

Boring Bars

E1 to E82

E



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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		
Profiling	SEC-Boring Bar	S-SDUC type / A-SDUC type	E26
		B-SDUC type / C-SDUC type	E27
		S-SDQC type / A-SDQC type	E28
		B-SDQC type	E29
		S-SDZC type	E30
		S-DDQN type / S-DDUN type	E31
		D-DDUN type / S-PDUN type / S-EDUN type	E32
		S-PDZN type / S-EDZN type	E33
Through Boring	SEC-Boring Bar	S-SSKP type / C-SSKP type	E34
		S-CSKP type	E35
		S-SSK type	E36
		S-DSKN type / S-PSKN type	E37
		S-ESKN type / S-PSYN type	E38
		S-ESYN type	E39
Stop Boring	SEC-Boring Bar	S-STUB type / S-STUP type / A-STUP type	E40
		B-STUP type	E41
		D-STUP type / C-STUB type / C-STUP type	E42
		E-STUP type	E43
		S-CTFP type	E44
		S-DTFN type / D-DTFN type	E45
		S-PTFN type / B-PTFN type	E46
		S-ETFN type	E47
Profiling	SEC-Boring Bar	S-SVJB type / B-SVJB type	E48
		S-SVJC type	E49
		S-SVQB type / B-SVQB type	E50
		C-SVQB type	E51
		S-SVQC type / A-SVQC type	E52
		S-SVUB type / B-SVUB type	E53
		C-SVUB type	E54
		S-SVUC type / A-SVUC type	E55
		S-SVZB type / B-SVZB type	E56
		C-SVZB type	E57
		S-SVZC type	E58
		MV type / GD type	(C45, C46, C47)
		Stop Boring	SEC-Boring Bar
S-SWUP type	E61		
S-DWLN type / D-DWLN type	E62		
S-PWLN type	E63		
SumiSmall Very Small Diameter Turning Small Diameter Turning	SEC-MINI Boring Bars	CKB series	E64
	Solid Carbide Bar	BXBR series	E70
	Small Diameter Boring Bars	BSME series	E73
	<i>Expansion</i> SUMIBORON Small Hole Boring Bars	SEXC series	E74
		BNBX series	E76
		BNZ series	E77
		BNB series	E78
	SUMIDIA Small Diameter Boring Bars	DABB series	E80
SUMIDIA BINDERLESS Small Diameter Boring Bars <i>New</i>	DABX series	E81	
Double Clamp Tool Holders	Clamp Set Parts	E82	

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 Bar series

Selection Guide by Tooling

Applications		Bottom Facing		Profiling			Back Turning	
Insert Shape		80° Diamond type		55° Diamond type	35° Diamond type		55° Diamond type	35° Diamond type
Structure/Shank Material								
Screw-on	Steel	 S-SCLP [BBPC]	 S-SCLC	 S-SDUC S-SDQC	 S-SVUC S-SVUB	 S-SVQC S-SVQB	 S-SDZC	 S-SVZC S-SVZB
	Carbide	 A-SCLP	 A-SCLC	 A-SDUC A-SDQC	 A-SVUC A-SVQC	—	—	—
	Steel with Anti-Vibration Mechanism	 B-SCLP/D-SCLP [XBPC/XBPC-H]	 B-SCLC	 B-SDUC B-SDQC	 B-SVUB B-SVQB	—	—	 B-SVZB
	Carbide	 C-SCLP [WBPC]	 C-SCLC E-SCLC	 C-SDUC	 C-SVUB C-SVQB	—	—	 C-SVZB
Double Clamp	Steel	 S-DCLN	—	 S-DDUN S-DDQN	—	—	—	—
	Steel with Anti-Vibration Mechanism	 D-DCLN	—	 D-DDUN	—	—	—	—
Clamp-on	Steel	—	—	—	—	—	—	—
Lever Lock	Steel	 S-PCLN	—	 S-PDUN	—	—	 S-PDZN	—
	Steel with Anti-Vibration Mechanism	 B-PCLN	—	—	—	—	—	—
Pin Lock	Steel	 S-ECLN [BCLN]	—	 S-EDUN [BDUN]	—	—	 S-EDZN [BDZN]	—
	Carbide	 BNZ	—	—	—	—	—	—

Symbols in [] indicate the previous models : With oil hole : Lineup of dedicated insert grades (includes solid/brazed)

Boring Bar series

Selection Guide by Tooling

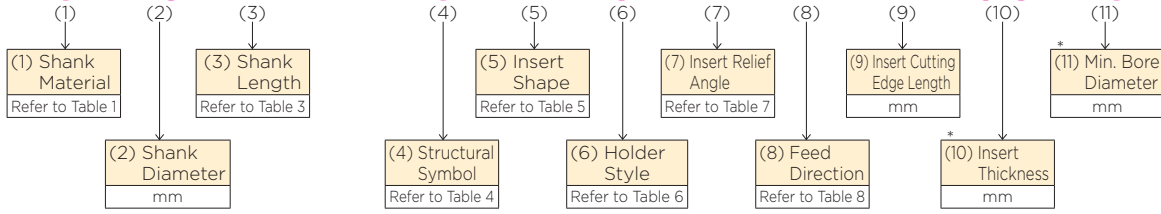
Applications		Spherical Internal Facing	Through Boring		Stop Boring		
Insert Shape		35° Diamond type	Trigon type / Others	Square type	Trigon type	Triangular type	Others
Structure/Shank Material							
Screw-on	Steel	 S-SVJB E48 S-SVJC E49	 S-SWUB [BBPW] E60 S-SWUP E61	 S-SSKP [BBPS] E34 S-SSKC E36	 S-SWUB [BBPW] E60 S-SWUP E61	 S-STUP/S-STUB [BBPT] E40	—
	Steel with Anti-Vibration Mechanism	 B-SVJB E48	—	—	—	 A-STUP E40	—
	Carbide	—	 C-SWUB [WBPW] E60	 C-SSKP [WBPS] E34	 C-SWUB [WBPW] E60	 C-STUP/C-STUB [WBPT] E42 E-STUP [WBPT-H] E43	 SEXC E74
Double Clamp	Steel	—	—	 S-DSKN E37	 S-DWLN E62	 S-DTFN E45	—
	Steel with Anti-Vibration Mechanism	—	—	—	 D-DWLN E62	 D-DTFN E45	—
Clamp-on	Steel	—	—	 S-CSKP E35	—	 S-CTFP E44	 CKB E64
Lever Lock	Steel	—	—	 S-PSKN E37 S-PSYN E38	 S-PWLN E63	 S-PTFN E46	—
	Steel with Anti-Vibration Mechanism	—	—	—	—	 B-PTFN E46	—
Pin Lock	Steel	—	—	 S-ESKN [BSKN] E38 S-ESYN [BSYN] E39	—	 S-ETFN [BTFN] E47	—
Solid Carbide / CBN / PCD	Carbide	—	—	—	—	 BXBR E70	 DABX E81
	Carbide	—	—	—	 BNB E78	 BSME E73	 BNBX E76

Symbols in [] indicate the previous models : With oil hole : Lineup of dedicated insert grades (includes solid/brazed)

Boring Bars 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) Structural Symbol					
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-handed	Symbol	Left-handed
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	Hexagonal type	V	35° Apex Angle Diamond type
K	55° Apex Angle Parallelogram	W	Trigon type
L	Rectangular type		

Table 6

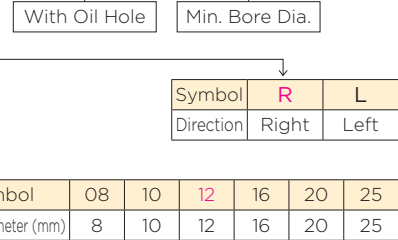
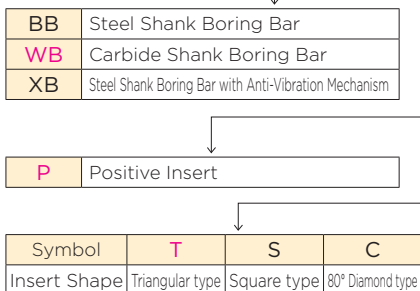
(6) Holder Style (— indicates main cutting edge)					
Symbol	Shape	Offset	Symbol	Shape	Offset
A		No	N		No
B		No	Q		Yes
D		No	R		Yes
E		No	S		Yes
F		Yes	T		Yes
G		Yes	U		Yes
J		Yes	W		Yes
K		Yes	Y		Yes
L		Yes	Z		Yes

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)**



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

Selection Guide for Boring Bars

Application	Model	Shank Material Boring Depth (L/D)			Applicable Inserts and Shapes	Tooling	Min. Bore Dia. (mm)																	
		Steel	Carbide	Anti-Vibration			*The actual values will be written in the table if it differs from those in the column headings.																	
		1	1.5	2			3	4	5	6	7	8	10	12	13	14	16	18	20	22	25	28	32	40
Very Small Dia. Boring	CKB → E64	up to 3			Coated Inserts and Dedicated SUMIDIA Inserts		●	●	●	●	●													
	BXBR → E70		up to 5		Coated Carbide					●	●	●	●											
	DABB → E80		up to 2		Brazed SUMIDIA				●	●	●	●												
	DABX → E81		up to 5		Brazed SUMIDIA BINDERLESS				●	●														
Stop Boring	BSME → E73		up to 4		Brazed SUMIBORON					●	●	●	●											
	SEXC → E74		up to 3		Dedicated Inserts					●	●	●												
	BNBX → E76		up to 5		Brazed SUMIBORON					●	●	●	●											
	BNB → E78		up to 4		SUMIBORON SUMIDIA Dedicated Inserts								●	●	●	●	●							
	S-STUB/S-STUP [BBPT] → E40		up to 3								●	●	●	●	●	●	●	●	●	●	●			
	A-STUP → E40		up to 3										●	●	●	●	●	●	●	●	●			
	B-STUP [XBPT] → E41			up to 6																			●	
	D-STUP [XBPT-H] → E42			up to 6																			●	
	C-STUB/C-STUP [WBPT] → E42		up to 8																					
	E-STUP [WBPT-H] → E43		up to 8			Triangular type 5° Positive (With Hole) 11° Positive (With Hole)																		
	S-CTFP → E44		up to 3			Triangular type 11° Positive (Without Hole)																	●	
	S-PTFN → E46		up to 3																				●	●
	B-PTFN → E46			up to 6																			●	●
	S-DTFN → E45		up to 3																				●	●
	D-DTFN → E45			up to 6																			●	●
	S-ETFN [BTFN] → E47		up to 3			Triangular type Negative (With Hole)																	●	●
Bottom Facing	BNZ → E77		up to 5		SUMIBORON Dedicated Inserts																			
	S-SCLC → E18		up to 3																					
	A-SCLC → E18		up to 3																					
	B-SCLC → E19		up to 6		80° Diamond type 7° Positive (With Hole)																			

Symbols in [] indicate the previous models With oil hole

: Steel Shank : Carbide Shank : Steel Shank with Anti-Vibration Mechanism

: Coloured box: Manufacturable size (no oil hole), ● : In stock, H : In stock with oil hole



Selection Guide for Boring Bars

Boring Bars



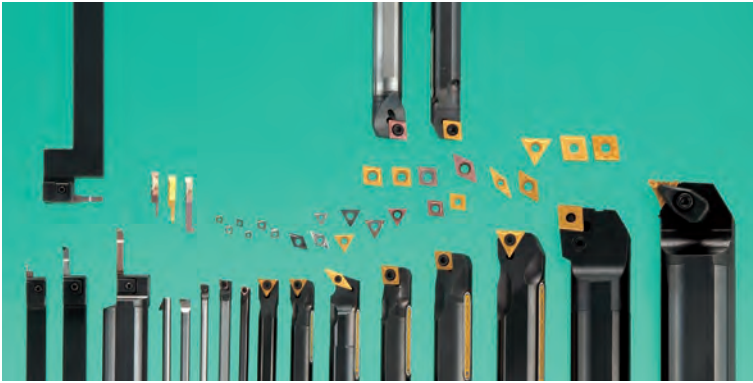
Application	Model	Shank Material Boring Depth (L/D)			Applicable Inserts and Shapes	Tooling	Min. Bore Dia. (mm)																									
		Steel	Carbide	Anti-Vibration			*The actual values will be written in the table if it differs from those in the column headings.																									
							1	1.5	2	3	4	5	6	7	8	10	12	13	14	16	18	20	22	25	28	32	40	50	63			
Bottom Facing	C-SCLC → E20		up to 8		80° Diamond type 7° Positive (With Hole)							●	●	●	●	●	●	●	●	●	●	●	●									
	E-SCLC (Oil Hole) → E20		up to 8																													
	S-SCLP [BBPC] → E21		up to 3																													
	A-SCLP (Oil Hole) → E21		up to 3			80° Diamond type 11° Positive (With Hole)																										
	B-SCLP [XBPC] → E22			up to 6																												
	D-SCLP (Oil Hole) [XBPC-H] → E22			up to 6																												
	C-SCLP [WBPC] → E22			up to 8		80° Diamond type 11° Positive (With Hole)																										
	S-DCLN → E23		up to 3					DCLN type 																								
	D-DCLN (Oil Hole) → E23			up to 6																												
	S-PCLN → E24		up to 3			PCLN type / ECLN type 																										
	B-PCLN → E24			up to 6																												
	S-ECLN [BCLN] → E25		up to 3				80° Diamond type Negative (With Hole)																									
	D-DWLN (Oil Hole) → E62			up to 6		Trigon type Negative (With Hole)																										
	S-DWLN → E62		up to 3																													
	S-PWLN → E63		up to 3																													

Application	Model	Shank Material Boring Depth (L/D)			Applicable Inserts and Shapes	Tooling	Min. Bore Dia. (mm)																							
		Steel	Carbide	Anti-Vibration			*The actual values will be written in the table if it differs from those in the column headings.																							
							6	8	10	12	13	14	16	18	20	22	25	28	32	34	35	40	44	50	54	63	70			
Profiling	S-SDUC → E26, E28		up to 3		55° Diamond type 7° Positive (With Hole)	SDUC type 																								
	A-SDUC (Oil Hole) → E26, E28		up to 3					SDQC type 																						
	B-SDUC → E27, E29			up to 6																										
	C-SDUC → E27			up to 8		55° Diamond type 7° Positive (With Hole)																								
	S-SDZC → E30		up to 3					SVU□ type/SVQ□ type 																						
	S-SVJB → E48		up to 3																											
	B-SVJB → E48			up to 6		35° Diamond type 5° Positive (With Hole) 7° Positive (With Hole)																								
	S-SVJC → E49		up to 3																											
	S-SVQC → E52, E55		up to 3																											
	A-SVUC (Oil Hole) → E55		up to 3			35° Diamond type 5° Positive (With Hole) 7° Positive (With Hole)																								
	A-SVQC (Oil Hole) → E52		up to 3																											

Symbols in [] indicate the previous models (●): With oil hole
 Steel Shank Carbide Shank Steel Shank with Anti-Vibration Mechanism
 Coloured box: Manufacturable size (no oil hole), ●: In stock, ⊕: In stock with oil hole

Boring Bar 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 have since included the popular SEC-Small Diameter Boring Bars and now the **SumiTurn X-Bar** with anti-vibration mechanism, optimised insert grades and chipbreakers.

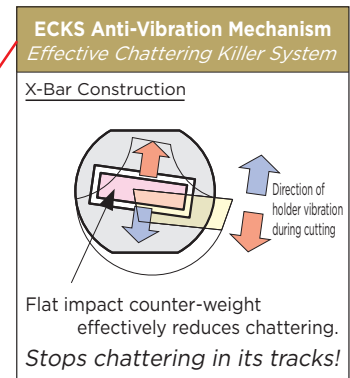
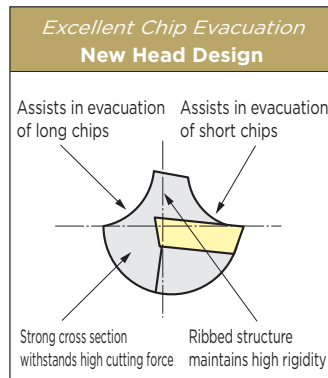
Features of SEC-Boring Bars

- Suitable for a wide variety of applications. Stop-Boring/Bottom Facing/Through-Boring/Profiling
- Min. bore diameter: **From $\varnothing 1\text{mm}$** for CKB series, **from $\varnothing 5\text{mm}$** 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 $\varnothing 32\text{mm}$ 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. $\varnothing 25$ to $\varnothing 50\text{mm}$) are now in stock.



Shank Material Selection



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

◎ 1st Recommendation ○ 2nd Recommendation

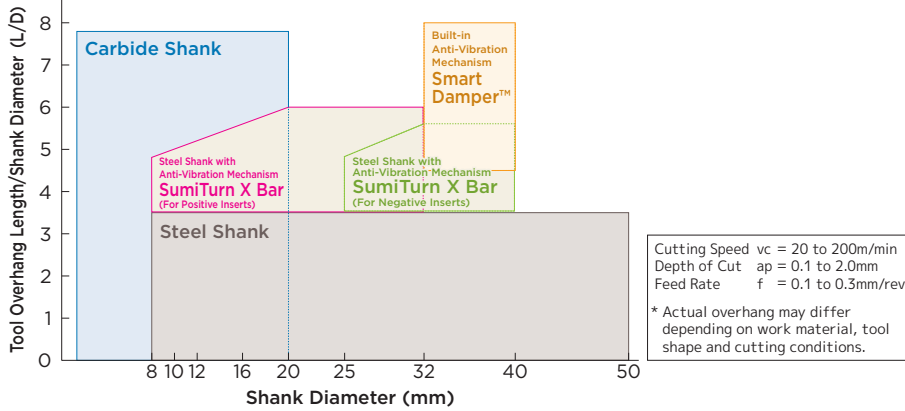
⚠ Precautions for Clamping Position on Steel Shank with Anti-Vibration Mechanism



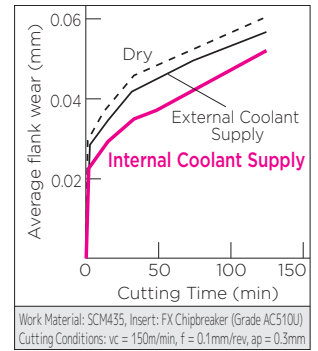
Clamping on the **SUMITOMO ELECTRIC** label-affixed portion may disrupt dampening functions (due to built-in Anti-Vibratic Mechanism). Therefore, minimum tool overhang length is kept at 3.5D (shank diameter x 3.5). This is a dedicated turning tool. It cannot be used as a rotating tool.

Boring Bar series

Application Range by Shank type



Wear Comparison by Coolant Supply Method



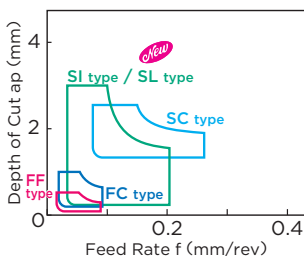
Recommended Grades

Insert Grades	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 Metals	Sintered Alloy	
Coated Carbide	CVD	AC8115P			◎						
		AC8020P			◎						
		AC8025P			◎						
		AC8035P			◎						
		AC6020M			◎	◎					
		AC6030M			◎	◎					
		AC4010K			◎		◎				
		AC4015K			◎		◎				
	AC4125K			◎		◎					
	PVD	ACZ150			◎	◎					
		AC5015S			◎	◎					
		AC5025S			◎	◎					
		AC530U			◎	◎		◎			
		AC1030U			◎	◎		◎		◎	
AC6135M			◎	◎							
Uncoated Cermet Coated Cermet	T1000A			◎	◎						
	T1500A/T1500Z			◎	◎						
	T2500Z			◎	◎						
Cemented Carbide	G10E			◎	◎						
Uncoated CBN Coated CBN (SUMIBORON)	BN1000										
	BN2000										
	BNC2105										
	BNC2115										
	BNC2125										
	BNC2010										
	BNC2020										
	BN7125					◎				◎	
Polycrystalline Diamond (SUMIDIA)	DA1000								◎		
	DA150								◎		

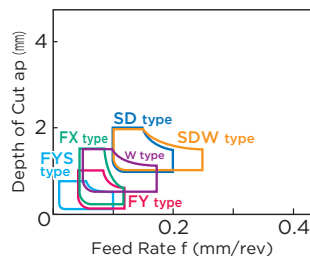
◎ 1st Recommendation ○ 2nd Recommendation

Recommended Chipbreakers

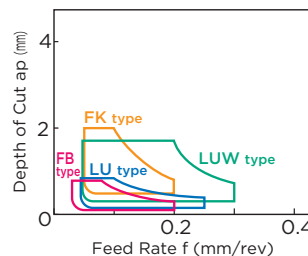
G Class Chipbreakers



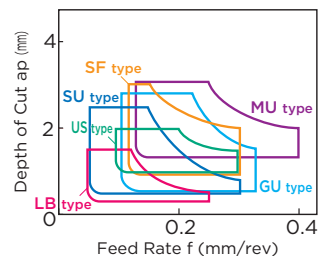
G Class Ground type



M Class Finishing to Light Cutting



M Class Light to Medium Cutting



Smart Damper™

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning / Very Small Diameter Turning

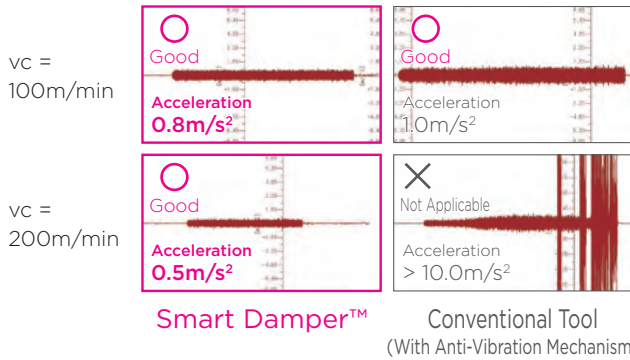


■ Features

- Adopts a special damper mechanism to suppress chattering for large diameter bars with long overhang of L/D=5.5 to 8.
- Replaceable heads enable a wide selection of positive and negative inserts.
- Internal coolant supply improves chip evacuation and tool life. (For use with internal coolant supply, keep the coolant pressure at **3MPa** or below.)

■ Cutting Performance

Vibration of 6D overhang during machining



Surface roughness of 9D* overhang during machining



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

SCLC type
SCLP type

SDUC type
SDQC type

STUP type

SVUB type
SVQB type

For Negative Inserts

DCLN type

DDUN type

DTFN type

Smart Damper™ Body



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

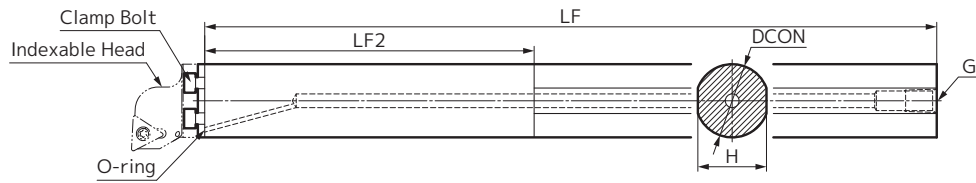
Indexable heads can be selected to suit machining applications

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

Smart Damper™



Fig 1



Smart Damper™ Body

Parts

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Overall Length LF	Length LF2	Height H	Shank G	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 the anti-vibration mechanism is built in, clamping to the LF2 dimension may disrupt dampening functions. The indexable head is not included in the weight.

Indexable Heads E12 to E15

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

Fig 1

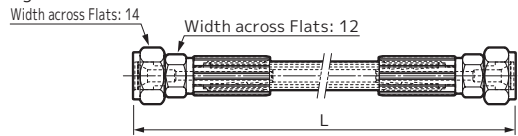


Fig 1

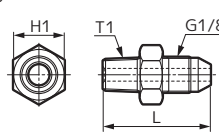
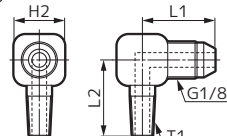


Fig 2



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.

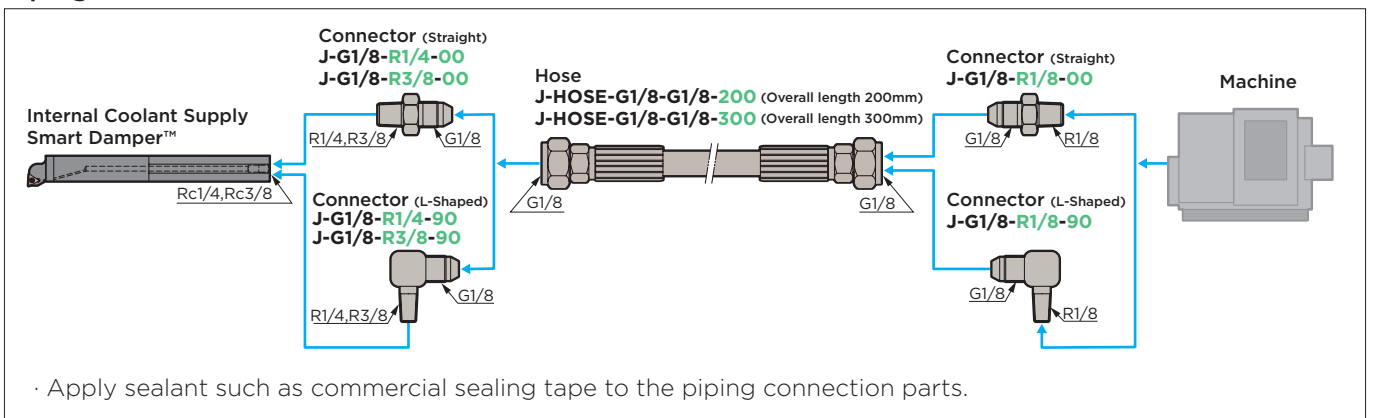
Parts (Connector)

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



Apply sealant such as commercial sealing tape to the piping connection parts.

