

THE NEW VALUE FRONTIER



小零件  
Small Tools

MEGACOAT系列  
MEGACOAT Series

小零件加工用



# MEGACOAT系列

MEGACOAT Series for small parts cutting

## 钢加工用第一推荐

For Steel Cutting

### MEGACOAT NANO PR1425

特殊纳米多层涂层保证高速加工、长寿命  
High speed and long tool life with Special Multilayer Nano Coating

## 不锈钢加工的第一推荐

For Stainless Steel Cutting

### MEGACOAT PR1225

提高涂层密着性的独特薄膜技术实现稳定加工  
Stable cutting with Kyocera's unique thin coating technology for improved bonding force



### 3维锋锐刀尖断屑槽

Molded sharp edge chipbreakers  
解决切屑处理的烦恼  
Solution for better chip evacuation

自动车床用负角系列  
Double Sided Tooling for Automatic Lathes

**NEW**



SK断屑槽上市!  
SK chipbreaker, now available

ADVANCING PRODUCTIVITY

致力于生产效率提高的京瓷

钢加工的第一推荐  
First Choice for Steel Cutting

# MEGACOAT NANO PR1425

研磨断屑槽  
价格不变  
品质升级至E级  
E-class tolerance inserts  
at reasonable prices

采用特殊纳米多层涂层[MEGACOAT NANO]在钢加工的广泛领域内发挥卓越的切削性能

Superior performance in various applications of steel cutting by Special Multilayer Nano Coating "MEGACOAT NANO"

不锈钢加工的第一推荐  
First Choice for Stainless Steel Cutting

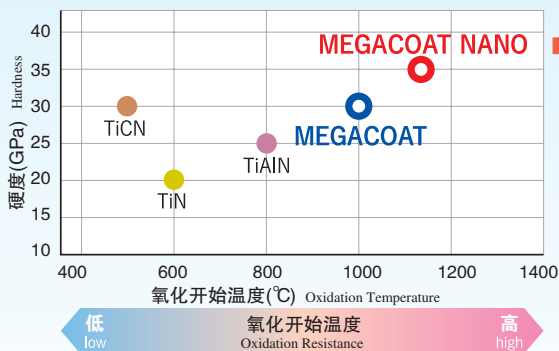
# MEGACOAT PR1225

涂层密着性的增强、独特的薄膜技术以及表面平滑性的提升，在不锈钢加工中发挥威力

Kyocera's unique Coating Technology for improved bonding force and surface smoothness enables excellent performance in stainless steel cutting.

## 实现长寿命加工的2大MEGA涂层

Two types of MEGACOAT for Long Tool Life



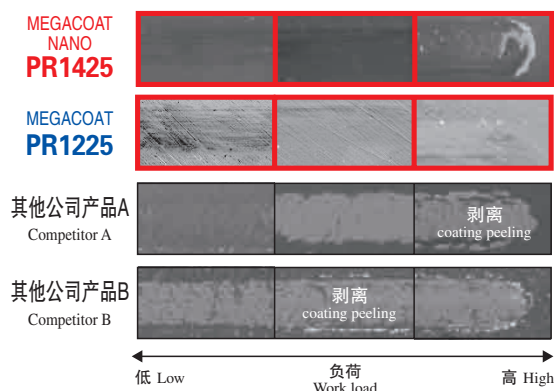
特殊纳米多层涂层薄膜断面  
Cross-section: Special Multilayer Nano Coating



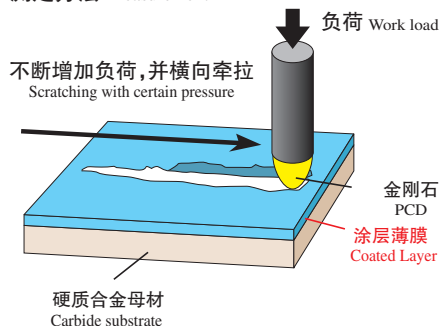
MEGACOAT NANO高硬度高(35Gpa)以及抗氧化性卓越(氧化开始温度: 1150°C), 可抑制磨损、抗振刀性能提高。  
MEGACOAT NANO prevents wear and fracture with high hardness (35GPa) and superior oxidation resistance (oxidation temperature: 1,150°C)

## 以高薄膜密着强度实现自动车床所需要的稳定加工

Stability required in automatic lathe cutting and high bonding force



测定方法 Measurement



### 适用材质图 Application range

钢 Steel

速度 Speed	PR1425	PR930	PR1225
高速 High speed [Vc=200m/min]	适用	不适用	不适用
中速 Medium speed [Vc=150m/min]	适用	适用	适用
低速 Low speed [Vc=50m/min]	不适用	适用	适用
加工方式	连续 Continuous	轻断续 Light interruption	强断续 Heavy interruption

第一推荐材质: PR1425 1st recommended grade

- 断续加工的高可靠性: PR1225 High reliability in interrupted cutting
- 低速~中速领域的稳定加工: PR1225 Stable cutting at low to middle speed
- 低速领域的稳定加工: PR930 Stable cutting at low speed

不锈钢 Stainless steel

速度 Speed	PR1425	PR930	PR1225
高速 High speed [Vc=150m/min]	适用	不适用	不适用
中速 Medium speed [Vc=100m/min]	适用	适用	适用
低速 Low speed [Vc=50m/min]	不适用	适用	适用
加工方式	连续 Continuous	轻断续 Light interruption	强断续 Heavy interruption

第一推荐材质: PR1225 1st recommended grade

- 高速领域的长寿命化: PR1425 Extended tool life in high speed cutting
- 低速领域的长寿命化: PR930 Extended tool life in low speed cutting

# 解决切屑处理烦恼！ 适应加工需求的3个选择

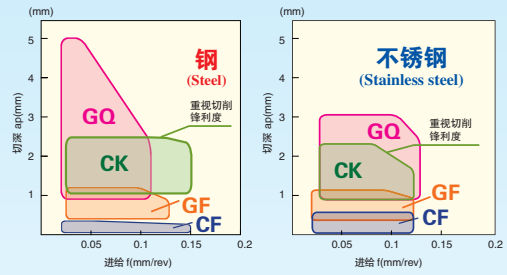
3 types of chipbreakers as solutions for chip evacuation problems

## 3维锋利刀尖断屑槽系列 Molded sharp edge chipbreakers

卓越的切屑处理性能  
Excellent chip evacuation

- 特点1 Point 1** 新开发的3维断屑槽系列的完成，在广泛的加工领域发挥良好的切屑处理性能  
New chipbreaker series delivers excellent chip control in a wide range of cutting.
- 特点2 Point 2** 精密外圆研磨以及锋利刀尖式样的锋利效果，有效应用于高精加工  
Sharp cutting with ground edge periphery in high precision
- 特点3 Point 3** 镜面式样的采用提高了耐熔着性能以及加工面品质  
The mirror polished insert provides improved adhesion resistance and surface finish.

· 断屑槽示意图 Chipbreaker Application Map



**对应切深 ap=0.8~5mm(钢)、ap=0.8~3mm(不锈钢)的广泛领域**  
Available in wide range of application: ap= 0.8-5mm(steel), ap= 0.8-3mm(stainless steel)

**对应低~高切深 GQ 断屑槽**  
Applicable to both small and large ap

· 低断屑槽段差实现低阻力设计  
Low cutting force design with small chipbreaker gap

· 前端突起的凸点设计保证实现低切深时的切屑处理  
Achieves chip control at low ap with a dot that overhangs to the edge

· 根据切深范围选择最适合的断屑槽宽，可在宽泛的条件下进行切削  
Enables cutting over a wide range of conditions by using the optimum chipbreaker width according to the cutting depth

**切屑处理比较 Chip Evacuation Comparison**

[ S45C Vc=100m/min 湿式 Wet DCGT11T302型 ]

**GQ 断屑槽 GQ Chipbreaker**

其他公司产E Competitor E

· 切屑不稳定 Unstable chips

[ SUS304 Vc=80m/min 湿式 Wet DCGT11T302型 ]

**GQ 断屑槽 GQ Chipbreaker**

其他公司产F Competitor F

· 切屑不稳定 Unstable chips

**对应切深 1.0~2.5mm**  
Applicable ap range from 1.0 to 2.5mm

**重视切削锋利度 CK 断屑槽**  
For sharp cutting

· 由于朝向中央部使得切刃可下降，大大降低了切削阻力。  
Slant cutting edge design reduces cutting force greatly

· 大前角设计降低切削阻力。顺畅排出稳定的长切屑。  
Large rake angle reduces cutting force. Long chips in stable conditions.

[ S45C Vc=100m/min 湿式 Wet CCGT09T302型 ]

**CK 断屑槽 CK Chipbreaker**

其他公司产G Competitor G

· 切屑不稳定 Unstable chips

**对应切深 0.25~1.25mm**  
Applicable ap range from 0.25 to 1.25mm

**精加工用 GF 断屑槽**  
For finishing

· 远离刀棱线的高凸点 减轻大切深条件下切屑缠绕以及烧着  
High breaker dot apart from ridge line of cutting edge Good heat resistance and chip control in cutting of high ap

· 大前角提升切削锋利度  
Increased sharpness through the use of a large rake angle

· 延伸至刀尖部、切刃棱线附近的凸点→低切深条件下可细碎切断切屑  
Dot located close to ridge line of cutting edge on corner Chips fragmented in small pieces in cutting of small ap

[ S45C Vc=100m/min 湿式 Wet DCGT11T302型 ]

**GF 断屑槽 GF Chipbreaker**

其他公司产H Competitor H

· 切屑不稳定 Unstable chips

**对应微小切深的 CF 断屑槽**  
Applicable to minute ap

· 特殊凸点可稳定卷曲切屑  
Consistent curled chips through the use of special dots

· 大前角提升切削锋利度  
Increase sharpness by large rake angle

· 防止刀片熔着、抑制工件毛刺、白油面  
Prevents workpiece adhesion and reduces burrs

[ SUS304 Vc=100m/min 湿式 Wet CCGT030102型 ]

**CF 断屑槽 CF Chipbreaker**

以往研磨断屑槽 Conventional grinding breaker I

不断扩展的MEGA涂层系列 Expanding MEGACOAT Series → 确认第3页!! See page 3

特定于小径工件的专用设计负角刀片实现了媲美正角刀片的锋利度的同时，2倍刀尖数实现最佳性价比

Specially designed economical double-sided insert for small diameter workpieces  
Sharp cutting equivalent to positive inserts and economical double edge numbers

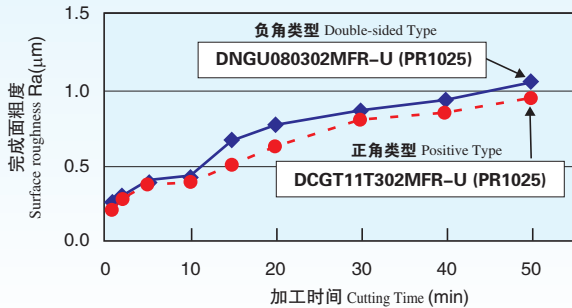


- 特点1 Point 1** 开发最适用于自动车床的负角刀片  
Newly developed double-sided inserts optimized for automatic lathes
- 特点2 Point 2** 研磨断屑槽、3次元断屑槽的系列化，使对应从精加工~粗加工的广泛领域成为可能  
Ground and mold chipbreakers are available. Applicable for roughing to finishing
- 特点3 Point 3** G级(研磨级)的刀尖角R(re)尺寸公差采用负公差  
Corner R of ground chipbreakers are minus tolerance.

