

# Boring Bars

## E1 to E82

# E



Boring Bars

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### Stock Markings and Symbols

- mark: Standard stocked item
- mark: To be replaced with the new item featured on the same page
- ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability)

- \* mark: Semi-standard stock (please confirm stock availability)
- mark: Stock or planned stock (please confirm stock availability)
- Blank: Made-to-order item
- mark: Not available

# Boring Bar series






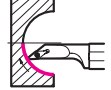
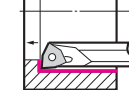

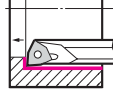
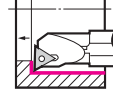
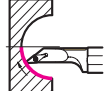
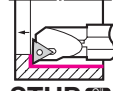

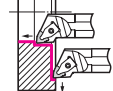
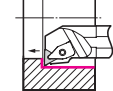
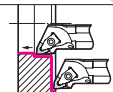

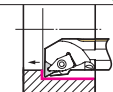


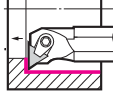
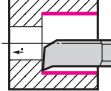


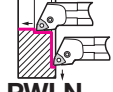
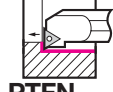
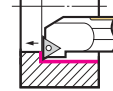

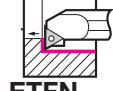
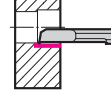


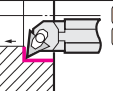


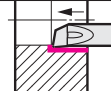





## Selection Guide by Tooling

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	 <b>S-SCLP</b> [BBPC]	 <b>S-SCLC</b>	 <b>S-SDUC</b> <b>S-SDQC</b>	 <b>S-SVUC</b> <b>S-SVUB</b>	 <b>S-SVQC</b> <b>S-SVQB</b>	 <b>S-SDZC</b>	 <b>S-SVZC</b> <b>S-SVZB</b>
	Steel with Oil Hole	 <b>A-SCLP</b>	 <b>A-SCLC</b>	 <b>A-SDUC</b> <b>A-SDQC</b>	 <b>A-SVUC</b> <b>A-SVQB</b>	—	—	—
	Steel with Anti-Vibration Mechanism	 <b>B-SCLP/D-SCLP</b> [XBPC/XBPC-H]	 <b>B-SCLC</b>	 <b>B-SDUC</b> <b>B-SDQC</b>	 <b>B-SVUB</b> <b>B-SVQB</b>	—	—	 <b>B-SVZB</b>
	Carbide	 <b>C-SCLP</b> [WBPC]	 <b>C-SCLC</b> <b>E-SCLC</b>	 <b>C-SDUC</b>	 <b>C-SVUB</b> <b>C-SVQB</b>	—	—	 <b>C-SVZB</b>
Double Clamp	Steel	 <b>S-DCLN</b>	—	 <b>S-DDUN</b> <b>S-DDQN</b>	—	—	—	—
	Steel with Oil Hole	 <b>D-DCLN</b>	—	 <b>D-DDUN</b>	—	—	—	—
Clamp-on	Steel	—	—	—	—	—	—	—
Lever Lock	Steel	 <b>S-PCLN</b>	—	 <b>S-PDUN</b>	—	—	 <b>S-PDZN</b>	—
	Steel with Anti-Vibration Mechanism	 <b>B-PCLN</b>	—	—	—	—	—	—
Pin Lock	Steel	 <b>S-ECLN</b> [BCLN]	—	 <b>S-EDUN</b> [BDUN]	—	—	 <b>S-EDZN</b> [BDZN]	—
Special Double Clamp	T-REX Tool Holders	—	—	 <b>S-DTR55C</b> SumiTurn T-REX	—	—	—	—
CBN	Carbide	 <b>BNZ</b>	—	—	—	—	—	—

Inside [ ] shows previous product series : With oil hole : Lineup of dedicated insert grades (includes solid/brazed)

# Boring Bar series

## Selection Guide by Tooling

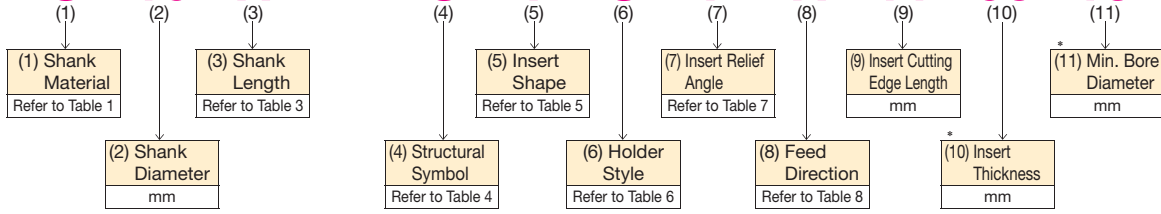
Applications		Spherical Internal Facing	Through Boring		Stop Boring		
Insert Shape	Structure/Shank Material	35° Diamond type 	Trigon type  Others	Square type 	Trigon type 	Triangular type 	Others
Screw-on	Steel	 <b>S-SVJB</b> E50 <b>S-SVJC</b> E51	 <b>S-SWUB</b> [BBPW] E62 <b>S-SWUP</b> E63	 <b>S-SSKP</b> [BBPS] E36 <b>S-SSKC</b> E38	 <b>S-SWUB</b> [BBPW] E62 <b>S-SWUP</b> E63	 <b>S-STUP/S-STUB</b> [BBPT] E42	—
	Steel with Anti-Vibration Mechanism	 <b>B-SVJB</b> E50	—	—	—	 <b>A-STUP</b> E42	—
Double Clamp	Steel	—	—	 <b>S-DSKN</b> E39	 <b>S-DWLN</b> E64	 <b>S-DTFN</b> E47	—
	Steel with Anti-Vibration Mechanism	—	—	—	 <b>D-DWLN</b>  E64	 <b>D-DTFN</b>  E47	—
Clamp-on	Steel	—	—	 <b>S-CSKP</b> E37	—	 <b>S-CTFP</b> E46	 <b>CKB</b>  PCD E66
Lever Lock	Steel	—	—	 <b>S-PSKN</b> E39 <b>S-PSYN</b> E40	 <b>S-PWLN</b> E65	 <b>S-PTFN</b> E48	—
	Steel with Anti-Vibration Mechanism	—	—	—	—	 <b>B-PTFN</b> E48	—
Pin Lock	Steel	—	—	 <b>S-ESKN</b> [BSKN] E40 <b>S-ESYN</b> [BSYN] E41	—	 <b>S-ETFN</b> [BTFN] E49	—
Solid	Carbide	—	—	—	—	 <b>BXBR</b>   E72	—
CBN/PCD	Carbide	—	—	—	—	 <b>BNB</b>  CBN/PCD  E80	 <b>BSME</b>  CBN  E75
		—	—	—	—	 <b>BNBX</b>  CBN  E78	—

Inside [ ] shows previous product series : 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 Hand	Symbol	Left Hand
R		L	

Table 5

(5) Insert Shape			
Symbol	Insert Shape	Symbol	Insert Shape
A	85° Apex Angle Parallelogram	M	86° Apex Angle Diamond type
B	82° Apex Angle Parallelogram	O	Octagonal type
C	80° Apex Angle Diamond type	P	Pentagonal type
D	55° Apex Angle Diamond type	R	Round type
E	75° Apex Angle Diamond type	S	Square type
F	50° Apex Angle Diamond type	T	Triangular type
H	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)**

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

P	Positive Insert
---	-----------------

Symbol	T	S	C
Insert Shape	Triangular type	Square type	80° Diamond type

With Oil Hole      Min. Bore Dia.

Symbol	R	L
Direction	Right	Left

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

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

# Selection Guide for Boring Bars

## Guide for Selection by Application

Applications	Tool Type	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	34	44	54	70
Very Small Dia. Boring	<b>CKB</b> →E66	up to 3			Coated Inserts and Dedicated SUMIDIA Inserts		●	●	●	●	●															
	<b>BXBR</b> →E72	up to 5			Coated Carbide					●	●	●														
	<b>DABB</b> →E81	up to 2			Brazed SUMIDIA					●	●	●														
Stop Boring	<b>BSME</b> <sup>Oil Hole</sup> →E73	up to 4			Brazed SUMIBORON					⊕	⊕	⊕														
	<b>SEXC</b> <sup>Oil Hole</sup> →E74	up to 3			Dedicated Inserts					⊕	⊕	⊕														
	<b>BNBX</b> →E78	up to 5			Brazed SUMIBORON					●	●	●														
	<b>BNB</b> →E80	up to 4			SUMIBORON SUMIDIA Dedicated Inserts								●	●	●	●	●	●	●	●						
	<b>S-STUB/S-STUP</b> [BBPT] →E42	up to 3									●	●	●	●	●	●	●	●	●	●	●					
	<b>A-STUP</b> <sup>Oil Hole</sup> →E42	up to 3									⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕						
	<b>B-STUP</b> [XBPT] →E43			up to 6										●	●	●	●	●	●	●	●	●	●	40		
	<b>D-STUP</b> <sup>Oil Hole</sup> [XBPT-H] →E44			up to 6										⊕	⊕	⊕	⊕	⊕	⊕	⊕						
	<b>C-STUB/C-STUP</b> [WBPT] →E44			up to 8							●	●	●	●	●	●	●	●	●	●	●					
	<b>E-STUP</b> <sup>Oil Hole</sup> [WBPT-H] →E45			up to 8		Triangular type 5° Positive (With Hole) 11° Positive (With Hole)					⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕						
	<b>S-CTFP</b> →E46	up to 3				Triangular type 11° Positive (Without Hole)																			32	
	<b>S-PTFN</b> →E48	up to 3																							40 50 63	
	<b>B-PTFN</b> →E48			up to 6																					32 40 50	
	<b>S-DTFN</b> →E47	up to 3																							40 50 63	
	<b>D-DTFN</b> <sup>Oil Hole</sup> →E47			up to 6																					⊕ 32 40 50	
<b>S-ETFN</b> [BTFN] →E49	up to 3				Triangular type Negative (With Hole)																			●		
Bottom Facing	<b>BNZ</b> →E79	up to 5			SUMIBORON Dedicated Inserts								●	●	●	●	●	●	●	●						
	<b>S-SCLC</b> →E18	up to 3								●	●	●	●	●	●	●	●	●	●	●	●			27		
	<b>A-SCLC</b> <sup>Oil Hole</sup> →E18	up to 3											⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕			27			
	<b>B-SCLC</b> →E19			up to 6		80° Diamond type 7° Positive (With Hole)																		32		

Inside [ ] shows previous product series : 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

# Selection Guide for Boring Bars

Applications	Tool Type	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	34	44	54
Bottom Facing	<b>C-SCLC</b> →E20		up to 8		80° Diamond type 7° Positive (With Hole)														●	●						
	<b>E-SCLC</b> →E20		up to 8																	⊕	⊕	⊕	⊕			
	<b>S-SCLP</b> [BBPC] →E21		up to 3		80° Diamond type 11° Positive (With Hole)																					●
	<b>A-SCLP</b> →E21		up to 3																		⊕	⊕	⊕	⊕	⊕	⊕
	<b>B-SCLP</b> [XBPC] →E22			up to 6	80° Diamond type 11° Positive (With Hole)																					
	<b>D-SCLP</b> →E22			up to 6																	⊕	⊕	⊕			
	<b>C-SCLP</b> [WBPC] →E22		up to 8		80° Diamond type 11° Positive (With Hole)																					
	<b>S-DCLN</b> →E23		up to 3																							
	<b>D-DCLN</b> →E23			up to 6	80° Diamond type Negative (With Hole)	DCLN type 																				●
	<b>S-PCLN</b> →E24		up to 3																							
	<b>B-PCLN</b> →E24			up to 6	80° Diamond type Negative (With Hole)	PCLN type / ECLN type 																				●
	<b>S-ECLN</b> [BCLN] →E25		up to 3																							
	<b>D-DWLN</b> →E64			up to 6	Trigon type Negative (With Hole)																					●
	<b>S-DWLN</b> →E64		up to 3																							
	<b>S-PWLN</b> →E65		up to 3																							●

Applications	Tool Type	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	<b>S-SDUC</b> →E26, E28		up to 3		55° Diamond type 7° Positive (With Hole)	SDUC type 																				
	<b>A-SDUC</b> →E26, E28		up to 3																							
	<b>B-SDUC</b> →E27, E29			up to 6	55° Diamond type 7° Positive (With Hole)	SDQC type 																				
	<b>C-SDUC</b> →E27		up to 8																							
	<b>S-SDZC</b> →E30		up to 3		55° Diamond type 7° Positive (With Hole)																					
	<b>S-SVJB</b> →E50		up to 3																							
	<b>B-SVJB</b> →E50			up to 6	35° Diamond type 5° Positive (With Hole) 7° Positive (With Hole)																					
	<b>S-SVJC</b> →E51		up to 3																							
	<b>S-SVQC</b> →E54, E57		up to 3		35° Diamond type 5° Positive (With Hole) 7° Positive (With Hole)	SVU□/SVQ□ type 																				
	<b>A-SVUC</b> →E57		up to 3																							
	<b>A-SVQC</b> →E54		up to 3																							

Inside [ ] shows previous product series : 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-Bars** with anti-vibration mechanism, optimised insert grades and chipbreakers.

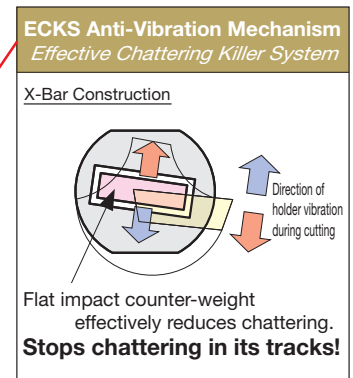
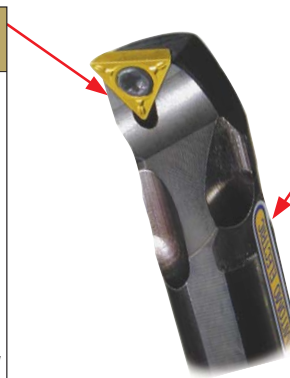
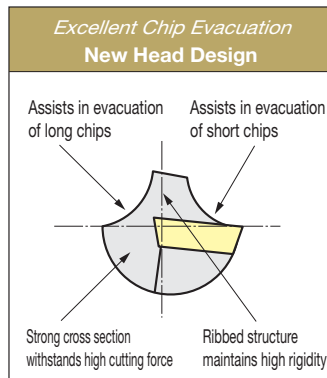
## Features of SEC-Boring Bars

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

## Steel Shank type with Anti-Vibration Mechanism



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



## Shank Material Selection



Shank Material		Steel	Steel with Anti-Vibration Mechanism	Carbide
Application				
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

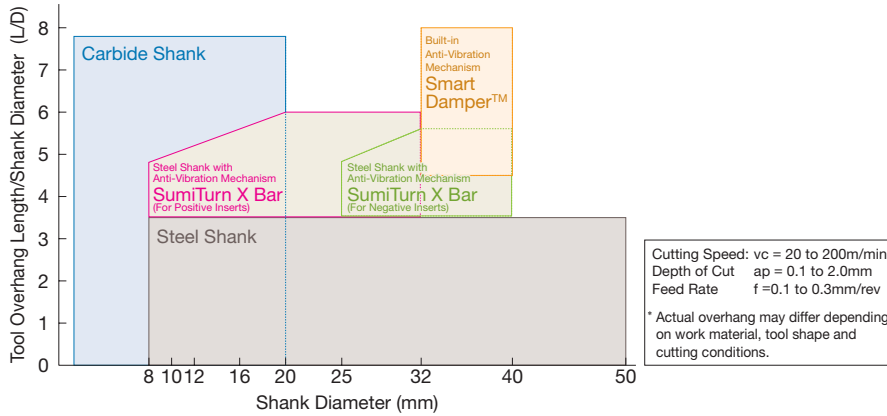
Do not clamp or cut off label-affixed portion.

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

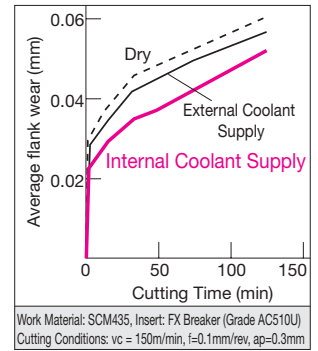


# Boring Bar series

## Application Range by Shank type



## Wear Comparison by Coolant Supply Method



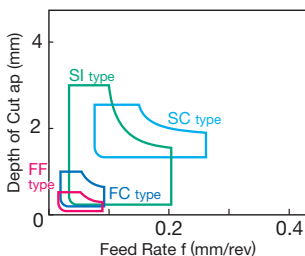
## Recommended Grades

Insert Grade	Application Range			Applicable Work Material							
	High Precision	Finishing to Light Cutting	Medium Cutting	P General Steel	M Stainless Steel	K Cast Iron	S Heat-Resistant Alloy	H Hardened Steel	N Non-Ferrous Metals	Sintered Alloy	
Coated Carbide	CVD	AC8015P			◎						
		AC8020P			◎						
		AC8025P			◎						
		AC8035P			◎						
		AC6020M			◎	◎					
		AC6030M			◎	◎					
		AC4010K			◎		◎				
	PVD	AC4015K			◎		◎				
		AC420K			◎		◎				
		ACZ150			◎	◎				◎	
		AC5015S			◎		◎				
		AC5025S			◎		◎				
		AC530U			◎		◎				
		AC1030U			◎	◎				◎	
Uncoated Cermet Coated Cermet	AC6040M			◎	◎						
	T1000A			◎		◎				◎	
	T1500A/T1500Z			◎		◎					
Cemented Carbide	T2500Z			◎		◎					
	G10E			◎		◎					
CBN (SUMIBORON)	BN1000							◎			
	BN2000							◎			
	BNC2105							◎			
	BNC2115							◎			
	BNC2125							◎			
	BNC2010							◎			
	BNC2020							◎			
	BN7125					◎				◎	
PCD (SUMIDIA)	BN7115							◎		◎	
	DA1000							◎			
DA150							◎				

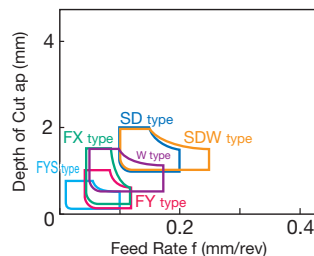
◎ 1st Recommendation ○ 2nd Recommendation

## Recommended Chipbreakers

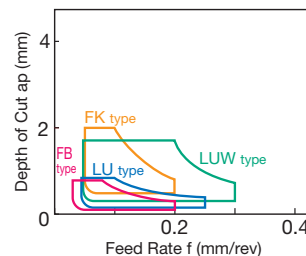
### ● G Class Chipbreakers



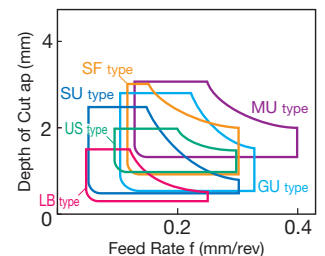
### ● G Class Ground type



### ● M Class Finishing to Light Cutting



### ● M Class Light to Medium Cutting



# Smart Damper™

Boring Bars



Smart Damper Turning  
Very Small Diameter Turning

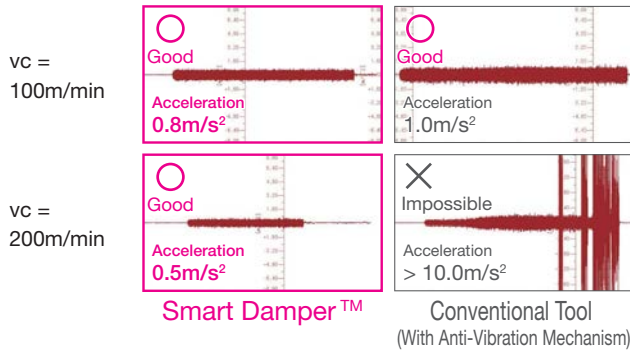


## ■ Features

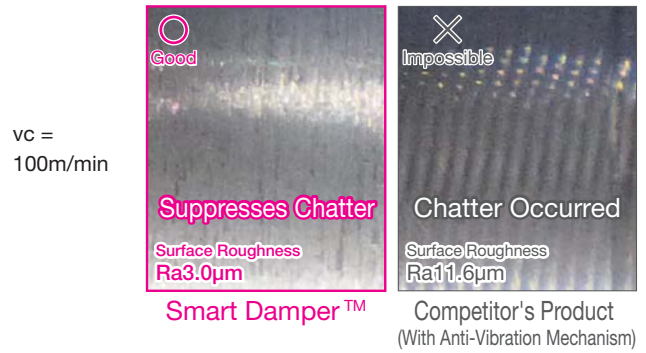
- Adopts a special damper mechanism to suppress chattering for large diameter bars with long overhang of L/D=5.5 to 8.
- Replaceable heads enable a wide selection of positive and negative inserts.
- Internal coolant supply improves chip evacuation and tool life. (For use with internal coolant supply,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

## ■ Cutting Performance

### Overhang Amount 6D' Vibration during Machining



### Overhang Amount 9D' Surface Roughness during Machining



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

### Indexable Head

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

### Smart Damper™ Body

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

Indexable heads can be selected to suit machining applications

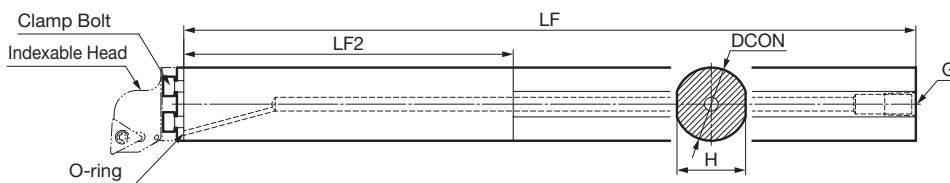


\*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

# For Internal Boring 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	
<b>S-SDB3240L320</b>	●	32	320	144	30	Rc1/4	1	2.3	1	BX0510	3.0	LH040	SS020
<b>S-SDB4050L410</b>	●	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.

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

Indexable Heads **E12 to E15**

Fig 1

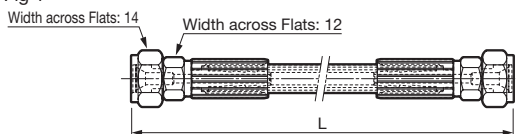


Fig 1

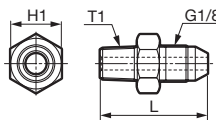
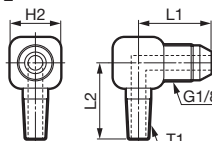


Fig 2



## Parts (Hose)

Dimensions (mm)

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

Hoses are sold separately.

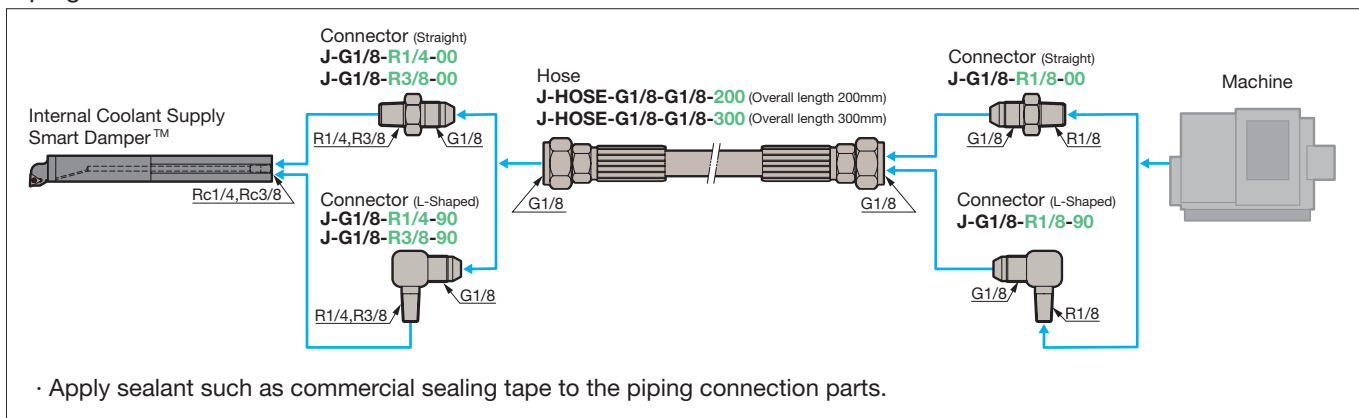
## Parts (Connector)

Dimensions (mm)

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

Connectors are sold separately.

## Piping Method for Hoses and Connectors



## Identification Code (Smart Damper™ Body)

**S-SDB 32 40 L320**

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

## Identification Code (Indexable Head)

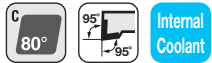
**SDB 32 - SCLCR09T3 - 40**

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

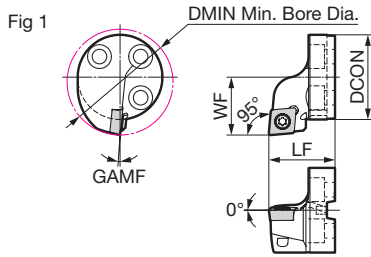
\*Smart Damper™ is a registered trademark of BIG DAISHOWA Co., Ltd.

Recommended Tightening Torque (N-m)

# Smart Damper™



Internal Boring  
Screw-on, Internal Coolant Supply



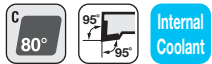
## Indexable Heads (For Positive Inserts)

## Parts

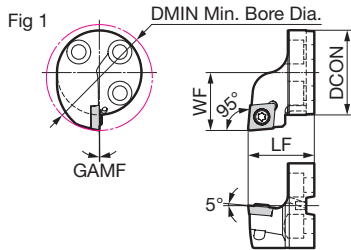
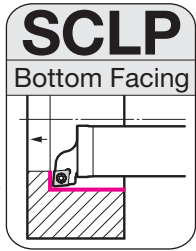
Dimensions (mm)

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)	
<b>SDB32-SCLC R/L09T3-40</b>	●	●	<b>40</b>	32	25	22	<b>-6°</b>	CC□□09T3	<b>B73~</b>	1	1	BFTX0409N	<b>3.4</b>	TRX15
<b>SDB40-SCLC R/L09T3-50</b>	●	●	<b>50</b>	40	25	27	<b>-2°</b>			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 E11 for applicable Smart Damper™ bodies.



Internal Boring  
Screw-on, Internal Coolant Supply



## 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)	
<b>SDB32-SCLP R/L0903-40</b>	●		<b>40</b>	32	25	22	0°	CP□□0903	<b>B77~</b>	1	1	BFTX0409N	<b>3.4</b>	TRX15
<b>SDB40-SCLP R/L0903-50</b>	●		<b>50</b>	40	25	27	0°			2	1			

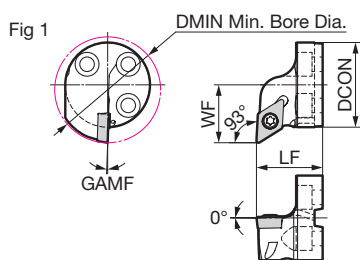
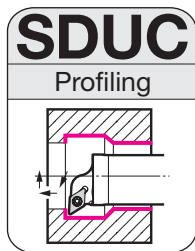
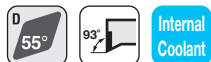
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\*Refer to Smart Damper™ body Group Nos. on E11 for applicable Smart Damper™ bodies.

Note: The values in red (rake angle GAMF) have been changed from those in the 2021-2022 General Catalogue.

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

Recommended Tightening Torque (N·m)

# Smart Damper™



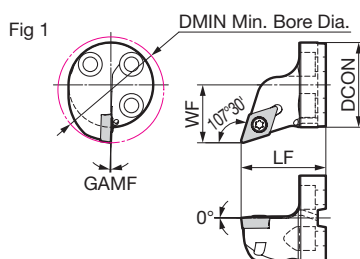
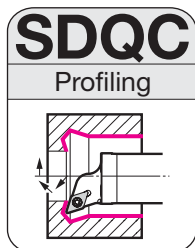
Internal Boring  
Screw-on, Internal Coolant Supply

## 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				
<b>SDB32-SDUC R/L11T3-40</b>	●	●	40	32	25	22	-2°	DC□□11T3	B84-	1	1	BFTX0409N	3.4 TRX15
<b>SDB40-SDUC R/L11T3-50</b>	●	●	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 E11 for applicable Smart Damper™ bodies.



