

Tooling Systems Cartridges G1 to G27

G

Tooling

G

Tooling

Cartridges





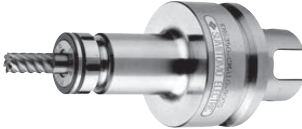
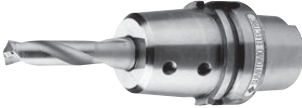


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ICTM HSK Tooling System	G3
Polygonal Taper Shank SumiPolygon	G8
2 Locating Faces Modular Taper Shank	G18
2 Locating Faces HSK Tooling System	G18
Smart Damper™ for Milling	G20
IGETALLOY ABS System	G22
SEC-Micro Units	G24
Expansion SEC-Cartridge Units	G25
Boring Quills / Carbide Line Boring Bars	G27

Stock Markings and Symbols

- mark: Standard stocked item
- mark: To be replaced with the new item featured on the same page
- ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability)
- * mark: Semi-standard stock (please confirm stock availability)
- mark: Stock or planned stock (please confirm stock availability)
- Blank: Made-to-order item
- mark: Not available

General Features of Tooling Systems

■ Tooling Systems

Application	System Name		Feature	Ref. Page
Turning	ICTM STANDARD		Shanks for turning applications in multi-tasking machines, conforming to the ICTM (Interface Committee for Turning Mill) Standard. Compatible with HSK-A type, tools can be shared between multi-tasking machines and machining centres. <i>Compliant with ISO standard ISO12164-3:2008.</i>	G3 ~
	HSK Tooling System		Polygonal keyless coupling system achieves an indexing accuracy of $\pm 2\mu\text{m}$. Supports both turning and rotating tools. <i>Compliant with ISO standard ISO26623-1:2008.</i>	G8 ~
Milling	Modular Taper Shank		Achieving high-precision machining by increasing rigidity at high-speed rotations with two locating faces on the taper and flange, along with an excellent clamping mechanism. <i>Compliant with ISO standard ISO 26622-1:2008.</i>	G18
	HSK Tooling System		The ISO standard for milling shanks with 2 locating faces.	G18
	Smart Damper™		A special anti-vibration mechanism is built in to realize high-efficiency and high quality machining with a long overhang.	G20 ~
	IGETALLOY ABS System		This quick change system for round tools uses a unique mechanism with a strong holding force. The system offers high rigidity and precision, and exhibits good indexing accuracy during tool changes.	G22 ~

Tooling

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HSK Tooling System



ICTM
STANDARD

■ Features

The HSK tooling system has been adopted by Japan's 17 major machine tool manufacturers as the interface for turning tools in multi-tasking machines. It is based on the ICTM (Interface Committee for Turning Mill) standard. Based on the ISO standard HSK shank, this system is designed to improve precision in turning applications, and is compatible with the HSK-A type that is widely used on machining centres.

* Catalogue numbers have been changed due to ISO standardisation (ISO 12164-3:2008).

For support with non-standard specifications, contact us directly.

General External Turning and Profiling
Double Clamp

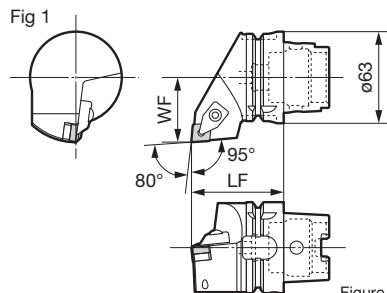
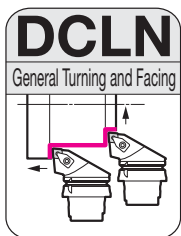


Figure shows right hand (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page
CN□□1204□□	B16 ~

(Representative example)
CNMG120408N-GE

Holder

Parts

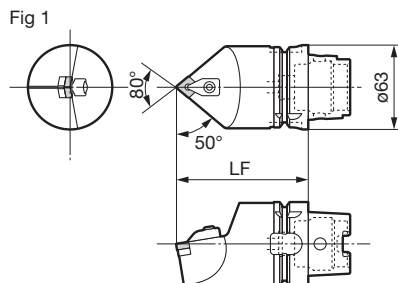
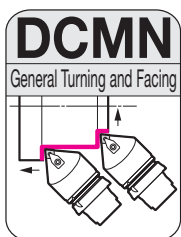
Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock		Overhang LF	Cutting Edge WF	Fig	Clamp Set	Shim	Shim Screw	Wrench for Shim	Wrench	
		R	L									
HSK63TH-DCLN R/L-DX12	H63A-WH-DCLN R/L-DX12			65	45	1	SCP-2	5.0	CNS1204	BFTX0409N	TRX15(*)	LH040

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **C48**

General External Turning and Profiling
Double Clamp



Insert

Applicable Insert Cat. No.	Ref. Page
CN□□1204□□	B16 ~

(Representative example)
CNMG120408N-GE

Holder

Parts

Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock	Overhang LF	Fig	Clamp Set	Shim	Shim Screw	Wrench for Shim	Wrench	
HSK63TH-DCMN N-H12	H63A-WH-DCMN N-H12		100	1	SCP-2	5.0	CNS1204	BFTX0409N	TRX15(*)	LH040
HSK63TH-DCMN N-L12	H63A-WH-DCMN N-L12		140	1	SCP-2	5.0	CNS1204	BFTX0409N	TRX15(*)	LH040

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **C48**

Recommended Tightening Torque (N-m)

Tooling
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Cartridges

HSK Tooling System

Tooling

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Cartridges

General External Turning and Profiling
Double Clamp

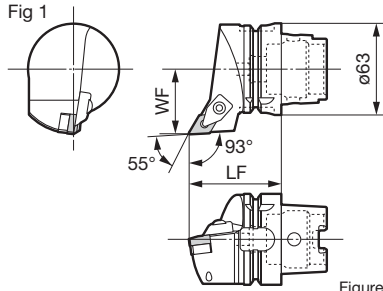
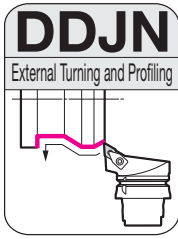


Figure shows right hand (R) tool.

Insert

(Representative example)

Applicable Insert Cat. No.	Ref. Page
DN□□1504□□	B25 ~

DNMG150408N-GE

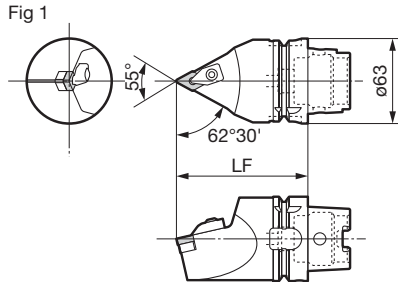
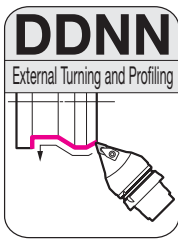
Holder

Cat. No.	Previous Cat. No.	Stock		Overhang LF	Cutting Edge WF	Fig	Dimensions (mm)					
		R	L				Clamp Set	Shim	Shim Screw	Wrench for Shim	Wrench	
HSK63TH-DDJN R/L-DX15	H63A-WH-DDJN R/L-DX15			65	45	1	SCP-2	5.0	DNS1504	BFTX0409N	TRX15(*)	LH040

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **IC C48**

General External Turning and Profiling
Double Clamp



Insert

(Representative example)

Applicable Insert Cat. No.	Ref. Page
DN□□1504□□	B25 ~

DNMG150408N-GE

Holder

Cat. No.	Previous Cat. No.	Stock	Overhang LF	Fig	Dimensions (mm)					
					Clamp Set	Shim	Shim Screw	Wrench for Shim	Wrench	
HSK63TH-DDNN N-H15	H63A-WH-DDNN N-H15		100	1	SCP-2	5.0	DNS1504	BFTX0409N	TRX15(*)	LH040
HSK63TH-DDNN N-L15	H63A-WH-DDNN N-L15		140	1						

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **IC C48**

General External Turning and Profiling
Double Clamp

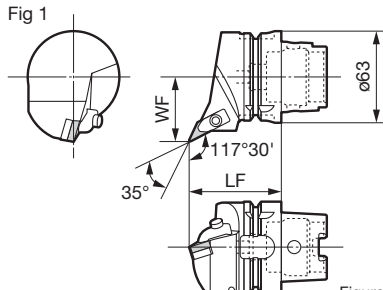
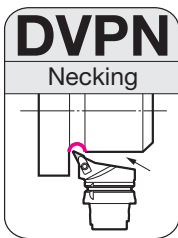


Figure shows right hand (R) tool.

Insert

(Representative example)

Applicable Insert Cat. No.	Ref. Page
VN□□1604□□	B60 ~

VNMG 160408N-GE

Holder

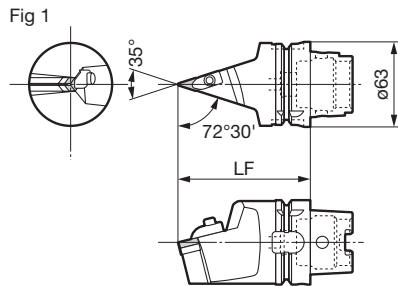
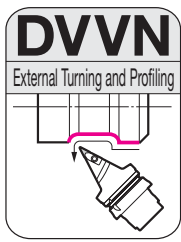
Cat. No.	Previous Cat. No.	Stock		Overhang LF	Cutting Edge WF	Fig	Dimensions (mm)					
		R	L				Clamp Set	Shim	Shim Screw	Wrench for Shim	Wrench	
HSK63TH-DVPN R/L-DX16	H63A-WH-DVPN R/L-DX16			65	45	1	SCP-4	5.0	VNS1604	BFTX0307N	TRX10(*)	LH040

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **IC C48**

HSK Tooling System

General External Turning and Profiling
Double Clamp



Insert

Applicable Insert Cat. No.	Ref. Page
VN□□1604○○	B60 ~

(Representative example)
VNMGM 160408N-GE

Holder

Parts

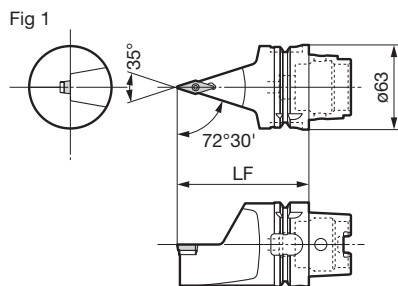
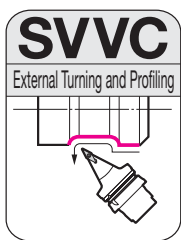
Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock	Overhang		Fig	Parts					
			LF	Fig		Clamp Set	Shim	Shim Screw	Wrench for Shim	Wrench	
HSK63TH-DVWN N-H16	H63A-WH-DVWN N-H16		100	1	1	SCP-4	5.0	VNS1604	BFTX0307N	TRX10(*)	LH040

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **C48**

General External Turning and Profiling
Screw-on



Insert

Applicable Insert Cat. No.	Ref. Page
VC□□1604○○	B122 ~

(Representative example)
VCMT160404N-SU

Holder

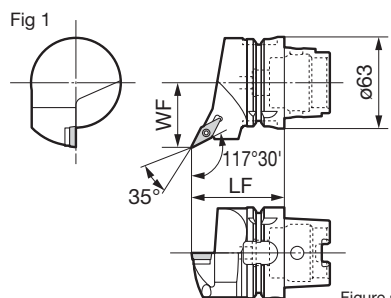
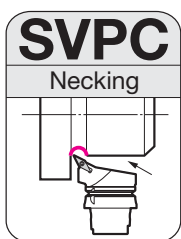
Parts

Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock	Overhang		Fig	Parts					
			LF	Fig		Pin	Nut	Shim	Flat Insert Screw	Wrench for Shim	Wrench
HSK63TH-SVVC N-H16	H63A-WH-SVVCN-H16		100	1	1	VP25	CPV33N	SVP32	BFTX03508	TRX10(*)	LH025
HSK63TH-SVVC N-L16	H63A-WH-SVVCN-L16		140	1	1						

*Wrench for shim is sold separately from the main body.

