

Boring Bars

E1 to E78

E

E



Boring
Bars

III

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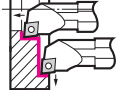
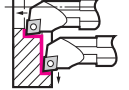
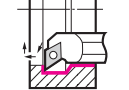
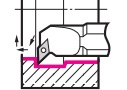
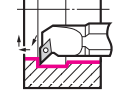
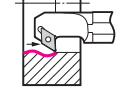
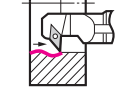
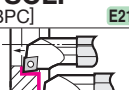
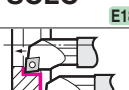












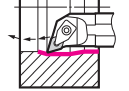
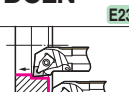
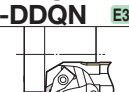
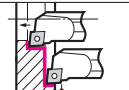
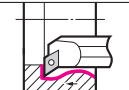
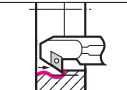




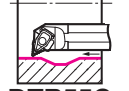
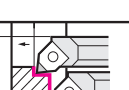
Bottom Facing	SEC-Boring Bar	S-SCLC Type / A-SCLC Type	E18		
		B-SCLC Type	E19		
		C-SCLC Type / E-SCLC Type	E20		
		S-SCLP Type / A-SCLP Type	E21		
		B-SCLP Type / D-SCLP Type / C-SCLP Type	E22		
		S-DCLN Type / D-DCLN Type	E23		
		S-PCLN Type / B-PCLN Type	E24		
		S-ECLN Type	E25		
		S-DWLN Type / D-DWLN Type	E26		
		S-PWLN Type	E27		
Profiling	SEC-Boring Bar	S-SDUC Type / A-SDUC Type	E28		
		B-SDUC Type / C-SDUC Type	E29		
		S-SDQC Type / A-SDQC Type	E30		
		B-SDQC Type	E31		
		S-SDZC Type	E32		
		S-DDQN Type / S-DDUN Type	E33		
		D-DDUN Type / S-PDUN Type / S-EDUN Type	E34		
		S-PDZN Type / S-EDZN Type	E35		
		S-DTR55C Type	E36		
		S-SVJB Type / B-SVJB Type	E37		
		S-SVJC Type	E38		
		S-SVQB Type / B-SVQB Type	E39		
		C-SVQB Type	E40		
		S-SVQC Type / A-SVQC Type	E41		
		S-SVUB Type / B-SVUB Type	E42		
		C-SVUB Type	E43		
		S-SVUC Type / A-SVUC Type	E44		
		S-SVZB Type / B-SVZB Type	E45		
		C-SVZB Type	E46		
	S-SVZC Type	E47			
MV Type / GD Type	(C43, C44, C45)				
Through Boring	SEC-Boring Bar	S-SSKP Type / C-SSKP Type	E48		
		S-CSKP Type	E49		
		S-SSKC Type	E50		
		S-DSKN Type / S-PSKN Type	E51		
		S-ESKN Type / S-PSYN Type	E52		
		S-ESYN Type	E53		
		S-SWUB Type / C-SWUB Type	E54		
		S-SWUP Type	E55		
		Stop Boring	SEC-Boring Bar	S-STUB Type / S-STUP Type / A-STUP Type	E56
				B-STUP Type	E57
D-STUP Type / C-STUB Type / C-STUP Type	E58				
E-STUP Type	E59				
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S-DTFN Type / D-DTFN Type	E61				
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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

Boring Bars Series






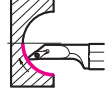
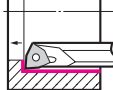
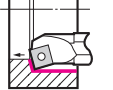
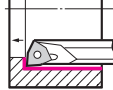
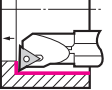
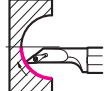
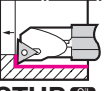

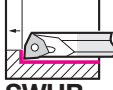
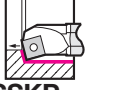
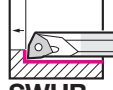
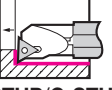
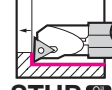

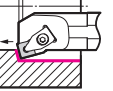
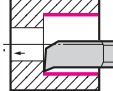
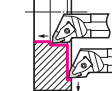
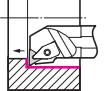
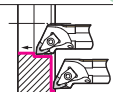

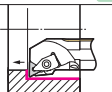

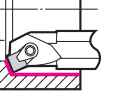
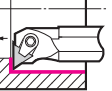
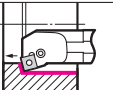
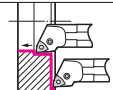
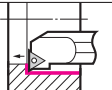
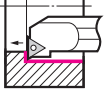
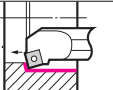
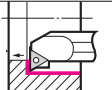
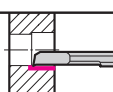
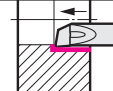

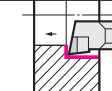
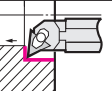
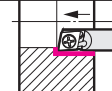

Selection Guide by Tooling


Applications		Bottom Facing		Profiling			Back Turning	
Insert Shape		80° Diamond Type $\sphericalangle C$		55° Diamond Type $\sphericalangle D$	35° Diamond Type $\sphericalangle V$		55° Diamond Type $\sphericalangle D$	35° Diamond Type $\sphericalangle V$
Structure/Shank Material								
Screw-on	Steel	 S-SCLP [BBPC] E21	 S-SCLC E18	 S-SDUC E28 S-SDQC E30	 S-SVUC E44 S-SVUB E42	 S-SVQC E41 S-SVQB E39	 S-SDZC E32	 S-SVZC E47 S-SVZB E45
	Steel with Oil Hole	 A-SCLP E21	 A-SCLC E18	 A-SDUC E28 A-SDQC E30	 A-SVUC E44 A-SVQC E41	—	—	—
	Steel with Anti-Vibration Mechanism	 B-SCLP/D-SCLP [XBPC/XBPC-H] E22	 B-SCLC E19	 B-SDUC E29 B-SDQC E31	 B-SVUB E42 B-SVQB E39	—	—	 B-SVZB E45
	Carbide	 C-SCLP [WBPC] E22	 C-SCLC E20 E-SCLC E20	 C-SDUC E29	 C-SVUB E43 C-SVQB E40	—	—	 C-SVZB E46
Clamp-on/Double Clamp	Steel	—	—	 S-DDUN E33 S-DDQN E33	—	—	—	—
	Steel with Anti-Vibration Mechanism	 D-DCLN E23	—	 D-DDUN E34	—	—	—	—
	Carbide	—	—	—	—	—	—	—
Lever Lock	Steel	 S-PCLN E24	—	 S-PDUN E34	—	—	 S-PDZN E35	—
	Steel with Anti-Vibration Mechanism	 B-PCLN E24	—	—	—	—	—	—
Pin Lock	Steel	 S-ECLN [BCLN] E25	—	 S-EDUN [BDUN] E34	—	—	 S-EDZN [BDZN] E35	—
Special Double Clamp	T-REX Tool Holders	—	—	 S-DTR55C T-REX E36	—	—	—	—
CBN	Carbide	 BNZ E75	—	—	—	—	—	—

Symbols in [] indicate the previous product types : With oil hole

Boring Bars Series

Selection Guide by Tooling

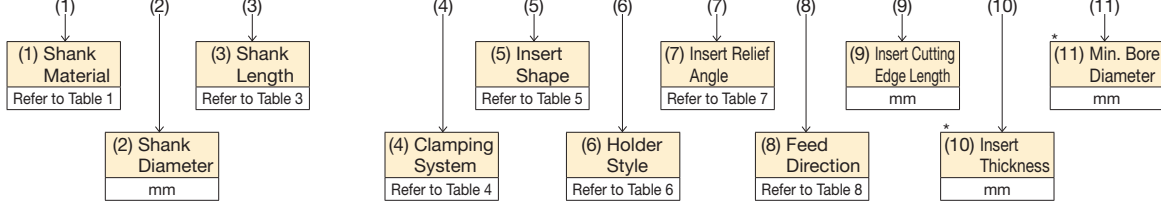
Applications		Spherical Internal Facing	Through Boring		Stop Boring			
Insert Shape		35° Diamond Type 	Trigon Type  / Others	Square Type 	Trigon Type  / Others		Triangular Type  / Others	
Structure/Shank Material								
Screw-on	Steel	 S-SVJB E37 S-SVJC E38	 S-SWUB [BBPW] E54 S-SWUP E55	 S-SSKP [BBPS] E48 S-SSKC E50	 S-SWUB [BBPW] E54 S-SWUP E55	—	 S-STUP/S-STUB [BBPT] E56	
	Steel with Anti-Vibration Mechanism	 B-SVJB E37	—	—	—	—	 A-STUP  E56	
	Carbide	—	 C-SWUB [WBPW] E54	 C-SSKP [WBPS] E48	 C-SWUB [WBPW] E54	—	 C-STUP/C-STUB [WBPT] E58	 E-STUP  E59
Clamp-on/Double Clamp	Steel	—	—	 S-DSKN E51	 CKB E64	 S-DWLN E26	 S-DTFN E61	
	Steel with Anti-Vibration Mechanism	—	—	—	 D-DWLN  E26	—	 D-DTFN  E61	
	Carbide	—	—	 S-CSKP E49	—	—	 S-CTFP E60	
Lever Lock	Steel	—	—	 S-PSKN E51 S-PSYN E52	 S-PWLN E27	—	 S-PTFN E62	
	Steel with Anti-Vibration Mechanism	—	—	—	—	—	 B-PTFN E62	
Pin Lock	Steel	—	—	 S-ESKN [BSKN] E52 S-ESYN [BSYN] E53	—	—	 S-ETFN [BTFN] E63	
Solid	Carbide	—	—	—	 BXBR E69	—	—	
CBN	Carbide	—	—	—	 BSME  E70	 BNBX E74	 BNB E76	 SEXC  E71

Symbols in [] indicate the previous product types  : With oil hole

Boring Bars Cat. No. Identification Table

■ Catalogue Classification System for SEC-Boring Bars (Round Shank) [ISO Standard]

Example: **S 16 R — S T U P R 11 03 - 18**



* This code may only be included in some of the catalogue nos.

Table 1

(1) Shank Material	
Symbol	Shank Material
S	Steel Shank
A	Steel Shank with Oil Hole
B	Steel Shank with Anti-Vibration Mechanism
D	Steel Shank with Anti-Vibration Mechanism and Oil Hole
C	Carbide Shank
E	Carbide Shank with Oil Hole

Table 3

(3) Shank Length					
Symbol	Length (mm)	Symbol	Length (mm)	Symbol	Length (mm)
F	80	M	150	T	300
G	90	N	160	U	350
H	100	P	170	V	400
J	110	Q	180	W	450
K	125	R	200		
L	140	S	250		

Table 4

(4) Clamping System					
Symbol	Clamp	Structure	Symbol	Clamp	Structure
C	Clamp-on		M	Clamp-on + Pin Lock	
D	Double Clamp		P	Lever Lock (insert supported by 2 faces)	
E	Pin Lock (insert supported by 1 face)		S	Screw-on	

Table 8

(8) Feed Direction			
Symbol	Right Hand	Symbol	Left Hand
R		L	

Table 5

(5) Insert Shape			
Symbol	Insert Shape	Symbol	Insert Shape
A	85° Apex Angle Parallelogram	M	86° Apex Angle Diamond Type
B	82° Apex Angle Parallelogram	O	Octagonal Type
C	80° Apex Angle Diamond Type	P	Pentagonal Type
D	55° Apex Angle Diamond Type	R	Round Type
E	75° Apex Angle Diamond Type	S	Square Type
F	50° Apex Angle Diamond Type	T	Triangular Type
H	Trigon Type	V	35° Apex Angle Diamond Type
K	55° Apex Angle Parallelogram	W	Uneven Trigon Type
L	Rectangular Type		

Table 6

(6) Holder Style (— indicates major cutting edge)					
Symbol	Shape	Offset	Symbol	Shape	Offset
A		No	N		No
B		No	Q		Yes
D		No	R		Yes
E		No	S		Yes
F		Yes	T		Yes
G		Yes	U		Yes
J		Yes	W		Yes
K		Yes	Y		Yes
L		Yes	Z		Yes

Table 7

(7) Insert Relief Angle	
Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special Relief Angle

■ Catalogue Classification System for SEC-Boring Bars (Round Shank) [Sumitomo Standard]

Example: **WB P T — 2 12 R (H) (14)**

BB	Steel Shank Boring Bar
WB	Carbide Shank Boring Bar
XB	Steel Shank Boring Bar with Anti-Vibration Mechanism

P	Positive Insert
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Symbol	T	S	C
Insert Shape	Triangular Type	Square Type	80° Diamond Type

With Oil Hole Min. Bore Dia.

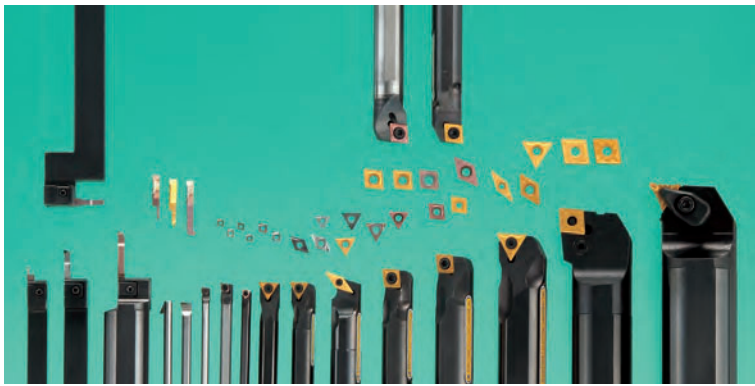
Symbol	R	L
Direction	Right	Left

Symbol	08	10	12	16	20	25
Shank Diameter (mm)	8	10	12	16	20	25

Symbol	5	6	2	0	3	4
Insert Inscribed Circle (mm)	3.97	4.76	6.35	7.94	9.525	12.70

Boring Bars Series

Boring Bars



General Features

Since its launch in 1976, our industry leading SEC-Boring Bar Series with its steel/carbide shank holders and high rigidity heads has since included the popular SEC-Small Diameter Boring Bars and now the **SumiTurn X-Bars** with anti-vibration mechanism, optimised insert grades and chipbreakers.

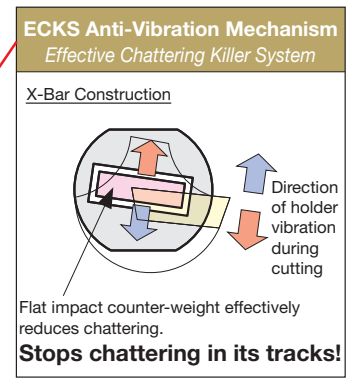
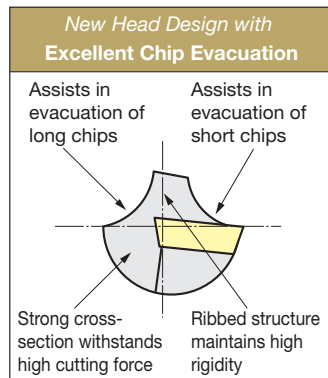
Features of SEC-Boring Bars

- Suitable for a wide variety of applications Stop-Boring/Bottom Facing/Through-Boring/Profiling
- Min. bore diameter: $\phi 1\text{mm}$ for CKB Type, $\phi 5\text{mm}$ for C-SCLC Type
- Anti-vibration boring bar **SumiTurn X-Bar**
- **Smart Dampers for Internal Boring** with Built-in Anti-Vibration Mechanism
- **Carbide short shank** type usable on turret lathes without shortening (C16M-STUP, C20M-STUP Types).
- Wide selection of insert grades and chipbreakers available for various work materials.

Steel Shank Type with Anti-Vibration Mechanism



- Higher anti-chatter capability for effective rough boring of deep holes.
- Achieves low-cost boring of large diameters and deep holes, with $\phi 32\text{mm}$ shank now in stock.
- Excellent chip control with double chip pockets.
- Bars with internal coolant hole are also in stock.
- Negative insert holders (shank dia. $\phi 25$ to $\phi 50\text{mm}$) are now in stock.



Shank Material Selection



Shank Material		Steel	Steel with Anti-Vibration Mechanism	Carbide
Application	Shallow Holes (L/D < 3)	◎		
	Deep Holes (L/D > 3)		◎	◎
High-efficiency boring with wiper insert			○	◎
Hardened Steel			—	◎
High-precision Machining				◎

◎ 1st Recommendation ○ 2nd Recommendation

Precautions for Clamping Position on Steel Shank with Anti-Vibration Mechanism

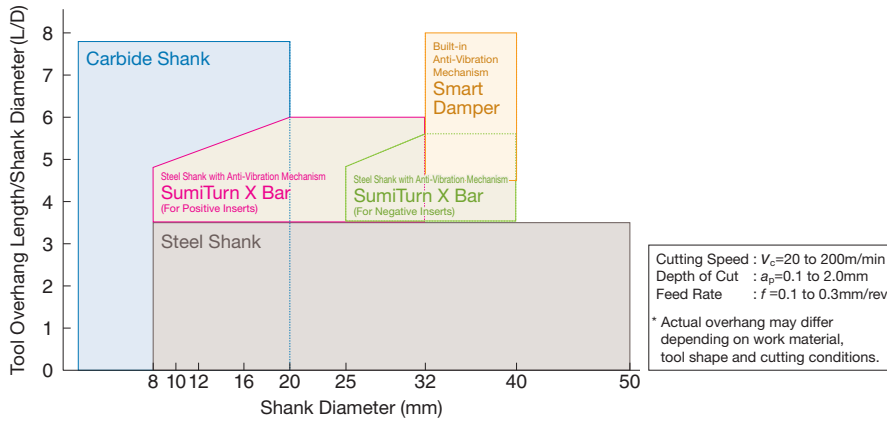


Do not clamp or cut off label-affixed portion.

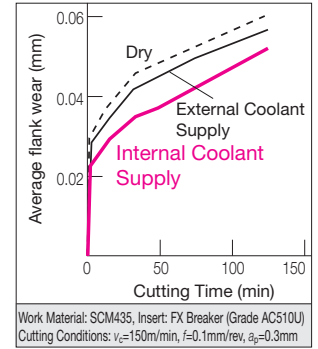
Clamping on the "SUMITOMO ELECTRIC" label-affixed portion may disturb normal functioning (due to built-in Anti-Vibration mechanism). Therefore, minimum tool overhang length is kept to 3.5D (shank diameter x 3.5). This is a dedicated turning tool. It cannot be used as a rotating tool.

Boring Bars Series

Application Range by Shank Type



Wear Comparison by Coolant Supply Method



Recommended Grades

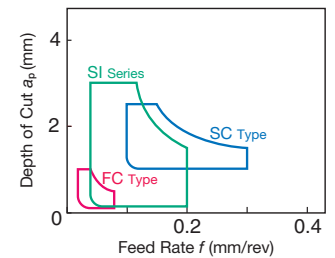
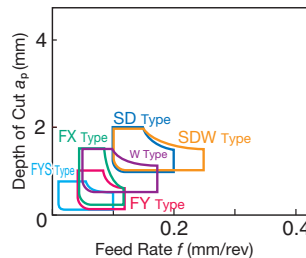
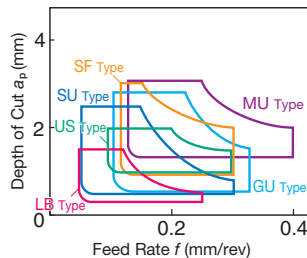
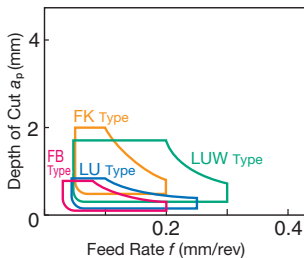
Insert Grade	Application Range			Applicable Work Material							
	High Precision	Finishing to Light Cutting	Medium Cutting	P General Steel	M Stainless Steel	K Cast Iron	S Heat-Resistant Alloy	H Hardened Steel	N Non-ferrous Metal	Other Alloy	
Coated Carbide	CVD	AC8015P			◎						
		AC8020P			◎						
		AC8025P			◎		○				
		AC8035P			◎	○					
		AC6020M			◎	◎					
		AC6030M			◎	◎					
		AC4010K					◎				
		AC4015K					◎				
		AC420K					◎				
		Coated Carbide	PVD	ACZ150			◎	◎			
AC5015S				◎	◎	○					
AC5025S				◎	◎	◎					
AC530U				◎	◎	◎			○		
AC1030U				◎	◎	◎			○		
AC6040M				◎	◎						
Uncoated Cermet Coated Cermet	T1000A			◎	◎	◎					
	T1500A/T1500Z			◎	◎	◎			○		
	T2500Z			◎	◎	◎					
Cemented Carbide	G10E					◎			○		
CBN (SUMIBORON)	BN1000							◎			
	BN2000							◎			
	BNC2010							◎			
	BNC2115							◎			
	BNC2020							◎			
	BNC2125							◎			
	BN7000					◎			○		
PCD (SUMIDIA)	DA1000								◎		
	DA150								◎		

◎ 1st Recommendation ○ 2nd Recommendation

Recommended Chipbreakers

● M Class Finishing to Light Cutting ● M Class Light to Medium Cutting ● G Class Ground Type

● G Class Chipbreakers



Smart Dampers for Internal Boring

Boring Bars

E

C

D

R

S

T

V

W

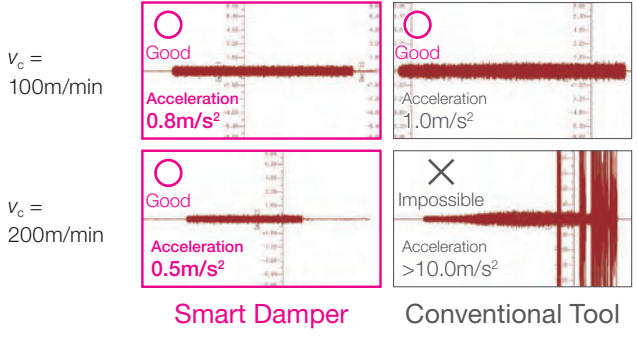
Smart Damper Turning / Key Smart Damper Turning



- **Features**
- Adopting a special damper mechanism to suppress chattering for large diameter bars with long overhang of L/D=5 to 8.
 - Replaceable heads enable a wide selection of positive and negative inserts.
 - Internal coolant supply improves chip evacuation and tool life.

■ **Cutting Performance**

Overhang Amount 6D Vibration during Machining



Overhang Amount 9D* Surface Roughness during Machining



Work Material: S45C(Work Dia. ø40 up) Holder: ø32 Shank Insert: TPMT160404N-SU Cutting Conditions: f=0.1mm/rev a_p=0.2mm Dry

*Machining performed with 9D overhang was for anti-vibration performance evaluation only; to prevent tool deflection, use up to a maximum of 8D.

■ **Smart Damper Combination Example**

Indexable Head

For Positive Inserts	For Negative Inserts
SCLC Type SCLP Type	DCLN Type
SDUC Type SDQC Type	DDUN Type
STUP Type	DTFN Type
SVUB Type SVQB Type	

Smart Damper Body

S-SDB3240L320 Shank Dia.: ø32mm LF: 320mm
S-SDB4050L410 Shank Dia.: ø40mm LF: 410mm

Indexable heads can be selected to suit machining applications

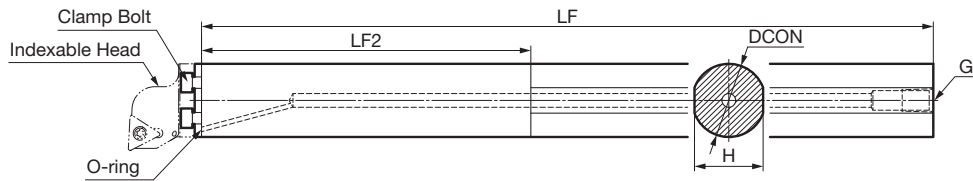


*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

Smart Dampers for Internal Boring



Fig 1



Smart Damper Body

Parts

Dimensions (mm)

Cat. No.	Stock	Diameter	Overall Length	Length	Height	Shank	Indexable Head Group No.	Weight (kg)	Fig	Parts			
										Clamp Bolt	Wrench	O-ring	
S-SDB3240L320	●	32	320	144	30	Rc1/4	1	2.3	1	BX0510	3.0	LH040	SS020
S-SDB4050L410	●	40	410	170	37	Rc3/8	2	4.5	1	BX0610	5.2	LH050	SS020

Refer to the user's manual for methods of mounting indexable heads. Indexable heads are not included with the Smart Damper body.

Because an anti-vibration mechanism is built in, clamping to the LF2 dimension may disturb normal functioning.

The indexable head is not included in the weight.

Three clamp bolts and two O-rings (including one spare) are included.

Indexable Heads **E12** to **E15**

Fig 1

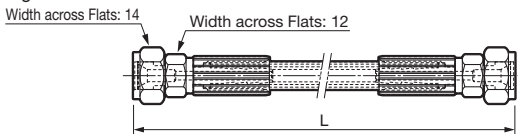


Fig 1

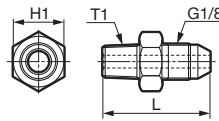
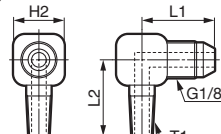


Fig 2



Parts (Hose)

Dimensions (mm)

Cat. No.	Stock	L	Screw Standard	Screw Standard	Fig
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8	1

Hoses are sold separately.

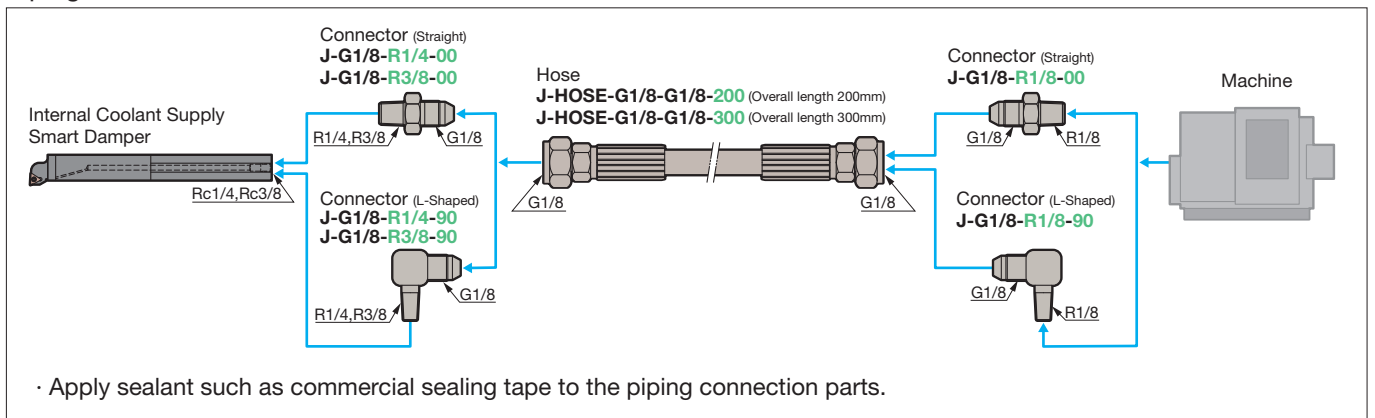
Parts (Connector)

Dimensions (mm)

Cat. No.	Stock	Screw Standard	T1	L	L1	L2	H1	H2	Fig
J-G1/8-R1/4-00	●	R1/4	34	—	—	—	14	—	1
J-G1/8-R1/8-00	●	R1/8	29	—	—	—	14	—	1
J-G1/8-R3/8-00	●	R3/8	36	—	—	—	19	—	1
J-G1/8-R1/4-90	●	R1/4	—	22	25	—	17	2	2
J-G1/8-R1/8-90	●	R1/8	—	20	21	—	14	2	2
J-G1/8-R3/8-90	●	R3/8	—	23	30	—	19	2	2

Connectors are sold separately.

Piping Method for Hoses and Connectors



Identification Code (Smart Damper Body)

S-SDB 32 40 L320

Connection Method: S, Shank Dia.: 32, Min. Bore Dia.: 40, Overall Length: L320

Identification Code (Indexable Head)

SDB 32 - SCLCR09T3 - 40

Connection Method: SDB, Compatible Shank Dia.: 32, (Conforms to boring bar ISO standard classification) See page E4, Min. Bore Dia.: 40

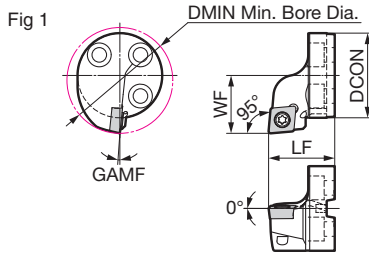
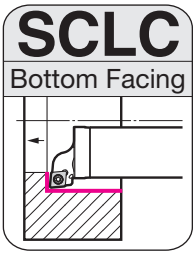
*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

Recommended Tightening Torque (N-m) ● mark: Standard Stock (new product/expanded item)

Smart Dampers for Internal Boring



Screw-on, Internal Coolant Supply
Internal Diameter



Indexable Heads (For Positive Inserts)

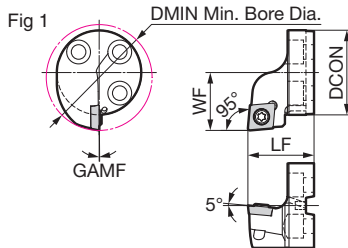
Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert	Smart Damper Group No.	Fig	Flat Insert Screw Wrench			
	R	L									DMIN	DCON	LF	WF
SDB32-SCLC R/L09T3-40	●	●	40	32	25	22	-4°	CC□□09T3	B79 on	1 1	1 1	BFTX0409N	3.4	TRX15
SDB40-SCLC R/L09T3-50	●	●	50	40	25	27	-2°							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.