Internal Boring  
Screw-on, Internal Coolant Supply

## Indexable Heads (For Positive Inserts)

Parts Dimensions (mm)

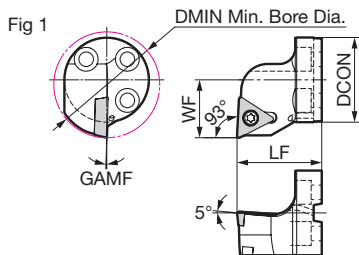
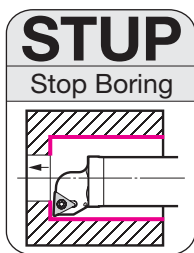
Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Overall Length LF	Cutting Edge Distance WF	Rake Angle GAMF	Applicable Insert		Smart Damper™ Group No.	Fig	Flat Insert Screw	Wrench
	R	L						Cat. No.	Ref. Page				
<b>SDB32-SDQC R/L11T3-40</b>	●	●	40	32	32	22	-2°	DC□□11T3	B84-	1	1	BFTX0409N	3.4 TRX15
<b>SDB40-SDQC R/L11T3-50</b>	●	●	50	40	32	27	0°			2	1		

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

# Smart Damper™



Internal Boring  
Screw-on, Internal Coolant Supply



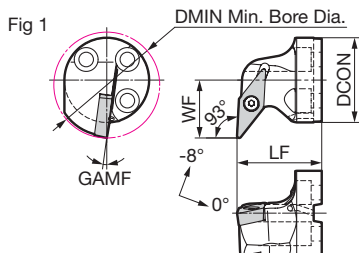
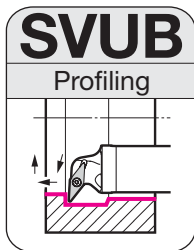
## Indexable Heads (For Positive Inserts)

## Parts

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Inserts		Smart Damper™ Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Fig	N·m	
<b>SDB32-STUP R/L1103-40</b>	●	●	40	32	25	22	-2°	TP□□1103	B109-	1	1	BFTX0307N	2.0	TRX10
<b>SDB40-STUP R/L1103-50</b>	●	●	50	40	25	27	0°			2	1			
<b>SDB32-STUP R/L1604-40</b>	●	●	40	32	32	22	-2°	TP□□1604	B112	1	1	BFTX0409N	3.4	TRX15
<b>SDB40-STUP R/L1604-50</b>	●	●	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 E11 for applicable Smart Damper™ bodies.

Internal Boring  
Screw-on, Internal Coolant Supply



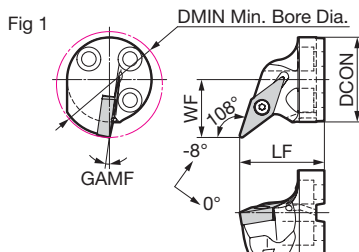
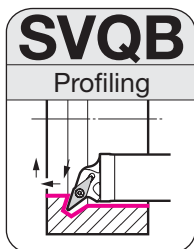
## Indexable Heads (For Positive Inserts)

## Parts

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper™ Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Fig	N·m	
<b>SDB32-SVUB R/L1604-40</b>	●		40	32	32	22	(-7.5°)	VB□□1604	B120	1	1	BFTX03508N	2.0	TRX10
<b>SDB40-SVUB R/L1604-50</b>	●		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.  
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Internal Boring  
Screw-on, Internal Coolant Supply



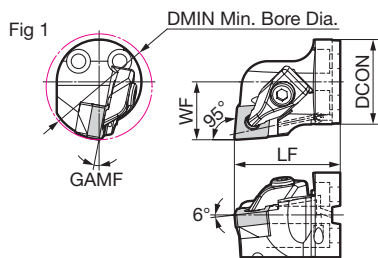
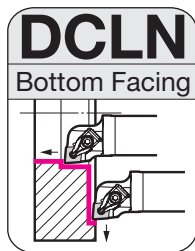
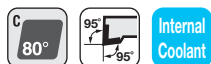
## Indexable Heads (For Positive Inserts)

## Parts

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Rake Angle	Applicable Insert		Smart Damper™ Group No.	Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			Fig	N·m	
<b>SDB32-SVQB R/L1604-40</b>	●		40	32	32	22	(-6.5°)	VB□□1604	B120	1	1	BFTX03508N	2.0	TRX10
<b>SDB40-SVQB R/L1604-50</b>	●		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 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.

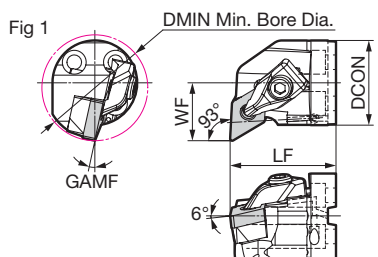
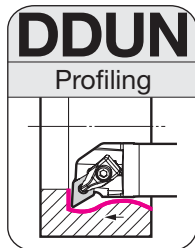
For Internal Boring  
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.  
For Facing  
Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N)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

## Indexable Heads (For Negative Inserts)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper™ Group No.	Fig	Dimensions (mm)					
	R	L					Cat. No.	Ref. Page			Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
	DMIN	DCON	LF	WF	Nm	(For Hexagonal hole)			(For Hexagonal hole)							
SDB32-DCLN R/L1204-40	●	●	40	32	40	22	CN□□1204	B16~	1	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
SDB40-DCLN R/L1204-50	●	●	50	40	40	27			2	1						

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

Clamp Set Parts E82



Internal Boring  
Internal Coolant Supply Double Clamp

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

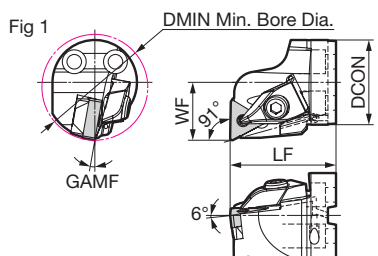
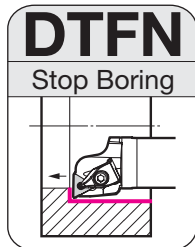
For Internal Boring  
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.  
For Facing  
Right-handed (R) tool holders are compatible with right-handed (R) or neutral (N)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

## Indexable Heads (For Negative Inserts)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper™ Group No.	Fig	Dimensions (mm)					
	R	L					Cat. No.	Ref. Page			Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
	DMIN	DCON	LF	WF	Nm	(For Hexagonal hole)			(For Hexagonal hole)							
SDB32-DDUN R/L1504-40	●	●	40	32	40	22	DN□□1504	B26~	1	1	SCP-2	5.0	DNS1504B	BFTX0409N	LH040	LH025
SDB40-DDUN R/L1504-50	●	●	50	40	40	27			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 E11 for applicable Smart Damper™ bodies.

Clamp Set Parts E82



Internal Boring  
Internal Coolant Supply Double Clamp

● Feed direction of applicable inserts differs for DTFN 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)

Cat. No.	Stock		Min. Bore Dia.	Diameter	Overall Length	Cutting Edge Distance	Applicable Insert		Smart Damper™ Group No.	Fig	Dimensions (mm)					
	R	L					Cat. No.	Ref. Page			Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
	DMIN	DCON	LF	WF	Nm	(For Hexagonal hole)			(For Hexagonal hole)							
SDB32-DTFN R/L1604-40	●	●	40	32	40	22	TN□□1604	B50~	1	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025
SDB40-DTFN R/L1604-50	●	●	50	40	40	27			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 E11 for applicable Smart Damper™ bodies.

Clamp Set Parts E82

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

# Twin Head Holder

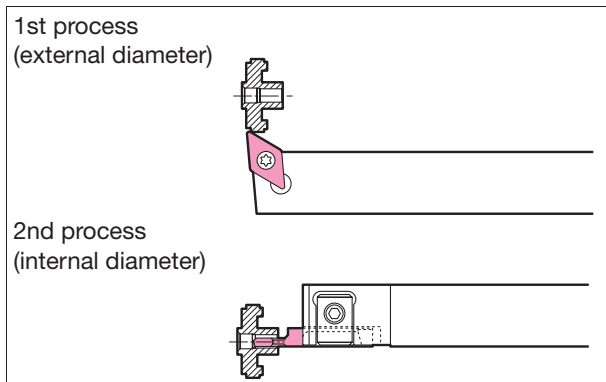


### ■ Features

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

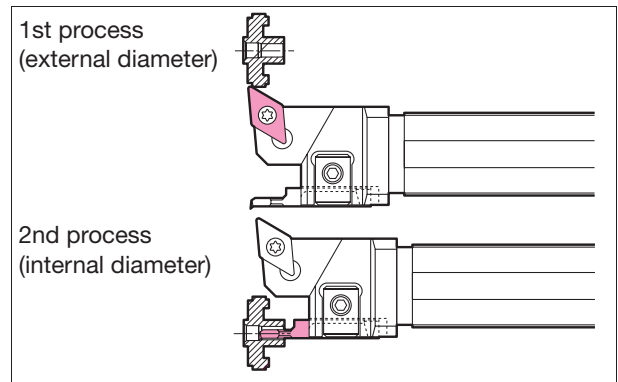
### ■ Advantages of the Twin Head Holder

#### ● Conventional Tool

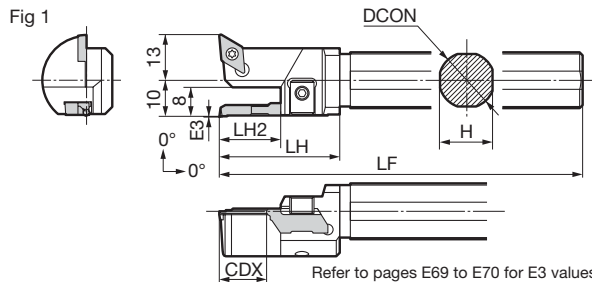


· 2 different operations requiring 2 separate tools.

#### ● Twin head holder



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



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



### Holder (mm) (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 (mm) (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 **E69 to E70** External Diameter Inserts **B80 to B82**

Boring Bars

E

C

D

R

S

T

V

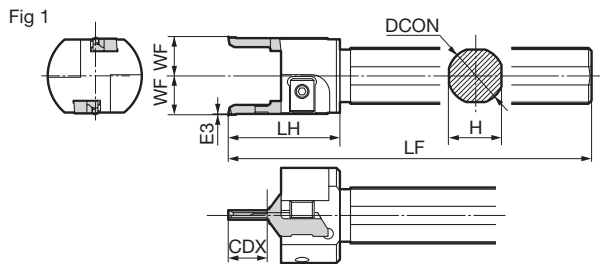
W

Small Diameter Turning  
 Very Small Diameter Turning



# Twin Head Holder

Internal Boring, Face Grooving  
Clamp-on



## Holder

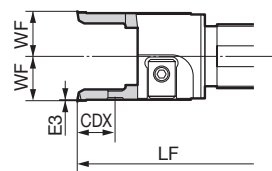
Dimensions (mm)

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

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

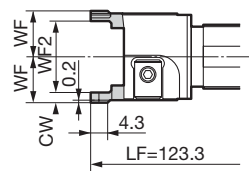
Ref. Page for Inserts **E69** to **E70**

Insert: KBMX (ID+ID) assembled



Insert	Offset			
	E3	Boring Depth CDX	Cutting Edge Distance WF	Overall Length LF
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
<b>KBMX R0311-00(T)*</b>	<b>0.3</b>	<b>11</b>	<b>11.0</b>	<b>130</b>
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		
	WF	WF2	Width of Cut CW
<b>KBMF R0615-05</b>	10.9	18.8	1.5
<b>KBMF R0620-05</b>	10.9	17.8	2.0
<b>KBMF R0630-05</b>	10.9	15.8	3.0

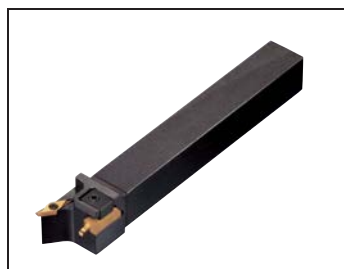
## Part (KBM□R insert mounting part)

Clamp Plate	Double Screw	Wrench
KBKW16	WB4-8	LH020

## Part (DC□□ insert mounting part)

Flat Insert Screw	Wrench
BFTX02506N	1.5 TRX08

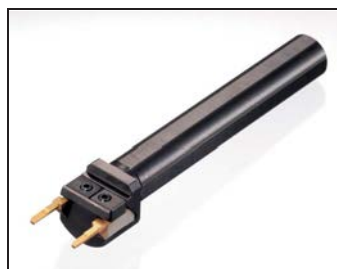
## Special Holder Configurations



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.

# S-SCLC type / A-SCLC type



Internal Finishing to Medium Cutting  
Screw-on

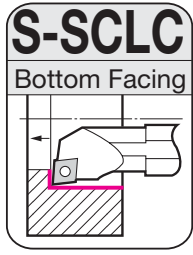


Fig 1

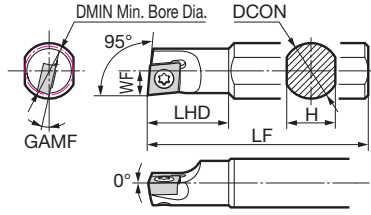


Fig 2

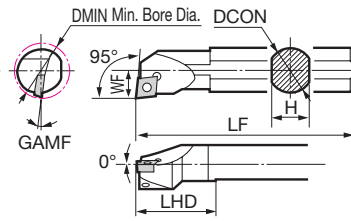


Figure shows right-handed (R) tool.



## 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	Fig	(N·m)		
Steel	S08H-SCLC R/L03X1-05	—	●	●	5	8	7	100	2.5	24	-15°	CC□□03X1	B68	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	B69	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	B70~	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°	CC□□09T3	B73~	2	BFTX02506N	1.5	TRX08
	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	B73~	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°	CC□□09T3	B73~	2	BFTX0409N	3.4	TRX15	

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

Smart Damper™ E12



Internal Finishing to Medium Cutting  
Screw-on

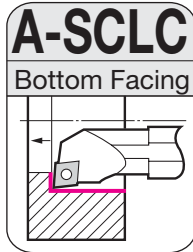


Fig 1

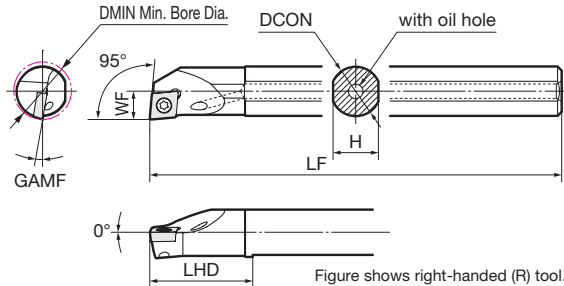


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	(N·m)		
Steel with Oil Hole	A08H-SCLC R/L0602-10	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B70~	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°	CC□□09T3	B73~	1	BFTX02506N	1.5	TRX08
	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	B73~	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°	CC□□09T3	B73~	1	BFTX0409N	3.4	TRX15	

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

Smart Damper™ E12

# B-SCLC type



Internal Finishing to Medium Cutting  
Screw-on

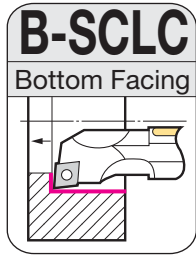


Fig 1

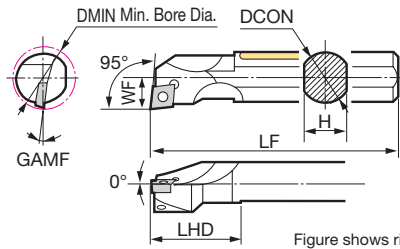


Figure shows right-handed (R) tool.



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 Inserts		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel with Anti-Vibration Mechanism	<b>B08H-SCLC R/L0602-10</b>	●	●	10	8	7	100	5.5	19	-13°	CC□□0602	B70~	1	BFTX02505N	1.1	TRX08
	<b>B10K-SCLC R/L0602-12</b>	●	●	12	10	9	125	6.0	21	-12°			1	BFTX02506N	1.5	
	<b>B12M-SCLC R/L0602-14</b>	●	●	14	12	11	150	7.0	25	-10°			1			
	<b>B12M-SCLC R/L0602-16</b>	●	●	16	12	11	150	9.0	25	-10°						
	<b>B16R-SCLC R/L09T3-20</b>	●	●	20	16	15	200	11.0	30	-8°	CC□□09T3	B73~	1	BFTX0407N	3.0	TRX15
	<b>B20S-SCLC R/L09T3-25</b>	●	●	25	20	18	250	13.0	30	-7°			1	BFTX0409N	3.4	
<b>B25T-SCLC R/L1204-32</b>	●	●	32	25	23	300	17.0	38	-6°	CC□□1204	B75	1	BFTX0511N	5.0	TRX20	

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

Smart Damper™ E12

C

D

R

S

T

V

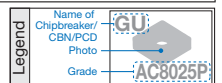
W

Smart Damper™ turning  
Very Small Damper™ turning

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

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10~).
- 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 Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	SU	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA
	T1500Z	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7125/BN6500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA90
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BN6500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	A10~			A14~			A16~			A18~	A22~		A20~		M2~

BN6500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

# C-SCLC type / E-SCLC type



Internal Finishing to Medium Cutting  
Screw-on

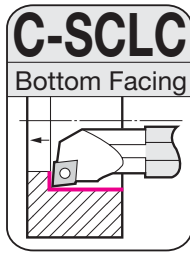


Fig 1

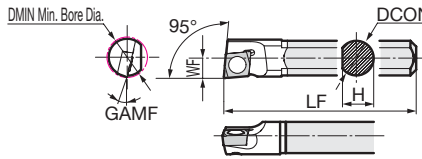
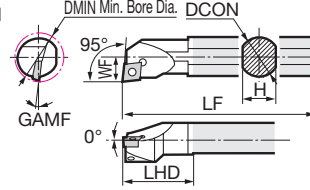


Fig 2



**SumiSmall**

Holder

Parts

Dimensions (mm)

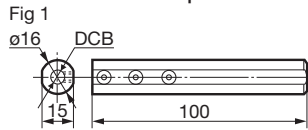
Shank Material	Cat. No.	Previous Cat. No.	Stock R	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Inserts		Flat Insert Screw		Wrench (For Torx hole)	
											Cat. No.	Ref. Page	Fig	(N·m)		
Carbide	<b>C04G-SCLC R03X1-05'</b>	C04G-SCLCR03X1-05'	●	5	4	3.8	90	2.5	—	-15°	CC□□03X1	<b>B68</b>	1	BFTX016033	<b>0.2</b>	TRX06
	<b>C05H-SCLC R03X1-06'</b>	C05H-SCLCR03X1-06'	●	6	5	4.4	100	3.0	—	-13°	CC□□03X1	<b>B68</b>	1	BFTX016033	<b>0.2</b>	TRX06
	<b>C06J-SCLC R04X1-07'</b>	C06J-SCLCR04X1-07'	●	7	6	5.4	110	3.5	—	-13°	CC□□04X1	<b>B69</b>	1	BFTX0203N	<b>0.5</b>	TRX06
	<b>C07K-SCLC R04X1-08'</b>	C07K-SCLCR04X1-08'	●	8	7	6.4	125	4.0	—	-11°	CC□□04X1	<b>B69</b>	1	BFTX0203N	<b>0.5</b>	TRX06
	<b>C08H-SCLC R0602-10</b>	C08H-SCLCR06	●	10	8	7.0	100	5.5	19	-13°	CC□□0602	<b>B70~</b>	2	BFTX02505N	<b>1.1</b>	TRX08
	<b>C10K-SCLC R0602-12</b>	C10K-SCLCR06-12	●	12	10	9.0	125	6.0	21	-12°			2	BFTX02506N	<b>1.5</b>	
	<b>C10K-SCLC R0602-13</b>	C10K-SCLCR06	●	13	10	9.0	125	7.0	21	-12°			2	BFTX02506N	<b>1.5</b>	
	<b>C12M-SCLC R0602-14</b>	C12M-SCLCR06-14	●	14	12	11.0	150	7.0	25	-10°	CC□□09T3	<b>B73~</b>	2	BFTX0407N	<b>3.4</b>	TRX15
	<b>C12M-SCLC R0602-16</b>	C12M-SCLCR06	●	16	12	11.0	150	9.0	25	-10°			2	BFTX0409N	<b>3.4</b>	
	<b>C16R-SCLC R09T3-20</b>	C16R-SCLCR09	●	20	16	15.0	200	11.0	30	-8°	CC□□09T3	<b>B73~</b>	2	BFTX0407N	<b>3.4</b>	TRX15
<b>C20S-SCLC R09T3-25</b>	C20S-SCLCR09	●	25	20	18.0	250	13.0	35	-7°	2			BFTX0409N	<b>3.4</b>		

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

\* Separately sold sleeve is required.

Smart Damper™ **E12**

Adapter Sleeve



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

Internal Finishing to Medium Cutting  
Screw-on

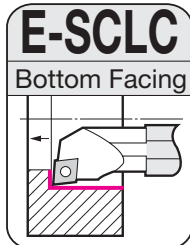
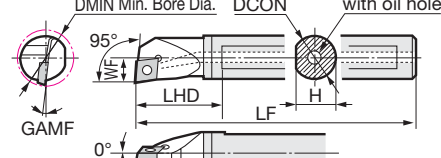


Fig 1



**SumiSmall**

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 Inserts		Flat Insert Screw		Wrench (For Torx hole)	
											Cat. No.	Ref. Page	Fig	(N·m)		
Carbide with oil hole	<b>E08H-SCLC R0602-10</b>	E08H-SCLCR06	●	10	8	7.5	100	5.5	18	-13°	CC□□0602	<b>B70~</b>	1	BFTX02505N	<b>1.1</b>	TRX08
	<b>E10K-SCLC R0602-13</b>	E10K-SCLCR06	●	13	10	9.5	125	7.0	19	-12°			1	BFTX02506N	<b>1.5</b>	
	<b>E12M-SCLC R0602-16</b>	E12M-SCLCR06	●	16	12	11.5	150	9.0	25	-10°			1	BFTX02506N	<b>1.5</b>	
	<b>E16R-SCLC R09T3-20</b>	E16R-SCLCR09	●	20	16	15.5	200	11.0	30	-8°	CC□□09T3	<b>B73~</b>	1	BFTX0407N	<b>3.4</b>	TRX15

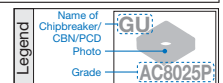
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

Smart Damper™ **E12**

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

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10-).
- 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 Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision Finishing	Finishing to Medium Cutting	Coated	Uncoated	—	
General Machining	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6040M	SUMIBORON BN7125/BNC500	MU AC4015K	No Chipbreaker AC4015K	SU AC5015S	SUMIDIA DA1000	H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90	
High-precision	FF AC1030U	SI AC1030U	SC AC1030U	FF AC1030U	SI AC1030U	SC AC1030U	SUMIBORON BN7125/BNC500	—	—	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10	
Recommended Cutting Conditions	A10~			A14~			A16~			A18~	A22~		A20~			M2~

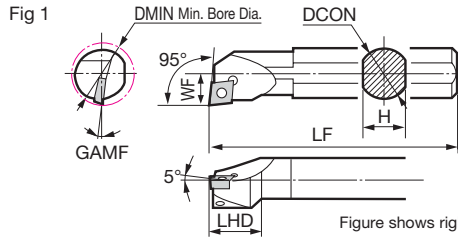
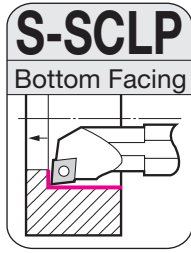
BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

# S-SCLP type / A-SCLP type



Internal Finishing to Medium Cutting  
Screw-on



## Holder

## Parts

Dimensions (mm)

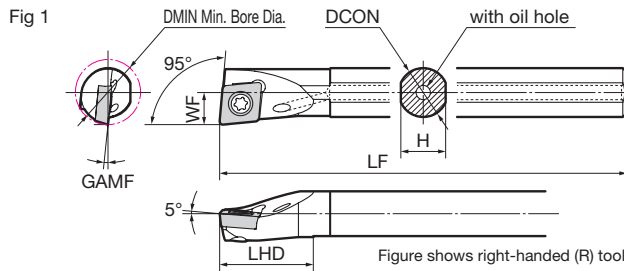
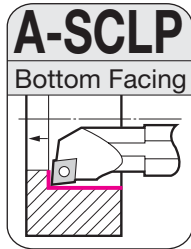
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Flat Insert Screw		Wrench	
			R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel	<b>S10K-SCLP R/L0802-12</b>	BBPC-010 R/L	●	●	12	10	9	125	6.0	12.0	-5°	CP□□0802	<b>B76</b>	1	BFTX0305A	<b>2.0</b>	TRX10
	<b>S12M-SCLP R/L0802-14</b>	BBPC-012 R/L 14	●	●	14	12	11	150	7.0	10.6	-5°						
	<b>S12M-SCLP R/L0903-16</b>	—	●	●	16	12	11	150	8.0	23.0	-6°	CP□□0903	<b>B77~</b>	1	BFTX0407A	<b>3.4</b>	TRX15
	<b>S16R-SCLP R/L0903-18</b>	BBPC-316 R/L 18	●	●	18	16	15	200	9.0	18.0	-4°						
	<b>S20S-SCLP R/L0903-22</b>	BBPC-320 R/L 22	●	●	22	20	18	250	11.0	18.0	-2°						
	<b>S25T-SCLP R/L0903-27</b>	—	●	●	27	25	22	300	13.5	18.0	-2°						

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

Smart Damper™ E12



Internal Finishing to Medium Cutting  
Screw-on



## Parts

Dimensions (mm)

Shank Material	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	Fig	N·m		
with oil hole Steel	<b>A10K-SCLP R/L0802-12</b>	●	●	12	10	9	125	6.0	12.0	-5°	CP□□0802	<b>B76</b>	1	BFTX0305N	<b>2.0</b>	TRX10
	<b>A12M-SCLP R/L0802-14</b>	●	●	14	12	11	150	7.0	10.6	-5°						
	<b>A12M-SCLP R/L0903-16</b>	●	●	16	12	11	150	8.0	23.0	-6°	CP□□0903	<b>B77~</b>	1	BFTX0407N	<b>3.4</b>	TRX15
	<b>A16R-SCLP R/L0903-18</b>	●	●	18	16	15	200	9.0	18.0	-4°						
	<b>A20S-SCLP R/L0903-22</b>	●	●	22	20	18	250	11.0	18.0	-2°						
	<b>A25T-SCLP R/L0903-27</b>	●	●	27	25	22	300	13.5	18.0	-2°						

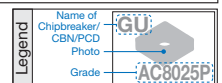
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper™ E12

## Applicable Inserts ◀ S-SCLP type / A-SCLP type / B-SCLP type / D-SCLP type / C-SCLP type

### 1st Recommended Insert

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



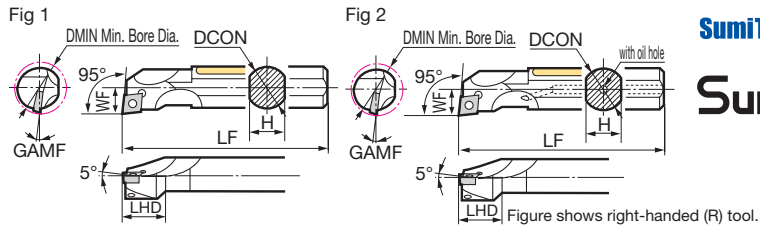
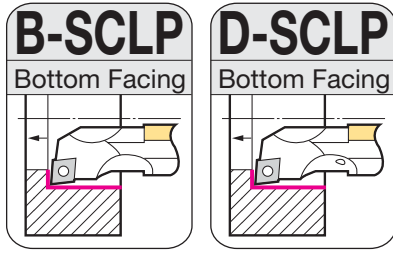
Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)		S (Exotic Alloy)	N (Non-Ferrous)	H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	—	Coated	Uncoated
General Machining	FB T1500Z	GU AC8025P	MU AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	MU AC4015K	No Chipping	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	E10~			E14~			E16~		E18~	E22~	E20~	

