



新氮化硅陶瓷

KS6050/CS7050

New Si_3N_4 Ceramic Insert Grades

新开发 铸铁加工用氮化硅陶瓷
兼具铸铁加工时的高效化、高可靠性

New Si_3N_4 ceramic insert grades for cutting cast iron
High efficiency and high reliability at cast iron machining

- **高纵横比组织结构，抗崩损性得到提高** Fracture resistance improvement by high aspect ratio structure
黑皮、断续加工时抑制振刀 Prevents chipping at processing scale and interrupted cutting
 - **通过晶界相抑制实现高速加工铸铁(良好的耐磨损性)**
High speed cutting of cast iron by controlling grain boundary phase (good wear resistance)
 - **无涂层(KS6050:通用、断续加工，重视稳定性)**
Non coated grade (KS6050: for general use and interrupted cut / stability oriented)
 - **涂层(CS7050: 精加工、连续加工，重视高速、高效加工)**
Coated grade (CS7050: for finishing and continuous cut / speed and efficiency oriented)
- 2种材质阵容同时推出**
2 types of grades available



ADVANCING PRODUCTIVITY

致力于生产效率提高的京瓷

新开发 铸铁加工用氮化硅陶瓷 KS6050&CS7050诞生

New Si₃N₄ Ceramic Insert Grades KS6050 & CS7050

■ KS6050

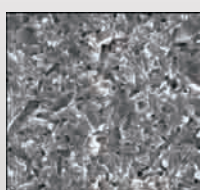
● 特点 Features

- 兼具氮化硅的晶界相抑制和高纵横比组织结构、抗崩损性和耐磨损性得到提高

High fracture resistance and wear resistance by controlling grain boundary phase and high aspect ratio structure of Si₃N₄

- 铸铁的粗、断续加工、第一推荐材种

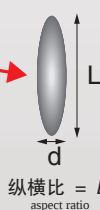
First recommendation for roughing and interrupted cut of cast iron



以往产品A
Grade A (conventional)

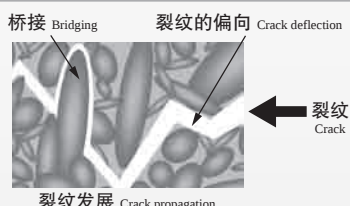


KS6050



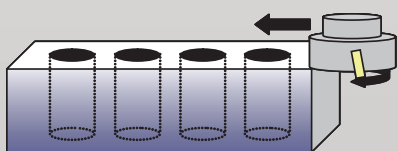
纵横比 = L/d
aspect ratio

KS6050与以往产品A相比
纵横比更大
KS6050 has high aspect ratio
compared with grade A



裂纹的偏向 Crack deflection
裂纹发展 Crack propagation
纵横比：大→抑制裂纹发展
Large aspect ratio → Controls crack propagation
抗崩损性提高 Fracture resistance improvement

● 抗崩损性比较 Comparison of fracture resistance

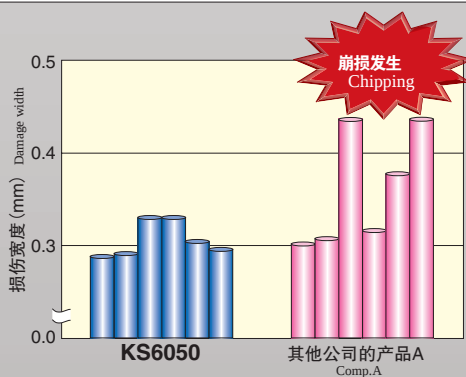


<切削条件 Cutting Condition>

Vc=500m/min, ap=2mm, fz=0.5mm/t, 干式 Dry

被切削材料 Workpiece Material ; FCD450 (4孔刀座 4-hole block)

刀片 Insert ; SNGN120412T02025



即使在断续加工中损伤宽度也小
Less damage at interrupted cutting

→ 良好的抗崩损性
High fracture resistance

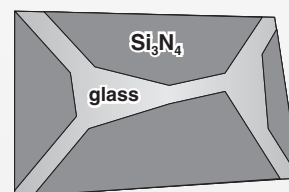
■ 晶界相的不同

Difference of the grain boundary phase

● 以往材质 Conventional Grade

晶界相(glass)多, 受切削热的影响出现强度下降

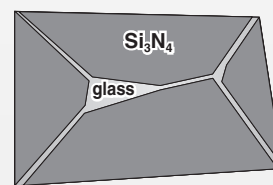
The grain boundary phase contained a high proportion of glass, therefore its toughness will be weakened by cutting heat.



● KS6050

抑制晶界相, 提高机械性能与热性能

Mechanical and thermal property will be improved by controlling grain boundary phase.



