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2026

车削刀片
TURNING INSERTS



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FROM TOOL MATERIALS TO A FULL-CHAIN CNC CUTTING TOOL SOLUTION PROVIDER

从刀具材料到聚焦数控刀具领域的
全产业链集成供应商

株洲欧科亿数控精密刀具股份有限公司

OKE PRECISION CUTTING TOOLS Co., Ltd.

株洲欧科亿数控精密刀具股份有限公司，成立于1996年，是一家专业从事硬质合金制品和数控刀具产品的研发、生产和销售，具有自主研发和创新能力的国家级高新技术企业。

目前，欧科亿已铺设近30家直属运营中心，旨在为客户提供更快速、精准的本地化技术支持与服务，为客户提质增效，持续创造价值。

欧科亿将继续聚焦高端数控刀具国产化和进口替代，以创新刀具打造世界一流品牌，为全球智造提供切削解决方案。

Founded in 1996, OKE Precision Cutting Tools Co., Ltd. is a national high-tech enterprise specializing in the research and development, production and sales of cemented carbide products and CNC tools with independent research and development and innovation capabilities.

To date, OKE has established nearly 30 directly operated centers worldwide, providing fast and precise localized technical support and services to help customers improve quality and efficiency while continuously creating value.

OKE will continue to focus on the localization and import substitution of high-end CNC tools, striving to build a world-class brand through innovation and delivering advanced cutting solutions for global intelligent manufacturing.



集研发、制造、销售、服务于一体的切削工具集成供应商
An integrated cutting tool provider covering R&D, manufacturing, sales, and service

- 国家级博士后科研工作站
National Postdoctoral Research Workstation
- 湖南省数控刀具涂层工程技术研究中心
Hunan Provincial Engineering Research Center for CNC Tool Coatings
- 一流院校产学研基地
Industry-Academia Research Base with Leading Universities



7大核心产品，聚焦用户需求
Seven Core Product Lines Tailored to User Needs

			
数控刀片 CNC Inserts	数控刀体 CNC Tool Holders	整体硬质合金刀具 Solid Carbide Tools	超硬刀具 PCD & PCBN
			
金属陶瓷刀具 Cermet Tools	硬质合金棒材 Carbide Rods	硬质合金锯齿 Carbide Saw Tips	

为增值创效创新刀具技术，为客户难题创优解决方案
Innovating Cutting Tool Technologies to Create Value and Efficiency — Delivering Smart Solutions to Complex Customer Challenges

					
航空航天 Aerospace	轨道交通 Rail Transit	汽车制造 Automotive	新能源 New Energy	模具制造 Moulds and Dies	3C

200+行业解决方案
200+ Industry Solutions

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A 车削刀片牌号 Application Scope of Turning Insert Grades

01 车削刀片牌号适用范围 The applicable scope of turning blade grades

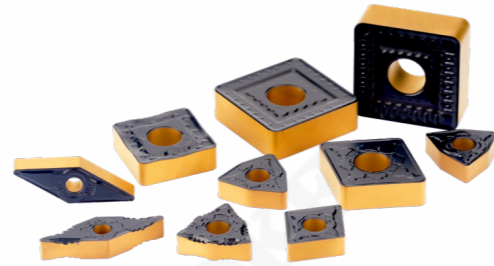
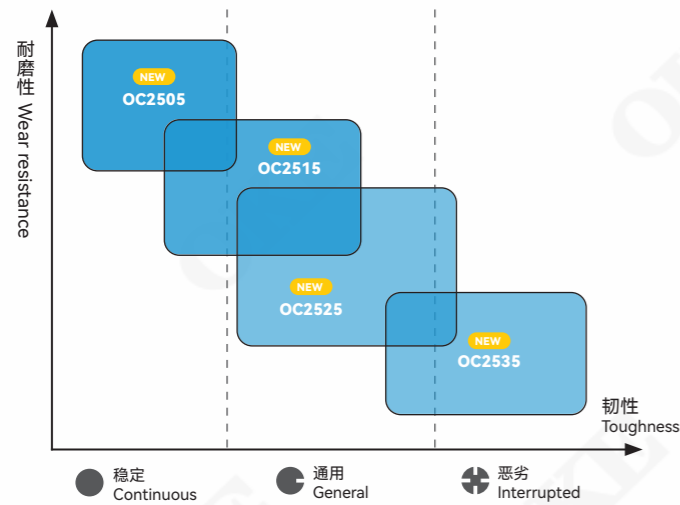
■ 钢类材料车削用可转位涂层刀片系列

Indexable Coated Inserts for Turning Steel Materials (Recommended Grades)

ISO P 类车削——硬质合金刀片 (CVD 涂层)

ISO P Turning - Carbide Inserts (CVD Coating)

P



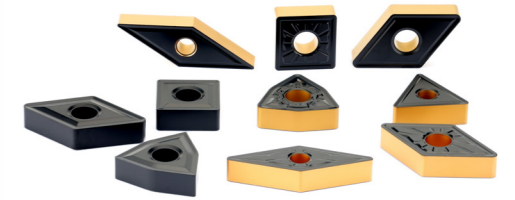
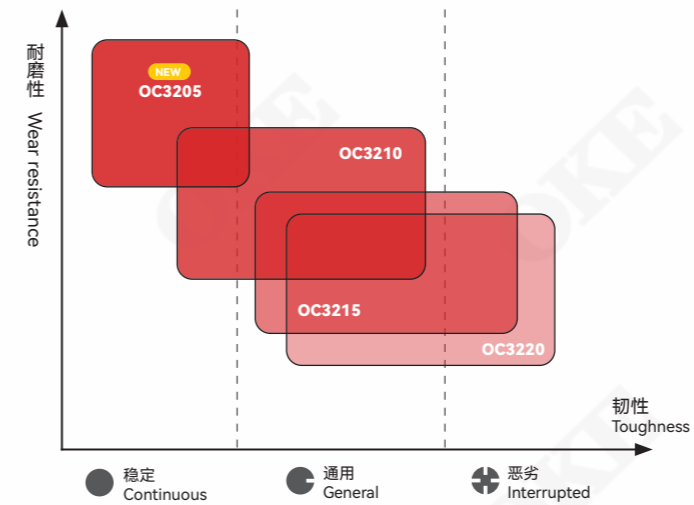
■ 铸铁类材料车削用可转位涂层刀片系列

Indexable Coated Inserts for Turning Cast Iron Materials

ISO K 类车削——硬质合金刀片 (CVD 涂层)

ISO K Turning - Carbide Inserts (CVD Coating)

K



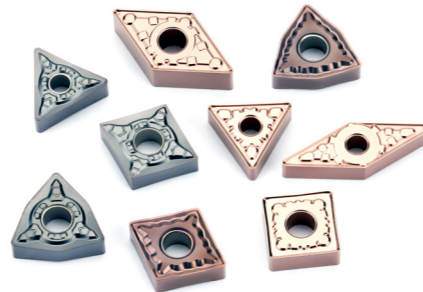
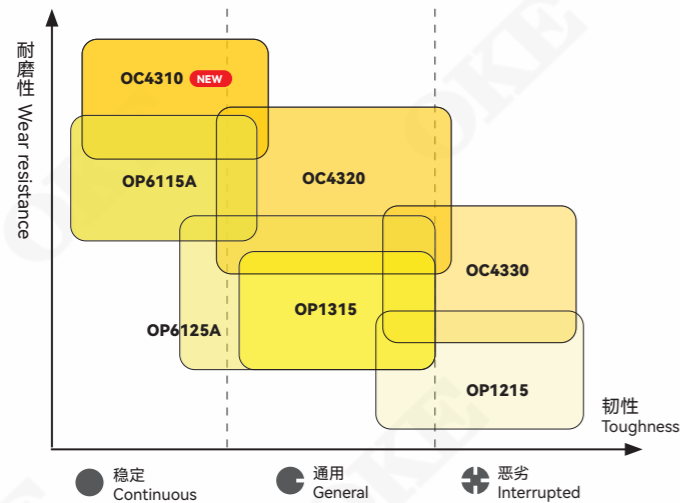
■ 不锈钢类材料车削用可转位涂层刀片系列

Indexable Coated Inserts for Turning Stainless Steel Materials

ISO M 类车削——硬质合金刀片 (CVD 与 PVD 涂层)

ISO M Turning - Carbide Inserts (CVD and PVD Coating)

M



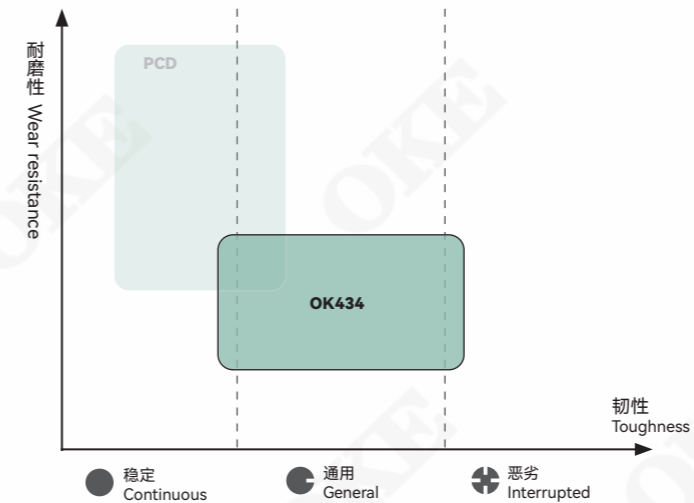
■ 有色金属类材料车削用可转位刀片系列

Indexable Inserts for Turning Non-Ferrous Metal Materials

ISO N 类车削——硬质合金刀片 (无涂层)

ISO N Turning - Carbide Inserts (Uncoated)

N



02 车削刀片牌号等级与应用

Turning Insert Grades and Applications

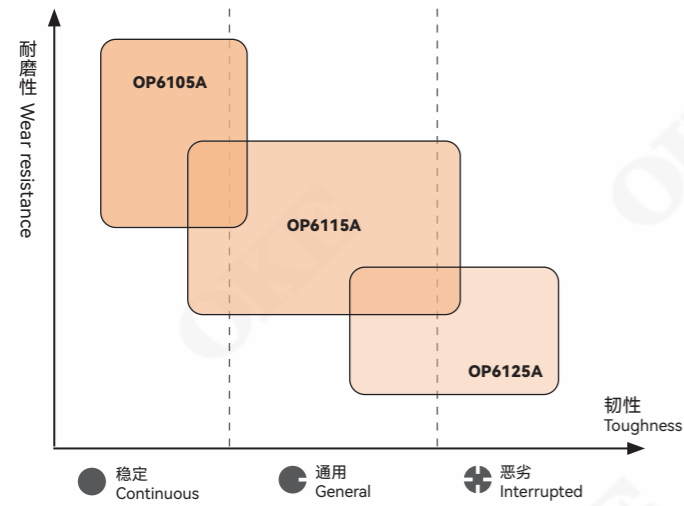
涂层类型 Coating type	P				M				K				N				S				H				
	05	10	20	30	40	05	10	20	30	40	05	10	20	30	10	20	30	40	05	10	20	30	10	20	30	40
CVD	OC2505																								
	OC2515																								
	OC2525																								
	OC2125																								
	OC2325S																								
	OC2535																								
无涂层 Without coating					OC4310																				
					OC4320																				
					OC4330																				
									OC3205																
									OC3210																
PVD																					OK434				
					OP1215																				
					OP1315																				
					OP1415																				
																	OP6105A								
																	OP6115A								
																OP6125A									
																				OPH120					

难切削材料车削用可转位涂层刀片系列

Indexable Coated Inserts for Turning High Temperature Alloys Materials

ISO S 类车削——硬质合金刀片 (PVD 涂层)

ISO S Turning - Carbide Inserts (PVD Coating)



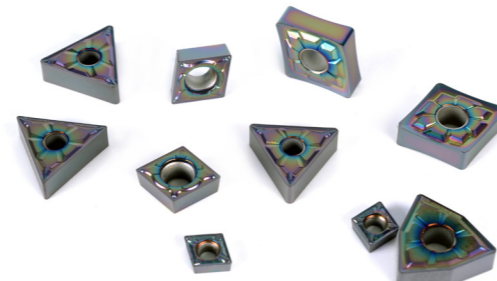
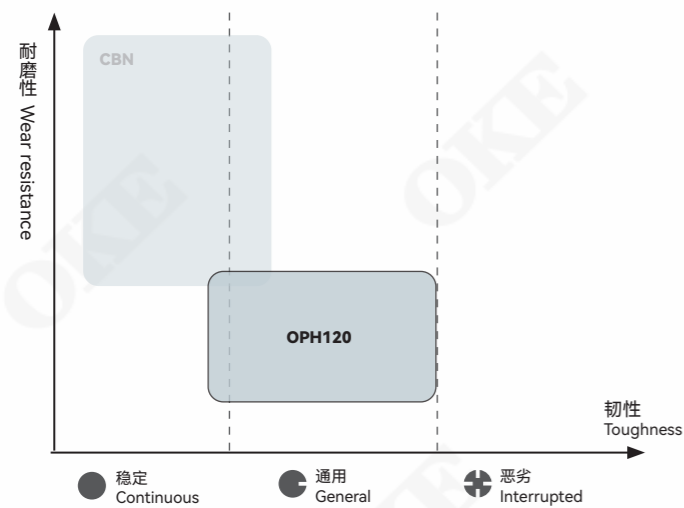
S

高硬材料车削用可转位涂层刀片系列

Indexable Coated Inserts for Turning Hardened Materials

ISO H 类车削——硬质合金刀片 (PVD 涂层)

ISO H Turning - Carbide Inserts (PVD Coating)



H

B 车削刀片分类介绍



Introduction of Turning Insert Categories

01 P 钢类车削刀片
Turning Inserts for Steel

P

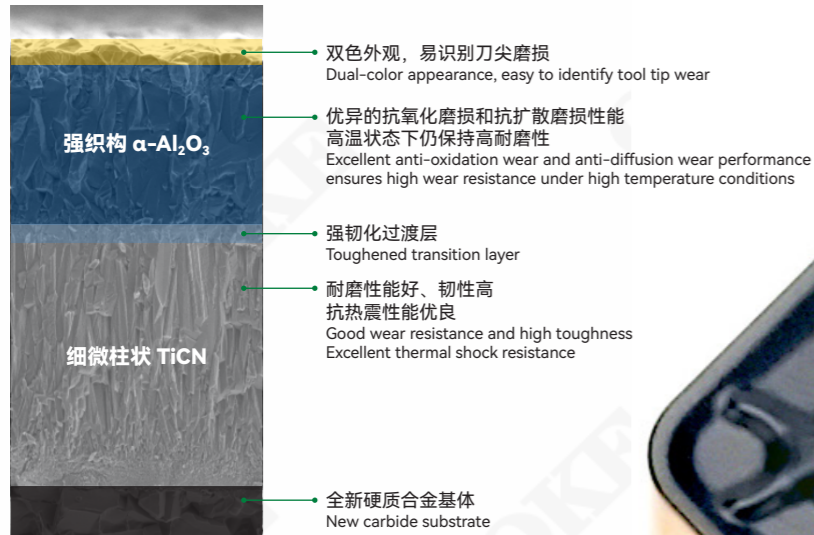
■ P 钢类车削刀片 - 牌号介绍

Turning Inserts for Steel Grade Introduction

涂层牌号 Coating	ISO 等级 ISO Grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OC2505 <small>NEW</small>	P05 (P01-P15)	●						CVD	<p>精加工等级; 全新强织构 CVD 涂层与高红硬性基材的结合; 高耐磨材质, 可实现长时间连续切削; 可进行精加工或半精加工操作; 亦可用于轻微断续切削; 如果机床 - 刀具 - 工件系统结构具有足够的刚性, 也可进行粗加工操作。</p> <p>Finishing grade; Combination of new strong-textured CVD coating and high red-hardness substrate; High wear-resistant material, enables long-duration continuous cutting; Suitable for finishing or semi-finishing operations; Also suitable for light intermittent cutting; Can be used for roughing if the machine-tool-workpiece system has sufficient rigidity.</p>	
OC2515 (OC2415) <small>NEW</small>	P15 (P10-P20)	●						CVD	<p>精加工至中等加工等级; 全新加厚的强织构化 CVD 涂层与高硬度基材的结合, 拥有更为出色的耐磨性、红硬性和抗月牙洼磨损能力; 钢类材料 (碳钢、合金钢等) 的连续至轻断续加工, 拥有较宽的应用范围和极佳的稳定性。</p> <p>Finishing to medium machining grade; Combination of new, thickened strong-textured CVD coating and high-hardness substrate, offering excellent wear resistance, red hardness, and crater wear resistance; Stable for continuous to light intermittent machining of steel materials (carbon steel, alloy steel, etc.), with wide application range and excellent stability.</p> <p>旧牌号 Old Coating : OC2415</p>	
OC2525 (OC2425) <small>NEW</small>	P25 (P15-P30) M20-M30 K25-K35	●	○	○				CVD	<p>通用车削加工等级; 全新优化涂层织构与结构的 CVD 涂层, 硬度与强度兼顾的基材, 良好的抗变形能力和出色的刀片刃口强度, 涂层对基材的附着力良好; 独特的后处理技术, 实现双色标识层及有益的压应力分布, 达到更高的耐磨性和稳定性。</p> <p>General turning grade; New optimized coating texture and structure CVD coating, substrate balancing hardness and strength, good anti-deformation capability and excellent cutting edge strength, good coating adhesion; Unique post-treatment technology achieves dual-color identification layer and beneficial compressive stress distribution, resulting in higher wear resistance and stability.</p> <p>旧牌号 Old Coating : OC2425</p>	

涂层牌号 Coating	ISO 等级 ISO Grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OC2125	P25 (P20-P30)	●						CVD	<p>通用车削加工等级; 基体为高立方相含量的梯度硬质合金; 涂层为耐磨的 CVD 氧化铝涂层, 经过特殊后处理工艺, 具有很好的抗塑性变形能力和韧性。</p> <p>General turning grade; Substrate is gradient carbide with high cubic phase content; Coating is wear-resistant CVD alumina coating, with special post-treatment for good anti-plastic deformation ability and toughness.</p>	
OC2325S	P25 (P20-P30)	●						CVD	<p>钢材半精加工通用牌号; 富立方相含量的梯度硬质合金基体, 具有更好的高温性能、抗塑性变形能力; 均匀致密细晶涂层, 具有优异的耐磨性; 独特的后处理技术, 实现了双色标识层及均匀的压应力分布, 确保很好的耐磨性和稳定性。</p> <p>General semi-finishing grade for steel; Gradient carbide substrate rich in cubic phase, with better high-temperature performance and anti-plastic deformation ability; Uniform, dense fine-grained coating with excellent wear resistance; unique post-treatment technology achieves dual-color identification layer and uniform compressive stress distribution, ensuring good wear resistance and stability.</p>	
OC2535 (OC2435) <small>NEW</small>	P35 (P30-P40) M30-M40 K30-K40	●	○	○				CVD	<p>粗加工或断续加工等级; 全新的 CVD 多层涂层与高强度基材有机结合, 极佳的抗冲击性能与耐磨性的平衡, 延长了刀具寿命。</p> <p>Roughing or intermittent machining grade; Organic combination of new CVD multi-layer coating and high-strength substrate, excellent balance of impact resistance and wear resistance, extends tool life.</p> <p>旧牌号 Old Coating : OC2435</p>	

OC25* 系列牌号特性
OC25* Series Product Features



技术特点

- 先进的表面光滑处理技术，减少切削阻力；
- 强织构 $\alpha\text{-Al}_2\text{O}_3$ 涂层与细晶结构柱状 TiCN 涂层结合，有效改善刀具寿命；涂层间良好的结合强度，实现了强韧化；
- 全新的专用硬质合金基体，均匀分布的细晶立方相，提升合金稳定性；粘接相与固溶体梯度耦合，提升刃线抗冲击性；

Technical features

- Advanced surface smoothing technology reduces cutting resistance.
- Combination of strongly textured $\alpha\text{-Al}_2\text{O}_3$ coating and fine-grained columnar TiCN coating effectively improves tool life; good bonding strength between coatings achieves toughening.
- New dedicated carbide substrate with uniformly distributed fine-grained cubic phases enhances alloy stability; gradient coupling of binder phase and solid solution improves edge line impact resistance.



OC2515 切削性能

OC2515 Cutting performance

- 通过强化 $\alpha\text{-Al}_2\text{O}_3$ 涂层与硬质合金基体（粘接相与固溶体梯度耦合），抑制崩损
- By strengthening the $\alpha\text{-Al}_2\text{O}_3$ coating and carbide substrate (gradient coupling of binder phase and solid solution), chipping is suppressed

OC2515 与以往产品抗冲击性能对比

OC2515 Impact Resistance Comparison with Previous Product



OC2515 与市场样抗冲击性能对比

OC2515 Impact Resistance Comparison with Competitor Samples



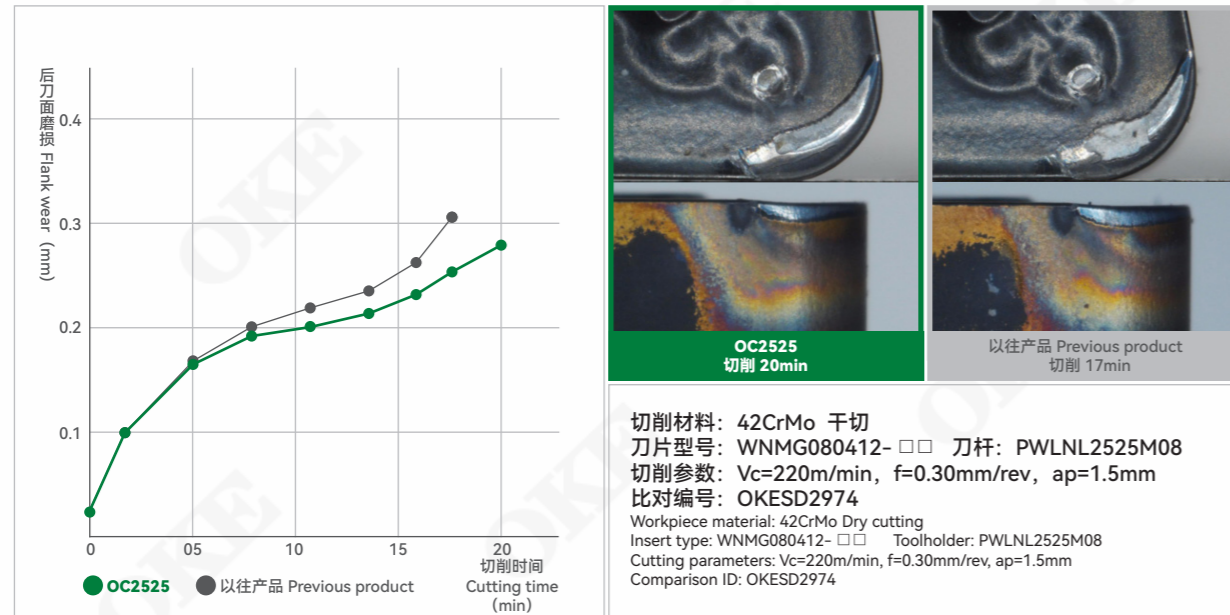
OC2525 切削性能

OC2525 Cutting Performance

- 通过表面光滑处理, 延长刀具寿命
- 通过涂层去应力处理, 改善刀片刃口韧性
- Extends tool life through smooth surface treatment
- Improves insert edge toughness through coating stress relief treatment

OC2525 与以往产品耐磨性能对比

OC2525 Wear Resistance Comparison with Previous Product



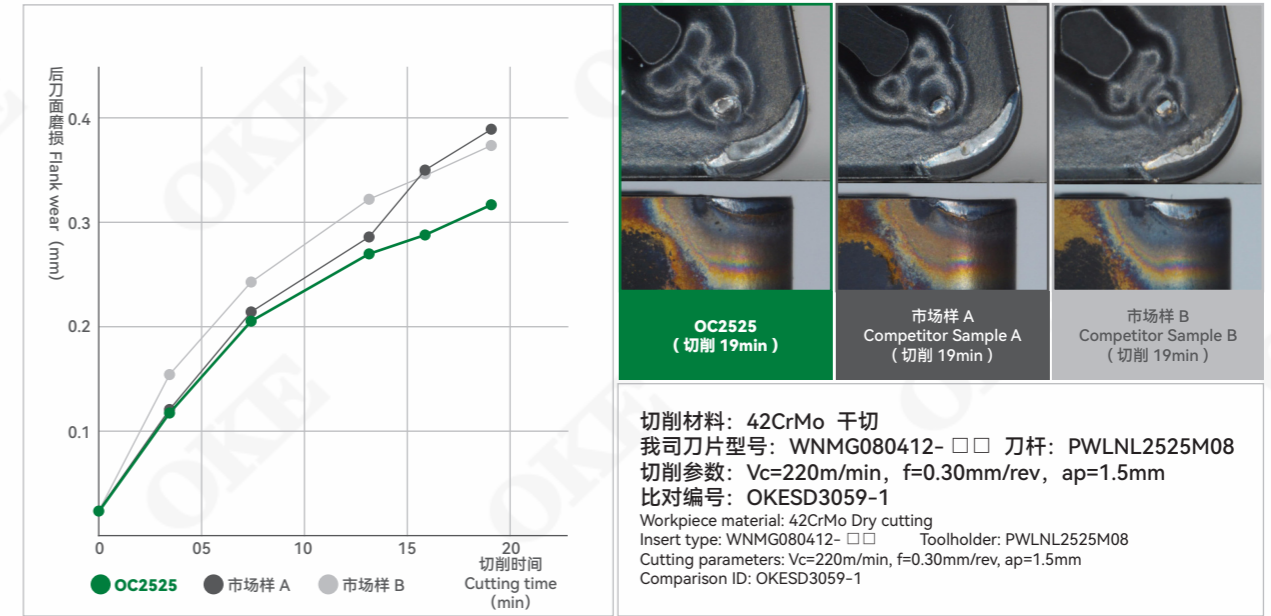
OC2525 与以往产品抗冲击性能对比

OC2525 Impact Resistance Comparison with Previous Product



OC2525 与市场样耐磨性能对比

OC2525 Wear Resistance Comparison with Competitor Samples



OC2525 与市场样抗冲击性能对比

OC2525 Impact Resistance Comparison with Competitor Samples



■ P 钢类车削刀片 - 槽型介绍 (第二代双面负角)

Chipbreaker Introduction (Second Generation Double-sided Negative and Supplementary Series)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>QF <small>NEW</small></p> <ul style="list-style-type: none"> - 精加工用 - 曲线刃设计, 切削轻快 - 小切深与低进给工况 <p>- For finishing</p> <ul style="list-style-type: none"> - Curved edge design, light cutting - Small depth of cut and low feed conditions 	●						 	0.5-1.5	0.08-0.30		
 <p>QN <small>NEW</small></p> <ul style="list-style-type: none"> - 通用性加工用 - 变刃宽设计, 通用性强 - 实现稳定的刀具寿命 <p>- For general machining</p> <ul style="list-style-type: none"> - Variable edge width design, good versatility - Ensures stable tool life 	●	○					 	1.0-5.0	0.15-0.45		
 <p>QR <small>NEW</small></p> <ul style="list-style-type: none"> - 粗加工车削用 - 强壮的切削刃设计 - 大切深与高进给工况 <p>- For rough turning</p> <ul style="list-style-type: none"> - Robust cutting edge design - Large depth of cut and high feed conditions 	●	○	○				 	1.5-6.0	0.25-0.65		

■ P 钢类车削刀片槽型 -QN NEW

Indexable Insert Chipbreaker -QN

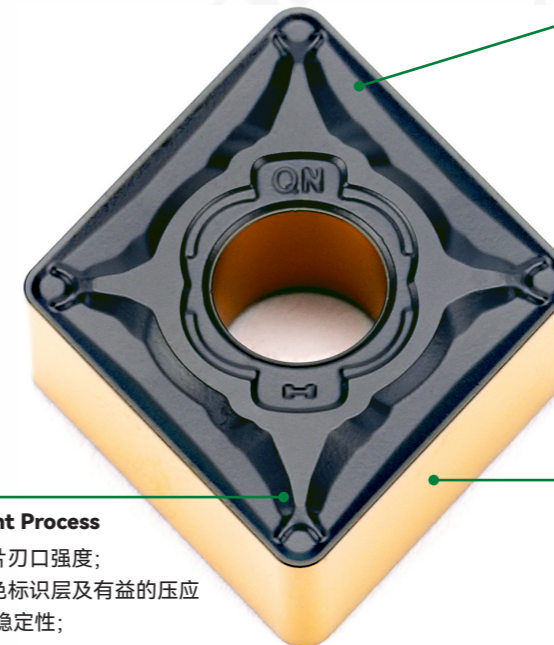
刀片技术细节与应用 Insert Technology and Application

刀片材质及应用 Grade and Application

CVD 材质 CVD Grade	OC2515、OC2525、OC2535	基本形状 Basic shapes	CNMG12、DNMG15 SNMG12、TNMG16 WNMG08...
被加工材料 Workpiece Material	钢类材料 Steel materials	刀尖圆弧 Corner Radius	0.4、0.8、1.2、1.6

槽型设计特性及应用 Chip Breaker Design Features and Application

适用范围 Application	专为中等切削加工研发 Developed for medium cutting applications	槽型特点 Chipbreak Characteristics	<ul style="list-style-type: none"> - 优化前角设计, 可实现强韧刀尖、低切削阻力 - 适用于连续切削、黑皮切削 - Optimized rake angle design enables strong and tough tip with low cutting resistance - Suitable for continuous cutting, scaly skin cutting
加工参数 Parameter	<p>Ap=1.0-5.0mm</p> <p>Fn=0.15-0.45mm/rev</p>	主切削刃 Main cutting edges	



贴合实际应用的设计
Design Optimized for Practical Applications

- 直线刃口设计确保刀片在不同加工参数时拥有良好的刃边强度;
- 刃尖变前角变刃宽设计, 刀片在不同切深时能保证切削轻快、切屑有效卷曲;
- Straight edge design ensures good edge strength under varying cutting parameters;
- Variable rake angle and variable width design at the tip ensures light cutting and effective chip curling across different depths of cut;

先进的表面处理工艺
Advanced Surface Treatment Process

- 涂层去应力处理, 改善了刀片刃口强度;
- 独特的后处理技术, 实现双色标识层及有益的压应力分布, 达到更高的耐磨性和稳定性;
- 可用于多种加工工况;
- Coating stress relief treatment improves insert edge strength;
- Unique post-treatment technology achieves dual-color identification layer and beneficial compressive stress distribution, resulting in higher wear resistance and stability;
- Suitable for various machining conditions;

强韧硬质合金基材
Tough Carbide Substrate

- 高温硬度与强度优异的硬质合金基材;
- 红硬性与其韧性兼顾, 实现良好的抗边界磨损与抗崩刃特性;
- Carbide substrate with excellent high-temperature hardness and strength;
- Balances red hardness and toughness, achieving good anti-notch wear and chipping resistance;

双面通用加工可转位刀片 Double-sided General Purpose Indexable Insert
OC2525 CNMG120408-QN

■ P 钢类车削刀片 - 槽型介绍 (重载单面负角 / 正角槽型)

P Turning Inserts for Steel - Chipbreaker Introduction (Heavy-duty Single-sided Negative/Positive)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>HR3 <small>NEW</small></p> <ul style="list-style-type: none"> - 粗加工、低进给用 - 曲线刃设计, 切削轻快 - 断屑性能良好 - For roughing, low feed - Curved edge design, light cutting - Good chip breaking performance 	● ● ○ ○ ○ ○								3.0-10.0	0.30-0.70	
 <p>HP</p> <ul style="list-style-type: none"> - 重载切削低碳钢首选 - 切削锋利性与强度兼备 - 切屑排出性能良好 - Preferred for heavy-duty cutting of low carbon steel - Balances cutting sharpness and strength - Good chip evacuation performance 	● ○ ● ○ ○ ○								4.0-12.0	0.40-0.90	
 <p>RP</p> <ul style="list-style-type: none"> - 重载切削中碳合金钢、高进给首选 - 直线刃与倒角刃相结合 - 排屑性能良好 - Preferred for heavy-duty high feed cutting of medium carbon alloy steel - Combination of straight edge and chamfer - Good chip evacuation performance 	● ○ ○ ○ ○ ○								6.0-15.0	0.50-1.10	
 <p>HRP <small>NEW</small></p> <ul style="list-style-type: none"> - 重载切削高金属去除率用 - 宽刃边与大倒角设计, 刃口强度高 - 宽断屑槽, 防止切屑堵塞 - For heavy-duty cutting with high metal removal rate - Wide chip edge and large chamfer design, high edge strength - Wide chipbreaker, prevents chip clogging 	● ○ ○ ○ ○ ○								8.0-20.0	0.70-1.30	
 <p>JH</p> <ul style="list-style-type: none"> - 用于精加工至粗加工及连续至断续切削的断屑槽 - 负倒角设计, 在大切深切削时拥有良好的刃边强度 - 优化设计的断屑台, 针对不同工况能有效断屑, 产品通用性能好 - Chipbreaker for finishing to roughing and continuous to intermittent cutting - Negative chamfer design provides good edge strength at large DOC - Optimized chip breaker, effective chip breaking for different conditions, good versatility 	● ○ ○ ○ ○ ○								2.0-9.0	0.4-1.4	

■ P 钢类车削刀片槽型 -HR3 NEW
Indexable Insert Chipbreaker -HR3

刀片技术细节与应用 Insert Technology and Application

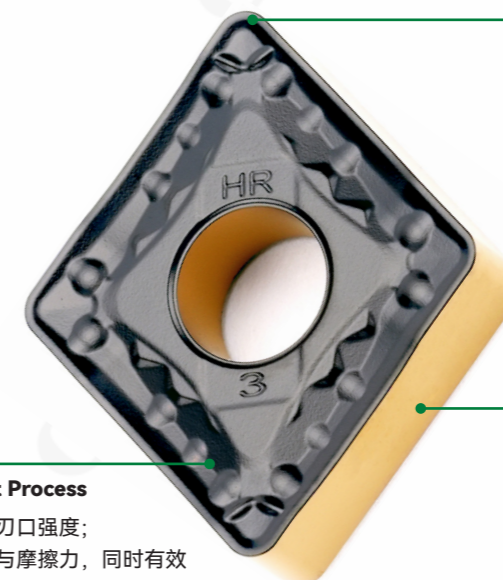
刀片材质及应用 Grade and Application

刀片型号 Inserts Size

CVD 材质 CVD Grade	OC2515、OC2525、OC2535	基本形状 Basic shapes	CNMM16、CNMM19 CNMM25、SNMM15 SNMM19、SNMM25
被加工材料 Workpiece Material	钢类材料 Steel materials	刀尖圆弧 Corner Radius	1.2、1.6、2.4

槽型设计特性及应用 Chip Breaker Design Features and Application

适用范围 Application	专为重切削加工研发 Developed for heavy cutting applications	槽型特点 Chipbreak Characteristics	- 优化前角设计, 可实现强韧刀尖、低切削阻力 - 适用于连续切削、黑皮切削 - Optimized rake angle design enables strong and tough tip with low cutting resistance - Suitable for continuous cutting, scaly skin cutting
加工参数 Parameter	Ap=3.0-10mm Fn=0.30-0.70mm/rev	主切削刃 Main cutting edges	



贴合实际应用的设计
Design Optimized for Practical Applications

- 刀尖变前角变刃宽设计, 刀片在不同切深时能保证切削轻快、切屑有效卷曲;
- 粗加工、低进给用;
- 低阻力单面断屑槽;
- Variable rake angle and width design at the tip ensures light cutting and effective chip curling across different depths of cut;
- For roughing, low feed applications;
- Low resistance single-sided chipbreaker;

强韧硬质合金基材
Tough Carbide Substrate

- 材质具有很好的耐磨性、兼顾韧性, 广泛适用于各种钢件材料连续切削、黑皮切削;
- Good wear resistance and balanced toughness, widely suitable for continuous and scaly skin cutting of various steel materials;

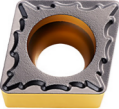
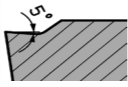
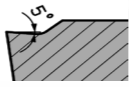
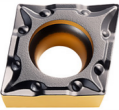
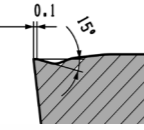
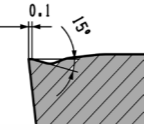
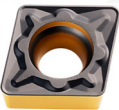
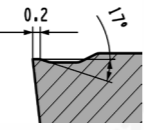
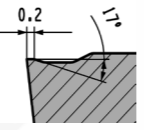
先进的表面处理工艺
Advanced Surface Treatment Process

- 涂层去应力处理, 改善了刀片刃口强度;
- 产品表面光滑, 减少了切削力与摩擦力, 同时有效减轻了粘结现象, 延长了刀具寿命;
- 可用于多种加工工况;
- Coating stress relief treatment improves insert edge strength;
- Smooth insert surface reduces cutting force and friction, effectively reduces built-up edge, extends tool life;
- Suitable for various machining conditions;

单面粗加工可转位刀片 Single-sided Roughing Indexable Insert
OC2525 CNMM190616-HR3

■ P 钢类车削刀片 - 槽型介绍 (单面正角槽型)

P Turning Inserts for Steel - Chipbreaker Introduction (Single-sided Positive)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>OTF</p> <ul style="list-style-type: none"> - 精加工用 - 曲线刃设计, 切削轻快 - 独特的槽型结构, 小切深工况下断屑处理能力优异 <p>- For finishing</p> <ul style="list-style-type: none"> - Curved edge design, light cutting - Unique chipbreaker structure, excellent chip breaking ability at small DOC <p>*5° 7°</p> <p>C D R S T V W</p>									0.5-1.5	0.08-0.20	
 <p>OTM</p> <ul style="list-style-type: none"> - 通用加工用 - 平刃设计, 有较好的刃口强度和耐破损性 - 刃倾角组合结构, 能很好的控制切屑流向 <p>- For general machining</p> <ul style="list-style-type: none"> - Flat edge design, good edge strength and fracture resistance - Combination of cutting edge angle, controls chip flow well <p>*5° 7° 11°</p> <p>C D R S T V W</p>									0.8-2.5	0.10-0.25	
 <p>OTR</p> <ul style="list-style-type: none"> - 粗加工用 - 平刃大前角设计, 刃口强度优异 - 变槽深设计, 控屑能力优异 <p>- For roughing</p> <ul style="list-style-type: none"> - Large positive rake angle design, excellent edge strength - Variable groove depth design, excellent chip control ability <p>*5° 7°</p> <p>C D R S T V W</p>									1.2-3.5	0.18-0.35	

*备注: 部分型号 Note: Applicable for certain types.