### 完成面粗度比较(锐利刀尖式样)

Surface roughness comparison (sharp edge)

媲美正角刀片的切刃锋利度保证卓越的完成面粗度  
Sharp cutting equivalent to positive inserts and excellent surface roughness



< 切削条件 Cutting Condition >

被削材 Workpiece Material : S45C Vc=100m/min, ap=1.5mm f=0.03mm/rev 湿式 Wet

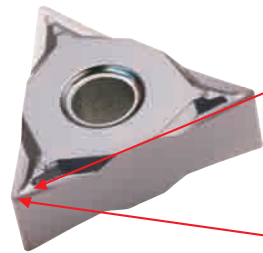
### 刀杆无偏头

Toolholder without offset



### 兼顾锋利度以及切屑处理效果 SK断屑槽

SK chipbreaker for sharpness and better chip control

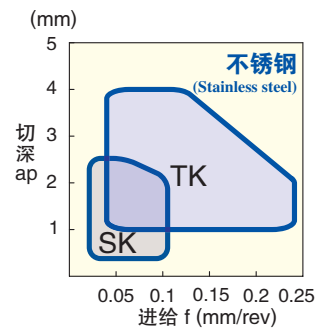
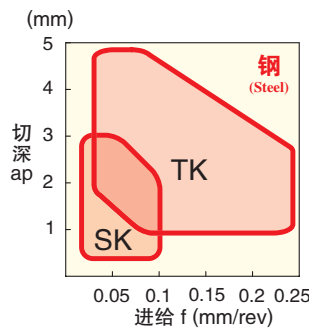


自动车床专用断屑槽可在广泛范围内保证切屑处理良好

Smooth chip control in wide application range due to special chipbreaker design for automatic lathe

锋利刀尖保证良好的锋利度 起始于R0.1的产品系列

Excellent sharpness. Available from nose R 0.1



### 镜面锋利刀尖式样 3维G级TK断屑槽

Polished face and sharp edge TK Chipbreaker: Economical double-sided molded Chipbreaker with G-class accuracy

镜面式样实现卓越的耐熔着性

Superior adhesion resistant polished surface

锋利刀尖保证良好的锋利度

Smooth cutting with sharp edge



无凸点断屑槽构造阻力小可广泛应对1~5mm的切深

Low cutting resistant structure without dots on chipbreaker Available in a wide range of ap:1~5mm



无偏头刀杆  
Without offset

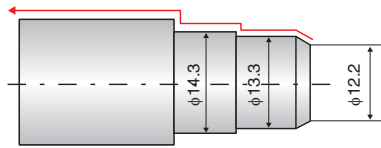
刀方16x20的基础上追加20x20

In addition to 16x20mm, 20x20mm square shanks are added to the lineup

## SUJ2

气缸 Cylinder

- Vc= 208 ~ 225m/min
- ap=1.0mm(外径)External turning
- f= 0.12mm/rev(外径)External turning
- 湿式 Wet
- DCGT11T302MFP-GF (PR1425)



PR1425

700个/刀尖  
700pcs/edge

其他公司产品I  
(3维断屑槽·PVD涂层)  
Competitor I  
(Molded Chipbreaker / PVD Coated)

250个/刀尖  
250pcs/edge

PR1425与其他公司产品I相比较(3维断屑槽·PVD涂层), 工具寿命提高了2.8倍。

其他公司产品I Vc=188 ~ 200m/min

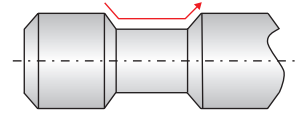
PR1425 achieved 2.8 times longer tool life than the competitor I (Molded Chipbreaker / PVD Coated). Competitor I Vc=188~200m/min

(根据用户评价)Evaluation by the user

## S45C

外径 Shaft

- Vc= 205m/min
- ap= ~ 1.5mm
- f=0.1mm/rev
- 湿式 Wet
- DCGT11T304MFP-GQ (PR1425)



PR1425

2,000个以上/刀尖  
More than 2000 pcs/edge

其他公司产品J  
(3维断屑槽·PVD涂层)  
Competitor J  
(Molded Chipbreaker / PVD Coated)

不足800个/刀尖  
Less than 800 pcs/edge

PR1425与其他公司产品J相比较(3维断屑槽·PVD涂层), 工具寿命提高了2.5倍。

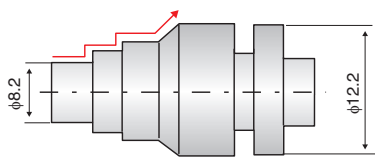
PR1425 achieved 2.5 times longer tool life than the competitor J (Molded Chipbreaker / PVD Coated)

(根据用户评价)Evaluation by the user

## SUS304

法兰盘 Flange

- Vc= 85m/min
- ap= ~ 1.5mm
- f=0.02 ~ 0.05mm/rev
- 湿式 Wet
- DCGT11T302MFP-GQ (PR1225)



PR1225

14,500个/刀尖  
14,500pcs/edge

其他公司产品K  
(3维断屑槽·PVD涂层)  
Competitor K  
(Molded Chipbreaker / PVD Coated)

4,000个/刀尖  
4,000pcs/edge

PR1225与其他公司产品K(3维断屑槽·PVD涂层)相比, 加工数提高3.6倍。

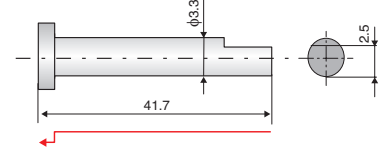
PR1225 increased 3.6 times as many workpieces, compared to Competitor K (Molded Chipbreaker / PVD Coated).

(根据用户评价)Evaluation by the user

## SUS440C

离合器轴 Clutch shaft

- Vc= 60m/min
- ap=0.25 ~ 1.3mm
- f=0.03mm/rev
- 湿式 Wet
- CCGT0602005MFR-U (PR1225)



PR1225

400 ~ 450个/刀尖  
400~450pcs/edge

其他公司产品L  
(研磨断屑槽·PVD涂层)  
Competitor L  
(Ground chipbreaker / PVD Coated)

250 ~ 300个/刀尖  
250~300pcs/edge

因为有平切部分, 有一部分断续加工。

PR1225与其他公司产品L(研磨断屑槽·PVD涂层)相比, 加工数提高1.5倍。

Because of flat cut, partially interrupted cutting

PR1225 increased 1.5 times as many workpieces, compared to Competitor L (Ground chipbreaker / PVD Coated).

(根据用户评价)Evaluation by the user



### 一点建议 Technical Tips

快削钢加工时最适用PR1425与J断屑槽的组合

For free-cutting steel, the best combination is PR1425 with J Chipbreaker.



PR1425



其他公司产品 Competitor

切削条件 Cutting Condition Vc=120m/min ap=0.5mm f=0.04mm/rev  
被削材 Workpiece Material SUM24L Wet 加工时间 Cutting Time 150分

凹坑磨损、刀尖熔着少, 切刃良好

Maintained good edge condition with less crater wear and built-up edge



### 一点建议 Technical Tips

从大型到中型工件(汽车零部件等)

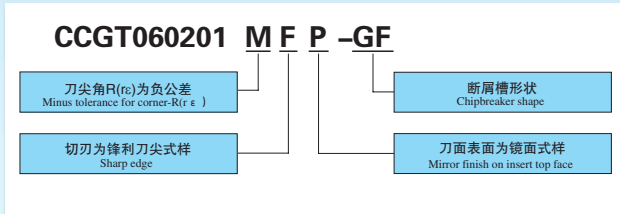
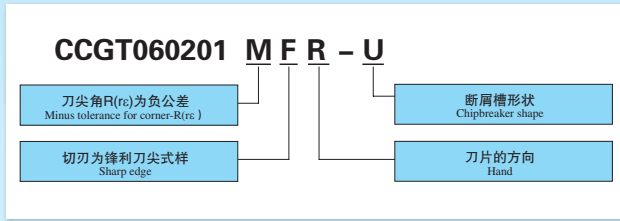
即使在内径精加工中PR1425也可实现长寿命

PR1425 extended tool life in large diameter workpiece cutting



M级产品  
亦系列化  
Molded Inserts also available

● 正角刀片的表示示例 Positive Insert Identification System



◆ 刀尖角R(re)的负公差使用方法  
Use of minus tolerance for corner-R(re)

参照加工图纸1所示，如使用刀尖角R(re)=0.2mm的刀片，则角部R有可能变大。此时，请使用刀尖角R(re)的负公差的刀片。  
The actual corner-R of the workpiece may become larger than R0.2mm when machined by the insert whose corner-R(re) is 0.2.

In such case, insert with minus tolerance for corner-R(re) is recommended.

