

Boring

F1~F88

New Products

F2~F4

Guide Line / Product Lineup / Identification System **F4~F11**

Solid Tip-Bars for Micro Boring

F12~F25

Twin Bar	TWB / TWBT	F12
System Bar	VNB-S / VNB / VNBT / VNBX-S	F14
2 Edges Tip-Bar	HPB / HPBT	F22
Tip-Bar	PSB-S / PSBT-S	F24
→ will be switched to HPB / HPBT.		

Boring Bars for Positive Inserts

F26~F62

CC □□ Insert	Dynamic Bar / Boring Bars for General Purpose	F26
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F64~F67

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Assembly (AS) List / Former Parts List

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Alternative Toolholder Reference Table for Boring Bar

F85~F88

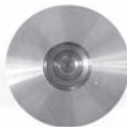
Parts Compatibility of Lever Lock Toolholders ○R42

- Toolholder design developed by using stress analysis technology
- Maximum structural thickness for high tool holder rigidity
- Controls chattering to achieve stable machining

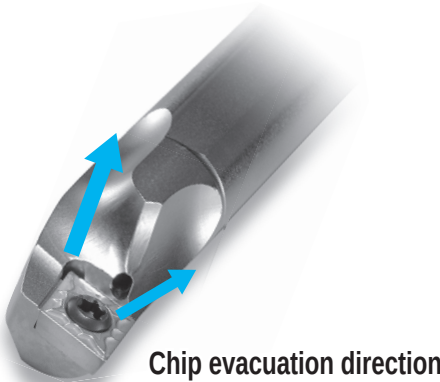
● Large chip pocket produces superior chip evacuation

Dynamic design by using the latest computer simulation technology

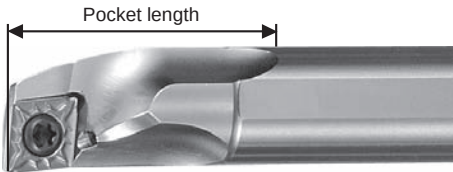
■ Superior chip evacuation
(External coolant)

	Dynamic Bar	Competitor A	Competitor B
Inside the workpiece			

In the products of competitor A and B chips remain inside the workpiece, but chips from the Dynamic Bar are all evacuated from the workpiece.

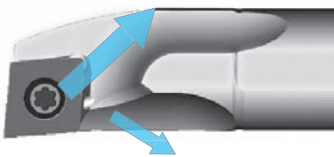
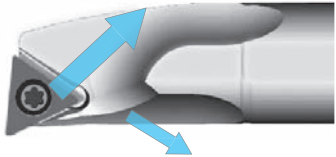


■ Comparison of pocket length



Description	Pocket length (mm)	
	Dynamic Bar	Competitor A
A16-SCLPR09-18 type	37	29
A20-SCLCR09-22 type	48	32

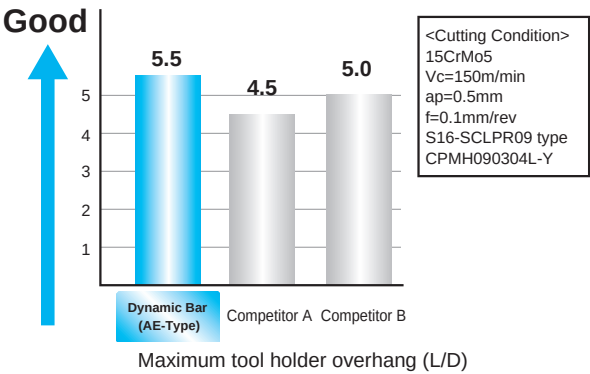
■ Chip evacuation direction

SCLC (P) type	STLB (P) type
	
Better evacuation by backward chip flow	

The dynamic Bar achieves superior chip evacuation

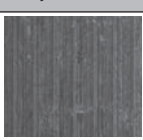
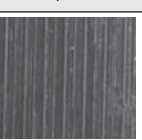
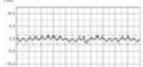
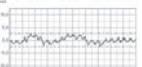
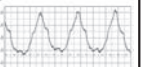
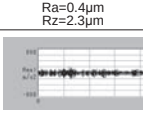
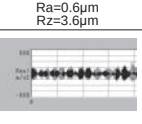
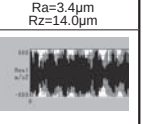
High rigidity and chattering resistance are ensured by using a special alloy and with help of stress analysis technology. Previously unattained surface finish and dimensional accuracy are now achieved.

■ Comparison of vibration tendency



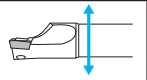
■ Comparison of surface finish

Vibration of the Dynamic Bar was minimal even at high cutting speeds, enabling stable machining.

	Dynamic Bar	Competitor A	Competitor B
Surface wall			
Surface Roughness	 Ra=0.4μm Rz=2.3μm	 Ra=0.6μm Rz=3.6μm	 Ra=3.4μm Rz=14.0μm
Oscillatory waveform			

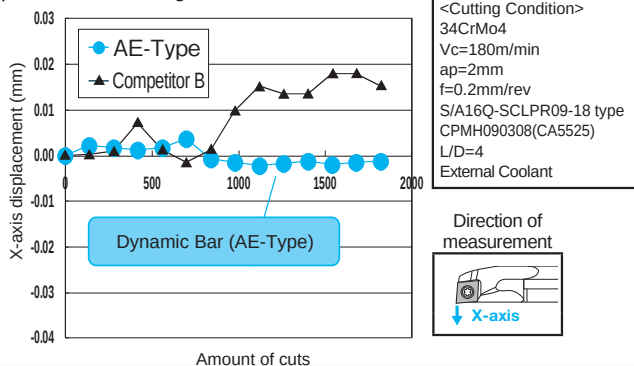
<Cutting Condition>
15CrMo5
Vc=210m/min
ap=0.5mm
f=0.1mm/rev
A16Q-SCLPR09-18 type
CPMT090304XP (PV7020)
L/D=4
External coolant

Direction of vibration measurement



Cutting Point Precision

The AE Dynamic Bar maintains precise cutting edge positional accuracy through the use of a special alloy, thereby achieving high precision machining.



Toolholder Lineup

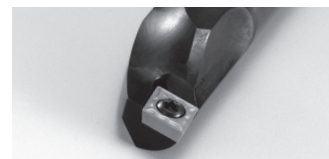
• Excellent Bar (AE-Type)

Excellent Bar with coolant hole (internal coolant) (A..AE) enables better chip evacuation.



• Steel Bar

The steel shank bar (without coolant hole) provides superior cost performance

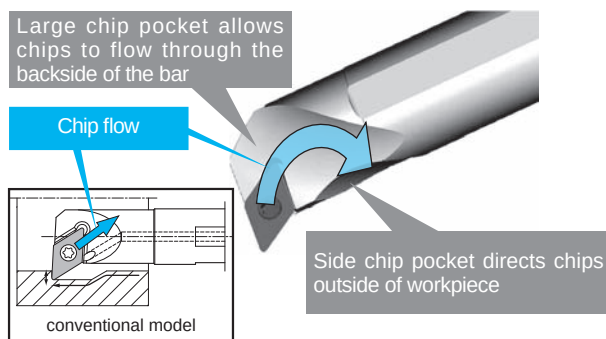


Advantages of Dynamic Bar SDUC

New design and concept focusing on chip evacuation

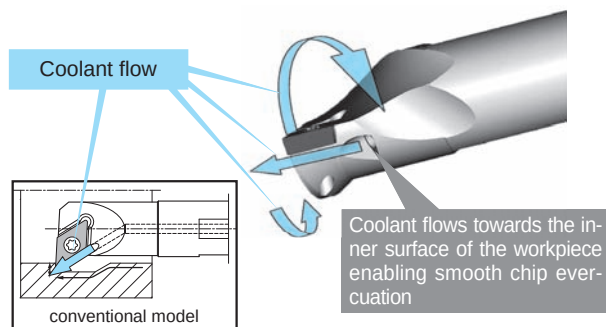
New design

Streamlined pocket enables an effective chip evacuation.



New concept

Coolant flows towards the workpiece's inner surface



HP Type 2-Edges Tip-Bar for Micro Boring

- Economically excellent 2-Edges
- Min. Bore Dia. Line Up from $\phi 2.0$ to Up
- Easy-to-Use Adjustable Overhang Length
- Integrated shank enables installation with standard sleeves
- Special sleeves for various machine types



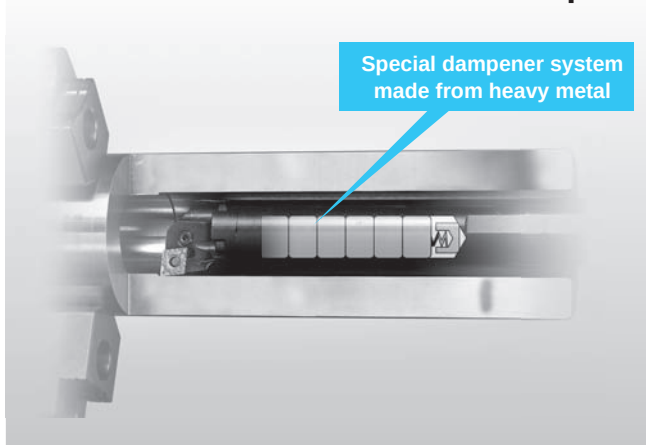
Boring	Back boring	Grooving	Face Grooving	Threading
HPB ⚙ F22	HPBT ⚙ F22	HPG ⚙ G44	HPFG ⚙ G65	HPT ⚙ J24
Min. Bore Dia.: $\phi 2\sim\phi 7$ Corner-R (r ϵ): 0.05	Min. Bore Dia.: $\phi 4\sim\phi 5$ Corner-R (r ϵ): 0.05	Min. Bore Dia.: $\phi 4\sim\phi 7$ Edge Width: 1.0~2.0 mm Depth: 1.0~2.0 mm	Min. Face Groove Dia.: $\phi 8$ Edge Width: 1.0~3.0mm Depth: 2.0~3.0mm	Min. Pilot Hole Dia.: $\phi 4.5\sim\phi 8$ M: 0.75~1.5 mm UN: 28~16 TPI W: 24~18 TPI Rc: 28~19 TPI

Boring bars with interchangeable heads and anti-vibration dampener system

- The AD (Advanced Dampener) system enables a maximum overhang of 6times L/D.
- Highly efficient machining: The anti-vibration dampener effect enables large cutting-depths and high feed rates.
- Applicable for a variety of machining conditions due to the interchangeable head design

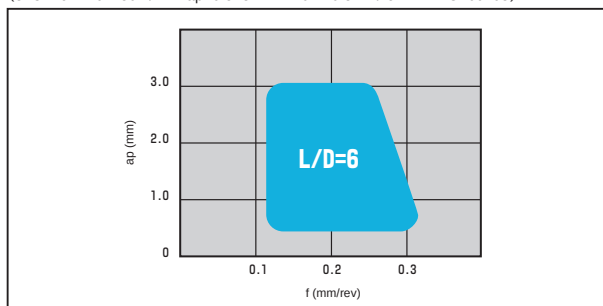


Structure of Anti-Vibration dampener system



Possible machining area

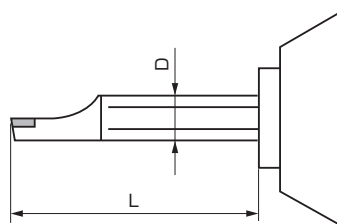
(34CrMo4 Vc=150m/min ap=0.5~3mm f=0.1~0.3mm/rev TNMG160408)



Guide Line for Boring Bars

Guide Line for Overhang Length of Boring Bar (Workpiece: C45)

Shank Material	L/D	Toolholder Type Example
Steel	3	S...SCLP
Steel (Dynamic Bar)	4	S...SCLP-A
Excellent Bar	5	S...SCLP-E
Excellent Bar (Dynamic Bar)	5.5	A...SCLP-AE
Anti-vibration dampener system (AD Bar)	6	HA...PCLN
Carbide	7	C...SCLP



D: Bar Diameter
L: Overhang Length

Carbide Shank Boring Bar

○ Short Shank Series

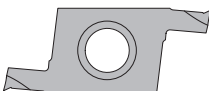
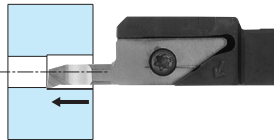
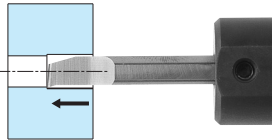
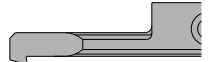
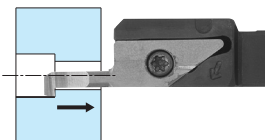
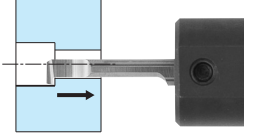
- Short Shank Type with length of 1/2 and 2/3 of standard type are available. (-1/2 or -2/3 is shown at the end of the description)
- Economical

Standard Size

←2/3 Size

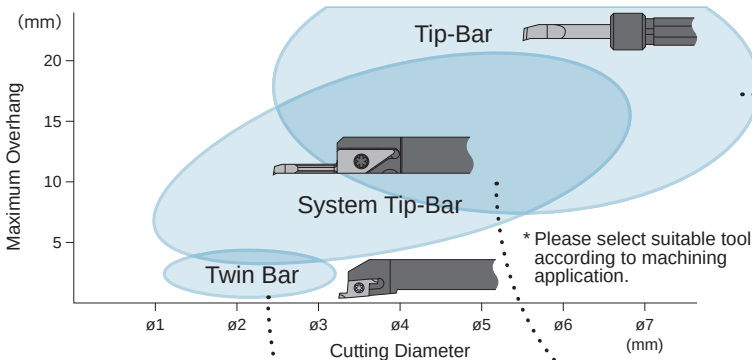
←1/2 Size

Solid Tip-Bars for Micro Boring

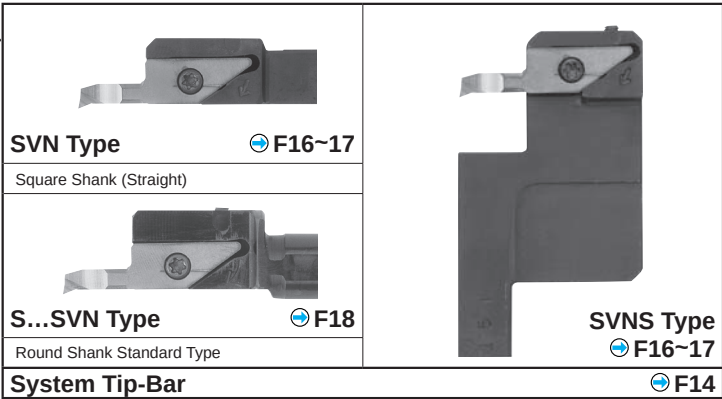
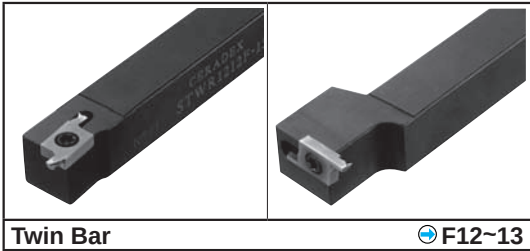
Application	Solid Tip-Bar Type	Shape	Shank Type Max. Overhang Length (L/D)	Min. Bore Dia. ϕA							Ref. Page for Toolholder	Summary			
				1	1.5	2	2.5	3	3.5	4			5	6	7
Boring	TWB Twin Bar 		Solid	●	●	●	●	●						F12	 
	TWBT Twin Bar 		Solid	●	●	●	●	●						F13	
	VNB-S System Tip-Bar 		Solid	●	●	●		●		●				F16 F17 F18	
	VNB System Tip-Bar 		Solid			●		●		●	●	●	●	F21	
	VNBX-S System Tip-Bar 		Solid	●	●	●		●	●					F23	
	HPB 2-Edges Tip-Bar 		Solid L/D=~-5			●		●		●	●	●	●	F25	
	PSB-S Tip-Bar 		Solid L/D=~-5			●		●		●	●	●	●	F25	
Back Boring	VNBT System Tip-Bar 		Solid							●	●			F16 F17 F18	 
	HPBT 2-Edges Tip-Bar 		Solid L/D=~-5								●	●		F23	
	PSBT-S Tip-Bar 		Solid L/D=~-5								●	●		F25	

Toolholder Dimension

Solid Tip-Bar Type: Minimum cutting Dia. 1mm

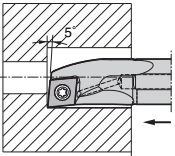
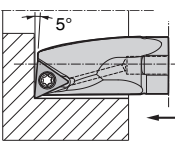
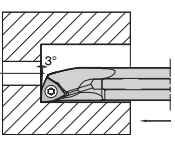


2-Edges Tip-Bar HPB

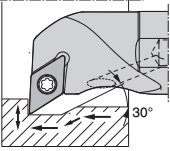
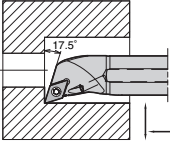
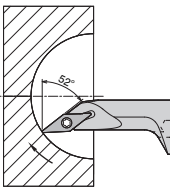
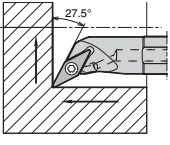
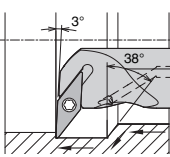
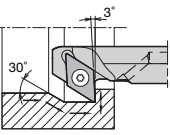
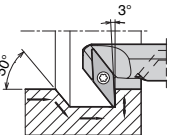


Product Lineup

Dynamic Bar

Application	Overview Shape	Boring Bar Type	Shank Type Max. Overhang Length (L/D)	Coolant Hole		Min. Bore Dia. ØA																						Refer Page for Toolholder
				Yes	No	5	6	7	8	10	12	13	14	16	18	20	22	23	25	26	27	30	31	32	34	40	50	
F		A...SCLC-AE	Excellent L/D = ~5.5	●						●	●		●		●		●				●							F26
		S...SCLC-AE	Excellent L/D = ~5.5	○		●	●	●	●																			
		S...SCLC-A	Steel L/D = ~4	○						●	●		●		●		●				●							
		C...SCLC-A	Carbide L/D = ~7	○		●	●	●	●																			
		E...SCLC-A	Carbide L/D = ~7	●						●	●		●		●		●				●							
		A...SCLP-AE	Excellent L/D = ~5.5	●						●			●	●	●		●				●							F30
		S...SCLP-A	Steel L/D = ~4	○						●			●	●	●		●				●							
		E...SCLP-A	Carbide L/D = ~7	●						●			●		●		●				●							
		E...STLP-A	Carbide	●						●	●		●		●		●				●							F42
		C...STLB-A	L/D = ~7	○				●																				
		A...STLP-AE	Excellent	●						●	●		●		●		●				●							
		S...STLB-AE	L/D = ~5.5	○				●																				
Boring		S...STLB(P)-A	Steel L/D = ~4	○				●	●	●			●		●		●				●							F41
		A...STLC-AE	Excellent L/D = ~5.5	●						●	●		●		●		●											
		S...STLC-A	Steel L/D = ~4	○						●	●		●		●		●											
		S...SWUB(P)-A	Steel L/D = ~4	○		●	●	●	●	●			●		●		●											F56
		S...SWUB-AE	Excellent L/D = ~5.5	○		●	●	●																				
		A...SWUB(P)-AE	Excellent L/D = ~5.5	●						●	●		●		●		●											
		C...SWUB-A	Carbide L/D = ~7	○		●	●	●																				
		E...SWUB(P)-A	Carbide L/D = ~7	●						●	●		●		●		●											

Dynamic Bar

Application	Overview Shape	Boring Bar Type	Shank Type Max. Overhang Length (L/D)	Coolant Hole		Min. Bore Dia. ØA																						Refer Page for Toolholder
				Yes	No	5	6	7	8	10	12	13	14	16	18	20	22	23	25	26	27	30	31	32	34	40	50	
Copying		A...SDUC-AE	Excellent L/D = ~5.5	●									●	●		●	●	●		●				●				F34
		S...SDUC-A	Steel L/D = ~4	○									●	●		●	●	●		●				●				
		E...SDUC-A	Carbide L/D = ~7	●									●	●		●	●	●		●				●				
		A...SDQC-AE	Excellent L/D = ~5.5	●									●	●		●		●		●								F36
		S...SDQC-A	Steel L/D = ~4	○									●	●		●		●		●								
		E...SDQC-A	Carbide L/D = ~7	●									●	●		●		●		●								
		A...SVJB(C)-AE	Excellent	●										●		●		●		●						●	●	F50
		A...SVJP-AE	L/D = ~5.5	●										●		●		●		●								
		S...SVJB(C)-A	Steel	○										●		●		●		●						●	●	
		S...SVJP-A	L/D = ~4	○										●		●		●		●								
		A...SVPB(C)-AE	Excellent L/D = ~5.5	●										●		●		●		●						●	●	F50
		S...SVPB(C)-A	Steel L/D = ~4	○										●		●		●		●						●	●	
		E...SVPB(C)-A	Carbide L/D = ~7	●										●		●		●		●								
		A...SVUB(C)-AE	Excellent L/D = ~5.5	●										●		●		●		●						●	●	F52
		S...SVUB(C)-A	Steel L/D = ~4	○										●		●		●		●						●	●	
		E...SVUB(C)-A	Carbide L/D = ~7	●										●		●		●		●		29				●		
Back Copying		A...SDZC-AE	Excellent L/D = ~5.5	●										●	●		●	●		●					●			F37
		S...SDZC-A	Steel L/D = ~4	○										●	●		●	●		●					●			
		E...SDZC-A	Carbide L/D = ~7	●										●	●		●	●		●					●			
		A...SVZB(C)-AE	Excellent L/D = ~5.5	●										●		●		●		●						●	●	F52
		S...SVZB(C)-A	Steel L/D = ~4	○										●		●		●		●						●	●	

For Min.Bore Dia. ØA, the figure under ● may be applied depending on the toolholder type.

F



Boring



F7

Boring Bars for General Purpose

Application	Boring Bar Type	Shape	Shank Type Max. Overhang Length (L/D)	Coolant Hole		Insert Type	Min. Bore Dia. ϕA																	Ref. Page for Toolholder
				Yes	No		5	6	7	8	10	12	14	16	18	20	25	30	32	40	50			
Boring / Internal Facing	S...SCLC		Steel L/D=-3			Positive					●												F28	
	S...SCLC-E		Excellent L/D=-5			Positive	●	●	●	●	●													
	C...SCLC		Carbide L/D=-7			Positive	●	●	●	●	●													
	A...SCLC-E		Excellent L/D=-5	●		Positive					●												F29	
	E...SCLC		Carbide L/D=-7	●		Positive					●													
	S...SCLP		Steel L/D=-3			Positive						●	●	●	●	●	●	●					F32	
	S...SCLP-E		Excellent L/D=-5			Positive						●	●	●	●	●	●							
	C...SCLP		Carbide L/D=-7			Positive						●		●		●	●							
	A...SCLP-E		Excellent L/D=-5	●		Positive						●	●	●	●	●	●							
	E...SCLP		Carbide L/D=-7	●		Positive						●		●		●	●						F68	
	S...PCLN○○		Steel L/D=-3			Negative										●	● 27		●	●	●			
	A...PCLN09		Steel L/D=-3	●		Negative										●	● 27		●					
	S...PWLN○○		Steel L/D=-3			Negative										●	● 27		●	●	●			
	A...PWLN06		Steel L/D=-3	●		Negative										●	● 27		●					
	S...WWLN08-E		Excellent L/D=-5			Negative											● 28		●	●				
	C...STXP(B)		Carbide L/D=-7			Positive			● 75	● 9	● 11												F48	
	C...SJLC		Carbide L/D=-7			Positive	● 5.5																F40	
Copying	S...STWP		Steel L/D=-3			Positive						●		●		●	●					F47		
	S...STWP-E		Excellent L/D=-5			Positive						●		●		●	●		●					
	S...SYXP-E		Excellent L/D=-5			Positive						●		●								F62		
	S...SDUC		Steel L/D=-3			Positive							●	●		●	●					F38		
	S...SDUC-E		Excellent L/D=-5			Positive							●	●		●	●		●					
	C...SDUC		Carbide L/D=-7			Positive								●	●		●	●		●				

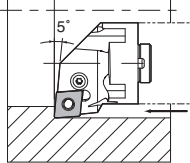
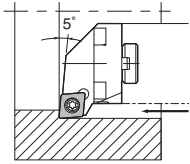
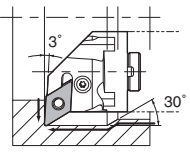
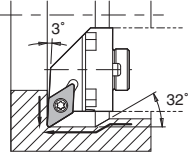
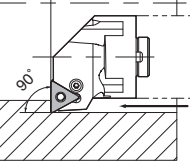
For Min.Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