■ P 钢类车削刀片 - 槽型介绍 (第一代双面负角槽型)

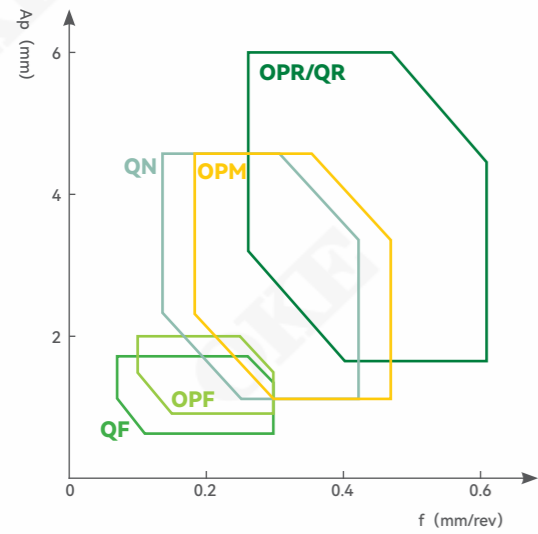
P Turning Inserts for Steel - Chipbreaker Introduction (First Generation Double-sided Negative)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>OPF</p> <ul style="list-style-type: none"> - 精加工用 - 独特的槽型设计能有效控制切屑卷曲与断屑 - 刃口锋利, 切削轻快 <p>- For finishing</p> <ul style="list-style-type: none"> - Unique chipbreaker design effectively controls chip curling and breaking - Sharp edge, light cutting <p>*0.12</p> <p>C D R S T V W</p>									0.8-2.0	0.10-0.30	
 <p>OPM</p> <ul style="list-style-type: none"> - 通用性加工用 (偏粗加工) - 负倒角设计, 增强刀片刃口强度与抗冲击性能 - 双断屑台设计, 扩大了断屑范围 <p>- For general machining (biased towards roughing)</p> <ul style="list-style-type: none"> - Negative chamfer design enhances edge strength and impact resistance - Double chip breaker design widens chip breaking range <p>*0.25</p> <p>C D R S T V W</p>									1.0-5.0	0.20-0.50	
 <p>OPR</p> <ul style="list-style-type: none"> - 粗加工和断续加工用 - 特殊双前角和宽刃带、负倒角三维断屑槽设计 - 具有很好的刃口强度, 延长切削寿命 <p>- For roughing and intermittent machining</p> <ul style="list-style-type: none"> - Special double rake angle and wide land, negative chamfer 3D chipbreaker design - Good edge strength, extends cutting life <p>*0.35</p> <p>C D R S T V W</p>									1.5-6.0	0.25-0.65	

■ 钢类车削槽型断屑范围 (负角 / 正角)

Turning Inserts for Steel - Chip-breaking range for steel turning (Negative/positive)

负角刀片 (钢类材料用)
Negative (For steel)



QF/OPF: 精加工槽型 Finishing chipbreaker



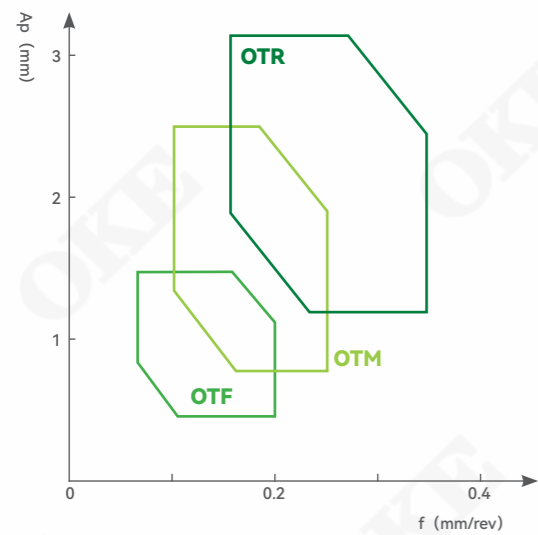
QN/OPM: 通用性车削槽型 General turning chipbreaker



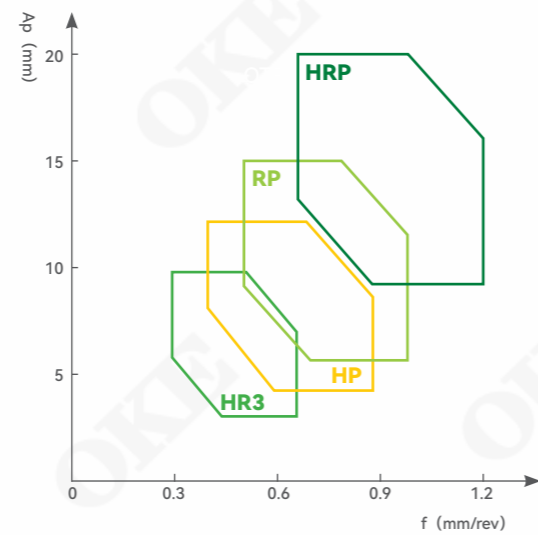
QR/OPR: 粗加工槽型 Roughing chipbreaker



正角刀片 (钢类材料用)
Positive (For Steel)



负角刀片 (钢类材料用, 单面)
Negative (Single-sided for Steel)



■ P 钢类车削刀片 - 槽型选择与应用

Insert Geometry Selection and Application

	第一代车削槽型 (高效率加工用断屑槽) The First Generation Turning Chipbreakers (For High Efficiency Machining)	第二代车削槽型 (通用性加工用断屑槽) The Second Generation Turning Chipbreakers (General Purpose)
精~轻切削用 Finishing ~ Light Cutting	<p>OPF</p>	<p>QF</p>
通用切削用 General Cutting	<p>OPM</p>	<p>QN</p>
粗切削用 Rough Cutting	<p>OPR</p>	<p>QR</p>

■ P 钢类车削刀片 - 产品应用 (通用领域: 汽车零部件)

P Turning Inserts for Steel -Application (General Field: Automotive Components)

■ P 钢类车削刀片 - 产品应用 (重载领域: 轨道交通与风力发电)

P Turning Inserts for Steel -Application(Heavy-Duty Field: Rail Transit and Wind Power)



02 M 不锈钢类车削刀片

M Turning Inserts for Stainless Steel

M

M 不锈钢类车削刀片 - 牌号介绍 (CVD 涂层)

M Turning Inserts for Stainless Steel Grade Introduction (CVD Coating)

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OC4310 <small>NEW</small>	M10 (M05-M15) P15-P25 S15-S25	○	●					CVD	<p>采用新 CVD 涂层, 配合使用耐磨性优良的高硬度基材, 实现优异的耐磨性、抗崩性; 适用于不锈钢高速、高效加工。</p> <p>Utilizes a new CVD coating, combined with a high-hardness substrate that offers excellent wear resistance, to achieve superior wear and chipping resistance; It is suitable for high-speed and high-efficiency machining of stainless steel.</p>	
OC4320	M20 (M15-M25) P25-P35 K30-K40 S20-S30	○	●	○				CVD	<p>新 CVD 涂层工艺搭配新烧结工艺的基材, 在保持硬度的同时大幅提高其韧性; 拥有良好的抗小崩口特性与抗边界磨损性能, 不锈钢通用车削首选牌号。</p> <p>The new CVD coating process is paired with a substrate from a new sintering process, significantly increasing its toughness while maintaining hardness; It possesses good resistance to micro-chipping and flank wear, making it the preferred grade for general turning of stainless steel.</p>	
OC4330	M30 (M25-M35) P30-P40 S25-S40	○	●					CVD	<p>新研发的涂层技术显著提升涂层强度, 特殊的表面处理工艺有效提升抗粘性能; 有效减少不锈钢加工中异常破损问题; 实现稳定长寿命车削。</p> <p>The newly developed coating technology significantly enhances coating strength, and a special surface treatment process effectively improves anti-adhesion properties; It effectively reduces abnormal breakage issues in stainless steel machining and enables stable, long-life turning.</p>	

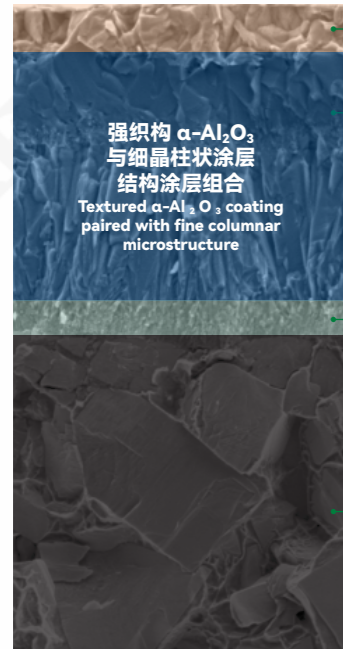
M 不锈钢类车削刀片 - 牌号介绍 (PVD 涂层)

M Turning Inserts for Stainless Steel Grade introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OP1215	M25-M35 P25-P35 K25-K35	○	●	○				PVD	<p>基材: 高 Co 含量强韧化细晶硬质合金; 涂层: 磁控溅射原理涂层, TiAlN/TiSiN 双层纳米复合结构, 具有纳米硬度高, 热稳定性好、摩擦系数小等特点; 应用: 推荐用于不锈钢以及较粘的低碳钢等材料连续、断续车削应用场景; 材质韧性、抗冲击性好, 通用工况下加工首选;</p> <p>Substrate: A carbide with high cobalt content, featuring a toughened fine-grained structure. Coating: Magnetron sputtering coating Technology, a TiAlN/TiSiN bilayer Nanocomposite with high nano-hardness, good thermal stability, good coefficient of friction. Application: Suitable for continuous and intermittent turning of materials like stainless steel and sticky low-carbon steel, the material is of good toughness and impact-resistance, it is the preferred grade for general machining condition.</p>	
OP1315	M15-M30 P20-P30 K20-K30	○	●	○				PVD	<p>基材: 高 Co 含量强韧化细晶硬质合金, 具有很好的刃口强度; 涂层: 电弧离子镀原理涂层, 涂层致密、结合力高。该涂层含有较高的铝含量, 为具有优异抗氧化和耐磨性能的 Barzers PVD-AITiN 涂层, 适用面广; 应用: 推荐用于不锈钢连续车削, 以及其它难加工材料中低速车削应用场景; 稳定工况下对刀具耐磨性要求较高时首选;</p> <p>Substrate: A carbide with high cobalt content, offering excellent edge strength. Coating: An Arc Ion Plating (AIP) coating technology with highly dense coating structure and good adhesion. Barzers PVD-AITiN coating with high aluminum content, featuring excellent antioxidant and wear resistance performance. Application: It is suitable for continuous turning of stainless steel, and medium or low speed turning of other hard to made materials. It is preferred grade in the case of high demand for wear resistance of tools to stable machining condition.</p>	
OP1415	M20-M35 P25-P35 K25-K35	○	●	○				PVD	<p>基材: 高 Co 含量强韧化细晶硬质合金; 涂层: 全新的 AlTiN/TiXN 复合结构设计, 抵抗裂纹扩展, 提升抗冲击性能; 维持 AIP 技术的 AlTi-base 涂层, 拥有高致密性及良好的抗氧化性; 参杂难熔 X 元素, 提升涂层高温性能; 应用: 适合于不锈钢通用车削工况;</p> <p>Substrate: A carbide with high cobalt content, featuring a toughened fine-grained structure. Coating: Features a novel AlTiN/TiXN composite structure design that resists crack propagation and improves impact resistance. Maintains the high density and oxidation resistance characteristic of AIP technology's AlTi-based coatings. The doping of a refractory X element enhances the coating's high-temperature performance. Application: It is preferred grade for general turning of stainless steel.</p>	

OC43* 系列牌号特性

CVD Stainless Steel Turning Inserts OC43* Series



香槟色外观，涂层表面光滑处理，有效降低表面粗糙度
Champagne-colored appearance with smooth coating surface treatment, effectively reducing surface roughness

优异的抗氧化磨损性能，高温状态下仍保持高耐磨性；同时保持良好的抗崩刃性
Excellent anti-oxidative wear resistance, maintaining high wear resistance even under high-temperature conditions; Good chipping resistance

强化过渡层
Strengthened Transition Layer

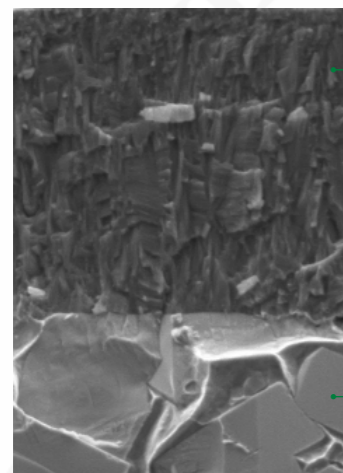
全新硬质合金基体，高温红硬性好
New carbide substrate with excellent high-temperature red hardness



OC4310

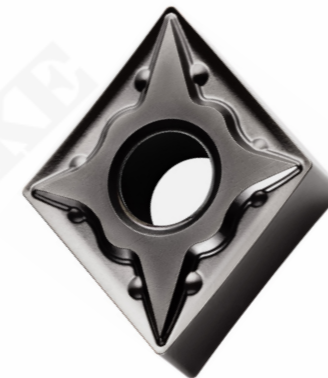
OP1315 牌号特性

OP1315 Product Features



高结合力、致密 Barzers PVD-AITIN 涂层，具有良好的抗氧化和耐磨性能的涂层，适用面广
High adhesion, dense Barzers PVD-AITIN coating with excellent oxidation resistance and wear resistance, suitable for a wide range of applications.


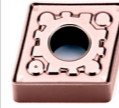
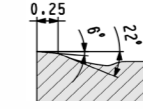
高钴细晶硬质合金基体
High-cobalt, fine-grained cemented carbide substrate.



OP1315

M 不锈钢类车削刀片 - 槽型介绍 (第二代双面负角系列槽型)

M Turning Inserts for Stainless Steel - Chip breaker Introduction (Second Generation Double-sided Negative Series)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)	
		P	M	K	N	S	H					
 NF <small>NEW</small> - 精加工用 - 曲线刃设计，切削轻快 - 小切深与低进给工况 - For finishing - Curved edge design, light cutting - Small depth of cut and low feed conditions 		●	●		○	○	○			0.1-1.5	0.08-0.28	
 QT <small>NEW</small> - 中等精度加工与粗加工 - 敞开且大正前角设计 - 槽型适用面广，尤其针对大进给、小切深工况，以及薄壁件、细长轴的车削 - For medium precision and roughing - Open and large positive rake design - Wide application range, especially for high feed, small DOC conditions, and turning of thin-walled parts and slender shafts; 		○	●				○			0.5-4.0	0.15-0.50	
 NR <small>NEW</small> - 半粗加工至粗加工用 - 变刃宽设计，通用性强 - 实现稳定的刀具寿命 - For semi-roughing to roughing - Variable edge width design, good versatility - Achieves stable tool life 		○	●					○			2.0-6.5	0.20-0.55

M 不锈钢类车削刀片槽型 -QT NEW
Indexable Insert Chipbreaker -QT

刀片技术细节与应用 Insert Technology and Application

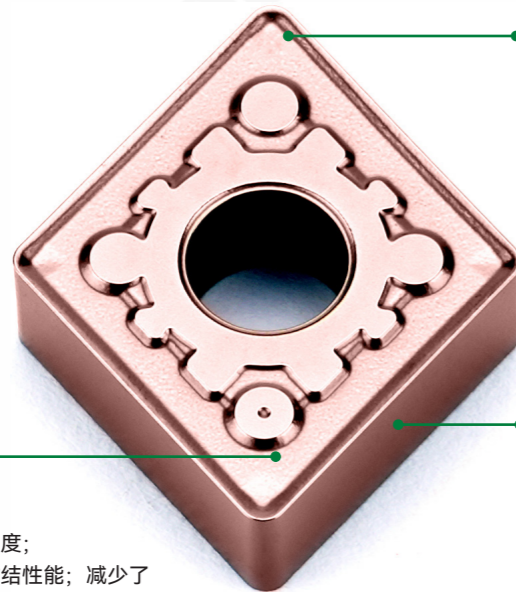
刀片材质及应用 Grade and Application

刀片型号 Inserts Size

CVD 材质 CVD Grade	OC4310、OC4320、OC4330	基本形状 Basic shapes	CNMG12、CNMG16、CNMG19、 DNMG15、SNMG12、SNMG15、 SNMG19、TNMG16、VNMG16、 WNMG06、WNMG08
被加工材料 Workpiece Material	不锈钢类材料 Stainless steel materials	刀尖圆弧 Corner Radius	0.4、0.8、1.2、1.6

槽型设计特性及应用 Chip Breaker Design Features and Application

适用范围 Application	中等精度加工与粗加工 Medium precision to rough machining	槽型特点 Chipbreaker Characteristics	<ul style="list-style-type: none"> - 敞开且大正前角设计 - 槽型适用范围广，尤其针对大进给、小切深工况，以及薄壁件、细长轴的车削； - Open and large positive rake angle design; - Wide application range, especially suitable for high feed rate with low depth of cut conditions, and turning of thin-walled parts and slender shafts;
加工参数 Parameter	$A_p=0.5-4.0\text{mm}$ $F_n=0.15-0.50\text{mm/rev}$	主切削刃 Main cutting edges	



贴合实际应用的设计
Design Optimized for Practical Applications

- 刀尖部位凹槽设计，在小切深时也可保证良好的断屑处理性能；
- 刀尖变前角变刃宽设计，刀片在不同切深时能保证切削轻快、切屑有效卷曲；
- Groove design at the tip ensures good chip breaking performance even at small cutting depths;
- Variable rake angle and edge width design at the cutting edge ensures light cutting and effective chip curling at different cutting depths;

全新硬质合金基材
New Carbide Substrate

- 在保持高温硬度的同时大幅提高其韧性；
- 拥有良好的抗小崩口特性与抗边界磨损性能；
- Significantly improves toughness while maintaining high temperature hardness;
- Excellent resistance to micro-chipping and flank wear;


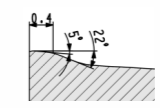
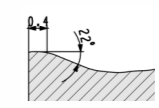


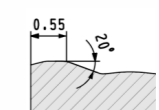
新研发涂层与后处理技术
Newly Developed Coating and Post-treatment Technology

- 新研发的涂层技术显著提升涂层强度；
- 特殊的表面处理工艺有效提升抗粘结性能；减少了切削力与摩擦力，同时有效减轻了粘结现象，延长了刀具寿命；
- 可用于多种加工工况；
- New coating technology significantly improves coating strength;
- Special surface treatment process effectively enhances anti-adhesion performance, reducing cutting force and friction while effectively mitigating adhesion phenomena and extending tool life;
- Suitable for various machining conditions;

双面通用加工可转位刀片 Double-sided indexable inserts for general machining
OC4320 CNMG120408-QT

M 不锈钢类车削刀片 - 槽型介绍 (单面负角槽型)

M Turning Inserts for Stainless Steel - Chip Breaker Introduction (Single-sided Negative Chip Breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>HR3 <small>NEW</small></p> <ul style="list-style-type: none"> - 粗加工、低进给用 - 曲线刃设计，切削轻快 - 断屑性能良好 - For roughing and low-feed applications - Curved cutting edge design for light cutting action - Excellent chip breaking performance 									3.0-10.0	0.30-0.60	
 <p>HP</p> <ul style="list-style-type: none"> - 重载切削推荐用 - 切削锋利性与强度兼备 - 切屑排出性能良好 - Recommended for heavy-duty cutting - Combining sharpness and strength - Excellent chip evacuation performance 									4.0-12.0	0.40-0.70	

M 不锈钢类车削刀片 - 槽型介绍 (第一代双面负角系列槽型)

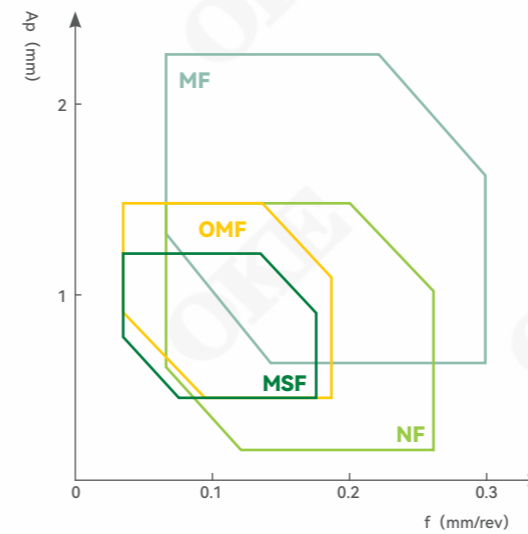
M Turning Inserts for Stainless Steel - Chip Breaker Introduction (The 1st generation double-sided negative Chip breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>MSF</p> <ul style="list-style-type: none"> - 精加工作 - 三维槽型设计 - 结合刃倾角设计, 能有效控制切屑流向 - For finishing - Three-dimension designed - Inclined cutting edge for improved chip flow control 									0.5-1.2	0.05-0.18	
 <p>OMF</p> <ul style="list-style-type: none"> - 精加工作 - 特殊前角和刃倾角设计 - 刃口锋利, 切削阻力小 - For finishing - Special designed rake angle and cutting edge inclination - Sharp cutting edge, small cutting force 									0.5-1.5	0.05-0.20	
 <p>MF</p> <ul style="list-style-type: none"> - 中等精度加工用 - 独特的槽型设计, 兼顾刃口锋利性与强度 - 可获得更高的加工效率 - For semi-finishing - Special designed chip breaker for sharpness and intensity of cutting edge - Higher machining efficiency 									0.8-2.5	0.08-0.30	
 <p>OMM</p> <ul style="list-style-type: none"> - 半粗加工与粗加工用 - 双前角设计, 兼顾刃口锋利性与强度 - 抗冲击性能好, 寿命长 - For semi-roughing and roughing - Double rake angle design ensures edge sharpness and strength - Good impact resistance and long tool life 									0.8-3.5	0.15-0.45	
 <p>OMR</p> <ul style="list-style-type: none"> - 粗加工和断续加工 - 变前角设计, 既保证了刃口的强度, 又保留了切削锋利性 - For roughing and interrupted cutting - Variable rake angle design ensures edge strength while maintaining cutting sharpness 									2.0-5.0	0.20-0.50	

不锈钢车削槽型断屑范围 (负角 / 正角)

Chip-breaking range for stainless steel turning (negative/positive)

负角刀片 (不锈钢材料用, 双面)
Negative (For stainless steel, double-sided)

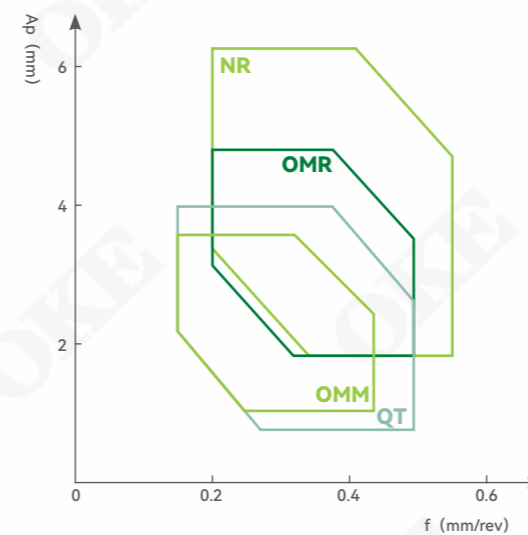


NF: 精加工槽型 Finishing



OC4310

负角刀片 (不锈钢材料用, 双面)
Negative (For stainless steel, double-sided)



QT/NM: 半精至粗加工槽型 Semi-finishing to roughing



OC4320

NR: 粗加工槽型 Roughing



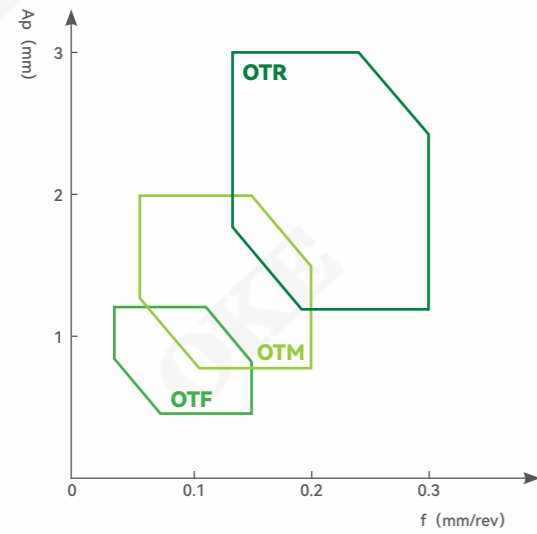
OC4330

M 不锈钢类车削刀片 - 槽型选择与应用

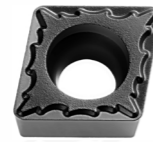
Insert Geometry Selection and Application

	第一代车削槽型 The First Generation Turning Chipbreakers	第二代车削槽型 The Second Generation Turning Chipbreakers
精切削用 Finishing	<p>MSF</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p>	<p>OMF</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p> <p>NF</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p>
轻切削 ~ 通用切削用 Light cutting ~ General Cutting	<p>MF</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p>	<p>QT</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p>
粗切削用 Roughing	<p>OMM</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p> <p>OMR</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p>	<p>NR</p> <p>刀尖部分 Nose</p> <p>主切削刃部分 Cutting edge</p>

正角刀片 (不锈钢材料用)
Positive (for tuning stainless steel)

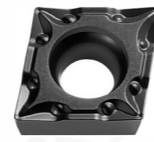


OTF: 精加工槽型 Finishing



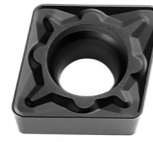
OP1315

OTM: 半精加工槽型 Semi-finishing



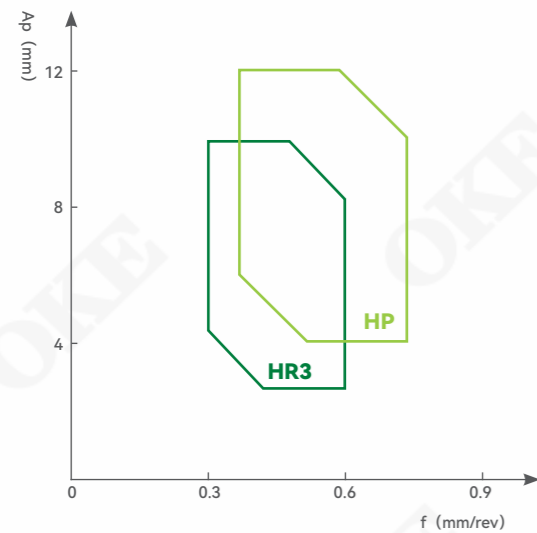
OP1315

OTR: 粗加工槽型 Roughing



OP1315

负角刀片 (不锈钢材料用, 单面)
Negative (For stainless steel, single-sided)



HR3: 准重加工槽型 Semi-heavy machining



OC4330



OP1215

HP: 重加工槽型 Heavy-duty machining



OC4330

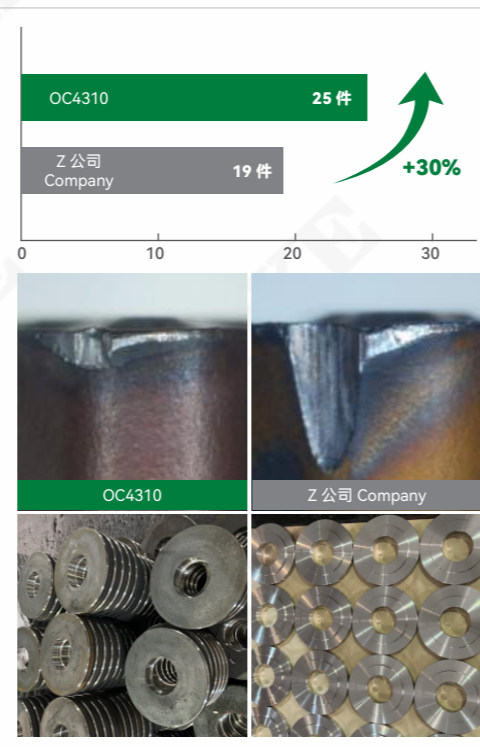


OP1215

M 不锈钢类车削刀片 - 产品应用

M Turning Inserts for Stainless Steel - Application

工件名称 Workpiece	法兰 Flange (T-M-WN06-HZL-23032907)
刀具规格 Type	WNMG060412-QT/OC4310
	WNMG060412-XX/Z 公司 Company
加工材料 Workpiece Material	316L (Φ200)
切削速度 Cutting Speed	145-210m/min
进给量 Feed Rate	0.30mm/rev
切深量 Ap	1.2mm
切削方式 Cutting Method	端面; 湿切 End face; Wet cutting

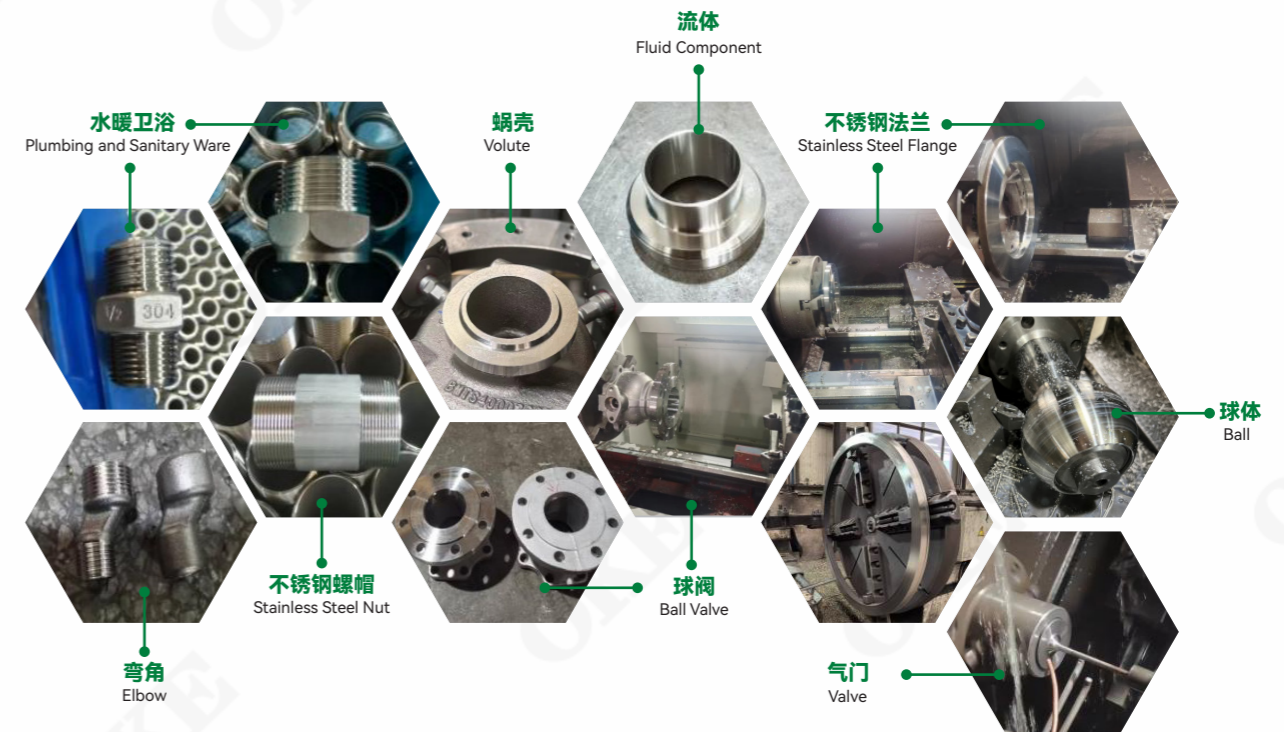


工件名称 Workpiece	气门 Valve (T-S-WN08-WF-24111601)
刀具规格 Type	WNMG080408-NF/OP6125A
	WNMG080408-XX/A 公司 Company
加工材料 Workpiece Material	Ni80
切削速度 Cutting Speed	130-150m/min
进给量 Feed Rate	0.15-0.20mm/rev
切深量 Ap	0.5-1.2mm
切削方式 Cutting Method	圆弧锥面; 湿切 Arc-shaped conical surface; Wet cutting



M 不锈钢类车削刀片 - 产品应用场景

M Turning Inserts for Stainless Steel - Typical Application



03 K 铸铁类车削刀片

K Turning Inserts for Cast Iron

K

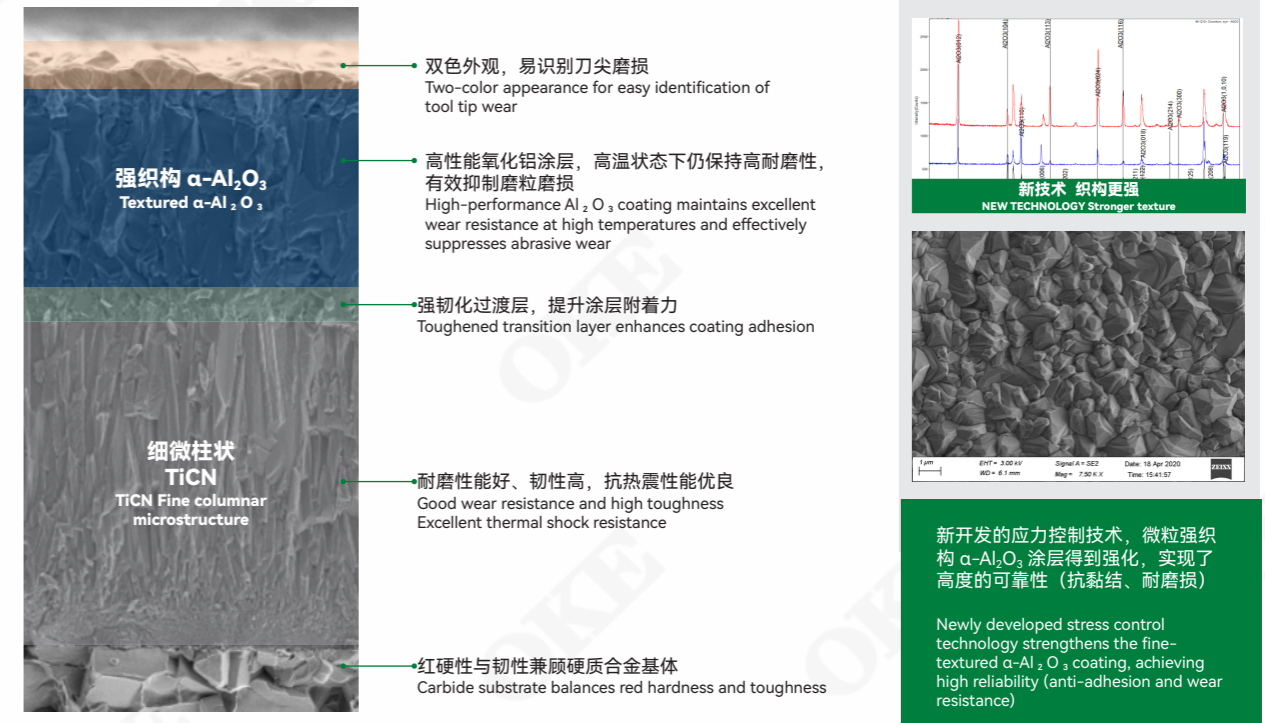
K 铸铁类车削刀片 - 牌号介绍

K Turning Inserts for Cast Iron Grade introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OC3205 <small>NEW</small>	K05 (K01-K10)			●				CVD	采用全新加厚的 CVD 强织构氧化铝涂层，基体为细晶粒硬质合金，实现了优异的耐磨性、红硬性；适用于合金铸铁、球墨铸铁、灰口铸铁高线速连续车削工况。 Featuring a newly thickened CVD highly textured Al ₂ O ₃ coating on a fine-grain carbide substrate, offering excellent wear resistance and red hardness. Suitable for high-speed continuous turning of alloy cast iron, ductile cast iron, and gray cast iron.	
OC3210	K10 (K05-K15)			●				CVD	细晶和高硬化度的化学涂层，基体具有很好的耐磨性，在广阔的加工领域实现了稳定和长寿命；灰口铸铁、球墨铸铁加工（连续、轻断续工况）；灰口铸铁、球墨铸铁加工（小零件开粗）。 Fine-grained and high-hardened chemical coating with substrates of good wear resistance, achieving stability and long life in a wide range of processing fields; Gray cast iron, ductile iron machining (continuous, light interrupted conditions); Gray cast iron, ductile iron machining (small parts roughing)	
OC3215	K20 (K15-K25) P15-P25	○		●				CVD	中等颗粒 WC 晶粒硬质合金基体搭配厚 TiCN 和厚的织构化 Al ₂ O ₃ 涂层，经特殊后处理工艺，具有突出的耐磨性、通用性；K 类通用车削牌号，也可以作为钢材车削的备选牌号。 Medium-grain WC cemented carbide substrate combined with thick TiCN and thick textured Al ₂ O ₃ coatings. After special post-treatment, it offers outstanding wear resistance and versatility. It is a K-grade general-purpose turning grade, and can also serve as an alternative grade for steel turning.	
OC3220	K20 (K15-K25) P15-P25	○		●				CVD	采用细晶 α-Al ₂ O ₃ 强化的 MTCVD TiCN-Al ₂ O ₃ 涂层，基体为一种韧性很好的硬质合金；灰口铸铁、球墨铸铁加工（强断续工况）；灰口铸铁、球墨铸铁加工（开粗、黑皮工况）。 Using fine-grain α-Al ₂ O ₃ reinforced MTCVD TiCN-Al ₂ O ₃ coating on a carbide substrate with excellent toughness. Suitable for machining gray cast iron and ductile cast iron under heavy interrupted cutting conditions. Suitable for roughing and scaled-skin cutting conditions of gray cast iron and ductile cast iron.	