General External Turning and Profiling
Screw-on



Insert

Applicable Insert Cat. No.	Ref. Page
VC□□1604○○	B122 ~

(Representative example)
VCMT160404N-SU

Holder

Parts

Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock		Overhang		Cutting Edge	Fig	Parts					
		R	L	LF	WF			Pin	Nut	Shim	Flat Insert Screw	Wrench for Shim	Wrench
HSK63TH-SVPC R/L-DX16	H63A-WH-SVPC-L-DX16			65	45	1	1	VP20	CPV33N	SVP32	BFTX03508	TRX10(*)	LH025

*Wrench for shim is sold separately from the main body.

Figure shows right hand (R) tool.

Recommended Tightening Torque (N-m)

HSK Tooling System

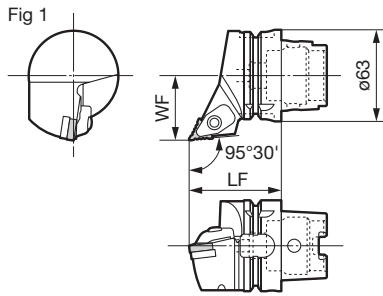
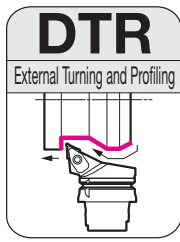
General External Turning and Profiling
Double Clamp

Tooling

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SumiT **T-REX**

Insert

Applicable Insert Cat. No.		Ref. Page	(Representative example)
TRM551700	C18		
			TRM551708-LU

Holder

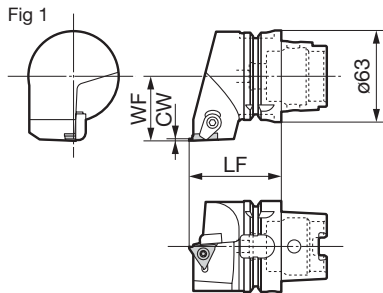
Parts

Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock	Overhang		Cutting Edge	Fig	Parts									
			LF	WF			Clamp Plate	Spring	Cap Screw	N-m	Shim	Shim Screw	Wrench	Wrench for Shim		
HSK63TH-DTR55C R-DX17	H63A-WH-DTR55C R-DX17		65	45	1	TRCP3	S-SP4-20	BX0520	3.5 to 4.5	TRW5505	BFTX0307N	TSW040	TRX10(*)			

*Wrench for shim is sold separately from the main body.
Refer to TRM series inserts on C18 for applicable inserts.

External Grooving
Double Clamp



Insert

Applicable Insert Cat. No.		Ref. Page	(Representative example)
TGAR40000	F6 to F7		
TGAR4000BF	F8		TGAR4150

Holder

Parts

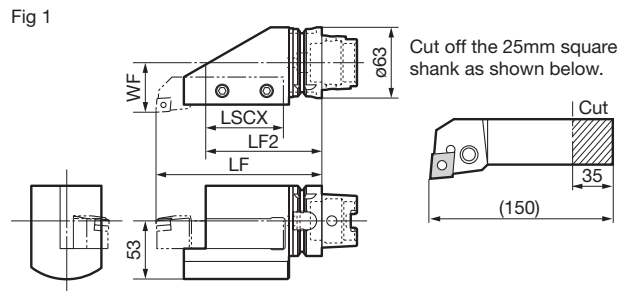
Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock	Overhang		Cutting Edge	Width of Cut	Group No.	Fig	Parts					
			LF	WF					CW	Flat Insert Screw	Clamp Plate	Double Screw	Wrench	Wrench
HSK63TH-GWC R-DX412	H63A-WH-GWC R-DX412		65	45	1.25 to 1.45	2	1	BFTX0511N	5.0	CCM8UL	WB8-22T	TRX20	LT27	
HSK63TH-GWC R-DX415	H63A-WH-GWC R-DX415		65	45	1.50 to 2.30	3	1							
HSK63TH-GWC R-DX425	H63A-WH-GWC R-DX425		65	45	2.50 to 4.80	4	1							

Refer to TGA series insert group numbers on F6, F7 and F8 for applicable inserts. Select applicable inserts for the holders by using matching group numbers.

HSK Tooling System

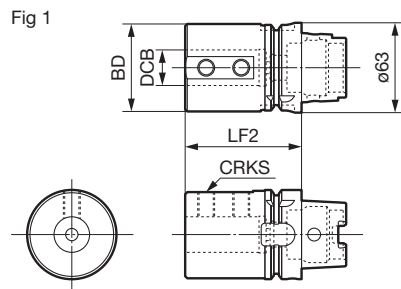
Square Shank Holder



Holder

Cat. No.	Previous Cat. No.	Stock	Overhang				Clamping Length	Cutting Edge	Fig	Parts	
			LF	LF2	LSCX	WF				Set Screw	Wrench
HSK63TH-S2525 R-105	H63A-WH-S2525 R-105		150	105	70	45	1	BTD0809	LH040		

Holder for Boring Bar



Holder

Cat. No.	Previous Cat. No.	Stock	Shank Dia.		Body Dia.	Min. Clamping Length	Screw	Fig	Parts	
			DCB	BD					LF2	CRKS
HSK63TH-C08-65	H63A-WH-C08-65		8	28	65	M8	1	BTD0809	LH040	
HSK63TH-C10-70	H63A-WH-C10-70		10	35	70	M8	1	BTD0812		
HSK63TH-C12-70	H63A-WH-C12-70		12	42	70	M8	1	BTD1015	LH050	
HSK63TH-C16-75	H63A-WH-C16-75		16	48	75	M10	1			
HSK63TH-C20-75	H63A-WH-C20-75		20	52	75	M10	1	BTD1218	LH060	
HSK63TH-C25-83	H63A-WH-C25-83		25	62	83	M12	1			
HSK63TH-C32-87	H63A-WH-C32-87		32	62	87	M12	1	BTD1215	LH060	
HSK63TH-C40-97	H63A-WH-C40-97		40	65	97	M16	1			BTD1610

Cut the boring bar to fit.

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SumiPolygon

Tooling

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Tooling

Cartridges



■ Features

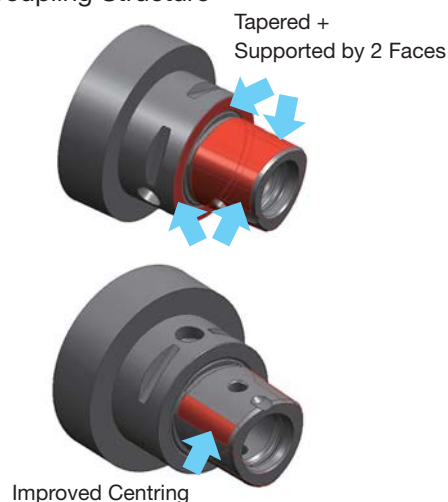
SumiPolygon is a keyless coupling with a characteristic polygonal shape, which bear cutting torque evenly on three surfaces, providing high rigidity and high indexing accuracy.

For support with non-standard design specifications, contact us directly.

■ Features

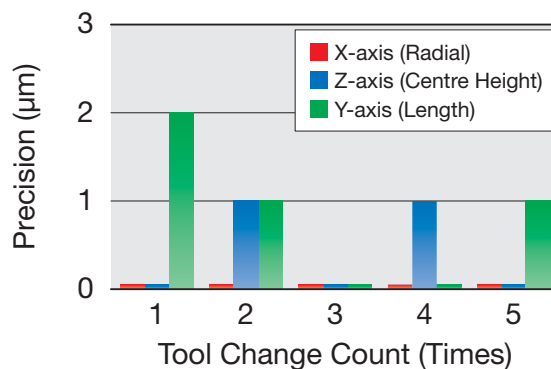
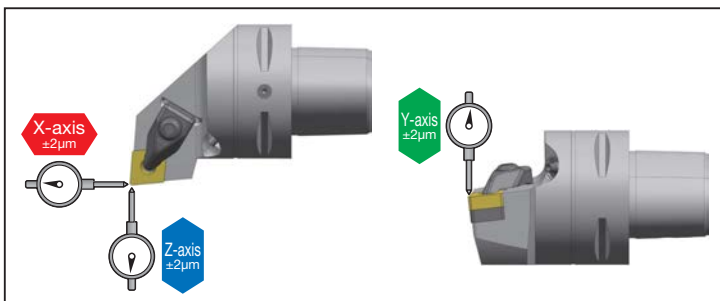
- Sizes
 - Supports shank sizes PSC32 (DCSFMS = 32mm) through PSC80 (DCSFMS = 80mm)
- High Rigidity and High Precision
 - 1/20 polygon tapered shape supported on 2 faces for high rigidity
 - Keyless coupling distributes cutting torque uniformly to 3 faces, reducing fluctuations in cutting edge height
 - Repeatability when tools are changed is within $\pm 2\mu\text{m}$ on all 3 axes
- Reduced Tool Change Time
 - No need to change inserts on the machine, so the tool change time is significantly reduced
- Coolant supported (up to 1MPa)

■ Coupling Structure

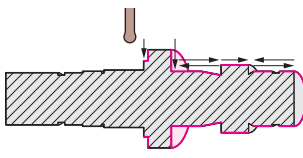
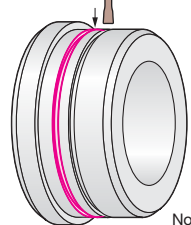
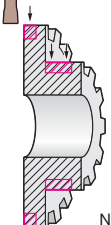


■ Repetitive Accuracy

Repeatability when tools are changed is within $\pm 2\mu\text{m}$ on all 3 axes: X-axis (Radial Direction) Y-axis (Centre Height Direction), Z-axis (Lengthwise Direction)



Application Examples

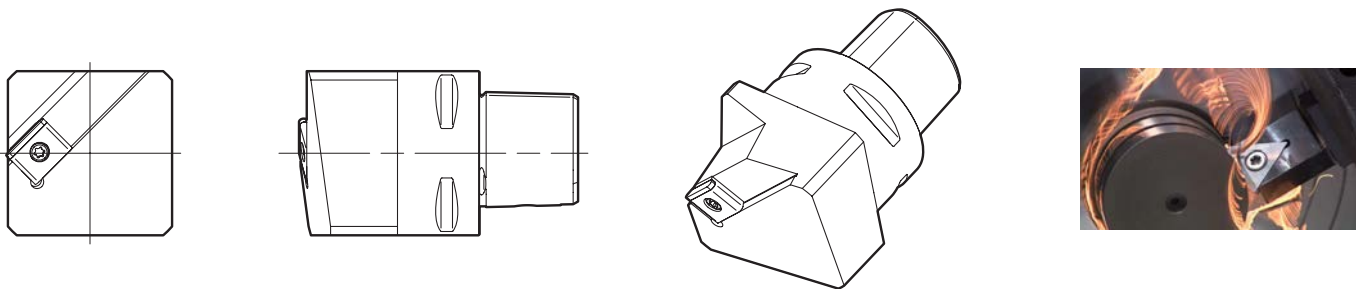
Nickel-Chromium Molybdenum Alloy Output Shaft Grooving	Stainless Steel Socket Joint Grooving	Sintered Alloy Sprocket Grooving/Facing
 <p>No Abnormal Chatter or Vibration</p>	 <p>No Abnormal Chatter or Vibration</p>	 <p>No Abnormal Chatter or Vibration</p>
<p>Holders : PSC40 Special type Insert : GCMN4020-RG (AC425K) Cutting Conditions : $vc = 120$ to 140m/min, $f = 0.2$ to 0.35mm/rev $ap = 2$mm Wet</p>	<p>Holders : PSC40 Special type Insert : GCMN4008-MG (AC530U) Cutting Conditions : $vc = 100$m/min, $f = 0.1$mm/rev $ap = 3$mm Wet</p>	<p>Holders : PSC40 Special type Insert : Special Insert (Diameter 6.35mm) MG (AC530U) Cutting Conditions : Grooving $vc = 180$m/min, $f = 0.16$mm/rev, $ap = 4$mm x 2 passes Wet Facing $vc = 190$m/min, $f = 0.18$mm/rev, $ap = 0.2$mm Wet</p>

Made-to-Order Product Design Example

For support with non-standard design specifications, contact us directly.