Recommended Tightening Torque (N·m)

# 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 Inserts		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Steel with Anti-Vibration Mechanism	<b>B12M-SCLP R/L0802-14</b>	XBPC-012 R/L 14	●	●	14	12	11	150	7	10.6	-5°	CP□□0802	<b>B76</b>	1	BFTX0305A	<b>2.0</b>	TRX10
	<b>B16R-SCLP R/L0903-18</b>	XBPC-316 R/L 18	●	●	18	16	15	200	9	18.0	-4°	CP□□0903	<b>B77~</b>	1	BFTX0407A	<b>3.4</b>	TRX15
	<b>B20S-SCLP R/L0903-22</b>	XBPC-320 R/L 22	●	●	22	20	18	250	11	18.0	-2°	CP□□0903	<b>B77~</b>	1	BFTX0407A	<b>3.4</b>	TRX15
Steel with Anti-Vibration Mechanism and Coolant Hole	<b>D12M-SCLP R/L0802-14</b>	XBPC-012 R/L H14	●	●	14	12	11	150	7	10.6	-5°	CP□□0802	<b>B76</b>	2	BFTX0305A	<b>2.0</b>	TRX10
	<b>D16R-SCLP R/L0903-18</b>	XBPC-316 R/L H18	●	●	18	16	15	200	9	18.0	-4°	CP□□0903	<b>B77~</b>	2	BFTX0407A	<b>3.4</b>	TRX15
	<b>D20S-SCLP R/L0903-22</b>	XBPC-320 R/L H22	●	●	22	20	18	250	11	18.0	-2°	CP□□0903	<b>B77~</b>	2	BFTX0407A	<b>3.4</b>	TRX15

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

Smart Damper™ E12

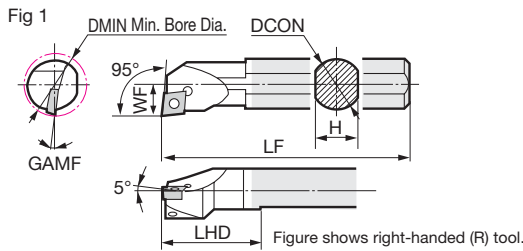
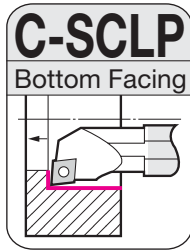
C

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 Inserts		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Carbide	<b>C10K-SCLP R/L0802-12</b>	WBPC-010 R/L S	●	●	12	10	9	125	6	19	-5°	CP□□0802	<b>B76</b>	1	BFTX0305A	<b>2.0</b>	TRX10
	<b>C12M-SCLP R/L0802-14</b>	WBPC-012 R/L S14	●	●	14	12	11	150	7	25	-5°	CP□□0802	<b>B76</b>	1	BFTX0305A	<b>2.0</b>	TRX10
	<b>C12M-SCLP R/L0802-16</b>	WBPC-012 R/L S	●	●	16	12	11	150	8	25	-3°	CP□□0802	<b>B76</b>	1	BFTX0305A	<b>2.0</b>	TRX10
	<b>C16R-SCLP R/L0903-18</b>	WBPC-316 R/L S18	●	●	18	16	15	200	9	30	-4°	CP□□0903	<b>B77~</b>	1	BFTX0407A	<b>3.4</b>	TRX15
	<b>C16R-SCLP R/L0903-20</b>	WBPC-316 R/L S	●	●	20	16	15	200	10	30	-3°	CP□□0903	<b>B77~</b>	1	BFTX0407A	<b>3.4</b>	TRX15

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

Smart Damper™ E12

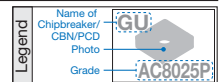
W

Small Damper Turning Very Small Diameter 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 AC8025P	LB AC6030M	GU AC6030M	MU AC6030M	MU AC4015K	No Chipbreaker AC4015K	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	SD T1500Z	—	—	SD AC5015S	—	—	—	—	SD AC5015S	SUMIDIA DA1000	SUMIBORON BNC2115	SUMIBORON BN1000
Recommended Cutting Conditions	A10~			A14~			A16~		A18~	A22~	A20~	

# S-DCLN type / D-DCLN type



Medium Diameter General-purpose Double Clamp

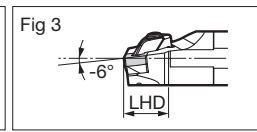
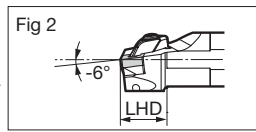
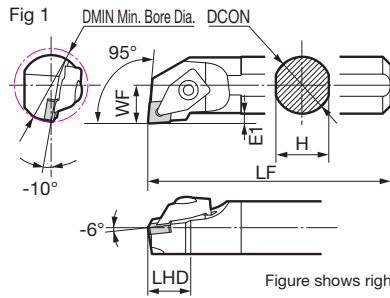
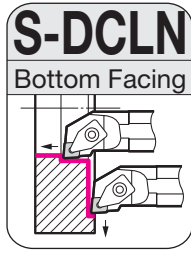


Figure shows right-handed (R) tool.

### Holder

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Inserts		Dimensions (mm)						
			R	L								DMIN	DCON	H	LF	WF	LHD	E1	Cat. No.	Ref. Page
Steel	S25R-DCLN R/L0903-32	—	●	●	32	25	23	200	17.0	18	4.5	CN□□0903	B14	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	B14	1	SCP-1	5.0	—	—	LH040	LH025
	S32S-DCLN R/L1204-40	—	●	●	40	32	30	250	22.0	26	7.0	CN□□1204	B16-	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	B16-	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	B16-	3	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025

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

### Parts

Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
SCP-1	—	—	LH040	LH025
SCP-2	CNS1204B	BFTX0409N	LH040	LH025

Clamp Set Parts E82

Smart Damper™ E15



Medium Diameter General-purpose Double Clamp

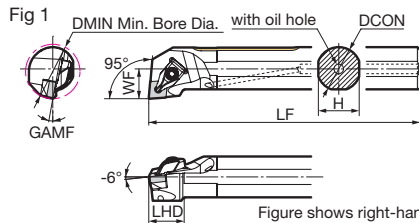
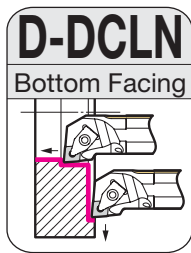


Figure shows right-handed (R) tool.



### Holder

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Dimensions (mm)						
		R	L								DMIN	DCON	H	LF	WF	LHD	GAMF	Cat. No.	Ref. Page
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DCLN R/L1204-32	●	●	32	25	23	300	17	26	-12°	CN□□1204	B16-	1	SCP-2	5.0	CNS1203B	BFTX0307N	LH040	LH025
	D32T-DCLN R/L1204-40	●	●	40	32	30	300	22	26	-10°	CN□□1204	B16-	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025
	D40U-DCLN R/L1204-50	●	●	50	40	37	350	27	26	-10°	CN□□1204	B16-	1	SCP-2	5.0	CNS1204B	BFTX0409N	LH040	LH025

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

### Parts

Clamp Set	Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
SCP-2	CNS1203B	BFTX0307N	LH040	LH025
SCP-2	CNS1204B	BFTX0409N	LH040	LH025

Clamp Set Parts E82

Smart Damper™ E15

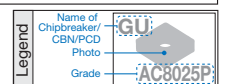
### \* Applicable Inserts for DCLN type

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	AC8015P	AC8025P	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
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	H1	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	No Chipbreaker	EF	EG	EM	SUMIDIA	—	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	BN7125/BNC500	AC420K	AC420K	AC5025S	AC5025S	AC5025S	DA1000	—	BNC300	BN350
Recommended Cutting Conditions	A10~			A14~			A16~			A18~			A22~		A20~	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

# S-PCLN/B-PCLN type



Medium Diameter General-purpose  
Lever Lock

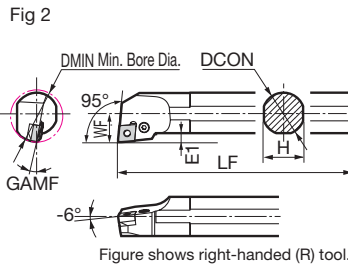
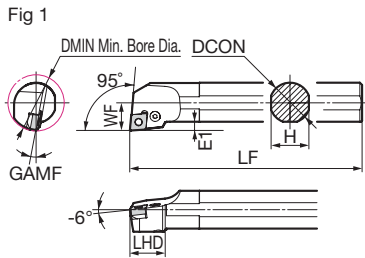
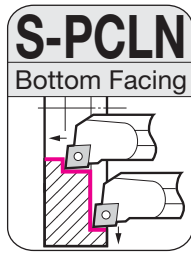


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Inserts		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
			R	L									Cat. No.	Ref. Page						
Steel	S25R-PCLN R/L0903-32	—	●	●	32	25	23	200	17.0	30	4.5	-15°	CN□□0903	B14	1	LCL3	LCS3	LSC32	LSP3	LH025
	S32S-PCLN R/L1204-40	—	●	●	40	32	30	250	22.0	29	7.0	-10°	CN□□1204	B16	1	LCL4	LCS4	LSC42B	LSP4	LH030
	S32S-PCLN R/L1204-44	S32S-PCLN R/L 12	▲	▲	44	32	30	250	22.0	29	7.0	-10°						LSC42		
	S40T-PCLN R/L1204-50	—	●	●	50	40	37	300	25.0	29	6.5	-10°								
	S40T-PCLN R/L1204-54	S40T-PCLN R/L 12	▲	▲	54	40	37	300	27.0	29	8.5	-10°								
	S50U-PCLN R/L1204-63	—	●	●	63	50	47	350	31.5	—	8.0	-10°	CN□□1906	B22	1	LCL6	LCS6	LSC63	LSP6	LH040
S50U-PCLN R/L1906-70	S50U-PCLN R/L 19	▲	▲	70	50	47	350	35.0	39	11.5	-10°									

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



Medium Diameter General-purpose  
Lever Lock

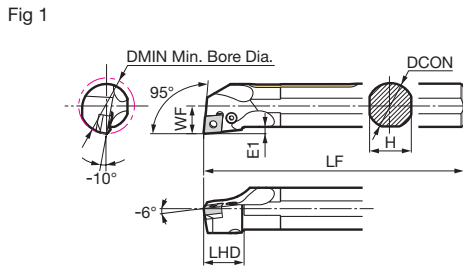
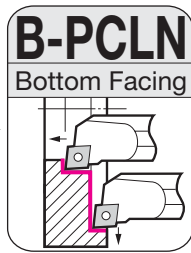


Figure shows right-handed (R) tool.



## 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								Cat. No.	Ref. Page						
Steel with Anti-Vibration Mechanism	B32U-PCLN R/L1204-40	●	●	40	32	30	350	20	29	5.0	CN□□1204	B16	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.



# S-ECLN type



Medium Diameter General-purpose Pin Lock

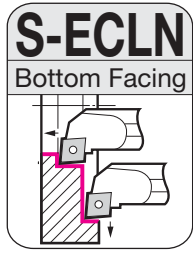


Fig 1

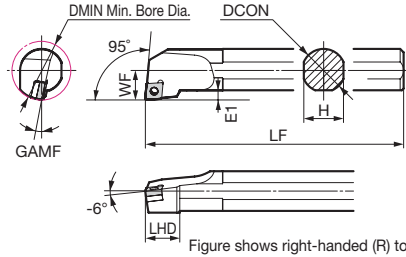


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Offset E1	Rake Angle GAMF	Applicable Inserts		Shim	Eccentric Pin	Wrench (For Hexagonal hole)	
			R	L									Cat. No.	Ref. Page				
Steel	<b>S20Q-ECLN R/L0903-26</b>	BCLN320 R/L	●	●	26	20	18	180	13	20	4.0	-12°	CN□□0903	B14	1	—	CPU304C	LH030
	<b>S25R-ECLN R/L0903-34</b>	BCLN325 R/L	●	●	34	25	23	200	17	20	5.5	-12°				1	SCW323	CPB32C
	<b>S25R-ECLN R/L1204-34</b>	BCLN425 R/L	●	●	34	25	23	200	17	20	5.5	-12°	CN□□1204	B16-	1	SCW423	CPB42	LH030
	<b>S32S-ECLN R/L1204-44</b>	BCLN432 R/L	●	●	44	32	30	250	22	25	7.0	-10°					CPB43S	
	<b>S40T-ECLN R/L1204-54</b>	BCLN440 R/L	●	●	54	40	37	300	27	25	8.5	-10°	CN□□1906	B22-	1	SCW635	CPB43	LH040
<b>S50U-ECLN R/L1906-70</b>	BCLN650 R/L	●	●	70	50	47	350	35	32	11.5	-10°	CPB64						

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

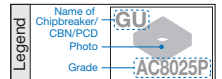
**\*Applicable Inserts for ECLN type**

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

**Applicable Inserts** ◀ S-DCLN type / D-DCLN type / S-PCLN type / B-PCLN type / S-ECLN type

**1st Recommended Insert**

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



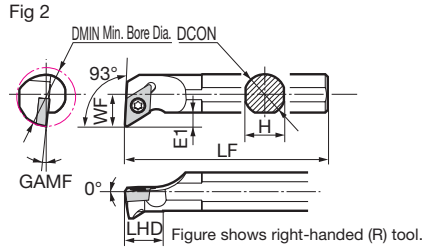
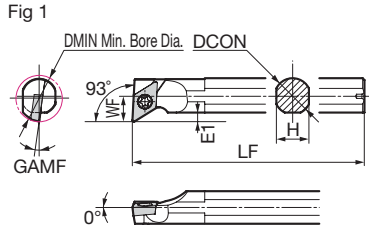
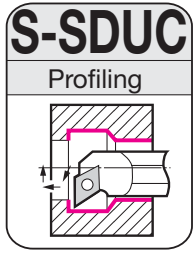
Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			N (Non-Ferrous)		H (Hardened Steel)	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	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 AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	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	EG AC6040M	EM AC6040M	SUMIBORON BN7125/BNC500	GZ AC420K	No Chipbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIDIA DA1000	—	SUMIBORON BNC300	SUMIBORON BN350
Recommended Cutting Conditions	A10~			A14~			A16~			A18~			A22~		A20~	

BNC500 is for ductile cast iron.

# S-SDUC type / A-SDUC type



Internal Profiling  
Screw-on



## Holder

## Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Inserts			Flat Insert Screw		Wrench (For Torx hole)
			R	L									DMIN	DCON	H	LF	WF	
Steel	<b>S10M-SDUC R/L0702-13</b>	S10M-SDUC R/L 07	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>S12M-SDUC R/L0702-16</b>	S12M-SDUC R/L 07	●	●	16	12	11	150	9.0	3.5	-8°	—						
	<b>S16Q-SDUC R/L0702-20</b>	—	●	●	20	16	15	180	11.0	4.0	-6°	—						
	<b>S16N-SDUC R/L0702-20</b>	S16N-SDUC R/L 07	●	●	20	16	15	160	11.0	4.0	-6°	—	DC□□11T3	B84~	2	BFTX0409N	3.4	TRX15
	<b>S16Q-SDUC R/L11T3-23</b>	—	●	●	23	16	15	180	12.5	5.5	-6°	15						
	<b>S20R-SDUC R/L11T3-25</b>	—	●	●	25	20	18	200	13.0	4.5	-6°	—						
	<b>S20N-SDUC R/L11T3-25</b>	S20N-SDUC R/L 11	●	●	25	20	18	160	13.0	4.5	-6°	—	DC□□11T3	B84~	1	BFTX0409N	3.4	TRX15
	<b>S25S-SDUC R/L11T3-32</b>	—	●	●	32	25	22	250	17.0	7.0	-6°	—						
	<b>S25Q-SDUC R/L11T3-32</b>	S25Q-SDUC R/L 11	●	●	32	25	22	180	17.0	7.0	-6°	—						

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

Smart Damper™ **E13**



Internal Profiling  
Screw-on

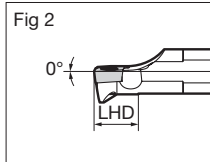
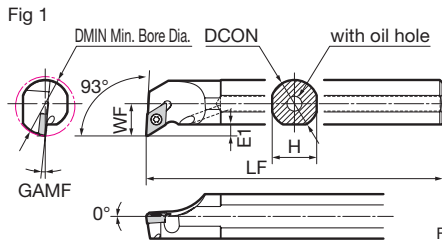
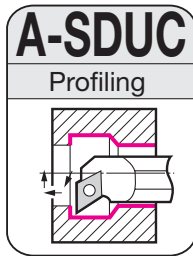


Figure shows right-handed (R) tool.

## Holder

## Parts

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Inserts			Flat Insert Screw		Wrench (For Torx hole)
		R	L									DMIN	DCON	H	LF	WF	
Steel with Oil Hole	<b>A10M-SDUC R/L0702-13</b>	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>A12M-SDUC R/L0702-16</b>	●	●	16	12	11	150	9.0	3.5	-8°	—						
	<b>A16Q-SDUC R/L0702-20</b>	●	●	20	16	15	180	11.0	4.0	-6°	—						
	<b>A16Q-SDUC R/L11T3-23</b>	●	●	23	16	15	180	12.5	5.5	-6°	15	DC□□11T3	B84~	2	BFTX0409N	3.4	TRX15
	<b>A20R-SDUC R/L11T3-25</b>	●	●	25	20	18	200	13.0	4.5	-6°	—						
<b>A25S-SDUC R/L11T3-32</b>	●	●	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

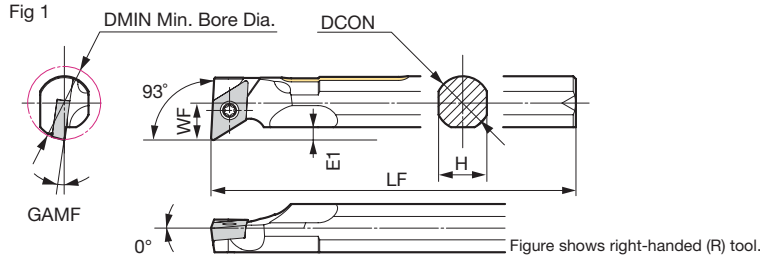
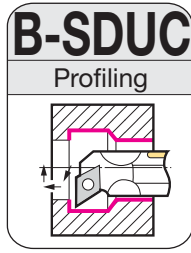
W

Smart Damper™  
Very Small Diameter Turning

# B-SDUC type / C-SDUC type



Internal Profiling  
Screw-on



Boring Bars

E

Holder

Parts

Dimensions (mm)

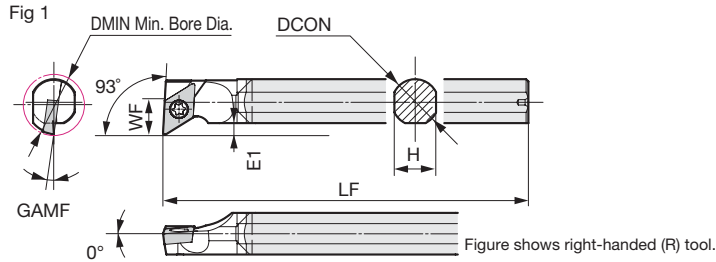
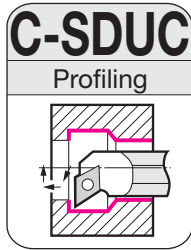
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Applicable Inserts		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel with Anti-Vibration Mechanism	<b>B10M-SDUC R/L0702-13</b>	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>B12M-SDUC R/L0702-16</b>	●	●	16	12	11	150	9	3.5	-8°						
	<b>B16R-SDUC R/L0702-20</b>	●	●	20	16	15	200	11	4.0	-6°						
	<b>B20S-SDUC R/L11T3-25</b>	●	●	25	20	18	250	13	4.5	-6°						
	<b>B25S-SDUC R/L11T3-32</b>	●	●	32	25	22	250	17	7.0	-6°						

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

Smart Damper™ E13



Internal Profiling  
Screw-on



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 Inserts		Flat Insert Screw		Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N·m		
Carbide	<b>C10M-SDUC R/L0702-13</b>	●	●	13	10	9	150	7	2.5	-8°	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>C12M-SDUC R/L0702-16</b>	●	●	16	12	11	150	9	3.5	-8°						
	<b>C16R-SDUC R/L0702-20</b>	●	●	20	16	15	200	11	4.0	-6°						
	<b>C20S-SDUC R/L11T3-25</b>	●	●	25	20	18	250	13	4.5	-6°						
	<b>C25S-SDUC R/L11T3-32</b>	●	●	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

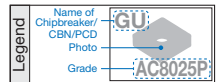
W

Smart Damper™ Turning

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 Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	No Chipbreaker	FX	SUMIDIA	AG	SUMIBORON	SUMIBORON	SUMIDIA
	T1500Z	AC8025P	AC8025P	AC6030M	AC6030M	AC6030M	BN7125/BN500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA90
High-precision	FF	SI	SC	FF	SI	SC	SUMIBORON	—	—	SI	SUMIDIA	—	SUMIBORON	SUMIBORON	SUMIDA BINDERLESS
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BN500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	A10~			A14~			A16~			A18~	A22~		A20~		M2~

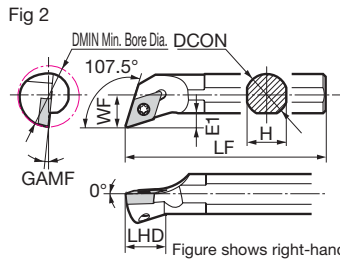
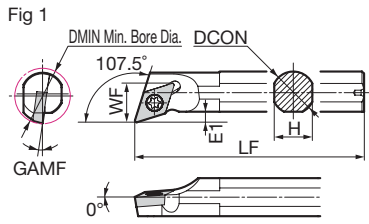
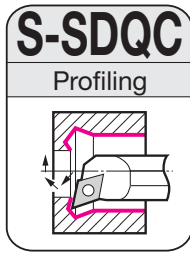
BN500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

# S-SDQC type / A-SDQC type



Internal Profiling  
Screw-on



## Holder

## Parts

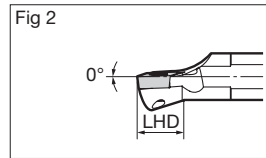
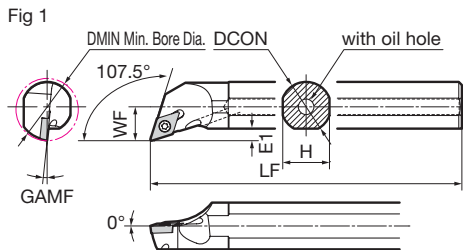
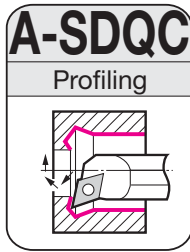
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Inserts			Flat Insert Screw	Wrench	
			R	L									Cat. No.	Ref. Page	Fig			
Steel	<b>S10M-SDQC R/L0702-13</b>	S10M-SDQC R/L 07	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>S12M-SDQC R/L0702-16</b>	S12M-SDQC R/L 07	●	●	16	12	11	150	9.0	3.5	-8°	—			1			
	<b>S16Q-SDQC R/L0702-20</b>	—	●	●	20	16	15	180	11.0	4.0	-6°	—			1			
	<b>S16N-SDQC R/L0702-20</b>	S16N-SDQC R/L 07	●	●	20	16	15	160	11.0	4.0	-6°	—	DC□□11T3	B84~	2	BFTX0409N	3.4	TRX15
	<b>S16Q-SDQC R/L11T3-23</b>	—	●	●	23	16	15	180	12.5	5.5	-6°	15			1			
	<b>S20R-SDQC R/L11T3-25</b>	—	●	●	25	20	18	200	13.0	4.5	-6°	—			1			
	<b>S20N-SDQC R/L11T3-25</b>	S20N-SDQC R/L 11	●	●	25	20	18	160	13.0	4.5	-6°	—			1			
	<b>S25S-SDQC R/L11T3-32</b>	—	●	●	32	25	22	250	17.0	7.0	-6°	—			1			
	<b>S25Q-SDQC R/L11T3-32</b>	S25Q-SDQC 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™ **IE E13**



Internal Profiling  
Screw-on



## Holder

## Parts

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Head	Applicable Inserts			Flat Insert Screw	Wrench	
		R	L									Cat. No.	Ref. Page	Fig			
Steel with Oil Hole	<b>A10M-SDQC R/L0702-13</b>	●	●	13	10	9	150	7.0	2.5	-8°	—	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>A12M-SDQC R/L0702-16</b>	●	●	16	12	11	150	9.0	3.5	-8°	—			1			
	<b>A16Q-SDQC R/L0702-20</b>	●	●	20	16	15	180	11.0	4.0	-6°	—			1			
	<b>A16Q-SDQC R/L11T3-23</b>	●	●	23	16	15	180	12.5	5.5	-6°	15	DC□□11T3	B84~	2	BFTX0409N	3.4	TRX15
	<b>A20R-SDQC R/L11T3-25</b>	●	●	25	20	18	200	13.0	4.5	-6°	—			1			
	<b>A25S-SDQC R/L11T3-32</b>	●	●	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™ **IE E13**

Boring Bars

E

C

D

R

S

T

V

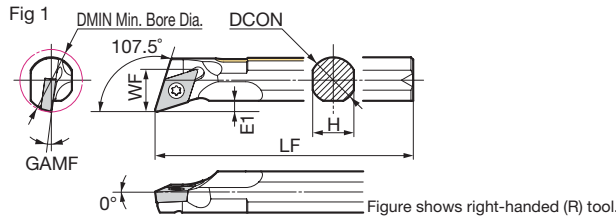
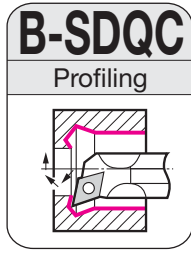
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Smart Damper™  
Very Small Diameter Turning

# B-SDQC type



Internal Profiling  
Screw-on



Boring Bars

Holder

Parts Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Applicable Inserts		Flat Insert Screw		Wrench	
		R	L								DMIN	DCON	H	LF		WF
Steel with Anti-Vibration Mechanism	<b>B10M-SDQC R/L0702-13</b>	●	●	<b>13</b>	10	9	150	7	2.5	-8°	DC□□0702	<b>B80~</b>	1	BFTX02506N	<b>1.5</b>	TRX08
	<b>B12M-SDQC R/L0702-16</b>	●	●	<b>16</b>	12	11	150	9	3.5	-8°						
	<b>B16R-SDQC R/L0702-20</b>	●	●	<b>20</b>	16	15	200	11	4.0	-6°	DC□□11T3	<b>B84~</b>	1	BFTX0409N	<b>3.4</b>	TRX15
	<b>B20S-SDQC R/L11T3-25</b>	●	●	<b>25</b>	20	18	250	13	4.5	-6°						
	<b>B25S-SDQC R/L11T3-32</b>	●	●	<b>32</b>	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

E

C

D

R

S

T

V

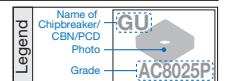
W

Smart Damper™ turning  
Very Small Damper™ turning

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 / Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	<b>FB</b> 	<b>GU</b> 	<b>MU</b> 	<b>LB</b> 	<b>GU</b> 	<b>MU</b> 	<b>SUMIBORON</b> 	<b>MU</b> 	No Chipbreaker	<b>FX</b> 	<b>SUMIDIA</b> 	<b>AG</b> 	<b>SUMIBORON</b> 	<b>SUMIBORON</b> 	<b>SUMIDIA</b> 
	<b>T1500Z</b> 	<b>AC8025P</b> 	<b>AC8025P</b> 	<b>AC6030M</b> 	<b>AC6030M</b> 	<b>AC6030M</b> 	<b>BN7125/BNC500</b> 	<b>AC4015K</b> 	<b>AC4015K</b> 	<b>AC5015S</b> 	<b>DA1000</b> 	<b>H1</b> 	<b>BNC2125</b> 	<b>BN2000</b> 	<b>DA90</b> 
High-precision	<b>FF</b> 	<b>SI</b> 	<b>SC</b> 	<b>FF</b> 	<b>SI</b> 	<b>SC</b> 	<b>SUMIBORON</b> 	—	—	<b>SI</b> 	<b>SUMIDIA</b> 	—	<b>SUMIBORON</b> 	<b>SUMIBORON</b> 	<b>SUMIDIA BINDERLESS</b> 
Recommended Cutting Conditions	A10~			A14~			A16~			A18~	A22~		A20~		M2~

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

# S-SDZC type



Internal Profiling  
Screw-on

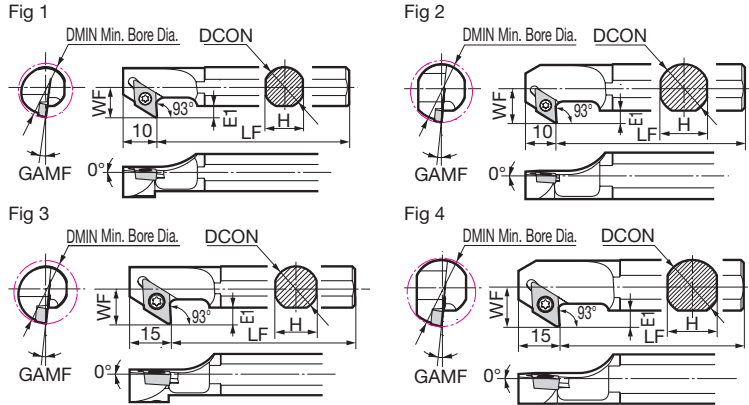
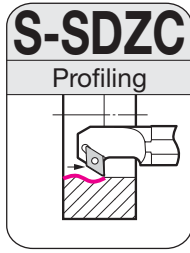


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

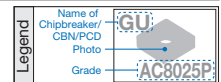
Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Offset E1	Rake Angle GAMF	Applicable Inserts			Flat Insert Screw		Wrench (For Torx hole)
		R	L								Cat. No.	Ref. Page	Fig	Nm		
Steel	<b>S10M-SDZC R/L0702-13</b>	●	●	13	10	9	150	7.5	3.0	-8°			1			
	<b>S12M-SDZC R/L0702-16</b>	●	●	16	12	11	150	9.0	3.5	-8°	DC□□0702	B80~	1	BFTX02506N	1.5	TRX08
	<b>S16Q-SDZC R/L0702-20</b>	●	●	20	16	15	180	11.0	4.0	-6°			2			
	<b>S16Q-SDZC R/L11T3-23</b>	●	●	23	16	15	180	13.0	6.0	-6°			3			
	<b>S20R-SDZC R/L11T3-25</b>	●	●	25	20	18	200	14.5	6.0	-6°	DC□□11T3	B84~	4	BFTX0409N	3.4	TRX15
	<b>S25S-SDZC R/L11T3-32</b>	●	●	32	25	22	250	17.0	7.0	-6°			4			

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

### 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.



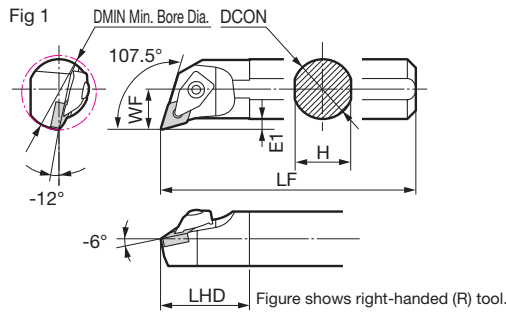
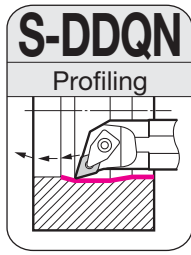
Application Range Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>MU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	<b>MU</b> AC6030M	SUMIBORON BN7125/BNC500	<b>MU</b> AC4015K	No Chipbreaker AC4015K	<b>FX</b> AC5015S	<b>SUMIDIA</b> DA1000	<b>AG</b> H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
	<b>FF</b> AC1030U	<b>SI</b> AC1030U	<b>SC</b> AC1030U	<b>FF</b> AC1030U	<b>SI</b> AC1030U	<b>SC</b> AC1030U	SUMIBORON BN7125/BNC500	—	—	<b>SI</b> AC5015S	<b>SUMIDIA</b> DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10~			A14~			A16~			A18~	A22~		A20~		M2~

BNC500 is for ductile cast iron.