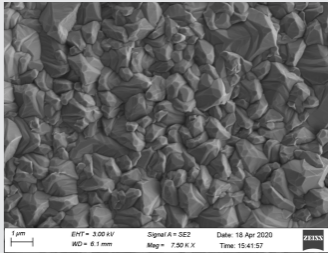
OC32 系列产品特性

OC32 Series Product Features

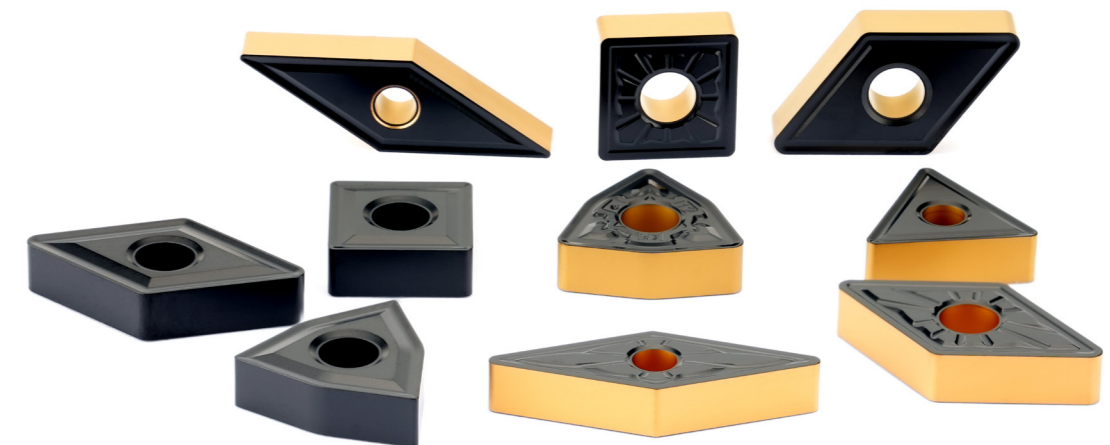


- 双色外观，易识别刀尖磨损
Two-color appearance for easy identification of tool tip wear
- 高性能氧化铝涂层，高温状态下仍保持高耐磨性，有效抑制磨粒磨损
High-performance Al₂O₃ coating maintains excellent wear resistance at high temperatures and effectively suppresses abrasive wear
- 强韧化过渡层，提升涂层附着力
Toughened transition layer enhances coating adhesion
- 耐磨性好、韧性高，抗热震性能优良
Good wear resistance and high toughness
Excellent thermal shock resistance
- 红硬性 with 韧性兼顾硬质合金基体
Carbide substrate balances red hardness and toughness

新技术 织构更强
NEW TECHNOLOGY Stronger texture



新开发的应力控制技术，微粒织构 α-Al₂O₃ 涂层得到强化，实现了高度的可靠性（抗黏结、耐磨损）
Newly developed stress control technology strengthens the fine-textured α-Al₂O₃ coating, achieving high reliability (anti-adhesion and wear resistance)



■ K 铸铁类车削刀片 - 槽型介绍 (双面负角槽型)

K Turning Inserts for Cast Iron – Chip breaker Introduction (Double-Sided Negative Chip breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H			
 OKM - 通用性加工用 - 切削锋利性与强度兼备 - 实现加工的稳定性 - For general-purpose machining - Combines sharpness and strength - Ensures machining stability 			●					1.0-4.5	0.15-0.45	
 OKR - 可对应强断续加工工况 - 刀尖与刃边强度优异 - 在断续切削、黑皮切削中实现稳定的刀具寿命 - Suitable for heavy interrupted cutting conditions - Excellent strength of the cutting edge and tip - Ensures stable tool life in interrupted and scale cutting 			●					1.5-6.0	0.25-0.60	
补充槽型 Complementary Chip breaker  K - 中等加工工况 - 刀尖与刃边强度优异 - 在连续至轻断续加工中实现稳定的刀具寿命 - For medium machining conditions - Excellent strength at the cutting edge and tip - Ensures stable tool life in continuous to light interrupted cutting 			●					1.0-5.0	0.15-0.50	
补充槽型 Complementary Chip breaker 无断屑槽 Without Chip breaker  - 可对应强断续加工工况 - 定位面大, 夹持稳定 - 在断续切削、高硬度铸铁车削中实现稳定的寿命 - Suitable for Heavy Interrupted Cutting Conditions - Large seating area for stable clamping - Stable tool life in interrupted cutting and high-hardness cast iron turning 			●					1.5-10	0.25-0.60	

■ K 铸铁类材料用车削刀片槽型 -OKM

Indexable Insert Chipbreaker -OKM

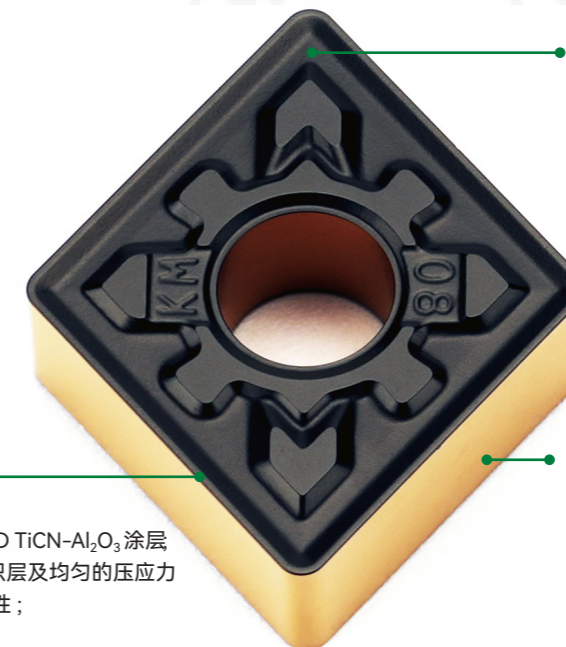
刀片技术细节与应用 Insert Technology and Application

刀片材质及应用 Grade and Application

CVD 材质 CVD Grade	OC3210、OC3220	基本形状 Basic shapes	CNMG12、DNMG15、SNMG12、TNMG16、VNMG16、WNMG08...
被加工材料 Workpiece Material	铸铁类材料 Cast iron material	刀尖圆弧 Corner Radius	0.4、0.8、1.2

槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	中等精度加工用 For medium-precision machining	槽型特点 Chipbreak Characteristics	- 刃口细节设计, 切削锋利性与强度兼备 - 在中等切削加工中具备良好的通用性 - Upgraded cutting edge design enables both sharpness and strength - Good versatility in medium cutting operations
加工参数 Parameter	Ap=1.0-4.5mm Fn=0.15-0.45mm/rev	主切削刃 Main cutting edges	



贴合实际应用的设计 Design Optimized for Practical Applications

- 通用性良好的全周槽设计;
- 平坦棱边设计确保很好的刀尖稳定性;
- All-round Chip breaker design for excellent versatility
- Flat edge design ensures high tip stability

涂层与后处理 Coating and Post-treatment

- 采用细晶 α - Al_2O_3 强化的 MTCVD TiCN- Al_2O_3 涂层
- 产品表面光滑, 实现了双色标识层及均匀的压应力分布, 确保更高的耐磨性和稳定性;
- 铸铁车削通用性工况;
- MTCVD TiCN- Al_2O_3 coating reinforced with fine-grained α - Al_2O_3
- Smooth surface with dual-color identification layer and uniform compressive stress distribution, ensuring higher wear resistance and stability
- Suitable for general cast iron turning application

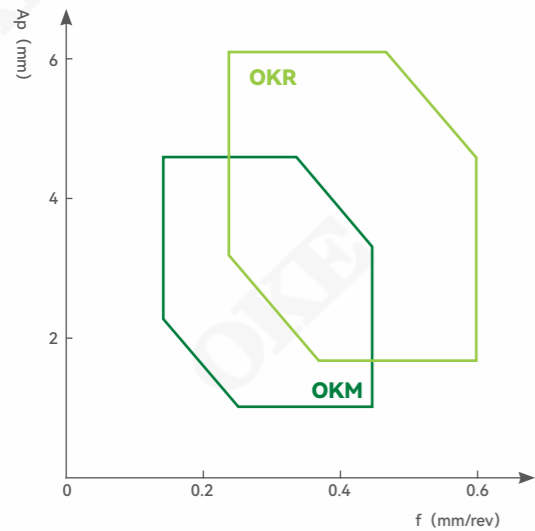
强韧硬质合金基材 Tough Carbide Substrate

- 中等晶粒强韧化硬质合金, 具有很好的刃口强度;
- 红硬性与其韧性兼顾, 实现良好的抗边界磨损与抗崩刃特性;
- Medium-grain toughened carbide with excellent edge strength
- Balanced red hardness and toughness, providing good resistance to boundary wear and edge chipping

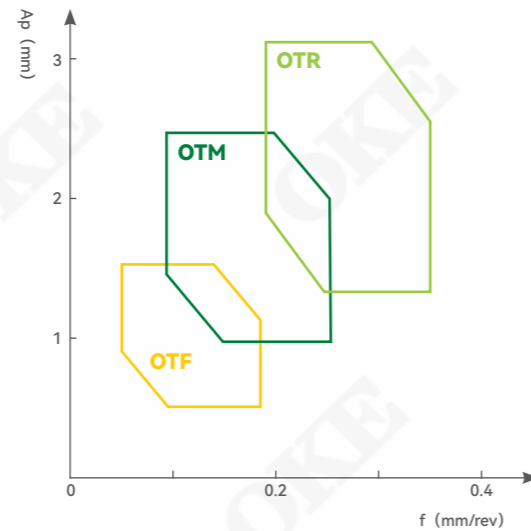
双面通用加工可转位刀片 Double-sided indexable inserts for general machining
OC3220 CNMG120408-OKM


■ 铸铁材料车削槽型断屑范围 (负角 / 正角)
Turning Chip breaker for Cast Iron (Negative / Positive)

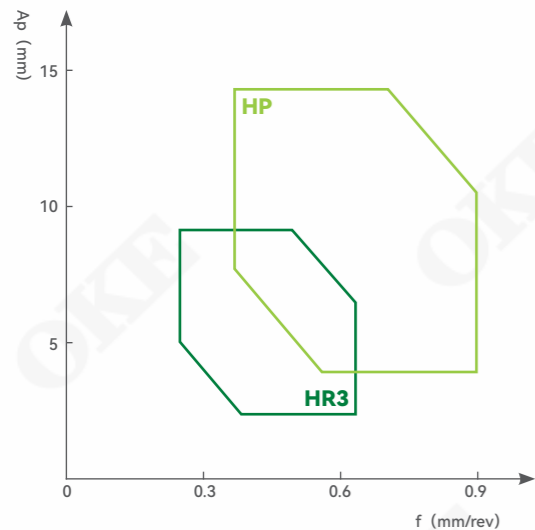
 **负角刀片 (铸铁类材料用)**
Negative (for cast iron)



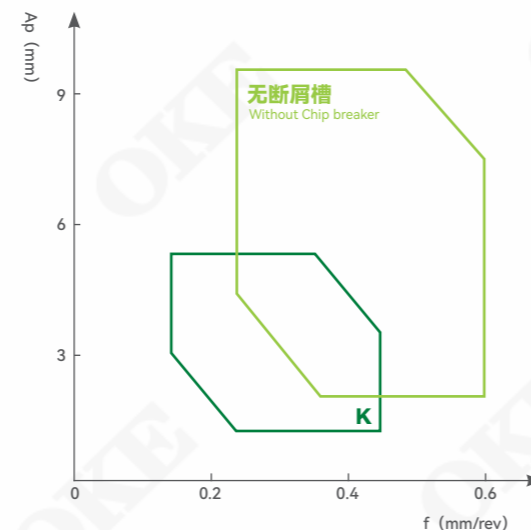
 **正角刀片 (铸铁类材料用)**
Positive (for cast iron)



 **负角刀片 (铸铁类材料用, 单面)**
Negative (for cast iron, single-sided)



 **负角刀片 (铸铁类材料用 - 补充槽型)**
Negative (for cast iron - complementary chip breaker)



■ K 铸铁类车削刀片 - 产品应用

K Turning Inserts for Stainless Steel - Application

工件名称 Workpiece	活塞 Piston (T-K-WN08-HZG-20073101)
刀具规格 Type	WNMG080408-OKR/OC3205 WNMG080408-XX/A 公司 Company
加工材料 Workpiece Material	合金铸铁 Alloy cast iron (Φ45)
切削速度 Cutting speed	320m/min
进给量 Feed rate	0.35mm/rev
切深量 Ap	1.5mm
切削方式 Cutting method	外圆、端面; 干切 External, End face; Dry cutting

OC3205 815 件
A 公司 Company 710 件
+15%

工件名称 Workpiece	轮毂 Hub (T_K_WN08_ZTJ_19063002)
刀具规格 Type	WNMG080408-OKM/OC3210 WNMG080408-XX/B 公司 Company
加工材料 Workpiece Material	汽车零部件 Automobile components QT750
切削速度 Cutting speed	160m/min
进给量 Feed rate	0.23mm/rev
切深量 Ap	2.0mm
切削方式 Cutting method	外圆、端面; 干切 External, End face; Dry cutting

OC3210 19 件
B 公司 Company 12 件
+35%

K 铸铁类车削刀片 - 产品应用

K Turning Inserts for Stainless Steel - Application

工件名称 Workpiece	轮毂 Hub (T_K_WN08_CP_19102203)	
刀具规格 Type	WNMG080408-OKM/OC3220 WNMG080408-XX/C 公司 Company	
加工材料 Workpiece Material	汽车零部件 Automobile components HT250	
切削速度 Cutting speed	414-524m/min	
进给量 Feed rate	0.35mm/rev	
切深量 Ap	1.5-2.0mm	
切削方式 Cutting method	外圆、端面; 干切 External, End face; Dry cutting	

工件名称 Workpiece	法兰 Flange (T-K-VN16-WY-20101003)	
刀具规格 Type	VNMG160408-OKR/OC3220 VNMG160408-XX/D 公司 Company	
加工材料 Workpiece Material	压缩机零部件 Compressor components HT250	
切削速度 Cutting speed	348m/min	
进给量 Feed rate	0.25mm/rev	
切深量 Ap	1.0-2.0mm	
切削方式 Cutting method	端面; 干切 End face; Dry cutting	

K 铸铁类车削刀片 - 产品应用汇总与推荐

K Turning Inserts for Stainless Steel - Application Summary and Recommendation

工件名称 Workpiece	图示 Illustration	第一推荐 Most Recommended for		推荐切削参数 Recommended Cutting Parameters	
		牌号 Grade	槽型 Chipbreaker	切削速度 Vc (m/min)	进给 F (mm/rev)
压缩机活塞 (合金铸铁) Compressor piston (alloy cast iron)		OC3205	OKM 无断屑槽 no Chip breaker	300	0.35
汽车钢套 (合金铸铁) Automotive steel casing (alloy cast iron)		OC3205	OKR 无断屑槽 no Chip breaker	300	0.35
压缩机曲轴 (QT750) Compressor crankshaft		OC3210	OKM	180	0.30
汽车轮毂 (QT500-7) Automotive wheel hub		OC3220	OKM	300	0.30
汽车制动鼓 (HT250) Automotive brake drum		OC3210	OKM	350	0.35
汽车刹车盘 (HT250) Automotive brake disc		OC3210 OC3220	OKR	400	0.30
压缩机法兰 (HT250) Compressor flange		OC3220	OKR	250	0.25
压缩机气缸 (HT250) Compressor cylinder		OC3220	OKM OKR	300	0.20
轴承件 (HT250) Bearing		OC3220	OKR	300	0.30
减速机配件 (HT250) Reducer components		OC3220	OKM	350	0.25

04 N 有色金属类车削刀片

N Turning Inserts for Non-Ferrous Material

N


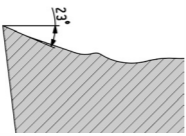
N 有色金属类车削刀片 - 牌号介绍

N Turning Inserts for Non-Ferrous Material Grade introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OK434	N15 (N10-N25) S15-S25				●	○		无涂层 No coating	<p>细颗粒碳化钨与超细钴粉结合，通过低压烧结实现内部组织的完全致密；具有硬度高，强度高，导热性好等特点，适用于有色金属、铸铁等材料的精、半精加工。</p> <p>Fine particles of tungsten carbide and ultrafine cobalt powder combined to realize fully dense internal organization by low-pressure sintering; It features high hardness, high strength, good thermal conductivity and etc., making it suitable for finishing and semi-finishing of non-ferrous metals and cast iron.</p>	

N 有色金属类车削刀片 - 槽型介绍 (单面正角槽型)

N Turning Inserts for Non-Ferrous Material Chip breaker Introduction (Single-Sided Positive Chip Breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H			
 NL - 精加工至粗加工工况 - 大前角及后角设计使刀片刃口更加锋利 - 三维断屑槽及大的容屑槽设计，断屑与排屑性能良好 - For finishing to roughing - Large rake and clearance angles form sharper cutting edge. - Unique 3D Chip breaker and sufficient chip pocket provide excellent chip breaking and chip evacuation performance.				●	○			0.2-2.0	0.10-0.35	

N 有色金属类车削刀片槽型 -NL

Indexable Insert Chipbreaker -NL

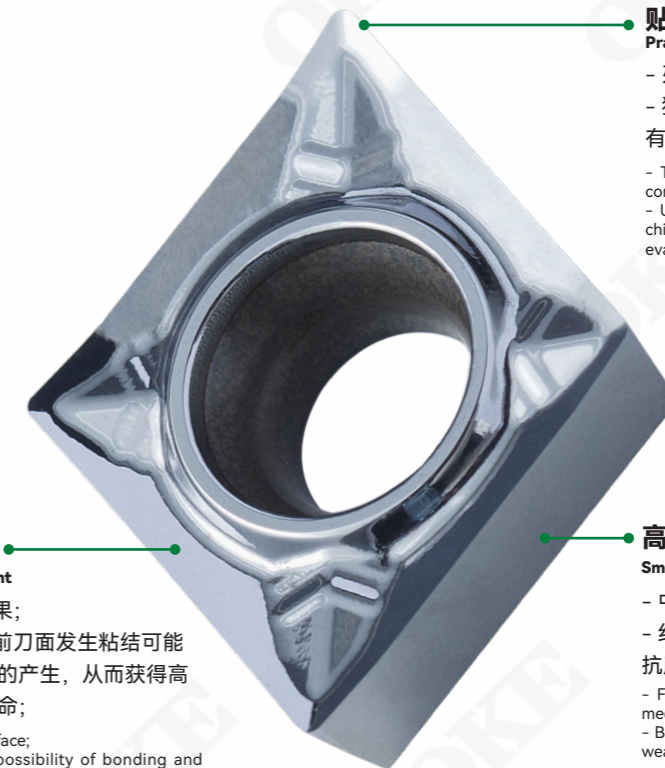
刀片技术细节与应用 Insert Technology and Application

刀片材质及应用 Grade and Application

无涂层牌号 Grade without coating	OK434	基本形状 Basic shapes	CCGT06、CCGT09、CCGT12 DCGT07、DCGT11、RCGT12 SCGX09、SCGX12、TCGX09 TCGX11、TCGX16、VCGX11...
被加工材料 Workpiece Material	有色金属材料、难切削材料 Non-ferrous material High-temp alloy	刀尖圆弧 Corner Radius	0.2、0.4、0.8、1.2...

槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	精加工至粗加工用 For finishing to roughing	槽型特点 Chipbreak Characteristics	- 大前角设计，切削轻快 - 大的容屑槽设计，排屑性能良好 - Large rake angle makes cutting smoother and lighter - Large chip pocket ensures excellent chip evacuation
加工参数 Parameter	Ap=0.2-2.0mm Fn=0.10-0.35mm/rev	主切削刃 Main cutting edges	



贴合实际应用的设计 Practical Application-oriented Design

- 刃倾角设计，有效控制切屑流向；
- 独一无二的三维断屑槽与大的容屑槽设计，有效保证了刀片的断屑与排屑性能；
- The cutting edge inclination angle effectively controls the chip flow direction.
- Unique 3D design of Chip breaker and sufficient chip pocket provide excellent chip breaking and chip evacuation performance.

光滑的表面处理 Smooth Surface Treatment

- 刀片前刀面镜面效果；
- 能有效降低切屑与前刀面发生粘结可能性，有效抑制积屑瘤的产生，从而获得高的表面质量与刀片寿命；
- Mirror finish on the rake face;
- Efficiently reduce the possibility of bonding and restrain built-up edge, consequently obtains good surface quality and insert life.

高硬度硬质合金基材 High Hardness Cemented Carbide Substrate

- 中低 Co 含量细晶强韧化硬质合金；
- 红硬性与其韧性兼顾，实现良好的抗磨损与抗崩刃特性；
- Fine-grained, toughened cemented carbide with medium to low Cobalt content.
- Balances red hardness and toughness, providing good wear resistance and chipping resistance.

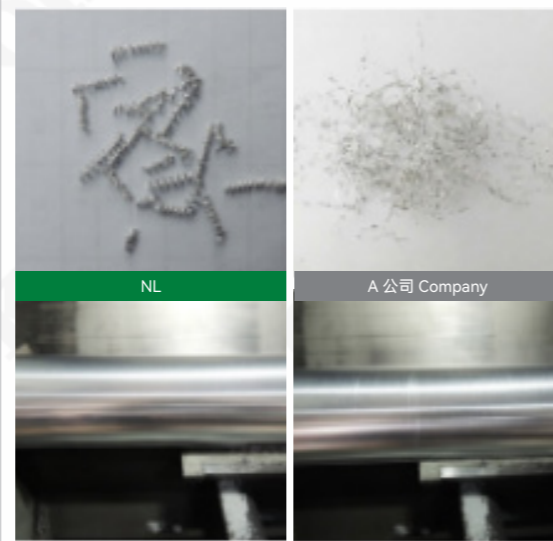
单面通用加工可转位刀片 Single-sided indexable inserts for general machining
OK434 CCGX09T304-NL

S

N 有色金属类车削刀片 - 产品应用

N Turning Inserts for Non-Ferrous Material - Application

工件名称 Workpiece	圆棒 Rods
刀具规格 Type	DCGX11T304-NL/OK434
	DCGX11T304-XX/A 公司 Company
加工材料 Workpiece Material	纯铝 Pure aluminum
切削速度 Cutting speed	600m/min
进给量 Feed rate	0.20mm/rev
切深量 Ap	0.3mm
切削方式 Cutting method	外圆 External



结论: 我司刀片断屑更好, 切屑更流畅, 加工表面更光滑;
Conclusion: Our inserts provide better chip breaking, smoother chip flow, and a smoother machined surface.



05 S 难切削材料类车削刀片

S Turning Inserts for High-temperature Alloys

S 难切削材料类车削刀片 - 牌号介绍

S Turning Inserts for High-temperature Alloys Grade Introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OP6105A	S05 (S05-S15) P05-P15 M05-M15 H10-H25	○	○			●	○	PVD	中等加工至精加工等级; 细晶粒硬质合金 PVD 涂层牌号; 兼具突出的红硬性和抗塑性变形能力, 同时具有优异的刃口安全性。 For Medium to finish machining; Fine-grained carbide PVD-coated grades; It combines outstanding red hardness and resistance to plastic deformation, while also offering excellent edge stability.	
OP6115A	S15 (S10-S20) P10-P20 M10-M20	○	○			●		PVD	通用车削加工等级; 薄的 PVD 含 Si 涂层与锋利刃口结合强度高, 光滑的表面具有优异的抗粘结性, 致密的涂层组织结构具有突出的抗氧化和耐磨损性能。 General turning grade The thin PVD Si-containing coating combines high adhesion with a sharp cutting edge. Its smooth surface provides excellent anti-adhesion properties, and the dense coating structure offers outstanding oxidation resistance and wear resistance.	
OP6125A	S25 (S20-S30) P20-P30 M20-M30 K20-K30	○	○	○		●		PVD	粗加工等级; 细晶粒硬质合金基材材质, 优异的刃口强度; 致密的 PVD 氮化物涂层, 兼具了极低阻力和优异的抗氧化特性, 突出的耐高温性能。 Suitable for roughing Fine-grained carbide substrate material, excellent edge stability; dense PVD nitride coating features extremely low resistance, excellent anti-oxidation properties and outstanding high temperature resistance.	

OP6 系列产品特性

OP6 Series Product Features

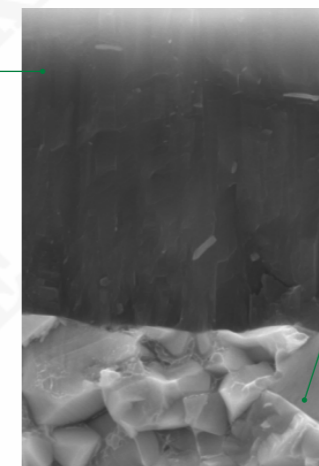
先进的涂层技术 Advanced coating technology

实现了涂层薄膜在基材上附着力良好; 产品表面光滑无液滴, 切削阻力小; TiAlSiN 多层薄膜结构, 实现了产品拥有超高的抗氧化、高耐磨与抗粘结特性;

Ensures good adhesion of the coating film to the substrate.
The smooth, droplet-free surface help to reduce cutting resistance.
TiAlSiN multilayer film structure provides excellent oxidation resistance, high wear resistance, and anti-adhesion performance


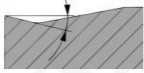
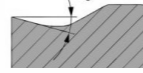

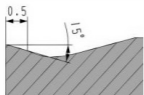
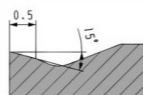

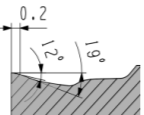
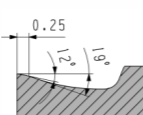

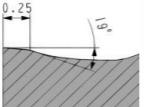
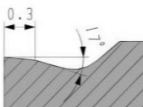
新研发的强韧硬质合金基材

Newly developed toughened cemented carbide substrate 在保持红硬性的同时提高韧性, 实现良好的抗边界磨损特性与抗崩刃性;
Improves toughness while maintaining red hardness. Provides good resistance to edge wear and excellent edge chipping resistance.




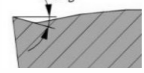
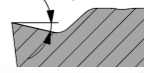

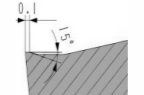
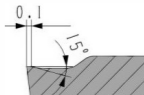
■ S 难切削材料类车削刀片 - 槽型介绍 (双面负角槽型)

S Turning Inserts for High-temperature Alloys Chip breaker Introduction (Double-Sided Negative Chip Breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>SMF</p> <ul style="list-style-type: none"> - 难切削材料精加工用 - 精加工槽型, 周边磨削 - 曲线刃设计, 切削轻快 - For finishing of hard-to-machine materials - Chipbreaker of finishing, peripheral grinding - Curved edge design, Cutting is light and fast <p>C D R S T V W</p>					●	○			0.5-2.0	0.05-0.20	
 <p>SMM</p> <ul style="list-style-type: none"> - 通用性加工用 - 双前角设计, 可有效断屑 - 切削锋利性与强度兼备 - For general machining - Double rake angle ensures efficient chip breaking - Combining sharpness and strength <p>C D R S T V W</p>					●	○			1.0-3.5	0.10-0.30	
 <p>SMR <small>NEW</small></p> <ul style="list-style-type: none"> - 通用性加工用 - 优化前角设计, 切削阻力小, 断屑范围广 - 兼顾耐磨损性能与抗月牙洼磨损性能 - For general machining - Optimized rake angle design reduces cutting resistance and provides a wide chip-breaking range - Balances wear resistance and resistance to crater wear <p>C D R S T V W</p>					○	●			1.0-5.0	0.15-0.35	
 <p>OSM</p> <ul style="list-style-type: none"> - 粗加工车削用 - 正棱边设计, 抗粘性好 - 实现稳定的刀具寿命 - For rough turning - Positive edge design, good anti-adhesion - stable tool life <p>C D R S T V W</p>					○	○			2.0-6.5	0.20-0.50	

■ S 难切削材料类车削刀片 - 槽型介绍 (单面正角槽型)

S Turning Inserts for High-temperature Alloys Chip breaker Introduction (Positive Chip Breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>SMF</p> <ul style="list-style-type: none"> - 注重锋利性的刀尖设计 - 精加工槽型, 周边磨削 - 非常好的切屑控制 - Focuses on sharp cutting edge design - Finishing-type chip breaker with periphery grinding - Excellent chip control <p>5° 7°</p> <p>C D R S T V W</p>					●	○			0.5-2.0	0.05-0.20	
 <p>SMM</p> <ul style="list-style-type: none"> - 中等至粗加工车削用 - 平行切削刃设计 - 可实现稳定的切屑处理 - For medium to rough turning - Parallel cutting edge design - Enables stable chip control <p>5° 7°</p> <p>C D R S T V W</p>					○	●			1.0-3.0	0.10-0.30	

*备注: 部分型号 Note: Applicable to certain types.



S 难切削材料类车削刀片槽型 -SMM
Indexable Insert Chipbreaker -SMM

刀片技术细节与应用 Insert Technology and Application

刀片材质及应用 Grade and Application

刀片型号 Inserts Size

PVD 材质 PVD Grade	OP6105A、OP6115A	基本形状 Basic shapes	CNMG12、CNMG16 CNMG19、DNMG15 SNMG12、SNMG15 SNMG19、TNMG16 VNMG16、WNMG08
被加工材料 Workpiece Material	难切削材料、不锈钢 Exotic Alloy, Stainless Steel	刀尖圆弧 Corner Radius	0.4、0.8、1.2、1.6

槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	通用性加工用 General machining	槽型特点 Chipbreak Characteristics	- 双前角设计, 可有效断屑 - 切削锋利性与强度兼备 - Double rake angles design for effective chip - breaking, combine cutting sharpness and strength
加工参数 Parameter	Ap=1.0~3.5mm Fn=0.10~0.30mm/rev	主切削刃 Main cutting edges	



先进的涂层技术
Advanced coating technology

- 实现了涂层薄膜在基材上附着力良好;
- 产品表面光滑无液滴, 切削阻力小;
- TiAlSiN 多层薄膜结构, 实现了产品拥有超高的抗氧化、高耐磨与抗粘特性;
- Coating film layer has good combination to the substrate;
- Inserts surface is smooth without droplets and has low cutting force;
- TiAlSiN multilayer film structure to achieve super high anti-oxidation, high wear resistance and anti-adhesion properties;

强韧硬质合金基材
Strong and tough carbide substrate

- 高温硬度与强度优异的硬质合金基材;
- 红硬性与韧性兼顾, 实现良好的抗边界磨损与抗崩刃特性;
- Carbide substrate with excellent high temperature hardness and strength;
- Balancing red hardness and toughness to achieve good resistance to edge wear and chipping;

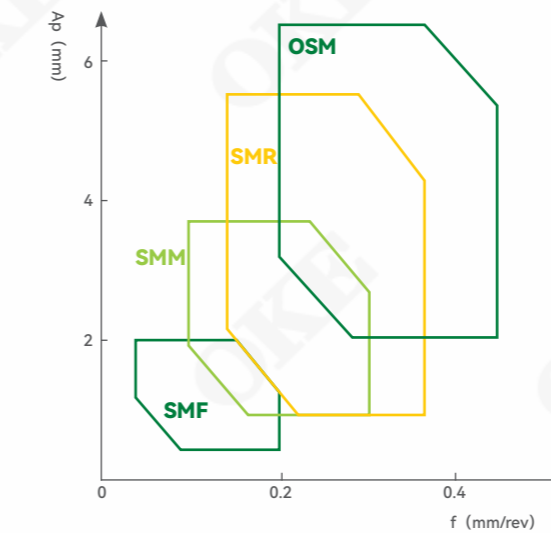
先进的表面处理工艺
Advanced surface treatment technology

- 涂层去应力处理, 改善了刀片刃口韧性;
- 产品表面光滑, 减少了切削力与摩擦力, 同时有效减轻了粘结现象, 延长了刀具寿命;
- 可用于多种加工工况;
- Stress relief treatment of the coating improves the toughness of the cutting edge;
- Smooth surface, which reduces cutting force and friction, effectively reduces adhesion and prolongs tool life;
- Suitable for different cutting conditions;

双面通用加工可转位刀片 Double sided general purpose indexable inserts
OP6115A CNMG120408-SMM

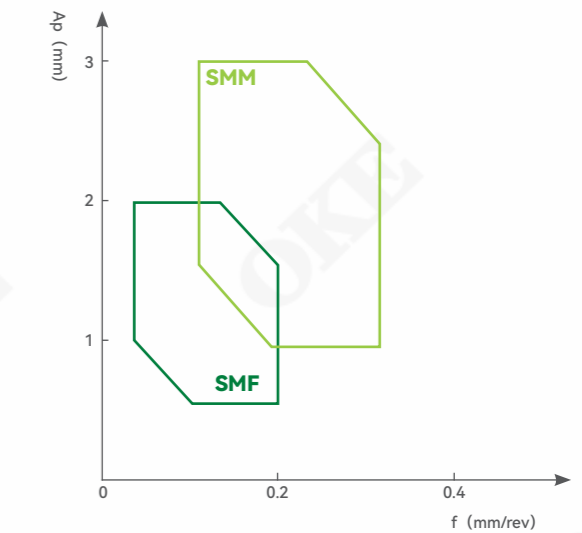
难切削类材料车削槽型断屑范围 (负角 / 正角)
Turning Chip breaker for High Temperature Alloys (Negative / Positive)

负角刀片 (难切削类材料用)
Negative inserts (ISO S)



- SMF** 精加工槽型
Finishing
- SMM** 通用性车削槽型
General use
- SMR** 通用性至粗加工车削槽型
General use to Roughing
- OSM** 粗加工槽型
Roughing

正角刀片 (难切削类材料用)
Positive inserts (ISO S)



- SMF** 精加工槽型
Finishing
- SMM** 通用性至粗加工车削槽型
General use to Roughing

S 难切削材料类车削刀片 - 产品应用
Turning Inserts for High Temperature Alloys - Applications

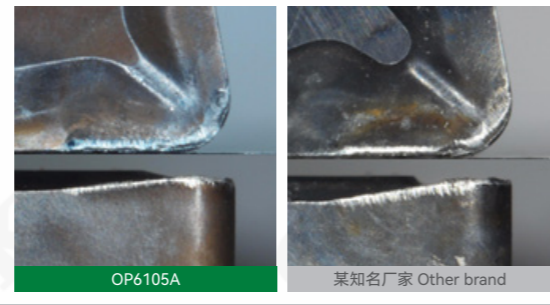
ISO	被加工材料 Workpiece Material	ISO 等级 ISO Grade	牌号 Grade	推荐切削速度 Recommended cutting speed (m/min)	产品特性 Properties	适用工况 Working Conditions
S	难切削材料 (铁基、镍基或钴基、α+β 钛合金) High Temperature Alloys (iron-based, nickel-based, or cobalt-based, α+β titanium alloys)	S05	OP6105A	50 30-80	重视高耐磨的等级牌号 high wear-resistance	精加工 ~ 中等切削 Finishing to medium
		S15	OP6115A	40 25-60	通用性第一推荐牌号 General use	中等切削 ~ 准重切削 Medium to roughing
		S25	OP6125A	25 20-35	重视稳定性的等级牌号 Stable	粗切削 ~ 轻断续切削 Roughing to slightly interrupted turning

S 难切削材料类车削刀片 - 产品应用

Turning Inserts for High Temperature Alloys - Applications

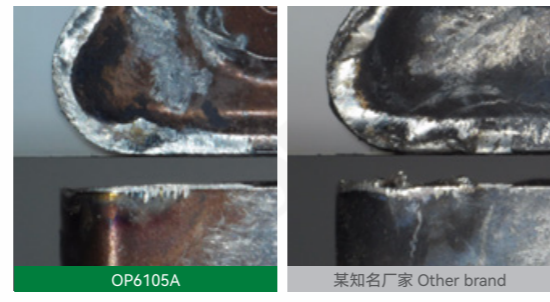
应用案例一 Application Case 1

刀片规格 Inserts	OP6105A/WNGG080408-SMF
零件名称 Work piece	排气阀零部件 Exhaust valve parts
零件材料 Work material	21-4N(5Cr21Mn9Ni4N)
切削参数 Parameter	Vc=35m/min, Fn=0.15mm/rev Ap=0.5mm, 湿切 Wet cutting
服役表现 Service performance	耐磨性优良 Excellent wear resistance



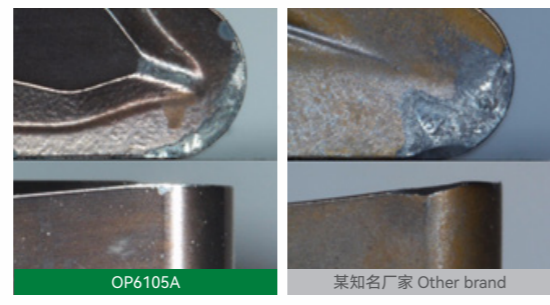
应用案例二 Application Case 2

刀片规格 Inserts	OP6105A/DNMG150612-QT
零件名称 Work piece	汽轮机零部件 Steam turbine parts
零件材料 Work material	inco.718
切削参数 Parameter	Vc=25m/min, Fn=0.30mm/rev Ap=1.3mm, 湿切 Wet cutting
服役表现 Service performance	可实现长时间车削 Enables long-term turning



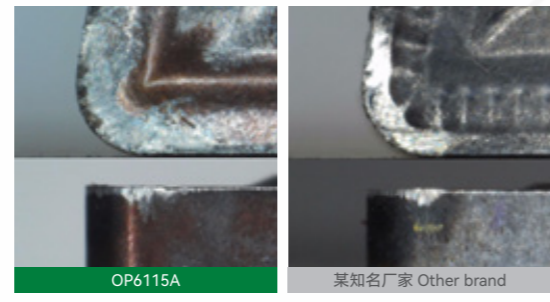
应用案例三 Application Case 3

刀片规格 Inserts	OP6105A/VNGG160412-SMF
零件名称 Work piece	飞机零部件 Steam turbine parts
零件材料 Work material	GH4698
切削参数 Parameter	Vc=22m/min, Fn=0.18mm/rev Ap=0.5mm, 湿切 Wet cutting
服役表现 Service performance	能实现长时间切削, 光洁度良好 Achieve long-term cutting and good surface



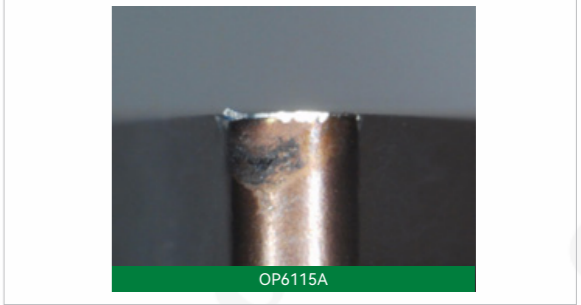
应用案例四 Application Case 4

刀片规格 Inserts	OP6115A/WNMG080408-SMM
零件名称 Work piece	飞机零部件 Aircraft parts
零件材料 Work material	TC11
切削参数 Parameter	Vc=40m/min, Fn=0.18mm/rev Ap=1.5mm, 湿切 Wet cutting
服役表现 Service performance	抑制磨损, 使用寿命提升 Reduce wear, increase service life



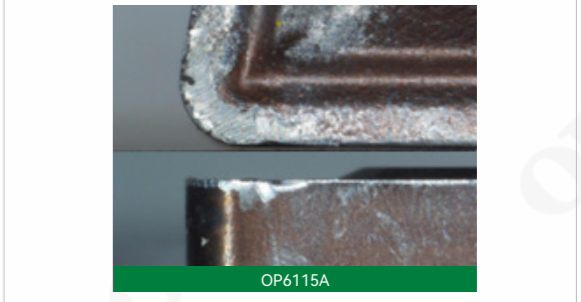
应用案例五 Application Case 5

刀片规格 Inserts	OP6115A/VNMG160408-SMM
零件名称 Work piece	飞机零部件 Aircraft parts
零件材料 Work material	GH4169
切削参数 Parameter	Vc=25m/min, Fn=0.15mm/rev Ap=1.0mm, 湿切 Wet cutting
服役表现 Service performance	耐磨性能好, 使用寿命提升 Good wear resistance and longer service life



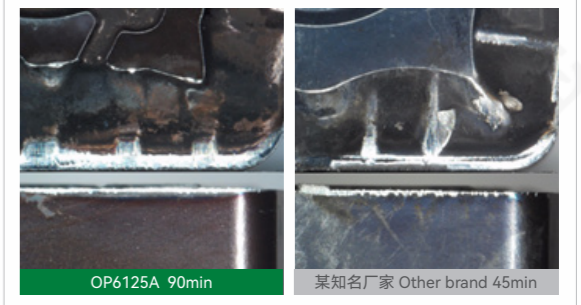
应用案例六 Application Case 6

刀片规格 Inserts	OP6115A/CNMG120408-SMM
零件名称 Work piece	飞机零部件 Aircraft parts
零件材料 Work material	GH3039
切削参数 Parameter	Vc=32m/min, Fn=0.12mm/rev Ap=1.5mm, 湿切 Wet cutting
服役表现 Service performance	抑制磨损, 使用寿命提升 Reduce wear, increase service life



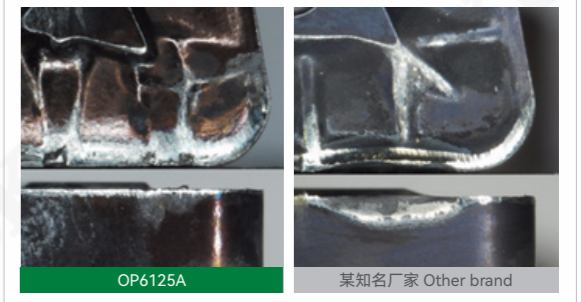
应用案例七 Application Case 7

刀片规格 Inserts	OP6125A/CNMG120412-SMR
零件名称 Work piece	飞机零部件 (黑皮) Aircraft parts (roughing)
零件材料 Work material	GH4169
切削参数 Parameter	Vc=22m/min, Fn=0.21mm/rev Ap=5.0mm, 湿切 Wet cutting
服役表现 Service performance	磨损均匀, 使用寿命提升明显 Uniform wear, significantly improved service life



应用案例八 Application Case 8

刀片规格 Inserts	OP6125A/CNMG120412-SMR
零件名称 Work piece	汽轮机零部件 Steam turbine parts
零件材料 Work material	GH4738
切削参数 Parameter	Vc=22m/min, Fn=0.24mm/rev, Ap=3.0mm, 湿切 Wet cutting
服役表现 Service performance	有效抑制破损, 可实现稳定加工 Effectively suppresses breakage and enables stable processing



A 车削刀片手册
Turning Insert Grades
B 难加工材料类车削刀片
Turning Inserts for High Temperature Alloys
C 专用刀具介绍
Specialized Product Introduction
D 附件
Attachments

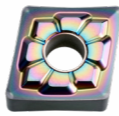
06 H 高硬材料类车削刀片

H Turning Inserts for Hardened Material

H

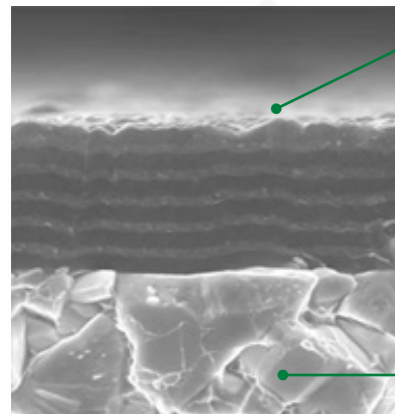
H 高硬材料类车削刀片 - 牌号介绍

H Turning Inserts for Hardened Material Grade introduction

涂层牌号 Coating	ISO 等级 ISO Grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OPH120	H15 (H10-H20)							PVD	高硬度、高耐磨性牌号；细晶粒硬质合金 PVD 涂层牌号，兼具优异的耐冲击性能和抗裂纹性，同时具有绚丽的特殊外观；适用于精加工至中等切削。 High hardness, high wear-resistance grade; A fine-grained carbide PVD-coated grade that combines excellent impact and crack resistance with a stunning, distinctive appearance. Suitable for finishing to medium cutting applications.	