Hard Skiving Tool

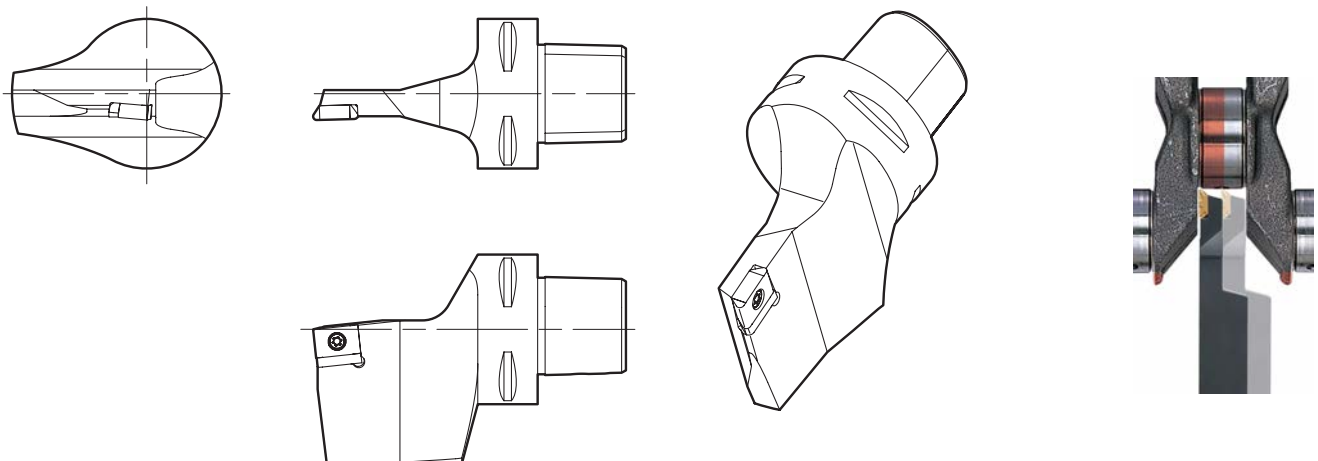
High-efficiency Hardened Steel Machining Tool



SEC-XD series Holders

For details on SEC-XD series Tool Holders (holders and inserts), see the separate "Tools for Machining Automotive Engine Parts" catalogue.

Tools for Crank Shaft Machining



SumiPolygon

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External Turning
Double Clamp

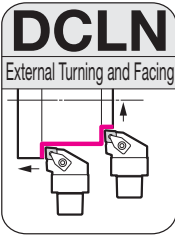


Fig 1

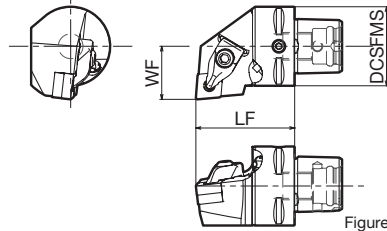


Figure shows right hand (R) tool

Insert

Applicable Insert Cat. No.	Ref. Page
CN□□1204○○	B16 ~

(Representative example)



CNMG120408N-GE

Holder

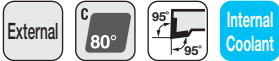
Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge		Overhang	Mounting	Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS	Fig		Clamp Set	N-m	Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
PSC40 DCLN R/L 27050-12	●	●	27	50	40	1									
PSC50 DCLN R/L 35060-12	●	●	35	60	50	1	SCP-2	5.0	CNS1204	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ	
PSC63 DCLN R/L 45065-12	●	●	45	65	63	1									

*Wrench for shim is sold separately from the main body.

Clamp Set Parts C48



External Turning
Lever Lock

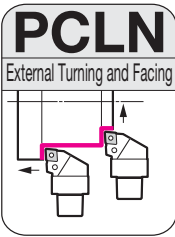


Fig 1

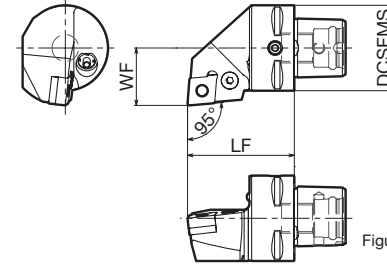
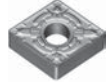


Figure shows right hand (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page
CN□□1204○○	B16 ~

(Representative example)



CNMG120408N-GE

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge		Overhang	Mounting	Fig	Lever Pin	Set Screw	Shim	Shim Retainer	Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS	Fig		Lever Pin	Set Screw	Shim	Shim Retainer	Wrench	Coolant Nozzle
PSC40 PCLN R/L 27050-12	●	●	27	50	40	1							
PSC50 PCLN R/L 35060-12	●	●	35	60	50	1	LCL4	LCS4	LSC42	LSP4	LH030	C4-CNZ	
PSC63 PCLN R/L 45065-12	●	●	45	65	63	1							



External Turning
Double Clamp

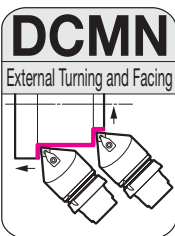
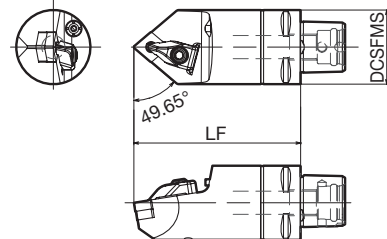


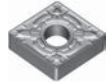
Fig 1



Insert

Applicable Insert Cat. No.	Ref. Page
CN□□1204○○	B16 ~

(Representative example)



CNMG120408N-GE

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Overhang	Mounting	Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	N	LF	DCSFMS		Clamp Set	N-m	Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
PSC40 DCMN N 00090-12	●	90	40	1								
PSC50 DCMN N 00105-12	●	105	50	1	SCP-2	5.0	CNS1204	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ
PSC63 DCMN N 00140-12	●	140	63	1								

*Wrench for shim is sold separately from the main body.

Clamp Set Parts C48

SumiPolygon



External Turning
Double Clamp

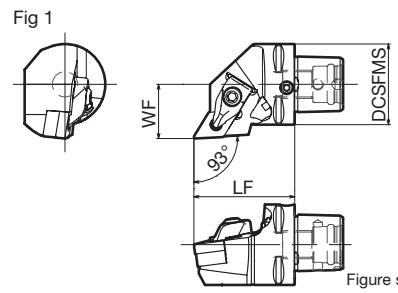
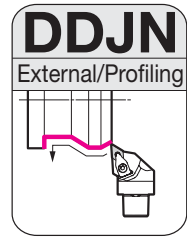


Figure shows right hand (R) tool

Insert

Applicable Insert Cat. No.	Ref. Page
DN□□1504□□	B26 ~

(Representative example)
DNMG150408N-GE

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge		Overhang		Mounting		Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS	Fig	Clamp Set	Shim		Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle			
PSC40 DDJN R/L 27050-15*	●	●	27	50	40	1	SCP-2	5.0	DNS1504	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ			
PSC50 DDJN R/L 35060-15	●	●	35	60	50	1											
PSC63 DDJN R/L 45065-15	●	●	45	65	63	1											
PSC63 DDJN R/L 45130-15	●	●	45	130	63	1											

*Depending on the design, ATC and extension bars may not be usable in some cases. Contact your local sales office prior to use.
*Wrench for shim is sold separately from the main body.

Clamp Set Parts **C48**



External Turning
Lever Lock

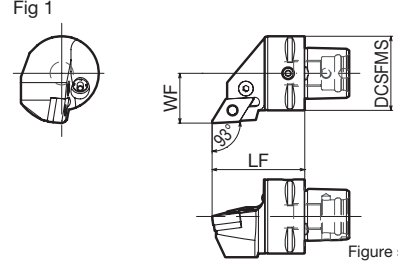
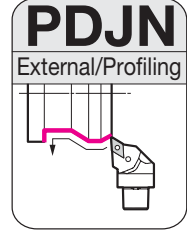


Figure shows right hand (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page
DN□□1504□□	B26 ~

(Representative example)
DNMG150408N-GE

Holder

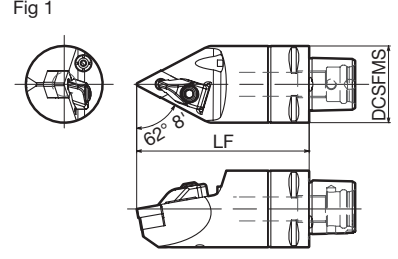
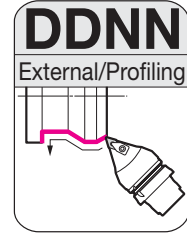
Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge		Overhang		Mounting		Fig	Lever Pin	Set Screw	Shim	Shim Retainer	Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS	Fig	Lever Pin	Set Screw		Shim	Shim Retainer	Wrench	Coolant Nozzle		
PSC40 PDJN R/L 27050-15	●	●	27	50	40	1	LCL4	LCS4	LSD42	LSP4	LH030	C4-CNZ			
PSC50 PDJN R/L 35060-15	●	●	35	60	50	1									
PSC63 PDJN R/L 45065-15	●	●	45	65	63	1									



External Turning
Double Clamp



Insert

Applicable Insert Cat. No.	Ref. Page
DN□□1504□□	B26 ~

(Representative example)
DNMG150408N-GE

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Overhang	Mounting	Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	N	LF	DCSFMS		Clamp Set	N-m	Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
PSC40 DDNN N 00090-15	●	90	40	1	SCP-2	5.0	DNS1504	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ
PSC50 DDNN N 00090-15	●	90	50	1								
PSC63 DDNN N 00125-15	●	125	50	1								
PSC63 DDNN N 00100-15	●	100	63	1								
PSC63 DDNN N 00140-15	●	140	63	1								

*Wrench for shim is sold separately from the main body.

Clamp Set Parts **C48**

Recommended Tightening Torque (N-m)

SumiPolygon

Tooling

G

Tooling

Cartridges



External Turning
Double Clamp



Fig 1

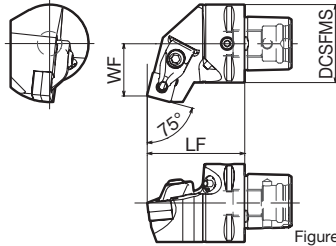



Figure shows right hand (R) tool.

Insert

















Applicable Insert Cat. No.	Ref. Page	
SN□□1204□□	B35 ~	

(Representative example)
SNMG120404N-GU

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge	Overhang	Mounting	Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS									
PSC40 DSBN R/L 27050-12	●	●	27	50	40	1								
PSC50 DSBN R/L 35060-12	●	●	35	60	50	1	SCP-2	5.0	SNS1204	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ
PSC63 DSBN R/L 45065-12	●	●	45	65	63	1								

*Wrench for shim is sold separately from the main body.

