

金属陶瓷刀具

Cermet Tools



**金属陶瓷刀片/金属陶瓷铣刀/
金属陶瓷材料**

CERMET CUTTING INSERTS/CERMET MILLING CUTTERS/
CERMET MATERIALS

KOVES[®]
科维丝工具

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ABOUT US
关于我们

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科维丝公司是一家专注于切削工具生产与销售的企业。
公司成立于2009年，从成立之初就注重技术服务为基础，公司建有“高性能数控刀具与工具系统技术联合实验室”，同时我们根据客户的产品和工艺需求：制定和优化加工工艺方案；选择合理切削参数；计算加工节拍；选择工具、刀具、刀片及附件；量身定做非标刀具；提供与机械加工相关的全套技术服务。

KOVES is a global service-oriented enterprise,specialized in developing and selling industrial products.
Since established in 2009,from the very beginning,koves pays attention to technical service as basement,we own” high performance CNC cutting tools and systems technology laboratory” ,also according to the customer’ s product and process requirements formulate and optimize manufacturing processes;reasonable selection of cutting parameters;calculating cycle times;select tools,cutters,blades and accessories;customized non-standard tools;provide a full range of technical



材质介绍Insert material list

金属陶瓷材料-优势 Metal ceramic materials-Advantage
Ti (C, N) 基金属陶瓷材料的性能 Ti(C,N)Properties of fund Cermet materials: 加工表面光洁度好, 实现以车代磨、以铣代磨 The machined surface has good smoothness, achieving the goal of replacing grinding with turning and milling. 在精加工、工况较好的半精加工场合, 有非常好的寿命表现 In precision and semi-finishing under stable cutting conditions, cermet inserts deliver outstanding service life. 抗氧化性能高, 特别适合干式切削 With high antioxidant properties, it is particularly suitable for dry cutting. 化学稳定性好, 有效防止积屑瘤的形成 It has good chemical stability and effectively prevents the formation of built-up edge. 高温红硬性好, 可实现干式高速切削 It has good high-temperature red hardness, enabling dry high-speed cutting. 低密度, 成本更具有竞争力 Low density, more competitive cost. 资源方面的考虑: 金属陶瓷使用更少的战略储备资源-----钨钴资源 Resource advantage: Cermet consumes fewer strategic reserves such as tungsten and cobalt. 从长远来看金属陶瓷的资源竞争优势更为明显 In the long run, the resource competitive advantage of cermet is more pronounced. 但金属陶瓷后期加工的难度较大 However, the later processing of cermet is relatively difficult. · 更好的性能 Better performance · 更出色的耐磨性 Better wear resistance · 更高的性价比 Higher cost-effectiveness · 更好的加工表面质量 Better machining surface quality

金属陶瓷材料Cermet materials

■ 概要
The profile

金属陶瓷刀具材料胜任的被加工材料：

钢类：主要是针对硬度不超过HRC45的碳钢、合金钢类材料，在工况稳定的情况下，能够承受半精加工。

铝合金：车削、铣削精加工、半精加工可以承受。但对于Si含量大于10%的高硅铝合金，不推荐用金属陶瓷刀具。

不锈钢：切削深度小于0.1mm的铁素体、马氏体和奥氏体不锈钢精加工，双相不锈钢的加工不推荐。

纯铁：电磁元件用金属材料。

铸铁：灰口铁、可锻铸铁的精加工能够承受。

Ceramic-metal cutting tool materials are suitable for machining the following materials:

Steel types: Primarily referring to carbon steel and alloy steel materials with a hardness not exceeding HRC45, capable of withstanding semi-finishing under stable working conditions.

Aluminum alloy: Turning, milling finishing, and semi-finishing can be withstood. However, for high silicon aluminum alloys with Si content greater than 10%, it is not recommended to use metal ceramic cutting tools.

Stainless steel: Fine machining of ferritic, martensitic, and austenitic stainless steels with a cutting depth less than 0.1mm is recommended. However, machining of duplex stainless steel is not recommended.

Pure iron: a metallic material used in electromagnetic components.

Cast iron: Grey iron and malleable iron can withstand fine machining.



牌号材质说明Brand and material specification

	材质说明 Material Description
KT20	说明: 成分:金属陶瓷牌号 Co/Ni 12.5%;WC 20.0%;TaNbC 12.0%;其余TiCN。 晶粒度:1.5um 硬度:HV30 1620 推荐应用: 高耐磨性和高韧性结合的牌号，保证复杂工况使用的稳定。 高氮微粒成分，保证加工表面较低的粗糙度，实现完美切削。 特殊表面处理技术，减小切削瘤产生。 高耐热冲击牌号，能够适应干式切削。 Instructions: Composition: Cermet grade Co/Ni 12.5%; WC 20.0%; TaNbC 12.0%; remainder TiCN. Grain size: 1.5um Hardness: HV30 1620 Recommended Apps: The grade, combining high wear resistance and high toughness, ensures stability in complex working conditions. High nitrogen particulate composition ensures a low roughness of the machined surface, achieving perfect cutting. Special surface treatment technology reduces the generation of cutting burrs. High thermal shock resistance grade, capable of adapting to dry cutting.
KCT20	说明: 成分:金属陶瓷牌号 Co/Ni 14%;WC 23.0%;TaNbC 6.0%;其余TiCN。 晶粒度:1.5um 硬度:HV30 1620 推荐应用: 高韧性结合的牌号，保证复杂工况使用的稳定。 高氮微粒成分，保证加工表面较低的粗糙度。 配合纳米级氮铝钛涂层，还用于钢、不锈钢、铸铁材料的车、铣。 高耐热冲击牌号，能够适应干式切削。 Instructions: Composition: Cermet grade Co/Ni 14%; WC 23.0%; TaNbC 6.0%; remainder TiCN. Grain size: 1.5um Hardness: HV30 1620 Recommended Apps:The grade with high toughness ensures stability in complex working conditions. High nitrogen particulate composition ensures a lower roughness of the machined surface. In conjunction with a nano-scale nitrogen-aluminum-titanium coating, it is also used for turning and milling steel, stainless steel, and cast iron materials. High thermal shock resistance grade, suitable for dry cutting.

牌号材质说明Brand and material specification

	材质说明 Material Description
KT25	说明: 成分:金属陶瓷牌号Co/Ni 14%;WC23.0%;TaNbC6.0%;其余TiCN 晶粒度:1.5um 硬度:HV301620 推荐应用: 高耐磨性和高韧性结合的牌号，保证复杂工况使用的稳定。 高氮微粒成分，保证加工表面较低的粗糙度，实现完美切削。 特殊表面处理技术，减小切削瘤产生。 高耐热冲击牌号，能够适应干式切削。 Instructions: Composition: Cermet grade, Co/Ni 14%; WC 23.0%; TaNbC 6.0%; balance TiCN Grain size: 1.5 μm Hardness: HV30 1620 Recommended Application: This grade balances high wear resistance and high toughness to ensure stable performance under complex cutting conditions. High-nitride microparticle composition delivers low surface roughness of machined workpieces for superior cutting results. Special surface treatment technology suppresses the formation of built-up edge. Excellent thermal shock resistance, suitable for dry cutting.
KCT25	说明: 成分:金属陶瓷牌号Co/Ni 14%;WC23.0%;TaNbC 6.0%;其余TiCN。 晶粒度:1.5um 硬度:HV301620 推荐应用: 高韧性结合的牌号，保证复杂工况使用的稳定。 高氮微粒成分，保证加工表面较低的粗糙度。 配合纳米级氮铝钛涂层，还用于钢、不锈钢、铸铁材料的车、铣。 高耐热冲击牌号，能够适应干式切削。 Instructions: Composition: Cermet grade, Co/Ni 14%; WC 23.0%; TaNbC 6.0%; balance TiCN Grain size: 1.5 μm Hardness: HV30 1620 Recommended Application: High-toughness grade ensuring stable performance in complex working conditions.High-nitride microparticle formulation achieves low machined surface roughness. When equipped with nano AlTiN coating, it is applicable for turning and milling of steel, stainless steel and cast iron. Good resistance to thermal shock, suitable for dry cutting.

应用范围推荐Scope Recommendation Table

材质说明 Material Description																			
应用范围 Scope of application	材质 牌号 Material Grade	标准代号 Standard code		应用范围Scope of application										K	P	M	S	N	H
														铸铁 Cast iron	钢 Steel	不锈钢 Stainless steel	难加工材料 Difficult-to-machine materials	有色金属 Non-ferrous metals	硬料 Harden material
				01	05	10	15	20	25	30	35	40	45	50					
车削 Turning	KT20		P15																
			M10																
			N10																
	KCT25		P20																
			M10																
铣削 Milling	KT20		P10																
			N10																
	KCT25		P05																
切槽 Grooving	KT20		P10																
	KCT25		P10																
铰刀 Reamer	KT20		P10																
			K05																
			M10																

刀片编号说明
Insert Identification System

C	N	M	G	12
1	2	3	4	5

1 刀片形状 Insert shape		2 刀片后角 Insert clearance angle	3 精度代号 Tolerance																												
A 85° B 82° K 55°		 <table><tr><td></td><td>a</td></tr><tr><td>A</td><td>3°</td></tr><tr><td>B</td><td>5°</td></tr><tr><td>C</td><td>7°</td></tr><tr><td>D</td><td>15°</td></tr><tr><td>E</td><td>20°</td></tr><tr><td>F</td><td>25°</td></tr><tr><td>G</td><td>30°</td></tr><tr><td>N</td><td>0°</td></tr><tr><td>P</td><td>11°</td></tr><tr><td>O</td><td>特殊 Special</td></tr></table>		a	A	3°	B	5°	C	7°	D	15°	E	20°	F	25°	G	30°	N	0°	P	11°	O	特殊 Special	d	m	s	d=6.3/9.5/25	d=12.7	d=15.8/19.0/5	
	a																														
A	3°																														
B	5°																														
C	7°																														
D	15°																														
E	20°																														
F	25°																														
G	30°																														
N	0°																														
P	11°																														
O	特殊 Special																														
H 120°			(±mm)	(±mm)	(±mm)																										
L 90°			A	0.025	0.005	0.025	•	•	•																						
O 135°			C	0.025	0.013	0.025	•	•	•																						
P 108°			E	0.025	0.025	0.025	•	•	•																						
C 80° D 55° E 75° M 86° V 35°			F	0.013	0.005	0.025	•	•	•																						
R -			G	0.025	0.025	0.130	•	•	•																						
S 90°			H	0.013	0.013	0.025	•	•	•																						
T 60°			J	0.050	0.05	0.025	•	•	•																						
W 80°		K	0.080	0.05	0.025		•	•																							
			0.100	0.05	0.025			•																							
			0.050	0.013	0.025	•																									
			0.080	0.013	0.025		•																								
			0.100	0.013	0.025			•																							
			0.05	0.08	0.13	•																									
			0.08	0.13	0.13		•																								
			0.10	0.15	0.13			•																							
			0.05	0.08	0.025	•																									
			0.08	0.13	0.025		•																								
			0.10	0.15	0.025			•																							
			0.08	0.13	0.13	•																									
			0.13	0.20	0.13		•																								
			0.18	0.27	0.13			•																							

4 切削槽及夹固形式 Chip-breaker and clamp type	
R  无中心孔 Without hole	Q  圆柱孔 + 双面倒角 40°60° Cylindrical hole+double countersink
F  无中心孔 Without hole	C  圆柱孔 + 双面倒角 70°90° Cylindrical hole+double countersink
N  无中心孔 Without hole	G  圆柱孔 Cylindrical hole
A  圆柱孔 Cylindrical hole	T  圆柱孔 + 单面倒角 40°60° Cylindrical hole+ countersink
M  圆柱孔 Cylindrical hole	H  圆柱孔 + 单面倒角 70°90° Cylindrical hole+ countersink
U  圆柱孔 + 双面倒角 40°60° Cylindrical hole+double countersink	W  圆柱孔 + 单面倒角 40°60° Cylindrical hole+ countersink
J  圆柱孔 + 双面倒角 70°90° Cylindrical hole+double countersink	B  圆柱孔 + 单面倒角 70°90° Cylindrical hole+ countersink
X 特殊设计 Special	

5 切削刃长度 Insert size									
d mm	C	D	R	S	T	V	W		
									
5.56	05	-	-	05	09	-	03		
6.0	-	-	06	-	-	-	-		
6.35	06	07	-	06	11	11	04		
6.65	-	-	-	-	-	-	-		
7.94	07	-	-	07	-	-	-		
8.0	-	-	08	-	-	-	-		
9.525	09	11	-	09	16	16	06		
10.0	-	-	10	-	-	-	-		
12.0	-	-	12	-	-	-	-		
12.7	12	15	-	12	22	22	08		
15.875	16	19	-	15	27	-	10		
16.0	-	-	16	-	-	-	-		
16.74	-	-	-	16	-	-	-		
19.05	19	-	-	19	33	-	13		
20.0	-	-	20	-	-	-	-		
25.4	25	-	25	25	-	-	-		

04	04	HQ
6	7	8

6 刀片厚度 S(mm) Insert thickness																					
	<table><tr><td>01</td><td>S=1.59</td></tr><tr><td>T1</td><td>S=1.98</td></tr><tr><td>02</td><td>S=2.38</td></tr><tr><td>03</td><td>S=3.18</td></tr><tr><td>T3</td><td>S=3.97</td></tr><tr><td>04</td><td>S=4.76</td></tr><tr><td>05</td><td>S=5.56</td></tr><tr><td>06</td><td>S=6.35</td></tr><tr><td>07</td><td>S=7.94</td></tr><tr><td>09</td><td>S=9.52</td></tr></table>	01	S=1.59	T1	S=1.98	02	S=2.38	03	S=3.18	T3	S=3.97	04	S=4.76	05	S=5.56	06	S=6.35	07	S=7.94	09	S=9.52
01	S=1.59																				
T1	S=1.98																				
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03	S=3.18																				
T3	S=3.97																				
04	S=4.76																				
05	S=5.56																				
06	S=6.35																				
07	S=7.94																				
09	S=9.52																				
																					

7 刀尖圆角半径 R Corner radius																				
	<table><tr><th>R (mm)</th></tr><tr><td>02</td><td>0.2</td></tr><tr><td>04</td><td>0.4</td></tr><tr><td>05</td><td>0.5</td></tr><tr><td>08</td><td>0.8</td></tr><tr><td>12</td><td>1.2</td></tr><tr><td>16</td><td>1.6</td></tr><tr><td>20</td><td>2.0</td></tr><tr><td>24</td><td>2.4</td></tr><tr><td>32</td><td>3.2</td></tr></table>	R (mm)	02	0.2	04	0.4	05	0.5	08	0.8	12	1.2	16	1.6	20	2.0	24	2.4	32	3.2
R (mm)																				
02	0.2																			
04	0.4																			
05	0.5																			
08	0.8																			
12	1.2																			
16	1.6																			
20	2.0																			
24	2.4																			
32	3.2																			
圆形刀片 Round insert																				
00 内切圆 (英制) Inch																				
MO 内切圆 (公制) Metric																				

8 断屑槽型 Chip breaker	
主切削符号方向符号或断屑槽符号等的自定义符号	

车削刀片一览表
List of Turning Insert

车削刀片-G级
Turning insert-G grade

槽型 Chip breaker	刀片外形 Shape	断屑槽断面 Chip Breaker Groove Cross-section	特点 Features
NP			仿形加工、清角加工等切深大幅变动的加工，实现顺畅切屑排出 Processing with significant changes in cutting depth, such as contour machining and corner cleaning, achieves smooth chip discharge.
S			锋利刀尖规格实现良好切削效果、降低阻力 控制排屑方向促使切削顺畅排出 Sharp blade specifications achieve good cutting effects and reduce resistance. Control the direction of chip removal to promote smooth cutting and discharge.
F			控制排屑、可实现低阻力切削 Control chip removal and achieve low resistance cutting.
U			控制排屑、可实现低阻力切削 Control chip removal and achieve low resistance cutting.
W			锋利光洁度好，精加工 Sharp and smooth finish, precision machining.
Y			切削效果良好、获得良好的完成面。 Good cutting effect and achieving good completionnoodles.
H			锋利度良好、卷屑小。 Good sharpness and small rolling debris.
C			对应容易发生切屑阻塞的材料或高负荷切削。 排屑良好、阻力低。 Corresponding to materials that are prone to chip blockage or high load cutting. Good chip removal and low resistance.
B			轻切削领域的通用断屑槽。 切屑处理与锋利度兼具、可对应大范围加工。 A universal chip breaker in the field of light cutting. Chip processing and sharpness are both suitable for large-scale processing.