OPH120 系列产品特性

OPH120 Grade properties



先进的涂层技术

Advanced coating technology

多层复合 + 纳米复合的架构设计；
优异的耐冲击性能和抗裂纹性；
AlTiN 的 AIP 技术，高附着性；

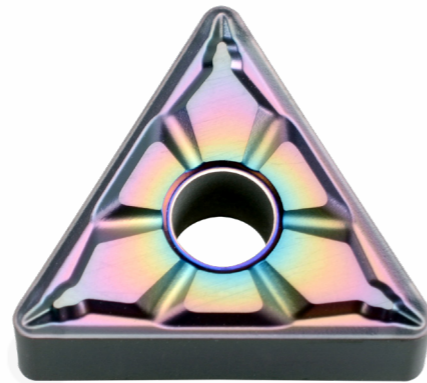
Multi-layer composite + nanocomposite design;
Excellent impact and crack resistances;
AlTiN AIP technology for high adhesion;

高硬度硬质合金基材

Newly-developed carbide substrate

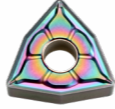
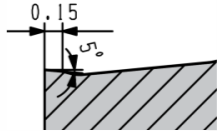
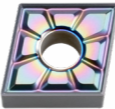
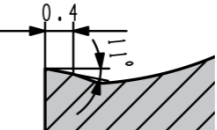
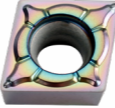
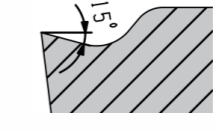
精选纳米级高性能碳化钨，具备高硬度、高强度，是高硬刀具基体之首选；
全新的制造工艺，在保持红硬性的同时提高韧性，实现良好的抗边界磨损特性与抗崩刃性；

Selected nano-scale, high-performance tungsten carbide offers high hardness and strength, making it the preferred choice for high-hardness tool substrates.
A brand-new manufacturing process maintains red hardness while improving toughness, achieving excellent resistance to edge wear and chipping.



H 高硬材料类车削刀片 - 槽型介绍 (双面负角与单面正角槽型)

H Turning Inserts for Hardened Material Chipbreaker Introduction (Double-side Negative Inserts and Single-side Positive Inserts)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H			
 OHF - 精加工槽型 - 锋利刃口设计，切削轻快 - 适合较小切深及进给，断屑性能良好 - Chipbreaker for finishing - Sharp edge design, cutting smoothly - Suitable for smaller cutting depth and feed, good chip breaking performance 							●	0.2-1.2	0.05-0.15	
 OH - 精加工至半精加工用 - 双前角设计，较低切削阻力及宽的断屑范围 - 切削锋利性与强度兼备 - Finishing to medium - Double rake angle design, lower cutting resistance and wide chip breaking range - Cutting sharpness and strength 							●	0.5-2.0	0.05-0.25	
 OH - 精加工槽型 - 大前角及后角设计使刀片刃口更加锋利 - 工件表面精度更高，适合内孔加工 - Finishing chipbreaker - Large rake and clearance angles make the blade edge sharper - The workpiece surface precision is higher, suitable for internal hole processing 							●	0.2-1.2	0.05-0.15	

* 备注：部分型号 Note: Applicable to certain types.

H 高硬材料类车削刀片槽型 -OH

Indexable Insert Chipbreaker -OH

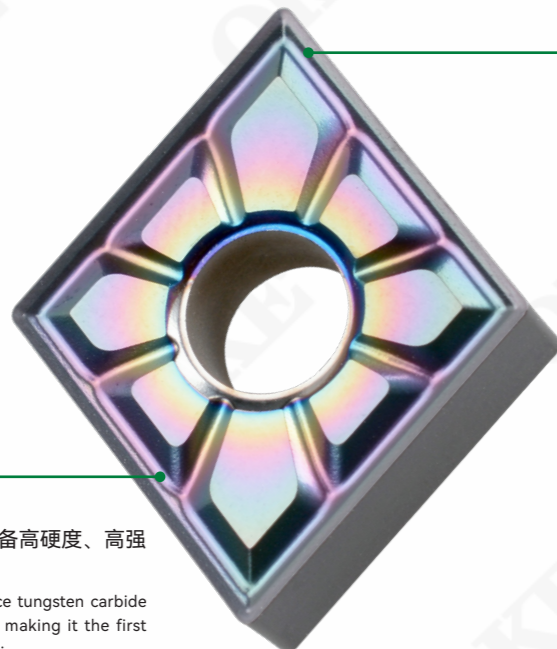
刀片技术细节与应用 Insert Technology and Application

刀片材质及应用 Grade and Application

PVD 材质 PVD Grade	OPH120	基本形状 Basic shapes	CNMG12、DNMG15、TNMG16、 VNMG16、WNMG08、CCGT、 DCMT11、TCMT11、VBMT16
被加工材料 Workpiece Material	高硬钢、淬硬钢 High hardness steel, Hardened steel	刀尖圆弧 Corner Radius	0.4、0.8

槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	精加工至半精加工用 Finishing to semi-finishing	槽型特点 Chipbreak Characteristics	- 双前角设计, 较低切削阻力及宽的断屑范围 - 切削锋利性与强度兼备 - Double rake angle design, lower cutting resistance and wide chip breaking range - Ensures both cutting sharpness and strength
加工参数 Parameter	Ap=0.5-2.0mm Fn=0.05-0.25mm/rev	主切削刃 Main cutting edges	



特殊设计的涂层结构 Special coating structure design

- 多层复合 + 纳米复合的架构设计;
- 优异的耐冲击性能和抗裂纹性;
- AlTiN 的 AIP 技术, 高附着力;
- Multi-layer composite + nanocomposite design;
- Excellent impact resistance and crack resistance;
- AlTiN AIP technology for high adhesion;

特制硬质合金基材 Special carbide substrate

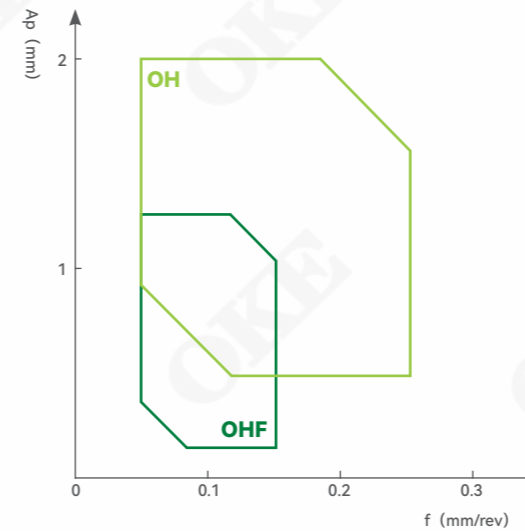
- 精选纳米级高性能碳化钨, 具备高硬度、高强度, 是高硬刀具基体之首选;
- Selected nano-level high-performance tungsten carbide has high hardness and high strength, making it the first choice for high-hardness tool substrates;

双面通用加工可转位刀片 Double sided indexable inserts for general machining
OPH120 CNMG120404-OH

H 高硬材料类车削刀片槽型断屑范围 (负角 / 正角)

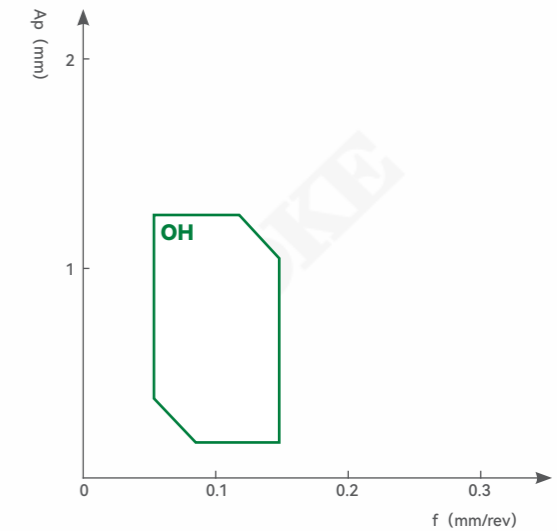
Turning Inserts for Hardened Material Turning Chip breaker for Hardened Material (Negative /Positive)

负角刀片 (高硬度材料用) Negative inserts (For Hardened Material)



- OHF** 精加工槽型
Finishing
- OH** 精加工 - 中等切削槽型
Finishing to medium

正角刀片 (高硬度材料用) Positive inserts (For Hardened Material)



- OH** 精加工槽型
Finishing

H 高硬材料类车削刀片 - 产品应用

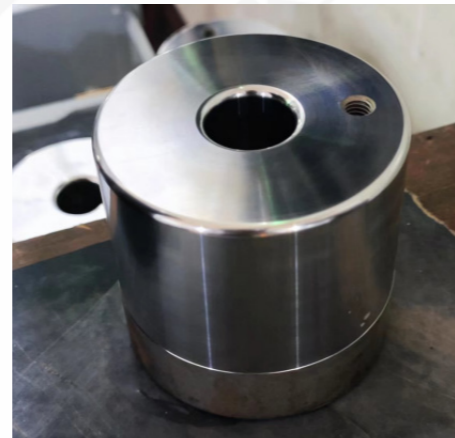
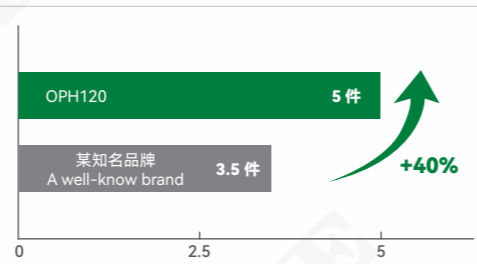
H Turning Inserts for Hardened Material Applications

ISO	被加工材料 Workpiece Material	ISO 等级 ISO Level	牌号 Grade	推荐切削速度 Recommended cutting speed (m/min)	产品特性 Product Features	适用工况 Application
H	淬硬钢材料 Hardened steel	H15	OPH120	30-80	高硬度、高耐磨性牌号 High hardness, good wear-resistance grade	精加工 ~ 中等切削 Finishing to medium machining

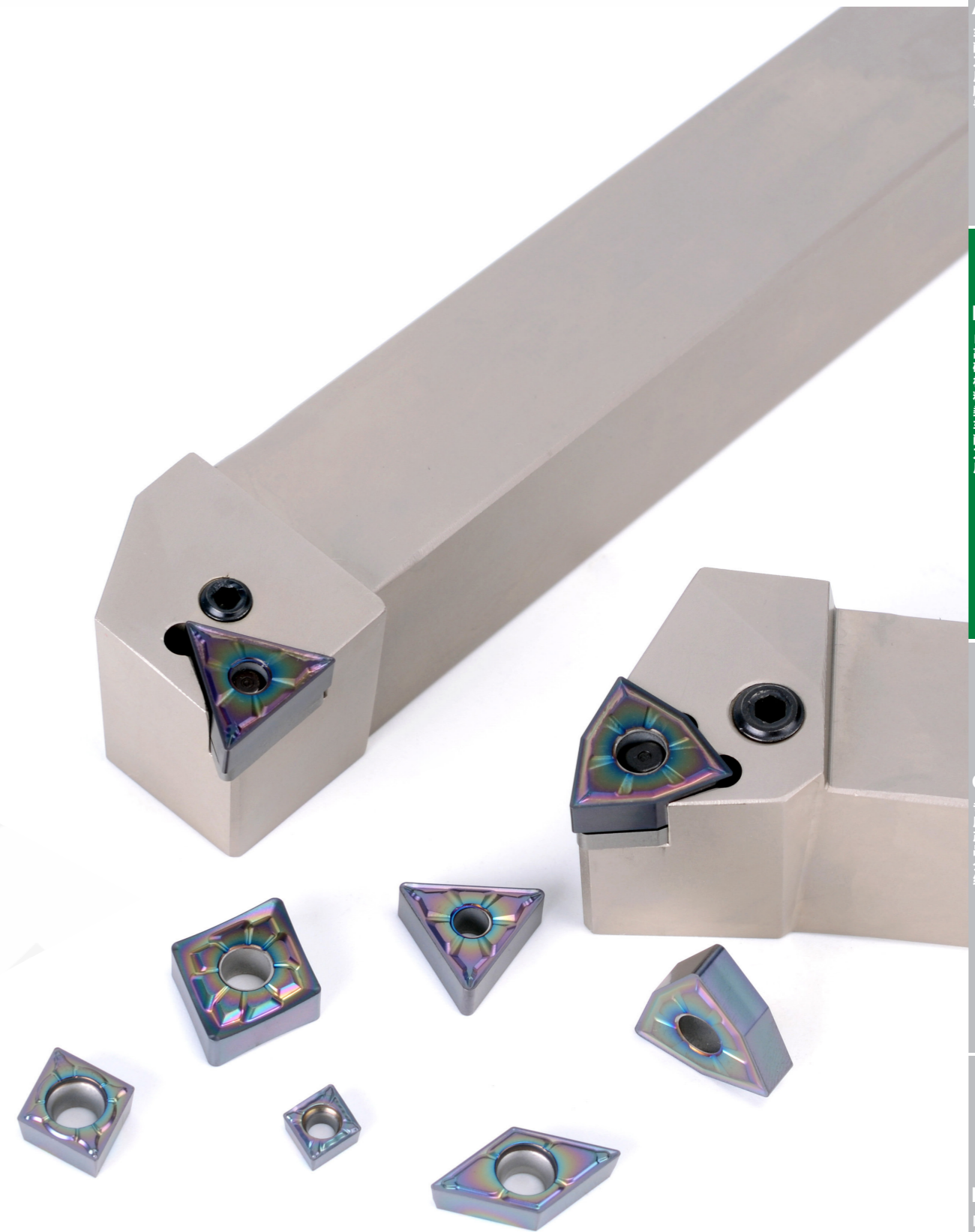
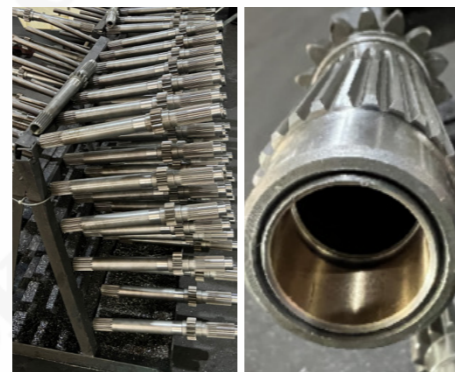
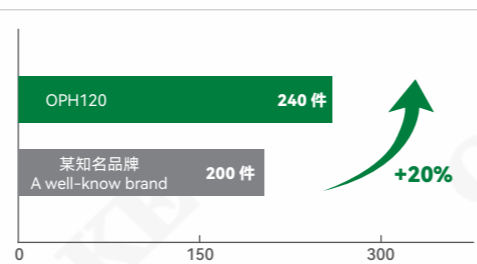
H 高硬材料类车削刀片 - 产品应用

H Turning Inserts for Hardened Material Applications

工件名称 Workpiece	套筒 Sleeve (T-P-TN16-ZHW-23082601)
刀具规格 Type	TNMG160404-OH/OPH120
	TNMG160404-XX/ 某知名品牌 A well-know brand
加工材料 Material	SKD11/HRC60-62
切削速度 Cutting speed	35m/min
进给量 Feed rate	0.08-0.12mm/rev
切深量 Ap	0.05-0.1mm
切削方式 Cutting method	外圆、端面; 水冷 External and end face; Liquid coolant



工件名称 Workpiece	齿轮轴 (T-P-WN08-ZH-23030501)
刀具规格 Type	WNMG080404-OH/OPH120
	WNMG080404-XX/ 某知名品牌 A well-know brand
加工材料 Material	20CrMnTi/HRC58-64
切削速度 Cutting speed	30m/min
进给量 Feed rate	0.10mm/rev
切深量 Ap	0.25mm
切削方式 Cutting method	内孔; 水冷 Internal turning; liquid coolant



07 车削刀片型号列表

Turning Insert List

车削刀片命名规则

Naming Rules For Turning Inserts

A	B	C
D	E	H
K	L	M
O	P	R
S	T	T
V	W	Z
		其它

形状代号
Shape

代号 Symbol	刀片高度m 公差 (mm) m(mm)	内接圆ΦI.C 公差 (mm) d=I.C. (mm)	厚度S 公差 (mm) s (mm)	(参考) M级精度详细情况 (按形状、大小分) ● 刀片高度公差(mm) (reference) M grade tolerance detail (according to shape, size.) Tolerance of insert nose height						
				内接圆 Inscribed Circle	正三角形 Regular Triangle	正方形 Square	80° 菱形 Rhombus	55° 菱形 Rhombus	35° 菱形 Rhombus	圆形 Round
				6.35	±0.08	±0.08	±0.08	±0.11	±0.16	...
				9.525	±0.08	±0.08	±0.08	±0.11	±0.16	...
				12.7	±0.13	±0.13	±0.13	±0.15	...	...
A	±0.005	±0.025	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	...	...
F	±0.005	±0.013	±0.025	19.05	±0.15	±0.15	±0.15	±0.18	...	...
C	±0.013	±0.025	±0.025	25.4	...	±0.18	...	...	...	...
H	±0.013	±0.013	±0.013	● 内接圆ΦI.C公差 (mm) ● Tolerance of Inscribed Circle						
E	±0.025	±0.025	±0.025	内接圆 Inscribed Circle	正三角形 Regular Triangle	正方形 Square	80° 菱形 Rhombus	55° 菱形 Rhombus	35° 菱形 Rhombus	圆形 Round
G	±0.025	±0.025	±0.13							
J	±0.005	±0.05-±0.13	±0.025	6.35	±0.05	±0.05	±0.05	±0.05	±0.05	
K	±0.013	±0.05-±0.13	±0.025	9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
L	±0.025	±0.05-±0.13	±0.025	12.7	±0.08	±0.08	±0.08	±0.08	...	±0.08
M	±0.08-±0.18	±0.05-±0.13	±0.13	15.875	±0.1	±0.1	±0.10	±0.10	...	±0.1
N	±0.08-±0.18	±0.05-±0.13	±0.025	19.05	±0.1	±0.1	±0.10	±0.10	...	±0.1
U	±0.13-±0.38	±0.08-±0.25	±0.13	25.4	...	...	±0.13	...	...	±0.13

精度等级代号
Accuracy Level Code

内切圆直径 Inscribed Circle diameter (mm)	刀片外形 Insert Shape							
	C	D	R	S	T	V	W	K
3.97								
5			05					
5.56					09			
6			06					
6.35	06	07			11	11		
8			08					
9.525	09	11	09	09	16	16	06	16
10			10					
12			12					
12.7	12	15	12	12	22	22	08	
15.875	16		15	15	27			
16			19	16				
19.05	19		19	19	33			
20			20					
25	25	25	25					
25.4			25	25				
31.75			31					
32			32					

切削刃长度代号
Cutting Edge Length

代号 Symbol	刀尖圆弧半径 (mm) Corner Radius (mm)
00	无圆角 No radius
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2
24	2.4
32	3.2
X	其它 Special

刀尖圆弧代号
Corner Radius

01 C N M G

05 12 04 08 07 OPF

A	B
C	D
E	F
G	N
P	O
	其它后角 Others

主切削刃后角代号
Clearance Angle

代号 Symbol	有无孔 Center Hole	有无断屑槽 Chip Breaker	刀片剖面 Insert Profile	代号 Symbol	有无孔 Center Hole	有无断屑槽 Chip Breaker	刀片剖面 Insert Profile
B	有(Y)	无(N)		N	无(N)	无(N)	
H	有(Y)	单面(S)		R	无(N)	单面(S)	
C	有(Y)	无(N)		F	无(N)	双面(D)	
J	有(Y)	双面(D)		A	有(Y)	无(N)	
W	有(Y)	无(N)		M	有(Y)	单面(S)	
T	有(Y)	单面(S)		G	有(Y)	双面(D)	
Q	有(Y)	无(N)		X			
U	有(Y)	双面(D)					

断屑槽及夹固形式代号
Chip Breaker and Clamping Symbol

代号 Symbol	刀片厚度 Thickness(mm)
00	0.79
T0	0.99
01	1.59
T1	1.98
02	2.38
T2	2.58
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	12.7

刀片厚度代号
Thickness

OPF	OPM	OPR	OMF	OMM
MF	MSF	OTF	OTM	OTR
OKM	OKR	OSM	SMM	NL

断屑槽型代号
Chip Breaker



形状 Shape	型号 Type	尺寸 Dimension (mm)				P					M			K	N	S	H									
		刀片厚度 RE	内切圆 IC	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3230	OK434	OP6105A	OP6115A	OP6125A	OP6135A
	CNMG120408-QR	0.8				○	●				○															
	CNMG120412-QR	1.2	12.7	4.76	5.16	○	●				○															
	CNMG120416-QR	1.6				○	●				○															
	CNMG160608-QR	0.8				○	●				○															
	CNMG160612-QR	1.2	15.875	6.35	6.35	○	●				○															
	CNMG160616-QR	1.6				○	●				○															
	CNMG190608-QR	0.8					○	●				○														
	CNMG190612-QR	1.2	19.05	6.35	7.94	○	●				○															
	CNMG190616-QR	1.6				○	●				○															
	CNMG120408-OPR	0.8					○	●	○					○	○											
	CNMG120412-OPR	1.2	12.7	4.76	5.16		○	●	○					○	○											
	CNMG120416-OPR	1.6					○	●	○					○	○											
	CNMG160608-OPR	0.8					○	●	○					○	○											
	CNMG160612-OPR	1.2	15.875	6.35	6.35		○	●	○					○	○											
	CNMG160616-OPR	1.6					○	●	○					○	○											
	CNMG190608-OPR	0.8					○	●	○					○	○											
	CNMG190612-OPR	1.2	19.05	6.35	7.94		○	●	○					○	○											
	CNMG190616-OPR	1.6					○	●	○					○	○											
	CNMG120408-OKR	0.8													○	○	●									
	CNMG120412-OKR	1.2	12.7	4.76	5.16										○	○	●									
	CNMG120416-OKR	1.6													○	○	●									
	CNMG160608-OKR	0.8													○	○	●									
	CNMG160612-OKR	1.2	15.875	6.35	6.35										○	○	●									
	CNMG160616-OKR	1.6													○	○	●									
	CNMA120404	0.4																●								
	CNMA120408	0.8	12.7	4.76	5.16												●									
	CNMA120412	1.2															●									
	CNMA120416	1.6															●									
	CNMA160608	0.8															●									
	CNMA160608	1.2	15.875	6.35	6.35												●									
	CNMA160612	1.6															●									
	CNMA190612	1.2	19.05	6.35	7.94												●									
	CNMA190616	1.6														●										
	CNMG190612-DP	1.2	19.05	6.35	7.94	○	○	○	●		○															
	CNMG190616-DP	1.6				○	○	○	●		○															

● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)				P					M			K	N	S	H										
		刀片厚度 RE	内切圆 IC	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3230	OK434	OP6105A	OP6115A	OP6125A	OP6135A	
	CNMG160612-KPR	1.2				○	○	○	●		○																
	CNMG160616-KPR	1.6	15.875	6.35	6.35	○	○	○	●		○																
	CNMG190612-KPR	1.2				○	○	○	●		○																
	CNMG190616-KPR	1.6	19.05	6.35	7.94	○	○	○	●		○																
	CNMG250724-KPR	2.4	25.4	7.94	9.12	○	○	○	●		○																
	CNMG250924-KPR	2.4	25.4	9.52	9.12	○	○	○	●		○																
	CNMM160612-HR3	1.2	15.875	6.35	6.35	○	●				○	○														○	
	CNMM160616-HR3	1.6				○	●				○	○														○	
	CNMM190612-HR3	1.2				○	●				○	○														○	
	CNMM190616-HR3	1.6	19.05	6.35	7.94	○	●				○	○														○	
	CNMM190624-HR3	2.4				○	●				○	○														○	
	CNMM250724-HR3	2.4	25.4	7.94	9.12	○	●				○	○														○	
	CNMM250924-HR3	2.4	25.4	9.52	9.12	○	●				○	○													○		
	CNMM160612-HP	1.2	15.875	6.35	6.35	○	○	○	●		○	○														○	
	CNMM160616-HP	1.6				○	○	○	●		○	○														○	
	CNMM190612-HP	1.2				○	○	○	●		○	○														○	
	CNMM190616-HP	1.6	19.05	6.35	7.94	○	○	○	●		○	○														○	
	CNMM190624-HP	2.4				○	○	○	●		○	○														○	
	CNMM250724-HP	2.4	25.4	7.94	9.12	○	○	○	●		○	○														○	
	CNMM250924-HP	2.4	25.4	9.52	9.12	○	○	○	●		○	○														○	
	CNMM190612-RP	1.2				○	○	○	●		○	○														○	
	CNMM190616-RP	1.6	19.05	6.35	7.94	○	○	○	●		○	○														○	
	CNMM190624-RP	2.4				○	○	○	●		○	○														○	
	CNMM250724-RP	2.4	25.4	7.94	9.12	○	○	○	●		○	○														○	
	CNMM250924-RP	2.4	25.4	9.52	9.12	○	○	○	●		○	○														○	
	CNMM250724-HRP	2.4	25.4	7.94	9.12	○	○	○	●		○	○														○	
	CNMM250924-HRP	2.4	25.4	9.52	9.12	○	○	○	●		○	○														○	
	CNMM190616-OPR	1.6	19.05	6.35	7.94		○	●	○																		
	CNMM250724-PR	2.4	25.4	7.94	9.12		○	●	○																		
	CNMM250924-PR	2.4	25.4	9.52	9.12		○	●	○																		

● 常备库存 Stock available ○ 按单生产 Make-to-order

A 车削刀片手册
Turning Insert Grades

B 超硬刀具
Turning Insert List

C 专用刀具介绍
Specialized Product Introduction

D 附件
Attachments

形状 Shape	型号 Type	尺寸 Dimension (mm)				P					M				K		N		S		H					
		刀片厚度 RE	内切圆 IC	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3215	OK434	OP6105A	OP6115A	OP6125A	OPH120
	SNMG120404-SMF	0.4																								
	SNMG120408-SMF	0.8	12.7	4.76	5.16																					
	SNMG120412-SMF	1.2																								
	SNMG120404-NF	0.4																								
	SNMG120408-NF	0.8	12.7	4.76	5.16																					
	SNMG120412-NF	1.2																								
	SNMG120408-OMF	0.8	12.7	4.76	5.16																					
	SNMG120404-QF	0.4	12.7	4.76	5.16																					
	SNMG120408-QF	0.8																								
	SNMG120404-OPF	0.4	12.7	4.76	5.16																					
	SNMG120408-OPF	0.8																								
	SNMG120404-SMM	0.4																								
	SNMG120408-SMM	0.8	12.7	4.76	5.16																					
	SNMG120412-SMM	1.2																								
	SNMG150608-SMM	0.8	15.875	6.35	6.35																					
	SNMG150612-SMM	1.2																								
	SNMG190612-SMM	1.2	19.05	6.35	7.94																					
	SNMG190616-SMM	1.6																								

● 常备库存 Stock available ○ 按单生产 Make-to-order

A 车削刀片手册
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D 附件
Attachments

形状 Shape	型号 Type	尺寸 Dimension (mm)				P					M				K		N		S		H				
		刀片厚度 RE	内切圆 IC	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3215	OK434	OP6105A	OP6115A	OP6125A
	SNMG120404-QT	0.4																							
	SNMG120408-QT	0.8	12.7	4.76	5.16																				
	SNMG120412-QT	1.2																							
	SNMG120416-QT	1.6																							
	SNMG150608-QT	0.8	15.875	6.35	6.35																				
	SNMG150612-QT	1.2																							
	SNMG150616-QT	1.6																							
	SNMG190608-QT	0.8	19.05	6.35	7.94																				
	SNMG190612-QT	1.2																							
	SNMG190616-QT	1.6																							
	SNMG120408-SMR	0.8	12.7	4.76	5.16																				
	SNMG120412-SMR	1.2																							
	SNMG150612-SMR	1.2	15.875	6.35	6.35																				
	SNMG151616-SMR	1.6																							
	SNMG190612-SMR	1.2	19.05	6.35	7.94																				
	SNMG190616-SMR	1.6																							
	SNMG120408-MF	0.8	12.7	4.76	5.16																				
	SNMG120404-OMM	0.4																							
	SNMG120408-OMM	0.8	12.7	4.76	5.16																				
	SNMG120412-OMM	1.2																							
	SNMG150608-OMM	0.8	15.875	6.35	6.35																				
	SNMG120404-QM	0.4																							
	SNMG120408-QM	0.8	12.7	4.76	5.16																				
	SNMG120412-QM	1.2																							
	SNMG120404-QN	0.4																							
	SNMG120408-QN	0.8	12.7	4.76	5.16																				
	SNMG120412-QN	1.2																							
	SNMG150608-QN	0.8	15.875	6.35	6.35																				
	SNMG150612-QN	1.2																							
	SNMG150616-QN	1.6																							
	SNMG190608-QN	0.8	19.05	6.35	7.94																				
SNMG190612-QN	1.2																								
SNMG190616-QN	1.6																								

● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)				P				M				K		N		S		H		
		刀片厚度 RE	内切圆 IC	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC2565	OC2575	OC2585	OC2595	OC3210	OC3220	OC3230	OC3240	OC3250	OC3260	OC3270
	SNMG120404-OPM	0.4																				
	SNMG120408-OPM	0.8	12.7	4.76	5.16																	
	SNMG120412-OPM	1.2																				
	SNMG150608-OPM	0.8																				
	SNMG150612-OPM	1.2	15.875	6.35	6.35																	
	SNMG150616-OPM	1.6																				
	SNMG190608-OPM	0.8																				
	SNMG190612-OPM	1.2	19.05	6.35	7.94																	
	SNMG190616-OPM	1.6																				
	SNMG120404-OKM	0.4																				
	SNMG120408-OKM	0.8	12.7	4.76	5.16																	
	SNMG120412-OKM	1.2																				
	SNMG120404-K	0.4																				
	SNMG120408-K	0.8	12.7	4.76	5.16																	
	SNMG120412-K	1.2																				
	SNMG090304	0.4	9.525	3.18	3.81																	
	SNMG090308	0.8																				
	SNMG120404	0.4																				
	SNMG120408	0.8	12.7	4.76	5.16																	
	SNMG120412	1.2																				
	SNMG150608	0.8																				
	SNMG150612	1.2	15.875	6.35	6.35																	
	SNMG150616	1.6																				
	SNMG190608	0.8																				
	SNMG190612	1.2	19.05	6.35	7.94																	
	SNMG190616	1.6																				
		SNMG120408-OSM	0.8	12.7	4.76	5.16																
SNMG120412-OSM		1.2																				
SNMG150608-OSM		0.8																				
SNMG150612-OSM		1.2	15.875	6.35	6.35																	
SNMG150616-OSM		1.6																				
SNMG190612-OSM		1.2																				
SNMG190616-OSM		1.6																				
SNMG190616-OSM		1.6	19.05	6.35	7.94																	

● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)				P				M				K		N		S		H		
		刀片厚度 RE	内切圆 IC	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC2565	OC2575	OC2585	OC2595	OC3210	OC3220	OC3230	OC3240	OC3250	OC3260	OC3270
	SNMG120408-NR	0.8																				
	SNMG120412-NR	1.2	12.7	4.76	5.16																	
	SNMG150612-NR	1.2	15.875	6.35	6.35																	
	SNMG150616-NR	1.6																				
	SNMG190612-NR	1.2	19.05	6.35	7.94																	
	SNMG190616-NR	1.6																				
	SNMG120408-QR	0.8																				
	SNMG120412-QR	1.2	12.7	4.76	5.16																	
	SNMG120416-QR	1.6																				
	SNMG150608-QR	0.8																				
	SNMG150612-QR	1.2	15.875	6.35	6.35																	
	SNMG150616-QR	1.6																				
	SNMG190608-QR	0.8																				
	SNMG190612-QR	1.2	19.05	6.35	7.94																	
	SNMG190616-QR	1.6																				
	SNMG120408-OPR	0.8																				
	SNMG120412-OPR	1.2	12.7	4.76	5.16																	
	SNMG120416-OPR	1.6																				
SNMG150608-OPR	0.8																					
SNMG150612-OPR	1.2	15.875	6.35	6.35																		
SNMG150616-OPR	1.6																					
SNMG190608-OPR	0.8																					
SNMG190612-OPR	1.2	19.05	6.35	7.94																		
SNMG190616-OPR	1.6																					
	SNMG120408-OKR	0.8																				
	SNMG120412-OKR	1.2	12.7	4.76	5.16																	
	SNMG120416-OKR	1.6																				
	SNMG150612-OKR	1.2	15.875	6.35	6.35																	
	SNMG150616-OKR	1.6																				
	SNMG190612-OKR	1.2	19.05	6.35	7.94																	

● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)				P					M					K		N		S		H				
		刀片 RE	宽度 W1	厚度 S	孔径 D1	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3215	OK434	OP6105A	OP6115A	OP6125A	OPH120
	175.32-191940-22	4.0	10	19.1	6.35			○	●	○																
	175.32-191940-28	4.0	10	19.1	6.35			○	●	○																
	KNUX160405L11	0.5	9.525	4.76	-			○	●	○																
	KNUX160405R11	0.5	9.525	4.76	-			○	●	○																

● 常备库存 Stock available ○ 按单生产 Make-to-order

型号列表 (正角刀片) Positive turning insert list

形状 Shape	型号 Type	尺寸 Dimension (mm)					P					M					K		N		S		H			
		刀片 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2505	OC2515	OC2525	OC2535	OC2545	OC2555	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3215	OK434	OP6105A	OP6115A	OP6125A	OPH120
	CCGT060202-SMF	< 0.2																								
	CCGT060204-SMF	< 0.4	6.35	2.38	2.8	7°																				
	CCGT060208-SMF	< 0.8																								
	CCGT09T302-SMF	< 0.2																								
	CCGT09T304-SMF	< 0.4	9.525	3.97	4.4	7°																				
	CCGT09T308-SMF	< 0.8																								
	CCMT060202-MSF	0.2	6.35	2.38	2.8	7°									○	●										
	CCMT060204-MSF	0.4													○	●										
	CCMT09T302-MSF	0.2													○	●										
	CCMT09T304-MSF	0.4	9.525	3.97	4.4	7°									○	●										
	CCMT09T308-MSF	0.8													○	●										
	CCMT120404-MSF	0.4	12.7	4.76	5.5	7°									○	●										
	CCMT060202-OTF	0.2	6.35	2.38	2.8	7°			●	○	○				○	●										
	CCMT060204-OTF	0.4							●	○	○				○	●										
	CCMT09T304-OTF	0.4	9.525	3.97	4.4	7°			●	○	○				○	●										
	CCMT09T308-OTF	0.8							●	○	○				○	●										
	CCMT120404-OTF	0.4	12.7	4.76	5.5	7°			●	○	○				○	●										
	CCMT120408-OTF	0.8							●	○	○				○	●										
	CCGT060204-OH	0.4	6.35	2.38	2.8	7°																			●	
	CCGT09T304-OH	0.4	9.525	3.97	4.4	7°																			●	
	CCGT060202-NL	0.2	6.35	2.38	2.8	7°																				
	CCGX060204-NL	0.4																								
	CCGX09T302-NL	0.2																								
	CCGX09T304-NL	0.4	9.525	3.97	4.4	7°																				
	CCGX09T308-NL	0.8																								
	CCGX120404-NL	0.4	12.7	4.76	5.5	7°																				

● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)					P					M			K	N	S	H								
		刀片 RE	内切 IC	厚 S	孔 D1	后 AN	OC2505	OC2525	OC2545	OC2565	OC2585	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3215	OK434	OP6105A	OP6115A	OP6125A	OPH120
		0.4	9.525	3.97	4.4	7°																				
	SCMT09T304-OTF	0.4	9.525	3.97	4.4	7°		●	○	○				○	●											
	SCMT09T308-OTF	0.8	9.525	3.97	4.4	7°		●	○	○				○	●											
	SCMT120404-OTF	0.4	12.7	4.76	5.5	7°		●	○	○				○	●											
	SCMT120408-OTF	0.8	12.7	4.76	5.5	7°		●	○	○				○	●											
	SCGX09T304-NL	0.4	9.525	3.97	4.4	7°																●				
	SCGX09T308-NL	0.8	9.525	3.97	4.4	7°																●				
	SCGX120408-NL	0.8	12.7	4.76	5.5	7°																●				
	SCMT09T304-OTM	0.4	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	SCMT09T308-OTM	0.8	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	SCMT120404-OTM	0.4	12.7	4.76	5.5	7°		○	●	○				○	●							○	●	○		
	SCMT120408-OTM	0.8	12.7	4.76	5.5	7°		○	●	○				○	●							○	●	○		
	SCMT120412-OTM	1.2						○	●	○				○	●							○	●	○		
	SCMT09T304-OTR	0.4	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	SCMT09T308-OTR	0.8	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	SCMT120404-OTR	0.4	12.7	4.76	5.5	7°		○	●	○				○	●							○	●	○		
	SCMT120408-OTR	0.8	12.7	4.76	5.5	7°		○	●	○				○	●							○	●	○		
	SCMT120412-OTR	1.2						○	●	○				○	●							○	●	○		

● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)					P					M			K	N	S	H								
		刀片 RE	内切 IC	厚 S	孔 D1	后 AN	OC2505	OC2525	OC2545	OC2565	OC2585	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OC3215	OK434	OP6105A	OP6115A	OP6125A	OPH120
		< 0.4	6.35	2.38	2.8	7°																				
	TCGT110204-SMF	< 0.4	6.35	2.38	2.8	7°																				
	TCMT090202-OTF	0.2	5.56	2.38	2.5	7°		●	○	○				○	●											
	TCMT090204-OTF	0.4	5.56	2.38	2.5	7°		●	○	○				○	●											
	TCMT110202-OTF	0.2	6.35	2.38	2.8	7°		●	○	○				○	●											
	TCMT110204-OTF	0.4	6.35	2.38	2.8	7°		●	○	○				○	●											
	TCMT16T304-OTF	0.4	9.525	3.97	4.4	7°		●	○	○				○	●											
	TCMT16T308-OTF	0.8	9.525	3.97	4.4	7°		●	○	○				○	●											
	TCMT110204-OH	0.4	6.35	2.38	2.8	7°																				●
	TCGX090204-NL	0.4	5.56	2.38	2.5	7°																	●			
	TCGX110202-NL	0.2	6.35	2.38	2.8	7°																	●			
	TCGX110204-NL	0.4	6.35	2.38	2.8	7°																	●			
	TCGX16T304-NL	0.4	9.525	3.97	4.4	7°																	●			
	TCGX16T308-NL	0.8	9.525	3.97	4.4	7°																	●			
	TCMT16T304-SMM	0.4	9.525	3.97	4.4	7°																	●	○	○	
	TCMT16T308-SMM	0.8	9.525	3.97	4.4	7°																	●	○	○	
	TCMT090204-OTM	0.4	5.56	2.38	2.5	7°		○	●	○				○	●							○	●	○		
	TCMT090208-OTM	0.8	5.56	2.38	2.5	7°		○	●	○				○	●							○	●	○		
	TCMT110204-OTM	0.4	6.35	2.38	2.8	7°		○	●	○				○	●							○	●	○		
	TCMT110208-OTM	0.8	6.35	2.38	2.8	7°		○	●	○				○	●							○	●	○		
	TCMT16T304-OTM	0.4	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	TCMT16T308-OTM	0.8	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	TCMT16T312-OTM	1.2						○	●	○				○	●							○	●	○		
	TCMT16T308-OTR	0.8	9.525	3.97	4.4	7°		○	●	○				○	●							○	●	○		
	TCMT16T312-OTR	1.2						○	●	○				○	●							○	●	○		
	TCMT220408-OTR	0.8	12.7	4.76	5.5	7°		○	●	○				○	●							○	●	○		

● 常备库存 Stock available ○ 按单生产 Make-to-order


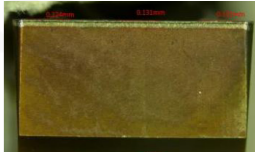
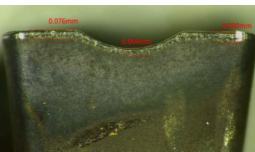
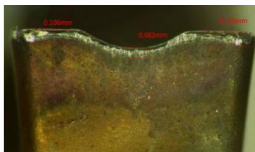
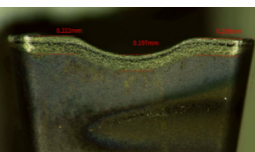
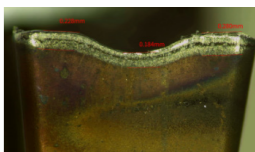
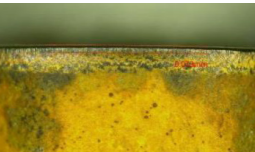
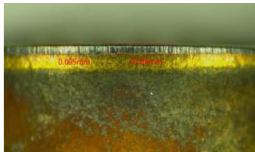
■ 切断切槽刀片 - 槽型介绍

Parting and Grooving Inserts Chipbreak Introduction

工况 Conditions	槽型	介绍及应用	被加工材料 Workpiece Material						Ap (mm)	Ft (mm/rev)	Fg (mm/rev)
			P	M	K	N	S	H			
切槽加工 Grooving		<p>QC*-GTF <small>NEW</small></p> <p>- 精加工磨削槽型 - 适合低进给的精密切槽 - 低切削阻力, 良好的转位精度</p> <p>- Finishing grinding chipbreak - Suitable for low-feed precision grooving - Low cutting resistance and good indexing accuracy</p>	○	●	○	●			0.5-3.5	0.05-0.25	0.05-0.10
通用加工 General		<p>QC*-TM <small>NEW</small></p> <p>- 切槽、切断、车削加工通用 - 正前角设计能够抑制积屑瘤的产生 - 良好的切屑控制和表面质量</p> <p>- General grooving, turning and parting - The positive rake angle design can restrain the formation of built-up edge - Good chip control and surface quality</p>	●	●	●	●			0.5-3.5	0.05-0.30	0.10-0.20
切断加工 Parting		<p>QD*-TM <small>NEW</small></p> <p>- 切断首选槽型 - 较好的刃口强度, 支持良好工况下大多数材料切断加工及轻断续切削</p> <p>- First choice for parting - Good edge strength, suitable for parting and light interrupted cutting of most materials under favorable conditions</p>	●	●	●	●			\	\	0.08-0.15
仿形加工 Profiling		<p>QR*-TM <small>NEW</small></p> <p>- 通用仿形加工槽型 - 低进给和小切深的工况也有良好的切屑控制</p> <p>- General profile machining - Good chip control even under low feed and small depth cutting conditions</p>	●	●	●	●			0.5-3.0	0.20-0.70	0.15-0.25

■ 切断切槽刀片 - 产品应用

Parting and Grooving Inserts Application

工件属性 Workpiece	SUS304, HB210			
加工工序 Process	外圆切槽, 湿切 External grooving, Wet cutting		OP6115A	国外某品牌 A foreign brand
刀片 Type	QCHD0402N-GTF/ OP6115A	国外某品牌 A foreign brand		
切削速度 Vc	160m/min	160m/min		
进给量 f	0.10mm/rev	0.10mm/rev		
刀具寿命 Tool life	27min	24min		
结果: 在相同磨损情况下, 我司 OP6115A 的加工时长多 10% Result: Under the same wear condition, the tool life of our OP6115A is about 10% longer				
工件属性 Workpiece	圆棒 Round bar, SUS304, HB210			
加工工序 Process	切断, 湿切 Parting, Wet cutting		OP1530	国外某品牌 A foreign brand
刀片 Type	QDED0202N-TM/ OP1530	国外某品牌 A foreign brand		
切削速度 Vc	130m/min	130m/min		
进给量 f	0.10mm/rev	0.10mm/rev		
刀具寿命 Tool life	21 件 PCS	20 件 PCS		
结果: 在寿命相当的情况下, 我司 OP1530 的磨损量小 24% Result: Under the same tool life, the wear condition of our OP1530 is about 24% smaller				
工件属性 Workpiece	SUS304, HB210			
加工工序 Process	外圆切槽, 湿切 External grooving, Wet cutting		OP1530	国外某品牌 A foreign brand
刀片 Type	QCGD0303N-TM/ OP1530	国外某品牌 A foreign brand		
切削速度 Vc	150m/min	150m/min		
进给量 f	0.10mm/rev	0.10mm/rev		
刀具寿命 Tool life	30min	30min		
结果: 在相同加工时间下, 我司 OP1530 的磨损量小 13% Result: Under the same machining time, the wear condition of our OP1530 is about 13% smaller				
工件属性 Workpiece	钢圈 Steel ring, 42CrMo, HB200			
加工工序 Process	外圆仿形, 精加工, 湿切 External profiling, Finishing, Wet cutting		OC2525	国外某品牌 A foreign brand
刀片 Type	QRJW06-TM/OC2525	国外某品牌 A foreign brand		
切削速度 Vc	182m/min	182m/min		
进给量 f	0.35mm/rev	0.35mm/rev		
刀具寿命 Tool life	30 件 PCS	30 件 PCS		
结果: 在相同加工件数下, 我司 OC2525 的磨损量小 23% Result: With the same number of workpieces, the wear condition of our OC2525 is about 23% smaller				

■ 切断切槽刀片命名规则

Parting and Grooving Inserts Naming Rule

代号 Symbol	系列总称 Application Code
QC	切槽 Grooving
QD	切断 Part off
QR	仿形 Profile
QT	切断切槽 Parting & Grooving

代号 Symbol	刃口数量 Edge Number
W/D	2
V/S	1

代号 Symbol	圆角 Corner Radius
02	R0.2
03	R0.3
04	R0.4
05	R0.5
08	R0.8

代号 Symbol	角度 Angle
05	5°
07	7°

系列总称代号
Application Code

刃口数量代号
Edge Number

刀尖圆弧半径代号
Corner Radius

刀片角度
Insert Angle



刀片座型号
Tools Holder Type

刃宽代号
Cutting Edge Width

切削方向代号
Cutting Direction

断屑槽型代号
Chip Breaker

代号 Symbol	宽度 (mm) Width	刀柄 Handle.
E	2	E
F	2.5	F E
G	3	G F E
H	4	H
J	5	J H
K	6	K J H
L	8	L

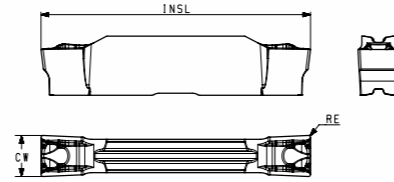
代号 Symbol	宽度 (mm) Width
03	3
04	4

代号 Symbol	宽度 (mm) Width
R	右 Right
L	左 Left
N	双向 Neutral

代号 Symbol	断屑槽型 Chip Breaker
GTF	
TM	

A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 切断切槽刀具
Grooving & Parting Tool Series
D 附件
Attachments

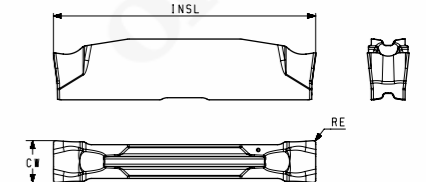
刀片型号列表 - 精密切槽刀片 NEW
Insert Product List - Precision Grooving Insert



型号 Type	尺寸 Dimension (mm)				P				M				K		S									
	CW	INSL	RE	SSC	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1530	OP1415	OC3205	OC3210	OC3220	OC3215	OP6105A	OP6115A	OP6125A	
QCDD01501N-GTF	1.5	14.8	0.1	D										●										○
QCED0202N-GTF	2.0	20.7	0.2	E										●										○
QCED0204N-GTF	2.0	20.7	0.4	E										●										○
QCGD0302N-GTF	3.0	20.6	0.2	G										●										○
QCGD0304N-GTF	3.0	20.6	0.4	G										●										○
QCGD0308N-GTF	3.0	20.6	0.8	G										●										○
QCHD0402N-GTF	4.0	26.25	0.2	H										●										○
QCHD0404N-GTF	4.0	26.25	0.4	H										●										○
QCHD0502N-GTF	5.0	26.15	0.2	H										●										○
QCHD0504N-GTF	5.0	26.15	0.4	H										●										○
QCKD0602N-GTF	6.0	26	0.2	K										●										○

● 常备库存 Stock available ○ 按单生产 Make-to-order

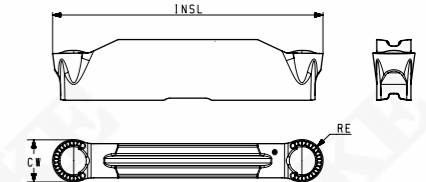
刀片型号列表 - 切断刀片 NEW
Insert Product List - Parting Insert



型号 Type	尺寸 Dimension (mm)				P				M				K		S									
	CW	INSL	RE	SSC	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1530	OP1415	OC3205	OC3210	OC3220	OC3215	OP6105A	OP6115A	OP6125A	
QDDD01502N-TM	1.5	14.0	0.2	D									○	●										○
QDED0202N-TM	2.0	20.0	0.2	E									○	●										○
QDFD02502N-TM	2.5	20.0	0.2	F									○	●										○
QDGD0302N-TM	3.0	20.0	0.2	G									○	●										○
QDHD0402N-TM	4.0	24.8	0.2	H									○	●										○
QDJD0502N-TM	5.0	24.8	0.2	J									○	●										○

● 常备库存 Stock available ○ 按单生产 Make-to-order

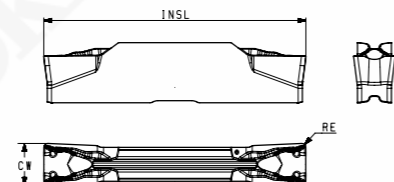
刀片型号列表 - 仿形刀片 NEW
Insert Product List - Profiling Insert



型号 Type	尺寸 Dimension (mm)				P				M				K		S									
	CW	INSL	RE	SSC	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1530	OP1415	OC3205	OC3210	OC3220	OC3215	OP6105A	OP6115A	OP6125A	
QRFW03-TM	3.0	20.7	1.5	F										○	●									○
QRHW04-TM	4.0	25.7	2.0	H										○	●									○
QRHW05-TM	5.0	25.7	2.5	H										○	●									○
QRJW06-TM	6.0	25.7	3.0	J										○	●									○

● 常备库存 Stock available ○ 按单生产 Make-to-order

刀片型号列表 - 切槽、切断、车削通用刀片 NEW
Insert Product List - Grooving, Parting and General Turning Inserts



型号 Type	尺寸 Dimension (mm)				P				M				K		S									
	CW	INSL	RE	SSC	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1530	OP1415	OC3205	OC3210	OC3220	OC3215	OP6105A	OP6115A	OP6125A	
QCGD0303N-TM	3.0	20.0	0.3	G									○	●										○
QCHD0404N-TM	4.0	25.1	0.4	H									○	●										○
QCJD0504N-TM	5.0	25.0	0.4	J									○	●										○
QCKD0604N-TM	6.0	25.0	0.4	K									○	●										○

● 常备库存 Stock available ○ 按单生产 Make-to-order

A 车削刀片手册
B 车削刀片分类介绍
C 切槽切槽刀片
D 附件

■ 切断切槽刀杆命名规则

Parting and Grooving Inserts Tool Holder Naming Rule

外圆、端面切断切槽刀具 External and End Face Parting and Grooving Cutting Tools

Q F G D 25 25 R 22 52 H - S

Q	F	G	D	25	25	R	22	52	H	S
切槽刀代号 Q: 切断切槽 P: 切断 Application code Q: parting and grooving P: part off	加工方式 E: 外圆切削 F: 端面切削 Cutting application E: external cutting F: end face cutting	定位槽代号与刀片 对应的定位槽代号 一致并对应一定 刀片刃宽范围 Positioning slot code	对应刀片的 刀刃数代号 S: 单刃 D: 双刃 Cutting edge number S: single head D: double heads	切槽刀刀体高度 Tool body height	切槽刀刀体宽度 Tool body width	刀具的左右手 R: 右 L: 左 N: 两者皆可 Cutting direction R: right left N: neutral	最大切削深度 Max cutting depth	端面切槽刀首次 切削的最小直径 (外圆切槽时适用) The minimum diameter for initial end face cutting	端面切槽 刀刀柄类 H: 直头 L: 弯头 End face cutting shank type: H: straight L: bend	适用的 刀片系列 Applicable insert series

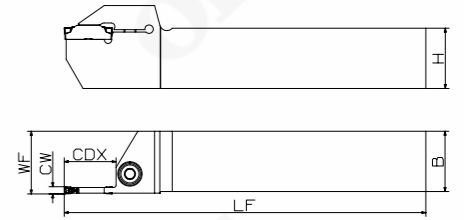
内圆切槽刀具 Grooving Tool

C 32 S - Q G D R 11 - 44 - S

C	32	S	Q	G	D	R	11	44	S
切槽刀压紧方式 Clamp type	刀杆直径 Holder diameter	刀杆长度 Holder length	切槽刀代号 Application code	定位槽代号 Positioning slot code	对应刀片刃数 Cutting edge number	刀具的左右手 R: 右 L: 左 Cutting direction (Right/Left)	最大切削深度 Max cutting depth	最小加工孔径 Min diameter	适用的 刀片系列 Applicable insert series

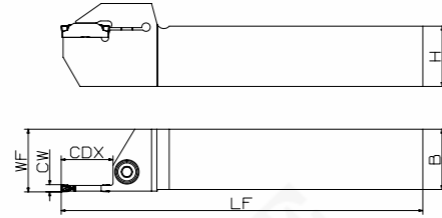
■ 刀杆型号列表 - 外径槽刀杆 NEW

Tool Holder Product List - External Grooving Tool Holder



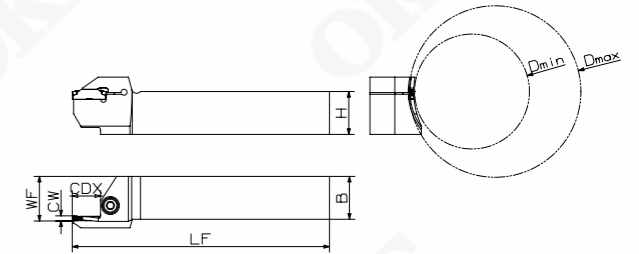
型号 Type	尺寸 Dimension (mm)					适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	CDX	SSC			
QEDD	1616R/L08H-1.5-S	16X16	125	17	8	QDDD01502N-TM QCDD01501N-GTF	SCH0416	WLH3063
	1616R/L15H-1.5-S	16X16	125	17	15			
	2020R/L08H-1.5-S	20X20	125	21	8			
	2020R/L15H-1.5-S	20X20	125	21	15			
	2525R/L15H-1.5-S	25X25	150	26	15			
QEED	1616R/L08H-2-S	16X16	125	17	8	QDED0202N-TM QCED0202N-GTF QCED0204N-GTF	SCH0416	WLH3063
	1616R/L15H-2-S	16X16	125	17	15			
	2020R/L08H-2-S	20X20	125	21	8			
	2020R/L15H-2-S	20X20	125	21	15			
	2525R/L15H-2-S	25X25	150	26	15			
QEFD	1616R/L10H-2.5-S	16X16	125	17	10	QDFD02502N-TM QRFW03-TM	SCH0416	WLH3063
	1616R/L20H-2.5-S	16X16	125	17	20			
	2020R/L10H-2.5-S	20X20	125	21	10			
	2020R/L20H-2.5-S	20X20	125	21	20			
	2525R/L20H-2.5-S	25X25	150	26	20			
QEGD	1616R/L10H-3-S	16X16	125	17	10	QDGD0302N-TM QCGD0303N-TM QCGD0302N-GTF QCGD0304N-GTF	SCH0516	WLH4070
	1616R/L20H-3-S	16X16	125	17	20			
	2020R/L10H-3-S	20X20	125	21	10			
	2020R/L20H-3-S	20X20	125	21	20			
	2525R/L10H-3-S	25X25	150	26	10			
	2525R/L20H-3-S	25X25	150	26	20			
3232R/L20H-3-S	32X32	170	33	20				

刀杆型号列表 - 外径槽刀杆 NEW
Tool Holder Product List - External Grooving Tool Holder



型号 Type	尺寸 Dimension (mm)					适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	CDX	SSC			
QEHD	1616R/L13H-4-S	16X16	125	17	13	QDHD0402N-TM QCHD0404N-TM QCHD0402N-GTF QCHD0404N-GTF QCHD0502N-GTF QCHD0504N-GTF QRHW04-TM QRHW05-TM	SCH0620	WLH5080
	1616R/L25H-4-S	16X16	125	17	25			
	2020R/L13H-4-S	20x20	125	21	13			
	2020R/L25H-4-S	20x20	125	21	25			
	2525R/L13H-4-S	25x25	150	26	13			
	2525R/L25H-4-S	25x25	150	26	25			
	3232R/L13H-4-S	32x32	170	33	13			
	3232R/L25H-4-S	32x32	170	33	25			
QEJD	2020R/L13H-5-S	20x20	125	21	13	QDJD0502N-TM QCJD0504N-TM QRJW06-TM	SCH0620	WLH5080
	2525R/L13H-5-S	25x25	150	26	13			
	2525R/L22H-5-S	25x25	150	26	22			
	2525R/L32H-5-S	25x25	150	26	32			
	3232R/L13H-5-S	32x32	170	33	13			
	3232R/L32H-5-S	32x32	170	33	32			
QEKD	2525R/L16H-6-S	25x25	150	26	16	QCKD0604N-TM QCKD0602N-GTF	SCH0620	WLH5080
	2525R/L32H-6-S	25x25	150	26	32			
	3232R/L16H-6-S	32x32	170	33	16			
	3232R/L32H-6-S	32x32	170	33	32			

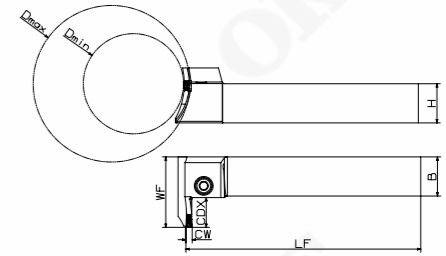
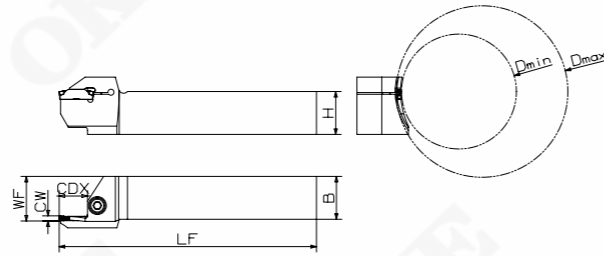
刀杆型号列表 - 直头端面槽刀杆 NEW
Tool Holder Product List - Straight Type Face Grooving Tool Holder



型号 Type	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench				
	HxB	LF	WF	CDX	Dmin~Dmax	SSC							
QFGD	2020R/L15H034-3-S	20x20	125	21	15	34~44	QDGD0302N-TM QCGD0303N-TM QCGD0302N-GTF QCGD0304N-GTF	SCH0516	WLH4070				
	2020R/L15H042-3-S	20x20	125	21	15	42~60							
	2020R/L15H054-3-S	20x20	125	21	15	54~75							
	2020R/L15H067-3-S	20x20	125	21	15	67~100							
	2020R/L15H090-3-S	20x20	125	21	15	90~160							
	2020R/L15H130-3-S	20x20	125	21	15	130~300							
	2525R/L15H034-3-S	25x25	150	26	15	34~44							
	2525R/L15H042-3-S	25x25	150	26	15	42~60							
	2525R/L15H054-3-S	25x25	150	26	15	54~75							
	2525R/L15H067-3-S	25x25	150	26	15	67~100							
	2525R/L15H090-3-S	25x25	150	26	15	90~160							
	2525R/L15H130-3-S	25x25	150	26	15	130~300							
	QFHD	2020R/L18H040-4-S	20x20	125	21	18				40~60	QDHD0402N-TM QCHD0404N-TM QCHD0402N-GTF QCHD0404N-GTF QCHD0502N-GTF QCHD0504N-GTF QRHW04-TM QRHW05-TM	SCH0620	WLH5080
		2020R/L18H052-4-S	20x20	125	21	18				52~72			
2020R/L18H064-4-S		20x20	125	21	18	64~100							
2020R/L18H092-4-S		20x20	125	21	18	92~140							
2020R/L18H132-4-S		20x20	125	21	18	132~230							
2020R/L18H220-4-S		20x20	125	21	18	220~500							
2525R/L18H040-4-S		25x25	150	26	18	40~60							
2525R/L18H052-4-S		25x25	150	26	18	52~72							
2525R/L18H064-4-S		25x25	150	26	18	64~100							
2525R/L18H092-4-S		25x25	150	26	18	92~140							
2525R/L18H132-4-S		25x25	150	26	18	132~230							
2525R/L18H220-4-S		25x25	150	26	18	220~500							
2525R/L18H300-4-S		25x25	150	26	18	300~1100							

刀杆型号列表 - 直头端面槽刀杆 NEW
Tool Holder Product List - Straight Type Face Grooving Tool Holder

刀杆型号列表 - 弯头端面槽刀杆 NEW
Tool Holder Product List - Angled Type Face Grooving Tool Holder

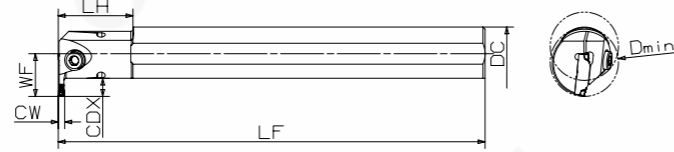


型号 Type	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	CDX	Dmin~Dmax	SSC			
QFJD	2525R/L18H040-5-S	25x25	150	26	18	40~70	QJD0502N-TM QCJD0504N-TM QRJW06-TM	SCH0516	WLH4070
	2525R/L18H060-5-S	25x25	150	26	18	60~95			
	2525R/L18H085-5-S	25x25	150	26	18	85~130			
	2525R/L18H120-5-S	25x25	150	26	18	120~180			
	2525R/L18H175-5-S	25x25	150	26	18	175~500			
QFKD	2525R/L18H040-6-S	25x25	150	26	18	40~70	QCKD0604N-TM QCKD0602N-GTF	SCH0620	WLH5080
	2525R/L18H058-6-S	25x25	150	26	18	58~100			
	2525R/L18H088-6-S	25x25	150	26	18	88~180			
	2525R/L18H168-6-S	25x25	150	26	18	168~400			
	2525R/L18H220-6-S	25x25	150	33	18	220~100			
	3232R/L18H088-6-S	32x32	170	33	18	88~180			
	3232R/L18H168-6-S	32x32	170	33	18	168~400			
3232R/L18H220-6-S	32x32	170	33	18	220~1000				

型号 Type	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	CDX	Dmin~Dmax	SSC			
QFJD	2525R/L18L040-4-S	25X25	150	45	18	40~60	QDHD0402N-TM QCHD0404N-TM QCHD0402N-GTF QCHD0404N-GTF QCHD0502N-GTF QCHD0504N-GTF QRHW04-TM QRHW05-TM	SCH0620	WLH5080
	2525R/L18L052-4-S	25X25	150	45	18	52~72			
	2525R/L18L064-4-S	25X25	150	45	18	64~100			
	2525R/L18L092-4-S	25X25	150	45	18	92~140			
	2525R/L18L132-4-S	25X25	150	45	18	132~230			
	2525R/L18L220-4-S	25X25	150	45	18	220~500			
	2525R/L18L300-4-S	25X25	150	45	18	300~1000			
QFKD	2525R/L18L058-6-S	25X25	150	45	18	58~100	QCKD0604N-TM QCKD0602N-GTF	SCH0620	WLH5080
	2525R/L18L088-6-S	25X25	150	45	18	88~180			
	2525R/L18L168-6-S	25X25	150	45	18	168~400			

A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 切屑槽刀具
Grooving & Parting Tool Series
D 附件
Attachments

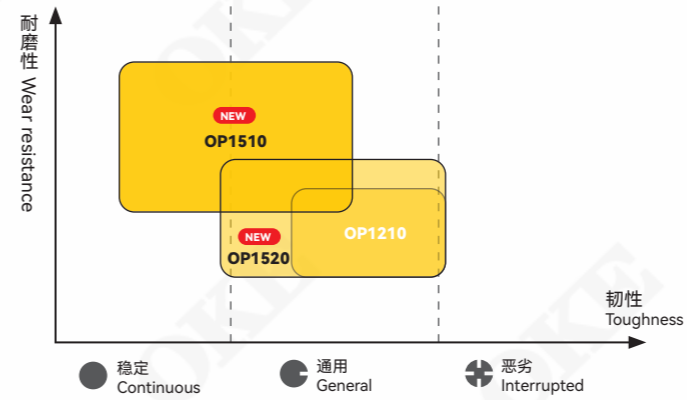
刀杆型号列表 - 内径槽刀杆
Tool Holder Product List - Internal Grooving Tool Holder



型号 Type	尺寸 Dimension (mm)							适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	Dmin	DC	L	LH	CDX	WF	SSC			
C16M-QDDR/L04-25-1.5-S	25	16	150	25	4	12.5	D	QDDD01502N-TM	SCH0412	WLH3063
C20Q-QDDR/L05-32-1.5-S	32	20	180	30	4	12.5		QCDD01501N-GTF		
C20Q-QEDR/L05-32-2-S	32	20	180	30	5	15.25	E	QDED0202N-TM	SCH0416	WLH3063
C25R-QEDR/L07-32-2-S	32	25	200	35	7	19.75		QCED0202N-GTF		
C32S-QEDR/L09-40-2-S	40	32	250	45	9	25.5		QCED0204N-GTF		
C20Q-QFDR/L06-32-2.5-S	32	20	180	30	6	15.25	F	QDFD02502N-TM	SCH0516	WLH4070
C25R-QFDR/L07-32-2.5-S	32	25	200	35	7	19.75		QRFW03-TM		
C32S-QFDR/L09-40-2.5-S	40	32	250	45	9	25.5				
C20Q-QGDR/L06-32-3-S	32	20	180	25	6	15.25	G	QDGD0302N-TM	SCH0516	WLH4070
C25R-QGDR/L07-32-3-S	32	25	200	35	7	19.75		QCGD0303N-TM		
C32S-QGDR/L09-40-3-S	40	32	250	45	9	25.25		QCGD0302N-GTF		
C40T-QGDR/L11-50-3-S	50	40	300	50	11	31		QCGD0304N-GTF		
C25R-QHDR/L07-32-4-S	32	25	200	35	7	19.25	H	QDHD0402N-TM	SCH0620	WLH5080
C32S-QHDR/L10-40-4-S	40	32	250	45	10	26.5		QCHD0404N-TM		
C40T-QHDR/L11-50-4-S	50	40	300	50	11	31		QCHD0402N-GTF		
C50U-QHDR/L13-60-4-S	60	50	350	60	13	38.25		QCHD0502N-GTF		
C25R-QJDR/L08-32-5-S	32	25	200	35	8	19.75	J	QDJD0502N-TM	SCH0620	WLH5080
C32S-QJDR/L11-40-5-S	40	32	250	45	11	27		QCJD0504N-TM		
C40T-QJDR/L11-50-5-S	50	40	300	50	11	31		QRJW06-TM		
C50U-QJDR/L13-60-5-S	60	50	350	60	13	38.25				
C40T-QKDR/L11-50-6-S	50	40	300	50	11	31				
C50U-QKDR/L13-60-6-S	60	50	350	60	13	38.25	K	QCKD0604N-TM	SCH0620	WLH5080
								QCKD0602N-GTF		

02 螺纹车削刀片
Threading Turning Inserts

螺纹车削刀片 - 牌号适用范围
Threading Insert Grade Application Range



螺纹车削刀片 - 牌号介绍
Threading Insert Grade introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OP1510 NEW	M15-M25 P15-P25 K15-K25	○	●	○				PVD	耐磨加工等级; 高硬度的硬质合金基体, 具有良好的高温红硬性, 搭配全新一代 PVD 涂层工艺, 采用含 Si 纳米复合结构涂层, 使产品具有超高的耐磨性和良好的热稳定性, 加工适用范围广, 通用性强; Wear-resistant grade; The hard alloy substrate with high hardness has good high-temperature red hardness. With a new generation of PVD coating technology and a coating with nano-composite structure containing Si, the product has ultra-high wear resistance and good thermal stability, wide processing application range and strong versatility.	
OP1520 NEW	M20-M30 P20-P30 K20-K30	○	●	○				PVD	通用加工等级; 高韧性的硬质合金基体, 具有良好的抗崩损性能, 搭配电弧涂层工艺, 精准调控沉积工艺以优化应力分布, 搭配具有标识性的 TiN 功能层, 配合特殊后处理工艺, 进一步降低涂层摩擦系数; General grade; The high toughness cemented carbide substrate has good edge chipping resistance. With arc coating process, the deposition process is accurately controlled to optimize the stress distribution, and with the marked TiN functional layer and special post-treatment process, the friction coefficient of the coating is further reduced. Suitable for processing high-temperature alloy materials;	
OP1210	M20-M30 P20-P30 K20-K30	○	●	○				PVD	通用加工等级; 高韧性的硬质合金基体搭配高耐磨性涂层, 使得该牌号产品拥有很好的刃口强度; 加工适用性、通用性强; General grade; High toughness cemented carbide substrate with high wear resistance coating makes this brand of products have good cutting edge strength; Strong processing applicability and universality.	

■ 螺纹车削刀片 - 产品应用
Threading Insert Application

工件名称 Workpiece	接头 Joint (T-M-16ER-WF-25041601)
刀具规格 Type	16ER-11BSPTA/OP1510 16ER-11BSPT/A 公司 Company
加工材料 Workpiece Material	SUS304
切削速度 Cutting speed	150m/min
进给量 Feed rate	25.4/11mm/rev
切深量 Ap	0.2mm
切削方式 Cutting method	湿切 Wet cutting

OP1510 305 件
A 公司 Company 262 件 +16%

OP1510 A 公司 Company

工件名称 Workpiece	接头 Joint (T-M-16ER-WF-25041601)
刀具规格 Type	16ER-11WA/OP1520 16ER-11W/B 公司 Company
加工材料 Workpiece Material	SUS304
切削速度 Cutting speed	130-150m/min
进给量 Feed rate	25.4/11mm/rev
切深量 Ap	0.2mm
切削方式 Cutting method	湿切 Wet cutting

OP1520 130 件
B 公司 Company 115 件 +13%

OP1520 B 公司 Company

■ 螺纹车削刀片 - 命名规则
Threading Insert Naming Rule

螺纹车削刀片命名规则 (带修光刃) Threading Insert Naming rule (with wiper)

11	6.35
16	9.525
22	12.70

符号 Mark 内接圆直径 Diameter of inscribed circle

R	右手 Right hand
L	左手 Left hand

ISO	公制螺纹 Metric thread
UN	美制螺纹 Unified thread
W	惠氏螺纹 Whitworth thread
BSPT	英制管用锥度螺纹 British standard taper pipe thread
NPT	美制管用锥度螺纹 American standard taper pipe thread

带修光刃 With wiper

适用螺纹种类 Applicative threading types

刀片尺寸 Insert size: 16 (01)

刀片方向 Insert direction: R (03)

外径·内径的区别 Difference between outer diameter and inner diameter: E (02)

螺距或牙数 Thread pitch or teeth number: 100 (04)

自定义符号 Custom symbol: A (06)

螺纹车削刀片命名规则 (无修光刃) Threading Insert Naming rule (without wiper)

11	6.35
16	9.525
22	12.70

符号 Mark 内接圆直径 Diameter of inscribed circle

R	右手 Right hand
L	左手 Left hand

A	压制级 Pressed type
M	磨制级 Ground type

刀片方向 Insert direction: R (03)

自定义符号 Custom symbol: A (05)

刀片尺寸 Insert size: 16 (01)

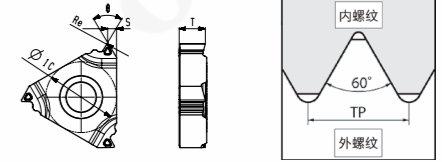
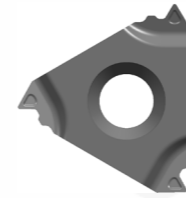
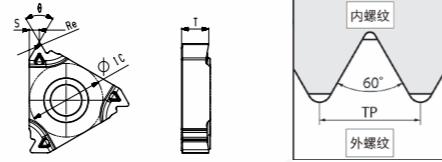
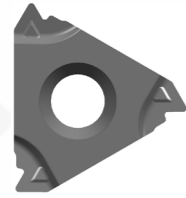
外径·内径的区别 Difference between outer diameter and inner diameter: E (02)

螺距或牙数 Thread pitch or teeth number: A60 (04)

60°	A60	60°无修光刃 Without wiper 0.5~1.5mm	60°	6001	60°无修光刃 Without wiper 刀尖 R (RE) =0.1mm
	G60	60°无修光刃 Without wiper 1.75~3mm		1.0~2.5mm	
	AG60	60°无修光刃 Without wiper 0.5~3mm			
55°	A55	55°无修光刃 Without wiper 40~16 牙 / 英寸 tooth/inch	55°	A55	55°无修光刃 Without wiper 刀尖 R (RE) =0.1mm
	G55	55°无修光刃 Without wiper 14~8 牙 / 英寸 tooth/inch		28~11 牙 / 英寸 tooth/inch	
	AG55	55°无修光刃 Without wiper 40~8 牙 / 英寸 tooth/inch		无修光刃 Without wiper	

■ 螺纹车削刀片型号列表 - 公制螺纹 ISO 外螺纹加工刀片
Threading Insert Product List-Metric Thread ISO External Threading Insert

■ 螺纹车削刀片型号列表 - 公制螺纹 ISO 内螺纹加工刀片
Threading Insert Product List-Metric Thread ISO Internal Threading Insert



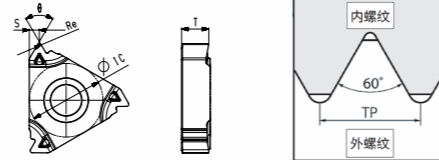
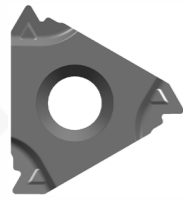
型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P							M					P/M/K			S											
	mm	牙数 / 英寸 Tooth number /inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A	OP6135A	OP6145A	OP6155A	OP6165A	OP6175A	OP6185A			
16ER-100ISOA	1.0	-	0.12	0.7	60	9.525	3.25																											
16ER-125ISOA	1.25	-	0.13	0.9	60	9.525	3.25																											
16ER-150ISOA	1.50	-	0.19	1	60	9.525	3.25																											
16ER-175ISOA	1.75	-	0.2	1.2	60	9.525	3.25																											
16ER-200ISOA	2.0	-	0.26	1.3	60	9.525	3.25																											
16ER-250ISOA	2.5	-	0.31	1.5	60	9.525	3.25																											
16ER-300ISOA	3.0	-	0.4	1.6	60	9.525	3.25																											
16ER-350ISOA	3.5	-	0.45	2.1	60	9.525	3.25																											
22ER-400ISOA	4.0	-	0.52	2.3	60	12.7	4.64																											
22ER-500ISOA	5.0	-	0.63	2.5	60	12.7	4.64																											
22ER-600ISOA	6.0	-	0.78	2.72	60	12.7	4.64																											

● 常备库存 Stock available ○ 按单生产 Make-to-order

型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P							M					P/M/K			S												
	mm	牙数 / 英寸 Tooth number /inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A	OP6135A	OP6145A	OP6155A	OP6165A	OP6175A	OP6185A				
06IR-100ISOA	1.0	-	0.07	0.5	60	3.97	1.91																												
06IR-150ISOA	1.5	-	0.11	0.7	60	3.97	1.91																												
08IR-100ISOA	1.0	-	0.07	0.5	60	4.76	2.38																												
08IR-150ISOA	1.5	-	0.2	1.2	60	4.76	2.38																												
11IR-100ISOA	1.0	-	0.07	0.7	60	6.35	3																												
11IR-125ISOA	1.25	-	0.09	0.9	60	6.35	3																												
11IR-150ISOA	1.5	-	0.11	1	60	6.35	3																												
11IR-175ISOA	1.75	-	0.12	1	60	6.35	3																												
11IR-200ISOA	2.0	-	0.15	1.1	60	6.35	3																												
11IR-250ISOA	2.5	-	0.16	1.24	60	6.35	3																												
16IR-075ISOA	0.75	-	0.05	0.5	60	9.525	3.52																												
16IR-100ISOA	1.0	-	0.07	0.7	60	9.525	3.52																												
16IR-125ISOA	1.25	-	0.08	0.9	60	9.525	3.52																												
16IR-150ISOA	1.50	-	0.11	1	60	9.525	3.52																												
16IR-175ISOA	1.75	-	0.12	1.2	60	9.525	3.52																												
16IR-200ISOA	2.0	-	0.15	1.2	60	9.525	3.52																												
16IR-250ISOA	2.5	-	0.16	1.5	60	9.525	3.52																												
16IR-300ISOA	3.0	-	0.22	1.6	60	9.525	3.52																												
16IR-350ISOA	3.5	-	0.22	2.1	60	9.525	3.52																												
22IR-400ISOA	4.0	-	0.25	2.3	60	12.7	4.64																												
22IR-500ISOA	5.0	-	0.32	2.5	60	12.7	4.64																												
22IR-600ISOA	6.0	-	0.38	2.72	60	12.7	4.64																												