Clamp Set Parts 



External Turning
Double Clamp

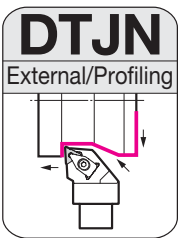


Fig 1

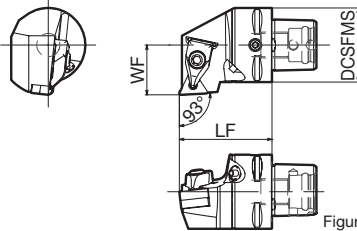



Figure shows right hand (R) tool.

Insert

















Applicable Insert Cat. No.	Ref. Page	
TN□□1604□□	B50 ~	

(Representative example)
TNMG160404N-GU


Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge	Overhang	Mounting	Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS									
PSC40 DTJN R/L 27050-16	●	●	27	50	40	1								
PSC50 DTJN R/L 35060-16	●	●	35	60	50	1	SCP-1	5.0	TNS1604	BFTX0307N	TRX10(*)	LH040	LH025	C4-CNZ

*Wrench for shim is sold separately from the main body.

Clamp Set Parts 

SumiPolygon



Internal Coolant

External Turning
Screw-on

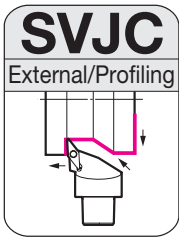


Fig 1

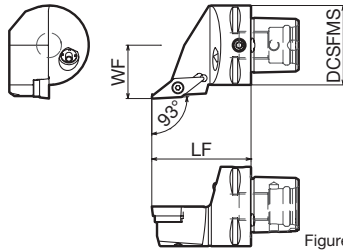



Figure shows right hand (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page	(Representative example)
VC□□1604□□	B122 ~	
VCMT160404N-SU		

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge	Overhang	Mounting	Fig	Pin	Nut	Shim	Flat Insert Screw	Wrench for Shim	Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS		VP20	CPV33N	SVP32	BFTX03508	N·m	LH025	TRX10
PSC40 SVJC R/L 27050-16*	●	●	27	50	40	1	VP20						
PSC50 SVJC R/L 35060-16	●	●	35	60	50	1	VP25						
PSC63 SVJC R/L 45065-16	●	●	45	65	63	1	VP25						

*Depending on the design, ATC and extension bars may not be usable in some cases. Contact your local sales office prior to use.



Internal Coolant

External Turning
Screw-on

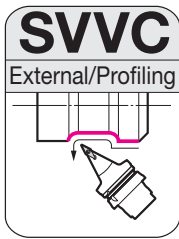
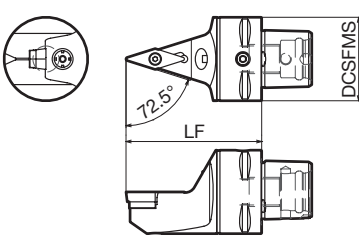



Fig 1



Insert

Applicable Insert Cat. No.	Ref. Page	(Representative example)
VC□□1604□□	B122 ~	
VCMT160404N-SU		

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Overhang	Mounting	Fig	Pin	Nut	Shim	Flat Insert Screw	Wrench for Shim	Wrench	Coolant Nozzle
	N	LF	DCSFMS		VP20	CPV33N	SVP32	BFTX03508	N·m	LH025	TRX10
PSC40 SVVC N 00065-16	●	65	40	1	VP20						
PSC50 SVVC N 00090-16	●	90	50	1	VP25						
PSC50 SVVC N 00125-16	●	125	50	1	VP25						
PSC63 SVVC N 00100-16	●	100	63	1	VP25						
PSC63 SVVC N 00140-16	●	140	63	1	VP25						



Internal Coolant

External Turning
Double Clamp

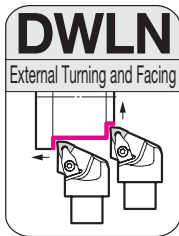


Fig 1

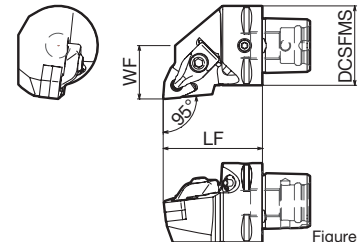



Figure shows right hand (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page	(Representative example)
WN□□0804□□	B65 ~	
WNMG080404N-GU		


Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge	Overhang	Mounting	Fig	Clamp Set	Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench	Coolant Nozzle
	R	L	WF	LF	DCSFMS		SCP-2	WNS0804	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ
PSC40 DWLN R/L 27050-08	●	●	27	50	40	1	SCP-2	WNS0804	BFTX0409N	TRX15(*)	LH040	LH025	C4-CNZ

*Wrench for shim is sold separately from the main body.

Clamp Set Parts  C48

 Recommended Tightening Torque (N·m)

SumiPolygon

Tooling

G

Tooling

Cartridges



Internal Boring
Lever Lock

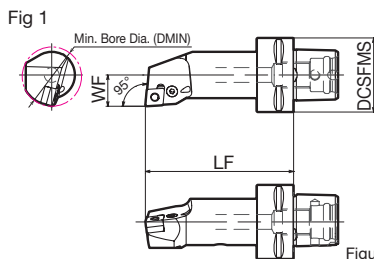
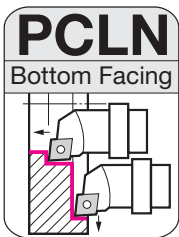



Figure shows right hand (R) tool.






Insert

Applicable Insert Cat. No.	Ref. Page	(Representative example)
CN□□0903□□	B14	
		CNMG090308N-GU

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia. DMIN	Cutting Edge WF	Overhang LF	Mounting DCSFMS	Fig	Lever Pin	Set Screw	Shim	Shim Retainer	Wrench
	R	L										
PSC40 PCLN R/L 17080-09	●	●	32	17	80	40	1	LCL3	LCS3	LSC32	LSP3	LH025



Internal Boring
Double Clamp

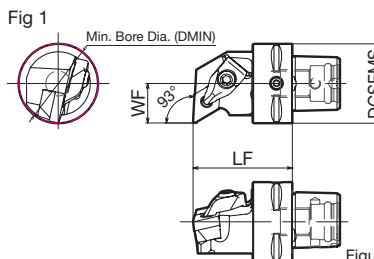
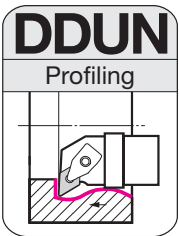



Figure shows right hand (R) tool.










Insert

Applicable Insert Cat. No.	Ref. Page	(Representative example)
DN□□1504□□	B26 ~	
		DNMG150408N-GE


Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia. DMIN	Cutting Edge WF	Overhang LF	Mounting DCSFMS	Fig	Clamp Set		Shim	Shim Screw	Wrench for Shim	Top Hex Wrench	Bottom Hex Wrench
	R	L												
PSC40 DDUN R/L 20050-15	●	●	40	20	50	40	1			DNS1504B	BFTX0409N	TRX15(*)	LH040	LH025
PSC40 DDUN R/L 20070-15	●	●	40	20	70	40	1	SCP-2	5.0	DNS1504B	BFTX0409N	TRX15(*)	LH040	LH025
PSC40 DDUN R/L 27090-15	●	●	54	27	90	40	1							

*Wrench for shim is sold separately from the main body.

Clamp Set Parts  **E82**



Internal Boring
Lever Lock

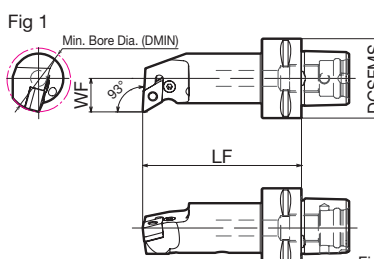
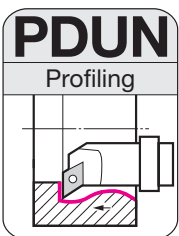



Figure shows right hand (R) tool.






Insert

Applicable Insert Cat. No.	Ref. Page	(Representative example)
DN□□1104□□	B25 ~	
		DNMG150408N-GE

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia. DMIN	Cutting Edge WF	Overhang LF	Mounting DCSFMS	Fig	Lever Pin	Set Screw	Shim	Shim Retainer	Wrench
	R	L										
PSC40 PDUN R/L 17080-11	●	●	32	17	80	40	1	LCL3	LCS3	LSD317	LSP3	LH025

SumiPolygon

Internal Internal Coolant

Internal Boring
Lever Lock

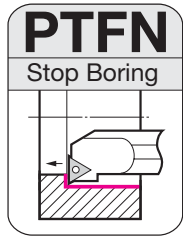


Fig 1

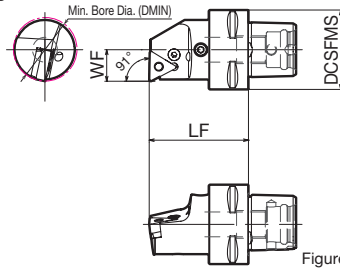


Figure shows right hand (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page	
TN□□1604□□	B50 ~	

(Representative example)
TNMG160404N-GU

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia. DMIN	Cutting Edge WF	Overhang LF	Mounting DCSFMS	Fig	Lever Pin	Set Screw	Shim	Shim Retainer	Wrench
	R	L										
PSC40 PTFN R/L 16050-16	●	●	32	16	50	40	1	LCL3	LCS3	LST317CA	LSP3	LH025

External

External Threading
Screw-on

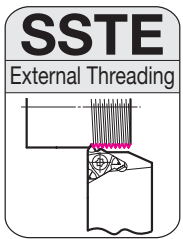
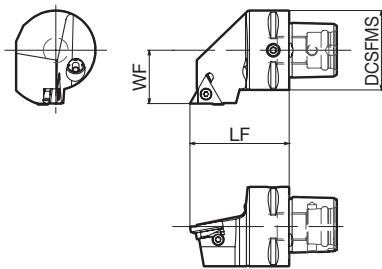


Fig 1



Insert

Applicable Insert Cat. No.	Ref. Page	
16ER□□□□CB	F104	

(Representative example)
16ERA60-CB

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Cutting Edge WF	Overhang LF	Mounting DCSFMS	Fig	Shim	Shim Retainer	Flat Insert Screw	Wrench for Shim	Wrench	Flat Washer	Coolant Nozzle	
PSC40 SSTE R 27050-16ER	●	27	50	40	1								
PSC50 SSTE R 35060-16ER	●	35	60	50	1	YE3	BX0304	BFTX0312N	2.0	LH025(*)	TRX10	PW3	C4-CNZ
PSC63 SSTE R 45065-16ER	●	45	65	63	1								

*Wrench for shim is sold separately from the main body.

Clamp Set Parts

Applicable Clamp Set Cat. No.	Spring	Cap Screw		
		Stock	Stock	
SCP-1	CSP08	●	CP-M5-20-1	5.0
SCP-2	CSP08	●	CP-M5-20-1	

CP-M5-20-1 can also be fastened from the other end of the screw.

SumiPolygon



SumiPolygon Cassette for External Grooving
Clamp-on

Tooling

G

Tooling

Cartridges



Fig 1

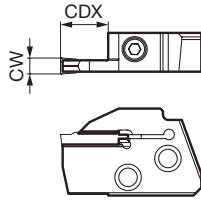


Figure shows right-handed (R) tool.

Insert

Applicable Insert Cat. No.	Ref. Page
GC□□○○○○-□□	F51

(Representative example)
GCMN2002-GG

SumiPolygon GND series Cassette

Parts

Dimensions (mm)

Cat. No.	Stock		Width of Cut		Maximum Groove Depth	Applicable Holder	Fig	Cap Screw		Wrench
	R	L	CW	CDX	CDX			Cap Screw	N·m	Wrench
GNDCM R/L 212	●	●	2	12			1			
GNDCM R/L 312	●	●	3	12			1			
GNDCM R/L 418	●	●	4	18		PSC○○GND○○○○00 R/L	1	BX0512	5.0	LH040
GNDCM R/L 518	●	●	5	18		PSC○○GND○○○○90 R/L	1			
GNDCM R/L 618	●	●	6	18			1			

Select holders and inserts with matching width of cut (CW). Refer to F51 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to F19.