Application	Boring Bar Type	Shape	Shank Type Max. Overhang Length (L/D)	Coolant Hole		Insert Type	Min. Bore Dia. ϕA																	Ref. Page for Toolholder
				Yes	No		5	6	7	8	10	12	14	16	18	20	25	30	32	40	50			
Copying	S...PDUN11		Steel L/D=~-3			○ Negative												● 27		●	●		F69	
	A...PDUN11		Steel L/D=~-3	●		○ Negative												● 27		●	●			
	S...SVJB(C)-E		Excellent L/D=~-5			○ Positive							●		●	●	●			●	●	F54		
	S...SVJP-E		○ Positive							●														
	S...SVPB(C)-E		Excellent L/D=~-5			○ Positive								●		●	●		●	●				
	S...SVUB(C)-E		Excellent L/D=~-5			○ Positive								●		●	●		●	●				
Back Copying	C...STZB		Carbide L/D=~-7			○ Positive				● 8.5												F48		
	C...SJZC		Carbide L/D=~-7			○ Positive		● 6.5														F40		
	S...SDZC		Steel L/D=~-3			○ Positive							●	●		●	●					F39		
	S...SDZC-E		Excellent L/D=~-5			○ Positive							●	●		●	●		●					
	S...SVZB(C)-E		Excellent L/D=~-5			○ Positive								●		●	●		●	●		F54		
Boring	S...STUP(B)		Steel L/D=~-3			○ Positive				●	●	●		●		●	●		●			F44		
	S...STUP(B)-E		Excellent L/D=~-5			○ Positive				●	●	●	●	●	●	●	●		●					
	C...STUP(B)		Carbide L/D=~-7			○ Positive				●	●	●	●	●	●	●	●							
	A...STUP-E		Excellent L/D=~-5	●		Positive					●	●	●	●	●	●	●		●			F46		
	E...STUP		Carbide L/D=~-7	●		Positive					●	●	●	●	●	●	●							
	S...CTUP		Steel L/D=~-3			○ Positive								●		●	● 27		●	● 34	● 43	●	F61	
	S...PTUN ○○		Steel L/D=~-3			○ Negative										●	●	●	●	●	●	F70		
	A...PTUN11		Steel L/D=~-3	●		Negative										●	●		●					
	S...SWUB		Steel L/D=~-3			○ Positive		●	●	●													F58	
	S...SWUP(B)-E		Excellent L/D=~-5			○ Positive					●	●	●	●	●	●	●							
	C...SWUP(B)		Carbide L/D=~-7			○ Positive		●	●	●	●	●	●	●	●	●	●							
	S...SSKP		Steel L/D=~-3			○ Positive										●	●		●	●			F60	
S...CSKP		Steel L/D=~-3			○ Positive										●	● 27		●	● 34	● 43				

For Min.Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

Product Lineup

AD Bar Interchangeable Head Boring Bars with Anti-vibration Dampener System

Application	Boring Bar Type	Shape	Shank Type Max. Overhang Length (L/D)	Coolant Hole		Insert Type	Min. Bore Dia. ϕA																Ref. Page for Toolholder
				Yes	No		7	8	10	12	14	16	18	20	25	30	32	40	43	50	63		
Boring / Internal Facing	HA...PCLN12		Anti-Vibration Dampener L/D=~-5.5	●		Negative													●		●	●	F64
	HA...SCLC09		Anti-Vibration Dampener L/D=~-6	●		Positive													●				F66
Copying	HA...PDUN15		Anti-Vibration Dampener L/D=~-6	●		Negative														●	●	●	F65
	HA...SDUC11		Anti-Vibration Dampener L/D=~-6	●		Positive													●				F66
Boring	HA...PTFN16		Anti-Vibration Dampener L/D=~-6	●		Negative													●		●	●	F65

Toolholders for Bearing Machining (Square Shank)

Application	Boring Bar Type	Shape	Min. Bore Dia. ϕA						Ref. Page for Toolholder
			20	25	30	32	40	50	
Boring	SRCP-B		●				●		F63

Application	Boring Bar Type	Shape	Min. Bore Dia. ϕA						Ref. Page for Toolholder
			20	25	30	32	40	50	
Round-Chamfering	CBSN-B		●						F63

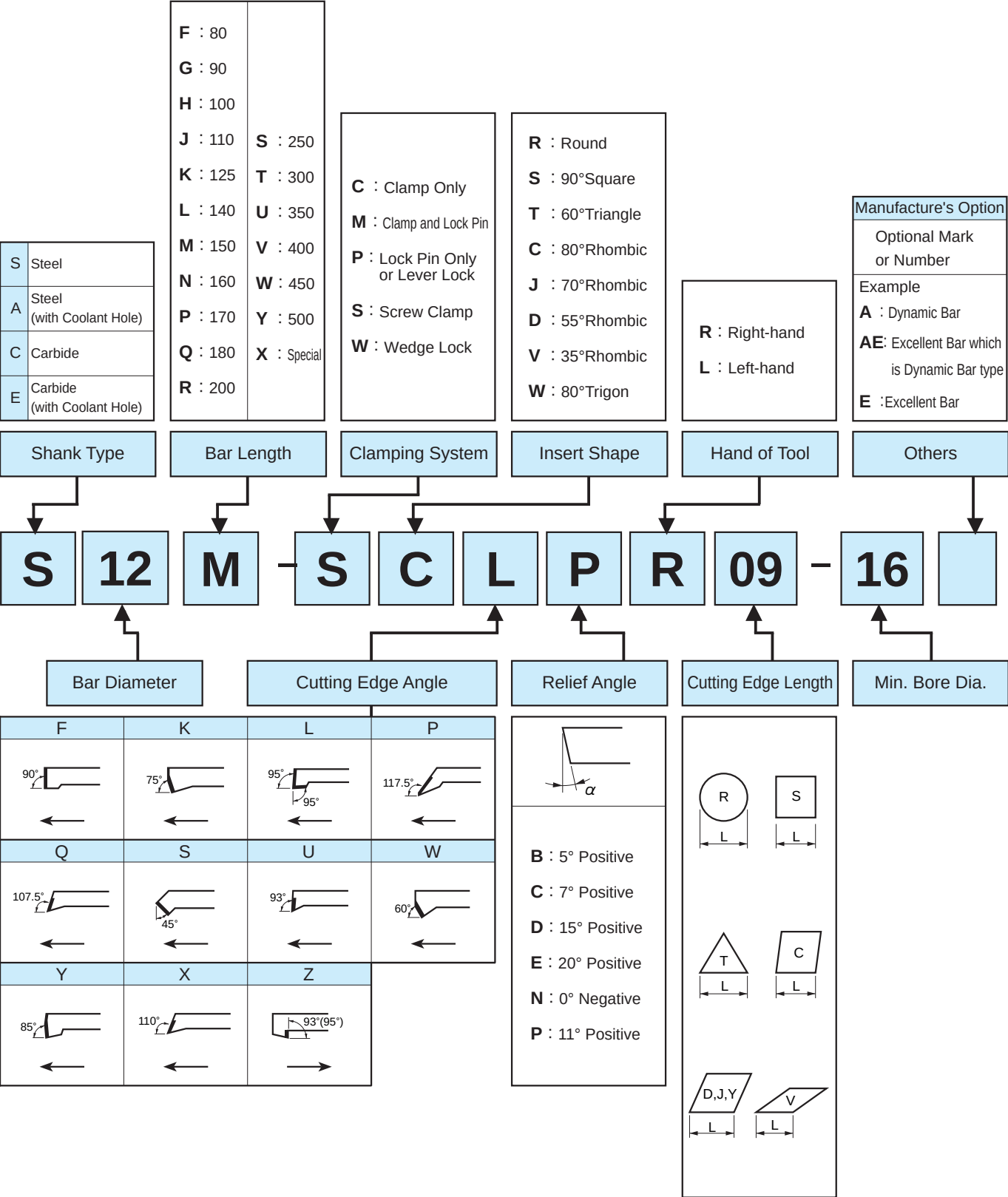
Boring Bars for Ceramic / Solid CBN Tools (L/D≈-3)

Application	Boring Bar Type	Shape	Min. Bore Dia. ϕA								Ref. Page for Toolholder
			16	18	20	25	30	32	40	50	
Boring / Internal Facing Machining	S...CELN									●	F73
Boring	S...CTUP		●		●	●		●	●	●	F61
	S...CTUC								●		F73
	S...CSKP				●	●		●	●		F60
	S...CSKN									●	F73

For Min. Bore Dia. ϕA , the figure under ● may be applied depending on the toolholder type.

Application	Boring Bar Type	Shape	Min. Bore Dia. ϕA						Ref. Page for Toolholder
			20	25	30	32	40	50	
Boring / Internal Facing Machining	S...CCLN-GX						●	●	F74
Boring / Copying Machining	S...CDUN-GX						●	●	F74
Boring Machining	S...CSKN-GX						●	●	F74
Boring / Internal Facing Machining	S...CCLN-A				●		●		F75
Boring	S...CTUN-A				●				F75
	S...CSKN-A				●		●		F75

■ Boring Bar Identification System (Round Shank)



● Anti-vibration interchangeable head mechanism Boring Bar “AD Bar”

For the identification system for Boring Bars with interchangeable heads see page ● F64.

Twin Bar

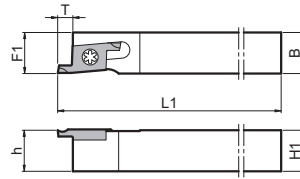
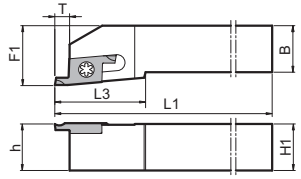
TWB (Micro Boring : Horizontal type) [Corner-R (rε) Tolerance: +0/-0.02mm, +0/-0.03mm]

Description	Min. Bore Dia.	Dimension (mm)			Insert Grade	
		øA	F	S	PVD Coated Carbide	Carbide
					PR1025	KW10
TWBR 01003-005	1.0	0.85	0.2	0.05	●	□
	1.5	1.30			●	□
	2.0	1.75	0.25		●	□
	2.5	2.10	0.3		●	□
	3.0	2.40	0.4		●	□
TWBR 01503-010	1.5	1.30	0.2	0.1	●	□
	2.0	1.75	0.25		●	□
	2.5	2.10	0.3		●	□
	3.0	2.30	0.4		●	□

● Right-hand shown

STW (Square shank for Horizontal type insert)

(For Left-hand toolholder for grooving, please see G66.)

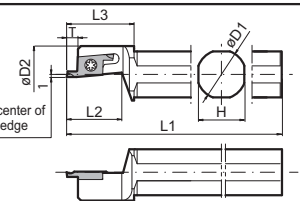
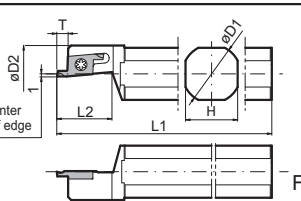
				
	● Right-hand shown		R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder.	

Toolholder Dimensions

Description		Std.	Dimension (mm)								Drawing	Spare Parts		Applicable Insert
			H1=h	B	L1	L2	L3	F1	F2	T		Clamp Screw	Wrench	 F12
														
STWR	1010F-15		10	10	80	-	-	10	-	3	Fig.1	SB-3080TR	LTW-10S	TWBR ○○○○○○ - ○○○○
	1212F-15		12	12				12						
	1010K-15		10	10	125			10						
	1212K-15		12	12				12						
	1616K-15		16	16				16						
	2020K-15		20	20	25			25						
	2525M-15		25	25				150						

S..-STW (Round shank for Horizontal type insert)

(For Left-hand toolholder for grooving, please see G66.)

				
	● Right-hand shown		R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder.	

Toolholder Dimensions

Description	Std.	Dimension (mm)								Drawing	Spare Parts		Applicable Insert
		øD1	øD2	H	L1	L2	L3	T			Clamp Screw	Wrench	
													
S12F- STWR15	●	12	20	11	80	18	22	3	Fig.1		SB-3080TR	LTW-10S	TWBR ○○○○○○ - ○○○○
S14H- STWR15	●	14		13	100								
S15F- STWR15	●	15.875		15	85								
S16F- STWR15	●	16		17	90								
S19G- STWR15	●	19.05	18.5	17	120	-	3	Fig.2			SB-3080TR	LTW-10S	TWBR ○○○○○○ - ○○○○
S19K- STWR15	●	19.05		18	120								
S20G- STWR15	●	20	19.5	18	90	-	3	Fig.2			SB-3080TR	LTW-10S	TWBR ○○○○○○ - ○○○○
S20K- STWR15	●	20		20	120								
S22K- STWR15	●	22	21.5	20	125	22					SB-3080TR	LTW-10S	TWBR ○○○○○○ - ○○○○
S25.0J- STWR15	●	25	24.5	23	110								
S25K- STWR15	●	25.4	25	23	120								

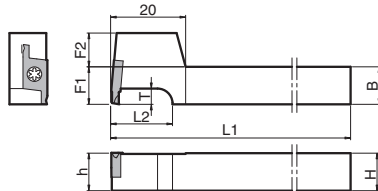
● : Std. Item ○ : Check Availability □ : Deleted from the next catalogue

TWBT (Micro Boring : Vertical type) [Corner-R (rε) Tolerance: +0/-0.02mm, +0/-0.03mm]

Description	Min. Bore Dia.	Dimension (mm)			Insert Grade	
		F	S	rε	PVD Coated Carbide	Carbide
	φA				PR1025	KW10
TWBT 01003-005	1.0	0.85	0.2	+0 -0.02	●	□
01503-005	1.5	1.30	0.25		●	□
02003-005	2.0	1.75	0.3		●	□
02503-005	2.5	2.10	0.4		●	□
03003-005	3.0	2.30	0.4	+0 -0.03	●	□
TWBT 01503-010	1.5	1.30	0.2		●	□
02003-010	2.0	1.75	0.25		●	□
02503-010	2.5	2.10	0.3		●	□
03003-010	3.0	2.30	0.4		●	□

● Right-hand shown

STWS (Square shank for Vertical type insert: L-shape type)

	
● Right-hand shown	

Toolholder Dimensions

Description		Std.	Dimension (mm)										Drawing	Spare Parts		Applicable Insert			
			H=h	B	L1	L2	L3	F1	F2	T		Clamp Screw		Wrench	 F13  G67				
																			
STWSR	1010JX-15T	●	10	10	120	16	-	10	9	3	-	SB-3080TR	LTW-10S	TWBTR ○○○○○○ - ○○○○ TWFGTR ○○○○					
	1212JX-15T	●	12	12		-	12	7											
	1616JX-15T	●	16	16		20	16	3											
STWSR	1010F-15T	●	10	10	85	16	-	10	9						3	-	SB-3080TR	LTW-10S	TWBTR ○○○○○○ - ○○○○ TWFGTR ○○○○
	1212F-15T	●	12	12				12	7										
	1010K-15T	□	10	10				10	9										
	1212K-15T	□	12	12				125											
	1616K-15T	□	16	16	20	16	3												

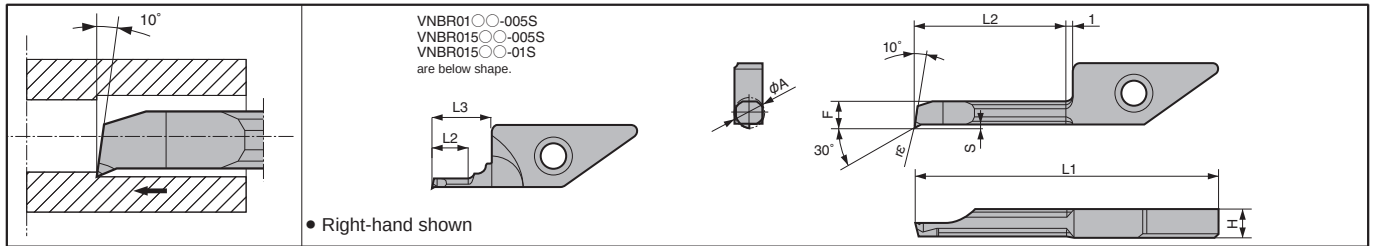
Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)		TWBR01003 Type TWBR01503 Type TWBTR01003 Type TWBTR01503 Type		TWBR02003 Type TWBR02503 Type TWBR03003 Type TWBTR02003 Type TWBTR02503 Type TWBTR03003 Type		Remarks
	PVD Coated Carbide	Carbide					
	PR1025	KW10	Cut: ap (mm), Feed: f (mm/rev)				
			ap	f	ap	f	
Carbon Steel	★ 30~100		~0.1	~0.01	~0.2	~0.03	Coolant
Alloy Steel							
Stainless Steel	★ 30~80		~0.1	~0.01	~0.2	~0.02	
Non-ferrous Metals		★ ~100	~0.1	~0.02	~0.2	~0.05	

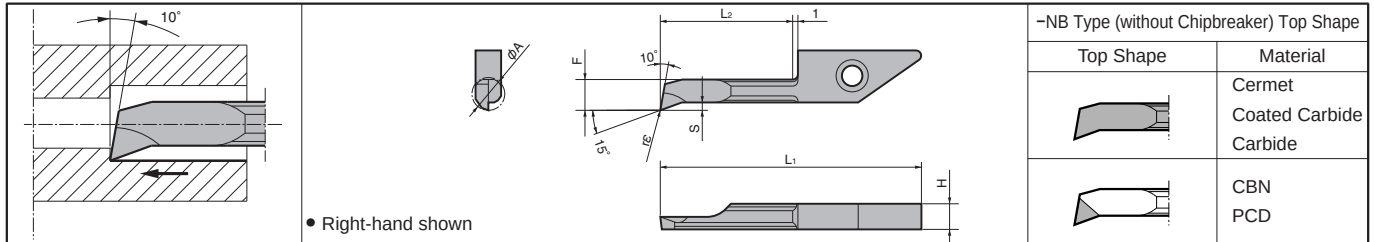
★ : 1st Recommendation

System Tip-Bar

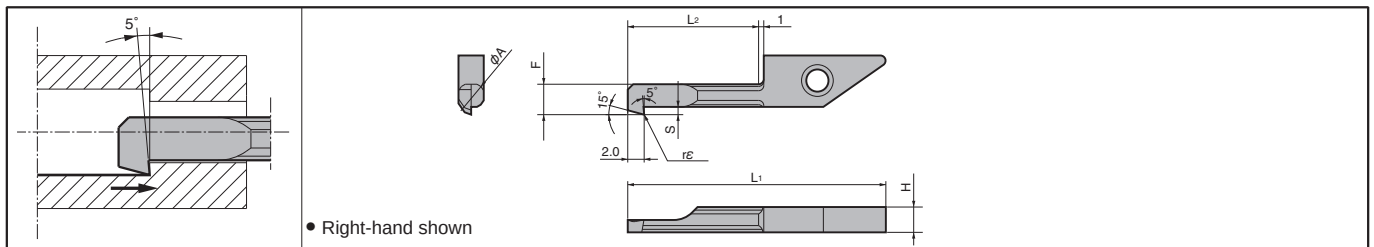
VNB-S (Boring) [Corner-R (rε): Minus tolerance]



VNB (Boring)



VNBT (Back Boring)



Insert Dimensions

Description		Min. Bore Dia.	Dimension (mm)							Insert Grade							
										Cermet	PVD Coated Carbide		Carbide	CBN	PCD		
			øA	H	L1	L2	L3	F	S	rε		TC60	PR915	PR930	KW10	KBN510	KPD001
VNBR	0103-005S	1.0	3.9	26.5	7	0.85	0.2	0.05	⁺⁰ _{-0.02}				●				
	0105-005S												●				
	01503-005S	1.5				3					1.3	0.25			●		
	01505-005S				5		●										
	0206-005S	2.0			6	1.8	0.4						●				
	025075-005S	2.5		28.1	7.5	2.1	0.4						●				
	0311-005S	3.0		30.8	11	2.6	0.4						●				
	03515-005S	3.5		34.8	15	2.9	0.5						●				
	0411-005S	4.0		30.8	11	3.5	0.5						●				
	0420-005S			39.8	20							●					
VNBR	01503-01S	1.5	3.9	26.5	7	1.3	0.2	0.1	⁺⁰ _{-0.03}				●				
	01505-01S										5		●				
	0206-01S	2.0			6	1.8	0.25						●				
	025075-01S	2.5		28.1	7.5	2.1	0.4						●				
	0311-01S	3.0		30.8	11	2.6	0.4						●				
	03515-01S	3.5		34.8	15	2.9	0.5						●				
	0411-01S	4.0		30.8	11	3.5	0.5						●				
	0420-01S			39.8	20							●					
	VNBR	0411-02S		4.0	3.9	30.8	11				-	3.5	0.5	⁺⁰ _{-0.04}	0.2		
0420-02S		39.8	20				●										

Recommended Cutting Conditions (In the case of VNB-S)

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)							VNB01-S Type VNB015-S Type		VNB02-S Type } VNB04-S Type		Remarks
	Cermet	PVD Coated Carbide	Carbide	CBN	PCD							
	TC60	PR915	PR930	KW10	KBN510	KPD001	KPD010					
	Cut: ap (mm), Feed: f (mm/rev)											
	ap	f		ap	f							
Carbon Steel / Alloy Steel			★ 30~100					~0.1	~0.01	~0.2	~0.03	Coolant
Stainless Steel			★ 30~80					~0.1	~0.01	~0.2	~0.02	

★ : 1st Recommendation

● : Std. Item □ : Check Availability

● Insert Dimensions

Description		Min. Bore Dia.	Dimension (mm)							Insert Grade							
										Cermet	PVD Coated Carbide		Carbide	CBN	PCD		
		øA	H	L1	L2	F	S	rε			TC60	PR915	PR930	KW10	KBN510	KPD001	KPD010
VNBR	0206-003	2	3.9	26.5	6	1.8	0.25	0.03					●	●			
	0311-003	3		30.8	11	2.6	0.4						●	●			
	0411-003	4		30.8	11	3.5	0.5				●		●	●			
	0420-003			39.8	20						●		●	●			
	0511-003	5		30.8	11	4.5	0.7				●		●	●			
	0520-003			39.8	20						●		●	●			
	0620-003	6		39.8	20	5.3	1.0				●		●	●			
	0630-003			49.8	30						●		●	●			
	0720-003	7		39.8	20	6.2	1.0				□		●	●			
	0730-003			49.8	30						□		●	●			
VNBR	0206-02	2	3.9	26.5	6	1.8	0.25	0.2					●	●			
	0311-02	3		30.8	11	2.6	0.4					□	●	●			
	0411-02	4		30.8	11	3.5	0.5					□	●	●			
	0420-02			39.8	20								●	●			
	0511-02	5		30.8	11	4.5	0.7						●	●			
	0520-02			39.8	20								●	●			
	0620-02	6		39.8	20	5.3	1.0						●	●			
	0630-02			49.8	30								●	●			
	0720-02	7		39.8	20	6.2	1.0						●	●			
	0730-02			49.8	30								●	●			
VNBR	0206-01	2	3.9	26.5	6	1.8	0.25	0.1					●	●			
	0311-01	3		30.8	11	2.6	0.4						●	●			
	0411-01	4		30.8	11	3.5	0.5						●	●			
	0420-01			39.8	20								●	●			
	0511-01	5		30.8	11	4.5	0.7						●	●			
	0520-01			39.8	20								●	●			
	0620-01	6		39.8	20	5.3	1.0						●	●			
	0630-01			49.8	30								●	□			
	0720-01	7		39.8	20	6.2	1.0						●	●			
	0730-01			49.8	30								●	□			
VNBR	0206-003NB	2	3.9	26.5	6	1.8	0.25	0.03					●	●			
	0311-003NB	3		30.8	11	2.6	0.4						●	●			
	0411-003NB	4		30.8	11	3.5	0.5						●	●			
	0420-003NB			39.8	20								●	●			
	0511-003NB	5		30.8	11	4.5	0.7						●	●			
	0520-003NB			39.8	20								●	●			
	0620-003NB	6		39.8	20	5.3	1.0						●	●			
	0630-003NB			49.8	30								●	●			
	0720-003NB	7		39.8	20	6.2	1.0						●	●			
	0730-003NB			49.8	30								●	●			
VNBR	0206-02NB	2	3.9	26.5	6	1.8	0.25	0.2					●	●			
	0311-02NB	3		30.8	11	2.6	0.4						●	●			
	0411-02NB	4		30.8	11	3.5	0.5						●	●		●	●
	0420-02NB			39.8	20								●	●		●	●
	0511-02NB	5		30.8	11	4.5	0.7						●	●		●	●
	0520-02NB			39.8	20								●	●		●	●
	0620-02NB	6		39.8	20	5.3	1.0						●	●		●	●
	0630-02NB			49.8	30								●	●		●	●
	0720-02NB	7		39.8	20	6.2	1.0						●	●		●	●
	0730-02NB			49.8	30								●	●		●	●
VNBTR	0411-003	4	3.9	30.8	11	3.6	1.0	0.03					●	●			
	0420-003			39.8	20								●	●			
	0511-003	5		30.8	11	4.6	1.3	0.1					●	●			
	0520-003			39.8	20								●	●			
VNBTR	0411-01	4	3.9	30.8	11	3.6	1.0	0.1					●	●			
	0420-01			39.8	20								●	●			
	0511-01	5		30.8	11	4.6	1.3						●	●			
	0520-01			39.8	20								●	●			

◆ Recommended Cutting Conditions (In the case of VNB / VNB-NB / VNBTR)

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)							VNB02 Type		VNB03 Type		VNB04 VNB04 Type		VNB05 VNB06 VNB07 VNB05 Type		Remarks
	Cermet	PVD Coated Carbide	Carbide	CBN	PCD											
	TC60	PR915	PR930	KW10	KBN510	KPD001	KPD010									
	Cut: ap(mm), Feed: f(mm/rev)							ap	f	ap	f	ap	f			
Carbon Steel / Alloy Steel	☆ 60~120	☆ 50~150	★ 30~100					~0.3	~0.03	~0.4	~0.04	~0.45	~0.07	~0.5	~0.1	Coolant
Stainless Steel	☆ 50~100	☆ 50~150	★ 30~80					~0.3	~0.02	~0.4	~0.03	~0.45	~0.05	~0.5	~0.07	
Non-ferrous Metals				☆ ~100		★ ~300	☆ ~300	~0.3	~0.05	~0.4	~0.06	~0.45	~0.1	~0.5	~0.15	

★: 1st Recommendation ☆: 2nd Recommendation

● : Std. Item □ : Check Availability

System-Tip-Bars are sold in 5 piece boxes.



