THE NEW VALUE FRONTIER

KYOCERA

切槽
Grooving

SIGE型

内径切槽加工
SIGE型

Internal Grooving SIGE Type

应用螺钉锁紧方式实现更通畅的排屑效果
Internal screw clamp toolholder provides excellent chip evacuation

双刀尖设计、最小加工直径起始于ϕ8的丰富产品阵线
8mm minimum cutting diameter with a 2 edge design

ADVANCING PRODUCTIVITY

致力于生产效率提高的京瓷

■特点 Advantages

● **应用螺钉锁紧方式实现更通畅的排屑效果**
Large chip pocket screw clamp toolholder design provides excellent chip evacuation

螺钉锁紧
Screw Clamp

以往锁紧方式
Top Clamp

● **3坐标断屑槽(模具成型品)使切屑处理良好、经济(GER···M型)**
Cost effective chip control from a 3-D molded chipbreaker (GER---M type)

GER···M型
GER---M type

● **刀片侧面是刀片定位面**
Cutting edge is free from contact face

● **双刀尖设计、最小加工直径起始于ϕ8的产品阵线**
An 8mm minimum cutting diameter with a 2 edge design

● **新PR1025涂层材质保证加工稳定**
New PR1025 PVD coated carbide
新材质PR1025(微粒硬质合金+PVD涂层)
内径切槽中实现长寿命与稳定加工
Consistentmachining with our new micrograin carbide structure and PVD-FS TiCN coating Long tool life

●自动车床用SIGE型刀杆和套筒
SIGE type tool holder and sleeve for automatic lathes

・自动车床用SIGE刀杆
SIGE type tool holder

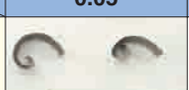
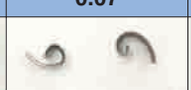
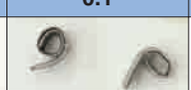
到刀杆的尖端附近，刀杆的背面是一个整体面(侧面偏芯)。即使缩短刀杆深处长度，刀杆与套筒也能锁紧，提高抗振性和刚性。
Since it has the same diameter (single adjustment) as the shank nearly to the end, the single adjustment portion is restrained by the sleeve even when the overhang length is shortened. This improves chattering rigidity when using automatic lathes.

・适用套筒
Applicable Sleeve

通过刀杆与套筒之间的配合，实现刀杆伸出量可根据需要调节。
Combination with the tool holder makes it possible to use by adjusting the overhang

推出可对应各机床厂家的不同刀杆直径的系列化产品。
Shank diameters for other automatic lathe manufacturers added to stock items

■切屑比较(3维断屑槽)
Comparison of chip evacuation (3-D molded chipbreaker)

进给(mm/rev) Feed rate / 型号 Description	SCM415(下孔径ϕ16 Minimum Bore Dia.) 0.05	0.07	0.1	评价 Evaluation
SIGER1612C-EH GER300-020CM(PR1025)				切屑良好 Good chip control
其他公司产品A Comp A 槽宽 3mm (Width 3mm)			刀片缺损 Insert fracture	不稳定的切屑处理 发生切屑咬合现象 Unstable chip control and biting
其他公司产品B Comp B 槽宽 3mm(Width 3mm)				不稳定的切屑处理 发生切屑咬合现象 Unstable chip control and biting

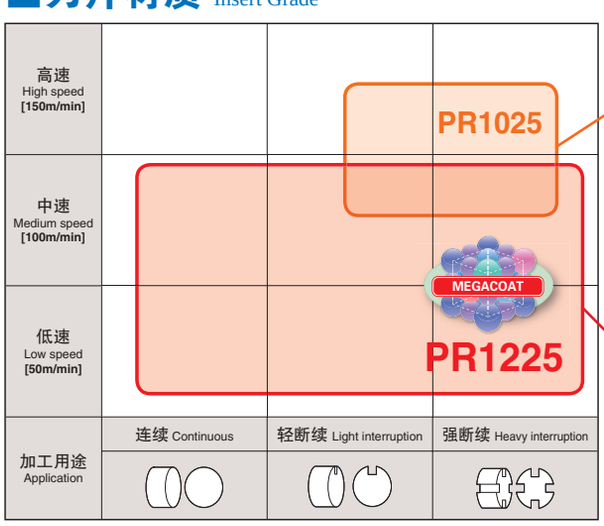
[Vc = 100m/min, ap=2.0mm , 湿式 Wet]
(本公司比较) Internal evaluation

■切屑处理比较(最小加工径ϕ8)
Comparison of chip evacuation (Minimum cutting dia. 8mm)

进给(mm/rev) Feed rate / 型号 Description	SCM415 0.02	评价 Evaluation
SIGER0808A-EH GER200-010A (PR1025)		◎
其他公司产品C 槽宽 2mm Comp C (Width 2mm)		× 振刀 Chipping

[Vc=50m/min, ap=1.25mm, 湿式 Wet]
(本公司比较) Internal evaluation

■刀片材质 Insert Grade



PVD涂层 PVD Coated Grade

PR1025 高韧性材质 Fracture Resistant

● 采用高韧性母材可提高抗崩损性!
Fracture resistant substrate reduces chipping

● 采用TiCN系特殊PVD涂层，提高抗磨损性、耐熔着性!
TiCN PVD Coat improves wear resistance and adhesion resistance.

被削材 Workpiece Material	钢 Steel			
使用分类 Classification	P01	P10	P20	P30
适用领域 Applicable Range			PR1025	

MEGACOAT

PR1225 NEW

● 高韧性母材与高硬度、优异的抗氧化性采用MEGACOAT对应广泛的加工领域
PR1225 covers a wide application range by a combination of a tough substrate and MEGACOAT with a high hardness and good oxidation resistance.

● 独特的薄膜技术与平滑性能的效果提高了耐熔着性，在不锈钢的工件加工上也能发挥威力
New thin coating technology greatly reduces adhesion to the workpiece. Effective cutting for stainless steel.