Identification Code Cassette

GNDCM R 2 12

Series Code Feed Direction Width of Cut (mm) Maximum Groove Depth (mm)

Fig 1

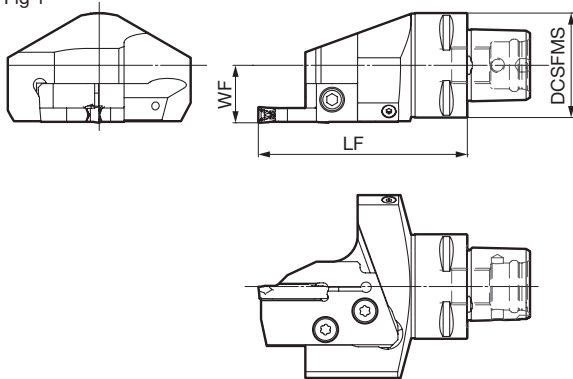


Figure shows right-handed (R) tool.

Fig 1

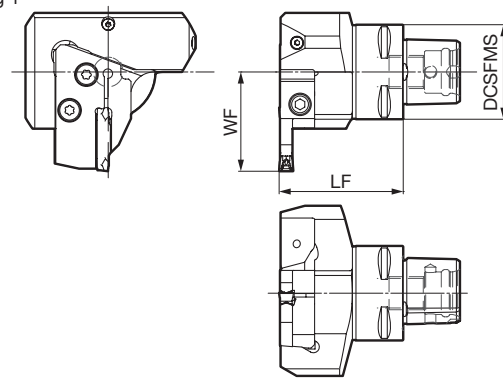


Figure shows right-handed (R) tool.

SumiPolygon GND series Tool Holder (Straight) Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge	Overhang	Mounting	Applicable Cassettes	Fig	Flat Head Screw		Wrench
	R	L	WF	LF	DCS-FMS			Flat Head Screw	N·m	Wrench
PSC40 GND 228000 R/L	●	●	22	80	40		1			
PSC50 GND 278000 R/L	●	●	27	80	50	GNDCM R/LOCO	1	BFTX0619N	7.5	TT25
PSC63 GND 338000 R/L	●	●	33	80	63		1			

Inserts and cassettes are not included with the holders.

SumiPolygon GND series Tool Holder (L type) Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge	Overhang	Mounting	Applicable Cassettes	Fig	Flat Head Screw		Wrench
	R	L	WF	LF	DCS-FMS			Flat Head Screw	N·m	Wrench
PSC40 GND 425290 R/L	●	●	42	52.5	40		1			
PSC50 GND 475590 R/L	●	●	47	55	50	GNDCM L/ROCO	1	BFTX0619N	7.5	TT25
PSC63 GND 545790 R/L	●	●	54	57	63		1			

Inserts and cassettes are not included with the holders.

Identification Code Holder

PSC40 GND 42 52 90 R

SumiPolygon Shank Size Series Code: GND series WF Dimension (mm) LF Dimension (mm) 00: Straight Feed Direction 90: L type

Square Shank Holder

Adapter

Fig 1

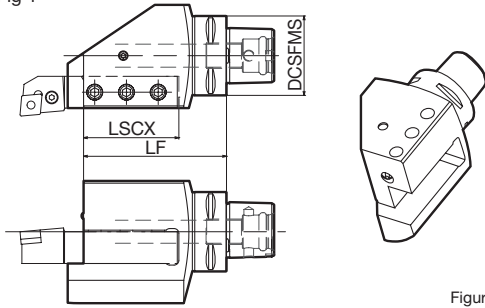


Figure shows right hand (R) tool.

Holder

Parts

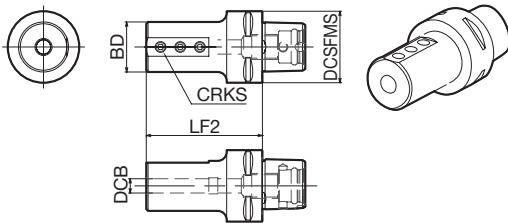
Dimensions (mm)

Cat. No.	Stock		Cutting Edge LSCX	Overhang LF	Mounting DCSFMS	Fig	Dimensions (mm)		
	R	L					Set Screw BTD1012	Wrench LH050	Coolant Nozzle C4-CNZ
PSC50 S2020 R/L -90	●	●	60	90	50	1			
PSC63 S2525 R/L -100	●	●	70	100	63	1			

Holder for Boring Bar

Adapter

Fig 1



Holder

Parts

Dimensions (mm)

Cat. No.	Stock N	Cutting Edge BD	Overhang LF2	Shank Dia. DCB	Screw CRKS	Mounting DCSFMS	Fig	Dimensions (mm)	
								Set Screw BTD0609 / BTD0812 / BTD1012	Wrench LH030 / LH040 / LH050
PSC40 C08-65	●	28	65	8	M6	40	1	BTD0609	LH030
PSC40 C10-70	●	35	70	10	M8	40	1	BTD0812	LH040
PSC40 C12-70	●	42	70	12	M10	40	1		
PSC40 C16-75	●	48	75	16	M10	40	1		
PSC40 C20-75	●	52	75	20	M10	40	1	BTD1012	LH050
PSC40 C25-83	●	62	83	25	M10	40	1		
PSC40 C32-87	●	62	87	32	M10	40	1		
PSC50 C08-65	●	28	65	8	M6	50	1	BTD0609	LH030
PSC50 C10-70	●	35	70	10	M8	50	1	BTD0812	LH040
PSC50 C12-70	●	42	70	12	M10	50	1		
PSC50 C16-75	●	48	75	16	M10	50	1		
PSC50 C20-75	●	52	75	20	M10	50	1		
PSC50 C25-83	●	62	83	25	M10	50	1		
PSC50 C32-87	●	62	87	32	M10	50	1	BTD1012	LH050
PSC63 C12-70	●	42	70	12	M10	63	1		
PSC63 C16-75	●	48	75	16	M10	63	1		
PSC63 C20-75	●	52	75	20	M10	63	1		

Modular Taper Shank/HSK Tooling System

*Catalogue numbers have been changed due to the establishment of ISO standard ISO 26622-1:2008.

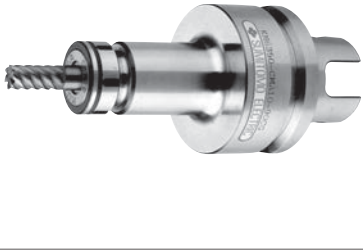
Tooling

G

Tooling

Cartridges

Modular Taper Shank

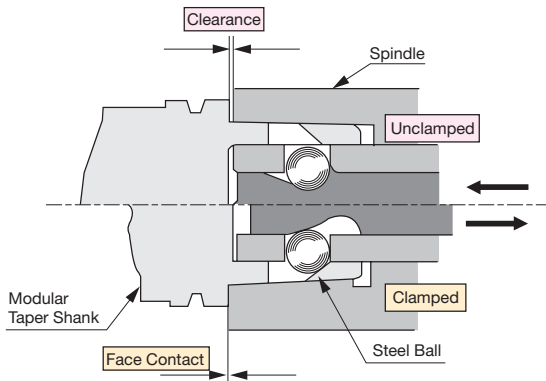


This has widespread use throughout Europe and the United States.

Features

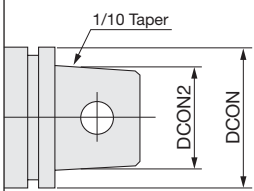
- Tool shape suitable for high-speed rotations.
- Achieving high-precision machining by increasing rigidity at high-speed rotations with two locating faces on the taper and flange, along with an excellent clamping mechanism.
- Hollow and short taper reduces weight and shortens ATC time when changing tools.

Mechanism

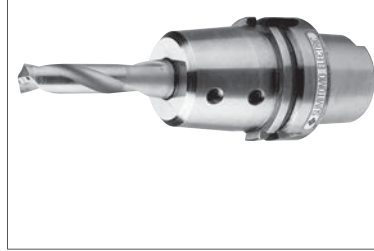


Size

Cat. No.	Mounting Dia.	
	DCON	DCON2
TS32	32	24
TS40	40	30
TS50	50	40
TS63	63	50
TS80	80	64



HSK Tooling System

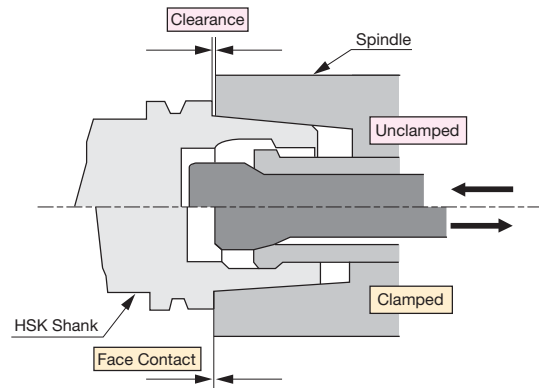


This hollow shank was developed by RWTH Aachen University and the German Industry Association, and has been adopted as an ISO standard.

Feature

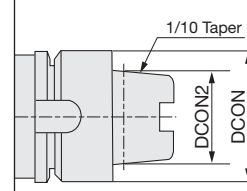
- DIN standard with 2 locating faces.
- Two locating faces on the taper and flange for high precision and high rigidity machining.
- Hollow and short taper reduces weight and allows for high-speed ATC.