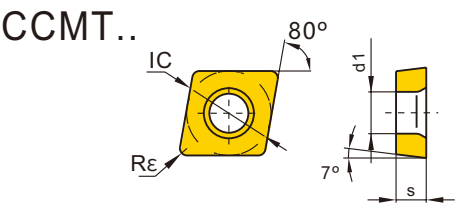
车削刀片一览表
List of Turning Insert

车削刀片-M级
Turning insert-M grade

槽型 Chip breaker	刀片外形 Shape	断屑槽断面 Chip Breaker Groove Cross-section	特点 Features
HQ			轻切削领域的通用断屑槽 Universal chip breaker in the field of light cutting
MT			适用于中等粗糙度的应用钢、铸铁和不锈钢坚固的前角， 适用于一般用途 For medium rough applications Steel, cast iron and stainless steel Tough rake angle for general use.
FG			适用于微小切削深度、微小进给量等的精密加工 尖锐的切削刃与低切削力断屑槽组合，切削锋利性高 Suitable for precision machining with small cutting depths, small feed rates, etc. The combination of sharp cutting edges and low cutting force chip breaking grooves results in high cutting sharpness.
TS			适用于精加工和半精加工应用 钢、不锈钢和铸铁加工 低切削力 For finish and semi finish applications. Steel, stainless steel and cast iron machining. Low cutting forces.
TF			周边磨削精加工刀片 重复定位精度高 锋利的切削刃，加工表面精度好 Peripheral grinding finishing insert. High repeatability accuracy. Sharp cutting edge with excellent surface finish precision.
JF			精加工到轻中加工;低切削力，断屑好 Finishing to light semi-finishing; low cutting force and excellent chip breaking performance.
JM			中粗加工;钢件，铸铁和不锈钢加工;强韧的前角用于通用加工 Semi-rough machining; suitable for machining steel, cast iron and stainless steel; robust rake angle designed for general-purpose machining.
R/L-VF			仿形加工、清角加工等切深大幅变动的加工，实现顺畅切屑排出 Processing with significant changes in cutting depth, such as contour machining and corner cleaning, achieves smooth chip discharge.
R/L-FS			仿形加工、清角加工等切深大幅变动的加工，实现顺畅切屑排出 Processing with significant changes in cutting depth, such as contour machining and corner cleaning, to achieve smooth chip discharge.

金属陶瓷刀片
Cermet insert

车削刀片 (正型) M级
Turning insert(Positive)-M grade



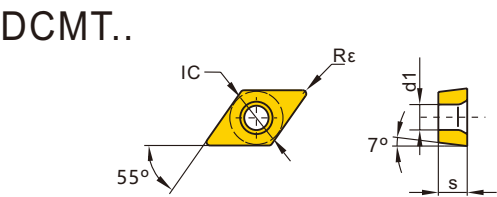
型号 Model	尺寸 Size (mm)		
	IC	S	d1
CC..0602..	6.35	2.38	2.8
CC..09T3..	9.525	3.97	4.4

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	CCMT060202-HQ	○	0.2	0.04-0.16	0.5-1.5	●	●
	CCMT060204-HQ	○	0.4	0.04-0.16	0.5-1.5	●	●
	CCMT060208-HQ	○	0.8	0.04-0.16	0.5-1.5	●	●
	CCMT09T302-HQ	○	0.2	0.08-0.2	0.5-2.0	●	●
	CCMT09T304-HQ	○	0.4	0.08-0.2	0.5-2.0	●	●
	CCMT09T308-HQ	○	0.8	0.08-0.2	0.5-2.0	●	●
	CCMT060204-MT	○	0.4	0.07-0.2	0.5-2.0	●	●
	CCMT09T304-MT	○	0.4	0.11-0.25	0.7-3.5	●	●
	CCMT09T308-MT	○	0.8	0.11-0.25	0.7-3.5	●	●
	CCMT060204-FG	○	0.4	0.05-0.15	0.3-1.5	●	●
	CCMT09T304-FG	○	0.4	0.07-0.2	0.4-2.0	●	●
	CCMT09T308-FG	○	0.8	0.07-1.2	0.4-2.0	●	●
	CCMT060204JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	CCNT09T304JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	CCMT09T308JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	CCMT060204JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	CCMT060208JM	○	0.8	0.07-0.35	0.5-5.0	●	●
	CCMT09T304JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	CCMT09T308JM	○	0.8	0.07-0.35	0.5-5.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) M级
Turning insert(Positive)-M grade



型号 Model	尺寸 Size (mm)		
	IC	S	d1
DC..0702..	6.35	2.38	2.8
DC..11T3..	9.525	3.97	4.4

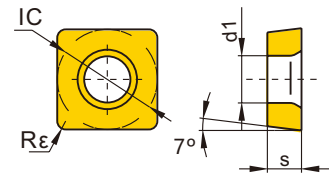
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	DCMT070202-HQ	○	0.2	0.04-0.12	0.2-1.0	●	●
	DCMT070204-HQ	○	0.4	0.04-0.12	0.2-1.0	●	●
	DCMT070208-HQ	○	0.8	0.04-0.12	0.2-1.0	●	●
	DCMT11T302-HQ	○	0.2	0.08-0.2	0.5-2.0	●	●
	DCMT11T304-HQ	○	0.4	0.08-0.2	0.5-2.0	●	●
	DCMT11T308-HQ	○	0.8	0.08-0.2	0.5-2.0	●	●
	DCMT11T304-MT	○	0.4	0.01-0.25	0.7-3.0	●	●
	DCMT11T308-MT	○	0.8	0.1-0.25	0.7-3.0	●	●
	DCMT070204-FG	○	0.4	0.07-0.2	0.4-1.5	●	●
	DCMT11T304-FG	○	0.4	0.1-0.25	0.6-1.5	●	●
	DCMT11T308-FG	○	0.8	0.1-0.25	0.6-1.5	●	●
	DCMT070204JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	DCMT11T304JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	DCMT11T308JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	DCMT11T304JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	DCMT11T308JM	○	0.8	0.07-0.35	0.5-5.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(正型) M级
Turning insert(Positive)-M grade

SCMT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
SC..09T3..	9.525	3.97	4.4
SC..1204..	12.7	4.76	5.16

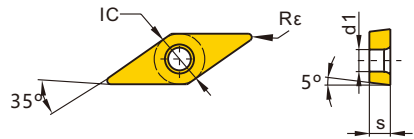
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	SCMT09T304-MT	○	0.4	0.13-0.3	0.7-3.5	●	●
	SCMT09T308-MT	○	0.8	0.13-0.3	0.7-3.5	●	●
	SCMT09T304JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	SCMT09T308JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	SCMT09T304JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	SCMT09T308JM	○	0.8	0.07-0.35	0.5-5.0	●	●
	SCMT120404JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	SCMT120408JM	○	0.8	0.07-0.35	0.5-5.0	●	●
钢 Steel							★
不锈钢 Stainless Steel							☆
铸铁 Cast Iron							☆
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(正型) M级
Turning insert(Positive)-M grade

VBMT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
VB..1103..	6.35	3.18	2.8
VB..1604..	9.525	4.76	4.4

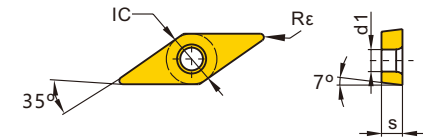
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	VBMT110304-HQ	○	0.4	0.08-0.16	0.5-1.5	●	●
	VBMT110308-HQ	○	0.8	0.08-0.16	0.5-1.5	●	●
	VBMT160404-HQ	○	0.4	0.08-0.16	0.5-2.0	●	●
	VBMT160408-HQ	○	0.8	0.08-0.16	0.5-2.0	●	●
	VBMT110304JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	VBMT160404JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	VBMT160408JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	VBMT110304JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	VBMT110308JM	○	0.8	0.07-0.35	0.5-5.0	●	●
	VBMT160404JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	VBMT160408JM	○	0.8	0.07-0.35	0.5-5.0	●	●
钢 Steel							★
不锈钢 Stainless Steel							☆
铸铁 Cast Iron							☆
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) M级
Turning insert(Positive)-M grade

VCMT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
VC..1103..	6.35	3.18	2.8
VC..1604..	9.525	4.76	4.4

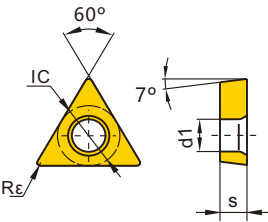
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	VCMT110304JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	VCMT160404JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	VCMT160408JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	VCMT110304JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	VCMT110308JM	○	0.8	0.07-0.35	0.5-5.0	●	●
	VCMT160404JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	VCMT160408JM	○	0.8	0.07-0.35	0.5-5.0	●	●
钢 Steel			★				
不锈钢 Stainless Steel			☆				
铸铁 Cast Iron			☆				
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选 Preferred ☆ 可选 optional ● 标准库存 standard stock ○ 订单生产 order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) M级
Turning insert(Positive)-M grade

TCMT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
TC..0902..	5.56	2.38	2.5
TC..1102..	6.35	2.38	2.8
TC..16T3..	9.525	3.97	4.4

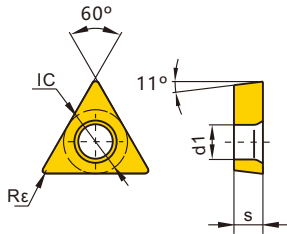
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TCMT090202-HQ	○	0.2	0.08-0.2	0.5-2.0	●	●
	TCMT090204-HQ	○	0.4	0.08-0.2	0.5-2.0	●	●
	TCMT110202-HQ	○	0.2	0.08-0.16	0.5-2.0	●	●
	TCMT110204-HQ	○	0.4	0.08-0.16	0.5-2.0	●	●
	TCMT110208-HQ	○	0.8	0.08-0.16	0.5-2.0	●	●
	TCMT16T304-HQ	○	0.4	0.08-0.2	0.5-1.5	●	●
	TCMT16T308-HQ	○	0.8	0.08-0.2	0.5-1.5	●	●
	TCMT090204-MT	○	0.4	0.1-0.25	0.6-2.0	●	●
	TCMT110204-MT	○	0.4	0.1-0.25	0.6-3.0	●	●
	TCMT110208-MT	○	0.8	0.1-0.25	0.6-3.0	●	●
	TCMT16T304-MT	○	0.4	0.1-0.25	0.8-5.0	●	●
	TCMT16T308-MT	○	0.8	0.1-0.25	0.8-5.0	●	●
	TCMT110204-FG	○	0.4	0.07-0.2	0.4-1.5	●	●
	TCMT16T304-FG	○	0.4	0.07-0.2	0.4-2.0	●	●
	TCMT090204JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	TCMT110204JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	TCMT110208JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	TCMT16T304JF	○	0.4	0.05-0.25	0.3-2.0	●	●
	TCMT16T308JF	○	0.8	0.05-0.25	0.3-2.0	●	●
	TCMT090202JM	○	0.2	0.07-0.35	0.5-5.0	●	●
	TCMT090204JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	TCMT110204JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	TCMT110208JM	○	0.8	0.07-0.35	0.5-5.0	●	●
	TCMT16T304JM	○	0.4	0.07-0.35	0.5-5.0	●	●
	TCMT16T308JM	○	0.8	0.07-0.35	0.5-5.0	●	●
钢 Steel			★				
不锈钢 Stainless Steel			☆				
铸铁 Cast Iron			☆				
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选 Preferred ☆ 可选 optional ● 标准库存 standard stock ○ 订单生产 order production

金属陶瓷刀片
Cermet insert

车削刀片(正型) M级
Turning insert(Positive)-M grade

TPMT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
TP..1103..	6.35	3.18	3.3

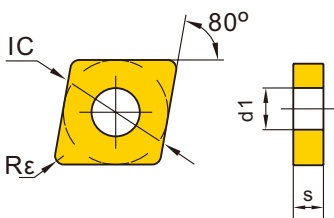
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TPMT110302-HQ	○	0.2	0.08-0.2	0.5-2.0	●	●
	TPMT110304-HQ	○	0.4	0.08-0.2	0.5-2.0	●	●
	TPMT110308-HQ	○	0.8	0.08-0.2	0.5-2.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(负型) M级
Turning Inserts (Negative)-M grade

CNMG..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
CN..1204..	12.7	4.76	5.16

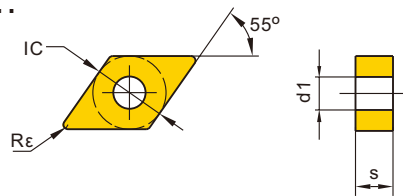
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	CNMG120404-HQ	○	0.4	0.08-0.2	0.5-2.0	●	●
	CNMG120408-HQ	○	0.8	0.08-0.2	0.5-2.0	●	●
	CNMG120404-MT	○	0.4	0.17-0.55	1.2-5.0	●	●
	CNMG120408-MT	○	0.8	0.17-0.55	1.2-5.0	●	●
	CNMG120404JM	○	0.4	0.15-0.55	1.0-5.0	●	●
	CNMG120408JM	○	0.8	0.15-0.55	1.0-5.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

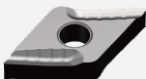
金属陶瓷刀片
Cermet insert

车削刀片(负型)M级
Turning Inserts (Negative)-M grade

DNMG..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
DN..1504..	12.7	4.76	5.16

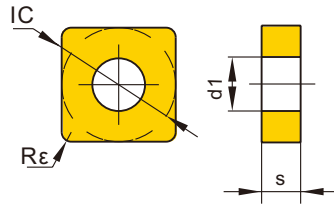
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	DNMG150404R-VF	○	0.4	0.12-0.45	1.0-4.5	●	●
	DNMG150408R-VF	○	0.8	0.12-0.45	1.0-4.5	●	●
	DNMG150404-HQ	○	0.4	0.08-0.24	0.5-2.0	●	●
	DNMG150408-HQ	○	0.8	0.08-0.24	0.5-2.0	●	●
	DNMG150404JM	○	0.4	0.15-0.55	1.0-5.0	●	●
	DNMG150408JM	○	0.8	0.15-0.55	1.0-5.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(负型)M级
Turning Inserts (Negative)-M grade

SNMG..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
SN..1204..	12.7	4.76	5.16