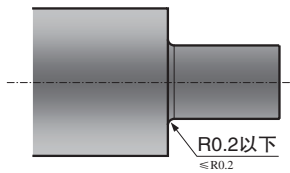


图1 加工图示中的角部R指示例  
Fig.1 Corner-R on the drawing

● “超精细” 高品质研磨刀片

"Super Fine" Edge for High Quality and Long Tool Life

- 适用于精密机械、电子器件、高精密零部件加工  
Recommended for mechatronics, electronics and high precision machined parts
- 应对超微米精度要求  
Sub-micron accuracy possible

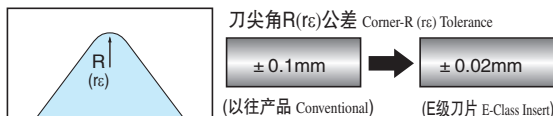
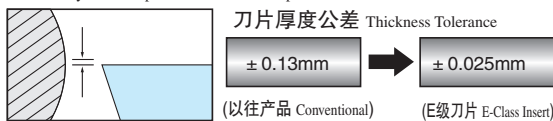
高品质研磨刀片 High Quality Ground Insert

- 减少刀尖端研磨时的微小崩损  
Reduction of micro-chipping at ground edge
- 降低熔着 Less edge build-up • 延长刀尖寿命 Long tool life



车削用E级刀片 E-class Turning Insert

- 更换刀片时的刀尖位置、高度一定  
Accuracy of index position after insert replacement



标准库存型号(正角) Stock Items(Positive)

形状 Shape	型号 Description	尺寸(mm) Dimension(mm)					材质 Grades		
		内接 直径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R(re) Corner-R(re)	后角 Relief Angle	PR1425	PR1225	
微小切深 Minute up	带方向刀片显示为左手(L)刀 Left-hand shown	CCGT 030101MP-CF 030102MP-CF	3.5	1.4	1.9	<0.1 <0.2	7°	●	●
								CCGT 040101MP-CF 040102MP-CF	4.3
精加工 Finishing	锋利刀尖·镜面式样 Sharp Edge / Polished	CCGT 060201MFP-GF 060202MFP-GF 060204MFP-GF	6.35	2.38	2.8	<0.1 <0.2 <0.4	7°	●	●
		CCGT 09T301MFP-GF 09T302MFP-GF 09T304MFP-GF	9.525	3.97	4.4	<0.1 <0.2 <0.4	7°	●	●
		CCGT 060201MP-CK 060202MP-CK	6.35	2.38	2.8	<0.1 <0.2	7°	●	●
精加工 精加工 Finishing-Medium	锋利刀尖·镜面式样 Sharp Edge / Polished	CCGT 060201MFP-GQ 060202MFP-GQ 060204MFP-GQ	6.35	2.38	2.8	<0.1 <0.2 <0.4	7°	●	●
		CCGT 09T301MFP-GQ 09T302MFP-GQ 09T304MFP-GQ	9.525	3.97	4.4	<0.1 <0.2 <0.4	7°	●	●
精加工·半精加工 Finishing-Medium	锋利刀尖·镜面式样 Sharp Edge / Polished	CCMT 060202GK 060204GK	6.35	2.38	2.8	0.2 0.4	7°	●	●
		CCMT 09T302GK 09T304GK	9.525	3.97	4.4	0.2 0.4	7°	●	●
精加工·半精加工 Finishing-Medium	锋利刀尖·镜面式样 Sharp Edge / Polished	CCMT 060202HQ 060204HQ	6.35	2.38	2.8	0.2 0.4	7°	●	●
		CCMT 09T302HQ 09T304HQ 09T308HQ	9.525	3.97	4.4	0.2 0.4 0.8	7°	●	●
半精加工 Medium cutting	锋利刀尖 Sharp Edge	CCMT 09T308	9.525	3.97	4.4	0.8	7°	●	●
		CCGT 0602005MF 060201MF 060202MF 060204MF	6.35	2.38	2.8	<0.05 <0.1 <0.2 <0.4	7°	●	●
半精加工 Medium cutting	锋利刀尖 Sharp Edge	CCGT 09T3005MF 09T301MF 09T302MF 09T304MF	9.525	3.97	4.4	<0.05 <0.1 <0.2 <0.4	7°	●	●
		超精细 Super Fine	CCET 0301005M <sup>®</sup> /-FSF 030101M <sup>®</sup> /-FSF 030102M <sup>®</sup> /-FSF 030104M <sup>®</sup> /-FSF	3.5	1.4	1.9	<0.05 <0.1 <0.2 <0.4	7°	●
精加工 Finishing	锋利刀尖·对应精密加工 Sharp Edge / Precision	CCET 0401005M <sup>®</sup> /-FSF 040101M <sup>®</sup> /-FSF 040102M <sup>®</sup> /-FSF 040104M <sup>®</sup> /-FSF	4.3	1.8	2.3	<0.05 <0.1 <0.2 <0.4	7°	●	●
		CCET 0301005M <sup>®</sup> /-F 030101M <sup>®</sup> /-F 030102M <sup>®</sup> /-F 030104M <sup>®</sup> /-F	3.5	1.4	1.9	<0.05 <0.1 <0.2 <0.4	7°	●	●
精加工 Finishing	锋利刀尖 Sharp Edge	CCET 040101M <sup>®</sup> /-F 040102M <sup>®</sup> /-F 040104M <sup>®</sup> /-F	4.3	1.8	2.3	<0.1 <0.2 <0.4	7°	●	●
		CCGT 0301005M <sup>®</sup> /-F 030101M <sup>®</sup> /-F 030102M <sup>®</sup> /-F 030104M <sup>®</sup> /-F	3.5	1.4	1.9	<0.05 <0.1 <0.2 <0.4	7°	●	●
精加工 Finishing	锋利刀尖 Sharp Edge	CCGT 0401005M <sup>®</sup> /-F 040101M <sup>®</sup> /-F 040102M <sup>®</sup> /-F 040104M <sup>®</sup> /-F	4.3	1.8	2.3	<0.05 <0.1 <0.2 <0.4	7°	●	●
		CCGT 0301005M <sup>®</sup> /-F 030101M <sup>®</sup> /-F 030102M <sup>®</sup> /-F 030104M <sup>®</sup> /-F	3.5	1.4	1.9	<0.05 <0.1 <0.2 <0.4	7°	●	●



# 标准库存型号(正角) Stock Items(Positive)

形状 Shape	型号 Description	尺寸(mm) Dimension(mm)					材质 Grades	
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角(°) Corner- R(°)	后角 Relief Angle	PR1425	PR1225
带方向刀片显示为左手(L)刀 Left-hand shown								
低进给 Low Feed	超精细 Super Fine DCET 0702005MF <sup>9</sup> /L-USF 070201MF <sup>9</sup> /L-USF 070202MF <sup>9</sup> /L-USF	6.35	2.38	2.8	<0.05 <0.1 <0.2	7°	●	●
	锋利刀尖, 对应精密加工 Sharp Edge / Precision DCET 11T3005MF <sup>9</sup> /L-USF 11T301MF <sup>9</sup> /L-USF 11T302MF <sup>9</sup> /L-USF	9.525	3.97	4.4	<0.05 <0.1 <0.2		●	●
低进给 Low Feed	DCET 0702005MF <sup>9</sup> /L-U 070201MF <sup>9</sup> /L-U 070202MF <sup>9</sup> /L-U	6.35	2.38	2.8	<0.05 <0.1 <0.2	7°	R	●
	锋利刀尖 Sharp Edge DCET 11T3005MF <sup>9</sup> /L-U 11T301MF <sup>9</sup> /L-U 11T302MF <sup>9</sup> /L-U 11T304MF <sup>9</sup> /L-U	9.525	3.97	4.4	<0.05 <0.1 <0.2 <0.4		R	●
低进给 Low Feed	DCGT 0702005MF <sup>9</sup> /L-U 070201MF <sup>9</sup> /L-U 070202MF <sup>9</sup> /L-U 070204MF <sup>9</sup> /L-U	6.35	2.38	2.8	<0.05 <0.1 <0.2 <0.4	7°	●	●
	锋利刀尖 Sharp Edge DCGT 11T3005MF <sup>9</sup> /L-U 11T301MF <sup>9</sup> /L-U 11T302MF <sup>9</sup> /L-U 11T304MF <sup>9</sup> /L-U	9.525	3.97	4.4	<0.05 <0.1 <0.2 <0.4		●	●
低进给 Low Feed	DCET 0702005MF <sup>9</sup> /L-J 070201MF <sup>9</sup> /L-J 070202MF <sup>9</sup> /L-J	6.35	2.38	2.8	<0.05 <0.1 <0.2	7°	R	R
	锋利刀尖 Sharp Edge						●	●
低进给 Low Feed	超精细 Super Fine DCET 11T3005MF <sup>9</sup> /L-JSF 11T301MF <sup>9</sup> /L-JSF 11T302MF <sup>9</sup> /L-JSF	9.525	3.97	4.4	<0.05 <0.1 <0.2	7°	●	●
	锋利刀尖, 对应精密加工 Sharp Edge / Precision						●	●
低进给 Low Feed	DCET 11T3005MF <sup>9</sup> /L-J 11T301MF <sup>9</sup> /L-J 11T302MF <sup>9</sup> /L-J 11T304MF <sup>9</sup> /L-J	9.525	3.97	4.4	<0.05 <0.1 <0.2 <0.4	7°	R	●
	锋利刀尖 Sharp Edge						R	●
低进给 Low Feed	DCGT 11T3005MF <sup>9</sup> /L-J 11T301MF <sup>9</sup> /L-J 11T302MF <sup>9</sup> /L-J 11T304MF <sup>9</sup> /L-J	9.525	3.97	4.4	<0.05 <0.1 <0.2 <0.4	7°	●	●
	锋利刀尖 Sharp Edge						●	●
精加工 Finishing	JCET 030102M <sup>9</sup> /L-F 030104M <sup>9</sup> /L-F	3.5	1.4	1.9	<0.2 <0.4	7°	●	●
	锋利刀尖 Sharp Edge						●	●
微小切深 Minute ap	TBGT 060101MP-CF 060102MP-CF	3.97	1.59	2.3	<0.1 <0.2	5°	●	●
	锋利刀尖, 镜面式样 Sharp Edge / Polished						●	●
精加工 Finishing	TBET 0601005M <sup>9</sup> /L 060101M <sup>9</sup> /L 060102M <sup>9</sup> /L 060104M <sup>9</sup> /L	3.97	1.59	2.3	<0.05 <0.1 <0.2 <0.4	5°	●	●
	锋利刀尖 Sharp Edge						●	●
低进给 Low Feed	TCGT 0802005MF <sup>9</sup> /L-U 080201MF <sup>9</sup> /L-U 080202MF <sup>9</sup> /L-U	4.76	2.38	2.3	<0.05 <0.1 <0.2	7°	●	●
	锋利刀尖 Sharp Edge TCGT 1103005MF <sup>9</sup> /L-U 110301MF <sup>9</sup> /L-U 110302MF <sup>9</sup> /L-U 110304MF <sup>9</sup> /L-U	6.35	3.18	2.8	<0.05 <0.1 <0.2 <0.4		●	●
微小切深 Minute ap	TPGT 080201MP-CF 080202MP-CF 090201MP-CF 090202MP-CF	4.76 4.76 5.56	2.38 2.38 2.38	2.3 2.3 3.0	<0.1 <0.2 <0.1 <0.2	11°	●	●
	锋利刀尖, 镜面式样 Sharp Edge / Polished						●	●