Boring

System Tip-Bar

SVN-N (without side stopper)

SVNS-N (without side stopper / without setscrew)

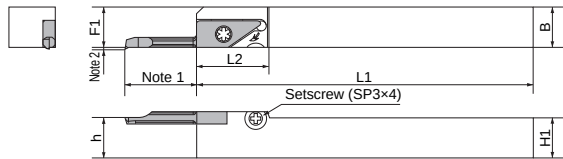


Fig.1 (SVN-N)

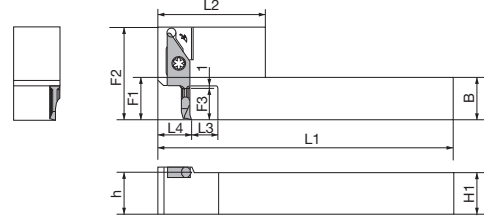


Fig.2 (SVNS-N)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14~F15](#)

Toolholder Dimensions

Description	Std.	Dimension (mm)										Drawing	Spare Parts			Applicable Inserts
		H1=h	B	L1	L2	L3	L4	F1	F2	F3	Clamp Screw		Wrench	Setscrew	 F14~F15  G43  G64  J27	
													 FT LTW			
SVNR <u>1010H-12N</u>	●	10	10	100	22	-	-	10	-	-	Fig.1	SB-3080TR	FT-10	SP3×4	VNBR○○○○-○○○	
<u>1212K-12N</u>	●	12	12					12							VNBTR○○○○-○○○	
<u>1616K-12N</u>	●	16	16	125				16							VNGR○○○○-○○	
<u>2020K-12N</u>	●	20	20					20							VNFGR○○○○-○○	
<u>2525M-12N</u>	●	25	25	150				25							VNTR○○○○-○○	
SVNSR <u>1010K-12-06N</u>	●	10	10	125	45	10	12	10	29	6	Fig.2	SB-3080TR	LTW-10S	-	(VNBR○○06-○○○)*	
<u>1010K-12-11N</u>	●	10	10	125		10	12	10	33	11					(VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)*	
						<u>1212M-12-06N</u>	●	12	12	150					10	12
<u>1212M-12-11N</u>	●	12	12	150		10	12	12	33	11					(VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)*	
<u>1212M-12-20N</u>	●	12	12	150		10	13	12	42	20					(VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○-11)*	
<u>1616M-12-06N</u>	●	16	16	150		16	12	16	29	6					(VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)*	
<u>1616M-12-11N</u>	●	16	16	150		16	12	16	33	11						
<u>1616M-12-20N</u>	●	16	16	150		16	13	16	42	20						

- SVN-N (without side stopper) retains high index accuracy by simple restraint.
- SVN-N (without side stopper) has a setscrew SP3X4. Changing the setscrew SP3X4 to a screw HS3X4 (sold separately) enables the holder to be used as a binding effect holder similar to the side stopper holder.
- Please use [SVN / SVNS inserts] with side stoppers if machining with binding effect is required (e.g. varying directions for internal, external or face cutting when using only one tool).

All System Tip-Bar Inserts are used with a SVNSR-N Toolholder, however, When setting the cutting edge at the face level of the toolholder as shown in Fig.2, use the insert shown in (). In these cases, the F3 dimension of the toolholder corresponds to the L2 dimension of the insert.

Spare Parts (Optional)

Screw (Side Stopper)	Wrench
HS3×4	LW-1.5

● : Std. Item □ : Check Availability

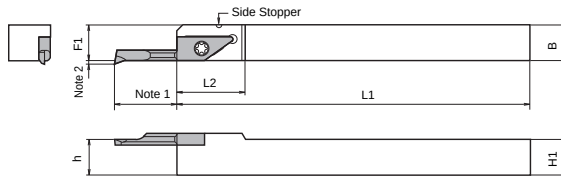
SVN Square Shank (Straight)**SVNS** Square Shank (L-shape)

Fig.1 (SVN)

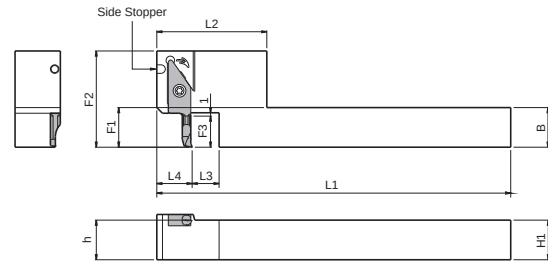


Fig.2 (SVNS)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14~F15](#)

● Toolholder Dimensions

Description	Std.	Dimension (mm)										Drawing	Spare Parts				Applicable Inserts
		H1=h	B	L1	L2	L3	L4	F1	F2	F3	Clamp Screw		Wrench	Screw (Side Stopper)	Wrench		
																	
SVNR	1010H-12	☐	10	10	100	22	-	-	10	-	-	Fig.1	SB-3080TR	FT-10	HS3×4	LW-15	VNBR○○○○-○○○
1212K-12	☐	12	12		12				VNBTR○○○○-○○○								
1616K-12	☐	16	16	125	16				VNGR○○○○-○○								
2020K-12	☐	20	20		20				VNFGR○○○○-○○								
2525M-12	☐	25	25	150	25				VNTR○○○○-○○								
SVNSR	1010K-12-06	☐	10	10	125	45	10	12	10	29	6	Fig.2	SB-3080TR	LTW-10S	HS3×4	LW-15	(VNBR○○06-○○○)*
1010K-12-11	☐	10	10	125	10		12	10	33	11	(VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○○-11)*						
1212M-12-06	☐	12	12	150	45	10	12	12	29	6	SB-3080TR		LTW-10S	HS3×4	LW-15	(VNBR○○06-○○○)* (VNBR○○11-○○○)* (VNBTR○○11-○○○)* (VNGR○○○○-11)* (VNTR○○○○-11)*	
1212M-12-11	☐	12	12	150		10	12	12	33	11						(VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)*	
1212M-12-20	☐	12	12	150		10	12.5	12	42	20							
1616M-12-06	☐	16	16	150		45	16	12	16	29						6	SB-3080TR
1616M-12-11	☐	16	16	150	16		12	16	33	11	(VNBR○○20-○○○)* (VNBTR○○20-○○○)* (VNGR○○○○-20)*						
1616M-12-20	☐	16	16	150	16		12.5	16	42	20							

All System Tip-Bar Inserts are used with a SVNSR Toolholder, however, When setting the cutting edge at the face level of the toolholder as shown in Fig.2, use the insert shown in ().
In these cases, the F3 dimension of the toolholder corresponds to the L2 dimension of the insert.

S...SVN-N Round Shank (Standard, without side stopper)

S...SVN-SN Round Shank (Straight, without side stopper)

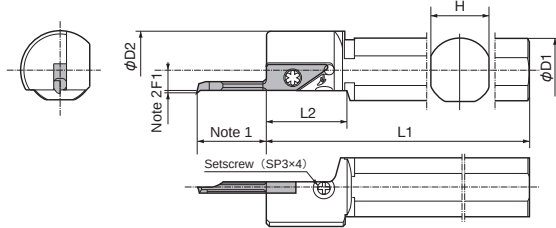


Fig.1 (S...SVN-N)

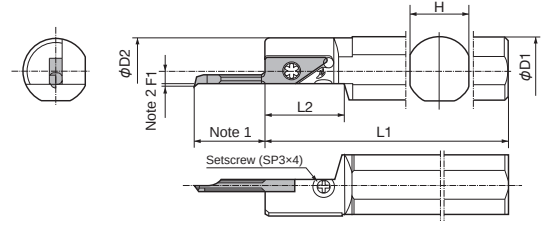


Fig.2 (S...SVN-SN)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14-F15](#)

S...SVN Round Shank (Standard)

S...SVN-S Round Shank (Straight)

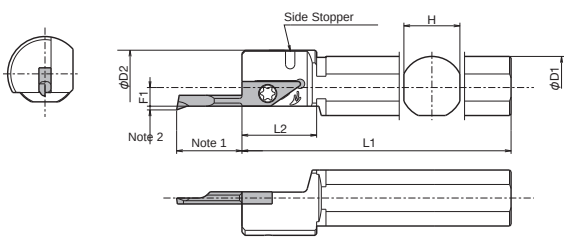


Fig.3 (S...SVN)

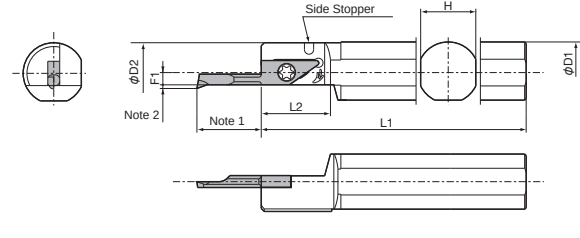


Fig.4 (S...SVN-S)

• Right-hand shown

R-hand Insert for R-hand Toolholder.

Note 1 & Note 2 : For insert dimensions, see page [F14-F15](#)

Toolholder Dimensions

Description	Std.	Dimension (mm)						Drawing	Spare Parts					Applicable Inserts	
		øD1	øD2	H	L1	L2	F1		Clamp Screw	Wrench	Screw (Side Stopper)	Setscrew	Wrench		
															
S12F-SVNR12N	●	12	20	11	80	23	4	Fig.1	SB-3080TR	FT-10	-	SP3×4	-	➡ F14~F15 ➡ G43 ➡ G64 ➡ J27	
S14G-SVNR12N	●	14	20	13	90										
S16H-SVNR12N	●	16	24	15	100	24	6								
S19H-SVNR12N	●	19.05	24	17	100										
S19N-SVNR12N	●				160										
S20H-SVNR12N	●	20	24	18	100										
S25H-SVNR12N	●				100										
S25Q-SVNR12N	●				180										
S19H-SVNR12SN	●	19.05	18.5	17	100	23	4	Fig.2	SB-3080TR	FT-10	-	SP3×4	-		VNBR○○○○-○○ VNBTR○○○○-○○○ VNGR○○○○-○○ VNFGR○○○○-○○ VNTR○○○-○○
S20H-SVNR12SN	●	20	19.5	18	125										
S22K-SVNR12SN	●	22	21.5	20	90										
S25.0G-SVNR12SN	●	25	24.5	23	90										
S12F-SVNR12	□	12	20	11	80	23	4	Fig.3	SB-3080TR	FT-10	HS3×4	-	LW-15		
S14G-SVNR12	□	14	20	13	90										
S16H-SVNR12	□	16	24	15	100	24	6								
S19H-SVNR12	□	19.05	24	17	100										
S19N-SVNR12	□				160										
S20H-SVNR12	□	20	24	18	100										
S25H-SVNR12	□				100										
S25Q-SVNR12	□				180										
S19H-SVNR12S	□	19.05	18.5	17	100	23	4	Fig.4	SB-3080TR	FT-10	HS3×4	-	LW-15		
S20H-SVNR12S	□	20	19.5	18	125										
S22K-SVNR12S	□	22	21.5	20	90										
S25.0G-SVNR12S	□	25	24.5	23	90										

- S...SVN-N and S...SVN-SN (without side stopper) retain high index accuracy by simple restrain.
- S...SVN-N and S...SVN-SN (without side stopper) have a setscrew SP3x4. Changing the setscrew SP3x4 to a screw HS3x4 (sold separately) enables the holder to be used as a binding effect holder like with the side stopper holder.
- In case of machining insert emphasizing on binding effect, (e.g. varying loading direction of under cutting, internal and external or face cutting by one tool) please use [S...SVN and S...SVN-S Holders] with attached side stoppers.

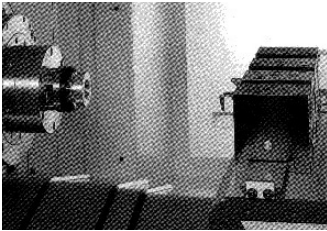
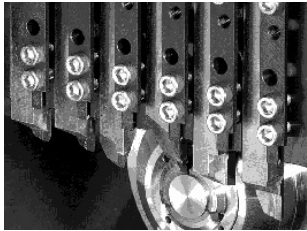
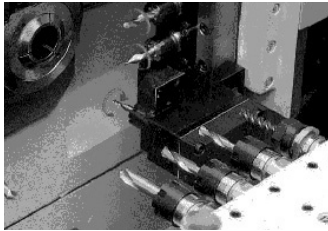
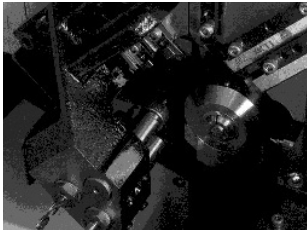
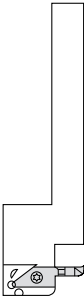
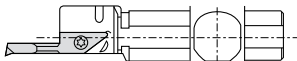
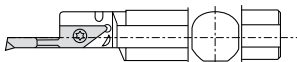
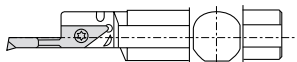
Spare Parts (Optional)

Screw (Side Stopper)	Wrench
HS3x4	LW-1.5

● : Std. Item □ : Check Availability

■ Selection of Solid Tip-Bars

Recommended toolholder may change according to machines used and actual position.
Automatic Lathes have various toolpost types other than those below.

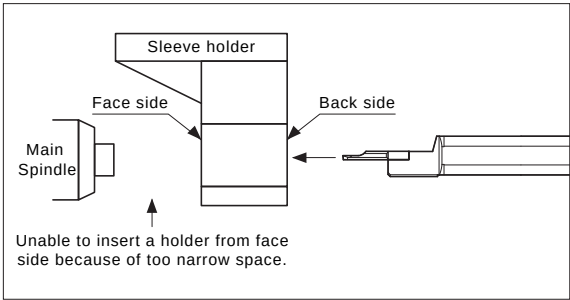
Gang-Type (Horizontal)	Gang-Type	Gang-Type (Front Loading Sleeve Type)	Gang-Type (Back Loading Sleeve Type)
			
Square Shank (Straight) 	Square Shank (L-shape) 	Square Shank 	Square Shank 
Round Shank (Standard) 		Round Shank (Standard) 	Round Shank (Standard) 
Round Shank (Straight) 		Round Shank (Straight) 	Round Shank (Straight) 

Q: There are standard types (head dia. is larger than shank) and straight types for round shanks.

What is each one used for??

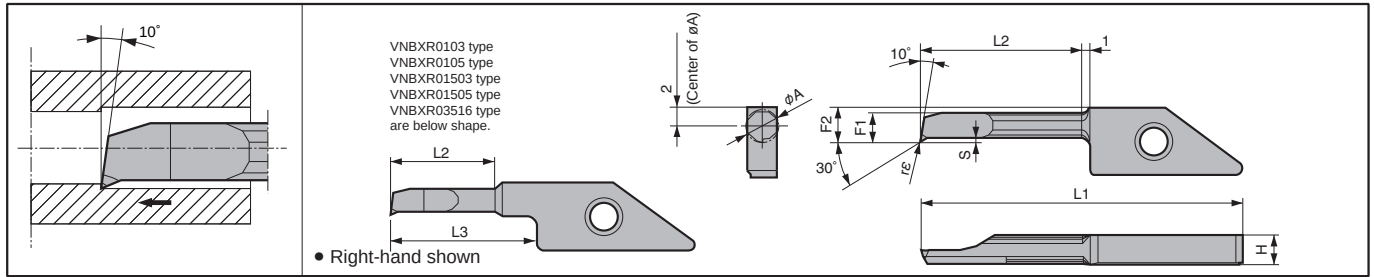
A: The straight type is used when it cannot be inserted from the face side of the sleeve holder and can be inserted only from the back side due to space limitation (Refer to Fig. on the right).

On the other hand, the standard type should be installed when it can be inserted from the face side, and the head end is used for positioning as stopper.



System Tip-Bar

VNBX-S (Boring) [Corner-R (rε): Minus tolerance]



Insert Dimensions (VNBX-S)

Description		Min. Bore Dia.	Dimension (mm)								Insert Grade							
											Cermet		PVD Coated Carbide		Carbide	CBN	PCD	
		∅A	H	L1	L2	L3	F1	F2	S	rε	TC60	PR630	PR915	PR930	KW10	KBN510	KPD001	KPD010
VNBXR	0103-005S	1.0	3.9	26.5	3	7	0.85	2.5	0.2	$\begin{smallmatrix} +0 \\ -0.02 \end{smallmatrix}$ 0.05				●				
	0105-005S				5									●				
	01503-005S	1.5			3		1.3	2.75						●				
	01505-005S				5									●				
	0206-005S	2.0			6		1.8	3			0.25				●			
	0311-005S	3.0		30.8	11	-	2.6	3.5	0.4					●				
	03511-005S	3.5											●					
	03516-005S						39.8	16	21		3.1	3.75	0.45				●	
	0411-005S	4.0		30.8	11	-	3.5	4	0.5					●				
	0420-005S				39.8		20						●					
VNBXR	01503-01S	1.5	3.9	26.5	3	7	1.3	2.75	0.2	$\begin{smallmatrix} +0 \\ -0.03 \end{smallmatrix}$ 0.1				●				
	01505-01S				5									●				
	0206-01S	2.0			6		1.8	3	0.25					●				
	0311-01S	3.0		30.8	11	-	2.6	3.5	0.4					●				
	03511-01S	3.5												●				
	03516-01S						39.8	16	21		3.1	3.75	0.45				●	
	0411-01S	4.0		30.8	11	-	3.5	4	0.5					●				
	0420-01S				39.8		20						●					
	VNBXR	0411-02S		4.0	3.9	30.8	11	-	3.5		4	0.5	$\begin{smallmatrix} +0 \\ -0.04 \end{smallmatrix}$ 0.2				●	
0420-02S			39.8			20						●						

Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)								VNBX01-S Type VNBX015-S Type		VNBX02-S Type } VNBX04-S Type		Remarks
	Cermet	PVD Coated Carbide			Carbide	CBN	PCD						
	TC60	PR630	PR915	PR930	KW10	KBN510	KPD001	KPD010					
	Cut: ap (mm), Feed: f (mm/rev)												
	ap	f		ap	f								
Carbon Steel / Alloy Steel			★ 30~100						~0.1	~0.01	~0.2	~0.03	Coolant
Stainless Steel			★ 30~80						~0.1	~0.01	~0.2	~0.02	

★ : 1st Recommendation

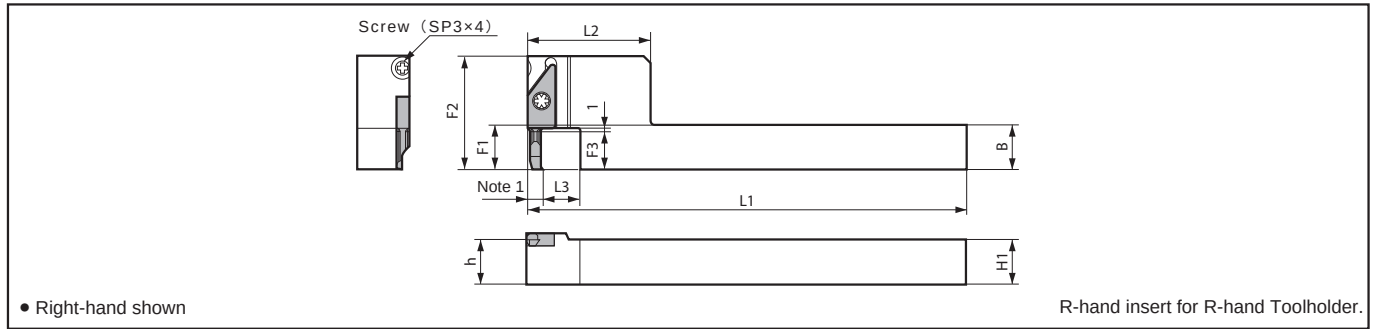
Attachment holder for VNBX-S System Tip-Bar

- There are three different types of attachment holders for the VNBX-S System Tip-Bar (See page F21).
 - SVNS-XN Type (without Side Stopper)
 - S...SVN-XN Type (without Side Stopper)
 - S...SVN-SXN Type (without Side Stopper)
- Above holders assure high index accuracy by easy restraint.
- Clamp screws (SP3×4) are attached. Holders without Side Stopper can be used as a binding effect holder when removing the clamp screws and inserting screws (HS3×4: sold separately) with a wrench (LW-1.5: sold separately).

Spare Parts (Optional)

Screw (Side Stopper)	Wrench
HS3×4	LW-1.5

● : Std. Item □ : Check Availability

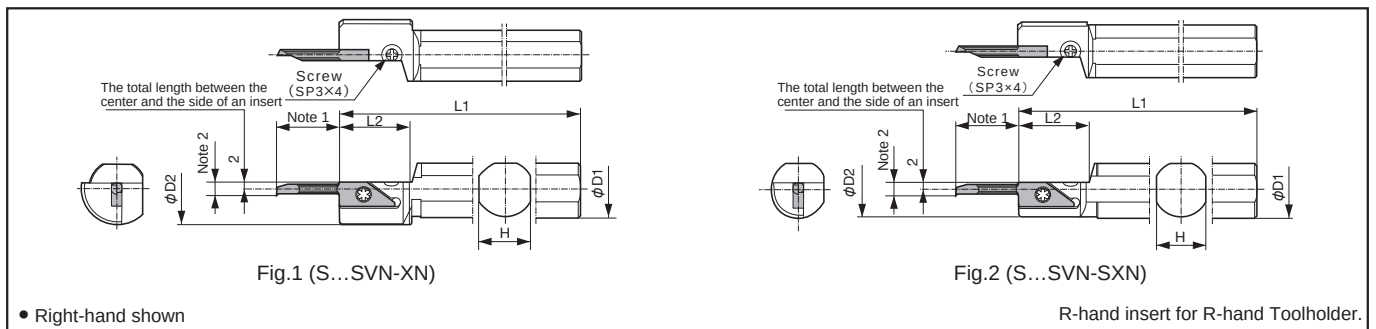
SVNS-XN Square Shank (L-shape)

Note 1 : The dimension of Note 1 is same size as the applicable insert (VNBX **F20**) F2 dimension.

● Toolholder Dimensions (L-shape square shank applicable to gang tool post)

Description	Std.	Dimension (mm)									Spare Parts			*Applicable Inserts F20
		H1=h	B	L1	L2	L3	F1	F2	F3		Clamp Screw	Wrench	Screw	
SVNSR 1010K-12-06XN	●	10	10	125			10	29	6		SB-3080TR	LTW-10S	SP3×4	(VNBXR02..)
1010K-12-11XN	●							33	11					(VNBXR○○11..)
1212M-12-06XN	●					10		29	6					(VNBXR02..)
1212M-12-11XN	●	12	12				12	33	11					(VNBXR○○11..)
1212M-12-20XN	●			150				42	20					(VNBXR0420..)
1616M-12-06XN	●							29	6					(VNBXR02..)
1616M-12-11XN	●	16	16			16	16	33	11					(VNBXR○○11..)
1616M-12-20XN	●							42	20					(VNBXR0420..)

* All System Tip-Bar Inserts are used with a SVNS-XN Toolholder, however, When setting the cutting edge at the face level of the toolholder as shown in Fig., use the insert shown in ().

S...SVN-XN (Round Shank: Standard type)**S...SVN-SXN** (Round Shank: Straight type)

Note 1 : The dimension of Note 1 shows the applicable insert (VNBX **F20**) L2 dimension + 1 mm.

Note 2 : The dimension of Note 2 is the same as the applicable insert (VNBX **F20**) F2 dimension.

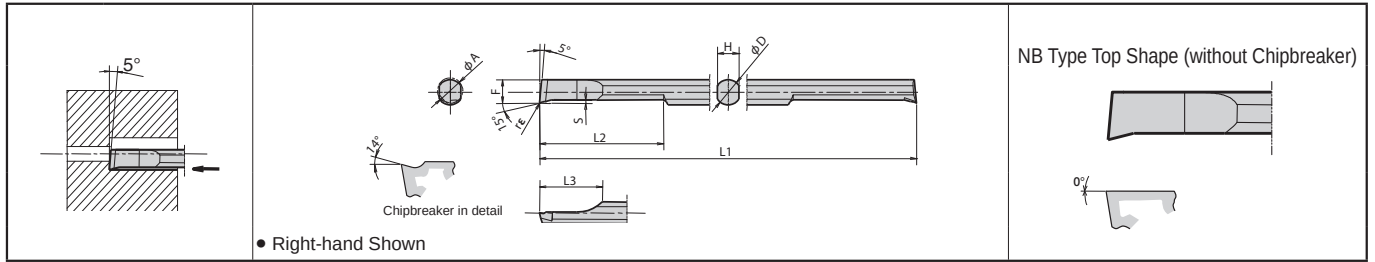
● Toolholder Dimensions (Holder center axis core and insert center are coaxial type)

Description	Std.	Dimension (mm)						Drawing	Spare Parts			Applicable Inserts F20
		ØD1	ØD2	H	L1	L2			Clamp Screw	Wrench	Screw	
S12F -SVNR12XN	●	12	20	11	80	23		Fig.1	SB-3080TR	FT-10	SP3×4	VNBXR...
S14G -SVNR12XN	●	14		13	90							
S15H -SVNR12XN	□	15.875		15	100							
S16H -SVNR12XN	●	16		17	160							
S19H -SVNR12XN	●	19.05		18	100							
S19N -SVNR12XN	●	20		18	100							
S20H -SVNR12XN	●	20		18	100							
S25H -SVNR12XN	●	25.4	30	23	180							
S25Q -SVNR12XN	●	25.4	30	23	180			Fig.2	SB-3080TR	FT-10	SP3×4	VNBXR...
S19H -SVNR12SXN	●	19.05	18.5	17	100	23						
S20H -SVNR12SXN	●	20	19.5	18	100							
S22K -SVNR12SXN	●	22	21.5	20	125							
S25.0G -SVNR12SXN	●	25	24.5	23	90							

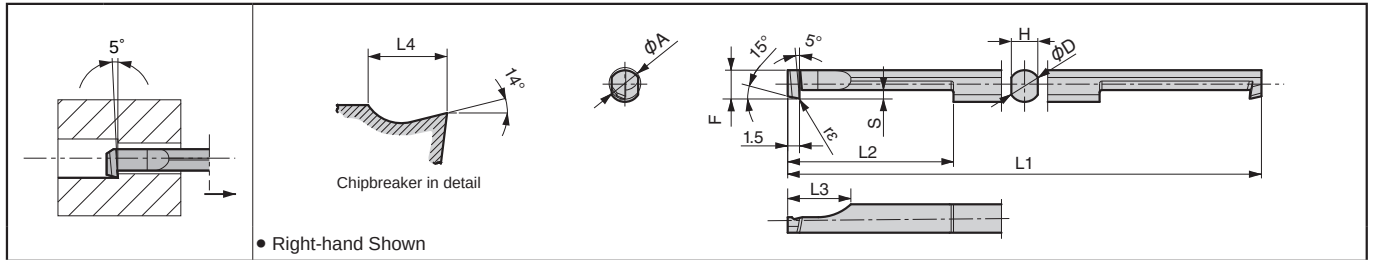
* Reminder of applicable insert.