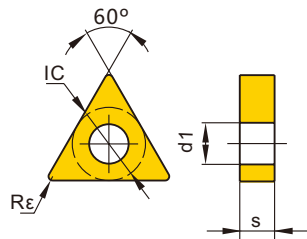
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	SNMG120404-MT	○	0.4	0.15-0.4	1.0-5.0	●	●
	SNMG120408-MT	○	0.8	0.15-0.4	1.0-5.0	●	●
	SNMG120404JM	○	0.4	0.15-0.55	1.0-5.0	●	●
	SNMG120408JM	○	0.8	0.15-0.55	1.0-5.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(负型)M级
Turning Inserts (Negative)-M grade

TNMG..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
TN..1604..	9.525	4.76	3.81

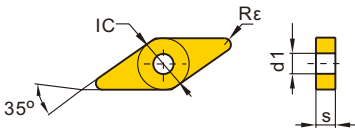
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TNMG160404-HQ	○	0.4	0.15-0.4	0.5-3.0	●	●
	TNMG160408-HQ	○	0.8	0.15-0.4	0.5-3.0	●	●
	TNMG160404-MT	○	0.4	0.17-0.5	1.2-3.5	●	●
	TNMG160408-MT	○	0.8	0.17-0.5	1.2-3.5	●	●
	TNMG160404R/L-FS	○	0.4	0.15-0.3	1.2-3.0	●	●
	TNMG160408R/L-FS	○	0.8	0.15-0.3	1.2-3.0	●	●
	TNMG160404-FG	○	0.4	0.07-0.2	0.5-2.0	●	●
	TNMG160408-FG	○	0.8	0.17-0.2	0.5-3.0	●	●
	TNMG160404R/L-VF	○	0.4	0.1-0.3	0.7-3.5	●	●
	TNMG160408R/L-VF	○	0.8	0.1-0.3	0.7-3.5	●	●
	TNMG160404-TS	○	0.4	0.03-0.15	0.2-1.5	●	●
	TNMG160408-TS	○	0.8	0.03-0.15	0.2-1.5	●	●
	TNMG160404JM	○	0.4	0.15-0.55	1.0-5.0	●	●
	TNMG160408JM	○	0.8	0.15-0.55	1.0-5.0	●	●
钢 Steel							★
不锈钢 Stainless Steel							☆
铸铁 Cast Iron							☆
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(负型)M级
Turning Inserts (Negative)-M grade

VNMG..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
VN..1604..	9.525	4.76	3.81

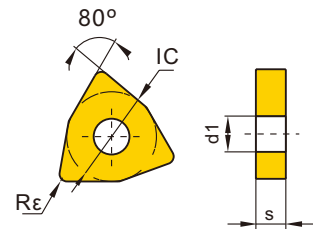
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	VNMG160404-HQ	○	0.4	0.1-0.25	0.5-2.0	●	●
	VNMG160408-HQ	○	0.8	0.1-0.25	0.5-2.0	●	●
	VNMG160404-MT	○	0.4	0.08-0.23	0.5-2.0	●	●
	VNMG160408-MT	○	0.8	0.08-0.23	0.5-2.0	●	●
	VNMG160404JM	○	0.4	0.15-0.55	1.0-5.0	●	●
	VNMG160408JM	○	0.8	0.15-0.55	1.0-5.0	●	●
钢 Steel							★
不锈钢 Stainless Steel							☆
铸铁 Cast Iron							☆
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(负型)M级
Turning Inserts (Negative)-M grade

WNMG..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
WN..0804..	12.7	4.76	5.16

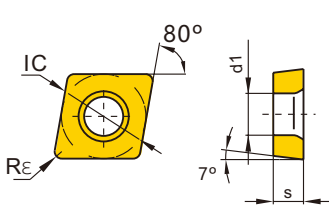
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	WNMG080404-HQ	○	0.4	0.1-0.25	0.5-2.0	●	●
	WNMG080408-HQ	○	0.8	0.1-0.25	0.5-2.0	●	●
	WNMG080404-MT	○	0.4	0.12-0.4	1.0-3.0	●	●
	WNMG080408-MT	○	0.8	0.12-0.4	1.0-3.0	●	●
	WNMG080404-TS	○	0.4	0.1-0.3	0.5-2.5	●	●
	WNMG080408-TS	○	0.8	0.1-0.3	0.5-2.5	●	●
	WNMG080404R-FS	○	0.4	0.1-0.3	1.5-4.5	●	●
	WNMG080408R-FS	○	0.8	0.1-0.3	1.5-4.5	●	●
	WNMG080404JM	○	0.4	0.15-0.55	1.0-5.0	●	●
	WNMG080408JM	○	0.8	0.15-0.55	1.0-5.0	●	●
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片(正型)G级
Turning insert(Positive)-G grade

CCGT..



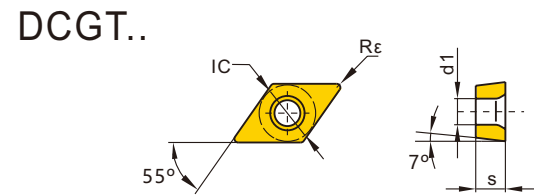
型号 Model	尺寸 Size (mm)		
	IC	S	d1
CC..0301..	3.5	1.4	1.9
CC..0401..	4.3	1.8	2.3
CC..0602..	6.35	2.38	2.8
CC..09T3..	9.525	3.97	4.4
CC..1204..	12.7	4.76	5.5

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	CCGT060202L-S	○	0.2	0.01-0.06	0.1-0.4	●	○
	CCGT060204L-S	○	0.4	0.01-0.06	0.1-0.4	●	○
	CCGT09T302L-S	○	0.2	0.02-0.1	0.1-0.4	●	○
	CCGT09T304L-S	○	0.4	0.02-0.1	0.1-0.4	●	○
	CCGT030101L-F	○	0.1	0.01-0.05	0.1-0.3	●	○
	CCGT030102L-F	○	0.2	0.01-0.05	0.1-0.3	●	○
	CCGT030104L-F	○	0.4	0.01-0.05	0.1-0.3	●	○
	CCGT040101L-F	○	0.1	0.01-0.06	0.1-0.4	●	○
	CCGT040102L-F	○	0.2	0.01-0.06	0.1-0.4	●	○
	CCGT040104L-F	○	0.4	0.01-0.06	0.1-0.4	●	○
	CCGT060202R/L-F	○	0.2	0.01-0.06	0.1-0.4	●	○
	CCGT060204R/L-F	○	0.4	0.01-0.06	0.1-0.4	●	○
	CCGT09T302R/L-F	○	0.2	0.02-0.1	0.1-0.4	●	○
	CCGT09T304R/L-F	○	0.4	0.02-0.1	0.1-0.4	●	○
	CCGT060202R/L-U	○	0.2	0.02-0.1	0.5-2.5	●	○
	CCGT060204R/L-U	○	0.4	0.02-0.1	0.5-2.5	●	○
	CCGT09T302R/L-U	○	0.2	0.02-0.1	0.5-4.0	●	○
	CCGT09T304R/L-U	○	0.4	0.02-0.1	0.5-4.0	●	○
	CCGT060202NP	○	0.2	0.01-0.12	0.05-3.0	●	○
	CCGT060204NP	○	0.4	0.02-0.15	0.1-3.0	●	○
	CCGT060208NP	○	0.8	0.02-0.20	0.1-4.0	●	○
	CCGT09T302NP	○	0.2	0.02-0.20	0.05-3.0	●	○
	CCGT09T304NP	○	0.4	0.02-0.30	0.1-5.0	●	○
	CCGT09T308NP	○	0.8	0.03-0.50	0.1-5.0	●	○
	CCGT120402NP	○	0.2	0.02-0.30	0.05-4.0	●	○
	CCGT120404NP	○	0.4	0.03-0.50	0.1-5.0	●	○
	CCGT120408NP	○	0.8	0.04-0.80	0.1-5.0	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade



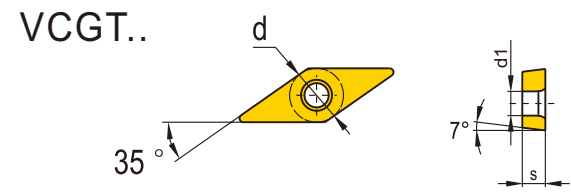
型号 Model	尺寸 Size (mm)		
	IC	S	d1
DC..0702..	6.35	2.38	2.8
DC..11T3..	9.525	3.97	4.4

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	DCGT070202R/L-S	○	0.2	0.02-0.18	0.1-0.4	●	○
	DCGT070204R/L-S	○	0.4	0.02-0.18	0.1-0.4	●	○
	DCGT11T302R/L-S	○	0.2	0.02-0.2	0.1-0.4	●	○
	DCGT11T304R/L-S	○	0.4	0.02-0.2	0.1-0.4	●	○
	DCGT11T302R/L-U	○	0.2	0.01-0.1	0.5-4.0	●	○
	DCGT11T304R/L-U	○	0.4	0.01-0.1	0.5-4.0	●	○
	DCGT070202R/L-F	○	0.2	0.02-0.18	0.1-0.4	●	○
	DCGT070204R/L-F	○	0.4	0.02-0.18	0.1-0.4	●	○
	DCGT11T302R/L-F	○	0.2	0.02-0.2	0.1-0.4	●	○
	DCGT11T304R/L-F	○	0.4	0.02-0.2	0.1-0.4	●	○
	DCGT070202NP	○	0.2	0.01-0.20	0.05-3.0	●	○
	DCGT070204NP	○	0.4	0.02-0.30	0.1-4.0	●	○
	DCGT070208NP	○	0.8	0.03-0.40	0.1-4.0	●	○
	DCGT11T302NP	○	0.2	0.02-0.30	0.05-4.0	●	○
	DCGT11T304NP	○	0.4	0.03-0.50	0.1-5.0	●	○
	DCGT11T308NP	○	0.8	0.03-0.50	0.1-5.0	●	○
	DCGT11T312NP	○	1.2	0.04-0.60	0.15-5.0	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade



型号 Model	尺寸 Size (mm)		
	d	S	d1
VC..1103..	6.35	3.18	2.8
VC..1604..	9.525	4.76	4.4

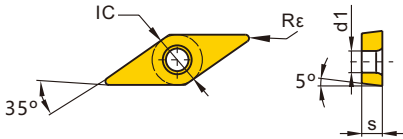
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	VCGT110302NP	○	0.2	0.02-0.20	0.05-3.0	●	○
	VCGT110304NP	○	0.4	0.02-0.20	0.1-4.0	●	○
	VCGT110308NP	○	0.8	0.03-0.30	0.1-5.0	●	○
	VCGT160402NP	○	0.2	0.02-0.30	0.05-5.0	●	○
	VCGT160404NP	○	0.4	0.03-0.40	0.1-5.0	●	○
	VCGT160408NP	○	0.8	0.03-0.50	0.1-5.0	●	○
	VCGT160412NP	○	1.2	0.05-0.60	0.1-5.0	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade

VBGT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
VB..1103..	6.35	3.18	2.8
VB..1604..	9.525	4.76	4.4

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	VBGT110302R/L-S	○	0.2	0.01-0.18	0.1-0.3	●	○
	VBGT110304R/L-S	○	0.4	0.01-0.18	0.1-0.3	●	○
	VBGT110302R/L-Y	○	0.2	0.08-0.22	0.5-1.8	●	○
	VBGT110304R/L-Y	○	0.4	0.08-0.22	0.5-1.8	●	○
	VBGT160402R/L-Y	○	0.2	0.1-0.25	0.8-2.0	●	○
	VBGT160404R/L-Y	○	0.4	0.1-0.25	0.8-2.0	●	○
	VBGT110302R/L-F	○	0.2	0.1-0.18	0.1-0.3	●	○
	VBGT110304R/L-F	○	0.4	0.1-0.18	0.1-0.3	●	○
	VBGT160402R/L-F	○	0.2	0.02-0.15	0.2-0.5	●	○
	VBGT160404R/L-F	○	0.4	0.02-0.15	0.2-0.5	●	○
	VBGT110302R/L-H	○	0.2	0.01-0.06	0.2-2.0	●	○
	VBGT110304R/L-H	○	0.4	0.01-0.06	0.2-2.0	●	○
	VBGT110302NP	○	0.2	0.02-0.15	0.05-3.0	●	○
	VBGT110304NP	○	0.4	0.02-0.15	0.1-4.0	●	○
	VBGT110308NP	○	0.8	0.03-0.18	0.1-5.0	●	○
	VBGT160402NP	○	0.2	0.03-0.30	0.05-4.0	●	○
	VBGT160404NP	○	0.4	0.03-0.40	0.1-5.0	●	○
	VBGT160408NP	○	0.8	0.03-0.50	0.1-5.0	●	○
	VBGT160412NP	○	1.2	0.05-0.60	0.1-5.5	●	○
	VBGT110301TF	○	0.1	0.02-0.15	0.1-1.5	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional

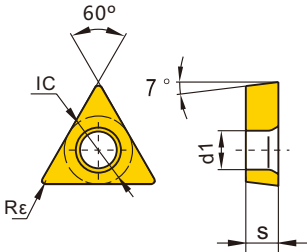
● 标准库存standard stock

○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade

TCGT..



型号 Model	尺寸 Size (mm)		
	d	S	d1
TC..0902..	5.56	2.38	2.5
TC..1102..	6.35	2.38	2.8
TC..16T3..	9.525	3.97	4.4

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TCGT110202L-W	○	0.2	0.02-0.12	0.2-0.8	●	○
	TCGT110204L-W	○	0.4	0.02-0.12	0.2-0.8	●	○
		○				●	○
		○				●	○
	TCGT090202NP	○	0.2	0.01-0.12	0.05-3.0	●	○
	TCGT090204NP	○	0.4	0.02-0.15	0.1-4.0	●	○
	TCGT110202NP	○	0.2	0.02-0.20	0.05-4.0	●	○
	TCGT110204NP	○	0.4	0.03-0.30	0.1-4.0	●	○
	TCGT110208NP	○	0.8	0.03-0.40	0.1-5.0	●	○
	TCGT16T302NP	○	0.2	0.02-0.30	0.05-5.0	●	○
	TCGT16T304NP	○	0.4	0.03-0.40	0.1-5.5	●	○
	TCGT16T308NP	○	0.8	0.03-0.50	0.1-5.5	●	○
	TCGT16T312NP	○	1.2	0.04-0.60	0.15-5.5	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional

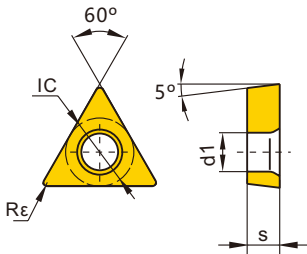
● 标准库存standard stock

○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade

TBGT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
TB..0601..	3.97	1.59	2.3

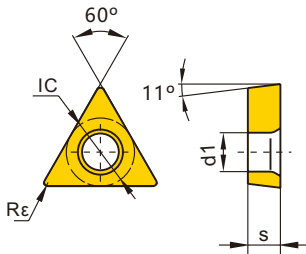
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TBGT060102L-W	○	0.2	0.03-0.08	0.1-0.5	●	○
	TBGT060104L-W	○	0.4	0.03-0.08	0.1-0.5	●	○
	TBGT060102L-F	○	0.2	0.03-0.08	0.1-0.5	●	○
	TBGT060104L-F	○	0.4	0.03-0.08	0.1-0.5	●	○
钢 Steel							
不锈钢 Stainless Steel							
铸铁 Cast Iron							
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade

TPGT..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
TP..0802..	4.76	2.38	2.3
TP..0902..	5.56	2.38	2.8
TP..1103..	6.35	3.18	3.3

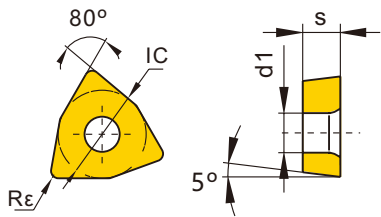
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TPGT080202L-S	○	0.2	0.01-0.1	0.1-0.8	●	○
	TPGT080204L-S	○	0.4	0.01-0.1	0.1-0.8	●	○
	TPGT090202L-S	○	0.2	0.01-0.1	0.1-0.8	●	○
	TPGT090204L-S	○	0.4	0.01-0.1	0.1-0.8	●	○
	TPGT110302L-S	○	0.2	0.01-0.12	0.2-0.8	●	○
	TPGT110304L-S	○	0.4	0.01-0.12	0.2-0.8	●	○
	TPGT080202L-W	○	0.2	0.01-0.1	0.1-0.8	●	○
	TPGT080204L-W	○	0.4	0.01-0.1	0.1-0.8	●	○
	TPGT090202L-W	○	0.2	0.01-0.1	0.1-0.8	●	○
	TPGT090204L-W	○	0.4	0.01-0.1	0.1-0.8	●	○
	TPGT110302L-W	○	0.2	0.01-0.12	0.2-0.8	●	○
	TPGT110304L-W	○	0.4	0.01-0.12	0.2-0.8	●	○
钢 Steel							
不锈钢 Stainless Steel							
铸铁 Cast Iron							
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade

WBG T..