● 常备库存 Stock available ○ 按单生产 Make-to-order

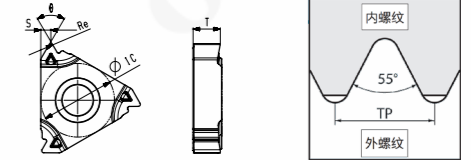
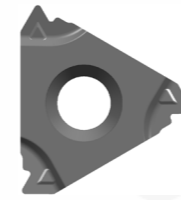
■ 螺纹车削刀片型号列表 - 通用螺纹 60°外螺纹加工刀片
Threading Insert Product List-General thread 60° External Threading Insert



型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P									M			P/M/K			S														
	mm	牙数 / 英寸 Tooth number /inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A												
16ER-A60A	0.5~1.5	48~16	0.06	0.9	60	9.525	3.25																														
16ER-AG60A	0.5~3	48~8	0.07	1.5	60	9.525	3.25																														
16ER-G60A	1.75~3	14~18	0.23	1.7	60	9.525	3.25																														
22ER-N60A	3.5~5	7~5	0.4	2.5	60	12.7	4.64																														

● 常备库存 Stock available ○ 按单生产 Make-to-order

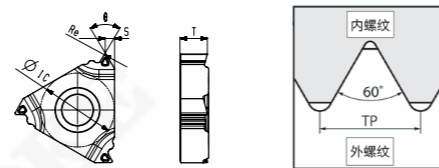
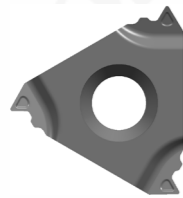
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Threading Insert Product List-General thread 55° External Threading Insert



型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P									M			P/M/K			S														
	mm	牙数 / 英寸 Tooth number /inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A												
16ER-AG55A	-	48~8	0.07	1.5	55	9.525	3.25																														
22ER-N55A	-	7~5	0.44	2.5	55	12.7	4.64																														

● 常备库存 Stock available ○ 按单生产 Make-to-order

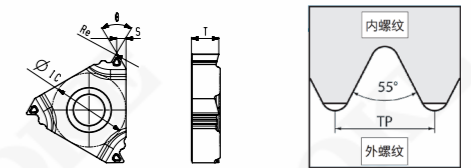
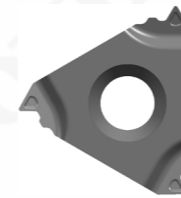
■ 螺纹车削刀片型号列表 - 通用螺纹 60°内螺纹加工刀片
Threading Insert Product List-General thread 60° Internal Threading Insert



型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P									M			P/M/K			S														
	mm	牙数 / 英寸 Tooth number /inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A												
06IR-A60A	0.5~1.5	48~16	0.04	0.75	60	3.97	1.91																														
08IR-A60A	0.5~1.5	48~16	0.04	0.75	60	4.76	2.38																														
11IR-A60A	0.5~1.5	48~16	0.04	0.9	60	6.35	3																														
16IR-A60A	0.5~1.5	48~16	0.04	0.9	60	9.525	3.52																														
16IR-AG60A	0.5~3	48~8	0.07	1.5	60	9.525	3.52																														
16IR-G60A	1.75~3	14~18	0.11	1.7	60	9.525	3.52																														
22IR-N60A	3.5~5	7~5	0.26	2.5	60	12.7	4.64																														

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 螺纹车削刀片型号列表 - 通用螺纹 55°内螺纹加工刀片
Threading Insert Product List-General thread 55° Internal Threading Insert

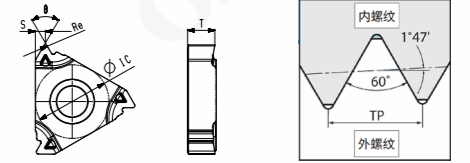
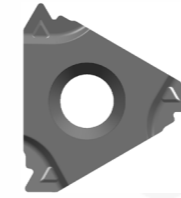
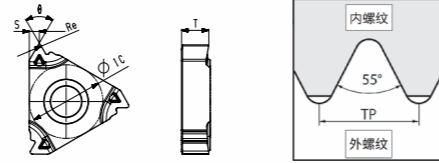
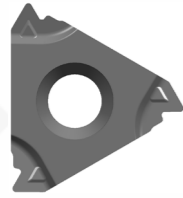


型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P									M			P/M/K			S														
	mm	牙数 / 英寸 Tooth number /inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A												
06IR-A55A	-	40~16	0.06	0.7	55	3.97	1.91																														
08IR-A55A	-	40~16	0.06	0.7	55	4.76	2.38																														
11IR-A55A	-	40~16	0.06	0.9	55	6.35	3																														
16IR-AG55A	-	40~8	0.07	1.5	55	9.525	3.52																														
22IR-N55A	-	7~5	0.44	2.5	55	12.7	4.64																														

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 螺纹车削刀片型号列表 - 英制惠氏螺纹 W 内螺纹加工刀片
Threading Insert Product List-British Standard Whitworth Thread W Internal Threading Insert

■ 螺纹车削刀片型号列表 - 美制管螺纹 NPT 外螺纹加工刀片
Threading Insert Product List-National Pipe Thread NPT External Threading Insert

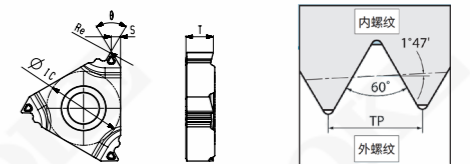
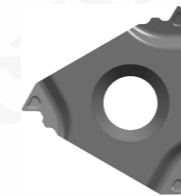


型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P						M			P/M/K			S						
	mm	牙数 / 英寸 Tooth number / inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6155A	OP6125A	
16ER-32WA	-	32	0.11	0.65	55	9.525	3.52																			
16ER-26WA	-	26	0.13	0.75	55	9.525	3.52																			
16ER-24WA	-	24	0.15	0.8	55	9.525	3.52																			
16ER-20WA	-	20	0.18	0.9	55	9.525	3.52																			
16ER-19WA	-	19	0.18	1	55	9.525	3.52																			
16ER-18WA	-	18	0.19	1	55	9.525	3.52																			
16ER-16WA	-	16	0.22	1.1	55	9.525	3.52																			
16ER-14WA	-	14	0.27	0.95	55	9.525	3.52																			
16ER-12WA	-	12	0.29	1.4	55	9.525	3.52																			
16ER-11WA	-	11	0.32	1.2	55	9.525	3.52																			
16ER-10WA	-	10	0.35	1.6	55	9.525	3.52																			
16ER-9WA	-	9	0.39	1.7	55	9.525	3.52																			
16ER-8WA	-	8	0.44	1.8	55	9.525	3.52																			

型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P						M			P/M/K			S						
	mm	牙数 / 英寸 Tooth number / inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6155A	OP6125A	
16ER-18NPTA	-	18	0.08	1	60	9.525	3.52																			
16ER-14NPTA	-	14	0.09	1.2	60	9.525	3.52																			
16ER-11.5NPTA	-	11.5	0.11	1.5	60	9.525	3.52																			
16ER-8NPTA	-	8	0.14	1.8	60	9.525	3.52																			

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 螺纹车削刀片型号列表 - 美制管螺纹 NPT 内螺纹加工刀片
Threading Insert Product List-National Pipe Thread NPT Internal Threading Insert



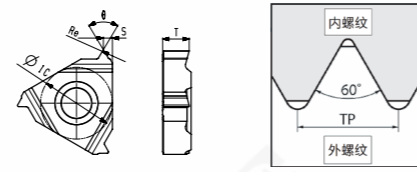
型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P						M			P/M/K			S						
	mm	牙数 / 英寸 Tooth number / inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6155A	OP6125A	
16IR-18NPTA	-	18	0.08	1	60	9.525	3.52																			
16IR-14NPTA	-	14	0.09	1.2	60	9.525	3.52																			
16IR-11.5NPTA	-	11.5	0.11	1.5	60	9.525	3.52																			
16IR-8NPTA	-	8	0.14	1.8	60	9.525	3.52																			

● 常备库存 Stock available ○ 按单生产 Make-to-order

A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 螺纹车削刀片
Threading Turning Inserts
D 附件
Attachments

螺纹车削刀片型号列表 - 公制螺纹 ISO 内螺纹加工刀片

Threading Insert Product List-ISO Metric Thread Internal Threading Insert



型号 Type	螺距 Thread pitch		尺寸 Dimension (mm)					P							M					P/M/K			S				
	mm	牙数 / 英寸 Tooth number / Inch	Re	S	θ	IC	T	OC2505	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OP1510	OP1520	OP1210	OP6105A	OP6115A	OP6125A		
06IR-100ISOM	1.0	-	0.07	0.5	60	3.97	1.91														○	●	○			○	
06IR-150ISOM	1.5	-	0.11	0.7	60	3.97	1.91															○	●	○			○
08IR-100ISOM	1.0	-	0.07	0.5	60	4.76	2.38															○	●	○			○
08IR-150ISOM	1.5	-	0.2	1.2	60	4.76	2.38															○	●	○			○
11IR-100ISOM	1.0	-	0.07	0.7	60	6.35	3															○	●	○			○
11IR-125ISOM	1.25	-	0.09	0.9	60	6.35	3															○	●	○			○
11IR-150ISOM	1.5	-	0.11	1	60	6.35	3															○	●	○			○
11IR-175ISOM	1.75	-	0.12	1	60	6.35	3															○	●	○			○
11IR-200ISOM	2.0	-	0.15	1.1	60	6.35	3															○	●	○			○
11IR-250ISOM	2.5	-	0.16	1.24	60	6.35	3															○	●	○			○
16IR-075ISOM	0.75	-	0.05	0.5	60	9.525	3.52															○	●	○			○
16IR-100ISOM	1.0	-	0.07	0.7	60	9.525	3.52															○	●	○			○
16IR-125ISOM	1.25	-	0.08	0.9	60	9.525	3.52															○	●	○			○
16IR-150ISOM	1.50	-	0.11	1	60	9.525	3.52															○	●	○			○
16IR-175ISOM	1.75	-	0.12	1.2	60	9.525	3.52															○	●	○			○
16IR-200ISOM	2.0	-	0.15	1.2	60	9.525	3.52															○	●	○			○
16IR-250ISOM	2.5	-	0.16	1.5	60	9.525	3.52															○	●	○			○
16IR-300ISOM	3.0	-	0.22	1.6	60	9.525	3.52															○	●	○			○
16IR-350ISOM	3.5	-	0.22	2.1	60	9.525	3.52															○	●	○			○

● 常备库存 Stock available ○ 按单生产 Make-to-order

03 卫浴市场车削刀具

Inserts for the Sanitary Ware Market

卫浴市场车削刀具 - 牌号介绍

Inserts for the Sanitary Ware Market Grade Introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OP1305	M15-M25	●						PVD	基本采用细晶粒硬质合金，通过适中的钴含量及烧结控制技术，使基体硬度耐磨性能优异；涂层为高铝含量、高致密性 AlTiN 电弧涂层，高温红硬性和耐磨性能优异；应用：广泛应用于卫浴不锈钢市场车削领域，通用性好，适用性强； The substrate is made of fine-grain cemented carbide. With a moderate cobalt content and optimized sintering control, it offers excellent hardness and wear resistance; the coating is a high-aluminum-content, high-density AlTiN arc coating, providing outstanding hot hardness and wear resistance at high temperatures. Application: Widely used in the turning of stainless steel in the sanitary ware market, featuring good versatility and strong adaptability.	



■ 卫浴市场车削刀具槽型 -NMS
Indexable Insert Chipbreaker - NMS

刀片技术细节与应用 Grade introduction

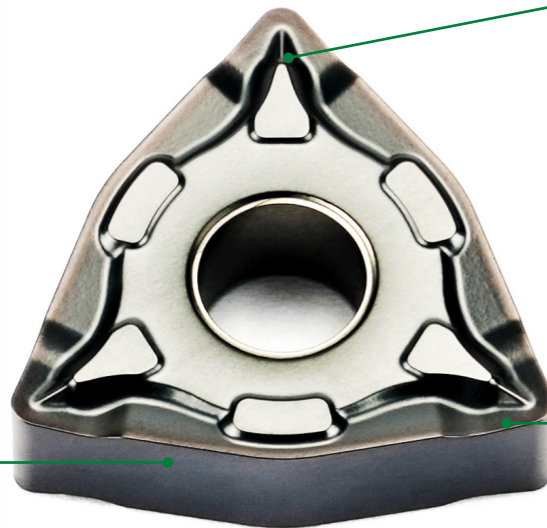
刀片材质及应用 Grade and Application

PVD 材质 PVD Grade	OP1305	基本形状 Basic shapes	CNMG1204、TNMG1604 WNMG0804、VNMG1604
被加工材料 Workpiece Material	不锈钢 Stainless Steel	刀尖圆弧 Corner Radius	0.4、0.8

刀片型号 Inserts Size

槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	通用性加工用 For general-purpose machining	槽型特点 Chipbreak Characteristics	<ul style="list-style-type: none"> - 刃口优化设计, 切削刃锋利与强度兼备 - 超长刃倾角设计, 切削轻快兼具更通用性 - Optimized cutting edge design ensures both sharpness and strength. - Extra-long inclination angle design provides light cutting action and wider versatility.
加工参数 Parameter	Ap=0.2-2.5mm Fn=0.10-0.30mm/rev	主切削刃 Main cutting edges	



先进的涂层技术
Advanced Coating Technology

- 实现了涂层薄膜在基材上附着力良好;
- 产品表面光滑无液滴, 切削阻力小;
- AITIN 多层薄膜结构, 实现了产品拥有超高的抗氧化、高耐磨与抗粘结特性;

- Achieves strong coating adhesion on the substrate;
- The surface is smooth and droplet-free, resulting in low cutting resistance;
- The multilayer AITIN coating structure provides excellent oxidation resistance, high wear resistance, and anti-adhesion properties.

强韧硬质合金基材
Tough carbide substrate

- 高温硬度与强度优异的硬质合金基材;
- 红硬性与韧性兼顾, 实现良好的抗边界磨损与抗崩刃特性;

- Cemented carbide substrate with both excellent red hardness and strength;
- Combines hot hardness and toughness, providing good resistance to boundary wear and chipping.

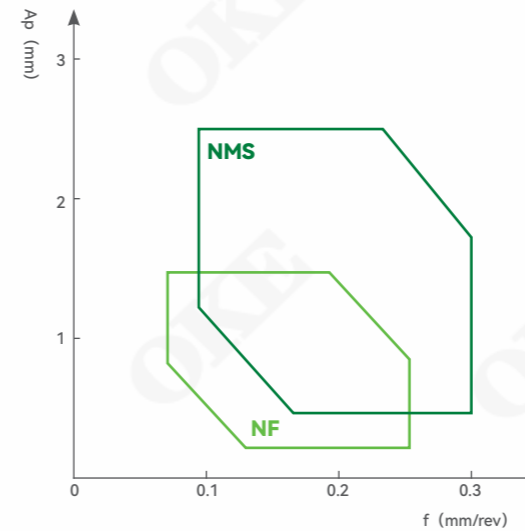
广泛的应用领域
Wide range of application

- 可用于食品级流体零件加工;
- 能应对各种复杂的卫浴类产品加工;
- 可用于各种球体以及汽车排气法兰加工;
- Suitable for machining food-grade fluid parts;
- Capable of handling various complex sanitary ware products;
- Applicable to the machining of various spheres and automotive exhaust flanges;

■ 不锈钢卫浴市场车削槽型断屑范围 (负角 --NMS 槽型)

Inserts for the Sanitary Ware Market Chip-breaking range for stainless steel sanitary ware turning (negative - NMS chip breaker)

 负角刀片 (不锈钢材料用, 双面)
Negative inserts (For stainless steel, double-sided)



■ 卫浴市场车削刀具 - 产品应用

Inserts for the Sanitary Ware Market Application

工件名称 Workpiece	管件 Tube (T-S-TN16-SW-250730)	
刀具规格 Type	TNMG160408-NMS/OP1305	
	TNMG160408-*F/A 公司 Company	
加工材料 Workpiece Material	SUS304	
切削速度 Cutting speed	110m/min	
进给量 Feed rate	0.15mm/rev	
切深量 Ap	0.5mm	
切削方式 Cutting method	外圆; 湿切 External; Wet cutting	

■ 卫浴市场车削刀具 - 产品应用

Inserts for the Sanitary Ware Market Application

工件名称 Workpiece	管件 Tube (T-S-TN16-WF-250730)
刀具规格 Type	TNMG160408-NMS/OP1305
	TNMG160408-*F/B 公司 Company
加工材料 Workpiece Material	SUS304
切削速度 Cutting speed	140m/min
进给量 Feed rate	0.20mm/rev
切深量 Ap	0.5-1.8mm
切削方式 Cutting method	外圆; 湿切 External; Wet cutting

OP1305	140 件
B 公司 Company	120 件
+16%	

OP1305 B 公司 Company

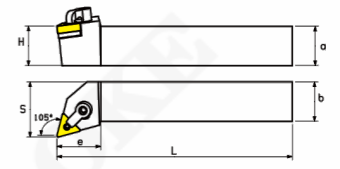
工件名称 Workpiece	法兰 Flange (T-S-TN16-SW-250908)
刀具规格 Type	WNMG080408-NMS/OP1305
	WNMG080408-*F/C 公司 Company
加工材料 Workpiece Material	SUS304
切削速度 Cutting speed	100m/min
进给量 Feed rate	0.20mm/rev
切深量 Ap	1.0-1.2mm
切削方式 Cutting method	外圆; 湿切 External; Wet cutting

OP1305	146 件
C 公司 Company	131 件
+11%	

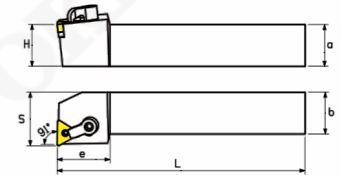
OP1305 C 公司 Company

■ 卫浴市场车削刀具 - 钢制品 (外圆车刀)

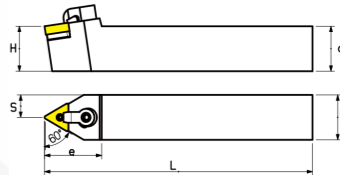
Inserts for the Sanitary Ware Market Tool Holder (External Turning)



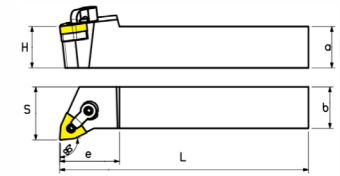
型号 Type	尺寸 Dimension (mm)						适用刀片 Applicable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud	
	a	b	L	H	S	e							
MTQNR/L	2020K16	20	20	125	20	29	25	TN □ □ 1604 □ □	WS61025 WS61030	MT1603	S2,S3	MCL1814	SMP513
	2525K16	25	25	150	25	35	28						



型号 Type	尺寸 Dimension (mm)						适用刀片 Applicable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud	
	a	b	L	H	S	e							
MTFNR/L	1616H16	16	16	100	16	21	28	TN □ □ 1604 □ □	WS61025 WS61030	MT1603	S2,S3	MCL1814	SMP513
	2020K16	20	20	125	20	25	30						
	2525M16	25	25	150	25	32	32						



型号 Type	尺寸 Dimension (mm)						适用刀片 Applicable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud	
	a	b	L	H	S	e							
MTENN	2020K16	20	20	125	20	10	34	TN □ □ 1604 □ □	WS061025 WS061030	MT1603	S2,S3	MCL1814	MSP513
	2525M16	25	25	150	25	12.5	32						

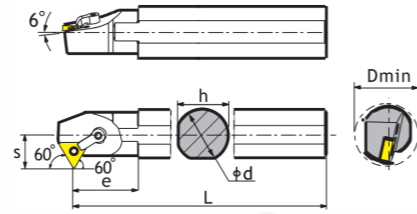


型号 Type	尺寸 Dimension (mm)						适用刀片 Applicable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud	
	a	b	L	H	S	e							
MWLNR/L	2020K08	20	20	125	20	26	28	WN □ □ 0804 □ □	WS061025 WS061030	MW0804	S3	MCL1814	MSP617
	2525M08	25	25	150	25	32	35						

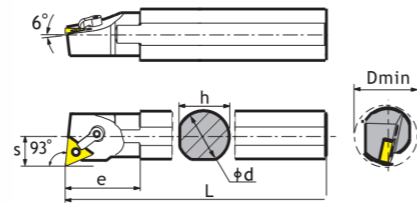
A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 卫浴市场车削刀具
Inserts for the Sanitary Ware Market
D 附件
Attachments

■ 卫浴市场车削刀具 - 钢制品 (内孔车刀)

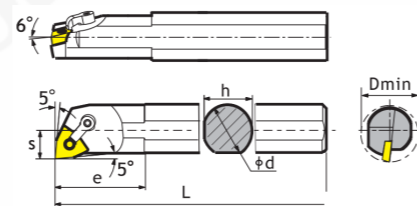
Inserts for the Sanitary Ware Market - Tool Holder (Internal Turning)



60°主偏角 Lead Angle	尺寸 Dimension (mm)						适用刀片 Applicable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud
	Dmin	φd	h	L	S	e						
型号 Type							TN □□ 1604 □□	WS061020	X	S2,S3	MCL1810	MSP510
S20Q-MTWNRL16	27	20	18	180	15	31						
S25R-MTWNRL16	32	25	23	200	17	35		WS061025			MCL1814	



93°主偏角 Lead Angle	尺寸 Dimension (mm)						适用刀片 Applicable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud
	Dmin	φd	h	L	S	e						
型号 Type							TN □□ 1604 □□	WS061020	X	S2,S3	MCL1810	MSP510
S20Q-MTUNRL16	25	20	18	180	13	31						
S25R-MTUNRL16	32	25	23	200	17	35		WS061025			MCL1814	

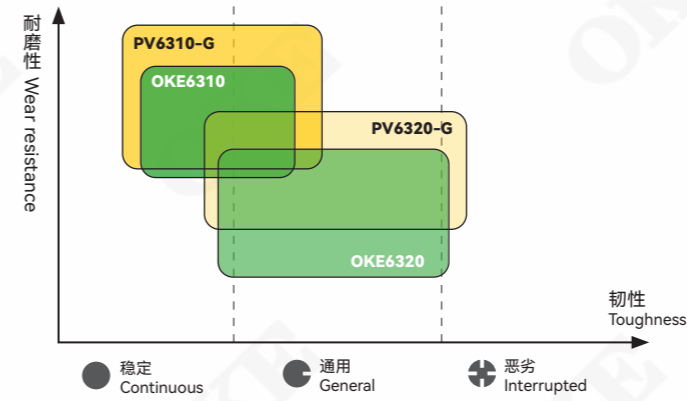


95°主偏角 Lead Angle	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	刀垫 Shim	扳手 Wrench	压板 Clamp	销钉 CalmpStud
	Dmin	φd	h	L	S	e						
型号 Type							WN □□ 0804 □□	WS061020	X	S2,S3	MCL1810	MSP613
S20Q-MWLNRL08	25	20	18	180	14.5	36						
S25R-MWLNRL08	32	25	23	200	17	40						

04 金属陶瓷车削刀片
Cermet Turning Insert

■ 金属陶瓷车削刀片 - 牌号适用范围

Cermet Turning Insert Grade Application Range









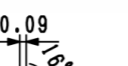
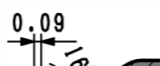
■ 金属陶瓷车削刀片 - 牌号介绍

Cermet Turning Insert Grade introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OKE6310	P10 (P10-P20)	●			○			无涂层 Without coating	合金具有高百分比的细晶硬质相, 可提供优秀的耐磨性及表面加工效果, 内部的高韧性使材料具有了良好的抗崩性能与热冲击性能, 产品的耐磨性和韧性得到完美平衡; 推荐用于钢的精-半精加工, 连续-轻断续加工工况; The alloy has a high percentage of fine crystal hard phase, which can provide excellent wear resistance and surface machining effect. The internal high toughness makes the material have good anti-chipping performance and thermal shock resistance performance. The wear resistance and toughness of the product are perfectly balanced; Recommended for steel finishing to semi-finishing machining, continuous and light intermittent machining conditions;	
OKE6320	P20 (P20-P30)	●						无涂层 Without coating	合金融合了强化粘相及降低摩擦系数的特殊材料, 高强化的粘相可提供优秀的抗崩性能, 低摩擦系数可确保稳定的耐磨性及优质的加工品质; 推荐用于钢的精、半精加工, 连续、轻断续、中等断续等工况的通用加工; The combination of special materials to strengthen the bonding phase and reduce the friction coefficient, the high strengthening bonding phase can provide excellent anti-breakage performance, low friction coefficient can ensure stable wear resistance and high quality of machining surface quality; Recommended for finishing and semi-finishing machining of steel, continuous, light intermittent, medium intermittent and other general machining conditions;	
PV6310-G <small>NEW</small>	P10 (P10-P20)	●						PVD	高耐磨性金属陶瓷基体搭配耐磨性能与抗粘性能良好的涂层; 推荐用于钢的精、半精加工, 可实现在高速连续工况下的稳定加工, 实现高质量的表面光洁度; High abrasion resistance cermet substrate combined with good abrasion resistance and anti-adhesion performance coating; Recommended for steel finishing and semi-finishing machining, can achieve stable machining under high speed continuous working conditions, achieve high quality of surface finish;	
PV6320-G <small>NEW</small>	P10 (P20-P30)	●						PVD	强韧性与耐磨性兼具的金属陶瓷基体搭配耐磨性能与抗粘性能良好的涂层; 推荐用于钢的精、半精加工, 可实现在连续-轻断续、中等断续工况下的高寿命稳定加工; The cermet substrate paired with coating of good wear resistance and anti-adhesion performance; Recommended for steel finishing and semi-finishing machining, can achieve high life and stable machining under continuous-light intermittent, medium intermittent working conditions;	


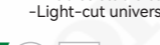






■ 金属陶瓷车削刀片 - 槽型介绍 (双面负角槽型)

Cermet Turning Insert Chip Breaker Introduction(Double-sided negative chip breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>OF-JT <small>NEW</small></p> <ul style="list-style-type: none"> - 中等精度加工用 - 大前角保持切削轻快 - 切屑控制效果优异 - 适合细长工件加工 <p>-For medium-finishing machining -Maintain light and quick cutting at the large rake angle -Excellent chip control -Suitable for machining slender workpieces</p> <p>C D R S </p>	●						 	0.7-4.5	0.10-0.45		
 <p>AF-JT <small>NEW</small></p> <ul style="list-style-type: none"> - 精加工与半精度加工用 - 双凸台结构, 切屑处理优 - 切削阻力小, 表面质量佳 - 强化的微刃口处理 <p>-For finishing and semi-finishing machining -Double boss structure, excellent chip handling -Low cutting resistance, good surface quality -Enhanced micro-edge treatment</p> <p>C D R S </p>	●						 	0.4-2.0	0.13-0.30		

■ 金属陶瓷车削刀片 - 槽型介绍 (单面正角槽型)

Cermet Turning Insert Chip Breaker Introduction(Single-sided Positive Chip Breaker)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						刀尖圆弧 Corner Radius	切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H				
 <p>AF-JT <small>NEW</small></p> <ul style="list-style-type: none"> - 精加工与半精度加工用 - 双前角设计, 保持刃口锋利性与强度 - 可实现稳定切削 - 轻切加工通用槽型 <p>-For finishing and semi-finishing machining -Dual rake angles design, maintaining sharpness and strength -Enables stable cutting -Light-cut universal chip breaker</p> <p>5° 7° 11° C D R S </p>	●						 	0.6-2.0	0.12-0.25		
 <p>BE-JT <small>NEW</small></p> <ul style="list-style-type: none"> - 轴承加工用 - 锋利刃口切削阻力小 - 优异的排屑效果 - 适用外径 / 内径 / 外圆加工 <p>-For bearing machining -Sharp insert cuts with less resistance -Excellent chip removal -Applicable to outer diameter, inner diameter, and external machining</p> <p>11° C D R S </p>	●						 	0.1-2.0	0.20-0.60		

* 备注: 部分型号 Note: Applicable to certain types.

金属陶瓷车削刀片槽型 -AF-JT NEW
Cermet Turning Insert Chipbreaker AF-JT

刀片技术细节与应用 Grade introduction

刀片材质及应用 Grade and Application

刀片型号 Inserts Size

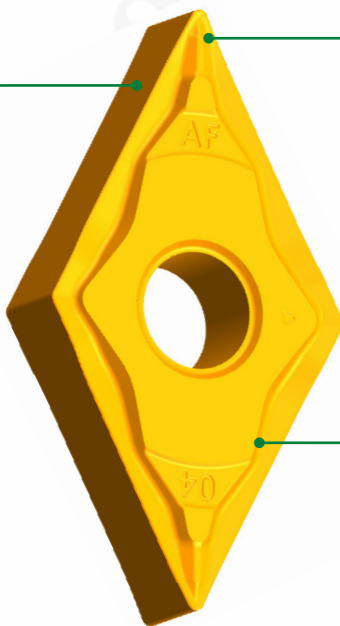
牌号 Grade	OKE6310, OKE6320 PV6310-G, PV6320-G	基本形状 Basic shapes	DNMG15、TNMG16 VNMG16、WNMG08
被加工材料 Workpiece Material	钢类材料加工 Steel materials machining	刀尖圆弧 Corner Radius	0.4、0.8

槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	- 钢件精加工 - 半精加工 - Steel parts finishing to semi-finishing machining	槽型特点 Chipbreak Characteristics	- 大前角及刃倾角的设计, 降低切削阻力, 排屑顺畅 - 适用于连续切削、轻断续加工 - The design of the large rake angle and inclination angle reduces cutting resistance and facilitates smooth chip removal. - Suitable for continuous cutting and light intermittent machining
加工参数 Parameter	Ap=0.4-2.0mm Fn=0.13-0.30mm/rev	主切削刃 Main cutting edges	

优化的微刃口处理
Optimized micro-edge preparation

- 瀑布式刃口圆化处理, 在保持刃口锋利的同时, 增加了刀片强度, 延长刀具寿命, 并更容易获得优异的工作表面质量;
- 可用于多种加工工况;
- Waterfall-style edge honing maintains sharpness while increasing insert strength, extending tool life, and improving workpiece surface quality;
- Applicable to various machining conditions;



满足多种工况需求的槽型结构
Chip breaker meeting various working conditions

- 双凸台挡屑结构, 在不同切削参数下均能得到优良的排屑效果;
- 刃倾角的设计, 增加刀具锋利度的同时, 起到很好的导屑作用;
- 低阻力的断屑槽设计, 可有效降低加工过程的切削力;
- Double protrusion chip blocking structure, which can get excellent chip discharge effect under different cutting parameters;
- The design of the insert inclination angle increases the sharpness of the tool and plays a good role in chip guidance;
- Chip breaker designed for low cutting force, effectively reduce the cutting force during processing;

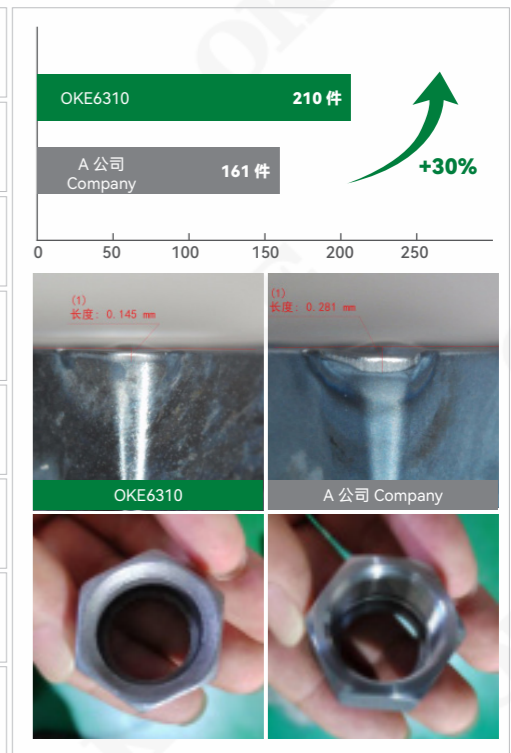
强韧金属陶瓷基材
Tough Cermet Substrate

- 可提供优秀的耐磨性及表面加工效果, 内部的高韧特性使材料具有了良好的抗崩性能与热冲击性能, 产品的耐磨性和韧性得到完美平衡;
- 可搭配最新 PVD 涂层, 实现高效切削;
- Excellent wear resistance and surface processing effect can be provided, the internal high toughness characteristics make the material has good anti-chipping performance and thermal shock performance, the wear resistance and toughness of the product are perfectly balanced;
- Match with the newest PVD coating to realized high efficiency cutting;

金属陶瓷双面槽负角刀片 Double-sided cermet negative inserts
PV6310-G VNMG160404-AF-JT

金属陶瓷车削刀片 - 产品应用
Cermet Turning Insert Application

工件名称 Workpiece	螺母 Nuts (T-P-CC09-YYQ-22071901)
刀具规格 Type	CCMT09T304-AF-JT/OKE6310 CCMT09T304-XX/A 公司 Company
加工材料 Workpiece Material	汽车零部件 Auto parts Q235
切削速度 Cutting speed	124m/min
进给量 Feed rate	0.13mm/rev
切深量 Ap	0.5mm
切削方式 Cutting method	内孔加工 Internal hole machining



工件名称 Workpiece	管接头 Pipe fitting(T-P-TN16-HXP-23071606)
刀具规格 Type	TNMG160404-AF-JT/OKE6320 TNMG160404-XX/B 公司 Company
加工材料 Workpiece Material	A3 钢 steel
切削速度 Cutting speed	236m/min
进给量 Feed rate	0.17mm/rev
切深量 Ap	1.0-2.0mm
切削方式 Cutting method	外圆及端面加工; 水冷 External and end face machining; water cooling



■ 金属陶瓷车削刀片 - 产品应用

Cermet Turning Insert Application

工件名称 Workpiece	单发球销 Ball pin(T-P-VN6-YYQ-24120301)
刀具规格 Type	VNMG160404-AF-JT/PV6310-G
	VNMG160404-XX/C 公司 Company
加工材料 Workpiece Material	40Cr
切削速度 Cutting speed	188m/min
进给量 Feed rate	0.20mm/rev
切深量 Ap	0.5mm
切削方式 Cutting method	外圆; 水冷 External ; water-cooled

PV6310-G 585 件
C 公司 Company 345 件
+34%

0 150 300 450 600

PV6310-G C 公司 Company

工件名称 Workpiece	传动轴 Transmission shaft (T-P-TN16-CHF-23060302)
刀具规格 Type	TNMG160404R-OF-JT/PV6320-G
	TNMG160404R-XX/D 公司 Company
加工材料 Workpiece Material	45 钢 steel
切削速度 Cutting speed	100m/min
进给量 Feed rate	0.27mm/rev
切深量 Ap	0.9-3.0mm
切削方式 Cutting method	外圆; 水冷 External circle; water-cooled

PV6320-G 515 件
D 公司 Company 412 件
+25%

0 150 300 450 600

PV6320-G D 公司 Company

■ 金属陶瓷车削刀片 - 型号列表 (负角刀片)

Cermet Turning Inserts-Product List (Negative inserts)

形状 Shape	型号 Type	尺寸 Dimension (mm)				P					M			K		S										
		刀片半径 RE	内切圆 IC	厚度 S	孔径 D1	OC2S15	OC2S25	OC2S35	OKE6310	OKE6320	PV6310-G	PV6320-G	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OP4105A	OP4115A	OP4125A		
	DNMG150404L-OF-JT	0.4	12.7	4.76	5.16				●	●	○	○														
	DNMG150404R-OF-JT	0.4	12.7	4.76	5.16				●	●	○	○														
	TNMG160404L-OF-JT	0.4	9.525	4.76	3.81				●	●	○	○														
	TNMG160404R-OF-JT	0.4	9.525	4.76	3.81				●	●	○	○														
	TNMG160408L-OF-JT	0.8	9.525	4.76	3.81				●	●	○	○														
	TNMG160408R-OF-JT	0.8	9.525	4.76	3.81				●	●	○	○														
	DNMG150404-AF-JT	0.4	12.7	4.76	5.16				●	●	○	○														
	DNMG150408-AF-JT	0.8	12.7	4.76	5.16				●	●	○	○														
	TNMG160404-AF-JT	0.4	9.525	4.76	3.81				●	●	○	○														
	TNMG160408-AF-JT	0.8	9.525	4.76	3.81				●	●	○	○														
	VNMG160404-AF-JT	0.4	9.525	4.76	3.81				●	●	○	○														
	VNMG160408-AF-JT	0.8	9.525	4.76	3.81				●	●	○	○														
	WNMG080404-AF-JT	0.4	12.7	4.76	5.16				●	●	○	○														
	WNMG080408-AF-JT	0.8	12.7	4.76	5.16				●	●	○	○														

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 金属陶瓷车削刀片 - 型号列表 (正角刀片)

Cermet Turning Inserts-Product List (Positive inserts)

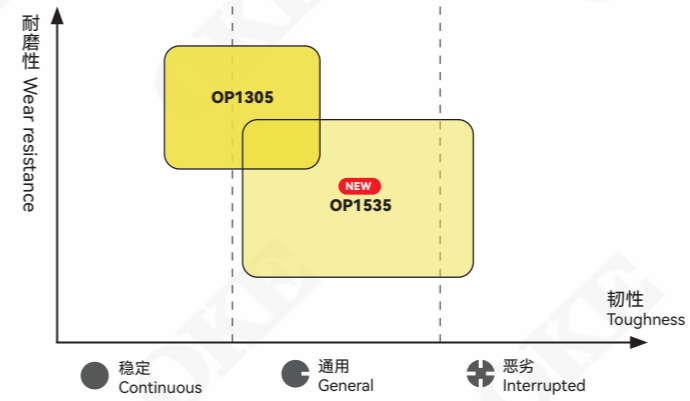
形状 Shape	型号 Type	尺寸 Dimension (mm)					P						M				K		S							
		刀尖半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC6220	OC6310	OC6320	PV6310-G	PV6320-G	OC4310	OC4320	OC4330	OP1215	OP1315	OP1415	OC3205	OC3210	OC3220	OP6105A	OP6115A	OP6125A	
	CCMT060204-AF-JT	0.4	6.35	2.38	2.8	7°					○	●	○	○												
	CCMT09T304-AF-JT	0.4	9.525	3.97	4.4	7°					○	●	○	○												
	DCMT070204-AF-JT	0.4	6.35	2.38	2.8	7°					○	●	○	○												
	DCMT11T304-AF-JT	0.4	9.525	3.97	4.4	7°					○	●	○	○												
	TCMT090204-AF-JT	0.4	5.56	2.38	2.5	7°					○	●	○	○												
	TCMT110204-AF-JT	0.4	6.35	2.38	2.8	7°					○	●	○	○												
	TPMT090204-AF-JT	0.4	5.56	2.38	2.8	11°					○	●	○	○												
	TPMT110304-AF-JT	0.4	6.35	3.18	3.4	11°					○	●	○	○												
	VBMT110304-AF-JT	0.4	6.35	3.18	2.8	5°					○	●	○	○												
	VBMT160404-AF-JT	0.4	9.525	4.76	4.4	5°					○	●	○	○												
	RPMT1203MO-BE-JT		12	3.18	4.4	11°					●	○														
	RPMT1604MO-BE-JT		16	4.76	5.56	11°					●	○														

● 常备库存 Stock available ○ 按单生产 Make-to-order

05 小零件车削刀具
Small Parts Turning Insert

■ 小零件车削刀片 - 牌号适用范围

Small Parts Turning Insert Grade Application Range

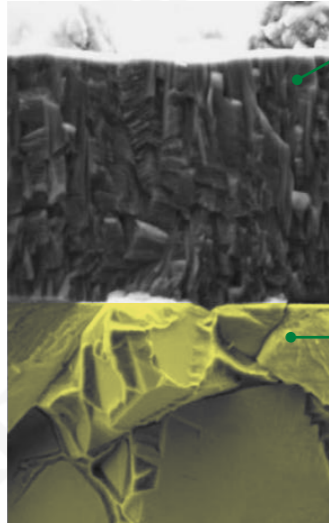


■ 小零件车削刀片 - 牌号介绍

Small Parts Turning Insert Grade introduction

涂层牌号 Coating	ISO 等级 ISO grade	被加工材料 Workpiece Material						涂层工艺 Coating Technique	牌号等级与应用 Grade and Application	刀片示例 Insert Shape
		P	M	K	N	S	H			
OP1305	P10-P20 M10-M20	●	○					PVD	基体采用细晶粒硬质合金，通过适中的钴含量及烧结控制技术，使基体硬度耐磨性能优异；涂层为高铝含量、高致密性 AlTiN 电弧涂层，高温红硬性和耐磨性能优异；应用：可加工 1215 钢 /1144 钢 /SUS303/SUS304 等； The substrate is made of fine-grained cemented carbide, with moderate cobalt content and sintering control technology to achieve excellent hardness and wear resistance. The coating is a high-aluminum, high-density AlTiN arc coating, which exhibits excellent red hardness and wear resistance at high temperatures. Application: Suitable for processing 1215 steel, 1144 steel, SUS303, SUS304, etc.	
OP1535 <small>NEW</small>	M15-M40 P15-P30	○	●					PVD	基体采用细晶粒硬质合金，通过粘结相固溶强化工艺及热压烧结工艺，可保证合金具备高强度、高韧性的特点，使刀具刃口拥有优秀的锋利度和耐磨性，可获得理想的表面光洁度效果；涂层为 AlTiN 基纳米涂层，可调节涂层内应力，抑制裂纹扩展，层间外延生长的强化界面保证涂层高硬耐磨，引入 X 元素，提高涂层抗氧化性和红硬性，延长刀具寿命；应用：可加工 SUS303/SUS304/SUS316L/SUS430/SUS431/SUS620/ 钛合金 TC4 等； The substrate adopts fine grain cemented carbide, and the bonding phase solid solution strengthening process and hot pressing sintering process can ensure that the alloy has the characteristics of high strength and high toughness, so that the insert edge of the tool has excellent sharpness and wear resistance, and can obtain the ideal surface finish effect. The coating is an AlTiN-based nano-coating that regulates internal stress and inhibits crack propagation. Its interfacial strengthening through interfacial epitaxial growth ensures high hardness and wear resistance. The addition of X element enhances oxidation resistance and red hardness, thereby extending tool life. Application: Suitable for machining SUS303/SUS304/SUS316L/SUS430/SUS431/SUS620/Titanium alloy TC4.	