Identification Code (Smart Damper™ Body)

S-SDB 32 40 L320

Connection Method Shank Dia. Min. Bore Dia. Overall Length

Identification Code (Indexable Head)

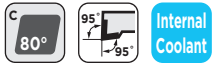
SDB 32 - SCLCR09T3 - 40

Connection Method Compatible Shank Dia. (Conforms to boring bar ISO standard classification) Min. Bore Dia.

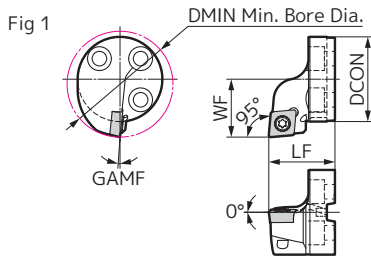
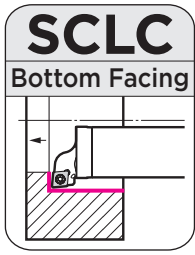
*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

Recommended Tightening Torque (N·m)

Smart Damper™



Internal Boring, Internal Coolant Supply
Screw-on



Boring Bars

E

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					
SDB32-SCLC R/L09T3-40	●	●	40	32	25	22	-6°	CC□□09T3	B71~	1	1	BFTX0409N	3.4	TRX15
SDB40-SCLC R/L09T3-50	●	●	50	40	25	27	-2°			2	1			

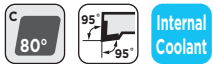
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

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

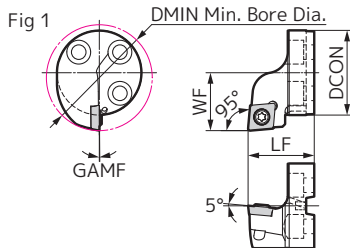
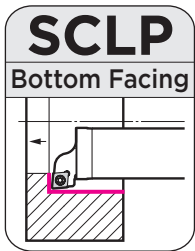
C

D

R



Internal Boring, Internal Coolant Supply
Screw-on



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					
SDB32-SCLP R/L0903-40	●		40	32	25	22	0°	CP□□0903	B75~	1	1	BFTX0409N	3.4	TRX15
SDB40-SCLP R/L0903-50	●		50	40	25	27	0°			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.

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

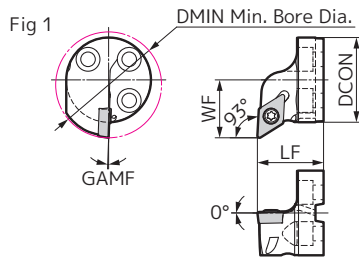
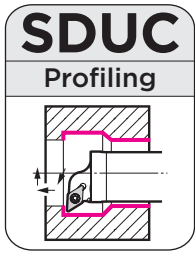
Small Diameter Turning / Very Small Diameter Turning

W

Smart Damper™



Internal Boring, Internal Coolant Supply
Screw-on



Indexable Heads (For Positive Inserts)

Parts

Dimensions (mm)

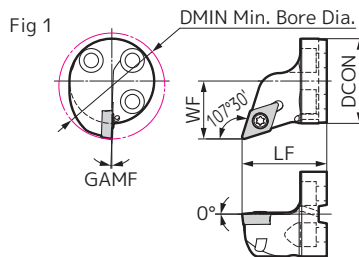
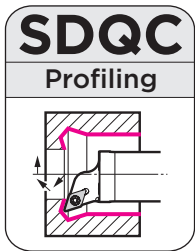
Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Overall Length LF	Cutting Edge Distance WF	Rake Angle GAMF	Applicable Insert		Smart Damper™ Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Flat Insert Screw	Wrench	
SDB32-SDUC R/L11T3-40	●	●	40	32	25	22	-2°	DC□□11T3	B82~	1	1	BFTX0409N	3.4	TRX15
SDB40-SDUC R/L11T3-50	●	●	50	40	25	27	0°			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.

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



Internal Boring, Internal Coolant Supply
Screw-on



Indexable Heads (For Positive Inserts)

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Overall Length LF	Cutting Edge Distance WF	Rake Angle GAMF	Applicable Insert		Smart Damper™ Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Flat Insert Screw	Wrench	
SDB32-SDQC R/L11T3-40	●	●	40	32	32	22	-2°	DC□□11T3	B82~	1	1	BFTX0409N	3.4	TRX15
SDB40-SDQC R/L11T3-50	●	●	50	40	32	27	0°			2	1			

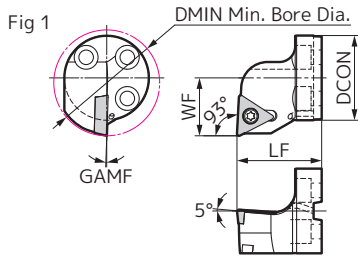
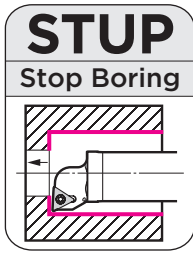
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

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

Smart Damper™



Internal Boring, Internal Coolant Supply
Screw-on



Indexable Heads (For Positive Inserts)

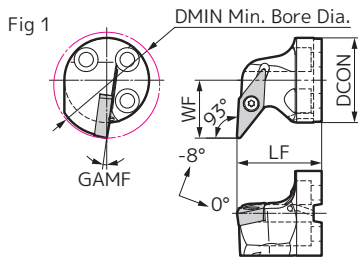
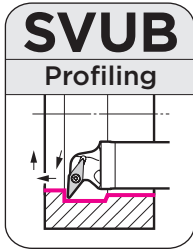
Parts

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 hole)	
SDB32-STUP R/L1103-40	●	●	40	32	25	22	-2°	TP□□1103	B107~	1	1	BFTX0307N	2.0	TRX10
SDB40-STUP R/L1103-50	●	●	50	40	25	27	0°			2	1			
SDB32-STUP R/L1604-40	●	●	40	32	32	22	-2°	TP□□1604	B110	1	1	BFTX0409N	3.4	TRX15
SDB40-STUP R/L1604-50	●	●	50	40	32	27	0°			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.
*Refer to Smart Damper™ body Group Nos. on page E11 for applicable Smart Damper™ bodies.

Internal Boring, Internal Coolant Supply
Screw-on



Indexable Heads (For Positive Inserts)

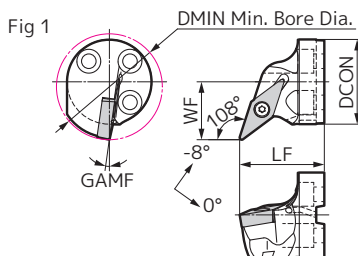
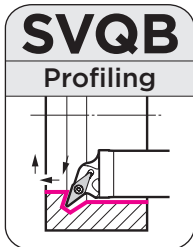
Parts

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 hole)	
SDB32-SVUB R/L1604-40	●		40	32	32	22	(-7.5°)	VB□□1604	B118	1	1	BFTX03508N	2.0	TRX10
SDB40-SVUB R/L1604-50	●		50	40	32	27	(-7.5°)			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.
*Refer to Smart Damper™ body Group Nos. on page E11 for applicable Smart Damper™ bodies.

Internal Boring, Internal Coolant Supply
Screw-on



Indexable Heads (For Positive Inserts)

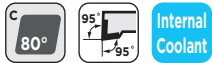
Parts

Dimensions (mm)

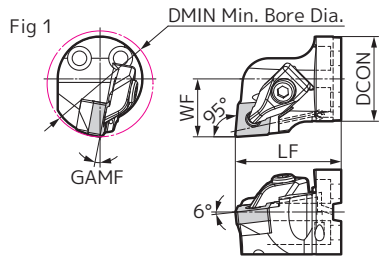
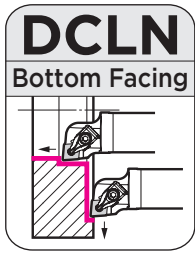
Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper™ Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			(N·m)	(For Torx hole)	
SDB32-SVQB R/L1604-40	●		40	32	32	22	(-6.5°)	VB□□1604	B118	1	1	BFTX03508N	2.0	TRX10
SDB40-SVQB R/L1604-50	●		50	40	32	27	(-6.5°)			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.
*Refer to Smart Damper™ body Group Nos. on page E11 for applicable Smart Damper™ bodies.
*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

Smart Damper™



Internal Boring, Internal Coolant Supply
Double Clamp



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

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.

Indexable Heads (For Negative Inserts)

Parts

Dimensions (mm)

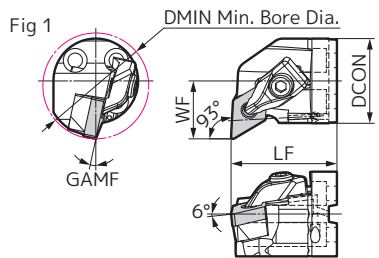
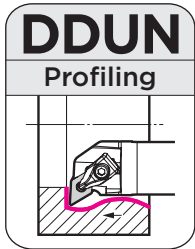
Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper™ Group No.	Fig	Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
	R	L					Cat. No.	Ref. Page								DMIN
SDB32-DCLN R/L1204-40	●	●	40	32	40	22	CN□□1204	B14~	1	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
SDB40-DCLN R/L1204-50	●	●	50	40	40	27	CN□□1204	B14~	2	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025

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

Clamp Set Parts **E82**



Internal Boring, Internal Coolant Supply
Double Clamp



Indexable Heads (For Negative Inserts)

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper™ Group No.	Fig	Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
	R	L					Cat. No.	Ref. Page								DMIN
SDB32-DDUN R/L1504-40	●	●	40	32	40	22	DN□□1504	B24~	1	1	SCP-2	5.0	DNS1504B	BFTX0409N	LH040	LH025
SDB40-DDUN R/L1504-50	●	●	50	40	40	27	DN□□1504	B24~	2	1	SCP-2	5.0	DNS1504B	BFTX0409N	LH040	LH025

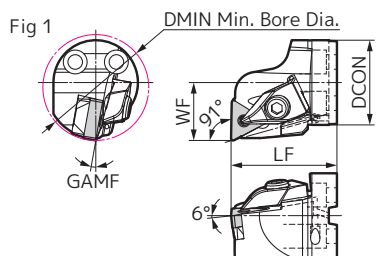
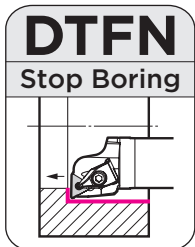
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

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

Clamp Set Parts **E82**



Internal Boring, Internal Coolant Supply
Double Clamp



Indexable Heads (For Negative Inserts)

Parts

Dimensions (mm)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper™ Group No.	Fig	Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
	R	L					Cat. No.	Ref. Page								DMIN
SDB32-DTFN R/L1604-40	●		40	32	40	22	TN□□1604	B48~	1	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025
SDB40-DTFN R/L1604-50	●		50	40	40	27	TN□□1604	B48~	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 page E11 for applicable Smart Damper™ bodies.

Clamp Set Parts **E82**

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Recommended Tightening Torque (N·m)

Twin Head Holder



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

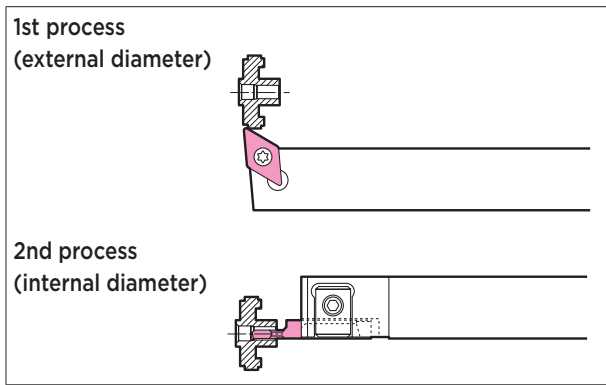


■ Features

- 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.

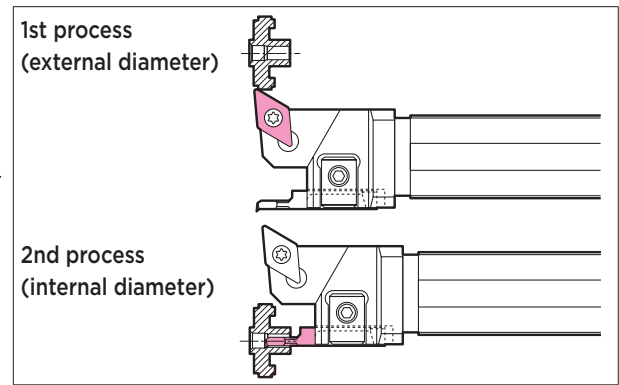
■ Advantages of the Twin Head Holder

● Conventional Tool

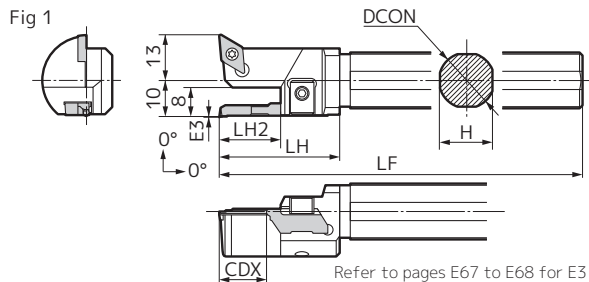


• 2 different operations requiring 2 separate tools.

● Twin head holder



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



Refer to pages E67 to E68 for E3 values.

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



Holder (Internal Boring Depth of 6.0mm)

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Boring Depth 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□□070200	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 (Internal Boring Depth of 11.0mm)

Dimensions (mm)

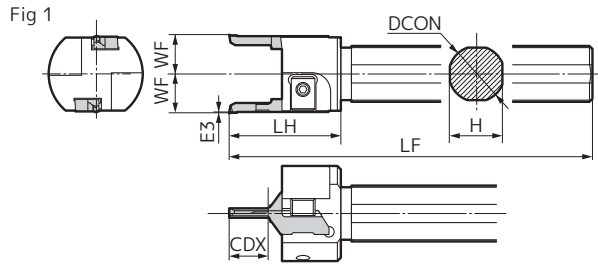
Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Boring Depth CDX	Head LH2	*Max. Work Material Dia.	Insert for Internal Boring	Insert for External Turning	Fig
S1588X-CKBE-11	●	15.875	15	130	32	11	15	12.0	KBMX R0011-00 KBMX R0011-00T	DC□□070200	1
S16X-CKBE-11	●	16	15	130	32	11	15	12.0			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 Inserts External Diameter Inserts

Twin Head Holder

Internal Boring, Face Grooving
Clamp-on



Holder

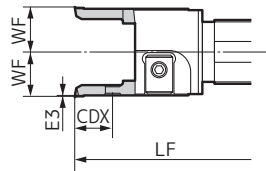
Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Cutting Edge Distance WF	Boring Depth CDX	Insert for Internal Boring	Insert for Face Grooving	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.)

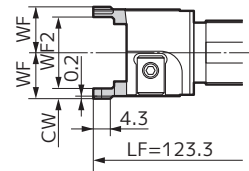
Ref. Page for Inserts **E67 to E68**

Insert: KBMX (ID+ID) assembled



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

Insert: KBMF (Face+Face) assembled



Insert	Cutting Edge Distance		Width of Cut
	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

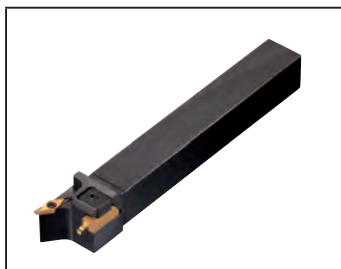
Part (KBM□R insert mounting part)

Clamp Plate	Double Screw	Wrench
CKBW16	WB4-8	LH020

Part (DC□□ insert mounting part)

Flat Insert Screw	Wrench
BFTX02506N	1.5 TRX08

Special Holder Configurations



Internal diameter + external diameter (Square 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.

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

S-SCLC type / A-SCLC type



Internal Finishing to Medium Cutting Screw-on

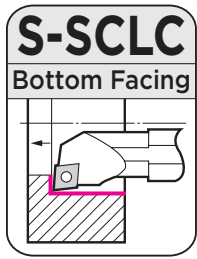


Fig 1

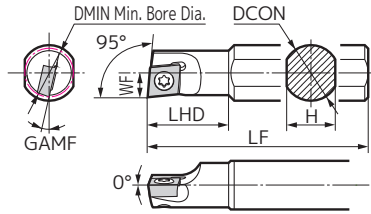


Fig 2

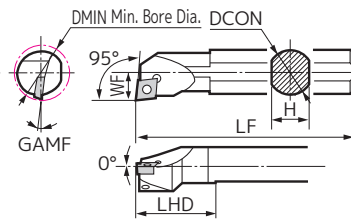


Figure shows right-handed (R) tool.



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 Inserts		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Steel	S08H-SCLC R/L03X1-05	—	●	●	5	8	7	100	2.5	24	-15°	CC□□03X1	B66	1 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	B67	1 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	B68~	2 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	B71~	2 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.



Internal Finishing to Medium Cutting Screw-on

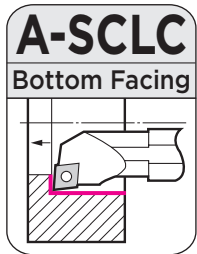


Fig 1

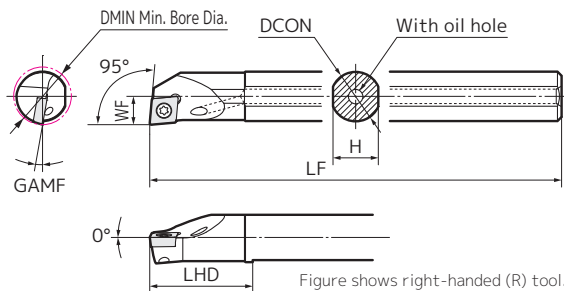


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw	Wrench		
		R	L								Cat. No.	Ref. Page				
Steel with Oil Hole	A08H-SCLC R/L0602-10	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B68~	1 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	B71~	1 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.



B-SCLC type



Internal Finishing to Medium Cutting
Screw-on

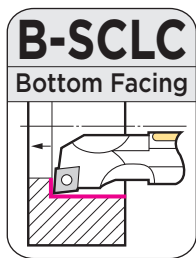


Fig 1

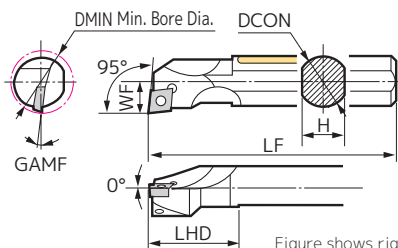


Figure shows right-handed (R) tool.



Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	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		
Steel with Anti-Vibration Mechanism	B08H-SCLC R/L0602-10	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B68 ~	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°			1			
	B16R-SCLC R/L09T3-20	●	●	20	16	15	200	11.0	30	-8°	CC□□09T3	B71 ~	1	BFTX0407N	3.0	TRX15
	B20S-SCLC R/L09T3-25	●	●	25	20	18	250	13.0	30	-7°	1	BFTX0409N	3.4			
B25T-SCLC R/L1204-32	●	●	32	25	23	300	17.0	38	-6°	CC□□1204	B73	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

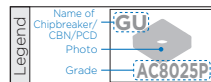
W

Smart Damper™
Very Smart Damper™

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials
	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 Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	SU	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA
	T150OZ	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNCS500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNCS500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~	A22 ~		A20 ~		M2 ~

BNCS500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

C-SCLC type / E-SCLC type



Internal Finishing to Medium Cutting Screw-on

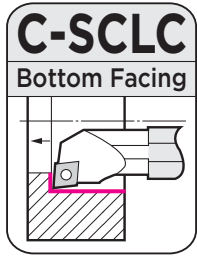


Fig 1

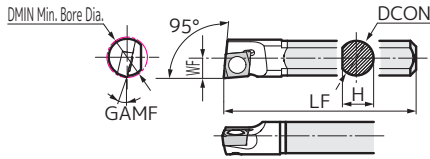
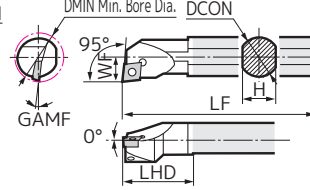


Fig 2



Holder

Parts

Dimensions (mm)

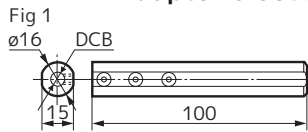
Shank Material	Cat. No.	Previous Cat. No.	Stock R	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Insert		Flat Insert Screw		Wrench (For Torx hole)	
											Cat. No.	Ref. Page	Fig	(N·m)		
Carbide	C04G-SCLC R03X1-05*	C04G-SCLCR03X1-05*	●	5	4	3.8	90	2.5	—	-15°	CC□□03X1	B66	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	B67	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	B68 ~	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°	CC□□09T3	B71 ~	2	BFTX0407N	3.4	TRX15
	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°			2	BFTX0409N	3.4		

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

* Separately sold adapter sleeve is required.

Adapter Sleeve

Smart Damper™ ICS E12



Cat. No.	Stock	Bore Dia. DCB	Applicable Holder	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

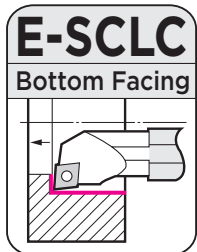
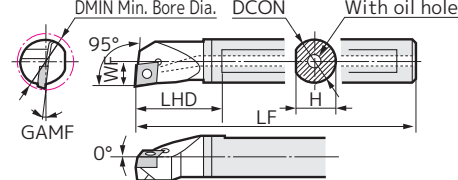


Fig 1



Holder

Parts

Dimensions (mm)

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 hole)	
											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	B68 ~	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	B71 ~	1	

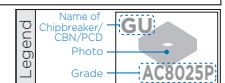
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Smart Damper™ ICS 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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)			H (Hardened Steel)			Hard Brittle Materials
	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 Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	SU	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA		
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNCS00	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090		
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS		
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNCS00	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10		
Recommended Cutting Conditions	I A10 ~			I A14 ~			I A16 ~			I A18 ~	I A22 ~		I A20 ~			I M2 ~	

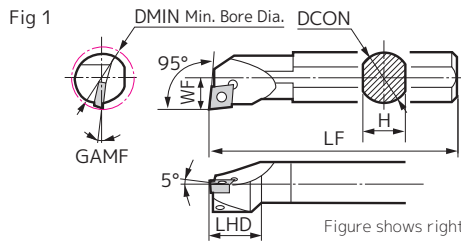
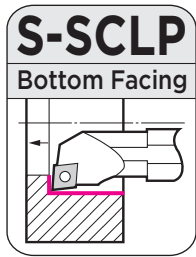
BNCS00 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SCLP type / A-SCLP type



Internal Finishing to Medium Cutting
Screw-on



Holder

Parts

Dimensions (mm)

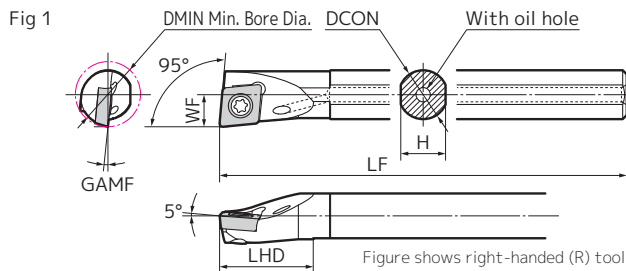
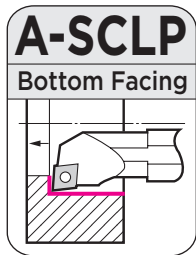
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel	S10K-SCLP R/L0802-12	BBPC-010 R/L	●	●	12	10	9	125	6.0	12.0	-5°	CP□□0802	B74	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	B75 ~	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™ ICS E12



Internal Finishing to Medium Cutting
Screw-on



Holder

Parts

Dimensions (mm)

Shank Material	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		
Steel with Oil Hole	A10K-SCLP R/L0802-12	●	●	12	10	9	125	6.0	12.0	-5°	CP□□0802	B74	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	B75 ~	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°						

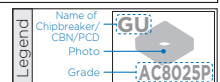
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper™ ICS 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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.