# S-DDQN type / S-DDUN type



Profiling  
Double Clamp



Holder

Parts

Dimensions (mm)

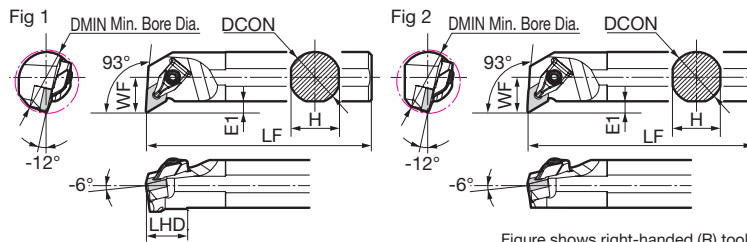
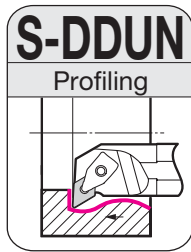
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Insert		Clamp Set		Top Hex Wrench (For Hexagonal hole)	Bottom Hex Wrench (For Hexagonal hole)	
			R	L								Cat. No.	Ref. Page	Fig	N·m			
Steel	<b>S32T-DDQN R/L1504-40</b>	S32T-DDQN15	●	●	<b>40</b>	32	30	300	22	48	6	DN□□1504	<b>B26~</b>	1	SCP-2	<b>5.0</b>	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



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 (For Hexagonal hole)	Bottom Hex Wrench (For Hexagonal hole)	
		R	L								Cat. No.	Ref. Page	Fig	N·m					
Steel	<b>S32S-DDUN R/L1504-40</b>	●	●	<b>40</b>	32	30	250	22.0	26	7.0	DN□□1504	<b>B26~</b>	1	SCP-2	<b>5.0</b>	DNS1504B	BFTX0409N	LH040	LH025
	<b>S40T-DDUN R/L1504-50</b>	●	●	<b>50</b>	40	37	300	27.0	26	8.5									
	<b>S50U-DDUN R/L1504-63</b>	●	●	<b>63</b>	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**

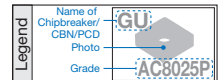
Smart Damper™ **E15**

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 Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	Finishing
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7125/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA NPD10
General Machining	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7125/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIDIA DA1000	AX H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7125/BNC500	GZ AC420K	No Chiselbreaker AC420K	EF AC5025S	EG AC5025S	EM AC5025S	SUMIDIA DA1000	-	SUMIBORON BNC300	SUMIBORON BN350	-
Recommended Cutting Conditions	E A10~			E A14~			E A16~			E A18~			E A22~		E A20~		E M2~

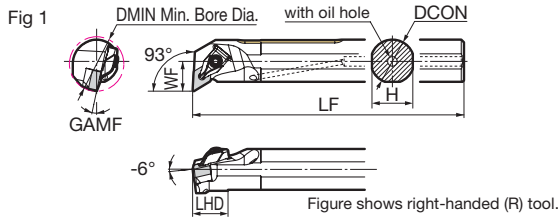
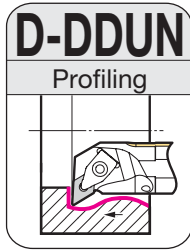
BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

# D-DDUN type / S-PDUN type / S-EDUN type



Profiling  
Double Clamp



## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N-m					
Steel with Anti-Vibration Mechanism Coolant Hole	D32T-DDUN R/L1104-40	●	●	40	32	30	300	22	26	-10°	DN□□1104	B25~	1	SCP-1	5.0	DNS1104B	BFTX0307N	LH040	LH025
	D32T-DDUN R/L1506-40	●	●	40	32	30	300	22	26	-12°	DN□□1506	B30~	1	SCP-2	5.0	DNS1506B	BFTX0409N	LH040	LH025
	D40U-DDUN R/L1506-50	●	●	50	40	37	350	27	26	-12°									

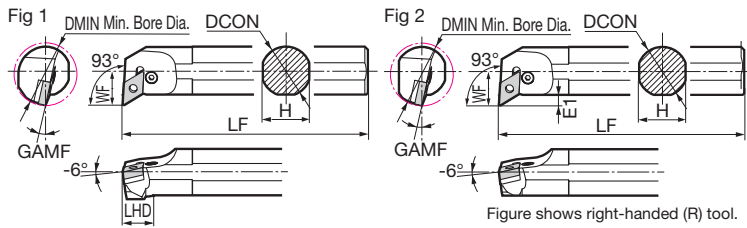
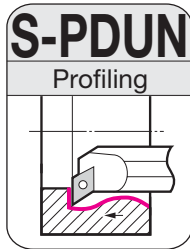
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Clamp Set Parts **E82**

Smart Damper™ **E15**



Profiling  
Lever Lock



## Holder

## Parts

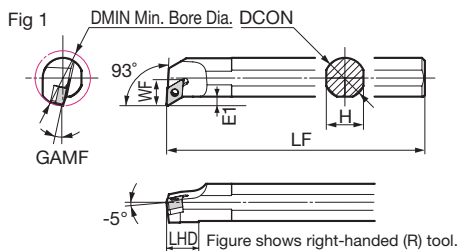
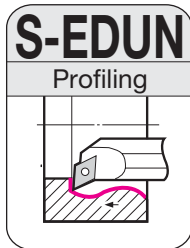
Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Rake Angle	Applicable Inserts		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	B25~	1	LCL3	LCS3	LSD317	LSP3	LH025
	S32S-PDUN R/L1504-40	—	●	●	40	32	30	250	22.0	20	7.0	-12°			1					
	S32S-PDUN R/L1504-44	S32S-PDUN R/L 15	▲	▲	44	32	30	250	22.0	20	7.0	-10°	DN□□1504	B26~	1	LCL4	LCS4	LSD42	LSP4	LH030
	S40T-PDUN R/L1504-50	—	●	●	50	40	37	300	27.0	20	8.5	-12°			1					
	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 Inserts		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	B25~	1	SDW323	CPB34	LH025
	S32S-EDUN R/L1504-44	BDUN432 R/L	●		44	32	30	250	22	20	7.0	-10°	DN□□1504	B26~	1	SDW423	CPB43	LH030

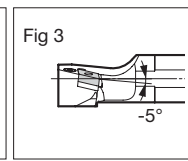
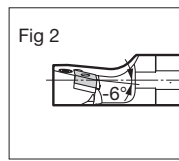
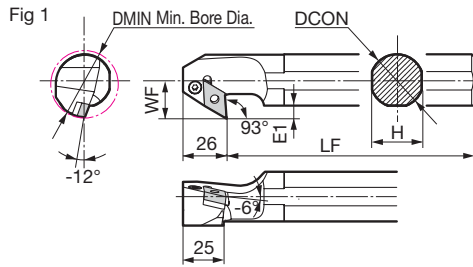
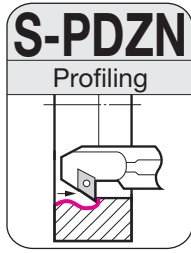
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



# S-PDZN type / S-EDZN type



Profiling  
Lever Lock



Holder

Parts

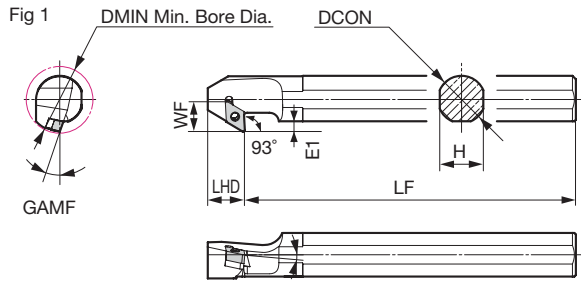
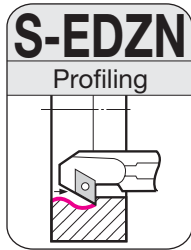
Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	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	B26~	2 1 2 3	LCL4	LCS4	LSD42	LSP4	LH030 <small>(For Hexagonal hole)</small>
	S32S-PDZN R/L1504-44	S32S-PDZN R/L 15	▲	▲	44	32	30	250	22.0	7.0								
	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 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



-5° Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

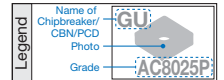
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Head	Cutting Edge Distance	Offset	Rake Angle	Applicable Inserts		Shim	Eccentric Pin	Wrench	
			R	L									Cat. No.	Ref. Page				
Steel	S25R-EDZN R/L1104-34	BDZN325 R/L	●		34	25	23	200	20	17	5.5	-12°	DN□□1104	B25~	1	SDW323	CPB34	LH025
	S32S-EDZN R/L1504-44	BDZN432 R/L	●		44	32	30	250	25	22	7.0	-10°	DN□□1504	B26~	1	SDW423	CPB43	LH030

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

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

**1st Recommended Insert**

- Refer as well to the Insert Selection Guide (page A10-).
- 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 Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	Finishing
Continuous Cutting	FE	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIDIA	AX	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	T1500Z	AC8015P	AC8025P	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
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	H1	BNC2125	BN2000	DA90
Interrupted Cutting	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	No Chipbreaker	EF	EG	EM	SUMIDIA	—	SUMIBORON	SUMIBORON	—
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	BN7125/BNC500	AC420K	AC420K	AC5025S	AC5025S	AC5025S	DA1000	—	BNC300	BN350	—
Recommended Cutting Conditions	A10~			A14~			A16~			A18~			A22~		A20~		M2~

BNC500 is for ductile cast iron.

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

# S-DTR55C type



Internal Profiling  
Double Clamp

**SumiTura T-REX**

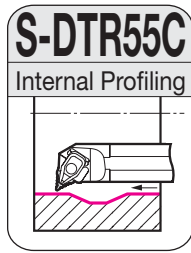
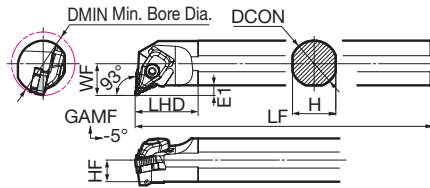


Fig 1



Boring Bars

E

## Holder

## Parts

Dimensions (mm)

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

\* Item is sold separately.

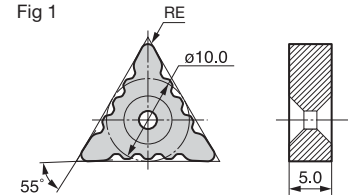
DTR55C type: External Profiling **C17**

## Insert ( Coated Carbide / Cermet)

Dimensions (mm)

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

Fig 1



R

S

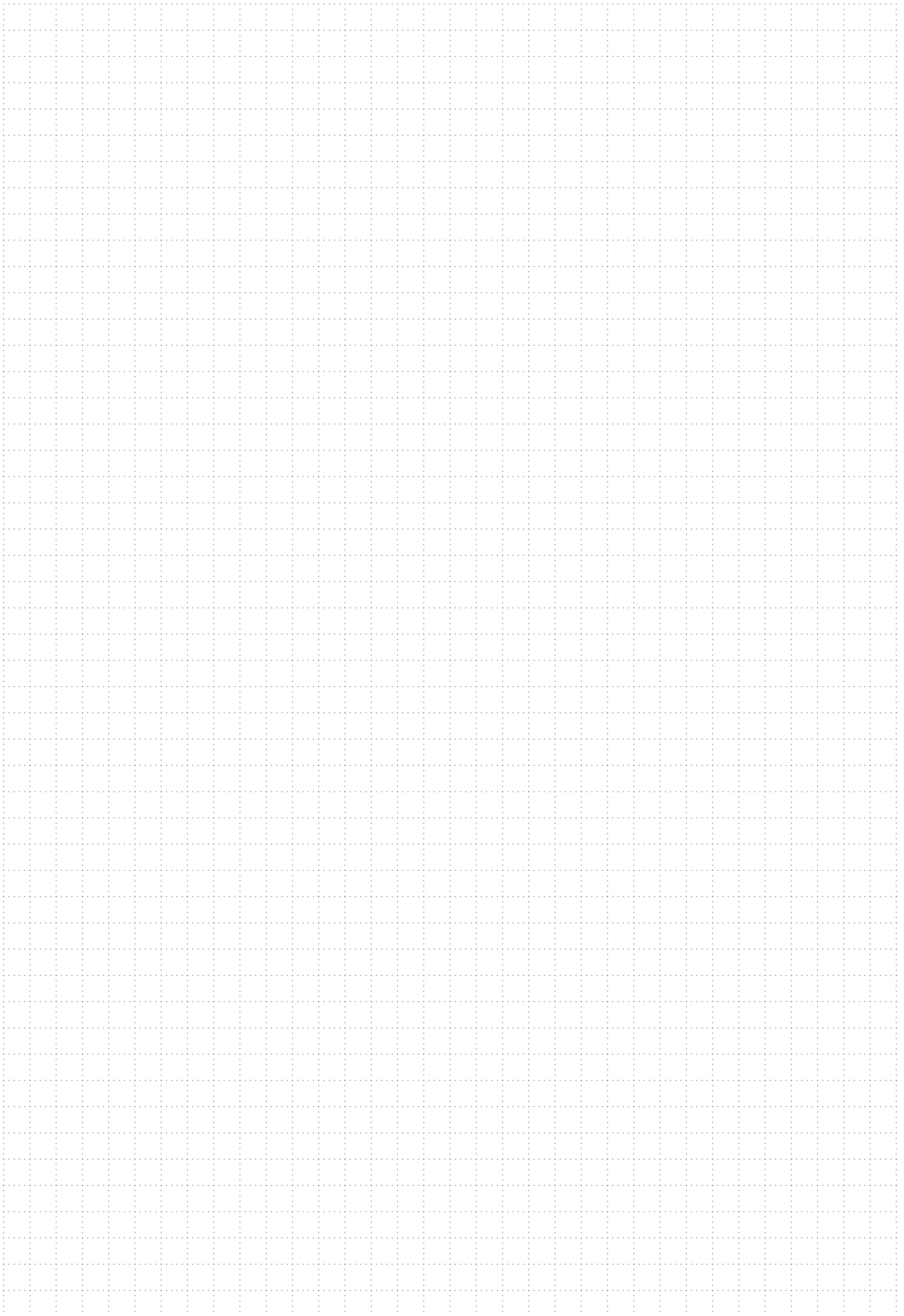
T

V

W

Small Diameter Turning  
Very Small Diameter Turning

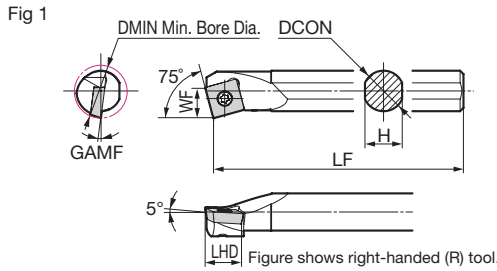
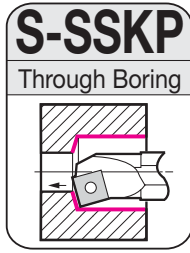
# MEMO



# S-SSKP type/C-SSKP type



Internal General-purpose  
Screw-on



## Holder

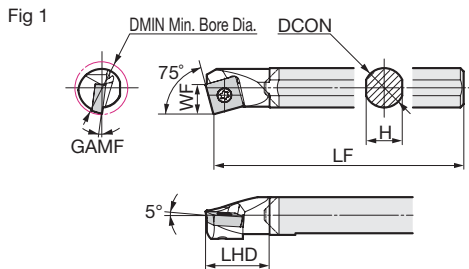
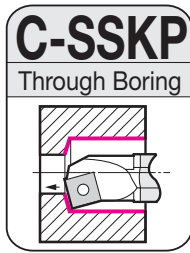
## Parts

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			
Steel	<b>S12M-SSKP R/L0903-16</b>	BBPS-312 R/L	●	●	16	12	11	150	8.0	9.0	-6°	SP□□0903	B94	BFTX0307A	2.0	TRX10
	<b>S16R-SSKP R/L0903-20</b>	BBPS-316 R/L	●	●	20	16	15	200	10.0	6.8	-4°					
	<b>S20S-SSKP R/L0903-25</b>	BBPS-320 R/L	●	●	25	20	18	250	12.5	8.5	-2°					
	<b>S25T-SSKP R/L0903-28</b>	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

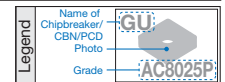
Shank Material	Cat. No.	Previous Cat. No.	Stock	Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Flat Insert Screw	Wrench	
			R								Cat. No.	Ref. Page			
Carbide Standard	<b>C12M-SSKP R0903-16</b>	WBPS-312RS	●	16	12	11	150	8	25	-6°	SP□□0903	B94	BFTX0307A	2.0	TRX10
Carbide Long	<b>C12R-SSKP R0903-16</b>	WBPS-312R	●	16	12	11	200	8	25	-6°					
	<b>C16S-SSKP R0903-20</b>	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	<b>FB</b> T1500Z	<b>LB</b> AC8025P	<b>LU</b> AC6030M	<b>LB</b> AC6030M	<b>SUMIDIA</b> DA1000
High-precision	<b>SD</b> T1500Z	—	—	—	<b>SUMIDIA</b> DA1000
Recommended Cutting Conditions	A10~		A14~		A22~

# SEC-Boring Bar S-CSKP type



Internal General-purpose  
Clamp-on

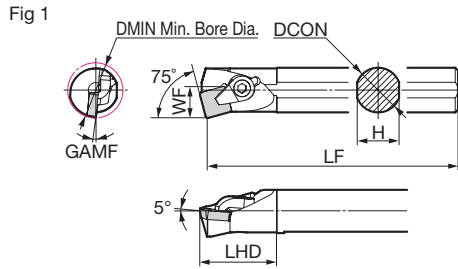
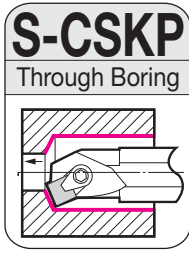


Figure shows right-handed (R) tool.

## 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		Clamp Plate	Double Screw	Wrench	
			R	L								Cat. No.	Ref. Page				
Steel	<b>S16Q-CSKP R/L0903-20</b>	S16Q-CSKP R/L 09	●	●	20	16	15	180	10.0	28	-4°	SP□□0903	B96	1 1	CCM6B L/R	WB6-10 WB6-13	LH030 (For Hexagonal hole)
	<b>S20R-CSKP R/L0903-25</b>	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

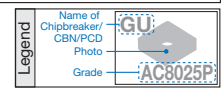


Shank Diameter Turning  
Min Shank Diameter Turning

## 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 Process	P (Steel)		K (Cast Iron)			S (Exotic Alloy)		H (Hardened Steel)
	Finishing	Medium Cutting	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	Medium to Roughing	Uncoated
General 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

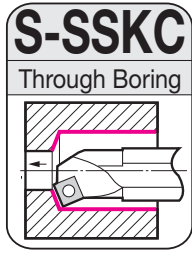


Fig 1

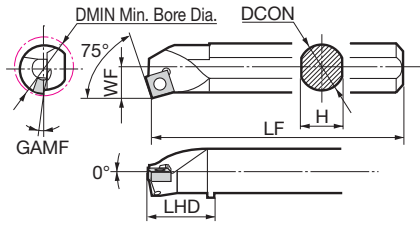


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

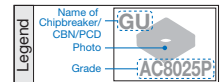
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Flat Insert Screw		Wrench (For Torx hole)	
			R	L								Cat. No.	Ref. Page	Fig	N·m		
Steel	<b>S16R-SSKC R/L09T3-20</b>	S16R-SSKC R/L 09	●	●	20	16	15	200	11	23	-10°	SC□□09T3	<b>B91</b>	1	BFTX0407N	<b>3.4</b>	TRX15
	<b>S20S-SSKC R/L09T3-25</b>	S20S-SSKC R/L 09	●	●	25	20	18	250	13	27	-8°				BFTX0409N	<b>3.4</b>	
	<b>S25T-SSKC R/L1204-32</b>	S25T-SSKC R/L 12	●		32	25	23	300	17	30	-7°	SC□□1204	<b>B92</b>	1	BFTX0511N	<b>5.0</b>	TRX20
	<b>S32U-SSKC R/L1204-40</b>	S32U-SSKC R/L 12	●		40	32	30	350	22	33	-6°				BFTX0511N	<b>5.0</b>	

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 Process	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	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>MU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	<b>MU</b> AC6040M	<b>MU</b> AC4015K	No Chipbreaker <b>AC4015K</b>	<b>SUMIDIA</b> DA1000
High-precision	<b>FX</b> T1500A	<b>SC</b> AC1030U	<b>SC</b> AC1030U	<b>FX</b> AC1030U	<b>SC</b> AC1030U	<b>SC</b> AC1030U	—	—	<b>SUMIDIA</b> DA1000
Recommended Cutting Conditions	A10~			A14~			A16~		A22~

# S-DSKN type / S-PSKN type



Medium Diameter General-purpose Double Clamp

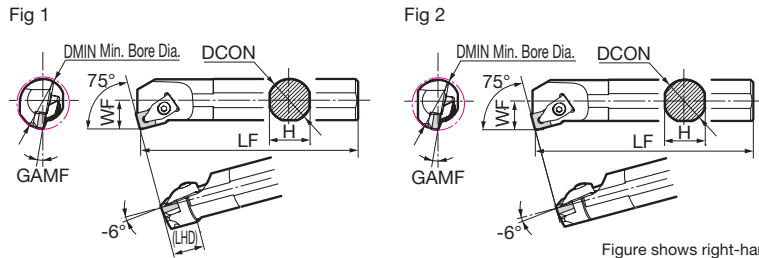


Figure shows right-handed (R) tool.

Holder

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	S25R-DSKN R/L1204-32	●	●	32	25	23	200	17.0	(26)	-13°	SN□□1204	B35~	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

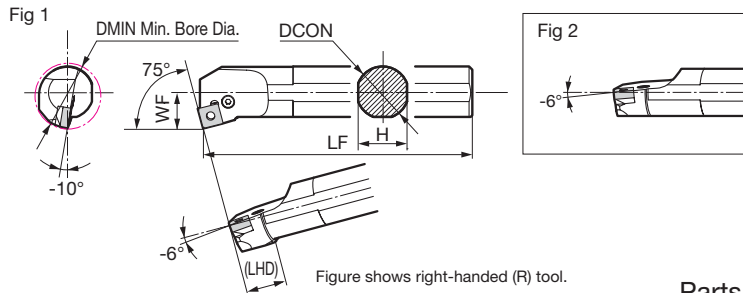
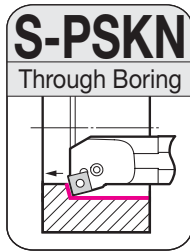


Figure shows right-handed (R) tool.

Holder

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Parts					
			R	L							Cat. No.	Ref. Page	Fig	Lever Pin	Bolt	Shim	Shim Retainer	Wrench
Steel	S32S-PSKN R/L1204-40	-	●	●	40	32	30	250	22.0	(21)	SN□□1204	B35~	1	LCL4	LCS4	LSS42B	LSP4	LH030
	S32S-PSKN R/L1204-44	S32S-PSKN R/L 12	▲	▲	44	32	30	250	22.0	(21)								
	S40T-PSKN R/L1204-50	-	●	●	50	40	37	300	27.0	(21)								
	S40T-PSKN R/L1204-54	S40T-PSKN R/L 12	▲	▲	54	40	37	300	27.0	(21)						LSS42		
	S50U-PSKN R/L1204-63	-	●	●	63	50	47	350	31.5	-						LSS42B		
	S50U-PSKN R/L1906-70	S50U-PSKN R/L 19	▲	▲	70	50	47	350	35.0	(31)						SN□□1906	B41~	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.  
( ) 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.

Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)			H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	Coated	Uncoated	Finishing
Continuous Cutting	FE	GU	MU	EF	EG	EM	SUMIBORON	UZ	GZ	EF	EG	EM	SUMIBORON	SUMIBORON	SUMIDIA BINDERLESS
	T1500Z	AC8015P	AC8025P	AC6020M	AC6020M	AC6030M	BN7125/BNC500	AC4010K	AC4010K	AC5015S	AC5015S	AC5015S	BNC2115	BN1000	NPD10
General Machining	SU	GU	MU	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIBORON	SUMIBORON	SUMIDIA
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	BNC2125	BN2000	DA90
Interrupted Cutting	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	No Chipbreaker	EF	EG	EM	SUMIBORON	SUMIBORON	-
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	BN7125/BNC500	AC420K	AC420K	AC5025S	AC5025S	AC5025S	BNC2125	BN350	-
Recommended Cutting Conditions	A10~			A14~			A16~			A18~			A20~		M2~

BNC500 is for ductile cast iron.

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

Boring Bars



Steel Diameter Turning  
Non Steel Diameter Turning

# S-ESKN type/S-PSYN type



Medium Diameter General-purpose Pin Lock

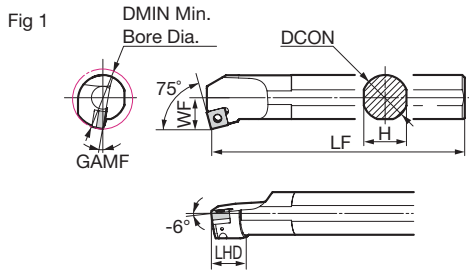


Figure shows right-handed (R) tool.

## 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 Inserts		Shim	Eccentric Pin	Wrench (For Hexagonal hole)
			R	L								Cat. No.	Ref. Page			
Steel	<b>S25R-ESKN R/L1204-34</b>	BSKN425 R/L	●		<b>34</b>	25	23	200	17	(18)	-12°	SN□□1204	B35-	SSW423	CPB42	LH030
	<b>S32S-ESKN R/L1204-44</b>	BSKN432 R/L	●		<b>44</b>	32	30	250	22	(20)	-10°					
	<b>S40T-ESKN R/L1204-54</b>	BSKN440 R/L			<b>54</b>	40	37	300	27	(20)	-10°					
	<b>S50U-ESKN R/L1906-70</b>	BSKN650 R/L			<b>70</b>	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

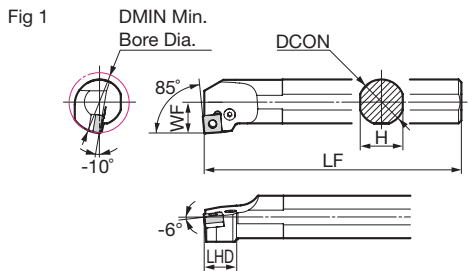
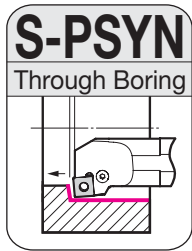


Figure shows right-handed (R) tool.

## 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 (For Hexagonal hole)
			R	L							Cat. No.	Ref. Page					
Steel	<b>S32S-PSYN R/L1204-44</b>	S32S-PSYN R/L 12	●	●	<b>44</b>	32	30	250	22	(22)	SN□□1204	B35-	LCL4	LCS4	LSS42B	LSP4	LH030

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

Boring Bars

E

C

D

R

S

T

V

W

Small Diameter Turning / Very Small Diameter Turning



# S-ESYN type



Medium Diameter General-purpose Pin Lock



Fig 1

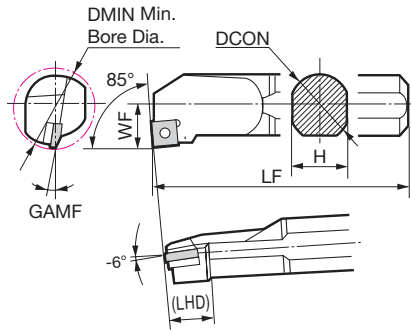


Figure shows right-handed (R) tool.

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	<b>S25R-ESYN R/L1204-34</b>	BSYN425 R/L			<b>34</b>	25	23	200	17	(20)	-12°	SN□□1204	B35-	1 1	SSW423	CPB42 CPB43S	LH030
	<b>S32S-ESYN R/L1204-44</b>	BSYN432 R/L			<b>44</b>	32	30	250	22	(22)	-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.

Boring Bars

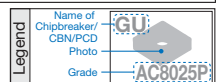


Shank Diameter Turning  
 Very Small Diameter Turning

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

1st Recommended Insert

- Refer as well to the Insert Selection Guide (page A10~).
- 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)		Hard Brittle Material
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing	Medium Cutting	Roughing	Coated	Uncoated	Finishing
Continuous Cutting	FE T1500Z	GU AC8015P	MU AC8025P	EF AC6020M	EG AC6020M	EM AC6030M	SUMIBORON BN7125/BNC500	UZ AC4010K	GZ AC4010K	EF AC5015S	EG AC5015S	EM AC5015S	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
General Machining	SU AC8015P	GU AC8025P	MU AC8025P	EF AC6030M	EG AC6030M	EM AC6040M	SUMIBORON BN7125/BNC500	GZ AC4015K	GZ AC4015K	EF AC5015S	EG AC5015S	EM AC5025S	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
Interrupted Cutting	SX AC8025P	UX AC8035P	MX AC8035P	EF AC6030M	EG AC6040M	EM AC6040M	SUMIBORON BN7125/BNC500	GZ AC420K	No Chipbreaker AC420K	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

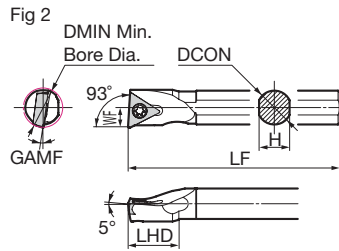
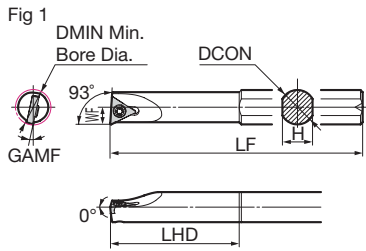
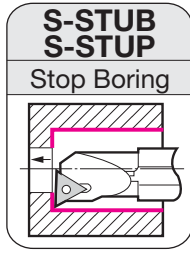


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Inserts		Flat Insert Screw		Wrench (For Torx hole)	
			R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel	S08H-STUB R/L0601-08	BBPT-508 R/L	●	●	8	8	7	100	4.0	30	-12°	TB□□0601	B100-	1	BFTX0204A	0.5	TRX06
	S08H-STUP R/L0802-10	BBPT-608 R/L	●	●	10	8	7	100	5.0	13	-10°	TP□□0802	B105-	1	BFTX0204A	0.5	TRX06
	S08H-STUP R/L0902-10	—	●	●	10	8	7	100	5.0	13	-10°	TP□□0902	B107	2	BFTX02505N	1.1	TRX08
	S10K-STUP R/L1103-12	BBPT-210 R/L	●	●	12	10	9	125	6.0	15	-8°	TP□□1103	B109-	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°			2	BFTX0307A	2.0	
	S20S-STUP R/L1103-22	BBPT-220 R/L	●	●	22	20	18	250	11.0	18	-2°	TP□□1603	B111	2	BFTX0407A	3.4	TRX15
	S25T-STUP R/L1103-28	BBPT-225 R/L	●	●	28	25	22	300	14.0	18	-2°			2	BFTX0407A	3.4	
	S20S-STUP R/L1603-22	—	●	●	22	20	18	250	11.0	18	-3°	TP□□1604	B112	2	BFTX0409N	3.4	TRX15
	S25T-STUP R/L1603-28	—	●	●	28	25	22	300	14.0	18	-1°			2	BFTX0410A	3.4	
	S20S-STUP R/L1604-22	—	●	●	22	20	18	250	12.5	18	-5°	TP□□1604	B112	2	BFTX0409N	3.4	TRX15
	S25T-STUP R/L1604-28	BBPT-325 R/L	●	●	28	25	22	300	14.0	18	-2°			2	BFTX0410A	3.4	

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

Smart Damper™ E14



Internal Finishing to Medium Cutting Screw-on

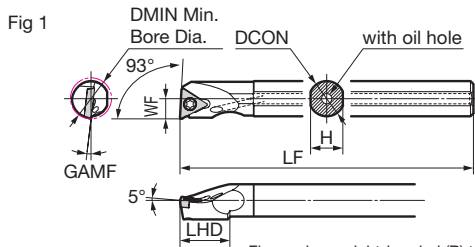
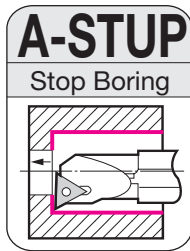


Figure shows right-handed (R) tool.

## Holder

## Parts

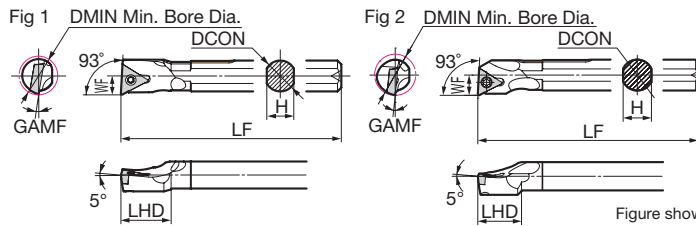
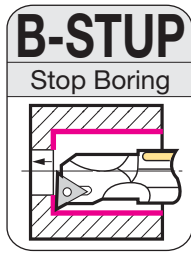
Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Head LHD	Rake Angle GAMF	Applicable Inserts		Flat Insert Screw		Wrench (For Torx hole)	
		R	L								Cat. No.	Ref. Page	Fig	N-m		
Steel with Oil Hole	A08H-STUP R/L0802-10	●	●	10	8	7	100	5	13	-10°	TP□□0802	B105-	1	BFTX0204N	0.5	TRX06
	A08H-STUP R/L0902-10	●	●	10	8	7	100	5	13	-10°	TP□□0902	B107	1	BFTX02505N	1.1	TRX08
	A10K-STUP R/L1102-12	●	●	12	10	9	125	6	15	-8°	TP□□1102	B108	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	B109-	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	B111	1	
	A25T-STUP R/L1103-28	●	●	28	25	22	300	14	18	-2°	1	BFTX0407N			2.0	
	A20S-STUP R/L1603-22	●	●	22	20	18	250	11	18	-3°	TP□□1604	B112	1	BFTX0409N	3.4	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°	TP□□1604	B112	1	BFTX0409N	3.4	TRX15
	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

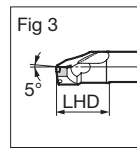


Figure shows right-handed (R) tool.

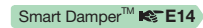
## Holder

## 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 Inserts		Flat Insert Screw		Wrench				
			R	L								Cat. No.	Ref. Page	Fig	(N-m)		(For Torx hole)			
Steel with Anti-Vibration Mechanism	<b>B08H-STUP R/L0802-10</b>	XBPT-608 R/L	●	●	10	8	7	100	5.0	13	-10°	TP□□0802	B105-	1	BFTX0204A	0.5	TRX06			
	<b>B10K-STUP R/L1103-12</b>	XBPT-210 R/L	●	●	12	10	9	125	6.0	15	-8°	TP□□1103	B109-	1	BFTX0306A	2.0	TRX10			
	<b>B12M-STUP R/L1103-14</b>	XBPT-212 R/L 14	●	●	14	12	11	150	7.0	17	-7°			2	BFTX0307A	2.0				
	<b>B12M-STUP R/L1103-16</b>	XBPT-212 R/L	●	●	16	12	11	150	8.0	17	-6°			2	BFTX0306A	2.0				
	<b>B16R-STUP R/L1103-18</b>	XBPT-216 R/L 18	●	●	18	16	15	200	9.0	18	-4°			2	BFTX0307A	2.0				
	<b>B16R-STUP R/L1103-20</b>	XBPT-216 R/L	●	●	20	16	15	200	10.0	18	-2°			2						
	<b>B20S-STUP R/L1103-22</b>	XBPT-220 R/L	●	●	22	20	18	250	11.0	18	-2°			2	BFTX0307A	2.0				
	<b>B25T-STUP R/L1103-28</b>	XBPT-225 R/L	●	●	28	25	22	300	14.0	18	-2°			2						
	<b>B32T-STUP R/L1103-40</b>	XBPT-232 R/L	●	●	40	32	30	300	20.0	53	-2°			3						
	<b>B20S-STUP R/L1604-25</b>	XBPT-320 R/L	●	●	25	20	18	250	12.5	18	-3°			TP□□1604	B112	2		BFTX0410A	3.4	TRX15
	<b>B25T-STUP R/L1604-28</b>	XBPT-325 R/L	●	●	28	25	22	300	14.0	18	-2°			TP□□1604	B112	2		BFTX0410A	3.4	TRX15
	<b>B32T-STUP R/L1604-40</b>	XBPT-332 R/L	●	●	40	32	30	300	20.0	53	-2°	3								

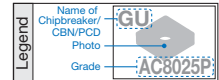
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.



## 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.

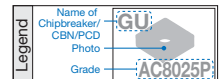


Application Range	P (Steel)		M (Stainless Steel)		N (Non-Ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—	Uncoated
Process	FW	FX	FW	FX	SUMIDIA	SUMIBORON
High-precision	T1500Z	AC1030U	AC1030U	AC1030U	DA1000	BN2000
Recommended Cutting Conditions	A10~		A14~		A22~	A20~

## 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.

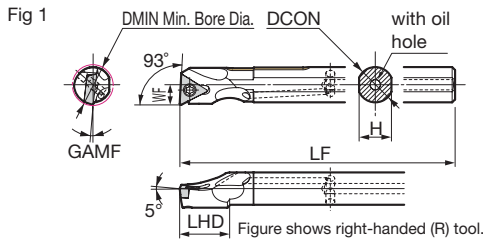
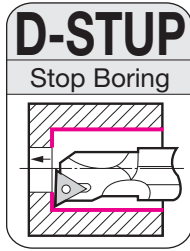


Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)	S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Material	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
Process	FB	GU	MU	LB	GU	MU	SUMIBORON	MU	FX	SUMIDIA	AY	SUMIBORON	SUMIBORON	SUMIDIA
General Machining	T1500Z	AC8025P	AC8025P	AC6030M	AC6030M	AC6030M	BN7125	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA90
High-precision	FF	AC1030U	—	—	—	—	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



Boring Bars

E

C

D

R

S

T

V

W

Smart Damper™ Very Small Diameter Turning

## Holder

## Parts

Dimensions (mm)

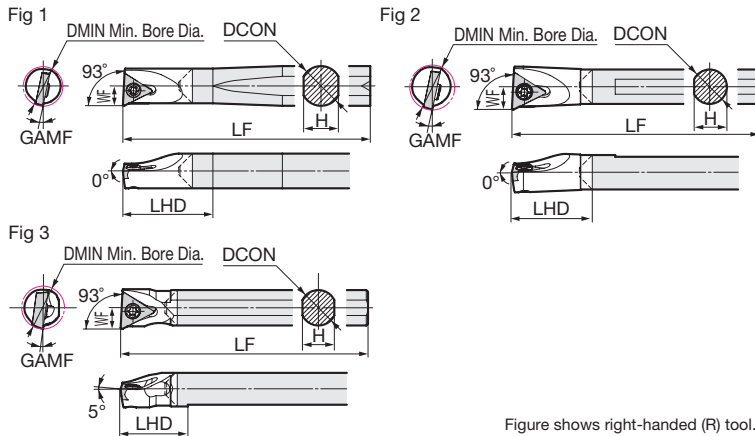
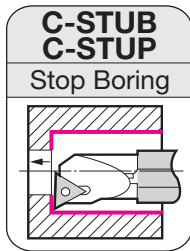
Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert			Flat Insert Screw		Wrench (For Torx hole)	
			R	L								Cat. No.	Ref. Page	Fig	Flat Insert Screw	N-m		
Steel with Anti-Vibration Mechanism and Oil Hole	<b>D12M-STUP R/L1103-14</b>	XBPT-212 R/L H14	●	●	14	12	11	150	7	17	-7°	TP□□1103	B109-	1	BFTX0306A	2.0	TRX10	
	<b>D16R-STUP R/L1103-18</b>	XBPT-216 R/L H18	●	●	18	16	15	200	9	18	-4°				1	BFTX0307A		2.0
	<b>D20S-STUP R/L1103-22</b>	XBPT-220 R/L H22	●	●	22	20	18	250	11	18	-2°				1	BFTX0307A		2.0

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 Finishing to Medium Cutting Screw-on



## Holder

## Parts

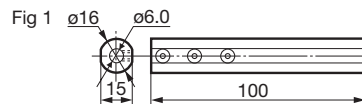
Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts			Flat Insert Screw		Wrench (For Torx hole)	
			R	L								Cat. No.	Ref. Page	Fig	Flat Insert Screw	N-m		
Carbide Standard	<b>C08H-STUB R/L0601-08</b>	WBPT-508 R/L S	●	●	8	8	7.0	100	4.0	50	-12°	TB□□0601	B100-	1	BFTX0204A	0.5	TRX06	
	<b>C08H-STUB R/L0601-08K</b>	WBPT-508 R/L SK	●	●	8	6	5.7	100	4.0	—	-12°				2	BFTX0204N		0.5
	<b>C08H-STUB R/L0802-10</b>	WBPT-608 R/L S	●	●	10	8	7.0	100	5.0	18	-10°				3	BFTX0204A		0.5
	<b>C10K-STUP R/L1103-12</b>	WBPT-210 R/L S	●	●	12	10	9.0	125	6.0	19	-8°	TP□□1103	B109-	3	BFTX0306A	2.0	TRX10	
	<b>C12M-STUP R/L1103-14</b>	WBPT-212 R/L S14	●	●	14	12	11.0	150	7.0	25	-7°				3	BFTX0307A		2.0
	<b>C12M-STUP R/L1103-16</b>	WBPT-212 R/L S	●	●	16	12	11.0	150	8.0	25	-6°				3	BFTX0306A		2.0
	<b>C16R-STUP R/L1103-18</b>	WBPT-216 R/L S18	●	●	18	16	15.0	200	9.0	30	-4°				3	BFTX0306A		2.0
	<b>C16R-STUP R/L1103-20</b>	WBPT-216 R/L S	●	●	20	16	15.0	200	10.0	30	-2°				3	BFTX0307A		2.0
	<b>C20S-STUP R/L1103-22</b>	WBPT-220 R/L S	●	●	22	20	18.0	250	11.0	35	-2°				3	BFTX0307A		2.0
<b>C20S-STUP R/L1604-25</b>	WBPT-320 R/L S	●	●	25	20	18.0	250	12.5	35	-3°	TP□□1604	B112	3	BFTX0410A	3.4	TRX15		
Carbide Long	<b>C08M-STUB R/L0601-08</b>	WBPT-508 R/L	●	●	8	8	7.0	150	4.0	50	-12°	TB□□0601	B100-	1	BFTX0204A	0.5	TRX06	
	<b>C08M-STUB R/L0802-10</b>	WBPT-608 R/L	●	●	10	8	7.0	150	5.0	18	-10°	TP□□0802	B105-	3	BFTX0204A	0.5	TRX06	
	<b>C10Q-STUP R/L1103-12</b>	WBPT-210 R/L	●	●	12	10	9.0	180	6.0	19	-8°	TP□□1103	B109-	3	BFTX0306A	2.0	TRX10	
	<b>C12R-STUP R/L1103-14</b>	WBPT-212 R/L 14	●	●	14	12	11.0	200	7.0	25	-7°				3	BFTX0307A		2.0
	<b>C12R-STUP R/L1103-16</b>	WBPT-212 R/L	●	●	16	12	11.0	200	8.0	25	-6°				3	BFTX0306A		2.0
	<b>C16S-STUP R/L1103-18</b>	WBPT-216 R/L 18	●	●	18	16	15.0	250	9.0	30	-4°				3	BFTX0306A		2.0
<b>C16S-STUP R/L1103-20</b>	WBPT-216 R/L	●	●	20	16	15.0	250	10.0	30	-2°	3				BFTX0307A	2.0		
<b>C16M-STUP R/L1103-18</b>	WBPT-216 R/L E18	●	●	18	16	15.0	150	9.0	30	-4°	TP□□1103				B109-	3		BFTX0306A
<b>C16M-STUP R/L1103-20</b>	WBPT-216 R/L E	●	●	20	16	15.0	150	10.0	30	-2°		3	BFTX0307A	2.0				
<b>C20M-STUP R/L1103-22</b>	WBPT-220 R/L E	●	●	22	20	18.0	150	11.0	35	-2°		3	BFTX0307A	2.0				
<b>C20M-STUP R/L1604-25</b>	WBPT-320 R/L E	●	●	25	20	18.0	150	12.5	35	-3°	TP□□1604	B112	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
<b>HBB 616</b>	●	1

Adapter sleeve is optional.

# E-STUP type



Internal Finishing to Medium Cutting  
Screw-on

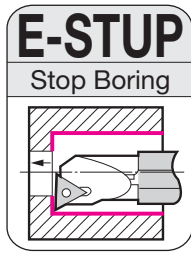
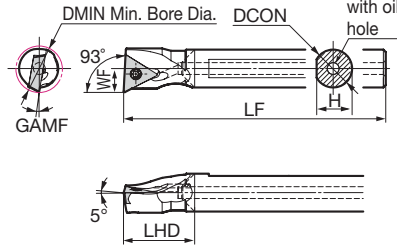


Fig 1



## 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	Head GAMF	Rake Angle	Applicable Inserts		Flat Insert Screw		Wrench	
												Cat. No.	Ref. Page	Fig	N·m	(For Torx hole)	
Carbide with oil hole	<b>E08H-STUP R0802-10</b>	WBPT-608RH	●	10	8	7.5	100	5	18	-10°		TP□□0802	B105~	1	BFTX0204A	0.5	TRX06
	<b>E10K-STUP R1103-12</b>	WBPT-210RH	●	12	10	9.5	125	6	19	-8°				1	BFTX0306A	2.0	TRX10
	<b>E12M-STUP R1103-14</b>	WBPT-212RH14	●	14	12	11.5	150	7	25	-7°				1	BFTX0307A	2.0	
	<b>E12M-STUP R1103-16</b>	WBPT-212RH	●	16	12	11.5	150	8	25	-6°		TP□□1103	B109~	1	BFTX0307A	2.0	
	<b>E16R-STUP R1103-18</b>	WBPT-216RH18	●	18	16	15.5	200	9	30	-4°				1	BFTX0306A	2.0	
	<b>E16R-STUP R1103-20</b>	WBPT-216RH	●	20	16	15.5	200	10	30	-2°				1	BFTX0307A	2.0	

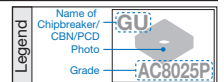
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.

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.

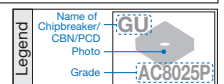


Application Range	P (Steel)		M (Stainless Steel)		N (Non-Ferrous)	H (Hardened Steel)
	Finishing	Medium Cutting	Finishing	Medium Cutting	—	Uncoated
High-precision	<b>FW</b> T1500Z	<b>FX</b> AC1030U	<b>FW</b> AC1030U	<b>FX</b> AC1030U	<b>SUMIDIA</b> DA1000	<b>SUMIBORON</b> BN2000
Recommended Cutting Conditions	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 Material	
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>MU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	<b>MU</b> AC6030M	<b>SUMIBORON</b> BN7125	<b>MU</b> AC4015K	<b>FX</b> AC5015S	<b>SUMIDIA</b> DA1000	<b>AY</b> H1	<b>SUMIBORON</b> BNC2125	<b>SUMIBORON</b> BN2000	<b>SUMIDIA</b> DA90
High-precision	<b>FF</b> AC1030U	—	—	—	—	—	<b>SUMIBORON</b> BN7125	—	<b>FX</b> AC5015S	<b>SUMIDIA</b> DA1000	—	<b>SUMIBORON</b> BNC2115	<b>SUMIBORON</b> BN1000	<b>SUMIDIA BINDERLESS</b> NPD10
Recommended Cutting Conditions	A10~			A14~			A16~		A18~	A22~		A20~		M2~

# S-CTFP type



Internal General-purpose  
Clamp-on

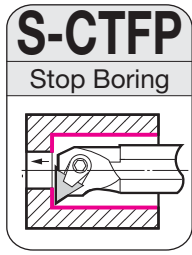


Fig 1

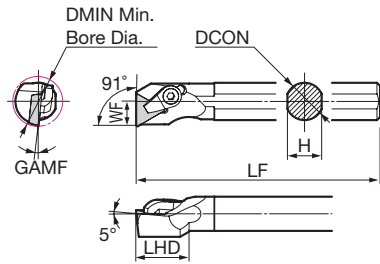


Figure shows right-handed (R) tool.

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 Inserts		Fig	Clamp Plate	Double Screw	Wrench (For Hexagonal hole)
			R	L								Cat. No.	Ref. Page				
Steel	<b>S12M-CTFP R/L1103-16</b>	S12M-CTFP R/L 11	●	●	16	12	11	150	8.0	17	-6°			1			
	<b>S16Q-CTFP R/L1103-20</b>	S16Q-CTFP R/L 11	●	●	20	16	15	180	10.0	18	-4°	TP□□1103	B113~	1	CCM5BSL/R	WB5-10	LH025
	<b>S20R-CTFP R/L1103-25</b>	S20R-CTFP R/L 11	●	●	25	20	18	200	12.5	18	-2°			1			
	<b>S25S-CTFP R/L1603-32</b>	S25S-CTFP R/L 16	●	●	32	25	23	250	16.0	38	-2°	TP□□1603	B114	1	CCM8UL/R	WB8R/L-16T	LT27

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

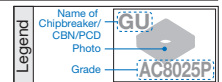
W

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

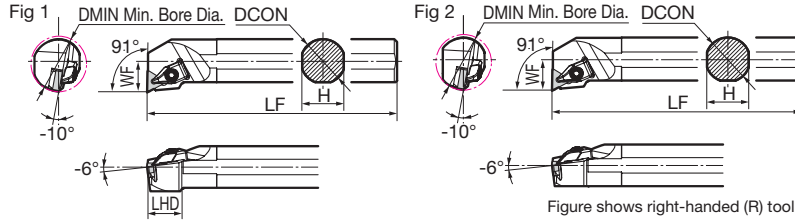
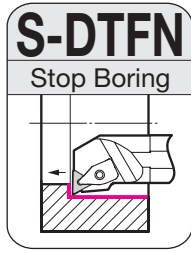


Figure shows right-handed (R) tool.

## Holder

## Parts

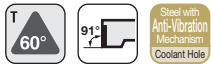
Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L							Cat. No.	Ref. Page	Fig	N-m					
Steel	<b>S32S-DTFN R/L1604-40</b>	●	●	40	32	30	250	22.0	26	TN□□1604	B50~	1	SCP-1	5.0	TNS1604B	BFTX0307N	LH040	LH025
	<b>S40T-DTFN R/L1604-50</b>	●	●	50	40	37	300	27.0	26									
	<b>S50U-DTFN R/L1604-63</b>	●	●	63	50	47	350	31.5	—									

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

Clamp Set Parts **E82**

Smart Damper™ **E15**



Medium Diameter General-purpose Double Clamp

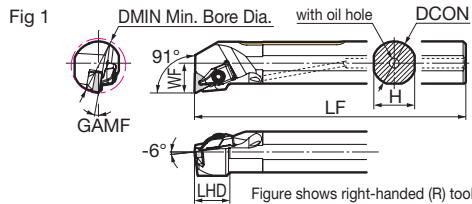
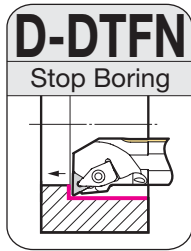


Figure shows right-handed (R) tool.



## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Flake Angle	Applicable Insert		Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench	
		R	L								Cat. No.	Ref. Page	Fig	N-m					
Steel with Anti-Vibration Mechanism and Oil Hole	<b>D25T-DTFN R/L1604-32</b>	●	●	32	25	23	300	17	21	-12°	TN□□1604	B50~	1	SCP-1	5.0	TNS1603B	BFTX0307N	LH040	LH025
	<b>D32T-DTFN R/L1604-40</b>	●	●	40	32	30	300	22	26	-10°									
	<b>D40U-DTFN R/L1604-50</b>	●	●	50	40	37	350	27	26	-10°									

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

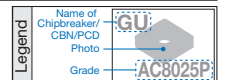
Clamp Set Parts **E82**

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	AC8015P	AC8025P	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
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	DA1000	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EG	EM	SUMIBORON	GZ	GZ	EF	EG	EM	SUMIDIA	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	BN7125/BNC500	AC420K	AC420K	AC5025S	AC5025S	AC5025S	DA1000	BNC300	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

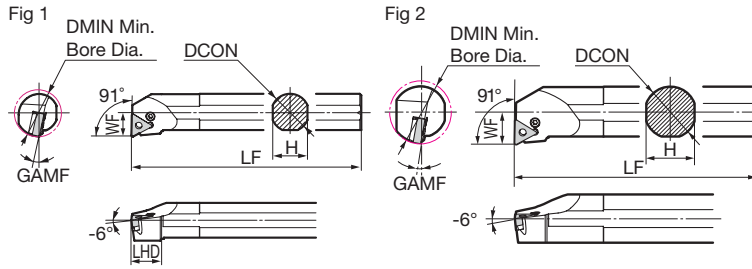
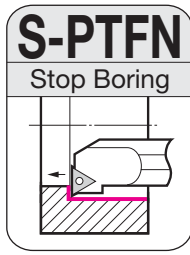


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
			R	L								Cat. No.	Ref. Page						
Steel	<b>S25R-PTFN R/L1604-32</b>	—	●	●	32	25	23	200	16.0	21.5	-12°	TN□□1604	B50~	1	LCL3	LCS3	LST317CA	LSP3	LH025
	<b>S32S-PTFN R/L1604-40</b>	—	●	●	40	32	30	250	20.0	21.0	-10°								
	<b>S32S-PTFN R/L1604-44</b>	S32S-PTFN R/L16	▲	▲	44	32	30	250	22.0	21.0	-10°								
	<b>S40T-PTFN R/L1604-50</b>	—	●	●	50	40	37	300	25.0	21.0	-10°								
	<b>S50U-PTFN R/L1604-63</b>	—	●	●	63	50	47	350	31.5	—	-10°								
	<b>S40T-PTFN R/L2204-54</b>	S40T-PTFN R/L22	▲	▲	54	40	37	300	27.0	26.0	-10°								
<b>S50U-PTFN R/L2204-70</b>	S50U-PTFN R/L22	▲	▲	70	50	47	350	35.0	33.0	-10°	TN□□2204	B55~	1	LCL4	LCS4	LST42	LSP4	LH030	

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



Medium Diameter General-purpose  
Lever Lock

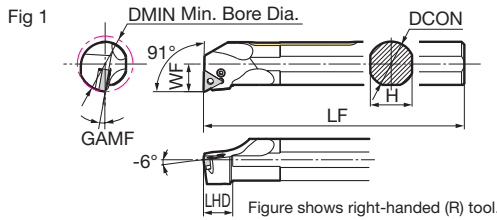
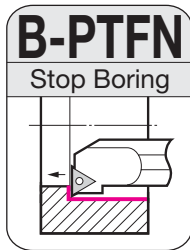


Figure shows right-handed (R) tool.



## Holder

## Parts

Dimensions (mm)

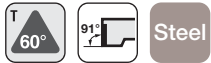
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Insert		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
		R	L								Cat. No.	Ref. Page						
Steel with Anti-Vibration Mechanism	<b>B25T-PTFN R/L1604-32</b>	●		32	25	23	300	16	21	-12°	TN□□1604	B50~	1	LCL3	LCS3	LST317CA	LSP3	LH025
	<b>B32U-PTFN R/L1604-40</b>	●		40	32	30	350	20	21	-10°								
	<b>B40W-PTFN R/L1604-50</b>	●		50	40	37	450	25	21	-10°								

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

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



# S-ETFN type



Medium Diameter General-purpose Pin Lock

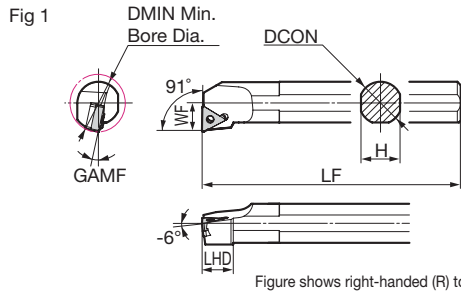
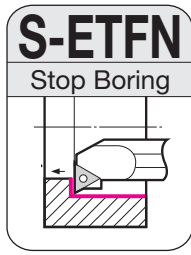


Figure shows right-handed (R) tool.

## 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		Shim	Eccentric Pin	Wrench	
			R	L								Cat. No.	Ref. Page				
Steel	<b>S25R-ETFN R/L1604-34</b>	BTFN325 R/L	●		<b>34</b>	25	23	200	17	18	-12°	TN□□1604	<b>B50~</b>	1 1	STW323	CPB34 CPB35	LH025
	<b>S32S-ETFN R/L1604-44</b>	BTFN332 R/L	●		<b>44</b>	32	30	250	22	20	-10°	TN□□1604	<b>B50~</b>	1 1	STW323	CPB34 CPB35	LH025
	<b>S40T-ETFN R/L2204-54</b>	BTFN440 R/L	●		<b>54</b>	40	37	300	27	25	-10°	TN□□2204	<b>B55~</b>	1 1	STW434	CPB44T CPB45T	LH030
	<b>S50U-ETFN R/L2204-70</b>	BTFN450 R/L	●		<b>70</b>	50	47	350	35	32	-10°	TN□□2204	<b>B55~</b>	1 1	STW434	CPB44T 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.

Boring Bars

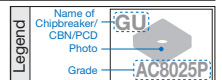


Steel Diameter Turning  
Very Small Diameter Turning

## 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	<b>FE</b>	<b>GU</b>	<b>MU</b>	<b>EF</b>	<b>EG</b>	<b>EM</b>	SUMIBORON	<b>UZ</b>	<b>GZ</b>	<b>EF</b>	<b>EG</b>	<b>EM</b>	SUMIDIA	SUMIBORON	SUMIBORON
	<b>T1500Z</b>	<b>AC8015P</b>	<b>AC8025P</b>	<b>AC6020M</b>	<b>AC6020M</b>	<b>AC6030M</b>	BN7125/BNC500	<b>AC4010K</b>	<b>AC4010K</b>	<b>AC5015S</b>	<b>AC5015S</b>	<b>AC5015S</b>	<b>DA1000</b>	<b>BNC2115</b>	<b>BN1000</b>
General Machining	<b>SU</b>	<b>GU</b>	<b>MU</b>	<b>EF</b>	<b>EG</b>	<b>EM</b>	SUMIBORON	<b>GZ</b>	<b>GZ</b>	<b>EF</b>	<b>EG</b>	<b>EM</b>	SUMIDIA	SUMIBORON	SUMIBORON
	<b>AC8015P</b>	<b>AC8025P</b>	<b>AC8025P</b>	<b>AC6030M</b>	<b>AC6030M</b>	<b>AC6040M</b>	BN7125/BNC500	<b>AC4015K</b>	<b>AC4015K</b>	<b>AC5015S</b>	<b>AC5015S</b>	<b>AC5025S</b>	<b>DA1000</b>	<b>BNC2125</b>	<b>BN2000</b>
Interrupted Cutting	<b>SX</b>	<b>UX</b>	<b>MX</b>	<b>EF</b>	<b>EG</b>	<b>EM</b>	SUMIBORON	<b>GZ</b>	<b>GZ</b>	<b>EF</b>	<b>EG</b>	<b>EM</b>	SUMIDIA	SUMIBORON	SUMIBORON
	<b>AC8025P</b>	<b>AC8035P</b>	<b>AC8035P</b>	<b>AC6030M</b>	<b>AC6040M</b>	<b>AC6040M</b>	BN7125/BNC500	<b>AC420K</b>	<b>AC420K</b>	<b>AC5025S</b>	<b>AC5025S</b>	<b>AC5025S</b>	<b>DA1000</b>	<b>BNC300</b>	<b>BN350</b>
Recommended Cutting Conditions	A10~			A14~			A16~			A18~			A22~	A20~	

BNC500 is for ductile cast iron.

# S-SVJB type/B-SVJB type



Internal Profiling  
Screw-on

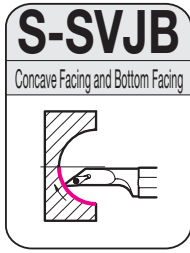


Fig 1

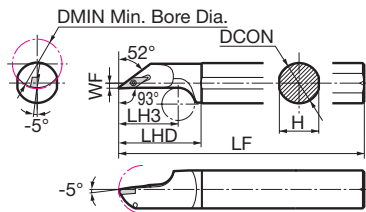


Fig 2

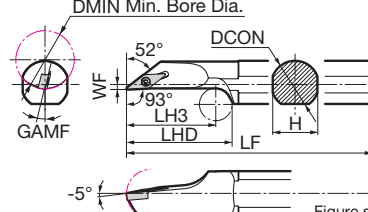


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Head	Rake Angle	Applicable Inserts			Flat Insert Screw		Wrench						
		R	L									Cat. No.	Ref. Page	Fig	(N·m)	(For Torx hole)							
Steel	<b>S20R-SVJB R/L1103-25</b>	●	●	25	20	19	200	2.0	42	29	—	VB□□1103	B113-	1	BFTX02508NV	1.5	TRX08						
	<b>S25S-SVJB R/L1103-30</b>	●	●	30	25	24	250	3.5	50	36	—												
	<b>S32T-SVJB R/L1604-40</b>	●	●	40	32	30	300	3.5	75	60	-8°							VB□□1604	B114	2	BFTX03508	2.0	TRX10
	<b>S40T-SVJB R/L1604-50</b>	●	●	50	40	37	300	4.5	95	75	-7°												

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



Internal Profiling  
Screw-on

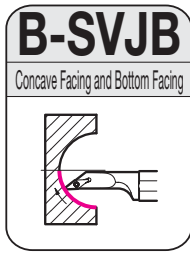


Fig 1

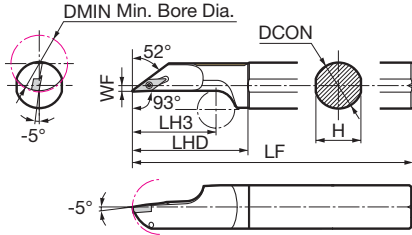


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

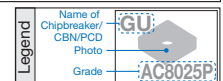
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Head	Rake Angle	Applicable Insert			Flat Insert Screw		Wrench
		R	L									Cat. No.	Ref. Page	Fig	(N·m)	(For Torx hole)	
Steel with Anti-Vibration Mechanism	<b>B20R-SVJB R/L1103-25</b>	●	●	25	20	19	200	2.0	55	37.5	VB□□1103	B118-	1	BFTX02508NV	1.5	TRX08	
	<b>B25S-SVJB R/L1103-30</b>	●	●	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

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

BNC500 is for ductile cast iron.

# SEC-Boring Bar S-SVJC type



Internal Profiling  
Screw-on

Sumi Small

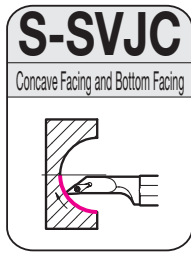


Fig 1

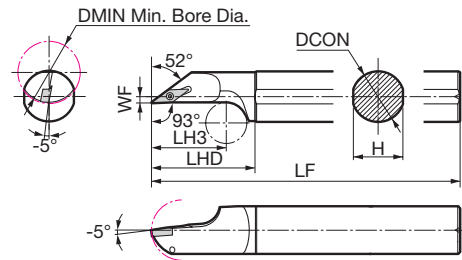


Figure shows right-handed (R) tool.

## 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								DMIN	DCON	H	LF	WF	LHD
Steel	S12M-SVJC R/L0802-16	●	●	16	12	11	150	2.0	30	21	VC□□0802	B121	1 1	BFTX0204N	0.5	TRX06
	S16Q-SVJC R/L0802-20	●	●	20	16	15	180	2.0	40	29						

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

Boring Bars

E

C

D

R

S

T

V

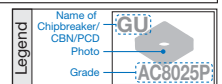
W

Small Diameter Turning  
Very Small Diameter Turning

## Applicable Inserts ◀ S-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 Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	Coated	Uncoated	—
General Machining	<b>FB</b> T1500Z	<b>SU</b> AC8025P	<b>LB</b> AC6030M	<b>SU</b> AC6030M	<b>SU</b> AC5015S	<b>SU</b> AC5025S	<b>SUMIBORON</b> BNC2125	<b>SUMIBORON</b> BN2000	<b>SUMIDIA</b> DA90
	<b>FC</b> T1500A	<b>SI</b> AC1030U	<b>FC</b> AC1030U	<b>SI</b> AC1030U	<b>FC</b> AC5015S	<b>SI</b> AC5015S	<b>SUMIBORON</b> BNC2115	<b>SUMIBORON</b> BN2000	<b>SUMIDIA BINDERLESS</b> NPD10
Recommended Cutting Conditions	I <sub>CS</sub> A10~		I <sub>CS</sub> A14~		I <sub>CS</sub> A18~		I <sub>CS</sub> A20~		I <sub>CS</sub> M2~

Recommended Tightening Torque (N-m)

# S-SVQB type/B-SVQB type



Internal Profiling  
Screw-on

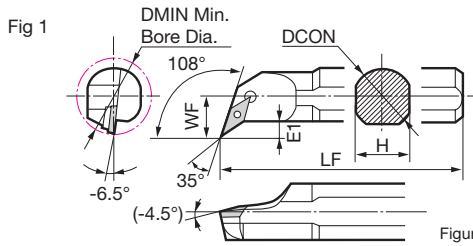
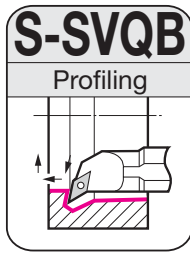


Figure shows right-handed (R) tool.

## Holder

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Inserts		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	B118-	1	—	—	—	BFTX02508NV	1.5	TRX08
	S25S-SVQB R/L1103-32	●	●	32	25	23	250	19.0	7.5									
	S25S-SVQB R/L1604-34	●	●	34	25	23	250	20.5	9.0	VB□□1604	B120	1	—	—	BFTX03508	2.0	TRX10	
	S32T-SVQB R/L1604-40	●	●	40	32	30	300	22.0	9.0									
	S40T-SVQB R/L1604-50	●	●	50	40	37	300	27.0	10.0									

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

Smart Damper™ E14



Internal Profiling  
Screw-on

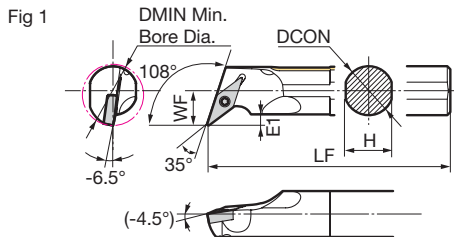
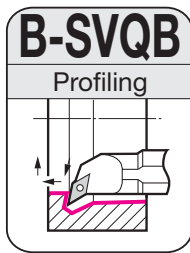


Figure shows right-handed (R) tool.



## 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	B118-	1	—	—	—	BFTX02508NV	1.5	TRX08
	B20R-SVQB R/L1103-25	●	—	25	20	18	200	14.5	5									

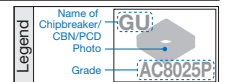
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper™ E14

## Applicable Inserts

### 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	E10 A10~		E10 A14~		E10 A16~		E10 A18~	E10 A22~	E10 A20~	

BNC500 is for ductile cast iron.

# C-SVQB type



Internal Profiling  
Screw-on

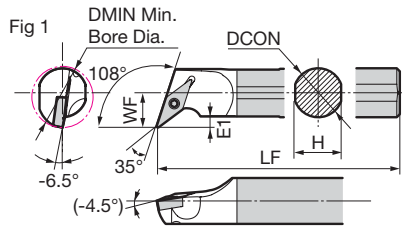
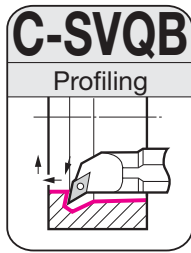


Figure shows right-handed (R) tool.

### 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							DMIN	DCON	H	LF	WF	
Carbide	<b>C16R-SVQB R/L1103-20</b>	●		<b>20</b>	16	15	200	11.5	4	VB□□1103	B118~	1 1		<b>1.5</b>	TRX08
	<b>C20R-SVQB R/L1103-25</b>	●		<b>25</b>	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™ IE E14

Boring Bars

E

C

D

R

S

T

V

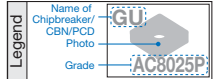
W

Smart 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	<b>FB</b> 	<b>GU</b> 	<b>LB</b> 	<b>GU</b> 	<b>SUMIBORON</b> 	<b>No Chipbreaker</b> 	<b>SI</b> 	<b>AY</b> 	<b>H1</b> 	<b>BNC2125</b> 	<b>BN2000</b> 
High-precision	<b>FYS</b> 	<b>SI</b> 	<b>FYS</b> 	<b>SI</b> 	<b>SUMIBORON</b> 	—	<b>SI</b> 	—	<b>BNC2115</b> 	<b>BN1000</b> 	
Recommended Cutting Conditions	IE A10~		IE A14~		IE A16~		IE A18~	IE A22~	IE A20~		

BNC500 is for ductile cast iron.

# S-SVQC type/A-SVQC type



Internal Profiling  
Screw-on

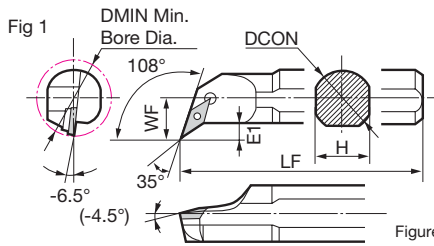
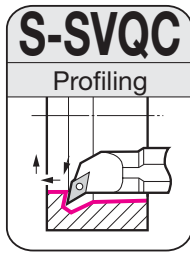


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Inserts		Flat Insert Screw		Wrench	
		R	L							DMIN	DCON	H	LF		WF
Steel	<b>S10M-SVQC R/L0802-14</b>	●	●	<b>14</b>	10	9	150	8.5	4.5	VC□□0802	<b>B121</b>	1	BFTX0204N	<b>0.5</b>	TRX06
	<b>S12M-SVQC R/L0802-16</b>	●	●	<b>16</b>	12	11	150	9.5	4.5	VC□□0802	<b>B121</b>	1	BFTX0204N	<b>0.5</b>	TRX06
	<b>S16Q-SVQC R/L1103-20</b>	●	●	<b>20</b>	16	15	180	11.5	4.5	VC□□1103	<b>B121~</b>	1	BFTX02508NV	<b>1.5</b>	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

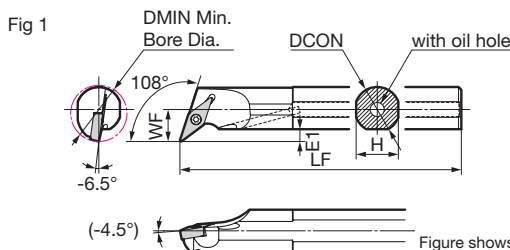
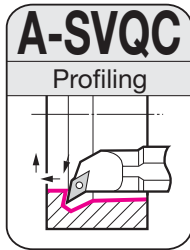


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

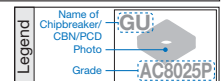
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Inserts		Flat Insert Screw		Wrench	
		R	L							DMIN	DCON	H	LF		WF
Steel with Oil Hole	<b>A16Q-SVQC R/L1103-20</b>	●	●	<b>20</b>	16	15	180	11.5	4.5	VC□□1103	<b>B121~</b>	1	BFTX02508NV	<b>1.5</b>	TRX08
	<b>A20R-SVQC R/L1103-25</b>	●	●	<b>25</b>	20	18	200	14.5	5.5	VC□□1103	<b>B121~</b>	1	BFTX02508NV	<b>1.5</b>	TRX08
	<b>A25S-SVQC R/L1103-32</b>	●	●	<b>32</b>	25	23	250	19.0	7.5	VC□□1103	<b>B121~</b>	1	BFTX02508NV	<b>1.5</b>	TRX08
	<b>A25S-SVQC R/L1604-34</b>	●	●	<b>34</b>	25	23	250	20.5	9.0	VC□□1604	<b>B122~</b>	1	BFTX03508	<b>2.0</b>	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 Material
	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

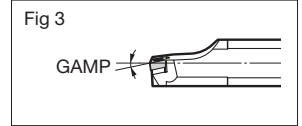
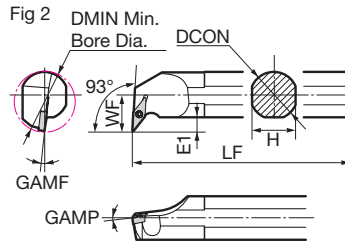
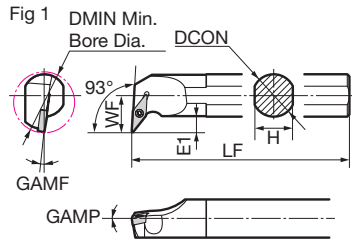
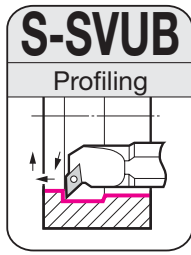


Figure shows right-handed (R) tool.

## 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 Inserts		Pin	Bolt	Shim	Flat Insert Screw	Wrench	Wrench for Bolt	
		R	L									Cat. No.	Ref. Page							
Steel	S20R-SVUB R/L1103-28	●	●	28	20	18	200	17.5	7.5	-7.5°	-3.0°	VB□□1103	B118~	—	—	—	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	B120	—	—	—	BFTX03508	2.0	TRX10	—
	S32T-SVUB R/L1604-40	●	●	40	32	30	300	23.5	10.5	-7.5°	-3.0°			VP32B	BH03504	SVP32				LH020
	S40T-SVUB R/L1604-50	●	●	50	40	37	300	29.5	12.5	-7.5°	-3.0°			VP40B	—	—				—

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

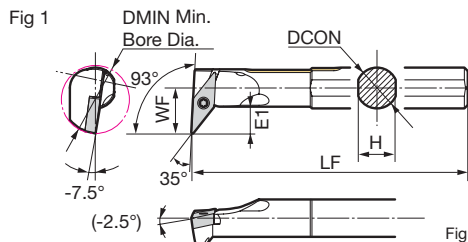
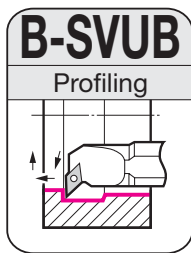


Figure shows right-handed (R) tool.



## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Pin	Flat Insert Screw	Wrench	
		R	L							Cat. No.	Ref. Page				
Steel with Anti-Vibration Mechanism	B12M-SVUB R/L1103-20	●	●	20	12	11	150	13.5	8	VB□□1103	B118~	1	BFTX02508NV	1.5	TRX08
	B16R-SVUB R/L1103-25	●	●	25	16	15	200	16.5	9						

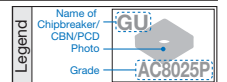
Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts.  
Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.

Smart Damper™ E14

## Applicable Inserts

### 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	IE A10~		IE A14~		IE A16~		IE A18~	IE A22~	IE A20~	

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N-m)

# C-SVUB type



Internal Profiling  
Screw-on

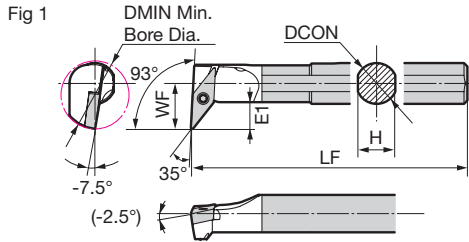
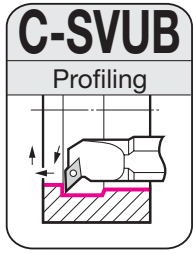


Figure shows right-handed (R) tool.

## 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	<b>C12M-SVUB R/L1103-20</b> <b>C16R-SVUB R/L1103-25</b>	●		<b>20</b>	12	11	150	13.5	8	VB□□1103	B118-	1 1	BFTX02508NV	<b>1.5</b>	TRX08 (For Torx 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.

Smart Damper™ E14

Boring Bars

E

C

D

R

S

T

V

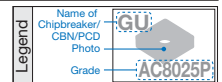
W

Smart Damper Turning  
Very 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	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	<b>SUMIBORON</b> BN7125/BNC500	<b>No Chipbreaker</b> AC4015K	<b>SI</b> AC5015S	<b>AY</b>	<b>H1</b> BNC2125	<b>SUMIBORON</b> BN2000
High-precision	<b>FYS</b> AC1030U	<b>SI</b> AC1030U	<b>FYS</b> AC1030U	<b>SI</b> AC1030U	<b>SUMIBORON</b> BN7125/BNC500	—	<b>SI</b> AC5015S	—	<b>SUMIBORON</b> BNC2115	<b>SUMIBORON</b> 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

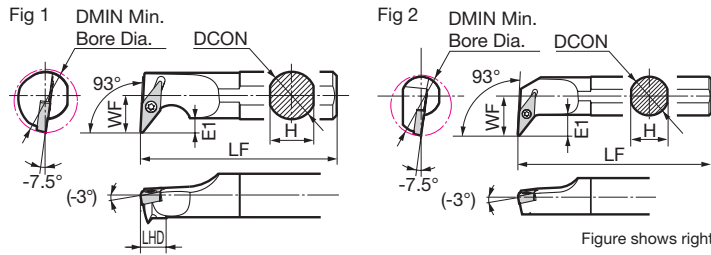
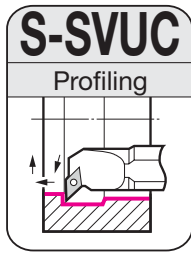


Figure shows right-handed (R) tool.

## Holder

## Parts

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Offset	Applicable Inserts		Flat Insert Screw			Wrench
		R	L								DMIN	DCON	H	LF	WF	
Steel	<b>S12M-SVUC R/L0802-16</b>	●	●	<b>16</b>	12	11	150	9.5	6.5	3.5	VC□□0802	<b>B121</b>	1	BFTX0204N	<b>0.5</b>	TRX06
	<b>S16Q-SVUC R/L0802-20</b>	●	●	<b>20</b>	16	15	180	11.5	—	3.5	VC□□1103	<b>B121-</b>	2	BFTX02508NV	<b>1.5</b>	TRX08
	<b>S16Q-SVUC R/L1103-25</b>	●	●	<b>25</b>	16	15	180	16.5	—	8.5	VC□□1103	<b>B121-</b>	2	BFTX02508NV	<b>1.5</b>	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

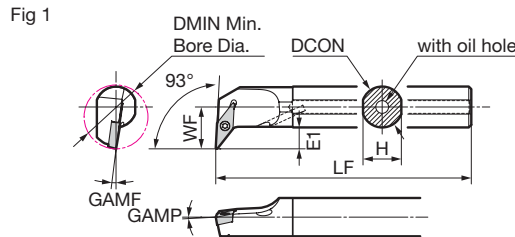
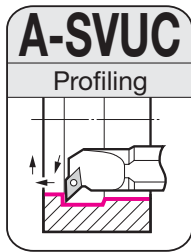


Figure shows right-handed (R) tool.