2 Edges Tip-Bar HPB / HPBT

HPB (Boring)



HPBT (Back Boring)



Tip-Bar Dimensions

Description		Min. Bore Dia.	Dimension (mm)							Insert Grade				Refer Page for Applicable Sleeve	
										PVD Coated Carbide		Carbide			
		øA	øD	H	L1	L2	L3	F	S	rε	PR930		KW10		
											R	L	R		L
HPB ^{R/L}	0202-005	2	2	1.7	50	10	5	1.75	0.25	0.05 ^{+0 -0.02}	●	●	●		F23
	0303-005	3	3	2.5		15	7	2.7	0.3		●	●	●		
	0404-005	4	4	3.35	60	20	10	3.65	0.5		●	●	●		
	0505-005	5	5	4.3	70	25	12	4.55			●	●	●		
	0606-005	6	6	5.2				5.5			●	●	●		
	0707-005	7	7	6.2	80			6.45			●	●	●		
HPB ^{R/L}	0202-005NB	2	2	1.7	50	10	5	1.75	0.25	0.05 ^{+0 -0.02}	●		●		
	0303-005NB	3	3	2.5		15	7	2.7	0.3		●		●		
	0404-005NB	4	4	3.35	60	20	10	3.65	0.5		●		●		
	0505-005NB	5	5	4.3	70	25	12	4.55			●		●		
	0606-005NB	6	6	5.2				5.5			●		●		
	0707-005NB	7	7	6.2	80			6.45			●		●		
HPBT ^{R/L}	0404-005	4	4	3.35	60	21	8	3.65	1.0	0.05 ^{+0 -0.02}	●	●	●	●	F23
	0505-005	5	5	4.3	70	26		4.55	1.3		●	●	●	●	

Recommended Cutting Conditions

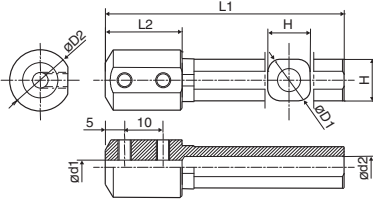
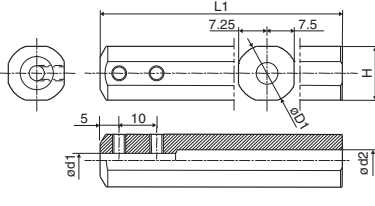
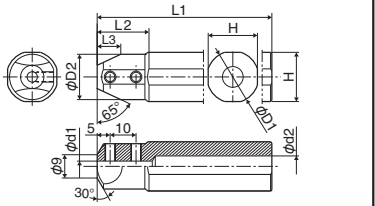
(Cut: ap (mm), Feed: f (mm/rev))

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)		HPB02 Type		HPB03 Type		HPB04 Type HPBT04 Type		HPB05 / 06 / 07 Type HPBT05 Type		Remarks
	PVD Coated Carbide	Carbide	Cut: ap (mm), Feed: f (mm/rev)								
	PR930	KW10	ap	f	ap	f	ap	f	ap	f	
Carbon Steel / Alloy Steel	30~100	-	~0.3	~0.03	~0.4	~0.04	~0.45	~0.07	~0.5	~0.1	Coolant
Stainless Steel	30~80	-	~0.3	~0.02	~0.4	~0.03	~0.45	~0.05	~0.5	~0.07	
Non-ferrous Metals	-	30~100	~0.3	~0.05	~0.4	~0.06	~0.45	~0.1	~0.5	~0.15	

● : Std. Item □ : Check Availability

Tip-Bar is sold in 1 piece boxes.

● Applicable Sleeve

															
(2 Edges Tip-Bar installation side) Fig.1		(2 Edges Tip-Bar installation side) Fig.2		(2 Edges Tip-Bar installation side) Fig.3											
Description	Std.	Dimension (mm)								Drawing	Spare Parts		Applicable Machine Manufacturer	Ref. Page for 2 Edges Tip-Bar (Ref. Page for Other Application 2 Edges Tip-Bar)	
		* ød1	øD1	øD2	ød2	H	L1	L2	L3						
PSH 0212-80	●	2	12	16	6	11	80	20	-	Fig.1	HS3×4P	LW-1.5	(General use)		
0312-80	●	3									8	HS4×4P			LW-2
0412-80	●	4										8			8
0512-80	●	5													
0612-80	●	6													
0712-80	●	7													
PSH 0216-100	●	2	16	-	6	15	100	-	-	Fig.2	HS3×4P	LW-1.5	(General use)		
0316-100	●	3									8	HS4×4P			LW-2
0416-100	●	4										8			8
0516-100	●	5													
0616-100	●	6													
0716-100	●	7													
PSH 0220-120	●	2	20	17.5	6	19	120	20	11	Fig.3	HS3×4P	LW-1.5	Amada Wasino Eguro Citizen Machinery Precision Tsugami Miyano (General use)	Boring (HPB Type) ⇒ F22	
0320-120	●	3							9		7.5	8			
0420-120	●	4													8
0520-120	●	5													
0620-120	●	6													
0720-120	●	7													
PSH 0225.0-135	●	2	25	18	6	24	135	23	11.5	Fig.3	HS3×4P	LW-1.5	Amada Wasino Eguro Precision Tsugami Miyano (General use)	Internal Back Boring (HPBT Type) ⇒ F22	
0325.0-135	●	3							9.5		8	8			
0425.0-135	●	4													8
0525.0-135	●	5													
0625.0-135	●	6													
0725.0-135	●	7													
PSH 0219-120	●	2	19.05	17.5	6	18	120	20	11	Fig.3	HS3×4P	LW-1.5	Citizen Machinery	Internal Face Grooving (HPFG Type) ⇒ G65	
0319-120	●	3							9		7.5	8			
0419-120	●	4													8
0519-120	●	5													
0619-120	●	6													
0719-120	●	7													
PSH 0225-120	●	2	25.4	18	6	24.4	120	23	11.5	Fig.3	HS3×4P	LW-1.5	Star Micronics Nomura VTC	Internal Threading (HPT Type) ⇒ J24	
0325-120	●	3							9.5		8	8			
0425-120	●	4													8
0525-120	●	5													
0625-120	●	6													
0725-120	●	7													
PSH 0222-135	●	2	22	18	6	21	135	22	11.5	Fig.3	HS3×4P	LW-1.5	Star Micronics Nomura VTC		
0322-135	●	3							9.5		8	8			
0422-135	●	4													8
0522-135	●	5													
0622-135	●	6													
0722-135	●	7													
PSH 0223-120	●	2	23	18	6	22	120	22	11.5	Fig.3	HS3×4P	LW-1.5	Nomura VTC		
0323-120	●	3							9.5		8	8			
0423-120	●	4													8
0523-120	●	5													
0623-120	●	6													
0723-120	●	7													

*: Length of ød1...20 mm (PH02, PH03, PH04 type)
...25 mm (PH05, PH06, PH07 type)

- Choose sleeves (ød1) to meet with øD dimension of 2 Edges Tip-Bar.
- Machine manufactures in random order.

● : Std. Item □ : Check Availability

F



Boring

Internal Back Boring

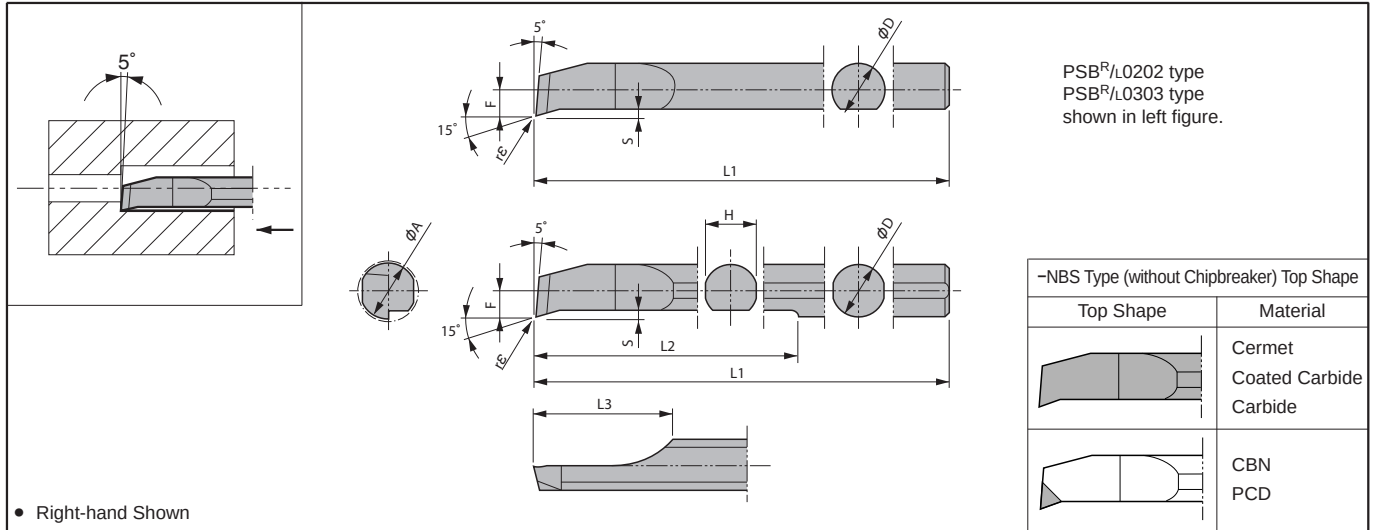
Internal Face Grooving

Internal Threading

Tip-Bar for Micro Boring

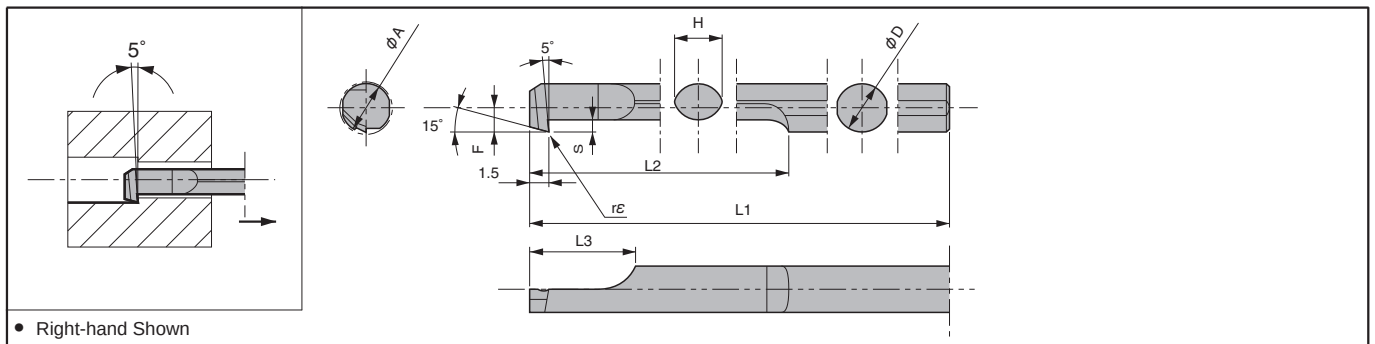
PSB-S (Boring) <Adjustable Overhang Length>

This insert will be switched to **HPB** Type (2 Edges. Ref. Page [F22](#)).



PSBT-S (Back Boring) <Adjustable Overhang Length>

This insert will be switched to **HPBT** Type (2 Edges. Ref. Page [F22](#)).



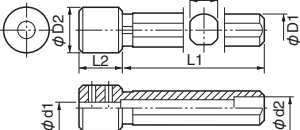
Tip-Bar Dimension

Description		Min. Bore Dia.	Dimension (mm)								Insert Grade							
											Cermet		PVD Coated		Carbide	CBN		PCD
			øA	øD	H	L1	L2	L3	F	S	rε	TC60M	PR915	PR930	KW10	KBN510	KBN525	KPD001
PSB ^R /L	0202-50S	2	1.8	-	50	-	5	0.9	0.25	0.05	☐	☐	☐	☐	☐	☐	☐	☐
	0303-50S	3	2.8				7	1.4	0.3		☐	☐	☐	☐	☐	☐	☐	☐
	0404-60S	4	3.8	3.6	60	30	10	1.9	0.5		☐	☐	☐	☐	☐	☐	☐	☐
	0505-70S	5	4.8	4.4	70	40	12	2.4			☐	☐	☐	☐	☐	☐	☐	☐
	0606-70S	6	5.8	5.2				45			2.9	☐	☐	☐	☐	☐	☐	☐
	0707-80S	7	6.8	6.2	80	50		3.4			☐	☐	☐	☐	☐	☐	☐	☐
PSB ^R /L	0202-50NBS	2	1.8	-	50	-		5	0.9	0.25	0.05	☐	☐	☐	☐	☐	☐	☐
	0303-50NBS	3	2.8				7	1.4	0.3	☐		☐	☐	☐	R	R	☐	☐
	0404-60NBS	4	3.8	3.6	60	30	10	1.9	0.5	☐		☐	☐	☐	R	R	R	R
	0505-70NBS	5	4.8	4.4	70	40	12	2.4		☐		☐	☐	☐	R	R	R	R
	0606-70NBS	6	5.8	5.2				45		2.9		☐	☐	☐	☐	R	R	R
	0707-80NBS	7	6.8	6.2	80	50		3.4		☐		☐	☐	☐	R	R	R	R
PSBT ^R /L	0415-60S	4	3.8	3.6	60	20		8	1.9	1.0	0.05	☐	☐	☐	☐	☐	☐	☐
	0515-70S	5	4.8	4.6	70		2.4		1.3	☐		☐	☐	☐	☐	☐	☐	☐

● : Std. Item □ : Check Availability

● Applicable Sleeve

This sleeve is for 1-Edge Tip-Bar. For 2-Edges Tip-Bar, use  **F23**.

Shape	Description	(Previous Description)	Std.	Dimension (mm)								Spare Parts		Applicable Tip-Bar 
				øD1	øD2	ød1	ød2	H	L1	L2				
 (Tip-Bar installation side)	PH 0212-60	PH -0212	☐	12	19	1.8	6	11	60	20	HS3 × 4	LW-1.5	PSB [®] /0202-50S / NBS	
	0312-60	-0312	☐			2.8							PSB [®] /0303-50S / NBS	
	0412-60	-0412	☐			3.8							PSB [®] /0404-60S / NBS PSBT [®] /0415-60S	
	0512-60	-0512	☐			4.8	8				HS4 × 4	LW-2	PSB [®] /0505-70S / NBS PSBT [®] /0515-70S	
	0612-60	-0612	☐			5.8							PSB [®] /0606-70S / NBS	
	0712-60	-0712	☐			6.8							PSB [®] /0707-80S / NBS	
	PH 0216-80	PH -0216	☐	16	22	1.8	Rp ^{1/4} (PS ^{1/4})	15	80	20	HS3 × 4	LW-1.5	PSB [®] /0202-50S / NBS	
	0316-80	-0316	☐			2.8							PSB [®] /0303-50S / NBS	
	0416-80	-0416	☐			3.8							HS4 × 4	LW-2
	0516-80	-0516	☐			4.8					PSB [®] /0505-70S / NBS PSBT [®] /0515-70S			
	0616-80	-0616	☐			5.8					PSB [®] /0606-70S / NBS			
	0716-80	-0716	☐			6.8					PSB [®] /0707-80S / NBS			

◆ Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)							PSB02 Type		PSB03 Type		PSB04 PSBT04 Type		PSB05 PSB06 PSB07 PSBT05 Type		Remarks
	Cermet		PVD Coated Carbide	Carbide	CBN	PCD										
	TC60	PR915	PR930	KW10	KBN510 KBN525	KPD001	KPD010	Cut: ap (mm), Feed: f (mm/rev)								
	ap	f	ap	f	ap	f	ap	f								
Carbon Steel / Alloy Steel	☆ 60~120		★ 30~100					~0.3	~0.03	~0.4	~0.04	~0.45	~0.07	~0.5	~0.1	Coolant
Stainless Steel	☆ 50~100		★ 30~80					~0.3	~0.02	~0.4	~0.03	~0.45	~0.05	~0.5	~0.07	
Non-ferrous Metals				☆ ~100		★ ~300	☆ ~300	~0.3	~0.05	~0.4	~0.06	~0.45	~0.1	~0.5	~0.15	
Hard Materials					★ ~100			-	-	~0.07	~0.03	~0.10	~0.05	~0.15	~0.07	

★: 1st Recommendation ☆: 2nd Recommendation

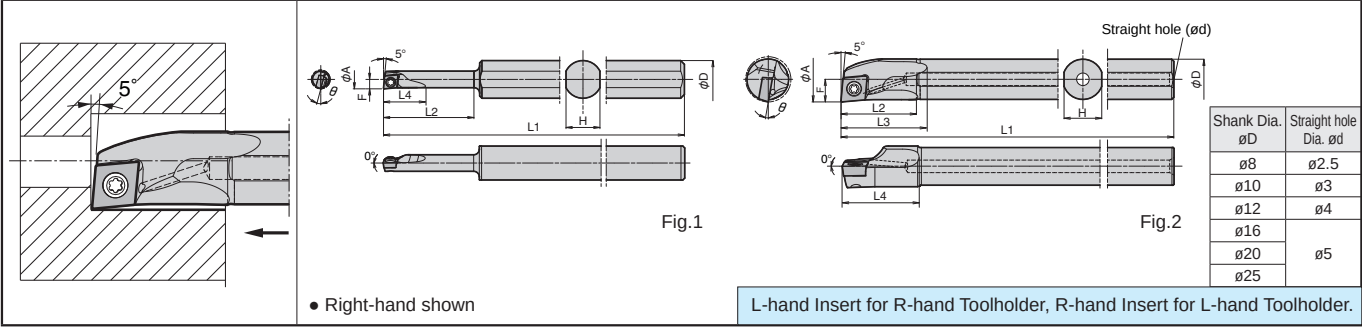
☐ : Check Availability



Dynamic Bar [CC Insert]

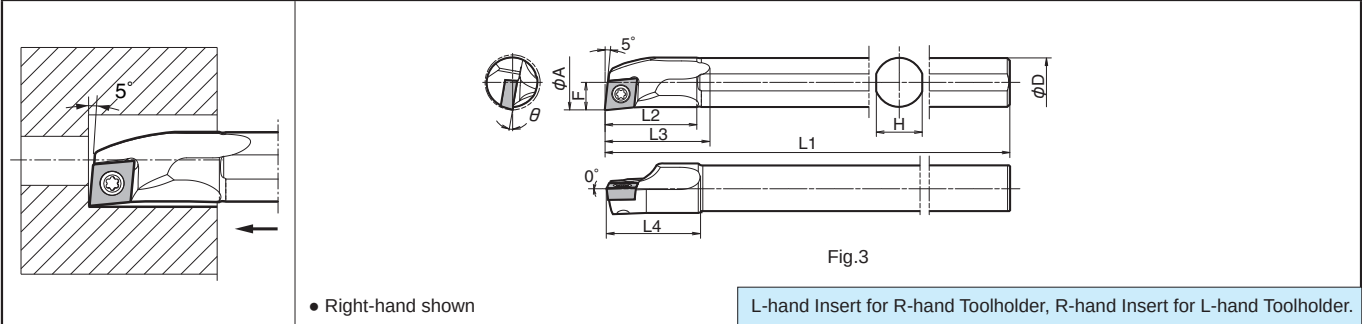
A / S-SCLC-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D=~-5.5



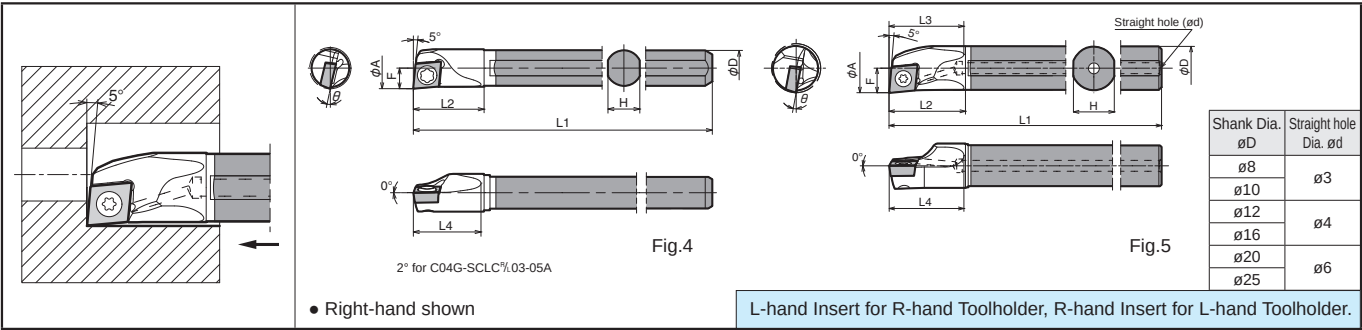
S-SCLC-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D=~-4

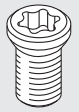
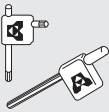


C / E-SCLC-A Carbide Shank Bar (Boring / Internal Facing)

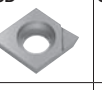
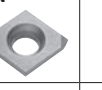
Max. Overhang Length L/D=~-7



● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (rε)	Coolant Hole	Drawing	Spare Parts						
		R	L		øA	øD	H	L1	L2	L3	L4					F	Clamp Screw	Wrench				
																						
Excellent Bar	S10H-SCLC ^{R/L} 03-05AE	●	●	5	10	9	100	24	-	11	2.5	15°	0.2	No	Fig.1	SB-1635TR	FT-6					
	S10H-SCLC ^{R/L} 03-06AE	●	●	6				28		13	3	13°										
	S10H-SCLC ^{R/L} 04-07AE	●	●	7				32		15	3.5	13°										
	S10H-SCLC ^{R/L} 04-08AE	●	●	8				37		15	4	11°										
	A08X-SCLC ^{R/L} 06-10AE	●	●	10	8	7	120	16	20	17	5	14°	0.4	Yes	Fig.2	SB-2545TR	FT-8					
	A10L-SCLC ^{R/L} 06-12AE	●	●	12	10	9	140	20	25	21	6	12°				SB-4065TR	FT-15					
	A12M-SCLC ^{R/L} 06-14AE	●	●	14	12	11	150	24	30	25	7	10°										
	A16Q-SCLC ^{R/L} 09-18AE	●	●	18	16	15	180	30	34	31	9	8°										
	A20R-SCLC ^{R/L} 09-22AE	●	●	22	20	19	200	36	49	37	11	6°										
	A25S-SCLC ^{R/L} 09-27AE	●	●	27	25	24	250	46	55	46	13.5	6°										
Steel	S08X-SCLC ^{R/L} 06-10A	●	●	10	8	7	120	16	20	17	5	14°	0.4	No	Fig.3	SB-2545TR	FT-6					
	S10L-SCLC ^{R/L} 06-12A	●	●	12	10	9	140	20	25	21	6	12°				SB-4065TR	FT-15					
	S12M-SCLC ^{R/L} 06-14A	●	●	14	12	11	150	24	30	25	7	10°										
	S16Q-SCLC ^{R/L} 09-18A	●	●	18	16	15	180	30	34	31	9	10°										
	S20R-SCLC ^{R/L} 09-22A	●	●	22	20	19	200	36	49	37	11	8°										
	S25S-SCLC ^{R/L} 09-27A	●	●	27	25	24	250	46	55	46	13.5	6°										
Carbide	C04G-SCLC ^{R/L} 03-05A	●	●	5	4	3.8	90	9	-	8	2.5	15°	0.2	No	Fig.4	SB-1635TR	FT-6					
	C05H-SCLC ^{R/L} 03-06A	●	●	6	5	4.4	100	11		11	3	13°										
	C06J-SCLC ^{R/L} 04-07A	●	●	7	6	5.4	110	12		12	3.5	13°										
	C07K-SCLC ^{R/L} 04-08A	●	●	8	7	6.4	125	13		13	4	11°										
	E08L-SCLC ^{R/L} 06-10A	●	●	10	8	7	140	16	15	15	5	14°	0.4	Yes	Fig.5	SB2545TR	FT-8					
	E08L-SCLC ^{R/L} 06-10A-2/3	●	●				90															
	E10N-SCLC ^{R/L} 06-12A	●	●	12	10	9	160	20	19	19	6	12°										
	E10N-SCLC ^{R/L} 06-12A-2/3	●	●				105															
	E12Q-SCLC ^{R/L} 06-14A	●	●	14	12	11	180	23	22	22	7	10°										
	E12Q-SCLC ^{R/L} 06-14A-2/3	●	●				120															
	E16X-SCLC ^{R/L} 09-18A	●	●	18	16	15	220	28	27	27	9	10°										
	E16X-SCLC ^{R/L} 09-18A-2/3	●	●				145															
	E20S-SCLC ^{R/L} 09-22A	●	●	22	20	19	250	32	31	31	11	8°										
	E20S-SCLC ^{R/L} 09-22A-2/3	●	●				165															
	E25T-SCLC ^{R/L} 09-27A	●	●	27	25	24	300	38	37	37	13.5	6°										
	E25T-SCLC ^{R/L} 09-27A-2/3	●	●				200															

● Applicable Inserts

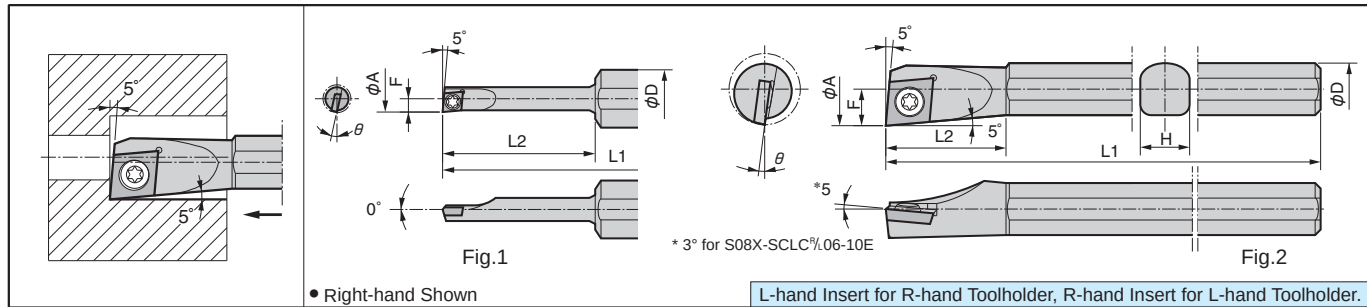
Applications	Minute ap	Finishing	Finishing-Medium	Finishing-Medium	Medium	Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed
Ref. Page	B45	B45	B45	B45	B46	B46	B45	B47	B47	B48
Insert	CF	GF	GK	HQ	FN-Z	Standard	GQ	^{R/L} -F	^{R/L} -FSF	(E / F) ^{R/L} -U
Toolholder										
---SCLC ^{R/L} 03---	CCGT0301..	-	-	-	-	-	-	CCGT0301..	CCET0301..	-
---SCLC ^{R/L} 04---	CCGT0401..	-	-	-	-	-	-	CCGT0401..	CCET0401..	-
---SCLC ^{R/L} 06---	-	CCGT0602..	CCMT0602..	CCMT0602..	CCGT0602..	CCGT0602..	CCGT0602..	-	-	CCGT0602..
---SCLC ^{R/L} 09---	-	-	CCMT09T3..	CCMT09T3..	CCGT09T3..	CCGT09T3..	CCGT09T3..	-	-	CCGT09T3..
Applications	Low Feed / Precision	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials			
Ref. Page	B48	B46	B47	B46	B46	C18	C10			
Insert	F ^{R/L} -USF	MQ	Without Chipbreaker	AH	A3	PCD	CBN			
Toolholder										
---SCLC ^{R/L} 03---	-	-	-	-	-	-	CCMW0301..			
---SCLC ^{R/L} 04---	-	-	-	-	-	CCGW0401..	CCMW0401..			
---SCLC ^{R/L} 06---	CCET0602..	-	CCGW0602..	-	-	CCMT0602..	CCMW0602..			
---SCLC ^{R/L} 09---	CCET09T3..	CCMT09T3..	CCGW09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3..	CCMW09T3..			