型号 Model	尺寸 Size (mm)		
	IC	S	d1
WB..0601..	3.97	1.59	2.3

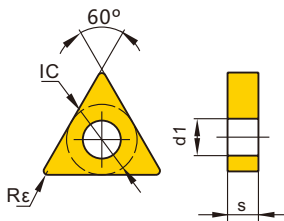
刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	WBG T060102L-F	○	0.2	0.05-0.08	0.1-0.8	●	○
	WBG T060104L-F	○	0.4	0.05-0.08	0.1-0.8	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade

TNGG..



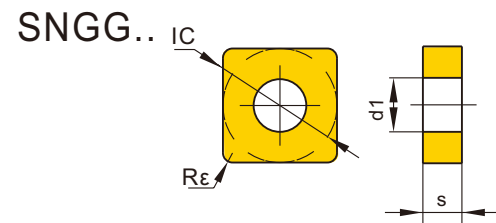
型号 Model	尺寸 Size (mm)		
	IC	S	d1
TN..1604..	9.525	4.76	3.81

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	TNGG160402R/L-S	○	0.2	0.08-0.2	0.5-2.3	●	○
	TNGG160404R/L-S	○	0.4	0.08-0.2	0.5-2.3	●	○
	TNGG160402R/L-C	○	0.2	0.2-0.38	0.5-3.8	●	○
	TNGG160404R/L-C	○	0.4	0.2-0.38	0.5-3.8	●	○
	TNGG160408R/L-C	○	0.8	0.2-0.38	0.5-3.8	●	○
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

车削刀片 (正型) G级
Turning insert(Positive)-G grade



型号 Model	尺寸 Size (mm)		
	d	S	d1
SN..0903..	9.525	3.18	3.81
SN..1204..	12.7	4.76	5.16

刀片外形 Insert shape	型号 Model	库存 Stock	刀片材质及适用加工材料 Insert grades and application				
			Rε	进给fn mm/rev	切深ap mm	KT 20	KCT 25
	SNGG090304R-B	○	0.4	0.17-0.30	0.5-1.5	●	●
	SNGG090304L-B	○	0.4	0.17-0.30	0.5-1.5	●	●
	SNGG090308R-B	○	0.8	0.17-0.30	0.5-1.5	●	●
	SNGG090308L-B	○	0.8	0.17-0.30	0.5-1.5	●	●
	SNGG120404R-C	○	0.4	0.15-0.30	1.0-4.0	●	●
	SNGG120404L-C	○	0.4	0.15-0.30	1.0-4.0	●	●
	SNGG120408R-C	○	0.8	0.15-0.35	1.0-4.0	●	●
	SNGG120408L-C	○	0.8	0.15-0.35	1.0-4.0		
钢 Steel						★	★
不锈钢 Stainless Steel						☆	☆
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal						☆	
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

车削刀片
Turning Insert

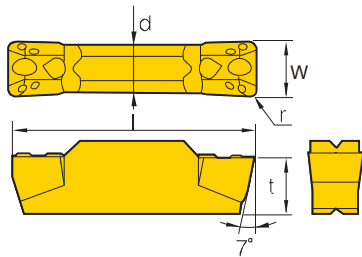
推荐切削条件表
Recommended Cutting Conditions

工件材料 Workpiece Materials			布氏硬度 HB	切削速度推荐值Vc(m/min) Recommended Cutting Speed					
				KT20 f(mm/rev)			KCT25 f(mm/rev)		
				0.1	0.3	0.5	0.1	0.3	0.5
P	碳素钢 Carbon Steel	约0.15%C退火 About 0.15%C, Annealed	125	200	100	70	310	200	160
		约0.45%C退火 About 0.45%C, Annealed	190	200	100	70	310	200	160
		约0.45%C调质 About 0.45%C, Quenched	250	200	80	50	310	180	140
		约0.75%C退火 About 0.75%C, Annealed	270	200	80	50	310	180	140
		约0.75%C调质 About 0.75%C, Quenched	300	200	80	50	310	180	140
	低合金钢 Low Alloy Steel	退火 Annealed	180	180	80	50	290	180	140
		调质 Quenched and Tempered	275	180	80	50	290	180	140
		调质 Quenched and Tempered	300	180	80	50	290	180	140
		调质 Quenched and Tempered	350	180	80	50	290	180	140
	高合金钢 High Alloy Steel	退火 Annealed	200	160	80	50	270	180	140
M	工具钢 Tool Steel	淬火并回火 Quenched and Tempered	325	160	80	50	270	180	140
	不锈钢 Stainless Steel	铁素体/马氏体 Ferrite/Martensite	200						
		马氏体 Martensite	280						
K	灰口铸铁 Gray Cast iron	奥氏体 Austenite	180						
		球光体/铁素体 Pearlite/Ferrite	180						
	球墨铸铁 Nodular Cast iron	球光体/马氏体 Pearlite/Martensite	260						
		铁素体 Ferrite	160						
	可锻铸铁 Malleable Cast iron	球光体 Pearlite	250						
		铁素体 Ferrite	130						
N	铝合金 Aluminium Alloys	球光体 Pearlite	230						
		非时效淬硬 Non-aging Hardened	60						
	铜和铜合金 Copper Alloy	时效淬硬 Aging Hardened	100						
		易切削合金 Free Cutting Alloys	110						
		黄铜 Brass	90						
		青铜和电解铜 Bronze & Electrolytic Copper	100						

金属陶瓷刀片
Cermet insert

槽刀片
Grooving insert

MGMN..



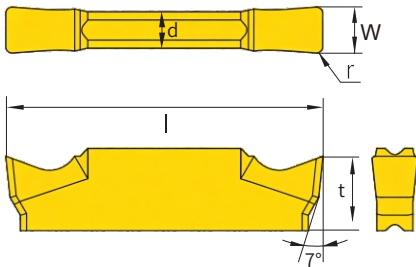
刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades							
			W	r	l	d	t	KT 20	KCT 25	
	MGMN200-T	○	2.0	0.2	16	1.6	3.5	●	○	
	MGMN300-T	○	3.0	0.4	21	2.35	4.8	●	○	
	MGMN400-T	○	4.0	0.4	21	3.3	4.8	●	○	
	MGMN200-G	○	2.0	0.2	16.0	1.6	3.5	●	○	
	MGMN300-M	○	3.0	0.4	21.0	2.35	4.8	●	○	
	MGMN400-M	○	4.0	0.4	21.0	3.3	4.8	●	○	
钢 Steel									★	★
不锈钢 Stainless Steel									☆	☆
铸铁 Cast Iron										
有色金属 Non-ferrous Metal									★	
耐热合金 Heat Resistant Alloy										
淬硬钢 Hardened Steel										

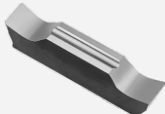
★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

槽刀片
Grooving insert

MGGN..V

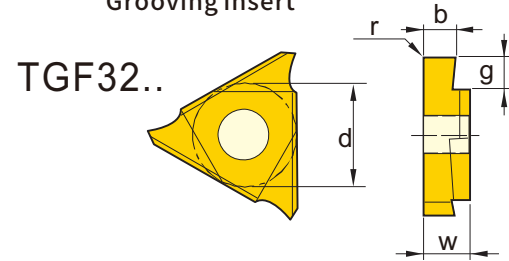


刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades							
			W	r	l	d	t	KT 20	KCT 25	
	MGGN200-V	○	2.0	0.2	16	1.6	3.5	●	○	
	MGGN300-V	○	3.0	0.4	21	2.35	4.8	●	○	
	MGGN400-V	○	4.0	0.4	21	3.3	4.8	●	○	
钢 Steel									★	★
不锈钢 Stainless Steel									☆	☆
铸铁 Cast Iron										
有色金属 Non-ferrous Metal									★	
耐热合金 Heat Resistant Alloy										
淬硬钢 Hardened Steel										

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

切槽刀片
Grooving insert



型号 Model	尺寸 Size (mm)		
	d	S	d1
TGF32..	9.525	3.18	4.6

刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades			KT20	KCT25
		W	B	R		
	TGF32R033	0.33	0.8	0.05	●	○
	TGF32R050	0.50	1.2	0.05	●	○
	TGF32R075	0.75	2.0	0.1	●	○
	TGF32R095	0.95	2.0	0.1	●	○
	TGF32R100	1.00	2.0	0.1	●	○
	TGF32R120	1.20	2.0	0.1	●	○
	TGF32R125	1.25	2.0	0.1	●	○
	TGF32R150	1.50	2.0	0.1	●	○
	TGF32R175	1.75	2.0	0.1	●	○
	TGF32R200	2.00	2.5	0.1	●	○
	TGF32R250	2.50	2.5	0.1	●	○
	TGF32L033	0.33	0.8	0.05	●	○
	TGF32L050	0.50	1.2	0.05	●	○
	TGF32L075	0.75	2.0	0.1	●	○
	TGF32L095	0.95	2.0	0.1	●	○
	TGF32L100	1.00	2.0	0.1	●	○
	TGF32L120	1.20	2.0	0.1	●	○
	TGF32L125	1.25	2.0	0.1	●	○
	TGF32L150	1.50	2.0	0.1	●	○
	TGF32L175	1.75	2.0	0.1	●	○
	TGF32L200	2.00	2.5	0.1	●	○
	TGF32L250	2.50	2.5	0.1	●	○
钢 Steel					★	★
不锈钢 Stainless Steel					☆	☆
铸铁 Cast Iron						
有色金属 Non-ferrous Metal					★	
耐热合金 Heat Resistant Alloy						
淬硬钢 Hardened Steel						

★ 首选 Preferred ☆ 可选 optional

● 标准库存 standard stock ○ 订单生产 order production

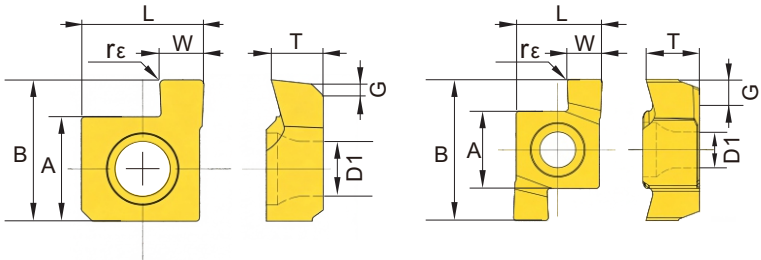
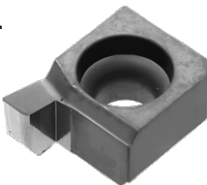
推荐切削条件表
Recommended Cutting Conditions

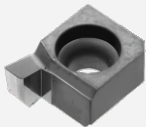
工件材料 Workpiece Materials		加工形式	切削速度推荐值 Vc(m/min) Recommended Cutting Speed		切削速度推荐值 f(mm/rev) Recommended Cutting Speed					
			KT20	KCT25	0.33-0.50	0.75-0.95	1.00-1.45	1.50-2.50		
					f(mm/rev)	f(mm/rev)	f(mm/rev)	f(mm/rev)		
P	钢 Steel	切槽加工	80-220	80-220	0.01-0.05	0.02-0.07	0.03-0.08	0.03-0.08		
		横向加工	80-220	80-220			0.03-0.06	0.03-0.06		
M	不锈钢 Stainless Steel	切槽加工	70-160	70-160	0.01-0.04	0.2-0.06	0.03-0.07	0.03-0.07		
		横向加工	70-160	70-160			0.02-0.05	0.02-0.05		
K	铸铁 Cast iron	切槽加工								
		横向加工								
N	有色金属 Nonferrous metal	切槽加工								
		横向加工								

金属陶瓷刀片
Cermet insert

切槽刀片
Grooving insert

..GR/L



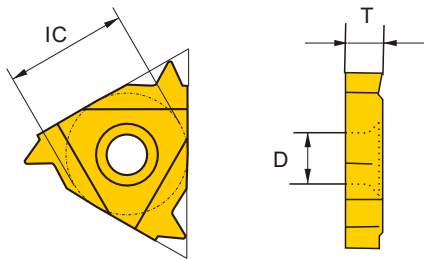
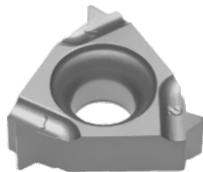
刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades										
			W±0.025	rε	A	B	T	D1	L	G	KT 20	KCT 25	
 	6GR/L100	○	1	0.2	4.76	6.44	2.34	2.3	5.56	1.5	●	○	
	6GR/L150	○	1.5	0.2	4.76	6.44	2.34	2.3	5.56	1.5	●	○	
	6GR/L200	○	2	0.2	4.76	6.44	2.34	2.3	5.56	1.5	●	○	
	7GR/L100	○	1	0.2	5.56	7.36	3.08	2.58	5.56	1.5	●	○	
	7GR/L150	○	1.5	0.2	5.56	7.36	3.08	2.58	5.56	1.5	●	○	
	7GR/L200	○	2	0.2	5.56	7.36	3.08	2.58	5.56	1.5	●	○	
	8GR/L150	○	1.5	0.2	5.56	10.16	3.87	2.58	6.15	2	●	○	
	8GR/L200	○	2	0.2	5.56	10.16	3.87	2.58	6.15	2	●	○	
	8GR/L250	○	2.5	0.2	5.56	10.16	3.87	2.58	6.15	2	●	○	
	8GR/L300	○	3	0.2	5.56	10.16	3.87	2.58	6.15	2	●	○	
	8GR/L350	○	3.5	0.2	5.56	10.16	3.87	2.58	6.15	2	●	○	
	9GR/L150	○	1.5	0.2	6.35	12.95	4.66	2.86	7.74	2	●	○	
	9GR/L200	○	2	0.2	6.35	12.95	4.66	2.86	7.74	3	●	○	
	9GR/L250	○	2.5	0.2	6.35	12.95	4.66	2.86	7.74	3	●	○	
	9GR/L300	○	3	0.2	6.35	12.95	4.66	2.86	7.74	3	●	○	
	9GR/L350	○	3.5	0.2	6.35	12.95	4.66	2.86	7.74	3	●	○	
	15GR/L200	○	2	0.2	9.2	20.8	5.1	4.8	10.8	3	●	○	
	15GR/L250	○	2.5	0.2	9.2	20.8	5.1	4.8	10.8	3	●	○	
15GR/L300	○	3	0.2	9.2	20.8	5.1	4.8	10.8	3	●	○		
15GR/L350	○	3.5	0.2	9.2	20.8	5.1	4.8	10.8	3	●	○		
15GR/L400	○	4	0.2	9.2	20.8	5.1	4.8	10.8	4	●	○		
15GR/L450	○	4.5	0.2	9.2	20.8	5.1	4.8	10.8	4	●	○		
15GR/L500	○	5	0.2	9.2	20.8	5.1	4.8	10.8	5	●	○		
钢 Steel												★	★
不锈钢 Stainless Steel												☆	☆
铸铁 Cast Iron													
有色金属 Non-ferrous Metal												★	
耐热合金 Heat Resistant Alloy													
淬硬钢 Hardened Steel													