被削材 Workpiece Material	钢 Steel				
使用分类 Classification	P01	P10	P20	P30	P40
适用领域 Applicable Range			PR1225		

被削材 Workpiece Material	不锈钢 Stainless steel			
使用分类 Classification	M10	M20	M30	M40
适用领域 Applicable Range		PR1225		

内径切槽SIGE型丰富的产品阵线 SIGE Insert and Toolholder Lineup

刀片 Insert	形状 Shape	 研磨断屑槽 Ground chipbreaker		 3维断屑槽 3-D molded chipbreaker									 研磨断屑槽 Ground chipbreaker										
	型号 Description	GE$^{R}/_{L}$…A	GE$^{R}/_{L}$…B	GER…CM	GER…DM			GER…EM					GE$^{R}/_{L}$…C	GE$^{R}/_{L}$…D				GE$^{R}/_{L}$…E					
		GER…AR	GER…BR	-	-			-					GER…CR	GER…DR				-					
	槽宽(mm) Groove Width	1.0~2.0	1.0~3.0	1.5~3.5	1.5	2.0~2.5	3.0~4.0	1.5	2.0	2.5~3.0	3.5~4.0	4.5~5.0	1.0~3.5	1.0~1.45	1.5~1.95	2.0~2.8	3.0~4.0	1.0	1.5~1.95	2.0~2.3	2.5~3.3	3.5~4.3	4.5~5.0
	加工可能槽深 (mm) Available Groove Depth (mm)	1.5	2.2	2.5	3.0	3.2	4.5	3.0	3.2	4.5	5.5	6.5	2.5	2.5	3.0	3.2	4.5	2.5	3.0	3.2	4.5	5.5	6.5
刀杆 Toolholder	最小加工径 Minimum Cutting Dia. (mm)	φ8	φ10, φ12	φ14, φ16	φ20			φ25, φ32, φ40					φ14, φ16	φ20				φ25, φ32, φ40					
	抗振刀杆 Excellent Bar	SIGE$^{R}/_{L}$… A-EH	SIGE$^{R}/_{L}$… B-EH	SIGE$^{R}/_{L}$… C-EH	SIGE$^{R}/_{L}$… D-EH			SIGE$^{R}/_{L}$…E-EH					SIGE$^{R}/_{L}$… C-EH	SIGE$^{R}/_{L}$…D-EH				SIGE$^{R}/_{L}$…E-EH					
	硬质合金抗振刀杆 Carbide Shank Bar	SIGE$^{R}/_{L}$… A-WH	SIGE$^{R}/_{L}$… B-WH(-90)	SIGE$^{R}/_{L}$… C-WH(-90)	-			-					SIGE$^{R}/_{L}$… C-WH(-90)	-				-					

■内径切槽工具一览表

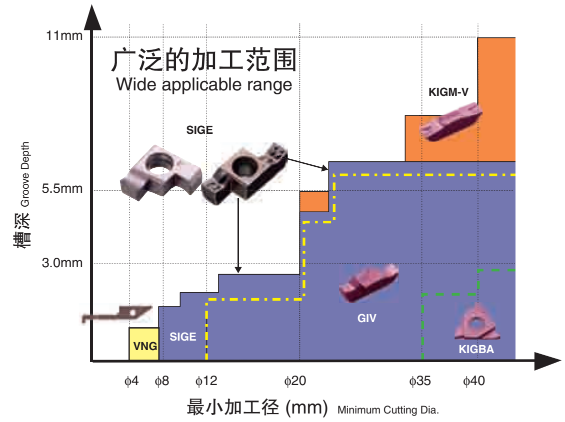
Available Groove Depth of Internal Grooving Tool

槽宽 (mm) Groove width	1.0~2.0	1.0~2.0	1.0~2.0	1.0~2.0	1.0~2.0	1.0~3.0	1.0~3.5	1.0~4.0	1.5~5.0	1.0~3.0	1.0~3.4	1.45~4.0	2.8~5.0	0.33~2.5	1.5~4.8	3.0	3.0~4.0	4.0~5.0	4.0~5.0
加工可能槽深 (mm) Available Groove Depth (mm)	0.8	1.0	1.8	2.5	1.5	2.2	2.5	4.5	6.5	2.2	2.2	4.2	6.3	2.5	2.8	5.5	6.5	8.5	11.0
最小加工径 Minimum Cutting Dia. (mm)	φ4	φ5	φ6	φ7	φ8	φ10 φ12	φ14 φ16	φ20	φ25 φ32 φ40	φ12	φ14 φ16	φ20	φ25 φ32 φ40	φ32	φ40	φ20	φ25	φ32	φ40
刀杆 Toolholder	VNG型				SIGE型					GIV型				KIGBA型		KIGM−V型			

可加工槽深与可安装的最大槽宽有关。详细请参见各刀杆的记载目录。
Available groove depth depends on the maximum groove width of the attached insert. Please refer to the toolholder catalogs for details.

■内径切槽加工范围图

Applicable Range of Internal Grooving Tool



● 适用刀片以及带骗安装时的前角(α) Applicable Insert & Rake Angle(α) after Installment of Insert

刀杆型号 Description		适用刀片以及带骗安装时的前角(α) Applicable Insert & Rake Angle (α) after Installment of Insert 研磨断屑槽 Ground Chipbreaker	α(°)	3维断屑槽 3-D Molded Chipbreaker	α(°)
SIGE$^{R}/_{L}$	0808A-EH	GE$^{R}/_{L}$100-005A~GE$^{R}/_{L}$200-010A GER100-050AR~GER200-100AR	5°	-	-
	1010B-EH 1210B-EH	GE$^{R}/_{L}$100-005B~GE$^{R}/_{L}$300-020B GER100-050BR~GER200-100BR	5°	-	-
	1412C-EH 1612C-EH 1616C-EH	GE$^{R}/_{L}$100-005C~GE$^{R}/_{L}$350-020C GER200-100CR~GER300-150CR	8°	GER150-010CM~GER350-020CM	10°
	2020D-EH	GE$^{R}/_{L}$100-005D~GE$^{R}/_{L}$400-020D GER200-100DR~GER300-150DR	9°	GER150-010DM~GER400-020DM	10°
	2525E-EH 3232E-EH 4032E-EH	GE$^{R}/_{L}$100-005E~GE$^{R}/_{L}$500-020E	10°	GER150-010EM~GER500-020EM	10°
SIGE$^{R}/_{L}$	0808A-WH	GE$^{R}/_{L}$100-005A~GE$^{R}/_{L}$200-010A GER100-050AR~GER200-100AR	5°	-	-
	1010B-WH 1210B-WH	GE$^{R}/_{L}$100-005B~GE$^{R}/_{L}$300-020B GER100-050BR~GER200-100BR	5°	-	-
	1412C-WH 1612C-WH	GE$^{R}/_{L}$100-005C~GE$^{R}/_{L}$350-020C GER200-100CR~GER300-150CR	8°	GER150-010CM~GER350-020CM	10°

自动车床 For automatic lathe

SIGER	1008B-WH-90 1210B-WH-90	GER100-005B~GER300-020B GER100-050BR~GER200-100BR	5°	-	-
	1412C-WH-90	GER100-005C~GER350-020C GER200-100CR~GER300-150CR	8°	GER150-010CM~GER350-020CM	10°

3维断屑槽的α(°)表示刀片安装时的槽宽中央部前角。 α indicates the rake angle at the center of the edge width, after installing insert

■适用刀片 Applicable Insert

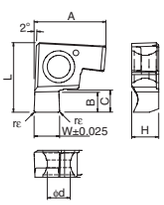
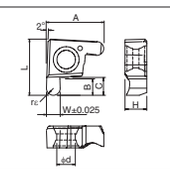
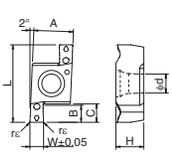
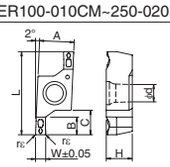
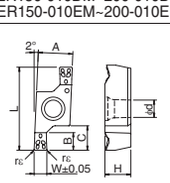
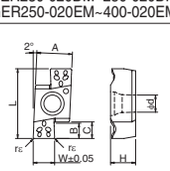
(mm)

型号 Description	A	L	H	ϕd
GE$^{R}_{L}$...-A	6.69	6.5	2.58	2.5
GER...-AR				
GE$^{R}_{L}$...-B	8.46	8.2	3.18	2.7
GER...-BR				
GER...-CM	5.8	11.48	4.05	2.8
GER...-DM	6.8	16.44	5.05	3.4
GER...-EM	9.54	21.66	5.55	4.4

NEW

P	碳钢、合金钢 Carbon Steel / Alloy Steel		◕	◔		
M	不锈钢 Stainless Steel		◕	◔		
K	铸铁 Cast Iron					◔
N	非铁金属 Non-ferrous Material					◕
S	钛合金 Titanium alloy					◕
H	高硬度材料(40HRC以下) Hardened Material (~40HRC)		●	○		
	高硬度材料(40HRC以上) Hardened Material (40HRC~)					

使用分类标准 Indication of clasification
◕：轻断续/第1推荐 Light Interruption / 1st choice
◔：轻断续/第2推荐 Light Interruption / 2nd choice
●：连续/第1推荐 Continuous / 1st choice
○：连续/第2推荐 Continuous / 2nd choice

形状 Shape 左右手刀片显示为右手刀® Right-handed insert shown		型号 Description		尺寸 (mm) Dimension (mm) W	B	C	rε	金属陶瓷 Cermet TN6020 R	TN6020 L	MEGACOAT PR1225 R	PR1225 L	PVD涂层 PVD coated PR1025 R	PR1025 L	硬质合金 Carbide GW15 R	GW15 L	KW10 R	KW10 L	适合刀杆 Applicable Toolholder
 2刀尖式样 2 Edge type		GE$^{R}_{L}$	100-005A	1.00	1.5	1.8	0.05	●	●	●	●	●	●			●	●	SIGE$^{R}_{L}$...A-EH SIGE$^{R}_{L}$...A-WH
			120-005A	1.20				●	●	●	●	●	●			●	●	
			125-005A	1.25				●	●	●	●	●	●			●	●	
			150-010A	1.50			0.1	●	●	●	●	●	●			●	●	
			200-010A	2.00				●	●	●	●	●	●			●	●	
		GE$^{R}_{L}$	100-005B	1.00	2.2	2.6	0.05	●	●	●	●	●	●			●	●	SIGE$^{R}_{L}$...B-EH SIGE$^{R}_{L}$...B-WH SIGER...B-WH-90
			120-005B	1.20				●	●	●	●	●	●			●	●	
			125-005B	1.25				●	●	●	●	●	●			●	●	
			145-010B	1.45			0.1	●	●	●	●	●	●			●	●	
			150-010B	1.50				●	●	●	●	●	●			●	●	
			200-010B	2.00				●	●	●	●	●	●			●	●	
			250-020B	2.50			0.2	●	●	●	●	●	●			●	●	
			300-020B	3.00				●	●	●	●	●	●			●	●	
 全R槽 Full-R		GER	100-050AR	1.00	1.5	1.8	0.5			●		●				●		SIGER...A-EH SIGER...A-WH
			200-100AR	2.00			1.0			●		●				●		
		GER	100-050BR	1.00	2.2	2.6	0.5			●		●				●		SIGER...B-EH SIGER...B-WH SIGER...B-WH-90
			200-100BR	2.00			1.0			●		●				●		
	 GER100-010CM~250-020M	GER	150-010CM	1.50	2.5	2.7	0.1			●		●						SIGER...C-EH SIGER...C-WH SIGER...C-WH-90
			200-010CM	2.00						●		●						
			250-020CM	2.50			0.2			●		●						
			300-020CM	3.00						●		●						
			350-020CM	3.50						●		●						
	 GER150-010DM~200-010DM GER150-010EM~200-010EM	GER	150-010DM	1.50	3.0	4.8	0.1			●		●						SIGER...D-EH
			200-010DM	2.00						●		●						
			230-020DM	2.30	3.2		0.2			●		●						
			250-020DM	2.50						●		●						
			300-020DM	3.00						●		●						
			350-020DM	3.50	4.5					●		●						
			400-020DM	4.00						●		●						
	 GER230-020DM~250-020DM GER250-020EM~400-020EM	GER	150-010EM	1.50	3.0	6.8	0.1			●		●						SIGER...E-EH
			200-010EM	2.00	3.2					●		●						
			250-020EM	2.50	4.5		0.2			●		●						
			300-020EM	3.00						●		●						
			350-020EM	3.50	5.5					●		●						
			400-020EM	4.00						●		●						
			450-020EM	4.50	6.5					●		●						
2刀尖式样 3维断屑槽 2 Edge type 3-D molded Chipbreaker	 GER300-020CM~350-020CM GER300-020DM~400-020DM GER450-020EM~500-020EM		500-020EM	5.00						●		●						

・B尺寸：表示可加工的槽深。・Dimension B shows available grooving depth.

切槽刀片的销售规格为1盒10片装。 Inserts are sold in 10 piece boxes.

●：标准库存 ●：Standard Stock

■适用刀片 Applicable Insert

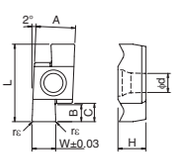
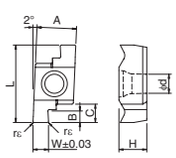
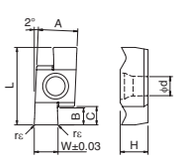
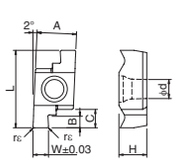
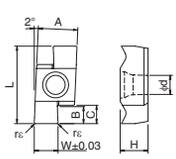
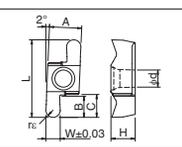
(mm)

型 号 Description	A	L	H	ϕd
GE$^{R}_{L}$...-C	5.8	11.48	4.05	2.8
GER...-CR				
GE$^{R}_{L}$...-D	6.8	16.44	5.05	3.4
GER...-DR				
GE$^{R}_{L}$...-E	9.54	21.66	5.55	4.4

NEW

P	碳钢、合金钢 Carbon Steel / Alloy Steel		●	◔		
M	不锈钢 Stainless Steel		●	◔		
K	铸铁 Cast Iron				◔	
N	非铁金属 Non-ferrous Material				●	
S	钛合金 Titanium alloy				●	
H	高硬度材料 (40HRC 以下) Hardened Material (~40HRC)		●	○		
	高硬度材料 (40HRC 以上) Hardened Material (40HRC~)					

使用分类标准 Indication of clasification
●：轻断续/第1推荐 Light Interruption / 1st choice
◔：轻断续/第2推荐 Light Interruption / 2nd choice
●：连续/第1推荐 Continuous / 1st choice
○：连续/第2推荐 Continuous / 2nd choice

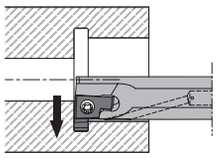
形 状 Shape 左右手刀片显示为右手刀® Right-handed insert shown	型 号 Description		尺寸 (mm) Dimension (mm)				金属陶瓷 Cermet		MEGACOAT		PVD涂层 PVD coated		硬质合金 Carbide				适合刀杆 Applicable Toolholder
			W	B	C	rε	TN6020		PR1225		PR1025		GW15		KW10		
							R	L	R	L	R	L	R	L	R	L	
 2刀尖式样 2 Edge type		GE$^{R}_{L}$ 100-005C	1.00	2.5	2.7	0.05	●	●	●	●	●	●	●	●			SIGE$^{R}_{L}$...C-EH SIGE$^{R}_{L}$...C-WH SIGER...C-WH-90
		120-005C	1.20				●		●	●	●	●	●				
		125-005C	1.25				●	●	●		●	●	●	●			
		140-005C	1.40				●		●		●	●	●				
		145-010C	1.45			0.1	●	●	●		●	●	●	●			
		150-010C	1.50				●	●	●	●	●	●	●	●			
		170-010C	1.70				●		●		●	●	●				
		185-010C	1.85				●		●		●	●	●				
		195-010C	1.95				●		●		●	●	●				
		200-010C	2.00				●	●	●	●	●	●	●	●			
		250-020C	2.50			0.2	●	●	●	●	●	●	●	●			
		300-020C	3.00				●	●	●	●	●	●	●	●			
		350-020C	3.50				●	●	●		●	●	●	●			
	 GER100-005D~280-020D  GER300-020D~400-020D	GE$^{R}_{L}$ 100-005D	1.00	2.5	4.8	0.05	●	●	●	●	●	●	●	●			SIGE$^{R}_{L}$...D-EH
		140-005D	1.40				●		●	●	●	●	●				
		145-010D	1.45			0.10	●	●	●		●	●	●	●			
		150-010D	1.50	3.0			●	●	●	●	●	●	●	●			
		170-010D	1.70				●		●	●	●	●	●				
		185-010D	1.85				●				●	●	●				
		195-010D	1.95				●				●	●	●				
		200-010D	2.00	3.2			●	●	●	●	●	●	●	●			
		225-010D	2.25				●		●	●	●	●	●				
		230-020D	2.30			0.20	●	●	●	●	●	●	●	●			
		250-020D	2.50				●	●	●	●	●	●	●	●			
		275-020D	2.75				●				●	●	●				
		280-020D	2.80				●				●	●	●				
		300-020D	3.00	4.5			●	●	●	●	●	●	●	●			
		330-020D	3.30				●				●	●	●				
		350-020D	3.50				●	●	●		●	●	●	●			
		400-020D	4.00				●	●	●	●	●	●	●	●			
 2刀尖式样 2 Edge type	 GER100-005E~430-020E  GER450-020E~500-020E	GE$^{R}_{L}$ 100-005E	1.00	2.5	6.8	0.05	●	●	●	●	●	●	●	●			SIGE$^{R}_{L}$...E-EH
		150-010E	1.50	3.0			●	●	●	●	●	●	●	●			
		170-010E	1.70				●		●	●	●	●	●				
		185-010E	1.85			0.1	●				●	●	●				
		195-010E	1.95				●				●	●	●				
		200-010E	2.00	3.2			●	●	●		●	●	●	●			
		225-010E	2.25				●		●		●	●	●				
		230-020E	2.30	4.5		0.2	●	●	●		●	●	●	●			
		250-020E	2.50				●	●	●	●	●	●	●	●			
		275-020E	2.75				●		●		●	●	●				
		280-020E	2.80				●		●	●	●	●	●				
		300-020E	3.00				●	●	●	●	●	●	●	●			
		330-020E	3.30				●		●		●	●	●				
		350-020E	3.50	5.5			●	●	●		●	●	●	●			
		400-020E	4.00				●	●	●		●	●	●	●			
		430-020E	4.30				●		●		●	●	●				
		450-020E	4.50	6.5			●	●	●		●	●	●	●			
		460-020E	4.60				●		●		●	●	●				
		500-020E	5.00				●	●	●		●	●	●	●			
 全R槽 Full-R		GER	200-100CR	2.00	2.5	2.7	1.0			●		●		●				SIGER...C-EH SIGER...C-WH SIGER...C-WH-90
			250-125CR	2.50			1.25			●		●		●			
			300-150CR	3.00			1.5			●		●		●			
		GER	200-100DR	2.00	3.2	4.8	1.0			●		●		●			SIGER...D-EH
			300-150DR	3.00	4.5		1.5			●		●		●			