OP1535 系列产品特性
OP1535 Series Product Features



先进的涂层技术
Advanced coating technology

AlTiN 基纳米多层, 可调节涂层内应力, 抑制裂纹扩展;
层间外延生长的强化界面保证涂层高硬磨;
引入特殊元素, 提高涂层抗氧化性和红硬性;
AlTiN-based nano-multilayer coatings can regulate internal stress and inhibit crack propagation.
The enhanced interface of interlayer epitaxial growth ensures high hardness of coating;
Introduce special elements to improve the oxidation resistance and red hardness of coating;

新研发的硬质合金基材
Newly developed hard alloy substrate

通过粘结相固溶强化工艺及热压烧结工艺, 可保证合金具备高强度高韧性的特点;
Through the bonding phase solid solution strengthening process and hot pressing sintering process, the alloy can be guaranteed to have the characteristics of high strength and high toughness;

小零件加工刀片 - 槽型介绍 (前扫刀片)

Small Parts Processing Inserts - Chip breaker introduction (front- turning insert)

槽型 Chipbreak	介绍及应用 Introduction and Application	被加工材料 Workpiece Material						切削刃 Cutting Edges	ap(mm)	f(mm/rev)
		P	M	K	N	S	H			
 JGQ - 通用加工槽型, 刃口强壮, 产品耐磨性能优异 - 适用于大切深 (变切深)、小进给加工工况 - Universal processing chip breaker, strong cutting edge, excellent product wear resistance performance - Suitable for deep cutting (variable depth) and small feed machining conditions *5° 7° 	● ●						 5°	0.5-3.5	0.02-0.1	
 JCK - 超精加工槽型, 刃口锋利, 切削轻快 - 前刀面镜面处理, 加工工件的表面质量更好 - Ultra-finishing chip breaker with sharp cutting edge, enabling light and quick cutting - Mirror finish on the rake surface to provide good surface quality *5° 7° 11° 	● ●						 13°	0.1-1.5	0.02-0.08	
 SE - 刃倾角结构, 切屑控制能力更好 - 断屑台距离更短, 适用于小切深、小进给加工工况 - Rake angle structure provides better chip control; - Shorter chipbreaker platform, suitable for shallow cutting depth and small feed conditions. *5° 7° 	● ●						 12°	0.05-1.0	0.03-0.08	

*备注: 部分型号 Note: Applicable to certain types.

小零件加工刀片槽型 -SE

Small Parts Processing Inserts Chipbreaker -SE

刀片技术细节与应用 Grade introduction

刀片材质及应用 Grade and Application

PVD 牌号 PVD Grade	OP1535	基本形状 Basic shapes	CCGT06、CCGT09、DCGT11 VBGT11、VCGT11
被加工材料 Workpiece Material	SUS304、SUS316L、马氏体不锈钢等 SUS304, SUS316L, martensitic stainless steel, etc.	刀尖圆弧 Corner Radius	0.1、0.2、0.4

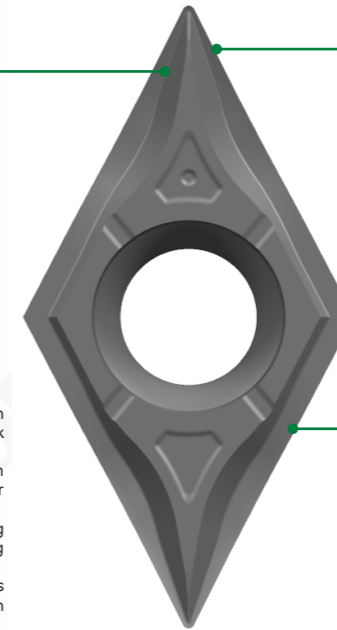
槽型设计特性及应用 Chipbreak Characteristics And Applications

适用范围 Application	精加工槽型 Finishing chip breaker	槽型特点 Chipbreak Characteristics	- 大前角设计, 刃口锋利, 切削轻快 - Large rake angle design, sharp cutting edge, light and quick cutting
加工参数 Parameter	Ap=0.05-1.0mm Fn=0.03-0.08mm/rev	主切削刃 Main cutting edges	

特殊的涂层工艺
Special Coating Process

- AlTiN 基纳米多层, 可调节涂层内应力, 抑制裂纹扩展;
- 层间外延生长的强化界面保证涂层高硬耐磨;
- 引入特殊元素, 提高涂层抗氧化性和红硬性, 延长服役寿命;
- 产品表面光滑, 实现了更低的摩擦阻力与抗黏屑特性;

- AlTiN-based nano-multilayer coating with adjustable internal stress, effectively inhibiting crack propagation;
- Strengthened interfaces formed by epitaxial growth between layers ensure high hardness and wear resistance;
- Introduce special elements to improve the coating oxidation resistance and red hardness, and prolong the service life;
- The smooth surface of the product achieves lower friction resistance and better chip adhesion resistance;



贴合实际应用的设计
Design Optimized for Practical Applications

- 刃倾角结构设计, 适合小切深加工工况;
- 断屑台更靠近刀尖, 微小切深工况下使切屑处理成为可能;
- The insert inclination angle structure design is suitable for small cutting deep processing conditions;
- The chip breaker platform is closer to the tip, making chip processing possible under the condition of small cutting depth;

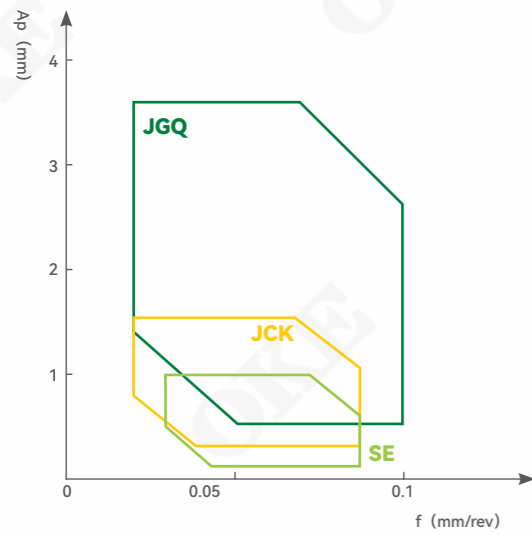
强韧硬质合金基材
Tough Carbide Substrate

- 细晶粒硬质相, 使刀具刃口拥有优秀的锋利度和耐磨性;
- 通过粘结相固溶强化工艺及热压烧结工艺, 可保证合金具备高强度高韧性的特点;
- Fine grain hard phase, so that the insert edge has excellent sharpness and wear resistance;
- Through the bonding phase solid solution strengthening process and hot pressing sintering process, the alloy can be guaranteed to have the characteristics of high strength and high toughness;

前扫刀具 Front Turning Tool
OP1535 DCGT11T302-SE

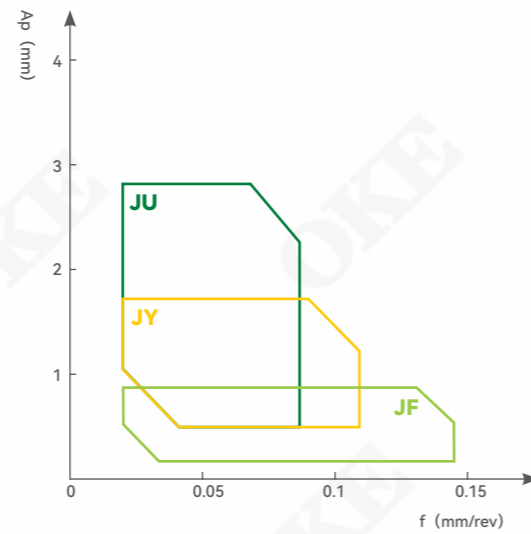
■ 小零件加工槽型断屑范围
Small part Processing chip breaker

 正角刀片 (压槽系列)
Positive insert (Pressed series)



- JGQ** 通用加工槽型
General machining chip breaker
- JCK** 精加工槽型 (光洁度)
Finishing chip breaker (surface finish)
- SE** 精加工槽型 (断屑)
Finishing chip breaker (chip breakage)

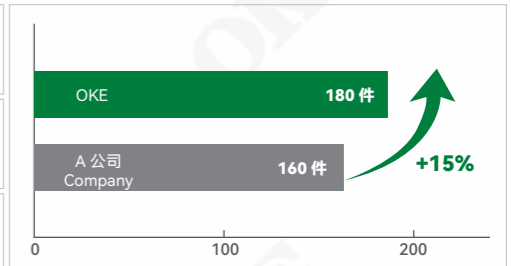
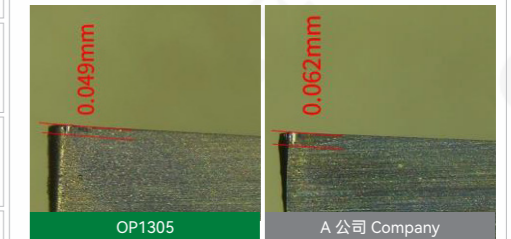

 正角刀片 (磨槽系列)
Positive insert (Ground series)



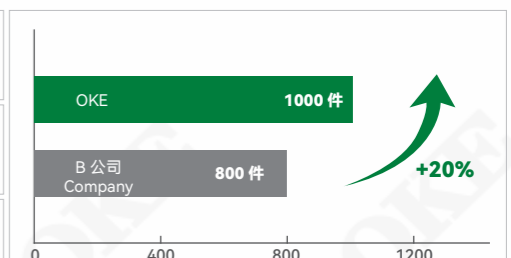
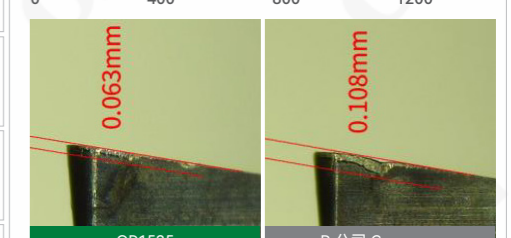
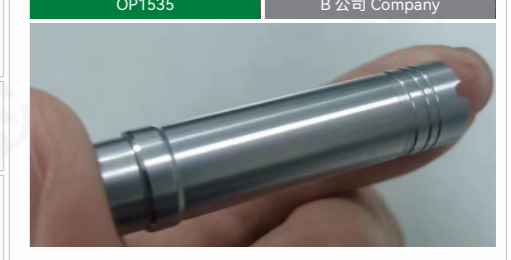
- JU/JY** 精加工槽型 (外圆)
Finishing chip breaker (External)
- JF** 精加工槽型 (端面、内孔)
Finishing chip breakers (End Faces, bore)

■ 小零件加工刀片 - 产品应用
Small Parts Processing Inserts Application

工件名称 Workpiece	磨头 Tear drop (T_PVB11_YYF_23101802)
刀具规格 Type	VBGT110301-SE\OP1305
	VBGT110301-XX\A 公司 Company
加工材料 Workpiece Material	1215 钢 steel
切削速度 Cutting speed	60m/min
进给量 Feed rate	0.03mm/rev
切深量 Ap	0.1mm
切削方式 Cutting method	外圆; 油冷 External; oil-cooled

工件名称 Workpiece	电磁阀 Electro-magnetic Valve (T_P_DC11_YYF_24090301)
刀具规格 Type	DCGT11T302-JCK\OP1535
	DCGT11T302-XX/B 公司 Company
加工材料 Workpiece Material	SUS420
切削速度 Cutting speed	80m/min
进给量 Feed rate	0.05mm/rev
切深量 Ap	0.3mm
切削方式 Cutting method	外圆; 油冷 External; oil-cooled

■ 小零件加工刀片 - 型号列表 (前扫刀片)

Small Parts Processing Inserts Product List (front-turning inserts)

形状 Shape	型号 Type 	尺寸 Dimension (mm)					P					M					K					P/M/S	
		刀片半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC2125	OC2325S	OC2525S	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP155S	
	CCGT030101R/L-JF	0.1	3.5	1.37	1.9	7°															●	○	
	CCGT030102R/L-JF	0.2	3.5	1.37	1.9	7°															●	○	
	CCGT030104R/L-JF	0.4	3.5	1.37	1.9	7°															●	○	
	CCGT040101R/L-JF	0.1	4.3	1.77	2.3	7°															●	○	
	CCGT040102R/L-JF	0.2	4.3	1.77	2.3	7°															●	○	
	CCGT040104R/L-JF	0.4	4.3	1.77	2.3	7°															●	○	
	CCGT060201R/L-JU	0.1	6.35	2.38	2.8	7°															●	○	
	CCGT060202R/L-JU	0.2	6.35	2.38	2.8	7°															●	○	
	CCGT060204R/L-JU	0.4	6.35	2.38	2.8	7°															●	○	
	CCGT09T301R/L-JU	0.1	9.525	3.97	4.4	7°															●	○	
	CCGT09T302R/L-JU	0.2	9.525	3.97	4.4	7°															●	○	
	CCGT09T304R/L-JU	0.4	9.525	3.97	4.4	7°															●	○	
	CCGT060201-SE	0.1	6.35	2.38	2.8	7°															●	●	
	CCGT060202-SE	0.2	6.35	2.38	2.8	7°															●	●	
	CCGT060204-SE	0.4	6.35	2.38	2.8	7°															●	●	
	CCGT09T301-SE	0.1	9.525	3.97	4.4	7°															●	●	
	CCGT09T302-SE	0.2	9.525	3.97	4.4	7°															●	●	
	CCGT09T304-SE	0.4	9.525	3.97	4.4	7°															●	●	
	CCGT060201-JGQ	0.1	6.35	2.38	2.8	7°															●	●	
	CCGT060202-JGQ	0.2	6.35	2.38	2.8	7°															●	●	
	CCGT060204-JGQ	0.4	6.35	2.38	2.8	7°															●	●	
	CCGT09T301-JGQ	0.1	9.525	3.97	4.4	7°															●	●	
	CCGT09T302-JGQ	0.2	9.525	3.97	4.4	7°															●	●	
	CCGT09T304-JGQ	0.4	9.525	3.97	4.4	7°															●	●	

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工刀片 - 型号列表 (前扫刀片)

Small Parts Processing Inserts Product List (front-turning inserts)

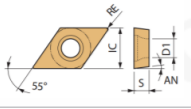
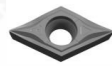


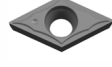
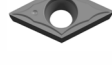
形状 Shape	型号 Type 	尺寸 Dimension (mm)					P					M					K					P/M/S	
		刀片半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC2125	OC2325S	OC2525S	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP155S	
	DCGT070201R/L-JU	0.1	6.35	2.38	2.8	7°															●	○	
	DCGT070202R/L-JU	0.2	6.35	2.38	2.8	7°															●	○	
	DCGT070204R/L-JU	0.4	6.35	2.38	2.8	7°															●	○	
	DCGT11T3003R/L-JU	0.03	9.525	3.97	4.4	7°															○	○	
	DCGT11T3005R/L-JU	0.05	9.525	3.97	4.4	7°															○	○	
	DCGT11T301R/L-JU	0.1	9.525	3.97	4.4	7°															●	○	
	DCGT11T302R/L-JU	0.2	9.525	3.97	4.4	7°															●	○	
	DCGT11T304R/L-JU	0.4	9.525	3.97	4.4	7°															●	○	
	DCGT0702003R/L-JF	0.03	6.35	2.38	2.8	7°															○	○	
	DCGT0702005R/L-JF	0.05	6.35	2.38	2.8	7°															○	○	
	DCGT070201R/L-JF	0.1	6.35	2.38	2.8	7°															●	○	
	DCGT070202R/L-JF	0.2	6.35	2.38	2.8	7°															●	○	
	DCGT070204R/L-JF	0.4	6.35	2.38	2.8	7°															●	○	
	DCGT11T3003R/L-JF	0.03	9.525	3.97	4.4	7°															○	○	
	DCGT11T3005R/L-JF	0.05	9.525	3.97	4.4	7°															○	○	
	DCGT11T301R/L-JF	0.1	9.525	3.97	4.4	7°															●	○	
	DCGT11T302R/L-JF	0.2	9.525	3.97	4.4	7°															●	○	
	DCGT11T304R/L-JF	0.4	9.525	3.97	4.4	7°															●	○	
	DCGT0702003R/L-JJ	0.03	6.35	2.38	2.8	7°															○	○	
	DCGT0702005R/L-JJ	0.05	6.35	2.38	2.8	7°															○	○	
	DCGT070201R/L-JJ	0.1	6.35	2.38	2.8	7°															●	○	
	DCGT070202R/L-JJ	0.2	6.35	2.38	2.8	7°															●	○	
	DCGT070204R/L-JJ	0.4	6.35	2.38	2.8	7°															●	○	
	DCGT11T3003R/L-JJ	0.03	9.525	3.97	4.4	7°															○	○	
	DCGT11T3005R/L-JJ	0.05	9.525	3.97	4.4	7°															○	○	
	DCGT11T301R/L-JJ	0.1	9.525	3.97	4.4	7°															●	○	
	DCGT11T302R/L-JJ	0.2	9.525	3.97	4.4	7°															●	○	
	DCGT11T304R/L-JJ	0.4	9.525	3.97	4.4	7°															●	○	

● 常备库存 Stock available ○ 按单生产 Make-to-order

A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 小零件车削刀具
Small Parts Processing Series
D 附件
Attachments

■ 小零件加工刀片 - 型号列表 (前扫刀片)

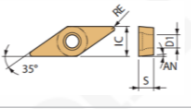
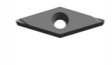


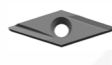
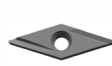




Small Parts Processing Inserts Product List (front-turning inserts)

形状 Shape	型号 Type 	尺寸 Dimension (mm)					P					M					K					P/M/S	
		刀尖半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC2125	OC2325S	OC2525S	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
	DCGT11T301-SE	0.1	9.525	3.97	4.4	7°															●	●	
	DCGT11T302-SE	0.2	9.525	3.97	4.4	7°																●	●
	DCGT11T304-SE	0.4	9.525	3.97	4.4	7°																●	●
	DCGT070201-JCK	0.1	6.35	2.38	2.8	7°																●	●
	DCGT070202-JCK	0.2	6.35	2.38	2.8	7°																●	●
	DCGT070204-JCK	0.4	6.35	2.38	2.8	7°																●	●
	DCGT11T301-JCK	0.1	9.525	3.97	4.4	7°																●	●
	DCGT11T302-JCK	0.2	9.525	3.97	4.4	7°																●	●
	DCGT11T304-JCK	0.4	9.525	3.97	4.4	7°																●	●
	DCGT070201-JGQ	0.1	6.35	2.38	2.8	7°																●	●
	DCGT070202-JGQ	0.2	6.35	2.38	2.8	7°																●	●
	DCGT070204-JGQ	0.4	6.35	2.38	2.8	7°																●	●
	DCGT11T301-JGQ	0.1	9.525	3.97	4.4	7°																●	●
	DCGT11T302-JGQ	0.2	9.525	3.97	4.4	7°																●	●
	DCGT11T304-JGQ	0.4	9.525	3.97	4.4	7°																●	●

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工刀片 - 型号列表 (前扫刀片)

Small Parts Processing Inserts Product List (front-turning inserts)

形状 Shape	型号 Type 	尺寸 Dimension (mm)					P					M					K					P/M/S				
		刀尖半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC2125	OC2325S	OC2525S	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535				
	VBGT1103003R/L-JF	0.03	6.35	3.18	2.8	5°																○	○			
	VBGT1103005R/L-JF	0.05	6.35	3.18	2.8	5°																	○	○		
	VBGT110301R/L-JF	0.1	6.35	3.18	2.8	5°																	●	○		
	VBGT110302R/L-JF	0.2	6.35	3.18	2.8	5°																		●	○	
	VBGT110304R/L-JF	0.4	6.35	3.18	2.8	5°																	●	○		
	VCGT1103003R/L-JF	0.03	6.35	3.18	2.8	7°																	○	○		
	VCGT1103005R/L-JF	0.05	6.35	3.18	2.8	7°																	○	○		
	VCGT110301R/L-JF	0.1	6.35	3.18	2.8	7°																		●	○	
	VCGT110302R/L-JF	0.2	6.35	3.18	2.8	7°																		●	○	
	VCGT110304R/L-JF	0.4	6.35	3.18	2.8	7°																		●	○	
	VPET1103003R/L-JF	0.03	6.35	3.18	2.8	11°																		○	○	
	VPET1103005R/L-JF	0.05	6.35	3.18	2.8	11°																		○	○	
	VPET110301R/L-JF	0.1	6.35	3.18	2.8	11°																		●	○	
	VPET110302R/L-JF	0.2	6.35	3.18	2.8	11°																			●	○
	VPET110304R/L-JF	0.4	6.35	3.18	2.8	11°																			●	○
	VBGT1103003R/L-JY	0.03	6.35	3.18	2.8	5°																		○	○	
	VBGT1103005R/L-JY	0.05	6.35	3.18	2.8	5°																		○	○	
	VBGT110301R/L-JY	0.1	6.35	3.18	2.8	5°																			●	○
	VBGT110302R/L-JY	0.2	6.35	3.18	2.8	5°																			●	○
	VBGT110304R/L-JY	0.4	6.35	3.18	2.8	5°																			●	○
	VCGT1103003R/L-JY	0.03	6.35	3.18	2.8	7°																		○	○	
	VCGT1103005R/L-JY	0.05	6.35	3.18	2.8	7°																		○	○	
	VCGT110301R/L-JY	0.1	6.35	3.18	2.8	7°																			●	○
	VCGT110302R/L-JY	0.2	6.35	3.18	2.8	7°																			●	○
	VCGT110304R/L-JY	0.4	6.35	3.18	2.8	7°																			●	○
	VBGT110301-SE	0.1	6.35	3.18	2.8	5°																			●	●
	VBGT110302-SE	0.2	6.35	3.18	2.8	5°																			●	●
	VBGT110304-SE	0.4	6.35	3.18	2.8	5°																			●	●
	VCGT110301-SE	0.1	6.35	3.18	2.8	7°																			●	●
	VCGT110302-SE	0.2	6.35	3.18	2.8	7°																			●	●
	VCGT110304-SE	0.4	6.35	3.18	2.8	7°																			●	●
	VCGT110301-JCK	0.1	6.35	3.18	2.8	7°																			●	●
	VCGT110302-JCK	0.2	6.35	3.18	2.8	7°																			●	●
	VCGT110304-JCK	0.4	6.35	3.18	2.8	7°																			●	●

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工刀片 - 型号列表 (前扫刀片)

Small Parts Processing Inserts Product List (front-turning inserts)

形状 Shape	型号 Type	尺寸 Dimension (mm)					P					M					K					P/M/S	
		刀片半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC2125	OC2325S	OC2535S	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
	WBG060101R/L-JF	0.1	3.97	1.59	2.3	5°																●	○
	WBG060102R/L-JF	0.2	3.97	1.59	2.3	5°																●	○
	WBG060104R/L-JF	0.4	3.97	1.59	2.3	5°																●	○
	TBGT060101R/L	0.1	3.97	1.59	2.3	5°																●	○
	TBGT060102R/L	0.2	3.97	1.59	2.3	5°																●	○
	TBGT060104R/L	0.4	3.97	1.59	2.3	5°																●	○
	TPGH080201R/L-F	0.1	4.76	2.38	2.3	11°																●	○
	TPGH080202R/L-F	0.2	4.76	2.38	2.3	11°																●	○
	TPGH080204R/L-F	0.4	4.76	2.38	2.3	11°																●	○
	TPGH090201R/L-F	0.1	5.56	2.38	3.2	11°																●	○
	TPGH090202R/L-F	0.2	5.56	2.38	3.2	11°																●	○
	TPGH090204R/L-F	0.4	5.56	2.38	3.2	11°																●	○
	TPGH110301R/L-F	0.1	6.35	3.18	3.3	11°																●	○
	TPGH110302R/L-F	0.2	6.35	3.18	3.3	11°																●	○
	TPGH110304R/L-F	0.4	6.35	3.18	3.3	11°																●	○

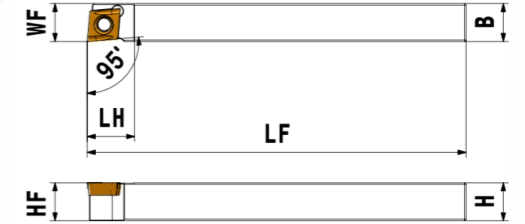
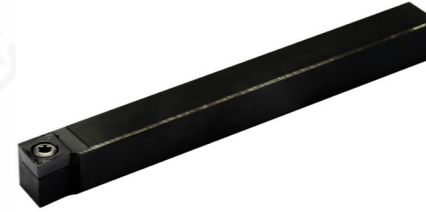
● 常备库存 Stock available ○ 按单生产 Make-to-order

形状 Shape	型号 Type	尺寸 Dimension (mm)					P					M					K					P/M/S	
		刀片半径 RE	内切圆 IC	厚度 S	孔径 D1	后角 AN	OC2515	OC2525	OC2125	OC2325S	OC2535S	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
	TNGG160401R/L-JS	0.1	9.525	4.76	3.81																	●	●
	TNGG160402R/L-JS	0.2	9.525	4.76	3.81																	●	●
	TNGG160404R/L-JS	0.4	9.525	4.76	3.81																	●	●
	TNGG160401-SE	0.1	9.525	4.76	3.81																	●	●
	TNGG160402-SE	0.2	9.525	4.76	3.81																	●	●
	TNGG160404-SE	0.4	9.525	4.76	3.81																	●	●

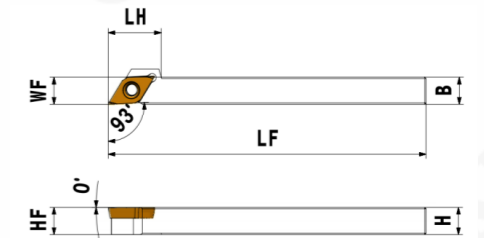
● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工 - 走心机刀杆 (前扫外圆刀杆)

Small Parts Processing - Swiss Tool Machine Holder (External Front Turning Design)



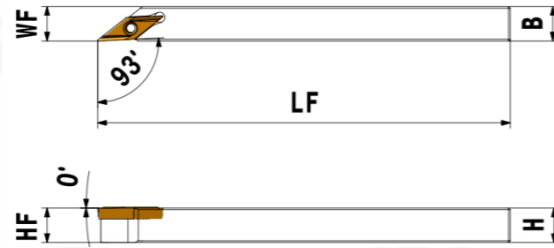
型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench	
	HxB	LF	WF	HF				
SCLCR/L	1010JX-06	10X10	120	10	10	CCGT06	SOT2560A	WQT08C
	1010JX-09	10X10	120	10	10	CCGT09	SOT4090A	WQT15C
	1212JX-09	12X12	120	12	10			
	1616JX-09	16X16	120	16	10			



型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench	
	HxB	LF	WF	HF				
SDJCR/L	1010JX-07F	10X10	120	10	10	DCGT07	SOT2560A	WQT08C
	1212JX-07F	12X12	120	12	12	DCGT11	SOT4090A	WQT15C
	1010JX-11F	10X10	120	10	10			
	1212JX-11F	12X12	120	12	12			
1616JX-11F	16X16	120	16	16				

■ 小零件加工 - 走心机刀杆 (前扫外圆刀杆)

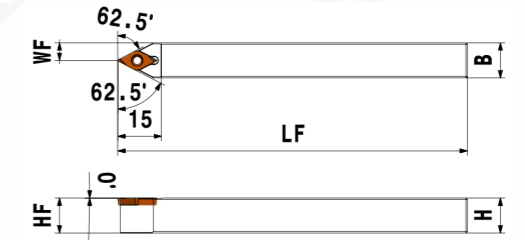
Small Parts Processing - Swiss Tool Machine Holder (External Front Turning Design)



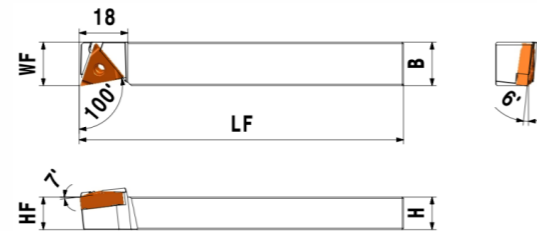
型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF			
SVJBR/L	1010JX-11F	10X10	120	10	VBGT11	SOT2560A	WQT08C
	1212JX-11F	12X12	120	12			
	1616JX-11F	16X16	120	16			
SVJCR/L	1010JX-11F	10X10	120	10	VCGT11	SOT2560A	WQT08C
	1212JX-11F	12X12	120	12			
	1616JX-11F	16X16	120	16			
SVJPR/L	1010JX-11F	10X10	120	10	VPGT11	SOT2560A	WQT08C
	1212JX-11F	12X12	120	12			
	1616JX-11F	16X16	120	16			

■ 小零件加工 - 走心机刀杆 (前扫中置刀杆)

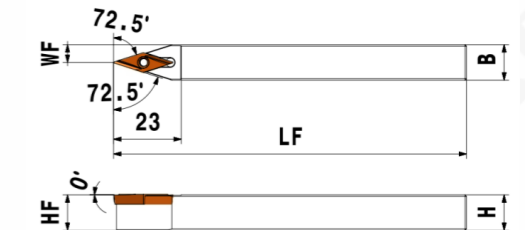
Small Parts Processing - Swiss Tool Machine Holder (Front-turning Central Design)



型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF			
SDNCN	1010JX-07	10X10	120	5	DCGT07	SOT2560A	WQT08C
	1212JX-07	12X12	120	6			
	1010JX-11	10X10	120	5	DCGT11	SOT4090A	WQT08C
	1212JX-11	12X12	120	6			
1616JX-11	16X16	120	8				



型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF			
STXNR/L	1016JX-16FF	10X16	120	10	TNGG16	SOT3590A	WQT15C
	1216JX-16FF	12X16	120	10			
	1616JX-16FF	16X16	120	12			

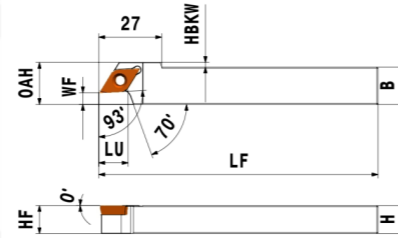


型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF			
SVVBN	1010JX-11	10X10	120	5	VBGT11	SOT2560A	WQT08C
	1212JX-11	12X12	120	6			
	1616JX-11	16X16	120	8			

A 车削刀片手册 Introduction of Turning Insert Categories
B 车削刀片分类介绍 Introduction of Turning Insert Categories
C 小零件车削刀具 Small Parts Processing Series
D 附件 Attachments

■ 小零件加工 - 走心机刀杆 (前扫空间刀杆)

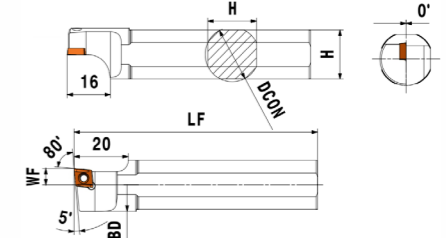
Small Parts Processing - Swiss Tool Machine Holder (Front-turning Spatial Design)



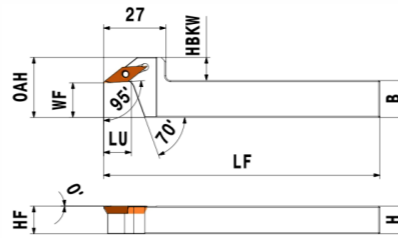
型号 Type	尺寸 Dimension (mm)							适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF	LU	OAH	HBK W			
SDJCR	1216JX-11-F05	12X16	120	5	12	12	12	DCGT07	DCGT07	WQT15C
	1216JX-11-F15	12X16	120	15	12	12	12			
	1620JX-11-F05	16X20	120	5	16	16	16			
	1620JX-11-F15	16X20	120	15	16	16	16			

■ 小零件加工 - 走心机刀杆 (背轴外圆刀杆)

Small Parts Processing - Swiss Tool Machine Holder (Sub-Spindle External Turning Design)



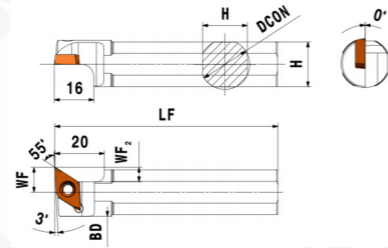
型号 Type	尺寸 Dimension (mm)					适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench			
	H	LF	WF	BD	DCON						
S12F-SCLCL06	11	80	6	13.4	12	CCGT06	SOT2060A	WQT08C			
S14H-SCLCL06	13	100	6	13.4	14						
S15F-SCLCL06	15	85	6	15.4	15.875						
S16F-SCLCL06	15	85	6	15.4	16						
S19G-SCLCL06	17	90	6	18.4	19.05						
S19K-SCLCL06	17	120	6	18.4	19.05						
S20G-SCLCL06	18	90	6	19.4	20						
S20K-SCLCL06	18	120	6	19.4	20						
S19G-SCLCL09	17	90	10	18.4	19.05				CCGT09	SOT4090A	WQT15C
S19K-SCLCL09	17	120	10	18.4	19.05						
S20G-SCLCL09	18	90	10	19.4	20						
S20K-SCLCL09	18	120	10	19.4	20						
S25.0H-SCLCL09	23	100	10	24.4	25						
S25K-SCLCL09	23	120	10	24.8	25.4						



型号 Type	尺寸 Dimension (mm)							适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF	LU	OAH	HBK W			
SVLPR	1216JX-11-F15	12X16	120	15	12	12	26	VPGT11	SOT2560A	WQT08C
	1620JX-11-F15	16X20	120	15	16	12	26			

■ 小零件加工 - 走心机刀杆 (背轴外圆刀杆)

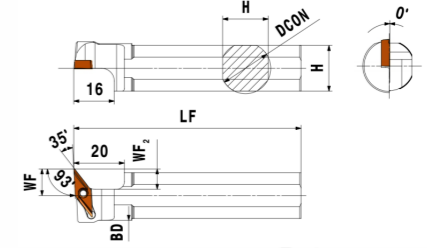
Small Parts Processing—Swiss Tool Machine Holder (Sub-Spindle External Turning Design)



型号 Type	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	H	LF	WF	BD	DCON	WF ₂			
S14H -SDUCL07	13	100	6	13.4	14	3.8	DCGT07	SOT2060A	WQT08C
S15F -SDUCL07	15	85	6	15.4	15.875	3.8			
S19G -SDUCL07	17	90	6	18.4	19.05	3.8			
S19K -SDUCL07	17	120	6	18.4	19.05	3.8			
S20G -SDUCL07	18	90	6	19.4	20	3.8			
S20K -SDUCL07	18	120	6	19.4	20	3.8			
S19G -SDUCL11	17	90	10	18.4	19.05	5.8				DCGT11	SOT4090A	WQT15C
S19K -SDUCL11	17	120	10	18.4	19.05	5.8			
S20G -SDUCL11	18	90	10	19.4	20	5.8			
S20K -SDUCL11	18	120	10	19.4	20	5.8			
S22K -SDUCL11	20	120	10	21.4	22	5.8			
S25.0H -SDUCL11	23	100	10	24.4	25	5.8			
S25K -SDUCL11	23	120	10	24.8	25.4	5.8			

■ 小零件加工 - 走心机刀杆 (背轴外圆刀杆)

Small Parts Processing—Swiss Tool Machine Holder (Sub-Spindle External Turning Design)

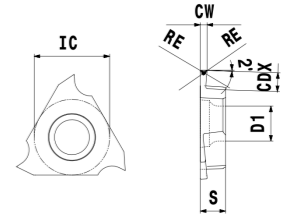
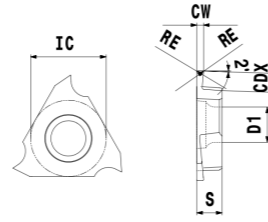
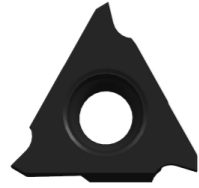