形状 Shape	型号 Description	尺寸(mm) Dimension(mm)					材质 Grades	
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角(°) Corner- R(°)	后角 Relief Angle	PR1425	PR1225
带方向刀片显示为左手(L)刀 Left-hand shown								
精加工 Finishing	TPGH 080201 <sup>9</sup> /L 080202 <sup>9</sup> /L 080204 <sup>9</sup> /L	4.76	2.38	2.3	0.1 0.2 0.4		●	●
	TPGH 090201 <sup>9</sup> /L 090202 <sup>9</sup> /L 090204 <sup>9</sup> /L	5.56	2.38	3	0.1 0.2 0.4		●	●
	TPGH 110202 <sup>9</sup> /L 110204 <sup>9</sup> /L	6.35	2.38	3.5	0.2 0.4	11°	●	●
	TPGH 110302 <sup>9</sup> /L 110304 <sup>9</sup> /L 110308 <sup>9</sup> /L	6.35	3.18	3.3	0.2 0.4 0.8		●	●
	TPGH 160302 <sup>9</sup> /L 160304 <sup>9</sup> /L 160308 <sup>9</sup> /L	9.525	3.18	4.5	0.2 0.4 0.8		●	●
半精加工 Medium Cutting	TPGH 110302 <sup>9</sup> /L-H 110304 <sup>9</sup> /L-H 110308 <sup>9</sup> /L-H	6.35	3.18	3.3	0.2 0.4 0.8	11°	●	●
	锋利刀尖 Sharp Edge TPGH 160304 <sup>9</sup> /L-H 160308 <sup>9</sup> /L-H	9.525	3.18	4.5	0.4 0.8		●	●
精加工 Finishing	TPMT 090202GP 090204GP	5.56	2.38	2.8	0.2 0.4		●	●
	TPMT 110304GP 110308GP	6.35	3.18	3.3	0.4 0.8		●	●
	TPMT 160304GP	9.525	3.18	4.5	0.4		●	●
精加工 + 半精加工 Finishing-Medium	TPMT 090202HQ 090204HQ	5.56	2.38	2.8	0.2 0.4	11°	●	●
	TPMT 110302HQ 110304HQ 110308HQ	6.35	3.18	3.3	0.2 0.4 0.8		●	●
	TPMT 160302HQ 160304HQ 160308HQ	9.525	3.18	4.5	0.2 0.4 0.8		●	●
软钢 Low Carbon Steel	TPMT 090204XP 110304XP 110308XP	5.56 6.35	2.38 3.18	2.8 3.3	0.4 0.4 0.8	11°	●	●
	TPMT 160304XP 160308XP	9.525	2.18	4.5	0.4 0.8		●	●
精加工 Finishing	VBMT 110304GP	6.35	3.18	2.8	0.4	5°	●	●
精加工 Finishing	VBMT 110302VF 110304VF 110308VF	6.35	3.18	2.8	0.2 0.4 0.8	5°	●	●
精加工 + 半精加工 Finishing-Medium	VBMT 110304HQ 110308HQ	6.35	3.18	2.8	0.4 0.8	5°	●	●
精加工 Finishing	超精细 Super Fine VBET 1103005M <sup>9</sup> /L-FSF 110301M <sup>9</sup> /L-FSF 110302M <sup>9</sup> /L-FSF	6.35	3.18	2.8	<0.05 <0.1 <0.2	5°	●	●
	锋利刀尖, 对应精密加工 Sharp Edge / Precision						●	●
精加工 Finishing	VBET 1103005M <sup>9</sup> /L-F 110301M <sup>9</sup> /L-F 110302M <sup>9</sup> /L-F	6.35	3.18	2.8	<0.05 <0.1 <0.2	5°	●	●
	锋利刀尖 Sharp Edge						●	●
精加工 Finishing	VBGT 1103005M <sup>9</sup> /L-F 110301M <sup>9</sup> /L-F 110302M <sup>9</sup> /L-F	6.35	3.18	2.8	<0.05 <0.1 <0.2	5°	●	●
	锋利刀尖 Sharp Edge						●	●
精加工 + 半精加工 Finishing-Medium	VBET 1103005M <sup>9</sup> /L-Y 110301M <sup>9</sup> /L-Y 110302M <sup>9</sup> /L-Y 110304M <sup>9</sup> /L-Y	6.35	3.18	2.8	<0.05 <0.1 <0.2 <0.4	5°	●	●
	锋利刀尖 Sharp Edge						●	●



形状 Shape	型号 Description	尺寸(mm) Dimension(mm)					材质 Grades																			
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R(re) Corner- R(re)	后角 Relief Angle	PR1425	PR1225																		
带方向刀片显示为左手(L)刀 Left-hand shown		VBGT 1103005M <sup>0</sup> /L-Y 110301M <sup>0</sup> /L-Y 110302M <sup>0</sup> /L-Y 110304M <sup>0</sup> /L-Y 110308M <sup>0</sup> /L-Y	6.35	3.18	2.8	<0.05 <0.1 <0.2 <0.4 <0.8	5°	●	●																	
								VBGT 160402M <sup>0</sup> /L-Y 160404M <sup>0</sup> /L-Y 160408M <sup>0</sup> /L-Y	9.525	4.76	4.4	<0.2 <0.4 <0.8	●	●												
													VCMT 080202VF 080204VF	4.76	2.38	2.3	0.2 0.4	7°	●	●						
																			VCMT 080202HQ 080204HQ	4.76	2.38	2.3	0.2 0.4	7°	●	●
																									VCMT 080202VF 080204VF	4.76
VPGT 110301MP-CF 110302MP-CF	6.35	3.18	2.8	<0.1 <0.2	11°	●	●																			
						VPGT 110301MFP-GF 110302MFP-GF	6.35	3.18	2.8	<0.1 <0.2	11°	●	●													
VPGT 080201MP-CK 080202MP-CK	4.76	2.38	2.3	<0.1 <0.2	11°							●	●													
						VPGT 110301MP-CK 110302MP-CK	6.35	3.18	2.8	<0.1 <0.2	11°	●	●													
VPET 080201M <sup>0</sup> /L-FSF 080202M <sup>0</sup> /L-FSF	4.76	2.38	2.3	<0.1 <0.2	11°							●	●													
						VPET 1103005M <sup>0</sup> /L-FSF 110301M <sup>0</sup> /L-FSF	6.35	3.18	2.8	<0.05 <0.1	11°	●	●													

形状 Shape	型号 Description	尺寸(mm) Dimension(mm)					材质 Grades									
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R(re) Corner- R(re)	后角 Relief Angle	PR1425	PR1225								
带方向刀片显示为左手(L)刀 Left-hand shown		VPET 080201M <sup>0</sup> /L-F 080202M <sup>0</sup> /L-F	4.76	2.38	2.3	<0.1 <0.2	11°	●	●							
								VPET 1103005M <sup>0</sup> /L-F 110301M <sup>0</sup> /L-F	6.35	3.18	2.8	<0.05 <0.1	11°	●	●	
超精细 Super Fine		VPET 080201MF <sup>0</sup> /L-USF 080202MF <sup>0</sup> /L-USF	4.76	2.38	2.3	<0.1 <0.2	11°							●	●	
								低进给 Low Feed	VPET 1103005MF <sup>0</sup> /L-USF 110301MF <sup>0</sup> /L-USF	6.35	3.18	2.8	<0.05 <0.1	11°	●	●
低进给 Low Feed		VPET 080201MF <sup>0</sup> /L-U 080202MF <sup>0</sup> /L-U	4.76	2.38	2.3	<0.1 <0.2	11°								●	●
								低进给 Low Feed	VPET 1103005MF <sup>0</sup> /L-U 110301MF <sup>0</sup> /L-U	6.35	3.18	2.8	<0.05 <0.1	11°	●	●
低进给 Low Feed		VPET 113005MF <sup>0</sup> /L-J 110301MF <sup>0</sup> /L-J	6.35	3.18	2.8	<0.1 <0.2	11°								●	●
								微小切深 Minute ap		WBGT 060101MP <sup>0</sup> /L-CF 060102MP <sup>0</sup> /L-CF	3.97	1.59	2.3	<0.1 <0.2	5°	●
微小切深 Minute ap	WBGT 060101MP <sup>0</sup> /L-CF 060102MP <sup>0</sup> /L-CF	3.97	1.59	2.3	<0.1 <0.2	5°	●									●
							精加工 Finishing		WBMT 060102 <sup>0</sup> /L-DP 060104 <sup>0</sup> /L-DP	3.97	1.59	2.3	0.2 0.4	5°	●	●
精加工 Finishing	WBMT 080202 <sup>0</sup> /L-DP 080204 <sup>0</sup> /L-DP	4.76	2.38	2.3	0.2 0.4	5°									●	●
							精加工 Finishing		WBET 0601005M <sup>0</sup> /L-F 060101M <sup>0</sup> /L-F 060102M <sup>0</sup> /L-F 060104M <sup>0</sup> /L-F	3.97	1.59	2.3	<0.05 <0.1 <0.2 <0.4	5°	L	●
精加工 Finishing	WBET 080201M <sup>0</sup> /L-F 080202M <sup>0</sup> /L-F	4.76	2.38	2.3	<0.1 <0.2	5°									L	●
															精加工 Finishing	WBET 080201M <sup>0</sup> /L-F 080204M <sup>0</sup> /L-F

· 刀尖角R(re)以不等号(例: <0.05,<0.1,<0.2等)显示的刀片,表示刀尖角R(re)为负公差的产品。  
An insert which corner R(re) dimension is shown with inequality sign (Ex:<0.05,<0.1,<0.2) indicates minus tolerance of corner R(re).

●: 标准库存 ●: Standard Stock  
R: 仅右手刀(R)有库存 R: R-hand Only L: 仅左手刀(L)有库存 L: L-hand Only

## 背车用(AABS/SABS/AABW/SABW型刀杆用) Inserts for back turning toolholders (AABS/SABS/AABW/SABW)

形状 Shape	型号 Description	尺寸 (mm) Dimension(mm)	MEGACOAT NANO	MEGACOAT
		rε	PR1425	PR1225
	ABS 15R4005M 15R4015M	<0.05 <0.15	● ●	● ●
	ABW 15R4005M 15R4015M	<0.05 <0.15	● ●	● ●
	ABW 23R5005M 23R5015M	<0.05 <0.15	● ●	● ●

· 刀尖角R(re)以不等号(例: <0.05,<0.1,<0.2等)显示的刀片,表示刀尖角R(re)为负公差的产品。  
· 配套刀杆请确认综合样本。  
· Inserts with corner R(re) dimension expressed in less than sign (e.g.<0.05,<0.1,<0.2, etc.) indicate models with minus tolerance for corner R(re).  
· For applicable toolholders, refer to the General Catalog.

### 标准库存型号 Stock Items

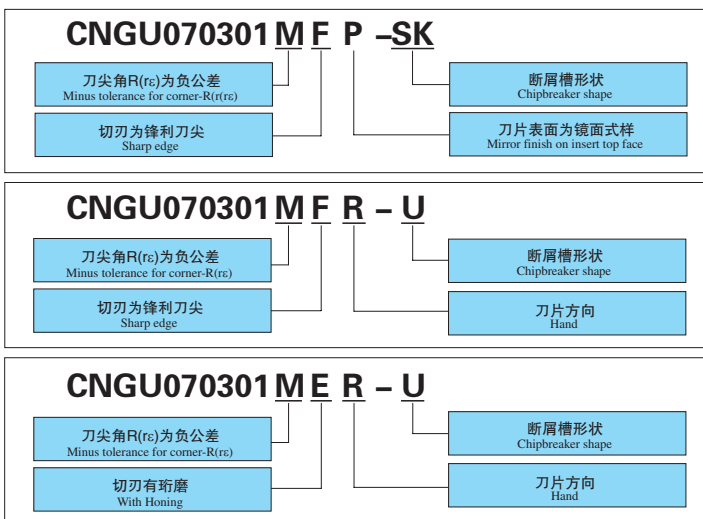
形状 Shape	型号 Description	尺寸 (mm) Dimension (mm)				材质 Grades	
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R(re) Corner- R(re)	PR1425	PR1225
精加工、半精加工 Finishing-Medium	CNGU 070301MFP-SK	7.5	3.18	3.6	<0.1	●	●
	070302MFP-SK				<0.2	●	●
半精加工、粗加工 Medium-Roughing	CNMU 070302E-GK	7.5	3.18	3.6	0.2	●	●
	070304E-GK				0.4	●	●
精加工 Finishing	CNGU 0703005MFR-F	7.5	3.18	3.6	<0.05	●	●
	070301MFR-F				<0.1	●	●
	070302MFR-F				<0.2	●	●
	070304MFR-F				<0.4	●	●
低进给 Low Feed	CNGU 0703005MFR-U	7.5	3.18	3.6	<0.05	●	●
	070301MFR-U				<0.1	●	●
	070302MFR-U				<0.2	●	●
	070304MFR-U				<0.4	●	●
精加工、半精加工 Finishing-Medium	DNGU 080301MFP-SK	7.0	3.18	3.6	<0.1	●	●
	080302MFP-SK				<0.2	●	●
	080304MFP-SK				<0.4	●	●
半精加工、粗加工 Medium-Roughing	DNMU 080302E-GK	7.0	3.18	3.6	0.2	●	●
	080304E-GK				0.4	●	●
精加工 Finishing	DNGU 0803005MFR-F	7.0	3.18	3.6	<0.05	●	●
	080301MFR-F				<0.1	●	●
	080302MFR-F				<0.2	●	●
	080304MFR-F	<0.4	●	●			

形状 Shape	型号 Description	尺寸 (mm) Dimension (mm)				材质 Grades	
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R(re) Corner- R(re)	PR1425	PR1225
低进给 Low Feed	DNGU 0803005MFR-U	7.0	3.18	3.6	<0.05	●	●
	080301MFR-U				<0.1	●	●
	080302MFR-U				<0.2	●	●
	080304MFR-U				<0.4	●	●
精加工 Finishing	TNGU 0903005MFR-F	5.56	3.18	3.0	<0.05	●	●
	090301MFR-F				<0.1	●	●
	090302MFR-F				<0.2	●	●
	090304MFR-F	<0.4	●	●			
低进给 Low Feed	TNGU 0903005MFR-U	5.56	3.18	3.0	<0.05	●	●
	090301MFR-U				<0.1	●	●
	090302MFR-U				<0.2	●	●
	090304MFR-U				<0.4	●	●

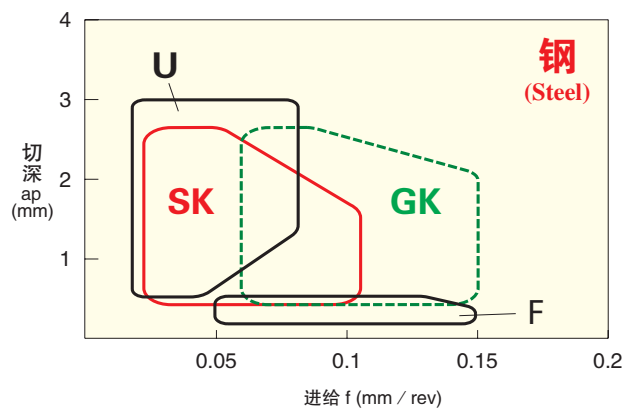
· 刀尖角R(re)以不等号(例: <0.05, <0.1, <0.2等)显示的刀片, 表示刀尖角R(re)为负公差的产品。  
An insert which corner R(re) dimension is shown with inequality sign (Ex: <0.05, <0.1, <0.2) indicates minus tolerance of corner R(re).  
●: 标准库存 ●: Standard Stock

切削范围 Cutting Range	名称 Name	断屑槽断面 Design	特长 Advantages
精加工 ~ 半精加工 Finishing-Medium	SK		兼顾钢、不锈钢加工时的切屑处理以及低阻力。实现媲美正角刀片的锋利度。 Superior chip evacuation and low cutting force for machining steel and stainless steel. Cutting performance comparable to positive insert.
半精加工 ~ 粗加工 Medium-Roughing	GK		前端的断屑槽凸点以及容屑槽设计, 可在广泛范围内实现良好的切屑处理。 Good chip evacuation at wide range through chipbreaker dot and wide chip pocket.
精加工 Finishing	F		切屑流向可控, 可实现低阻力切削。 Good chip control for finishing to light cutting with low cutting force.
低进给 Low Feed	U		低进给时即使切深变化也可确实的控制切屑, 使低阻力切削成为可能。 Good chip control at low feed rate and varied ap with low cutting force.

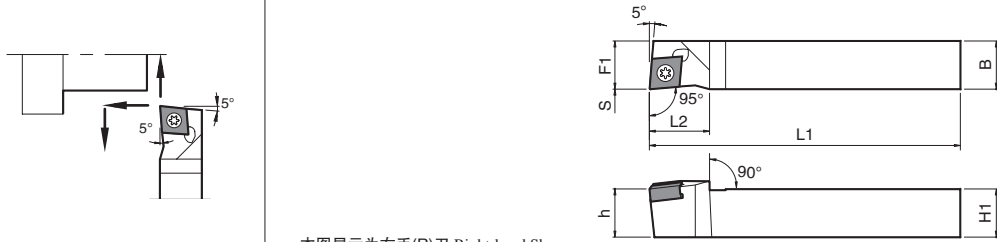
### · 自动车床用小零件负角刀片的表示示例 Small Double-Sided Tooling Identification System



### · 断屑槽范围图 Chipbreaker Application Map



## SCLN-FF型(无偏头 Without Offset) (外圆·端面加工 External/Facing)



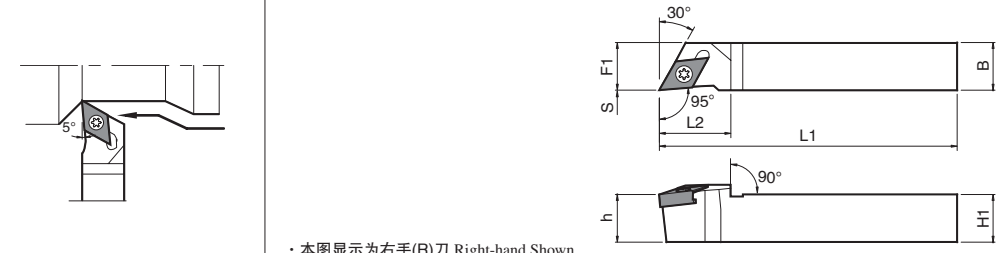
· 本图显示为右手(R)刀 Right-hand Shown

侧前角:  $-6^\circ$   
 Traverse rake angle  
 刃倾角:  $-6^\circ$   
 Cutting edge inclination angle

### ● 刀杆尺寸 Toolholder Dimension

型号 Description	库存 Stock	尺寸(mm) Dimension						基准 刀尖角 R (rε)	零部件 Spare Parts		适合刀片 Applicable Insert
		H1=h	B	L1	L2	F1	S		紧固螺钉 Clamp Screw	扳手 Wrench	
<b>SCLNR</b> 1010K-07FF	●	10	10	120	15	10	0	0.2	SB-3080TR	LTW-10SS	<b>CNGU0703..</b> <b>CNMU0703..</b>
1212F-07FF	●	12	12	85		12					
1212K-07FF	●	12	12	120		12					
1616K-07FF	●	16	16	120		16					

## SDLN-FF型(无偏头 Without Offset) (外径 仿形加工 External/Copying)



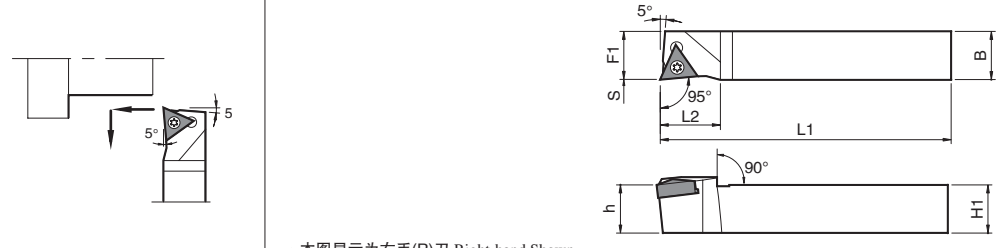
· 本图显示为右手(R)刀 Right-hand Shown

侧前角:  $-6^\circ$   
 Traverse rake angle  
 刃倾角:  $-7^\circ$   
 Cutting edge inclination angle