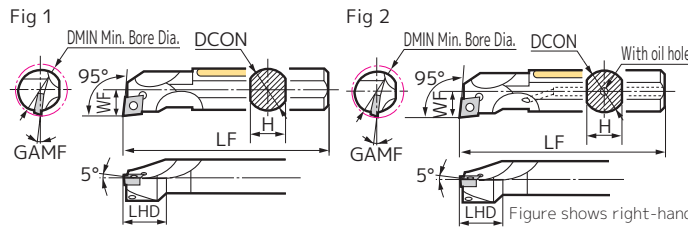
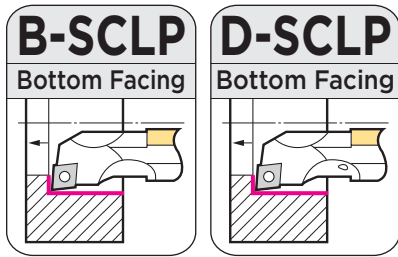


Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)	S (Exotic Alloy)	N (Non-Ferrous)	H (Hardened Steel)		
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	—	Coated	Uncoated
General Machining	FB T1500Z	GU AC8025P	MU AC8020P	LB AC6030M	GU AC6030M	MU AC6135M	MU AC4015K	No Chipbreaker AC4015K	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2125	SUMIBORON BN2000
	SD T1500Z	—	—	SD AC5015S	—	—	—	—	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	ICS A10 ~			ICS A14 ~			ICS A16 ~		ICS A18 ~	ICS A22 ~	ICS A20 ~	

B-SCLP type / D-SCLP type / C-SCLP type



Internal Finishing to Medium Cutting Screw-on



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		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Steel with Anti-Vibration Mechanism	B12M-SCLP R/L0802-14	XBPC-012 R/L 14	●	●	14	12	11	150	7	10.6	-5°	CP□□0802	B74	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	B75 ~	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	B75 ~	1	BFTX0407A	3.4	TRX15
Steel with Anti-Vibration Mechanism and Coolant Hole	D12M-SCLP R/L0802-14	XBPC-012 R/L H14	●	●	14	12	11	150	7	10.6	-5°	CP□□0802	B74	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	B75 ~	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	B75 ~	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™ ICS E12

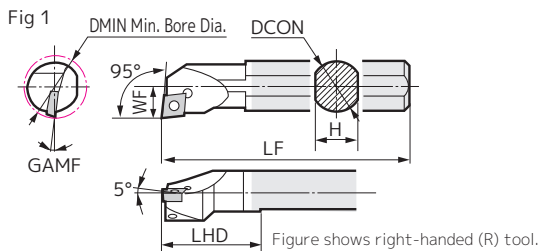
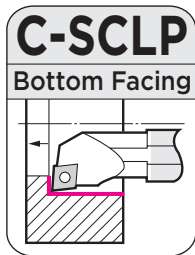
C

D

R



Internal Finishing to Medium Cutting Screw-on



S

T

V

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				
Carbide	C10K-SCLP R/L0802-12	WBPC-010 R/L S	●	●	12	10	9	125	6	19	-5°	CP□□0802	B74	1	BFTX0305A	2.0	TRX10
	C12M-SCLP R/L0802-14	WBPC-012 R/L S14	●	●	14	12	11	150	7	25	-5°	CP□□0802	B74	1	BFTX0305A	2.0	TRX10
	C12M-SCLP R/L0802-16	WBPC-012 R/L S	●	●	16	12	11	150	8	25	-3°	CP□□0802	B74	1	BFTX0305A	2.0	TRX10
	C16R-SCLP R/L0903-18	WBPC-316 R/L S18	●	●	18	16	15	200	9	30	-4°	CP□□0903	B75 ~	1	BFTX0407A	3.4	TRX15
	C16R-SCLP R/L0903-20	WBPC-316 R/L S	●	●	20	16	15	200	10	30	-3°	CP□□0903	B75 ~	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™ ICS E12

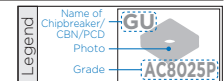
W

Small Damper Turning Very Small Damper Turning

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application 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 Machining	FB T1500Z	GU AC8025P	MU AC8020P	LB AC6030M	GU AC6030M	MU AC6135M	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 ~			A14 ~			A16 ~		A18 ~	A22 ~	A20 ~	

S-DCLN type / D-DCLN type



Medium Diameter General-purpose Double Clamp

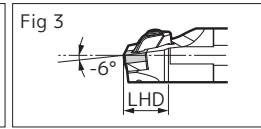
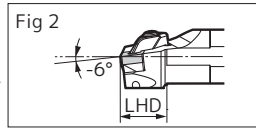
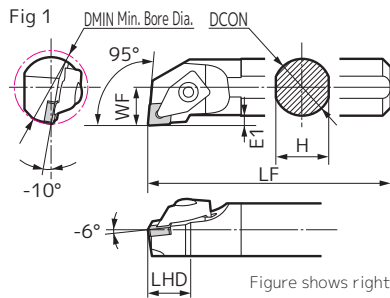
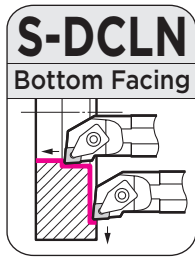


Figure shows right-handed (R) tool.

Holder

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								DMIN	DCON	H	LF					WF
Steel	S25R-DCLN R/L0903-32	—	●	●	32	25	23	200	17.0	18	4.5	CN□□0903	B12	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	CN□□0903	B12	1	SCP-1	5.0	—	—	LH040	LH025
	S32S-DCLN R/L1204-40	—	●	●	40	32	30	250	22.0	26	7.0	CN□□1204	B14~	2	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
	S40T-DCLN R/L1204-50	—	●	●	50	40	37	300	27.0	26	8.5	CN□□1204	B14~	2	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
	S50U-DCLN R/L1204-63	—	●	●	63	50	47	350	31.5	36	8.0	CN□□1204	B14~	3	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025

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

Clamp Set Parts E82 Smart Damper™ E15



Medium Diameter General-purpose Double Clamp

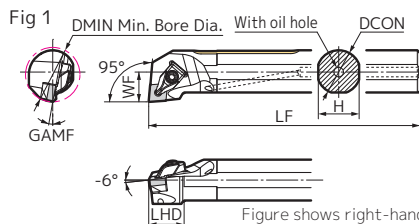
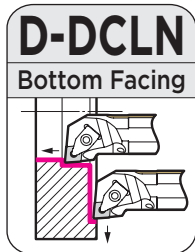


Figure shows right-handed (R) tool.



Holder

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 Coolant Hole	D25T-DCLN R/L1204-32	●	●	32	25	23	300	17	26	-12°	CN□□1204	B14~	1	SCP-2	5.0	CNS1203B	BFTX0307N	LH040	LH025
	D32T-DCLN R/L1204-40	●	●	40	32	30	300	22	26	-10°	CN□□1204	B14~	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
	D40U-DCLN R/L1204-50	●	●	50	40	37	350	27	26	-10°	CN□□1204	B14~	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025

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

Clamp Set Parts E82 Smart Damper™ E15

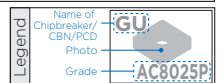
* Applicable Inserts for DCLN type

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application 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	AC8115P	AC8020P	AC6020M	AC6020M	AC6030M	BN7125/BNC500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	H1	BNC2115	BN1000
General Machining	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON
	AC8115P	AC8025P	AC8025P	AC6030M	AC6030M	AC6135M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	H1	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EH	EM	SUMIBORON	GZ	No Chipbreaker	EF	EG	EM	SUMIDIA	—	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6135M	AC6145M	BN7125/BNC500	AC4125K	AC4125K	AC5025S	AC5025S	AC5025S	DA1000	—	BNC2135	BN350
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~			A22 ~		A20 ~	

BN7125/BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

S-PCLN type / B-PCLN type



Medium Diameter General-purpose Lever Lock

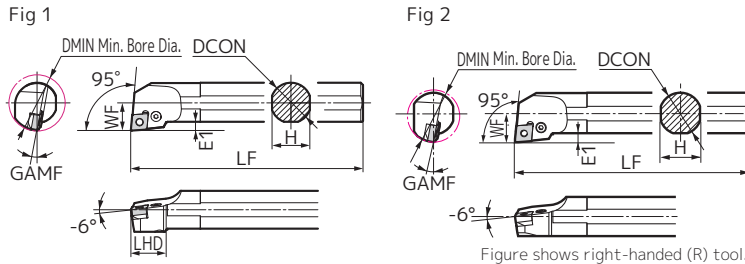
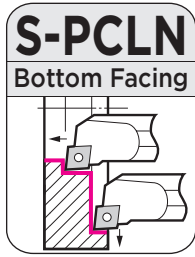


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	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									DMIN	DCON						Cat. No.
Steel	S25R-PCLN R/L0903-32	●	●	32	25	23	200	17.0	30	4.5	-15°	CN□□0903	B12	1	LCL3	LCS3	LSC32	LSP3	LH025
	S32S-PCLN R/L1204-40	●	●	40	32	30	250	22.0	29	7.0	-10°	CN□□1204	B14 ~	1	LCL4	LCS4	LSC42B	LSP4	LH030
	S40T-PCLN R/L1204-50	●	●	50	40	37	300	25.0	29	6.5	-10°								
	S50U-PCLN R/L1204-63	●	●	63	50	47	350	31.5	—	8.0	-10°								

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



Medium Diameter General-purpose Lever Lock

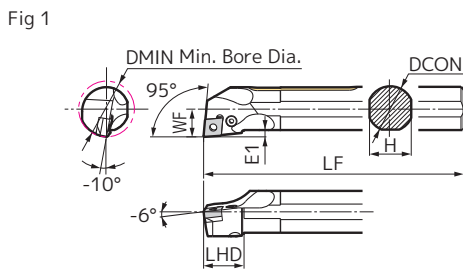
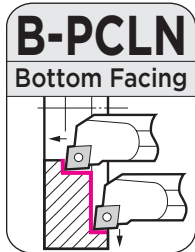


Figure shows right-handed (R) tool.



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								DMIN	DCON						Cat. No.
Steel with Anti-Vibration Mechanism	B32U-PCLN R/L1204-40	●	●	40	32	30	350	20	29	5.0	CN□□1204	B14 ~	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.

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning / Very Small Diameter Turning

S-ECLN type



Medium Diameter General-purpose Pin Lock

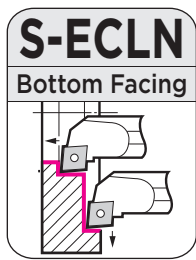


Fig 1

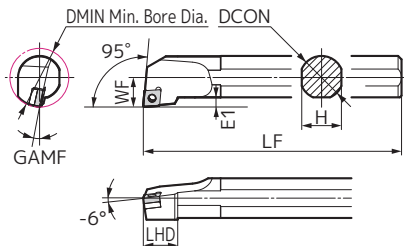


Figure shows right-handed (R) tool.

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		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	B12	1	—	CPU304C	LH030
	S25R-ECLN R/L0903-34	BCLN325 R/L	●	●	34	25	23	200	17	20	5.5	-12°	CN□□0903	B12	1	SCW323	CPB32C	LH025
	S25R-ECLN R/L1204-34	BCLN425 R/L	●	●	34	25	23	200	17	20	5.5	-12°	CN□□1204	B14	1	—	CPB42	—
	S32S-ECLN R/L1204-44	BCLN432 R/L	●	●	44	32	30	250	22	25	7.0	-10°	CN□□1204	B14	1	SCW423	CPB43S	LH030
	S40T-ECLN R/L1204-54	BCLN440 R/L	●	●	54	40	37	300	27	25	8.5	-10°	CN□□1204	B14	1	—	CPB43	—
	S50U-ECLN R/L1906-70	BCLN650 R/L	●	●	70	50	47	350	35	32	11.5	-10°	CN□□1906	B20	1	SCW635	CPB64	LH040

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

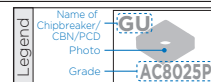
*Applicable Inserts for ECLN type

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application 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 T1500Z	GU AC8115P	MU AC8020P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7125/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2115	SUMIBORON BN1000
General Machining	SU AC8115P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6135M	SUMIBORON BN7125/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	EH AC6135M	EM AC6145M	SUMIBORON BN7125/BNC500	GZ AC4125K	No Chipbreaker AC4125K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIDIA DA1000	—	SUMIBORON BNC2135	SUMIBORON BN350
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~			A22 ~		A20 ~	

BN500 is for ductile cast iron.

S-SDUC type / A-SDUC type



Internal Profiling
Screw-on

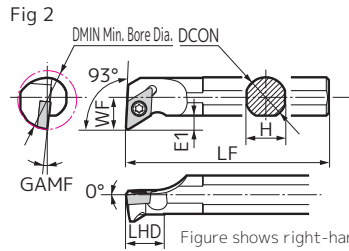
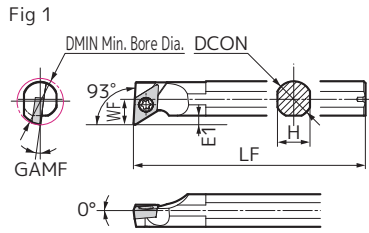
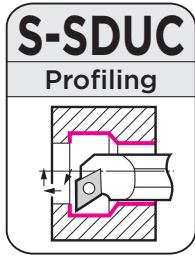


Figure shows right-handed (R) tool.

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 (For Torx hole)
			R	L									DMIN	DCON	Cat. No.	Ref. Page	Fig	
Steel	S10M-SDUC R/L0702-13	S10M-SDUC R/L 07	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B78 ~	1	BFTX02506N	1.5	TRX08
	S12M-SDUC R/L0702-16	S12M-SDUC R/L 07	●	●	16	12	11	150	9.0	3.5	-8°	—			1			
	S16Q-SDUC R/L0702-20	—	●	●	20	16	15	180	11.0	4.0	-6°	—			1			
	S16N-SDUC R/L0702-20	S16N-SDUC R/L 07	●	●	20	16	15	160	11.0	4.0	-6°	—	DC□□11T3	B82 ~	1	BFTX0409N	3.4	TRX15
	S16Q-SDUC R/L11T3-23	—	●	●	23	16	15	180	12.5	5.5	-6°	15			2			
	S20R-SDUC R/L11T3-25	—	●	●	25	20	18	200	13.0	4.5	-6°	—			1			
	S20N-SDUC R/L11T3-25	S20N-SDUC R/L 11	●	●	25	20	18	160	13.0	4.5	-6°	—			1			
	S25S-SDUC R/L11T3-32	—	●	●	32	25	22	250	17.0	7.0	-6°	—			1			
	S25Q-SDUC R/L11T3-32	S25Q-SDUC R/L 11	●	●	32	25	22	180	17.0	7.0	-6°	—			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™ E13



Internal Profiling
Screw-on

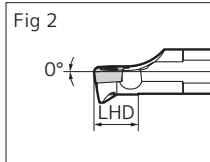
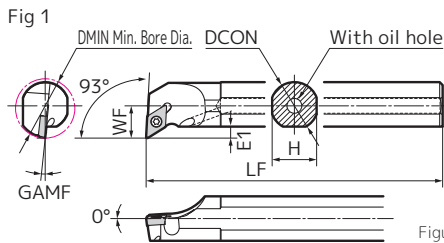
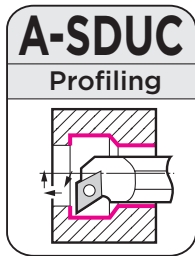


Figure shows right-handed (R) tool.

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 (For Torx hole)
		R	L									DMIN	DCON	Cat. No.	Ref. Page	Fig	
Steel with Oil Hole	A10M-SDUC R/L0702-13	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B78 ~	1	BFTX02506N	1.5	TRX08
	A12M-SDUC R/L0702-16	●	●	16	12	11	150	9.0	3.5	-8°	—			1			
	A16Q-SDUC R/L0702-20	●	●	20	16	15	180	11.0	4.0	-6°	—			1			
	A16Q-SDUC R/L11T3-23	●	●	23	16	15	180	12.5	5.5	-6°	15	DC□□11T3	B82 ~	1	BFTX0409N	3.4	TRX15
	A20R-SDUC R/L11T3-25	●	●	25	20	18	200	13.0	4.5	-6°	—			1			
	A25S-SDUC R/L11T3-32	●	●	32	25	22	250	17.0	7.0	-6°	—			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™ E13

Boring Bars

E

C

D

R

S

T

V

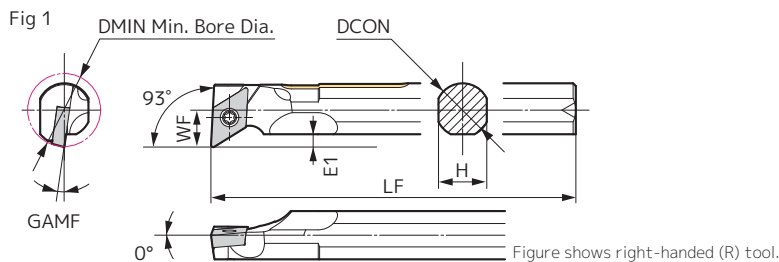
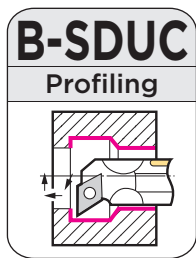
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Small Diameter Turning / Very Small Diameter Turning

B-SDUC type / C-SDUC type



Internal Profiling
Screw-on



Boring Bars

E

Holder

Parts

Dimensions (mm)

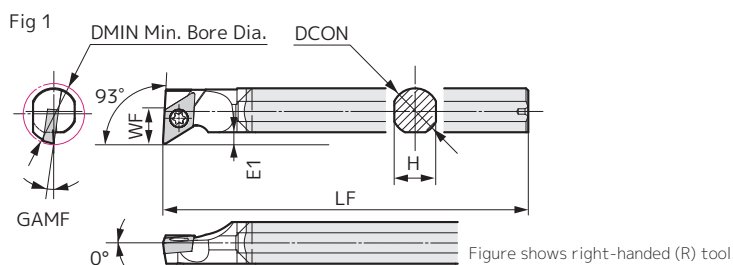
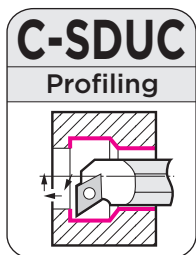
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel with Anti-Vibration Mechanism	B10M-SDUC R/L0702-13	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B78 ~	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°						
	B25S-SDUC R/L11T3-32	●	●	32	25	22	250	17	7.0	-6°						
				DMIN	DCON	H	LF	WF	E1	GAMF						

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



C

D

R

S

T

V

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	Fig	N·m		
Carbide	C10M-SDUC R/L0702-13	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B78 ~	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°						
	C25S-SDUC R/L11T3-32	●	●	32	25	22	250	17	7.0	-6°						
				DMIN	DCON	H	LF	WF	E1	GAMF						

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

W

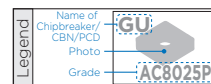
Very Small Damper™

Smart Damper™

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

1st Recommended Insert

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



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials
	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 Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	FX	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNCS50	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNCS50	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~	A22 ~		A20 ~		M2 ~

BNCS50 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SDQC type / A-SDQC type



Internal Profiling
Screw-on

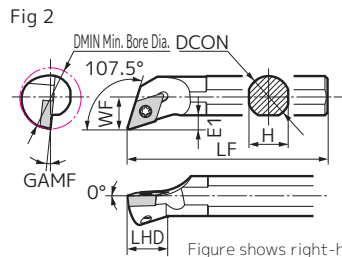
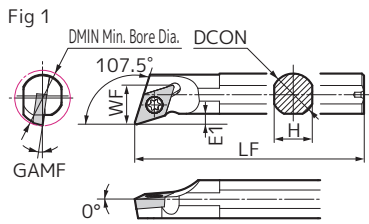
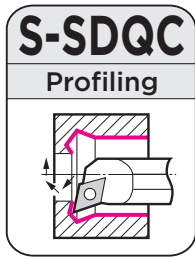


Figure shows right-handed (R) tool.

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				
Steel	S10M-SDQC R/L0702-13	S10M-SDQC R/L 07	●	●	13	10	9	150	7.0	2.5	-8°	—	DCC□0702	B78 ~	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°	—	DCC□11T3	B82 ~	2	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°	—	DCC□11T3	B82 ~	1	BFTX0409N	3.4	TRX15
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

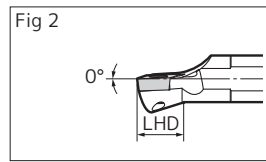
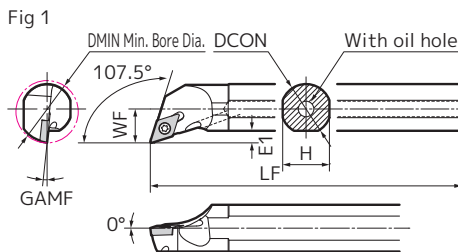
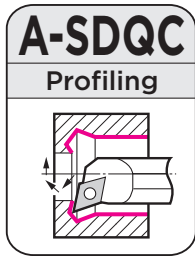


Figure shows right-handed (R) tool.

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				
Steel with Oil Hole	A10M-SDQC R/L0702-13	●	●	13	10	9	150	7.0	2.5	-8°	—	DCC□0702	B78 ~	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	DCC□11T3	B82 ~	2	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
W
Smart Damper™ / Very Small Diameter Turning

B-SDQC type



Internal Profiling
Screw-on

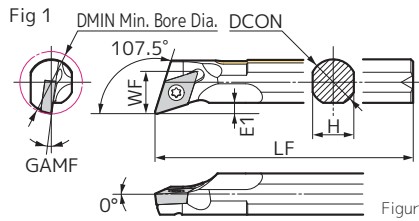
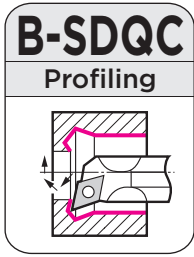


Figure shows right-handed (R) tool.



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.
Steel with Anti-Vibration Mechanism	B10M-SDQC R/L0702-13	●	●	13	10	9	150	7	2.5	-8°								
	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°								
	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

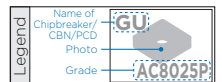
W

Smart Damper™
Very Smart Damper™

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

1st Recommended Insert

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



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials
	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 Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	FX	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNCS500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNCS500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	E13 A10 -			E13 A14 -			E13 A16 -			E13 A18 -	E13 A22 -		E13 A20 -		E13 M2 -

BNCS500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SDZC type



Internal Profiling
Screw-on

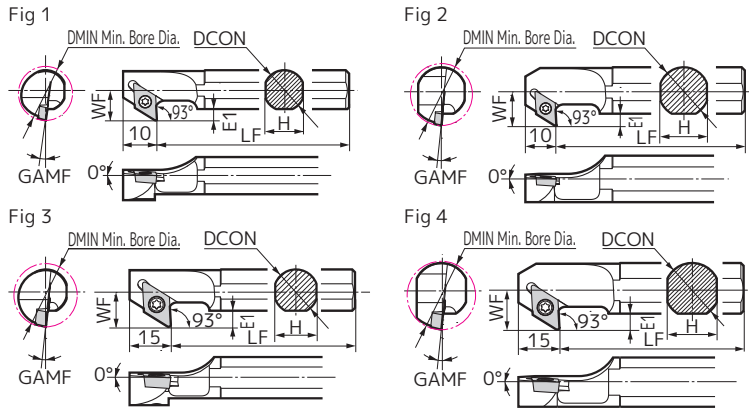
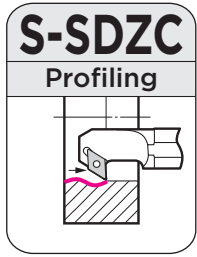


Figure shows right-handed (R) tool.

Holder

Parts

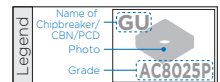
Dimensions (mm)

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	Applicable Insert			Flat Insert Screw		Wrench (For Torx hole)
		R	L								Cat. No.	Ref. Page	Fig	Flat Insert Screw	Tightening Torque (N·m)	
Steel	S10M-SDZC R/L0702-13	●	●	13	10	9	150	7.5	3.0	-8°	DCC□0702	B78 ~	1	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°						
	S16Q-SDZC R/L11T3-23	●	●	23	16	15	180	13.0	6.0	-6°	DCC□11T3	B82 ~	4	BFTX0409N	3.4	TRX15
	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.

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

Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials
	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 Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	FX	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNC500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~	A22 ~		A20 ~		M2 ~



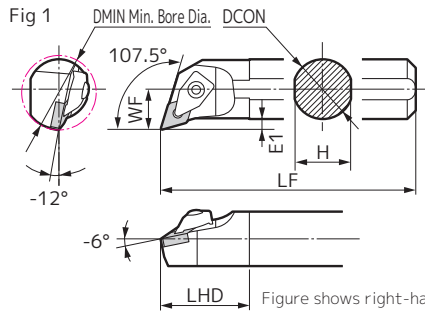
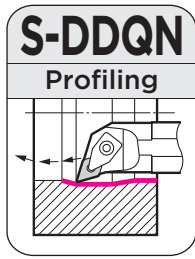
BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

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-DDQNL15	●	●	40	32	30	300	22	48	6	DN□□1504	B24 ~ 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 **E82**



Profiling
Double Clamp

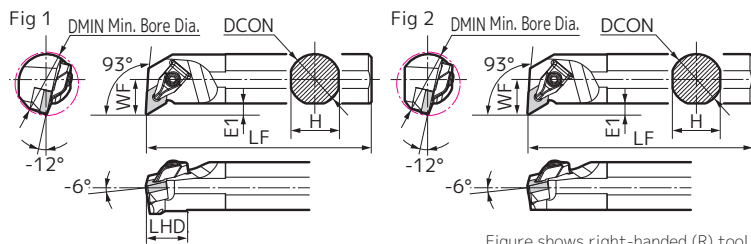
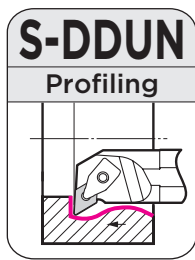


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		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	B24 ~ 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 **E82**

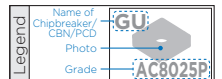
Smart Damper™ **E15**

Modification of the holder and shim is required when using inserts with corner radius of 1.6 or larger, 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 ~).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-Ferrous)		H (Hardened Steel)	Hard Brittle Materials	
	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	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	T1500Z	AC8115P	AC8020P	AC6020M	AC6020M	AC6030M	BN7125/BNCS500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	H1	BNC2115	BN1000	NPD10
General Machining	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON	SUMIDIA
	AC8115P	AC8025P	AC8025P	AC6030M	AC6030M	AC6135M	BN7125/BNCS500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	H1	BNC2125	BN2000	DA1090
Interrupted Cutting	SX	UX	MX	EF	EH	EM	SUMIBORON	GZ	No Chipbreaker	EF	EG	EM	SUMIDIA	—	SUMIBORON	SUMIBORON	—
	AC8025P	AC8035P	AC8035P	AC6030M	AC6135M	AC6145M	BN7125/BNCS500	AC4125K	AC4125K	AC5025S	AC5025S	AC5025S	DA1000	—	BNC2135	BN350	—
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~			A22 ~		A20 ~		M2 ~

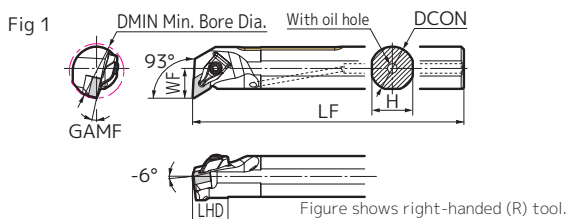
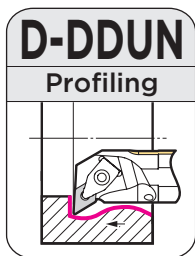
BNCS500 is for ductile cast iron.

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 Precision Hydrogen and Oil Hole	D32T-DDUN R/L1104-40	●	●	40	32	30	300	22	26	-10°	DN□□1104	B23	1	SCP-1	5.0	DNS1104B	BFTX0307N	LH040	LH025
	D32T-DDUN R/L1506-40	●	●	40	32	30	300	22	26	-12°	DN□□1506	B28	1	SCP-2	5.0	DNS1506B	BFTX0409N	LH040	LH025
	D40U-DDUN R/L1506-50	●	●	50	40	37	350	27	26	-12°									

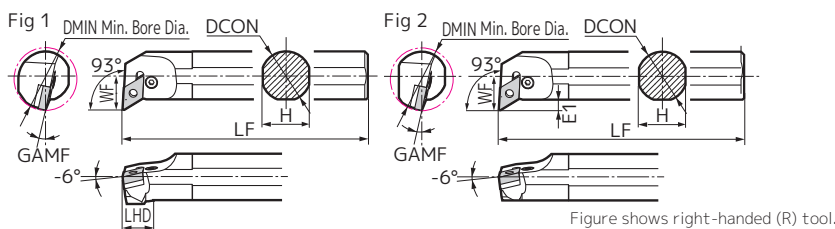
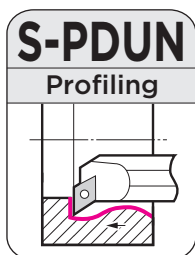
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Clamp Set Parts **E82**

Smart Damper™ **E15**



Profiling
Lever Lock



Holder

Parts

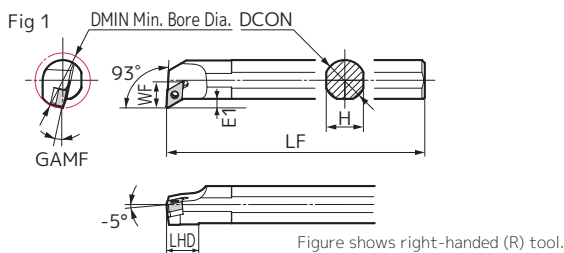
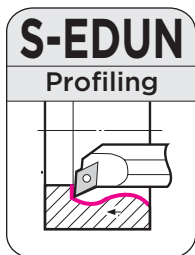
Dimensions (mm)

Shank Material	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	B23	1	LCL3	LCS3	LSD317	LSP3	LH025
	S32S-PDUN R/L1504-40	●	●	40	32	30	250	22.0	20	7.0	-12°		1						
	S40T-PDUN R/L1504-50	●	●	50	40	37	300	27.0	20	8.5	-12°	DN□□1504	B24	1	LCL4	LCS4	LSD42	LSP4	LH030
	S50U-PDUN R/L1504-63	●	●	63	50	47	350	31.5	—	8.0	-12°		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.



Profiling
Pin Lock



Holder

Parts

Dimensions (mm)

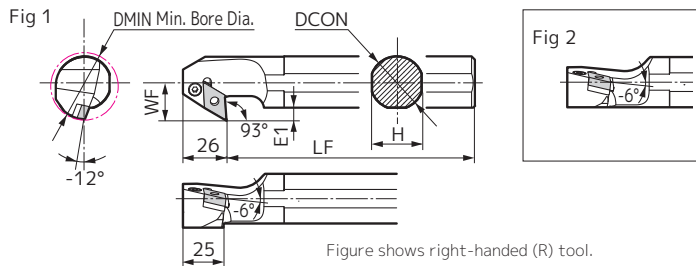
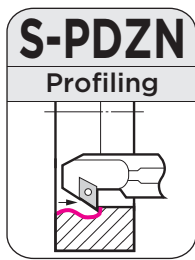
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Insert		Shim	Eccentric Pin	Wrench	
			R	L									Cat. No.	Ref. Page				
Steel	S25R-EDUN R/L1104-34	BDUN325 R/L	●		34	25	23	200	17	20	5.5	-12°	DN□□1104	B23	1	SDW323	CPB34	LH025
	S32S-EDUN R/L1504-44	BDUN432 R/L	●		44	32	30	250	22	20	7.0	-10°	DN□□1504	B24	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

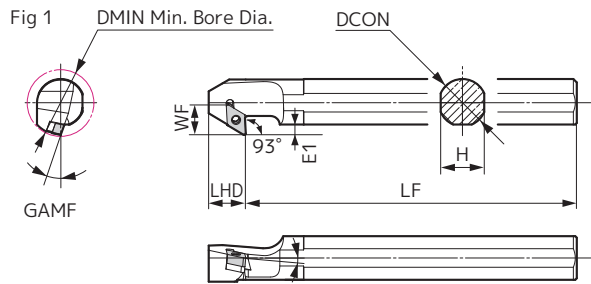
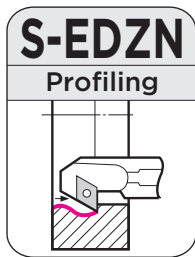
Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
		R	L							Cat. No.	Ref. Page						
Steel	S32S-PDZN R/L1504-40	●	●	40	32	30	250	22.0	7.0	DN□□1504	B24 ~	1	LCL4	LCS4	LSD42	LSP4	LH030
	S40T-PDZN R/L1504-50	●	●	50	40	37	300	27.0	8.5								
	S50U-PDZN R/L1504-63	●	●	63	50	47	350	31.5	8.0								

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.



Profiling
Pin Lock



Holder

Parts

Dimensions (mm)

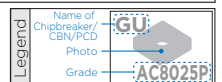
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Head	Cutting Edge Distance	Offset	Rake Angle	Applicable Insert		Shim	Eccentric Pin	Wrench	
			R	L									Cat. No.	Ref. Page				
Steel	S25R-EDZN R/L1104-34	BDZN325 R/L	●		34	25	23	200	20	17	5.5	-12°	DN□□1104	B23 ~	1	SDW323	CPB34	LH025
	S32S-EDZN R/L1504-44	BDZN432 R/L	●		44	32	30	250	25	22	7.0	-10°	DN□□1504	B24 ~	1	SDW423	CPB43	LH030

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-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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-Ferrous)		H (Hardened Steel)	Hard Brittle Materials	
	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	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	T1500Z	AC8115P	AC8020P	AC6020M	AC6020M	AC6030M	BN7125/BNC500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	H1	BNC2115	BN1000	NPD10
General Machining	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON	SUMIDIA
	AC8115P	AC8025P	AC8025P	AC6030M	AC6030M	AC6135M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	H1	BNC2125	BN2000	DA1090
Interrupted Cutting	SX	UX	MX	EF	EH	EM	SUMIBORON	GZ	No Chipbreaker	EF	EG	EM	SUMIDIA		SUMIBORON	SUMIBORON	
	AC8025P	AC8035P	AC8035P	AC6030M	AC6135M	AC6145M	BN7125/BNC500	AC4125K	AC4125K	AC5025S	AC5025S	AC5025S	DA1000		BNC2135	BN350	
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~			A22 ~		A20 ~		M2 ~

BNC500 is for ductile cast iron.

S-SSKP type / C-SSKP type



Internal General-purpose
Screw-on

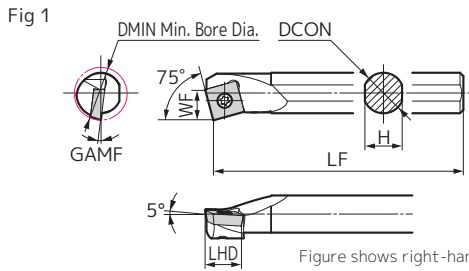
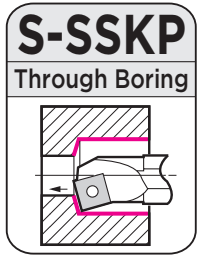


Figure shows right-handed (R) tool.

Holder

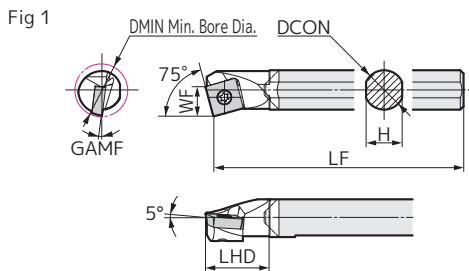
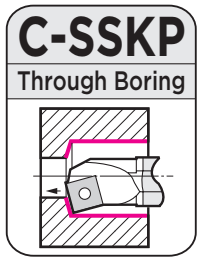
Parts

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								Cat. No.	Ref. Page	Fig	N-m		
Steel	S12M-SSKP R/L0903-16	BBPS-312 R/L	●	●	16	12	11	150	8.0	9.0	-6°	SP□□0903	B92	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

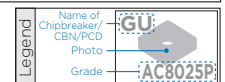
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N-m		
Carbide Standard	C12M-SSKP R0903-16	WBPS-312RS	●		16	12	11	150	8	25	-6°	SP□□0903	B92	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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)		M (Stainless Steel)		N (Non-Ferrous)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—
General Machining	FB T1500Z	LB AC8025P	LU AC6030M	LB AC6030M	SUMIDIA DAT000
High-precision	SD T1500Z	—	—	—	SUMIDIA DAT000
Recommended Cutting Conditions	A10 ~		A14 ~		A22 ~

S-CSKP type



Internal General-purpose Clamp-on

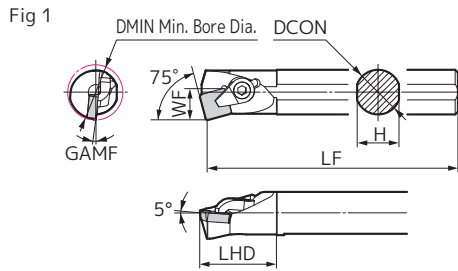
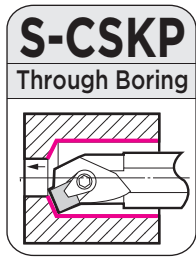


Figure shows right-handed (R) tool.

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		Fig	Clamp Plate	Double Screw	Wrench
			R	L								Cat. No.	Ref. Page				
Steel	S16Q-CSKP R/L0903-20	S16Q-CSKP R/L 09	●	●	20	16	15	180	10.0	28	-4°	SP□□0903	B94	1 1	CCM6B L/R	WB6-10 WB6-13	LH030 (For Hexagonal hole)
	S20R-CSKP R/L0903-25	S20R-CSKP R/L 09	●	●	25	20	18	200	12.5	28	-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.

Boring Bars

E

C

D

R

S

T

V

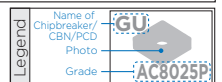
W

Shank Diameter Tolerances
Very Small Diameter Turning

Applicable Inserts ◀ S-CSKP type

1st Recommended Insert

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



Application Range	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 Machining	FK T1500Z	SF AC8025P	SUMIBORON BN7125	No Chipbreaker AC4015K	No Chipbreaker AC4015K	No Chipbreaker AC5015S	No Chipbreaker AC5025S	SUMIBORON BN2000
Recommended Cutting Conditions	A10 ~		A16 ~			A18 ~		A20 ~

11° inserts with holes can also be used.

S-SSKC type



Internal General-purpose
Screw-on

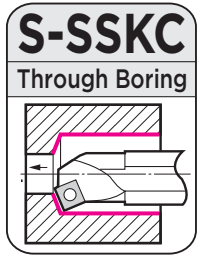


Fig 1

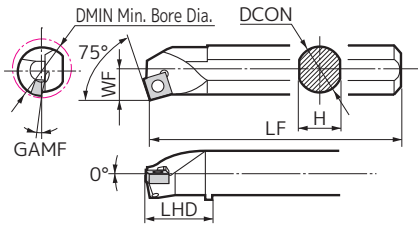


Figure shows right-handed (R) tool.

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

Holder

Parts

Dimensions (mm)

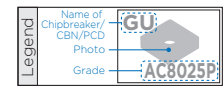
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench (For Torx hole)			
			R	L								Cat. No.	Ref. Page	Fig	N·m				
Steel	S16R-SSKC R/L09T3-20	S16R-SSKC R/L 09	●	●	20	16	15	200	11	23	-10°	SC□□09T3	B89	1	BFTX0407N	3.4	TRX15		
	S20S-SSKC R/L09T3-25	S20S-SSKC R/L 09	●	●	25	20	18	250	13	27	-8°			1	BFTX0409N	3.4			
	S25T-SSKC R/L1204-32	S25T-SSKC R/L 12	●		32	25	23	300	17	30	-7°			SC□□1204	B90	1		BFTX0511N	5.0
	S32U-SSKC R/L1204-40	S32U-SSKC R/L 12	●		40	32	30	350	22	33	-6°					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.

Applicable Inserts ◀ S-SSKC type

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	MU AC8020P	LB AC6030M	GU AC6030M	MU AC6030M	MU AC4015K	No Chiselbreaker AC4015K	SUMIDIA DA1000
High-precision	FX T1500A	SC AC1030U	SC AC1030U	FX AC1030U	SC AC1030U	SC AC1030U	-	-	SUMIDIA DA1000
Recommended Cutting Conditions	A10 -			A14 -			A16 -		A22 -

S-DSKN type / S-PSKN type



Medium Diameter General-purpose Double Clamp

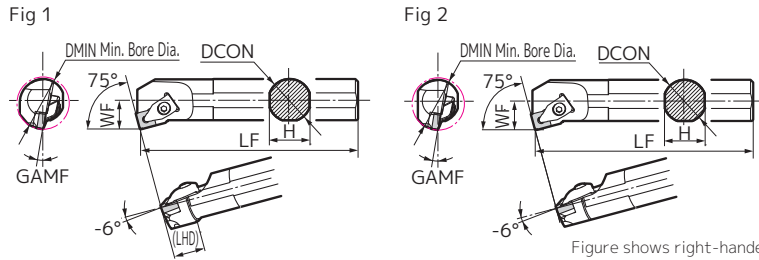


Figure shows right-handed (R) tool.

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 (For Hexagonal hole)	Bottom Hex Wrench (For Hexagonal hole)	
		R	L								Cat. No.	Ref. Page	Fig	N-m					
Steel	S25R-DSKN R/L1204-32	●	●	32	25	23	200	17.0	(26)	-13°	SNO□1204	B33 ~	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 **E82**



Medium Diameter General-purpose Lever Lock

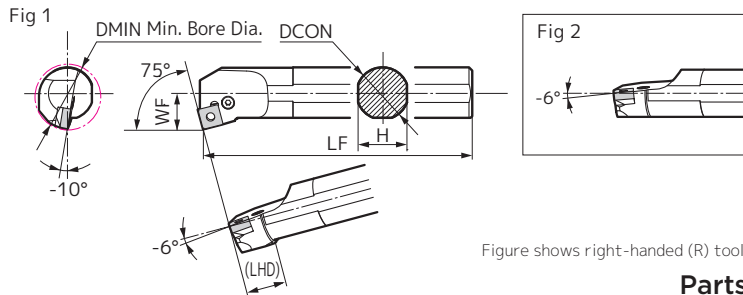
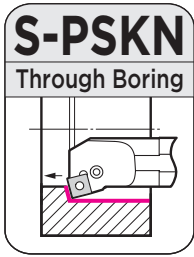


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench (For Hexagonal hole)	
		R	L							Cat. No.	Ref. Page						Fig
Steel	S32S-PSKN R/L1204-40	●	●	40	32	30	250	22.0	(21)	SNO□1204	B33 ~	1	LCL4	LCS4	LSS42B	LSP4	LH030
	S40T-PSKN R/L1204-50	●	●	50	40	37	300	27.0	(21)								
	S50U-PSKN R/L1204-63	●	●	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.
() 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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.

Legend: Name of Chipbreaker/CBN/PCD Photo Grade **AC8025P**

Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			H (Hardened Steel)		Hard Brittle Materials
	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 AC8115P	MU AC8020P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7125/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
General Machining	SU AC8115P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6135M	SUMIBORON BN7125/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA1090
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EH AC6135M	EM AC6145M	SUMIBORON BN7125/BNC500	GZ AC4125K	No Chipbreaker AC4125K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN350	—
Recommended Cutting Conditions	A10 -			A14 -			A16 -			A18 -			A20 -		M2 -

BNC500 is for ductile cast iron.

N-m Recommended Tightening Torque (N-m)

S-ESKN type / S-PSYN type



Medium Diameter General-purpose Pin Lock

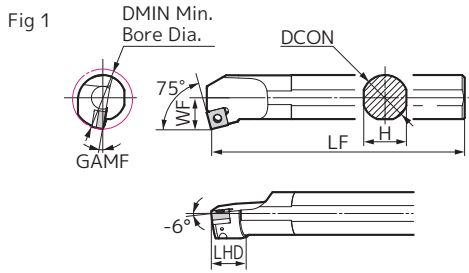


Figure shows right-handed (R) tool.

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-ESKN R/L1204-34	BSKN425 R/L	●		34	25	23	200	17	(18)	-12°	SN□□1204	B33 ~ 1	SSW423	CPB42	LH030
	S32S-ESKN R/L1204-44	BSKN432 R/L	●		44	32	30	250	22	(20)	-10°					
	S40T-ESKN R/L1204-54	BSKN440 R/L			54	40	37	300	27	(20)	-10°					
	S50U-ESKN R/L1906-70	BSKN650 R/L			70	50	47	350	35	(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.
The LHD () is a reference value.



Medium Diameter General-purpose Lever Lock

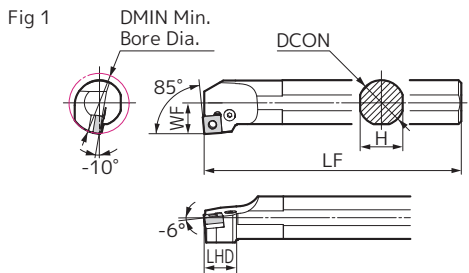
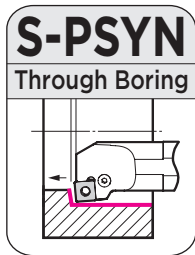


Figure shows right-handed (R) tool.

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-PSYN R/L1204-44	S32S-PSYN R/L 12	●	●	44	32	30	250	22	(22)	SN□□1204	B33 ~ 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 / Key Small Diameter Turning

S-ESYN type



Medium Diameter General-purpose Pin Lock

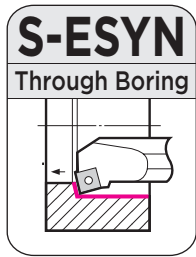


Fig 1

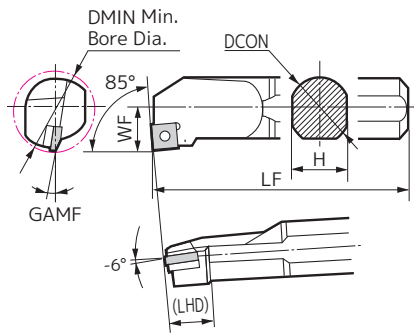


Figure shows right-handed (R) tool.

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								DMIN	DCON	H			
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	B33 ~	1 1	SSW423	CPB42 CPB43S	LH030 (For Hexagonal hole)

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.

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.

Legend

Name of Chipbreaker/CBN/PCD Photo Grade

GU

AC8025P

Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			H (Hardened Steel)		Hard Brittle Materials
	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 AC8115P	MU AC8020P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7125/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
General Machining	SU AC8115P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6135M	SUMIBORON BN7125/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA1090
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EH AC6135M	EM AC6145M	SUMIBORON BN7125/BNC500	GZ AC4125K	No Chipbreaker AC4125K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN350	-
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~			A20 ~		M2 ~

BNC500 is for ductile cast iron.

S-STUB type / S-STUP type / A-STUP type



Internal Finishing to Medium Cutting Screw-on

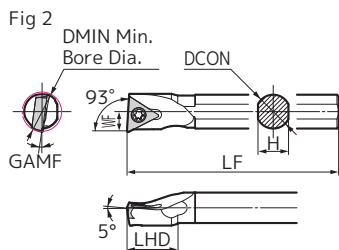
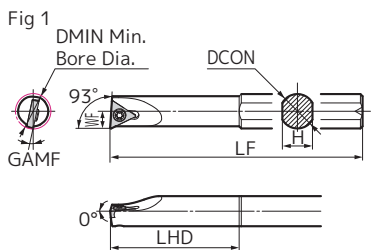
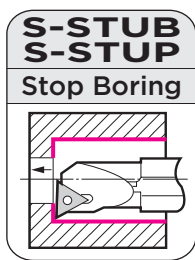


Figure shows right-handed (R) tool.

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								DMIN	DCON	H	LF	WF	
Steel	S08H-STUB R/L0601-08	BBPT-508 R/L	●	●	8	8	7	100	4.0	30	-12°	TB□□0601	B98 ~	1	BFTX0204A	0.5	TRX06
	S08H-STUP R/L0802-10	BBPT-608 R/L	●	●	10	8	7	100	5.0	13	-10°	TP□□0802	B103 ~	1	BFTX0204A	0.5	TRX06
	S08H-STUP R/L0902-10	—	●	●	10	8	7	100	5.0	13	-10°	TP□□0902	B105	2	BFTX02505N	1.1	TRX08
	S10K-STUP R/L1103-12	BBPT-210 R/L	●	●	12	10	9	125	6.0	15	-8°	TP□□1103	B107 ~	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°			2	BFTX0307A	2.0	
	S16R-STUP R/L1103-20	BBPT-216 R/L	●	●	20	16	15	200	10.0	18	-2°	TP□□1603	B109	2	BFTX0407A	3.4	TRX15
	S20S-STUP R/L1103-22	BBPT-220 R/L	●	●	22	20	18	250	11.0	18	-2°			2	BFTX0307A	2.0	
	S25T-STUP R/L1103-28	BBPT-225 R/L	●	●	28	25	22	300	14.0	27	-2°	TP□□1604	B110	2	BFTX0407A	3.4	TRX15
	S20S-STUP R/L1603-22	—	●	●	22	20	18	250	11.0	18	-3°			2	BFTX0409N	3.4	
	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	B110	1	BFTX0409N	3.4	TRX15
	S25T-STUP R/L1604-28	BBPT-325 R/L	●	●	28	25	22	300	14.0	18	-2°			1	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

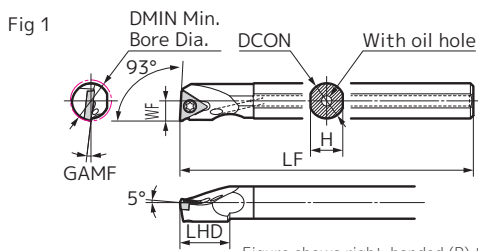
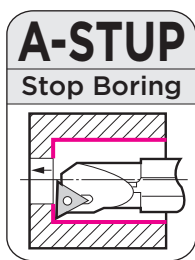


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert			Flat Insert Screw		Wrench
		R	L								DMIN	DCON	H	LF	WF	
Steel with Oil Hole	A08H-STUP R/L0802-10	●	●	10	8	7	100	5	13	-10°	TP□□0802	B103 ~	1	BFTX0204N	0.5	TRX06
	A08H-STUP R/L0902-10	●	●	10	8	7	100	5	13	-10°	TP□□0902	B105	1	BFTX02505N	1.1	TRX08
	A10K-STUP R/L1102-12	●	●	12	10	9	125	6	15	-8°	TP□□1102	B106	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°	TP□□1103	B107 ~	1	BFTX0306N	2.0	TRX10
	A10K-STUP R/L1103-12	●	●	12	10	9	125	6	15	-8°			1	BFTX0307N	2.0	
	A12M-STUP R/L1103-14	●	●	14	12	11	150	7	17	-7°			1	BFTX0306N	2.0	
	A16R-STUP R/L1103-18	●	●	18	16	15	200	9	18	-4°			1	BFTX0307N	2.0	
	A20S-STUP R/L1103-22	●	●	22	20	18	250	11	18	-2°	TP□□1603	B109	1	BFTX0407N	2.0	TRX15
	A25T-STUP R/L1103-28	●	●	28	25	22	300	14	18	-2°			1	BFTX0409N	3.4	
	A20S-STUP R/L1603-22	●	●	22	20	18	250	11	18	-3°	TP□□1604	B110	1	BFTX0407N	2.0	TRX15
	A25T-STUP R/L1603-28	●	●	28	25	22	300	14	18	-1°			1	BFTX0409N	3.4	
	A20S-STUP R/L1604-22	●	●	22	20	18	250	11	18	-5°			1	BFTX0409N	3.4	
	A25T-STUP R/L1604-28	●	●	28	25	22	300	14	18	-2°	1	BFTX0409N	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

B-STUP type



Internal Finishing to Medium Cutting Screw-on

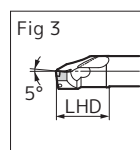
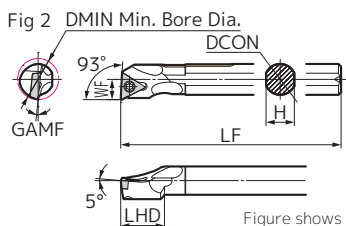
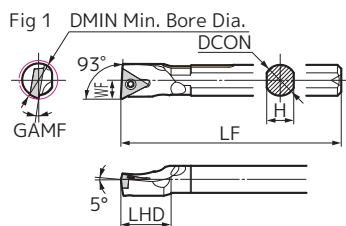
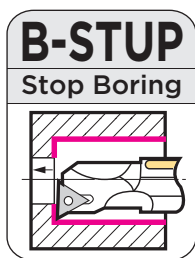


Figure shows right-handed (R) tool.

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							
Steel with Anti-Vibration Mechanism	B08H-STUP R/L0802-10	XBPT-608 R/L	●	●	10	8	7	100	5.0	13	-10°	TP□□0802	B103 ~	1	BFTX0204A	0.5	TRX06			
	B10K-STUP R/L1103-12	XBPT-210 R/L	●	●	12	10	9	125	6.0	15	-8°	TP□□1103	B107 ~	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	BFTX0307A	2.0				
	B32T-STUP R/L1103-40	XBPT-232 R/L	●	●	40	32	30	300	20.0	53	-2°			3	TP□□1604	B110		BFTX0410A	3.4	TRX15
	B20S-STUP R/L1604-25	XBPT-320 R/L	●	●	25	20	18	250	12.5	18	-3°			2						
	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								

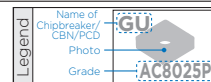
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper™ E14

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

1st Recommended Insert

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

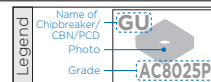


Application Range	P (Steel)		M (Stainless Steel)		N (Non-Ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—	Uncoated
Process	FW	FX	FW	FX	SUMIDIA	SUMIBORON
High-precision	T1500Z	AC1030U	AC1030U	AC1030U	DA1000	BN2000
Recommended Cutting Conditions	A10 -		A14 -		A22 -	A20 -

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

1st Recommended Insert

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



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)	S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials	
	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 Machining	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6030M	BN7125	AC4015K	AC5015S	DA1000	—	BNC2125	BN2000	DA1090
High-precision	FF	—	—	—	—	—	SUMIBORON	—	FX	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
Recommended Cutting Conditions	A10 -			A14 -			A16 -	A18 -	A22 -		A20 -	M2 -		

D-STUP type / C-STUB type / C-STUP type



Internal Finishing to Medium Cutting Screw-on

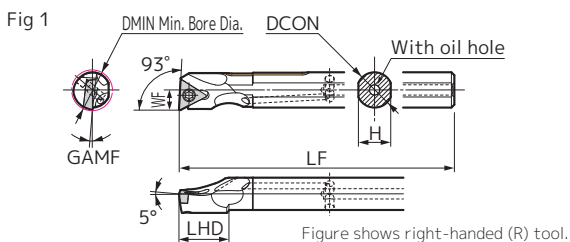
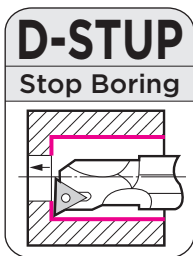


Figure shows right-handed (R) tool.



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 (For Torx hole)
			R	L								DMIN	DCON	H	LF	WF	
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	B107~	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

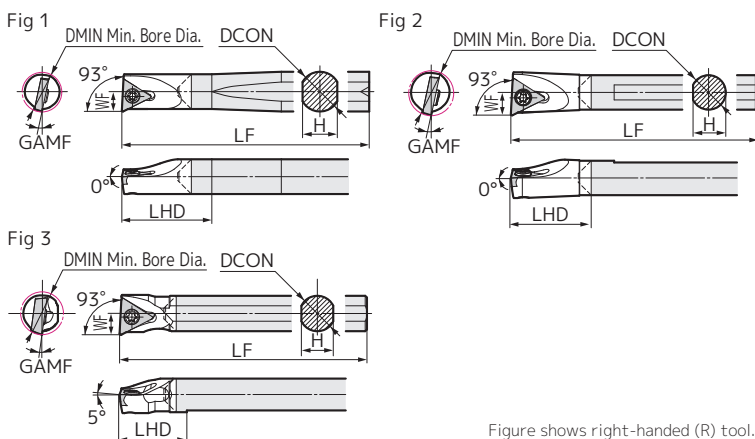
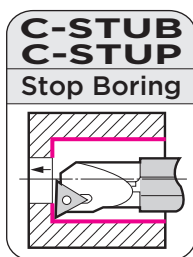


Figure shows right-handed (R) tool.



Holder

Parts

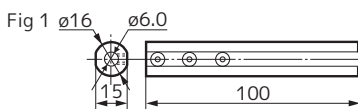
Dimensions (mm)

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 (For Torx hole)					
			R	L								DMIN	DCON	H	LF	WF		LHD	GAMF	Cat. No.	Ref. Page	Fig
Carbide Standard	C08H-STUB R/L0601-08	WBPT-508 R/L S	●	●	8	8	7.0	100	4.0	50	-12°	TB□□0601	B98~	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	B103~	3	BFTX0204A	0.5
	C10K-STUP R/L1103-12	WBPT-210 R/L S	●	●	12	10	9.0	125	6.0	19	-8°	TP□□1103	B107~	3	BFTX0306A	2.0	TRX10					
	C12M-STUP R/L1103-14	WBPT-212 R/L S14	●	●	14	12	11.0	150	7.0	25	-7°											
	C12M-STUP R/L1103-16	WBPT-212 R/L S	●	●	16	12	11.0	150	8.0	25	-6°											
	C16R-STUP R/L1103-18	WBPT-216 R/L S18	●	●	18	16	15.0	200	9.0	30	-4°											
	C16R-STUP R/L1103-20	WBPT-216 R/L S	●	●	20	16	15.0	200	10.0	30	-2°											
	C20S-STUP R/L1103-22	WBPT-220 R/L S	●	●	22	20	18.0	250	11.0	35	-2°											
C20S-STUP R/L1604-25	WBPT-320 R/L S	●	●	25	20	18.0	250	12.5	35	-3°	TP□□1604							B110	3	BFTX0410A	3.4	TRX15
C08M-STUB R/L0601-08	WBPT-508 R/L	●	●	8	8	7.0	150	4.0	50	-12°	TB□□0601							B98~	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							B103~	3	BFTX0204A	0.5	TRX06
Carbide Long	C10Q-STUP R/L1103-12	WBPT-210 R/L	●	●	12	10	9.0	180	6.0	19	-8°	TP□□1103	B107~	3	BFTX0306A	2.0	TRX10					
	C12R-STUP R/L1103-14	WBPT-212 R/L 14	●	●	14	12	11.0	200	7.0	25	-7°											
	C12R-STUP R/L1103-16	WBPT-212 R/L	●	●	16	12	11.0	200	8.0	25	-6°											
	C16S-STUP R/L1103-18	WBPT-216 R/L 18	●	●	18	16	15.0	250	9.0	30	-4°											
	C16S-STUP R/L1103-20	WBPT-216 R/L	●	●	20	16	15.0	250	10.0	30	-2°											
Carbide Short	C16M-STUP R/L1103-18	WBPT-216 R/L E18	●	●	18	16	15.0	150	9.0	30	-4°	TP□□1103	B107~	3	BFTX0306A	2.0	TRX10					
	C16M-STUP R/L1103-20	WBPT-216 R/L E	●	●	20	16	15.0	150	10.0	30	-2°											
	C20M-STUP R/L1103-22	WBPT-220 R/L E	●	●	22	20	18.0	150	11.0	35	-2°											
C20M-STUP R/L1604-25	WBPT-320 R/L E	●	●	25	20	18.0	150	12.5	35	-3°	TP□□1604	B110	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)

E-STUP type



Internal Finishing to Medium Cutting
Screw-on

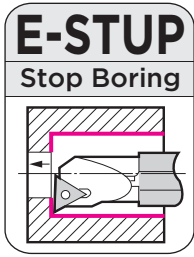
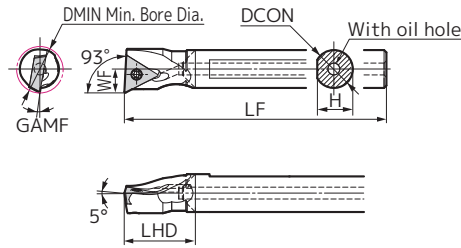


Fig 1



Holder

Parts

Dimensions (mm)

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	
											Cat. No.	Ref. Page	Fig	N·m	(For Torx hole)	
Carbide with Oil Hole	E08H-STUP R0802-10	WBPT-608RH	●	10	8	7.5	100	5	18	-10°	TP□□0802	B103~	1	BFTX0204A	0.5	TRX06
	E10K-STUP R1103-12	WBPT-210RH	●	12	10	9.5	125	6	19	-8°	TP□□1103	B107~	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	

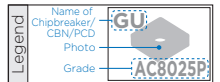
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Smart Damper™ E14

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

1st Recommended Insert

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

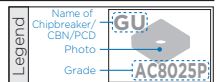


Application Range	P (Steel)		M (Stainless Steel)		N (Non-Ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—	Uncoated
High-precision	FW T1500Z	FX AC1030U	FW AC1030U	FX AC1030U	SUMIDIA DA1000	SUMIBORON BN2000
Recommended Cutting Conditions	A10 ~		A14 ~		A22 ~	A20 ~

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

1st Recommended Insert

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



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)	S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials	
	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 Machining	FB T1500Z	GU AC8025P	MU AC8020P	LB AC6030M	GU AC6030M	MU AC6030M	SUMIBORON BN7125	MU AC4015K	FX AC5015S	SUMIDIA DA1000	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA1090
High-precision	FF AC1030U	—	—	—	—	—	SUMIBORON BN7125	—	FX AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~	A18 ~	A22 ~		A20 ~		M2 ~	

S-CTFP type



Internal General-purpose
Clamp-on

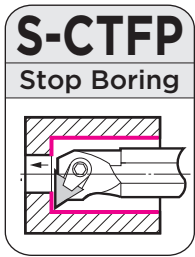


Fig 1

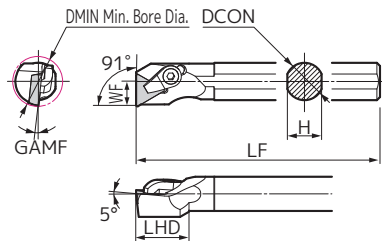


Figure shows right-handed (R) tool.

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		Fig	Clamp Plate	Double Screw	Wrench
			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	B111	1	CCM5BSL/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

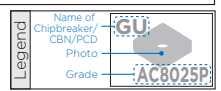
W

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 ~).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application 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 Machining	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 ~		A16 ~			A18 ~		A22 ~	A20 ~

11° inserts with holes can also be used.

S-DTFN type / D-DTFN type



Medium Diameter General-purpose Double Clamp

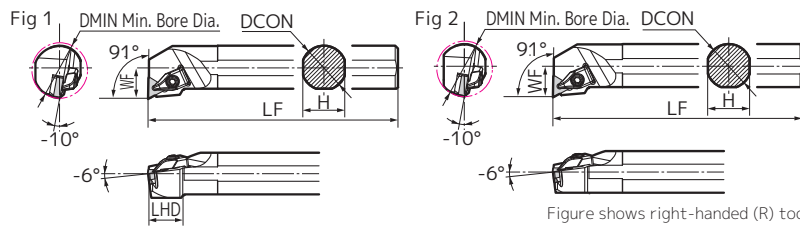
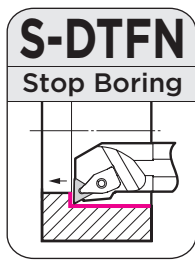


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Fig	Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
		R	L							DMIN	DCON		H	LF				
Steel	S32S-DTFN R/L1604-40	●	●	40	32	30	250	22.0	26	TN□□1604	B48 ~	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025
	S40T-DTFN R/L1604-50	●	●	50	40	37	300	27.0	26			1						
	S50U-DTFN R/L1604-63	●	●	63	50	47	350	31.5	—			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.

Clamp Set Parts **E82**

Smart Damper™ **E15**



Medium Diameter General-purpose Double Clamp

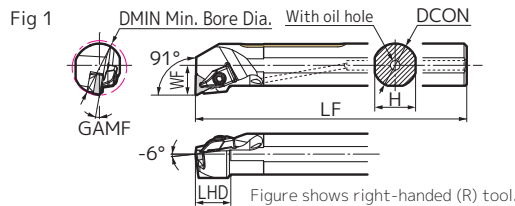
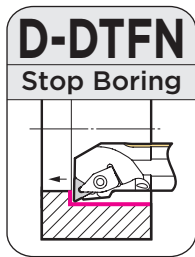


Figure shows right-handed (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Fig	Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
		R	L								DMIN	DCON		H	LF				
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DTFN R/L1604-32	●	●	32	25	23	300	17	21	-12°	TN□□1604	B48 ~	1	SCP-1	5.0	TNS1603B TNS1604B	BFTX0307N	LH040	LH025
	D32T-DTFN R/L1604-40	●	●	40	32	30	300	22	26	-10°			1						
	D40U-DTFN R/L1604-50	●	●	50	40	37	350	27	26	-10°			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.

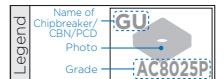
Clamp Set Parts **E82**

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 ~).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application 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	AC8115P	AC8020P	AC6020M	AC6020M	AC6030M	BN7125/BNC500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	BNC2115	BN1000
General Machining	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8115P	AC8025P	AC8025P	AC6030M	AC6030M	AC6135M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EH	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6135M	AC6145M	BN7125/BNC500	AC4125K	AC4125K	AC5025S	AC5025S	AC5025S	DA1000	BNC2135	BN350
Recommended Cutting Conditions	E A10 ~			E A14 ~			E A16 ~			E A18 ~			E A22 ~	E A20 ~	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-PTFN type / B-PTFN type



Medium Diameter General-purpose Lever Lock

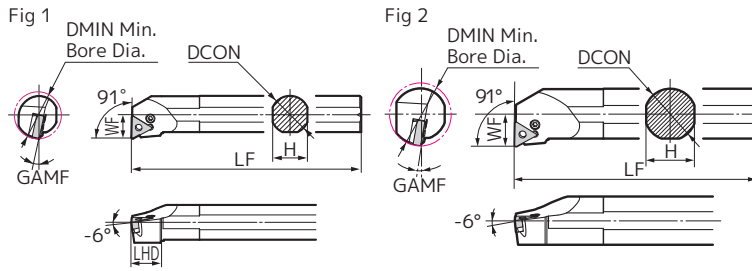
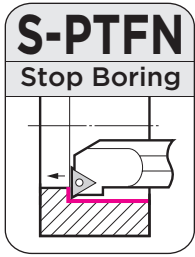


Figure shows right-handed (R) tool.

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	S25R-PTFN R/L1604-32	●	●	32	25	23	200	16.0	21.5	-12°	TN□□1604	B48 ~	1	LCL3	LCS3	LST317CA	LSP3	LH025 <small>(For Hexagonal hole)</small>
	S32S-PTFN R/L1604-40	●	●	40	32	30	250	20.0	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°								

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

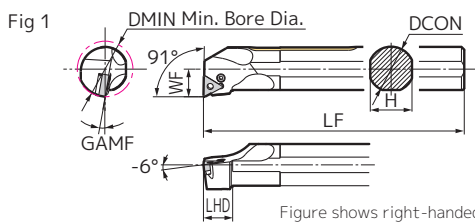
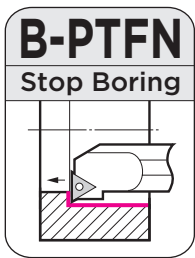


Figure shows right-handed (R) tool.



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	B48 ~	1	LCL3	LCS3	LST317CA	LSP3	LH025 <small>(For Hexagonal hole)</small>
	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.

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning / Very Small Diameter Turning

S-ETFN type



Medium Diameter General-purpose Pin Lock

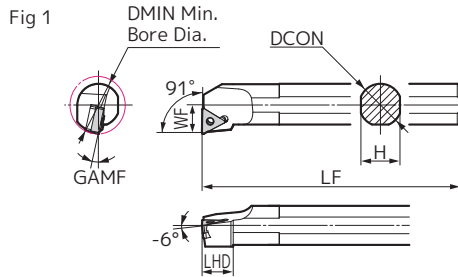
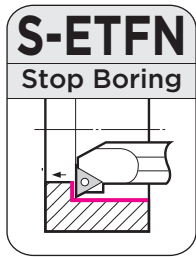


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

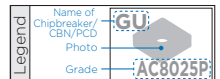
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert			Shim	Eccentric Pin	Wrench
			R	L								Cat. No.	Ref. Page	Fig			
Steel	S25R-ETFN R/L1604-34	BTFN325 R/L	●		34	25	23	200	17	18	-12°	TN□□1604	B48 ~	1	STW323	CPB34	LH025
	S32S-ETFN R/L1604-44	BTFN332 R/L	●		44	32	30	250	22	20	-10°	TN□□1604	B48 ~	1	STW323	CPB35	LH025
	S40T-ETFN R/L2204-54	BTFN440 R/L	●		54	40	37	300	27	25	-10°	TN□□2204	B53 ~	1	STW434	CPB44T	LH030
	S50U-ETFN R/L2204-70	BTFN450 R/L	●		70	50	47	350	35	32	-10°	TN□□2204	B53 ~	1	STW434	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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application 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	AC8115P	AC8020P	AC6020M	AC6020M	AC6030M	BN7125/BNCS500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	DA1000	BNC2115	BN1000
General Machining	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8115P	AC8025P	AC8025P	AC6030M	AC6030M	AC6135M	BN7125/BNCS500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EH	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6135M	AC6145M	BN7125/BNCS500	AC4125K	AC4125K	AC5025S	AC5025S	AC5025S	DA1000	BNC2135	BN350
Recommended Cutting Conditions	I _{CS} A10 ~			I _{CS} A14 ~			I _{CS} A16 ~			I _{CS} A18 ~			I _{CS} A22 ~	I _{CS} A20 ~	

BNCS500 is for ductile cast iron.

S-SVJB type / B-SVJB type



Internal Profiling
Screw-on

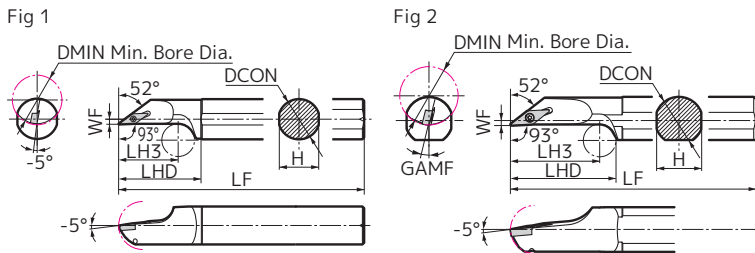
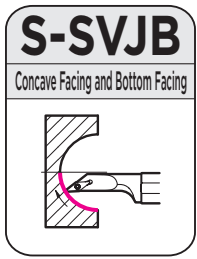


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench							
		R	L									Cat. No.	Ref. Page	Fig	(N·m)		(For Torx hole)						
Steel	S20R-SVJB R/L1103-25	●	●	25	20	19	200	2.0	42	29	—	VB□□1103	B116 ~	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	B118	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

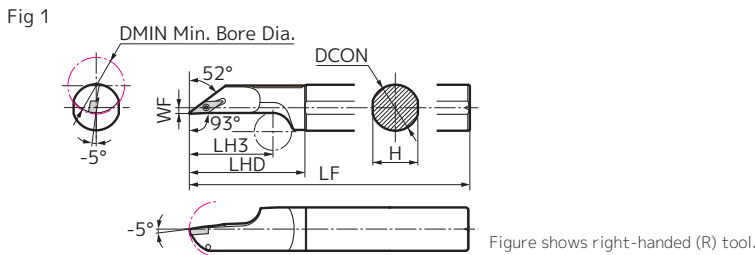
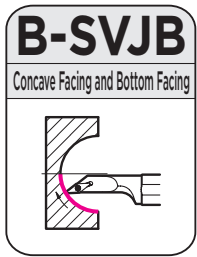


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Head	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench
		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	B116 ~	1	BFTX02508NV	1.5	TRX08
	B25S-SVJB R/L1103-30	●	●	30	25	24	250	3.5	62	45						

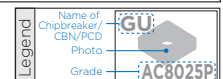
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Applicable Inserts

◀ S-SVJB type / B-SVJB type / S-SVQB type / B-SVQB type / C-SVQB type / S-SVUB type / B-SVUB type / C-SVUB type / S-SVZB type / B-SVZB type / C-SVZB type

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	I _{CS} A10 ~		I _{CS} A14 ~		I _{CS} A16 ~		I _{CS} A18 ~	I _{CS} A22 ~	I _{CS} A20 ~	

BNC500 is for ductile cast iron.

SEC-Boring Bar S-SVJC type



Internal Profiling
Screw-on

Sumi Small

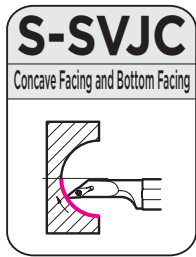


Fig 1

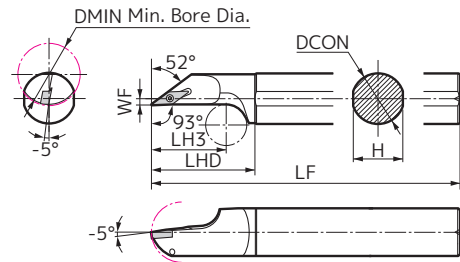


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Head	Applicable Insert		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N·m		(For Torx hole)
Steel	S12M-SVJC R/L0802-16	●	●	16	12	11	150	2.0	30	21	VC□□0802	B119	1	BFTX0204N	0.5	TRX06
	S16Q-SVJC R/L0802-20	●	●	20	16	15	180	2.0	40	29			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.

Boring Bars

E

C

D

R

S

T

V

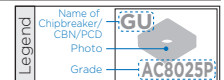
W

Sumi Draper Training
Very Small Draper Training

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

1st Recommended Insert

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



Application Range / Process	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		H (Hardened Steel)		Hard Brittle Materials
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	Coated	Uncoated	—
General Machining	FB T1500Z	SU AC8025P	LB AC6030M	SU AC6030M	SU AC5015S	SU AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA1090
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 ~		A14 ~		A18 ~		A20 ~		M2 ~

S-SVQB type / B-SVQB type



Internal Profiling
Screw-on

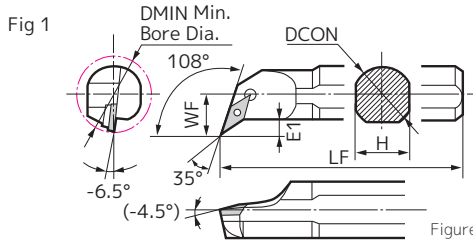
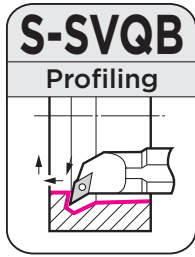


Figure shows right-handed (R) tool.

Boring Bars

E

Holder

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	Wrench for Bolt		
		R	L							Cat. No.	Ref. Page								
Steel	S20R-SVQB R/L1103-25	●	●	25	20	18	200	14.5	5.5	VB□□1103	B116 ~	1	—	—	—	BFTX02508NV	1.5	TRX08	—
	S25S-SVQB R/L1103-32	●	●	32	25	23	250	19.0	7.5	—	—	1	—	—	—	—	—	—	
	S25S-SVQB R/L1604-34	●	●	34	25	23	250	20.5	9.0	—	—	1	—	—	—	—	—	—	
	S32T-SVQB R/L1604-40	●	●	40	32	30	300	22.0	9.0	VB□□1604	B118	1	VP32B	BH03504	SVP32	BFTX03508	2.0	TRX10	—
	S40T-SVQB R/L1604-50	●	●	50	40	37	300	27.0	10.0	—	—	1	VP40B	—	—	—	—	LH020	

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



Internal Profiling
Screw-on

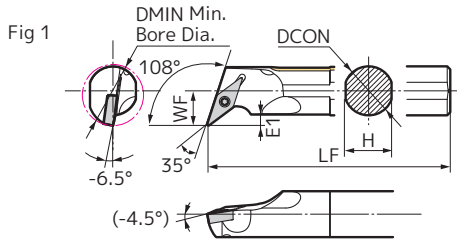
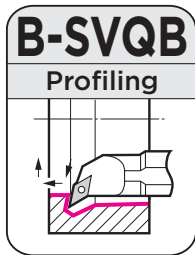


Figure shows right-handed (R) tool.



S

T

V

Holder

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		
		R	L							Cat. No.	Ref. Page							
Steel with Anti-Vibration Mechanism	B16R-SVQB R/L1103-20	●	—	20	16	15	200	11.5	4	VB□□1103	B116 ~	1	—	—	—	BFTX02508NV	1.5	TRX08
	B20R-SVQB R/L1103-25	●	—	25	20	18	200	14.5	5	—	—	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

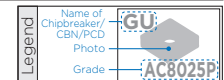
W

Small Diameter Turning

Applicable Inserts

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	E14 A10 ~		E14 A14 ~		E14 A16 ~		E14 A18 ~	E14 A22 ~	E14 A20 ~	

BNC500 is for ductile cast iron.

E50

Recommended Tightening Torque (N·m)

C-SVQB type



Internal Profiling
Screw-on

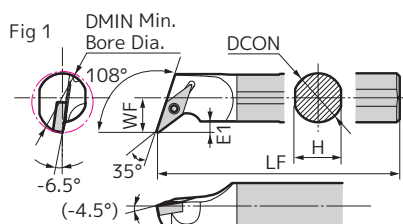
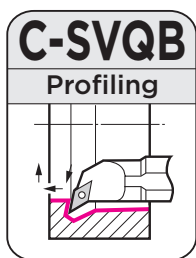


Figure shows right-handed (R) tool.



Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Flat Insert	Screw	Wrench	
		R	L							Cat. No.	Ref. Page				
Carbide	C16R-SVQB R/L1103-20	●		20	16	15	200	11.5	4	VB□□1103	B116~	1 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

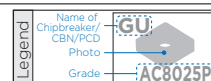
- Boring Bars
- E
- C
- D
- R
- S
- T
- V
- W
- Smart Damper™
Very Small Damper™

Applicable Inserts

◀ S-SVJB type / B-SVJB type / S-SVQB type / B-SVQB type / C-SVQB type / S-SVUB type / B-SVUB type / C-SVUB type / S-SVZB type / B-SVZB type / C-SVZB type

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 ~		A14 ~		A16 ~		A18 ~	A22 ~	A20 ~	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SVQC type / A-SVQC type



Internal Profiling
Screw-on

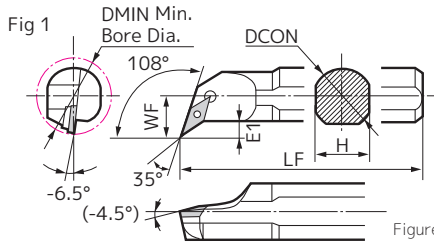
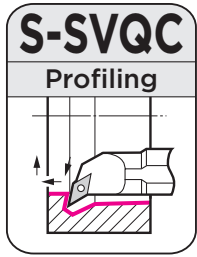


Figure shows right-handed (R) tool.

Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Flat Insert Screw		Wrench (For Torx hole)	
		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	B119	1	BFTX0204N	0.5	TRX06
	S12M-SVQC R/L0802-16	●	●	16	12	11	150	9.5	4.5	VC□□0802	B119	1	BFTX0204N	0.5	TRX06
	S16Q-SVQC R/L1103-20	●	●	20	16	15	180	11.5	4.5	VC□□1103	B119~	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.

C

D

R



Internal Profiling
Screw-on

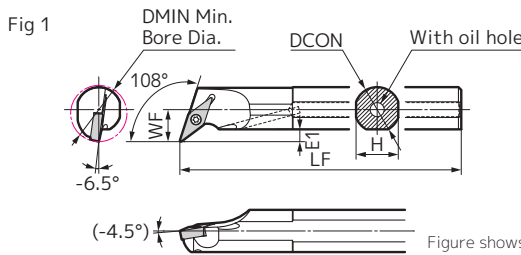
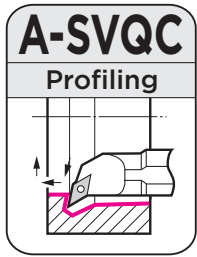


Figure shows right-handed (R) tool.

S

T

V

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Flat Insert Screw		Wrench (For Torx hole)	
		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	B119~	1	BFTX02508NV	1.5	TRX08
	A20R-SVQC R/L1103-25	●	●	25	20	18	200	14.5	5.5	VC□□1103	B119~	1	BFTX02508NV	1.5	TRX08
	A25S-SVQC R/L1103-32	●	●	32	25	23	250	19.0	7.5	VC□□1103	B119~	1	BFTX02508NV	1.5	TRX08
	A25S-SVQC R/L1604-34	●	●	34	25	23	250	20.5	9.0	VC□□1604	B120~	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.

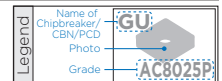
W

Small Diameter Turning
Very Small Diameter Turning

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

1st Recommended Insert

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



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

S-SVUB type / B-SVUB type



Internal Profiling
Screw-on

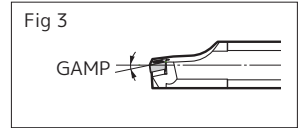
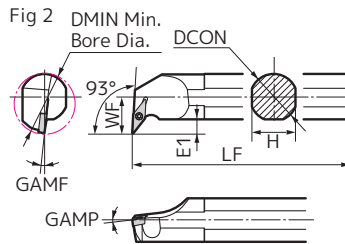
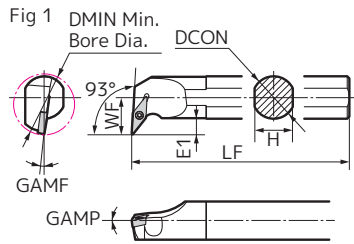
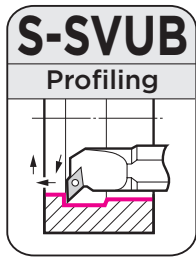


Figure shows right-handed (R) tool.

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		Pin	Bolt	Shim	Flat Insert Screw		Wrench	Wrench for Bolt
		R	L									Cat. No.	Ref. Page				N-m	(For Hexagonal hole)		
Steel	S20R-SVUB R/L1103-28	●	●	28	20	18	200	17.5	7.5	-7.5°	-3.0°	VB□□1103	B116 ~	—	—	—	BFTX02508NV	1.5	TRX08	—
	S25S-SVUB R/L1103-32	●	●	32	25	23	250	19.0	7.5	-6.5°	-2.5°									
	S25S-SVUB R/L1604-34	●	●	34	25	23	250	20.5	9.0	-7.5°	-3.0°	VB□□1604	B118	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°									
	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

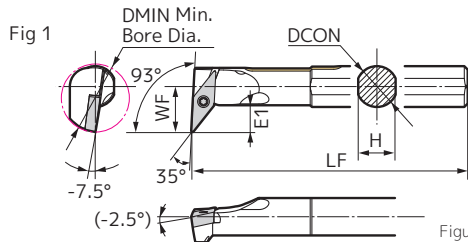
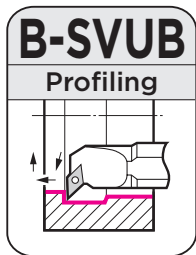


Figure shows right-handed (R) tool.



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
		R	L							Cat. No.	Ref. Page				N-m	(For Torx hole)	
Steel with Anti-Vibration Mechanism	B12M-SVUB R/L1103-20	●	●	20	12	11	150	13.5	8	VB□□1103	B116 ~	1	1	BFTX02508NV	1.5	TRX08	—
	B16R-SVUB R/L1103-25	●	●	25	16	15	200	16.5	9								

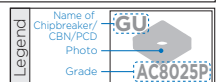
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper™ E14

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

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 ~		A14 ~		A16 ~		A18 ~	A22 ~	A20 ~	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

C-SVUB type



Internal Profiling
Screw-on

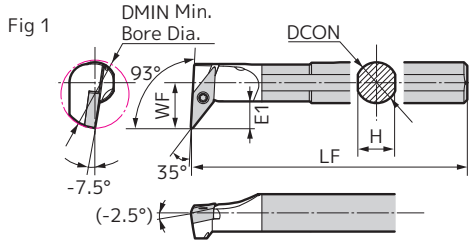
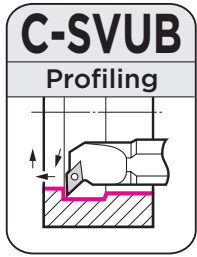


Figure shows right-handed (R) tool.

Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert			Flat Insert Screw		Wrench (For Torx hole)
		R	L							DMIN	DCON	H	LF	WF	
Carbide	C12M-SVUB R/L1103-20 C16R-SVUB R/L1103-25	●		20	12	11	150	13.5	8	VB□□1103	B116~	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.

Smart Damper™ E14

C

D

R

S

T

V

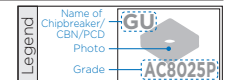
W

Small Damper Turning
Very Small Damper Turning

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

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	E14 A10 ~		E14 A14 ~		E14 A16 ~		E14 A18 ~	E14 A22 ~	E14 A20 ~	

BNC500 is for ductile cast iron.

S-SVUC type / A-SVUC type



Internal Profiling
Screw-on

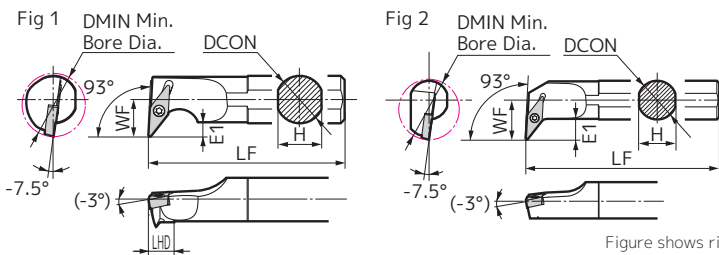
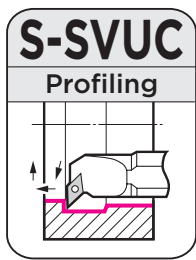


Figure shows right-handed (R) tool.

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	Fig	N·m		(For Torx hole)
Steel	S12M-SVUC R/L0802-16	●	●	16	12	11	150	9.5	6.5	3.5	VC□□0802	B119	1	BFTX0204N	0.5	TRX06
	S16Q-SVUC R/L0802-20	●	●	20	16	15	180	11.5	—	3.5	VC□□0802	B119	2	BFTX0204N	0.5	TRX06
	S16Q-SVUC R/L1103-25	●	●	25	16	15	180	16.5	—	8.5	VC□□1103	B119~	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

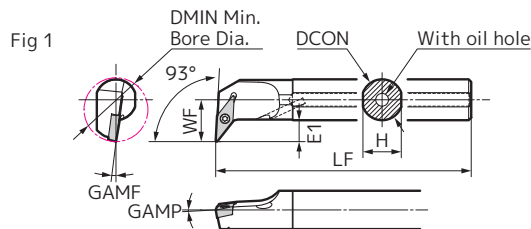
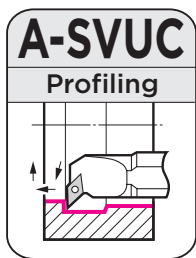


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

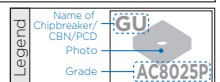
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Rake Angle	Applicable Insert		Flat Insert Screw		Wrench	
		R	L									Cat. No.	Ref. Page	Fig	N·m		(For Torx hole)
Steel with Oil Hole	A16Q-SVUC R/L1103-25	●	●	25	16	15	180	16.5	8.5	-7.5°	-3.0°	VC□□1103	B119~	1	BFTX02508NV	1.5	TRX08
	A20R-SVUC R/L1103-28	●	●	28	20	18	200	17.5	7.5	-7.5°	-3.0°	VC□□1103	B119~	1	BFTX02508NV	1.5	TRX08
	A25S-SVUC R/L1103-32	●	●	32	25	23	250	19.0	7.5	-6.5°	-2.5°	VC□□1103	B119~	1	BFTX02508NV	1.5	TRX08
	A25S-SVUC R/L1604-34	●	●	34	25	23	250	20.5	9.0	-7.5°	-3.0°	VC□□1604	B120~	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 type / S-SVQC type / A-SVQC type / S-SVUC type / A-SVUC type / S-SVZC type

1st Recommended Insert

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



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

S-SVZB type / B-SVZB type



Internal Profiling
Screw-on

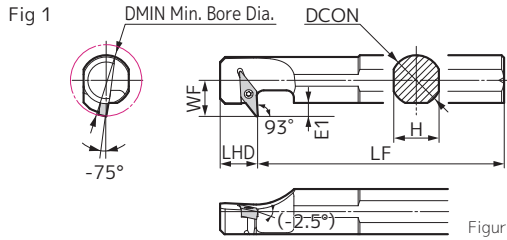
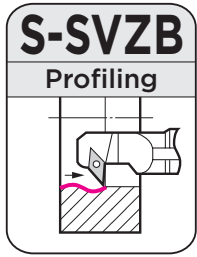


Figure shows right-handed (R) tool.

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 hole)	Wrench for Bolt (For Hexagonal hole)		
		R	L								Cat. No.	Ref. Page								
Steel	S20R-SVZB R/L1103-25	●	●	25	20	18	200	15	14.5	5.5	VB□□1103	B116~	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	B118	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	1	VP40B	—	—	—	—	—	—	—	

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.



Internal Profiling
Screw-on

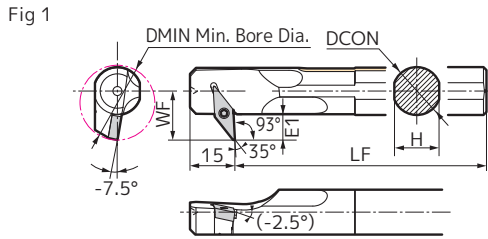
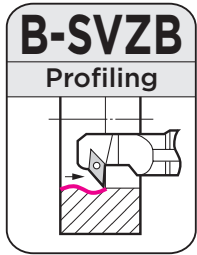


Figure shows right-handed (R) tool.



Holder

Parts

Dimensions (mm)

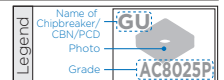
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Pin	Bolt	Flat Insert Screw	Wrench (For Torx hole)	
		R	L							Cat. No.	Ref. Page					
Steel with Anti-Vibration Mechanism	B12M-SVZB R/L1103-20	●	●	20	12	11	150	13.5	8	VB□□1103	B116~	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 right-handed (R) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Applicable Inserts

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 ~		A14 ~		A16 ~		A18 ~	A22 ~	A20 ~	

BNC500 is for ductile cast iron.

C-SVZB type



Internal Profiling
Screw-on

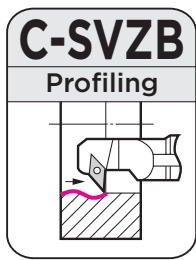


Fig 1

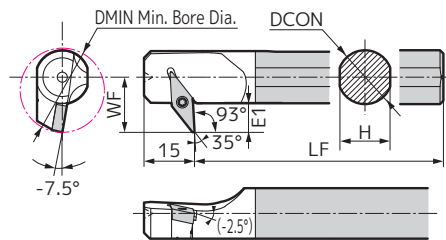


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Flat Insert Screw		Wrench	
		R	L							Cat. No.	Ref. Page	Fig	N·m		
Carbide	C12M-SVZB R/L1103-20	●		20	12	11	150	13.5	8	VB□□1103	B116~	1	BFTX02508NV	1.5	TRX08
	C16R-SVZB R/L1103-25	●		25	16	15	200	16.5	9						

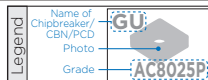
Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N) inserts.
Left-handed (L) tool holders are compatible with left-handed (L) or neutral (N) inserts.



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

1st Recommended Insert

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



Application 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 Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	SI AC5015S	AY H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	FYS AC1030U	SI AC1030U	FYS AC1030U	SI AC1030U	SUMIBORON BN7125/BNC500	—	SI AC5015S	—	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10 ~		A14 ~		A16 ~		A18 ~	A22 ~	A20 ~	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

S-SVZC type



Internal Profiling
Screw-on

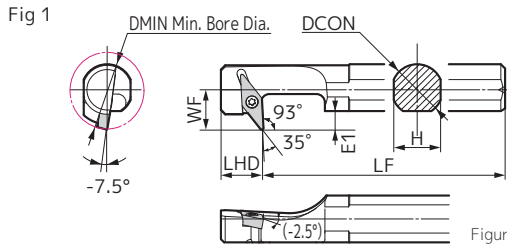
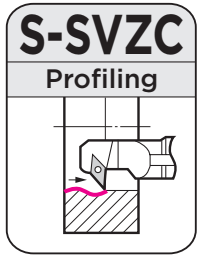


Figure shows right-handed (R) tool.

Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Head	Cutting Edge Distance	Offset	Applicable Insert		Flat Insert Screw		Wrench	
		R	L								DMIN	DCON	H	LF		LHD
Steel	S12M-SVZC R/L0802-16	●	●	16	12	11	150	10	9.5	4.5	VC□□0802	B119	1	BFTX0204N	0.5	TRX06
	S16Q-SVZC R/L1103-20	●	●	20	16	15	180	15	11.5	4.5	VC□□1103	B119~	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.

C

D

R

S

T

V

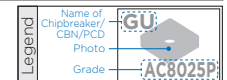
W

Small Diameter Turning
Very Small Diameter Turning

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

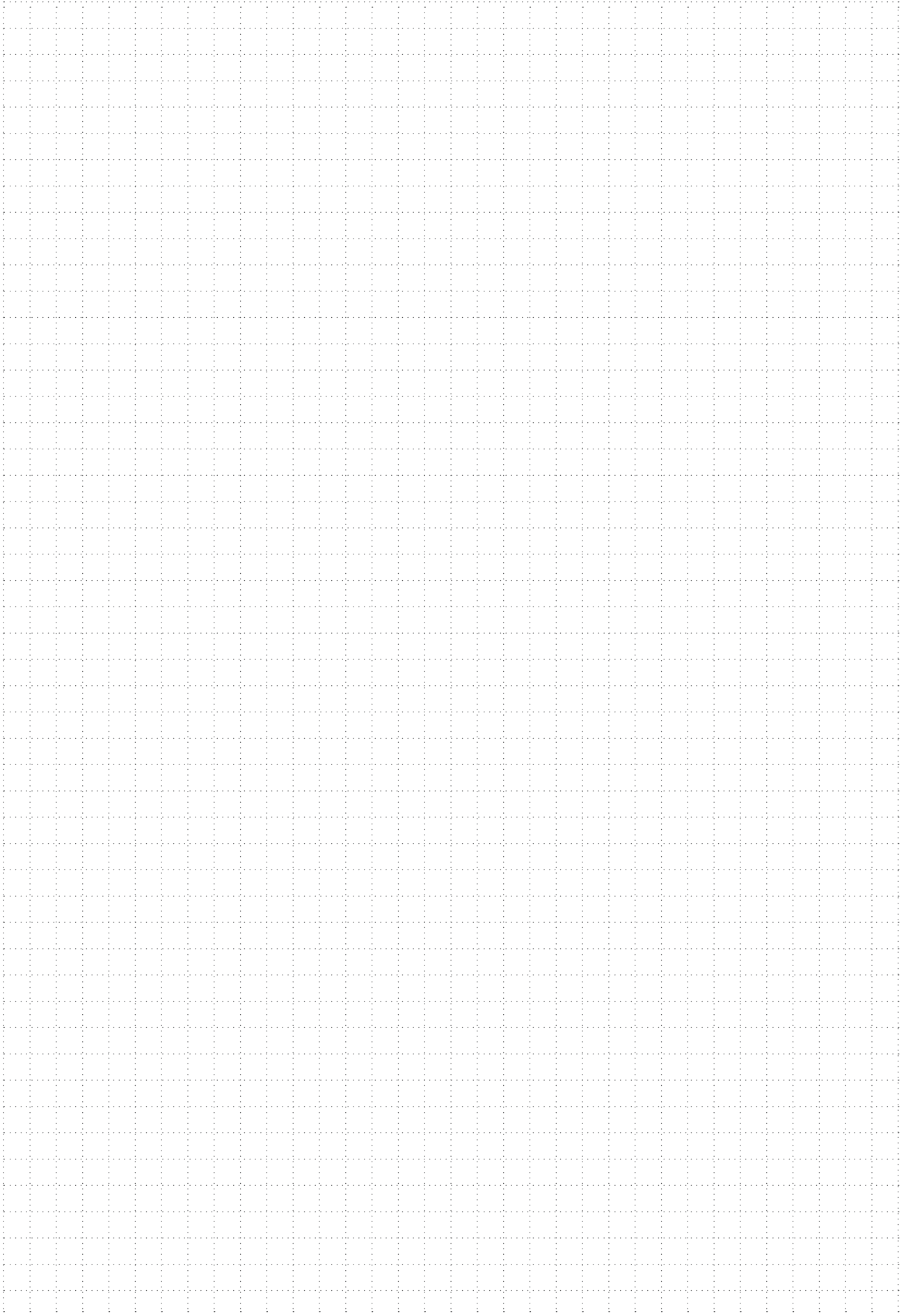
1st Recommended Insert

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



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

MEMO



S-SWUB type / C-SWUB type



Internal Finishing (Small Diameter) Screw-on

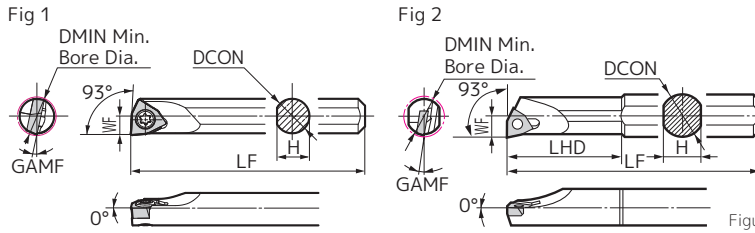
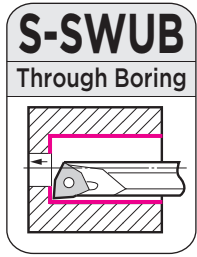


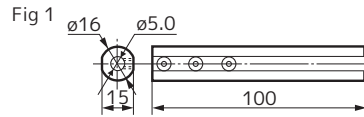
Figure shows right-handed (R) tool.

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								Cat. No.	Ref. Page	Fig	(N·m)		
Steel	S05H-SWUB R/L0601-06K	BBPW-508 R/L K*	●	●	5.5	5	4.7	100	2.75	—	-12°	WB□□0601	B124	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	B124	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.



Internal Finishing (Small Diameter) Screw-on

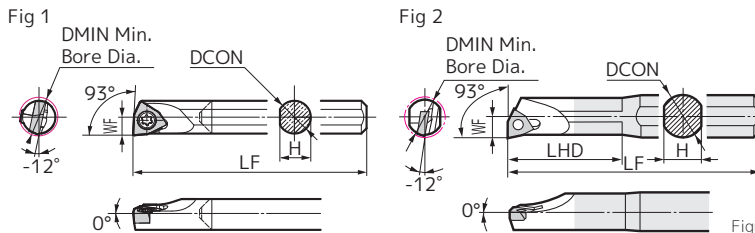
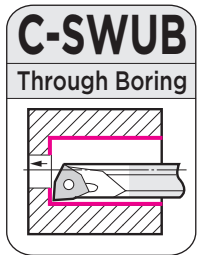


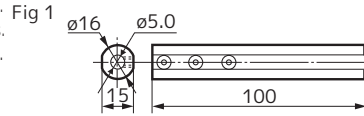
Figure shows right-handed (R) tool.

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								Cat. No.	Ref. Page	Fig	(N·m)		
Carbide	C05H-SWUB R/L0601-06K	WBPW-508 R/L K*	●	●	5.5	5	4.7	100	2.75	—	-12°	WB□□0601	B124	1	BFTX0203N	0.5	TRX06
	C08K-SWUB R/L0601-06	WBPW-508 R/L	●	●	5.5	8	7.0	125	2.75	30	-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. C05H-SWUB R/L0601-06K requires the separately sold HBB516 adapter sleeve. Holders marked with * show an ISO Cat. No.



Adapter Sleeve

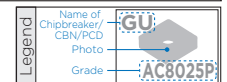
Cat. No.	Stock	Fig
HBB 516	●	1

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)		M (Stainless Steel)		K (Cast Iron)	S (Exotic Alloy)	N (Non-Ferrous)	H (Hardened Steel)
Process	Finishing	Medium Cutting	Finishing	Roughing	High-speed Finishing	Finishing to Medium Cutting	—	Uncoated
General Machining	FW T1500A	FX AC1030U	FX AC1030U	FX AC1030U	SUMIBORON BN7125	FX AC5015S	SUMIDIA DA1000	SUMIBORON BNX20
High-precision	FW T1500A	FX AC1030U	FX AC1030U	FX AC1030U	SUMIBORON BN7125	FX AC5015S	SUMIDIA DA1000	SUMIBORON BNX20
Recommended Cutting Conditions	I _{CS} A10 -		I _{CS} A14 -		I _{CS} A16 -	I _{CS} A18 -	I _{CS} A22 -	I _{CS} A20 -

The FY type chipbreaker (corner radius RE 0.2mm and below) and SUMIBORON and SUMIDIA inserts can also be used for stop-boring.

S-SWUP type



Internal Finishing (Small Diameter)
Screw-on

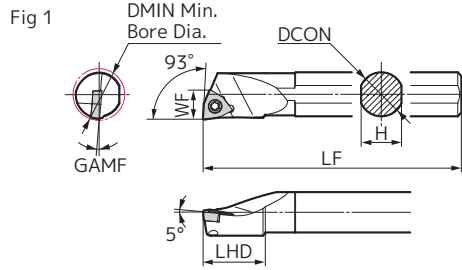
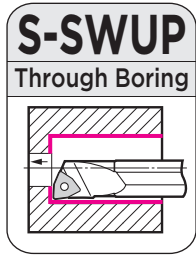


Figure shows right-handed (R) tool.

Sumi Small

Boring Bars

E

Holder

Parts

Dimensions (mm)

Shank Material	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	(For Torx hole)	
Steel	S12M-SWUP R/L1102-14	●	●	14	12	11	150	7	17	-6°	WP□□1102	B125	1	BFTX02505N	1.1	TRX08
	S16Q-SWUP R/L1102-18	●	●	18	16	15	180	9	18	-3°						
	S16Q-SWUP R/L1603-18	●	●	18	16	15	180	9	18	-3°	WP□□1603	B125	1	BFTX0407N	3.4	TRX15
	S20R-SWUP R/L1603-22	●	●	22	20	18	200	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.

C

D

R

S

T

V

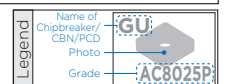
W

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 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



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

S-DWLN type / D-DWLN type



Medium Diameter General-purpose Double Clamp

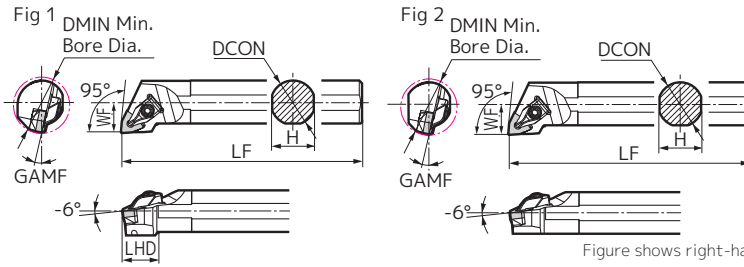
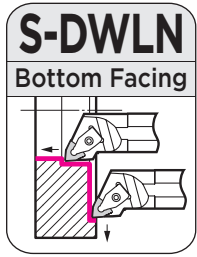


Figure shows right-handed (R) tool.

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	LHD	GAMF	Cat. No.	Ref. Page	Fig
Steel	S32S-DWLN R/L0604-40	●	●	40	32	30	250	22.0	29	-10°	WN□□0604	B61	~ 1	1	SCP-4	5.0	WNS0603B	BFTX0307N	LH040	LH025
	S25R-DWLN R/L0804-32	●	●	32	25	23	200	17.0	26	-12°	WN□□0804	B63	~ 1	1	SCP-2	5.0	WNS0803B	BFTX0307N	LH040	LH025
	S32S-DWLN R/L0804-40	●	●	40	32	30	250	22.0	26	-10°		~ 1	1	WNS0804B			BFTX0409N			
	S40T-DWLN R/L0804-50	●	●	50	40	37	300	27.0	26	-10°		~ 1	1							
	S50U-DWLN R/L0804-63	●	●	63	50	47	350	31.5	—	-10°		~ 2	2							

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

Clamp Set Parts **IES E82**



Medium Diameter General-purpose Double Clamp

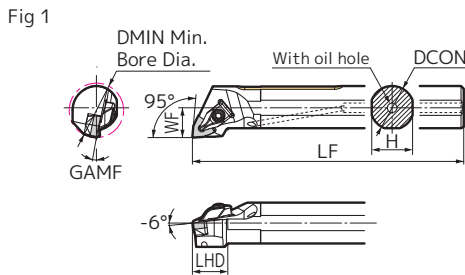
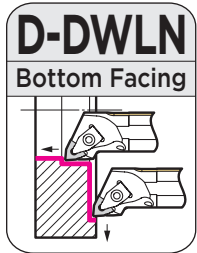


Figure shows right-handed (R) tool.



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	LHD	GAMF	Cat. No.	Ref. Page	Fig
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DWLN R/L0804-32	●	●	32	25	23	300	17	26	-12°	WN□□0804	B63	~ 1	1	SCP-2	5.0	WNS0803B	BFTX0307N	LH040	LH025
	D32T-DWLN R/L0804-40	●	●	40	32	30	300	22	26	-10°		~ 1	1	WNS0804B			BFTX0409N			
	D40U-DWLN R/L0804-50	●	●	50	40	37	350	27	26	-10°		~ 1	1							

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

Clamp Set Parts **IES E82**

*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.

Note: The GAMF dimensions in red have been changed from those in the 2023-2024 General Catalogue.

S-PWLN type



Medium Diameter General-purpose Lever Lock

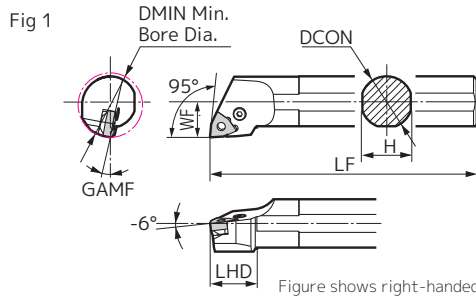
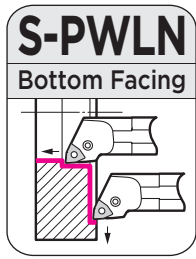


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

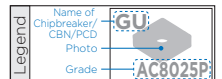
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert			Lever Pin	Bolt	Shim	Shim Retainer	Wrench
		R	L								Cat. No.	Ref. Page	Fig					
Steel	S32S-PWLN R/L0604-40	●	●	40	32	30	250	22	29	-10°	WN□□0604	B61 ~	1	LCL3	LCS3	LSW317	LSP3	LH025
	S32S-PWLN R/L0804-40	●	●	40	32	30	250	22	29	-10°	WN□□0804	B63 ~	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.

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

1st Recommended Insert

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



Application 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	GU	MU	EF	EG	EM	UZ	GZ	EF	EG	EM	SUMIBORON	SUMIBORON
	T1500Z	AC8115P	AC8020P	AC6020M	AC6020M	AC6030M	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	BNC2115	BN2000
General Machining	SU	GU	MU	EF	EG	EM	GZ	GZ	EF	EG	EM	SUMIBORON	SUMIBORON
	AC8115P	AC8025P	AC8025P	AC6030M	AC6030M	AC6135M	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EH	EM	GZ	No Chipbreaker	EF	EG	EM	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6135M	AC6145M	AC4125K	AC4125K	AC5025S	AC5025S	AC5025S	BNC2125	BN2000
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~		A18 ~			A20 ~	

CKB series

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

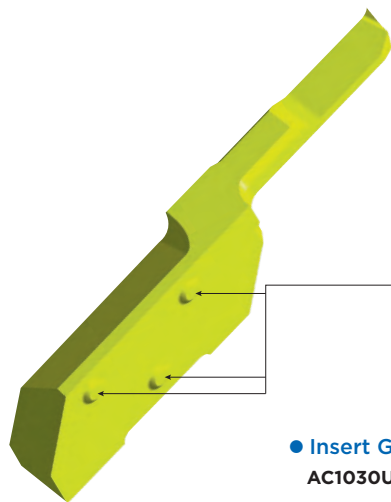


■ Features

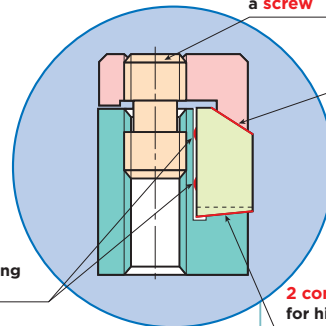
- Minimum bore diameters **from $\varnothing 1\text{mm}$ to $\varnothing 5\text{mm}$** are now in stock.
- Maximum boring depth of **20mm** ($\varnothing 4$, $\varnothing 5\text{mm}$).
- Can be used with various small lathes.
- Unique design ensures **high indexing accuracy**.
- Indexable inserts are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

● High indexing accuracy

● Indexable inserts are easily handled



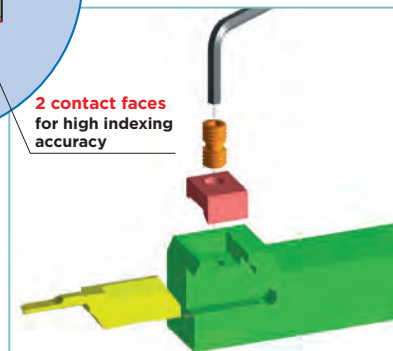
3 points of contact for high indexing accuracy



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

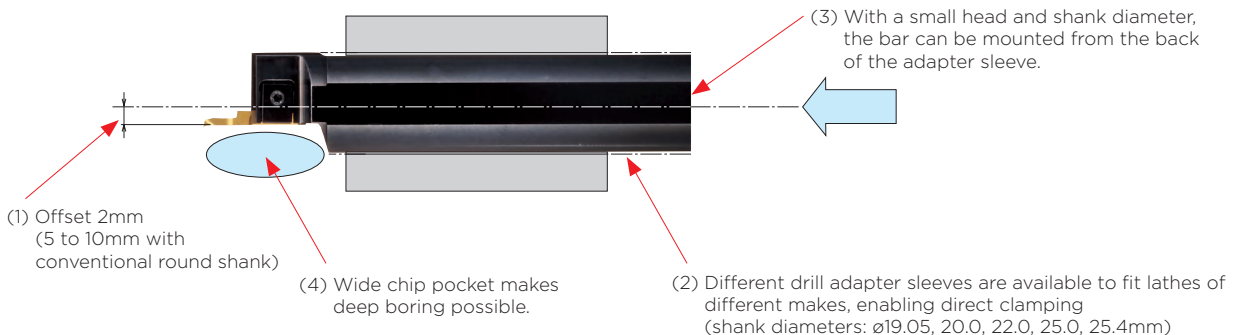
AC1030U: Stainless Steel, General Steel

ACZ150: Stainless Steel, General Steel

DA2200: Aluminum Alloy and Non-Ferrous Metals

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

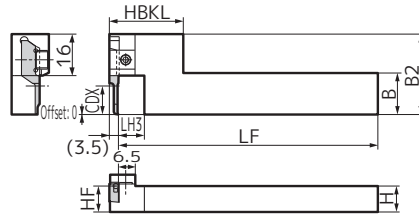
● 2mm offset bars expand application range.



Very Small Diameter L type
Clamp-on



Fig 1



H = HF (Cutting Edge Height)

Holder

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

KBMX type (For Very Small Diameter L type Holder) (Coated Carbide)

Cat. No.	AC1030U	Min. Bore Dia. DMIN	Cutting Edge Position WF3	Offset E3	Corner Radius RE	Overall Length L	Boring Depth CDX	Fig 1
KBMX L0206-05R	●	2.0	0.5	0.25	0.05	23.5	6	<p>* Figure shows left-handed insert with a right-hand cutting edge</p>
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 : $vc = 60\text{m/min}$
Feed Rate : $f = 0.01\text{mm/rev}$
Depth of Cut : $ap = 0.03\text{mm}$
Coolant : Non-water-soluble coolant

Application Example (2)

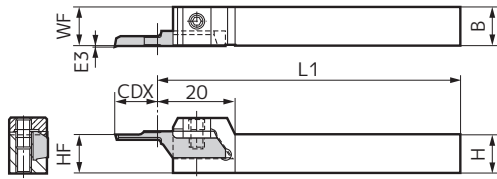
Automotive Fuel Pump Component (SUS430)

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

CKB series

Square Shank
Clamp-on

Fig 1



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

Sumi Small

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning

Holder

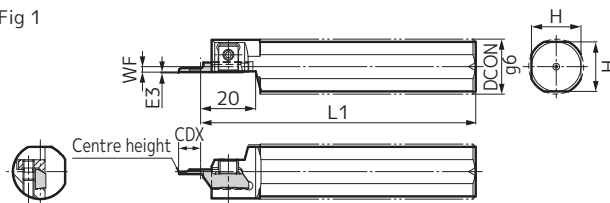
Parts

Dimensions (mm)

Cat. No.	Stock	Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Fig	Clamp Plate	Double Screw	Wrench
		H	B	L1	WF	HF				
CKB R1010-16	●	10	10	100	10	10	1	CKBW16	WB4-8	LH020 <small>(For Hexagonal hole)</small>
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

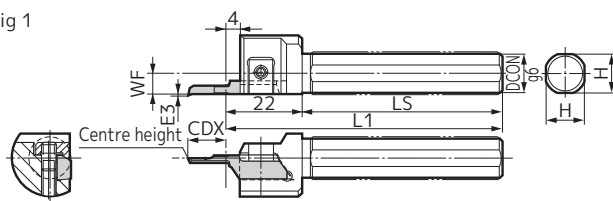
Parts

Dimensions (mm)

Cat. No.	Stock	Diameter	Height	Overall Length	Cutting Edge Distance	Fig	Clamp Plate	Double Screw	Wrench
		DCON	H	L1	WF				
S1905H-CKB RS-16	●	19.05	17	100	2	1	CKBW16	WB4-8	LH020 <small>(For Hexagonal hole)</small>
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)

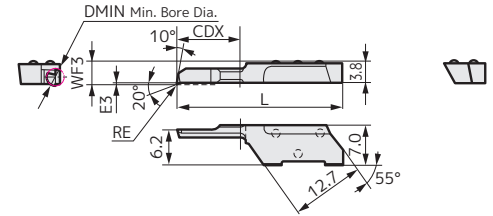
Cat. No.	Stock	Diameter	Height	Overall Length	Length	Cutting Edge Distance	Fig	Clamp Plate	Double Screw	Wrench
		DCON	H	L1	LS	WF				
S10F-CKB R-16	●	10	9	80	58	5	CKBW16	WB4-8	LH020 <small>(For Hexagonal hole)</small>	
S12F-CKB R-16	●	12	11	80	58	6				
S16H-CKB R-16	●	16	15	100	78	8				
S19K-CKB R-16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

(Coated Carbide)

KBMX type (Internal Boring)

Dimensions (mm)

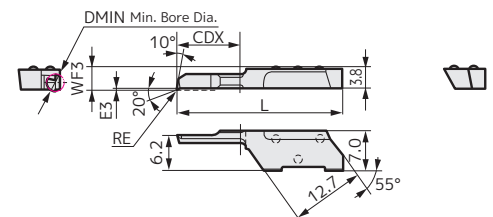
Cat. No.	AC1030U	Min. Bore Dia. DMIN	Cutting Edge Position WF3	Offset		Corner Radius		Overall Length L	Boring Depth CDX
				E3	RE	RE	RE		
KBMX R0103-05	●	1.0	4.00	0.20	0.05	20.5	3		
KBMX R0103-20	●	1.0	4.00	0.20	0.20	20.5	3		
KBMX R01506-05	●	1.5	4.05	0.25	0.05	23.5	6		
KBMX R01506-20	●	1.5	4.05	0.25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



KBMX-T type (Internal Boring)

Dimensions (mm)

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



Recommended Cutting Conditions **E69**

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

Boring Bars

E

C

D

R

S

T

V

W

Shut Down Training
Very Small Diameter Turning

(Coated Carbide / SUMIDIA)

KBMZ type (Internal Back Turning)

Dimensions (mm)

Cat. No.	AC1030U	Min. Bore Dia.	Cutting Edge Distance	Offset	Corner Radius	Overall Length	Maximum Boring Depth	Boring Depth
		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	●	4.0	5.10	1.3	0.20	28.5	11	9
KBMZ R0511-05	●	5.0	5.10	1.3	0.05	28.5	11	9
KBMZ R0511-20	●	5.0	5.10	1.3	0.20	28.5	11	9

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	0.8	11
KBMG R0411-10	●	4.0	4.90	2.00	0.10	28.5	0.8	11
KBMG R0511-05	●	5.0	5.10	1.00	0.05	28.5	1.0	11
KBMG R0511-10	●	5.0	5.10	2.00	0.10	28.5	1.0	11

KBMF type (Face Grooving)

Dimensions (mm)

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

KBMX type (SUMIDIA/Internal Boring)

Dimensions (mm)

Cat. No.	DA2200	Min. Bore Dia.	Cutting Edge Distance	Offset	Corner Radius	Overall Length	Maximum Boring Depth
		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

Recommended Cutting Conditions **KS E69**

Note: The CDX dimensions in red have been changed from those in the 2023-2024 General Catalogue.

Boring Bars
 E
 C
 D
 R
 S
 T
 V
 W
 Small Diameter Turning / Key Small Diameter Turning

Recommended Cutting Conditions (CKB series)

Work Material		P General Steel	M Stainless Steel	N Non-Ferrous Metal		S Exotic Alloy
Internal Boring	Insert Grades	ACZ150/AC1030U	ACZ150/AC1030U	ACZ150/AC1030U	DA2200	ACZ150/AC1030U
	Spindle Speed n (min ⁻¹)	2,000 to 10,000	2,000 to 8,000	5,000 to 15,000	5,000 to 15,000	2,000 to 6,000
	Depth of Cut ap (mm)	up to 0.2	up to 0.2	up to 0.2	up to 0.2	up to 0.2
	Feed Rate f (mm/rev)	up to 0.05	up to 0.05	up to 0.05	up to 0.05	up to 0.05
Internal Back Turning	Spindle Speed n (min ⁻¹)	2,000 to 10,000	2,000 to 8,000	5,000 to 15,000	—	2,000 to 6,000
	Depth of Cut ap (mm)	up to 0.2	up to 0.2	up to 0.2	—	up to 0.2
	Feed Rate f (mm/rev)	up to 0.05	up to 0.05	up to 0.05	—	up to 0.05
Internal Grooving	Spindle Speed n (min ⁻¹)	2,000 to 10,000	2,000 to 8,000	5,000 to 15,000	—	2,000 to 4,000
	Feed Rate f (mm/rev)	up to 0.03	up to 0.03	up to 0.05	—	up to 0.02
Face Grooving	Spindle Speed n (min ⁻¹)	2,000 to 10,000	2,000 to 8,000	5,000 to 15,000	—	2,000 to 4,000
	Feed Rate f (mm/rev)	up to 0.03	up to 0.03	up to 0.05	—	up to 0.02

Boring Bars

E

C

D

R

S

T

V

W

 Small Diameter Turning
 Very Small Diameter Turning

BXBR series

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning
Very Small Diameter Turning



Features

- Economical 2-cornered bars
- Boring depths of 5D (5 times the shank diameter)
- Usable at any desired overhang
- Shank size = min. bore diameter for easy selection. (Available from $\phi 2.0\text{mm}$ to $\phi 5.0\text{mm}$ in 0.5mm increments)
- KBMX type cutting edge used. Bars with no chipbreaker are also available in stock
- Corner radius expansion (RE = 0.15mm)
- AC1030U with excellent cutting edge quality now in stock (bars with chipbreaker only)

Carbide

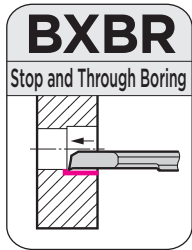
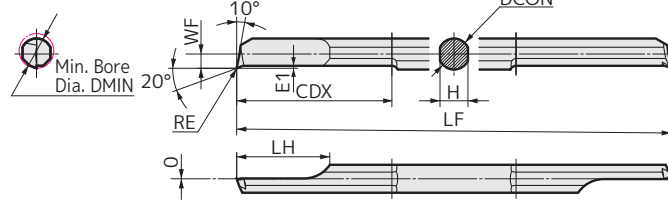


Fig 1 (shows tool with chipbreaker)



Internal Finishing (Small Diameter) Solid

SumiSmall

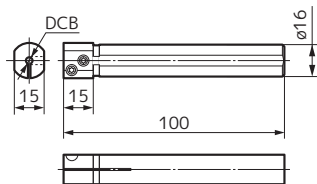
Bar (With Chipbreaker) (Coated Carbide)

Dimensions (mm)

Cat. No.	AC1030U	ACZ150	AC530U	*Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LH	Maximum Boring Depth CDX	Offset E1	Corner Radius RE	Applicable Adapter Sleeve	Fig
BXBR 02005R	●	●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.05	HBX 2016	1
BXBR 02015R	●	●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.15	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 02515R	●	●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.15	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 03015R	●	●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.15	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 03515R	●	●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.15	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 04015R	●	●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.15	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 04515R	●	●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.15	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 05015R	●	●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.15	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

* Boring depth CDX or less.

Fig 1



Adapter Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder	Fig
HBX 2016	●	2.0	BXBR 0200OR(-NB)	1
HBX 2516	●	2.5	BXBR 0250OR(-NB)	1
HBX 3016	●	3.0	BXBR 0300OR(-NB)	1
HBX 3516	●	3.5	BXBR 0350OR(-NB)	1
HBX 4016	●	4.0	BXBR 0400OR(-NB)	1
HBX 4516	●	4.5	BXBR 0450OR(-NB)	1
HBX 5016	●	5.0	BXBR 0500OR(-NB)	1

Parts (for Adapter Sleeve)

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

Adapter sleeve is optional.

BXBR bars can also be used with HBB type adapter sleeves. Commercially available adapter sleeves may also be used. Refer to page E76 for details on HBX type adapter sleeves.

Solid Carbide Bar BXBR series

Carbide

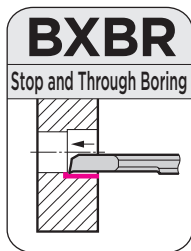
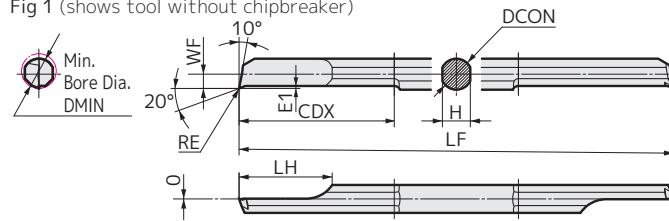


Fig 1 (shows tool without chipbreaker)



Internal Finishing (Small Diameter)
Solid

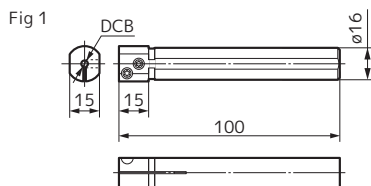
Sumi Small

Bar (No Chipbreaker) (Coated Carbide)

Dimensions (mm)

Cat. No.	AC1030U	ACZ150	AC530U	*Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LH	Maximum Boring Depth CDX	Offset E1	Corner Radius RE	Applicable Adapter Sleeve	Fig
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.



Adapter Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder	Fig
HBX 2016	●	2.0	BXBR 0200OR(-NB)	1
HBX 2516	●	2.5	BXBR 0250OR(-NB)	1
HBX 3016	●	3.0	BXBR 0300OR(-NB)	1
HBX 3516	●	3.5	BXBR 0350OR(-NB)	1
HBX 4016	●	4.0	BXBR 0400OR(-NB)	1
HBX 4516	●	4.5	BXBR 0450OR(-NB)	1
HBX 5016	●	5.0	BXBR 0500OR(-NB)	1

BXBR bars can also be used with HBB type adapter sleeves.
Commercially available adapter sleeves may also be used.
Refer to page E76 for details on HBX type adapter sleeves.

Parts (for Adapter Sleeve)

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

Adapter sleeve is optional.

Recommended Cutting Conditions

Work Material		P General Steel	M Stainless Steel	N Non-Ferrous Metal	S Exotic Alloy
Internal Boring	Insert Grades	ACZ150/AC1030U	ACZ150/AC1030U	ACZ150/AC1030U	ACZ150/AC1030U
	Spindle Speed n (min ⁻¹)	2,000 to 10,000	2,000 to 8,000	5,000 to 15,000	2,000 to 6,000
	Depth of Cut ap (mm)	up to 0.2	up to 0.2	up to 0.2	up to 0.2
	Feed Rate f (mm/rev)	up to 0.05	up to 0.05	up to 0.05	up to 0.05

BSME series / SEXC series

Boring Bars

E

C

D

R

S

T

V

W

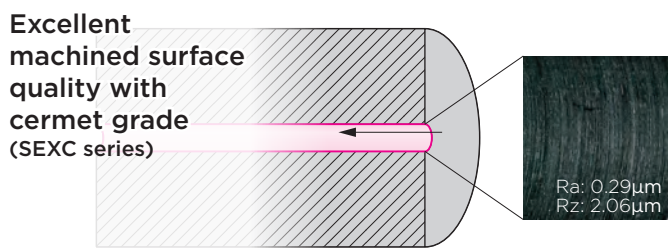
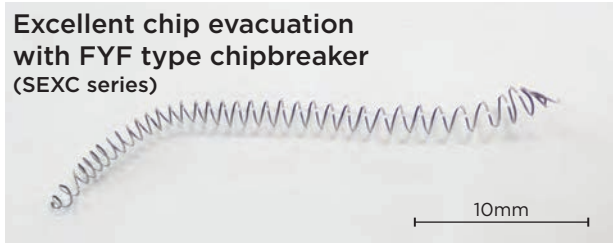
Small Diameter Turning
Key Small Diameter Turning



■ Features

- For internal boring of hardened steel with min. bore diameters from $\varnothing 2.5\text{mm}$.
- Achieves high-precision cutting edge positioning thanks to the newly developed clamp mechanism.
- Realises high-efficiency machining by switching from grinding to cutting in the small diameter range.
- BSME series (brazed type)
Can be used with bore diameters from $\varnothing 2.5$ to 5.0mm .
- SEXC series (indexable Insert type)
Can be used with bore diameters from $\varnothing 4.0$ to 6.0mm .
Expansion of coated carbide and cermet grades.
- Economical 2-cornered insert.