Screw-on, Internal Coolant Supply
Internal Diameter



Indexable Heads (For Positive Inserts)

Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert	Smart Damper Group No.	Fig	Flat Insert Screw Wrench			
	R	L									DMIN	DCON	LF	WF
SDB32-SCLP R/L0903-40	●		40	32	25	22	0°	CP□□0903	B83 on	1 2	1 1	BFTX0409N	3.4	TRX15
SDB40-SCLP R/L0903-50	●		50	40	25	27	0°							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
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Boring Bars

E

C

D

R

S

T

V

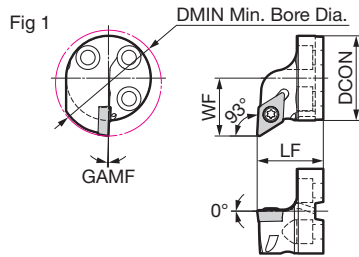
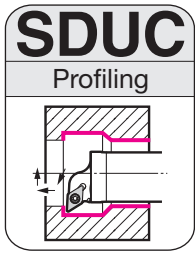
W

Small Damper Turning / Very Small Damper Turning

Smart Dampers for Internal Boring



Screw-on, Internal Coolant Supply
Internal Diameter



Indexable Heads (For Positive Inserts)

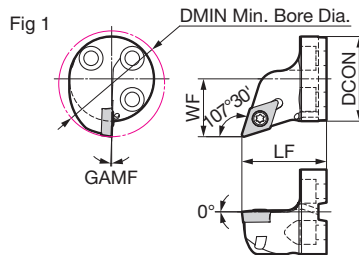
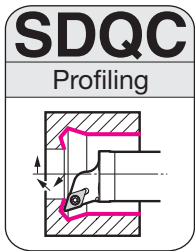
Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			N·m	(For Torx Holes)	
SDB32-SDUC R/L11T3-40	●	●	40	32	25	22	-2°	DC□□11T3	B90 on	1	1	BFTX0409N	3.4	TRX15
SDB40-SDUC R/L11T3-50	●	●	50	40	25	27	0°							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.



Screw-on, Internal Coolant Supply
Internal Diameter



Indexable Heads (For Positive Inserts)

Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			N·m	(For Torx Holes)	
SDB32-SDQC R/L11T3-40	●	●	40	32	32	22	-2°	DC□□11T3	B90 on	1	1	BFTX0409N	3.4	TRX15
SDB40-SDQC R/L11T3-50	●	●	50	40	32	27	0°							

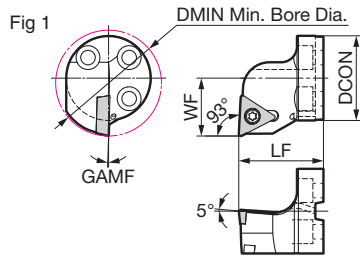
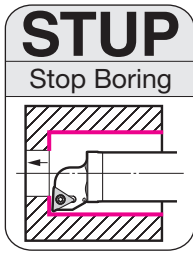
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Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
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Smart Dampers for Internal Boring



Screw-on, Internal Coolant Supply
Internal Diameter



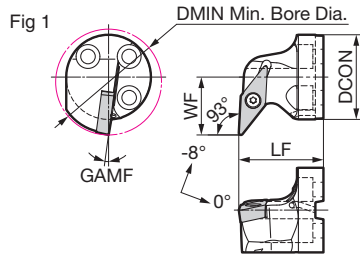
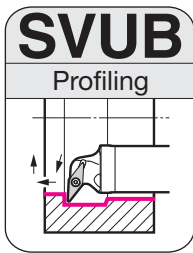
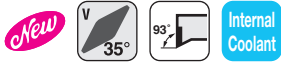
Indexable Heads (For Positive Inserts)

Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Fig	N·m	
SDB32-STUP R/L1103-40	●	●	40	32	25	22	-2°	TP□□1103	B114 on	1 2	1 1	BFTX0307N	2.0	TRX10
SDB40-STUP R/L1103-50	●	●	50	40	25	27	0°							
SDB32-STUP R/L1604-40	●	●	40	32	32	22	-2°	TP□□1604	B117	1 2	1 1	BFTX0409N	3.4	TRX15
SDB40-STUP R/L1604-50	●	●	50	40	32	27	0°							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.

Screw-on, Internal Coolant Supply
Internal Diameter



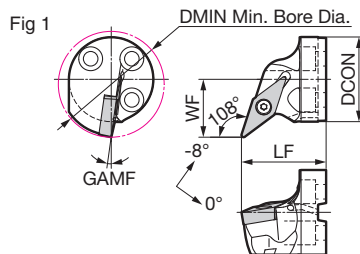
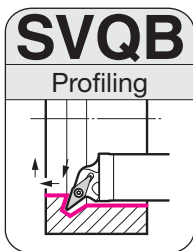
Indexable Heads (For Positive Inserts)

Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Fig	N·m	
SDB32-SVUB R/L1604-40	●		40	32	32	22	(-7.5°)	VB□□1604	B125	1 2	1 1	BFTX03508N	2.0	TRX10
SDB40-SVUB R/L1604-50	●		50	40	32	27	(-7.5°)							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.

Screw-on, Internal Coolant Supply
Internal Diameter



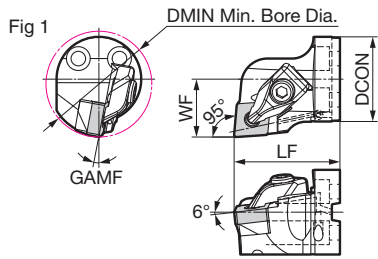
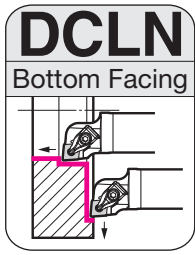
Indexable Heads (For Positive Inserts)

Parts Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Fig	N·m	
SDB32-SVQB R/L1604-40	●		40	32	32	22	(-6.5°)	VB□□1604	B125	1 2	1 1	BFTX03508N	2.0	TRX10
SDB40-SVQB R/L1604-50	●		50	40	32	27	(-6.5°)							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.
*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

Smart Dampers for Internal Boring



Internal Coolant Supply, Double Clamp
Internal Diameter

● Feed direction of applicable inserts differs for DCLN Type according to machining application.

Internal Boring
Right-handed (R) tool holders are compatible with **left-handed (L)** or neutral (N) inserts.
Left-handed (L) tool holders are compatible with **right-handed (R)** or neutral (N) inserts.

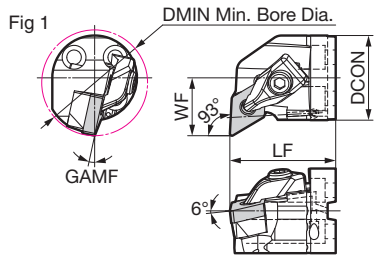
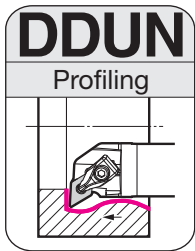
During Facing
Right-handed (R) tool holders are compatible with **right-handed (R)** or neutral (N) inserts.
Left-handed (L) tool holders are compatible with **left-handed (L)** or neutral (N) inserts.

Indexable Heads (For Negative Inserts)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper Group No.	Fig	Dimensions (mm)					
	R	L					Cat. No.	Ref. Page			Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
SDB32-DCLN R/L1204-40	●	●	40	32	40	22	CN□□1204	B22 on	1	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
SDB40-DCLN R/L1204-50	●	●	50	40	40	27	CN□□1204	B22 on	2	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025

*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.

Clamp Set Parts **E78**



Internal Coolant Supply, Double Clamp
Internal Diameter

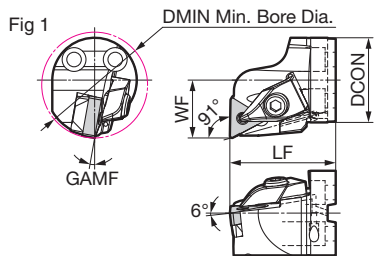
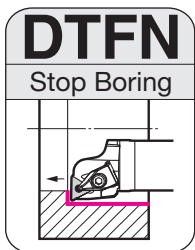
Indexable Heads (For Negative Inserts)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper Group No.	Fig	Dimensions (mm)					
	R	L					Cat. No.	Ref. Page			Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
SDB32-DDUN R/L1504-40	●	●	40	32	40	22	DN□□1504	B32 on	1	1	SCP-2	5.0	DNS1504B	BFTX0409N	LH040	LH025
SDB40-DDUN R/L1504-50	●	●	50	40	40	27	DN□□1504	B32 on	2	1	SCP-2	5.0	DNS1504B	BFTX0409N	LH040	LH025

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.

Clamp Set Parts **E78**



Internal Coolant Supply, Double Clamp
Internal Diameter

Indexable Heads (For Negative Inserts)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper Group No.	Fig	Dimensions (mm)					
	R	L					Cat. No.	Ref. Page			Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
SDB32-DTFN R/L1604-40	●		40	32	40	22	TN□□1604	B56 on	1	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025
SDB40-DTFN R/L1604-50	●		50	40	40	27	TN□□1604	B56 on	2	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

*Refer to Smart Damper body Group Nos. on E11 for applicable Smart Damper bodies.

Clamp Set Parts **E78**

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

Boring Bars
E
C
D
R
S
T
V
W
Smart Damper Turning
Very Smart Damper Turning

Twin Head Holder



Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

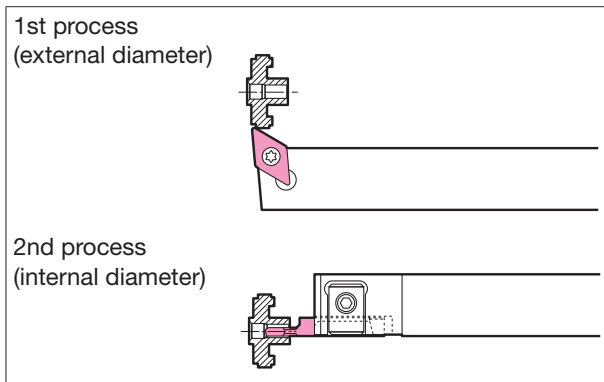


■ Features

- Having one holder that performs two operations is equivalent to mounting an additional tool on the drill sleeve toolpost.
- External turning possible with the aid of a drill sleeve.
- 2 holder configurations, internal + external and internal + internal, are standard stocked items.
- Centre height difference of the 2 cutting edges is below 40µm, which is good for high-precision machining.

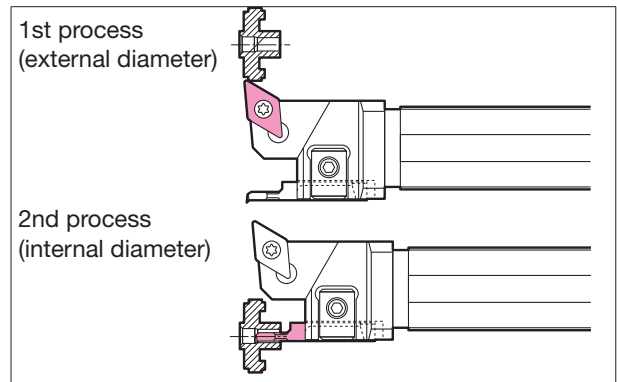
■ Advantages of the Twin Head Holder

● Conventional Tool

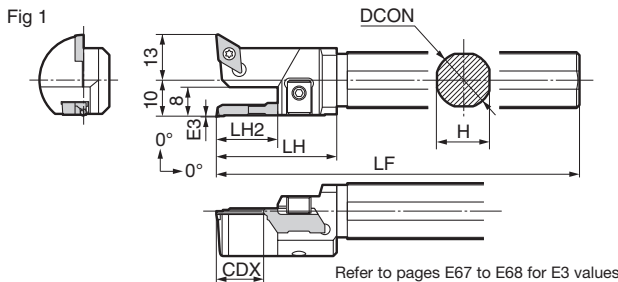


· 2 different operations requiring 2 separate tools.

● Twin head holder



- A single tool performing 2 different operations.
- Toolpost moving time can also be reduced.



Internal Boring + External Turning
Screw-on + Clamp-on

Sumi Small

Holder (mm) (Internal Machining, Depth of Cut 6.0mm)

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Depth of Cut CDX	Head LH2	*Max. Work Material Dia.	Insert for Internal Boring	Insert for External Turning	Fig
S1588X-CKBE-06	●	15.875	15	130	27	6	10	12.0	KBMX R0006-00 KBMX R0006-00T	DC□□0702□□	1
S16X-CKBE-06	●	16	15	130	27	6	10	12.0			1
S1905X-CKBE-06	●	19.05	17	130	27	6	10	12.0			1
S20X-CKBE-06	●	20	18	130	27	6	10	12.0			1
S22X-CKBE-06	●	22	20	130	27	6	10	12.0			1

* When machining internal diameter

Holder (mm) (Internal Machining, Depth of Cut 11.0mm)

Dimensions (mm)

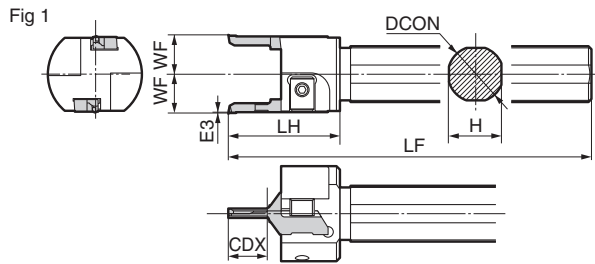
Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Depth of Cut CDX	Head LH2	*Max. Work Material Dia.	Insert for Internal Boring	Insert for External Turning	Fig
S1588X-CKBE-11	●	15.875	15	130	32	11	15	12.0	KBMX R0011-00 KBMX R0011-00T	DC□□0702□□	1
S16X-CKBE-11	●	16	15	130	32	11	15	12.0			1
S1905X-CKBE-11	●	19.05	17	130	32	11	15	12.0			1
S20X-CKBE-11	●	20	18	130	32	11	15	12.0			1
S22X-CKBE-11	●	22	20	130	32	11	15	12.0			1

* When machining internal diameter

Internal Diameter Insert E67 to E68 External Diameter Insert B86 to B88

Twin Head Holder

Internal Boring, Face Grooving
Clamp-on



Holder

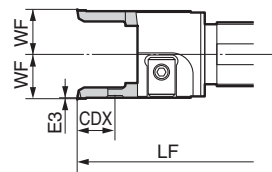
Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Cutting Edge Distance WF	Depth of Cut CDX	Insert for Internal Boring	Face Grooving Inserts	Fig
S1588X-CKBB-F	●	15.875	15	130	32	11.0	11	KBMX R0000-00 KBMX R0000-00T	KBMF R0000-05	1
S16X-CKBB-F	●	16	15	130	32	11.0	11			1
S1905X-CKBB-F	●	19.05	17	130	32	11.0	11			1
S20X-CKBB-F	●	20	18	130	32	11.0	11			1
S22X-CKBB-F	●	22	20	130	32	11.0	11			1

* Reference values for LF, WF and CDX dimensions are with KBMXR0311-00(T) mounted. (Refer to the table below for dimensions with other inserts mounted.)

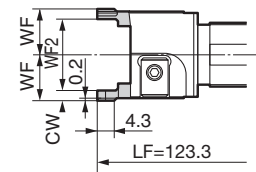
Ref. Page for Inserts **E67** to **E68**

Insert: KBMX (ID+ID) assembled



Insert	Offset		Cutting Edge Distance		Overall Length LF
	E3	CDX	WF	WF	
KBMX R0103-00(T)	0.2	3	10.9	10.9	122
KBMX R01506-00(T)	0.25	6	10.95	10.95	125
KBMX R0206-00(T)	0.25	6	10.95	10.95	125
KBMX R0311-00(T)*	0.3	11	11.0	11.0	130
KBMX R0411-00(T)	0.5	11	11.2	11.2	130
KBMX R0511-00(T)	0.7	11	11.4	11.4	130
KBMX R0420-00(T)	0.5	20	11.2	11.2	139
KBMX R0520-00(T)	0.7	20	11.4	11.4	139

Insert: KBMF (Face+Face) assembled



Insert	Cutting Edge Distance		Width of Cut CW
	WF	WF2	
KBMF R0615-05	10.9	18.8	1.5
KBMF R0620-05	10.9	17.8	2.0
KBMF R0630-05	10.9	15.8	3.0

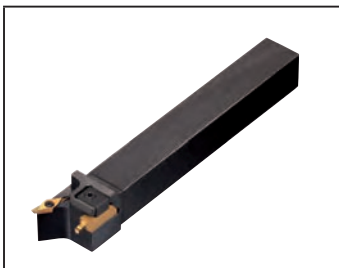
Part (KBM□R insert mounting part)

Clamp Plate	Double Screw	Wrench
CKBW16	WB4-8	LH020 (For Hex Socket)

Part (DC□□ insert mounting part)

Flat Insert Screw	Wrench	
BFTX02506N	1.5	TRX08 (For Torx Holes)

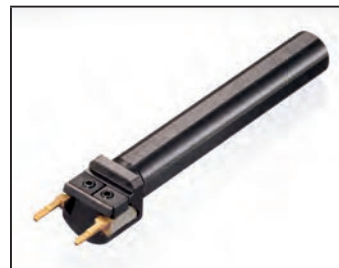
Special Holder Configurations



Internal diameter + external diameter (angled holder)



Internal diameter + Centre drill



Internal diameter + internal diameter (parallel design)

Holder configurations for different work materials or various machining applications, such as centre holes, chamfering and external necking, can be made to order.

S-SCLC Type/A-SCLC Type



Internal Finishing to Medium Cutting
Screw-on

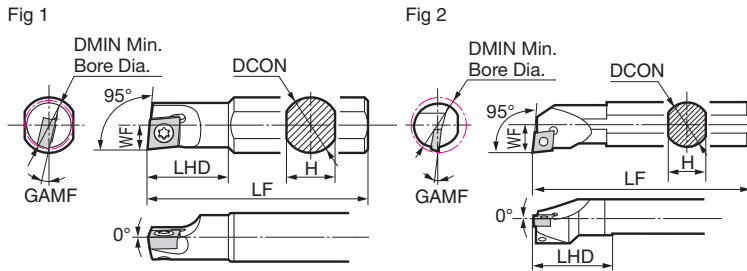
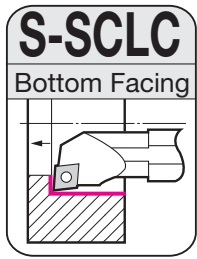


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
			R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel	S08H-SCLC R/L03X1-05	—	●	●	5	8	7	100	2.5	24	-15°	CC□□03X1	B74	1	BFTX016033	0.2	TRX06
	S08H-SCLC R/L03X1-06	—	●	●	6	8	7	100	3.0	28	-13°						
	S08H-SCLC R/L04X1-07	—	●	●	7	8	7	100	3.5	32	-13°	CC□□04X1	B75 on	1	BFTX0203N	0.5	TRX06
	S08H-SCLC R/L04X1-08	—	●	●	8	8	7	100	4.0	37	-11°						
	S08H-SCLC R/L0602-10	S08H-SCLC R/L 06	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B76 on	2	BFTX02505N	1.1	TRX08
	S10K-SCLC R/L0602-12	S10K-SCLC R/L 06-12	●	●	12	10	9	125	6.0	21	-12°						
	S12M-SCLC R/L0602-14	S12M-SCLC R/L 06-14	●	●	14	12	11	150	7.0	25	-10°						
	S16R-SCLC R/L0602-18	—	●	●	18	16	15	200	9.0	27	-8°						
	S16R-SCLC R/L09T3-18	—	●	●	18	16	15	200	9.0	30	-10°	CC□□09T3	B79 on	2	BFTX0407N	3.0	TRX15
	S20S-SCLC R/L09T3-22	—	●	●	22	20	18	250	11.0	30	-8°						
S25T-SCLC R/L09T3-27	—	●	●	27	25	23	300	13.5	35	-6°							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12



Internal Finishing to Medium Cutting
Screw-on

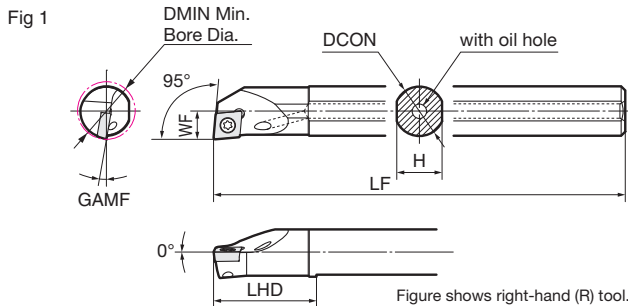
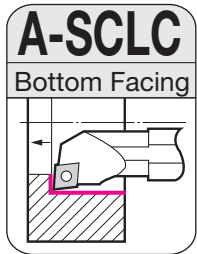


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel with Oil Hole	A08H-SCLC R/L0602-10	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B76 on	1	BFTX02505N	1.1	TRX08
	A10K-SCLC R/L0602-12	●	●	12	10	9	125	6.0	21	-12°						
	A12M-SCLC R/L0602-14	●	●	14	12	11	150	7.0	25	-10°						
	A16R-SCLC R/L0602-18	●	●	18	16	15	200	9.0	27	-8°						
	A16R-SCLC R/L09T3-18	●	●	18	16	15	200	9.0	30	-10°	CC□□09T3	B79 on	1	BFTX0407N	3.0	TRX15
	A20S-SCLC R/L09T3-22	●	●	22	20	18	250	11.0	30	-8°						
	A25T-SCLC R/L09T3-27	●	●	27	25	23	300	13.5	35	-6°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12

SEC-Boring Bar B-SCLC Type



Internal Finishing to Medium Cutting
Screw-on

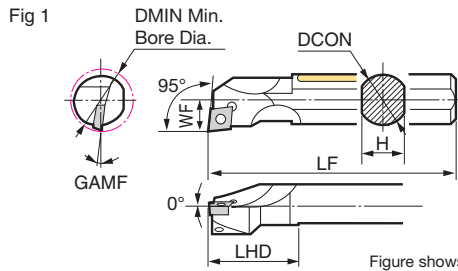
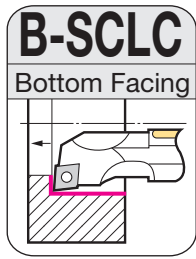


Figure shows right-hand (R) tool.



Boring Bars

E

Holder

Parts

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L								Cat. No.	Ref. Page	Fig	Torque (N·m)		
Steel with Anti-Vibration Mechanism	B08H-SCLC R/L0602-10	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B76 on	1	BFTX02505N	1.1	TRX08
	B10K-SCLC R/L0602-12	●	●	12	10	9	125	6.0	21	-12°			1	BFTX02506N	1.5	
	B12M-SCLC R/L0602-14	●	●	14	12	11	150	7.0	25	-10°			1			
	B12M-SCLC R/L0602-16	●	●	16	12	11	150	9.0	25	-10°	CC□□09T3	B79 on	1	BFTX0407N	3.0	TRX15
	B16R-SCLC R/L09T3-20	●	●	20	16	15	200	11.0	30	-8°			1	BFTX0409N	3.4	
	B20S-SCLC R/L09T3-25	●	●	25	20	18	250	13.0	30	-7°			1			
	B25T-SCLC R/L1204-32	●	●	32	25	23	300	17.0	38	-6°	CC□□1204	B81	1	BFTX0511N	5.0	TRX20

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12

C

D

R

S

T

V

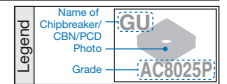
W

Smart Damper Turning
Very Smart Damper Turning

Applicable Inserts ◀ S-SCLC Type/A-SCLC Type/B-SCLC Type/C-SCLC Type/E-SCLC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6040M	SUMIBORON BN7000/BNC500	MU AC4015K	No Chiselbreaker AC4015K	SU AC5015S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	SC AC1030U	FC AC1030U	SI AC1030U	SC AC1030U	SUMIBORON BN7000/BNC500	—	—	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on	A22 on		A20 on		M2 on

BNC500 is for ductile cast iron.

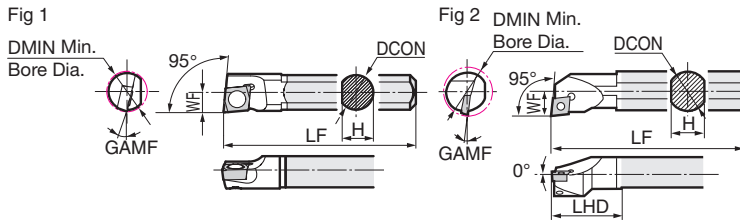
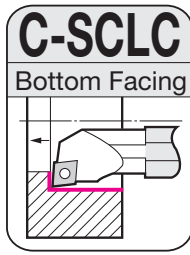
Recommended Tightening Torque (N·m)

E19

C-SCLC Type/E-SCLC Type



Internal Finishing to Medium Cutting
Screw-on



Holder

Parts

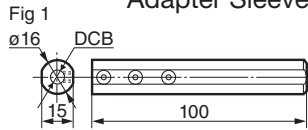
Shank Material	Cat. No.	Previous Cat. No.	Stock R	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
											Cat. No.	Ref. Page	Fig	(N·m)		
Carbide	C04G-SCLC R03X1-05	C04G-SCLCR03X1-05*	●	5	4	3.8	90	2.5	—	-15°	CC□□03X1	B74	1	BFTX016033	0.2	TRX06
	C05H-SCLC R03X1-06	C05H-SCLCR03X1-06*	●	6	5	4.4	100	3.0	—	-13°						
	C06J-SCLC R04X1-07	C06J-SCLCR04X1-07*	●	7	6	5.4	110	3.5	—	-13°	CC□□04X1	B75	1	BFTX0203N	0.5	TRX06
	C07K-SCLC R04X1-08	C07K-SCLCR04X1-08*	●	8	7	6.4	125	4.0	—	-11°						
	C08H-SCLC R0602-10	C08H-SCLCR06	●	10	8	7.0	100	5.5	19	-13°	CC□□0602	B76 on	2	BFTX02505N	1.1	TRX08
	C10K-SCLC R0602-12	C10K-SCLCR06-12	●	12	10	9.0	125	6.0	21	-12°						
	C10K-SCLC R0602-13	C10K-SCLCR06	●	13	10	9.0	125	7.0	21	-12°						
	C12M-SCLC R0602-14	C12M-SCLCR06-14	●	14	12	11.0	150	7.0	25	-10°						
	C12M-SCLC R0602-16	C12M-SCLCR06	●	16	12	11.0	150	9.0	25	-10°						
	C16R-SCLC R09T3-20	C16R-SCLCR09	●	20	16	15.0	200	11.0	30	-8°						
C20S-SCLC R09T3-25	C20S-SCLCR09	●	25	20	18.0	250	13.0	35	-7°	CC□□09T3	B79 on	2	BFTX0407N	3.4	TRX15	
											2	BFTX0409N	3.4			

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

* Separately sold sleeve is required.

Smart Damper E12

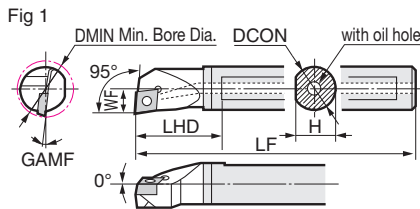
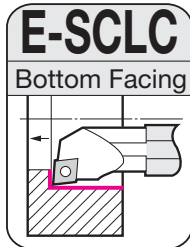
Adapter Sleeve



Cat. No.	Stock	Bore Dia. DCB	Applicable Holders	Fig
HBB 416	●	4.0	C04G-SCLC R03X1-05	1
HBB 516	●	5.0	C05H-SCLC R03X1-06	1
HBB 616	●	6.0	C06J-SCLC R04X1-07	1
HBB 716	●	7.0	C07K-SCLC R04X1-08	1



Internal Finishing to Medium Cutting
Screw-on



Holder

Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock R	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
											Cat. No.	Ref. Page	Fig	(N·m)		
Carbide with Oil Hole	E08H-SCLC R0602-10	E08H-SCLCR06	●	10	8	7.5	100	5.5	18	-13°	CC□□0602	B76 on	1	BFTX02505N	1.1	TRX08
	E10K-SCLC R0602-13	E10K-SCLCR06	●	13	10	9.5	125	7.0	19	-12°						
	E12M-SCLC R0602-16	E12M-SCLCR06	●	16	12	11.5	150	9.0	25	-10°						
	E16R-SCLC R09T3-20	E16R-SCLCR09	●	20	16	15.5	200	11.0	30	-8°			CC□□09T3	B79 on	1	

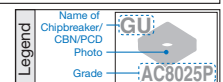
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Smart Damper E12

Applicable Inserts ◀ S-SCLC Type/A-SCLC Type/B-SCLC Type/C-SCLC Type/E-SCLC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision Finishing	Finishing to Medium Cutting	Coated	Uncoated	—	
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6040M	SUMIBORON BN7000/BNC500	MU AC4015K	No Chipbreaker AC4015K	SU AC5015S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90	
High-precision	FC T1500A	SI AC1030U	SC AC1030U	FC AC1030U	SI AC1030U	SC AC1030U	SUMIBORON BN7000/BNC500	—	—	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA NPD10	
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on		A22 on		A20 on		M2 on

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SCLP Type/A-SCLP Type



Internal Finishing to Medium Cutting
Screw-on

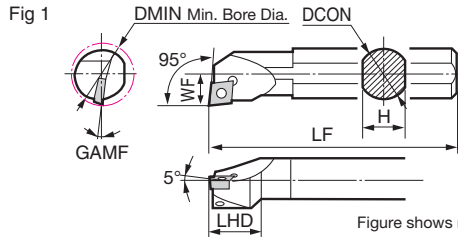
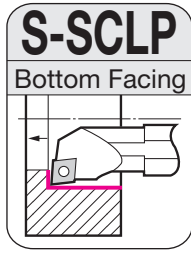


Figure shows right-hand (R) tool.



Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	(N·m)		
Steel	S10K-SCLP R/L0802-12	BBPC-010 R/L	●	●	12	10	9	125	6.0	12.0	-5°	CP□□0802	B82	1	BFTX0305A	2.0	TRX10
	S12M-SCLP R/L0802-14	BBPC-012 R/L 14	●	●	14	12	11	150	7.0	10.6	-5°						
	S12M-SCLP R/L0903-16	—	●	●	16	12	11	150	8.0	23.0	-6°	CP□□0903	B83 on	1	BFTX0407A	3.4	TRX15
	S16R-SCLP R/L0903-18	BBPC-316 R/L 18	●	●	18	16	15	200	9.0	18.0	-4°						
	S20S-SCLP R/L0903-22	BBPC-320 R/L 22	●	●	22	20	18	250	11.0	18.0	-2°						
	S25T-SCLP R/L0903-27	—	●	●	27	25	22	300	13.5	18.0	-2°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12



Internal Finishing to Medium Cutting
Screw-on

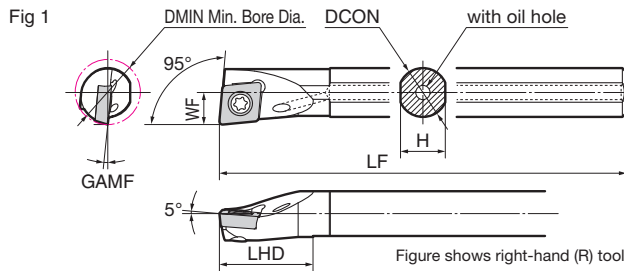
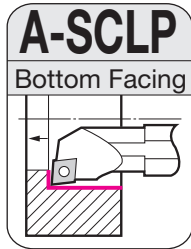


Figure shows right-hand (R) tool.

Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	(N·m)		
Steel with Oil Hole	A10K-SCLP R/L0802-12	●	●	12	10	9	125	6.0	12.0	-5°	CP□□0802	B82	1	BFTX0305N	2.0	TRX10
	A12M-SCLP R/L0802-14	●	●	14	12	11	150	7.0	10.6	-5°						
	A12M-SCLP R/L0903-16	●	●	16	12	11	150	8.0	23.0	-6°	CP□□0903	B83 on	1	BFTX0407N	3.4	TRX15
	A16R-SCLP R/L0903-18	●	●	18	16	15	200	9.0	18.0	-4°						
	A20S-SCLP R/L0903-22	●	●	22	20	18	250	11.0	18.0	-2°						
	A25T-SCLP R/L0903-27	●	●	27	25	22	300	13.5	18.0	-2°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12

Applicable Inserts ◀ S-SCLP Type/A-SCLP Type/B-SCLP Type/D-SCLP Type/C-SCLP Type

1st Recommended Insert

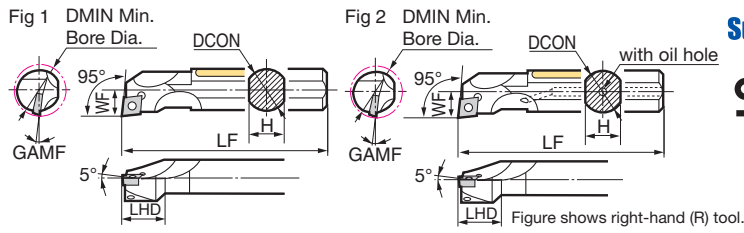
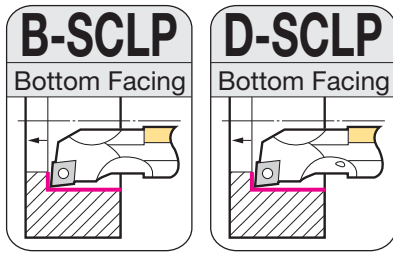
- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	—	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	MU AC4015K	No Chipbreaker AC4015K	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	SD T1500Z	—	—	SD AC5015S	—	—	—	—	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	E A10 on			E A14 on			E A16 on		E A18 on	E A22 on	E A20 on	

B-SCLP Type/D-SCLP Type/C-SCLP Type



Internal Finishing to Medium Cutting
Screw-on



Holder

Parts Dimensions (mm)

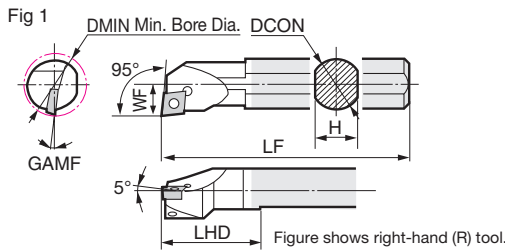
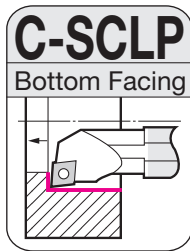
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N·m		
See with Anti-Vibration Mechanism	B12M-SCLP R/L0802-14	XBPC-012 R/L 14	●	●	14	12	11	150	7	10.6	-5°	CP□□0802	B82	1	BFTX0305A	2.0	TRX10
	B16R-SCLP R/L0903-18	XBPC-316 R/L 18	●	●	18	16	15	200	9	18.0	-4°	CP□□0903	B83 on	1	BFTX0407A	3.4	TRX15
	B20S-SCLP R/L0903-22	XBPC-320 R/L 22	●	●	22	20	18	250	11	18.0	-2°	CP□□0903	B83 on	1	BFTX0407A	3.4	TRX15
Steel with Anti-Vibration Mechanism of High Precision	D12M-SCLP R/L0802-14	XBPC-012 R/L H14	●		14	12	11	150	7	10.6	-5°	CP□□0802	B82	2	BFTX0305A	2.0	TRX10
	D16R-SCLP R/L0903-18	XBPC-316 R/L H18	●		18	16	15	200	9	18.0	-4°	CP□□0903	B83 on	2	BFTX0407A	3.4	TRX15
	D20S-SCLP R/L0903-22	XBPC-320 R/L H22	●		22	20	18	250	11	18.0	-2°	CP□□0903	B83 on	2	BFTX0407A	3.4	TRX15

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12



Internal Finishing to Medium Cutting
Screw-on



Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N·m		
Carbide	C10K-SCLP R/L0802-12	WBPC-010 R/L S	●	●	12	10	9	125	6	19	-5°	CP□□0802	B82	1	BFTX0305A	2.0	TRX10
	C12M-SCLP R/L0802-14	WBPC-012 R/L S14	●	●	14	12	11	150	7	25	-5°	CP□□0802	B82	1	BFTX0305A	2.0	TRX10
	C12M-SCLP R/L0802-16	WBPC-012 R/L S	●	●	16	12	11	150	8	25	-3°	CP□□0802	B82	1	BFTX0305A	2.0	TRX10
	C16R-SCLP R/L0903-18	WBPC-316 R/L S18	●	●	18	16	15	200	9	30	-4°	CP□□0903	B83 on	1	BFTX0407A	3.4	TRX15
	C16R-SCLP R/L0903-20	WBPC-316 R/L S	●	●	20	16	15	200	10	30	-3°	CP□□0903	B83 on	1	BFTX0407A	3.4	TRX15

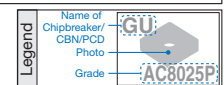
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E12

Applicable Inserts ◀ S-SCLP Type/A-SCLP Type/B-SCLP Type/D-SCLP Type/C-SCLP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	—	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	MU AC4015K	No Chipbreaker AC4015K	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	SD T1500Z	—	—	SD AC5015S	—	—	—	—	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 on			A14 on			A16 on		A18 on	A22 on	A20 on	

S-DCLN Type/D-DCLN Type



Medium Diameter General-purpose Double Clamp

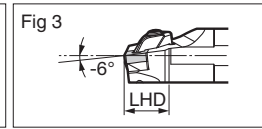
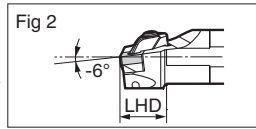
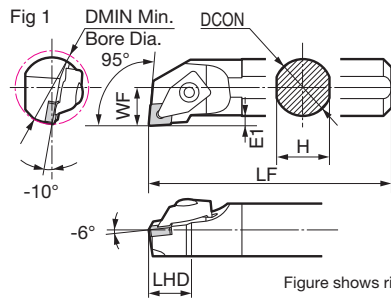
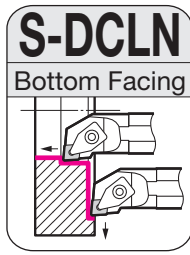


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
			R	L								Cat. No.	Ref. Page	Fig	Nm					
Steel	S25R-DCLN R/L0903-32	—	●	●	32	25	23	200	17.0	18	4.5	CNC□□0903	B20	1	SCP-1	5.0	—	—	LH040	LH025
	S25T-DCLN R/L0903-32	S25T-DCLN R/L 09	●	●	32	25	23	300	17.0	18	4.5									
	S32S-DCLN R/L1204-40	—	●	●	40	32	30	250	22.0	26	7.0	CNC□□1204	B22 on	2	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
	S40T-DCLN R/L1204-50	—	●	●	50	40	37	300	27.0	26	8.5									
	S50U-DCLN R/L1204-63	—	●	●	63	50	47	350	31.5	36	8.0									

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)

Clamp Set Parts E78

Smart Damper E15



Medium Diameter General-purpose Double Clamp

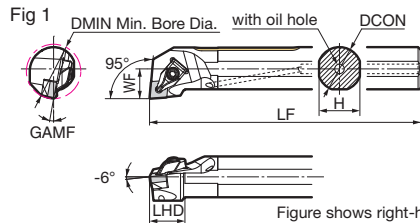
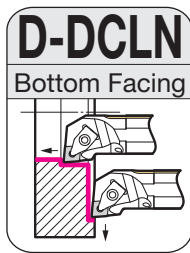


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								Cat. No.	Ref. Page	Fig	Nm					
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DCLN R/L1204-32	●	●	32	25	23	300	17	26	-12°	CNC□□1204	B22 on	1	SCP-2	5.0	CNS1203B	BFTX0307N	LH040	LH025
	D32T-DCLN R/L1204-40	●	●	40	32	30	300	22	26	-10°									
	D40U-DCLN R/L1204-50	●	●	50	40	37	350	27	26	-10°									

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)

Clamp Set Parts E78

Smart Damper E15

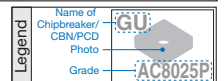
*** Applicable Inserts for DCLN Type**

For internal boring: Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
For facing: Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts. Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Applicable Inserts ◀ S-DCLN Type/D-DCLN Type/S-PCLN Type/B-PCLN Type/S-ECLN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-ferrous)		H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision Finishing	Finishing to Medium Cutting	Coated	Uncoated
Continuous Cutting	FE	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON
	T1500Z	AC8015P	AC8025P	AC6020M	AC6020M	AC6030M	BN7000/BNC500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	H1	BNC2115	BN1000
General Cutting	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7000/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	H1	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	No Chisel	EF	EG	EM	SUMIDIA	—	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	BN7000/BNC500	AC420K	AC420K	AC5025S	AC5025S	AC5025S	DA1000	—	BNC300	BN350
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A22 on		A20 on	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

S-PCLN Type/B-PCLN Type



Medium Diameter General-purpose
Lever Lock

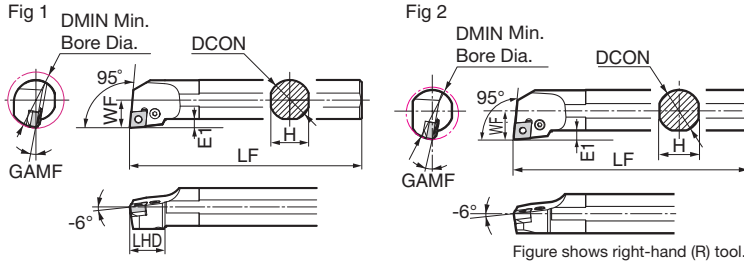
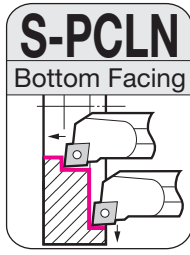


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
			R	L									Cat. No.	Ref. Page						
Steel	S25R-PCLN R/L0903-32	—	●	●	32	25	23	200	17.0	30	4.5	-15°	CN□□0903	B20	1	LCL3	LCS3	LSC32	LSP3	LH025
	S32S-PCLN R/L1204-40	—	●	●	40	32	30	250	22.0	29	7.0	-10°	CN□□1204	B22 on	1	LCL4	LCS4	LSC42B	LSP4	LH030
	S32S-PCLN R/L1204-44	S32S-PCLN R/L 12	▲	▲	44	32	30	250	22.0	29	7.0	-10°						LSC42		
	S40T-PCLN R/L1204-50	—	●	●	50	40	37	300	25.0	29	6.5	-10°								
	S40T-PCLN R/L1204-54	S40T-PCLN R/L 12	▲	▲	54	40	37	300	27.0	29	8.5	-10°	CN□□1906	B28 on	1	LCL6	LCS6	LSC63	LSP6	LH040
	S50U-PCLN R/L1204-63	—	●	●	63	50	47	350	31.5	—	8.0	-10°						LSC42B		
S50U-PCLN R/L1906-70	S50U-PCLN R/L 19	▲	▲	70	50	47	350	35.0	39	11.5	-10°									

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)



Medium Diameter General-purpose
Lever Lock

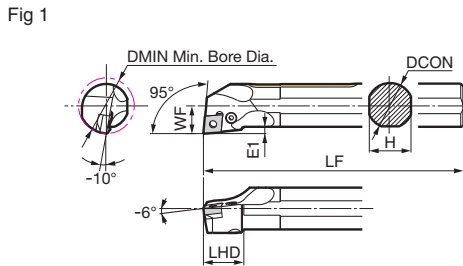
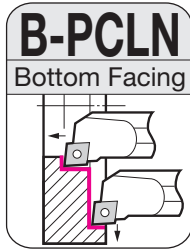


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
		R	L								Cat. No.	Ref. Page						
Steel with Anti-Vibration Mechanism	B32U-PCLN R/L1204-40	●	●	40	32	30	350	20	29	5.0	CN□□1204	B22 on	1	LCL4	LCS4CA	LSC42B	LSP4	LH030
	B40W-PCLN R/L1204-50	●	●	50	40	37	450	25	29	6.5					LCS4			

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)

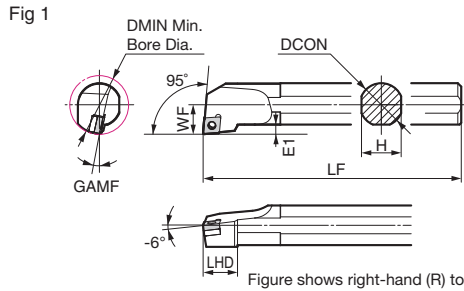
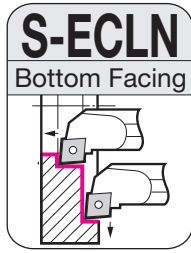
* Applicable Inserts for PCLN Type

For internal boring: Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
For facing: Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts. Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

SEC-Boring Bar S-ECLN Type



Medium Diameter General-purpose Pin Lock



Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Insert		Shim	Eccentric Pin	Wrench	
			R	L									Cat. No.	Ref. Page				
Steel	S20Q-ECLN R/L0903-26	BCLN320 R/L	●	●	26	20	18	180	13	20	4.0	-12°	CN□□0903	B20	1	—	CPU304C	LH030
	S25R-ECLN R/L0903-34	BCLN325 R/L	●	●	34	25	23	200	17	20	5.5	-12°	CN□□0903	B20	1	SCW323	CPB32C	LH025
	S25R-ECLN R/L1204-34	BCLN425 R/L	●	●	34	25	23	200	17	20	5.5	-12°	CN□□1204	B22 on	1	—	CPB42	LH030
	S32S-ECLN R/L1204-44	BCLN432 R/L	●	●	44	32	30	250	22	25	7.0	-10°	CN□□1204	B22 on	1	SCW423	CPB43S	
	S40T-ECLN R/L1204-54	BCLN440 R/L	●	●	54	40	37	300	27	25	8.5	-10°	CN□□1204	B22 on	1	—	CPB43	LH030
	S50U-ECLN R/L1906-70	BCLN650 R/L	●	●	70	50	47	350	35	32	11.5	-10°	CN□□1906	B28 on	1	SCW635	CPB64	

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)

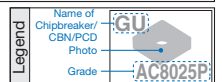
* Applicable Inserts for ECLN Type

For internal boring: Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
For facing: Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts. Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Applicable Inserts ◀ S-DCLN Type/D-DCLN Type/S-PCLN Type/B-PCLN Type/S-ECLN Type

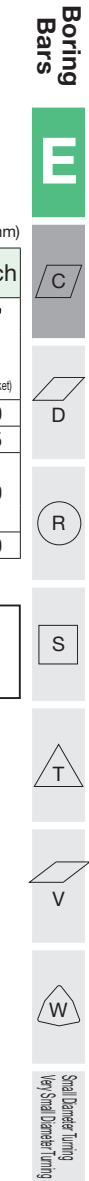
1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-ferrous)		H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision/Finishing	to Medium Cutting	Coated	Uncoated
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7000/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2115	SUMIBORON BN1000
General Cutting	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2125	SUMIBORON BN2000
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC420K	No Chipbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIDIA DA1000	—	SUMIBORON BNC300	SUMIBORON BN350
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A22 on		A20 on	

BN500 is for ductile cast iron.



S-DWLN Type/D-DWLN Type



Medium Diameter General-purpose Double Clamp

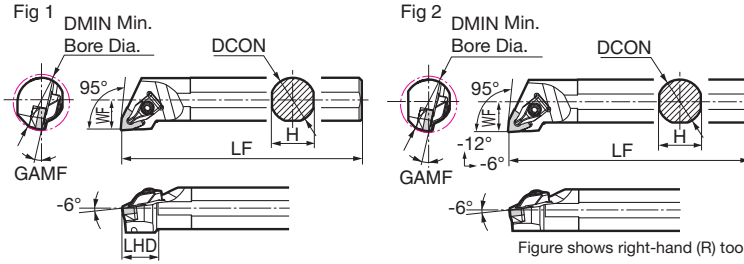
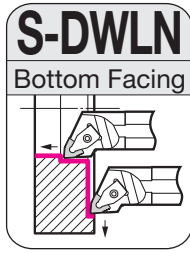


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert			Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
		R	L								DMIN	DCON	H	LF	WF				
Steel	S32S-DWLN R/L0604-40	●	●	40	32	30	250	22.0	29	-10°	WN□□0604	B69 on	1	SCP-4	5.0	WNS0603B	BFTX0307N	LH040	LH025
	S25R-DWLN R/L0804-32	●	●	32	25	23	200	17.0	26	-12°	WN□□0804	B71 on	1	SCP-2	5.0	WNS0803B	BFTX0307N	LH040	LH025
	S32S-DWLN R/L0804-40	●	●	40	32	30	250	22.0	26	-12°			1			WNS0804B	BFTX0409N		
	S40T-DWLN R/L0804-50	●	●	50	40	37	300	27.0	26	-12°			1						
S50U-DWLN R/L0804-63	●	●	63	50	47	350	31.5	—	-12°	2									

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)

Clamp Set Parts **E78**



Medium Diameter General-purpose Double Clamp

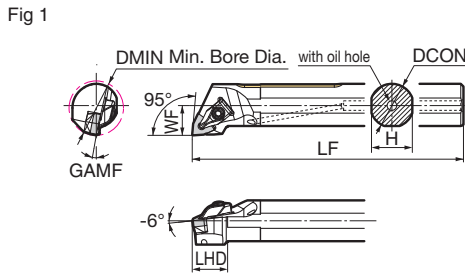
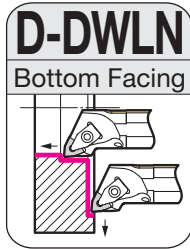


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert			Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
		R	L								DMIN	DCON	H	LF	WF				
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DWLN R/L0804-32	●	●	32	25	23	300	17	26	-12°	WN□□0804	B71 on	1	SCP-2	5.0	WNS0803B	BFTX0307N	LH040	LH025
	D32T-DWLN R/L0804-40	●	●	40	32	30	300	22	26	-10°						1			
	D40U-DWLN R/L0804-50	●	●	50	40	37	350	27	26	-10°						1			

Feed direction of applicable inserts differs according to machining application. (Refer to * note below)

Clamp Set Parts **E78**

*** Applicable Inserts for DWLN Type**
 For internal boring: Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
 For facing: Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts. Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

S-PWLN Type



Medium Diameter General-purpose
Lever Lock

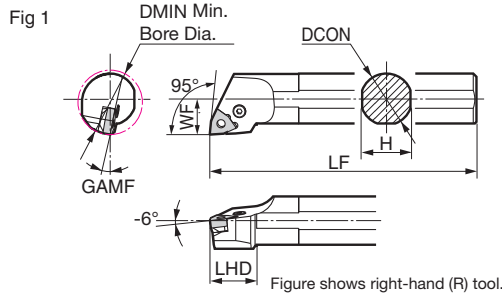
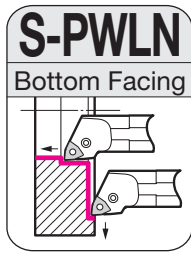


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
		R	L								Cat. No.	Ref. Page						
Steel	S32S-PWLN R/L0604-40	●	●	40	32	30	250	22	29	-10°	WN□□0604	B69 on	1	LCL3	LCS3	LSW317	LSP3	LH025
	S32S-PWLN R/L0804-40	●	●	40	32	30	250	22	29	-10°	WN□□0804	B71 on	1	LCL4	LCS4	LSW42B	LSP4	LH030
	S40T-PWLN R/L0804-50	●	●	50	40	37	300	27	29	-10°								

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Boring Bars

E

C

D

R

S

T

V

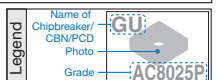
W

Steel Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-DWLN Type/D-DWLN Type/S-PWLN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

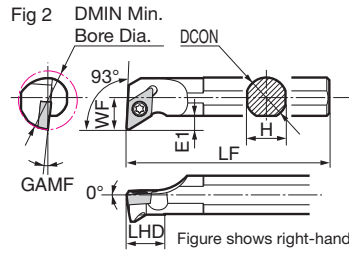
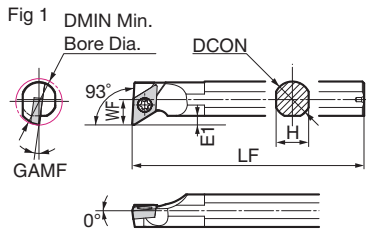
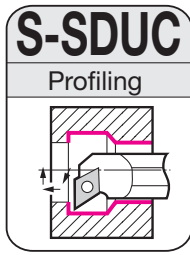


Cutting Range Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)		S (Exotic Alloy)			H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	Coated	Uncoated
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIBORON BNC2115	SUMIBORON BN2000
General Cutting	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	GZ AC420K	No Chipbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000
Recommended Cutting Conditions	A10 on			A14 on			A16 on		A18 on			A20 on	

S-SDUC Type/A-SDUC Type



Internal Profiling
Screw-on



Holder

Parts

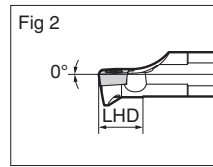
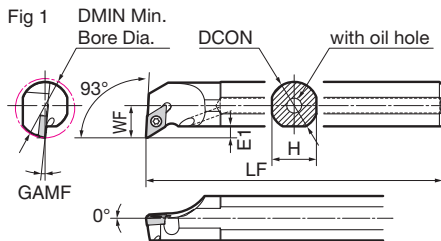
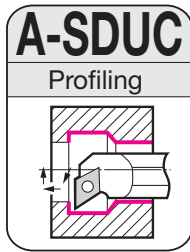
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Insert		Flat Insert Screw		Wrench	
			R	L									Cat. No.	Ref. Page	Fig	N·m		
Steel	S10M-SDUC R/L0702-13	S10M-SDUC R/L 07	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08
	S12M-SDUC R/L0702-16	S12M-SDUC R/L 07	●	●	16	12	11	150	9.0	3.5	-8°	—						
	S16Q-SDUC R/L0702-20	—	●	●	20	16	15	180	11.0	4.0	-6°	—						
	S16N-SDUC R/L0702-20	S16N-SDUC R/L 07	●	●	20	16	15	160	11.0	4.0	-6°	—	DC□□11T3	B90 on	2	BFTX0409N	3.4	TRX15
	S16Q-SDUC R/L11T3-23	—	●	●	23	16	15	180	12.5	5.5	-6°	15						
	S20R-SDUC R/L11T3-25	—	●	●	25	20	18	200	13.0	4.5	-6°	—						
	S20N-SDUC R/L11T3-25	S20N-SDUC R/L 11	●	●	25	20	18	160	13.0	4.5	-6°	—	DC□□11T3	B90 on	1	BFTX0409N	3.4	TRX15
	S25S-SDUC R/L11T3-32	—	●	●	32	25	22	250	17.0	7.0	-6°	—						
	S25Q-SDUC R/L11T3-32	S25Q-SDUC R/L 11	●	●	32	25	22	180	17.0	7.0	-6°	—						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13



Internal Profiling
Screw-on



Holder

Parts

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Insert		Flat Insert Screw		Wrench	
		R	L									Cat. No.	Ref. Page	Fig	N·m		
Steel with Oil Hole	A10M-SDUC R/L0702-13	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08
	A12M-SDUC R/L0702-16	●	●	16	12	11	150	9.0	3.5	-8°	—						
	A16Q-SDUC R/L0702-20	●	●	20	16	15	180	11.0	4.0	-6°	—						
	A16Q-SDUC R/L11T3-23	●	●	23	16	15	180	12.5	5.5	-6°	15	DC□□11T3	B90 on	2	BFTX0409N	3.4	TRX15
	A20R-SDUC R/L11T3-25	●	●	25	20	18	200	13.0	4.5	-6°	—						
	A25S-SDUC R/L11T3-32	●	●	32	25	22	250	17.0	7.0	-6°	—						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning / Very Small Diameter Turning

B-SDUC Type/C-SDUC Type



Internal Profiling
Screw-on

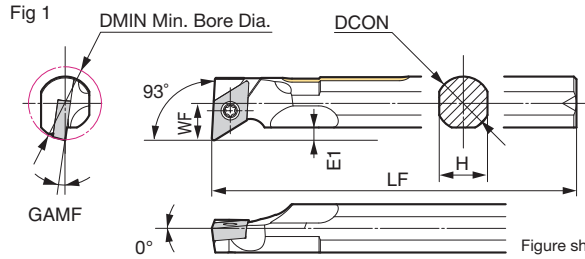
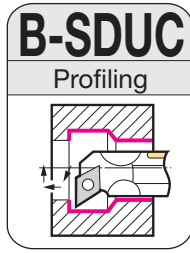


Figure shows right-hand (R) tool.



Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)							
		R	L								Cat. No.	Ref. Page	Fig	N·m								
Steel with Anti-Vibration Mechanism	B10M-SDUC R/L0702-13	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08						
	B12M-SDUC R/L0702-16	●	●	16	12	11	150	9	3.5	-8°												
	B16R-SDUC R/L0702-20	●	●	20	16	15	200	11	4.0	-6°												
	B20S-SDUC R/L11T3-25	●	●	25	20	18	250	13	4.5	-6°							DC□□11T3	B90 on	1	BFTX0409N	3.4	TRX15
	B25S-SDUC R/L11T3-32	●	●	32	25	22	250	17	7.0	-6°												

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13



Internal Profiling
Screw-on

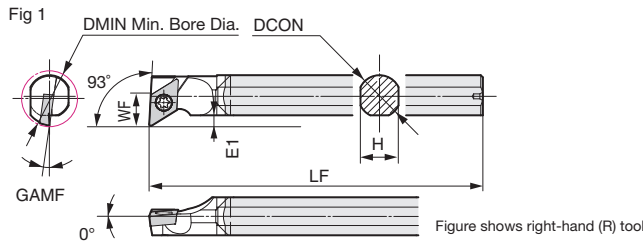
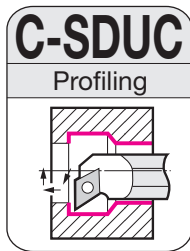


Figure shows right-hand (R) tool.



C

D

R

S

T

V

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Carbide	C10M-SDUC R/L0702-13	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08
	C12M-SDUC R/L0702-16	●	●	16	12	11	150	9	3.5	-8°						
	C16R-SDUC R/L0702-20	●	●	20	16	15	200	11	4.0	-6°						
	C20S-SDUC R/L11T3-25	●	●	25	20	18	250	13	4.5	-6°						

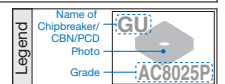
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13

Applicable Inserts ◀ S-SDUC/A-SDUC/B-SDUC/C-SDUC/S-SDQC/A-SDQC/B-SDQC/S-SDZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	SUMIBORON BN7000/BNCS500	MU AC4015K	No Chipbreaker AC4015K	FX AC5015S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	SC AC1030U	FC AC1030U	SI AC1030U	SC AC1030U	SUMIBORON BN7000/BNCS500	—	—	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on	A22 on		A20 on		M2 on

BNCS500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SDQC Type/A-SDQC Type



Internal Profiling
Screw-on

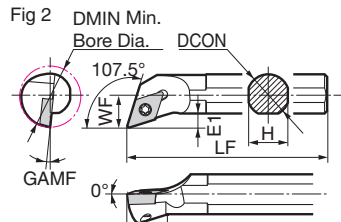
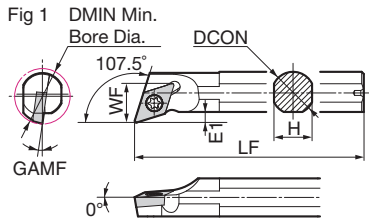
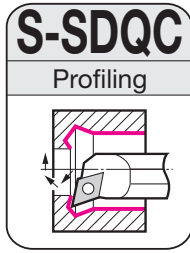


Figure shows right-hand (R) tool.

Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Insert		Flat Insert Screw		Wrench		
			R	L									Cat. No.	Ref. Page	Fig	N·m			
Steel	S10M-SDQC R/L0702-13	S10M-SDQC R/L 07	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08	
	S12M-SDQC R/L0702-16	S12M-SDQC R/L 07	●	●	16	12	11	150	9.0	3.5	-8°	—							
	S16Q-SDQC R/L0702-20	—	●	●	20	16	15	180	11.0	4.0	-6°	—							
	S16N-SDQC R/L0702-20	S16N-SDQC R/L 07	—	●	●	20	16	15	160	11.0	4.0	-6°	—	DC□□11T3	B90 on	1	BFTX0409N	3.4	TRX15
	S16Q-SDQC R/L11T3-23	—	●	●	23	16	15	180	12.5	5.5	-6°	15							
	S20R-SDQC R/L11T3-25	—	●	●	25	20	18	200	13.0	4.5	-6°	—							
	S20N-SDQC R/L11T3-25	S20N-SDQC R/L 11	—	●	●	25	20	18	160	13.0	4.5	-6°	—						
	S25S-SDQC R/L11T3-32	—	●	●	32	25	22	250	17.0	7.0	-6°	—							
S25Q-SDQC R/L11T3-32	S25Q-SDQC R/L 11	—	●	●	32	25	22	180	17.0	7.0	-6°	—							

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13



Internal Profiling
Screw-on

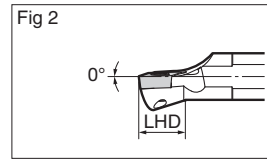
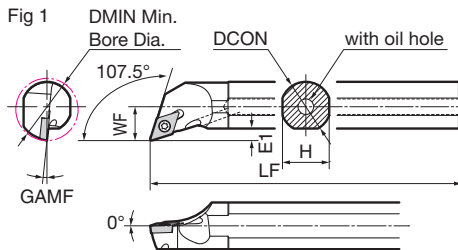
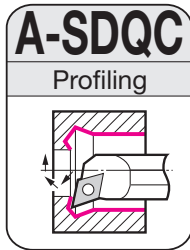


Figure shows right-hand (R) tool.

Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Insert		Flat Insert Screw		Wrench		
		R	L									Cat. No.	Ref. Page	Fig	N·m			
Steel with Oil Hole	A10M-SDQC R/L0702-13	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08	
	A12M-SDQC R/L0702-16	●	●	16	12	11	150	9.0	3.5	-8°	—							
	A16Q-SDQC R/L0702-20	●	●	20	16	15	180	11.0	4.0	-6°	—							
	A16Q-SDQC R/L11T3-23	—	●	●	23	16	15	180	12.5	5.5	-6°	15	DC□□11T3	B90 on	1	BFTX0409N	3.4	TRX15
	A20R-SDQC R/L11T3-25	—	●	●	25	20	18	200	13.0	4.5	-6°	—						
	A25S-SDQC R/L11T3-32	—	●	●	32	25	22	250	17.0	7.0	-6°	—						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13

Boring Bars

E

C

D

R

S

T

V

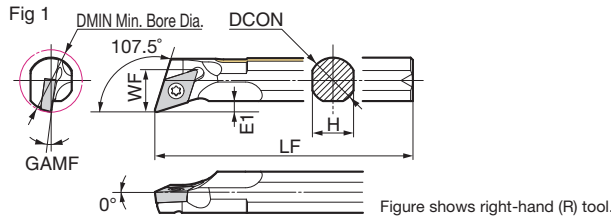
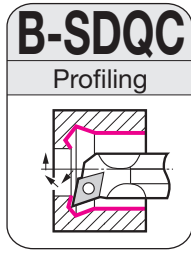
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Small Diameter Turning / Very Small Diameter Turning

B-SDQC Type



Internal Profiling
Screw-on



Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.		Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench
		R	L	DMIN	DCON	H	LF	WF	E1	GAMF	Cat. No.	Ref. Page	Fig		N·m	
Steel with Anti-Vibration Mechanism	B10M-SDQC R/L0702-13	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B86 on	1	BFTX02506N	1.5	TRX08
	B12M-SDQC R/L0702-16	●	●	16	12	11	150	9	3.5	-8°						
	B16R-SDQC R/L0702-20	●	●	20	16	15	200	11	4.0	-6°	DC□□11T3	B90 on	1	BFTX0409N	3.4	TRX15
	B20S-SDQC R/L11T3-25	●	●	25	20	18	250	13	4.5	-6°						
	B25S-SDQC R/L11T3-32	●	●	32	25	22	250	17	7.0	-6°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E13

C

D

R

S

T

V

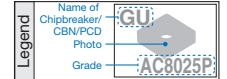
W

Smart Damper Tuning
Very Smart Damper Tuning

Applicable Inserts ◀ S-SDUC/A-SDUC/B-SDUC/C-SDUC/S-SDQC/A-SDQC/B-SDQC/S-SDZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	SUMIBORON BN7000/BNC500	MU AC4015K	No Chipbreaker AC4015K	FX AC5015S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	SC AC1030U	FC AC1030U	SI AC1030U	SC AC1030U	SUMIBORON BN7000/BNC500	—	—	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on	A22 on		A20 on		M2 on

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SDZC Type



Internal Profiling
Screw-on

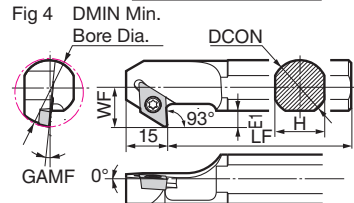
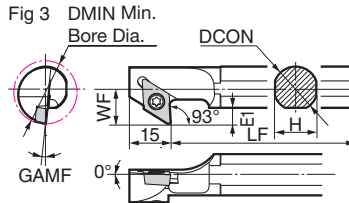
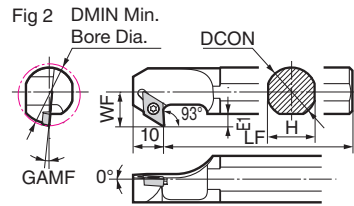
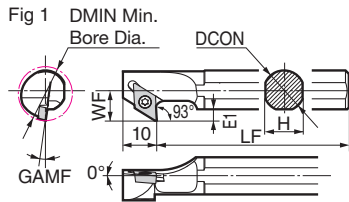
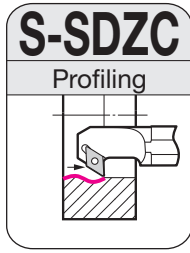


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Applicable Insert		Flat Insert Screw	Wrench	
		R	L								Cat. No.	Ref. Page			
Steel	S10M-SDZC R/L0702-13	●	●	13	10	9	150	7.5	3.0	-8°	DC□□0702	B86 on	BFTX02506N	1.5	TRX08
	S12M-SDZC R/L0702-16	●	●	16	12	11	150	9.0	3.5	-8°					
	S16Q-SDZC R/L0702-20	●	●	20	16	15	180	11.0	4.0	-6°	DC□□11T3	B90 on	BFTX0409N	3.4	TRX15
	S16Q-SDZC R/L11T3-23	●	●	23	16	15	180	13.0	6.0	-6°					
	S20R-SDZC R/L11T3-25	●	●	25	20	18	200	14.5	6.0	-6°					
	S25S-SDZC R/L11T3-32	●	●	32	25	22	250	17.0	7.0	-6°					

Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Boring Bars

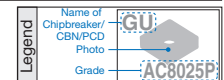


Small Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-SDUC/A-SDUC/B-SDUC/C-SDUC/S-SDQC/A-SDQC/B-SDQC/S-SDZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



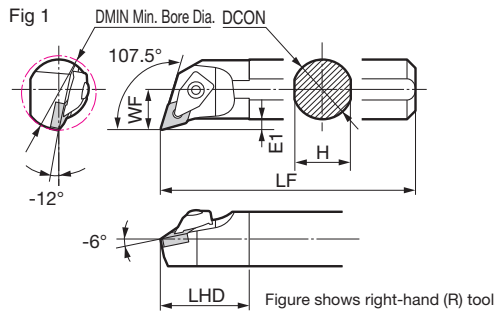
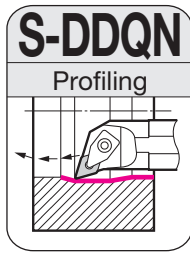
Cutting Range Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	SUMIBORON BN7000/BNC500	MU AC4015K	No Chipbreaker AC4015K	FX AC5015S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	SC AC1030U	FC AC1030U	SI AC1030U	SC AC1030U	SUMIBORON BN7000/BNC500	—	—	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on	A22 on		A20 on		M2 on

BNC500 is for ductile cast iron.

S-DDQN Type/S-DDUN Type



Profiling
Double Clamp



Holder

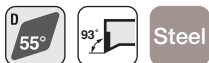
Parts

Dimensions (mm)

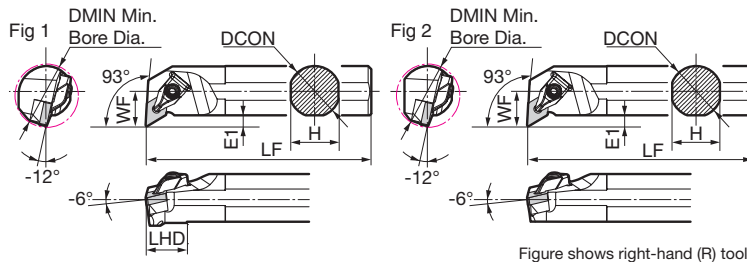
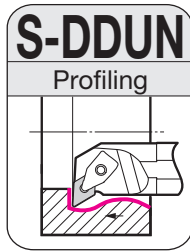
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		Clamp Set		Top Hex Wrench	Bottom Hex Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N-m			
Steel	S32T-DDQN R/L1504-40	S32T-DDQN L15	●	●	40	32	30	300	22	48	6	DN□□1504	B32 on	1	SCP-2	5.0	LH040	LH025

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Clamp Set Parts E78



Profiling
Double Clamp



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N-m					
Steel	S32S-DDUN R/L1504-40	●	●	40	32	30	250	22.0	26	7.0	DN□□1504	B32 on	1	SCP-2	5.0	DNS1504B	BFTX0409N	LH040	LH025
	S40T-DDUN R/L1504-50	●	●	50	40	37	300	27.0	26	8.5									
	S50U-DDUN R/L1504-63	●	●	63	50	47	350	31.5	—	8.0									

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Clamp Set Parts E78

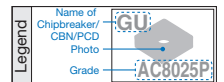
Smart Damper E15

Modification of the holder and shim is required when using a corner radius 1.6 or higher insert, in order to prevent interference with the workpiece.

Applicable Inserts ◀ S-DDQN Type/S-DDUN Type/D-DDUN Type/S-PDUN Type/S-EDUN Type/S-PDZN Type/S-EDZN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	Finishing
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7000/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA NPD10
General Cutting	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC420K	GZ AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIDIA DA1000	—	SUMIBORON BNC300	SUMIBORON BN350	—
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A22 on		A20 on		M2 on

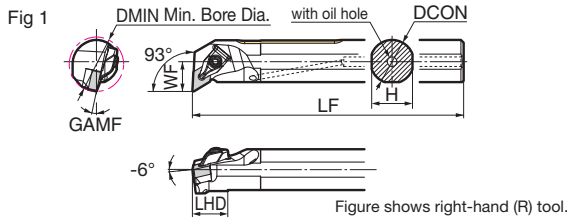
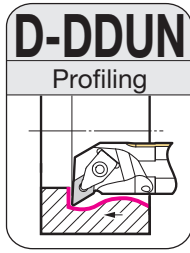
BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

D-DDUN Type/S-PDUN Type/S-EDUN Type



Profiling
Double Clamp



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								Cat. No.	Ref. Page	Fig	(N·m)					
Steel with Anti-Vibration Mechanism Coolant Hole	D32T-DDUN R/L1104-40	●	●	40	32	30	300	22	26	-10°	DN□□1104	B31 on	1	SCP-1	5.0	DNS1104B	BFTX0307N	LH040	LH025
	D32T-DDUN R/L1506-40	●	●	40	32	30	300	22	26	-12°	DN□□1506	B36 on	1	SCP-2	5.0	DNS1506B	BFTX0409N	LH040	LH025
	D40U-DDUN R/L1506-50	●	●	50	40	37	350	27	26	-12°									

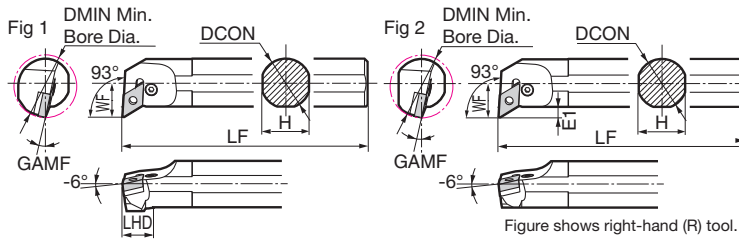
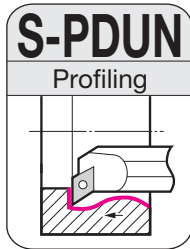
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Clamp Set Parts **E78**

Smart Damper **E15**



Profiling
Lever Lock



Holder

Parts

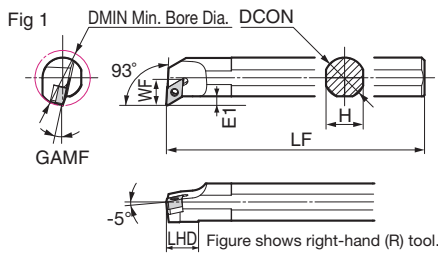
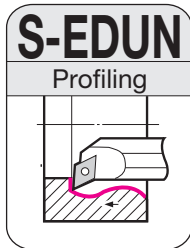
Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
			R	L									Cat. No.	Ref. Page						
Steel	S25R-PDUN R/L1104-32	—	●	●	32	25	22	200	17.0	20	7.0	-15°	DN□□1104	B31 on	1	LCL3	LCS3	LS317	LSP3	LH025
	S32S-PDUN R/L1504-40	—	●	●	40	32	30	250	22.0	20	7.0	-12°	DN□□1504	B32 on	1	LCL4	LCS4	LSD42	LSP4	LH030
	S32S-PDUN R/L1504-44	S32S-PDUN R/L 15	▲	▲	44	32	30	250	22.0	20	7.0	-10°								
	S40T-PDUN R/L1504-50	—	●	●	50	40	37	300	27.0	20	8.5	-12°	DN□□1504	B32 on	1	LCL4	LCS4	LSD42	LSP4	LH030
	S50U-PDUN R/L1504-63	—	●	●	63	50	47	350	31.5	—	8.0	-12°								

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Profiling
Pin Lock



Holder

Parts

Dimensions (mm)

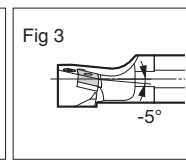
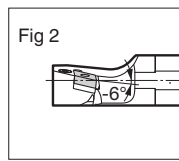
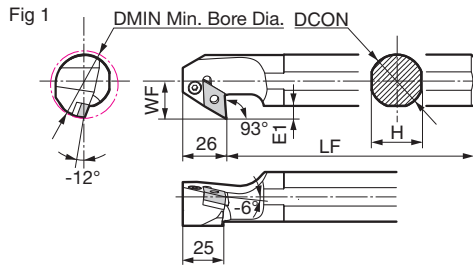
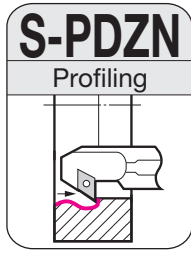
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Insert		Shim	Eccentric Pin	Wrench	
			R	L									Cat. No.	Ref. Page				
Steel	S25R-EDUN R/L1104-34	BDUN325 R/L	●		34	25	23	200	17	20	5.5	-12°	DN□□1104	B31 on	1	SDW323	CPB34	LH025
	S32S-EDUN R/L1504-44	BDUN432 R/L	●		44	32	30	250	22	20	7.0	-10°	DN□□1504	B32 on	1	SDW423	CPB43	LH030

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

S-PDZN Type/S-EDZN Type



Profiling
Lever Lock



Holder

Parts

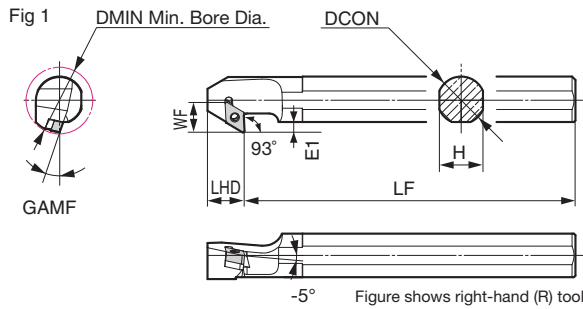
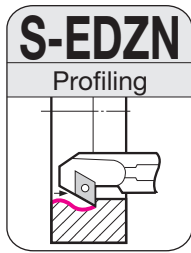
Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench (For Hex Socket)		
			R	L							Cat. No.	Ref. Page							
Steel	S32S-PDZN R/L1504-40	—	●	●	40	32	30	250	22.0	7.0	DN□□1504	B32 on	2	LCL4	LCS4	LSD42	LSP4	LH030	
	S32S-PDZN R/L1504-44	S32S-PDZN R/L 15	▲	▲	44	32	30	250	22.0	7.0									1
	S40T-PDZN R/L1504-50	—	●	●	50	40	37	300	27.0	8.5									2
	S50U-PDZN R/L1504-63	—	●	●	63	50	47	350	31.5	8.0									3

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Profiling
Pin Lock



Holder

Parts

Dimensions (mm)

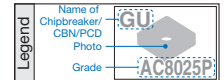
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Head LHD	Cutting Edge Distance WF	Offset E1	Rake Angle GAMF	Applicable Insert		Shim	Eccentric Pin	Wrench (For Hex Socket)	
			R	L									Cat. No.	Ref. Page				
Steel	S25R-EDZN R/L1104-34	BDZN325 R/L	●		34	25	23	200	20	17	5.5	-12°	DN□□1104	B31 on	1	SDW323	CPB34	LH025
	S32S-EDZN R/L1504-44	BDZN432 R/L	●		44	32	30	250	25	22	7.0	-10°	DN□□1504	B32 on	1	SDW423	CPB43	LH030

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Applicable Inserts ◀ S-DDQN Type/S-DDUN Type/D-DDUN Type/S-PDUN Type/S-EDUN Type/S-PDZN Type/S-EDZN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	Finishing
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7000/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA NPD10
General Cutting	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC420K	No Chipbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIDIA DA1000	—	SUMIBORON BNC300	SUMIBORON BN350	—
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A22 on		A20 on		M2 on

BNC500 is for ductile cast iron.

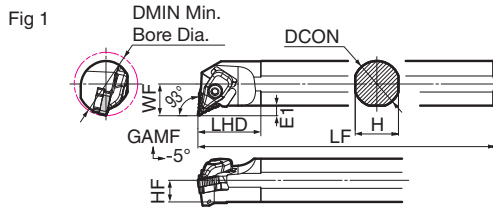
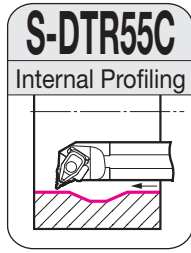
▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability).

S-DTR55C Type



Internal Profiling
Double Clamp

SumiTura T-REX



Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Key Small Diameter Turning

Holder

Parts

Dimensions (mm)

Cat. No.	Stock R	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Offset E1	Cutting Edge Height HF	Fig	Clamp Plate	Spring	Cap Screw	Shim	Shim Screw	Wrench	Wrench for Shims	
												TRCP3	S-SP4-20	BX0520	N-m 3.5 to 4.5	TRW5505	BFTX0307N	TSW040 (For Hex Socket)	TRX10(*) (For Torx Holes)
S32S-DTR55C R-17	●	44	32	30	250	22	42	-12°	7.0	15.0	1	TRCP3	S-SP4-20	BX0520	3.5 to 4.5	TRW5505	BFTX0307N	TSW040	TRX10(*)
S40T-DTR55C R-17	●	50	40	37	300	25	42	-10°	6.2	18.5	1	TRCP3	S-SP4-20	BX0520	3.5 to 4.5	TRW5505	BFTX0307N	TSW040	TRX10(*)

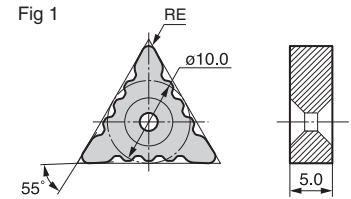
* Item is sold separately.

DTR55C Type: External Profiling **C15**

Insert (Coated Carbide / Cermet)

Dimensions (mm)

Applications	Appearance	Cat. No.	Corner Radius RE	AC810P	AC8025P	AC820P	AC830P	AC630M	T3000Z	Fig
Fine Cutting		TRM 551704-FL	0.4	●	●	●	●	●	▲	1
		551708-FL	0.8	●	●	●	●	●	▲	1
Finishing		TRM 551704-LU	0.4	●	●	●	●	●	▲	1
		551708-LU	0.8	●	●	●	●	●	▲	1
		551712-LU	1.2	●	●	●	●	●	▲	1
		TRM 551704-SU	0.4	●	●	●	●	●	▲	1
		551708-SU	0.8	●	●	●	●	●	▲	1
		551712-SU	1.2	●	●	●	●	●	▲	1
Medium Cutting		TRM 551704-GU	0.4	●	●	●	●	●	▲	1
		551708-GU	0.8	●	●	●	●	●	▲	1
		551712-GU	1.2	●	●	●	●	●	▲	1



S-SVJB Type/B-SVJB Type



Internal Profiling
Screw-on

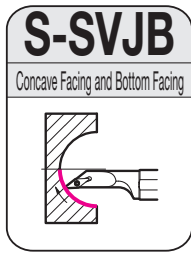


Fig 1

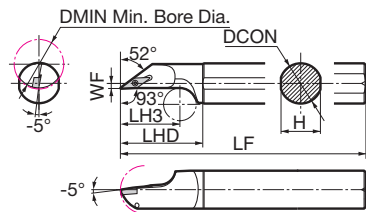


Fig 2

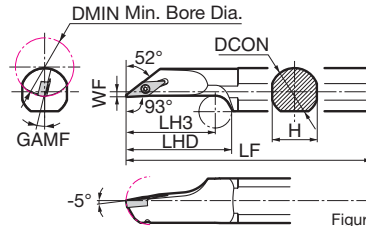


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Head LH3	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L									Cat. No.	Ref. Page	Fig	N·m		
Steel	S20R-SVJB R/L1103-25	●	●	25	20	19	200	2.0	42	29	—	VB□□1103	B123 on	1	BFTX02508NV	1.5	TRX08
	S25S-SVJB R/L1103-30	●	●	30	25	24	250	3.5	50	36	—						
	S32T-SVJB R/L1604-40	●	●	40	32	30	300	3.5	75	60	-8°	VB□□1604	B125	2	BFTX03508	2.0	TRX10
	S40T-SVJB R/L1604-50	●	●	50	40	37	300	4.5	95	75	-7°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Internal Profiling
Screw-on

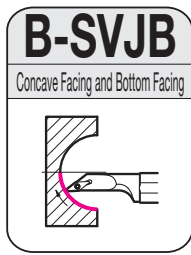


Fig 1

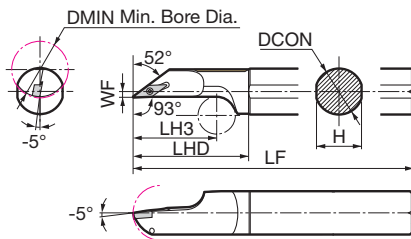


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

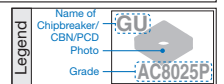
Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Head LH3	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L									Cat. No.	Ref. Page	Fig	N·m		
Steel with Anti-Vibration Mechanism	B20R-SVJB R/L1103-25	●	●	25	20	19	200	2.0	55	37.5	—	VB□□1103	B123 on	1	BFTX02508NV	1.5	TRX08
	B25S-SVJB R/L1103-30	●	●	30	25	24	250	3.5	62	45	—						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Applicable Inserts ◀ S-SVJB/B-SVJB/S-SVQB/B-SVQB/C-SVQB/S-SVUB/B-SVUB/C-SVUB/S-SVZB/B-SVZB/C-SVZB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)		M (Stainless Steel)		K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	Finishing to Medium Cutting	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7000/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7000/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 on		A14 on		A16 on		A18 on	A22 on	A20 on	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SVJC Type



Internal Profiling
Screw-on

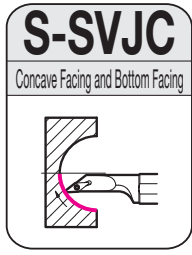


Fig 1

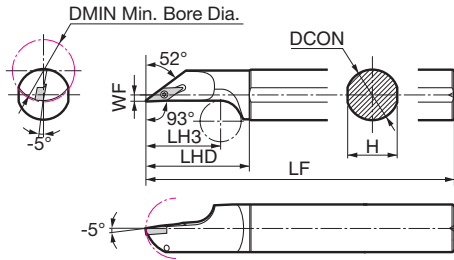


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Head LH3	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel	S12M-SVJC R/L0802-16 S16Q-SVJC R/L0802-20	●	●	16	12	11	150	2.0	30	21	VC□□0802	B126	1	BFTX0204N	0.5	TRX06

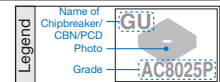
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Applicable Inserts ◀ S-SVJC/S-SVQC/A-SVQC/S-SVUC/A-SVUC/S-SVZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	Coated	Uncoated	—
General Cutting	FB T1500Z	SU AC8025P	LB AC6030M	SU AC6030M	SU AC5015S	SU AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	FC AC1030U	SI AC1030U	FC AC5015S	SI AC5015S	SUMIBORON BNC2115	SUMIBORON BN2000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	⚙️ A10 on		⚙️ A14 on		⚙️ A18 on		⚙️ A20 on		⚙️ M2 on

S-SVQB Type/B-SVQB Type



Internal Profiling
Screw-on

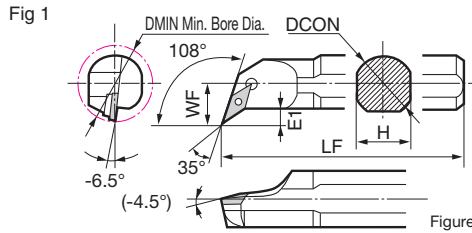
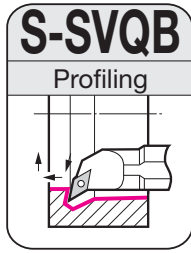


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Pin	Bolt	Shim	Flat Insert Screw		Wrench (For Torx Holes)	Wrench for Bolt (For Hex Socket)	
		R	L							Cat. No.	Ref. Page				Cat. No.	N-m			
Steel	S20R-SVQB R/L1103-25	●	●	25	20	18	200	14.5	5.5	VB□□1103	B123 on	1	—	—	—	BFTX02508NV	1.5	TRX08	—
	S25S-SVQB R/L1103-32	●	●	32	25	23	250	19.0	7.5										
	S25S-SVQB R/L1604-34	●	●	34	25	23	250	20.5	9.0	VB□□1604	B125	1	VP32B	BH03504	SVP32	BFTX03508	2.0	TRX10	LH020
	S32T-SVQB R/L1604-40	●	●	40	32	30	300	22.0	9.0										
	S40T-SVQB R/L1604-50	●	●	50	40	37	300	27.0	10.0										

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14



Internal Profiling
Screw-on

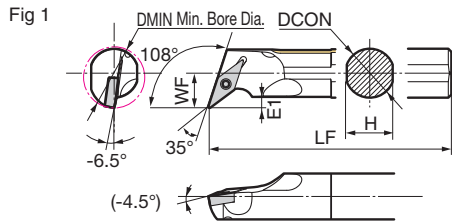
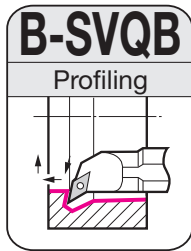


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Pin	Bolt	Shim	Flat Insert Screw		Wrench (For Torx Holes)
		R	L							Cat. No.	Ref. Page				Cat. No.	N-m	
Steel with Anti-Vibration Mechanism	B16R-SVQB R/L1103-20	●	—	20	16	15	200	11.5	4	VB□□1103	B123 on	1	—	—	BFTX02508NV	1.5	TRX08
	B20R-SVQB R/L1103-25	●	—	25	20	18	200	14.5	5								

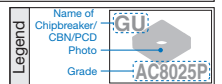
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14

Applicable Inserts ◀ S-SVJB/B-SVJB/S-SVQB/B-SVQB/C-SVQB/S-SVUB/B-SVUB/C-SVUB/S-SVZB/B-SVZB/C-SVZB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)		M (Stainless Steel)		K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	Finishing to Medium Cutting	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7000/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7000/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 on		A14 on		A16 on		A18 on	A22 on	A20 on	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

C-SVQB Type



Internal Profiling
Screw-on

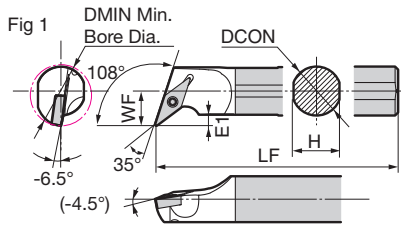
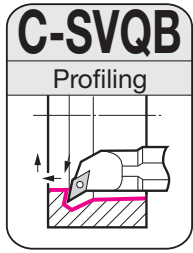


Figure shows right-hand (R) tool.

Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Flat Insert Screw		Wrench	
		R	L							Cat. No.	Ref. Page	Fig	N-m	(For Torx Holes)	
Carbide	C16R-SVQB R/L1103-20	●		20	16	15	200	11.5	4	VB□□1103	B123 on	1	BFTX02508NV	1.5	TRX08
	C20R-SVQB R/L1103-25	●		25	20	18	200	14.5	5						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14

C

D

R

S

T

V

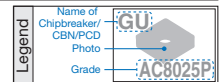
W

Small Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-SVJB/B-SVJB/S-SVQB/B-SVQB/C-SVQB/S-SVUB/B-SVUB/C-SVUB/S-SVZB/B-SVZB/C-SVZB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)		M (Stainless Steel)		K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	Finishing to Medium Cutting	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7000/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7000/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	⚙️ A10 on		⚙️ A14 on		⚙️ A16 on		⚙️ A18 on	⚙️ A22 on	⚙️ A20 on	

BNC500 is for ductile cast iron.

S-SVQC Type/A-SVQC Type



Internal Profiling
Screw-on

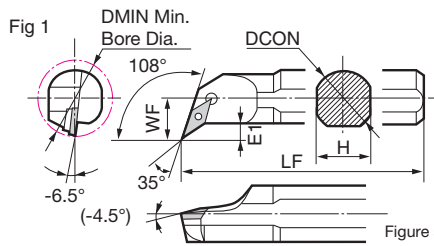
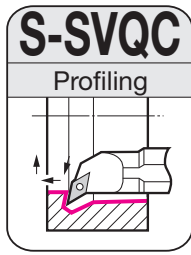


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L							Cat. No.	Ref. Page	Fig	N·m		
Steel	S10M-SVQC R/L0802-14	●	●	14	10	9	150	8.5	4.5	VC□□0802	B126	1	BFTX0204N	0.5	TRX06
	S12M-SVQC R/L0802-16	●	●	16	12	11	150	9.5	4.5			1			
	S16Q-SVQC R/L1103-20	●	●	20	16	15	180	11.5	4.5	VC□□1103	B126 on	1	BFTX02508NV	1.5	TRX08

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Internal Profiling
Screw-on

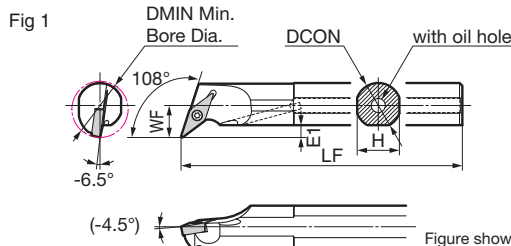
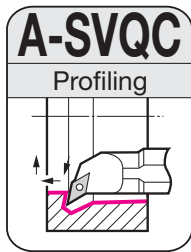


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L							Cat. No.	Ref. Page	Fig	N·m		
Steel with Oil Hole	A16Q-SVQC R/L1103-20	●	●	20	16	15	180	11.5	4.5	VC□□1103	B126 on	1	BFTX02508NV	1.5	TRX08
	A20R-SVQC R/L1103-25	●	●	25	20	18	200	14.5	5.5						
	A25S-SVQC R/L1103-32	●	●	32	25	23	250	19.0	7.5						
	A25S-SVQC R/L1604-34	●	●	34	25	23	250	20.5	9.0						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Applicable Inserts ◀ S-SVJC/S-SVQC/A-SVQC/S-SVUC/A-SVUC/S-SVZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

Cutting Range Process	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SU AC5015S	SU AC5025S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	FC AC1030U	SI AC1030U	FC AC5015S	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on		A14 on		A18 on		A22 on		A20 on		M2 on

Boring Bars
E
C
D
R
S
T
V
W
Special Drilling
Very Special Drilling

S-SVUB Type/B-SVUB Type



Internal Profiling
Screw-on

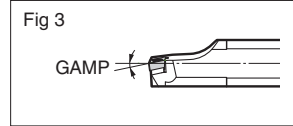
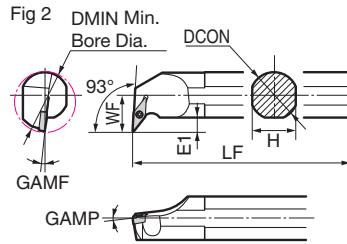
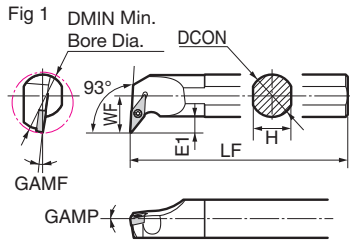
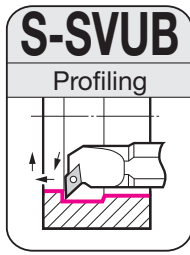


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Rake Angle GAMF	Rake Angle GAMP	Applicable Insert		Pin	Bolt	Shim	Flat Insert Screw	Wrench (For Torx Holes)	Wrench for Bolt (For Hex Socket)		
		R	L									Cat. No.	Ref. Page								
Steel	S20R-SVUB R/L1103-28	●	●	28	20	18	200	17.5	7.5	-7.5°	-3.0°	VB□□1103	B123 on	1	—	—	BFTX02508NV	1.5	TRX08	—	
	S25S-SVUB R/L1103-32	●	●	32	25	23	250	19.0	7.5	-6.5°	-2.5°			2	—	—					
	S25S-SVUB R/L1604-34	●	●	34	25	23	250	20.5	9.0	-7.5°	-3.0°	VB□□1604	B125	3	VP32B	BH03504	SVP32	BFTX03508	2.0	TRX10	LH020
	S32T-SVUB R/L1604-40	●	●	40	32	30	300	23.5	10.5	-7.5°	-3.0°			VP40B							
	S40T-SVUB R/L1604-50	●	●	50	40	37	300	29.5	12.5	-7.5°	-3.0°										

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14



Internal Profiling
Screw-on

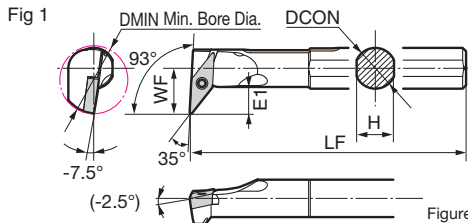
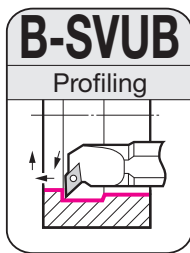


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Pin	Bolt	Shim	Flat Insert Screw	Wrench (For Torx Holes)	
		R	L							Cat. No.	Ref. Page						
Steel with Anti-Vibration Mechanism	B12M-SVUB R/L1103-20	●	●	20	12	11	150	13.5	8	VB□□1103	B123 on	1	—	—	BFTX02508NV	1.5	TRX08
	B16R-SVUB R/L1103-25	●	●	25	16	15	200	16.5	9								

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14

C-SVUB Type



Internal Profiling
Screw-on

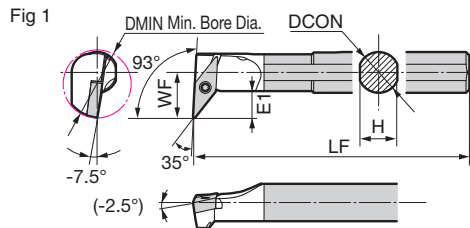
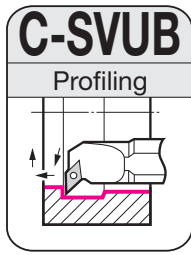


Figure shows right-hand (R) tool.

Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L							Cat. No.	Ref. Page	Fig	N·m		
Carbide	C12M-SVUB R/L1103-20	●		20	12	11	150	13.5	8	VB□□1103	B123 on	1	BFTX02508NV	1.5	TRX08
	C16R-SVUB R/L1103-25	●		25	16	15	200	16.5	9						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14

Boring Bars

E

C

D

R

S

T

V

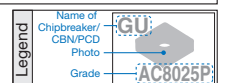
W

Smart Damper Tuning
Very Small Damper Tuning

Applicable Inserts ◀ S-SVJB/B-SVJB/S-SVQB/B-SVQB/C-SVQB/S-SVUB/B-SVUB/C-SVUB/S-SVZB/B-SVZB/C-SVZB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range / Process	P (Steel)		M (Stainless Steel)		K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	Finishing to Medium Cutting	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7000/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7000/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 on		A14 on		A16 on		A18 on	A22 on	A20 on	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SVUC Type/A-SVUC Type



Internal Profiling
Screw-on

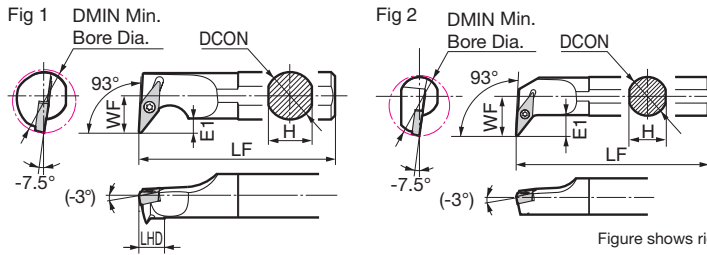
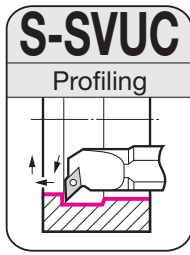


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		Flat Insert Screw	Wrench		
		R	L								Cat. No.	Ref. Page				
Steel	S12M-SVUC R/L0802-16	●	●	16	12	11	150	9.5	6.5	3.5	VC□□0802	B126	1	BFTX0204N	0.5	TRX06
	S16Q-SVUC R/L0802-20	●	●	20	16	15	180	11.5	—	3.5	VC□□1103	B126 on	2	BFTX02508NV	1.5	TRX08
	S16Q-SVUC R/L1103-25	●	●	25	16	15	180	16.5	—	8.5	VC□□1103	B126 on	2	BFTX02508NV	1.5	TRX08

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Internal Profiling
Screw-on

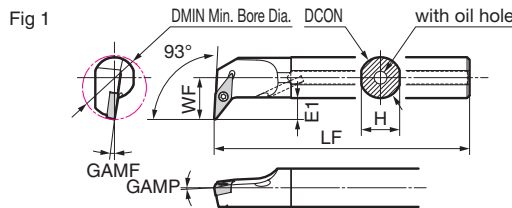
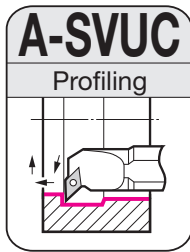


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

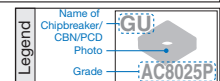
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Rake Angle	Applicable Insert		Flat Insert Screw	Wrench		
		R	L									Cat. No.	Ref. Page				
Steel	A16Q-SVUC R/L1103-25	●	●	25	16	15	180	16.5	8.5	-7.5°	-3.0°	VC□□1103	B126 on	1	BFTX02508NV	1.5	TRX08
Steel with Oil Hole	A20R-SVUC R/L1103-28	●	●	28	20	18	200	17.5	7.5	-7.5°	-3.0°	VC□□1103	B126 on	1	BFTX02508NV	1.5	TRX08
	A25S-SVUC R/L1103-32	●	●	32	25	23	250	19.0	7.5	-6.5°	-2.5°	VC□□1103	B126 on	1	BFTX02508NV	1.5	TRX08
	A25S-SVUC R/L1604-34	●	●	34	25	23	250	20.5	9.0	-7.5°	-3.0°	VC□□1604	B127 on	1	BFTX03508	2.0	TRX10

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Applicable Inserts ◀ S-SVJC/S-SVQC/A-SVQC/S-SVUC/A-SVUC/S-SVZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SU AC5015S	SU AC5025S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	FC AC1030U	SI AC1030U	FC AC5015S	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	☞ A10 on		☞ A14 on		☞ A18 on		☞ A22 on		☞ A20 on		☞ M2 on

S-SVZB Type/B-SVZB Type



Internal Profiling
Screw-on

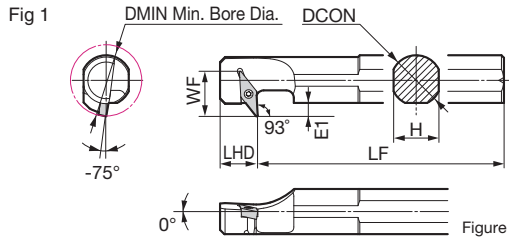
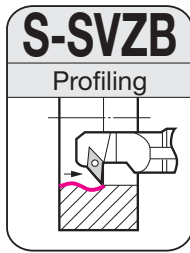


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Head	Cutting Edge Distance	Offset	Applicable Insert		Pin	Bolt	Shim	Flat Insert Screw	Wrench (For Torx Holes)	Wrench for Bolt (For Hex Socket)		
		R	L								Cat. No.	Ref. Page								
Steel	S20R-SVZB R/L1103-25	●	●	25	20	18	200	15	14.5	5.5	VB□□1103	B123 on	1	—	—	BFTX02508NV	1.5	TRX08	—	
	S25S-SVZB R/L1103-32	●	●	32	25	23	250	15	19.0	7.5										
	S25S-SVZB R/L1604-34	●	●	34	25	23	250	20	20.5	9.0	VB□□1604	B125	1	VP32B	BH03504	SVP32	BFTX03508	2.0	TRX10	LH020
	S32T-SVZB R/L1604-40	●	●	40	32	30	300	20	22.0	9.0										
	S40T-SVZB R/L1604-50	●	●	50	40	37	300	20	27.0	10.0										

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Internal Profiling
Screw-on

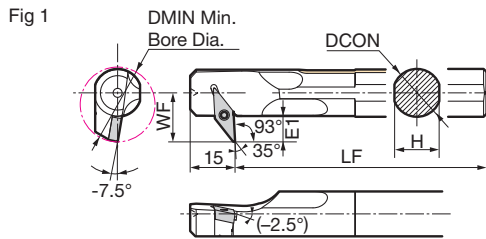
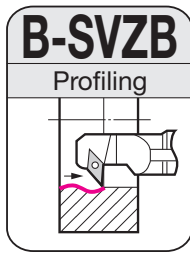


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

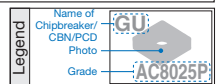
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Pin	Bolt	Shim	Flat Insert Screw	Wrench (For Torx Holes)	
		R	L							Cat. No.	Ref. Page						
Steel with Anti-Vibration Mechanism	B12M-SVZB R/L1103-20	●	●	20	12	11	150	13.5	8	VB□□1103	B123 on	1	—	—	BFTX02508NV	1.5	TRX08
	B16R-SVZB R/L1103-25	●	●	25	16	15	200	16.5	9								

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Applicable Inserts ◀ S-SVJB/B-SVJB/S-SVQB/B-SVQB/C-SVQB/S-SVUB/B-SVUB/C-SVUB/S-SVZB/B-SVZB/C-SVZB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)		M (Stainless Steel)		K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	Finishing to Medium Cutting	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7000/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7000/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 on		A14 on		A16 on		A18 on	A22 on	A20 on	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

C-SVZB Type



Internal Profiling
Screw-on

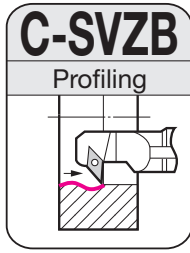


Fig 1

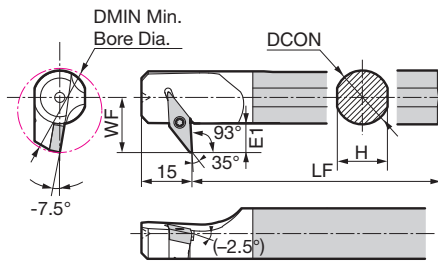


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Applicable Insert			Flat Insert Screw	Wrench	
		R	L							Cat. No.	Ref. Page	Fig			
Carbide	C12M-SVZB R/L1103-20 C16R-SVZB R/L1103-25	●		20	12	11	150	13.5	8	VB□□1103	B123 on	1 1	BFTX02508NV	1.5	TRX08

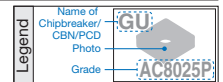
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

- Boring Bars
- E
- C
- D
- R
- S
- T
- V
- W
- Small Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-SVJB/B-SVJB/S-SVQB/B-SVQB/C-SVQB/S-SVUB/B-SVUB/C-SVUB/S-SVZB/B-SVZB/C-SVZB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



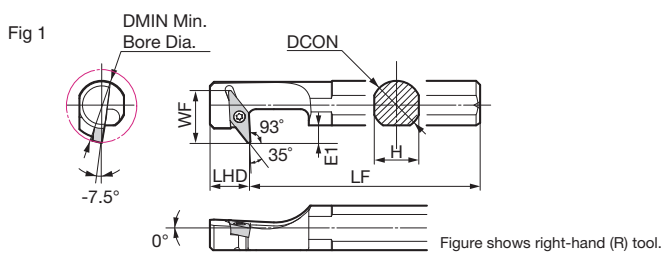
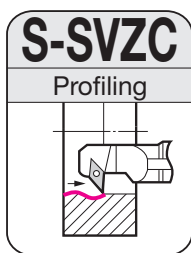
Cutting Range	P (Steel)		M (Stainless Steel)		K (Cast Iron)		S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	Finishing to Medium Cutting	Coated	Uncoated
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7000/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7000/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	⚙️ A10 on		⚙️ A14 on		⚙️ A16 on		⚙️ A18 on	⚙️ A22 on	⚙️ A20 on	

BNC500 is for ductile cast iron.

SEC-Boring Bar S-SVZC Type



Internal Profiling
Screw-on



Holder

Parts

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Head LHD	Cutting Edge Distance WF	Offset E1	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel	S12M-SVZC R/L0802-16	●	●	16	12	11	150	10	9.5	4.5	VC□□0802	B126	1	BFTX0204N	0.5	TRX06
	S16Q-SVZC R/L1103-20	●	●	20	16	15	180	15	11.5	4.5	VC□□1103	B126 on	1	BFTX02508NV	1.5	TRX08

Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Boring Bars

E

C

D

R

S

T

V

W

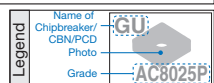
Special Draper Turning
Very Special Draper Turning

Applicable Inserts ◀ S-SVJC/S-SVQC/A-SVQC/S-SVUC/A-SVUC/S-SVZC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

Cutting Range Process	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SU AC5015S	SU AC5025S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	SI AC1030U	FC AC1030U	SI AC1030U	FC AC5015S	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on		A14 on		A18 on		A22 on		A20 on		M2 on



Recommended Tightening Torque (N-m)

E47

S-SSKP Type/C-SSKP Type



Internal General-purpose
Screw-on

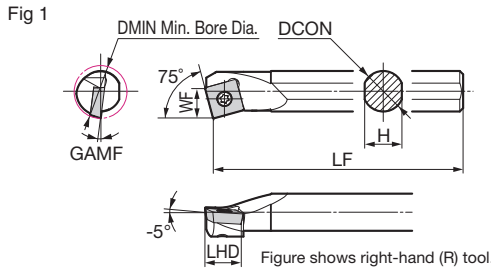
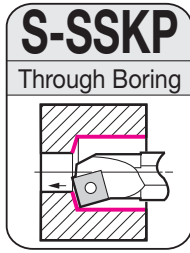


Figure shows right-hand (R) tool.

Holder

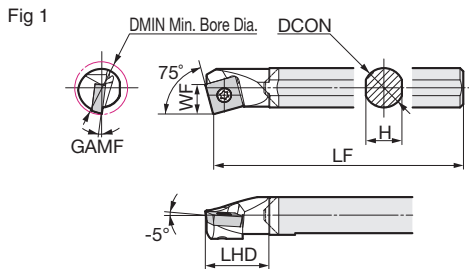
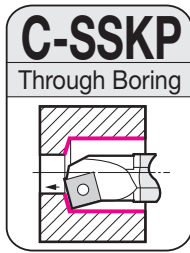
Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								DMIN	DCON	Cat. No.	Ref. Page		Fig
Steel	S12M-SSKP R/L0903-16	BBPS-312 R/L	●	●	16	12	11	150	8.0	9.0	-6°	SP□□0903	B100	1 1 1 1	BFTX0307A	2.0	TRX10
	S16R-SSKP R/L0903-20	BBPS-316 R/L	●	●	20	16	15	200	10.0	6.8	-4°						
	S20S-SSKP R/L0903-25	BBPS-320 R/L	●	●	25	20	18	250	12.5	8.5	-2°						
	S25T-SSKP R/L0903-28	BBPS-325 R/L	●	●	28	25	22	300	14.0	5.0	0°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Internal General-purpose
Screw-on



Holder

Parts

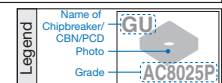
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								DMIN	DCON	Cat. No.	Ref. Page		Fig
Carbide Standard	C12M-SSKP R0903-16	WBPS-312RS	●		16	12	11	150	8	25	-6°	SP□□0903	B100	1 1 1	BFTX0307A	2.0	TRX10
Carbide Long	C12R-SSKP R0903-16	WBPS-312R	●		16	12	11	200	8	25	-6°						
	C16S-SSKP R0903-20	WBPS-316R	●		20	16	15	250	10	30	-4°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Applicable Inserts ◀ S-SSKP Type/C-SSKP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)		M (Stainless Steel)		N (Non-ferrous)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—
General Cutting	FB T1500Z	LB AC8025P	LU AC6030M	LB AC6030M	SUMIDIA DA1000
High-precision	SD T1500Z	—	—	—	SUMIDIA DA1000
Recommended Cutting Conditions	A10 on		A14 on		A22 on

SEC-Boring Bar S-CSKP Type



Internal General-purpose
Clamp-on

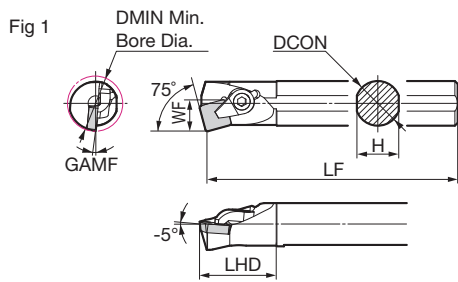
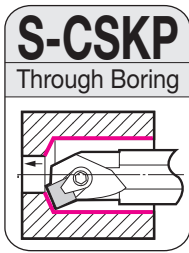


Figure shows right-hand (R) tool.

Holder

Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.		Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle		Applicable Insert		Clamp Plate	Double Screw	Wrench
			R	L	DMIN	DCON						H	LF	WF	LHD			
Steel	S16Q-CSKP R/L0903-20	S16Q-CSKP R/L 09	●	●	20	16	15	180	10.0	28	-4°	SP□□0903	B102	1	CCM6B	WB6-10	LH030 (For Hex Socket)	
	S20R-CSKP R/L0903-25	S20R-CSKP R/L 09	●	●	25	20	18	200	12.5	28	-2°			1	L/R	WB6-13		

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Boring Bars

E

C

D

R

S

T

V

W

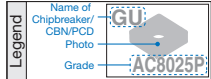
Spial Drucker turning
Very Spial Drucker turning

Applicable Inserts ◀ S-CSKP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

Cutting Range Process	P (Steel)		K (Cast Iron)			S (Exotic Alloy)		H (Hardened Steel)
	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	Medium to Roughing	Uncoated
General Cutting	FK T1500Z	SF AC8025P	SUMIBORON BN7000	No Chipbreaker AC4015K	No Chipbreaker AC4015K	No Chipbreaker AC5015S	No Chipbreaker AC5025S	SUMIBORON BN2000
Recommended Cutting Conditions	A10 on		A16 on			A18 on		A20 on



11° inserts with holes can also be used.

S-SSKC Type



Internal General-purpose
Screw-on

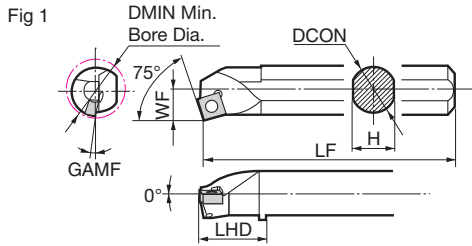
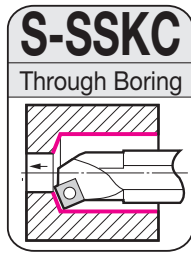


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	Nm		
Steel	S16R-SSKC R/L09T3-20	S16R-SSKC R/L 09	●	●	20	16	15	200	11	23	-10°	SC□□09T3	B97	1	BFTX0407N	3.4	TRX15 (For Torx Holes)
	S20S-SSKC R/L09T3-25	S20S-SSKC R/L 09	●	●	25	20	18	250	13	27	-8°	SC□□09T3	B97	1	BFTX0409N	3.4	
	S25T-SSKC R/L1204-32	S25T-SSKC R/L 12	●	●	32	25	23	300	17	30	-7°	SC□□1204	B98	1	BFTX0511N	5.0	
	S32U-SSKC R/L1204-40	S32U-SSKC R/L 12	●	●	40	32	30	350	22	33	-6°	SC□□1204	B98	1	BFTX0511N	5.0	

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Boring Bars

E

C

D

R

S

T

V

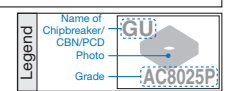
W

Small Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-SSKC Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)		N (Non-ferrous)
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	—
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6040M	MU AC4015K	No Chipbreaker AC4015K	SUMIDIA DA1000
High-precision	FX T1500A	SC AC1030U	SC AC1030U	FX AC1030U	SC AC1030U	SC AC1030U	—	—	SUMIDIA DA1000
Recommended Cutting Conditions	A10 on			A14 on			A16 on		A22 on

S-DSKN Type/S-PSKN Type



Medium Diameter General-purpose Double Clamp

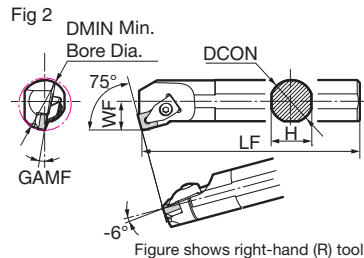
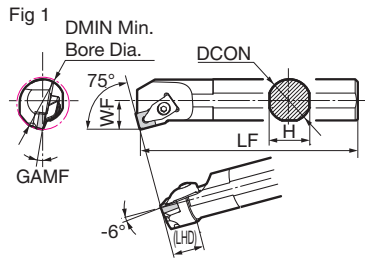


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								Cat. No.	Ref. Page	Fig	Nm					
Steel	S25R-DSKN R/L1204-32	●	●	32	25	23	200	17.0	(26)	-13°	SN□□1204	B41 on	1	SCP-2	5.0	SNS1203B	BFTX0307N	LH040	LH025
	S32S-DSKN R/L1204-40	●	●	40	32	30	250	22.0	(21)	-10°									
	S40T-DSKN R/L1204-50	●	●	50	40	37	300	27.0	(21)	-10°									
	S50U-DSKN R/L1204-63	●	●	63	50	47	350	31.5	—	-10°									

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts. () is a reference value.

Clamp Set Parts **E78**



Medium Diameter General-purpose Lever Lock

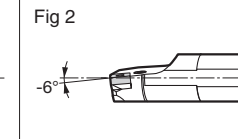
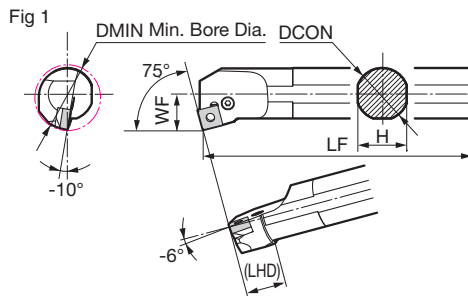


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

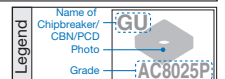
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
			R	L							Cat. No.	Ref. Page						
Steel	S32S-PSKN R/L1204-40	—	●	●	40	32	30	250	22.0	(21)	SN□□1204	B41 on	1	LCL4	LCS4	LSS42B	LSP4	LH030
	S32S-PSKN R/L1204-44	S32S-PSKN R/L 12	▲	▲	44	32	30	250	22.0	(21)								
	S40T-PSKN R/L1204-50	—	●	●	50	40	37	300	27.0	(21)								
	S40T-PSKN R/L1204-54	S40T-PSKN R/L 12	▲	▲	54	40	37	300	27.0	(21)								
	S50U-PSKN R/L1204-63	—	●	●	63	50	47	350	31.5	—								
	S50U-PSKN R/L1906-70	S50U-PSKN R/L 19	▲	▲	70	50	47	350	35.0	(31)								

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts. () is a reference value.

Applicable Inserts ◀ S-DSKN Type/S-PSKN Type/S-ESKN Type/S-PSYN Type/S-ESYN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	Coated	Uncoated	Finishing
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7000/BN6500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA NPD10
General Cutting	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7000/BN6500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7000/BN6500	GZ AC420K	No Chipbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN350	—
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A20 on		M2 on

BNC500 is for ductile cast iron.