For recommended cutting conditions, see page ● F82~F83

Boring Bar [CC ☐ ☐ Insert]

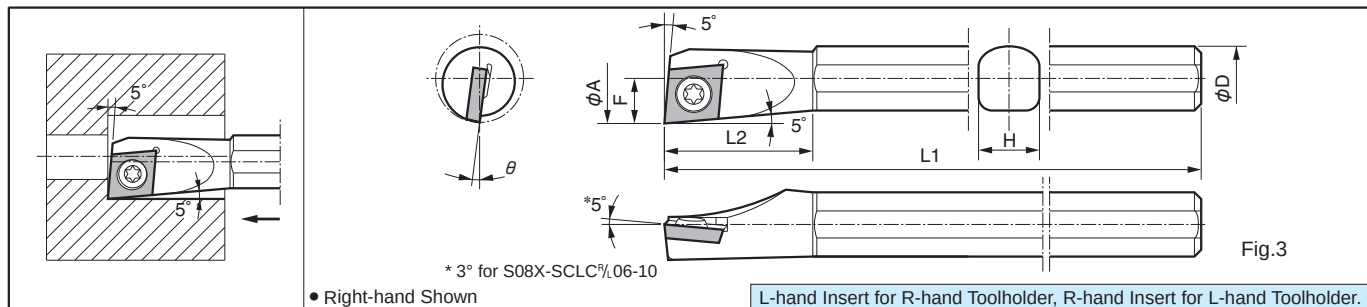
S...SCLPC Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D=--5



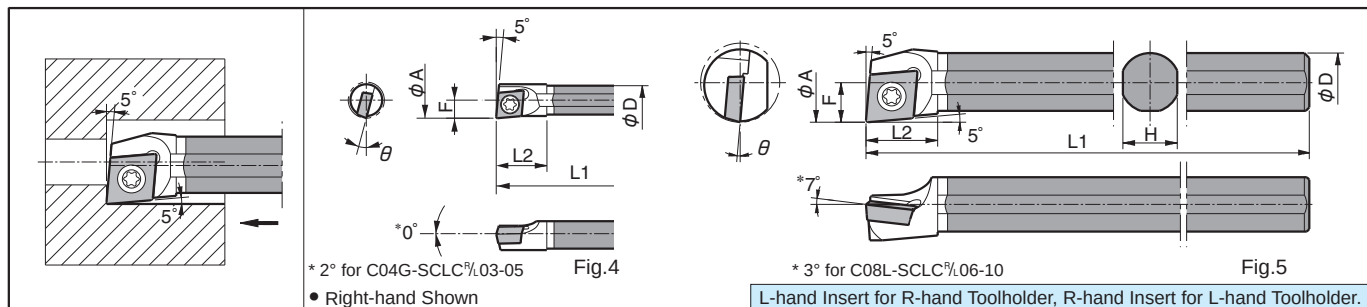
S...SCLC Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D=--3



C...SCLC Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D=--7



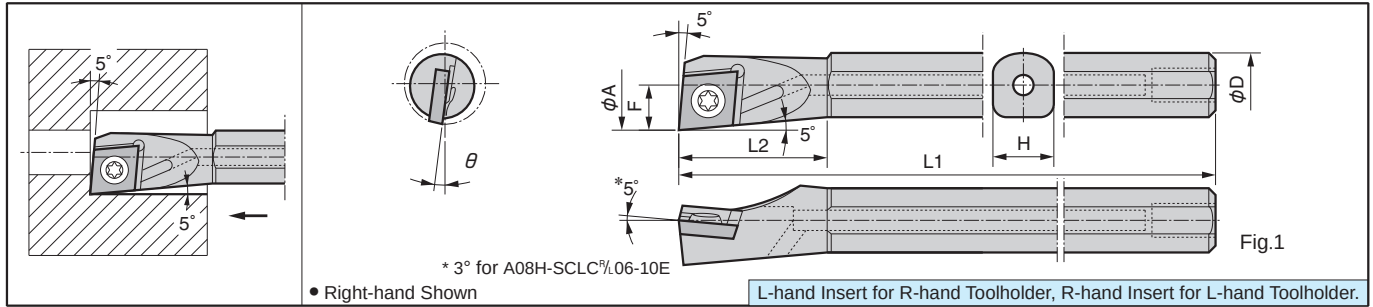
● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (r)	Drawing	Spare Parts			
		R	L		øA	øD	H	L1	L2	L3	L4				F	Clamp Screw	Wrench	
S10H -SCLC ³ / ₄ 03-05E SCLC ³ / ₄ 03-06E	SCLC ³ / ₄ 0510B-03E 0610B-03E 0710B-04E 0810B-04E	☐	☐	5	10	9	100	24	-	-	2.5	15°	0.2	Fig.1	SB-1635TR	FT-6		
☐		☐	6	10	9	100	28	-	-	3.0	13°							
S10J -SCLC ³ / ₄ 04-07E SCLC ³ / ₄ 04-08E		☐	☐	7	10	9	110	32	-	-	3.5	13°	0.2	Fig.1	SB-2040TR			
☐		☐	8	10	9	110	37	-	-	4.0	11°							
S08X -SCLC ³ / ₄ 06-10E	SCLC ³ / ₄ 1008B-06E	☐	☐	10	8	7	120	17	-	-	5	12°	0.2	Fig.2	SB-2545TR	FT-8		
S08X -SCLC ³ / ₄ 06-10	SCLC ³ / ₄ 1008B-06	☐	☐											Fig.3	SB-2545TR			
C04G -SCLC ³ / ₄ 03-05	SCLC ³ / ₄ 0504B-03W 0605B-03W 0706B-04W 0807B-04W	☐	☐	5	4	3.8	90	7	-	-	2.5	15°	0.2	Fig.4	SB-1635TR	FT-6		
C05H -SCLC ³ / ₄ 03-06		☐	☐	6	5	4.4	100	9	-	-	3.0	13°						
C06J -SCLC ³ / ₄ 04-07		☐	☐	7	6	5.4	110	10	-	-	3.5	13°			0.2		Fig.4	SB-2040TR
C07K -SCLC ³ / ₄ 04-08		☐	☐	8	7	6.4	125	11	-	-	4.0	11°						
C08L -SCLC ³ / ₄ 06-10	SCLC ³ / ₄ 1008B-06W	☐	☐	10	8	7	140	10	-	-	5	10°	0.2	Fig.5	SB-2545TR	FT-8		

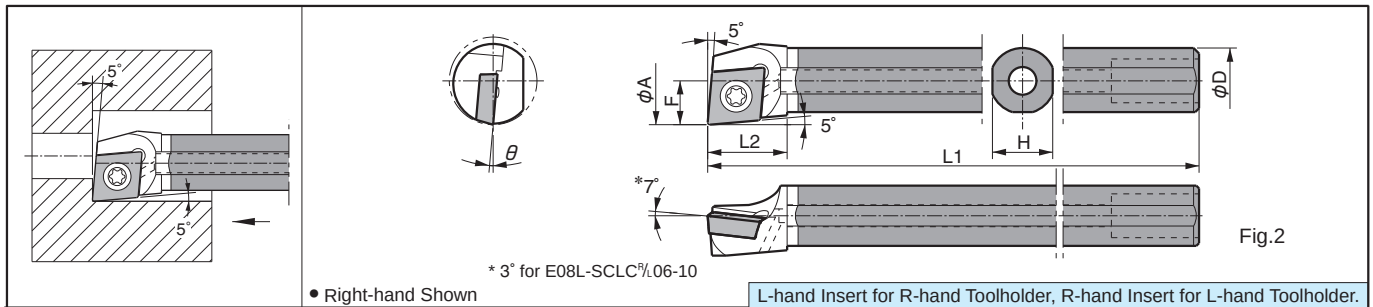
☐ : Check Availability

A...SCLC-E Excellent Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length L/D=~-5

**E...SCLC** Carbide Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length L/D=~-7



- Toolholder Dimensions [Will be switched to Dynamic Bar, see [F85~F88](#) (Alternative Toolholder Reference Table for Boring Bar)].
(For applicable sleeve / Joint, please see [F77~F79](#).)

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (r)	Drawing	Spare Parts		
		R	L		øA	øD	H	L1	L2	L3	L4				F	Clamp Screw	Wrench
A08H -SCLC [®] /L06-10E	SCLC [®] /L 1008B-06EH	☐	☐	10	8	7	100	17	-	-	5	12°	0.2	Fig.1	SB-2545TR	FT-8	
E08L -SCLC [®] /L06-10	SCLC [®] /L 1008B-06WH	☐	☐				140	11	-	-	5	10°		Fig.2			

• Applicable Inserts

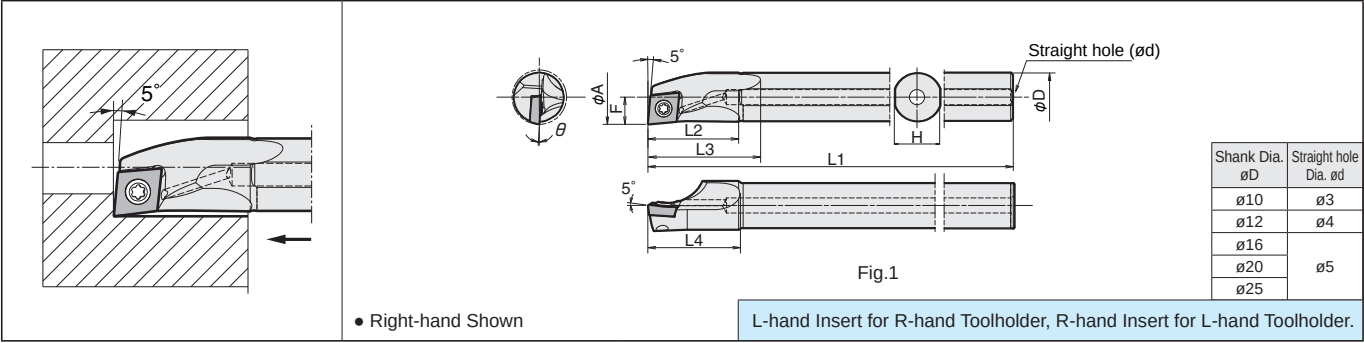
Applications	Minute ap	Finishing	Finishing-Medium	Medium	Finishing-Medium	Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed
Ref. Page	B45	B45	B45	B46	B45	B45	B45	B47	B47	B48
Insert	CF	GF	GK	FN-Z	HQ	Standard	GQ	[®] /L-F	[®] /L-FSF	(E/F) [®] /L-U
Toolholder										
...SCLC [®] /L 03...	CCGT0301..	-	-	-	-	-	-	CCGT0301..	CCET0301..	-
...SCLC [®] /L 04...	CCGT0401..	-	-	-	-	-	-	CCGT0401..	CCET0401..	-
...SCLC [®] /L 06...	-	CCGT0602..	CCMT0602..	CCGT0602..	CCMT0602..	CCGT0602..	CCGT0602..	-	-	CCGT0602..
Applications	Low Feed / Precision	Cast Iron	Non-ferrous Metals	Hard materials						
Ref. Page	B48	B47	C18	C10						
Insert	F [®] /L-USF	Without Chipbreaker	PCD	CBN						
Toolholder										
...SCLC [®] /L 03...	-	-	-	CCMW0301..						
...SCLC [®] /L 04...	-	-	CCGW0401..	CCMW0401..						
...SCLC [®] /L 06...	CCET0602..	CCGW0602..	CCMT0602.. CCGW0602..	CCMW0602..						

For recommended cutting conditions, see page [F82~F83](#)

Dynamic Bar [CP ☐ ☐ Insert]

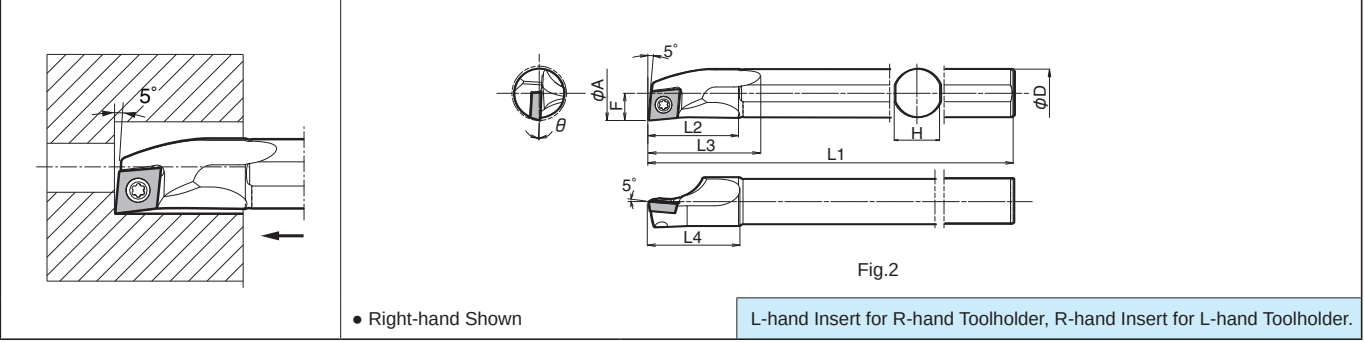
A-SCLP-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D=-5.5



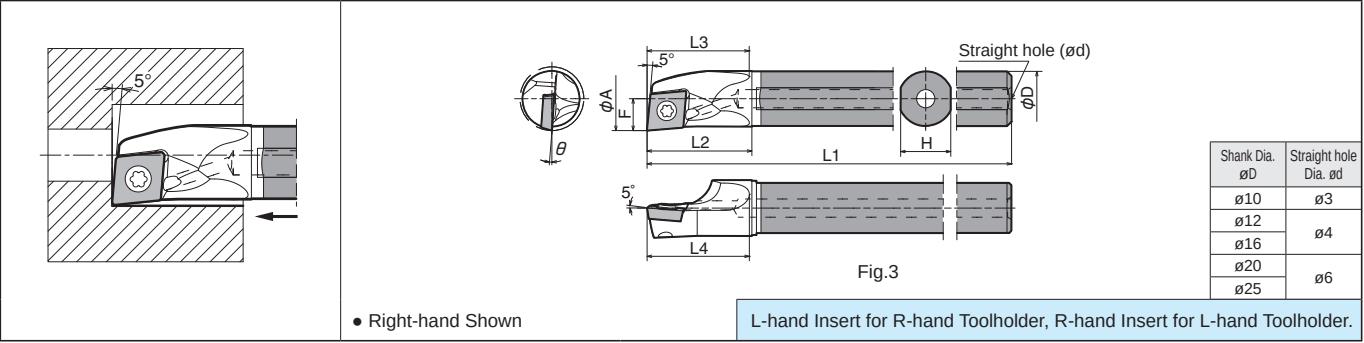
S-SCLP-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D=-4



E-SCLP-A Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D=-7



● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (R)	Coolant Hole	Drawing	Spare Parts						
		R	L	øA	øD	H	L1	L2	L3	L4	F					Clamp Screw	Wrench					
																						
Excellent Bar	A10L-SCLP ^{R/L} 08-12AE	●	●	12	10	9	140	20	25	20	6	5°	0.4	Yes	Fig.1	SB-3060TR	FT-10					
	A12M-SCLP ^{R/L} 08-14AE	●	●	14	12	11	150	24	29	24	7	4°										
	A12M-SCLP ^{R/L} 09-16AE	●	●	16					31	24	8											
	A16Q-SCLP ^{R/L} 09-18AE	●	●	18	16	15	180	30	37	30	9	3.5°				SB-4065TR	FT-15					
	A20R-SCLP ^{R/L} 09-22AE	●	●	22	20	19	200	36	47	37	11	2°										
	A25S-SCLP ^{R/L} 09-27AE	●	●	27	25	24	250	46	55	46	13.5	0°										
Steel	S10L-SCLP ^{R/L} 08-12A	●	●	12	10	9	140	20	25	20	6	5°	0.4	No	Fig.2	SB-3060TR	FT-10					
	S12M-SCLP ^{R/L} 08-14A	●	●	14	12	11	150	24	29	24	7	4°										
	S12M-SCLP ^{R/L} 09-16A	●	●	16					31	24	8											
	S16Q-SCLP ^{R/L} 09-18A	●	●	18	16	15	180	30	37	30	9	3.5°				SB-4065TR	FT-15					
	S20R-SCLP ^{R/L} 09-22A	●	●	22	20	19	200	36	47	37	11	2°										
	S25S-SCLP ^{R/L} 09-27A	●	●	27	25	24	250	46	55	46	13.5	0°										
Carbide	E10N-SCLP ^{R/L} 08-12A	●	●	12	10	9	160	20	19	19	6	5°	0.4	Yes	Fig.3	SB-3060TR	FT-10					
	E10N-SCLP ^{R/L} 08-12A-2 / 3	●					105					4°										
	E10N-SCLP ^{R/L} 08-12A-1 / 2	●					80															
	E12Q-SCLP ^{R/L} 08-14A	●	●	14	12	11	180	23	22	22	7	4°						SB-4065TR	FT-15			
	E12Q-SCLP ^{R/L} 08-14A-2 / 3	●					120															
	E12Q-SCLP ^{R/L} 08-14A-1 / 2	●					90															
	E16X-SCLP ^{R/L} 09-18A	●	●	18	16	15	220	28	27	27	9	3.5°				SB-4065TR	FT-15					
	E16X-SCLP ^{R/L} 09-18A-2 / 3	●					145															
	E16X-SCLP ^{R/L} 09-18A-1 / 2	●					110															
	E20S-SCLP ^{R/L} 09-22A	●	●	22	20	19	250	32	31	31	11	2°								SB-4065TR	FT-15	
	E20S-SCLP ^{R/L} 09-22A-2 / 3	●					165															
	E20S-SCLP ^{R/L} 09-22A-1 / 2	●					125															
	E25T-SCLP ^{R/L} 09-27A	●	●	27	25	24	300	38	37	37	13.5	0°						SB-4065TR	FT-15			
	E25T-SCLP ^{R/L} 09-27A-2 / 3	●					200															

● Applicable Inserts

Applications	Finishing	Finishing-Medium	Medium	Finishing-Medium	Soft Steel Finishing	Soft Steel Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard Materials	
Ref. Page	B50	B50	B50	B50	B50	B50	B50	C18	C10	
Insert	GP	HQ	Standard	^{R/L} -Y	XP	XQ	Without Chipbreaker	PCD	CBN	
Toolholder										
---SCLP ^{R/L} 08---	CPMT0802..	CPMH0802..	CPMH0802..	CPMH0802..	CPMT0802..	-	CPMB0802..	CPMH0802..	CPGB0802..	
---SCLP ^{R/L} 09---	CPMT0903..	CPMH0903..	CPMH0903..	CPMH0903..	CPMT0903..	CPMT0903..	CPMB0903..	CPMH0903..	CPGB0903..	

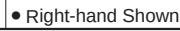
For recommended cutting conditions, see page ● F82~F83

Max. Overhang Length $L/D \sim 5$



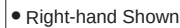
L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

Max. Overhang Length $L/D \sim 3$



L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

Max. Overhang Length $L/D \sim 7$



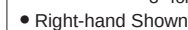
L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

Max. Overhang Length $L/D \sim 5$



L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

Max. Overhang Length $L/D \sim 7$



L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (r _c)	Drawing	Spare Parts	
		R	L	øA	øD	H	L1	L2	L3	L4	F				Clamp Screw	Wrench
																
S10M-SCLP ^{R/L} 08 -12E	SCLP ^{R/L} 1210B-08E	☐	☐	12	10	9	150	23	-	-	6	5°	0.4	Fig.1	SB-3STR	FT-10
S12M-SCLP ^{R/L} 08 -14E		☐	☐	14	12	11	150	25	-	-	7	4°				
S12M-SCLP ^{R/L} 09 -16E		☐	☐	16	12	11	150	29	-	-	8	4°				
S16Q-SCLP ^{R/L} 09 -18E		☐	☐	18	16	15	180	31	-	-	9	3.5°				
S16R-SCLP ^{R/L} 09 -20E		☐	☐	20	16	15	200	34	-	-	10	3°				
S20X-SCLP ^{R/L} 09 -25E		☐	☐	25	20	19	220	37	-	-	12.5	0°				
S10M-SCLP ^{R/L} 08 -12	SCLP ^{R/L} 1210B-08	☐	☐	12	10	9	150	23	-	-	6	5°	0.4	Fig.2	SB-3STR	FT-10
S12M-SCLP ^{R/L} 08 -14		☐	☐	14	12	11	150	25	-	-	7	4°				
S12M-SCLP ^{R/L} 09 -16	1612B-09	☐	☐	16	12	11	150	29			8	4°	0.4	Fig.2	SB-4TR	FT-15
S16N-SCLP ^{R/L} 09 -18		☐	☐	18	16	15	160	31			9	3.5°				
S16Q-SCLP ^{R/L} 09 -20		☐	☐	20	16	15	180	34	-	-	10	3°				
S20R-SCLP ^{R/L} 09 -25		☐	☐	25	20	19	200	37			12.5	0°				
S25S-SCLP ^{R/L} 09 -30		☐	☐	30	25	24	250	40			15	0°				
S25S-SCLP ^{R/L} 09 -30		☐	☐	30	25	24	250	40			15	0°				
C10N-SCLP ^{R/L} 08 -12	SCLP ^{R/L} 1210B-08W	☐	☐				160						0.4	Fig.3	SB-3STR	FT-10
SCLP ^{R/L} 08 -12-1/2		☐	☐	12	10	9	80	12	-	-	6	8°				
SCLP ^{R/L} 08 -12-2/3		☐	☐				105									
C12Q-SCLP ^{R/L} 09 -16	1612B-09W	☐	☐				180						0.4	Fig.3	SB-4TR	FT-15
SCLP ^{R/L} 09 -16-1/2		☐	☐	16	12	11	90	14	-	-	8	5°				
SCLP ^{R/L} 09 -16-2/3		☐	☐				120									
C16X-SCLP ^{R/L} 09 -20	2016B-09W	☐	☐				220						0.4	Fig.3	SB-4TR	FT-15
SCLP ^{R/L} 09 -20-1/2		☐	☐	20	16	15	110	16	-	-	10	3°				
SCLP ^{R/L} 09 -20-2/3		☐	☐				145									
C20S-SCLP ^{R/L} 09 -25	2520B-09W	☐	☐				250						0.4	Fig.3	SB-4TR	FT-15
SCLP ^{R/L} 09 -25-1/2		☐	☐	25	20	19	125	17	-	-	12.5	0°				
SCLP ^{R/L} 09 -25-2/3		☐	☐				165									
A10X-SCLP ^{R/L} 08 -12E	SCLP ^{R/L} 1210B-08EH	☐	☐	12	10	9	120	23	-	-	6	5°	0.4	Fig.4	SB-3STR	FT-10
A12X-SCLP ^{R/L} 08 -14E		☐	☐	14	12	11	120	25	-	-	7	4°				
A12X-SCLP ^{R/L} 09 -16E		☐	☐	16	12	11	120	29	-	-	8	4°				
A16M-SCLP ^{R/L} 09 -18E		☐	☐	18	16	15	150	31	-	-	9	3.5°				
-SCLP ^{R/L} 09 -20E		☐	☐	20	16	15	150	34	-	-	10	3°				
A20Q-SCLP ^{R/L} 09 -25E		☐	☐	25	20	19	180	37	-	-	12.5	0°				
E10N-SCLP ^{R/L} 08 -12	SCLP ^{R/L} 1210B-08WH	☐	☐	12	10	9	160	12	-	-	6	8°	0.4	Fig.5	SB-3STR	FT-10
E12Q-SCLP ^{R/L} 09 -16		☐	☐	16	12	11	180	15	-	-	8	5°				
E16X-SCLP ^{R/L} 09 -20		☐	☐	20	16	15	220	16	-	-	10	3°				
E20S-SCLP ^{R/L} 09 -25		☐	☐	25	20	19	250	17	-	-	12.5	0°				

For applicable sleeve / Joint, please see ● F77~F79

● Applicable Inserts

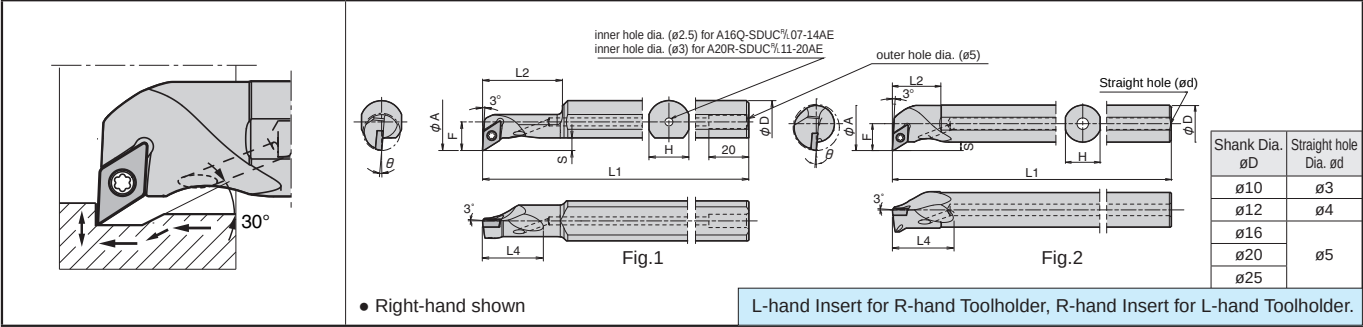
Applications	Finishing	Finishing-Medium	Medium	Finishing-Medium	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard materials	
Ref. Page	B50	B50	B50	B50	B50	B50	B50	C18	C10	
Insert										
Toolholder										
---SCLP ^{R/L} 08---	CPMT0802..	CPMH0802..	CPMH0802..	CPMH0802..	CPMT0802..	-	CPMB0802..	CPMH0802..	CPGB0802..	
---SCLP ^{R/L} 09---	CPMT0903..	CPMH0903..	CPMH0903..	CPMH0903..	CPMT0903..	CPMT0903..	CPMB0903..	CPMH0903..	CPGB0903..	

