525	3.18	3.81	0.8		☆	★			☆
			120404	12.7	4.76	5.16	0.4		☆	★			☆
			120408	12.7	4.76	5.16	0.8		☆	★			☆
			120412	12.7	4.76	5.16	1.2		☆	★			☆
			120416	12.7	4.76	5.16	1.6		☆	★			☆
			150608	15.875	6.35	6.35	0.8		☆	★			☆
			150612	15.875	6.35	6.35	1.2		☆	★			☆
			150616	15.875	6.35	6.35	1.6		☆	★			☆
			190608	19.05	6.35	7.93	0.8		☆	★			☆
			190612	19.05	6.35	7.93	1.2		☆	★			☆
			190616	19.05	6.35	7.94	1.6		☆	★			☆
			190624	19.05	6.35	7.94	2.4		☆	★			☆
			250724	25.4	7.94	9.12	2.4		☆	★			☆
250924	25.4	9.52	9.12	2.4		☆	★			☆			



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

B1-7 铸铁加工负型刀片 Inserts for processing cast iron .....半精加工 Semi finishing

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
								CVD涂层牌号 CVD coating grade			非涂层牌号 Uncoated grade		
				$\Phi$ I.C	S	$\Phi$ d	R	BPC102	BPC131	BPC132	BPS101	YG8	BU810
		TNMA	160404	9.525	4.76	3.81	0.4		☆	★			☆
			160408	9.525	4.76	3.81	0.8		☆	★			☆
			160412	9.525	4.76	3.81	1.2		☆	★			☆
			160416	9.525	4.76	3.81	1.6		☆	★			☆
			220404	12.7	4.76	5.16	0.4		☆	★			☆
			220408	12.7	4.76	5.16	0.8		☆	★			☆
			220412	12.7	4.76	5.16	1.2		☆	★			☆
			220416	12.7	4.76	5.16	1.6		☆	★			☆
			270616	15.875	6.35	6.35	1.6		☆	★			☆
		WNMA	060404	9.525	4.76	3.81	0.4		☆	★			☆
			060408	9.525	4.76	3.81	0.8		☆	★			☆
			060412	9.525	4.76	3.81	1.2		☆	★			☆
			080404	12.7	4.76	5.16	0.4		☆	★			☆
			080408	12.7	4.76	5.16	0.8		☆	★			☆
			080412	12.7	4.76	5.16	1.2		☆	★			☆
			080416	12.7	4.76	5.16	1.6		☆	★			☆

**B**  
普通车削  
General Turning

★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade



B1-7 其他扒皮刀 Peeling inserts ..... 半精加工 Semi finishing

**B**  
普通车削  
General Turning

刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended							
									CVD涂层牌号 CVD coating grade				非涂层牌号 Uncoated grade			
				B	L	S	L1	a	BPS101	BPS251	BPS321	BPS371	BP35	YT5	YW1	YW2
 	LPUC	121517	12	31	7.5	17	1.5				★	★	☆			
		182020	18	37	12	20	2				★	★	☆			
		182027	18	43	12	27	2				★	★	☆			
		183020	18	43	12	20	3				★	★	☆			
		183027	18	47	12	27	3				★	★	☆			
 	LNUC	121517	12	31	7.5	17	1.5				★	★	☆			
		182020	18	37	12	20	2				★	★	☆			
		182027	18	43	12	27	2				★	★	☆			
		183020	18	43	12	20	3				★	★	☆			
		183027	18	47	12	27	3				★	★	☆			
 	XNGX	20.171138R	17.5	38.3	12	27					★	★	☆			


刀片基本形状The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)				材质推荐 Grade recommended							
								CVD涂层牌号 CVD coating grade				非涂层牌号 Uncoated grade			
				B	L	S	L1	BPS101	BPS251	BPS321	BPS371	BP35	YT5	YW1	YW2
 	LNGF	4012	20	40	12.4	12.15				★	★	☆			
 	LNGF	3008-F	12	30	7.5	17.5				★	★	☆			



★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade

# B1-7 仿形车刀 Turning inserts for profile ..... 半精加工 Semi finishing

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade	
				B	L	L.W	S	R	BPS051	BPP301	BPS251	BPS371	BPG05B	BPG308
 	KNUX	160405L11	16	16.15	9.525	4.76	0.5	☆	☆	★			★	☆
		160410L11	16	16.15	9.525	4.76	1	☆	☆	★			★	☆
		160405R11	16	16.15	9.525	4.76	0.5	☆	☆	★			★	☆
		160410R11	16	16.15	9.525	4.76	1	☆	☆	★			★	☆
 	KNUX	160405L11-1	16.15	9.525	3.38	4.76	0.5	☆	☆	★			★	☆
		160410L11-1	16.15	9.525	3.38	4.76	1	☆	☆	★			★	☆
		160405R11-1	16.15	9.525	3.38	4.76	0.5	☆	☆	★			★	☆
		160410R11-1	16.15	9.525	3.38	4.76	1	☆	☆	★			★	☆

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
									CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade	
				B	L.W	ΦD	S	R	BPS051	BPP301	BPS251	BPS371	BPG10A	BPG308
 	KNUX	160405L11-2	16.15	9.525	3.38	4.76	0.5	☆	☆	★			★	☆
		160410L11-2	16.15	9.525	3.38	4.76	1	☆	☆	★			★	☆
		160405R11-2	16.15	9.525	3.38	4.76	0.5	☆	☆	★			★	☆
		160410R11-2	16.15	9.525	3.38	4.76	1	☆	☆	★			★	☆

**B**  
General Turning  
普通车削

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## B2-1 车削刀具一览表 Turning toolholders overview

外圆车刀刀具 External Turning tools

<b>□CLNR/L</b> Kr=95° 	<b>□CBNR/L</b> Kr=75° 	<b>MCGNR/L</b> Kr=90° 	<b>□DJNR/L</b> Kr=93° 
<b>MSBNR/L</b> Kr=75° 	<b>□SKNR/L</b> Kr=75° 	<b>□SSNR/L</b> Kr=45° 	<b>MTBNR/L</b> Kr=75° 
<b>MTENN</b> Kr=60° 	<b>□TFNR/L</b> Kr=90° 	<b>□TGNR/L</b> Kr=90° 	<b>MTJNR/L</b> Kr=93° 
<b>MVJNR/L</b> Kr=93° 	<b>MVQNR/L</b> Kr=117° 30' 	<b>MVVNN</b> Kr=72° 30' 	<b>MVUNR/L</b> Kr=93° 
<b>□WLNRL/L</b> Kr=95° 	<b>SCACR/L</b> Kr=90° 	<b>SCBCR/L</b> Kr=75° 	<b>SCFCR/L</b> Kr=90° 
<b>SCKCR/L</b> Kr=75° 	<b>SCLCR/L</b> Kr=95° 	<b>SCMCN</b> Kr=50° 	<b>SDACR/L</b> Kr=90° 
<b>SDJCR/L</b> Kr=93° 	<b>SDNCN</b> Kr=62° 30' 	<b>SRACR/L</b> 	<b>SRDCN</b> 
<b>SSBCR/L</b> Kr=75° 	<b>SSDCN</b> Kr=45° 	<b>SSKCR/L</b> Kr=75° 	<b>SSSCR/L</b> Kr=45° 





## B2-1 车削刀具一览表 Turning toolholders overview

### 外圆车刀刀具 External Turning tools

<b>STFCR/L</b> $Kr=90^\circ$ 	<b>STGCR/L</b> $Kr=90^\circ$ 	<b>SVJ□R/L</b> $Kr=93^\circ$ 	<b>SVU□R/L</b> $Kr=93^\circ$ 
<b>SVVBN</b> $Kr=72^\circ 30'$ 	<b>SVJ□R/L</b> $Kr=93^\circ$ 		

### 内孔车刀刀具 Internal turning tools

<b>MCLNR/L</b> 	<b>MDUNR/L</b> 	<b>MSKNR/L</b> 	<b>MTFNR/L</b> 
<b>MVUNR/L</b> 	<b>MWLNRL/L</b> 	<b>SCLCL/R</b> 	<b>SDQCL/R</b> 
<b>SDUCL/R</b> 	<b>SSKCL/R</b> 	<b>SSSCR/L</b> 	<b>STFCL/R</b> 
<b>SVU□L/R</b> 			

### 切断(槽)刀: Grooving tools

<b>MGEHR/L</b> 	<b>MGIVR/L</b> 	<b>ZQ</b> 	<b>SPH</b> 
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## B2-2 外圆车削刀具命名规则 External turning tools code key

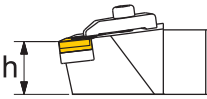
压紧方式 Clamping system	刀片形状 Inserts shape		刀片后角 Inserts clearance angle	切削方向 Cutting direction
 P - 杠杆压紧式 Hole clamping	 C	 D	 B	 L - 左手 N - Left hand
 M - 复合压紧式 Top and hole clamping	 R	 S	 C	 R - 右手 N - Right hand
 S - 螺钉压紧式 Screw clamping	 T	 V	 D	
 C - 压板压紧式 Top clamping	 W		 E	 N - 左、右手 N - Neutral
 D - 双重夹紧式 Double clamping			 N	
			 P	

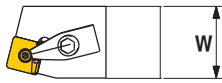
**P C L N L**

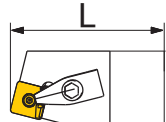
刀具形式与主偏角 Tool holder style and approach angle							
 <b>A</b>	 <b>B</b>	 <b>C</b>	 <b>D</b>	 <b>E</b>	 <b>F</b>	 <b>G</b>	 <b>H</b>
 <b>J</b>	 <b>K</b>	 <b>L</b>	 <b>M</b>	 <b>N</b>	 <b>O</b>	 <b>P</b>	 <b>Q</b>
 <b>R</b>	 <b>S</b>	 <b>T</b>	 <b>U</b>	 <b>V</b>	 <b>W</b>	 <b>X</b>	

**B**  
普通车削  
General Turning








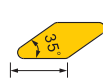

刀尖高度(mm) Nose height (mm)	
	
代号 Code	高度 Height
<b>12</b>	12
<b>16</b>	16
<b>20</b>	20
<b>25</b>	25
<b>32</b>	32
<b>40</b>	40
<b>50</b>	50

刀体宽度(mm) Width of toolholder (mm)	
	
代号 Code	宽度 Width
<b>12</b>	12
<b>16</b>	16
<b>20</b>	20
<b>25</b>	25
<b>32</b>	32
<b>40</b>	40
<b>50</b>	50

刀具长度(mm) Length of toolholder (mm)	
	
代号 Code	长度 Length
<b>E</b>	70
<b>F</b>	80
<b>H</b>	100
<b>K</b>	125
<b>M</b>	150
<b>P</b>	170
<b>Q</b>	180
<b>R</b>	200
<b>S</b>	250
<b>T</b>	300

**25 25 M 12**

**B**  
General Turning  
普通车削

切削刃长 Length of cutting edge							
刀片形状 Inserts shape	C	D	R	S	T	V	W
							
内切圆I.C(mm) Inscribed circle (mm)	切削刃长度(mm) Length of cutting edge (mm)						
5.56	---	---	---	---	09	---	---
6.35	06	07	---	---	11	---	---
9.525	09	11	09	09	16	16	06
12.7	12	15	12	12	22	22	08
15.875	16	19	15	15	27	---	---
19.05	19	---	19	19	33	---	---
25.4	25	---	25	25	44	---	---
32.0	---	---	32	---	---	---	---



**B** General Turning  
普通车削



## C 切断（切槽） Parting and grooving





<b>C1</b>	切断切槽刀片材质 Parting and grooving blade material	146
<b>C2</b>	切断(切槽)刀 Parting and grooving tools	148
<b>C3</b>	切槽刀刀具 Grooving tools	153








## C1 切断切槽刀片材质 Parting and grooving blade materials

**P** 钢加工 Process on steel

牌号 Grade	ISO分类 ISO classification	表面颜色 Surface color	应用推荐 Applications Recommended
BPS253	P20(P15-P30)	黄 Yellow 	梯度合金基体涂覆厚膜耐磨CVD牌号。通用性广的牌号。适于钢和铸钢件上的精加工到粗加工的连续切削以及间断切削。不锈钢材料连续切削和间断切削。 CVD coated carbide grade, Universal grade, suitable for steel and cast steel continuous cutting and interrupted cutting finishing to roughing. Grades with a wide range of applications. Stainless steel continuous cutting and interrupted cutting.
BPS373	P30(P25-P40)	黄 Yellow 	CVD涂层硬质合金牌号，高强度合金基体上厚膜耐磨涂层。在恶劣工况下加工钢和铸钢件。刃线安全性，用于高金属去除率的间断切削。 CVD coated carbide grade, high-strength alloy substrate with thick wear-resistant coating. Machining steel and cast steel in bad conditions. Edge line security for interrupted cutting high metal removal rate.
BPG20B	M25(M10-M30)	青灰 Cyan-blue gray dark 	PVD涂层微晶粒硬质合金。使用中等到低切削速度，进行各种不锈钢的精加工。需要出色的刃口强度和高表面质量时，可提供完美的平顺切削。很高的耐热冲击性能。适用于轻型间断切削。 PVD coated micro-grain carbide. Use for a variety of stainless steel finishing at medium to low cutting speed. When need excellent edge strength and high surface quality, provide the perfect ride cutting. A high thermal shock resistance. Suitable for light interrupted cuts.
BPG30B	M35(M25-M40)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金。用于以低至中等切削速度进行奥氏体不锈钢和双相不锈钢的半精加工到粗加工。很高的耐热冲击性能。非常适合快速间断切削。 PVD coated carbide. For austenitic stainless steels and duplex stainless steel semi-finishing to roughing at low to medium cutting speed. High thermal shock resistance. Ideal for quickly interrupted cutting.

C 切断切槽  
Parting Grooving


**M** 不锈钢加工 Process on stainless steel

牌号 Grade	ISO分类 ISO classification	表面颜色 Surface color	应用推荐 Applications Recommended
BPG05B	M10(M05-M15)	青灰 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力，适用于高速切削条件下，奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	M25(M10-M30)	青灰 Cyan-blue gray dark 	PVD涂层微晶粒硬质合金。使用中等到低切削速度，进行各种不锈钢的精加工。需要出色的刃口强度和高表面质量时，可提供完美的平顺切削。很高的耐热冲击性能。适用于轻型间断切削。 PVD coated micro-grain carbide. Use for a variety of stainless steel finishing at medium to low cutting speed. When need excellent edge strength and high surface quality, provide the perfect ride cutting. A high thermal shock resistance. Suitable for light interrupted cuts.
BPG30B	M35(M25-M40)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金。用于以低至中等切削速度进行奥氏体不锈钢和双相不锈钢的半精加工到粗加工。很高的耐热冲击性能。非常适合快速间断切削。 PVD coated carbide. For austenitic stainless steels and duplex stainless steel semi-finishing to roughing at low to medium cutting speed. High thermal shock resistance. Ideal for quickly interrupted cutting.




## C1 切断切槽刀片材质 Parting and grooving blade materials



### K 铸铁加工 Process on cast iron

牌号 Grade	ISO分类 ISO classification	表面颜色 Surface color	应用推荐 Applications Recommended
BPS253	K25 (K10-K30)	黄 Yellow 	梯度合金基体涂覆厚膜耐磨CVD牌号。通用性广的牌号。 适于钢和铸钢件上的精加工到粗加工的连续切削以及间断切削。不锈钢材料连续切削和间断切削。 CVD coated carbide grade, Universal grade, suitable for steel and cast steel continuous cutting and interrupted cutting finishing to roughing. Grades with a wide range of applications. Stainless steel continuous cutting and interrupted cutting.

### N 有色金属加工 Process on Non-ferrous metals

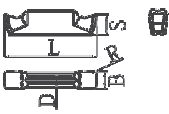
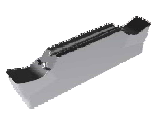
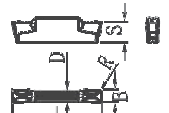
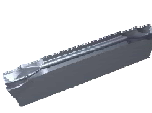






牌号 Grade	ISO分类 ISO classification	表面颜色 Surface color	应用推荐 Applications Recommended
BU810	N10 (N05-N15)		非涂层硬质合金牌号，有良好的切削刃锋利性。推荐用于铝切削和断续切削。 Uncoated carbide grade, with good sharpness, best used for aluminum cutting process and aluminum interrupted cutting process.
BK10	N10 (N10-N20)		耐磨性高，使用强度较好，适用于加工冷硬合金铸铁与耐热合金钢，及普通铸铁加工。 High wear resistance, the use of high strength, suitable for machining of chilled alloy cast iron and steel, and ordinary cast iron processing.
BPG05B	N05 (N05-N10)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金牌号，用于车削典型预硬化和塑料模具钢，加工硬度为HRC36及其以上： PVD coated carbide grade for milling typical hardened steel and plastic mold steel, processing hardness above HRC36.

### S 耐热合金加工 Heat Resistant alloys

牌号 Grade	ISO分类 ISO classification	表面颜色 Surface color	应用推荐 Applications Recommended
BPG118	S05-S15	紫黄 Purple yellow 	PVD含硅涂层硬质合金牌号，用于湿工况下灰口铸铁和球墨铸铁的中到粗加工铣削。 在中等到高切削速度下，具有可预期刀具寿命。 CVD coated carbide grade for gray cast iron and ductile cast iron semi-finishing to roughing milling, mainly used in dry conditions. Under low to medium cutting speed the cutting tools can have a long tool life.
BPG218	S15(S15-S30)	紫黄 Purple yellow 	PVD涂层硬质合金牌号，具有良好的抗积屑瘤和抗塑性变形能力。 用于不稳定工况，如长切削刃、切屑堵塞、深台肩和立铣、长悬伸、车铣工序等； 不锈钢的轻型铣削；结合周边磨削刀片，用于粘性和加工硬化材料；耐热优质合金的中等速度铣削； 淬硬零件的低进给和中速铣削。 PVD coated carbide grade have good ability to avoid built-up edge and good resistance to plastic deformation capacity. For unstable conditions, such as long cutting edge, clogging, deep shoulder milling, long overhang, milling processes. Light milling of stainless steel; combine grinding blade for viscous and hardening materials; moderate speed milling of heat resistant alloys; hardened parts milling at low feed and medium-speed.



## C2 切槽刀 Parting and grooving tools

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended					
									CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade		非涂层牌号 Uncoated grade	
				B	R	L	D/a	S	BPS253	BPS371	BPC05B	BPC20B	BPC30B	BU810
		MGNN	200-LH	2	0.2	16	1.5	3.5			★		★	
			300-LH	3	0.2	20	2.35	4.8			★		★	
			400-LH	4	0.3	21	3.3	4.8			★		★	
			500-LH	5	0.3	25.86	4.12	5.8			★		★	
			600-LH	6	0.4	26	5	5.8			★		★	
		MGNN	200-L	2	0.2	16	1.2	3.5	★		★			
			250-L	2.5	0.2	18.4	1.6	3.5	★		★			
			300-L	3	0.2	20	2.35	4.8	★		★			
			400-L	4	0.3	21	3.3	4.8	★		★			
			500-L	5	0.3	26	4.1	5.8	★		★			
		MGNN	200-H	2	0.2	16	1.2	3.5	★		★			
			250-H	2.5	0.2	18.4	2	3.85	★		★			
			300-H	3	0.2	20	2.35	4.8	★		★			
			400-H	4	0.3	21	3.3	4.8	★		★			
			500-H	5	0.3	26	4.1	5.8	★		★			
		MGNN	200-6D	2	0.2	16	6	3.5	★		★			
			250-6D	2.5	0.2	18.2	6	3.85	★		★			
			300-6D	3	0.4	21	6	4.8	★		★			
			400-6D	4	0.4	21	6	4.8	★		★			
			500-6D	5	0.4	26	6	5.8	★		★			
			MGNN	200-30D	2	0.2	16	30	3.5	★		★		
				250-30D	2.5	0.2	18.2	30	3.85	★		★		
				300-30D	3	0.4	21	30	4.8	★		★		
				400-30D	4	0.4	21	30	4.8	★		★		
				500-30D	5	0.4	26	30	5.8	★		★		


C 切  
断  
切  
槽  
Parting  
Grooving




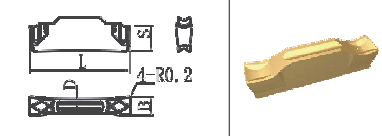

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## C2 切槽刀 Parting and grooving tools

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Material recommended									
							CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade		
		B	R	L	D	S	BPC122	BPS321	BPS411	BPG108	BPG05B	BPG20B	BPG25B	BPG30B	BK10	BU810
	GR/LIP300-M	3	0.30	19	2.1	5.4									☆	★
	GR/LIP400-M	4	0.40	18.93	2.85	5.85	★	☆		★	★	★	☆			
	GR/LIP500-M	5	0.40	19	3.4	5.75		☆	★	☆		★	★	☆		


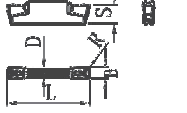
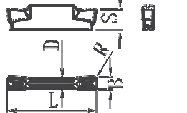
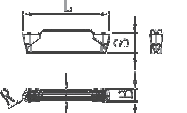
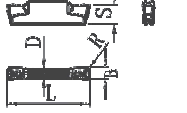

提供模块式刀杆系统 详见: P152

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended								
							CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade			
		B	R	L	D	S	BPS253	BPS371	BPG20B	BPU206	BPG308	BU810	BU820	BP35	
	TDJ2	2	0.2	20	1.7	3.9	★		★						
	TDJ3	3	0.2	20	2.4	4	★		★						
	TDJ4	4	0.3	19.76	3	4.05	★		★						
	TDJ5	5	0.3	25	4	4.89	☆		☆						
	TDC2	2	0.2	20	1.7	3.84	★		★						
	TDC3	3	0.2	20	2.4	4	★		★						
	TDC4	4	0.3	20	3	4.03	★		★						
	TDC5	5	0.3	25	4	4.89	★		★						
	TDT2	2	0.2	20	1.7	3.9	★		★						
	TDT3	3	0.2	20	2.4	4	★		★						
	TDT4	4	0.3	19.76	3	4.05	★		★						
	TDT5	5	0.3	25	4	4.89	☆		☆						

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## C2 切槽刀 Parting and grooving tools

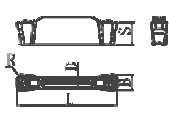

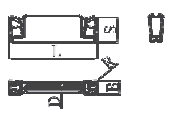

刀片基本形状 The basic shape of inserts		型号 Type		基本尺寸 Dimension (mm)					材质推荐 Grade recommended						
									CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade	
				B	R	L	D	S	BPS253	BPS371	BPC20B	BPJ206	BPC308	BU810	BU820
	BP	200	2.2	9.3	0.2			★	★						
		300	3.1	11.3	0.2			★	★						
		400	4.1	11.3	0.25			★	★						
		500	5.1	11.4	0.3			★	★						
	MGMN	200-M	2	0.2	16	1.2	3.5	★	★						
		250-M	2.5	0.2	18.5	2	3.85	★	★						
		300-M	3	0.4	21	2.35	4.8	★	★						
		400-M	4	0.4	21	3.3	4.8	★	★						
		500-M	5	0.8	26	4.1	5.8	★	★						
		600-M	6	0.8	26	5	5.8	★	★						
	MGMN	150-G	1.5	0.15	16	1.2	3.5	★	★						
		200-G	2	0.2	16	1.6	3.5	★	★						
		300-G	3	0.4	21	2.35	4.8	★	★						
		400-G	4	0.4	21	3.3	4.8	★	★						
	MRMN	200-M	2	1	16	1.5	3.5	★	★						
		300-M	3	1.5	21	2.35	4.8	★	★						
		400-M	4	2	21	3.3	4.8	★	★						
		500-M	5	2.5	25.86	4.12	5.8	★	★						
		600-M	6	3	26	5	5.8	★	★						
	MGMN	200-M	2	0.2	16	1.5	3.5	★	★						
		300-M	3	0.4	21	2.35	4.8	★	★						
		400-M	4	0.4	21	3.3	4.8	★	★						
		500-M	5	0.8	25.86	4.12	5.8	★	★						
		600-M	6	0.8	26	5	5.8	★	★						
	MGMN	150-G	1.5	0.15	16	1.2	3.5	★	★						
		200-G	2	0.2	16	1.6	3.5	★	★						
		300-G	3	0.4	21	2.35	4.8	★	★						
		400-G	4	0.4	21	3.3	4.8	★	★						

C 切断切槽  
Parting Grooving



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

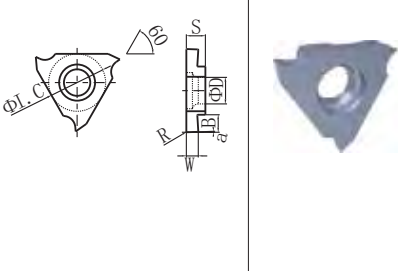
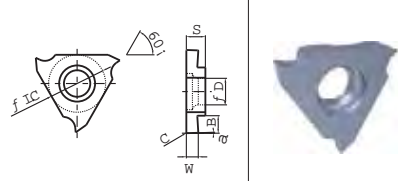
## C2 切槽刀 Parting and grooving tools

刀片基本形状The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended								
							CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
		B	R	L	D	S	BPS253	BPS371	BPC20B	BPJ206	BPC308	BU810	BU820	BP35	
 	N123E2-0200-0004-BGF	2	0.4	20.6	1.63	4.44	★		★						
	N123E2-0260-0008-BGF	2.6	0.8	20.7	2	4.52	★		★						
	N123G2-0318-0008-GF	3.18	0.8	20.7	2.31	4.52	★		★						
	N123J2-0500-0004-BTF	5	0.4	25.2	4.3	4.6	★		★						
 	DGN2202J	2.2	0.2	19.8	1.9	-	★		★						
	DGR_L2202J	2.2	0.2	20.8	1.84	-	★		★						
	DGR/L2202J-6D	2.2	0.2	20.6	1.84	6	★		★						
	DGR/L2200JS-6D	2.2	0.02	20.3	1.84	6	★		★						
 	DGN3102C	3.1	0.2	20	2.4	-	★		★						



## C2 切槽刀 Parting and grooving tools


C  
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切  
槽  
Parting Grooving

刀片基本形状The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)							材质推荐 Grade recommended							
		ΦI.C	S	Φd	B	W	R/C	CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade			
								BPS263	BPS371	BPG20B	BPJ206	BPG308	BU810	BU820	BP35	
	TGF32R/L	-033-005	9.525	3.18	4.4	0.8	0.33	0.05			★			★		
		-050-005	9.525	3.18	4.4	1.2	0.50	0.05			★			★		
		-065-010	9.525	3.18	4.4	2.0	0.65	0.10			★			★		
		-075-010	9.525	3.18	4.4	2.0	0.75	0.10			★			★		
		-100-010	9.525	3.18	4.4	2.0	1.00	0.10			★			★		
		-120-010	9.525	3.18	4.4	2.0	1.20	0.10			★			★		
		-125-010	9.525	3.18	4.4	2.0	1.25	0.10			★			★		
		-150-010	9.525	3.18	4.4	2.0	1.50	0.10			★			★		
		-175-010	9.525	3.18	4.4	2.0	1.75	0.10			★			★		
		-200-010	9.525	3.18	4.4	2.0	2.00	0.10			★			★		
	TGF32R/L	-075-C010	9.525	3.18	4.4	2.0	0.75	C0.1			★			★		
		-100-C010	9.525	3.18	4.4	2.0	1.00	C0.1			★			★		
		-120-C010	9.525	3.18	4.4	2.0	1.20	C0.1			★			★		
		-125-C010	9.525	3.18	4.4	2.0	1.25	C0.1			★			★		
		-150-C010	9.525	3.18	4.4	2.0	1.50	C0.1			★			★		
		-175-C010	9.525	3.18	4.4	2.0	1.75	C0.1			★			★		
		-200-C010	9.525	3.18	4.4	2.0	2.00	C0.1			★			★		

刀片基本形状The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)										材质推荐 Grade recommended					
		最大切削直径	S	W	D	H	α	k	R	CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
										BPS263	BPS371	BPG20B	BPJ206	BPG308	BU810	BU820	
	KGF12R/L	-050-15-00	5	3.0	0.50	4.4	8.0	15	0	0.05			★			☆	
		-070-15-00	8	3.0	0.70	4.4	8.0	15	0	0.05			★			☆	
		-100-15-00	12	3.0	1.00	4.4	8.0	15	0	0.05			★			☆	
		-125-15-00		3.0	1.25	4.4	8.0	15	0	0.05			★			☆	
		-150-15-00	3.0	1.50	4.4	8.0	15	0	0.05			★			☆		
		-175-15-00	3.0	1.75	4.4	8.0	15	0	0.05			★			☆		
		-200-15-00	3.0	2.00	4.4	8.0	15	0	0.05			★			☆		
	KGF12R/L	-050-15-08	5	3.0	0.50	4.4	8.0	15	8	0.05			★			☆	
		-070-15-08	8	3.0	0.70	4.4	8.0	15	8	0.05			★			☆	
		-100-15-08	12	3.0	1.00	4.4	8.0	15	8	0.05			★			☆	
		-125-15-08		3.0	1.25	4.4	8.0	15	8	0.05			★			☆	
		-150-15-08	3.0	1.50	4.4	8.0	15	8	0.05			★			☆		
		-175-15-08	3.0	1.75	4.4	8.0	15	8	0.05			★			☆		
		-200-15-08	3.0	2.00	4.4	8.0	15	8	0.05			★			☆		

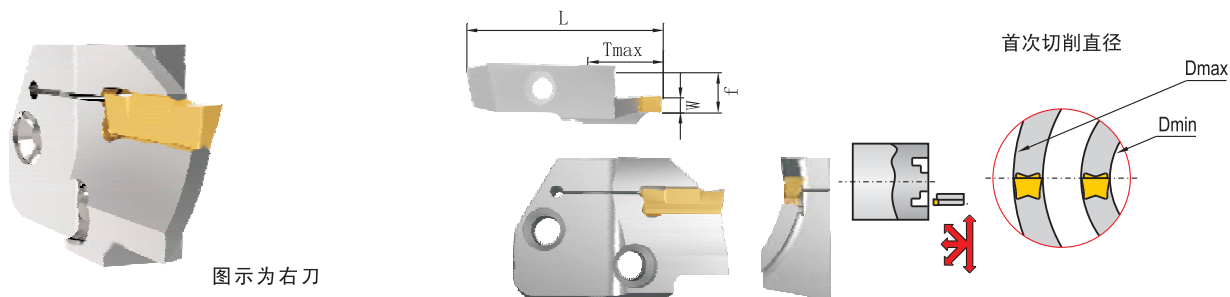


★ 主推荐牌号Recommended grade ☆ 可选牌号Optional grade

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Material recommended									
							CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade			
		B	R	L	D	S	BPC122	BPS321	BPS411	BPG108	BPG05B	BPG20B	BPG25B	BPG30B	BK10	BU810
	GR/LIP300-M	3	0.30	19	2.1	5.4									☆	★
	GR/LIP400-M	4	0.40	18.93	2.85	5.85	★	☆		★	★	★	★	☆		
	GR/LIP500-M	5	0.40	19	3.4	5.75		☆	★	☆		★	★	☆		

加工用途		BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810
	P:钢	★	★	★	★	☆	
	M:不锈钢		☆	★	★	★	
	K:铸铁		★		☆		★
N:有色金属							★

★ 主推牌号 ★ Recommended grade and always stock available ☆ 按单生产 ☆ Recommended grade and produce according to order

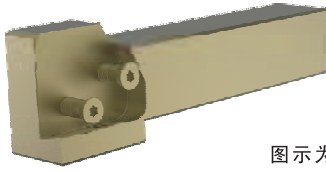


端面切槽刀头 左刀	尺寸					配件 刀片	适合刀体
	W	Tmax	L	Dmin~Dmax	F		
GDIR/L300025-12BG		12	48	25~30			
GDIR/L300030-12BG		12	48	30~40			
GDIR/L300040-12BG	3	12	48	40~65	10.3	GRIP300...	GDXL/R GDYL/R
GDIR/L300065-20BG		20	56	65~115			
GDIR/L300115-20BG		20	56	115~400			
GDIR/L400025-12BG		12	48	25~31			
GDIR/L400031-12BG		12	48	31~44			
GDIR/L400044-16BG	4	16	52	44~58	10.4	GRIP400...	GDXL/R GDYL/R
GDIR/L400058-16BG		16	52	58~88			
GDIR/L400088-16BG		16	52	88~175			
GDIR/L400175-22BG		22	58	175~800			
GDIR/L500040-16BG		16	52	40~50			
GDIR/L500050-16BG		16	52	50~75			
GDIR/L500075-16BG	5	16	52	75~110	10.5	GRIP500...	GDXL/R GDYL/R
GDIR/L500110-16BG		16	52	110~200			
GDIR/L500200-22BG		22	58	200~800			

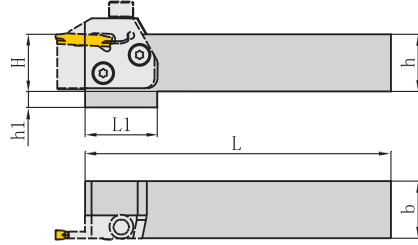


## 模块式切槽刀

纵向型刀体 (0°)

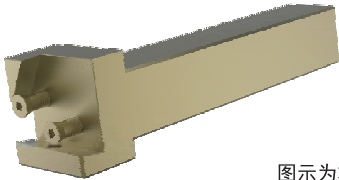


图示为右刀

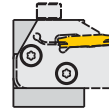
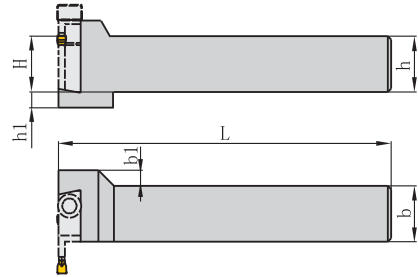


型号		尺寸						螺钉	扳手	适合刀头
左刀	右刀	h	b	H	L	L1	h1	SIC060160	LT25	GD1L/R GDAL/R
GDXL2020K	GDXR2020K	20	20	20	110	32	12			
GDXL2525M	GDXR2525M	25	25	25	135	32	7			
GDXL3225P	GDXR3225P	32	25	32	155	32	-			
GDXL3232P	GDXR3232P	32	32	32	155	32	-			
GDXL4040R	GDXR4040R	40	40	40	185	32	-			

横向型刀体 (90°)



图示为右刀



型号		尺寸						螺钉	扳手	适合刀头
左刀	右刀	h	b	H	L	b1	h1	SIC060160	LT25	GD1L/R GDAL/R
GDYL2020K	GDYR2020K	20	20	20	125	12	12			
GDYL2525M	GDYR2525M	25	25	25	150	7	7			
GDYL3225P	GDYR3225P	32	25	32	170	-	-			
GDYL3232P	GDYR3232P	32	32	32	170	-	-			
GDYL4040R	GDYR4040R	40	40	40	200	-	-			

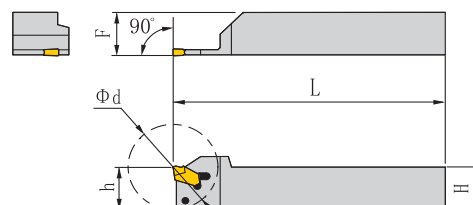
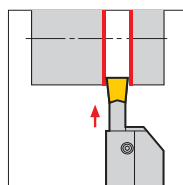
备注：横向型刀体与刀头左右相反，如左刀刀体GDYL...使用右刀刀头GDCR

- ➡ 供货详情：基本刀体均配有附件不包括刀头及刀片
- ➡ 订货示例：GDYL4040R 1件
- ➡ 刀头及刀片需单独订购



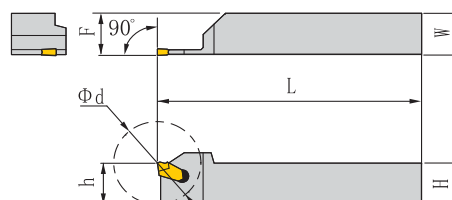
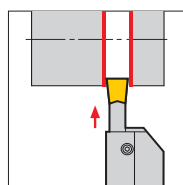
### C3 切槽刀刀具 Grooving tools

#### ZQ



型号 Type	库存		适用刀片 Recommended inserts 	适用条件 Application						配件 Parts		
	Stock Item			外切削槽、切断 External Grooving, Parting off						螺丝 Screw 	扳手 Wrench 	
	R	L		Φd	H	F	L	h	α°			
ZQ	1616R/L-03	●	●	BP300	30	16	16	100	16	16.3	M3.5×9	T-15
	2020R/L-03	●	●		38	20	20	125	20	20.3		
	2525R/L-03	●	●		38	25	25	150	25	25.3		
	2020R/L-04	●	●	BP400	38	20	20	125	20	20.4		
	2525R/L-04	●	●		38	25	25	150	25	25.4		

#### SPH

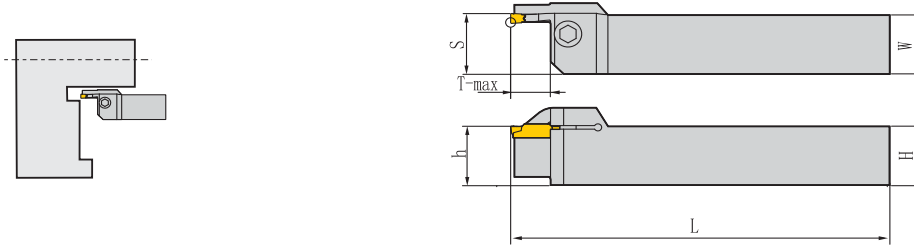


型号 Type	库存		适用刀片 Recommended inserts 	适用条件 Application					配件 Parts	
	Stock Item			切断 Parting off					扳手 Wrench 	
	R	L		H=(h)	W	L	Φd	F(max)		
SPH	316R/L			BP300,300R/L	16	16	100	32	16.3	L5.0
	320R/L			BP300,300R/L	20	20	120	40	20.3	
	420R/L			BP400,400R/L	20	20	120	50	20.4	
	520R/L			BP500,500R/L	20	20	120	60	20.5	
	325R/L			BP300,300R/L	25	25	150	50	25.3	
	425R/L			BP400,400R/L	25	25	150	60	25.4	
	525R/L			BP500,500R/L	25	25	150	70	25.5	

●库存 stock item    ○准库存 be preparing for stock    其余订货 the others can be made to order



### C3 切槽刀刀具 Grooving tools



型号 Type	库存 Stock Item		适用刀片 Recommended inserts 	适用条件 Application 外切槽、车削加工 External Grooving, Turning					配件 Parts	
	R	L		H=(h)	W	L	S	T(max)	螺丝 Screw 	扳手 Wrench 
1616-1.5	○		MGMN150-G	16	16	100	16.25	14.5	LTX0512	L2.0
2020-1.5	○			20	20	125	20.25	14.5		
2525-1.5	○			25	25	150	25.25	14.5		
1212-2.0			MGMN200-G	12	12	100	14.25	14.5	BHA0616	L5.0
1616-2.0	○	○		16	16	100	16.25	14.5		
2020-2.0	○	○		20	20	125	20.25	14.5		
2525-2.0	○	○		25	25	150	25.25	14.5		
1616-2.5	○	○	MGMN250-G	16	16	100	16.3	16.5	MHA0512	L4.0
2020-2.5	○	○		20	20	125	20.3	16.5		
2525-2.5	○	○		25	25	150	25.3	16.5		
1616-3.0	●	●	MGMN300-M MRMN300-M	16	16	100	16.35	18.5	BHA0616	L5.0
2020-3.0	●	●		20	20	125	20.4	18		
2020-3.0-T10	●			20	20	125	20.4	10		
2525-3.0	●	●		25	25	150	25.4	18		
MGEHR/L 2525-3.0-T10	●			25	25	150	25.4	10		
3232-3.0	●	●		32	32	170	32.4	18		
3233-3.0-T10				32	32	170	32.4	10		
2020-4.0	●	●	MGMN400-M MRMN400-M	20	20	125	20.4	18	BHA0616	L5.0
2020-4.0-T10	●			20	20	125	20.5	10		
2525-4.0	●	●		25	25	150	25.4	18		
2525-4.0-T10	●	●		25	25	150	25.4	10		
3232-4.0	●	●		32	32	170	32.4	18		
3232-4.0-T10				32	32	170	32.4	10		
2020-5	○	○	MGMN500-M MRMN500-M	20	20	150	20.5	23	BHA0616	L5.0
2020-5-T15				20	20	150	20.5	15		
2525-5	○	○		25	25	150	25.5	23		
2525-5-T15				25	25	150	25.5	15		
3232-5	○	○		32	32	170	32.5	23		
3232-5-T15				32	32	170	32.5	15		

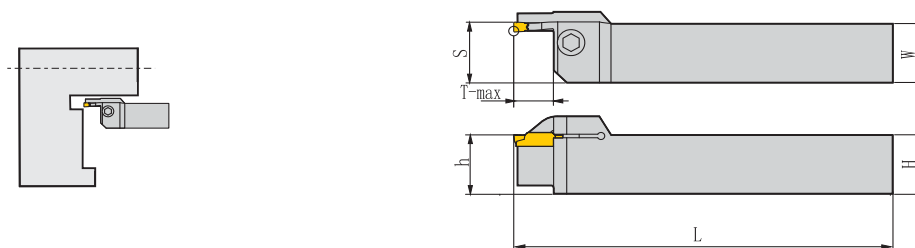
●库存 stock item    ○准库存 be preparing for stock    其余订货 the others can be made to order

C  
切  
断  
切  
槽  
Parting Grooving





### C3 切槽刀刀具 Grooving tools

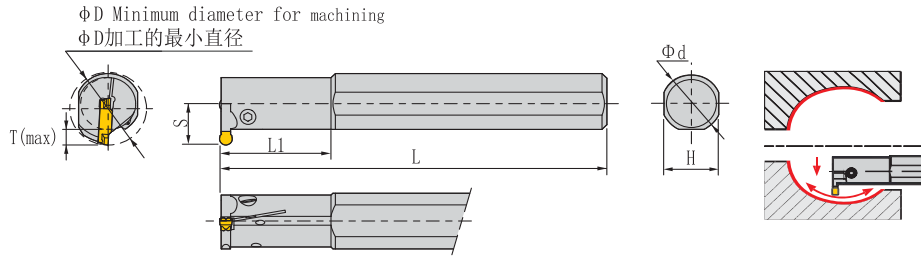


型号 Type	库存 Stock Item		适用刀片 Recommended inserts 	适用条件 Application 外切削槽、车削加工 External Grooving, Turning					配件 Parts		
	R	L		H=(h)	W	L	S	T(max)	螺丝 Screw 	扳手 Wrench 	
MGEHR/L	2020 -6	○	○	MGMN600-M MRMN600-M	20	20	125	20.6	23	BHA0616	L5.0
	2020 -6-T15				20	20	125	20.6	15		
	2525 -6				25	25	150	25.6	23		
	2525 -6-T15				25	25	150	25.6	15		
	3232 -6				32	32	170	32.6	23		
	3232 -6-T15				32	32	170	32.6	15		
	2525 -8			MRMN800-M	25	25	150	26.1	28		
	2525 -8-T15				25	25	150	26.1	15		
	3232 -8				32	32	170	33.1	28		
	3232 -8-T15				32	32	170	33.1	16		
	2525 -6A			MRGN600-A	25	25	150	25.6	23		
	2525-6A-T15				25	25	150	25.6	15		
	3232 -6A				32	32	170	32.6	23		
	3232-6A-T15				32	32	170	32.6	15		
	2525 -8A			MNGN800-A	25	25	150	26.1	28		
	2525-8A-T15				25	25	150	26.1	16		
3232 -8A			32		32	170	33.1	28			
3232-8A-T15			32		32	170	33.1	16			

●库存 stock item    ○准库存 be preparing for stock    其余订货 the others can be made to order



### C3 切槽刀刀具 Grooving tools



型号 Type	库存 Stock Item		适用刀片 Recommended inserts	适用条件 Application								配件 Parts	
	R	L		内槽加工、车削加工 Internal Grooving, Turning								螺丝 Screw	扳手 Wrench
				ΦD	Φd	L	L1	T(max)	H	S			
2020-1.5	○		MGMN150-G	20	16	125	35	4	15	11.3	MHB0310	L2.5	
2525-1.5	○			25	20	150	45	4	18	13.1			MHA0512
3925-1.5				29	25	200	45	4	23	16.2			
2016-2.0	○		MGMN200-G	20	16	125	35	5	15	12.4	MHB0310	L2.5	
2520-2.0	○			25	20	150	45	5	18	14	MHA0512	L4.0	
2925-2.0	○			29	25	200	45	5	23	17.2			
2016-2.5			MGMN250-G	20	16	125	35	6	15	12.5	MHB0310	L2.5	
2520-2.5	○			25	20	150	45	6	18	15.1	MHA0512	L4.0	
2925-2.5	○			29	25	200	45	6	23	18.2			
2520-3.0	●	●	MGMN300-M MRMN300-M	25	20	150	45	6	18	15.6	MHA0512	L4.0	
3125-3.0	●	●		31	25	200	45	6	25	18.9			
3732-3.0	●	●		37	32	250	65	6	30	21.5			
MGIVR/L 2520-4.0	●	●	MGMN400-M MRMN400-M	25	20	150	45	6	18	15.6			
3125-4.0	●			31	25	200	45	6	23	18.9			
3732-4.0	●			37	32	250	65	6	30	21.5			
3125-5	○		MGMN500-M MRMN500-M	31	25	200	45	8	25	19.5			
3732-5	○			37	32	250	65	8	30	21.5			
3125-6			MGMN600-M MRMN600-M	31	25	200	45	8	23	19.4			
3732-6				37	32	250	65	8	30	21.5			
3732-8			MRMN800-M	37	32	250	65	10	30	23.4			
3540-8				45	40	300	70	10	37	27.2			
3125-6A			MRGN600-A	31	25	200	45	8	23	19.4			
3732-6A				37	32	250	65	8	30	21.5			
3732-8A			MNGN800-A	37	32	250	65	10	30	23.4			
4540-8A				45	40	300	70	10	37	27.2			

●库存 stock item    ○准库存 be preparing for stock    其余订货 the others can be made to order

C 切断切槽  
Parting Grooving





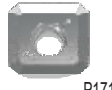
















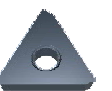



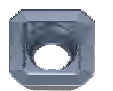

























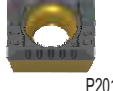
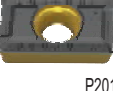







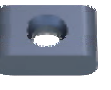
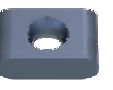

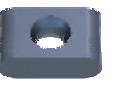


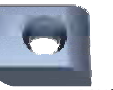


## D 铣削 Milling

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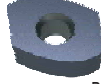



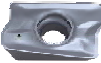












# D1 铣削刀片一览表 List of milling inserts

面铣刀片 Inserts for face milling							
	P168页	P168页	P171页				
	TEHW16T3*	SEKT1204AZFN-*	SEKT13T3AEFN-*				
							
	P174页	P174页	P174页	P174页	P175页	P175页	P176页
	RPMW**MOE	RDMT**MQ-V1	RPMT**MOE-BJS	RCHT**MQ-SM	LNKX**PN-**	TMRL**WM	CDE**
							
	P177页	P177页	P177页	P177页	P178页	P178页	P178页
	TPCW**PDR/L	TPMR**	TPMR**-3	TPKR**PDR	TPKN**PPR/L	TPKN**PPR/L-D2	TPKN**PDR-SU
							
	P179页	P179页	P179页	P180页	P180页	P180页	P181页
	TPKN**PDR-3	TPAN**PPN	TPAN**PPN-D2	SPCW**EDR/L	SPKW**EDFR/L	SEEW**AFN	SEKT**AESN
							
	P181页	P181页	P182页	P182页	P171页	P172页	P173页
	SEET**T3-DR	SDET**RF	SNAN1**ANN	SNAN**ENN	SEMT13T3**	HNGX0906ANSN-*	ONGX080608-*
							
P183页	P183页	P184页	P184页	P184页	P184页	P184页	
SPCN**APN	SPGN**	SPKN**ZETRL	SPKN**EDL-D2	SPKN**EDFR/L	SPKN**EDFR/L-D2	SPAN**EDR/L	
							
P185页	P185页	P185页	P186页	P186页	P186页	P187页	
SDHW**AEFN	SPAN**EDR/L	SPMR**	SEMN**AFTN	SEKR**AZ-YM	SPEX**EDR/L	OPHN**ZZN	
							
P187页	P187页	P188页	P176页	P201页	P201页		
OFER**NN	HEEN**	OFMT**NN	SOGX**EN-XN	SPMT120408-D51	LPMT1504**D51		
重型铣刀 Inserts for heavy-cutting milling							
	P190页	P190页	P191页	P191页	P191页	P191页	P192页
	CNE**	CDE**L05	LNE**TL-Φ4.1	LNE**-02	N**-1	SNE**-01	LND424-DA
							
P192页	P192页	P193页	P192页	P193页	P193页	P193页	
SNE**-4R3	LNE**-02	SN**R10-P50	LNE**-02	SN**R10-P50	SN**R6.5	GLOL20021R5	


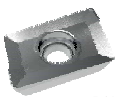
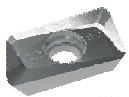
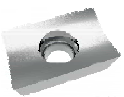

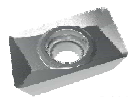




















# D1 铣削刀片一览表 List of milling inserts

Inserts for heavy-cutting milling 重型铣刀	 P194页 SN**RK13-ING	 P194页 LNHX**	 P194页 NXE**104	 P195页 DIN**M			
Inserts for square shoulder milling 方肩铣刀片	 P196页 APMT**PDER-H2	 P196页 APMT**PDER-H8	 P196页 APMT**PDER-M2	 P196页 APMT**R-EM	 P196页 BR390**PM	 P196页 BR390**PL	 P197页 APKT**LHC
Inserts for shallow hole drilling 浅孔钻	 P199页 APMT**T-WT	 P199页 SPMG**ZV	 P199页 WCGX**ZV	 P198页 WCGX**ZS			
Inserts for profile milling 仿形铣刀	 P200页 WPGT**ZSR	 P200页 ZDGW**T2R10					
Inserts for chamfer milling 倒角铣刀	 P200页 SPMT**						



# D1 铣削刀片一览表 List of milling inserts


铝的加工 Aluminum processing	 P189页	 P197页	 P197页	 P197页	 P198页	 P198页	
	RCGT**MO-LHC	APKT**PDER-LH	APKT**PDFR-G2C	APEX**FR-LHC	APKT**FR-LHC	APKT**T4PDFR-LH1C	
	 P170页	 P193页	 P193页				
	ADGT1135**PDFR-LHC	ADGT1504**PDFR-LHC	ADGT1904**LHC				
其他 Others	 P202页	 P202页	 P202页	 P202页	 P202页	 P202页	 P202页
	P22215**	P28*	P284*	P2800-*	P2816-1	P2894-*	P2803-1*
	 P202页	 P203页	 P203页	 P203页	 P203页	 P203页	 P203页
	P28451-1	P2922*	P28467-*	P28475-*	P270*	P2703-*R	P270*
	 P204页						
P2603-*							





## D2 铣削刀片材质 Grade for milling inserts

P 钢加工 Process steel

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	P05(P01-P15)	青灰 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力, 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	P15(P10-P20)	青灰 Cyan-blue gray dark 	PVD涂层微晶粒硬质合金。使用中等到低切削速度, 进行各种不锈钢的精加工。需要出色的刃口强度和高质量表面时, 可提供完美的平顺切削。很高的耐热冲击性能。适用于轻型间断切削。 PVD coated micro-grain carbide. Use for a variety of stainless steel finishing at medium to low cutting speed. When need excellent edge strength and high surface quality, provide the perfect ride cutting. A high thermal shock resistance. Suitable for light interrupted cuts.
BPG25B	M35(M25-M40)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金。用于以中至高切削速度进行奥氏体不锈钢和双相不锈钢的半精加工到粗加工。很高的耐热冲击性能。非常适合快速间断切削。 PVD coated carbide. For austenitic stainless steels and duplex stainless steel semi-finishing to roughing at low to medium cutting speed. High thermal shock resistance. Ideal for quickly interrupted cutting.
BPG308	P20(P15-P30)	紫黄 Purple yellow 	PVD涂层硬质合金牌号, 例如长切削刃、切屑堵塞、深台肩和立铣、长悬伸、车铣工序等。可作为韧性工序的备用选择。结合周边磨削刀片, 首选用于粘性材料, 例如低碳钢。 PVD coated carbide grade, for example, the long cutting edge, clogging, deep shoulder milling, long overhang, milling processes. or an alternative of toughness processes. Combining the peripheral-edge grinding blade, preferred for viscous material, such as low carbon steel.
BPS321	P30(P25-P40)	/黄 Black/yellow 	高强度基体与AL2O3涂层结合, 适于钢及铸铁的铣削加工。 High-strength matrix combined with AL2O3 coating suitable for steel and cast iron milling.
BPS322		Black 	
BPS411	P40(P35-P50)	/黄 Black/yellow 	韧性涂层硬质合金牌号用于钢铣削中要求苛刻的工序。对于立铣和方肩铣, 应该将牌号BPS411用于较稳定的工况, 例如短悬伸、面铣、浅方肩铣削等。对于其它工序, 牌号BPS411则为韧性工序的首选或备选。有无冷却液供给时都表现出色。 Toughness coated carbide grade for steel milling in demanding process. For vertical milling and shoulder milling, the grade BPS411 should be working in stable conditions, such as short overhangs, surface milling, shallow shoulder milling. For toughness process, BPS411 is the best choice. suitable for mixed materials small batch production. Whether the coolant supply is excellent.
BPS412		Black 	





D  
铣削  
Milling










## D2 铣削刀片材质 Grade for milling inserts

### K 铸铁加工 Process on cast iron

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	K10(K05-K15)	青灰 Cyan-blue gray dark 	具有很高的热硬度和良好的抗塑性变形能力, 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG108	K05-K15	紫黄 Purple yellow 	PVD涂层硬质合金牌号, 用于湿工况下灰口铸铁和球墨铸铁的中到粗加工铣削。在中等到高切削速度下, 具有可预期刀具寿命。 PVD coated carbide grade for gray cast iron and ductile iron medium to rough milling in wet conditions. In the medium to high cutting speeds, can predictor the tool-life.
BPC132	K15(K10-K25)	Black 	CVD涂层硬质合金, 在硬基体上涂有光滑的耐磨涂层, 能够耐受苛刻的间断切削工况。用于铸铁低到中切削速度的粗加工。 CVD-coated cemented carbide, the hard substrate coated with a smooth and wear-resistant coating, can bear harsh intermittent cutting conditions. Universal grade for all cast iron roughing cutting at low to medium speed.
BPS411	K30(K25-K35)	/黄 Black/yellow 	CVD涂层硬质合金牌号, 用于在要求高韧性的工况下以低速进行的中等负荷和重载加工。 Coated carbide grade for toughness demanding operating conditions to work at low speed, medium load and reload processing.

### M 不锈钢加工 Process on stainless steel

牌号 Grade	ISO分类 ISO classification	颜色 Color	应用推荐 Recommend for application
BPG05B	M10(M05-M15)	青灰 Cyan-blue gray dark 	PVD涂层牌号具有很高的热硬度和良好的抗塑性变形能力, 适用于高速切削条件下, 奥氏体不锈钢、淬硬钢、碳钢的精加工。 With high hot hardness and good resistance to plastic deformation. Suitable for high speed cutting and finishing process of austenitic stainless steel, quenched steel and carbon steel
BPG20B	M15(M10-M25)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金牌号, 用于不锈钢的轻型铣削。结合周边磨削刀片, 首选用于粘性和加工硬化材料。 PVD coated carbide grade for light milling of stainless steel. Combine grinding blade preferred for viscous and work hardening materials.
BPG30B	M25(M15-M30)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金牌号, 用于中到高速的不锈钢(主要为奥氏体型)铣削。结合正前角槽形, 也适用于耐热材料和钛合金。 PVD coated carbide grade for medium to high-speed stainless steel (austenitic) milling. Combined with positive rake angle trough also applies to the heat-resistant materials and titanium alloys.
BPG25B	M35(M25-M40)	青灰 Cyan-blue gray dark 	PVD涂层硬质合金。用于以中至高切削速度进行奥氏体不锈钢和双相不锈钢的半精加工到粗加工。很高的耐热冲击性能。非常适合快速间断切削。 PVD coated carbide. For austenitic stainless steels and duplex stainless steel semi-finishing to roughing at low to medium cutting speed. High thermal shock resistance. Ideal for quickly interrupted cutting.
BPS411	M40(M30-M40)	/黄 Black/yellow 	CVD涂层硬质合金牌号, 用于不锈钢铸件的中等到重载加工工序。 Coated carbide grade for stainless steel castings heavy machining process.



### D3 铣刀用可转位刀片表示方法 Code key for indexable milling inserts

刀片形状 / 代号 Insert Shape / Code			公制 Metric				
代号 Code	有无孔 With/Without hole	有无断屑槽 With/Without chipbreaker	刀片剖面 Section plane of Insert	代号 Code	有无孔 With/Without hole	有无断屑槽 With/Without chipbreaker	刀片剖面 Section plane of
	有 With	无 Without		<b>N</b>	无 Without	无 Without	
	有 With	单面 Single-side		<b>R</b>	无 Without	单面 Single-side	
	有 With	无 Without		<b>F</b>	无 Without	双面 Double-side	
	有 With	双面 Double-side		<b>A</b>	有 With	无 Without	
	有 With	无 Without		<b>M</b>	有 With	单面 Single-side	
	有 With	单面 Single-side		<b>G</b>	有 With	双面 Double-side	
	有 With	无 Without		<b>X</b>	---	---	特殊 Special
	有 With	双面 Double-side		<b>U</b>	有 With	双面 Double-side	
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					
	有 With	无 Without					

形状代号 Insert shape

断屑槽及夹固形式 Chipbreaker and clamping system

**S P K N**

主切削刃后角 Clearance angle of main cutting edge			
代号 Code	后角(度) Clearance angle	代号 Code	后角(度) Clearance angle
<b>A</b>		<b>B</b>	
<b>C</b>		<b>D</b>	
<b>E</b>		<b>F</b>	
<b>G</b>		<b>N</b>	
<b>P</b>		<b>O</b>	其他的后角 Other clearance angle

允许偏差 Allowed tolerance										
代号 Code	m允许偏差 (mm) "m" tolerance range	内切圆ØD1 允许偏差 (mm) Inscribed circle ØD1 Tolerance (mm)	厚度S1 允许偏差 (mm) Thickness S1 Tolerance (mm)	(参考) M级精度详细情况 (按形状、大小分) (Reference) details of M-class tolerance (identified by shape and size)						
				● 刀尖高度 允许偏差 (mm) Nose height tolerance (mm)						
				内切圆 Inscribed circle						
<b>A</b>	±0.005	±0.025	±0.025	6.35	±0.08	±0.08	±0.08	±0.11	±0.16	---
<b>F</b>	±0.005	±0.013	±0.025	9.525	±0.08	±0.08	±0.08	±0.11	±0.16	---
<b>C</b>	±0.013	±0.025	±0.025	12.7	±0.13	±0.13	±0.13	±0.15	---	---
<b>H</b>	±0.013	±0.013	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	---	---
<b>E</b>	±0.025	±0.025	±0.025	19.05	±0.15	±0.15	±0.15	±0.18	---	---
<b>G</b>	±0.025	±0.025	±0.13	25.4	---	±0.18	---	---	---	---
<b>J</b>	±0.005	±0.05-±0.13	±0.025	● 内切圆ØD1允许偏差 (mm) · Tolerance of Inscribed Circle ØD1 (mm)						
<b>K</b>	±0.013	±0.05-±0.13	±0.025	内切圆 Inscribed circle						
<b>L</b>	±0.025	±0.05-±0.13	±0.025	6.35	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
<b>M</b>	±0.08-±0.18	±0.05-±0.13	±0.13	9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
<b>N</b>	±0.08-±0.18	±0.05-±0.13	±0.025	12.7	±0.08	±0.08	±0.08	±0.08	---	±0.08
<b>U</b>	±0.13-±0.38	±0.08-±0.25	±0.13	15.875	±0.10	±0.10	±0.10	±0.10	---	±0.10
				19.05	±0.10	±0.10	±0.10	±0.10	---	±0.10
				25.4	---	±0.13	---	---	---	±0.13



内切圆直径 (mm) Diameter of IC	刀片形状 Insert shape						
	C	D	R	S	T	V	W
3.97					06		
5.0			05				
5.56					09		
6.0			06				
6.35	06	07			11	11	
8.0			08				
9.525	09	11	09	09	16	16	06
10.0			10				
12.0			12				
12.7	12	15	12	12	22	22	08
15.875	16	19	15	15	27		10
16.0			16				
19.05	19		19	19	33		
20.0			20				
25.0			25				
25.4	25		25	25			
31.75			31				
32			32				

**切削刃长度 Length of cutting edge**

厚度指刀片底面与切削刃最高部分之间的高度  
Thickness is defined as height from bottom of insert to the highest part of cutting edge.

代号 Code	刀片厚度(mm) Insert thickness (mm)
00	0.79
T0	0.99
01	1.59
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
T4	4.96
05	5.56
T5	5.95
06	6.35
T6	6.75
07	7.94
09	9.52
T9	9.72
11	11.11
12	12.70

**刀片厚度 Insert thickness**

# 12 04 AF T N -

修光刃 Wiper			
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	其它 Others	F	25°
		G	30°
		N	0°
		P	11°
		Z	其它 Others

切削刃倒棱(mm) Chamfer (mm)			
F			
	0-5°	0-0.10	K
	1-10°	1-0.15	
E	2-15°	2-0.20	P
	3-20°	3-0.25	
T	4-25°	4-0.30	W
	5-30°	5-0.35	
	6-0.40		
S	7-0.45		不标 No mark

**断屑槽型代号**  
Chipbreaker code

切削方向 Cutting direction	
R	右 Right hand
L	左 Left hand
N	双向 Neutral





## 可转位铝合金面铣刀刀片

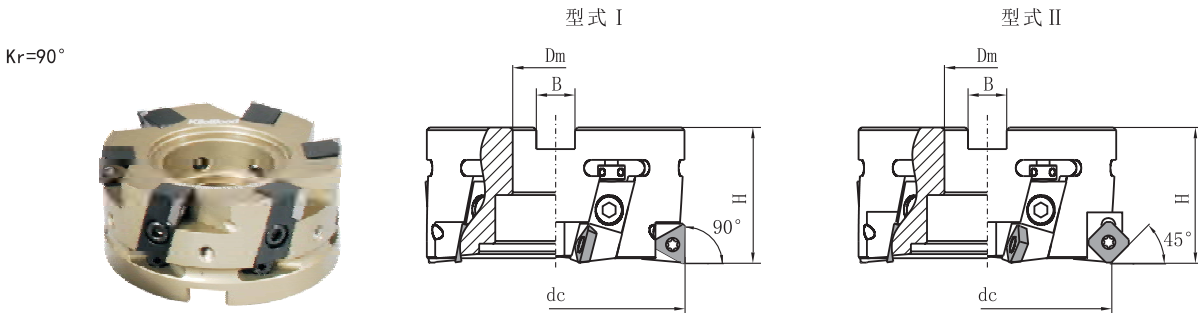
刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended													
						CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	d	a	BPS321	BPS411	BPG05B	BPG05B	BPG20B	BPG308	BPG25B	BPG30A	BP20	BP35	BK10	BU810	BU820	
	TEHW16T3PEFR	9.525	3.97		20				★	★	☆						☆	★	
	SEKT1204AZFN-LH2	12.7	4.76		20	☆			☆										★

加工用途	BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810
	P:钢	★	★	★	☆	☆
	M:不锈钢	☆	★	★	★	★
	K:铸铁	★		☆		
N:有色金属						★

★ 主推牌号 ★ Recommended grade and always stock available

☆ 按单生产 ☆ Recommended grade and produce according to order



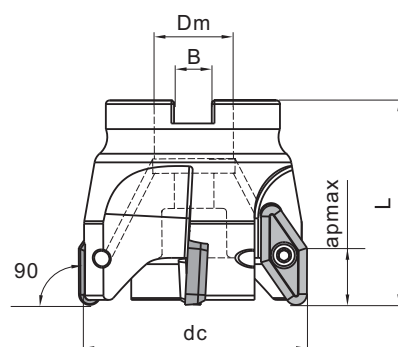
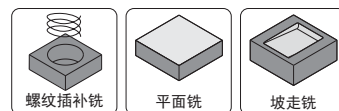
型号	尺寸 (mm)				齿数 Z	刀片	螺钉	扳手	刀夹	螺钉	扳手	螺钉	型式
	dc	Dm	B	H									
SA90-63R4TE16-P22AL	63	22	10.4	50	4	 TEHW16T3PEFR -PCD	SIC035080	FT15	STGER14CA-16	SCC060250	S5	SAC060145	I
SA90-80R4TE16-P27AL	80	27	12.4	50	4								
SA90-100R6TE16-S32AL	100	32	14.4	50	6								
SA90-125R8TE16-S40AL	125	40	16.4	50	8								
SA90-160R10TE16-T40AL	160	40	16.4	50	10								
SA90-200R12TE16-T60AL	200	60	25.7	63	12								
SA90-250R16TE16-T60AL	250	60	25.7	63	16								
SA90-315R20TE16-U60AL	315	60	25.7	63	20								
SA45-63R4SE12-P22AL	63	22	10.4	50	4	SE..1204AZ..	SIC035080	FT15	SSSDR14CA-09	SCC060250	S5	SAC060145	II
SA45-80R4SE12-P27AL	80	27	12.4	50	4								
SA45-100R6SE12-S32AL	100	32	14.4	50	6								
SA45-125R8SE12-S40AL	125	40	16.4	50	8								
SA45-160R10SE12-T40AL	160	40	16.4	50	10								
SA45-200R12SE12-T60AL	200	60	25.7	63	12								
SA45-250R16SE12-T60AL	250	60	25.7	63	16								
SA45-315R20SE12U60AL	315	60	25.7	63	20								

★ 主推推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

D  
铣削  
Milling

## 可转位铝合金面铣刀刀片

针对铝合金加工专用  
方肩铣削、曲面铣削和斜坡铣  
大前角断屑槽确保良好的表面粗糙度  
刀片表面抛光处理，减少积屑瘤产生



刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Grade recommended						
		φI.C	S	φd	R	α	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade			
							BPG05B	BPG308	BPU109	BU810	BU813	BK10	
	VCGT	220530-LH2C	12.7	5.96	5.5	3	11			☆	★	★	
加工用途			BPG05B	BPG308	BPU109	BU810	BU813	BK10					
	P:钢												
	M:不锈钢		☆										
	K:铸铁				☆		☆						
	N:有色金属						★	★		★			

★ 主推牌号 ★ Recommended grade and always stock available

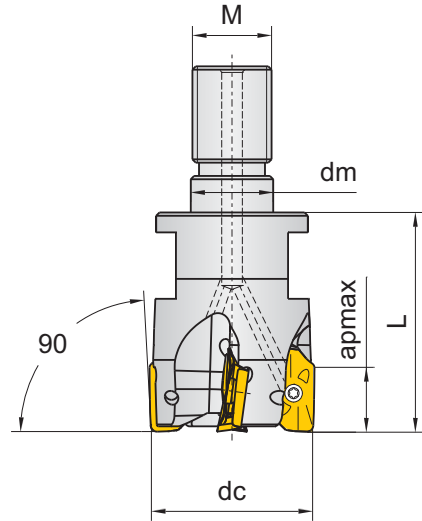
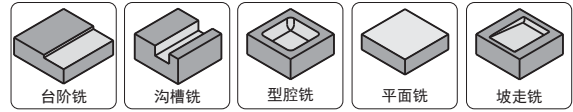
☆ 按单生产 ☆ Recommended grade and produce according to order

型号 Type	apmax	尺寸(mm) Dimension				齿数 Teeth	刀片 Inserts	螺钉 Screw	扳手 Wrench	内冷状态 Cooling	重量 (kg)
		dc	Dm	B	H						
SA90-50R3VC22-P22	16	50	22	10	56	3					0.37
SA90-63R4VC22-P22	16	63	22	10	56	4	VCGT220530-LH2C	SIC050108	WT20	+	0.65
SA90-80R5VC22-P27	16	80	27	12	56	5					1.10

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



# 模块式立铣刀 Modular end milling cutters



D  
铣削  
Milling

刀片基本形状 The basic shape of inserts	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Grade recommended					
		φ I.W	S	φ d	R	PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoated grade		
						BPG06B	BPG308	BPU109	BU810	BU813	BK10
	ADGT113504PDFR-LHC	6.525	3.5	2.8	0.4			☆	★	★	
	ADGT113508PDFR-LHC	6.525	3.5	2.8	0.8			☆	★	★	
	ADGT113510PDFR-LHC	6.525	3.5	2.8	1.0			☆	★	★	

加工用途	BPG05B	BPG308	BPU109	BU810	BU813	BK10
	P:钢					
	M:不锈钢	☆		☆		
	K:铸铁			☆	☆	
	N:有色金属				★	★
S:高温合金	☆		☆			

★ 主推牌号 ★ Recommended grade and always stock available

☆ 按单生产 ☆ Recommended grade and produce according to order

型号 Type	apmax	尺寸(mm) Dimension				齿数 Teeth	刀片 Inserts	螺钉 Screw	扳手 Wrench	内冷状态 Cooling	重量 (kg)
		dc	dm	M	L						
SB90-16R2AD11-DM8	10.2	16	8.5	M8	25	2	ADGT1135..	SIC025050	FT07	+	
SB90-20R3AD11-DM10	10.2	20	10.5	M10	30	3					
SB90-25R4AD11-DM12	10.2	25	12.5	M12	35	4					
SB90-32R5AD11-DM16	10.2	32	17	M16	43	5		SIC025065			



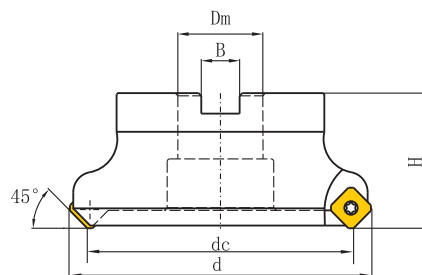
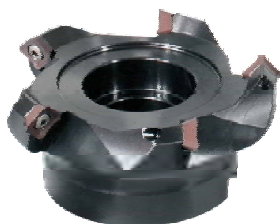
刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended												
						CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	d	a	BPS321	BPS411	BPG05B	BPG05B	BPG20B	BPG308	BPG25B	BPG30A	BP20	BP35	BK10	BU810	BU820
	SEKT13T3AEFN-LHC	13.4	3.97	4.4	20						☆					☆	★	
	SEKT13T3AEFN-JF	13.4	3.97	4.4	20				★		☆							
	SEMT13T3AGSN-JM	13.4	3.97	4.4	20	☆	★			★								
	SEMT13T3AGSN-JH	13.4	3.97	4.4	20	★	☆			★								

加工用途		BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810
	P:钢	★	★	★	★	☆	
	M:不锈钢		☆	★	★	★	
	K:铸铁		★			☆	★
	N:有色金属						★

★ 主推牌号 ★ Recommended grade and always stock available ☆ 按单生产 ☆ Recommended grade and produce according to order

## 可转位45° 面铣刀

Kr=45°

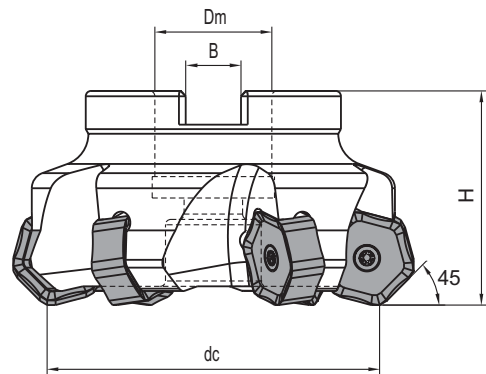
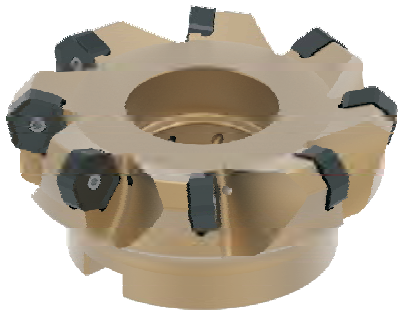


型号	尺寸 (mm)					齿数 Z	刀片 	螺钉 	扳手 	重量 (kg)
	dc	Dm	d	B	H					
SA45-50R3SE13-P22	50	22	63.4	10.4	40	3	SE..13T3..	SID040110	FT15	0.42
SA45-63R4SE13-P22	63	22	76.4	10.4	40	4				0.52
SA45-80R4SE13-P27	80	27	93.4	12.4	50	5				1.10
SA45-100R5SE13-S32	100	32	113.4	14.4	50	6				1.50
SA45-125R6SE13-S40	125	40	138.4	16.4	63	7				2.72
SA45-160R7SE13-T40	160	40	173.4	16.4	63	8				3.97
SA45-200R8SE13-T60	200	60	213.4	25.7	63	10				5.33
SA45-250R10SE13-T60	250	60	263.4	25.7	63					8.29

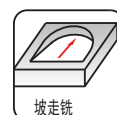
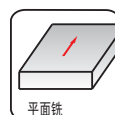


刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended											
		l.C	S	d	r	CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
						BPC122	BPS321	BPS411	BPG108	BPG05B	BPG20B	BPG30A	BPG30B	BK10	BU810		
	HNGX0906ANSN-L	16.5	6.35	4.9												☆	★
	HNGX0906ANSN-F	16.5	6.35	4.9		☆			★	★							
	HNGX0906ANSN-M	16.5	6.35	4.9			☆	★	☆		☆	☆					
	HNGX0906ANSN-R	16.5	6.35	4.9			☆	★				☆	☆				
	XNGX0906ANSN	16.5	6.35	4.9							★						
加工用途						BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810						
	P:钢					★	★	★	★	☆							
	M:不锈钢						☆	★	★	★							
	K:铸铁						★			☆							★
	N:有色金属																★

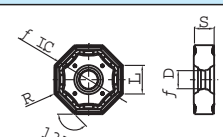

★ 主推牌号 ★ Recommended grade and always stock available ☆ 按单生产 ☆ Recommended grade and produce according to order



型号	尺寸(mm)				齿数 Z	内冷状态	刀片	螺钉	扳手
	dc	Dm	B	H					
SA45-50R4HN09-P22	50	22	10.4	40	4	有	HNGX 0906..	SIC035120	WT15
SA45-63R6HN09-P22	63	22	10.4	40	6	有			
SA45-80R6HN09-P27	80	27	12.4	50	6	有			
SA45-100R8HN09-S32	100	32	14.4	50	8	有			
SA45-125R10HN09-S40	125	40	16.4	63	10	有			
SA45-160R12HN09-T40	160	40	16.4	63	12	无			
SA45-200R10HN09-T60	200	60	25.7	63	10	无			

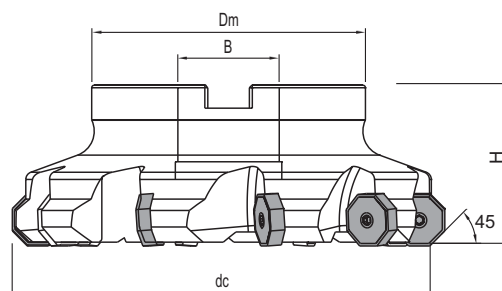




刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended											
		I.C	S	d	r	CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
						BPC12Z	BPS321	BPS411	BPG108	BPG05B	BPG20B	BPG25B	BPG30B	BK10	BU810		
 	ONGX080608-L	20.2	6.00	5.3	0.8											☆	★
	ONGX080608-F	20.2	6.00	5.3	0.8	☆			★	★							
	ONGX080608-M	20.2	6.00	5.3	0.8		☆	★	☆		☆	☆					
	ONGX080608-R	20.2	6.00	5.3	0.8		☆	★				☆	☆				

加工用途		BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810
	P:钢	★	★	★	★	☆	
	M:不锈钢		☆	★	★	★	
	K:铸铁		★		☆		★
	N:有色金属						★

★ 主推牌号 ★ Recommended grade and always stock available ☆ 按单生产 ☆ Recommended grade and produce according to order



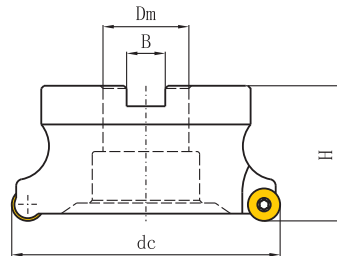
型号	尺寸				齿数 Z	刀片	螺钉	扳手
	dc	Dm	B	H				
SA45-63R5ON08-P22	63	22	10.4	40	5			
SA45-80R6ON08-P27	80	27	12.4	50	6			
SA45-100R7ON08-S32	100	32	14.4	63	7			
SA45-125R8ON08-S40	125	40	16.4	63	8	ONGX080608..	SIC050140	WT20
SA45-160R10ON08-T40	160	40	16.4	63	10			
SA45-200R12ON08-T60	200	60	25.7	63	12			
SA45-250R14ON08-T60	250	60	25.7	63	14			
SA45-315R16ON08-U60	315	60	25.7	80	16			

型号	尺寸				齿数 Z	刀片	螺钉	扳手	楔块
	dc	Dm	B	H					
WA45-80R10ON08-P27	80	27	12.4	50	10				
WA45-100R14ON08-S32	100	32	14.4	63	14				
WA45-125R18ON08-S40	125	40	16.4	63	18				
WA45-160R22ON08-T40	160	40	16.4	63	22	ONGX080608..	SEC060200	S3	W1006Y
WA45-200R28ON08-T60	200	60	25.7	63	28				
WA45-250R36ON08-T60	250	60	25.7	63	36				
WA45-315R46ON08-U60	315	60	25.7	80	46				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Material recommended											
		Φ1.C	S	Φd	α		CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
							BPS163	BPS263	BPG05B	BPG10B	BPG20B	BPG30B	BPG05B	BPG30B	BP20	BP35	BK10	BU810
	RPMT0803MOE-BJS	8	3.18	3.4	11					★	☆	☆			☆	☆	☆	
	RPMT10T3MOE-BJS	10	3.97	4.4	11					★	☆	☆			☆	☆	☆	
	RPMT1204MOE-BJS	12	4.76	4.4	11					★	☆	☆			☆	☆	☆	
	RPHT0803MO-SM	08	3.18	3.4	11		☆		☆	★	☆							
	RPHT1204MO-MM	12	4.76	4.4	11		☆		☆	★	☆							
	RPHT1606MO-ML	16	6.35	4.4	11		☆		☆	★	☆							
加工用途			BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810										
	P:钢	★	★	★	★	☆												
	M:不锈钢		☆	★	★	★												
	K:铸铁			★		☆											★	
	N:有色金属																★	
S:高温合金							★											

★ 主推牌号 ★ Recommended grade and always stock available ☆ 按单生产 ☆ Recommended grade and produce according to order

### 可转位R面铣刀



型号	尺寸 (mm)				齿数 Z	刀片 	螺钉 	扳手 	重量 (kg)
	dc	Dm	B	H					
SA00-63R3RP12-P22	63	22	10.4	40	3	RP..1204..	SIC035080	FT15	0.46
SA00-63R4RP12-P22					4				0.44
SA00-63R5RP12-P22					5				0.44
SA00-80R4RP12-P27	80	27	12.4	50	4				0.88
SA00-80R6RP12-P27					6				0.89
SA00-100R4RP12-S32	100	32	14.4	50	4				1.39
SA00-100R6RP12-S32					6	1.37			
SA00-63R3RP16-P22	63	22	10.4	40	3	RP..1605..	SID040110	FT15	0.38
SA00-63R4RP16-P22					4				0.37
SA00-80R4RP16-P27					80				27
SA00-80R5RP16-P27	5	0.86							
SA00-100R4RP16-S32	100	32	14.4	50	4				1.27
SA00-100R6RP16-S32					6				1.30
SA00-125R5RP16-S40	125	40	16.4	63	5	2.59			
SA00-125R6RP16-S40					6	2.52			



刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Material recommended							
							CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade		
		L	W	S	d	R	BPS321	BPS411	BPG108	BPG20B	BPG30C	BK10	BU810	BU820
	LNKG1206EN-1	12.7	11.3	6.35	4.4				★					
	LNKG1206EN-2	12.7	11.3	6.35	4.4				★					
	LNKG1206EN-3	12.7	11.3	6.35	4.4				★					
	LNKG1206EN-LH	12.7	11.3	6.35	4.4						☆	★		

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended								
						CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade			
		L	W	S	d	BPS321	BPS411	BPG108	BPG20B	BPG30C	BK10	BU810	BU820	
	LNKX1506PN-N-MM	15	13.9	6	4.6				★					
	LNKX1506PN-N-MR	15	13.9	6	4.6				★					

加工用途		BPS321	BPS411	BPG05B	BPG20B	BPG30A	BU810
	P:钢	★	★	★	★	☆	
	M:不锈钢		☆	★	★	★	
	K:铸铁		★		☆		★
	N:有色金属						★

★ 主推牌号 ★ Recommended grade and always stock available ☆ 接单生产 ☆ Recommended grade and produce according to order

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Material recommended												
							CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		I.W	L	S	Φd	r	BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	TMR/L331.1A-155015-WM	11.5	14.5	4.95	4.6	1.52				★	☆	☆							
	TMR/L331.1A-155025-WM	11.5	14.5	4.95	4.6	2.29				★	☆	☆							
	TMR/L331.1A-155030-WM	11.5	14.5	4.95	4.6	3.05				★	☆	☆							
	TMR/L331.1A-155035-WM	11.5	14.5	4.95	4.6	3.5				★	☆	☆							
	TMR/L331.1A-155050-WM	11.5	14.5	4.95	4.6	4.83				★	☆	☆							
	TMR/L331.1A-155055-WM	11.5	14.5	4.95	4.6	6.35				★	☆	☆							



刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended								
						CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade		
		L	W	S	d	BPS321	BPS411	BPG108	BPG20B	BPG30C	BK10	BU810	BU820	
	LNHT0804PNR-1										☆			
	LNHT1006ENR							★			☆			
	LNHT110708PNR							★			☆			
	LNHT110716PNR							★			☆			

★ 主推牌号 ★ Recommended grade and always stock available ☆ 接单生产 ☆ Recommended grade and produce according to order

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)				材质推荐 Material recommended								
						CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade		
		L	W	S	d	BPS321	BPS411	BPG108	BPG20B	BPG30C	BK10	BU810	BU820	
	CDE060308										☆			
	CDE09T304							★			☆			
	CDE09T304L-1							★			☆			
	CDE09T310							★			☆			

★ 主推牌号 ★ Recommended grade and always stock available ☆ 接单生产 ☆ Recommended grade and produce according to order

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		ΦI.C	S	r	α			BPS253	BPS321	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	SOGX1206EN-XN	12	4.76	0.8	9				★			★	☆		☆		☆					



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Milling

## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	d	bs	be	$\alpha$	BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	TPCW2204PDR/L	12.7	4.76	5.5	1.4	0.7	11							★	☆	☆	☆					
	TPCW2204PPR/L	12.7	4.76	5.5	1.4	0.7	11							★	☆	☆	☆					

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	r	$\alpha$			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	TPMR090204	5.56	2.38	0.4	11									★		☆	☆					
	TPMR110304	6.35	3.18	0.4	11									★		☆	☆					
	TPMR160304	9.525	3.18	0.4	11									★		☆	☆					
	TPMR160308	9.525	3.18	0.8	11									★		☆	☆					
	TPMR220404	12.7	4.76	0.4	11									★		☆	☆					
	TPMR220408	12.7	4.76	0.8	11									★		☆	☆					
	TPMR090204-3	5.56	2.38	0.4	11									★		☆	☆					
	TPMR110304-3	6.35	3.18	0.4	11									★		☆	☆					
	TPMR160304-3	9.525	3.18	0.4	11									★		☆	☆					
	TPMR160308-3	9.525	3.18	0.8	11									★		☆	☆					
	TPMR220404-3	12.7	4.76	0.4	11									★		☆	☆					
	TPMR220408-3	12.7	4.76	0.8	11									★		☆	☆					