Recommended tightening torque (N-m) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability)

S-ESKN Type/S-PSYN Type



Medium Diameter General-purpose Pin Lock

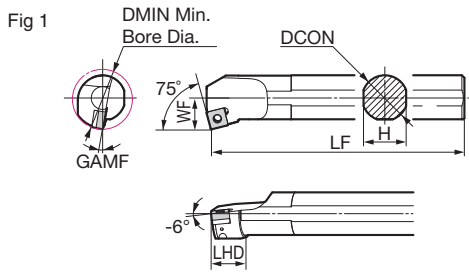
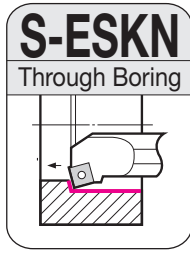


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Shim	Eccentric Pin	Wrench (For Hex Socket)	
			R	L								Cat. No.	Ref. Page				
Steel	S25R-ESKN R/L1204-34	BSKN425 R/L	●		34	25	23	200	17	(18)	-12°	SN□□1204	B41 on	1	SSW423	CPB42	LH030
	S32S-ESKN R/L1204-44	BSKN432 R/L	●		44	32	30	250	22	(20)	-10°					CPB43S	
	S40T-ESKN R/L1204-54	BSKN440 R/L			54	40	37	300	27	(20)	-10°					CPB43	
	S50U-ESKN R/L1906-70	BSKN650 R/L			70	50	47	350	35	(30)	-10°					SN□□1906	

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts. The LHD () is a reference value.



Medium Diameter General-purpose Lever Lock

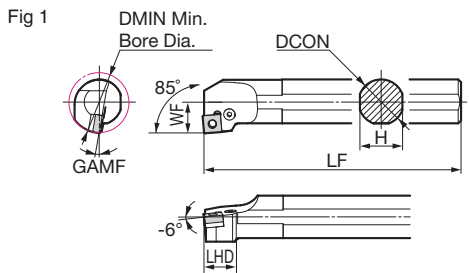
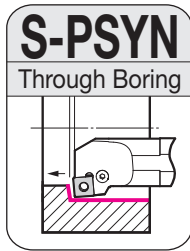


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench (For Hex Socket)	
			R	L							Cat. No.	Ref. Page						
Steel	S32S-PSYN R/L1204-44	S32S-PSYN R/L 12	●	●	44	32	30	250	22	(22)	SN□□1204	B41 on	1	LCL4	LCS4	LSS42B	LSP4	LH030

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts. The LHD () is a reference value.

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

S-ESYN Type



Medium Diameter General-purpose Pin Lock

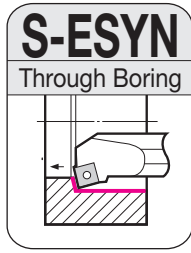


Fig 1

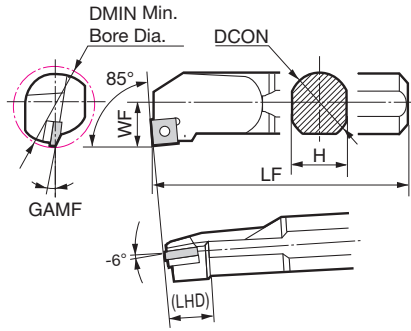


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Shim	Eccentric Pin	Wrench	
			R	L								Cat. No.	Ref. Page				
Steel	S25R-ESYN R/L1204-34 S32S-ESYN R/L1204-44	BSYN425 R/L BSYN432 R/L			34 44	25 32	23 30	200 250	17 22	(20) (22)	-12° -10°	SN□□1204	B41 on	1 1	SSW423	CPB42 CPB43S	LH030 (For Hex Socket)

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.
The LHD () is a reference value.

Boring Bars

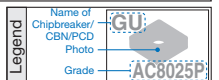


Shank Diameter Turning
Min Shank Diameter Turning

Applicable Inserts ◀ S-DSKN Type/S-PSKN Type/S-ESKN Type/S-PSYN Type/S-ESYN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



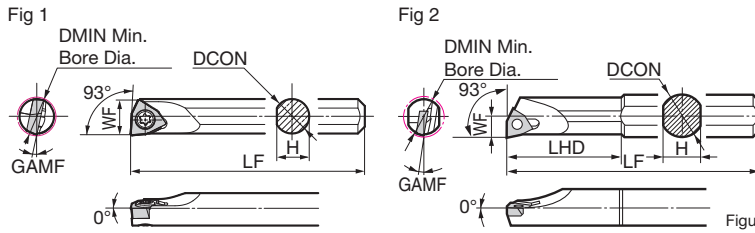
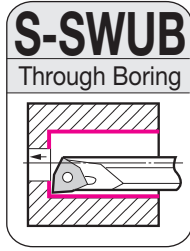
Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	Coated	Uncoated	Finishing
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7000/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
General Cutting	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7000/BNC500	GZ AC420K	No Chipbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN350	—
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A20 on		M2 on

BNC500 is for ductile cast iron.

S-SWUB Type/C-SWUB Type



Internal Finishing (Small Diameter)
Screw-on

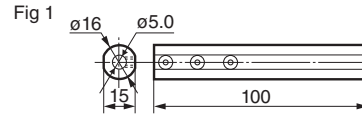


Holder

Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Steel	S05H-SWUB R/L0601-06K	BBPW-508 R/L K'	●	●	5.5	5	4.7	100	2.75	—	-12°	WB□□0601	B130	1	BFTX0203N	0.5	TRX06
	S08H-SWUB R/L0601-06	BBPW-508 R/L	●	●	5.5	8	7.0	100	2.75	18	-12°						
	S08H-SWUB R/L0601-08	BBPW-508 R/L 08'	●	●	8.0	8	7.0	100	4.00	30	-10°	WB□□0802	B130	2	BFTX02205N	0.5	TRX06
	S08H-SWUB R/L0802-10	BBPW-608 R/L'	●	●	10.0	8	7.0	100	5.00	18	-13°						
S10K-SWUB R/L0802-12	BBPW-610 R/L'	●	●	12.0	10	9.0	125	6.00	20	-10°							

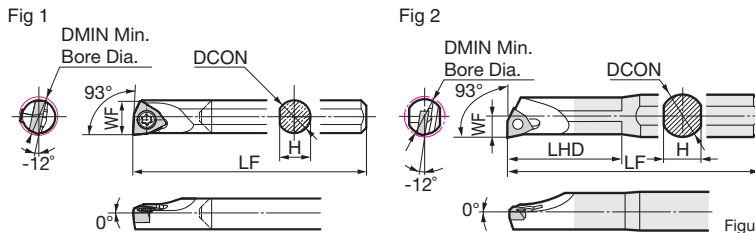
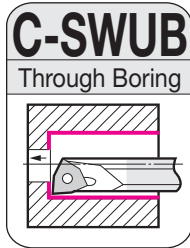
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts. S05H-SWUB R/L0601-06K requires the separately sold HBB516 adapter sleeve. Holders marked with * show an ISO Cat. No.



Adapter Sleeve

Cat. No.	Stock	Fig
HBB 516	●	1

Adapter sleeve is optional.

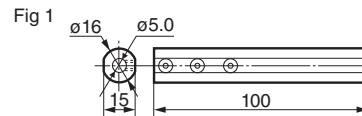


Holder

Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Carbide	C05H-SWUB R/L0601-06K	WBPW-508 R/L K'	●	●	5.5	5	4.7	100	2.75	—	-12°	WB□□0601	B130	1	BFTX0203N	0.5	TRX06
	C08K-SWUB R/L0601-06	WBPW-508 R/L	●	●	5.5	8	7.0	125	2.75	30	-10°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts. C05H-SWUB R/L0601-06K requires the separately sold HBB516 adapter sleeve. Holders marked with * show an ISO Cat. No.



Adapter Sleeve

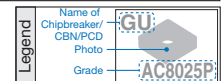
Cat. No.	Stock	Fig
HBB 516	●	1

Adapter sleeve is optional.

Applicable Inserts ◀ S-SWUB Type/C-SWUB Type

1st Recommended Insert

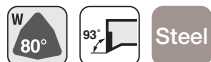
- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)		M (Stainless Steel)		K (Cast Iron)	S (Exotic Alloy)	N (Non-ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Roughing	High-speed Finishing	Finishing to Medium Cutting	—	Uncoated
General Cutting	FW T1500A	FX AC1030U	FX AC1030U	FX AC1030U	SUMIBORON BN7000	FX AC5015S	SUMIDIA DA1000	SUMIBORON BNX20
High-precision	FW T1500A	FX AC1030U	FX AC1030U	FX AC1030U	SUMIBORON BN7000	FX AC5015S	SUMIDIA DA1000	SUMIBORON BNX20
Recommended Cutting Conditions	I _{CS} A10 on		I _{CS} A14 on		I _{CS} A16 on	I _{CS} A18 on	I _{CS} A22 on	I _{CS} A20 on

The FY Type chipbreaker and SUMIBORON and SUMIDIA inserts can also be used for stop-boring.

S-SWUP Type



Internal Finishing (Small Diameter)
Screw-on

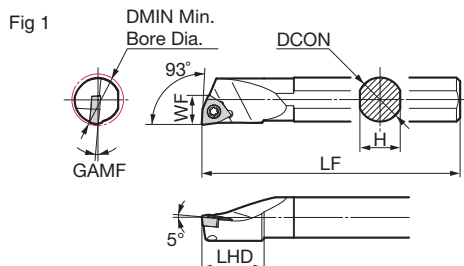
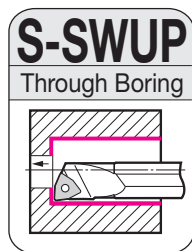


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx Holes)	
		R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel	S12M-SWUP R/L1102-14	●	●	14	12	11	150	7	17	-6°	WP□□1102	B131	1	BFTX02505N	1.1	TRX08
	S16Q-SWUP R/L1102-18	●	●	18	16	15	180	9	18	-3°	WP□□1102	B131	1	BFTX02505N	1.1	TRX08
	S16Q-SWUP R/L1603-18	●	●	18	16	15	180	9	18	-3°	WP□□1603	B131	1	BFTX0407N	3.4	TRX15
	S20R-SWUP R/L1603-22	●	●	22	20	18	200	11	18	-2°	WP□□1603	B131	1	BFTX0407N	3.4	TRX15

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Boring Bars

E

C

D

R

S

T

V

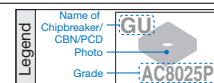
W

Small Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-SWUP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)	M (Stainless Steel)
	Process	Medium Cutting
General Cutting	LB AC8025P	LB AC6030M
Recommended Cutting Conditions	A10 on	A14 on

S-STUB Type/S-STUP Type/A-STUP Type



Internal Finishing to Medium Cutting Screw-on

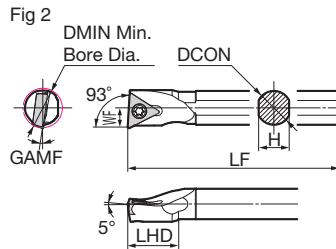
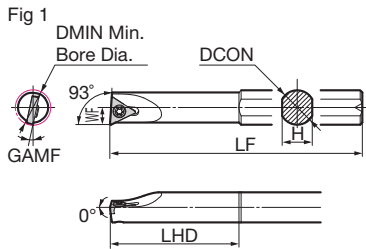
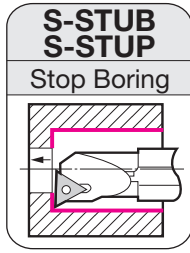


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel	S08H-STUB R/L0601-08	BBPT-508 R/L	●	●	8	8	7	100	4.0	30	-12°	TB□□0601	B106 on	1	BFTX0204A	0.5	TRX06
	S08H-STUP R/L0802-10	BBPT-608 R/L	●	●	10	8	7	100	5.0	13	-10°	TP□□0802	B111	1	BFTX0204A	0.5	TRX06
	S08H-STUP R/L0902-10	—	●	●	10	8	7	100	5.0	13	-10°	TP□□0902	B112	2	BFTX02505N	1.1	TRX08
	S10K-STUP R/L1103-12	BBPT-210 R/L	●	●	12	10	9	125	6.0	15	-8°	TP□□1103	B114 on	2	BFTX0306A	2.0	TRX10
	S12M-STUP R/L1103-14	BBPT-212 R/L 14	●	●	14	12	11	150	7.0	17	-7°			2	BFTX0307A	2.0	
	S12M-STUP R/L1103-16	BBPT-212 R/L	●	●	16	12	11	150	8.0	17	-6°			2	BFTX0306A	2.0	
	S16R-STUP R/L1103-18	BBPT-216 R/L 18	●	●	18	16	15	200	9.0	18	-4°	TP□□1603	B116	2	BFTX0307A	2.0	TRX15
	S16R-STUP R/L1103-20	BBPT-216 R/L	●	●	20	16	15	200	10.0	18	-2°			2	BFTX0407A	3.4	
	S20S-STUP R/L1103-22	BBPT-220 R/L	●	●	22	20	18	250	11.0	18	-2°	TP□□1604	B117	2	BFTX0409N	3.4	TRX15
	S25T-STUP R/L1103-28	BBPT-225 R/L	●	●	28	25	22	300	14.0	18	-2°			2	BFTX0410A	3.4	
	S20S-STUP R/L1603-28	—	●	●	22	20	18	250	11.0	18	-3°	TP□□1604	B117	2	BFTX0409N	3.4	TRX15
	S25T-STUP R/L1603-28	—	●	●	28	25	22	300	14.0	18	-1°			2	BFTX0410A	3.4	
	S20S-STUP R/L1604-22	—	●	●	22	20	18	250	12.5	18	-5°	TP□□1604	B117	2	BFTX0409N	3.4	TRX15
S25T-STUP R/L1604-28	BBPT-325 R/L	●	●	28	25	22	300	14.0	18	-2°	2			BFTX0410A	3.4		

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14



Internal Finishing to Medium Cutting Screw-on

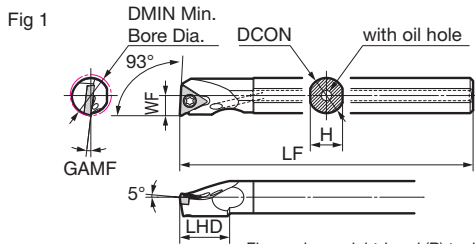
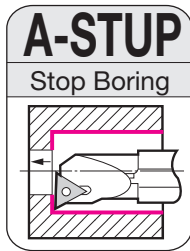


Figure shows right-hand (R) tool.

Holder

Parts

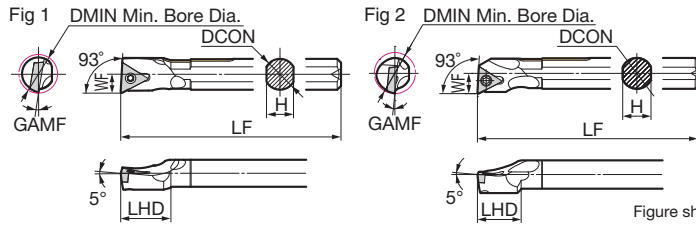
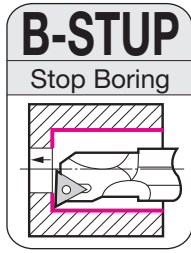
Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel with Oil Hole	A08H-STUP R/L0802-10	●	●	10	8	7	100	5	13	-10°	TP□□0802	B111	1	BFTX0204N	0.5	TRX06
	A08H-STUP R/L0902-10	●	●	10	8	7	100	5	13	-10°	TP□□0902	B112	1	BFTX02505N	1.1	TRX08
	A10K-STUP R/L1102-12	●	●	12	10	9	125	6	15	-8°	TP□□1102	B113	1	BFTX02505N	1.1	TRX08
	A12M-STUP R/L1102-14	●	●	14	12	11	150	7	17	-7°			1	BFTX02506N	1.5	
	A16R-STUP R/L1102-18	●	●	18	16	15	200	9	18	-4°			1			
	A10K-STUP R/L1103-12	●	●	12	10	9	125	6	15	-8°	TP□□1103	B114 on	1	BFTX0306N	2.0	TRX10
	A12M-STUP R/L1103-14	●	●	14	12	11	150	7	17	-7°			1	BFTX0307N	2.0	
	A16R-STUP R/L1103-18	●	●	18	16	15	200	9	18	-4°			1			
	A20S-STUP R/L1103-22	●	●	22	20	18	250	11	18	-2°	TP□□1603	B116	1	BFTX0407N	2.0	TRX15
	A25T-STUP R/L1103-28	●	●	28	25	22	300	14	18	-2°			1			
	A20S-STUP R/L1603-22	●	●	22	20	18	250	11	18	-3°	TP□□1604	B117	1	BFTX0409N	3.4	TRX15
	A25T-STUP R/L1603-28	●	●	28	25	22	300	14	18	-1°			1			
	A20S-STUP R/L1604-22	●	●	22	20	18	250	11	18	-5°	TP□□1604	B117	1	BFTX0409N	3.4	TRX15
A25T-STUP R/L1604-28	●	●	28	25	22	300	14	18	-2°	1						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14

B-STUP Type



Internal Finishing to Medium Cutting Screw-on



Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench				
			R	L								Cat. No.	Ref. Page	Fig	(N·m)		(For Torx Holes)			
Steel with Anti-Vibration Mechanism	B08H-STUP R/L0802-10	XBPT-608 R/L	●	●	10	8	7	100	5.0	13	-10°	TP□□0802	B111	1	BFTX0204A	0.5	TRX06			
	B10K-STUP R/L1103-12	XBPT-210 R/L	●	●	12	10	9	125	6.0	15	-8°	TP□□1103	B114 on	1	BFTX0306A	2.0	TRX10			
	B12M-STUP R/L1103-14	XBPT-212 R/L 14	●	●	14	12	11	150	7.0	17	-7°			2	BFTX0307A	2.0				
	B12M-STUP R/L1103-16	XBPT-212 R/L	●	●	16	12	11	150	8.0	17	-6°			2	BFTX0306A	2.0				
	B16R-STUP R/L1103-18	XBPT-216 R/L 18	●	●	18	16	15	200	9.0	18	-4°			2	BFTX0306A	2.0				
	B16R-STUP R/L1103-20	XBPT-216 R/L	●	●	20	16	15	200	10.0	18	-2°			2	BFTX0307A	2.0				
	B20S-STUP R/L1103-22	XBPT-220 R/L	●	●	22	20	18	250	11.0	18	-2°			2						
	B25T-STUP R/L1103-28	XBPT-225 R/L	●	●	28	25	22	300	14.0	18	-2°			2						
	B32T-STUP R/L1103-40	XBPT-232 R/L	●	●	40	32	30	300	20.0	53	-2°			3						
	B20S-STUP R/L1604-25	XBPT-320 R/L	●	●	25	20	18	250	12.5	18	-3°			TP□□1604	B117	2		BFTX0410A	3.4	TRX15
	B25T-STUP R/L1604-28	XBPT-325 R/L	●	●	28	25	22	300	14.0	18	-2°					2				
	B32T-STUP R/L1604-40	XBPT-332 R/L	●	●	40	32	30	300	20.0	53	-2°	3								

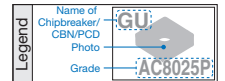
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14

Applicable Inserts ◀ S-STUB Type/C-STUB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

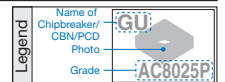


Cutting Range / Process	P (Steel)		M (Stainless Steel)		N (Non-ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—	Uncoated
High-precision	FW T1500Z	FX AC1030U	FW AC1030U	FX AC1030U	SUMIDIA DA1000	SUMIBORON BN2000
Recommended Cutting Conditions	A10 on		A14 on		A22 on	A20 on

Applicable Inserts ◀ S-STUP/A-STUP/B-STUP/D-STUP/C-STUP/E-STUP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

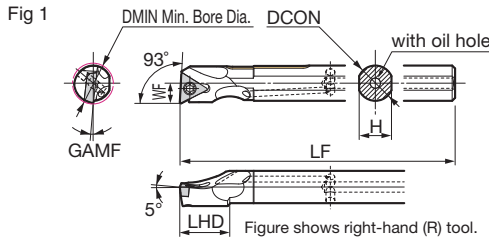
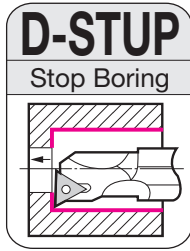


Cutting Range / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)	S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Cutting	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	SUMIBORON BN7000	MU AC4015K	FX AC5015S	SUMIDIA DA1000	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FC T1500A	—	—	—	—	—	SUMIBORON BN7000	—	FX AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 on			A14 on			A16 on		A18 on	A22 on		A20 on		M2 on

D-STUP Type / C-STUB Type / C-STUP Type



Internal Finishing to Medium Cutting Screw-on



Holder

Parts

Dimensions (mm)

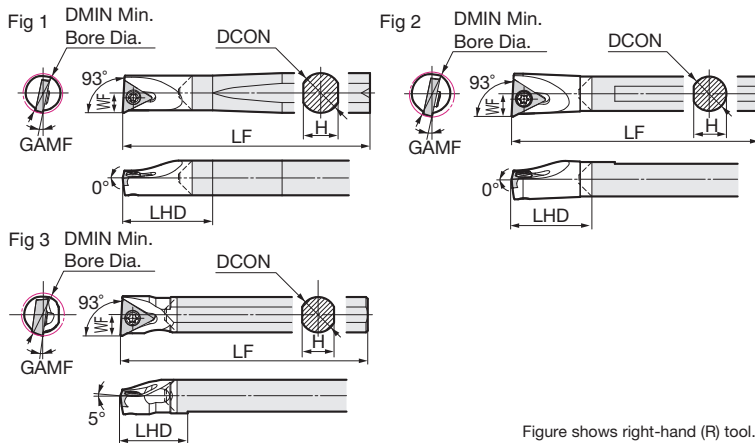
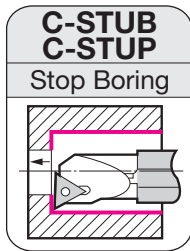
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert			Flat Insert Screw		Wrench (For Torx Holes)
			R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel with Anti-Vibration Mechanism and Oil Hole	D12M-STUP R/L1103-14	XBPT-212 R/L H14	●	●	14	12	11	150	7	17	-7°	TP□□1103	B114 on	1	BFTX0306A	2.0	TRX10
	D16R-STUP R/L1103-18	XBPT-216 R/L H18	●	●	18	16	15	200	9	18	-4°						
	D20S-STUP R/L1103-22	XBPT-220 R/L H22	●	●	22	20	18	250	11	18	-2°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper E14



Internal Finishing to Medium Cutting Screw-on



Holder

Parts

Dimensions (mm)

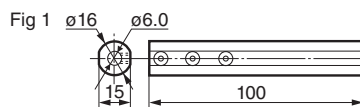
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert			Flat Insert Screw		Wrench (For Torx Holes)
			R	L								Cat. No.	Ref. Page	Fig	N-m		
Carbide Standard	C08H-STUB R/L0601-08	WBPT-508 R/L S	●	●	8	8	7.0	100	4.0	50	-12°	TB□□0601	B106 on	1	BFTX0204A	0.5	TRX06
	C08H-STUB R/L0601-08K	WBPT-508 R/L SK	●	●	8	6	5.7	100	4.0	—	-12°						
	C08H-STUB R/L0802-10	WBPT-608 R/L S	●	●	10	8	7.0	100	5.0	18	-10°	TP□□0802	B111	3	BFTX0204A	0.5	TRX06
	C10K-STUB R/L1103-12	WBPT-210 R/L S	●	●	12	10	9.0	125	6.0	19	-8°	TP□□1103	B114 on	3	BFTX0306A	2.0	TRX10
	C12M-STUB R/L1103-14	WBPT-212 R/L S14	●	●	14	12	11.0	150	7.0	25	-7°						
	C12M-STUB R/L1103-16	WBPT-212 R/L S	●	●	16	12	11.0	150	8.0	25	-6°						
	C16R-STUB R/L1103-18	WBPT-216 R/L S18	●	●	18	16	15.0	200	9.0	30	-4°						
	C16R-STUB R/L1103-20	WBPT-216 R/L S	●	●	20	16	15.0	200	10.0	30	-2°						
	C20S-STUB R/L1103-22	WBPT-220 R/L S	●	●	22	20	18.0	250	11.0	35	-2°						
	C20S-STUB R/L1604-25	WBPT-320 R/L S	●	●	25	20	18.0	250	12.5	35	-3°				TP□□1604	B117	
Carbide Long	C08M-STUB R/L0601-08	WBPT-508 R/L	●	●	8	8	7.0	150	4.0	50	-12°	TB□□0601	B106 on	1	BFTX0204A	0.5	TRX06
	C08M-STUB R/L0802-10	WBPT-608 R/L	●	●	10	8	7.0	150	5.0	18	-10°	TP□□0802	B111	3	BFTX0204A	0.5	TRX06
	C10Q-STUB R/L1103-12	WBPT-210 R/L	●	●	12	10	9.0	180	6.0	19	-8°	TP□□1103	B114 on	3	BFTX0306A	2.0	TRX10
	C12R-STUB R/L1103-14	WBPT-212 R/L 14	●	●	14	12	11.0	200	7.0	25	-7°						
	C12R-STUB R/L1103-16	WBPT-212 R/L	●	●	16	12	11.0	200	8.0	25	-6°						
	C16S-STUB R/L1103-18	WBPT-216 R/L 18	●	●	18	16	15.0	250	9.0	30	-4°						
C16S-STUB R/L1103-20	WBPT-216 R/L	●	●	20	16	15.0	250	10.0	30	-2°							
C16M-STUB R/L1103-18	WBPT-216 R/L E18	●	●	18	16	15.0	150	9.0	30	-4°	TP□□1103				B114 on	3	
C16M-STUB R/L1103-20	WBPT-216 R/L E	●	●	20	16	15.0	150	10.0	30	-2°							
C20M-STUB R/L1103-22	WBPT-220 R/L E	●	●	22	20	18.0	150	11.0	35	-2°							
Carbide Short	C20M-STUB R/L1604-25	WBPT-320 R/L E	●	●	25	20	18.0	150	12.5	35	-3°	TP□□1604	B117	3	BFTX0410A	3.4	TRX15

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

C08H-STUB R/L0601-08K requires the separately sold HBB616 adapter sleeve.

Actual products marked with * show an ISO type code.

Smart Damper E14



Adapter Sleeve

Cat. No.	Stock	Fig
HBB 616	●	1

Adapter sleeve is optional.

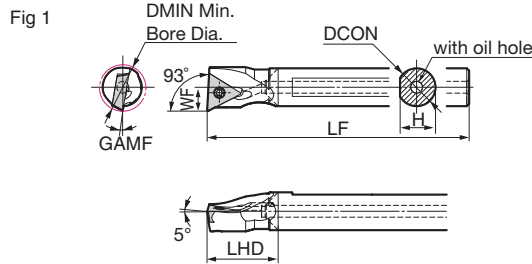
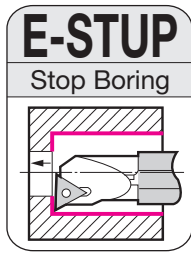
Recommended Tightening Torque (N-m)

SEC-Boring Bar E-STUP Type



Internal Finishing to Medium Cutting
Screw-on

Sumi Small



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock	Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
											Cat. No.	Ref. Page	Fig	N·m		
Carbide with Oil Hole	E08H-STUP R0802-10	WBPT-608RH	●	10	8	7.5	100	5	18	-10°	TP□□0802	B111	1	BFTX0204A	0.5	TRX06
	E10K-STUP R1103-12	WBPT-210RH	●	12	10	9.5	125	6	19	-8°	TP□□1103	B114 on	1	BFTX0306A	2.0	TRX10
	E12M-STUP R1103-14	WBPT-212RH14	●	14	12	11.5	150	7	25	-7°			1	BFTX0307A	2.0	
	E12M-STUP R1103-16	WBPT-212RH	●	16	12	11.5	150	8	25	-6°			1	BFTX0306A	2.0	
	E16R-STUP R1103-18	WBPT-216RH18	●	18	16	15.5	200	9	30	-4°			1	BFTX0307A	2.0	
	E16R-STUP R1103-20	WBPT-216RH	●	20	16	15.5	200	10	30	-2°			1	BFTX0307A	2.0	

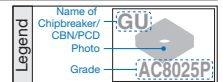
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Smart Damper **IS E14**

Applicable Inserts ◀ S-STUB Type/C-STUB Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

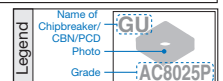


Cutting Range	P (Steel)		M (Stainless Steel)		N (Non-ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—	Uncoated
Process	FW	FX	FW	FX	SUMIDIA	SUMIBORON
High-precision	T1500Z	AC1030U	AC1030U	AC1030U	DA1000	BN2000
Recommended Cutting Conditions	A10 on		A14 on		A22 on	A20 on

Applicable Inserts ◀ S-STUP/A-STUP/B-STUP/D-STUP/C-STUP/E-STUP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)	S (Exotic Alloy)	N (Non-ferrous)		H (Hardened Steel)		Hard Brittle Material	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
Process	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	FX	SUMIDIA	AY	SUMIBORON	SUMIBORON	SUMIDIA
General Cutting	T1500Z	AC8025P	AC8025P	AC6030M	AC6030M	AC6030M	BN7000	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA90
High-precision	FC	—	—	—	—	—	SUMIBORON	—	FX	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA-BINDERLESS
Recommended Cutting Conditions	A10 on			A14 on			A16 on		A18 on	A22 on		A20 on		M2 on

Recommended Tightening Torque (N·m)

S-CTFP Type



Internal General-purpose
Clamp-on

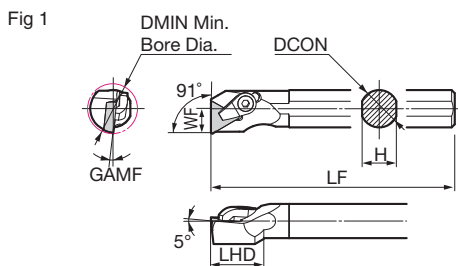
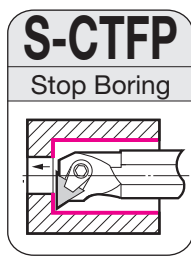


Figure shows right-hand (R) tool.

Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Clamp Plate	Double Screw	Wrench <small>(For Hex Socket)</small>	
			R	L								Cat. No.	Ref. Page				
Steel	S12M-CTFP R/L1103-16	S12M-CTFP R/L 11	●	●	16	12	11	150	8.0	17	-6°	TP□□1103	B118 on	1	CCM6BSL/R	WB5-10	LH025
	S16Q-CTFP R/L1103-20	S16Q-CTFP R/L 11	●	●	20	16	15	180	10.0	18	-4°						
	S20R-CTFP R/L1103-25	S20R-CTFP R/L 11	●	●	25	20	18	200	12.5	18	-2°						
	S25S-CTFP R/L1603-32	S25S-CTFP R/L 16	●	●	32	25	23	250	16.0	38	-2°						

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

C

D

R

S

T

V

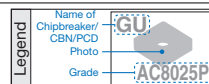
W

Small Diameter Turning
Very Small Diameter Turning

Applicable Inserts ◀ S-CTFP Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)		K (Cast Iron)			S (Exotic Alloy)		N (Non-ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	Medium to Roughing	—	Uncoated
General Cutting	FK T1500Z	SF AC8025P	SUMIBORON BN7000/BN500	No Chipbreaker AC4015K	No Chipbreaker AC4015K	No Chipbreaker AC5015S	No Chipbreaker AC5025S	SUMIDIA DA1000	SUMIBORON BN2000
Recommended Cutting Conditions	A10 on		A16 on			A18 on		A22 on	A20 on

11° inserts with holes can also be used.

S-DTFN Type/D-DTFN Type



Medium Diameter General-purpose Double Clamp

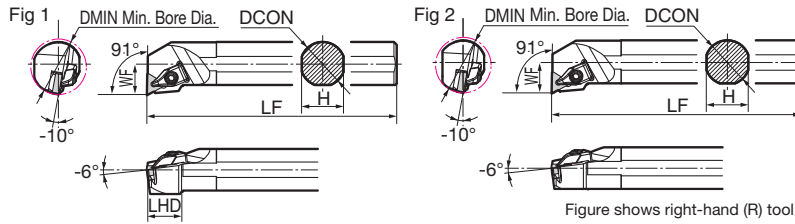
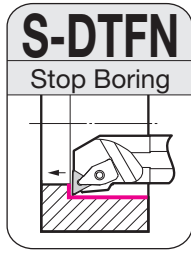


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L							DMIN	DCON	H	LF					WF
Steel	S32S-DTFN R/L1604-40	●	●	40	32	30	250	22.0	26	T□□1604	B56 on	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025
	S40T-DTFN R/L1604-50	●	●	50	40	37	300	27.0	26									
	S50U-DTFN R/L1604-63	●	●	63	50	47	350	31.5	—									

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Clamp Set Parts **E78**

Smart Damper **E15**



Medium Diameter General-purpose Double Clamp

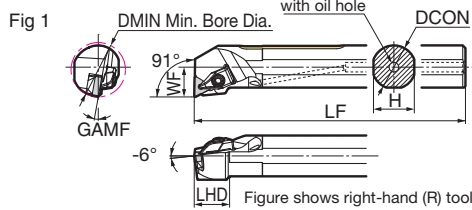
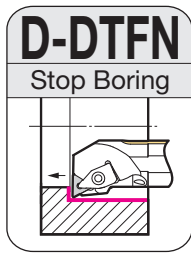


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								DMIN	DCON	H	LF					WF
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DTFN R/L1604-32	●	●	32	25	23	300	17	21	-12°	T□□1604	B56 on	1	SCP-1	5.0	TNS1603B	BFTX0307N	LH040	LH025
	D32T-DTFN R/L1604-40	●	●	40	32	30	300	22	26	-10°									
	D40U-DTFN R/L1604-50	●	●	50	40	37	350	27	26	-10°									

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

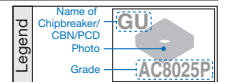
Clamp Set Parts **E78**

Smart Damper **E15**

Applicable Inserts ◀ S-DTFN Type/D-DTFN Type/S-PTFN Type/B-PTFN Type/S-ETFN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.



Cutting Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	—	Coated	Uncoated
Continuous Cutting	FE	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	T1500Z	AC8015P	AC8025P	AC6020M	AC6020M	AC6030M	BN7000/BNCS500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	BNC2115	BN1000
General Cutting	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7000/BNCS500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	BN7000/BNCS500	AC420K	AC420K	AC5025S	AC5025S	AC5025S	DA1000	BNC300	BN350
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A22 on	A20 on	

BNCS500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

S-PTFN Type/B-PTFN Type



Medium Diameter General-purpose Lever Lock

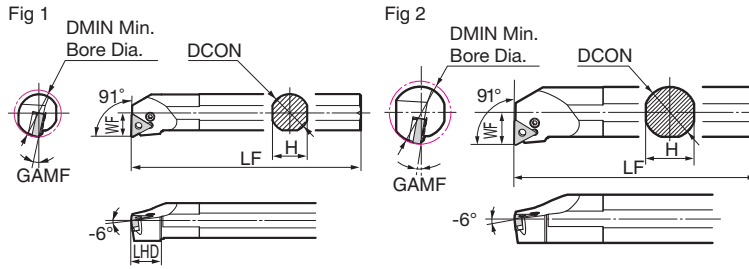
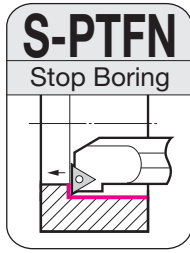


Figure shows right-hand (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
			R	L								Cat. No.	Ref. Page						
Steel	S25R-PTFN R/L1604-32	—	●	●	32	25	23	200	16.0	21.5	-12°	TN□□1604	B56 on	1	LCL3	LCS3	LST317CA	LSP3	LH025
	S32S-PTFN R/L1604-40	—	●	●	40	32	30	250	20.0	21.0	-10°								
	S32S-PTFN R/L1604-44	S32S-PTFN R/L16	▲	▲	44	32	30	250	22.0	21.0	-10°								
	S40T-PTFN R/L1604-50	—	●	●	50	40	37	300	25.0	21.0	-10°								
	S50U-PTFN R/L1604-63	—	●	●	63	50	47	350	31.5	—	-10°								
	S40T-PTFN R/L2204-54	S40T-PTFN R/L22	▲	▲	54	40	37	300	27.0	26.0	-10°								
S50U-PTFN R/L2204-70	S50U-PTFN R/L22	▲	▲	70	50	47	350	35.0	33.0	-10°	TN□□2204	B61 on	1	LCL4	LCS4	LST42	LSP4	LH030	

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Medium Diameter General-purpose Lever Lock

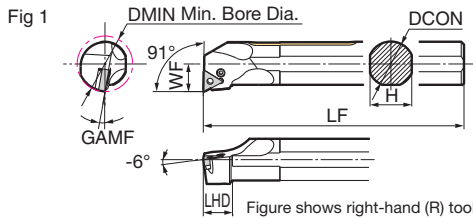
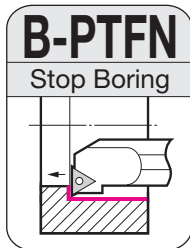


Figure shows right-hand (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
		R	L								Cat. No.	Ref. Page						
Steel with Anti-Vibration Mechanism	B25T-PTFN R/L1604-32	●	●	32	25	23	300	16	21	-12°	TN□□1604	B56 on	1	LCL3	LCS3	LST317CA	LSP3	LH025
	B32U-PTFN R/L1604-40	●	●	40	32	30	350	20	21	-10°								
	B40W-PTFN R/L1604-50	●	●	50	40	37	450	25	21	-10°								

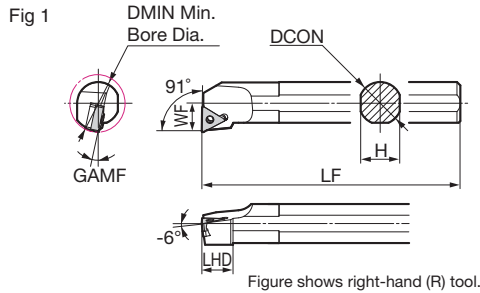
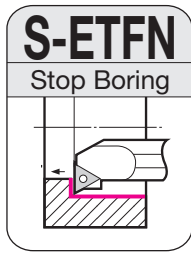
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability).

S-ETFN Type



Medium Diameter General-purpose Pin Lock



Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Shim	Eccentric Pin	Wrench (For Hex Socket)					
			R	L								Cat. No.	Ref. Page								
Steel	S25R-ETFN R/L1604-34	BTFN325 R/L	●		34	25	23	200	17	18	-12°	TN□□1604	B56 on	1	STW323	CPB34	LH025				
	S32S-ETFN R/L1604-44	BTFN332 R/L	●		44	32	30	250	22	20	-10°					CPB35	LH025				
	S40T-ETFN R/L2204-54	BTFN440 R/L	●		54	40	37	300	27	25	-10°					TN□□2204	B61 on	1	STW434	CPB44T	LH030
	S50U-ETFN R/L2204-70	BTFN450 R/L			70	50	47	350	35	32	-10°									CPB45T	LH030

Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



Applicable Inserts ◀ S-DTFN Type/D-DTFN Type/S-PTFN Type/B-PTFN Type/S-ETFN Type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10 on).
- Depending on the insert size, some combinations cannot be made-to-order or manufactured.

Cutting Range / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	—	Coated	Uncoated
Continuous Cutting	FE	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
General Cutting	T1500Z	AC8015P	AC8025P	AC6020M	AC6020M	AC6030M	BN7000/BNC500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	BNC2115	BN1000
	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
Interrupted Cutting	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7000/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	BNC2125	BN2000
	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
Recommended Cutting Conditions	A10 on			A14 on			A16 on			A18 on			A22 on	A20 on	

BNC500 is for ductile cast iron.

CKB Type

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

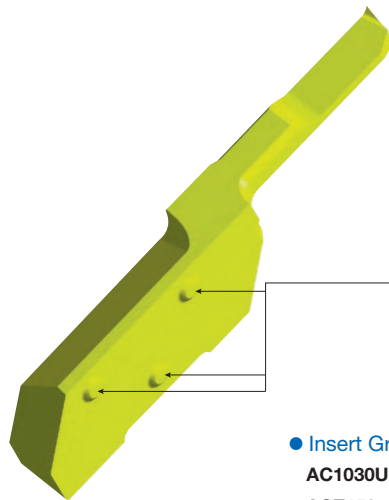


■ Features

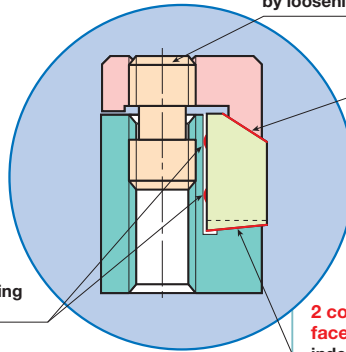
- Minimum bore diameters from $\varnothing 1\text{mm}$ to $\varnothing 5\text{mm}$ are now in stock.
- Maximum depth of cut of 20mm ($\varnothing 4, \varnothing 5\text{ mm}$).
- Can be used with various small lathes.
- Unique design ensures high indexing accuracy.
- Indexable inserts are easily handled.

● High indexing accuracy

● Indexable inserts are easily handled.



3 points of contact for high indexing accuracy



Change insert simply by loosening a screw

Wedge clamp face results in stronger clamping

2 contact faces for high indexing accuracy



● Insert Grades and Applications

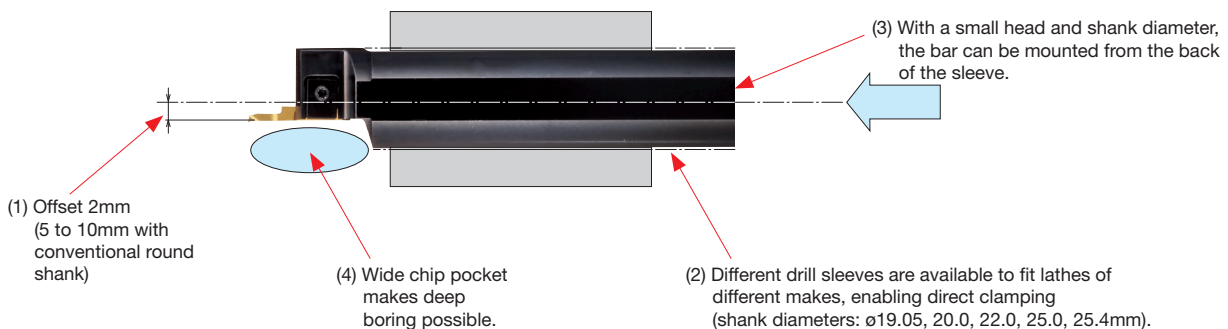
AC1030U: Stainless Steel, General Steel

ACZ150: Stainless Steel, General Steel

DA2200: Aluminum Alloy and Non-Ferrous Metals

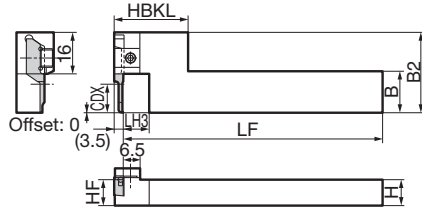
■ Round Shank Holders (Small Offset) [S-CKB-S Type]

● 2mm offset bars expand application range.



Very Small Diameter L Type
Clamp-on

Fig 1



H = HF (Cutting Edge Height)

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Depth of Cut CDX	Width B2	Head HBKL	Head LH3	Applicable Insert	Fig	Parts		
											Clamp Plate	Double Screw	Wrench (For Hex Socket)
CKBS R1016-16-06	●	10	16	125	6	26	28.5	10	KBMX L0206-00R	1	CKBW16	WB4-8	LH020
CKBS R1016-16-11	●	10	16	125	11	31	28.5	10	KBMX L03,04,0511-00R	1			
CKBS R1216-16-06	●	12	16	150	6	26	28.5	10	KBMX L0206-00R	1			
CKBS R1216-16-11	●	12	16	150	11	31	28.5	10	KBMX L03,04,0511-00R	1			
CKBS R1216-16-20	●	12	16	150	20	40	28.5	10	KBMX L04,0520-00R	1			
CKBS R1616-16-06	●	16	16	150	6	26	34.5	16	KBMX L0206-00R	1			
CKBS R1616-16-11	●	16	16	150	11	31	34.5	16	KBMX L03,04,0511-00R	1			
CKBS R1616-16-20	●	16	16	150	20	40	34.5	16	KBMX L04,0520-00R	1			

KBMX Type (For Very Small Diameter L Type Holder) (Coated)

Dimensions (mm)

Cat. No.	AC1030U	Min. Bore Dia. DMIN	Cutting Edge Position WF3	Offset E3	Corner Radius RE	Overall Length L	Depth of Cut CDX	Fig
KBMX L0206-05R	●	2.0	0.5	0.25	0.05	23.5	6	
KBMX L0206-20R	●	2.0	0.5	0.25	0.20	23.5	6	
KBMX L0311-05R	●	3.0	0.5	0.30	0.05	28.5	11	
KBMX L0311-20R	●	3.0	0.5	0.30	0.20	28.5	11	
KBMX L0411-05R	●	4.0	0.5	0.50	0.05	28.5	11	
KBMX L0411-20R	●	4.0	0.5	0.50	0.20	28.5	11	
KBMX L0420-05R	●	4.0	0.5	0.50	0.05	37.5	20	
KBMX L0420-20R	●	4.0	0.5	0.50	0.20	37.5	20	
KBMX L0511-05R	●	5.0	0.5	0.50	0.05	28.5	11	
KBMX L0511-20R	●	5.0	0.5	0.50	0.20	28.5	11	
KBMX L0520-05R	●	5.0	0.5	0.50	0.05	37.5	20	
KBMX L0520-20R	●	5.0	0.5	0.50	0.20	37.5	20	

Application Example (1)

Electronic Component (Free Cutting Stainless Steel)

Holder : CKBR1212-16
 Insert : **KBMXR 0420-05**
 Cutting Speed : $v_c=60\text{m/min}$
 Feed Rate : $f=0.01\text{mm/rev}$
 Depth of Cut : $a_p=0.03\text{mm}$
 Coolant : Non water soluble coolant

Application Example (2)

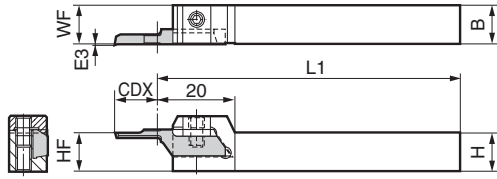
Automotive Fuel Pump Component (SUS430)

Holder : CKBR1616-16
 Insert : **KBMXR 0206-05T**
 Cutting Speed : $v_c=80\text{m/min}$
 Feed Rate : $f=0.03\text{mm/rev}$
 Depth of Cut : $a_p=0.05\text{mm}$
 Coolant : Non water soluble coolant

SEC-MINI Boring Bars
CKB Type

Square Shank
Clamp-on

Fig 1



Refer to pages E67 to E68 for E3 and CDX values.

Sumi Small

Holder

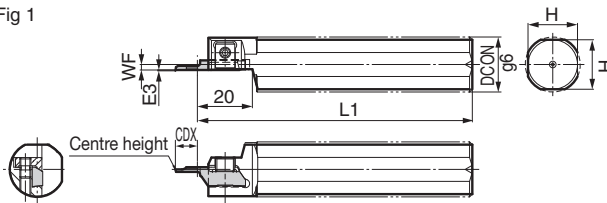
Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length L1	Cutting Edge Distance WF	Cutting Edge Height HF	Fig	Dimensions (mm)		
								Clamp Plate	Double Screw	Wrench
CKB R1010-16	●	10	10	100	10	10	1	CKBW16	WB4-8	LH020 (For Hex Socket)
CKB R1212-16	●	12	12	125	12	12	1			
CKB R1616-16	●	16	16	125	16	16	1			
CKB R2020-16	●	20	20	125	20	20	1			
CKB R2525-16	●	25	25	150	25	25	1			

Round Shank (Small Offset)
Clamp-on

Fig 1



Refer to pages E67 to E68 for E3 and CDX values.

Sumi Small

Holder

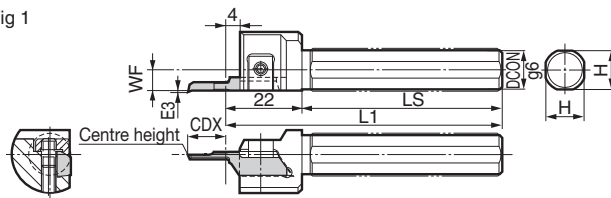
Parts

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length L1	Cutting Edge Distance WF	Fig	Dimensions (mm)		
							Clamp Plate	Double Screw	Wrench
S1905H-CKB RS-16	●	19.05	17	100	2	1	CKBW16	WB4-8	LH020 (For Hex Socket)
S20H-CKB RS-16	●	20	18	100	2	1			
S22K-CKB RS-16	●	22	19	125	2	1			
S25K-CKB RS-16	●	25	23	125	2	1			
S254K-CKB RS-16	●	25.4	23	125	2	1			

Round Shank
Clamp-on

Fig 1



Refer to pages E67 to E68 for E3 and CDX values.

Sumi Small

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length L1	Length LS	Cutting Edge Distance WF	Fig	Dimensions (mm)		
								Clamp Plate	Double Screw	Wrench
S10F-CKB R-16	●	10	9	80	58	5	1	CKBW16	WB4-8	LH020 (For Hex Socket)
S12F-CKB R-16	●	12	11	80	58	6	1			
S16H-CKB R-16	●	16	15	100	78	8	1			
S19K-CKB R-16	●	19.05	17	125	103	8	1			
S20K-CKB R-16	●	20	18	125	103	10	1			

Boring Bars

E

C

D

R

S

T

V

W

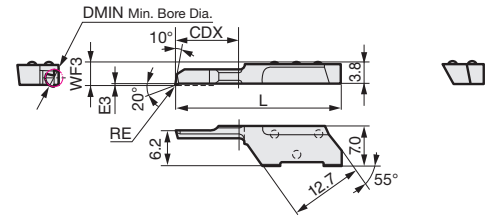
Small Diameter Turning
Very Small Diameter Turning

(Coated Carbide)

KBMX Type (Internal Boring)

Dimensions (mm)

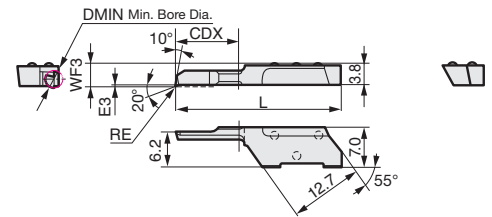
Cat. No.	AC1030U	Min. Bore Dia. DMIN	Cutting Edge Position WF3	Offset E3	Corner Radius RE	Overall Length L	Depth of Cut CDX
KBMX R0103-05 KBMX R0103-20	●	1.0	4.00	0.20	0.05 0.20	20.5	3
KBMX R01506-05 KBMX R01506-20	●	1.5	4.05	0.25	0.05 0.20	23.5	6
KBMX R0206-05 KBMX R0206-20	●	2.0	4.05	0.25	0.05 0.20	23.5	6
KBMX R0311-05 KBMX R0311-20	●	3.0	4.10	0.30	0.05 0.20	28.5	11
KBMX R0411-05 KBMX R0411-20	●	4.0	4.30	0.50	0.05 0.20	28.5	11
KBMX R0420-05 KBMX R0420-20	●	4.0	4.30	0.50	0.05 0.20	37.5	20
KBMX R0511-05 KBMX R0511-20	●	5.0	4.50	0.70	0.05 0.20	28.5	11
KBMX R0520-05 KBMX R0520-20	●	5.0	4.50	0.70	0.05 0.20	37.5	20



KBMX-T Type (Internal Boring)

Dimensions (mm)

Cat. No.	ACZ150	Min. Bore Dia. DMIN	Cutting Edge Position WF3	Offset E3	Corner Radius RE	Overall Length L	Depth of Cut CDX
KBMX R0103-05T KBMX R0103-20T	●	1.0	4.00	0.20	0.05 0.20	20.5	3
KBMX R01506-05T KBMX R01506-20T	●	1.5	4.05	0.25	0.05 0.20	23.5	6
KBMX R0206-05T KBMX R0206-20T	●	2.0	4.05	0.25	0.05 0.20	23.5	6
KBMX R0311-05T KBMX R0311-20T	●	3.0	4.10	0.30	0.05 0.20	28.5	11
KBMX R0411-05T KBMX R0411-20T	●	4.0	4.30	0.50	0.05 0.20	28.5	11
KBMX R0511-05T KBMX R0511-20T	●	5.0	4.50	0.70	0.05 0.20	28.5	11



KBMX Type	KBMX-T Type
Compacts chip curl for evacuation.	Evacuates chips toward the back. Lowers cutting force to prevent chattering.

Boring Bars



Special Drilling
Very Special Drilling

SEC-MINI Boring Bars
CKB Type

(Coated Carbide / SUMIDIA)

KBMZ Type (Internal Back Turning)

Dimensions (mm)

Cat. No.	AC1030U	Min. Bore Dia.	Cutting Edge Position	Offset	Corner Radius	Overall Length	Maximum Depth of Cut	Depth of Cut
		DMIN	WF3	E3	RE	L	CDX	CDX2
KBMZ R0411-05	●	4.0	5.10	1.3	0.05	28.5	11	9
KBMZ R0411-20	●				0.20			
KBMZ R0511-05	●	5.0	5.10	1.3	0.05	28.5	11	9
KBMZ R0511-20	●				0.20			

KBMG Type (Internal Grooving)

Dimensions (mm)

Cat. No.	AC1030U	Min. Bore Dia.	Cutting Edge Distance	Width of Cut	Corner Radius	Overall Length	Maximum Groove Depth	Machinable Length
		DMIN	WF3	CW	RE	L	CDX	LU
KBMG R0411-05	●	4.0	4.90	1.00	0.05	28.5	1.1	11
KBMG R0411-10	●			2.00	0.10			
KBMG R0511-05	●	5.0	5.10	1.00	0.05	28.5	1.3	11
KBMG R0511-10	●			2.00	0.10			

KBMF Type (Face Grooving)

Dimensions (mm)

Cat. No.	ACZ150	Min. Bore Dia.	Cutting Edge Position	Offset	Width of Cut	Corner Radius	Overall Length	Maximum Groove Depth
		DMIN	WF3	E3	CW	RE	L	CDX
KBMF R0615-05	●	6.0	4.0	0.2	1.5	0.05	21.8	4.0
KBMF R0620-05	●				2.0			
KBMF R0630-05	●				3.0			

KBMX Type (SUMIDIA/Internal Boring)

Dimensions (mm)

Cat. No.	DA2200	Min. Bore Dia.	Cutting Edge Position	Offset	Corner Radius	Overall Length	Maximum Depth of Cut
		DMIN	WF3	E3	RE	L	CDX
KBMX R0311-10	●	3.0	4.1	0.3	0.1	28.5	11
KBMX R0411-10	●	4.0	4.3	0.5	0.1	28.5	11
KBMX R0511-10	●	5.0	4.5	0.7	0.1	28.5	11

Boring Bars

M

C

D

R

S

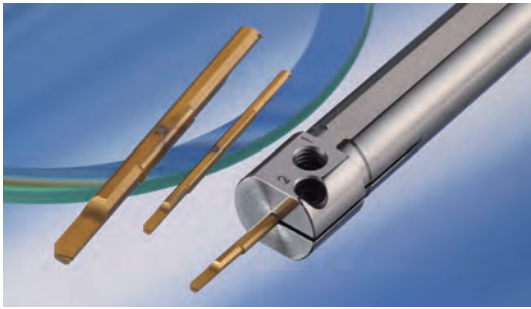
T

V

W

Small Diameter Turning / Key Small Diameter Turning

Solid Carbide Bar BXBR Type



Features

- Economical two-cornered insert
- Depth of cut 5D (5 times the shank diameter)
- Usable at any desired overhang
- Shank size = min. bore diameter for easy selection.
(Available from $\phi 2$ mm to $\phi 5$ mm in 0.5 mm increments.)
- KBMX Type cutting edge used. Versions with no chipbreaker also available in stock.

Internal (Small Diameter) Finishing Solid

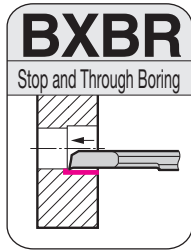
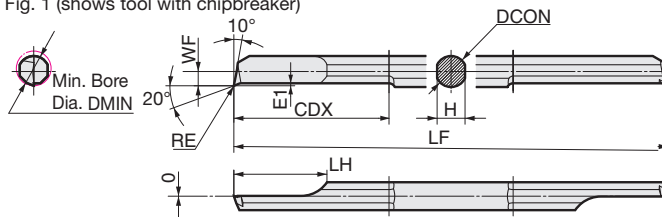


Fig. 1 (shows tool with chipbreaker)



Sumi Small

Holder (Coated)

Dimensions (mm)

	Cat. No.	ACZ150	AC530U	*Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LH	Maximum Depth of Cut CDX	Offset E1	Corner Radius RE	Applicable Sleeve	Fig
With Chipbreaker	BXBR 02005R	●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.05	HBX 2016	1
	BXBR 02020R	●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.20	HBX 2016	1
	BXBR 02505R	●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.05	HBX 2516	1
	BXBR 02520R	●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.20	HBX 2516	1
	BXBR 03005R	●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.05	HBX 3016	1
	BXBR 03020R	●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.20	HBX 3016	1
	BXBR 03505R	●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.05	HBX 3516	1
	BXBR 03520R	●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.20	HBX 3516	1
	BXBR 04005R	●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.05	HBX 4016	1
	BXBR 04020R	●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.20	HBX 4016	1
	BXBR 04505R	●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.05	HBX 4516	1
	BXBR 04520R	●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.20	HBX 4516	1
	BXBR 05005R	●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.05	HBX 5016	1
BXBR 05020R	●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.20	HBX 5016	1	
No Chipbreaker	BXBR 02005R-NB	●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.05	HBX 2016	1
	BXBR 02020R-NB	●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.20	HBX 2016	1
	BXBR 02505R-NB	●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.05	HBX 2516	1
	BXBR 02520R-NB	●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.20	HBX 2516	1
	BXBR 03005R-NB	●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.05	HBX 3016	1
	BXBR 03020R-NB	●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.20	HBX 3016	1
	BXBR 03505R-NB	●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.05	HBX 3516	1
	BXBR 03520R-NB	●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.20	HBX 3516	1
	BXBR 04005R-NB	●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.05	HBX 4016	1
	BXBR 04020R-NB	●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.20	HBX 4016	1
	BXBR 04505R-NB	●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.05	HBX 4516	1
	BXBR 04520R-NB	●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.20	HBX 4516	1
	BXBR 05005R-NB	●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.05	HBX 5016	1
BXBR 05020R-NB	●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.20	HBX 5016	1	

* Boring depth CDX or less.

Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder
HBX 2016	●	2.0	BXBR 0200OR(-NB)
HBX 2516	●	2.5	BXBR 0250OR(-NB)
HBX 3016	●	3.0	BXBR 0300OR(-NB)
HBX 3516	●	3.5	BXBR 0350OR(-NB)
HBX 4016	●	4.0	BXBR 0400OR(-NB)
HBX 4516	●	4.5	BXBR 0450OR(-NB)
HBX 5016	●	5.0	BXBR 0500OR(-NB)

BXBR bars can also be used with HBB type sleeves.
Commercially available sleeves may also be used.
Refer to page E74 for details on HBX Type sleeves.