型号 Type	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	H	LF	WF	BD	DCON	WF ₂			
S19G -SVUBL11	17	90	10.5	18.4	19.05	8	VBGT11	SOT2060A	WQT08C
S19K -SVUBL11	17	120	10.5	18.4	19.05	8			
S20G -SVUBL11	18	90	10.5	19.4	20	8			
S20K -SVUBL11	18	120	10.5	19.4	20	8			
S25.0H -SVUBL11	23	100	10.5	24.4	25	8			
S25K -SVUBL11	23	120	10.5	24.8	25.4	8			
S19G -SVUCL11	17	90	10.5	18.4	19.05	8				VCGT11	SOT2060A	WQT08C
S19K -SVUCL11	17	120	10.5	18.4	19.05	8			
S20G -SVUCL11	18	90	10.5	19.4	20	8			
S20K -SVUCL11	18	120	10.5	19.4	20	8			
S25.0H -SVUCL11	23	100	10.5	24.4	25	8			
S25K -SVUCL11	23	120	10.5	24.8	25.4	8			

A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 小零件车削刀具
Small Parts Processing Series
D 附件
Attachments

■ 小零件加工刀片 - 型号列表 (浅槽刀片)
Small Parts Processing Inserts - Product List (Shallow Grooving Insert)

■ 小零件加工刀片 - 型号列表 (浅槽刀片)
Small Parts Processing Inserts - Product List (Shallow Grooving Insert)



型号 Type	尺寸 Dimension (mm)						P				M				K				P/M/S				
	CW	RE	CDX	IC	S	D	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
TGF32R/L	033-005	0.33	0.05	1.2	9.525	3.18	4.4															●	○
	050-005	0.50	0.05	1.2	9.525	3.18	4.4															●	○
	070-010	0.70	0.1	2	9.525	3.18	4.4															●	○
	075-010	0.75	0.1	2	9.525	3.18	4.4															●	○
	080-010	0.80	0.1	2	9.525	3.18	4.4															●	○
	085-010	0.85	0.1	2	9.525	3.18	4.4															●	○
	090-010	0.90	0.1	2	9.525	3.18	4.4															●	○
	095-010	0.95	0.1	2	9.525	3.18	4.4															●	○
	100-010	1.00	0.1	2	9.525	3.18	4.4															●	○
	105-010	1.05	0.1	2	9.525	3.18	4.4															●	○
	110-010	1.10	0.1	2	9.525	3.18	4.4															●	○
	115-010	1.15	0.1	2	9.525	3.18	4.4															●	○
	120-010	1.20	0.1	2	9.525	3.18	4.4															●	○
	125-010	1.25	0.1	2	9.525	3.18	4.4															●	○
	130-010	1.30	0.1	2	9.525	3.18	4.4															●	○
	135-010	1.35	0.1	2	9.525	3.18	4.4															●	○
	140-010	1.40	0.1	2	9.525	3.18	4.4															●	○
	145-010	1.45	0.1	2	9.525	3.18	4.4															●	○
	150-010	1.50	0.1	2	9.525	3.18	4.4															●	○

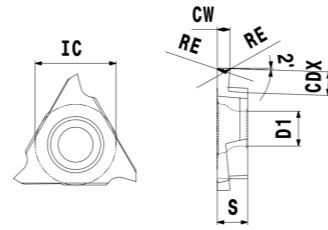
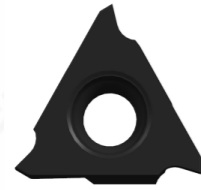
● 常备库存 Stock available ○ 按单生产 Make-to-order

型号 Type	尺寸 Dimension (mm)						P				M				K				P/M/S				
	CW	RE	CDX	IC	S	D	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
TGF32R/L	155-010	1.55	0.1	2	9.525	3.18	4.4															●	○
	160-010	1.60	0.1	2	9.525	3.18	4.4															●	○
	165-010	1.65	0.1	2	9.525	3.18	4.4															●	○
	170-010	1.70	0.1	2	9.525	3.18	4.4															●	○
	175-010	1.75	0.1	2	9.525	3.18	4.4															●	○
	180-010	1.80	0.1	2	9.525	3.18	4.4															●	○
	185-010	1.85	0.1	2	9.525	3.18	4.4															●	○
	190-010	1.90	0.1	2	9.525	3.18	4.4															●	○
	195-010	1.95	0.1	2	9.525	3.18	4.4															●	○
	200-010	2.00	0.1	2	9.525	3.18	4.4															●	○
	205-010	2.05	0.1	2	9.525	3.18	4.4															●	○
	210-010	2.10	0.1	2	9.525	3.18	4.4															●	○
	215-010	2.15	0.1	2	9.525	3.18	4.4															●	○
	220-010	2.20	0.1	2	9.525	3.18	4.4															●	○
	225-010	2.25	0.1	2	9.525	3.18	4.4															●	○
	230-010	2.30	0.1	2	9.525	3.18	4.4															●	○
	235-010	2.35	0.1	2	9.525	3.18	4.4															●	○
	240-010	2.40	0.1	2	9.525	3.18	4.4															●	○
	245-010	2.45	0.1	2	9.525	3.18	4.4															●	○
	250-010	2.50	0.1	2	9.525	3.18	4.4															●	○

● 常备库存 Stock available ○ 按单生产 Make-to-order

A 车削刀片手册
Turning Insert Grades
B 车削刀片分类介绍
Introduction of Turning Insert Categories
C 小零件车削刀具
Small Parts Processing Series
D 附件
Attachments

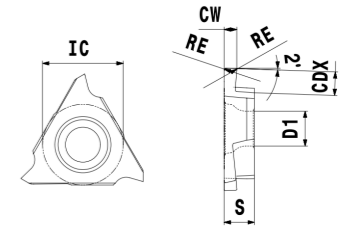
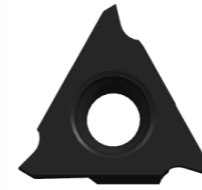
■ 小零件加工刀片 - 型号列表 (浅槽刀片)
Small Parts Processing Inserts - Product List (Shallow Grooving Insert)



型号 Type	尺寸 Dimension (mm)						P				M				K				P/M/S				
	CW	RE	CDX	IC	S	D	OC2S15	OC2S25	OC2125	OC2325S	OC2S35	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
125-010	1.25	0.1	3.5	12.7	4.76	5.5																●	○
125-020	1.25	0.2	3.5	12.7	4.76	5.5																●	○
130-020	1.30	0.2	3.5	12.7	4.76	5.5																●	○
135-020	1.35	0.2	3.5	12.7	4.76	5.5																●	○
140-020	1.40	0.2	3.5	12.7	4.76	5.5																●	○
145-020	1.45	0.2	3.5	12.7	4.76	5.5																●	○
150-010	1.50	0.1	3.5	12.7	4.76	5.5																●	○
150-020	1.50	0.2	3.5	12.7	4.76	5.5																●	○
155-020	1.55	0.2	3.5	12.7	4.76	5.5																●	○
160-020	1.60	0.2	3.5	12.7	4.76	5.5																●	○
165-020	1.65	0.2	3.5	12.7	4.76	5.5																●	○
170-020	1.70	0.2	3.5	12.7	4.76	5.5																●	○
175-020	1.75	0.2	3.5	12.7	4.76	5.5																●	○
180-020	1.80	0.2	3.5	12.7	4.76	5.5																●	○
185-020	1.85	0.2	3.5	12.7	4.76	5.5																●	○
190-020	1.90	0.2	3.5	12.7	4.76	5.5																●	○
195-020	1.95	0.2	3.5	12.7	4.76	5.5																●	○
200-010	2.00	0.1	3.5	12.7	4.76	5.5																●	○
200-020	2.00	0.2	3.5	12.7	4.76	5.5																●	○
205-020	2.05	0.2	3.5	12.7	4.76	5.5																●	○
210-020	2.10	0.2	3.5	12.7	4.76	5.5																●	○
215-020	2.15	0.2	3.5	12.7	4.76	5.5																●	○
220-020	2.20	0.2	3.5	12.7	4.76	5.5																●	○
225-020	2.25	0.2	3.5	12.7	4.76	5.5																●	○
230-020	2.30	0.2	3.5	12.7	4.76	5.5																●	○
235-020	2.35	0.2	3.5	12.7	4.76	5.5																●	○
240-020	2.40	0.2	3.5	12.7	4.76	5.5																●	○

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工刀片 - 型号列表 (浅槽刀片)
Small Parts Processing Inserts - Product List (Shallow Grooving Insert)

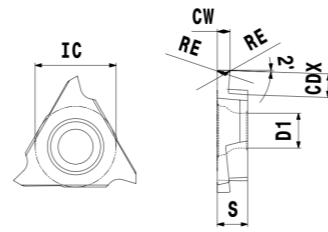
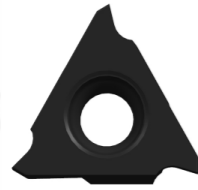


型号 Type	尺寸 Dimension (mm)						P				M				K				P/M/S				
	CW	RE	CDX	IC	S	D	OC2S15	OC2S25	OC2125	OC2325S	OC2S35	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
245-020	2.45	0.2	3.5	12.7	4.76	5.5																●	○
250-010	2.50	0.1	5	12.7	4.76	5.5																●	○
250-030	2.50	0.3	5	12.7	4.76	5.5																●	○
255-030	2.55	0.3	5	12.7	4.76	5.5																●	○
260-030	2.60	0.3	5	12.7	4.76	5.5																●	○
265-030	2.65	0.3	5	12.7	4.76	5.5																●	○
270-030	2.70	0.3	5	12.7	4.76	5.5																●	○
275-030	2.75	0.3	5	12.7	4.76	5.5																●	○
280-030	2.80	0.3	5	12.7	4.76	5.5																●	○
285-030	2.85	0.3	5	12.7	4.76	5.5																●	○
290-030	2.90	0.3	5	12.7	4.76	5.5																●	○
295-030	2.95	0.3	5	12.7	4.76	5.5																●	○
300-010	3.00	0.1	5	12.7	4.76	5.5																●	○
300-030	3.00	0.3	5	12.7	4.76	5.5																●	○
305-030	3.05	0.3	5	12.7	4.76	5.5																●	○
310-030	3.10	0.3	5	12.7	4.76	5.5																●	○
315-030	3.15	0.3	5	12.7	4.76	5.5																●	○
320-030	3.20	0.3	5	12.7	4.76	5.5																●	○
325-030	3.25	0.3	5	12.7	4.76	5.5																●	○
330-030	3.30	0.3	5	12.7	4.76	5.5																●	○
335-030	3.35	0.3	5	12.7	4.76	5.5																●	○
340-030	3.40	0.3	5	12.7	4.76	5.5																●	○
345-030	3.45	0.3	5	12.7	4.76	5.5																●	○
350-010	3.50	0.1	5	12.7	4.76	5.5																●	○
350-030	3.50	0.3	5	12.7	4.76	5.5																●	○
355-030	3.55	0.3	5	12.7	4.76	5.5																●	○
360-030	3.60	0.3	5	12.7	4.76	5.5																●	○

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工刀片 - 型号列表 (浅槽刀片)

Small Parts Processing Inserts - Product List (Shallow Grooving Insert)

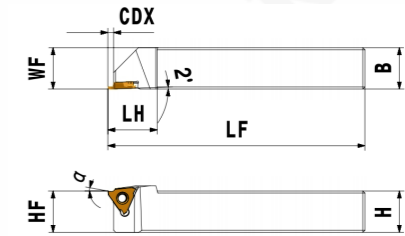


型号 Type	尺寸 Dimension (mm)						P					M					K					P/M/S	
	CW	RE	CDX	IC	S	D	OC2S15	OC2S25	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
365-030	3.65	0.3	5	12.7	4.76	5.5																●	○
370-030	3.70	0.3	5	12.7	4.76	5.5																●	○
375-030	3.75	0.3	5	12.7	4.76	5.5																●	○
380-030	3.80	0.3	5	12.7	4.76	5.5																●	○
385-030	3.85	0.3	5	12.7	4.76	5.5																●	○
390-030	3.90	0.3	5	12.7	4.76	5.5																●	○
395-030	3.95	0.3	5	12.7	4.76	5.5																●	○
400-010	4.00	0.1	5	12.7	4.76	5.5																●	○
400-040	4.00	0.4	5	12.7	4.76	5.5																●	○
405-040	4.05	0.4	5	12.7	4.76	5.5																●	○
410-040	4.10	0.4	5	12.7	4.76	5.5																●	○
415-040	4.15	0.4	5	12.7	4.76	5.5																●	○
420-040	4.20	0.4	5	12.7	4.76	5.5																●	○
425-040	4.25	0.4	5	12.7	4.76	5.5																●	○
430-040	4.30	0.4	5	12.7	4.76	5.5																●	○
435-040	4.35	0.4	5	12.7	4.76	5.5																●	○
440-040	4.40	0.4	5	12.7	4.76	5.5																●	○
445-040	4.45	0.4	5	12.7	4.76	5.5																●	○
450-040	4.50	0.4	5	12.7	4.76	5.5																●	○
455-040	4.55	0.4	5	12.7	4.76	5.5																●	○
460-040	4.60	0.4	5	12.7	4.76	5.5																●	○
465-040	4.65	0.4	5	12.7	4.76	5.5																●	○
470-040	4.70	0.4	5	12.7	4.76	5.5																●	○
475-040	4.75	0.4	5	12.7	4.76	5.5																●	○
480-040	4.80	0.4	5	12.7	4.76	5.5																●	○

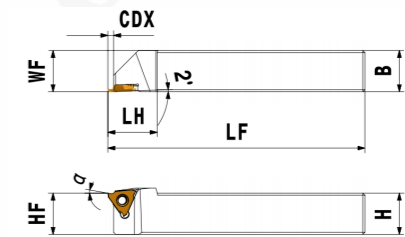
● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工 - 走心机刀杆 (浅槽刀杆)

Small Parts Processing - Swiss Tool Machine Holder (for Shallow Grooving Insert)

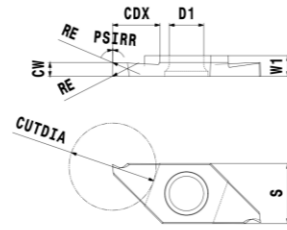


型号 Type	尺寸 Dimension (mm)						通用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench	
	HxB	LF	WF	HF	LH	CDX				
KGBAR/L	2020K22-15F	20X20	125	20	20	24	4	GBA43R/L	SOT5012A	WQT20C
	2525M22-15F	25X25	150	25	25	24	4			
	2020K22-35F	20X20	125	20	20	24	5.5			
	2525M22-35F	25X25	150	25	25	24	5.5			



型号 Type	尺寸 Dimension (mm)						通用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench	
	HxB	LF	WF	HF	LH	CDX				
KTGFR/L	1010JX-16F	10X10	120	10	10	18.5	2.5	TGF32R/L	SOT4090A	WQT15C
	1212JX-16F	12X12	120	12	12	18.5	2.5			
	1616JX-16F	16X16	120	16	16	18.5	2.5			
	2020JX-16F	20X20	120	20	20	20	2.5			
	2525JX-16F	25X25	120	25	25	20	2.5			

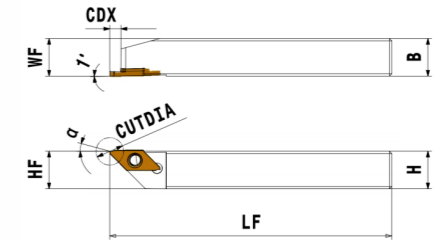
■ 小零件加工刀片 - 型号列表 (切断刀片)
Small Parts Processing Inserts - Product List (Parting Inserts)



型号 Type	尺寸 Dimension (mm)							P					M					K			P/M/S				
	CW	RE	CDX	W1	S	D	PSIRR	OC2515	OC2525	OC2125	OC2325S	OC2335	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535		
TKF12R/L	050-S	0.50	0.03	2.8	3	8.7	5	1°															○	●	
	070-S	0.70	0.03	4.3	3	8.7	5	1°																○	●
	100-S	1.00	0.03	6.3	3	8.7	5	1°																○	●
	125-S	1.25	0.03	6.3	3	8.7	5	1°																○	●
	150-S	1.50	0.03	6.3	3	8.7	5	1°																○	●
	200-S	2.00	0.03	6.3	3	8.7	5	1°																○	●
TKF12R/L	050-S-16DR	0.50	0.03	2.8	3	8.7	5	15°															○	●	
	070-S-16DR	0.70	0.03	4.3	3	8.7	5	15°															○	●	
	100-S-16DR	1.00	0.03	6.3	3	8.7	5	15°															○	●	
	125-S-16DR	1.25	0.03	6.3	3	8.7	5	15°															○	●	
	200-S-16DR	2.00	0.03	6.3	3	8.7	5	15°															○	●	
TKF16R/L	150-S	1.50	0.05	8.4	4	9.5	5	1°															○	●	
	200-S	2.00	0.05	8.4	4	9.5	5	1°															○	●	
TKF16R/L	150-S-16DR	1.50	0.05	8.4	4	9.5	5	15°															○	●	
	200-S-16DR	2.00	0.05	8.4	4	9.5	5	15°															○	●	

● 常备库存 Stock available ○ 按单生产 Make-to-order

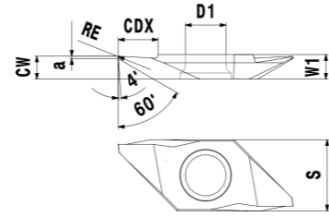
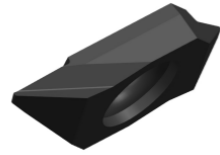
■ 小零件加工 - 走心机刀杆 (切断刀刀杆)
Small Parts Processing - Swiss Tool Machine Holder (Parting Tool Holder)



型号 Type	尺寸 Dimension (mm)						适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench	
	HxB	LF	WF	HF	LH	CDX				
KTKFR/L	1010JX-12	10X10	120	10	10	24	6	TKF12R/L	SOP4593A	WQP10B
	1212JX-12	12X12	120	12	12	24	6			
	1616JX-12	16X16	120	16	16	24	6			
	1010JX-16	10X10	120	10	10	30	8	TKF16R/L	SOP4593A	WQP10B
	1212JX-16	12X12	120	12	12	30	8			
	1616JX-16	16X16	120	16	16	30	8			

■ 小零件加工刀片 - 型号列表 (后扫刀片)

Small Parts Processing Inserts - Product List (Back Turning Insert)

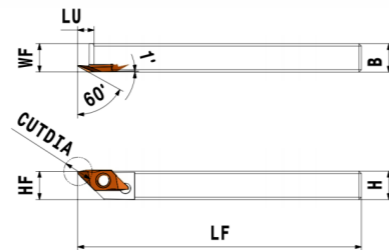


型号 Type	尺寸 Dimension (mm)						P				M				K				P/M/S				
	CW	RE	a	S	W	D	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
TKFB12R15-005	1.50	0.05	0.25	8.7	3	5																	○ ●
TKFB12R28-005	2.80	0.05	0.3	8.7	3	5																	○ ●
TKFB12R28-010	2.80	0.1	0.3	8.7	3	5																	○ ●

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工 - 走心机刀杆 (后扫刀杆)

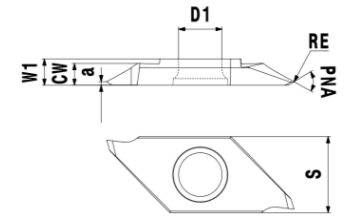
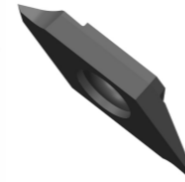
Small Parts Processing - Swiss Tool Machine Holder (Back Turning Tool Holder)



型号 Type	尺寸 Dimension (mm)					适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF	LU			
KTKFR/L	1010JX-12	10X10	120	10	10	TKFB12R/L	SOP4593A	WQP10B
	1212JX-12	12X12	120	12	12			
	1616JX-12	16X16	120	16	16			
	2020JX-12	20X20	120	20	20			
	1010JX-16	10X10	120	10	10	TKFB16R/L	SOP4593A	WQP10B
	1212JX-16	12X12	120	12	12			
	1616JX-16	16X16	120	16	16			
	2020JX-16	20X20	120	20	20			
1216JX-12	12X16	120	16	12	TKFB12R/L	SOP4593A	WQP10B	
1620JX-12	16X20	120	20	16				

■ 小零件加工刀片 - 型号列表 (螺纹刀片)

Small Parts Processing Inserts - Product List (Threading Insert)

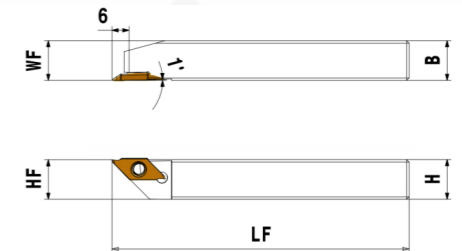


型号 Type	尺寸 Dimension (mm)						P				M				K				P/M/S				
	CW	RE	a	S	W	D	OC2515	OC2525	OC2125	OC2325S	OC2535	OC4310	OC4320	OC4330	OP1215	OP1315	OC3205	OC3210	OC3220	OC3215	OP1305	OP1535	
TKFT12RA6000	2.50	0	0.4	8.7	3	5																	● ○
TKFT12RB6000	2.50	0	2.1	8.7	3	5																	● ○
TKFT12RA60005	2.50	0.05	0.8	8.7	3	5																	● ○
TKFT12RB60005	2.50	0.05	1.7	8.7	3	5																	● ○
TKFT12RN6001	2.50	0.1	1.25	8.7	3	5																	● ○

● 常备库存 Stock available ○ 按单生产 Make-to-order

■ 小零件加工 - 走心机刀杆 (螺纹刀杆)

Small Parts Processing - Swiss Tool Machine Holder (Threading Tool Holder)



型号 Type	尺寸 Dimension (mm)				适用刀片 Adaptable Inserts	螺钉 Screw	扳手 Wrench
	HxB	LF	WF	HF			
KTKFR/L	1010JX-12	10X10	120	10	TKFT12R/L	TKFT12R/L	WQT10B
	1212JX-12	10X10	120	12			
	1616JX-12	16X16	120	16			

D 附件 Appendix

01 车削刀片牌号特性 (CVD 涂层)
Turning insert Grade Feature (CVD Coating)

工件材料 Workpiece Material	刀片材质 Insert grade	基体 Substrate		涂层 Coating	
		成分 Composition	硬度 Hardness (HRA)	结构 Structure	厚度 Thickness
P 钢 Steel	OC2505	W+Co+Ti+Ta+Nb	91.8	TiCN-Al2O3-TiN	厚膜 Thick coating
	OC2515	W+Co+Ti+Ta+Nb	91.5	TiCN-Al2O3-TiN	厚膜 Thick coating
	OC2525	W+Co+Ti+Ta+Nb	90.8	TiCN-Al2O3-TiN	厚膜 Thick coating
	OC2125	W+Co+Ti+Ta+Nb	90.5	TiCN-Al2O3	中厚膜 Medium-thickness coating
	OC2325S	W+Co+Ti+Ta+Nb	90.7	TiCN-Al2O3-TiN	中厚膜 Medium-thickness coating
	OC2535	W+Co+Ti+Ta+Nb	90.0	TiCN-Al2O3-TiN	中厚膜 Medium-thickness coating
M 不锈钢 Stainless steel	OC4310	W+Co+Ti+Ta+Nb	91.3	TiCN-Al2O3-TiCN	薄膜 Thin Coating
	OC4320	W+Co+Ti+Ta+Nb	90.5	TiCN-Al2O3-TiCN	薄膜 Thin Coating
	OC4330	W+Co+Ta	89.8	TiCN-Al2O3-TiCN	薄膜 Thin Coating
K 铸铁 Cast Iron	OC3205	W+Co+Ta	92.4	TiCN-Al2O3-TiN	厚膜 Thick coating
	OC3210	W+Co+Ta	92.2	TiCN-Al2O3-TiN	厚膜 Thick coating
	OC3215	W+Co	91.8	TiCN-Al2O3	中厚膜 Medium-thickness coating
	OC3220	W+Co	91.6	TiCN-Al2O3-TiN	中厚膜 Medium-thickness coating

02 车削刀片牌号对照表
The Comparison of Turning Insert Grades

■ CVD 涂层硬质合金 (车削用)
CVD Grade (For Turning)

ISO 分类 Material Grade	欧科亿 OKE	山特维克 SANDVIK	瓦尔特 WALTER	肯纳金属 KENNAMETAL	伊斯卡 ISCRA	特固克 TaeguTec	山高刀具 SECO	住友电工 SUMITOMO	泰珂洛 TUNGALOY	三菱综合材料 MITSUBISHI	京瓷 KYOCERA	株洲钻石 ZCCCT	
													分类	符号
P	P05	OC2505	GC4205	WPP05S	KCP05B	IC8005	TT8105	TP0501	AC700G	T9005	UE6105	CA510	-
			GC4305	WPP05	KCP05	IC8005	TT8105	TP0500	AC700G	T9105	UE6105	CA5505	-
	P10	OC2515	GC4215	WPP10S	KCP10B	IC8150	TT8115	TP1501	AC810P	T9015	MC6015	CA515	YBC151
			GC4315	WPP10	KCP10	IC9150	TT8115B	TP1500	AC8015P	T9115	MC6115	CA5515	YBC152
P20	OC2125 OC2325S OC2525	GC4125	WPP20S	KCP25B	IC8250	TT5100	TP2501	AC2000	T9215	MC6025	CA525	YBC251	
		GC4225	WPP20	KCP25	IC9125	TT8125	TP2500	AC820P	T9025	MC6125	CA5525	YBC252	
		GC4325	WPP20	KCP25	IC9250	TT8125B	TP2500	AC8025P	T9125	MC6025	CA5525	YBC252	
P30	OC2535	GC4135	WPP30S	KCP30B	IC635	TT7100	TP3501	AC830P	T9225	MC6035	CA025P	YBC351	
		GC4235	WPP30	KCP30	IC8350	TT8135	TP3500	AC8035P	T9035	MC6035	CA530	YBC352	
M	M10	OC4310	GC2015	-	KCM15	IC6015	TT9215	TM1501	AC610M	T6120	MC7015	CA6515	YBM151
			GC1515	-	KCM15B	IC8250	TT9215	TM1501	AC610M	T6120	MC7015	CA6515	YBM153
	M20	OC4320	GC2025	-	KCM25	IC6015	TT9215	TM2000	AC610M	T6120	MC7015	CA6515	YBM151
			GC1515	-	KCM25B	IC6015	TT9215	TM2501	AC6020M	T6120	MC7025	CA6515	YBM153
M30	OC4330	GC2220	-	KCM35	IC6025	TT9225	TM3501	AC630M	T6130	MC7025	CA6525	YBM251	
		GC2035	-	KCM35B	IC6025	TT9235	TM4000	AC6030M	T6130	MC7025	CA6525	YBM253	
M40	OC4330	GC2035	-	KCM35	IC6025	TT9235	TM3501	AC630M	T6130	MC7025	CA6525	YBM251	
		GC235	-	KCM35B	IC6025	TT7800	TM4000	AC6030M	T6130	MC7025	CA6525	YBM253	
K	K05	OC3205	GC3205	WKK10S	KCK05	IC5005	TT7005	TK0501	AC405K	T5105	MC5005	CA450S	YBD152D
			GC3205	WAK10	KCK05	IC5005	TT7005	TK1001	AC405K	T5105	MC5005	CA450S	YBD152D
	K10	OC3210	GC3210	WKK10S	KCK15	IC4100	TT7005	TK1501	AC415K	T5115	MH515	CA310	YBD102
			GC3210	WAK10	KCK15	IC5010	TT7005	TK1001	AC4010K	T5115	MY5015	CA550S	CA4515	YB7305
	K20	OC3215 OC3220	GC3225	WKK20S	KCK20	IC4100	TT7015	TK1501	AC420K	T5125	UC5115	CA320	YBD152
GC3225			WAK20	KCK20	IC5010	TT7015	K2001	AC425K	T5125	MC5015	CA4515	CA320	YBD152C
K30	OC2525	GC4425	WAK30	KCP25	IC8250	TT8125B	TP2501	AC8025P	T9125	MC6125	CA025P	YBC251	

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■ PVD 涂层硬质合金 (车削用)

PVD Grade (For Turning)

ISO 分类	材料	符号	欧科亿	山特维克	瓦尔特	肯纳金属	伊斯卡	特固克	山高刀具	住友电工	泰珂洛	三菱综合材料	京瓷	株洲钻石
			OKE	SANDVIK	WALTER	KENAMETAL	ISCRA	TaeguTec	SECO	SUMITOMO	TUNGALOY	MITSUBISHI	KYOCERA	ZCCCT
P	P10	OP6105A OP6115A	GC1115 GC1525 GC1225	WSM10 WSM10S	KCU10 KC5010 KC5510	IC507 IC807 IC907	TT5080	CP200 TS2000	ACZ150 AC5005S AC5015S	AH710	VP10MF MS6015	PR1705 PR1115 PR1215	YBG102 YBG202	
	P20	OP6125A OP1315	GC1225 GC1025	WSM20 WSM20S	KC5025 KC5525 KU25T	IC808 IC908	TT9030 TT9080	CP250 TS2500	AC5025S AC520U	AH7025 AH725 SH725	VP10RT VP15TF	PR1225 PR1625 PR1725	YBG212 YBG215	
	P30	OP1415 OP1215	GC1125	WSM30S	KC5025 KC5525 KU25T	IC1008 IC1028 IC3028	TT8020 TT9030	CP500	AC1030U AC530U	AH730 SH730	VP20RT VP20MF VP15TF	PR1225 PR1535	-	
	P40	OP1215 OP1030	GC1145 GC2145	-	-	IC1008 IC1028 IC3028	TT8020	CP600	AC1030U	AH140 AH740 J740	-	PR1535	-	
M	M10	OP6105A OP6115A	GC1105 GC1115 GC1225	WSM10 WSM10S	KCU10 KC5010 KC5510	IC507 IC807 IC907	TT5080	CP200 TS2000	ACZ150 AC5005S AC5015S	AH8005 AH8115	VP10MF MS6015	PR1215	YBG102 YBG202	
	M20	OP6125A OP1315	GC1025 GC1125	WSM20 WSM20S	KC5025 KC5525 KU25T	IC808 IC908	TT9030 TT9080	CP250 TS2500	AC5025S AC520U	AH120 AH7025 AH725 SH725	VP10RT VP15TF	PR930 PR1725 PR1225	YBG212 YBG215	
	M30	OP1415 OP1215	GC1125 GC2035	WSM30S	KC5025 KC5525 KU25T	IC1008 IC1028 IC3028	TT8020 TT9030	CP500	AC1030U AC530U AC6040M	AH645 AH730 SH730 J740	VP20RT VP20MF VP15TF	PR1535	-	
	M40	OP1215 OP1030	GC2035 GC1145 GC2145	-	-	IC1008 IC1028 IC3028	TT8020	CP600	AC1030U AC6040M	AH645	MP7035	PR1535	-	
K	K10	OP6115A	GC1010	-	KC5010 KC7210	IC507 IC807	TT5080	CP200 TS2000	ACZ150 AC510U AC5015S	GH110 AH110	VP10RT	PR905	YBG102 YBG202	
	K20	OP6125A OP1315 OP1415	GC1020 GC1120	-	KC5025 KC5525 KC7215	IC508 IC908	TT9030 TT9080	CP250 TS2500	AC5025S AC520U	AH120 AH7025	VP20RT VP15TF	PR1525	YBG212 YBG215	
	K30	OP1215 OP1030	GC1030	-	KC7225	IC508 IC908	TT8020 TT9030	CP500	AC1030U AC530U	AH120 AH130	VP20RT VP15TF	-	-	
S	S05	OP6105A	GC1105	WSM10	-	IC804 IC806	-	CP200	AC5005S AC510U	AH8005	MP9005 VP05RT	PR005S	YBS103	
	S10	OP6115A	GC1115 GC1225	WSM10 WSM10S	KCU10 KC5010 KC5510	IC507 IC807 IC907	TT5080 TT8010	CP200 TS2000	AC5015S AC520U	AH8015	MP9015 MT9015 VP10RT	PR015S	YBS203	
	S20	OP6125A	GC1025 GC1125	WSM20 WSM20S	KC5025 KC5525 KU25T	IC808 IC908	TT8020 TT9080	CP250 TS2500	AC5025S AC530U AC1030U	AH7025	MP9025 MS9025	PR1535	YBS303 YBG212	
	S30	OP6125A	GC1125 GC2035	WSM30 WSM30S	KC5025 KC5525 KU25T	IC1008 IC1028 IC3028	TT9030	CP500	AC6040M AC1030U	AH7025 AH630	MP9025 VP15TF	PR1535	YBS303 YBG212	

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03 车削刀片槽型对照表
Comparison of Turning Insert Chipbreaker

■ 负角刀片 Negative Insert

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切削领域	欧科亿	山特维克	瓦尔特	肯纳金属	伊斯卡	特固克	山高刀具	住友电工	泰珂洛	三菱综合材料	京瓷	株洲钻石
Cutting Condition	OKE	SANDVIK	WALTER	KENAMETAL	ISCRA	TaeguTec	SECO	SUMITOMO	TUNGALOY	MITSUBISHI	KYOCERA	ZCCCT
精加工 (带修光刃) Finishing (with Wiper)	-	WL WF	NF	FW	WF	WS	W-FF2 W-MF2	SEW LUW	AFW FW	SW	WF WP	WGF
精加工~半精加工 (带修光刃) Finishing ~ Semi-Finishing (with Wiper)	-	WM WMX	NM	MW	WG	WT	W-M3 W-M5	GUW	ASW SW	MW	WE WQ	WGM
精加工 Finishing	SMF NF	XF QF	FP5	FF, UF FS, LF	SF F3P	FM FG	FF2 MF2	FB, LU SU	TF, ZF TS, TSF	FH, FJ SH	GP PP	DF SF
精~半精加工 Finishing to semi- finishing	QF OPF	LC PF	MP3 FV5	K, FN FM	NF TF	FC	M3 MF3	SE SX	AS ZM	LP, SA	HQ, PQ CQ, CJ VC, VF	DM
半精加工 Semi-Finishing	QN, OPM	XM, QM SM, SMC PM, PMC MR, XMR	MP5, MV5 MU5	MP, P MN	GN M3P	PC, MP FT, MT	M5, MR5 MR6	GU GE, UX	TM, TQ DM, AM	MP, MA MH	PG, GS PS, PT GT	PM
粗加工 Roughing	QR, OPR OSM, KPR 全周	23, HM 全周槽	RP5 RP7	RN RP	GN, R3P NR	RT 全周槽	MR7	MU, ME MX, MP	TH, THS	RP, GH 全周槽	PH 全周槽	DR 全周槽
重载加工 Heavy-duty machining	HR3, HP RP, HRP	QR, PR HR, MR	NRF, HU5 NRR	MR, RP RM, RH	H3P H4P H5P	RX, RH HD, HY HT, HZ	R4, R5 R57, RR6 R7, RR9	HG HP, HU HW, HF	TRS, TU TUS	HZ, HL HM, HX HV	PX	DR, HDR ER, HPR
精加工 Finishing	NF MSF	MF	NF4 FM5	FP FS	F3M	EA SF	MF1	SU EF	SS	LM SH	MQ	EF
精~半精加工 Finishing to semi- finishing	OMF	23	MM5	MS	TF, VL PP	EM	MF2 M1	EX EG	SF SA	GM MS	TK	NF
半精加工 Semi-Finishing	MF, OMM QT	MM, MMC SMR	NM4, MS3 MU5	MP UP	M3M	ET	MF3, M3 MF4	GU	SM	MM	MS MU	NM EM
粗加工 Roughing	NR, OMR OSM	MR MRR	NR4, MR5 HU5	MR	MR, R3M M4	VF SU	MF5, M5 MR4	HM, EM MU	S SH	RM, GH HM	PH	ER
精~半精加工 Finishing to semi- finishing	OKL	KF	MK5	FN	-	FG	M3, M4	GU	CF	LK	KQ	-
半精加工 Semi-Finishing	OKM, K 全周槽	KM	RK5 MV7	RP UN	GN	MC	M5	GZ UX	CM 全周槽	MK, GK 全周槽	KG 全周槽	TC 全周槽
粗加工 Roughing	OKR, KPR 无断屑槽	KR, KRR	RK7, RV7 无断屑槽	RP, UN 无断屑槽	NR	KT	MR7 MR9 无断屑槽	ME 无断屑槽	CH 无断屑槽	RK 无断屑槽	KH, PH 无断屑槽	DR 无断屑槽
精加工 Finishing	SMF	SF	FM5	FS FF	F3S	FA	MF1	EF	-	FJ	MQ	EF
精~半精加工 Finishing to semi- finishing	NF	MF SGF	NFT MS3	MS FN	VL PP	EA SF	MF3	SU	HRF	LS MJ	SQ	NGF
半精加工 Semi-Finishing	SMM SMR	SM QM	NMS, NMT MU5	UP P	M3M	-	M1 M3	EG, EX UP	HRM, 28 SA, HMM	MS MA	MS, MU TK	NM, EM ER, SNR
粗加工 Roughing	NR OSM	SR SMR	NRS, NRT HU5	RP	M3R	ET	MR3 MR4	MU	-	RS GJ	SG SX	-

■ 正角刀片 Positive Insert

切削领域 Cutting Condition	欧科亿 OKE	特固克 TaeguTec	肯纳金属 KENNAMETAL	日立 HITACHI	株洲钻石 ZCCCT	山特维克 SANDVIK	泰珂洛 TUNGALOY	京瓷 KYOCERA	克洛伊 KORLOY	住友电工 SUMITOMO	三菱综合材料 MITSUBISHI
P 精加工 Finishing 精加工 (带修光刃) Finishing (with Wiper) 半精~粗加工 Semi-Finishing ~ Roughing 半精加工 (带修光刃) Semi-Finishing (with Wiper)	OTF	FA SA FG	LF FP	JQ	SF HF	PF UF XF	01, PF FS, JS	PF, DP GP, PP VF	VL VF	FC, FB LU(FP, FK)	FP, FV LP, SV
	-	WS	FW	-	-	WF	-	WP	-	LUW SDW	SW
	OTM OTR	PC MT PMR	MF MP	JE	HM	XM, PM UM, PR XR	PM, PS PF, PSF PSS 23, 24	HQ GK 全周	HMP MP	MU	MV MP 全周
	-	WT	MW	-	-	WM, PR UR, KM	-	-	-	-	MW
M 精加工 Finishing 半精加工 Semi-Finishing	MSF OTF	-	FP FF	MP	EF	MF	SS&	CF, CK GQ, GF MQ, SK	VP1	FC	FM LM
	OTM	-	MP UP	-	EM	MM	PM	HQ GK	VL	MU	MM 通槽
K 半精加工 Semi-Finishing	OTM	-	MW 平板	-	HR HM 平板	KM KR KF	无断屑槽 CM	平板	MP	MU	MK 通槽 平板
S 精加工 Finishing 半精加工 Semi-Finishing	SMF	-	GT-LF R.GV GT-HP	-	NF NSF	SF 01	-	-	VP1	-	FS LS FS-P LS-P FJ MS
	SMM	-	MT-LF R.GV-T MT-FP	-	-	MM QM SMR	-	MQ	VL	SI	-
N 通用加工 General	NL	FL	GT-HP GT-LF GW-F GW-E	-	LH	AL	PP AL	AH	AK AR	AG AW AY	AZ

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0731-2267 3988 (材料) (Carbide Blank)

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