★ 首选 Preferred ☆ 可选 optional

● 标准库存 standard stock ○ 订单生产 order production

金属陶瓷刀片
Cermet insert

螺纹刀片
Thread insert

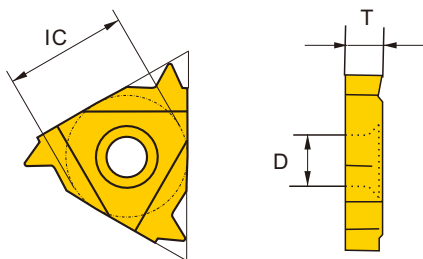


刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades						
			IC	螺距 (TPI)	R (mm)	D	T	KT 20	KCT 25
	11IR-1.50ISO	○	1/4"	1.50	0.08	3	3.18	●	○
	16ER-1.00ISO	○	3/8"	1.00	0.12	4	3.68	●	○
	16IR-1.00ISO	○	3/8"	1.00	0.07	4	3.68	●	○
	16ER-1.50ISO	○	3/8"	1.50	0.18	4	3.68	●	○
	16ER-1.50ISO-L	○	3/8"	1.50	0.18	4	3.68	●	○
	16IR-1.50ISO	○	3/8"	1.50	0.08	4	3.68	●	○
	16ER-2.00ISO	○	3/8"	2.00	0.25	4	3.68	●	○
	16IR-2.00ISO	○	3/8"	2.00	0.12	4	3.68	●	○
	16ER-2.50ISO	○	3/8"	2.50	0.33	4	3.68	●	○
	16IR-2.50ISO	○	3/8"	2.50	0.14	4	3.68	●	○

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

螺纹刀片
Thread insert

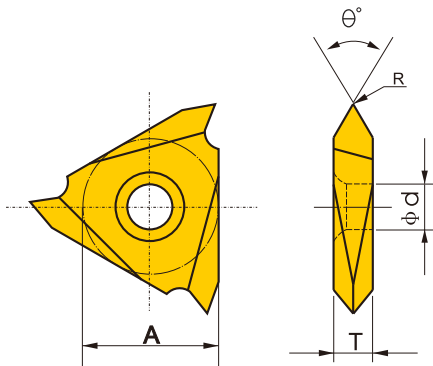
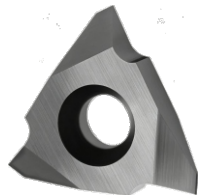


刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades						
			IC	螺距 (TPI)	R (mm)	D	T	KT 20	KCT 25
	16ER-3.00ISO	○	3/8"	3.00	0.38	4	3.68	●	○
	16IR-3.00ISO	○	3/8"	3.00	0.18	4	3.68	●	○
	16ER-A60	○	3/8"	0.05-1.50	0.06	4	3.68	●	○
	11IR-19W	○	1/4"	19	0.15	3	3.18	●	○
	16IR-14W	○	3/8"	14	0.21	4	3.68	●	○
	16ER-11W	○	3/8"	11	0.27	4	3.68	●	○
	16ER-14W	○	3/8"	14	0.21	4	3.68	●	○
	16ER-19W	○	3/8"	19	0.15	4	3.68	●	○

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

螺纹刀片
Thread inserts

TT..55..

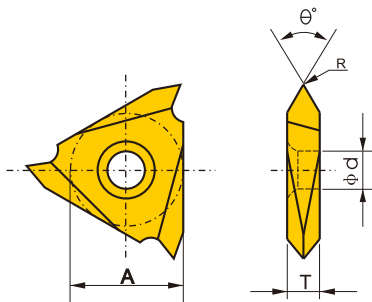
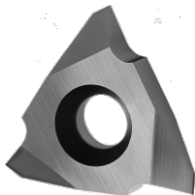


刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		螺距 Pitch	TPI	R	T	A	θ°	d		KT20	KCT25
	TT32R5501		28-10	0.1	3.18	9.525	55	4.4		●	○
	TT32R5502		14-11	0.2	3.18	9.525	55	4.4		●	○
	TT43R5501		28-11	0.1	4.76	12.70	55	5.5		●	○
	TT43R5502		14-11	0.2	4.76	12.70	55	5.5		●	○
	TT43R5503		10-7	0.3	4.76	12.70	55	5.5		●	○
	TT43R5504		8-7	0.4	4.76	12.70	55	5.5		●	○
	TT32L5501		28-10	0.1	3.18	9.525	55	4.4		●	○
	TT32L5502		14-11	0.2	3.18	9.525	55	4.4		●	○
	TT43L5501		28-11	0.1	4.76	12.70	55	5.5		●	○
	TT43L5502		14-11	0.2	4.76	12.70	55	5.5		●	○
	TT43L5503		10-7	0.3	4.76	12.70	55	5.5		●	○
	TT43L5504		8-7	0.4	4.76	12.70	55	5.5		●	○
钢 Steel										★	★
不锈钢 Stainless Steel										☆	☆
铸铁 Cast Iron											
有色金属 Non-ferrous Metal										★	
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

螺纹刀片
Thread inserts

TT..60..



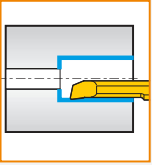
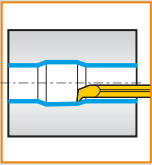
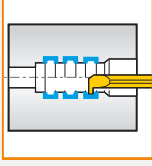
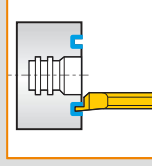
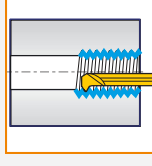
刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		螺距 Pitch	TPI	R	T	A	θ°	d		KT20	KCT25
	TT32R6000	0.5~2.5		0.0	3.18	9.525	60	4.4		●	○
	TT32R6001	1.0~2.5		0.1	3.18	9.525	60	4.4		●	○
	TT32R6002	1.5~2.5		0.2	3.18	9.525	60	4.4		●	○
	TT32R6003	2.5~3.5		0.3	3.18	9.525	60	4.4		●	○
	TT43R6001	1.0~3.5		0.1	4.76	12.70	60	5.5		●	○
	TT43R6002	1.5~3.5		0.2	4.76	12.70	60	5.5		●	○
	TT43R6003	2.5~3.5		0.3	4.76	12.70	60	5.5		●	○
	TT43R6004	3.0~3.5		0.4	4.76	12.70	60	5.5		●	○
	TT32L6000	0.5~2.5		0.0	3.18	9.525	60	4.4		●	○
	TT32L6001	1.0~2.5		0.1	3.18	9.525	60	4.4		●	○
	TT32L6002	1.5~2.5		0.2	3.18	9.525	60	4.4		●	○
	TT32L6003	2.5~3.5		0.3	3.18	9.525	60	4.4		●	○
	TT43L6001	1.0~3.5		0.1	4.76	12.70	60	5.5		●	○
	TT43L6002	1.5~3.5		0.2	4.76	12.70	60	5.5		●	○
	TT43L6003	2.5~3.5		0.3	4.76	12.70	60	5.5		●	○
	TT43L6004	3.0~3.5		0.4	4.76	12.70	60	5.5		●	○
钢 Steel										★	★
不锈钢 Stainless Steel										☆	☆
铸铁 Cast Iron											
有色金属 Non-ferrous Metal										★	
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

推荐切削条件表
Recommended Cutting Conditions

工件材料 Workpiece Materials		布氏硬度 HB	切削速度推荐值Vc(m/min) Recommended Cutting Speed	
			KT20	KCT25
P	碳素钢 Carbon Steel	约0.15%C退火 About 0.15%C Annealed	125	100-150
		约0.45%C退火 About 0.45%C Annealed	190	100-150
		约0.45%C调质 About 0.45%C Quenched	250	100-150
		约0.75%C退火 About 0.75%C Annealed	270	100-150
		约0.75%C调质 About 0.75%C Quenched	300	100-150
	低合金钢 Low Alloy Steel	退火 Annealed	180	100-150
		调质 Quenched and Tempered	275	100-150
		调质 Quenched and Tempered	300	100-150
	高合金钢 High Alloy Steel	调质 Quenched and Tempered	350	100-150
		退火 Annealed	200	100-150
M	工具钢 Tool Steel	淬火并回火 Quenched and Tempered	325	100-150
	不锈钢 Stainless Steel	铁素体/马氏体 Ferrite/Martensite	200	60-80
		马氏体 Martensite	330	60-80
K	灰口铸铁 Gray Cast iron	奥氏体 Austenite	200	60-80
		铁素体 Ferrite	130	
	球墨铸铁 Nodular Cast iron	球光体 Pearlite	230	
		铁素体 Ferrite	180	
	可锻铸铁 Malleable Cast iron	球光体 Pearlite	260	
		铁素体 Ferrite	160	
N	铝合金 Aluminium Alloys	球光体 Pearlite	260	
		非时效淬硬 Non-aging Hardened	60	
		时效淬硬 Aging Hardened	100	
	铜和铜合金 Copper Alloy	高硅合金 13-22% Si	130	
		黄铜 Brass	100	
		青铜 Bronze	100	

小径内孔车刀一览表
Small diameter inner hole turning tool

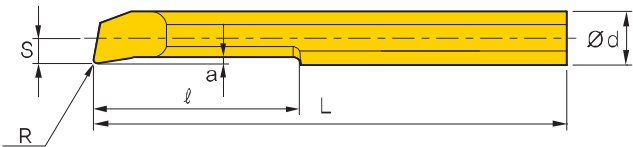
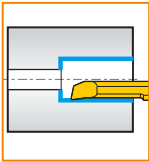
型号 Size	刀片外形 Shape	应用范围 Applicable	特点 Features
PSBR			内孔加工 最小加工直径3.2mm Inner hole machining Minimum machining diameter 3.2 mm
PSCR			内孔倒拉加工 最小加工直径3.2mm Back turning machining for inner hole Minimum machining diameter is 3.2mm
PSGR			内孔切槽加工 最小加工直径3.2mm,槽宽1.0-2.5mm Internal grooving machining Minimum machining diameter is 3.2mm, Groove width is 1.0-2.5mm
PSGFR			端面槽加工 最小加工直径6.0mm 槽宽1.0-4.5mm Face grooving machining Minimum machining diameter 6.0mm Groove width 1.0-4.5mm
PSTR			内螺纹加工 最小加工直径3.3mm 螺距0.5-1.5mm Internal thread machining Minimum machining diameter 3.3mm Pitch 0.5-1.5mm

推荐切削条件表
Recommended Cutting Conditions

Material 被加工材料	VC (m/min)	孔径 boring bar Φ		
		Φ1.0-Φ2.0 (mm/rev)	Φ2.5-Φ4.0 (mm/rev)	Φ4.5-Φ5.5 (mm/rev)
Free-cutting steel 易削铁	30-120	0.02-0.03	0.02-0.08	0.03-0.10
Low alloyed steel 低合金钢	30-120	0.01-0.03	0.02-0.05	0.03-0.06
High alloyed steel 高合金钢	30-120	0.01-0.02	0.02-0.04	0.02-0.06
Stainless steel 不锈钢	30-80	0.01-0.03	0.02-0.05	0.03-0.08
Aluminium 铝合金				
Titanium 钛合金				
Copper 铜				

镗孔

Boring

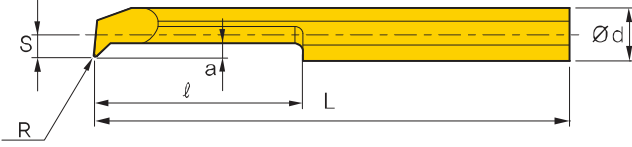
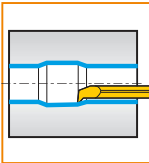


刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		R	最小直径 Min Dia mm	d	l	L	w	a	s	KT20	KCT25
	PSBR0310-1	0.05	3.2	3.0	10	35		0.5	1.4	●	○
	PSBR0315-1	0.05	3.2	3.0	15	45		0.5	1.4	●	○
	PSBR0410-1	0.05	4.2	4.0	10	35		0.6	1.9	●	○
	PSBR0415-1	0.05	4.2	4.0	15	45		0.6	1.9	●	○
	PSBR0420-1	0.05	4.2	4.0	20	50		0.6	1.9	●	○
	PSBR0610-1	0.05	6.2	6.0	10	40		0.75	2.9	●	○
	PSBR0615-1	0.05	6.2	6.0	15	45		0.75	2.9	●	○
	PSBR0620-1	0.05	6.2	6.0	20	50		0.75	2.9	●	○
钢 Steel											★
不锈钢 Stainless Steel											☆
铸铁 Cast Iron											☆
有色金属 Non-ferrous Metal											★
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★首选 ☆可选 ●标准库存 ○订单生产

仿形

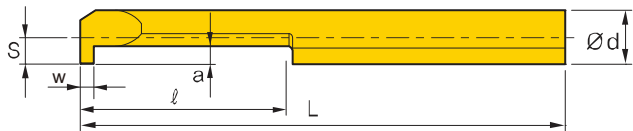
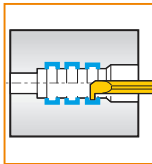
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刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		R	最小直径 Min Dia mm	d	l	L	w	a	s	KT 20	KCT 25
	PSCR0410-1	0.05	4.2	4.0	10	35		1.0	1.9	●	○
	PSCR0415-1	0.05	4.2	4.0	15	45		1.0	1.9	●	○
	PSCR0420-1	0.05	4.2	4.0	20	50		1.0	1.9	●	○
	PSCR0610-1	0.05	6.2	6.0	10	40		1.3	2.9	●	○
	PSCR0615-1	0.05	6.2	6.0	15	45		1.3	2.9	●	○
	PSCR0620-1	0.05	6.2	6.0	20	50		1.3	2.9	●	○
钢 Steel											★
不锈钢 Stainless Steel											☆
铸铁 Cast Iron											☆
有色金属 Non-ferrous Metal											★
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★首选 ☆可选 ●标准库存 ○订单生产

切槽
Square Grooving

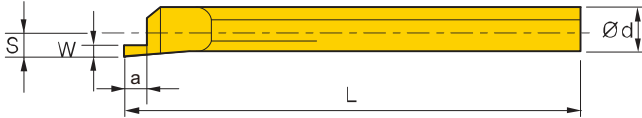
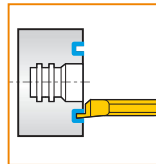


刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		R	最小直径 Min Dia mm	d	l	L	w	a	s	KT20	KCT25
	PSGR0310-1.0-1		3.2	3.0	10	35	1.0	0.8	1.4	●	○
	PSGR0315-1.0-1		3.2	3.0	15	45	1.0	0.8	1.4	●	○
	PSGR0310-1.5-1		3.2	3.0	10	35	1.5	0.8	1.4	●	○
	PSGR0315-1.5-1		3.2	3.0	15	45	1.5	0.8	1.4	●	○
	PSGR0410-1.0-1		4.2	4.0	10	35	1.0	1.4	1.9	●	○
	PSGR0420-1.0-1		4.2	4.0	20	50	1.0	1.4	1.9	●	○
	PSGR0410-1.5-1		4.2	4.0	10	35	1.5	1.4	1.9	●	○
	PSGR0420-1.5-1		4.2	4.0	20	50	1.5	1.4	1.9	●	○
	PSGR0410-2.0-1		4.2	4.0	10	35	2.0	1.4	1.9	●	○
	PSGR0420-2.0-1		4.2	4.0	20	50	2.0	1.4	1.9	●	○
	PSGR0610-1.0-1		6.2	6.0	10	40	1.0	1.8	2.9	●	○
	PSGR0620-1.0-1		6.2	6.0	20	50	1.0	1.8	2.9	●	○
	PSGR0610-1.5-1		6.2	6.0	10	40	1.5	1.8	2.9	●	○
	PSGR0620-1.5-1		6.2	6.0	20	50	1.5	1.8	2.9	●	○
	PSGR0610-2.0-1		6.2	6.0	10	40	2.0	1.8	2.9	●	○
	PSGR0620-2.0-1		6.2	6.0	20	50	2.0	1.8	2.9	●	○
	PSGR0610-2.5-1		6.2	6.0	10	40	2.5	2.0	2.9	●	○
	PSGR0620-2.5-1		6.2	6.0	20	50	2.5	2.0	2.9	●	○
钢 Steel										★	★
不锈钢 Stainless Steel										☆	☆
铸铁 Cast Iron											
有色金属 Non-ferrous Metal										★	
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★首选 ☆可选

●标准库存 ○订单生产

端面槽
Face Grooving

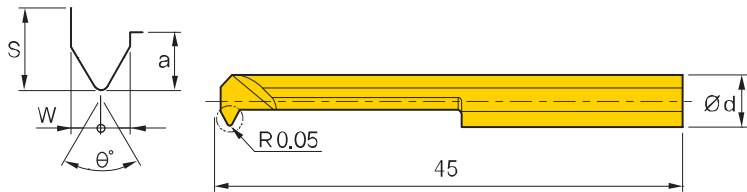
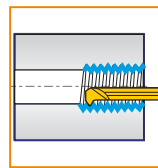


刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		R	最小直径 Min Dia mm	d	l	L	w	a	s	KT 20	KCT 25
	PSGFR0400-1.0-1		6.0	4.0		45	1.5	1.5	1.8	●	●
	PSGFR0400-1.5-1		6.0	4.0		45	2.0	2.0	1.8	●	●
	PSGFR0600-1.0-1		8.5	6.0		45	1.0	1.5	2.9	●	●
	PSGFR0600-1.5-1		8.5	6.0		45	1.5	2.0	2.9	●	●
	PSGFR0600-2.0-1		8.5	6.0		45	2.0	2.5	2.9	●	●
	PSGFR0800-1.0-1		10.4	8.0		60	1.0	2.0	3.9	●	●
	PSGFR0800-1.5-1		10.4	8.0		60	1.5	2.5	3.9	●	●
	PSGFR0800-2.0-1		10.4	8.0		60	2.0	3.0	3.9	●	●
	PSGFR1000-2.0-1		12.4	10.0		70	2.0	2.5	4.9	●	●
	PSGFR1000-2.5-1		12.4	10.0		70	2.5	3.0	4.9	●	●
	PSGFR1000-3.0-1		12.4	10.0		70	3.0	3.5	4.9	●	●
	PSGFR1000-3.5-1		12.4	10.0		70	3.5	4.0	4.9	●	●
	PSGFR1000-4.0-1		12.4	10.0		70	4.0	4.5	4.9	●	●
	PSGFR1000-4.5-1		12.4	10.0		70	4.5	5.0	4.9	●	●
钢 Steel										★	★
不锈钢 Stainless Steel										☆	☆
铸铁 Cast Iron											
有色金属 Non-ferrous Metal										★	
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★首选 ☆可选

●标准库存 ○订单生产

内螺纹
Threading



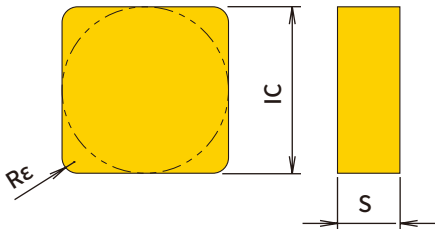
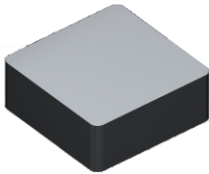
刀片外形 Insert shape	型号 Model	尺寸与材质 Size and Grades									
		R	最小直径 Min Dia mm	d	I	L	w	螺距 P/t	θ°	KT20	KCT25
	PSTR0315-F60-1	0.05	3.3	3.0			1.2	0.5-1.0	60	●	●
	PSTR0415-F60-1	0.05	4.3	4.0			1.2	0.5-1.0	60	●	●
	PSTR0615-A60-1	0.05	6.2	6.0			2.0	0.5-1.5	60	●	●
	PSTR0315-F55-1	0.05	3.3	3.0			1.2	48-24	55	●	●
	PSTR0415-F55-1	0.05	4.3	4.0			1.2	48-24	55	●	●
	PSTR0615-A55-1	0.05	6.2	6.0			2.0	28-16	55	●	●
钢 Steel										★	★
不锈钢 Stainless Steel										☆	☆
铸铁 Cast Iron											
有色金属 Non-ferrous Metal										★	
耐热合金 Heat Resistant Alloy											
淬硬钢 Hardened Steel											

★首选 ☆可选 ●标准库存 ○订单生产

金属陶瓷刀片
Cermet insert

轴承刀片..
Bearing insert

SNMN..



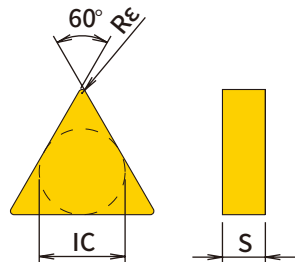
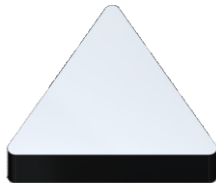
刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades				
			IC	S	Rε	KT 20	KCT 25
	SNMN090304	○	9.525	3.18	0.4	●	○
	SNMN120404	○	12.7	4.76	0.4	●	○
	SNMN150408	○	15.875	4.76	0.8	●	○
钢 Steel						★	
不锈钢 Stainless Steel							
铸铁 Cast Iron							
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★首选Preferred ☆ 可选optional ●标准库存standard stock ○订单生产order production

金属陶瓷刀片
Cermet insert

轴承刀片..
Bearing insert

TNMN..



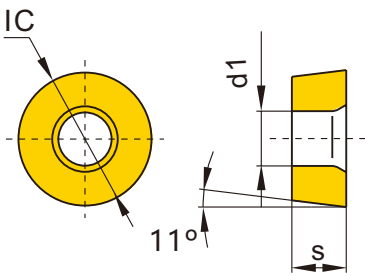
刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades				
			IC	S	Rε	KT 20	KCT 25
	TNMN160304	○	9.525	3.18	0.4	●	
	TNMN220408	○	12.7	4.76	0.8	●	
	TNMN270412	○	15.875	4.76	1.2	●	
钢 Steel						★	
不锈钢 Stainless Steel							
铸铁 Cast Iron							
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

轴承刀片..
Bearing insert

RPMT..



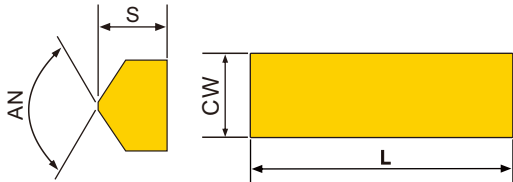
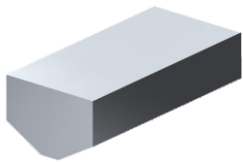
刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades				
			IC	S	d1	KT 20	KCT 25
	RPMT1203-Z	○	12	3.18	4.4	●	
	RPMT1604-Z	○	16	4.76	5.5	●	
钢 Steel						★	
不锈钢 Stainless Steel							
铸铁 Cast Iron							
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

金属陶瓷刀片
Cermet insert

金属陶瓷材料
Cermet material

轴承刀坯..
Bearing shaft blade blank..



刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades					KT 20	KCT 25
			AN 角度	L 长度	CW 宽度	S 厚度			
	F8-JY1	○	120°	21.5	8.2	6.9		●	
	F8-JY2	○	90°	21.5	8.2	8.2		●	
	F10-JY1	○	90°	21.5	10.2	7.8		●	
	F12-JY1	○	120°	26.5	12.2	8.0		●	
	F12-JY2	○	120°	26.5	12.2	8.9		●	
	F15-JY1	○	120°	32	15.2	10.2		●	
	F16-JY1	○	120°	32	16.2	10.2		●	
	F20-JY1	○	120°	36.5	20.2	11.1		●	
钢 Steel								★	
不锈钢 Stainless Steel									
铸铁 Cast Iron									
有色金属 Non-ferrous Metal									
耐热合金 Heat Resistant Alloy									
淬硬钢 Hardened Steel									

★ 首选Preferred ☆ 可选optional

● 标准库存standard stock

○ 订单生产order production

金属陶瓷刀片
Cermet insert

轴承加工刀具-成型刀片
Forming Insert for Bearing Machining Tools

刀片形状 Shape	刀片 inserts	加工示意图 Processing Diagram	刀片 inserts	加工示意图 Processing Diagram	刀片 inserts	加工示意图 Processing Diagram
三角形						
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金属陶瓷刀片
Cermet insert

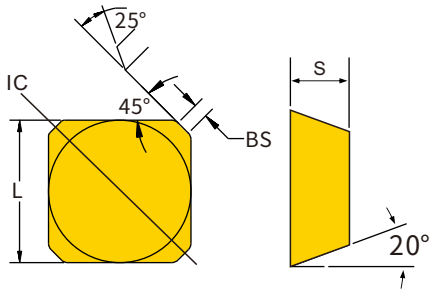
轴承加工刀具-成型刀片
Forming Insert for Bearing Machining Tools

刀片形状 Shape	刀片 inserts	加工示意图 Processing Diagram	刀片 inserts	加工示意图 Processing Diagram	刀片 inserts	加工示意图 Processing Diagram
四边形						
四边形						
四边形						
四边形						
四边形						
V形						
V形						
V形						
V形						
V形						

金属陶瓷刀片
Cermet insert

铣削刀片
Milling insert

SE..



刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades				
			IC	L	S	KT 20	KCT 25
	SEMN1203AFTN	○	12.7	12.7	3.18	●	○
	SEEN1203AFTN	○	12.7	12.7	3.18	●	○
钢 Steel							★
不锈钢 Stainless Steel							★
铸铁 Cast Iron							★
有色金属 Non-ferrous Metal							★
耐热合金 Heat Resistant Alloy							★
淬硬钢 Hardened Steel							★

★ 首选 Preferred ☆ 可选 optional ● 标准库存 standard stock ○ 订单生产 order production

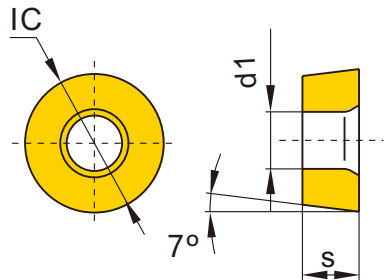
推荐切削条件表
Recommended Cutting Conditions

工件材料 Workpiece Materials		布氏硬度 Brinell hardness HB	材质牌号 Grade	切削速度推荐值 Recommended Cutting Speed		
				Vc(m/min)	f(mm/z)	ap(mm)
P	钢 Steel	<180	KT20	200-360	0.1-0.3	
		180-280	KT20	180-350	0.1-0.3	
		280-350	KT20	170-340	0.1-0.3	
M	不锈钢 Stainless Steel	<270	KT20	110-270	0.1-0.3	
K	铸铁 Cast iron					
N	铝合金 Aluminium Alloys		KT20	300	0.1-0.4	
H	高硬钢 Hardness					

金属陶瓷刀片
Cermet insert

铣削刀片
Milling insert

RC..



刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades				
			IC	S	d1	KT 20	KCT 25
	RCMT0602MO-61	○	6	2.38	2.8	●	○
	RCMT0803MO-61	○	8	3.18	3.4	●	○
	RCMT1003MO-61	○	10	3.18	3.6	●	○
	RCMT1204MO-61	○	12	4.76	4.4	●	○
	RCKT10T3MO-WM	○	10	3.97	4.4	●	○
	RCKT1204MO-WM	○	12	4.76	4.4	●	○
钢 Steel							★
不锈钢 Stainless Steel							
铸铁 Cast Iron							
有色金属 Non-ferrous Metal							★
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选 Preferred ☆ 可选 optional ● 标准库存 standard stock ○ 订单生产 order production

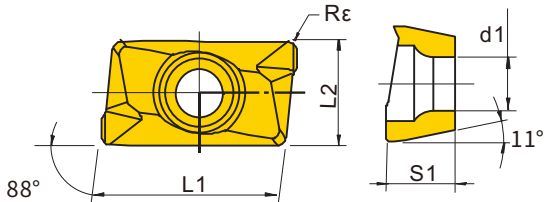
推荐切削条件表
Recommended Cutting Conditions

工件材料 Workpiece Materials		布氏硬度 Brinell hardness HB	材质牌号 Grade	切削速度推荐值 Recommended Cutting Speed		
				Vc(m/min)	f(mm/z)	ap(mm)
P	钢 Steel	<180	KT20	200-360	0.1-0.45	
		180-280	KT20	180-350	0.1-0.45	
		280-350	KT20	170-340	0.1-0.45	
M	不锈钢 Stainless Steel	<270	KT20	110-270	0.1-0.45	
K	铸铁 Cast Iron					
N	铝合金 Aluminium Alloys					
H	高硬钢 Hardness					

金属陶瓷刀片
Cermet insert

铣削刀片
Milling insert

APMT..



刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades						
			L1	L2	S1	d1	Rε	KT 20	KCT 25
	APMT1135PDER	○	11	6.35	3.5	2.8	0.8	●	○
	APMT1604PDER	○	16.5	9.525	4.76	4.4	0.8	●	○
	APMT1135PDER-H2	○	11	6.35	3.5	2.8	0.8	●	○
	APMT1604PDER-H2	○	16.5	9.525	4.76	4.4	0.8	●	○
钢 Steel								★	★
不锈钢 Stainless Steel									
铸铁 Cast Iron									
有色金属 Non-ferrous Metal								★	
耐热合金 Heat Resistant Alloy									
淬硬钢 Hardened Steel									

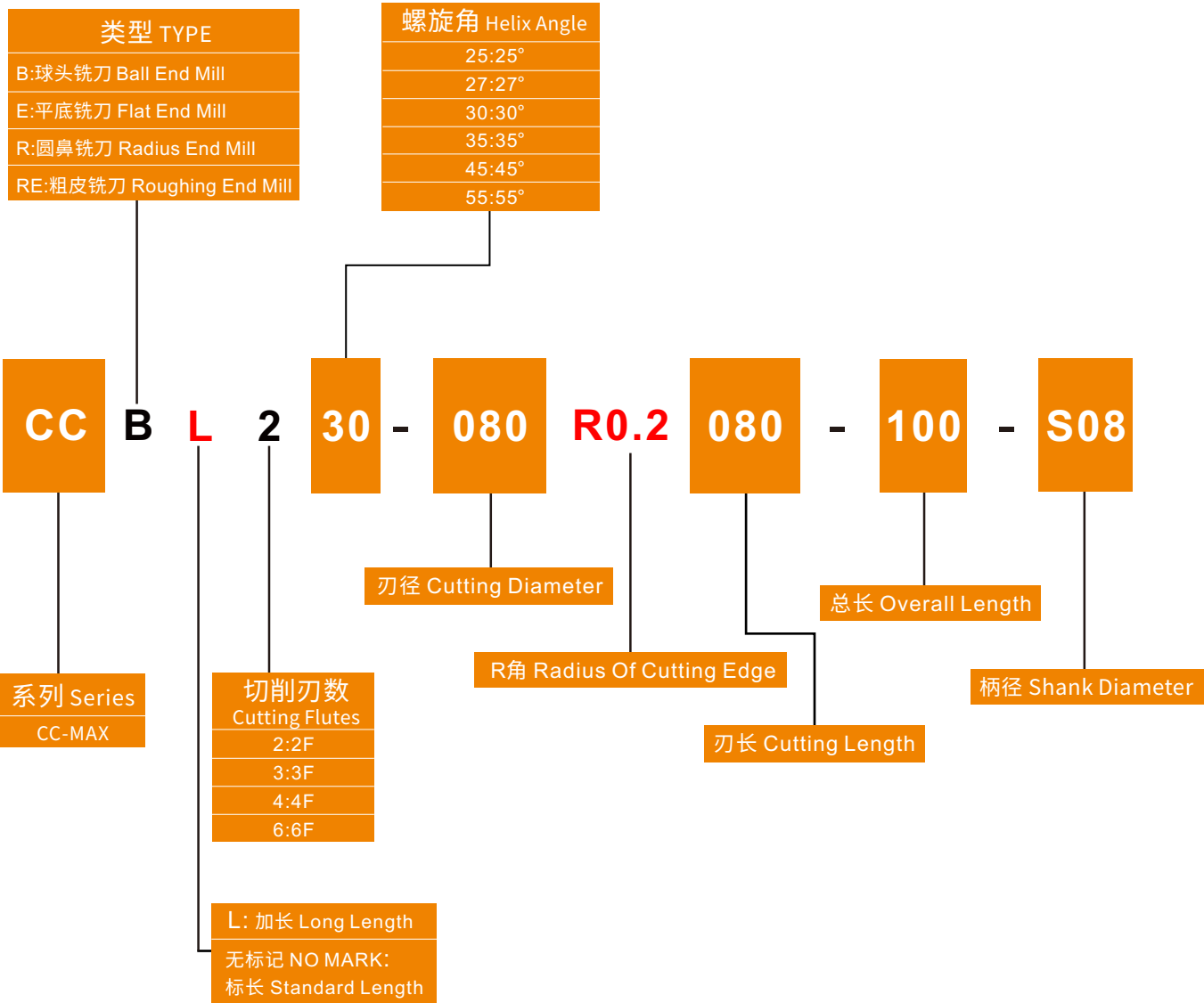
★ 首选 Preferred ☆ 可选 optional ● 标准库存 standard stock ○ 订单生产 order production

推荐切削条件表
Recommended Cutting Conditions

工件材料 Workpiece Materials		布氏硬度 Brinell hardness HB	材质牌号 Grade	切削速度推荐值 Recommended Cutting Speed		
				Vc(m/min)	f(mm/z)	ap(mm)
P	钢 Steel	<180	KT20	140-250	0.04-0.15	
		180-280	KT20	130-250	0.04-0.15	
		280-350	KT20	110-240	0.04-0.15	
M	不锈钢 Stainless Steel	<270	KT20	80-190	0.04-0.15	
K	铸铁 Cast Iron					
N	铝合金 Aluminium Alloys					
H	高硬钢 Hardness		KT20	70-120		

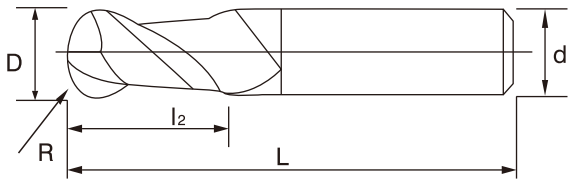
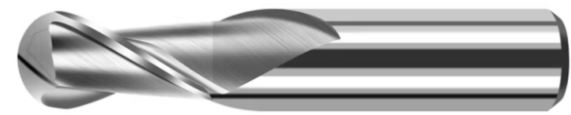
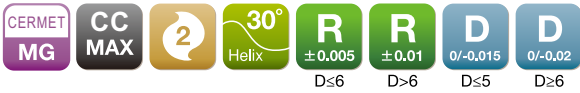
金属陶瓷铣刀型号详细说明

Cermet Milling Cutter Detailed explanation of the model



CCB230 二刃球头铣刀

CC-MAX Ball End Mill 2-Flute 30°



产品规格 | PRODUCT SPECIFICATION

unit:mm					
型号 Type No.	D 直径 Diameter	R R角 Corner R	l ₂ 刃长 Flute Length	L 全长 O.A.L.	d 柄径 Shank Dia.
CCB230-010020-050-S04	1.0	0.5	2	50	4
CCB230-015030-050-S04	1.5	0.75	3	50	4
CCB230-020040-050-S04	2.0	1	4	50	4
CCB230-030060-050-S04	3.0	1.5	6	50	4
CCB230-030060-050-S06	3.0	1.5	6	50	6
CCB230-040080-050-S04	4.0	2	8	50	4
CCB230-040080-050-S06	4.0	2	8	50	6
CCB230-050100-050-S06	5.0	2.5	10	50	6
CCB230-060120-050-S06	6.0	3	12	50	6
CCB230-060120-075-S06	6.0	3	12	75	6
CCB230-060120-100-S06	6.0	3	12	100	6
CCB230-080160-060-S08	8.0	4	16	60	8
CCB230-080160-075-S08	8.0	4	16	75	8
CCB230-080160-100-S08	8.0	4	16	100	8
CCB230-100200-075-S10	10.0	5	20	75	10
CCB230-100200-100-S10	10.0	5	20	100	10
CCB230-120240-075-S12	12.0	6	24	75	12
CCB230-120240-100-S12	12.0	6	24	100	12

加工材料 Work Material																
碳素钢 S45C Carbon Steel	合金钢 SK·SCM SUS Alloy Steel	不锈钢 S304L 316L Stainless Steel	预热钢 NAK/HPM Pre Hardened Steel 淬火钢 Chilled Hardened Steel ~50 ~55 ~60 ~62 ~65 HRC HRC HRC HRC HRC	铸铁 Cast iron	钛合金 Titanium Alloy	高温合金 Superalloy	铜合金 Copper Alloy	铝合金 Aluminum Alloy	树脂 Resin	工程塑料 Plastics	玻璃纤维 Glass Fiber	电木 Bakelite	石墨 Graphite	氧化锆 Zirconium oxide	单晶硅 Silicon	陶瓷 Ceramic
																碳纤维 Carbon Fiber

◎最适合Fit best ○适合Fit

CCE345 三刃平底铣刀
CC-MAX Flat End Mill 3-Flute 45°

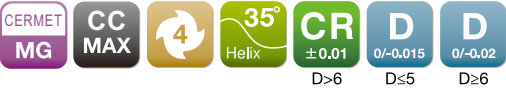


产品规格 | PRODUCT SPECIFICATION

unit:mm				
型号 Type No.	D 直径 Diameter	l ₂ 刃长 Flute Length	L 全长 O.A.L.	d 柄径 Shank Dia.
CCE345-010030-050-S04	1.0	3	50	4
CCE345-015040-050-S04	1.5	4	50	4
CCE345-020060-050-S04	2	6	50	4
CCE345-025070-050-S04	2.5	7	50	4
CCE345-030090-050-S04	3	9	50	4
CCE345-040120-050-S04	4	12	50	4
CCE345-040120-050-S06	4	12	50	6
CCE345-050130-050-S06	5	13	50	6
CCE345-060150-050-S06	6	15	50	6
CCE345-080200-060-S08	8	20	60	8
CCE345-100250-075-S10	10	25	75	10
CCE345-120300-075-S12	12	30	75	12
CCE345-140400-100-S14	14	40	100	14
CCE345-160450-100-S16	16	45	100	16
CCE345-180500-100-S18	18	50	100	18
CCE345-200500-100-S20	20	50	100	20

加工材料 Work Material																
碳素钢 S45C	合金钢 SK·SCM	不锈钢 S304L	预热钢 NAK/HPM Pre Hardened Steel 淬火钢				铸铁	钛合金	高温合金	铜合金	铝合金	树脂	工程塑料	玻璃纤维	电木	石墨
S55C	SUS	316L	Chilled Hardened Steel				Cast iron	Titanium Alloy	Superalloy	Copper Alloy	Aluminum Alloy		Plastics	Glass Fiber	Bakelite	Graphite
Carbon Steel	Alloy Steel	Stainless Steel	~50 ~55 ~60 ~62 ~65 HRC												Zirconium oxide	Silicon
			HRCHRC													Ceramic Carbon Fiber

CCR435 四刃圆鼻铣刀
CC-MAX Radius End Mill 4-Flute 35°



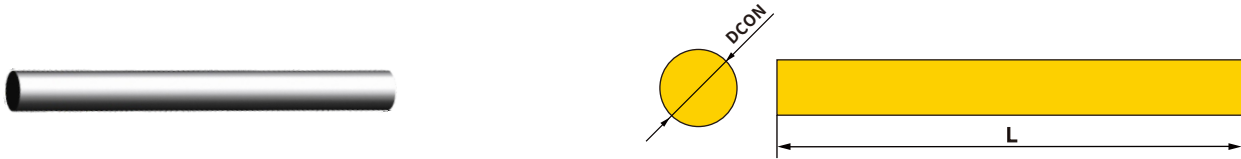
产品规格 | PRODUCT SPECIFICATION

unit:mm					
型号 Type No.	D 直径 Diameter	R R角 Corner R	l ₂ 刃长 Flute Length	L 全长 O.A.L.	d 柄径 Shank Dia.
CCR435-010030R0.2-050-S04	1	R0.2	3	50	4
CCR435-020060R0.2-050-S04	2	R0.2	6	50	4
CCR435-030090R0.2-050-S04	3	R0.2	9	50	4
CCR435-030090R0.5-050-S04	3	R0.5	9	50	4
CCR435-040110R0.2-050-S04	4	R0.2	11	50	4
CCR435-040110R0.5-050-S04	4	R0.5	11	50	4
CCR435-050130R0.2-050-S06	5	R0.2	13	50	6
CCR435-050130R0.5-050-S06	5	R0.5	13	50	6
CCR435-050130R1.0-050-S06	5	R1.0	13	50	6
CCR435-060160R0.2-050-S06	6	R0.2	16	50	6
CCR435-060160R0.5-050-S06	6	R0.5	16	50	6
CCR435-060160R1.0-050-S06	6	R1.0	16	50	6
CCR435-060160R0.5-075-S06	6	R0.5	16	75	6
CCR435-060160R1.0-075-S06	6	R1.0	16	75	6
CCR435-060160R0.5-100-S06	6	R0.5	16	100	6
CCR435-060160R1.0-100-S06	6	R1.0	16	100	6
CCR435-080200R0.5-060-S08	8	R0.5	20	60	8
CCR435-080200R1.0-060-S08	8	R1.0	20	60	8
CCR435-080200R0.5-075-S08	8	R0.5	20	75	8
CCR435-080200R1.0-075-S08	8	R1.0	20	75	8
CCR435-080200R0.5-100-S08	8	R0.5	20	100	8
CCR435-080200R1.0-100-S08	8	R1.0	20	100	8
CCR435-100250R0.5-075-S10	10	R0.5	25	75	10
CCR435-100250R1.0-075-S10	10	R1.0	25	75	10
CCR435-100250R0.5-100-S10	10	R0.5	25	100	10
CCR435-100250R1.0-100-S10	10	R1.0	25	100	10
CCR435-120300R0.5-075-S12	12	R0.5	30	75	12
CCR435-120300R1.0-075-S12	12	R1.0	30	75	12
CCR435-120300R0.5-100-S12	12	R0.5	30	100	12
CCR435-120300R1.0-100-S12	12	R1.0	30	100	12

加工材料 Work Material																
碳素钢 S45C	合金钢 SK·SCM	不锈钢 S304L	预热钢 NAK/HPM Pre Hardened Steel 淬火钢				铸铁	钛合金	高温合金	铜合金	铝合金	树脂	工程塑料	玻璃纤维	电木	石墨
S55C	SUS	316L	Chilled Hardened Steel				Cast iron	Titanium Alloy	Superalloy	Copper Alloy	Aluminum Alloy		Plastics	Glass Fiber	Bakelite	Graphite
Carbon Steel	Alloy Steel	Stainless Steel	~50 ~55 ~60 ~62 ~65 HRC												Zirconium oxide	Silicon
			HRCHRC													Ceramic Carbon Fiber

金属陶瓷圆棒
Cermet Rod

金属陶瓷材料
Cermet material



刀片外形 Insert shape	型号 Model	库存 Stock	尺寸与材质 Size and Grades				
			DCON 直径	L 长度	精度	KT 20	KCT 25
	Φ4x45	○	4.0	45	h6/h5	●	
	Φ4x50	○	4.0	50	h6/h5	●	
	Φ6x45	○	6.0	45	h6/h5	●	
	Φ8x60	○	8.0	60	h6/h5	●	
	Φ10x75	○	10.0	75	h6/h5	●	
	Φ10x100	○	10.0	100	h6/h5	●	
	Φ12x75	○	12.0	75	h6/h5	●	
	Φ12x100	○	12.0	100	h6/h5	●	
	Φ16x100	○	16.0	100	h6/h5	●	
钢 Steel						★	
不锈钢 Stainless Steel						☆	
铸铁 Cast Iron						☆	
有色金属 Non-ferrous Metal							
耐热合金 Heat Resistant Alloy							
淬硬钢 Hardened Steel							