Spare Parts (for Adapter Sleeve)

Applicable Sleeve	Flat Insert Screw	Set Screw	Wrench
HBX0000	BFTX0409N	3.4	BT06035T TRD15 (For Torx Holes)

Sleeve is optional.

BSME Type

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

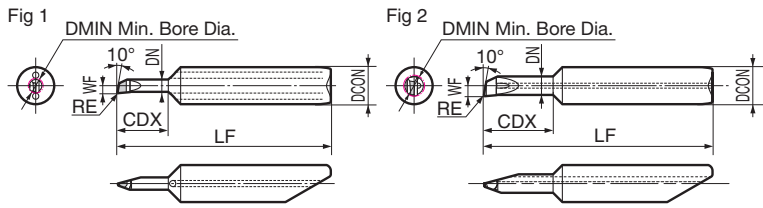
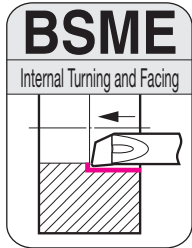


■ Features

- Applicable to min. bore diameters from $\phi 2.5\text{mm}$ in internal boring of hardened steel.
- Achieves high-precision cutting edge positioning thanks to the newly developed clamp mechanism.
- Expands the range of small hole boring to achieve more high-efficiency machining requiring no grinding.
- BSME Type (Brazed Type)
Can be used with bore diameters from $\phi 2.5$ to 5.0mm
- SEXC Type (Indexable Insert Type)
Can be used with bore diameters from $\phi 4.0$ to 6.0mm



SUMIBORON
Brazed



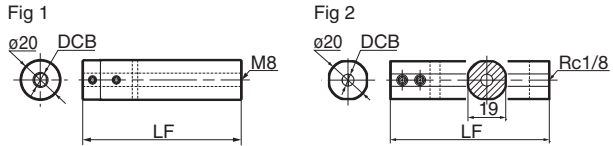
Sumi Small

Holder (SUMIBORON)

Dimensions (mm)

Cat. No.	BN2000		Min. Bore Dia. DMIN	Diameter DCON	Neck Diameter DN	Overall Length LF	Cutting Edge Distance WF	Maximum Depth of Cut CDX	Corner Radius RE	Applicable Sleeve	Fig
	R	L									
BSME R/L25020D2S6	●	●	2.5	6.0	2.0	32.0	1.20	5.3	0.2	HBSM6020 HBSM6020A	1
BSME R/L25020D3S6	●	●	2.5	6.0	2.0	34.5	1.20	7.8	0.2		1
BSME R/L25020D4S6	●	●	2.5	6.0	2.0	37.0	1.20	10.3	0.2		1
BSME R/L30020D2S6	●	●	3.0	6.0	2.5	32.8	1.45	6.3	0.2		2
BSME R/L30020D3S6	●	●	3.0	6.0	2.5	35.8	1.45	9.3	0.2		2
BSME R/L30020D4S6	●	●	3.0	6.0	2.5	38.8	1.45	12.3	0.2		2
BSME R/L35020D2S6	●	●	3.5	6.0	3.0	33.5	1.70	7.3	0.2		2
BSME R/L35020D3S6	●	●	3.5	6.0	3.0	37.0	1.70	10.8	0.2		2
BSME R/L35020D4S6	●	●	3.5	6.0	3.0	40.5	1.70	14.3	0.2		2
BSME R/L40020D2S6	●	●	4.0	6.0	3.5	33.9	1.95	8.3	0.2		2
BSME R/L40020D3S6	●	●	4.0	6.0	3.5	37.9	1.95	12.3	0.2		2
BSME R/L40020D4S6	●	●	4.0	6.0	3.5	41.9	1.95	16.3	0.2		2
BSME R/L45020D2S6	●	●	4.5	6.0	4.0	35.0	2.20	9.3	0.2		2
BSME R/L45020D3S6	●	●	4.5	6.0	4.0	39.5	2.20	13.8	0.2		2
BSME R/L45020D4S6	●	●	4.5	6.0	4.0	44.0	2.20	18.3	0.2		2
BSME R/L50020D2S6	●	●	5.0	6.0	4.5	35.8	2.45	10.3	0.2		2
BSME R/L50020D3S6	●	●	5.0	6.0	4.5	40.8	2.45	15.3	0.2		2
BSME R/L50020D4S6	●	●	5.0	6.0	4.5	45.8	2.45	20.3	0.2		2

The BSME Type requires HBSM6020(A) adapter sleeve (sold separately).



Alignment Jig (For Adapter Sleeve)

Cat. No.	Stock	
AFBSM60	●	

This jig is used for centring sleeves when setting them into holders.

Sleeve

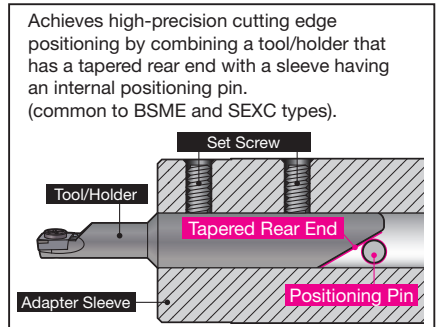
Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Overall Length LF	Fig	Set Screw	Wrench
HBSM6020	●	6.0	80	1		
HBSM6020A	●	6.0	80	2	BT0506	TH025

Adapter sleeve is optional.

Mounting Method E72

Newly Developed Clamp Mechanism



Achieves high-precision cutting edge positioning by combining a tool/holder that has a tapered rear end with a sleeve having an internal positioning pin.
(common to BSME and SEXC types).

SEXC Type



SUMIBORON
Screw-on

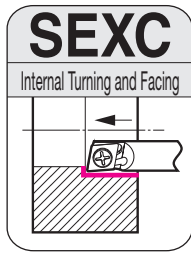
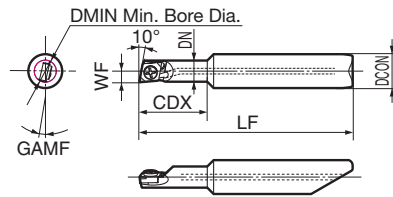


Fig 1



Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Neck Diameter DN	Overall Length LF	Cutting Edge Distance WF	Boring Depth CDX	Rake Angle GAMF	Applicable Sleeve	Fig	Bolt		Wrench
	R	L										N-m	Wrench	
E06D2-SEXC R/L03-04P	●	●	4.0	6.0	3.75	33.75	1.95	8	-13°	HBSM6020 HBSM6020A	1	MIB1.6-2	0.2	SDBSM
E06D3-SEXC R/L03-04P	●	●	4.0	6.0	3.75	37.75	1.95	12	-13°		1	MIB1.6-2.5	0.2	
E06D2-SEXC R/L03-05P	●	●	5.0	6.0	4.75	35.25	2.45	10	-12°		1	MIB1.6-2.5	0.2	
E06D3-SEXC R/L03-05P	●	●	5.0	6.0	4.75	40.25	2.45	15	-12°		1	MIB1.6-2.5	0.2	
E06D2-SEXC R/L03-06P	●	●	6.0	6.0	5.75	36.75	2.95	12	-11°		1	MIB1.6-3	0.2	
E06D3-SEXC R/L03-06P	●	●	6.0	6.0	5.75	42.75	2.95	18	-11°		1	MIB1.6-3	0.2	

The SEXC Type requires HBSM6020(A) adapter sleeve (sold separately).

Insert (SUMIBORON)

Dimensions (mm)

Cat. No.	BN2000 BN7000	Corner Radius RE	Fig	Fig 1	
				RE	Fig
2NU-ECXA 030X02LE	●	0.2	1		
2NU-ECXA 030X02LF	●	0.2	1		

Part Number Suffix: LE: Honing, LF: Sharp Edge

Fig 1

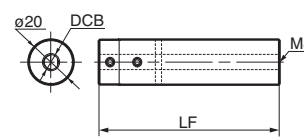
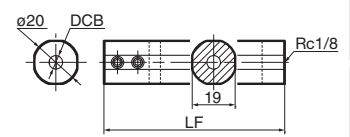


Fig 2



Sleeve

Dimensions (mm)

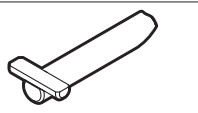
Cat. No.	Stock	Bore Dia. DCB	Overall Length LF	Fig	Set Screw	Wrench
HBSM6020A	●	6.0	80	2		

Sleeve is optional.

Mounting Method E72

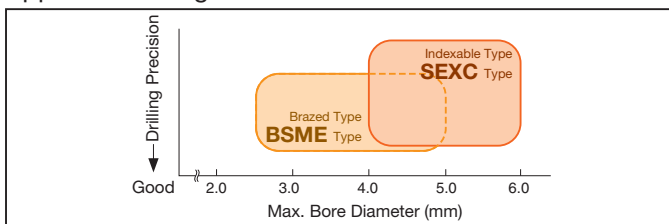
Alignment Jig (For Adapter Sleeve)

Cat. No.	Stock
AFBSM60	●



This jig is used for centring sleeves when setting them into holders.

Application Range



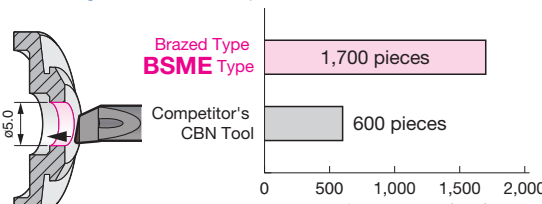
Recommended Cutting Conditions

Spindle Speed n	Above 2,000 min ⁻¹	May cause chattering or chipping at the cutting edge in low-speed machining.
Depth of Cut a_p	0.01 to 0.15mm	Excessive depth of cut causes deformation of the tool, which consequently leads to deterioration of dimensional tolerance.
Feed Rate f	0.01 to 0.10mm/rev	—

Application Examples

Hardened Alloy Steel Valve Components **BSME**

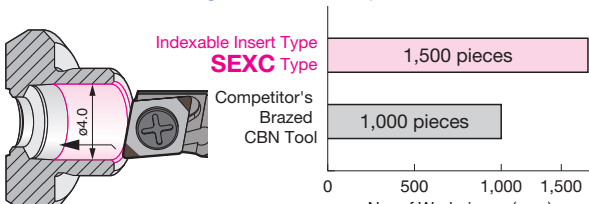
The BSME type provides stable machining and a tool life that is over 2 times longer than our competitors' CBN tools.



Work Material: Hardened Alloy Steel Valve Component (Automotive Component)
Tool: BSME R50020D2S6 Grade: BN2000
Cutting Conditions: $v_c = 118\text{m/min}$ (7,500min⁻¹), $f = 0.02\text{mm/rev}$, $a_p = 0.10\text{mm}$ Dry

Bearing Steel: Small Automotive Components **SEXC**

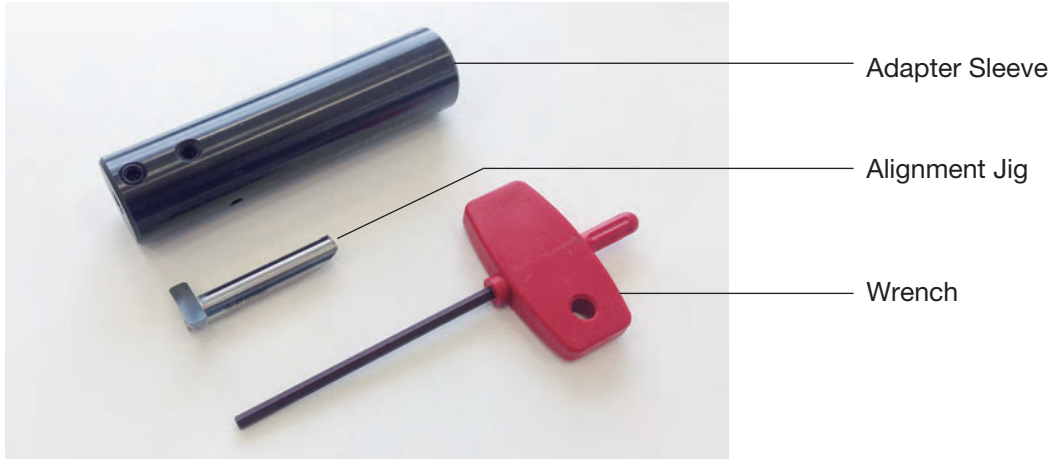
The SEXC type provides drastically reduced tool costs and a tool life that is 1.5 times longer than our competitors' brazed CBN tools.



Work Material: Bearing Steel Small Automotive Component (60HRC)
Holder: E06D2-SEXC R/L03-04P Insert: 2NU-ECXA 030X02LF (BN2000)
Cutting Conditions: $v_c = 50\text{m/min}$ (4,000min⁻¹), $f = 0.02\text{mm/rev}$, $a_p = 0.02\text{mm}$ Wet

BSME Type/SEXC Type

■ Dedicated Adapter Sleeve/Alignment Jig





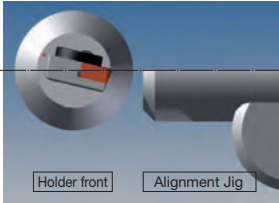


Adapter Sleeve

Alignment Jig

Wrench

■ Mounting Method

<p>1. Insert the alignment jig until it hits the positioning pin set in the adapter sleeve, and fasten the two set screws. Also fix the alignment jig.</p>	<p>(1) Insert until it hits the positioning pin. </p> <p>(2) Tighten the two set screws. </p>
<p>2. Mount the sleeve on the equipment and temporarily fasten with a bolt.</p>	
<p>3. Rotate the sleeve gradually to adjust until the alignment jig side lock flat is horizontal.</p> 	<p>When you set the sleeve adjusted with the alignment jig on the holder, the cutting edge position will automatically be set on center.</p> 
<p>4. Using a tool presetter, measure the holder diameter dimensions.</p>	

Boring Bars

E

C

D

R

S

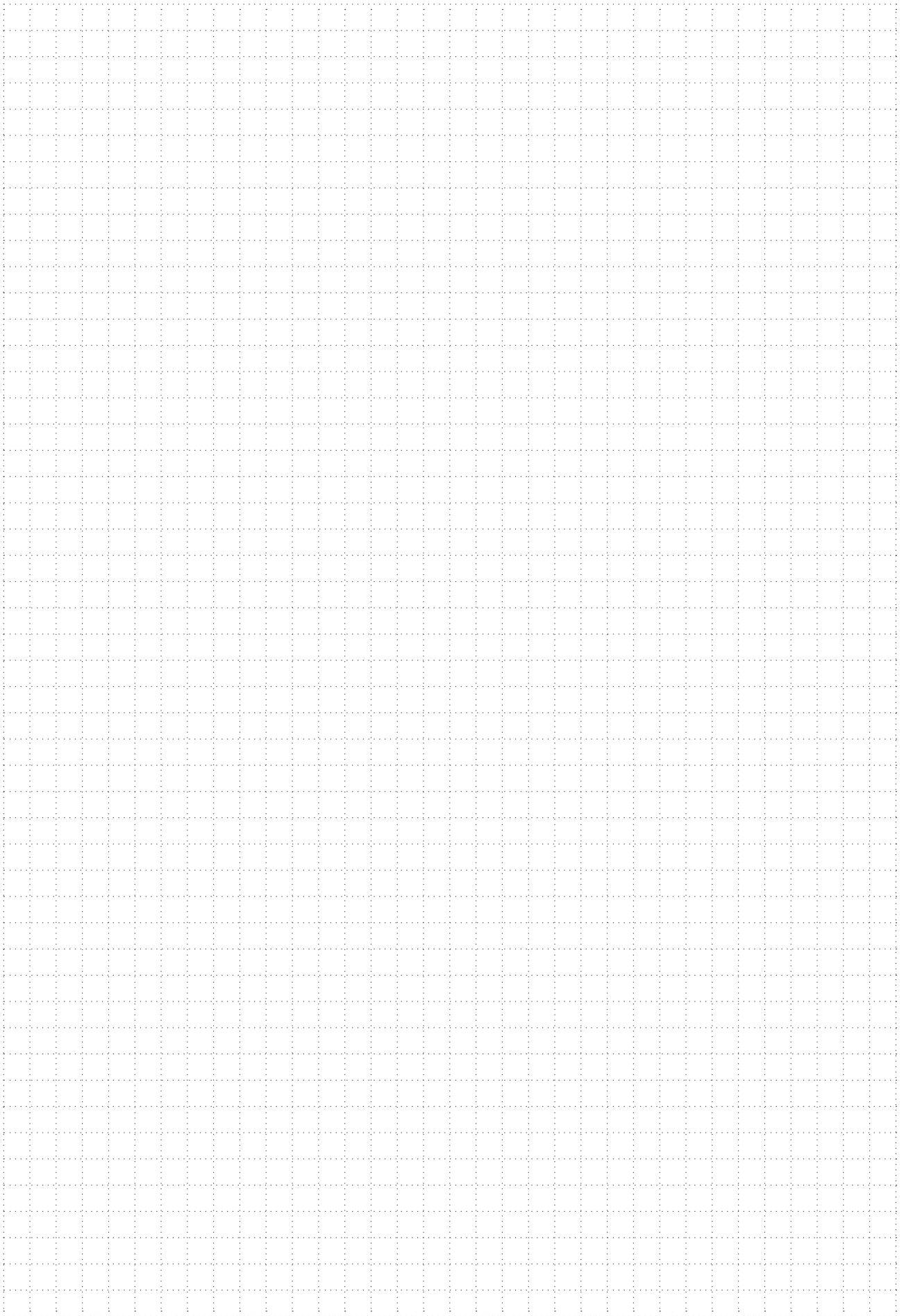
T

V

W

Small Diameter Turning
Key Small Diameter Turning

MEMO



BNBX Type



SUMIBORON
Brazed

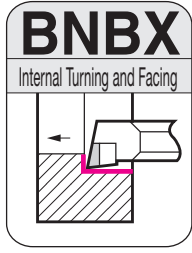
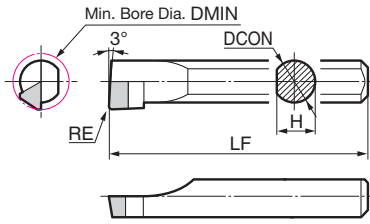


Fig 1



Holder (SUMIBORON)

Dimensions (mm)

Cat. No.	Holder		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Corner Radius RE	Applicable Sleeve	Fig
	BN2000	BN7000							
BNBX 020R	●	●	2.5	2.0	1.8	40	0.2	HBX 2016	1
BNBX 025R	●	●	3.0	2.5	2.2	40	0.2	HBX 2516	1
BNBX 030R	●	●	3.5	3.0	2.7	40	0.2	HBX 3016	1
BNBX 035R	●	●	4.0	3.5	3.2	40	0.2	HBX 3516	1
BNBX 040R	●	●	4.5	4.0	3.7	40	0.2	HBX 4016	1
BNBX 045R	●	●	5.0	4.5	4.2	40	0.2	HBX 4516	1
BNBX 050R	●	●	5.5	5.0	4.7	60	0.2	HBX 5016	1
BNBX 055R	●	●	6.0	5.5	5.2	60	0.2	HBX 5516	1
BNBX 060R	●	●	6.5	6.0	5.7	60	0.2	HBX 6016	1
BNBX 065R	●	●	7.0	6.5	6.2	60	0.2	HBB 6516	1
BNBX 070R	●	●	7.5	7.0	6.7	80	0.2	HBB 716	1
BNBX 075R	●	●	8.0	7.5	7.2	80	0.2	HBB 7516	1
BNBX 080R	●	●	8.5	8.0	7.7	80	0.2	HBB 816	1

BNBX bars can be used with HBB type sleeves, but HBX type sleeves are recommended for bars below ø6mm.

Fig 1

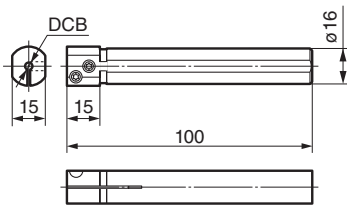
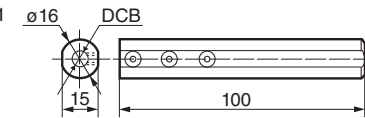


Fig 1



Sleeve (HBX Type)

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder	Fig
HBX 2016	●	2.0	BNBX 020R	1
HBX 2516	●	2.5	BNBX 025R	1
HBX 3016	●	3.0	BNBX 030R	1
HBX 3516	●	3.5	BNBX 035R	1
HBX 4016	●	4.0	BNBX 040R	1
HBX 4516	●	4.5	BNBX 045R	1
HBX 5016	●	5.0	BNBX 050R	1
HBX 5516	●	5.5	BNBX 055R	1
HBX 6016	●	6.0	BNBX 060R	1

Sleeve (HBB Type)

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder	Fig
HBB 6516	●	6.5	BNBX 065R	1
HBB 716	●	7.0	BNBX 070R	1
HBB 7516	●	7.5	BNBX 075R	1
HBB 816	●	8.0	BNBX 080R	1

HBB Type sleeve can also be used with ø2.5 to 6.0mm holders.

Spare Parts (for Adapter Sleeve)

Applicable Sleeve	Screw		Set Screw	Wrench
	Part	Torque (N·m)	Part	Part
HBX2000	BFTX0409N	1.5	BT06035T	TRD
HBX3000	BFTX0409N	3.0	BT06035T	TRD15
HBX4000				
HBX5000				
HBX6000	—	—	BT0404	LH020
HBB0000				

Boring Bars

M

C

D

R

S

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V

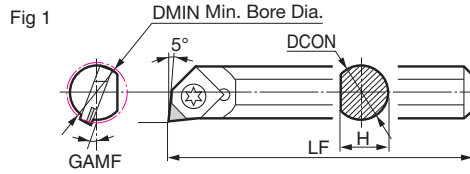
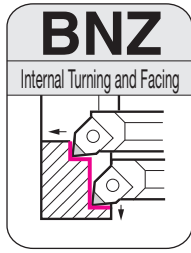
W

Small Diameter Turning
Very Small Diameter Turning

BNZ Type



SUMIBORON
Screw-on



Sumi Small

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Rake Angle GAMF	Fig	Parts			
								Flat Insert Screw	Wrench (For Torx Holes)	Adapter Sleeve	
BNZ 606R	●	7.0	6.0	5.5	80	-14°	1	BFTX0204N	0.5	TRX06	HBB616
BNZ 608R	●	9.0	8.0	7.5	100	-12°	1				HBB816
BNZ 610R	●	11.0	10.0	9.5	125	-10°	1				
BNZ 612R	●	13.0	12.0	11.0	130	-8°	1				
BNZ 616R	●	17.0	16.0	15.0	145	-6°	1				
BNZ 620R	●	21.0	20.0	19.0	160	-5°	1				

Insert (SUMIBORON)

Dimensions (mm)

Quantity	Cat. No.	BNC2010	BNC2020	BN1000	BN2000	BN7000	Corner Radius RE
Single pack	NU-ZNEX 040102	—	—	●	●	●	0.2
	NU-ZNEX 040104	—	—	●	●	●	0.4
	NC-ZNEX 040102LE	●	—	—	—	—	0.2
	NC-ZNEX 040104LE	●	—	—	—	—	0.4
	NC-ZNEX 040102LT	—	●	—	—	—	0.2
10 pack	T-NU-ZNEX 040102	—	—	●	●	●	0.2
	T-NU-ZNEX 040104	—	—	●	●	●	0.4

Fig 1

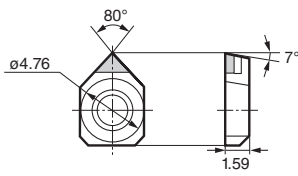
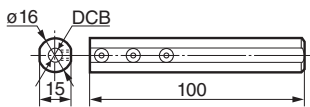


Fig 1



Sleeve

Dimensions (mm)

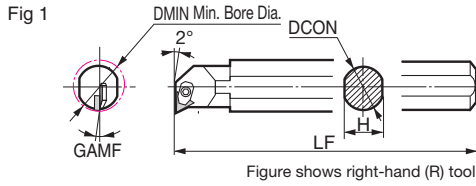
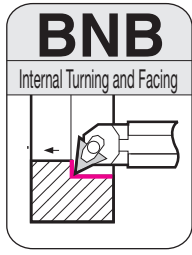
Cat. No.	Stock	Bore Dia. DCB	Applicable Holders	Fig
HBB 616	●	6.0	BNZ 606R	1
HBB 816	●	8.0	BNZ 608R	1

HBX Type sleeve (HBB6016) can also be used with BNZ606R.

BNB Type



SUMIBORON
Clamp-on



Boring Bars

E

Holder

Parts

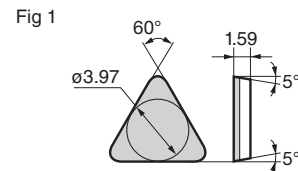
Dimensions (mm)

Cat. No.	Stock	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Rake Angle GAMF	Fig	Clamp Plate	Bolt	Nut	Wrench
								Fig			(For Hex Socket)
BNB 508R	●	10.0	8.0	7.0	140	-9°	1	BNBC	BH0306	BNBW-2	TH020
BNB 510R	●	12.0	10.0	9.0	140	-8°	1		FBUP3-A0-9	BNBW-4	
BNB 512R	●	14.0	12.0	11.0	160	-6°	1				
BNB 516R	●	18.0	16.0	14.0	180	-5°	1				
BNB 520R	●	22.0	20.0	18.0	180	-4°	1		BH0310	BNBW-7	

Insert (SUMIBORON, SUMIDIA)

Dimensions (mm)

Cat. No.	SUMIBORON							SUMIDIA		Corner Radius RE
	BNX10	BNX20	BN2000	BN350	BN500	BN7000	DA150	DA1000		
TBGN 060102B	●	●	●	●	●	●	●	●	0.2	
TBGN 060104B	●	●	●	●	●	●	●	●	0.4	
TBGN 060108B	●	●	●	●	●	●	●	●	0.8	
TBGN 060102-BSTN¹	—	●	—	—	—	—	—	—	0.2	
TBGN 060104-BSTN¹	—	●	—	—	—	—	—	—	0.4	
TBGN 060108-BSTN¹	—	●	—	—	—	—	—	—	0.8	
NF-TBGN 060102²	—	—	—	—	—	—	—	●	0.2	
NF-TBGN 060104²	—	—	—	—	—	—	—	●	0.4	



¹ TBGN OOOOOO-BSTN is only available in BNX20 grade and has a smaller negative land angle. (BSTN: -15°, B: -25°. However, the negative land angle is uniquely configured for each grade.)

² NF-TBGN is a single corner insert. (This is not a Full-Top insert)

C

D

R

S

T

V

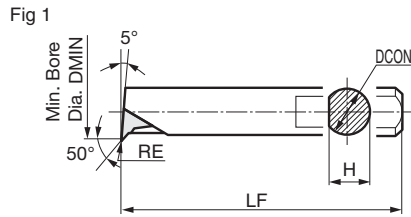
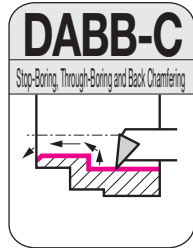
W

Small Diameter Turning
Very Small Diameter Turning

DABB Type

PCD

SUMIDIA
Brazed



Sumi Small

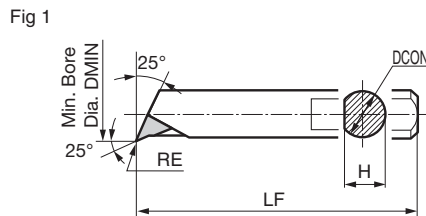
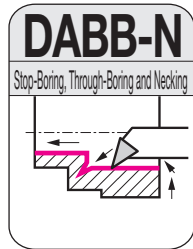
Holder (SUMIDIA)

Dimensions (mm)

Cat. No.	DA2200	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Corner Radius RE	Applicable Sleeve	Fig
DABB 025CR	●	3.0	2.5	2.2	60	0.1	HBB 2516	1
DABB 035CR	●	4.0	3.5	3.2	60	0.1	HBB 3516	1
DABB 045CR	●	5.0	4.5	4.1	80	0.1	HBB 4516	1
DABB 060CR	●	7.0	6.0	5.2	80	0.1	HBB 616	1

PCD

SUMIDIA
Brazed



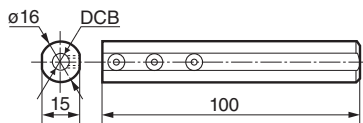
Sumi Small

Holder (SUMIDIA)

Dimensions (mm)

Cat. No.	DA2200	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Corner Radius RE	Applicable Sleeve	Fig
DABB 025NR	●	3.0	2.5	2.2	60	0.1	HBB 2516	1
DABB 035NR	●	4.0	3.5	3.2	60	0.1	HBB 3516	1
DABB 045NR	●	5.0	4.5	4.1	80	0.1	HBB 4516	1
DABB 060NR	●	7.0	6.0	5.2	80	0.1	HBB 616	1

Fig 1



Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Fig	Set Screw	Wrench
HBB 2516	●	2.5	1	BT0404	LH020 (For Hex Socket)
HBB 3516	●	3.5	1		
HBB 4516	●	4.5	1		
HBB 616	●	6.0	1		

HBX Type sleeve can also be used.

Boring Bars

E

C

D

R

S

T



V

W

Small Diameter Turning
Very Small Diameter Turning

Clamp Set Parts

Parts

Applicable Clamp Sets Cat. No.	Spring		Cap Screw		N·m
		Stock		Stock	
SCP-1	CSP08	●	CP-M5-20-1	●	5.0
SCP-2	CSP08	●	CP-M5-20-1	●	
SCP-3	CSP08	●	CP-M5-20-1	●	
SCP-4	CSP25	●	CP-M5-20-1	●	
SCP-5	CSP08	●	CP-M5-20-1	●	
SCP-6	CSP12	●	CP-M8-25-1	●	6.0

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

Boring
Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning