

THE NEW VALUE FRONTIER

京瓷 创造新价值



刀片材质  
Insert Grades

KS6030/KS6040

耐热合金加工用

# 氮化硅陶瓷

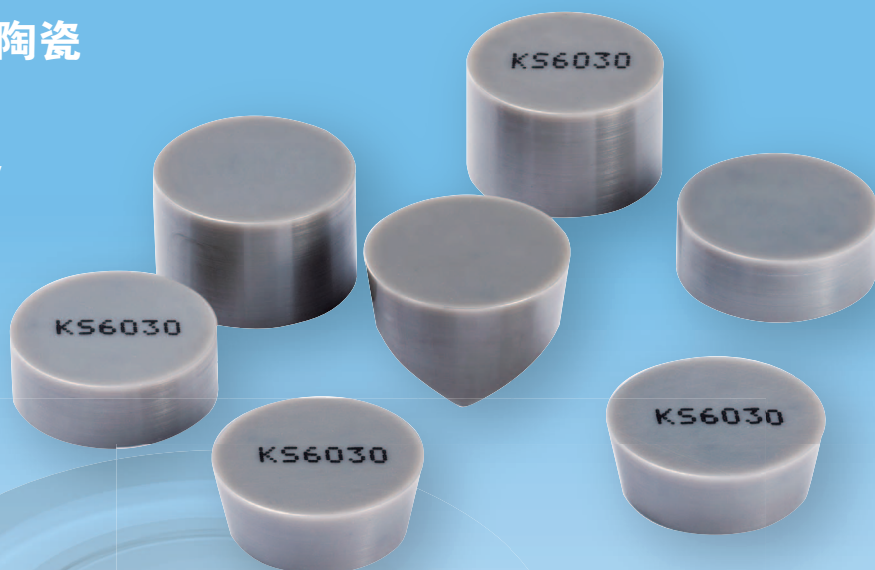
SiAlON Ceramic for Heat resistant alloy

新开发耐热合金用氮化硅陶瓷  
实现高可靠性、稳定加工

Newly Developed SiAlON Ceramic for Heat Resistant Alloy  
High Reliable and Stable process is now available.

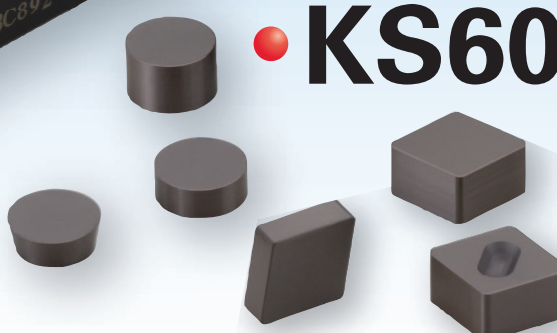
精加工 ~ 半精加工用 **NEW**  
For Finishing-Medium

● **KS6030**



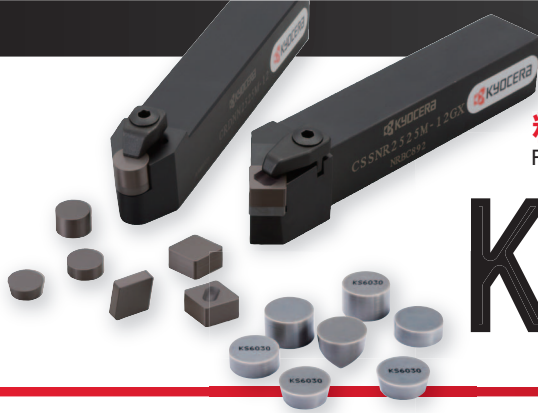
粗加工用  
For Roughing

● **KS6040**



ADVANCING PRODUCTIVITY

致力于生产效率提高的京瓷



精加工 ~ 半精加工用  
For Finishing-Medium

粗加工用  
For Roughing

# KS6030/KS6040

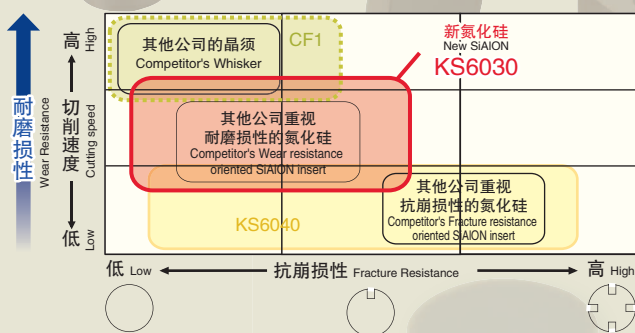
## 新开发 耐热合金加工用 新氮化硅陶瓷

Newly Developed SiAlON Ceramic for Heat Resistant Alloy

### KS6030

#### 特长 Advantages

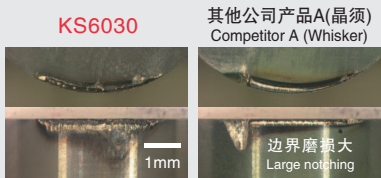
- 高化学稳定性保证发挥优良的耐磨损性  
Superior wear resistance due to high chemical stability
- 在中、高速的半精加工·仿形加工中发挥威力  
Most suitable for semi finishing and profiling at medium to high cutting speed
- 优越的耐边界磨损可抑制毛刺发生与刀片崩损  
Preventing burr formation and chipping due to high resistance against boundary wear
- 也可对应铣削加工  
Applicable to milling operation



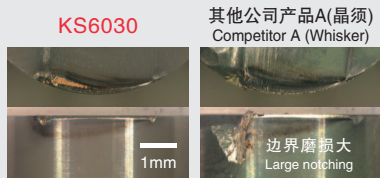
#### 耐磨损性比较 Wear resistance comparison

##### 车削加工 Turning

**切削条件 Cutting Conditions**  
[被削材]: 镍基耐热合金  
[Workpiece Material]: Ni-base heat resistant alloy  
Vc=300m/min f=0.2mm/rev ap=2.0mm  
加工时间2.5分钟 Cutting time 2.5min 湿式 Wet



**切削条件 Cutting Conditions**  
[被削材]: 镍基耐热合金  
[Workpiece Material]: Ni-base heat resistant alloy  
Vc=150m/min f=0.4mm/rev ap=2.0mm  
加工时间2.5分钟 Cutting time 2.5min 湿式 Wet



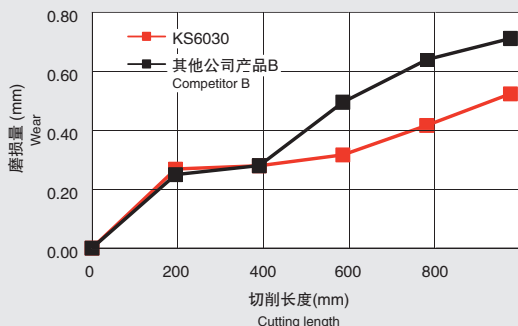
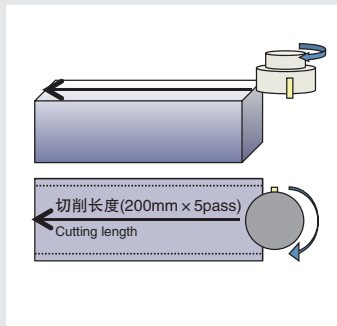
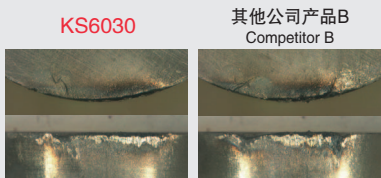
KS6030在低速·高进给加工中不降低加工效率的同时提高工具寿命。并且因为耐边界磨损性好而抑制了毛刺发生与刀片崩损。

KS6030 provides superior Long tool life and efficiency in low to high speed machining. Also prevents burr formation and crack due to Excellent Anti-notching performance.

(本公司比较) (Internal evaluation)

##### 铣削加工 Milling

**切削条件 Cutting Conditions**  
[被削材]: 镍基耐热合金  
[Workpiece Material]: Ni-base heat resistant alloy  
[工具]: RNGN120400T01020  
[Tool]: RNGN120400T01020  
Vc = 1,000m/min f=0.1mm/t ap=1.0mm  
干式 Dry

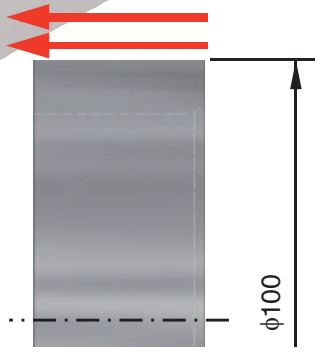


(本公司比较) (Internal evaluation)

## 加工案例 Case Study

### 镍基耐热合金 Ni-base heat resistant alloy

- 垫片 Seal
- Vc=170m/min
- f=0.2mm/rev
- ap=1.2mm (粗)  
Roughing
- ap=0.5mm (精)  
Finishing
- 湿式加工 WET
- RNGN120700E003 (KS6030)



KS6030	加工个数2个/刀尖 Machining efficiency 2 pcs/edge
其他公司产品C Competitor C	加工个数 1个/刀尖 Machining efficiency 1 pcs/edge