## Holder

## Parts

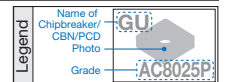
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Rake Angle	Rake Angle	Applicable Inserts		Flat Insert Screw			Wrench
		R	L									DMIN	DCON	H	LF	WF	
Steel with Oil Hole	<b>A16Q-SVUC R/L1103-25</b>	●	●	<b>25</b>	16	15	180	16.5	8.5	-7.5°	-3.0°	VC□□1103	<b>B121-</b>	1	BFTX02508NV	<b>1.5</b>	TRX08
	<b>A20R-SVUC R/L1103-28</b>	●	●	<b>28</b>	20	18	200	17.5	7.5	-7.5°	-3.0°	VC□□1103	<b>B121-</b>	1	BFTX02508NV	<b>1.5</b>	TRX08
	<b>A25S-SVUC R/L1103-32</b>	●	●	<b>32</b>	25	23	250	19.0	7.5	-6.5°	-2.5°	VC□□1103	<b>B121-</b>	1	BFTX02508NV	<b>1.5</b>	TRX08
	<b>A25S-SVUC R/L1604-34</b>	●	●	<b>34</b>	25	23	250	20.5	9.0	-7.5°	-3.0°	VC□□1604	<b>B122-</b>	1	BFTX03508	<b>2.0</b>	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 Process	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	<b>SU</b> AC5015S	<b>SU</b> AC5025S	<b>SUMIDIA</b> DA1000	<b>AG</b> H1	<b>SUMIBORON</b> BNC2125	<b>SUMIBORON</b> BN2000	<b>SUMIDIA</b> DA90
High-precision	<b>FF</b> AC1030U	<b>SI</b> AC1030U	<b>FF</b> AC1030U	<b>SI</b> AC1030U	<b>FF</b> AC1030U	<b>SI</b> AC5015S	<b>SUMIDIA</b> DA1000	—	<b>SUMIBORON</b> BNC2115	<b>SUMIBORON</b> BN1000	<b>SUMIDIA BINDERLESS</b> NPD10
Recommended Cutting Conditions	A10~		A14~		A18~		A22~		A20~		M2~

# S-SVZB type/B-SVZB type



Internal Profiling  
Screw-on

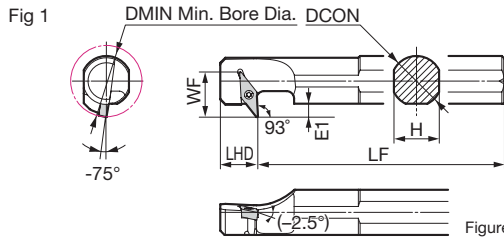
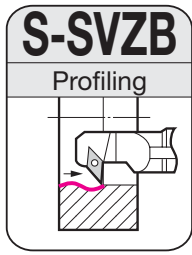


Figure shows right-handed (R) tool.

## Holder

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Head	Cutting Edge Distance	Offset	Applicable Inserts		Pin	Bolt	Shim	Flat Insert Screw	Wrench	Wrench for Bolt		
		R	L								Cat. No.	Ref. Page								
Steel	S20R-SVZB R/L1103-25	●	●	25	20	18	200	15	14.5	5.5	VB□□1103	B118~	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	B120	1	VP32B	BH03504	SVP32	BFTX03508	2.0	TRX10	LH020
	S32T-SVZB R/L1604-40	●	●	40	32	30	300	20	22.0	9.0										
	S40T-SVZB R/L1604-50	●	●	50	40	37	300	20	27.0	10.0										

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



Internal Profiling  
Screw-on

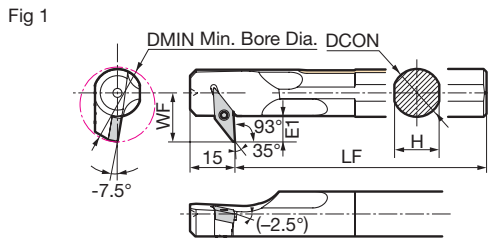
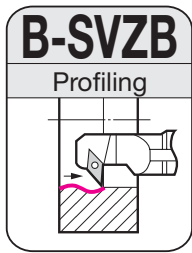


Figure shows right-handed (R) tool.



## Holder

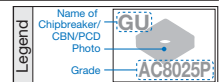
Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Offset	Applicable Insert		Pin	Flat Insert Screw	Wrench	
		R	L							Cat. No.	Ref. Page				
Steel with Anti-Vibration Mechanism	B12M-SVZB R/L1103-20	●	●	20	12	11	150	13.5	8	VB□□1103	B118~	1	BFTX02508NV	1.5	TRX08
	B16R-SVZB R/L1103-25	●	●	25	16	15	200	16.5	9						

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

## Applicable Inserts

### 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

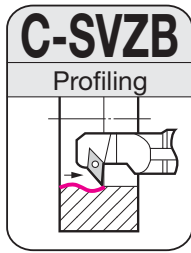


Fig 1

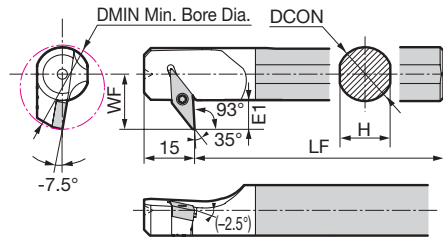


Figure shows right-handed (R) tool.

### 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	<b>C12M-SVZB R/L1103-20</b>	●		<b>20</b>	12	11	150	13.5	8	VB□□1103	B118-	1 1	BFTX02508NV	<b>1.5</b>	TRX08 (For Torx hole)
	<b>C16R-SVZB R/L1103-25</b>	●		<b>25</b>	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.

Boring Bars

E

C

D

R

S

T

V

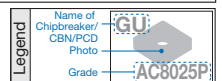
W

Shank Diameter Turning  
Min Shank Diameter 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	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	SUMIBORON BN7125/BNC500	No Chipbreaker AC4015K	<b>SI</b> AC5015S	<b>AY</b> H1	SUMIBORON BNC2125	SUMIBORON BN2000
High-precision	<b>FYS</b> AC1030U	<b>SI</b> AC1030U	<b>FYS</b> AC1030U	<b>SI</b> AC1030U	SUMIBORON BN7125/BNC500	—	<b>SI</b> 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

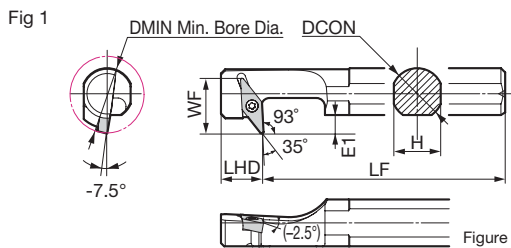
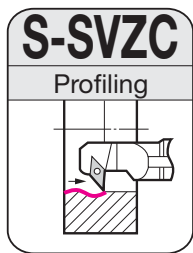


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Head	Cutting Edge Distance	Offset	Applicable Inserts		Flat Insert Screw	Wrench		
		R	L								Cat. No.	Ref. Page				
Steel	<b>S12M-SVZC R/L0802-16</b>	●	●	<b>16</b>	12	11	150	10	9.5	4.5	VC□□0802	<b>B121</b>	1	BFTX0204N	<b>0.5</b>	TRX06
	<b>S16Q-SVZC R/L1103-20</b>	●	●	<b>20</b>	16	15	180	15	11.5	4.5	VC□□1103	<b>B121~</b>	1	BFTX02508NV	<b>1.5</b>	TRX08

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

Boring Bars

E

C

D

R

S

T

V

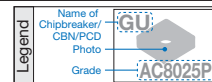
W

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

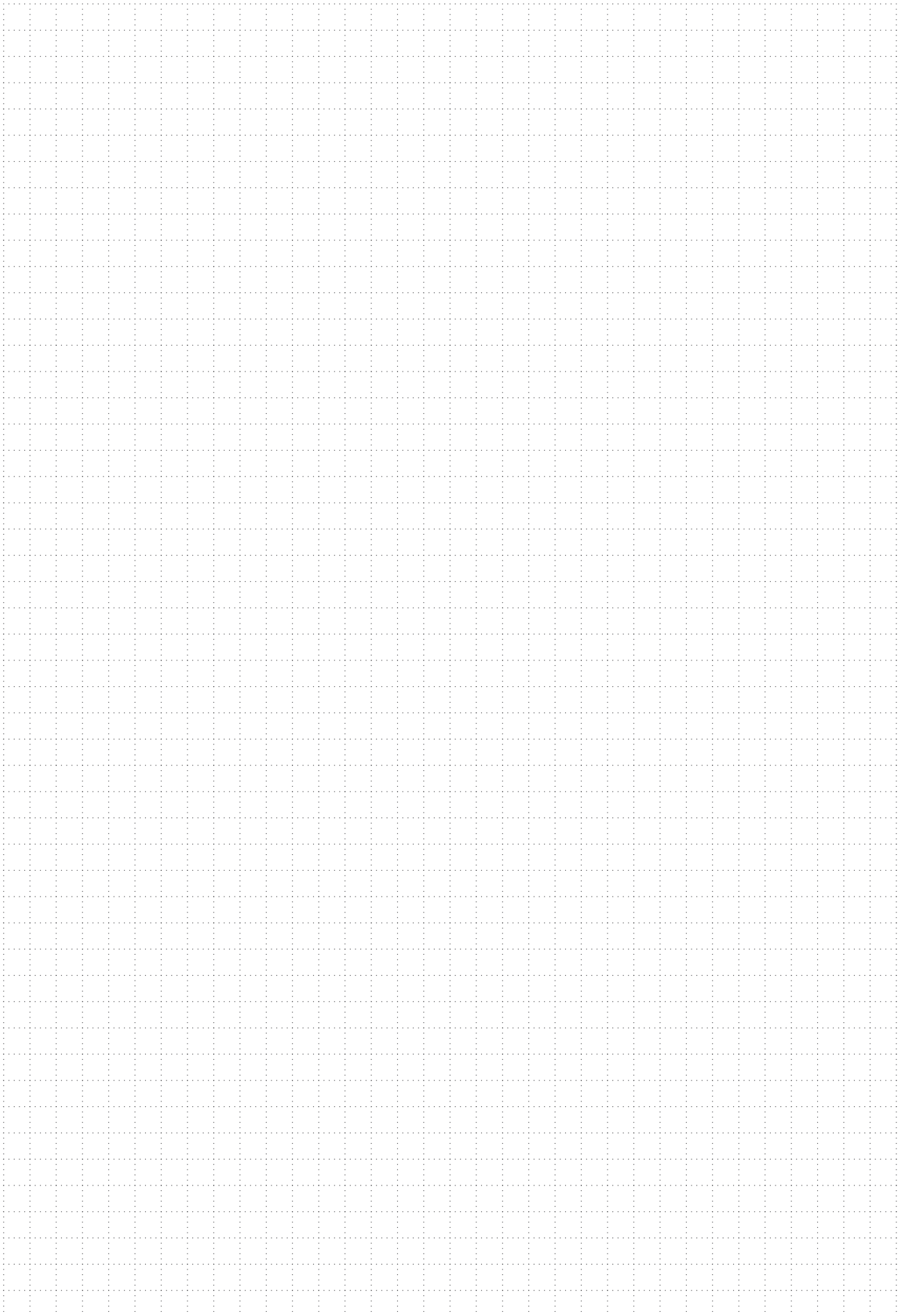
### 1st Recommended Insert

- 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 Material
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining	<b>FB</b> T1500Z	<b>GU</b> AC8025P	<b>LB</b> AC6030M	<b>GU</b> AC6030M	<b>SU</b> AC5015S	<b>SU</b> AC5025S	<b>SUMIDIA</b> DA1000	<b>AG</b> H1	<b>SUMIBORON</b> BNC2125	<b>SUMIBORON</b> BN2000	<b>SUMIDIA</b> DA90
High-precision	<b>FF</b> AC1030U	<b>SI</b> AC1030U	<b>FF</b> AC1030U	<b>SI</b> AC1030U	<b>FF</b> AC1030U	<b>SI</b> AC5015S	<b>SUMIDIA</b> DA1000	—	<b>SUMIBORON</b> BNC2115	<b>SUMIBORON</b> BN1000	<b>SUMIDIA BINDERLESS</b> NPD10
Recommended Cutting Conditions	A10~		A14~		A18~		A22~		A20~		M2~

# MEMO



# S-SWUB type/C-SWUB type



Internal Finishing (Small Diameter)  
Screw-on

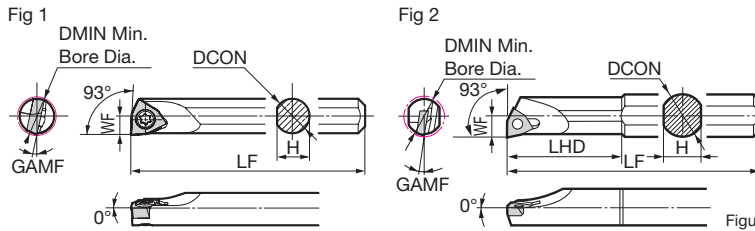
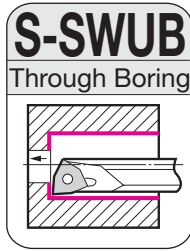


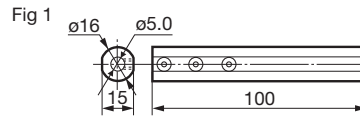
Figure shows right-handed (R) tool.

## Holder

## Parts

Shank Material	Cat. No.	Previous Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Flat Insert Screw	Wrench		
			R	L								Cat. No.	Ref. Page				
Steel	S05H-SWUB R/L0601-06K	BBPW-508 R/L K'	●	●	5.5	5	4.7	100	2.75	—	-12°	WB□□0601	B126	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	B126	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

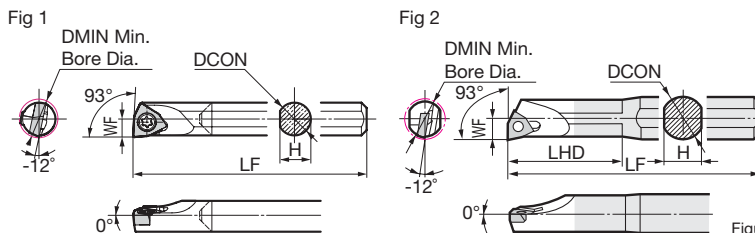
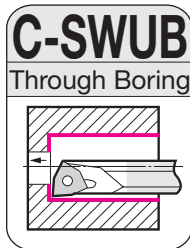


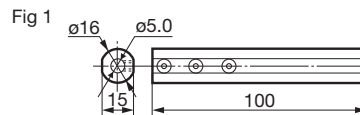
Figure shows right-handed (R) tool.

## 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				
Carbide	C05H-SWUB R/L0601-06K	WBPW-508 R/L K'	●	●	5.5	5	4.7	100	2.75	—	-12°	WB□□0601	B126	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

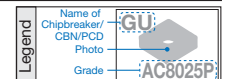
Cat. No.	Stock	Fig
HBB 516	●	1

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)
	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	IE A10~		IE A14~		IE A16~	IE A18~	IE A22~	IE 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

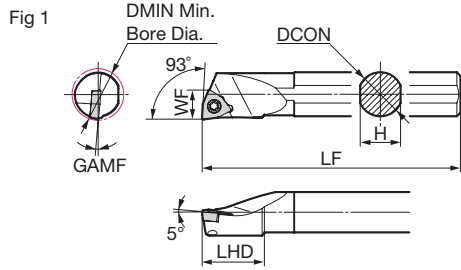
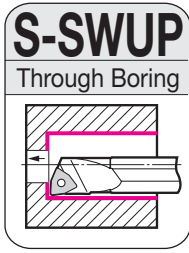


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	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	Fig	N·m	(For Torx hole)	
Steel	S12M-SWUP R/L1102-14	●	●	14	12	11	150	7	17	-6°	WP□□1102	B127	1 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	B127	1 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.

Boring Bars

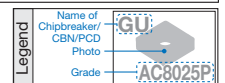


Small Diameter Turning  
Very Small Diameter Turning

## 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

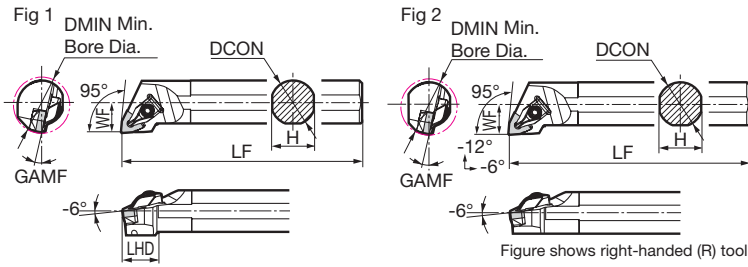
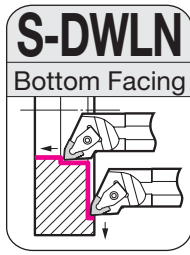


Figure shows right-handed (R) tool.

## Holder

## Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts			Clamp Set		Shim	Shim Screw	Top Hex Wrench	Bottom Hex Wrench
		R	L								DMIN	DCON	H	LF	WF	LHD	GAMF	Cat. No.	Ref. Page
Steel	S32S-DWLN R/L0604-40	●	●	40	32	30	250	22.0	29	-10°	WN□□0604	B63~	1	SCP-4	5.0	WNS0603B	BFTX0307N	LH040	LH025
	S25R-DWLN R/L0804-32	●	●	32	25	23	200	17.0	26	-12°	WN□□0804	B65~	1	SCP-2	5.0	WNS0803B	BFTX0307N	LH040	LH025
	S32S-DWLN R/L0804-40	●	●	40	32	30	250	22.0	26	-12°									
	S40T-DWLN R/L0804-50	●	●	40	37	300	27.0	26	-12°										
S50U-DWLN R/L0804-63	●	●	63	50	47	350	31.5	—	-12°			2							

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

Clamp Set Parts E82



Medium Diameter General-purpose Double Clamp

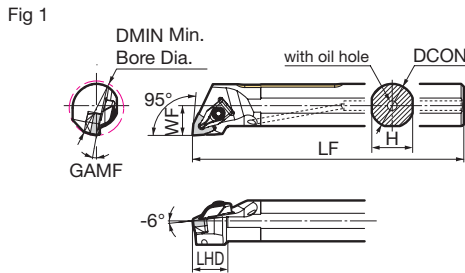
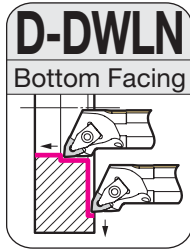


Figure shows right-handed (R) tool.



## 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
Steel with Anti-Vibration Mechanism and Oil Hole	D25T-DWLN R/L0804-32	●	●	32	25	23	300	17	26	-12°	WN□□0804	B65~	1	SCP-2	5.0	WNS0803B	BFTX0307N	LH040	LH025
	D32T-DWLN R/L0804-40	●	●	40	32	30	300	22	26	-10°									
	D40U-DWLN R/L0804-50	●	●	50	40	37	350	27	26	-10°									

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

Clamp Set Parts E82

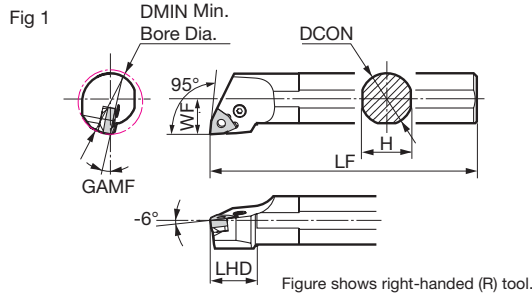
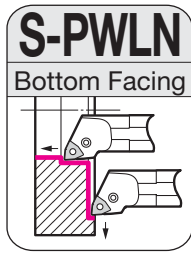
**\*Applicable Inserts for DWLN series**  
 For internal boring: Right-handed (R) tool holders are compatible with left-handed (L) or neutral (N) inserts. Left-handed (L) tool holders are compatible with right-handed (R) or neutral (N) inserts.  
 For facing: Right-handed (R) tool holders are compatible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



# S-PWLN type



Medium Diameter General-purpose  
Lever Lock



### Holder

### Parts

Dimensions (mm)

Shank Material	Cat. No.	Stock		Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Rake Angle	Applicable Inserts		Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
		R	L								Cat. No.	Ref. Page						
Steel	S32S-PWLN R/L0604-40	●	●	40	32	30	250	22	29	-10°	WN□□0604	B63~	1	LCL3	LCS3	LSW317	LSP3	LH025 <small>(For Hexagonal hole)</small>
	S32S-PWLN R/L0804-40	●	●	40	32	30	250	22	29	-10°	WN□□0804	B65~	1	LCL4	LCS4	LSW42B	LSP4	LH030
	S40T-PWLN R/L0804-50	●	●	50	40	37	300	27	29	-10°								

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

Boring Bars

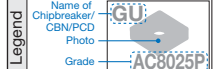


Steel Diameter Turning  
Non Steel Diameter Turning

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

**1st Recommended Insert**

- Refer as well to the Insert Selection Guide (page A10~).
- 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	AC8015P	AC8025P	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
	AC8015P	AC8025P	AC8025P	AC6030M	AC6030M	AC6040M	AC4015K	AC4015K	AC5015S	AC5015S	AC5025S	BNC2125	BN2000
Interrupted Cutting	SX	UX	MX	EF	EG	EM	GZ	No Chipbreaker	EF	EG	EM	SUMIBORON	SUMIBORON
	AC8025P	AC8035P	AC8035P	AC6030M	AC6040M	AC6040M	AC420K	AC420K	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

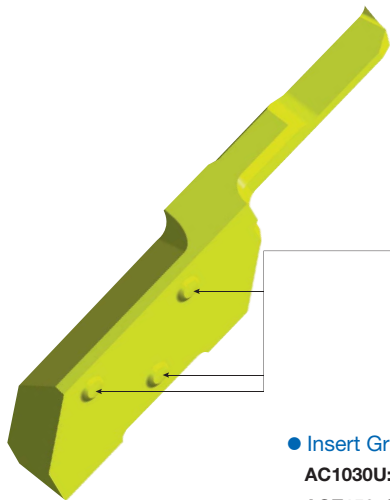


■ Features

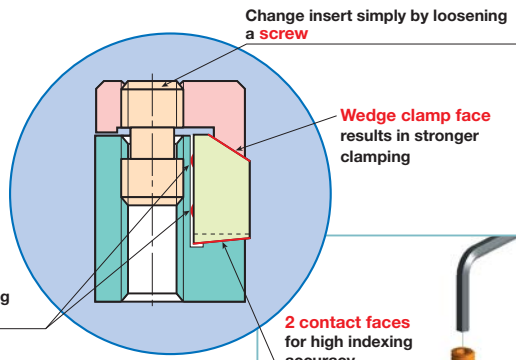
- Minimum bore diameters from  $\varnothing 1\text{mm}$  to  $\varnothing 5\text{mm}$  are now in stock.
- Maximum boring depth of  $20\text{mm}$  ( $\varnothing 4$ ,  $\varnothing 5\text{mm}$ ).
- Can be used with various small lathes.
- Unique design ensures high indexing accuracy.
- Indexable inserts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

● High indexing accuracy

● Indexable inserts are easily handled.



3 points of contact for high indexing accuracy



Change insert simply by loosening a screw

Wedge clamp face results in stronger clamping

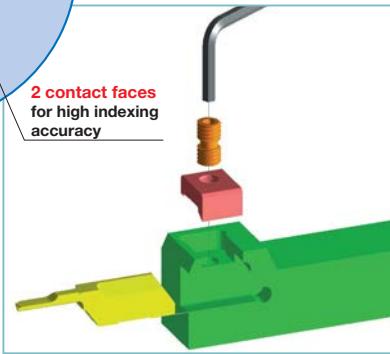
2 contact faces for high indexing accuracy

● Insert Grades and Applications

AC1030U: Stainless Steel, General Steel

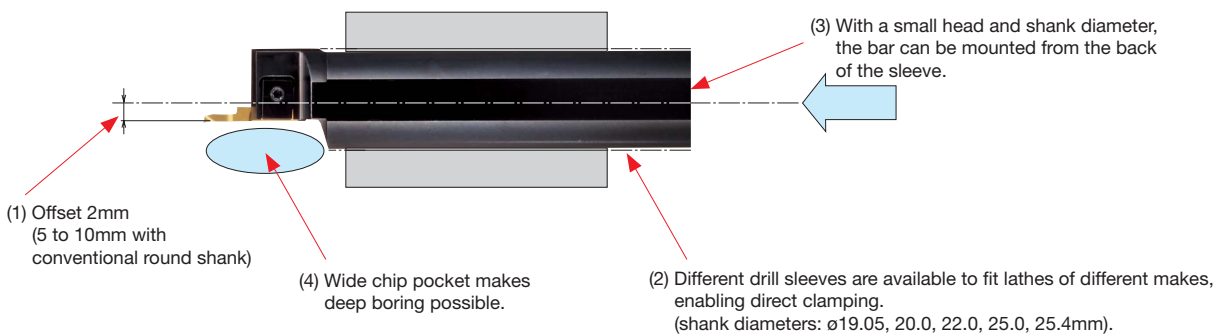
ACZ150: Stainless Steel, General Steel

DA2200: Aluminum Alloy and Non-Ferrous Metals



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

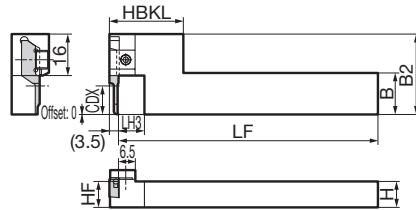
● 2mm offset bars expand application range.



Very Small Diameter L type  
Clamp-on



Fig 1



H = HF (Cutting Edge Height)

Holder

Parts

Dimensions (mm)

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

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

Dimensions (mm)

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	
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

Boring Bars

E

C

D

R

S

T

V

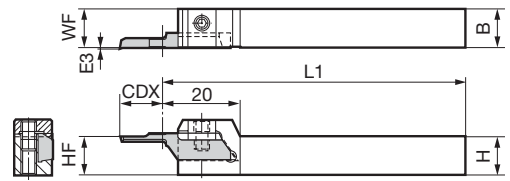
W

Small Diameter Turning  
Very Small Diameter Turning

# CKB series

Square Shank  
Clamp-on

Fig 1



Refer to pages E69 to E70 for E3 and CDX values.

Holder

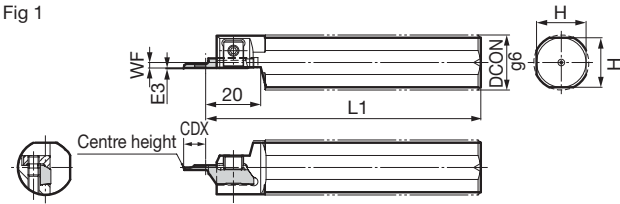
Parts

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		1	CKBW16	WB4-8
CKB R1010-16	●	10	10	100	10	10	1			
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 E69 to E70 for E3 and CDX values.

Holder

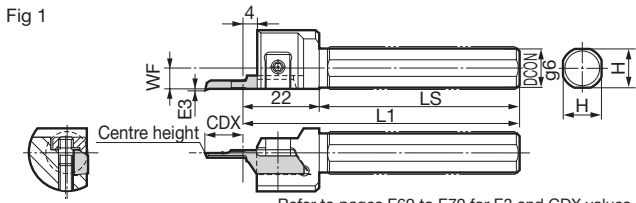
Parts

Dimensions (mm)

Cat. No.	Stock	Diameter	Height	Overall Length	Cutting Edge Distance	Fig	Clamp Plate	Double Screw	Wrench
		DCON	H	L1	WF		1	CKBW16	WB4-8
S1905H-CKB RS-16	●	19.05	17	100	2	1			
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 E69 to E70 for E3 and CDX values.

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		1	CKBW16	WB4-8
S10F-CKB R-16	●	10	9	80	58	5	1			
S12F-CKB R-16	●	12	11	80	58	6	1			
S16H-CKB R-16	●	16	15	100	78	8	1			
S19K-CKB R-16	●	19.05	17	125	103	8	1			
S20K-CKB R-16	●	20	18	125	103	10	1			

Boring Bars

E

C

D

R

S

T

V

W

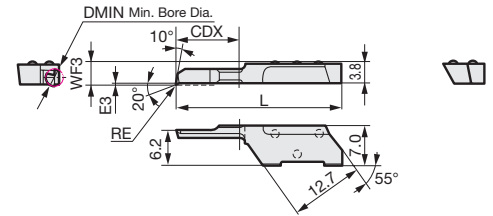
Small Diameter Turning  
Very Small Diameter Turning

(  Coated Carbide)

### KBMX type (Internal Boring)

Dimensions (mm)

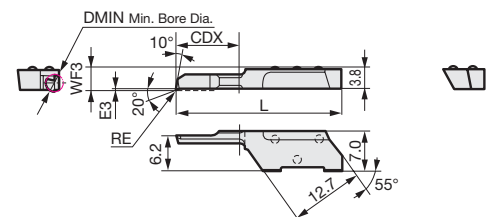
Cat. No.	AC1030U	Min. Bore Dia.	Cutting Edge Position	Offset	Corner Radius	Overall Length	Boring Depth
		DMIN	WF3	E3	RE	L	CDX
KBMX R0103-05	●	1.0	4.00	0.20	0.05	20.5	3
KBMX R0103-20	●	1.0	4.00	0.20	0.20	20.5	3
KBMX R01506-05	●	1.5	4.05	0.25	0.05	23.5	6
KBMX R01506-20	●	1.5	4.05	0.25	0.20	23.5	6
KBMX 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.	Cutting Edge Position	Offset	Corner Radius	Overall Length	Boring Depth
		DMIN	WF3	E3	RE	L	CDX
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 **E71**

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

Boring Bars



Shel Draper Turning  
Very Small Draper Turning

(      Coated Carbide /      SUMIDIA )

### KBMZ type (Internal Back Turning)

Dimensions (mm)

Cat. No.	AC1030U	Min. Bore Dia.	Cutting Edge Position	Offset	Corner Radius	Overall Length	Maximum Boring Depth	Boring Depth
		DMIN	WF3	E3	RE	L	CDX	CDX2
<b>KBMZ R0411-05</b>	●	<b>4.0</b>	5.10	1.3	0.05	28.5	11	9
<b>KBMZ R0411-20</b>	●	<b>4.0</b>	5.10	1.3	0.20	28.5	11	9
<b>KBMZ R0511-05</b>	●	<b>5.0</b>	5.10	1.3	0.05	28.5	11	9
<b>KBMZ R0511-20</b>	●	<b>5.0</b>	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
<b>KBMG R0411-05</b>	●	<b>4.0</b>	4.90	1.00	0.05	28.5	1.1	11
<b>KBMG R0411-10</b>	●	<b>4.0</b>	4.90	2.00	0.10	28.5	1.1	11
<b>KBMG R0511-05</b>	●	<b>5.0</b>	5.10	1.00	0.05	28.5	1.3	11
<b>KBMG R0511-10</b>	●	<b>5.0</b>	5.10	2.00	0.10	28.5	1.3	11

### KBMF type (Face Grooving)

Dimensions (mm)

Cat. No.	ACZ150	Min. Bore Dia.	Cutting Edge Position	Offset	Width of Cut	Corner Radius	Overall Length	Maximum Groove Depth
		DMIN	WF3	E3	CW	RE	L	
<b>KBMF R0615-05</b>	●	<b>6.0</b>	4.0	0.2	1.5	0.05	21.8	4.0
<b>KBMF R0620-05</b>	●	<b>6.0</b>	4.0	0.2	2.0	0.05	21.8	4.0
<b>KBMF R0630-05</b>	●	<b>6.0</b>	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 Position	Offset	Corner Radius	Overall Length	Maximum Boring Depth
		DMIN	WF3	E3	RE	L	CDX
<b>KBMX R0311-10</b>	●	<b>3.0</b>	4.1	0.3	0.1	28.5	11
<b>KBMX R0411-10</b>	●	<b>4.0</b>	4.3	0.5	0.1	28.5	11
<b>KBMX R0511-10</b>	●	<b>5.0</b>	4.5	0.7	0.1	28.5	11

Recommended Cutting Conditions **E71**

Boring Bars

M

C

D

R

S

T

V

W

Small Diameter Turning  
Very Small Diameter Turning

## Recommended Cutting Conditions (CKB series)

Work Material		<b>P</b> General Steel	<b>M</b> Stainless Steel	<b>N</b> Non-Ferrous Metal		<b>S</b> Exotic Alloy
Internal Boring	Insert Grades	ACZ150/AC1030U	ACZ150/AC1030U	ACZ150/AC1030U	DA2200	ACZ150/AC1030U
	Spindle Speed $n$ (min <sup>-1</sup> )	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 $a_p$ (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 <sup>-1</sup> )	2,000 to 10,000	2,000 to 8,000	5,000 to 15,000	-	2,000 to 6,000
	Depth of Cut $a_p$ (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 <sup>-1</sup> )	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 <sup>-1</sup> )	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

# Solid Carbide Bar BXBR series

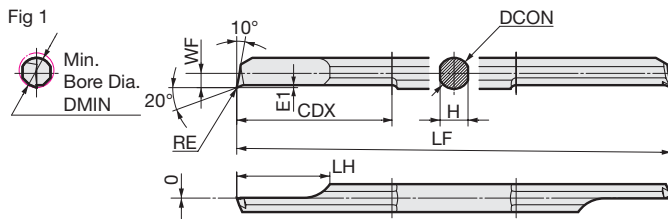
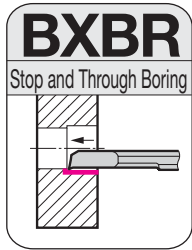
Boring Bars



## 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)

Expansion Carbide



Internal (Small Diameter) Finishing  
Solid

Sumi Small

C

D

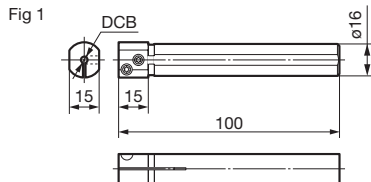
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## Bar (With Chipbreaker) (Coated Carbide)

Dimensions (mm)

Cat. No.	AC1030U	ACZ150	ACS30U	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 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.






## Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Bar
HBX 2016	●	2.0	BXBR 020○○R(-NB)
HBX 2516	●	2.5	BXBR 025○○R(-NB)
HBX 3016	●	3.0	BXBR 030○○R(-NB)
HBX 3516	●	3.5	BXBR 035○○R(-NB)
HBX 4016	●	4.0	BXBR 040○○R(-NB)
HBX 4516	●	4.5	BXBR 045○○R(-NB)
HBX 5016	●	5.0	BXBR 050○○R(-NB)

BXBR bars can also be used with HBB type sleeves.  
Commercially available sleeves may also be used.  
Refer to page E78 for details on HBX type sleeves.

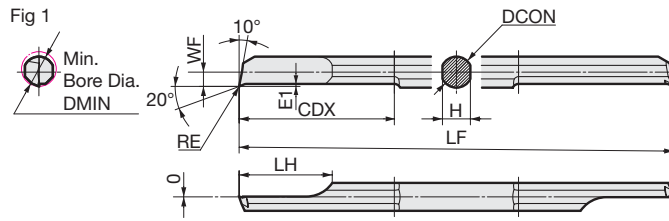
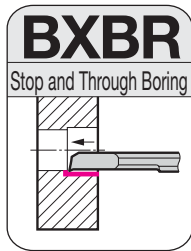
## Parts (for Adapter Sleeve)

Applicable Sleeve	Flat Insert Screw	Set Screw	Wrench
			
HBX○○○○	BFTX0409N	3.4	BT06035T TRD15

Sleeve is optional.



# Solid Carbide Bar BXBR series



Internal (Small Diameter) Finishing  
Solid

Sumi Small

Boring  
Bars

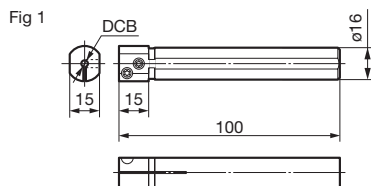


Bar (No Chipbreaker) (Coated Carbide)

Dimensions (mm)

Cat. No.	AC1030U	ACZ150	AC530U	Min. Bore Dia.	Diameter	Height	Overall Length	Cutting Edge Distance	Head	Maximum Boring Depth	Offset	Corner Radius	Applicable Sleeve	Fig
				DMIN	DCON	H	LF	WF	LH	CDX	E1	RE		
BXBR 02005R-NB		●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.05	HBX 2016	1
BXBR 02020R-NB		●		2.0	2.0	1.8	50	0.80	6.0	10.0	0.20	0.20	HBX 2016	1
BXBR 02505R-NB		●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.05	HBX 2516	1
BXBR 02520R-NB		●		2.5	2.5	2.2	50	1.05	7.5	12.5	0.20	0.20	HBX 2516	1
BXBR 03005R-NB		●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.05	HBX 3016	1
BXBR 03020R-NB		●		3.0	3.0	2.7	50	1.30	9.0	15.0	0.25	0.20	HBX 3016	1
BXBR 03505R-NB		●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.05	HBX 3516	1
BXBR 03520R-NB		●		3.5	3.5	3.1	60	1.55	10.5	17.5	0.25	0.20	HBX 3516	1
BXBR 04005R-NB		●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.05	HBX 4016	1
BXBR 04020R-NB		●		4.0	4.0	3.6	60	1.80	12.0	20.0	0.35	0.20	HBX 4016	1
BXBR 04505R-NB		●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.05	HBX 4516	1
BXBR 04520R-NB		●		4.5	4.5	4.1	70	2.05	13.5	22.5	0.35	0.20	HBX 4516	1
BXBR 05005R-NB		●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.05	HBX 5016	1
BXBR 05020R-NB		●		5.0	5.0	4.5	70	2.30	15.0	25.0	0.40	0.20	HBX 5016	1

\* Boring depth CDX or less.



Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia. DCB	Applicable Tool Holder
HBX 2016	●	2.0	BXBR 020○○○(-NB)
HBX 2516	●	2.5	BXBR 025○○○(-NB)
HBX 3016	●	3.0	BXBR 030○○○(-NB)
HBX 3516	●	3.5	BXBR 035○○○(-NB)
HBX 4016	●	4.0	BXBR 040○○○(-NB)
HBX 4516	●	4.5	BXBR 045○○○(-NB)
HBX 5016	●	5.0	BXBR 050○○○(-NB)

BXBR bars can also be used with HBB type sleeves.  
Commercially available sleeves may also be used.  
Refer to page E78 for details on HBX type sleeves.

Parts (for Adapter Sleeve)

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

Sleeve is optional.



Small Diameter Boring  
Very Small Diameter Boring

## Recommended Cutting Conditions

Work Material		P General Steel	M Stainless Steel	N Non-Ferrous Metal	S Exotic Alloy
Internal Boring	Tool Grades	ACZ150/AC1030U	ACZ150/AC1030U	ACZ150/AC1030U	ACZ150/AC1030U
	Spindle Speed n (min <sup>-1</sup> )	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

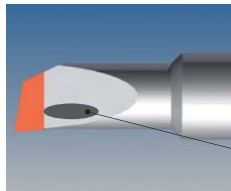
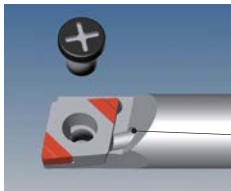
W

Small Diameter Turning  
Key Small Diameter Turning



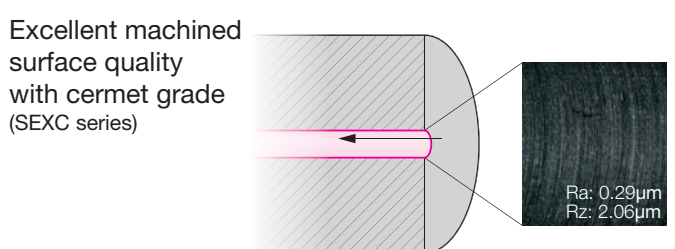
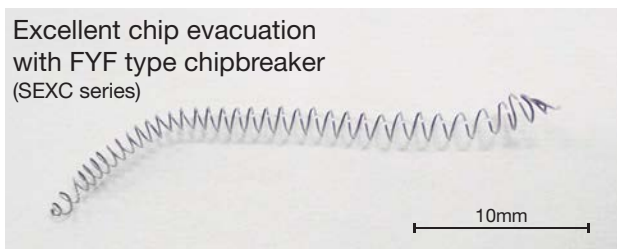
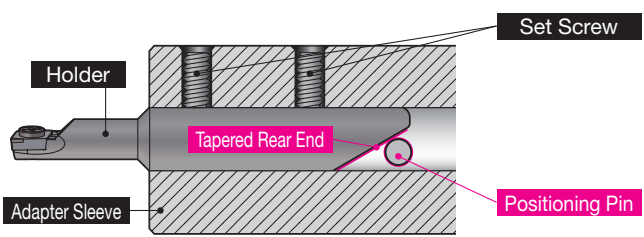
### ■ Features

- For internal boring of hardened steel with min. bore diameters from  $\phi 2.5\text{mm}$ .
- 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.
- Brazed type BSME series  
Can be used with bore diameters from  $\phi 2.5$  to  $5.0\text{mm}$ .
- Indexable Insert type SEXC series  
Can be used with bore diameters from  $\phi 4.0$  to  $6.0\text{mm}$ .  
Expansion of coated carbide and cermet grades.
- Economical 2-cornered insert.

Brazed CBN type BSME series	Indexable Insert type SEXC series
Min. Bore Dia.: $\phi 2.5$ to $5.0\text{mm}$	Min. Bore Dia.: $\phi 4.0$ to $6.0\text{mm}$
<p>High-quality, unique cutting edge shape</p>  <p>Internal Coolant Supply (Standard)</p>	<p>2-cornered insert used</p>  <p>Internal Coolant Supply (Standard)</p>

### Clamp Mechanism

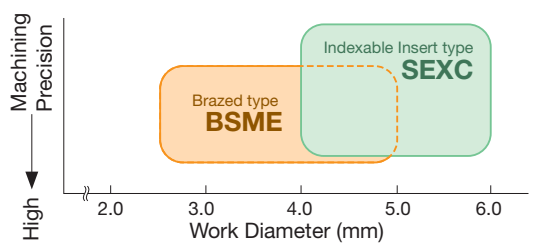
Achieves high-precision cutting edge positioning by combining a holder with a tapered rear end and a sleeve with an internal positioning pin.  
(common to BSME and SEXC series)



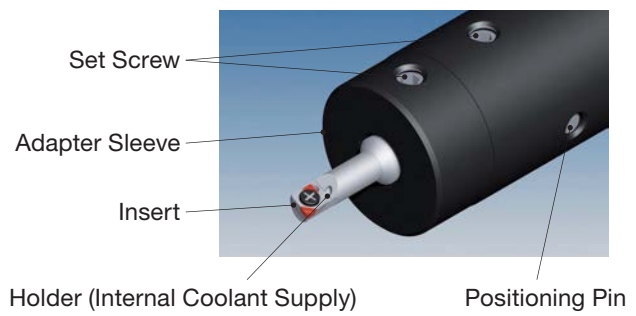
Work Material: SUS304 Internal Boring, Insert: ECEM 03X102L-FYF (AC1030U)  
Cutting Conditions:  $v_c = 100\text{m/min}$ ,  $f = 0.05\text{mm/rev}$ ,  $a_p = 0.03\text{mm}$ , Work Dia.:  $\phi 4$

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



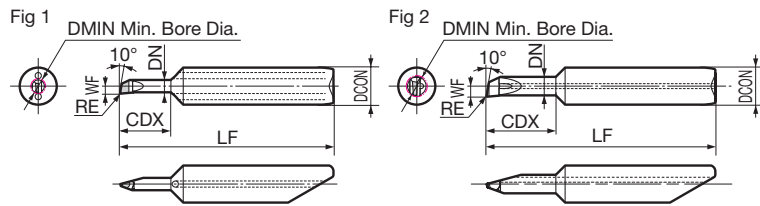
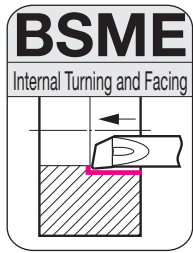
### Basic Configuration



# BSME series

CBN

SUMIBORON  
Brazed



SumiSmall

Holder (SUMIBORON)

Dimensions (mm)

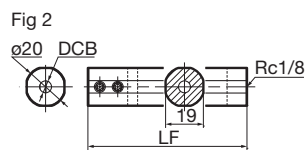
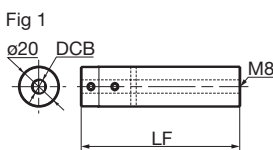
Cat. No.	BN2000		Min. Bore Dia. DMIN	Shank Diameter DCON	Neck Diameter DN	Overall Length LF	Cutting Edge Distance WF	Maximum Boring Depth CDX	Corner Radius RE	Applicable Sleeve	Fig
	R	L									
BSME R/L25020D2S6	●	●	2.5	6.0	2.0	32.0	1.20	5.3	0.2	HBSM6020 HBSM6020A	1
BSME R/L25020D3S6	●	●	2.5	6.0	2.0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

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

### Identification Code

**BSM E R 350 20 D2 S6**

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



### Sleeve (Sold Separately)

Dimensions (mm)

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

Mounting Method **E77**

### Alignment Jig (Sold Separately) For HBSM6020 Sleeve

Cat. No.	Stock	
AFBSM60	●	

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

### Recommended Cutting Conditions

Work Material	H Hardened Steel	
Spindle Speed n (min <sup>-1</sup> )	Above 2,000	Above 2,000
Depth of Cut ap (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 Turning  
Very Small Diameter Turning

# Small Diameter Boring Bars SEXC series



Carbide / Cermet / SUMIBORON  
Screw-on

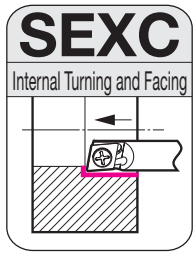
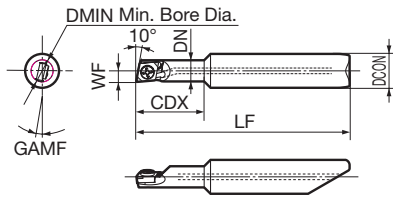


Fig 1



## Holder

## Parts

Dimensions (mm)

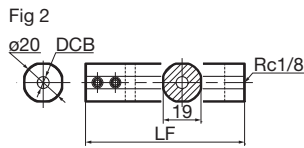
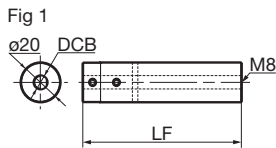
Cat. No.	Stock		Min. Bore Dia.	Shank Diameter	Neck Diameter	Overall Length	Cutting Edge Distance	Boring Depth	Rake Angle	Applicable Sleeve	Fig	Bolt		Wrench
	R	L										DCON	DN	LF
E06D2-SEXC R/L03-04P	●	●	4.0	6.0	3.75	33.75	1.95	8	-13°	HBSM6020 HBSM6020A	1	MIB1.6-2	0.2	SDBSM
E06D3-SEXC R/L03-04P	●	●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

The SEXC 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



## Sleeve (Sold Separately)

Dimensions (mm)

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

Mounting Method **E77**

## Alignment Jig (Sold Separately) For HBSM6020 Sleeve

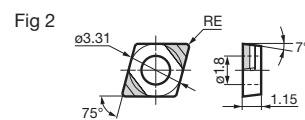
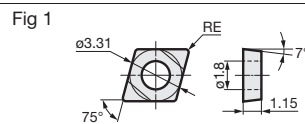
Cat. No.	Stock	Fig
AFBSM60	●	

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

## Insert ( Coated Carbide / SUMIBORON)

Dimensions (mm)

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



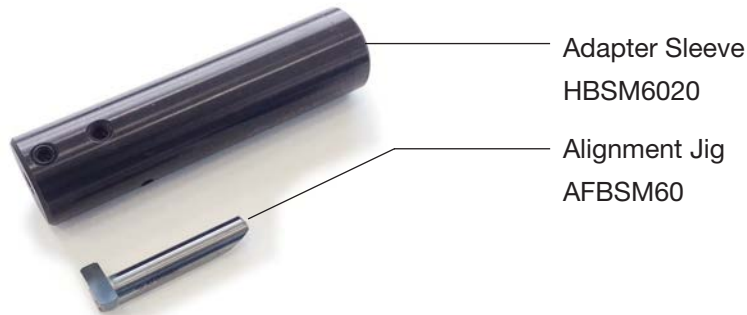
Part Number Suffix: LE: Honed Edge, LF: Sharp Edged, FYF: Sharp Edged (with Chipbreaker)

## Recommended Cutting Conditions





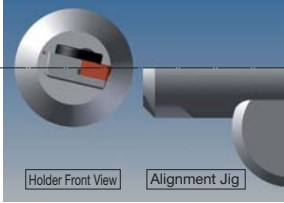
Work Material	P General Steel		M Stainless Steel		K Cast Iron		N Non-Ferrous Metal		S Exotic Alloy	H Hardened Steel	
Insert Grades	AC1030U	T1500A	AC1030U	T1500A	AC1030U	T1500A	AC1030U	T1500A	AC1030U	BN2000	BN7000
Spindle Speed n (min <sup>-1</sup> )	2,000-10,000	2,000-10,000	2,000-8,000	2,000-8,000	2,000-10,000	2,000-10,000	5,000-15,000	5,000-15,000	2,000-6,000	Above 2,000	Above 2,000
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
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

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

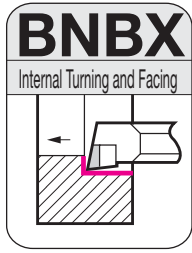
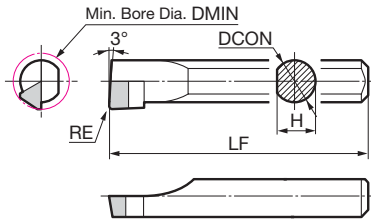


Fig 1



Holder (SUMIBORON)

Dimensions (mm)

Cat. No.	BN2000	BN7125	BN7000	Min. Bore Dia.	Diameter	Height	Overall Length	Corner Radius	Applicable 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 sleeves, but HBX type sleeves are recommended for bars below ø6mm.

Fig 1

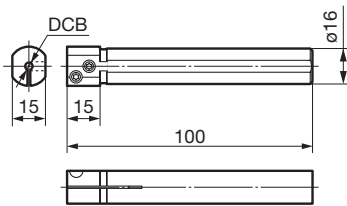
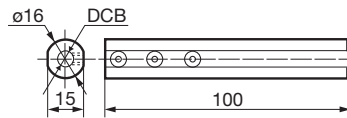


Fig 1



Sleeve (HBX type)

Dimensions (mm)

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

Sleeve (HBB type)

Dimensions (mm)

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

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

Parts (for Adapter Sleeve)

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

Boring Bars

M

C

D

R

S

T

V

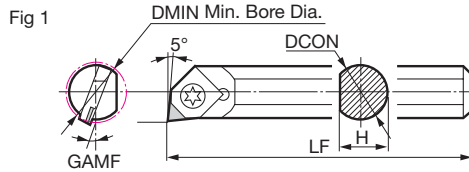
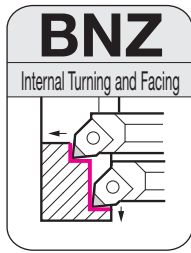
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Small Diameter Turning  
Very Small Diameter Turning

# BNZ series



SUMIBORON  
Screw-on



### Holder

### Parts

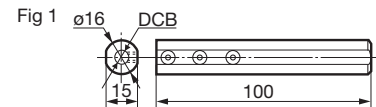
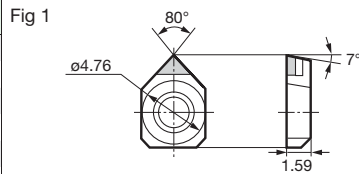
Dimensions (mm)

Cat. No.	Stock	Min. Bore Dia. DMIN	Diameter DCON	Height H	Overall Length LF	Rake Angle GAMF	Fig	Dimensions (mm)			
								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	—	—	●	●	○	●	0.2
	NU-ZNEX 040104	—	—	●	●	○	●	0.4
	NC-ZNEX 040102LE	●	—	—	—	—	—	0.2
	NC-ZNEX 040104LE	●	—	—	—	—	—	0.4
	NC-ZNEX 040102LT	●	—	—	—	—	—	0.2
10 pack	T-NU-ZNEX 040102	—	—	●	—	—	—	0.2
	T-NU-ZNEX 040104	—	—	●	—	—	—	0.4



### Sleeve

Dimensions (mm)

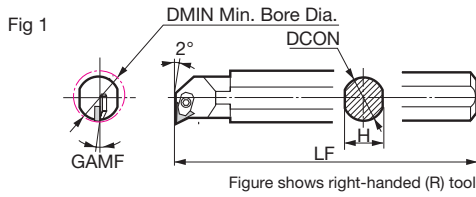
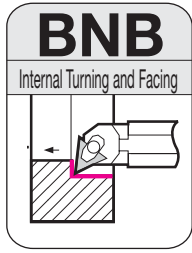
Cat. No.	Stock	Bore Dia. DCB	Applicable Holder	Fig
HBB 616	●	6.0	BNZ 606R	1
HBB 816	●	8.0	BNZ 608R	1

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

# BNB series



SUMIBORON  
Clamp-on



Boring Bars

E

## Holder

## Parts

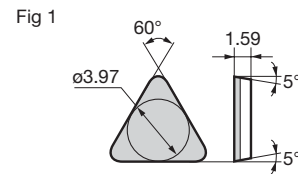
Dimensions (mm)

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

## Insert (SUMIBORON, SUMIDIA)

Dimensions (mm)

Cat. No.	SUMIBORON <small>NEW</small>							SUMIDIA		Corner Radius RE
	BNX10	BNX20	BN2000	BN350	BN500	BN7125	BN7000	DA150	DA1000	
<b>TBGN 060102B</b>	●	●	●	●	●	○	●	●	●	0.2
<b>TBGN 060104B</b>	●	●	●	●	●	○	●	●	●	0.4
<b>TBGN 060108B</b>	●	●	●	●	●	○	●	●	●	0.8
<b>TBGN 060102-BSTN<sup>1</sup></b>	—	●	—	—	—	—	—	—	—	0.2
<b>TBGN 060104-BSTN<sup>1</sup></b>	—	●	—	—	—	—	—	—	—	0.4
<b>TBGN 060108-BSTN<sup>1</sup></b>	—	●	—	—	—	—	—	—	—	0.8
<b>NF-TBGN 060102<sup>2</sup></b>	—	—	—	—	—	—	—	●	●	0.2
<b>NF-TBGN 060104<sup>2</sup></b>	—	—	—	—	—	—	—	●	●	0.4



<sup>1</sup>: TBGN ○○○○○○-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.)

<sup>2</sup>: NF-TBGN is a single corner insert. (This is not a Full-Top insert)

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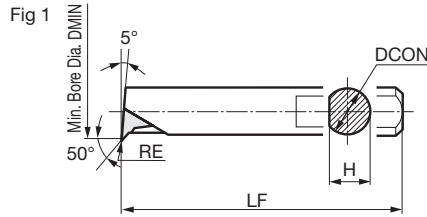
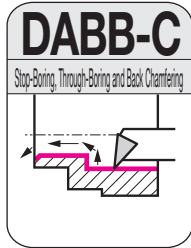
Small Diameter Turning  
Very Small Diameter Turning



# DABB series

PCD

SUMIDIA  
Brazed



Sumi Small

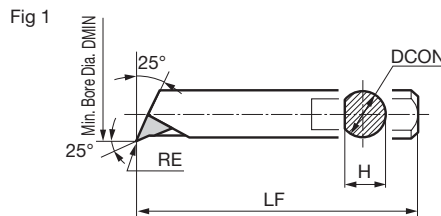
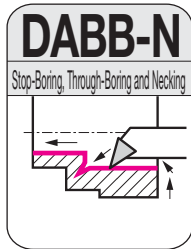
Holder (SUMIDIA)

Dimensions (mm)

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

PCD

SUMIDIA  
Brazed



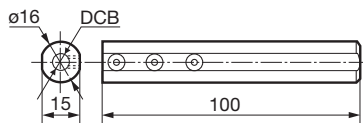
Sumi Small

Holder (SUMIDIA)

Dimensions (mm)

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

Fig 1



Sleeve

Dimensions (mm)

Cat. No.	Stock	Bore Dia.		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 sleeve can also be used.

Recommended Cutting Conditions

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

Boring Bars

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Small Diameter Turning  
Very Small Diameter Turning

# Clamp Set Parts

Parts

Applicable Clamp Set Cat. No.	Spring	Cap Screw	
			
SCP-1	CSP08 ●	CP-M5-20-1 ●	<b>5.0</b>
SCP-2	CSP08 ●	CP-M5-20-1 ●	
SCP-3	CSP08 ●	CP-M5-20-1 ●	
SCP-4	CSP25 ●	CP-M5-20-1 ●	
SCP-5	CSP08 ●	CP-M5-20-1 ●	
SCP-6	CSP12 ●	CP-M8-25-1 ●	<b>6.0</b>

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

Boring  
Bars

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Small Diameter Turning  
Very Small Diameter Turning