For recommended cutting conditions, see page ● F82~F83

Dynamic Bar [DC Insert]

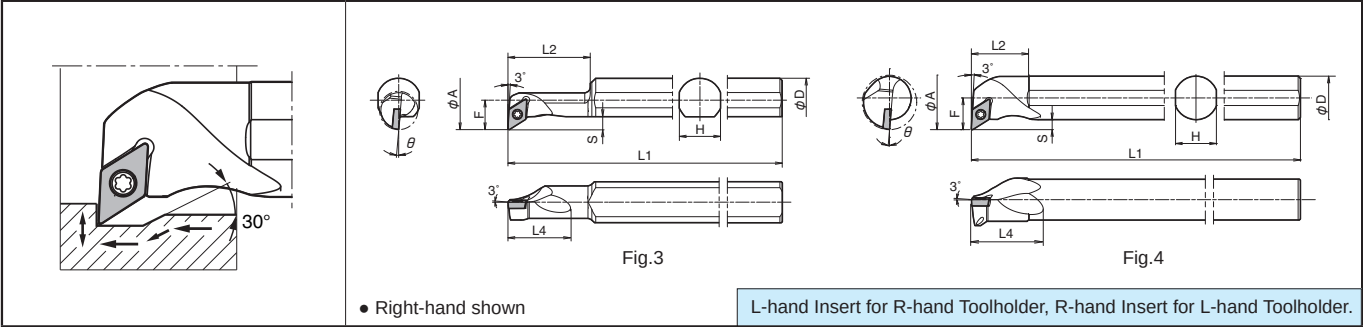
A-SDUC-AE Excellent Bar (Copying)

Max. Overhang Length L/D=--5.5



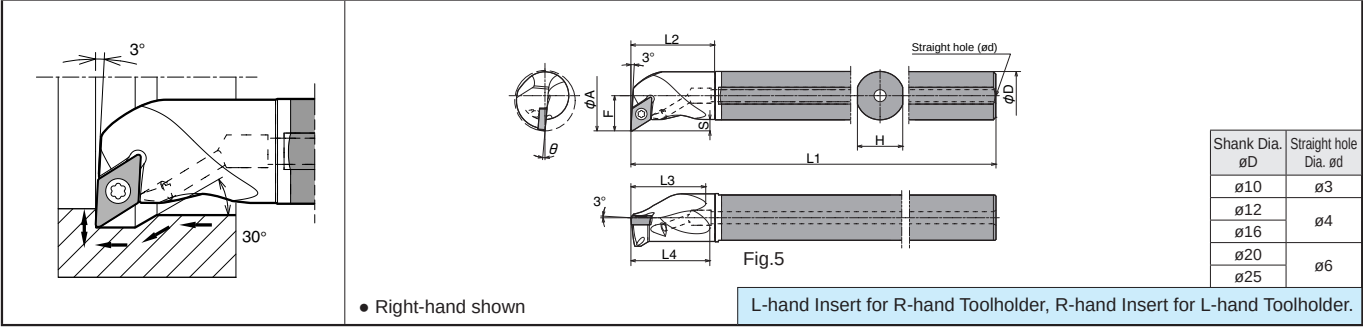
S-SDUC-A Steel Bar (Copying)

Max. Overhang Length L/D=--4



E-SDUC-A Carbide Shank Bar (Copying)

Max. Overhang Length L/D=--7



F

Boring

● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (rε)	Coolant Hole	Drawing	Spare Parts		
		R	L	øA	øD	H	L1	L2	L3	L4	F	S					Clamp Screw	Wrench	
																			
Excellent Bar	A16Q-SDUC ^{R/L} 07-14AE	●	●	14	16	15	180	28	-	23	10.8	4.4	5°	0.4	Yes	Fig.1	SB-2560TR	FT-8	
	A20R-SDUC ^{R/L} 11-20AE	●	●	20	20	19	200	48	-	30	15.6	6.1					SB-4065TR	FT-15	
	A10L-SDUC ^{R/L} 07-14AE	●	●	14	10	9	140	19	-	20	8.7	3.3	5°	0.4		Fig.2	SB-2560TR	FT-8	
	A12M-SDUC ^{R/L} 07-16AE	●	●	16	12	11	150	21	-	24	9.7								
	A16Q-SDUC ^{R/L} 07-20AE	●	●	20	16	15	180		-	26	11.7								
	A16Q-SDUC ^{R/L} 11-23AE	●	●	23					-	31	14.5								
	A20R-SDUC ^{R/L} 11-27AE	●	●	27	20	19	200	23	-	36	16.5	6.1	5°	0.4		Fig.2	SB-4065TR	FT-15	
	A25S-SDUC ^{R/L} 11-32AE	●	●	32	25	24	250	24	-	39	19								
Steel	S16Q-SDUC ^{R/L} 07-14A	●	●	14	16	15	180	28	-	23	10.8	4.4	5°	0.4	No	Fig.3	SB-2560TR	FT-8	
	S20R-SDUC ^{R/L} 11-20A	●	●	20	20	19	200	48	-	30	15.6	6.1					SB-4065TR	FT-15	
	S10L-SDUC ^{R/L} 07-14A	●	●	14	10	9	140	19	-	20	8.7	3.3	5°	0.4		Fig.4	SB-2560TR	FT-8	
	S12M-SDUC ^{R/L} 07-16A	●	●	16	12	11	150	21	-	24	9.7								
	S16Q-SDUC ^{R/L} 07-20A	●	●	20	16	15	180		-	26	11.7								
	S16Q-SDUC ^{R/L} 11-23A	●	●	23					-	31	14.5								
	S20R-SDUC ^{R/L} 11-27A	●	●	27	20	19	200	23	-	36	16.5	6.1	5°	0.4		Fig.4	SB-4065TR	FT-15	
	S25S-SDUC ^{R/L} 11-32A	●	●	32	25	24	250	24	-	39	19								
Carbide	E10N-SDUC ^{R/L} 07-14A	●	●	14	10	9	160	20	-	19	8.7	3.3	5°	0.4	Yes	Fig.5	SB-2560TR	FT-8	
	E10N-SDUC ^{R/L} 07-14A-2 / 3	●	●				105												
	E12Q-SDUC ^{R/L} 07-16A	●	●	16	12	11	180	23	-	22	9.7								
	E12Q-SDUC ^{R/L} 07-16A-2 / 3	●	●				120												
	E16X-SDUC ^{R/L} 07-20A	●	●	20	16	15	220	28	-	26	11.7								
	E16X-SDUC ^{R/L} 07-20A-2 / 3	●	●				145												
	E16X-SDUC ^{R/L} 11-23A	●	●	23	16	15	220	28	-	27	14.5								
	E16X-SDUC ^{R/L} 11-23A-2 / 3	●	●				145												
	E20S-SDUC ^{R/L} 11-27A	●	●	27	20	19	250	32	-	31	16.5								
	E20S-SDUC ^{R/L} 11-27A-2 / 3	●	●				165												
	E25T-SDUC ^{R/L} 11-32A	●	●	32	25	24	300	38	-	37	19								
	E25T-SDUC ^{R/L} 11-32A-2 / 3	●	●				200												

● Applicable Inserts

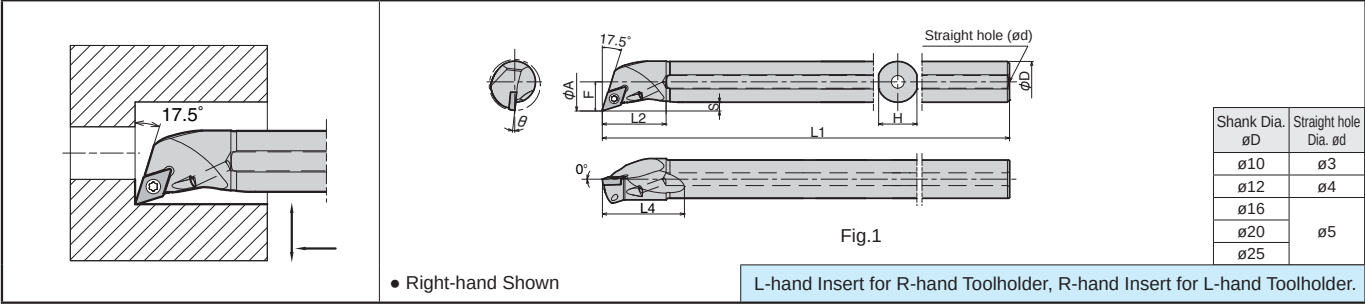
Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Medium-Roughing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B52	B52	B52	B53	B53	B53	B55	B55	B56	B56
Insert	CF	CK	GP	GK	HQ	Standard	^{R/L} -F	^{R/L} -FSF	(E / F) ^{R/L} -U	F ^{R/L} -USF
Toolholder										
---SDUC ^{R/L} 07---										
---SDQC ^{R/L} 07---	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
---SDZC ^{R/L} 07---										
---SDUC ^{R/L} 11---										
---SDQC ^{R/L} 11---	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3.. DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..
---SDZC ^{R/L} 11---										
Applications	Low Feed	Low Feed / Precision	Soft Steel Finishing	Soft Steel Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B57	B57	B54	B54	B54	B57	B57	B57	C19	C11
Insert	(E / F) ^{R/L} -J	F ^{R/L} -JSF	XP	XQ	MQ	Without Chipbreaker	AH	^{R/L} -A3	PCD	CBN
Toolholder										
---SDUC ^{R/L} 07---										
---SDQC ^{R/L} 07---	-	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
---SDZC ^{R/L} 07---										
---SDUC ^{R/L} 11---										
---SDQC ^{R/L} 11---	DCGT11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..
---SDZC ^{R/L} 11---										

For recommended cutting conditions, see page ● F82~F83

Dynamic Bar [DC Insert]

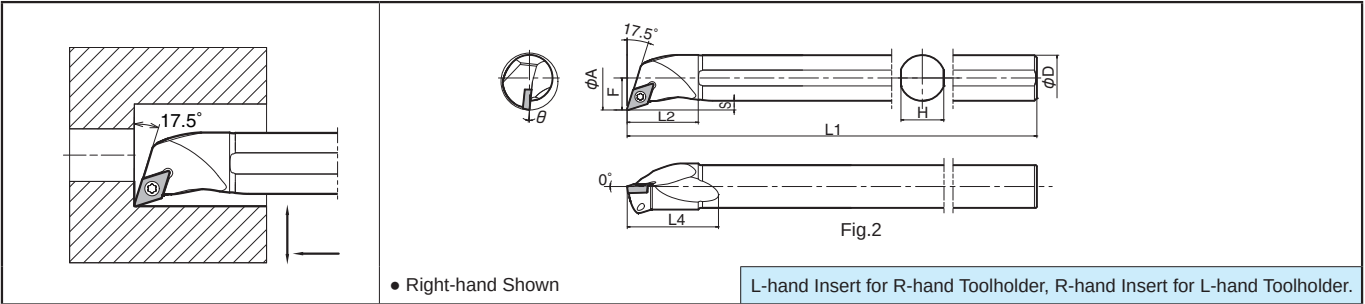
A-SDQC-AE Excellent Bar (Copying)

Max. Overhang Length L/D≈5.5



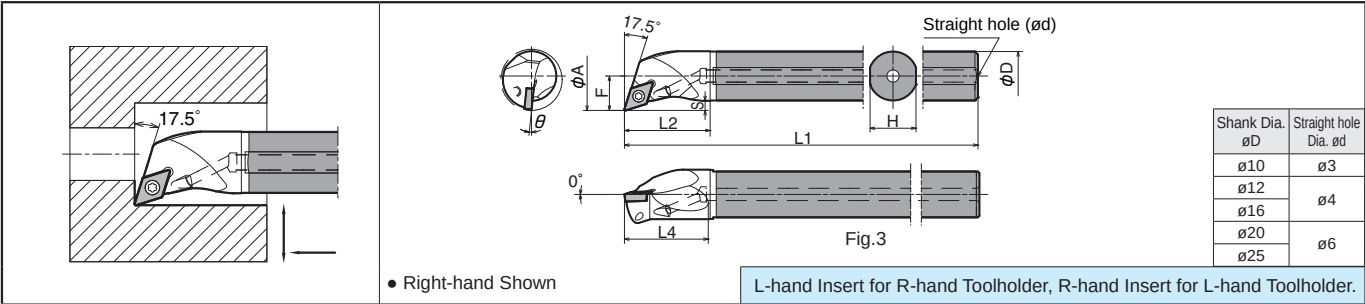
S-SDQC-A Steel Bar (Copying)

Max. Overhang Length L/D≈4



E-SDQC-A Carbide Shank Bar (Copying)

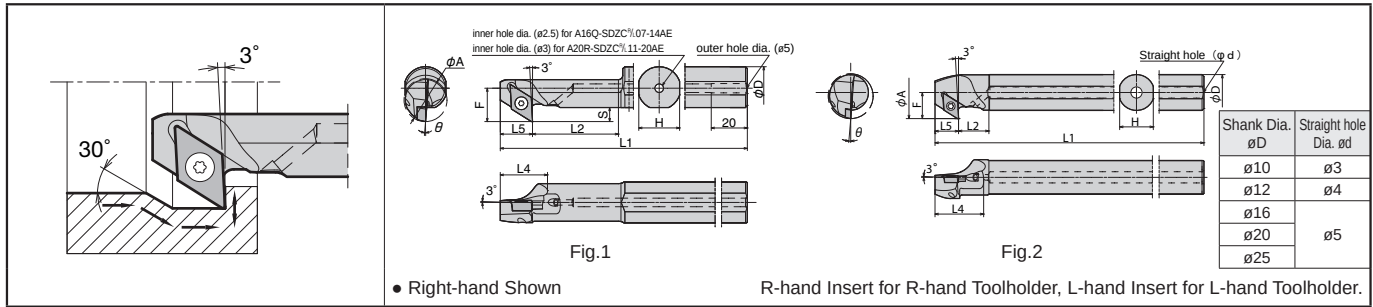
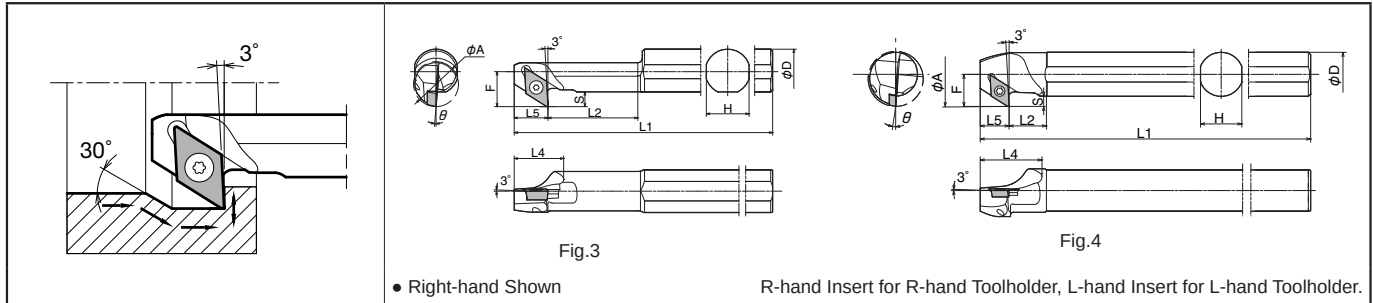
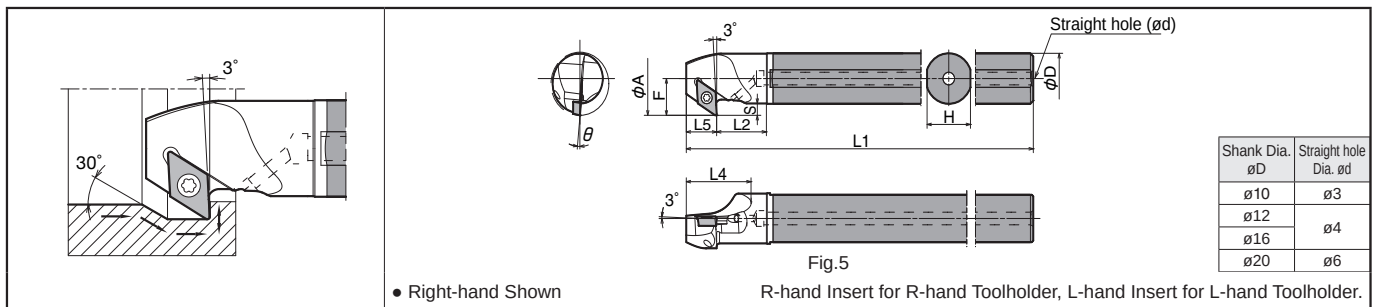
Max. Overhang Length L/D≈7



Toolholder Dimensions

Description		Std.		Min. Cutting Dia.	Dimension (mm)								θ	Standard Corner-R (r)	Coolant Hole	Drawing	Spare Parts			
		R	L		øA	øD	H	L1	L2	L3	L4	F					S	Clamp Screw	Wrench	
Excellent Bar	A10L-SDQC ^{R/L} 07-13AE	●	●	13	10	9	140	19	-	21	7.5	2.1	10°	0.4	Yes	Fig.1		SB-2560TR		FT-8
	A12M-SDQC ^{R/L} 07-16AE	●	●	16	12	11	150	22		25	9.25	2.6	8°							
	A16Q-SDQC ^{R/L} 07-20AE	●	●	20	16	15	180	25		32	11.3	2.6	6°							
	A20R-SDQC ^{R/L} 11-25AE	●	●	25	20	19	200	31		37	14.4	3.7	5°							
	A25S-SDQC ^{R/L} 11-30AE	●	●	30	25	24	250	38		45	16.9	3.7	4°							
Steel	S10L-SDQC ^{R/L} 07-13A	●	●	13	10	9	140	19	-	21	7.5	2.1	10°	0.4	No	Fig.2		SB-2560TR		FT-8
	S12M-SDQC ^{R/L} 07-16A	●	●	16	12	11	150	22		25	9.25	2.6	8°							
	S16Q-SDQC ^{R/L} 07-20A	●	●	20	16	15	180	25		32	11.3	2.6	6°							
	S20R-SDQC ^{R/L} 11-25A	●	●	25	20	19	200	31		37	14.4	3.7	5°							
	S25S-SDQC ^{R/L} 11-30A	●	●	30	25	24	250	38		45	16.9	3.7	4°							
Carbide	E10N-SDQC ^{R/L} 07-13A	●	●	13	10	9	160	20	-	19	7.5	2.1	10°	0.4	Yes	Fig.3		SB-2560TR		FT-8
	E10N-SDQC ^{R/L} 07-13A-2 / 3	●					105						10°							
	E12Q-SDQC ^{R/L} 07-16A	●	●	16	12	11	180	23	-	22	9.25	2.6	8°							
	E12Q-SDQC ^{R/L} 07-16A-2 / 3	●					120						8°							
	E16X-SDQC ^{R/L} 07-20A	●	●	20	16	15	220	28	-	27	11.3	2.6	6°							
	E16X-SDQC ^{R/L} 07-20A-2 / 3	●					145						6°							
	E20S-SDQC ^{R/L} 11-25A	●	●	25	20	19	250	32	-	31	14.4	3.7	5°					SB-4065TR		FT-15
	E20S-SDQC ^{R/L} 11-25A-2 / 3	●					165						5°							
	E25T-SDQC ^{R/L} 11-30A	●	●	30	25	24	300	38	-	37	16.9	3.7	4°							
	E25T-SDQC ^{R/L} 11-30A-2 / 3	●					200						4°							

● : Std. Item □ : Check Availability

A-SDZC-AE Excellent Bar (Back Boring)Max. Overhang Length $L/D \sim 5.5$ **S-SDZC-A** Steel Bar (Back Boring)Max. Overhang Length $L/D \sim 4$ **E-SDZC-A** Carbide Shank Bar (Back Boring)Max. Overhang Length $L/D \sim 7$ 

Toolholder Dimensions

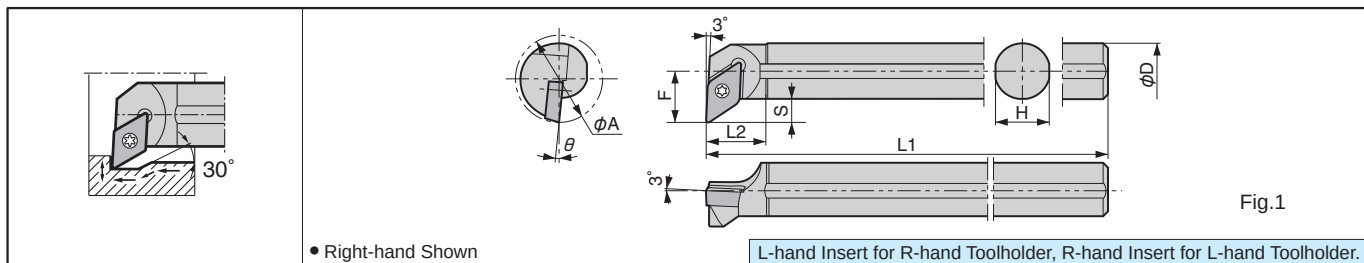
Description		Std.		Min. Cutting Dia.	Dimension (mm)								θ	Standard Corner-R (r _e)	Coolant Hole	Drawing	Spare Parts	
		R	L	øA	øD	H	L1	L2	L4	L5	F	S					Clamp Screw	Wrench
Excellent Bar	A16Q-SDZC ^{R/L} 07-14AE	●	●	14	16	15	180	30	17	10	10.8	4.4	5°	0.4	Yes	Fig.1	SB-2545TR	FT-8
	A20R-SDZC ^{R/L} 11-20AE	●	●	20	20	19	200	40	24	15	15.6	6.1					SB-4065TR	FT-15
	A10L-SDZC ^{R/L} 07-14AE	●	●	14	10	9	140	14	16	9.5	8.7	3.3	5°	0.4		Fig.2	SB-2545TR	FT-8
	A12M-SDZC ^{R/L} 07-16AE	●	●	16	12	11	150	14	20	10.5	9.7	3.3					SB-2560TR	
	A16Q-SDZC ^{R/L} 07-20AE	●	●	20	16	15	180	14	22	10.5	11.7	3.3					SB-4065TR	FT-15
	A16Q-SDZC ^{R/L} 11-23AE	●	●	23	16	15	180	15	22	15	14.5	6.1						
	A20R-SDZC ^{R/L} 11-27AE	●	●	27	20	19	200	15	25	15	16.5	6.1						
	A25S-SDZC ^{R/L} 11-32AE	●	●	32	25	24	250	15	26	15	19	6.1						
Steel	S16Q-SDZC ^{R/L} 07-14A	●	●	14	16	15	180	30	17	10	10.8	4.4	5°	0.4	No	Fig.3	SB-2545TR	FT-8
	S20R-SDZC ^{R/L} 11-20A	●	●	20	20	19	200	40	24	15	15.6	6.1					SB-4065TR	FT-15
	S10L-SDZC ^{R/L} 07-14A	●	●	14	10	9	140	14	16	9.5	8.7	3.3	5°	0.4		Fig.4	SB-2545TR	FT-8
	S12M-SDZC ^{R/L} 07-16A	●	●	16	12	11	150	14	20	10.5	9.7	3.3					SB-2560TR	
	S16Q-SDZC ^{R/L} 07-20A	●	●	20	16	15	180	14	22	10.5	11.7	3.3					SB-4065TR	FT-15
	S16Q-SDZC ^{R/L} 11-23A	●	●	23	16	15	180	15	22	15	14.5	6.1						
	S20R-SDZC ^{R/L} 11-27A	●	●	27	20	19	200	15	25	15	16.5	6.1						
	S25S-SDZC ^{R/L} 11-32A	●	●	32	25	24	250	15	26	15	19	6.1						
Carbide	E10N-SDZC ^{R/L} 07-14A	●		14	10	9	160	10.5	16	9.5	8.7	3.3	5°	0.4	Yes	Fig.5	SB-2545TR	FT-8
	E12Q-SDZC ^{R/L} 07-16A	●		16	12	11	180	12.5	20	10.5	9.7	3.3					SB-2560TR	
	E16X-SDZC ^{R/L} 07-20A	●		20	16	15	220	17.5	22	10.5	11.7	3.3					SB-4065TR	
	E16X-SDZC ^{R/L} 11-23A	●		23	16	15	220	17	22	15	14.5	6.1						
	E20S-SDZC ^{R/L} 11-27A	●		27	20	19	250	23	25	15	16.5	6.1						