■ CS7050(涂层Si₃N₄) CS7050 (coated Si₃N₄ ceramic)

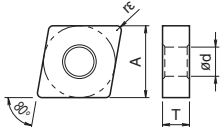
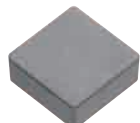
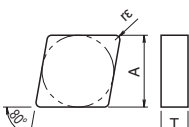
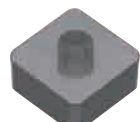
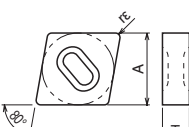
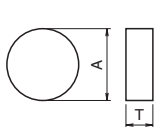
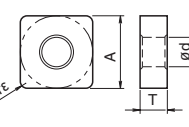
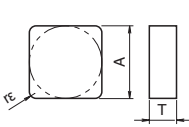
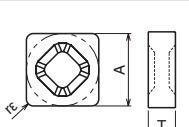
同样准备了适用于高速精加工铸铁的涂层规格 Coated type for high speed finishing of cast iron



高涂层粘着力带来更高的耐磨损性
也可适用于高速加工

Wear resistance improvement due to high coating adhesion. Suitable for high speed cutting.

标准库存型号 Stock Items

刀尖规格 Edge Preparation				使用分类的大致标准 Classification of usage		K	球墨铸铁(高速) Nodular Cast Iron (high speed)					●
符号 Symbol	切刃状态 Cutting edge condition	例 Indication		✂: 断续/第1推荐 Interrupted/1st. choice ✂✂: 断续/第2推荐 Interrupted/2nd. choice ●: 连续/第1推荐 Continuous/1st. choice ○: 连续/第2推荐 Continuous/2nd. choice			球墨铸铁(低速) Nodular Cast Iron (low speed)					○
T	倒角 Chamfer Cutting Edge	T02025	0.20mm × 25° 倒角 Chamfered Cutting Edge				灰口铸铁(高速) Gray Cast Iron (high speed)					●
							灰口铸铁(低速) Gray Cast Iron (low speed)					○
形状 Shape			型号 Description	(旧型号) Previous Description	刀尖规格 Edge Preparation		尺寸(mm) Dimension(mm)				KS6050	CS7050
						rε	A	T	ød			
		CNGA 120408T02025		CNGA 120408	T02025	0.8	12.70	4.76	5.16	●	●	
		120412T02025		120412		1.2				●	●	
		CNGN 120408T02025		CNGN 120408	T02025	0.8	12.70	4.76	-	●	●	
		120412T02025		120412		1.2				●	●	
		CNGX 120712T02025		-	T02025	1.2	12.70	7.94	-	●	●	
		120716T02025		-		1.6				●	●	
		RNGN 120400T02025		RNGN 120400	T02025	-	12.70	4.76	-	●	●	
		SNGA 120412T02025		SNGA 120412	T02025	1.2	12.70	4.76	5.16	●	●	
		120416T02025		120416		1.6				●	●	
		SNGN 120412T02025		SNGN 120412	T02025	1.2	12.70	4.76	-	●	●	
		120416T02025		120416		1.6				●	●	
		120420T02025		120420		2.0				●	●	
		SNGN 120716T02025		SNGN 120716	T02025	1.6		7.94		●	●	
		SNGX 120712T02025		-	T02025	1.2	12.70	7.94	-	●	●	
		120716T02025		-		1.6				●	●	

适用图 Application Map

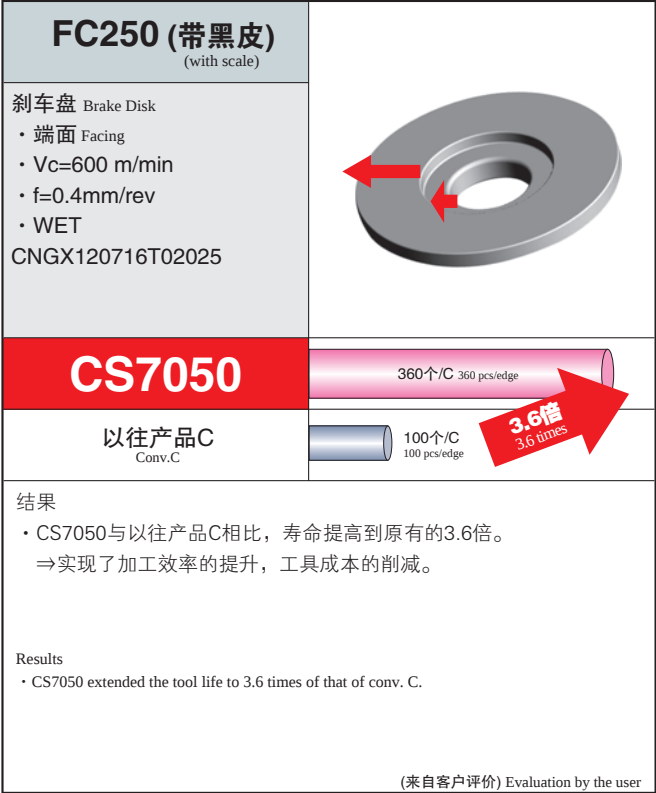


高速
精加工
High Speed / Finishing

通用
断续加工
General Cutting / Interrupted

CS7050

KS6050



切削工具相关咨询



400-650-6400-5

●受理时间 8:45~11:45・12:45~17:30
●周六、日以及法定节假日期间不受理业务。

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