★ 首选Preferred ☆ 可选optional ● 标准库存standard stock ○ 订单生产order production

陶瓷刀片厂家牌号对照表
Grade table of ceramic inserts

加工类别 Machining type	工件材料 Workpiece Material	分类代号 Code	各厂家牌号对照列表 Grade table of competitors and KOVES													
			科维丝 KOVES	山特维克 SANDVIK	伊斯卡 ISACR	肯纳金属 KENNAMETAL	三菱 MITSUBISHI	住友 SUMITOMO	泰珂洛 TUNGALOY	京瓷 KYOCERA	黛杰 DIJET	NTK NTK CUTTING TOOL	山高 SCEO	株洲钻石 ZCC-CT		
车削 Turning	P	P01	KT20 KCT25		IC20N IC520N	KT1120 KT125 HTX	AP25N VP25N NX1010	T110A T1000A	NS520 GT530 GT720 J530	TN610 PV710	LN10 CX50	T3N T15 Q15				
		P10	KT20 KCT25	CT5015 CT525	IC20N IC520N IC530N IC75T	KT315 KT175 HT2 KTP10	NX2525 AP25N VP25N	T1500Z T2000Z T1200A T1500A	NS9530 NS520 GT9530 GT530 GT730 AT9530	TN610 TN620 TN6020 TN60 PV710 PV720 CCX	LN10 CX50 CX75 NIT PX75	T3N C7Z Q15	TP1020 CM CMP	YNG151 TNG151C		
		P20	KT20 KCT25	CT525 CT530 GC1525	IC20N IC520N IC530N IC75T IC30N	PS5 KT5020	MP3025 NX2525 NX3035 AP25N VP45N	T1200A T1500A T2000Z T2500Z T3000A	NS9530 NS520 GT9530 GT530/730 AT9530	CCX TN620 TN90 TN6020 PV720	CX50 CX75 CX90 NAT PX90	T15 C7X C7Z	TP1020 C15M TP1030			
		P30	KT20 KCT25	CT530 GC1525	IC75T IC30N		NX4545 VP45N	T3000Z T250A	NS740	PV730	CX90 CX99 SUZ	N40 C7X	TP1030			
		M10	KT20 KCT25	CT5015 GC525	IC20N IC520N	KT1120 KT315 KT125	NX2525 AP25N VP25N	T110A T1000A T2000A	NS520 J530	TN620 TN60 TN6020 PV720	LN10	T15 C7X C7Z Z15	CM CMP	YNG151 TNG151C		
		M20	KT20 KCT25	CT530 GC1525	IC30N IC530N	KT175 HT2 PS5 KT5020	NX2525 NX3025 AP25N VP25N	T1500A T2000Z	NS530 NS730 GT530 GT730	TN620 TN90 TN6020 PV720	CX50 CX75 CX90 NAT NAT	C7X C7Z Q15	TP1020 C15M			
	M	M30	KT20 KCT25				NX4545	T3000Z T250A	NS740	PV730	CX75 CX90 PX90 CX99 SUZ	C7X	TP1030			
		K01	KT20 KCT25			KT1120	AP25N VP25N	T110A T1000A	NS520	PV7005 CCX	LN10	T3N T15 Q15				
		K10	KT20 KCT25	CT5015		KT315 HTX KTP10	NX2525 AP25N VP25N	T1200A T1500A T2000Z	NS530 NS730 GT530 GT730	TN610 CCX PV710 PV7005	LN10	T15 C7X C7Z Z15		YNG151 TNG151C		
	K	K20	KT20 KCT25			KT5020	NX2525 AP25N VP25N	T3000Z			NIT					

铣削加工问题及对策

Trouble Shooting (Milling)

故障内容 Trouble			对策与检查要点 Measures			刀具材质 Insert Grade			切削条件 Cutting Conditions					刀具几何形状 Tool Geometry							机床装夹 Setting/ Machine							
						硬度更高的材质 change to harder grade	韧性更大的材质 change to tougher grade	耐冲击性更好的材质 More thermal shock resistant grade	耐粘结性更好的材质 Change to more welding resistant grade	切削速度 Vc Cutting speed	进给量 fz Feed rate	切深 ap Depth of cut	刀盘直径与切削宽度 review review Cutter Dia cutting width review	改变走刀路线 Tool path review	切削液 Coolant		附屑屑槽刀片 Insert with chip breaker	刀片后角 Relief angle	刀尖角 Corner angle	切削刃强度钝化 Edge strength honing	刀盘刃数 Insert number	刀片安装凹槽 Insert pocket	修光刃形状逼刀槽（的检查 Wiper edge (relief angle) review	刀刃振动精度的检查 Insert run out check	刀具刚性的检查 Cutter rigidity	工件/刀具的安装 Workpiece/tool installation	刀柄悬伸长度 Over hang length	动力、机械松动情况 Power/rigidity
															喷雾 Useage of mist	干式 Dry												
						提高/增加 Higher(Larger) ↑	降低/减少 Lower(Smaller) ↓																					
切刃的损伤 Edge damage	后刀面 磨损增大 Flank wear increases	切屑条件不适当 Unsuitable cutting conditions				↓						●																
		刀具切刃形状不适当 Unsuitable tool geometry	●												↑		↓			●								
	前刀面 磨损增大 Rake face wear increase	切屑条件不适当 Unsuitable cutting conditions				↓	↓	↓				●																
		刀具切刃形状不适当 Unsuitable tool geometry	●												↑	↑	↓											
	切削刃崩损 Chipping cracking	切屑条件不适当 Unsuitable cutting conditions					↓	↓	●			●																
		刀具切刃形状不适当 Unsuitable tool geometry		●											↓	↓	↑			●	●	●	●	●				
	热冲击破坏 Edge breakage by thermal shock	切屑条件不适当 Unsuitable cutting conditions				↓	↓	↓				●																
		刀具切刃形状不适当 Unsuitable tool geometry			●										↑		↓											
刃口积屑瘤 Built-up edge	切屑条件不适当 Unsuitable cutting conditions				↑	↑					●																	
	刀具切刃形状不适当 Unsuitable tool geometry			●											↑		↓											
加工精度 Machining accuracy	精加工 表面不佳 Poor surface finish	切屑条件不适当 Unsuitable cutting conditions				↑	↓	↓				●																
		刀具切刃形状不适当 Unsuitable tool geometry	●		●												↓	↓		●	●	●	●	●				
	毛刺 Burr	切屑条件不适当 Unsuitable cutting conditions				↓	↓	↓	●			●				↑	↓	↓		●								
		刀具切刃形状不适当 Unsuitable tool geometry														↑	↓	↓										
	欠损 Workpiece chip off	切屑条件不适当 Unsuitable cutting conditions																										
		刀具切刃形状不适当 Unsuitable tool geometry														↑	↑	↓	↑	●								
其他 Others	振动/振刀大 Heavy chattering vibration	工具或刀具的逃隙 Tool or workpiece evacuation				↓	↓				●	1		●	↑	↓	↓	↓		●	●	●	●	●				
		安装过程/切削条件不适当 Unsuitable cutting conditions installation				↓	↓	↓	●		●	4		●	↑	↓	↓	↓			●	●	●					
	切削缠绕堵塞 Damaging chips	切屑条件不适当 Unsuitable cutting conditions				↑	↓	5	●			●	6	●														
		刀具切刃形状不适当 Unsuitable tool geometry												●	↑		↓	●										
(1) 由于切削热，使工件表面变形 If the surface is warped by cutting heat (2) 为了防止振刀，可采用较大进给量 To prevent chattering, the higher fz may be suitable (3) 为防止振刀，可采用较大的切深 To prevent chattering, the larger ap may be suitable (4) 螺旋加工时推荐使用逆铣加工方法 Down-cut method is recommended for helical end milling (5) 大进给量也可以 Higher fz may be suitable (6) 推荐使用压缩空气 Compressed air is recommended																												

车削加工问题及对策

Trouble Shooting (Turning)

故障内容 Trouble			对策与检查要点 Measures		主要原因 Trouble Item		刀具材质 Insert Grade				切削条件 Cutting Conditions				刀具几何形状 Tool Geometry					机床装夹 Setting/ Machine					
							硬度更高的材质 change to harder grade	韧性更大的材质 change to tougher grade	耐冲击性更好的材质 More thermal shock resistant grade	耐粘结性更好的材质 Change to more welding resistant grade	切削速度 Cutting speed V _c	进给量 Feed rate fz	切深 ap Depth of cut	改变走刀路线 Tool path review	切削液 Coolant	校正刀片断屑槽槽形 Chipbreaker review	前角 Rake angle	刀尖圆弧半径 Corner-R	余偏角 Approach angle	切削刃强度钝化 Edge strength honing	提高刀片精度等级 Change to higher tolerance	提高刀杆刚性 Tool holder rigidity	工件/刀具的安装 Workpiece/tool installation	刀柄悬伸长度 Over hang length	动力、机械松动情况 Power/rigidity
							提高/增加 Higher(Larger)↑ 降低/减少 Lower(Smaller)↓				喷雾式 Usage of mist 干式 Dry		增大 Increase ↑ 减少 Decrease ↓												
尺寸的不稳定 Unstable dimension	工件尺寸不稳定 Unstable workpiece dimension	刀片精度不当 Unsuitable insert tolerance															●								
		刀具或工件的逃隙 Tool or workpiece evacuation									●	●	↑	↓	↓	↓			●	●	●	●			
	切削中频繁偏心 Frequent workpiece runout during cutting	后刀面磨损增大 Flank wear increase	●													●	↑								
		切削条件不当 Unsuitable cutting conditions							↓	↓	↑														
		刃口切削瘤 Built-up edge				●		●	↑																
表面粗糙度 Surface roughness	表面粗糙度差 Poor surface roughness	刀具磨损使切削性能不佳 Poor cutting by tool wear	●			●		↓				●		●	↑	↑		↓	●						
		崩损 Chipping		●					↓	↓	↓			●		●	↑		↑		●	●	●		
		粘刀，刃口积屑瘤 Welding, built-up edge				●		●	↑				●		●	↑		↓	●						
		切削条件不当 Unsuitable cutting conditions							●	↑	↓	↓	↓		●										
		刀具材质/几何形状不当 Unsuitable tool geometry/geometry											●		●	↑		↓	●						
		振动，振刀 Vibration, chattering		●				↓	↓	↓	↓			●	●	↑	↓	↓	↓	↓	●	●	●	●	
发热 Heat	切削发热使加工精度恶化或刀具寿命降低 Deterioration of accuracy or tool life by cutting heat	切削条件不当 Unsuitable cutting conditions						↓	↓	↓	↓		●												
		刀具材质/几何形状不当 Unsuitable tool geometry/geometry	●											●	↑		↓								
毛刺、欠损、毛边 Burr, Chipping, Scuffing	钢，铝—毛刺 Steel, Aluminium - Burr	切削条件不当 Unsuitable cutting conditions						↓	↓	↑		●	●												
		刀具材质/几何形状不当 Unsuitable tool geometry/geometry	●										●	●	↑	↓	↓	↓							
	铸铁-欠损 Cast iron workpiece chip off	切削条件不当 Unsuitable cutting conditions							↓	↓	↓	●													
		刀具材质/几何形状不当 Unsuitable tool geometry/geometry	●										●	●	↑	↑	↑	↓		●	●	●	●		
	软钢-毛边 Mild steel scuffing	切削条件不当 Unsuitable cutting conditions							●	↑	↓	↓	●					↓							
		刀具材质/几何形状不当 Unsuitable tool geometry/geometry	●			●							●	●	↑										
切刃的损伤 Edge damage	后刀面和前刀面磨损增大 Wear increase at relief face rake face	后刀面的磨损 Flank wear	●					↓				●		●	●	↑	↑	↓							
		前刀面的磨损 Rake face wear	●					↓	↓	↓	↓		●		●	↑									
	境界磨损 Notching				●		↓					●													
	崩损 Chipping		●					↓	↓	↓			●			↑	↑		●	●	●	●			
	崩裂 Crack	刀具材质/切削条件不当 Unsuitable tool grade/cutting conditions	●	●				↓	↓	↓		●		●	↑	↑	↑		●	●	●	●			
	热龟裂 Thermal Crack	刀具材质/切削条件不当 Unsuitable tool grade/cutting conditions		●				↓	↓	↓		●	●	↑			↓								
	切刃刀尖角部的变形 Edge nose deformation	继续加工时刀尖部变形 Edge nose deformation during interrupted cutting	●					↓	↓	↓			●	●	↑	↑	↑								
	刃口积屑瘤 Built-up edge	刀具材质/切削条件不当 Unsuitable tool grade/cutting conditions				●		↑	↑	↑		●		●	↑		↓	●							
	切屑处理 Chip control	长切屑缠绕 Long, tangling chips	切削条件不当 Unsuitable cutting conditions						↓	↑	↑	●		●											
			刀具切刃形状不当 Unsuitable tool geometry										●		↓	↓									
短切屑四处飞溅 Chips scattering		切削条件不当 Unsuitable cutting conditions							↓	↓	↓		●												
		刀具切刃形状不当 Unsuitable tool geometry											●		↑	↑									
(1)为防止振刀，可采用较大的进给量。To prevent chattering, the higher f may be suitable (2)为避免毛边，可采用较大的进给量。To prevent scuffing, the higher f may be suitable																									

非标刀具

Non-standard cutter

根据要求制作各种尺寸的非标刀具，提供完美的加工方案，解决以往加工效率差，精度低，表面光洁度差，耗时长等各种问题！

According to the requirements of various sizes of non-standard tools. We can provide perfect machining solutions to solve the poor efficiency, low accuracy, poor surface finishing, long time consuming problems!



KOVES® 科维丝工具

ENQUIRY

日期
DATE
填表人
Applicant

客户单位
Customer Company
联系人
Name
电话 TEL

刀具名称
Request tool
图号
Part No.
规格 Specification

机床 Machine	机床名称: Machine Name				
	★机床类型: ☐ 数控车 ☐ 立式加工中心 ☐ 卧式加工中心 ☐ 专机 ☐ 其他 Machine type: CNC Lathe Vertical machining center Horizontal machining center Special machine Other machine				
	★夹柄型号: ☐ 热膨胀夹头 ☐ 液压夹头 ☐ 弹簧夹头 ☐ 侧固式 ☐ 专用丝锥夹头 ☐ 钻夹头 ☐ 其他 Holder type: Shrink fit chuck Hydraulic chuck Collet chuck Side lock chuck Special taps chuck Drill chuck Others				
	★机床主轴类型: ☐ BT30 ☐ BT40 ☐ BT50 ☐ HSK ☐ 其他 Machine Spindle Type Others				
★冷却类型: ☐ 内冷 ☐ 外冷 ☐ 干式切削 Cooling type: internal cooling external cooling dry cutting		机床冷却压力: Machine Cooling pressure			
加工工艺 Processing technique	★工件材料: Workpiece Material		★提供零件简图 Workpiece Picture		
	★硬度: Hardness				
	★加工表面状态 ☐ 毛坯表面 ☐ 已加工过表面 Machined surface Base Surface Machined Surface				
	★是否干涉 ☐ 无 ☐ 干涉 干涉长___mm Interference NO Interference Length				
	★干涉 ☐ 无 ☐ 干涉 干涉长___mm Interference NO Interference Length				
	Turning Boring Milling Forming				
	☐ 钻孔 ☐ 扩孔 ☐ 铰孔 ☐ 复合加工 Drilling Enlargement hole Reaming Compound machining				
	☐ 攻丝 ☐ 铣槽 ☐ 三维加工 ☐ 其他 Tapping Grooving 3D machining Others				
	★工况 ☐ 通孔 ☐ 盲孔 ☐ 平面 ☐ 外圆 ☐ 成型表面 Working condition Through hole Blind hole Flat External Forming surface				
	★产品加工状况 预孔 ☐ 无 No Product processing status ☐ 有 D___mm孔, 切削余量				
应用 Application	★客户对刀具耐用度要求: Customer requirements for tool durability:				
	目前客户使用状况 Current customer usage	新产品 New Products	☐ 是 参数是否由我司提供 Yes Condition provide by our Company ☐ 不是 请填写替换刀具内容 NO Please write replace tool details as below		
		替换刀具 Replace tool	刀具品牌: Tool Brand	★寿命 Tool Life	★进给f _n (mm/rev) Feederate
			切削速度V _c (m/min) Cutting Speed	★转速n(r/min) Rotation Speed	
申请人 Applicant:	销售主管 Sales Executive:		技术主管 Technical director:		
备注: 打★为必填项目 Remark: ★ Mandatory fields					
www.kovestool.cn					