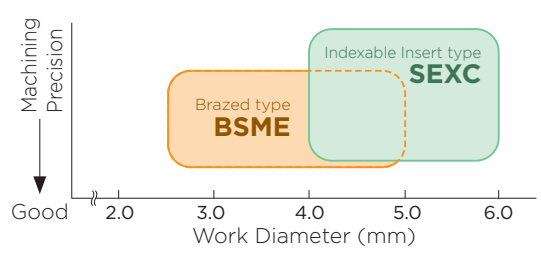
Brazed CBN type BSME series		Indexable Insert type SEXC series	
Min. Bore Dia.: $\varnothing 2.5$ to 5.0mm		Min. Bore Dia.: $\varnothing 4.0$ to 6.0mm	
High-quality, unique cutting edge shape	<p>Internal Coolant Supply (Standard)</p>	2-cornered insert used	<p>Internal Coolant Supply (Standard)</p>
<h3>Clamp Mechanism</h3> <p>Achieves high-precision cutting edge positioning by combining a holder with a tapered rear end and an adapter sleeve with an internal positioning pin. (common to BSME series and SEXC series)</p>			



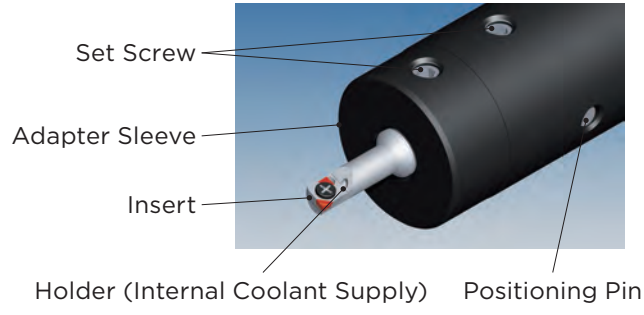
Work Material: SUS304 Internal Boring, Insert: ECEM 03X102L-FYF (AC1030U)
Cutting Conditions: $v_c = 100\text{m/min}$, $f = 0.05\text{mm/rev}$, $a_p = 0.03\text{mm}$, Work Dia.: $\varnothing 4$

Work Material: SCM415 Internal Boring, Insert: ECEM 03X102L-FYF (T1500A)
Cutting Conditions: $v_c = 100\text{ m/min}$, $f = 0.03\text{ mm/rev}$, $a_p = 0.03\text{ mm}$

Application Range



Basic Configuration



Small Diameter Boring Bars BSME series

CBN

SUMIBORON
Brazed

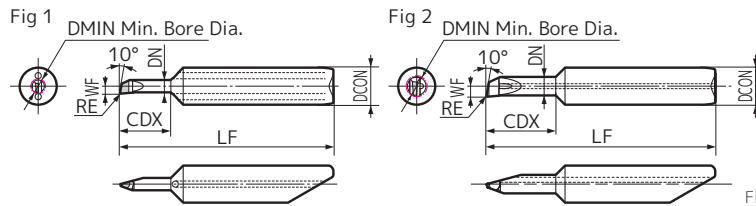
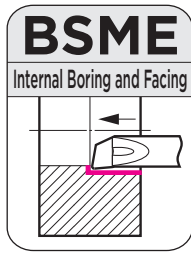


Figure shows right-handed (R) tool.

SumiSmall

Holder (SUMIBORON)

Dimensions (mm)

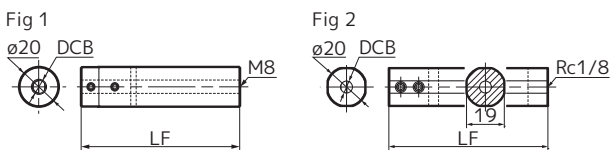
Cat. No.	BN2000		Min. Bore Dia. DMIN	Diameter DCON	Neck Diameter DN	Overall Length LF	Cutting Edge Distance WF	Maximum Boring Depth CDX	Corner Radius RE	Applicable Adapter Sleeve	Fig
	R	L									
BSME R/L25020D2S6	●	●	2.5	6.0	2.0	32.0	1.20	5.3	0.2	HBSM6020 HBSM6020A	1
BSME R/L25020D3S6	●	●	2.5	6.0	2.0	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 series requires HBSM6020(A) adapter sleeve (sold separately).

Identification Code

BSM E R 350 20 D2 S6

Series Code Carbide Shank with Oil Hole Feed Direction Min. Bore Dia. Cutting Edge Corner Radius L/D Shank Dia.



Adapter Sleeve (Sold Separately)

Parts Dimensions (mm)

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

Mounting Method **E75**

Alignment Jig (Sold Separately) For HBSM6020 adapter sleeve

Cat. No.	Stock
AFBSM60	●

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

Recommended Cutting Conditions

Work Material	Hardened Steel	
Spindle Speed n (min^{-1})	Above 2,000	Above 2,000
Depth of Cut a_p (mm)	0.01-0.15	0.01-0.15
Feed Rate f (mm/rev)	0.01-0.10	0.01-0.10

May cause chattering or chipping at the cutting edge during low-speed machining.

Excessive depth of cut causes deformation of the tool, which consequently leads to deterioration of dimensional tolerance.

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Boring Bars
Very Small Diameter Boring Bars

Small Diameter Boring Bars SEXC series



Carbide / Cermet / SUMIBORON
Screw-on

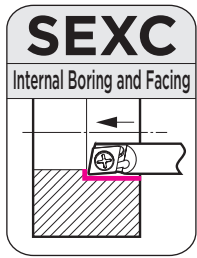


Fig 1

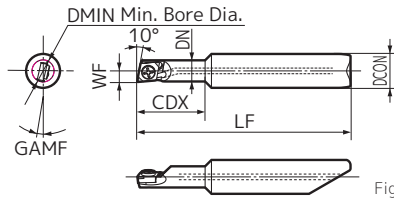


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

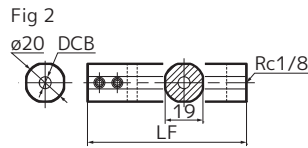
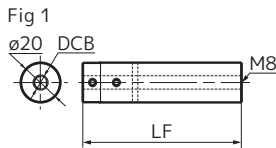
Cat. No.	Stock		Min. Bore Dia.	Diameter	Neck Diameter	Overall Length	Cutting Edge Distance	Boring Depth	Rake Angle	Applicable Adapter Sleeve	Fig	Bolt		Wrench
	R	L										DCON	LF	
E06D2-SEXC R/L03-04P	●	●	4.0	6.0	3.75	33.75	1.95	8	-13°	HBSM6020 HBSM6020A	1	MIB1.6-2	0.2	SDBSM
E06D3-SEXC R/L03-04P	●	●	4.0	6.0	3.75	37.75	1.95	12	-13°		1			
E06D2-SEXC R/L03-05P	●	●	5.0	6.0	4.75	35.25	2.45	10	-12°		1			
E06D3-SEXC R/L03-05P	●	●	5.0	6.0	4.75	40.25	2.45	15	-12°		1			
E06D2-SEXC R/L03-06P	●	●	6.0	6.0	5.75	36.75	2.95	12	-11°		1			
E06D3-SEXC R/L03-06P	●	●	6.0	6.0	5.75	42.75	2.95	18	-11°		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. The SEXC series requires HBSM6020(A) adapter sleeve (sold separately).

Identification Code

E 06 D2 - S E X C R 03 - 04 P

Carbide Shank with Oil Hole Shank Dia. L/D Screw-on Insert Shape Cutting Edge Shape Insert Relief Angle Feed Direction Insert Inscribed Circle Min. Bore Dia. Accessories



Adapter Sleeve (Sold Separately)

Parts

Dimensions (mm)

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

Mounting Method **E75**

Alignment Jig (Sold Separately) For HBSM6020 adapter sleeve

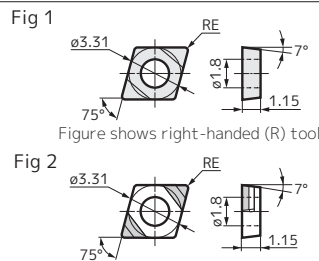
Cat. No.	Stock
AFBSM60	●

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

Insert (Coated Carbide / SUMIBORON)

Dimensions (mm)

Cat. No.	AC1030U		T1500A		BN2000	BN7125	BN7000	Corner Radius	Fig
	R	L	R	L					
ECEM 03X1005 R/L-FYF	●	●	●	●	—	—	—	0.05	1
ECEM 03X101 R/L-FYF	●	●	●	●	—	—	—	0.1	1
ECEM 03X1015 R/L-FYF	●	●	●	●	—	—	—	0.15	1
ECEM 03X102 R/L-FYF	●	●	●	●	—	—	—	0.2	1
2NU-ECXA 030X02 LE	—	—	—	—	●	—	—	0.2	2
2NU-ECXA 030X02 LF	—	—	—	—	●	●	▲	0.2	2



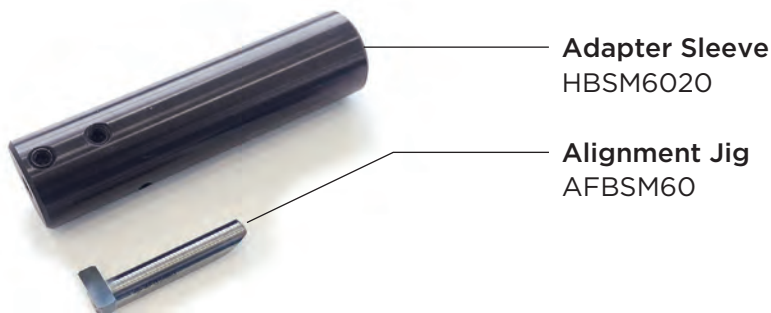
Part Number Suffix: LE: Honed Edge, LF: Sharp Edged, FYF: Sharp Edged (with Chipbreaker)

Recommended Cutting Conditions




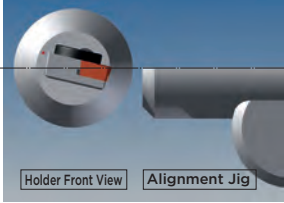
Work Material	P General Steel		M Stainless Steel		K Cast Iron		N Non-Ferrous Metal		S Exotic Alloy	H Hardened Steel		
Insert Grades	AC1030U	T1500A	AC1030U	T1500A	AC1030U	T1500A	AC1030U	T1500A	AC1030U	BN2000	BN7125	BN7000
Spindle Speed n (min ⁻¹)	2,000-10,000	2,000-10,000	2,000-8,000	2,000-8,000	2,000-10,000	2,000-10,000	5,000-15,000	5,000-15,000	2,000-6,000	Above 2,000	Above 2,000	Above 2,000
Depth of Cut ap (mm)	Up to 0.2	Up to 0.2	Up to 0.2	Up to 0.2	Up to 0.2	Up to 0.2	Up to 0.2	Up to 0.2	Up to 0.2	0.01-0.15	0.01-0.15	0.01-0.15
Feed Rate f (mm/rev)	Up to 0.05	Up to 0.05	Up to 0.05	Up to 0.05	Up to 0.05	Up to 0.05	Up to 0.05	Up to 0.05	Up to 0.05	0.01-0.10	0.01-0.10	0.01-0.10

May cause chattering or chipping at the cutting edge during low-speed machining. Excessive depth of cut causes deformation of the tool, which consequently leads to deterioration of dimensional tolerance.

■ Dedicated Adapter Sleeve/Alignment Jig



■ Mounting Method (HBSM6020A has a side lock flat, so centring with an alignment jig is not required.)

<p>1 Insert the alignment jig until it hits the positioning pin set in the adapter sleeve, and tighten the two set screws.</p>	<p>(2) Tighten the two set screws</p>  <p>(1) Insert until it hits the positioning pin</p>
<p>2 Mount the adapter sleeve into the sleeve holder and temporarily tighten the fastening screws.</p>	 <p>Holder for Adapter Sleeve</p> <p>Temporary screw fastening</p>
<p>3 Rotate the adapter sleeve gradually to adjust until the flat strip of the alignment jig is horizontal.</p> 	<p>When a boring bar is mounted into the adapter sleeve adjusted by the alignment jig, its cutting edge position will automatically be set at the centre.</p>  <p>Holder Front View Alignment Jig</p>
<p>4 Using a tool presetter, measure the diameter of the tool.</p>	

*Steps 1 and 3 above are not required when using HBSM6020A.

BNBX series



SUMIBORON
Braze

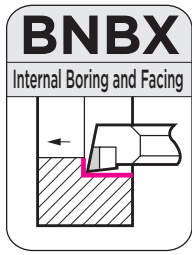
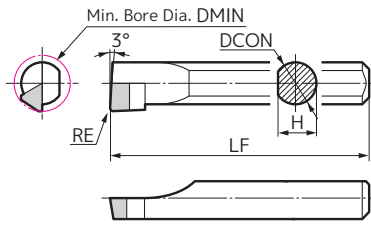


Fig 1



Holder (SUMIBORON)

Dimensions (mm)

Cat. No.	BN2000	BN7125	BN7000	Min. Bore Dia.	Diameter	Height	Overall Length	Corner Radius	Applicable Adapter Sleeve	Fig
				DMIN	DCON	H	LF	RE		
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 adapter sleeves, but HBX type adapter sleeves are recommended for bars below ø6mm.

Fig 1

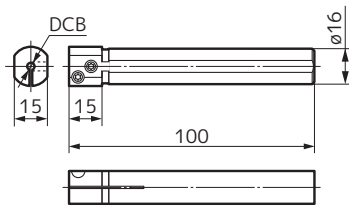
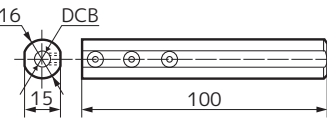


Fig 1 ø16



Adapter 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

Adapter 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 adapter sleeve can also be used with ø2.5 to 6.0mm holders.

Parts (for Adapter Sleeve)

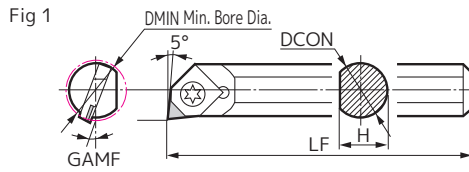
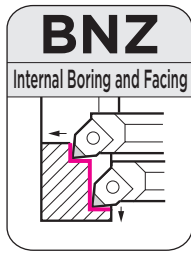
Applicable Adapter Sleeve	Flat Insert Screw	Set Screw	Wrench
HBX2000	BFTX0409N	1.5 BT06035T	TRD (For Torx hole)
HBX3000	BFTX0409N	3.0 BT06035T	TRD15 (For Torx hole)
HBX4000			
HBX5000			
HBX6000	—	BT0404	LH (For Hexagonal hole)
HBB0000			

Boring Bars
E
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W
Small Diameter Turning
Very Small Diameter Turning

BNZ series



SUMIBORON
Screw-on



SumiSmall

Holder

Parts

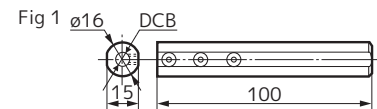
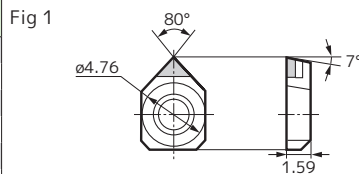
Dimensions (mm)

Cat. No.	Stock	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Rake Angle GAMF	Fig	Parts			
								Flat Insert Screw	Wrench	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	BN7125	BN7000	Corner Radius RE
		Single pack	NU-ZNEX 040102 NU-ZNEX 040104 NC-ZNEX 040102LE NC-ZNEX 040104LE NC-ZNEX 040102LT NC-ZNEX 040104LT	—	—	●	●	
10 pack	T-NU-ZNEX 040102 T-NU-ZNEX 040104	—	—	●	—	—	—	0.2 0.4



Adapter Sleeve

Dimensions (mm)

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

HBX type adapter sleeve (HBX6016) can also be used with BNZ606R.

Boring Bars

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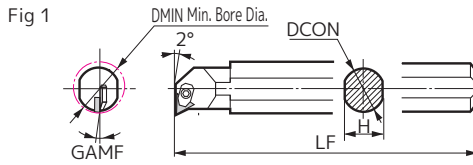
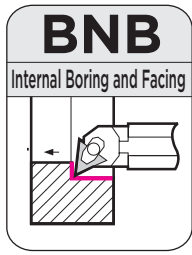
W

Small Diameter Turning
Very Small Diameter Turning

BNB series



SUMIBORON
Clamp-on



Boring Bars

E

Holder

Parts

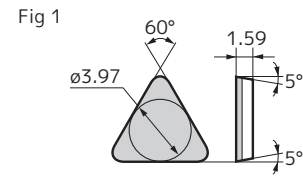
Dimensions (mm)

Cat. No.	Stock	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Rake Angle GAMF	Fig	Clamp Plate	Bolt	Nut	Wrench
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	BN7125	BN7000	DA150	DA1000	
TBGN 060102B	●	●	●	●	●	●	●	●	●	0.2
TBGN 060104B	▲	●	●	●	●	●	▲	●	●	0.4
TBGN 060108B	●	●	●	●	●	●	▲	●	●	0.8
TBGN 060102-BSTN^{*1}	—	●	—	—	—	—	—	—	—	0.2
TBGN 060104-BSTN^{*1}	—	●	—	—	—	—	—	—	—	0.4
TBGN 060108-BSTN^{*1}	—	●	—	—	—	—	—	—	—	0.8
NF-TBGN 060102^{*2}	—	—	—	—	—	—	—	●	●	0.2
NF-TBGN 060104^{*2}	—	—	—	—	—	—	—	●	●	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

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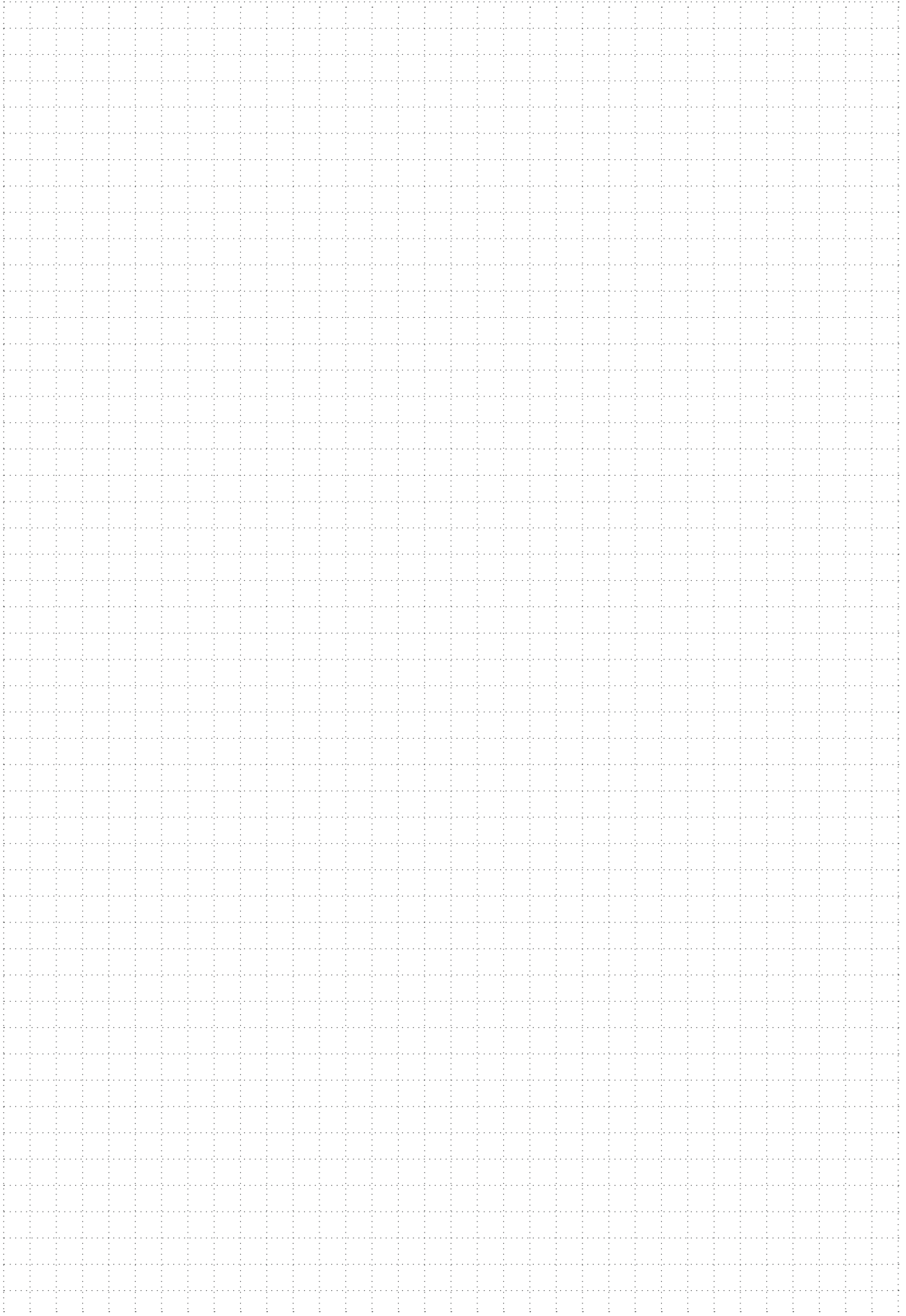
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Small Diameter Turning
Very Small Diameter Turning

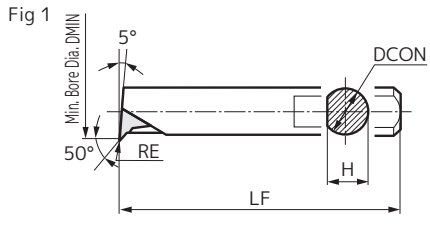
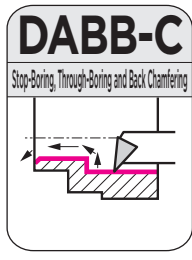
MEMO



DABB series

PCD

SUMIDIA
Braze



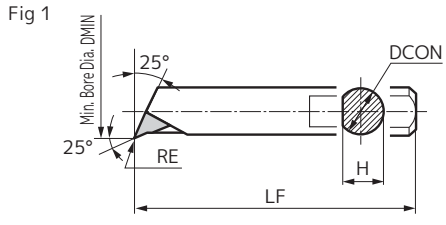
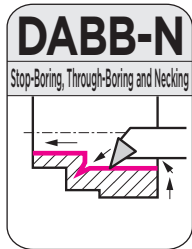
Holder (SUMIDIA)

Dimensions (mm)

Cat. No.	DA2200	Min. Bore Dia.	Diameter	Height	Overall Length	Corner Radius	Applicable Adapter Sleeve	Fig
		DMIN	DCON	H	LF	RE		
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
Braze

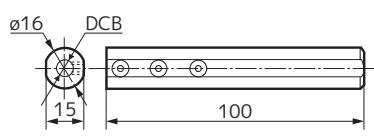


Holder (SUMIDIA)

Dimensions (mm)

Cat. No.	DA2200	Min. Bore Dia.	Diameter	Height	Overall Length	Corner Radius	Applicable Adapter Sleeve	Fig
		DMIN	DCON	H	LF	RE		
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



Adapter Sleeve

Dimensions (mm)

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

HBX type adapter sleeve can also be used.

Recommended Cutting Conditions

Work Material	Spindle Speed	Depth of Cut ap	Feed Rate f	Coolant
N Aluminum Alloy	Above 2,000 min ⁻¹	0.1mm or below	0.1mm/rev or below	Wet

Boring Bars

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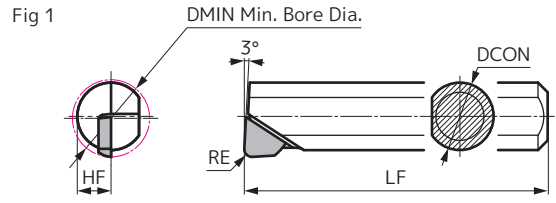
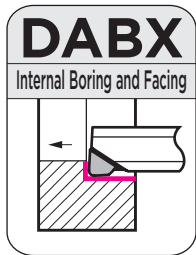
W

Small Diameter Turning
Very Small Diameter Turning

DABX series



SUMIDIA BINDERLESS
Braze

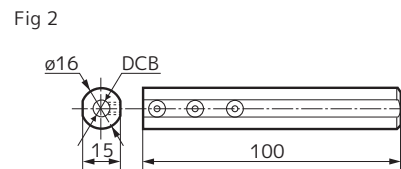
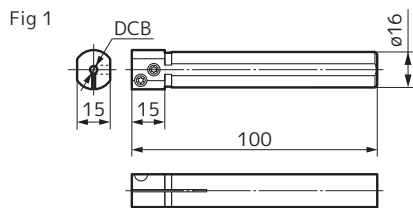


Holder

Dimensions (mm)

Cat. No.	NPD10	Min. Bore Dia. DMIN	Diameter DCON	Cutting Edge Height HF	Overall Length LF	Corner Radius RE	Applicable Adapter Sleeve	Fig
DABX025R-01	●	3.0	2.5	1.25	40	0.1	HBX 2516	1
DABX025R-02	●	3.0	2.5	1.25	40	0.2	HBX 2516	1
DABX025R-04	●	3.0	2.5	1.25	40	0.4	HBX 2516	1
DABX035R-01	●	4.0	3.5	1.75	40	0.1	HBX 3516	1
DABX035R-02	●	4.0	3.5	1.75	40	0.2	HBX 3516	1
DABX035R-04	●	4.0	3.5	1.75	40	0.4	HBX 3516	1

DABX series bars can be used with HBB type adapter sleeves, but HBX type adapter sleeves are recommended for machining when rigidity is required.



Adapter Sleeve (HBX type)

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder	Fig
HBX 2516	●	2.5	DABX 025R	1
HBX 3516	●	3.5	DABX 035R	1

Adapter Sleeve (HBB type)

Dimensions (mm)




Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder	Fig
HBB 2516	●	2.5	DABX 025R	2
HBB 3516	●	3.5	DABX 035R	2

Parts (for Adapter Sleeve)

Applicable Adapter Sleeve	Flat Insert Screw		Set Screw	Wrench
	Image	N-m	Image	Image
HBX 2516	BFTX0409N	1.5	BT06035T	TRD15
HBX 3516	BFTX0409N	3.0	BT06035T	TRD15
HBB 0000	—	—	BT0404	LH020

Clamp Set Parts

Parts

Applicable Clamp Set Cat. No.	Spring	Cap Screw	
			
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 ●	6.0
SCP-6	CSP12 ●	CP-M8-25-1 ●	

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