Mechanism

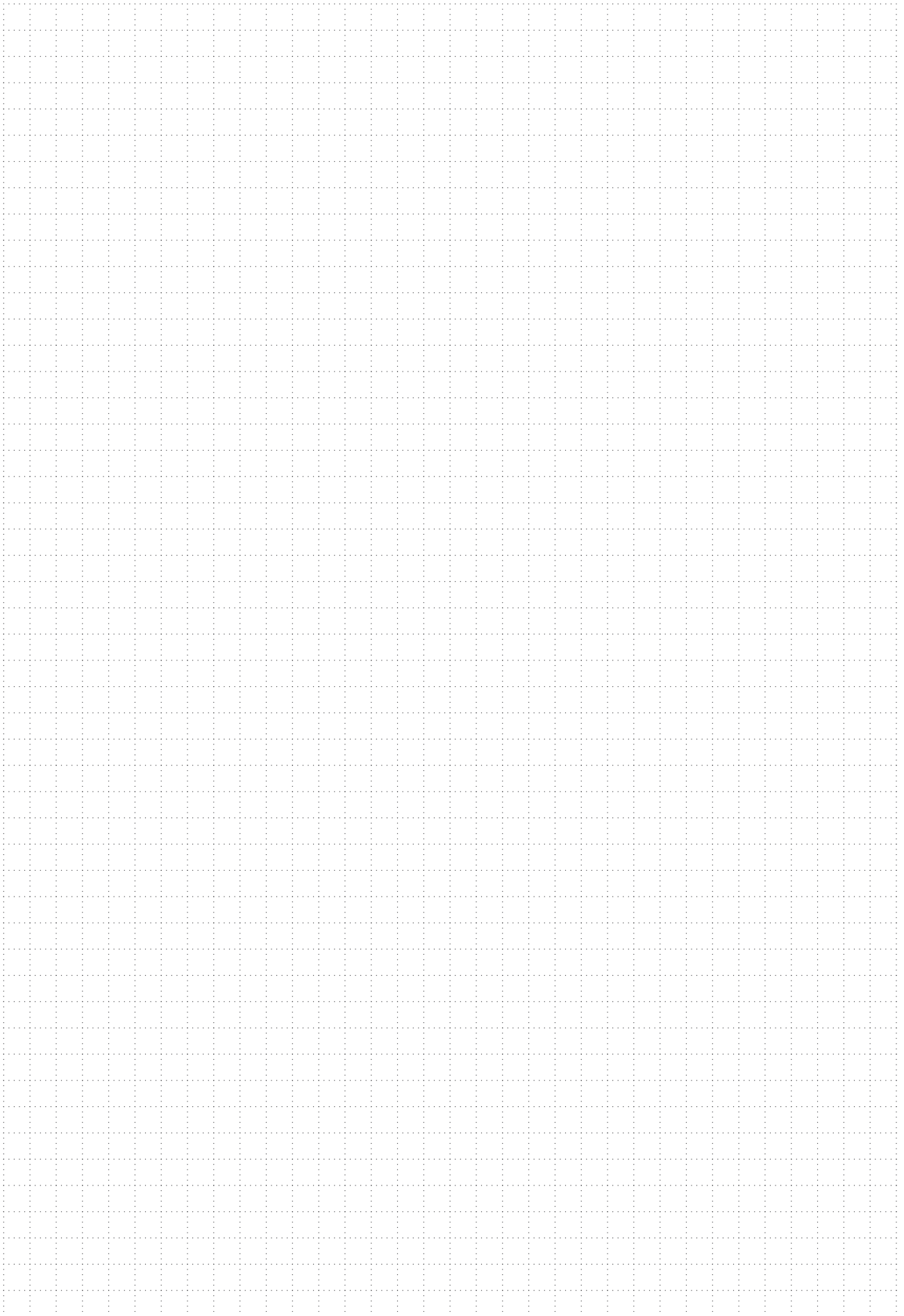


Size

Cat. No.	Mounting Dia.	
	DCON	DCON2
HSK A32	32	24
HSK A40	40	30
HSK A50	50	38
HSK A63	63	48
HSK A80	80	60
HSK A100	100	75



MEMO



Smart Damper™

Tooling



Tooling

Cartridges



■ Features

Smart Damper™ arbors are equipped with a special anti-vibration mechanism that has both counter damping and friction damping effects.

This suppresses chattering when machining with a large overhang, to prevent reduction of machined surface quality and tool life.

Expanded Internal Boring Lineup Smart Damper™ for Internal Boring E10



- Used in combination with a basic holder and damper head.
- Basic holder lineup supports **BBT50 (BIG-PLUS™)** Arbor and **HSK-A100** arbors in different lengths.
- Through-centre coolant compatible.

Face Milling Example with 347mm Overhang

Arbor	Results	
	Machined Surface	Vibration
Competitor's Arbor No Anti-Vibration Mechanism		
Smart Damper™ With Anti-Vibration Mechanism		

Suppress chatter by using a Smart Damper™!!

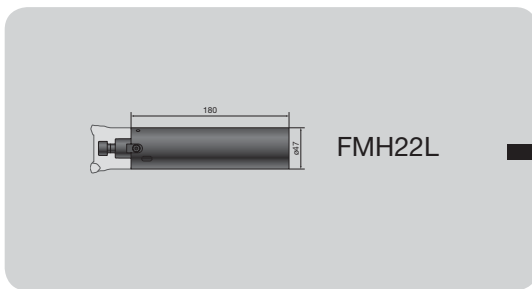
Work Material: S50C
Tool: Tool Diameter ø63 (5-teeth)
Cutting Conditions: vc = 100m/min, fz = 1.0mm/t, ap = 1.4mm, ae = 30mm

■ Smart Damper™ Combination Example (BBT50 type)

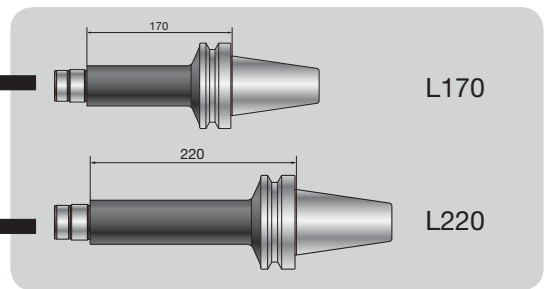
Damper Head

Basic Holder

ø47 type

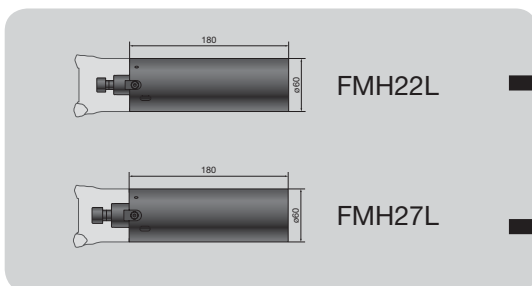


S-SDF3647FMH□□L180

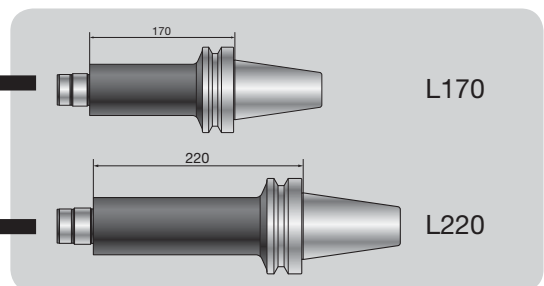


S-SDF3647L□□□-BBT50

ø60 type



S-SDF3660FMH□□L180



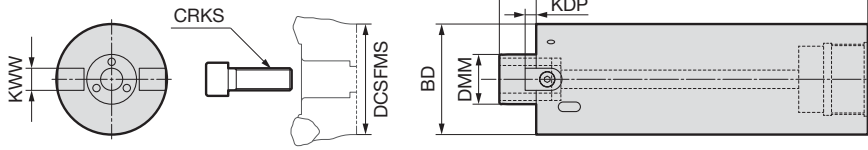
S-SDF3660L□□□-BBT50

*Smart Damper™ and BIG-PLUS™ are registered trademarks of BIG DAISHOWA Co., Ltd.

Smart Damper™

Damper Head

Fig 1



Damper Head

Dimensions (mm)

Cat. No.	Stock	Connecting Dia. DMM	Body Dia. BD	Overall Length LF	Connection Length LS	Keyway Width KWW	Keyway Depth KDP	Screw CRKS	Weight (kg)	Mounting DCSFMS	Fig
S-SDF3647FMH22L180	●	22	47	180	18	10	5	M10	3.0	36 up	1
S-SDF3660FMH22L180	●	22	60	180	18	10	5	M10	4.5	49 up	1
S-SDF3660FMH27L180	●	27	60	180	20	12	6	M12	4.5	46 up	1

Refer to the user's manual for methods of mounting to basic tool holders.

The cutter is not included in the weight.

A hook wrench and clamp bolt for tightening the cutter are included.

DCSFMS shows the cutter mounting surface diameter. Take care if the mounting surface diameter is small relative to the cutter outer diameter.

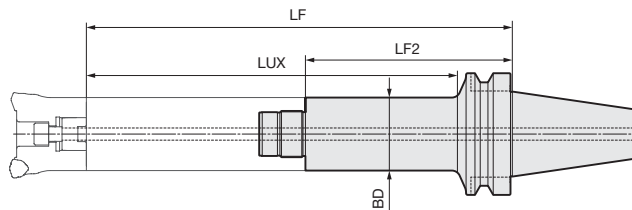
Identification Code

S-SDF36 47 FMH 22 L180

Connection Method Body Dia. Series Code Connecting Dia. Overall Length

Basic Holder BBT50 type

Fig 1



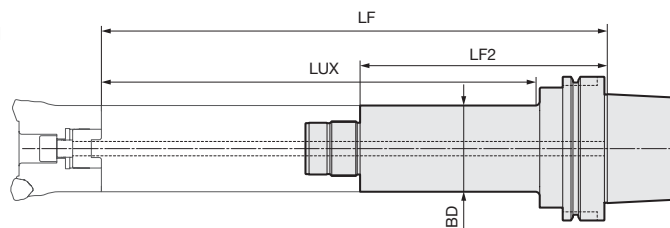
Holder (BBT50)

Dimensions (mm)

Cat. No.	Stock	Body Dia. BD	Overhang LF	Min. Clamping Length LF2	Effective Overhang LUX	Weight (kg)	Applicable Damper Head	Fig
S-SDF3647L170-BBT50	●	47	350	170	297	5.6	S-SDF3647FMH00LO00	1
S-SDF3647L220-BBT50	●	47	400	220	347	6.3	S-SDF3647FMH00LO00	1
S-SDF3660L170-BBT50	●	60	350	170	297	6.7	S-SDF3660FMH00LO00	1
S-SDF3660L220-BBT50	●	60	400	220	347	7.8	S-SDF3660FMH00LO00	1

Basic Holder HSK-A100 type

Fig 1



Holder (HSK-A100)

Dimensions (mm)

Cat. No.	Stock	Body Dia. BD	Overhang LF	Min. Clamping Length LF2	Effective Overhang LUX	Weight (kg)	Applicable Damper Head	Fig
S-SDF3647L170-HSKA100	●	47	350	170	310	4.4	S-SDF3647FMH00LO00	1
S-SDF3647L220-HSKA100	●	47	400	220	360	5.0	S-SDF3647FMH00LO00	1
S-SDF3660L170-HSKA100	●	60	350	170	310	5.5	S-SDF3660FMH00LO00	1
S-SDF3660L220-HSKA100	●	60	400	220	360	6.0	S-SDF3660FMH00LO00	1

Identification Code

S-SDF36 47 L170 - BBT50

Connection Method Body Dia. Min. Clamping Length Shank type

Note: The values in red have been changed from those in the 2021-2022 General Catalogue.

*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

ABS System

Tooling

G

Tooling

Cartridges



■ Features

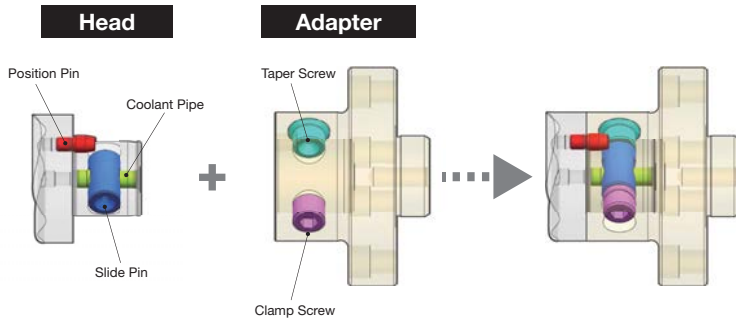
The IGETALLOY ABS system has received high acclamation worldwide for its strong clamping force, high rigidity and high precision. ABS is one of the quick change systems for round tools, which increases our customers' productivity in special tooling applications, while simplifying and standardising these special tools.

The SBA system is also available. For details, please contact us.

■ Applications

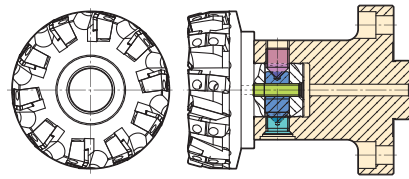
- The clamp screw, taper screw and slide pin act as a wedge for strong holding force.
- High rigidity, high precision. High indexing accuracy during tool changes.
- A wide array of sizes are available to cover a variety of tools.
- Easy handling allows short tool change times.
- Allows coolant supply from inside the spindle.
- Strong clamping force even with small diameters.