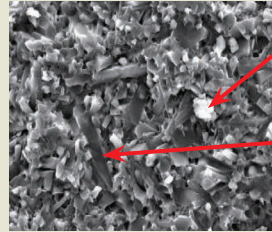
KS6030与其他公司产品C相比，在同一条件下工具寿命提高了2倍。  
KS6030 doubled tool life under the same cutting conditions as Competitor C

(来自用户评价) User Evaluation

## KS6040

### 特长 Advantages

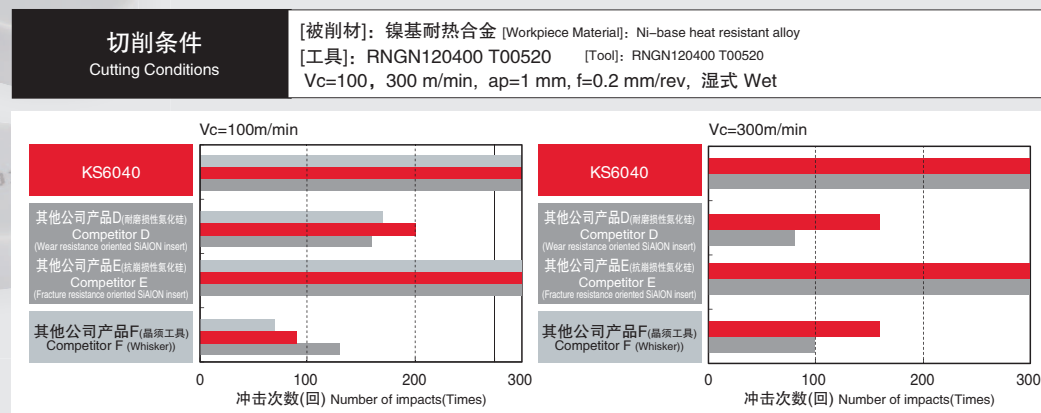
- 硬质粒子与针状粒子的存在、提高了耐磨损性与抗崩损性  
在耐热合金加工中取得很好的平衡  
Improved wear and fracture resistance due to the mixture of the hard and acicular particles  
Superior balance in heat resistant alloy machining
- 黑皮去除加工 · 粗加工 发挥威力  
Suitable for scaling and roughing



硬质粒子(耐磨损性提高)  
Hard Particle (Wear resistance improvement)

针状粒子(抗崩损性提高)  
Acicular Particle (Fracture resistance improvement)

### 抗崩损性比较 Fracture Resistance Comparison



KS6040与其他公司产品F(晶须工具)、其他公司产品D(耐磨损性氮化硅)相比，具有良好的抗崩损性  
与其他公司产品E(抗崩损性氮化硅)中，具有同等的抗崩损性

Compared to both Competitor F (Whisker) and Competitor D (Wear resistance oriented SiAlON insert), KS6040 provides superior fracture resistance  
KS6040 provides superior fracture resistance equivalent to Competitor E (Fracture resistance oriented SiAlON insert)

(本公司比较) (Internal evaluation)

## KS6040相对于以往的氮化硅、同时提高了耐磨损性与抗崩损性 在耐热合金加工中发挥出优越的平衡性

KS6040 achieves improved wear and fracture resistance compared to conventional SiAlON inserts Superior balance in heat resistant alloy machining

### 推荐切削条件 Recommended cutting conditions

材质 Grade	粗加工 Roughing	精加工-半精加工 Finishing-Medium	仿形加工 Profiling	切削速度 Vc(m/min)					
				0	200	400	600	800	1,000
KS6030	◎	◎	◎	湿式 Wet			干式 Dry		
				湿式 Wet			干式 Dry		
KS6040	◎	○	○	湿式 Wet			干式 Dry		
				湿式 Wet			干式 Dry		

■ : 车削 Turning ■ : 铣削加工 Milling

### 车削加工 Turning

推荐刀刃: E珩磨规格 E003 Recommended edge prep: R honing

材质 Grade	切削速度 Vc(m/min)	切深ap (mm)	进给f (mm/rev)
KS6030	150-350	1.0-2.5	0.15-0.35
KS6040	150-300	1.0-2.5	0.15-0.35

### 铣削加工 Milling

推荐刀刃: 倒棱规格 T01020 Recommended edge prep: Chamfering

材质 Grade	切削速度 Vc(m/min)	切深ap (mm)	进给f (mm/rev)
KS6030	700-1,200	1.0-2.0	0.08-0.12
KS6040	600-1,000	1.0-2.0	0.08-0.15