### ● 刀杆尺寸 Toolholder Dimension

型号 Description	库存 Stock	尺寸(mm) Dimension						基准 刀尖角 R (rε)	零部件 Spare Parts		适合刀片 Applicable Insert
		H1=h	B	L1	L2	F1	S		紧固螺钉 Clamp Screw	扳手 Wrench	
<b>SDLNR</b> 1010K-08FF	●	10	10	120	18	10	0	0.2	SB-3080TR	LTW-10SS	<b>DNGU0803..</b> <b>DNMU0803..</b>
1212F-08FF	●	12	12	85		12					
1212K-08FF	●	12	12	120		12					
1616K-08FF	●	16	16	120		16					

## STLN-FF型(无偏头 Without Offset) (外径加工 External)



· 本图显示为右手(R)刀 Right-hand Shown

侧前角:  $-6^\circ$   
 Traverse rake angle  
 刃倾角:  $-7^\circ$   
 Cutting edge inclination angle

### ● 刀杆尺寸 Toolholder Dimension

型号 Description	库存 Stock	尺寸(mm) Dimension						基准 刀尖角 R (rε)	部品 Spare Parts		适合刀片 Applicable Insert
		H1=h	B	L1	L2	F1	S		紧固螺钉 Clamp Screw	扳手 Wrench	
<b>STLNR</b> 1010K-09FF	●	10	10	120	15	10	0	0.2	SB-2570TR	LTW-8SS	<b>TNGU0903..</b>
1212F-09FF	●	12	12	85		12					
1212K-09FF	●	12	12	120		12					
1616K-09FF	●	16	16	120		16					

●: 标注库存 ●: Standard Stock

## 标准库存型号 Stock Items

形状 Shape	型号 Description	尺寸(mm) Dimension(mm)				材质 Grades		形状 Shape	型号 Description	尺寸(mm) Dimension(mm)				材质 Grades	
		内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R (r) Corner- R(re)	PR1425	PR1225			内接 圆径 I.C.	厚度 Thickness	孔径 Hole	刀尖角R (r) Corner- R(re)	PR1425	PR1225
半精加工-粗加工 Medium-Roughing	CNGG 120404FP-TK 120408FP-TK 锋利刀尖·镜面式样 Sharp Edge / Polished	12.70	4.76	5.16	0.4	●	●	精加工-半精加工 Finishing-Medium Finishing	CNGG 120402MFP-SK 120404MFP-SK 锋利刀尖·镜面式样 Sharp Edge / Polished	12.70	4.76	5.16	<0.2	●	●
					0.8	●	●						<0.4	●	●
	DNGG 150404FP-TK 150408FP-TK 锋利刀尖·镜面式样 Sharp Edge / Polished	12.70	4.76	5.16	0.4	●	●	DNGG 150402MFP-SK 150404MFP-SK 锋利刀尖·镜面式样 Sharp Edge / Polished	4.76	5.16	<0.2	●	●		
					0.8	●	●				<0.4	●	●		
	TNGG 160404FP-TK 160408FP-TK 锋利刀尖·镜面式样 Sharp Edge / Polished	9.525	4.76	3.81	0.4	●	●	TNGG 160401MFP-SK 160402MFP-SK 160404MFP-SK 锋利刀尖·镜面式样 Sharp Edge / Polished	9.525	4.76	3.81	<0.1	●	●	
					0.8	●	●					<0.2	●	●	
精加工 Finishing	TNGG 160402°/L-S 160404°/L-S 160408°/L-S 重视面粗度 Surface Finish Oriented	9.525	4.76	3.81	0.2	●	●	TNGG 160402°/L-S 160404°/L-S 160408°/L-S 重视面粗度 Surface Finish Oriented	9.525	4.76	3.81	0.4	●	●	
					0.4	●	●					0.8	●	●	
					0.8	●	●					0.8	●	●	

## PCLN-FF型(无偏头 Without Offset)(外径·端面加工 External / Facing)

· 本图显示为右手(R)刀 Right-hand Shown

侧前角: -6°  
Traverse rake angle  
刃倾角: -6°  
Cutting edge inclination angle

### 刀杆尺寸 Toolholder dimensions

型号 Description	库存 Stock	尺寸(mm) Dimension(mm)						刀尖角R 基准 (r) Std. Corner-R	零部件 Spare Parts						适合刀片 Applicable Inserts
		H1=h	B	L1	L2	F1	S		锁杆 Lever	锁紧螺钉 Lock Screw	垫片 Shim	垫片销 Shim Pin	冲头 Punch	扳手 Wrench	
PCLNR 1620JX-12FF	●	16	20	120	26	20	0	0.8	LL-2N	LS-2N	LC-42N	LSP-2	PC-2	LW-3	CNGG1204...
2020JX-12FF	●	20													

## PTLN-FF型(无偏头 Without Offset)(外径·提拉端面加工 External / Up facing)

· 本图显示为右手(R)刀 Right-hand Shown

侧前角: -6°  
Traverse rake angle  
刃倾角: -6°  
Cutting edge inclination angle

### 刀杆尺寸 Toolholder dimensions

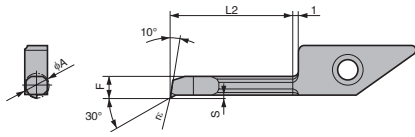
型号 Description	库存 Stock	尺寸(mm) Dimension(mm)						刀尖角R 基准 (r) Std. Corner-R	零部件 Spare Parts						适合刀片 Applicable Inserts
		H1=h	B	L1	L2	F1	S		锁杆 Lever	锁紧螺钉 Lock Screw	垫片 Shim	垫片销 Shim Pin	冲头 Punch	扳手 Wrench	
PTLNR 1620JX-16FF	●	16	20	120	24	20	0	0.8	LL-1N	LS-1N	LC-32N *LC-32N-20	LSP-1	PC-1	FH-2.5	TNGG1604...
2020JX-16FF	●	20													

· 使用刀尖角R(r)=1.6mm以上的刀片时, 为防止被削材与垫片之间的干涉, 请另行购买\*所示的垫片。  
When using inserts whose corner R(r) is larger than 1.6mm, please purchase a shim with \* mark and use it in order to prevent workpiece and shim from interfering each other.

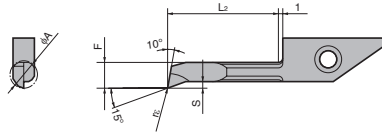
●: 标注库存 ●: Standard Stock

# 系统刀杆 System Tip-bars

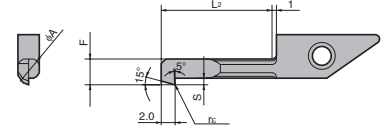
## • VNB-S型



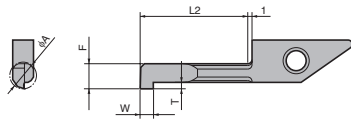
## • VNB型



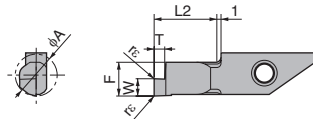
## • VNB T型



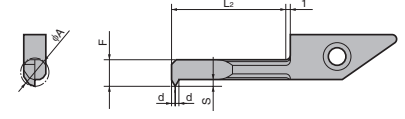
## • VNG型



## • VNFG型



## • VNT型



• 本图显示为右手(R)刀 Right-hand Shown

## • VNB-S型(内径加工)(Boring)[刀尖角R(rε)为负公差][Corner-R (rε) of minus tolerance]

型号 Description	最小加工径 Min. Bore Dia.	尺寸(mm) Dimension			PR1225	
		φA	L2	S		
VNBR 0103-005S	1.0	3	0.2	0.05 <sup>+0</sup> <sub>-0.02</sub>	●	
0105-005S		5			●	
01503-005S	1.5	3	0.1 <sup>+0</sup> <sub>-0.03</sub>		●	
01505-005S		5			●	
0206-005S	2.0	6			0.25	●
025075-005S	2.5	7.5			0.4	●
0311-005S	3.0	11			0.4	●
03515-005S	3.5	15			0.5	●
0411-005S	4.0	11			0.5	●
0420-005S		20				●
VNBR 01505-01S	1.5	5		0.2	0.1 <sup>+0</sup> <sub>-0.04</sub>	●
0206-01S	2.0	6		0.25		●
025075-01S	2.5	7.5	0.4	●		
0311-01S	3.0	11	0.4	●		
03515-01S	3.5	15	0.5	●		
0411-01S	4.0	11	0.5	●		
0420-01S		20		●		
VNBR 0411-02S	4.0	11	0.5	0.2		●
0420-02S		20		●		

## • VNB型(内径加工)(Boring)

型号 Description	最小加工径 Min. Bore Dia.	尺寸(mm) Dimension			PR1225	
		φA	L2	S		
VNBR 0206-003	2.0	6	0.25	0.03	●	
0311-003	3.0	11	0.4		●	
0411-003	4.0	11	0.5		●	
0420-003		20			●	
0511-003	5.0	11	0.7		●	
0520-003	6.0	20	1.0		●	
0620-003		30			●	
VNBR 0206-01	2.0	6	0.25		0.1	●
0311-01	3.0	11	0.4			●
0411-01	4.0	11	0.5			●
0420-01		20		●		
0511-01	5.0	11	0.7	●		
0520-01	6.0	20	1.0	●		
0620-01		30		●		
VNBR 0206-02	2.0	6	0.25	0.2		●
0311-02	3.0	11	0.4		●	
0411-02	4.0	11	0.5		●	
0420-02		20			●	
0511-02	5.0	11	0.7		●	
0520-02		20			●	
0620-02	6.0	20	1.0		●	
0630-02		30			●	
0720-02	7.0	20	1.0		●	
0730-02		30			●	

## • VNB T型(提拉加工) (Back boring)

型号 Description	最小加工径 Min. Bore Dia.	尺寸(mm) Dimension			PR1225
		φA	L2	S	
VNBTR 0411-01	4	11	1.0	0.1	●
0420-01		20			●
0511-01	5	11	1.3		●
0520-01		20			●

## • VNG型(内径切槽) (Internal grooving)

型号 Description	最小加工径 Min. Bore Dia.	尺寸(mm) Dimension				PR1225		
		φA	W±0.03	rε	L2			
VNGR 0410-11	4	1.0	0.05	11	0.8	●		
0420-11		2.0				●		
0510-11	5	1.0			20	1.0	●	
0520-11		2.0					●	
0610-20	6	1.0				2.0	1.8	●
0620-20		2.0						●
0710-20	7	1.0	2.0	2.0			●	
0720-20		2.0					●	

## • VNFG型(内径端面切槽) (Internal face grooving)

型号 Description	断面槽外径φA Face Grooving Dia.		尺寸(mm) Dimension				PR1225
	MIN.	MAX.	W±0.03	rε	L2	T	
VNFGR 0810-10	8 (0)	∞ (∞)	1.0	0.05	10	2.0	●
0820-10			2.0				●
0830-10			3.0				●

## • VNT型(内径螺纹加工: 螺纹角度60°) (Internal threading)

型号 Description	最小下孔径 Min. Bore Dia.	尺寸(mm) Dimension		PR1225
		φA	rε	
VNTR 045-11	4.5	11	0.05 <sup>+0</sup> <sub>-0.02</sub>	●
060-11	6.0			●

• 配合刀杆尺寸详情请参考综合样本。  
For details of dimension, please refer to the General Catalogue.

●: 标注库存 ●: Standard Stock

# 切断、背车、螺纹加工，1根刀杆可以实现！

Applicable to cut-off, back turning and threading with one toolholder

# KTKF型

KTKF型



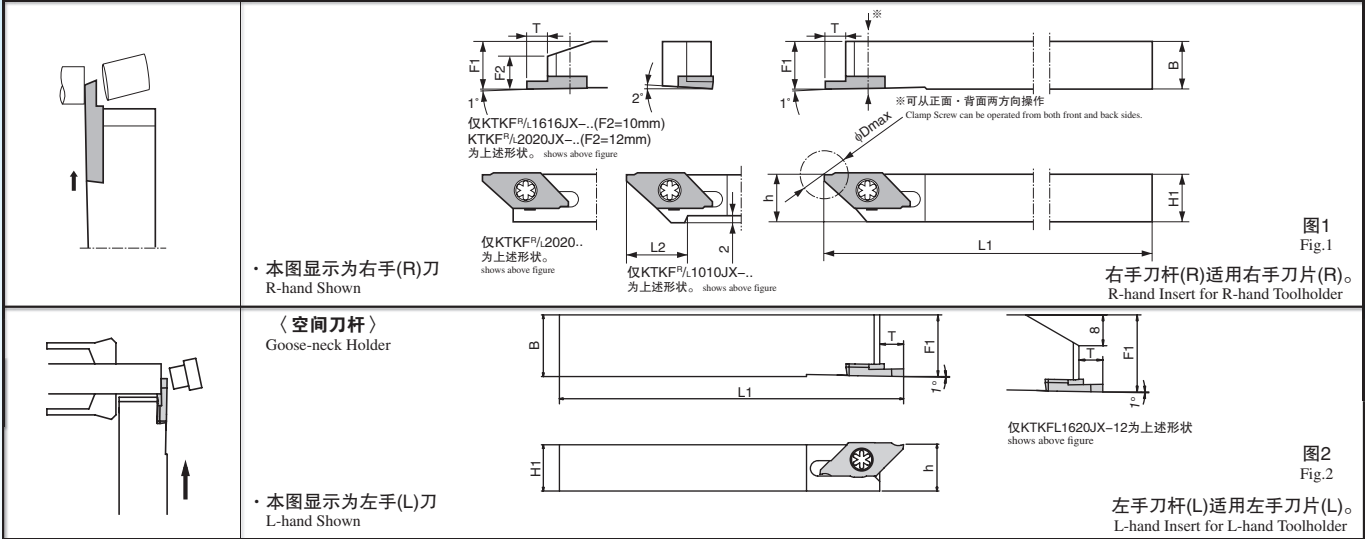
切断TKF型  
TKF for Cut-off



背车TKFB型  
TKFB for back Turning



螺纹TKFT型  
TKFT for Threading



## 刀杆尺寸 Toolholder Dimension

型号 Description	库存 Stock		尺寸(mm) Dimension							形状 Shape	零部件 Spare Parts		适合刀片 Applicable Inserts
	R	L	H1=h	B	L1	L2	F1	T	紧固螺钉 Clamp Screw		扳手 Wrench		
KTKF% 1010JX-12 1212JX-12 1616JX-12 <b>NEW</b> 2020JX-12	●	●	10	10	120	15	10	6	图1 Fig.1	SB-4590TRWN	LTW-10S	TKF12\$ ... TKF_12\$ ...	
	●	●	12	12		12							
	●	●	16	16		-	16						
	●	●	20	20		-	20						
KTKF% 1010JX-16 1212JX-16 1616JX-16 <b>NEW</b> 2020JX-16	●	●	10	10	120	20	10	8	图1 Fig.1	SB-4590TRWN	LTW-10S	TKF16\$ ... TKF_16\$ ...	
	●	●	12	12		-	12						
	●	●	16	16		-	16						
	●	●	20	20		-	20						
KTKF% 1212F-12 1212F-16	●	●	12	12	85	-	12	6	图1 Fig.1	SB-4590TRWN	LTW-10S	TKF12%L ... , TKF_12%L ... TKF16%L ... , TKF_16%L ...	
	●	●					12	8					
KTKFL 1216JX-12 1620JX-12	●	●	12	16	120	-	16	6	图2 Fig.2	SB-4590TRWN	LTW-10S	TKF12L ... TKF_12L ...	
	●	●	16	20			20						

· T尺寸：从刀杆到刀尖的距离。实际加工径请参考 P14。










Dimension T shows the distance from the Toolholder to the cutting edge. For actual cutting diameter, see page 14

注)-12型刀杆的加工径( $\phi D_{max}$ )随刀片的槽宽不同。Cutting diameters of -12 type toolholders ( $\phi D_{max}$ ) are different depending on the insert grooving width.

## 切断 TKF型 TKF for Cut-off

### 适合刀片 Applicable Inserts

形状 Shape 带方向刀片显示为右手(R)刀 Handed Insert Shows R-hand.	型号 Description	尺寸(mm) Dimension							角度(°) Angle	MEGACOAT NANO		MEGACOAT		适合刀杆 Applicable Toolholders
		W	$\phi D_{max}$	$r_e$	T	H	$\phi d$	$\theta$		PR1425 R	PR1425 L	PR1225 R	PR1225 L	
带右导程角 Right lead angle	TKF12% 050-S-16DR 070-S-16DR 100-S-16DR 125-S-16DR 150-S-16DR 200-S-16DR	0.5	5	0.03	3	8.7	5	16°	●	●	●	●		
		0.7	8						●	●	●	●		
		1.0	12						●	●	●	●		
		1.25							●	●	●	●		
		1.5							●	●	●	●		
		2.0							●	●	●	●		
带右导程角 Right lead angle Tough Edge	TKF12% 050-S 070-S 100-S 125-S 150-S 200-S	0.5	5	0.03	3	8.7	5	0°	●	●	●	●		
		0.7	8						●	●	●	●		
		1.0	12						●	●	●	●		
		1.25							●	●	●	●		
		1.5							●	●	●	●		
		2.0							●	●	●	●		
带右导程角 Right lead angle Tough Edge	TKF12% 100-T-16DR 150-T-16DR 200-T-16DR	1.0	12	0.08	3	8.7	5	16°	●	●	●	●		
		1.5							●	●	●	●		
		2.0							●	●	●	●		

形状 Shape 带方向刀片显示为右手(R)刀 Handed Insert Shows R-hand.	型号 Description	尺寸(mm) Dimension						角度(°) Angle	MEGACOAT NANO		MEGACOAT		适合刀杆 Applicable Toolholders
		W	$\phi D_{max}$	$r_e$	T	H	$\phi d$		PR1425		PR1225		
				R	L	R	L						
 刀尖强化型 Tough Edge	TKF12 <sup>R/L</sup> 100-T	1.0	12	0.08	3	8.7	5	0°	●	●	●	●	KTKF <sup>R/L</sup> ...12
	TKF12 <sup>R/L</sup> 150-T	1.5							●	●	●	●	
	TKF12 <sup>R/L</sup> 200-T	2.0							●	●	●	●	
 带右导程角 Right lead angle	TKF12 <sup>R/L</sup> 050-NB-20DR	0.5	5	0	3	8.7	5	20°	●	●			
	TKF12 <sup>R/L</sup> 070-NB-20DR	0.7	8						●	●			
	TKF12 <sup>R/L</sup> 100-NB-20DR	1.0	12						●	●			
	TKF12 <sup>R/L</sup> 150-NB-20DR	1.5	12						●	●			
	TKF12 <sup>R/L</sup> 200-NB-20DR	2.0	12						●	●			
 无断屑槽 Without Chipbreaker	TKF12 <sup>R/L</sup> 050-NB	0.5	5	0	3	8.7	5	0°	●	●			
	TKF12 <sup>R/L</sup> 070-NB	0.7	8						●	●			
	TKF12 <sup>R/L</sup> 100-NB	1.0	12						●	●			
	TKF12 <sup>R/L</sup> 150-NB	1.5	12						●	●			
	TKF12 <sup>R/L</sup> 200-NB	2.0	12						●	●			
 带右导程角 Right lead angle	TKF16 <sup>R/L</sup> 150-S-16DR	1.5	16	0.05	4	9.5	5	16°	●	●	●	●	KTKF <sup>R/L</sup> ...16
	TKF16 <sup>R/L</sup> 200-S-16DR	2.0							●	●	●	●	
 150-S	TKF16 <sup>R/L</sup> 150-S	1.5	16	0.05	4	9.5	5	0°	●	●	●	●	
	TKF16 <sup>R/L</sup> 200-S	2.0							●	●	●	●	
 带右导程角 刀尖强化型 Right lead angle Tough Edge	TKF16 <sup>R/L</sup> 150-T-16DR	1.5	16	0.08	4	9.5	5	16°	●	●	●	●	
	TKF16 <sup>R/L</sup> 200-T-16DR	2.0							●	●	●	●	
 刀尖强化型 Tough Edge	TKF16 <sup>R/L</sup> 150-T	1.5	16	0.08	4	9.5	5	0°	●	●	●	●	
	TKF16 <sup>R/L</sup> 200-T	2.0							●	●	●	●	
 带右导程角 无断屑槽 Right lead angle Without Chipbreaker	TKF16 <sup>R/L</sup> 150-NB-20DR	1.5	16	0	4	9.5	5	20°	●	●			
	TKF16 <sup>R/L</sup> 200-NB-20DR	2.0							●	●			
 无断屑槽 Without Chipbreaker	TKF16 <sup>R/L</sup> 150-NB	1.5	16	0	4	9.5	5	0°	●	●			
	TKF16 <sup>R/L</sup> 200-NB	2.0							●	●			

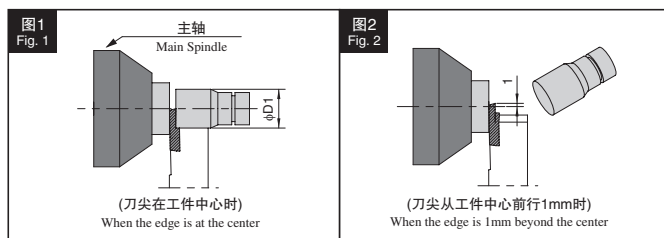
- 导程角(前切刃角度:  $\theta$ )为与刀杆安装时的角度。Lead angle (front cutting edge angle:  $\theta$ ) indicates the angle when a toolholder is attached.
- 刀片的加工径( $\phi D_{max}$ )如下图所示为刀尖前端前进至工件中心时的加工径。 $\phi D_{max}$  indicates the cutting diameter of the insert with top of the cutting edge progresses to the center.

## 刀片的加工径 $\phi D_{max}$ Insert Cutting Diameter $D_{max}$

仅限用于主轴使用  
When Using Main Spindle Only

切断侧工件最大加工径 $\phi D1$ (图-1)为 $\phi D1 = \phi D_{max}$   
程序上如图-2所示刀尖即使超过中心也会由于工件的下落保证刀片与工件之间无干涉。  
(刀片与工件之间的空间半径值为0.2mm)

Workpiece max,  $D1 = D_{max}$ . Even if the cutting edge runs beyond the center line, the insert does not contact the workpiece, since the workpiece falls off.  
(The clearance between the insert and the work is 0.2mm)

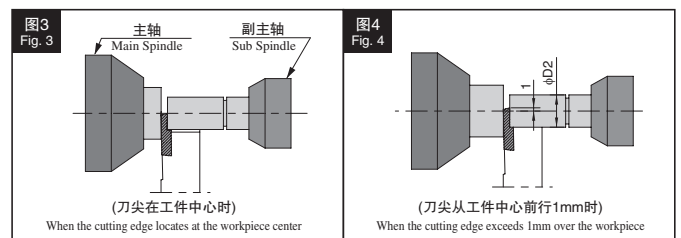


主轴与副主轴同时固定工件加工时  
When using both Main and Sub Spindle

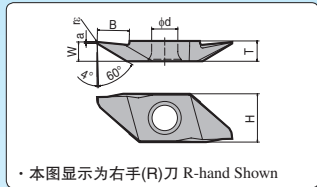
此种加工当刀尖进展到工件中心时也会由于工件不下落, 当刀尖超过中心时就会发生刀片与工件的干涉, 所以最大加工径发生变化。

例: 在程序上如图-4所示当设定刀尖从工件中心前行1mm时, 切断侧工件最大加工径 $\phi D2$ (图-4)  
 $\phi D2 = [\phi D_{max} - 1mm \times 2]$  (mm)  
(刀片与工件之间的空间半径值为0.2mm)

Workpiece max,  $D2 = D_{max} - (\text{Programmed distance beyond the center}) \times 2$   
In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off. Therefore the programmed distance beyond the center must be considered.  
When the cutting edge is programmed to run 1mm beyond the center,  $[D2 = D_{max} - 1mm \times 2]$ .  
(Max. clearance between insert and workpiece is 0.2mm in radius.)

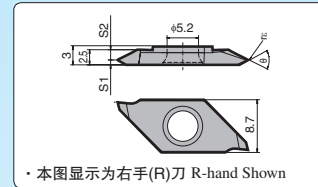


## 背车 TKFB型 TKFB for back Turning



· 本图显示为右手(R)刀 R-hand Shown

## 螺纹 TKFT型 TKFT for Threading



· 本图显示为右手(R)刀 R-hand Shown

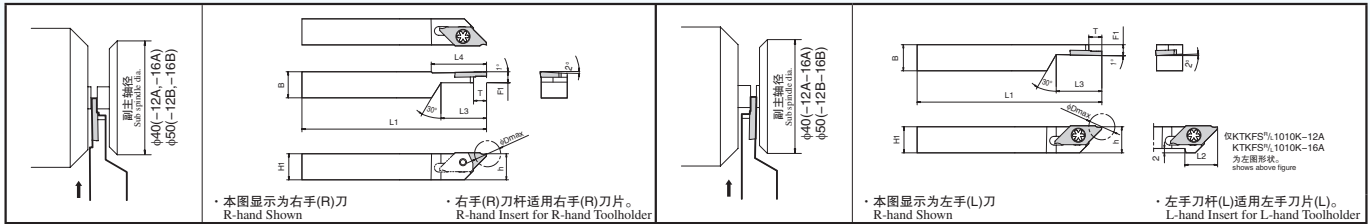
型号 Description	尺寸 (mm) Dimension							MEGA NANO	MEGA COAT	适合刀杆 Applicable Toolholders
	W	a	B	rε	T	H	φd			
TKFB 12R15005M	1.5	0.25	2.6	<0.05				●	●	KTKFR ...12
12R28005M	2.8	0.3	4.6	<0.05	3.0	8.7	5.2	●	●	
12R28010M				<0.1						
TKFB 16R38005M	3.8	0.3	6.3	<0.05	4.0	9.5	5.2	●	●	KTKFR ...16
16R38010M				<0.1						
TKFB 12L28005MR	2.8	0.3	4.6	<0.05	3.0	8.7	5.2	●	●	KTKFL ...12
12L28010MR				<0.1						
TKFB 16L38005MR	3.8	0.3	6.3	<0.05	4.0	9.5	5.2	●	●	
16L38010MR				<0.1						

· 刀尖角(rε)以不等号(例: <0.05, <0.1, <0.2等)显示的刀片, 表示刀尖角(rε)为负公差的产品。  
Inserts with corner R(rε) dimension expressed in less than sign (e.g. <0.05, <0.1, <0.2, etc.) indicate models with minus tolerance for corner R (rε).

型号 Description	使用 螺钉 Applicable Thread	牙 Pitch		尺寸 (mm) Dimension			角度(°) Angle	MEGA NANO	MEGA COAT	适合刀杆 Applicable Toolholders						
		mm	牙/inch TPI	rε	S1	S2										
TKFT 12RA6000 12RB6000 12RA60005 12RB60005 12RN6001	M UN	0.2-0.6	64-48	Max 0.05 平刃 Flat	0.4 2.1 2.1 0.4	60°	●	●	●	KTKFR ...12						
		0.5-1.25	48-24	0.05	0.8 1.7 1.7 0.8											
		1-1.5	24-18	0.1	1.25 1.25											
		12RA55005 12RB55005	G,R W	-	40-16						0.05	0.8 1.7 1.7 0.8	55°	●	●	●
		12LA6000 12LB6000 12LA60005 12LB60005	M UN	0.2-0.6	64-48						Max 0.05 平刃 Flat	2.1 0.4 0.4 2.1	60°	●	●	●
0.5-1.25	48-24	0.05		1.7 0.8 0.8 1.7												
1-1.5	24-18	0.1		1.25 1.25												
12LA55005 12LB55005	G,R W	-	40-16	0.05	1.7 0.8 0.8 1.7	55°	●	●	●							

## 切断对应副主轴 Cut-off with sub spindle

### KTKFS型(副主轴小径切断用) KTKFS for small diameter workpiece cut-off with sub spindle



· 本图显示为右手(R)刀 R-hand Shown

· 右手(R)刀杆适用右手(R)刀片。  
R-hand Insert for R-hand Toolholder

· 本图显示为左手(L)刀 R-hand Shown

· 左手刀杆(L)适用左手刀片(L)。  
L-hand Insert for L-hand Toolholder

### 刀杆尺寸 Toolholder Dimension

型号 Description	库存 Stock		加工径 Cutting Dia.	尺寸 (mm) Dimension								零部件 Spare Parts		适合刀片 Applicable Inserts
	R	L		φDmax	H1=h	B	L1	L2	L3	※ L4	F1	T	紧固螺钉 Clamp Screw	
KTKFS <sup>R/L</sup> 1010K-12A 1212F-12A 1212K-12B	●	●	6 ~ 12	10	10	120	15	22	26	5	6	SB-4050TRN	LTW-10S	TKFS12 <sup>R/L</sup>
	●	●		12	12	85	-							
	●	●		120	-	26								
KTKFS <sup>R/L</sup> 1010K-16A 1212F-16A 1212K-16B	●	●	14 ~ 16	10	10	120	20	22	30	5	8	SB-4050TRN	LTW-10S	TKFS16 <sup>R/L</sup>
	●	●		12	12	85	-							
	●	●		120	-	26								

· T尺寸: 从刀杆面到刀尖的距离。 Dimension T shows the distance from the Toolholder to the cutting edge.

· 工径(φDmax)随刀片的槽宽而不同。 Cutting diameters (φDmax) are different depending on the insert grooving width.

※L4尺寸仅为右手刀杆(R)。 L4 dimension is only for R-hand toolholders.

### 适合刀片 Applicable Inserts

形状 Shape 带方向刀片为左手(L)刀 Handed Insert Shows L-hand.	型号 Description	尺寸 (mm) Dimension						角度(°) Angle	MEGACOAT NANO	MEGACOAT			
		W	φD max	rε	T	H	φd			PR1425		PR1225	
										R	L	R	L
	TKFS12 <sup>R/L</sup> 100-S	1.0	6	0.05	2.2	8.7	4.4	0°	●	●	●	●	
	150-S	1.5	9						●	●	●	●	
	200-S	2.0	12						●	●	●	●	
	TKFS16 <sup>R/L</sup> 150-S	1.5	14	0.05	2.2	9.5	4.4	0°	●	●	●	●	
200-S	2.0	16	●						●	●	●		

· 刀片的加工径(φDmax)如图2(参照14页)所示, 为刀尖前从工件中心前行1mm时的加工径。 As shown in Fig 2 (of page 14), φDmax indicates the cutting diameter of inserts where the top of the cutting edge progresses 1mm from the center.

· 导程角(前切刃角度: θ)为安装刀杆时的角度。 Lead angle (front cutting edge angle: θ) indicates the angle when a toolholder is attached.

### 切削工具相关咨询

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