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	bs	be	$\alpha$		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	TPKR1603PDR	9.525	3.18	1.2	0.7	11							★	☆		☆		☆				
	TPKR2204PDR	12.7	4.76	1.4	0.7	11							★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	bs	$\alpha$			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	TPKN1603PPR/L	9.525	3.18	1.2	11								★	☆		☆		☆				
	TPAN1603PDR/L	9.525	3.18	1.3	11								★	☆		☆		☆				
	TPCN1603PDR/L	9.525	3.18	1.3	11								★	☆		☆		☆				
	TPKN1603PDR/L	9.525	3.18	1.2	11								★	☆		☆		☆				
	TECN1603PER/L	9.525	3.18	2	20								★	☆		☆		☆				
	TPAN2204PDR/L	12.7	4.76	1.4	11								★	☆		☆		☆				
	TPCN2204PDR/L	12.7	4.76	1.4	11								★	☆		☆		☆				
	TPKN2204PDR/L	12.7	4.76	1.4	11								★	☆		☆		☆				
	TDKN2204PDR/L	12.7	4.76	1.4	15								★	☆		☆		☆				
	TEKN2204PDTR/L	12.7	4.76	1.4	20								★	☆		☆		☆				
	TFAN2203PFR/L	12.7	3.18	2.5	25								★	☆		☆		☆				
	TPKN1603PPR/L-D2	9.525	3.18	1.2	11								★	☆		☆		☆				
	TPAN1603PDR/L-D2	9.525	3.18	1.3	11								★	☆		☆		☆				
	TPCN1603PDR/L-D2	9.525	3.18	1.3	11								★	☆		☆		☆				
	TPKN1603PDR/L-D2	9.525	3.18	1.2	11								★	☆		☆		☆				
	TECN1603PER/L-D2	9.525	3.18	2	20								★	☆		☆		☆				
	TPAN2204PDR/L-D2	12.7	4.76	1.4	11								★	☆		☆		☆				
	TPCN2204PDR/L-D2	12.7	4.76	1.4	11								★	☆		☆		☆				
	TPKN2204PDR/L-D2	12.7	4.76	1.4	11								★	☆		☆		☆				
	TDKN2204PDR/L-D2	12.7	4.76	1.4	15								★	☆		☆		☆				
	TEKN2204PDTR/L-D2	12.7	4.76	1.4	20								★	☆		☆		☆				
	TFAN2203PFR/L-D2	12.7	3.18	2.5	25								★	☆		☆		☆				

D 铁削 Milling



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	d	a			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	TPKN2204PDR-SU	12.7	4.76	1.4	11							★	☆		☆		☆				
	TPKN2204PDR-3	12.7	4.76	1.4	11							★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	bs	a			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	TPAN1103PPN	6.35	3.18	0.7	11							★	☆		☆		☆				
	TPCN1103PPN	6.35	3.18	0.7	11							★	☆		☆		☆				
	TPKN1103PPN	6.35	3.18	0.7	11							★	☆		☆		☆				
	TPAN1603PPN	9.525	3.18	1.2	11							★	☆		☆		☆				
	TPCN1603PPN	9.525	3.18	1.2	11							★	☆		☆		☆				
	TPKN1603PPN	9.525	3.18	1.2	11							★	☆		☆		☆				
	TPAN2204PPN	12.7	4.76	1.3	11							★	☆		☆		☆				
	TPCN2204PPN	12.7	4.76	1.3	11							★	☆		☆		☆				
	TPKN2204PPN	12.7	4.76	1.3	11							★	☆		☆		☆				
	TPAN1603PPN-D2	9.525	3.18	1.2	11							★	☆		☆		☆				
	TPCN1603PPN-D2	9.525	3.18	1.2	11							★	☆		☆		☆				
	TPKN1603PPN-D2	9.525	3.18	1.2	11							★	☆		☆		☆				
	TPAN2204PPN-D2	12.7	4.76	1.3	11							★	☆		☆		☆				
	TPCN2204PPN-D2	12.7	4.76	1.3	11							★	☆		☆		☆				
	TPKN2204PPN-D2	12.7	4.76	1.3	11							★	☆		☆		☆				

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	d	a	bs	be	BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	SPCW1504EDR/RL	15.875	4.76	5.5	11	1.5	1							★	☆		☆					
	SPCW1504EPR/RL	15.875	4.76	5.5	11	1.5	1							★	☆		☆					

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended															
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade								
		I.C	S	d	a	bs	be	BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820		
	SPKW1204EDFR/RL	12.7	4.76	5.5	11	1.4	1							★	☆		☆						
	SPKW1204EDSR/RL	12.7	4.76	5.5	11	1.4	1							★	☆		☆						
	SPKW1204EDTR/RL	12.7	4.76	5.5	11	1.4	1							★	☆		☆						

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	d	a	bs		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	SEEW1504AFN	15.875	4.76	5.5	20	2.85								★	☆		☆					

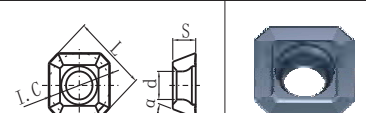
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Milling

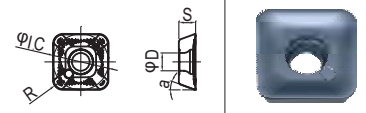


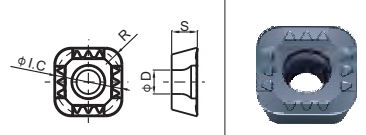
★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	d	α	L		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	SEKT1204AESN	12.7	4.76	5.5	20	15.23							★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	d	α	R		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	SEET12T3-DR	12.7	4.76	5.5	20	2.4							★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		I.C	S	d	α	R		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	SDET120408-RF	12.7	4.76	4.4	15	0.8							★	☆		☆		☆				
	SDET120412-RF	12.7	4.76	4.4	15	1.2							★	☆		☆		☆				
	SDET120416-RF	12.7	4.76	4.4	15	1.6							★	☆		☆		☆				
	SDET120420-RF	12.7	4.76	4.4	15	2.0							★	☆		☆		☆				
	SDET120424-RF	12.7	4.76	4.4	15	2.4							★	☆		☆		☆				
	SDET120432-RF	12.7	4.76	4.4	15	3.2							★	☆		☆		☆				

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		I.C	S	a	bs	be		CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade						非涂层牌号 Uncoating grade		
								BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10
	SNAN1204ANN	12.7	4.76	0	2							★	☆		☆	☆			
	SNCN1204ANN	12.7	4.76	0	2							★	☆		☆	☆			
	SNKN1204ANN	12.7	4.76	0	2							★	☆		☆	☆			
	SNAN1504ANN	15.875	4.76	0	2.5							★	☆		☆	☆			
	SNCN1504ANN	15.875	4.76	0	2.5							★	☆		☆	☆			
	SNKN1504ANN	15.875	4.76	0	2.5							★	☆		☆	☆			
	SNAN1904ANN	19.05	4.76	0	3							★	☆		☆	☆			
	SNCN1904ANN	19.05	4.76	0	3							★	☆		☆	☆			
	SNKN1904ANN	19.05	4.76	0	3							★	☆		☆	☆			
	SNCN1904ADSN	19.05	4.76	1	4	0.5						★	☆		☆	☆			

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刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		I.C	S	bs	m			CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade						非涂层牌号 Uncoating grade		
								BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10
	SNAN1204ENN	12.7	4.76	1.4	0.8							★	☆		☆	☆			
	SNCN1204ENN	12.7	4.76	1.4	0.8							★	☆		☆	☆			
	SNKN1204ENN	12.7	4.76	1.4	0.8							★	☆		☆	☆			
	SNAN1504ENN	15.875	4.76	1.4	1.5							★	☆		☆	☆			
	SNCN1504ENN	15.875	4.76	1.4	1.5							★	☆		☆	☆			
	SNKN1504ENN	15.875	4.76	1.4	1.5							★	☆		☆	☆			
	SNAN1904ENN	19.05	4.76	2	1.3							★	☆		☆	☆			
	SNCN1904ENN	19.05	4.76	2	1.3							★	☆		☆	☆			
	SNKN1905ENN	19.05	4.76	2	1.3							★	☆		☆	☆			



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended															
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade						非涂层牌号 Uncoating grade						
		I.C	S	a	bs	be		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820		
	SPCN1204APN	12.7	4.76	11	2.22							★	☆		☆		☆						
	SECN1203AEN	12.7	3.18	20	2.48							★	☆		☆		☆						
	SEEN1203AFFN	12.7	3.18	20	1.8							★	☆		☆		☆						
	SEKN1203AFTN	12.7	3.18	20	1.8							★	☆		☆		☆						
	SEKN1203AFTN-1	12.7	3.18	20	2.46	r1						★	☆		☆		☆						
	SEMN1204AEN	12.7	4.76	20	2.1							★	☆		☆		☆						
	SEKN1204AFN	12.7	4.76	20	1.8							★	☆		☆		☆						
	SEKN1204AFTN	12.7	4.76	20	1.8							★	☆		☆		☆						
	SPKN1504AFTN	15.875	4.76	11	1.8	1						★	☆		☆		☆						
	SDKN1504AEN	15.875	4.76	15	1.9							★	☆		☆		☆						
	SEKN1504AFN	15.875	4.76	20	1.6							★	☆		☆		☆						
	SEKN1504AFTN	15.875	4.76	20	1.6							★	☆		☆		☆						
	SPCN1904APN	19.05	4.76	11	4.48							★	☆		☆		☆						

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended															
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade						非涂层牌号 Uncoating grade						
		I.C	S	a	r			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820		
	SPGN090304	9.525	3.18	11	0.4			★				★	☆		☆		☆						
	SPGN090308	9.525	3.18	11	0.8			★				★	☆		☆		☆						
	SPGN120308	12.7	3.18	11	0.8			★				★	☆		☆		☆						
	SPEN120408	12.7	4.76	11	0.8			★				★	☆		☆		☆						
	SPGN120404	12.7	4.76	11	0.4			★				★	☆		☆		☆						
	SPGN120408	12.7	4.76	11	0.8			★				★	☆		☆		☆						
	SPEN150412	15.875	4.76	11	1.2			★				★	☆		☆		☆						
	SPEN190416	19.05	4.76	11	1.6			★				★	☆		☆		☆						

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade





## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		I.C	S	a	bs	be		CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10
	SPKN1204ZETRL	12.7	4.76	11	1.93	0.6		★			★	☆		☆	☆				
	SPCN1504ZETRL	15.875	4.76	11	2	1		★			★	☆		☆	☆				
	SPKN1504ZEFRL	15.875	4.76	11	2	0.8		★			★	☆		☆	☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		I.C	S	bs	m			CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10
	SPKN1504EDL-D2	15.875	4.76	11	1.4			★			★	☆		☆	☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		I.C	S	a	bs	be		CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10
	SPKN1203EDFR/L	12.7	3.18	11	1.4			★			★	☆		☆	☆				
	SPKN1203EDER/L	12.7	3.18	11	1.4			★			★	☆		☆	☆				
	SPKN1504EDFR/L	15.875	4.76	11	1.4			★			★	☆		☆	☆				
	SPKN1504EDER/L	15.875	4.76	11	1.4			★			★	☆		☆	☆				
	SPKN1203EDFR/L-D2	12.7	3.18	11	1.4			★			★	☆		☆	☆				
	SPKN1203EDER/L-D2	12.7	3.18	11	1.4			★			★	☆		☆	☆				
	SPKN1504EDFR/L-D2	15.875	4.76	11	1.4			★			★	☆		☆	☆				
	SPKN1504EDER/L-D2	15.875	4.76	11	1.4			★			★	☆		☆	☆				
	SPAN1203EDR/L	12.7	3.18	11	1.4			★			★	☆		☆	☆				
	SPCN1203EDR/L	12.7	3.18	11	1.4			★			★	☆		☆	☆				
	SPKN1203EDR/L	12.7	3.18	11	1.4			★			★	☆		☆	☆				

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	a	bs			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	SDHW0903AEFN	9.53	3.18	15	0.75			★				★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	a	bs			BPS153	BPS253	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	SPAN1203EDR/L	12.7	3.18	11	1.4			★				★	☆		☆		☆				
	SPCN1203EDR/L	12.7	3.18	11	1.4			★				★	☆		☆		☆				
	SPKN1203EDR/L	12.7	3.18	11	1.4			★				★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	a	r			BPS153	BPS253	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	SPMR090304	9.525	3.18	11	0.4			★					★	☆		☆		☆			
	SPMR09T304	9.525	3.97	11	0.4			★					★	☆		☆		☆			
	SPMR090308	9.525	3.18	11	0.8			★					★	☆		☆		☆			
	SPMR120304	12.7	3.18	11	0.4			★					★	☆		☆		☆			
	SPMR120308	12.7	3.18	11	0.8			★					★	☆		☆		☆			
	SPMR120312	12.7	3.18	11	1.2			★					★	☆		☆		☆			

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	a	L			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	SEMN1203AFTN	12.7	3.18	20	15.7			★				★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	a	bs	be		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	SEKR1203AZ-YM	12.7	3.18	20	1.6	0.8		★				★	☆		☆		☆				
	SEKR12T3AZ-YM	12.7	3.98	20	1.6	0.8		★				★	☆		☆		☆				
	SEKR1204AZ-YM	12.7	4.76	20	1.6	0.8		★				★	☆		☆		☆				
	SEKR1504AZ-YM	15.875	4.76	20	1.6	0.8		★				★	☆		☆		☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	a	R	L1		BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	SPEX1203EDR/L	12.7	3.18	11	500	15							★	☆		☆		☆			
	SPKX1504EDFRL	15.88	4.76	11	500	19.37							★	☆		☆		☆			



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
		L	I.C	S	r	$\alpha$		CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
								BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	OPHN0504ZZN	5.26	12.7	4.76	0.4	11			★		★	☆		☆		☆						
	OFEW05T305	5.3	12.8	3.97	4.4	25			★		★	☆		☆		☆						

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
		L	I.C	S	d	r	$\alpha$	CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
								BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	OFER070405NN	7.46	18	4.76	2.3	0.5	25			★		★	☆		☆		☆					

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
		$\Phi$ I.C	S	r	$\alpha$			CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
								BPS153	BPS253	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	HEEN532	15.875	4.76	0.8	20				★		★	☆		☆		☆						
	HDEN0625	6	2.48		15				★		★	☆		☆		☆						

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		L	$\Phi$ I.C	S	$\Phi$ d	r	$\alpha$	BPS163	BPS263	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG26B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	OFMT05T305NN	5.26	12.7	3.97	4.4	0.5	25							★	☆		☆					
	OFMT070405NN	7.46	18	4.76	5.5	0.5	25							★	☆		☆					

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		$\Phi$ I.C	S	$\Phi$ d	$\alpha$			BPS163	BPS263	BPS411	BPG06B	BPG108	BPG20B	BPG308	BPG26B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	RPMW0803MOE	8	3.18	3.4	11									★	☆		☆					
	RPMW1003MOE	10	3.18	4.4	11									★	☆		☆					
	RPMW10T3MOE	10	3.97	4.4	11									★	☆		☆					
	RPMW10T3MOT	10	3.97	4.4	11									★	☆		☆					
	RPMW1204MOE	12	4.76	4.4	11									★	☆		☆					
	RPMW1204MOT	12	4.76	4.4	11									★	☆		☆					

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
		$\Phi$ I.C	S	$\Phi$ d	$\alpha$			BPS263	BPS321	BPS411	BPG06B	BPG118	BPG218	BPG318	BPG26B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	RCHT0803MO-SM	08	3.18	3.4	7				☆		☆	★	☆									
	RCHT1204MO-MM	12	4.76	4.4	7				☆		☆	★	☆									
	RCHT1606MO-ML	16	6.35	4.4	7				☆		☆	★	☆									



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D4 面铣刀片 Inserts for face milling

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		$\phi$ I.C	S	$\phi$ d	$\alpha$			BPS153	BPS253	BPS411	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810
	RDMT0802MO-V1	8	2.38	3.4	15							★	☆		☆		☆		☆	
	RDMT0803MO-V1	8	3.18	3.4	15							★	☆		☆		☆		☆	
	RDMT1003MO-V1	10	3.18	4.4	15							★	☆		☆		☆		☆	
	RDMT10T3MO-V1	10	3.97	4.4	15							★	☆		☆		☆		☆	
	RDMT1204MO-V1	12	4.76	4.4	15							★	☆		☆		☆		☆	

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		$\phi$ I.C	S	$\phi$ d	$\alpha$			BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	RPMT0803MOE-BJS	8	3.18	3.4	11							★	☆		☆		☆		☆	
	RPMT10T3MOE-BJS	10	3.97	4.4	11							★	☆		☆		☆		☆	
	RPMT1204MOE-BJS	12	4.76	4.4	11							★	☆		☆		☆		☆	

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		$\phi$ I.C	S	$\phi$ d	$\alpha$			BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	RCGT0602MO-LHC	6	2.38	2.5	7												☆		★	
	RCGT0803MO-LHC	8	3.18	3.4	7												☆		★	
	RCGT1003MO-LHC	10	3.18	4	7												☆		★	
	RCGT10T3MO-LHC	10	3.97	4.4	7												☆		★	
	RCGT12T3MO-LHC	12	3.97	4.4	7												☆		★	

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D5 重型铣刀片 Inserts for heavy-cutting milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
		φI.C	W	S	d	C/R		BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	CNE44102	12.7	12.7	6.35	5.4	C0.5		☆				★	★			★				☆
	CNE323-405	12.7	9.525	4.76	4.3	C0.5		☆				★	★			★				☆
	CNE44-405	12.7	12.7	6.35	5.5	C0.5		☆				★	★			★				☆
	CNE454-4R1	16.3	14.288	6.35	5.5	R1.0		☆				★	★			★				☆

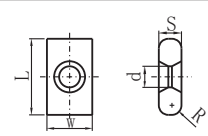
刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
		L	W	S	d	C/R		BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	CDE323L05	12.7	9.525	4.76	4.5	C1.0		☆				★	★			★				☆
	CDE323L05	12.7	9.525	4.76	4.5	C1.0		☆				★	★			★				☆

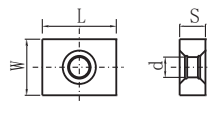
刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
		L	W	S	d	C/R		BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	LNE0904TL-φ4.1	9.53	9.53	4.76	4.1	C0.5		☆				★	★			★				☆

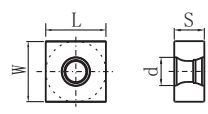


★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D5 重型铣刀片 Inserts for heavy-cutting milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		L	W	S	d	C/R	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
							BPS153	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	LNE434-02	19.05	14.29	6.35	5.4	C1.0		☆				★	★		★				☆
	N18404-JH	15.875	12.7	7.94	5.5	C0.4		☆				★	★		★				☆

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		L	W	S	d			CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade			
								BPS153	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810
	N18-1	15.875	12.7	7.94	5.5			☆				★	★		★				☆
	L19.05/14.3/6.35-R7-0.5.35	19.05	14.29	6.35	5.35			☆				★	★		★				☆

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		L	W	S	d			CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade			
								BPS153	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810
	SNE33-01	9.525	9.525	4.76	4.4			☆				★	★		★				☆
	SNC44	12.7	12.7	6.35	4.4			☆				★	★		★				☆
	SNC55	15.875	15.875	7.94	5.5			☆				★	★		★				☆

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D5 重型铣刀片 Inserts for heavy-cutting milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
		L	W	S	Φd1	R		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	LND424-DA	13	12.7	6.35	6	2.0			☆				★	★			★			☆
	N136	15.875	12.7	7.94	5.5	2.0			☆				★	★			★			☆

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
		L	W	S	d	C/R		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	SNE1507-4R3	15.88	15.88	7.94	5.5	R3.0			☆				★	★			★			☆
	LNC305-YT	17.46	12.7	7.15	5.5	R5.0			☆				★	★			★			☆

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
		L	W	S	d	R		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820
	LNE323-02	15.875	9.525	4.76	4.4	2			☆				★	★			★			☆
	LND624-DA	15.5	12.7	7.35	6	2.80			☆				★	★			★			☆



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D5 重型铣刀片 Inserts for heavy-cutting milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		L	W	S	d	R		BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820	
	SN155R10-P50	15.875	15.875	7.94	5.5	10			☆					★	★			★			☆
	SN55R8-EB50	16.875	16.875	7.94	5.5	8			☆					★	★			★			☆

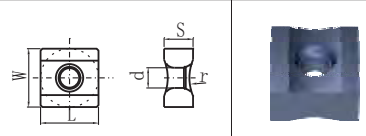
刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		L	W	S	d	R		BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820	
	SN55R6.5	15.875	15.875	7.94	5.5	6.5			☆					★	★			★			☆
	SN55R40	15.875	15.875	7.94	5.5	40			☆					★	★			★			☆

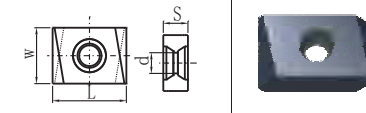
刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended													
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade					
		L	W	S	d	R		BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820	
	GLOL20021R5	15.28	12.7	7.94	5.4	5.0			☆					★	★			★			☆
	N182R5-JH	15.875	12.7	7.94	5.5	5.0			☆					★	★			★			☆
	LNC306-YT	15.875	12.7	7.15	5.5	4.7			☆					★	★			★			☆
	FNC334-103T05-W	23.5	11.5	6.4	4.4	6.5			☆					★	★			★			☆
	FNC484-103	51	14.3	6.3	5.6	6.3			☆					★	★			★			☆

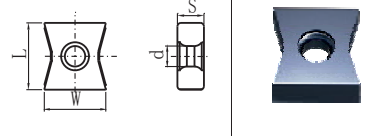
★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D5 重型铣刀片 Inserts for heavy-cutting milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		L	W	S	d	R		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade			
								BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810
	SN55RK13-ING	15.875	15.875	7.93	5.5	12.7			☆				★	★		★			☆
	SN55-R15-R00P50	15.875	15.875	7.93	5.5	15			☆				★	★		★			☆

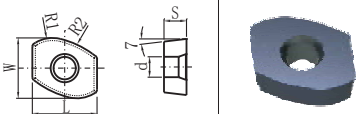
刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		L	W	S	d			CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade			
								BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810
	LNHX1906	19	14.3	6.35	5.3				☆				★	★		★			☆
	LNHX2509	25.4	14.3	9.5	5.5				☆				★	★		★			☆

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		L	W	S	d			CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade			
								BPS133	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810
	NXE324-104	12.7	11.89	6.35	4.5				☆				★	★		★			☆
	NXE324-R16	13.1	12.3	6.75	4.4				☆				★	★		★			☆
	LNKG1206TN-1	12.7	12.3	6.35	4.4				☆				★	★		★			☆
	LNKG1206EN-2	12.7	12.3	6.35	4.4				☆				★	★		★			☆
	LNKX1506PN-N-MM	15	13.9	6	4.6				☆				★	★		★			☆



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D5 重型铣刀片 Inserts for heavy-cutting milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended															
		L	W	S	d	R1	R2	CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade							
								BPS153	BPS253	BPS321	BPS411	BPG05B	BPG20B	BPG30B	BPG40A	BP20	BP35	BK10	BU810	BU820			
	DIN7168-M	15.875	14.53	6	5.4	8.0	22		☆					★	★				★				☆





## D6 方肩铣刀片 Inserts for square shoulder milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	APMT1135PDER-H2	6.2	11.21	3.5	2.8	0.8						★	☆	☆						
	APMT1604PDER-H2	9.28	17.15	4.76	4.4	0.8						★	☆	☆						
	APMT160432PDER-H8	9.33	16.31	4.76	4.4	3.2						★	☆	☆						
	APMT1135PDER-M2	6.2	11.21	3.5	2.8	0.8						★	☆	☆						
	APMT1604PDER-M2	9.28	17.15	4.76	4.4	0.8						★	☆	☆						


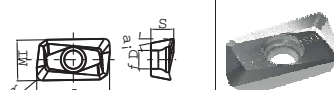

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	APMT1135PDER-EM	6.24	11.2	3.5	2.8	0.8						★	☆	☆						
	APMT1604PDER-EM	9.41	17.24	5.28	4.4	0.8						★	☆	☆						
	APMT170508R-EM	10.63	18.54	5.56	4.4	0.8						★	☆	☆						
	APMT170516R-EM	10.63	18.54	5.56	4.4	1.6						★	☆	☆						

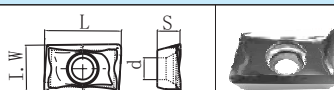
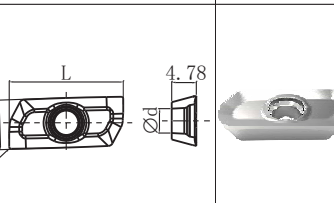
刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended												
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	BR390-11T308-PM	6.9	11.72	3.58	2.8	0.8						★	☆	☆						
	BR390-11T331-PM	6.9	11.86	3.6	2.8	3.1						★	☆	☆						
	R390-170408-PM	9.6	17.82	4.76	4.12	0.8						★	☆	☆						
	BR390-11T308-PL	6.9	11.72	3.58	2.8	0.8						★	☆	☆						
	R390-170450-PL	9.6	17.82	4.76	4.12	5						★	☆	☆						

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D6 方肩铣刀片 Inserts for square shoulder milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended									
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade						非涂层牌号 Uncoating grade	
								BPS153	BPS253	BPG05B	BPG10B	BPG20B	BPG30B	BPG25B	BPG30B	BP20	BP35
	APKT11T304-LHC	6.5	12.24	3.6	2.8	0.4				☆	☆	☆				☆	★
	APKT11T308-LHC	6.5	12.24	3.6	2.8	0.8				☆	☆	☆				☆	★
	APKT1135PDFR-G2C	6.2	11.3	3.5	2.8	0.8				☆	☆	☆				☆	★
	APKT1604PDFR-G2C	9.26	17	4.76	4.4	0.8				☆	☆	☆				☆	★
	APEX100304FR-LHC	6.6	10.3	3.18	2.8	0.4				☆	☆	☆				☆	★

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended									
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade		PVD涂层牌号 PVD coating grade						非涂层牌号 Uncoating grade	
								BPS153	BPS253	BPG05B	BPG10B	BPG20B	BPG30B	BPG25B	BPG30B	BP20	BP35
	ADGT150404PDFR-LHC	9.7	15.58	4.76	4.4	0.4				☆	☆	☆				☆	★
	ADGT150408PDFR-LHC	9.7	15.58	4.76	4.4	0.8				☆	☆	☆				☆	★
	ADGT150412PDFR-LHC	9.7	15.58	4.76	4.4	1.2				☆	☆	☆				☆	★
	ADGT190404-LHC	9.525	22.1	4.76	4.7	0.4				☆	☆	☆				☆	★
	ADGT190408-LHC	9.525	22.1	4.76	4.7	0.8				☆	☆	☆				☆	★
	ADGT190412-LHC	9.525	22.1	4.76	4.7	1.2				☆	☆	☆				☆	★
	ADGT190420-LHC	9.525	22.1	4.76	4.7	2.0				☆	☆	☆				☆	★
	ADGT190424-LHC	9.525	22.1	4.76	4.7	2.4				☆	☆	☆				☆	★
ADGT190432-LHC	9.525	22.1	4.76	4.7	3.2				☆	☆	☆				☆	★	

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



## D6 方肩铣刀片 Inserts for square shoulder milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended											
		I.W	L	S	Φd	r		CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade				
								BPS153	BPS253	BPG05B	BPG108	BPG20B	BPG308	BPG25B	BPG30B	BU813	BP35	BK10	BU810
	APKT160402FR-LHC	9.8	16.88	4.76	4.4	0.2					☆		☆		☆	★			★
	APKT160404PDFR-LHC	9.8	16.88	4.76	4.4	0.4					☆		☆		☆	★			★
	APKT160408PDFR-LHC	9.8	16.88	4.76	4.4	0.8					☆		☆		☆	★			★
	APKT160416PDFR-LHC	9.8	16.88	4.76	4.4	1.6					☆		☆		☆	★			★
	APKT16T4PDFR-LH1C	9.5	17	4.96	4.4	0.8													
	APKT1652PDFR-LH2C	9.8	16.88	4.76	4.4	3.2					☆		☆		☆	★			★

## D7 浅孔钻 Inserts for shallow hole drilling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended										
		ΦI.C	S	Φd	R	α		CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade				
								BPS251	BPS253		BP200	BPG20B	BPG30B	BP35	BK10	BU810	BU820	
	WCGX030204-ZS	5.56	2.38	2.8	0.4	7		★	★			★				☆	☆	
	WCGX030208-ZS	5.56	2.38	2.8	0.8	7		★	★			★				☆	☆	
	WCGX040204-ZS	6.35	2.38	3	0.4	7		★	★			★				☆	☆	
	WCGX040208-ZS	6.35	2.38	3	0.8	7		★	★			★				☆	☆	
	WCGX050304-ZS	7.94	3.18	3.4	0.4	7		★	★			★				☆	☆	
	WCGX050308-ZS	7.94	3.18	3.4	0.8	7		★	★			★				☆	☆	
	WCGX06T304-ZS	9.525	3.97	4.4	0.4	7		★	★			★				☆	☆	
	WCGX06T308-ZS	9.525	3.97	4.4	0.8	7		★	★			★				☆	☆	
	WCGX080404-ZS	12.7	4.76	5.5	0.4	7		★	★			★				☆	☆	
	WCGX080408-ZS	12.7	4.76	5.5	0.8	7		★	★			★				☆	☆	
	WCGX080412-ZS	12.7	4.76	5.5	1.2	7		★	★			★				☆	☆	

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D7 浅孔钻 Inserts for shallow hole drilling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)					材质推荐 Material recommended										
							CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade				
		I.W	L	S	d			BPS251	BPS253		BP200	BPG20B	BPG30B	BP35	BK10	BU810	BU820
	APMT1504T-WT	15.88	12.7	4.76	5.5		★	★			★						

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended									
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade			
		ΦI.C	S	d	r	a		BPS251	BPS253		BP200	BPG20B	BPG30B	BP35	BK10	BU810	BU820
	SPMG050204-ZV	5.56	2.38	2.5	0.4	11		★			★					☆	
	SPMG060204-ZV	6.35	2.38	2.8	0.4	11		★			★					☆	
	SPMG07T308-ZV	7.94	3.97	2.8	0.8	11		★			★					☆	
	SPMT090408-ZV	9.8	4.3	4.1	0.8	11		★			★					☆	
	SPMG110408-ZV	11.5	4.76	4.4	0.8	11		★			★					☆	
	SPMG140512-ZV	14.3	5.56	5.5	1.2	11		★			★					☆	

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended									
								CVD涂层牌号 CVD coating grade			PVD涂层牌号 PVD coating grade			非涂层牌号 Uncoating grade			
		ΦI.C	S	Φd	R	α		BPS251	BPS253		BP200	BPG20B	BPG30B	BP35	BK10	BU810	BU820
	WCGX030204-ZV	5.56	2.38	2.5	0.4	7		★	★			★			☆	☆	
	WCGX030208-ZV	5.56	2.38	2.5	0.8	7		★	★			★			☆	☆	
	WCGX040204-ZV	6.35	2.38	2.8	0.4	7		★	★			★			☆	☆	
	WCGX040208-ZV	6.35	2.38	2.8	0.8	7		★	★			★			☆	☆	
	WCGX050304-ZV	7.94	3.18	3.4	0.4	7		★	★			★			☆	☆	
	WCGX050308-ZV	7.94	3.18	3.4	0.8	7		★	★			★			☆	☆	
	WCGX06T304-ZV	9.525	3.97	4.4	0.4	7		★	★			★			☆	☆	
	WCGX06T308-ZV	9.525	3.97	4.4	0.8	7		★	★			★			☆	☆	
	WCGX080404-ZV	12.7	4.76	5.5	0.4	7		★	★			★			☆	☆	
	WCGX080408-ZV	12.7	4.76	5.5	0.8	7		★	★			★			☆	☆	
	WCGX080412-ZV	12.7	4.76	5.5	1.2	7		★	★			★			☆	☆	

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D8 仿形铣刀 Inserts for profile milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	d	r	a		BPS153	BPS253	BPS321	BPS411	BPG10A	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820	
	WPGT050315ZSR	7.94	3.5	4	1.5	11					★		★	☆		☆						
	WPGT060415ZSR	9.525	4.2	4.4	1.5	11					★		★	☆		☆						
	WPGT080615ZSR	12.85	6.35	5.5	1.5	11					★		★	☆		☆						
	WPGT090725ZSR	15	7	5.5	2.5	11					★		★	☆		☆						

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		Φ I.C	S	Φ d	L	R	a	BPS153	BPS253	BPS303	BPC102	BPG05B	BPG10A	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BK10	BU810	BU820
	ZDGW08T2R10	6.75	2.78	2.8	8.4	10	15			★	☆			★	☆		☆	☆				
	ZDGW1103R12.5	8.5	3.18	2.8	10.6	12.5	15			★	☆			★	☆		☆	☆				
	ZDGW13T3R16	10.5	3.97	4.4	13.2	16	15			★	☆			★	☆		☆	☆				
	ZPGW2204R20	12.7	4.76	5.5	16.1	20	11			★	☆			★	☆		☆	☆				
	ZPGW2204R25	12.7	4.76	5.5	16.9	25	11			★	☆			★	☆		☆	☆				
	ZPGW2204R31	12.7	4.76	5.5	17.6	31.5	11			★	☆			★	☆		☆	☆				

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended															
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				金属陶瓷 Cermet		非涂层牌号 Uncoating grade					
		I.C	S	d	r	a		BPS153	BPS253	BPS303	BPC102	BPU106	BPU200	BPU206	BPG208	BPG308	BN201	BN301	BP20	BP35	BK10	BU810	BU820
	SPMT120408	12.7	4.76	5.5	0.8	11		★	★	★	★												



★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade

## D9 仿形铣刀 Inserts for profile milling

刀片外形 Insert shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.C	S	d	r	a		BPS153	BPS253	BPS321	BPS411	BPG10A	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BU810	BU813	BU820	
	SPMT120408-D51	12.7	4.76	5.5	0.8	11				★		★	☆	☆	☆							

刀片外形 Inserts shape	型号 Type	基本尺寸 Dimension (mm)						材质推荐 Material recommended														
								CVD涂层牌号 CVD coating grade				PVD涂层牌号 PVD coating grade				非涂层牌号 Uncoating grade						
		I.W	L	S	d	r	a	BPS153	BPS253	BPS321	BPS411	BPG10A	BPG20B	BPG308	BPG25B	BPG30B	BP20	BP35	BU810	BU813	BU820	
	LPMT150408R-D51	12.7	15.88	4.76	5.5	0.8	11				★		★	☆	☆	☆						
	LPMT150412R-D51	12.7	15.88	4.76	5.5	1.2	11				★		★	☆	☆	☆						

★ 主推荐牌号 Recommended grade ☆ 可选牌号 Optional grade



F5 牌号对照表 Comparison table of Grade  
 ■ 车削材料对照表 Turning materials comparison table

类别	使用分类 代号	CDBP	SANDVIK	ISCAR	KENAMETAL	TaeguTec	WALTER	MTSUBISHI	SUMITOMO	TUNGALOY	KYOCERA	KORLOY	SECO	ZCC. CT
		邦普	山特维克	伊斯卡	肯纳金属	特固克	瓦尔特	三菱	住友电气工业	泰珂洛	京瓷	克洛伊	山高工具	株洲刀具
K	K01		GC3205	IC5005 IC4028	KCK05 K09315	TT1300	WAK10	UC5105	AC405K AC410K	T5105 T5010	CA4505 CA4010	NC6105 NC305K	TK1000	YBD052 YBD102
	K10	BPC102	GC3210	IC5010	KCK15 K09325	TT7310	WAK20	UC5115	AC420K	T5115 T5125	CA4515 CA4115 CA4120	NC6110 NC6010	TK2000	YBD252 YBC252
	K20	BPS101		IC5100										
P	P01	BPS051	GC4205	IC8150	KCP05	TT8115	WPP05	UE6105	AC700G	T9005	CA5505	NC3010	TP0500	YBC151
	P10	BPS101	GC4215	IC9150	KCP10	TT8125	WPP10	UE6110	AC810P	T9115	CA5515	NC3015	TP1500	YBC152
	P20	BPS251	GC4225 GC4025	IC8250 IC9250	KCP25 K09125	TT8125 TT5100	WPP20 WAP20	UE6020	AC820P PAC2000	T9125	CA5525 CR7025	NC3015 NC3120 NC3020	TP2000 TP2500	YBC251 YBC252
M	P30	BPS371	GC4235 GC4035	IC8350 IC9350	KCP30 KCP40 K09140	TT8135 TT7100	WPP30 WAP30	UE6035 UH6400	AC830P AC3000	T9135	CA5535 CR9025	NC3030 NC500H	TP3000 TP3500	YBC351 YBM351
	M10	BPG05B	GC2015	IC907	KCM15	TT9215	WAM10	US7020 VP05RT	AC610M AC510U	T6020	CA6515	PC8110 NC9020	TM2000 TP200	YBG201
	M20	BPG20B	C2025	IC9300	KCM25	TT9225	WAM20	US735	AC630M AC520U	T6030	CA6525	NC9025	CP500	YBG202
S	M30	BPG30B	GC2035	IC3028	KCM35	TT9235 TT8020	WAM30	UH6400	AC630M AC530U		PR630	NCS330 PC9030	TM4000 TP400	YBG203
	S05	BPG118	GCS05F GC1105 GC1115	IC907	K05510	GC3215 TT5080	WSM10	VP05RT VP10RT	AC510U	AH110	PR1005 PR930	PC8110	TH1000 TH1500 TS2000 TS2500	
	S25	BPG318	GC1125	IC908	K05525	TT9080	WSM20 WSM30	VP15TF VP20RT	AC520U	AH120	PR1025 PR1125 PR1225	PC5300 PC9530	CP500	

车削

F5 牌号对照表 Comparison table of Grade  
 ■ 铣削材料对照表 Milling materials comparison table

类别	使用分类 代号	CDBP 邦普	SANDVIK 山特维克	ISCAR 伊斯卡	KENNAMETAL 肯纳金属	TeeguTec 特固克	WALTER 瓦尔特	MITSUBISHI 三菱	SUMITOMO 住友电气工业	TUNGALOY 泰珂洛	KYOCERA 京瓷	KORLOY 克洛伊	SECO 山高工具	ZCC. CT 株洲刀具
K	K01	BPG108	GC3220	IC410	KC915M	TT6800		MP8010					T150M	
			GC3020	IC810		TT6080	WKK25	VP10TF	ACZ310	PR510	PC6510	PC6510	MK2000	YBG102
		BPC122	GC1020	IC910			WAM20		ACK200	PR610	PC215K	PC215K		YBD152
	K20	BPS321					WKP25		ACK300	PR905	PR905	PR905		YBD152
		BPG05B	GC4220	IC950		TT6800	WAM10	F7030	ACP100	PR830	PC3500	PC3500	MP2500	YBG252
		BPG20B	GC4020			TT7080	WAM20			PR1025	PC3535	PC3535	T250M	
P	P20					TT7030	WKP25			AH725	PC3525	PC3525		
P30		GC4230	IC808	KC522M	TT9080	WAM30	VP15TF	ACP200	PR1225	GH330	PC9530	F30M	YBG202	
	BPG25B	GC4030	IC908	KC635M	TT9030								YBM251	
P40		GC4240	IC830	KC725M	TT8020	WKP35	VP30RT	ACP300	PR1225	AH730	NCM325	F40M		
	BPS321	GC4040	IC928	KC735M	TT8080	WSP45	F7030	ACZ350	PR1230	AH140	NCM335	T350M	YBM351	
	BPS411			KC935M	TT7800				PC3545					
M	M10	BPG05B	GC1010	IC808	KC522M	TT9080	WAM30	VP15TF	ACP200	AH120	PR1025	F30M	F30M	YBG202
		BPG20B	GC1030	IC908	KC525M	TT9030	WQM35				PR1225			YBG205
		BPG30B	GC2030									PR905		
	M30	BPG25B				TT8020								YBG302
M40	BPG40A	GC2040	IC830	KC725M	TT8020	WXM35	VP30RF	ACP300	AH130	PR1535	F40M	F40M		



### F5 牌号对照表 Comparison table of Grade

■ 硬质合金材料 Cemented carbide

类别	使用分类		CDBP 邦普	SANDVIK 山特维克	ISCAR 伊斯卡	KENNAMETAL 肯纳金属	TaeguTec 特固克	WALTER 瓦尔特	ITSUBISHI 三菱	SUMITOMO 住友电气工业	TUNGALOY 泰珂洛	KYOCERA 京瓷	DIJET 黛杰	HITACHI 日立工具	KORLOY 克洛伊	SECO 山高工具	ZCC-CT 株硬刀具
	代号	分类															
P	P01														ST05		
	P10		BP10	S1P	IC70	P10	P10			ST10P	TX10S		SRT	WS10	ST10		YC10
	P20		BP20	SMA	IC70 IC50M	K125M TTM	P20		UT120T	ST20E	TX20 TX25		SRT DX30	EX35	ST20		
	P30		BP35	SM30	IC50M IC54	GK K600 TTR	P30		UT120T	A30 A30N	TX30 UX30	PW30	SR30 DX30	EX35 EX40	ST30A		
M	P40			S6	IC54	G13				ST40E	TX40		SR30 DX35	EX45			YC40
	M10		BM10	H10A		K313	M10			EH510 U10E	TU10		UMN	WA10B	U10	890	YC10
	M20		BM15A BM25A	H13A	IC08	K68 KMF K125M TTM	M20		UT120T	EH520 U2	TU20 UX30		DX25 UMS	EX35	U20	HX 883	
	M30			H10F SM30	IC08 IC28	K600 TTR			UT120T	A30 A30N	UX30		DX25 UMS	EX40 EX45	ST30A		YC40
K	M40			S6	IC128	G13	M40				TU40		UM40	EX45	U40		
	K01			H1P		K605			UT105T	H1 H2	TH03 KS05F		KG03	WH05	H02		YD051
	K10		BK10 BU810 BK10UF	H1P H10 HM	IC20	K313 K110M THM THM-U	K10		HT110	EH10 EH510	G1F TH10	KW10	KG10 KT9	WH10	H01	890	YD101
	K20		BU820 BK20UF	H13A	IC20 IC10	K715 KMF K600	K20		UT120T	G10E EH20 EH520	G2F KS15F G2 KS20	GW10	CR1 KG20	WH20	G10	890 HX 883	YD201
N	K30				IC10 IC28	THR			UT120T	G10E	G3		KG30		G3	883	
	N01			H10 H13A		K605				H1 H2	KS05F		KG03				
	N10		BU810 BK10UF			K313 K110M THM THM-U	K10	WK10	HT110	EH10 EH510	TH10 H10T		KG10 KT9		H01	890 H15	YD101
	N20		BU820 BK30UF			K715 KMF K600	K20			G10E EH20 EH520	KS15F		CR1 KG20			HX KX 883 H15 H25	YD201
S	N30					G13 THR							KG30			H25	
	S01								RT9005				KG03				
	S10			H10 H10A H10F H13A		K10 K313 THM	K10		RT9005 RT9010	EH10 EH510	KS05F TH10		FZ05 KG10		H01	890	YD101
	S20					K715 KMF			RT9010 TF-15	EH20 EH520	KS15F KS20		FZ15 KG20			890 883 HX H25	
S30					G13 K600 THR			TF-15				KG30					



### F5 牌号对照表 Comparison table of Grade

■ 硬质合金材料 Carbide materials

ISO 分类 ISO Classification	CDBP 邦普	SANDVIK 山特维克	ISCAR 伊斯卡	KENAMETAL 肯纳金属	TaeguTec 特固克	WALTER 瓦尔特	MTSUBISHI 三菱	SUMITOMO 住友电气工业	TUNGALOY 秦珂洛	KYOCERA 京瓷	DIJET 黛杰	HITACHI 日立工具	KORLOY 克洛伊	SECO 山高工具	ZCC. CT 株硬刀具
P	P10	BP10	S1P								SRT				YC10
	P20	BP20		K125	P10		UT20T	A30N	TX25		SRT DX30	EX35	ST20		
	P30	BP35		GX K600	P20		UT20T	A30N	UX30	PW30	SR30 DX30	EX35 EX40	ST30A		
	P40				P30					PW30	SR30	EX45	ST40		YC40
M	M10			K110M	M10						UMN		U10		YC10
	M20	BM15A BM25A		K313	M20		UT20T	A30N			DX25 UMS	EX35	U20		
	M30			KFM K600			UT20T	A30N	UX30		DX25 UMS	EX40 EX45			YC40
	M40				M40				TU40			EX45	U40		
K	K01						UT05T				KG03		H01		YD051
	K10	BU810 BK10	H1P	K110M K313	K10	WK10	HT110	G10E	TH10	KW10	KG10	WH10	H05 H10		YD101
	K20	BU820		KFM	K20		UT20T	G10E			KT9 CR1 KG20	WH20	G10	HX	YD201
	K30	BU820					UT20T				KG30				

铣削 Milling



F5 车削刀片槽型对照表 Comparison table of chipbreaker for turning insert  
 车削正切刀片断屑槽对照表 Comparison table for chipbreaker of positive inserts

ISO 分类 ISO Classification	加工范围 Processing range	CDBP 邦普合金	ZCCT 株洲刀具	SANDVIK 山特维克	KORLOY 克洛伊	TaeguTec 特固克	WALTER 瓦尔特	SECO 山高	MISTUBISHI 三菱	SUMITOMO 住友	KENAMETAL 肯纳	DIJET 黛杰	HITACHI 日立	TUNGALOY 泰珂洛	KYOCERA 京瓷	VALANTTE 万耐特
P	精加工 Finishing	FW	SF HF	UF PF	HFP	FA FG	PF4	FF1 F1	FV SV	FP LU SU SK	11 UF LF		JQ	01 PF FS	GP XP VF	PF4 JQ JZ
	精加工 (修光) Finishing(Fx light blade)			WK WP			PF	W-F1	SW	LUW	FW					
	半精加工 Semi finishing	MD	HM	UM PM	HMP C25	MT CMX	PSS PM5	F2	MV 全周	MU	MF	FT	JE	PM 23 24	HQ XG GK	PM2 PM4
M	半精加工 (修光) Semi finishing(Fx light blade)			WM			PM		MW		MW					
	精加工 Finishing	FW	EF	MF	HFP	FA FG	PF4		SV					SS		1A 2A
K	半精加工 Semi finishing	MD	EM	MM	HMP C25	MT CMX	PSS PM5		MV 全周							PM2 PM4
	半精加工 Semi finishing	MD	HM HR 无槽 HM HR No slot GH	KF KM KR	HMP C25	MT CMX	MW PSS PM5		无槽 No slot GH	无槽 No slot GH		FT		无槽 No slot GH	无槽 No slot GH	PM2 PM4
S	精加工/半精加工 Finishing, semi finishing						PF4 PSS PM5		FJ	SC	LF HP					PM2 1A 2A
N	通用切削 General cutting	LH	LH	AL	TA AK MA	FL	PM2			AG	HP	ALU ACB		PP	A3	1L 1A 2A

### F6 车削刀片槽型对照表 Comparison table of chipbreaker for turning insert

#### 车削负切刀片断屑槽对照表 Comparison table for chipbreaker of negative inserts

ISO分类 ISO Classification	加工范围 Processing range	CDBP 邦普合金	ZCCCT 株洲刀具	SANDVIK 山特维克	KORLOY 克洛伊	TaeguTec 特固克	WALTER 瓦尔特	SECO 山高	MISTUBISHI 三菱	SUMITOMO 住友	KENAMETAL 肯纳	DIJET 黛杰	HITACHI 日立	TUNGALOY 泰珂洛	KYOCERA 京瓷	VALANTTE 万耐特	
P	超精加工 Super finishing			QF	HU		NF3	FF1	PK FH FY	FA FL	UF FF		FE	01 TF ZF	DP GP VF XP XP-T	F1	
	精加工 Finishing	FW	DF	PF MF	HF	FG	NS6	MF2	C SA SH	SU LU SX	LF FN	PF UR UA UT	BE CE	NS 27 TS AS	HQ CQ	F2(B) F5(6C)	
	精加工(软钢) 精加工(修光) Finishing(Fix. light blade)		SF	WP WF	HW		NF	W-MF2	SW	LUW	FW			AFW ASW	WP WQ		
	半精加工 Semi finishing	MD	DM PM	PM QM SM	HA HC HM	MC ML MP	NM4 NM6	MF3 M3 M5	MV MA MH	GU UG UX	MG MN	PG UB	AB AY AE	NM ZM TM DM 37	CJ GS PS HS PT CS	F3 F4(9A) M2(2C) M3 M4 M5(5B) M6 M7 5S M8	
	半精加工(修光) 粗加工(修光) Semi finishing(Fix. light blade) Rough machining(Fix. light blade)		WG	WM				NM	W-M3	MW	GUW	MW					
	轻载粗加工 Light load balancing	RA	DR(单面) HDR DR(Double-sided)	PR	QR PR HR	HR HH	RT RH	NR6	R4 R6 R7 PR9	HZ HX HV	MP HG HP	MRR RM RH	UC	HX HE	HX	R3 R4 R6(9A) R7(9B) R9(9C)	
	精加工 Finishing	LH SJ	EF	MF	HA	HS	FG SF	NF4	FS	SU	K FP	K FP	SS	SE	GU	F1 F2(B) F5(6C)	
	半精加工 Semi finishing	SN	EM	MM			ML MP	NM4	MS ES	EX UP	P MP	P MP	SA SM S	DE	SU HU ST	F3 F4(9A) M2(2C) M3 M4 M5(5B) M6 M7 5S M8	
	粗加工 Rough machining	RA	ER	MR	GS HM		MT RH	NR4	M5 MR7	GH HZ	MP	RP				R3 R4 R6(9A) R7(9B) R9(9C)	
	精加工 Finishing	U CX	PM	KF	无断屑槽 No broken flooks slot		FG	MA		全周 All Week	UZ	FN	CM		全周 C All Week C	F2(2B)	
半精加工 Semi finishing	U CQ	PM	KM	全周槽+HM Whole Weeks slot		MC MT MG	MA NM5		全周 All Week	UX	全周 UN All Week UN	33 全周 All Week		ZS GC	M5(5B) M6 M8		
粗加工 Rough machining	GH 无槽 RA No slot	无槽 No slot	KR	GR HR GH		RT RH	MA		无断屑槽 No broken flooks slot	无断屑槽 No broken flooks slot				无断屑槽 No broken flooks slot	R3 R4 R7(9B)		
精加工 Finishing		NF				SF	NF4	56 R6	FJ	FS K	FS K				F5(5C) M2(2C)		
半精加工 Semi finishing		NM	NGP 23				NM4	MF1	MJ	SU	NGP	SA			M4 M5(5B) M7 5S		
粗加工 Rough machining			SR				NR4	M1	GJ	MS	MS						
N		LH															