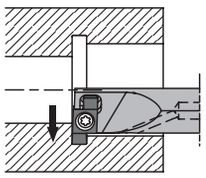
・B尺寸：表示可加工的槽深。 · Dimension B shows available grooving depth.

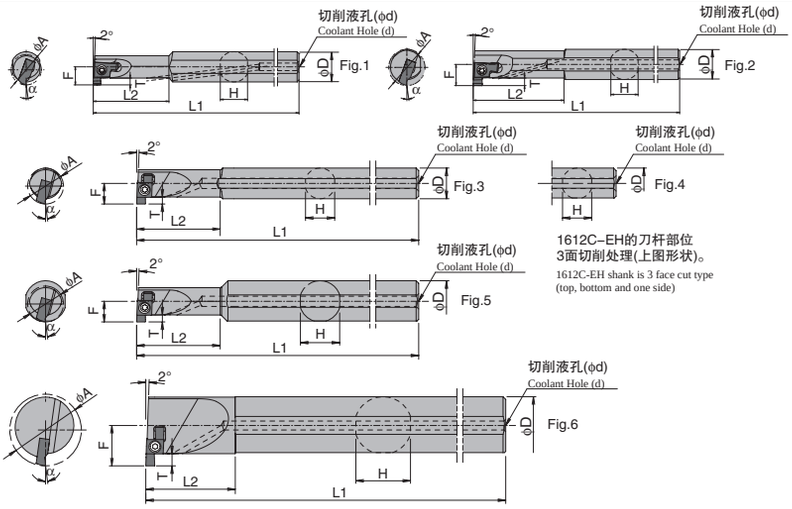
切槽刀片的销售规格为1盒10片装。 Inserts are sold in 10 piece boxes.

●：标准库存 ●：Standard Stock

SIGE–EH型 抗振刀杆(带内冷却液孔) SIGE-EH Type Excellent Bar (With coolant hole)







●本图示为右手(R)
Right-hand shown

右手刀杆(R)使用右手刀片(R),左手刀杆(L)使用左手刀片(L)。
R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder

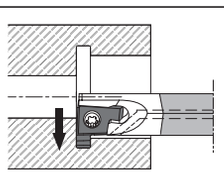
● 刀杆尺寸 Toolholder Dimension

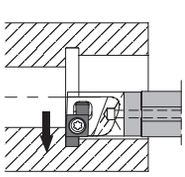
型号 Description	库存 Stock R	库存 Stock L	最小加工径 Minimum cutting dia. φA	尺寸(mm) Dimensions (mm) φD	H	L1	L2	F	T	φd	形状 Shape	零部件 Spare Parts 紧固螺钉 Clamp screw	扳手 Wrench FT	扳手 Wrench DT	适合刀片 Applicable Insert
SIGE$^{R}_{L}$ 0808A-EH	●	●	8	8	7.2	100	20	4.8	1.5	3	Fig.1	SB-2045TRN	FT-6	-	GE$^{R}_{L}$100-005A~GE$^{R}_{L}$200-010A GER100-050AR~GER200-100AR
1010B-EH	●	●	10	10	9	125	25	6.2	2.2	3	Fig.1	SB-2255TR	-	DT-7	GE$^{R}_{L}$100-005B~GE$^{R}_{L}$300-020B GER100-050BR~GER200-100BR
1210B-EH	●	●	12				30	7			Fig.2				
1412C-EH	●	●	14	12	11.4	150	33	8	2.5	4	Fig.3	SB-2570TR	FT-8	-	GE$^{R}_{L}$100-005C~GE$^{R}_{L}$350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR
1612C-EH	●	●	16				20	8.5			Fig.4				
1616C-EH	●	●		16	15	160	36	9		5	Fig.5				
2020D-EH	●	●	20	20	19	180	40	12.1	4.5	5	Fig.5	SB-3080TR	FT-10	-	GE$^{R}_{L}$100-005D~GE$^{R}_{L}$400-020D GER150-010DM~GER400-020DM GER200-100DR~GER300-150DR
2525E-EH	●	●	25	25	24	200	45	15.6	6.5	5	Fig.5	SB-4085TR	FT-15	-	GE$^{R}_{L}$100-005E~GE$^{R}_{L}$500-020E GER150-010EM~GER500-020EM
3232E-EH	●	●	32	32	30.4	220	55	19			Fig.5				
4032E-EH	●	●	40			250	45	23			Fig.6				

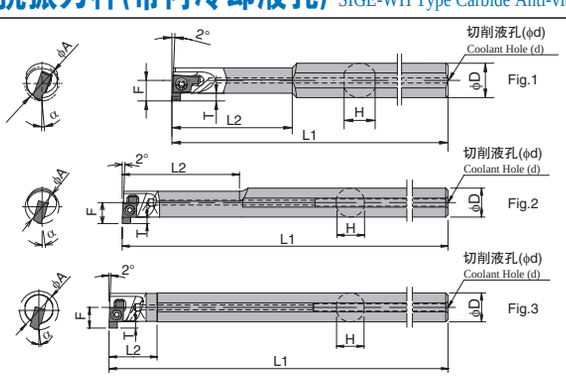
・T尺寸：表示可加工的槽深。实际的加工深度由刀片的B尺寸决定。
・Dimension T shows available grooving depth. Insert B dimension shows available grooving depth.

●：标准库存 ●：Standard Stock

SIGE–WH型 SIGE–WH型 硬质合金抗振刀杆(带内冷却液孔) SIGE-WH Type Carbide Anti-vibration Bar (with coolant hole)







●本图示为右手(R)
Right-hand shown

右手刀杆(R)使用右手刀片(R),左手刀杆(L)使用左手刀片(L)。
R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder

● 刀杆尺寸 Toolholder Dimension

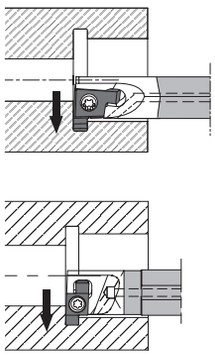
型号 Description	库存 Stock R	库存 Stock L	最小加工径 Minimum cutting dia. φA	尺寸(mm) Dimensions (mm) φD	H	L1	L2	F	T	φd	形状 Shape	零部件 Spare Parts 紧固螺钉 Clamp screw	扳手 Wrench FT	扳手 Wrench DT	适合刀片 Applicable Insert
SIGE$^{R}_{L}$ 0808A-WH	●	●	8	8	7.2	125	28	4.8	1.5	3	Fig.1	SB-2045TRN	FT-6	-	GE$^{R}_{L}$100-005A~GE$^{R}_{L}$200-010A GER100-050AR~GER200-100AR
1010B-WH	●	●	10	10	9	125	35	6.2	2.2	3	Fig.1	SB-2255TR	-	DT-7	GE$^{R}_{L}$100-005B~GE$^{R}_{L}$300-020B GER100-050BR~GER200-100BR
1210B-WH	●	●	12			140	45	7							
1412C-WH	●	●	14	12	11.4	150	50	8.7	2.5	4	Fig.2	SB-2570TR	FT-8	-	GE$^{R}_{L}$100-005C~GE$^{R}_{L}$350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR
1612C-WH	●	●	16			180	20	8.5			Fig.3				

・T尺寸：表示可加工的槽深。实际的加工深度由刀片的B尺寸决定。
・Dimension T shows available grooving depth. Insert B dimension shows available grooving depth.

●：标准库存 ●：Standard Stock

自动车床用产品系列

SIGE-WH-90型 硬质合金抗振刀杆(带内冷却液孔) SIGE-WH-90 Type Carbide anti vibration Bar (With coolant hole)



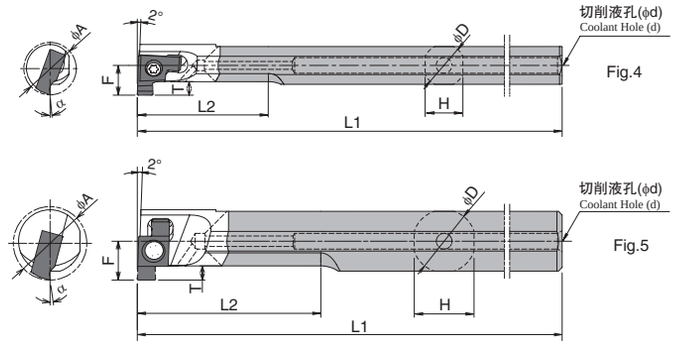


Fig.4

Fig.5

●本图示为右手(R)
Right-hand shown

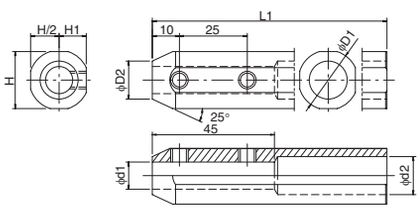
右手刀杆(R)使用右手刀片(R)。
R-hand Insert for R-hand Toolholder

● 刀杆尺寸 Toolholder Dimension

型 号 Description		库存 Stock	最小加工径 Minimum cutting dia.	尺寸(mm) Dimensions (mm)							形状 Shape	零部件 Spare Parts		适合刀片 Applicable Insert
			φA	φD	H	L1	L2	F	T	φd		紧固螺钉 Clamp screw	扳手 Wrench	
SIGER	1008B-WH-90	●	10	8	7.2	90	25	5.6	2.2	3	Fig.4	SB-2255TR	FT-7	GER100-005B~GER300-020B GER100-050BR~GER200-100BR
	1210B-WH-90	●	12	10	9.4		30	6.6						
	1412C-WH-90	●	14	12	11.4	90	35	7.4	2.5	3	Fig.5	SB-2570TR	FT-8	GER100-005C~GER350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR

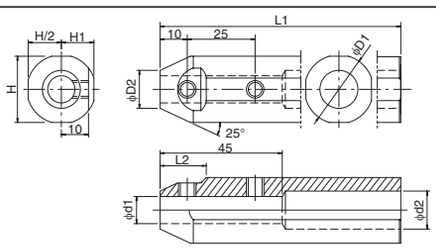
●：标准库存 ●：Standard Stock

● 适用套筒 Applicable Sleeve



刀杆安装面 Holder Installation side

Fig.1



刀杆安装面 Holder Installation side

Fig.2

型 号 Description		库存 Stock	尺寸(mm) Dimensions (mm)								形状 Shape	零部件 Spare Parts		适用机床厂商 Applicable Machine Manufacturer
			φd1	φD1	φD2	φd2	H	H1	L1	L2		螺钉 Screw	扳手 Wrench	
SHA	0820-120	●	8	20	14	12	19	9.25	120	-	Fig.1	HS6x4P	LW-3	株式会社 天田万事能 株式会社 江黑 株式会社 西铁城精机 株式会社 津上 AMADA MACHINE TOOLS CO., LTD. EGURO.LTD CITIZEN MACHINERY MIYANO CO., LTD. TSUGAMI CORPORATION
	1020-120	●	10											
SHA	0825.0-135	●	8	25	14	14	24	11.5	135	17	Fig.2			
	1025.0-135	●	10											
	1225.0-135	●	12		16									
SHA	0819-120	●	8	19.05	14	12	18	8.75	120	-	Fig.1	HS6x4P	LW-3	株式会社 西铁城精机 CITIZEN MACHINERY MIYANO CO., LTD.
	1019-120	●	10											
SHA	0820-120	●	8	20	14	12	19	9.25	120	-	Fig.1			
	1020-120	●	10											
SHA	0825.4-120	●	8	25.4	14	14	24.4	12	120	17	Fig.2			
	1025.4-120	●	10											
	1225.4-120	●	12		16									
SHA	0822-125	●	8	22	14	14	21	10	125	-	Fig.1	HS6x4P	LW-3	株式会社 星昂 野村VTC株式会社 STAR MICRONICS CO., LTD. Nomura VTC Automatic Lathe Co., Ltd.
	1022-125	●	10											
	1222-125	●	12		16									
SHA	0823-120	●	8	23	14	14	22	10.5	120	16	Fig.2	HS6x4P	LW-3	野村VTC株式会社 Nomura VTC Automatic Lathe Co., Ltd.
	1023-120	●	10											
	1223-120	●	12		16									

※φd1部分的长度…45mm(SHA全型号) Length of φd1 section …. 45mm (all SHA types)

●：标准库存 ●：Standard Stock

・刀杆尺寸φD，请根据套筒φｄ1尺寸来选定。 Choose sleeves(φd1) to meet with φD dimension of toolholder.

・省略各机床厂商的敬称。 Machine manufacturers in random order.

■推荐切削条件(研磨断屑槽：GE^{R}/$_{L}$…A(R)、GE^{R}/$_{L}$…B(R)) Recomennded cutting conditions (Ground Chipbreaker : GE^{R}/$_{L}$…A(R), GE^{R}/$_{L}$…B(R))

被削材 Workpiece Material	推荐刀片材质(切削速度 m/min) Recommended Insert Grade(Cutting Speed : m/min)				① 切槽加工时的进给 f at Grooving (mm/rev) ② 横进给加工时的进给 f at Traversing (mm/rev) ③ 横进给加工时的切深 ap at Traversing (mm)			参考 Remark
	金属陶瓷 Cermet	MEGACOAT	PVD涂层 PVD Coated	硬质合金 Carbide				
	TN6020	PR1225	PR1025	KW10	GE^{R}/$_{L}$ 100~200-010A 100~200-100AR	GE^{R}/$_{L}$ 100~200-010B 100~200-100BR	GE^{R}/$_{L}$ 250~300-020B	
碳素钢(SxxC等) Carbon Steel	☆ 50~80	★ 50~80	☆ 50~80	-	①0.01~0.03 ②0.01~0.03 ③Max. 0.05	①0.02~0.04 ②0.02~0.04 ③Max. 0.05	①0.02~0.04 ②0.02~0.04 ③Max. 0.1	湿式 Coolant
合金钢(SCM等) Alloy Steel	☆ 50~80	★ 50~80	☆ 50~80	-	①0.01~0.03 ②0.01~0.03 ③Max. 0.05	①0.02~0.04 ②0.02~0.04 ③Max. 0.05	①0.02~0.04 ②0.02~0.04 ③Max. 0.1	
不锈钢 (SUS304等) Stainless Steel(SUS304)	-	★ 50~80	☆ 50~80	-	①0.01~0.03 ②0.01~0.03 ③Max. 0.05	①0.01~0.03 ②0.01~0.03 ③Max. 0.05	①0.01~0.03 ②0.01~0.03 ③Max. 0.1	
铸铁(FC・FCD等) Cast Iron(FC FCD)	-	-	-	★ 50~80	①0.01~0.03 ②0.01~0.03 ③Max. 0.05	①0.02~0.04 ②0.02~0.04 ③Max. 0.05	①0.02~0.04 ②0.02~0.04 ③Max. 0.1	
铝 Aluminum	-	-	-	★ 50~100	①0.01~0.03 ②0.01~0.03 ③Max. 0.1	①0.02~0.04 ②0.02~0.04 ③Max. 0.1	①0.02~0.04 ②0.02~0.04 ③Max. 0.2	
黄铜 Brass	-	-	-	★ 50~100	①0.01~0.03 ②0.01~0.03 ③Max. 0.1	①0.02~0.04 ②0.02~0.04 ③Max. 0.1	①0.02~0.04 ②0.02~0.04 ③Max. 0.2	

※ 刀片的刃宽1mm(GE^{R}/$_{L}$100–005A / 100–005B)进行横进给加工时，请使用PVD涂层或硬质合金。)
Use PVD coated grade or carbide for traversing with edge width1mm.(GE^{R}/$_{L}$100-005A / 100-005B)

★:第1推荐 ☆:第2推荐 ★:1st Recommendtion ☆:2nd Recommendtion

■推荐切削条件(研磨断屑槽：GE^{R}/$_{L}$…C(R)、GE^{R}/$_{L}$…D(R)、GE^{R}/$_{L}$…E) Recomennded cutting conditions (Ground Chipbreaker : GE^{R}/$_{L}$…C(R), GE^{R}/$_{L}$…D(R), GE^{R}/$_{L}$…E)

被削材 Workpiece Material	推荐刀片材质(切削速度 m/min) Recommended Insert Grade(Cutting Speed : m/min)				① 切槽加工时的进给 f at Grooving (mm/rev) ② 横进给加工时的进给 f at Traversing (mm/rev) ③ 横进给加工时的切深 ap at Traversing (mm)						参考 Remark
	金属陶瓷 Cermet	MEGACOAT	PVD涂层 PVD Coated	硬质合金 Carbide	GE^{R}/$_{L}$ 100~200-010C 200-100CR	GE^{R}/$_{L}$ 250~350-020C 250~300-150CR					
	TN6020	PR1225	PR1025	GW15	GE^{R}/$_{L}$ 100-145-010D	GE^{R}/$_{L}$ 150~195-010D	GE^{R}/$_{L}$ 200~280-020D 200-100DR		GE^{R}/$_{L}$ 300~400-020D 300-150DR		
					GE^{R}/$_{L}$ 100-010E	GE^{R}/$_{L}$ 150~195-010E	GE^{R}/$_{L}$ 200~225-010E 230-020E	GE^{R}/$_{L}$ 250~330-020E		GE^{R}/$_{L}$ 350~430-020E	GE^{R}/$_{L}$ 450~500-020E
碳素钢(SxxC等) Carbon Steel	☆ 120~180	★ 60~140	☆ 60~140	-	①0.03~0.08 ②0.03~0.08 ③Max. 0.3	①0.03~0.08 ②0.03~0.08 ③Max. 0.3	①0.04~0.09 ②0.04~0.09 ③Max. 0.3	①0.04~0.09 ②0.04~0.09 ③Max. 0.3	①0.05~0.12 ②0.05~0.1 ③Max. 0.5	①0.05~0.12 ②0.05~0.1 ③Max. 0.5	①0.05~0.12 ②0.05~0.1 ③Max. 0.5
合金钢(SCM等) Alloy Steel	☆ 100~160	★ 60~120	☆ 60~120	-	①0.03~0.07 ②0.03~0.1 ③Max. 0.3	①0.03~0.07 ②0.03~0.1 ③Max. 0.3	①0.04~0.08 ②0.04~0.08 ③Max. 0.3	①0.04~0.08 ②0.04~0.08 ③Max. 0.3	①0.05~0.1 ②0.05~0.1 ③Max. 0.5	①0.05~0.1 ②0.05~0.1 ③Max. 0.5	①0.05~0.1 ②0.05~0.1 ③Max. 0.5
不锈钢 (SUS304等) Stainless Steel(SUS304)	☆ 70~130	★ 60~110	☆ 60~110	-	①0.03~0.07 ②0.03~0.1 ③Max. 0.3	①0.03~0.07 ②0.03~0.1 ③Max. 0.3	①0.04~0.08 ②0.04~0.08 ③Max. 0.3	①0.04~0.08 ②0.04~0.08 ③Max. 0.3	①0.05~0.1 ②0.05~0.1 ③Max. 0.5	①0.05~0.1 ②0.05~0.1 ③Max. 0.5	①0.05~0.1 ②0.05~0.1 ③Max. 0.5
铸铁(FC・FCD等) Cast Iron(FC FCD)	-	-	-	★ 60~100	①0.03~0.08 ②0.03~0.08 ③Max. 0.3	①0.03~0.08 ②0.03~0.08 ③Max. 0.3	①0.04~0.09 ②0.04~0.09 ③Max. 0.3	①0.04~0.09 ②0.04~0.09 ③Max. 0.3	①0.05~0.12 ②0.05~0.1 ③Max. 0.5	①0.05~0.12 ②0.05~0.1 ③Max. 0.5	①0.05~0.12 ②0.05~0.1 ③Max. 0.5
铝 Aluminum	-	-	-	★ 150~300	①0.05~0.12 ②0.05~0.12 ③Max. 0.5	①0.05~0.12 ②0.05~0.12 ③Max. 0.5	①0.05~0.15 ②0.05~0.15 ③Max. 0.5	①0.05~0.15 ②0.05~0.15 ③Max. 0.5	①0.08~0.15 ②0.08~0.15 ③Max. 0.8	①0.08~0.15 ②0.08~0.15 ③Max. 0.8	①0.08~0.15 ②0.08~0.15 ③Max. 0.8
黄铜 Brass	-	-	-	★ 100~250	①0.05~0.12 ②0.05~0.12 ③Max. 0.5	①0.05~0.12 ②0.05~0.12 ③Max. 0.5	①0.05~0.15 ②0.05~0.15 ③Max. 0.5	①0.05~0.15 ②0.05~0.15 ③Max. 0.5	①0.08~0.15 ②0.08~0.15 ③Max. 0.8	①0.08~0.15 ②0.08~0.15 ③Max. 0.8	①0.08~0.15 ②0.08~0.15 ③Max. 0.8

※ 刀片的刃宽1mm(GE^{R}/$_{L}$100–010C / 100–010D / 100–010E)进行横进给加工时，请使用PVD涂层或硬质合金。)
Use PVD coated grade or carbide for traversing with edge width 1mm.(GE^{R}/$_{L}$100-010C / 100-010D / 100-010E)

★:第1推荐 ☆:第2推荐 ★:1st Recommendtion ☆:2nd Recommendtion

■推荐切削条件(3坐标断屑槽) Recomennded cutting conditions (3-D Molded Chipbreaker)

被削材 Workpiece Material	推荐刀片材质(切削速度 m/min) Recommended Insert Grade(Cutting Speed : m/min)				① 切槽加工时的进给 f at Grooving (mm/rev) ② 横进给加工时的进给 f at Traversing (mm/rev) ③ 横进给加工时的切深 ap at Traversing (mm)						参考 Remark
	金属陶瓷 Cermet	MEGACOAT	PVD涂层 PVD Coated	硬质合金 Carbide	GER 150~200-010CM	GER 250~350-020CM					
	TN6020	PR1225	PR1025	GW15	GER 150~200-010DM		GER 230~250-020DM	GER 300~400-020DM			
					GER 150~200-010EM			GER 250~300-020EM	GER 350~400-020EM	GER 450~500-020EM	
碳素钢(SxxC等) Carbon Steel	-	★ 60~160	☆ 60~160	-	①0.03~0.1 ②0.03~0.1 ③Max. 1.0	①0.03~0.12 ②0.03~0.1 ③Max. 1.5	①0.04~0.12 ②0.04~0.1 ③Max. 1.5	①0.05~0.12 ②0.05~0.1 ③Max. 1.5	①0.05~0.12 ②0.05~0.1 ③Max. 1.5	①0.05~0.12 ②0.05~0.1 ③Max. 1.5	湿式 Coolant
合金钢(SCM等) Alloy Steel	-	★ 60~140	☆ 60~140	-	①0.03~0.1 ②0.03~0.1 ③Max. 1.0	①0.03~0.1 ②0.03~0.1 ③Max. 1.5	①0.04~0.12 ②0.04~0.1 ③Max. 1.5	①0.05~0.12 ②0.05~0.1 ③Max. 1.5	①0.05~0.12 ②0.05~0.1 ③Max. 1.5	①0.05~0.12 ②0.05~0.1 ③Max. 1.5	
不锈钢 (SUS304等) Stainless Steel(SUS304)	-	★ 60~110	☆ 60~110	-	①0.03~0.08 ②0.03~0.1 ③Max. 1.0	①0.03~0.08 ②0.03~0.1 ③Max. 1.5	①0.04~0.08 ②0.04~0.1 ③Max. 1.5	①0.05~0.1 ②0.05~0.1 ③Max. 1.5	①0.05~0.1 ②0.05~0.1 ③Max. 1.5	①0.05~0.1 ②0.05~0.1 ③Max. 1.5	

★:第1推荐 ☆:第2推荐 ★:1st Recommendtion ☆:2nd Recommendtion