■ 标准库存型号 Stock Items

刀具规格 Edge Preparation				使用分类标准 Classification of usage										
记号 Symbol	切刃状态 Cutting edge condition	记入例 Indication		✳: 断续/第1选择 Interruption / 1st Choice	✳: 断续/第2选择 Interruption / 2nd Choice									
E	R珩磨 Honed Cutting Edge	E003	R0.03珩磨 Honed	●: 轻断续/第1选择 Light Interruption / 1st Choice	○: 轻断续/第2选择 Light Interruption / 2nd Choice									
		E005	R0.05珩磨 Honed											
T	倒棱 Chamfered Cutting Edge	T01020	0.10mm x 20°倒棱 Chamfered Cutting Edge											
形状 Shape		型号 Description	(旧型号) Previous Description	刀刃规格 Edge Preparation	尺寸(mm) Dimension(mm)			KS6030	KS6040					
					r <sub>c</sub>	A	T							
负角 Negative insert		CNGN 120408T01020	CNGN 120408	T01020	0.8	12.70	4.76	●	●					
		CNGN 120412T01020	CNGN 120412		1.2			●	●					
		CNGN 120408T02025	CNGN 120408	T02025	0.8			●	●					
		CNGN 120412T02025	CNGN 120412		1.2			●	●					
		CNGX 120712T01020	-	T01020	1.2	12.70	7.94	●	●					
		CNGX 120716T01020	-		1.6			●	●					
		CNGX 120712T02025	-	T02025	1.2			●	●					
		CNGX 120716T02025	-		1.6			●	●					
		RNGN 090300E003	-	E003	9.525	3.18		●	●					
		RNGN 090300E005	-					E005	●	●				
		RNGN 090300T01020	-					T01020	●	●				
		RNGN 120400E003	-	E003	12.70	4.76		●	●					
		RNGN 120400E005	-					E005	●	●				
		RNGN 120400T01020	-					T01020	●	●				
		RNGN 120700E003	-	E003	-			●	●					
		RNGN 120700E005	-					E005	●	●				
		RNGN 120700T01020	-					T01020	●	●				
		RNGN 190700E003	-	E003	19.05	7.94		●	●					
		RNGN 190700E005	-					E005	●	●				
		RNGN 190700T01020	-					T01020	●	●				
		RNGN 250700E003	-	E003	25.40			非标	●					
		RNGN 250700E005	-					E005	●	●				
		RNGN 250700T01020	-					T01020	非标	●				
			SNGN 120412T01020	SNGN 120412	T01020	1.2	12.70	4.76	●	●				
SNGN 120416T01020	SNGN 120416		1.6	●		●								
SNGN 120412T02025	SNGN 120412		T02025	1.2	●	●								
SNGN 120416T02025	SNGN 120416			1.6	●	●								
	SNGX 120712T01020		-	T01020	1.2	12.70			7.94	●	●			
	SNGX 120716T01020		-		1.6					●	●			
	SNGX 120712T02025		-	T02025	1.2					●	●			
	SNGX 120716T02025		-		1.6					●	●			
正角 Positive insert		RCGX 060600E003	-	E003	6.35		8	●		●				
		RCGX 060600E005	-					E005		●	●			
		RCGX 060600T01020	-					T01020		●	●			
		RCGX 090700E003	-	E003				9.525		8	●	●		
		RCGX 090700E005	-			E005			●		●			
		RCGX 090700T01020	-			T01020			●		●			
	RCGX 120700E003	-	E003	12.70		●	●							
	RCGX 120700E005	-				E005	●		●					
	RCGX 120700T01020	-				T01020	●		●					
		RPGN 090300E003	-			E003	9.525	3.18		●	●			
		RPGN 090300E005	-							E005	●	●		
		RPGN 090300T01020	-							T01020	●	●		
RPGN 120400E003		-	E003	12.70	4.76					●	●			
RPGN 120400E005		-								E005	●	●		
RPGN 120400T01020		-								T01020	●	●		
	RPGX 060600E003	-	E003				6.35	6.35		●	●			
	RPGX 060600E005	-								E005	●	●		
	RPGX 060600T01020	-								T01020	●	●		
	RPGX 090700E003	-	E003	9.525	8					●	●			
	RPGX 090700E005	-								E005	●	●		
	RPGX 090700T01020	-								T01020	●	●		
RPGX 120700E003	-	E003	12.70						●	●				
RPGX 120700E005	-								E005	●	●			
RPGX 120700T01020	-								T01020	●	●			

●: 标准库存 Std. Stock 非标: 订单生产 Made to order

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