■ Clamp Mechanism

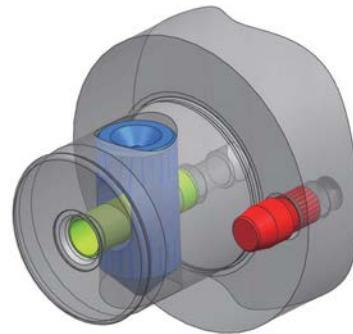
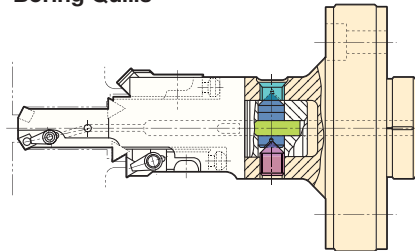


■ ABS System Design Examples

Indexable Cutters



Boring Quills



■ ABS Standard (Head)

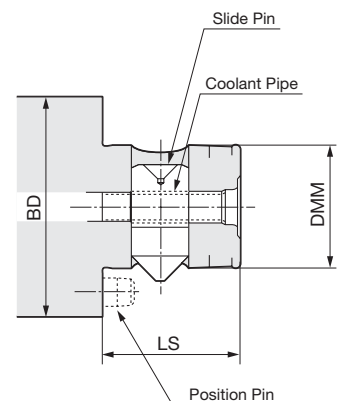
Head Dimensions

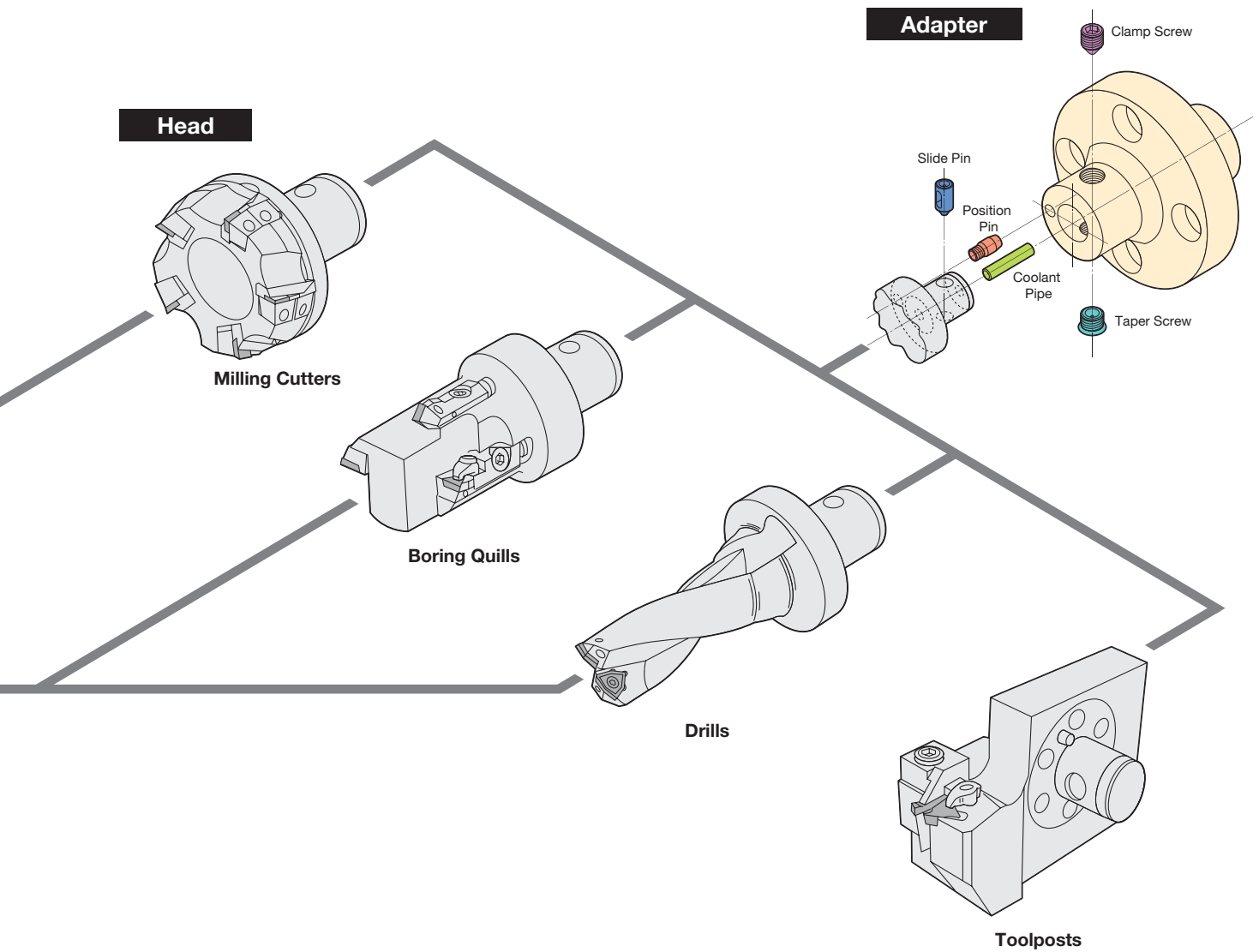
Dimensions (mm)

Cat. No.	Dimensions (mm)		
	Body Dia. BD	Shank Dia. DMM	Shank Length LS
ABS 25M	25	13	20
ABS 32M	32	16	23
ABS 40M	40	20	26
ABS 50M	50	28	31
ABS 63M	63	34	38
ABS 80M	80	46	43

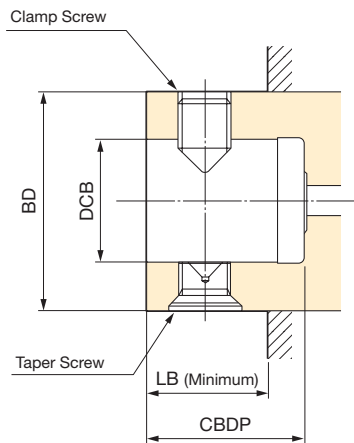
Spare Parts

Set Cat. No.	Slide Pin	Position Pin	Coolant Pipe
ABS 25-ES-M3	ABS 25-E3.2	ABS 25-E4	ABS 25-E6
ABS 32-ES-M3	ABS 32-E3.2	ABS 32-E4	ABS 32-E6
ABS 40-ES-M3	ABS 40-E3.2	ABS 40-E4	ABS 40-E6
ABS 50-ES-M3	ABS 50-E3.2	ABS 50-E4	ABS 50-E6
ABS 63-ES-M3	ABS 63-E3.2	ABS 63-E4	ABS 63-E6
ABS 80-ES-M3	ABS 80-E3.2	ABS 80-E4	ABS 80-E6





■ ABS Standard (Adapter)



Adapter Dimensions

Dimensions (mm)

Cat. No.	Body Dia.		Shank Dia.		Shank Length	Min. Clamping Length
	BD	DCB	CBDP	LB		
ABS 25W	25	13	22	13.0		
ABS 32W	32	16	25	16.0		
ABS 40W	40	20	30	18.5		
ABS 50W	50	28	34	22.0		
ABS 63W	63	34	41	28.0		
ABS 80W	80	46	48	34.0		
ABS100W	100	56	58	40.5		
ABS125W	125	70	76	51.0		
ABS160W	160	90	96	53.0		
ABS200W	200	112	116	82.0		

Spare Parts



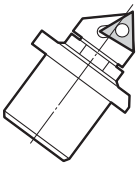
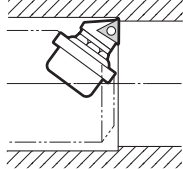
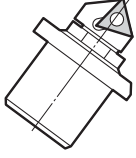
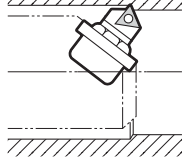
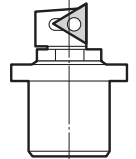
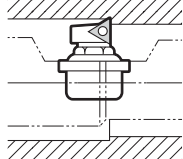
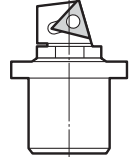
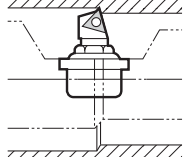
Set Cat. No.	Clamp Screw	Taper Screw
ABS 25-FS-W	ABS 25-F1	ABS 25-F2
ABS 32-FS-W	ABS 32-F1	ABS 32-F2
ABS 40-FS-W	ABS 40-F1	ABS 40-F2
ABS 50-FS-W	ABS 50-F1	ABS 50-F2
ABS 63-FS-W	ABS 63-F1	ABS 63-F2
ABS 80-FS-W	ABS 80-F1	ABS 80-F2
ABS100-FS-W	ABS100-F1	ABS100-F2
ABS125-FS-W	ABS125-F1	ABS125-F2
ABS160-FS-W	ABS160-F1	ABS160-F2
ABS200-FS-W	ABS200-F1	ABS200-F2

SEC-Micro Units

This section introduces an overview of the series.

Refer to the separate "SEC-Cartridge Unit/Micro Unit" catalogue for details on Micro Units (holders, inserts, spare parts) and quill unit seat machining.

Micro Unit Cat. No. by Model/Tooling type

		MUP series			MUN series		
							
Illustrations	Tooling	Cat. No.	Min. Bore Dia. (mm)	Stock	Cat. No.	Min. Bore Dia. (mm)	Stock
		MUP1-A0	25	●	MUN2 -A0	36	
		MUP2-A0	36	●	MUN3 -A0	47	
		MUP3-A0	47	●	MUN3L-A0	54	
		MUP4-A0	73		MUN4 -A0	73	
					MUN4L-A0	78	
		MUP1-A15	25		MUN2 -A15	36	
		MUP2-A15	36		MUN3 -A15	47	
		MUP3-A15	47		MUN3L-A15	54	
		MUP4-A15	73		MUN4 -A15	73	
					MUN4L-A15	78	
		MUP1-V0	25	●	MUN2 -V0	36	
		MUP2-V0	36	●	MUN3 -V0	47	
		MUP3-V0	47	●	MUN3L-V0	54	
		MUP4-V0	73		MUN4 -V0	73	
					MUN4L-V0	78	
		MUP1-V15	25		MUN2 -V15	36	
		MUP2-V15	36		MUN3 -V15	47	
		MUP3-V15	47		MUN3L-V15	54	
		MUP4-V15	73		MUN4 -V15	73	
					MUN4L-V15	78	

*If a left hand unit is required, include "LH" after the catalogue number. (Ex.: MUP1-A0-LH, MUP1-V0-LH)

*Inserts and wrenches are not included with Micro Units.

SEC-Cartridge Units

This section introduces an overview of the series.
Refer to the separate "SEC-Cartridge Unit/Micro Unit" catalogue for details on Micro Units (holders, inserts, spare parts) and quill unit seat machining.

Features of Each Model

Classification	Standard type	MINIT type		ISO type					
	Cat. No.	BU type	MINIT P24 type	MINIT N38 type	SP type/SX type/SC type	CP type	CE type	PN type	
Shape	The most common type of cartridge units		Mini type with good edge sharpness and chip control						
Items									
Clamp Mechanism	Pin Lock	Screw-on	Pin Lock	Screw-on	Clamp-on	Clamp-on	Pin Lock		
Adjustability	Yes	Axial: No Radial: Yes	No (By using shims)	Yes	Yes	Yes	Yes		
Rake Angle	Neg.	Pos.	Neg.	Pos.	Pos.	Pos.	Neg.		
Applicable Insert Relief Angle	0°	11°	0°	11° (SP type) 7° (SX type/SC type)	11°	20°	0°		
Cutting Edge Position	Above centre	Above centre and on centre	Above centre	On Centre	On Centre	On Centre	On Centre		
Min. Bore Dia. (mm)	ø24	ø24	ø38	ø30	ø30	ø30	ø38		

Cartridge Unit Cat. No. (For Triangular Inserts) by Model/Tooling type

() shows the min. bore diameter (mm).

Configuration	BU type	Stock		MINIT P24 type	Stock		MINIT N38 type	Stock		SP type/SX type/SC type	Stock		CP type	Stock		CE type	Stock		PN type	Stock	
		R	L		R	L		R	L		R	L		R	L		R	L		R	L
							MTGN3 R/L(38)	●	●	STGP R/L-10CA(38)	●	●	CTGP R/L10CA(38)	●	●	CTGE R/L10CA(38)			PTGN R/L10CA(38)	●	●
										STGP R/L-12CA(50)	●	●	CTGP R/L12CA(50)	●	●	CTGE R/L12CA(50)			PTGN R/L12CA(50)	●	●
										STGP R/L-16CA(60)	●	●	CTGP R/L16CA(60)	●	●				PTGN R/L16CA(60)	●	●
																			PTGN R/L20CA(70)	●	●
	BU224 R/L(48)	●	●	MTJP22 R/L(24)	●	●	MTJN3 R/L(38)	●	●	STJP R/L-10CA(38)	●	●	CTJP R/L10CA(38)	●	●	CTJE R/L10CA(38)	●	●			
	BU225 R/L(60)	●	●							STJP R/L-12CA(50)	●	●	CTJP R/L12CA(50)	●	●	CTJE R/L12CA(50)	●	●			
< >: MINIT P24										STJP R/L-16CA(55)	●	●	CTJP R/L16CA(55)	●	●						
	BU252 R/L(24)	●	●	MTFP22 R/L(24)	●	●	MTFN3 R/L(38)	●	●	STFP R/L- 8CA(30)	●	●	CTFP R/L 8CA(30)	●	●	CTFE R/L 8CA(30)	●	●	PTFN R/L10CA(38)	●	●
	BU253 R/L(30)	●	●							STFP R/L-10CA(38)	●	●	CTFP R/L10CA(38)	●	●	CTFE R/L10CA(38)	●	●	PTFN R/L12CA(50)	●	●
	BU254 R/L(38)	●	●							STFP R/L-12CA(50)	●	●	CTFP R/L12CA(50)	●	●	CTFE R/L12CA(50)	●	●	PTFN R/L16CA(55)	●	●
	BU255 R/L(48)	●	●							STFP R/L-16CA(55)	●	●	CTFP R/L16CA(55)	●	●	CTFE R/L16CA(55)	●	●	PTFN R/L20CA(70)	●	●
	BU256 R/L(55)	●	●										CTFP R/L20CA(70)	●	●	CTFE R/L20CA(70)	●	●			
	BU293 R/L(30)	●	●	MTUP22 R/L(24)	●	●	MTUN3 R/L(38)	●	●	STUP R/L-10CA(38)	●	●	CTUP R/L10CA(38)	●	●	CTUE R/L10CA(38)	●	●			
	BU294 R/L(38)	●	●							STUP R/L-12CA(50)	●	●	CTUP R/L12CA(50)	●	●	CTUE R/L12CA(50)	●	●			
	BU295 R/L(48)	●	●							STUP R/L-16CA(55)	●	●	CTUP R/L16CA(55)	●	●						
< >: MINIT P24/N38	BU295ER/L(48)	●	●																		
										STTP R/L- 8CA(30)	●	●	CTTP R/L 8CA(30)	●	●	CTTE R/L 8CA(30)	●	●	PTTN R/L10CA(38)	●	●
										STTP R/L-10CA(38)	●	●	CTTP R/L10CA(38)	●	●	CTTE R/L10CA(38)	●	●	PTTN R/L12CA(50)	●	●
										STTP R/L-12CA(50)	●	●	CTTP R/L12CA(50)	●	●	CTTE R/L12CA(50)	●	●	PTTN R/L16CA(60)	●	●
										STTP R/L-16CA(60)	●	●	CTTP R/L16CA(60)	●	●	CTTE R/L16CA(60)	●	●			
										STSP R/L-10CA(38)	●	●	CTSP R/L10CA(38)	●	●	CTSE R/L 8CA(30)	●	●			
										STSP R/L-12CA(50)	●	●	CTSP R/L12CA(50)	●	●	CTSE R/L10CA(38)	●	●			
										STSP R/L-16CA(55)	●	●	CTSP R/L16CA(55)	●	●	CTSE R/L12CA(50)	●	●			
															CTSE R/L16CA(55)	●	●				
				MTWP22 R/L(24)	●	●	MTWN3 R/L(38)	●	●	STWP R/L- 8CA(30)	●	●	CTWP R/L 8CA(30)	●	●	CTWE R/L 8CA(30)	●	●			
										STWP R/L-10CA(38)	●	●	CTWP R/L10CA(38)	●	●	CTWE R/L10CA(38)	●	●			
										STWP R/L-12CA(50)	●	●	CTWP R/L12CA(50)	●	●	CTWE R/L12CA(50)	●	●			
										STWP R/L-16CA(55)	●	●	CTWP R/L16CA(55)	●	●	CTWE R/L16CA(55)	●	●			
										STRP R/L 8CA(30)	●	●	CTRP R/L 8CA(30)	●	●	CTRE R/L 8CA(30)	●	●			
										STRP R/L 10CA(38)	●	●	CTRP R/L 10CA(38)	●	●	CTRE R/L 10CA(38)	●	●			
										STXP R/L 8CA(30)	●	●	CTXP R/L 8CA(30)	●	●	CTXE R/L 8CA(30)	●	●			
										STXP R/L 10CA(38)	●	●	CTXP R/L 10CA(38)	●	●	CTXE R/L 10CA(38)	●	●			

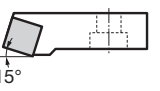
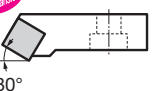
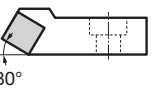
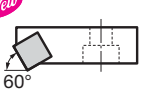
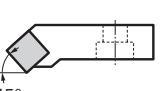
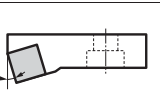
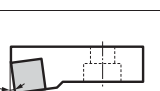
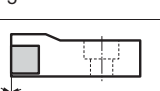

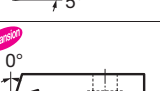
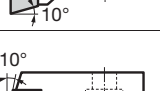
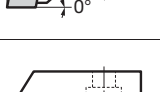
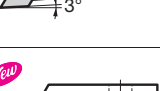

*Inserts and wrenches are not included with Cartridge Units.

● mark: Standard stocked item (new product/expanded item)

SEC-Cartridge Units

■ Tool Holder Cat. No. (For Square Inserts, 80°, 55°, Diamond Inserts)

() shows the min. bore diameter (mm).

Configuration	BU type	Stock		MINIT P24 type	Stock		MINIT N38 type	Stock		SP type/SX type/SC type	Stock		CP type	Stock		CE type	Stock		PN type	Stock		
		R	L		R	L		R	L		R	L		R	L		R	L		R	L	R
 15°	BU113 R/L(30)	●					MSRN4 R/L(38)	●	●	SSRP R/L-10CA(38)	●	●	CSRP R/L10CA(38)	●		CSRE R/L10CA(38)	●					
	BU114 R/L(38)	●											CSRP R/L12CA(50)	●		CSRE R/L12CA(50)	●					
	BU115 R/L(48)	●											CSRP R/L16CA(55)	●								
 30°	BU133 R/L(30)	●		MSTP04 R/L(24)	●	●	MSTN4 R/L(38)	●	●	SSTP R/L 10CA(38)	●	●	CSTP R/L 8CA(30)	●	●	CSTE R/L 8CA(30)	●	●				
	BU134 R/L(38)	●	●										CSTP R/L 10CA(38)	●	●	CSTE R/L 10CA(38)	●	●				
	BU135 R/L(48)	●	●																			
 30°	BU134E R/L(30)	●																				
	BU135E R/L(38)	●																				
 60°										SSWP R/L 10CA(38)	●	●	CSWP R/L 8CA(30)	●	●	CSWE R/L 8CA(30)	●	●				
													CSWP R/L 10CA(38)	●	●	CSWE R/L 10CA(38)	●	●				
 45°	BU142 R/L(24)	●	●	MSSP04 R/L(24)	●	●	MSSN4 R/L(38)	●	●	SSSP R/L- 8CA(30)	●	●	CSSP R/L 8CA(30)	●		CSSE R/L 8CA(30)	●		PSSN R/L10CA(38)	●	●	
	BU143 R/L(30)	●								SSSP R/L-10CA(38)	●	●	CSSP R/L10CA(38)	●	●	CSSE R/L10CA(38)	●	●	PSSN R/L12CA(50)	●	●	
	BU144 R/L(38)	●	●										CSSP R/L12CA(50)	●	●	CSSE R/L12CA(50)	●	●	PSSN R/L16CA(55)	●	●	
	BU145 R/L(48)	●	●										CSSP R/L16CA(55)	●	●	CSSE R/L16CA(55)	●	●				
 15°	BU152 R/L(24)	●	●				MSKN4 R/L(38)	●	●	SSKP R/L- 8CA(30)	●	●	CSKP R/L 8CA(30)	●	●	CSKE R/L 8CA(30)	●	●	PSKN R/L10CA(38)	●	●	
	BU153 R/L(30)	●	●							SSKP R/L-10CA(38)	●	●	CSKP R/L10CA(38)	●	●	CSKE R/L10CA(38)	●	●	PSKN R/L12CA(50)	●	●	
	BU154 R/L(38)	●	●										CSKP R/L12CA(50)	●	●	CSKE R/L12CA(50)	●	●	PSKN R/L16CA(55)	●	●	
	BU155 R/L(48)	●	●										CSKP R/L16CA(55)	●	●	CSKE R/L16CA(55)	●	●	PSKN R/L20CA(70)	●	●	
 5°	BU183 R/L(30)	●		MSYP04 R/L(24)	●	●	MSYN4 R/L(38)	●	●	SSYP R/L- 8CA(30)	●	●	CSYP R/L 8CA(30)	●		CSYE R/L 8CA(30)	●		PSYN R/L10CA(38)	●	●	
	BU184 R/L(38)	●								SSYP R/L-10CA(38)	●	●	CSYP R/L10CA(38)	●		CSYE R/L10CA(38)	●		PSYN R/L12CA(50)	●	●	
	BU185 R/L(48)	●											CSYP R/L12CA(50)	●		CSYE R/L12CA(50)	●		PSYN R/L16CA(55)	●	●	
 0°	BU194 R/L(30)	●																				
	BU195 R/L(38)	●																				
 5°							MCLN4 R/L(38)	●	●	SXLP R 8CA(30)	●	—							PCLN R/L12CA(50)	●	●	
										SXLP R 10CA(38)	●	—							PCLN R/L16CA(55)	●	●	
										SCLC R/L 10CA(56)	●	●							PCLN R/L20CA(70)	●	●	
 10°							MCFN4 R/L(38)	●	●	SXFP R 8CA(30)	●	—										
										SXFP R 10CA(38)	●	—										
										SCFC R/L 10CA(56)	●	●										
 10°							MCGN4 R/L(38)	●	●													
 3°							MDJN4 R/L(38)	●	●													
 30°										SDAC R/L 10CA(56)	●	●										
 25°										SDBC R/L 10CA(56)	●	●										

*Inserts and wrenches are not included with Cartridge Units.

Boring Quills / Carbide Line Boring Bars

This section introduces an overview of the series.
Refer to the separate "SEC-Cartridge Unit/Micro Unit" catalogue for details on Micro Units (holders, inserts, spare parts) and quill unit seat machining.

Indexable Cartridges and Boring Quills



Carbide Line Boring Bar

Carbide Line Bar Equipped with Cartridges



Tooling

G

Tooling

Cartridges