● : Std. Item □ : Check Availability

Boring Bar [DC ☐ ☐ Insert]

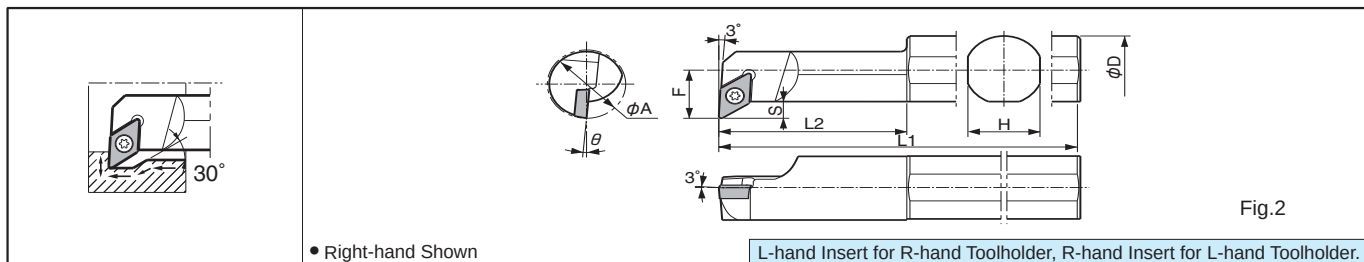
S...SDUC-E Excellent Bar (Copying)

Max. Overhang Length L/D≈5



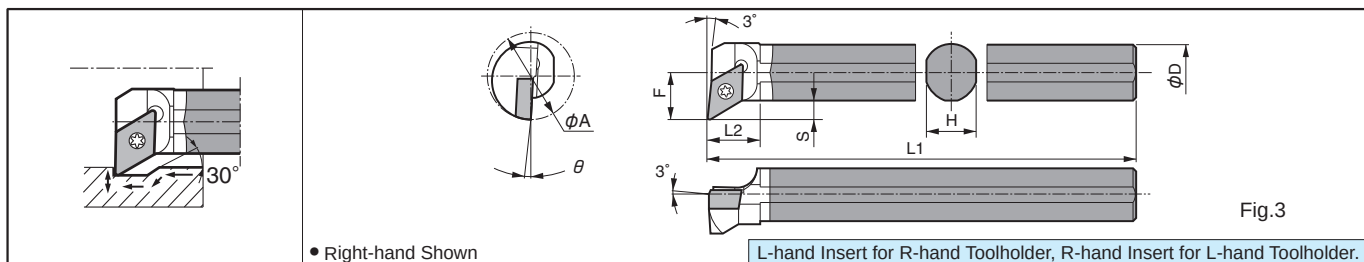
S...SDUC Steel Bar (Copying)

Max. Overhang Length L/D≈3



C...SDUC Carbide Shank Bar (Copying)

Max. Overhang Length L/D≈7



Toolholder Dimensions [Will be switched to Dynamic Bar, see **F85~F88** (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (R)	Drawing	Spare Parts		
		R	L		øA	øD	H	L1	L2	L3	L4	F				S	Clamp Screw	Wrench
																		
S10M-SDUC ^{1/2} 07-14E	SDUC ^{1/2} 1410B-07E	☐	☐	14	10	9	150	18			8.3				Fig.1	SB-2560TR	FT-8	
S12M-SDUC ^{1/2} 07-16E	1612B-07E	☐	☐	16	12	11	150	20			9.3	3.3	5°	0.4				
S16Q-SDUC ^{1/2} 07-20E	2016B-07E	☐	☐	20	16	15	180	20			11.3							
S16Q-SDUC ^{1/2} 11-25E	2516B-11E	☐	☐	25	16	15	180	21			14.1	6.1	5°	0.8				
S20Q-SDUC ^{1/2} 11-32E	3220B-11E	☐	☐	32	20	19	180	22			16.1					SB-4085TR	FT-15	
S16Q-SDUC ^{1/2} 07-14	SDUC ^{1/2} 1416B-07	☐	☐	14	16	14	180	30			10.4	4.4	5°	0.4	Fig.2	SB-2560TR	FT-8	
S16Q-SDUC ^{1/2} 07-16	1616B-07	☐	☐	16				35			11.4							
S20R-SDUC ^{1/2} 11-20	2020B-11	☐	☐	20	20	18	200	50			15.1	6.1	5°	0.8				
S25X-SDUC ^{1/2} 11-25	2525B-11	☐	☐	25	25	23	220	60			17.6							
C10N-SDUC ^{1/2} 07-14	SDUC ^{1/2} 1410B-07W	☐	☐	14	10	9	160	11			8.2				Fig.3	SB-2560TR	FT-8	
C12Q-SDUC ^{1/2} 07-16	1612B-07W	☐	☐	16	12	11	180	12			9.2	3.3	5°	0.4				
C12Q-SDUC ^{1/2} 11-20	2012B-11W	☐	☐	20	12	11	180	15			12.3							
C16X-SDUC ^{1/2} 11-25	2516B-11W	☐	☐	25	16	15	220	16			14.3	6.1	5°	0.8				
C20S-SDUC ^{1/2} 11-32	3220B-11W	☐	☐	32	20	19	250	17			16.3							
		☐	☐															

Applicable Inserts

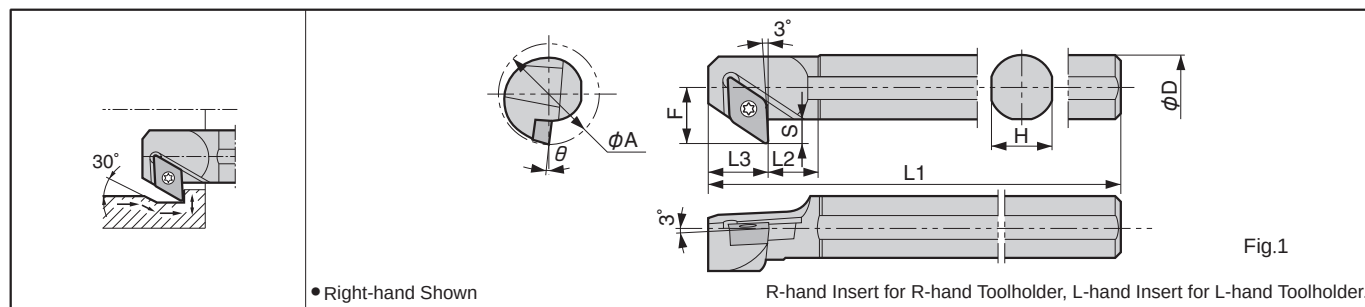
Applications	Minute ap	Finishing	Finishing-Medium	Finishing-Medium	Medium	Medium-Roughing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B52	B52	B53	B53	B54	B53	B55	B55	B56	B56
Insert	CF	GP	GK	HQ	FN-Z	Standard	1/2-F	1/2-FSF	(E / F) 1/2-U	F 1/2-USF
Toolholder										
....SDUC ^{1/2} 07....	DCGT0702..	DCMT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
....SDUC ^{1/2} 11....	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCMT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..
Applications	Low Feed	Low Feed / Precision	Soft Steel Finishing	Soft Steel Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B57	B57	B54	B54	B54	B57	B57	B57	C19	C11
Insert	(E / F) 1/2-J	F 1/2-JSF	XP	XQ	MQ	Without Chipbreaker	AH	1/2-A3	PCD	CBN
Toolholder										
....SDUC ^{1/2} 07....	-	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
....SDUC ^{1/2} 11....	DCGT11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

For recommended cutting conditions, see page **F82~F83**

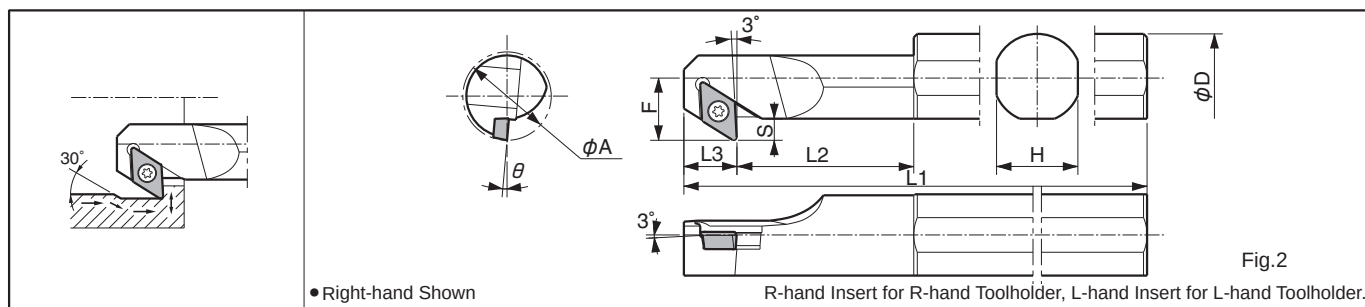
● : Std. Item □ : Check Availability

S...SDZC-E Excellent Bar (Back Boring)

Max. Overhang Length L/D=--5

**S...SDZC** Steel Bar (Back Boring)

Max. Overhang Length L/D=--3



● Toolholder Dimensions [Will be switched to Dynamic Bar, see [F85~F88](#) (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Drawing	Spare Parts	
		R	L		ϕA	ϕD	H	L1	L2	L3	L4	F	S			Clamp Screw	Wrench
S10M-SDZC^{R/L}/07-14E	SDZC^{R/L}/ 1410B-07E	☐	☐	14	10	9	150	14	9.5			8.3			Fig.1	SB-2560TR	FT-8
S12M-SDZC^{R/L}/07-16E	1612B-07E	☐	☐	16	12	11	150	16	10.5			9.3	3.3	5°			
S16Q-SDZC^{R/L}/07-20E	2016B-07E	☐	☐	20	16	15	180	16	10.5			11.3					
S16Q-SDZC^{R/L}/11-25E	2516B-11E	☐	☐	25	16	15	180	12	15			14.1	6.1	5°			
S20Q-SDZC^{R/L}/11-32E	3220B-11E	☐	☐	32	20	19						16.1			Fig.2	SB-4085TR	FT-15
S16Q-SDZC^{R/L}/07-14	SDZC^{R/L}/ 1416B-07	☐	☐	14	16	14	180	30	10			10.4	4.4	5°			
S16Q-SDZC^{R/L}/07-16	1616B-07	☐	☐	16				35	12.5			11.4					
S20R-SDZC^{R/L}/11-20	2020B-11	☐	☐	20	20	18	200	40				15.1	6.1	5°			
S25X-SDZC^{R/L}/11-25	2525B-11	☐	☐	25	25	23	220	50	15			17.6				SB-4085TR	FT-15

● Applicable Inserts

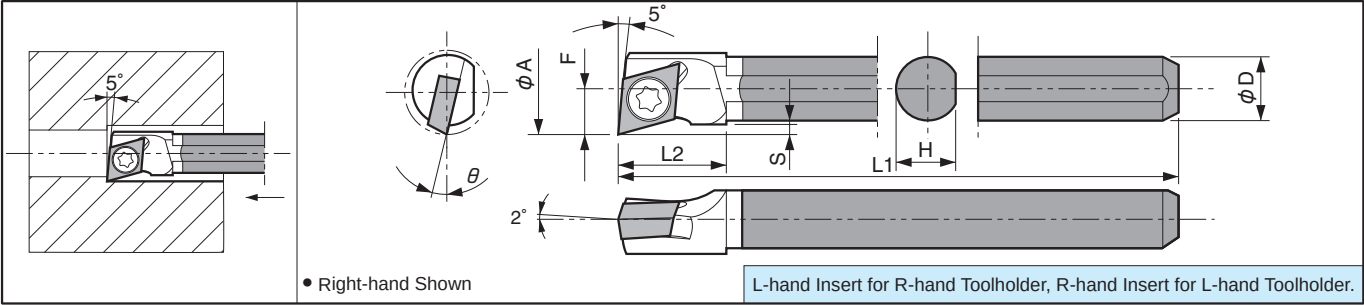
Applications	Minute ap	Finishing	Finishing-Medium	Finishing-Medium	Medium	Medium-Roughing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B52	B52	B53	B53	B54	B53	B55	B55	B56	B56
Insert	CF	GP	GK	HQ	FN-Z	Standard	%-F	%-FSF	(E / F) %-U	F%-USF
Toolholder										
---SDZC^{R/L}/07---	DCGT0702..	DCMT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
---SDZC^{R/L}/11---	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCMT11T3.. DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..
Applications	Low Feed	Low Feed / Precision	Soft Steel Finishing	Soft Steel Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B57	B57	B54	B54	B54	B57	B57	B57	C19	C11
Insert	(E / F) %-J	F%-JSF	XP	XQ	MQ	Without Chipbreaker	AH	%-A3	PCD	CBN
Toolholder										
---SDZC^{R/L}/07---	-	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
---SDZC^{R/L}/11---	DCGT11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

For recommended cutting conditions, see page [F82~F83](#)

Boring Bar [JC Insert]

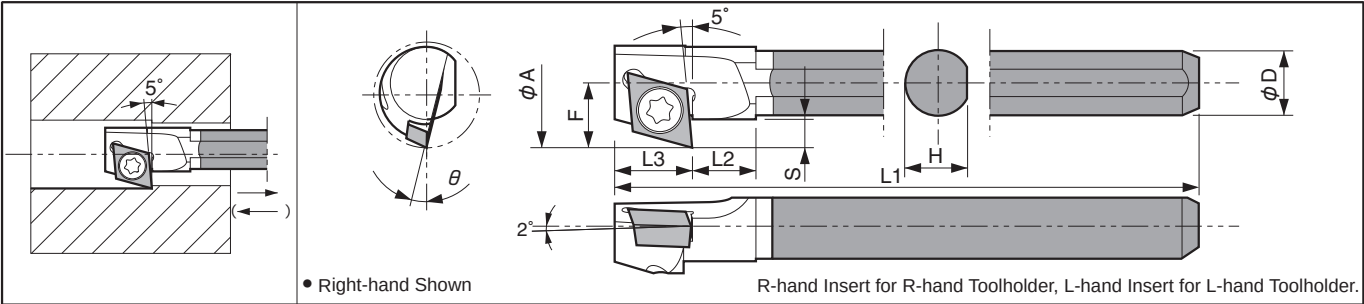
C...SJLC Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D=7



C...SJZC Carbide Shank Bar (Back Boring)

Max. Overhang Length L/D=7



* When using R-hand Toolholder, use R-hand insert if machining from back to front in this direction (→).
Use L-hand insert if machining from front to back in this direction (←).

Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (r)	Spare Parts		
		R	L		øA	øD	H	L1	L2	L3	F	S				Clamp Screw	Wrench
																	
C04X-SJLC ^{R/L} 03-055	SJLC ^{R/L} 05504B-03W	●	●	5.5	4	3.8	91	7	-	2.95	0.65		15°	0.03	SB-1635TR	FT-6	
C04X-SJZC ^{R/L} 03-065	SJZC ^{R/L} 06504B-03W	●	●	6.5			93	4	4.8	4.0	1.8						

Applicable Inserts

Applications	Finishing	Finishing / Precision													
Ref. Page	B60	B60													
Insert	^{R/L} -F	^{R/L} -FSF													
Toolholder															
---SJLC ^{R/L} 03---	JCGT0301..	JCET0301..													
---SJZC ^{R/L} 03---	JCGT0301..	JCET0301..													

For recommended cutting conditions, see page [F82~F83](#)

Features of C...SJLC

1. Specially designed for minimized bore dia. .
2. A relief angle of 15°C ensures high flexibility of the tool pass during necking.
3. Retaining front relief angle 5° and good surface roughness during internal facing.

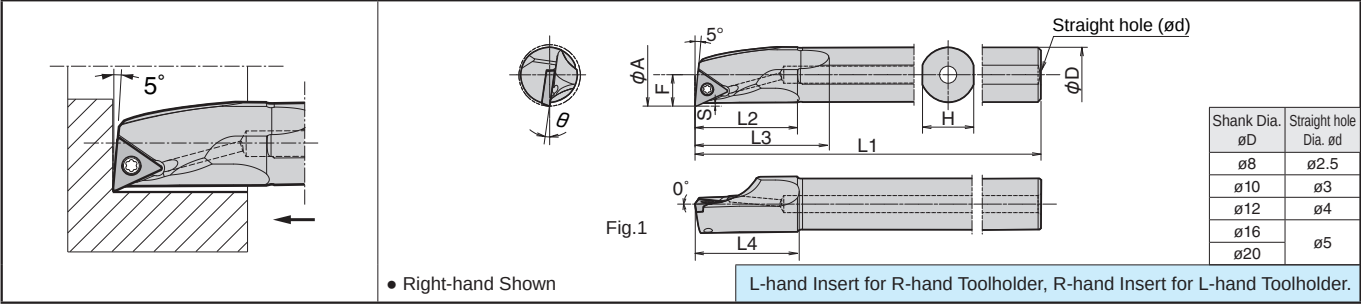
Features of C...SJZC

1. Back boring bars for workpieces that require high concentric circle accuracy and when a change of chuck is not possible.
2. Available for back boring and necking
3. Despite the small size of minimum boring dia. as ϕ6.5, the edge gap is retained as large as 1.8 mm.

Dynamic Bar [TC Insert]

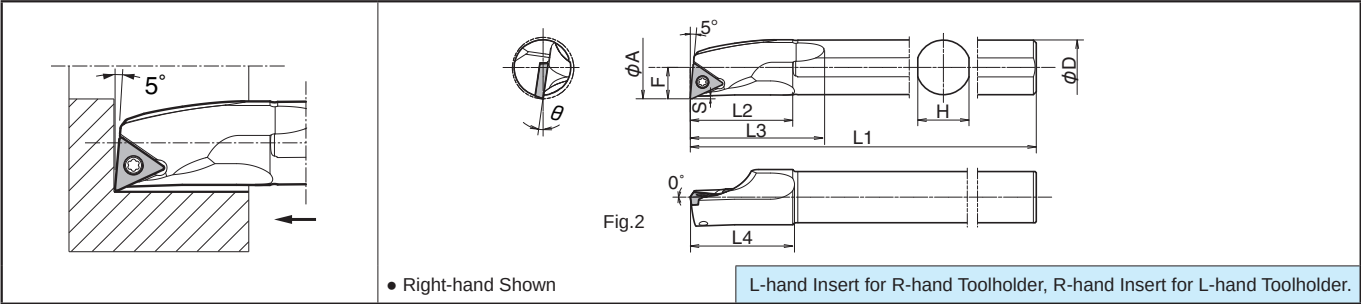
A-STLC-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D=~-5.5

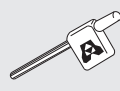


S-STLC-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D=~-4



Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (r)	Coolant Hole	Drawing	Spare Parts	
		R	L	øA	øD	H	L1	L2	L3	L4	F	S					Clamp Screw	Wrench
																		
Excellent Bar	A08X-STLC ^R /09-10AE	●	●	10	8	7	120	16	22	16	5	0.5	14°	0.4	Yes	Fig.1	SB-2250TR	FT-7
	A10L-STLC ^R /09-12AE	●	●	12	10	9	140	20	26	20	6.2	0.9	12°					
	A10L-STLC ^R /11-12AE	●	●	12	10	9	140	20	26	20	6.2	0.9	12°					
	A12M-STLC ^R /11-14AE	●	●	14	12	11	150	24	30	25	7.2	0.7	10°				SB-2560TR	FT-8
	A16Q-STLC ^R /11-18AE	●	●	18	16	15	180	30	39	31	9.2		8°					
	A20R-STLC ^R /11-22AE	●	●	22	20	19	200	36	44	36	11.2		6°					
Steel	S08X-STLC ^R /09-10A	●	●	10	8	7	120	16	22	16	5	0.5	14°	0.4	No	Fig.2	SB-2250TR	FT-7
	S10L-STLC ^R /09-12A	●	●	12	10	9	140	20	26	20	6.2	0.9	12°					
	S10L-STLC ^R /11-12A	●	●	12	10	9	140	20	26	20	6.2	0.9	12°					
	S12M-STLC ^R /11-14A	●	●	14	12	11	150	24	30	25	7.2	0.7	10°				SB-2560TR	FT-8
	S16Q-STLC ^R /11-18A	●	●	18	16	15	180	30	39	31	9.2		8°					
	S20R-STLC ^R /11-22A	●	●	22	20	19	200	36	44	36	11.2		6°					

Applicable Inserts

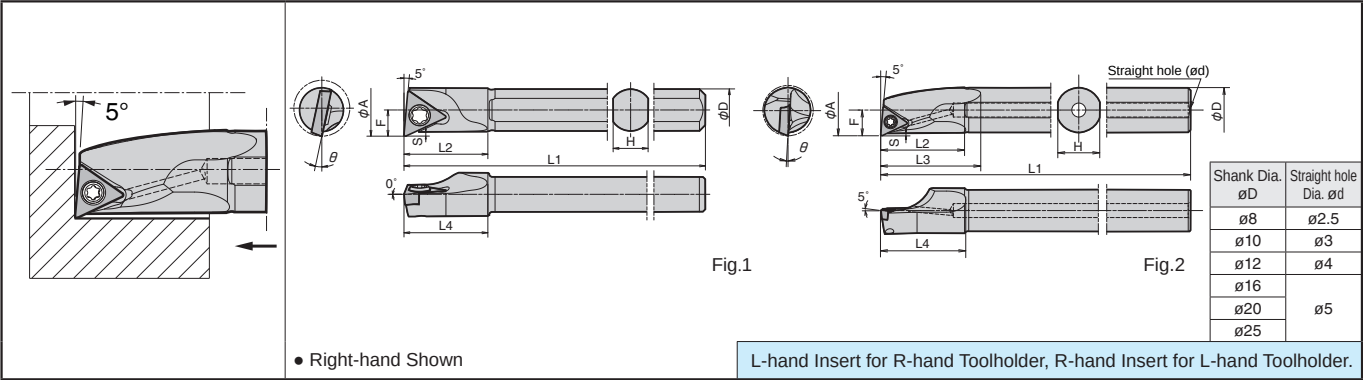
Applications	Finishing-Medium																		
Ref. Page	B63																		
Insert	HQ																		
Toolholder																			
...-STLC ^R /09-...	TCMT0902..																		
...-STLC ^R /11-...	TCMT1102..																		

For recommended cutting conditions, see page [F82~F83](#)

Dynamic Bar [TB , TP Insert]

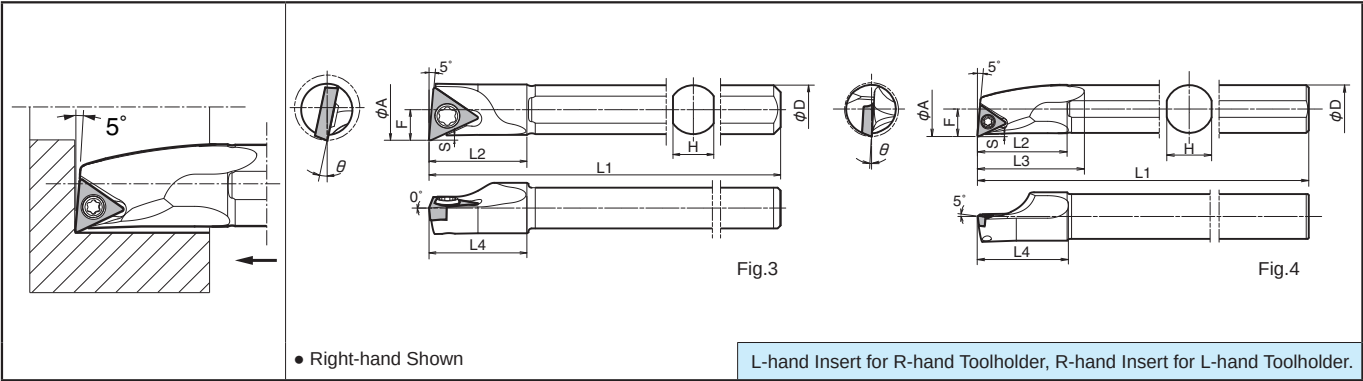
A / S-STLB(P)-AE Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈~5.5



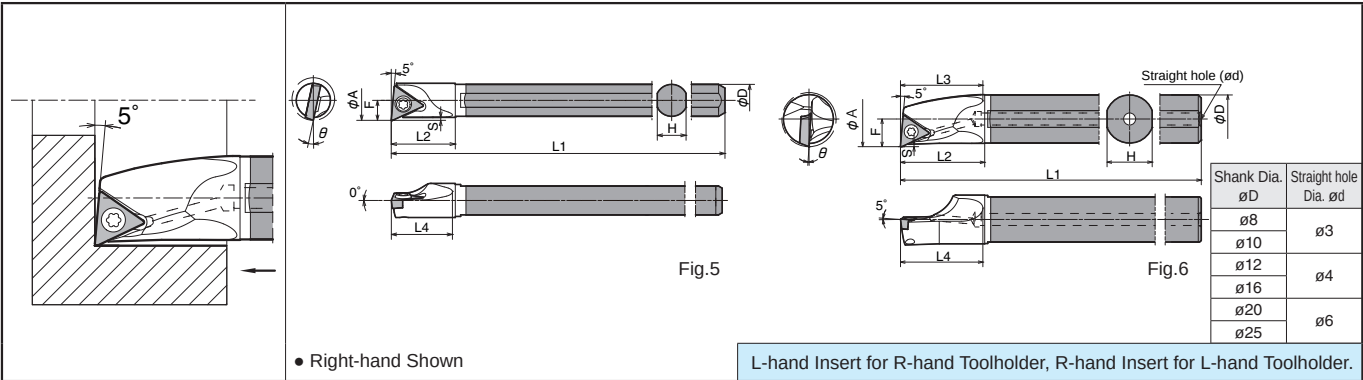
S-STLB(P)-A Steel Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈~4



E(C)-STLB(P)-A Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length L/D≈~7



F

Boring

● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Coolant Hole	Drawing	Spare Parts				
		R	L		øA	øD	H	L1	L2	L3	L4	F					S				
Excellent Bar	S06H-STLB ^{R/L} 06-08AE	●	●	8	6	5	100	12	-	12	3.8	0.5	12°	0.2	No	Fig.1	SB-2035TR	FT-6			
	A08X-STLP ^{R/L} 09-10AE	●	●	10	8	7	120	16	22	16	5	0.5	10°	0.4	Yes	Fig.2	SB-2545TR	FT-8			
	A10L-STLP ^{R/L} 09-12AE	●	●	12	10	9	140	20	25	20	6.2	0.9	8°				SB-3060TR	FT-10			
	A10L-STLP ^{R/L} 11-12AE	●	●						26		6	0.7	10°								
	A12M-STLP ^{R/L} 11-14AE	●	●	14	12	11	150	24	30	24	7.2	0.8	7°				SB-4065TR	FT-15			
	A16Q-STLP ^{R/L} 11-18AE	●	●	18	16	15	180	30	36	30	9.2	0.7	3.5°								
	A20R-STLP ^{R/L} 11-22AE	●	●	22	20	19	200	36	46	37	11.2		2°								
	A25S-STLP ^{R/L} 16-27AE	●	●	27	25	24	250	46	55	46	13.7	0°									
Steel	S06H-STLB ^{R/L} 06-08A	●	●	8	6	5	100	12	-	12	3.8	0.5	12°	0.2	No	Fig.3	SB-2035TR	FT-6			
	S08X-STLP ^{R/L} 09-10A	●	●	10	8	7	120	16	22	16	5	0.5	10°	0.4		Fig.4	SB-2545TR	FT-8			
	S10L-STLP ^{R/L} 09-12A	●	●	12	10	9	140	20	25	20	6.2	0.9	8°				SB-3060TR	FT-10			
	S10L-STLP ^{R/L} 11-12A	●	●						26		6	0.7	10°								
	S12M-STLP ^{R/L} 11-14A	●	●	14	12	11	150	24	30	24	7.2	0.8	7°				SB-4065TR	FT-15			
	S16Q-STLP ^{R/L} 11-18A	●	●	18	16	15	180	30	36	30	9.2	0.7	3.5°								
	S20R-STLP ^{R/L} 11-22A	●	●	22	20	19	200	36	46	37	11.2		2°								
	S25S-STLP ^{R/L} 16-27A	●	●	27	25	24	250	46	55	46	13.7	0°									
Carbide	C06J-STLB ^{R/L} 06-08A	●	●	8	6	5.4	110	12	-	12	3.8	0.5	12°	0.2	No	Fig.5	SB-2035TR	FT-6			
	E08L-STLP ^{R/L} 09-10A	●	●	10	8	7	140	16	15	15	5	0.5	10°	0.4	Yes	Fig.6	SB-2545TR	FT-8			
	E10N-STLP ^{R/L} 09-12A	●	●	12	10	9	160	20	19	19	6.2	0.9	8°								
	E10N-STLP ^{R/L} 09-12A-2 / 3	●					105						10°								
	E10N-STLP ^{R/L} 09-12A-1 / 2	●					80														
	E10N-STLP ^{R/L} 11-12A	●	●				160				10°										
	E10N-STLP ^{R/L} 11-12A-2 / 3	●					105														
	E10N-STLP ^{R/L} 11-12A-1 / 2	●					80														
	E12Q-STLP ^{R/L} 11-14A	●	●	14	12	11	180	23	22	22	7.2	0.8	7°				SB-3060TR	FT-10			
	E12Q-STLP ^{R/L} 11-14A-2 / 3	●					120						3.5°								
	E12Q-STLP ^{R/L} 11-14A-1 / 2	●					90														
	E16X-STLP ^{R/L} 11-18A	●	●	18	16	15	220	28	27	27	9.2	0.7	3.5°								
	E16X-STLP ^{R/L} 11-18A-2 / 3	●					145						2°								
	E16X-STLP ^{R/L} 11-18A-1 / 2	●					110														
	E20S-STLP ^{R/L} 11-22A	●	●	22	20	19	250	32	31	31	11.2	0°									
	E20S-STLP ^{R/L} 11-22A-2 / 3	●					165														
	E20S-STLP ^{R/L} 11-22A-1 / 2	●					125														
	E25T-STLP ^{R/L} 16-27A	●	●	27	25	24	300	38	37	37	13.7	0°									
	E25T-STLP ^{R/L} 16-27A-2 / 3	●					200														

● Applicable Inserts

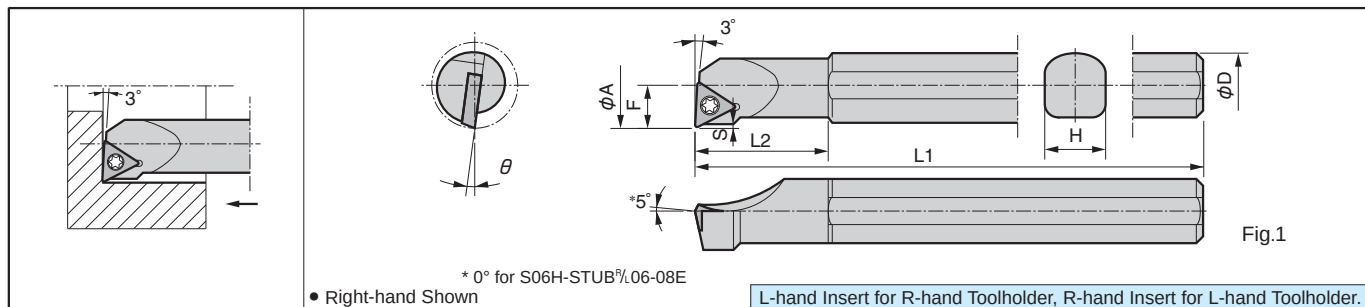
Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Medium	Low Feed / Precision	Soft Steel Finishing	Soft Steel Finishing-Medium
Ref. Page	B63, B66	B66	B63	B66	B63, B67	B68	B67	B68	B66	B66
Insert	CF	GP	DP	HQ	^{R/L}	^{R/L} -FSF	^{R/L} -H	^{R/L} -USF	XP	XQ
Toolholder										
...-STLB ^{R/L} 06-...	TBGT0601..	—	TBMT0601..	—	TBGT0601..	—	—	—	—	—
...-STLP ^{R/L} 09-...	TPGT0902..	TPMT0902..	—	TPMT0902..	TPGH0902..	—	—	—	TPMT0902..	—
...-STLP ^{R/L} 11-...	—	TPMT1103..	—	TPMT1103..	TPGH1103..	TPET1103..	TPGH1103..	TPET1103..	TPMT1103..	TPMT1103..
...-STLP ^{R/L} 16-...	—	TPMT1603..	—	TPMT1603..	TPGH1603..	—	TPGH1603..	—	TPMT1603..	TPMT1603..
Applications	Cast Iron	Non-ferrous Metals	Hard Materials							
Ref. Page	B63, B68	C19, C20, C21	C12							
Insert	Without Chipbreaker	PCD	CBN							
Toolholder										
...-STLB ^{R/L} 06-...	TBGW0601..	TBMT0601.. TBGW0601..	—							
...-STLP ^{R/L} 09-...	TPGB0902..	TPMH0902.. TPGB0902..	TPGB0902..							
...-STLP ^{R/L} 11-...	TPGB1103..	TPMH1103.. TPGB1103..	TPGB1103..							
...-STLP ^{R/L} 16-...	TPGB1603..	TPMH1603.. TPGB1603..	TPGB1603..							

For recommended cutting conditions, see page ● F82~F83

Boring Bar [TB □□ / TP □□ Insert]

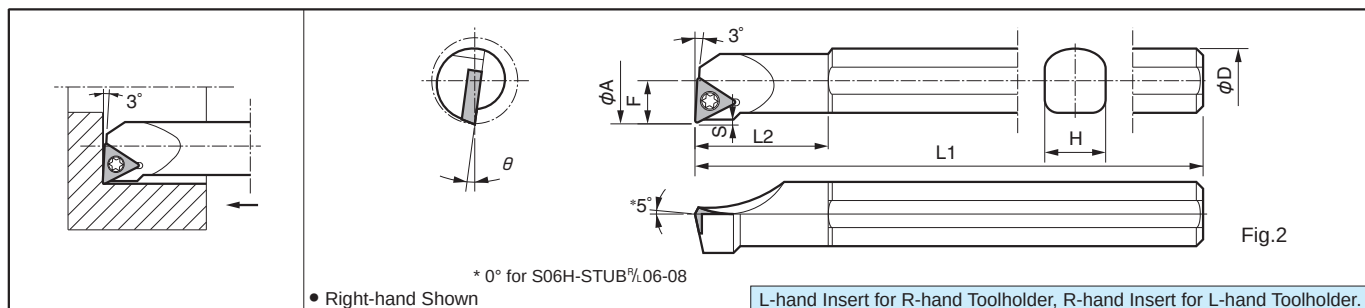
S...STUP(B)-E Excellent Bar (Boring)

Max. Overhang Length L/D=--5



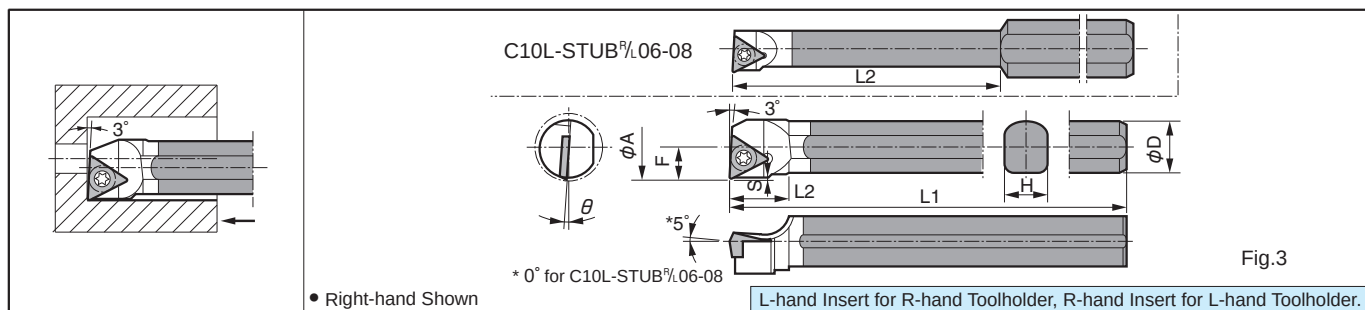
S...STUP(B) Steel Bar (Boring)

Max. Overhang Length L/D=--3



C...STUP(B) Carbide Shank Bar (Boring)

Max. Overhang Length L/D=--7



● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85-F88 (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Drawing	Spare Parts	
		R	L		øA	øD	H	L1	L2	L3	L4	F				S	Clamp Screw
																	
S06H-STUB ^{R/L} 06-08E	STUB ^{R/L} 0806B-06E	☐	☐	8	6	5.4	100	12	-	-	4	0.6	12°	0.2	Fig.1	SB-1STR	FT-6
S08K-STUP ^{R/L} 08-10E	STUP ^{R/L} 1008B-08E	☐	☐	10	8	7	125	17	-	-	5	0.4	10°	0.4		SB-1TR	
S10M-STUP ^{R/L} 09-12E	1210B-09E	☐	☐	12	10	9	150	20	-	-	6	0.5	8°	0.4		SB-2TR	FT-8
S12M-STUP ^{R/L} 09-16E	1612B-09E	☐	☐	16	12	11	25	8			0.5	5°					
S10M-STUP ^{R/L} 11-12E	1210B-11E	☐	☐	12	10	9	150	20			6	0.5	8°				
S12M-STUP ^{R/L} 11-14E	1412B-11E	☐	☐	14	12	11	150	25			7	0.6	7°				
STUP ^{R/L} 11-16E	1612B-11E	☐	☐	16					8	0.5	5°						
S16R-STUP ^{R/L} 11-18E	1816B-11E	☐	☐	18	16	15	200	27	-	-	9	0.7	4°	0.4		SB-3TR	FT-10
STUP ^{R/L} 11-20E	2016B-11E	☐	☐	20							10	0.9	3°				
S20X-STUP ^{R/L} 11-25E	2520B-11E	☐	☐	25	20	19	220	33			12.5	0.9	0°				
S20X-STUP ^{R/L} 16-25E	2520B-16E	☐	☐	25	20	19	220	33			-	-	12.5		0.9		
S25X-STUP ^{R/L} 16-32E	3225B-16E	☐	☐	32	25	23.4	270	42	16	0.6			0°				
S06H-STUB ^{R/L} 06-08	STUB ^{R/L} 0806B-06	☐	☐	8	6	5.4	100	12	-	-	4	0.6	12°	0.2	Fig.2	SB-1STR	FT-6
S08K-STUP ^{R/L} 08-10	STUP ^{R/L} 1008B-08	☐	☐	10	8	7	125	17	-	-	5	0.4	10°	0.4		SB-1TR	FT-6
S10M-STUP ^{R/L} 09-12	1210B-09	☐	☐	12	10	9	150	20	-	-	6	0.5	8°	0.4		SB-2TR	FT-8
S12M-STUP ^{R/L} 09-16	1612B-09	☐	☐	16	12	11	25	8			0.5	5°					
S16Q-STUP ^{R/L} 11-20	2016B-11	☐	☐	20	16	15	180	27	-	-	10	0.9	3°	0.4		SB-3TR	FT-10
S20R-STUP ^{R/L} 11-25	2520B-11	☐	☐	25	20	19	200	33			12.5	0.9	0°				
S25X-STUP ^{R/L} 16-32	3225B-16	☐	☐	32	25	23.4	220	42	-	-	16	0.6	0°	0.8		SB-4TR	FT-15

□ : Check Availability

● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (r _e)	Drawing	Spare Parts										
		R	L		øA	øD	H	L1	L2	L3	L4	F				S	Clamp Screw	Wrench								
																										
C10L -STUB ^{R/L} 06-08	STUB ^{R/L} 0810B-06W	☐	☐	8	10	9	140	50	-	-	4	0.5	12°	0.2	Fig.3	SB-1STR	FT-6									
C08L -STUP ^{R/L} 08-10	STUP ^{R/L} 1008B-08W	☐	☐	10	8	7	140	10	-	-	5	0.5	10°	0.4		SB-1TR										
C10N -STUP ^{R/L} 09-12	1210B-09W	☐	☐	12	10	9	160	11	-	-	6	0.5	8°	0.4		SB-2TR	FT-8									
STUP ^{R/L} 09-12-1/2	1210B-09W-1/2	☐	☐				80																			
STUP ^{R/L} 09-12-2/3	1210B-09W-2/3	☐	☐				105																			
C12Q -STUP ^{R/L} 09-16	1612B-09W	☐	☐	16	12	11	180	12	-	-	8	0.7	5°					0.4	SB-3TR	FT-10						
STUP ^{R/L} 09-16-1/2	1612B-09W-1/2	☐	☐				90																			
STUP ^{R/L} 09-16-2/3	1612B-09W-2/3	☐	☐				120																			
C10N -STUP ^{R/L} 11-12	1210B-11W	☐	☐	12	10	9	160	11	-	-	6	0.5	8°	0.4		SB-3TR	FT-10									
STUP ^{R/L} 11-12-1/2	1210B-11W-1/2	☐	☐				80																			
STUP ^{R/L} 11-12-2/3	1210B-11W-2/3	☐	☐				105																			
C12Q -STUP ^{R/L} 11-14	1412B-11W	☐	☐	14	12	11	180	13	-	-	7	0.5	7°								0.4	SB-3TR	FT-10			
STUP ^{R/L} 11-14-1/2	1412B-11W-1/2	☐	☐				90																			
STUP ^{R/L} 11-14-2/3	1412B-11W-2/3	☐	☐				120																			
C12Q -STUP ^{R/L} 11-16	1612B-11W	☐	☐	16	12	11	180	13	-	-	8	0.3	5°	0.4		SB-3TR	FT-10									
STUP ^{R/L} 11-16-1/2	1612B-11W-1/2	☐	☐				90																			
STUP ^{R/L} 11-16-2/3	1612B-11W-2/3	☐	☐				120																			
C16X -STUP ^{R/L} 11-18	1816B-11W	☐	☐	18	16	15	220	14	-	-	9	0.3	4°											0.8	SB-4TR	FT-15
STUP ^{R/L} 11-18-1/2	1816B-11W-1/2	☐	☐				110																			
STUP ^{R/L} 11-18-2/3	1816B-11W-2/3	☐	☐				145																			
C16X -STUP ^{R/L} 11-20	2016B-11W	☐	☐	20	16	15	220	14	-	-	10	0.8	3°	0.8		SB-4TR	FT-15									
STUP ^{R/L} 11-20-1/2	2016B-11W-1/2	☐	☐				110																			
STUP ^{R/L} 11-20-2/3	2016B-11W-2/3	☐	☐				145																			
C20S -STUP ^{R/L} 11-25	2520B-11W	☐	☐	25	20	19	250	16	-	-	12.5	0.7	0°					0.8	SB-4TR	FT-15						
STUP ^{R/L} 11-25-1/2	2520B-11W-1/2	☐	☐				125																			
STUP ^{R/L} 11-25-2/3	2520B-11W-2/3	☐	☐				165																			
C20S -STUP ^{R/L} 16-25	2520B-16W	☐	☐	25	20	19	250	18	-	-	12.5	0.3	0°	0.8		SB-4TR	FT-15									
STUP ^{R/L} 16-25-1/2	2520B-16W-1/2	☐	☐				125																			
STUP ^{R/L} 16-25-2/3	2520B-16W-2/3	☐	☐				165																			

● Applicable Inserts

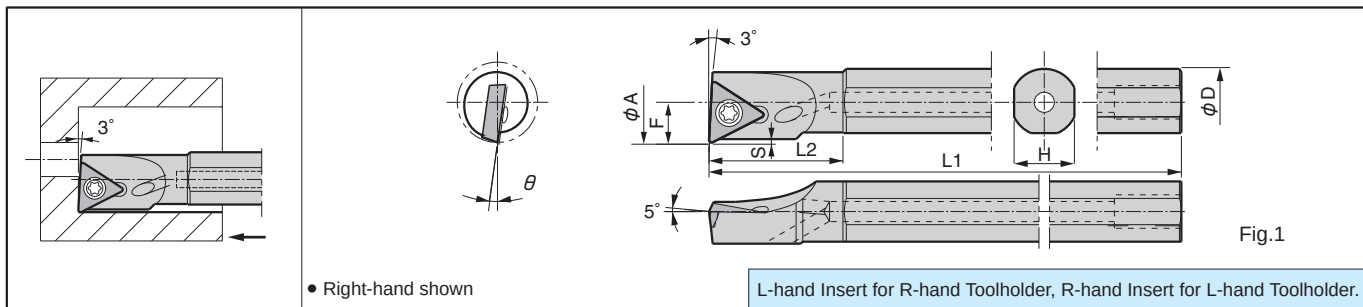
Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Medium	Low Feed / Precision	Soft Steel Finishing	Soft Steel Finishing-Medium
Ref. Page	B63, B66	B66	B63	B66	B63, B67	B68	B67	B68	B66	B66
Insert	CF	GP	DP	HQ	$\frac{R}{L}$	$\frac{R}{L}$ -FSF	$\frac{R}{L}$ -H	F $\frac{R}{L}$ -USF	XP	XQ
Toolholder										
---STUB ^{R/L} 06---	TBGT0601..	-	TBMT0601..	-	TBGT0601..	-	-	-	-	-
---STUP ^{R/L} 08---	TPGT0802..	-	-	-	TPGH0802..	TPET0802..	-	TPET0802..	-	-
---STUP ^{R/L} 09---	TPGT0902..	TPMT0902..	-	TPMT0902..	TPGH0902..	-	-	-	TPMT0902..	-
---STUP ^{R/L} 11---	-	TPMT1103..	-	TPMT1103..	TPGH1103..	TPET1103..	TPGH1103..	TPET1103..	TPMT1103..	TPMT1103..
---STUP ^{R/L} 16---	-	TPMT1603..	-	TPMT1603..	TPGH1603..	-	TPGH1603..	-	TPMT1603..	TPMT1603..
Applications	Cast Iron	Non-ferrous Metals	Hard Materials							
Ref. Page	B63, B68	C19~C21	C12							
Insert	Without Chipbreaker	PCD	CBN							
Toolholder										
---STUB ^{R/L} 06---	TBGW0601..	TBMT0601.. TBGW0601..	-							
---STUP ^{R/L} 08---	TPGB0802..	TPMH0802.. TPGB0802..	TPGB0802..							
---STUP ^{R/L} 09---	TPGB0902..	TPMH0902.. TPGB0902..	TPGB0902..							
---STUP ^{R/L} 11---	TPGB1103..	TPMH1103.. TPGB1103..	TPGB1103..							
---STUP ^{R/L} 16---	TPGB1603..	TPMH1603.. TPGB1603..	TPGB1603..							

For recommended cutting conditions, see page ● F82~F83

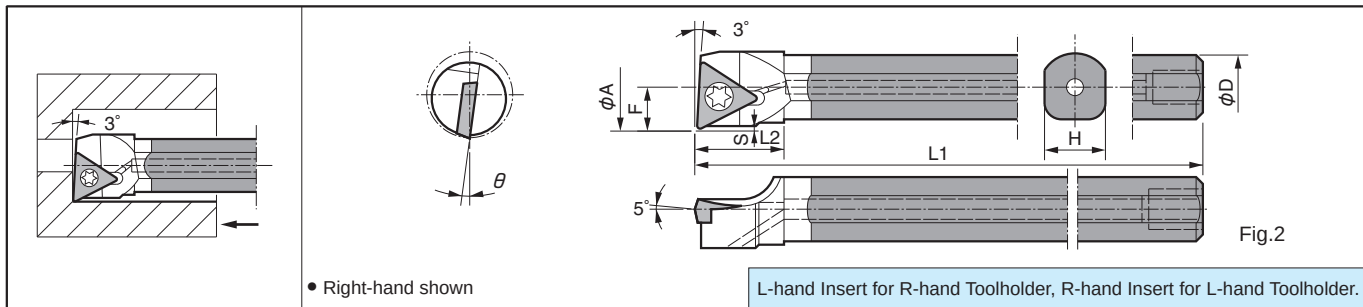
☐ : Check Availability

Boring Bar [TP ☐ ☐ Insert]**A...STUP-E** Excellent Twin-Hole Bar (Boring: with Coolant Hole)

Max. Overhang Length L/D=--5

**E...STUP** Carbide Twin-Hole Bar (Boring: with Coolant Hole)

Max. Overhang Length L/D=--7



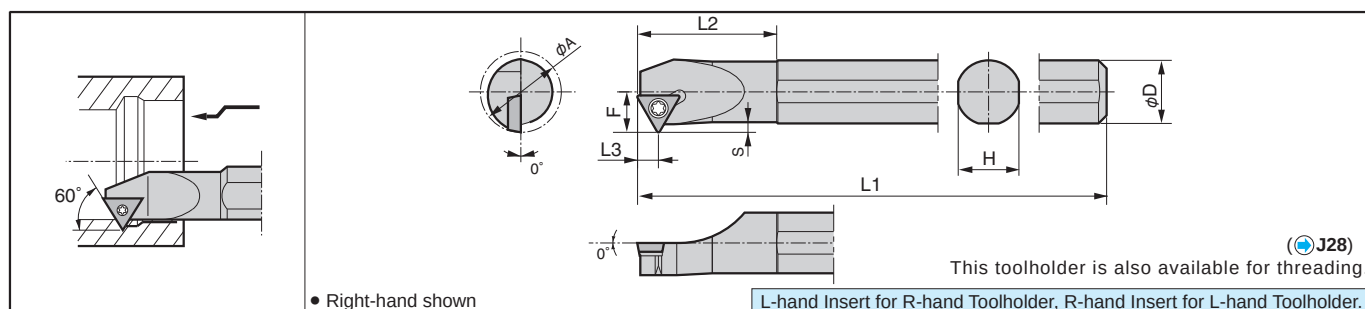
- Toolholder Dimensions [Will be switched to Dynamic Bar, see [F85~F88](#) (Alternative Toolholder Reference Table for Boring Bar)].
(Applicable Inserts list [F45](#))

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (r)	Drawing	Spare Parts				
		R	L		øA	øD	H	L1	L2	L3	L4	F				S	Clamp Screw	Wrench		
																				
A08H -STUP ^{R/L} 08-10E	STUP ^{R/L} 1008B-08EH	☐	☐	10	8	7	100	17	-	-	5	0.4	10°	0.4	Fig.1	SB-1TR	FT-6			
A10X -STUP ^{R/L} 09-12E		☐	☐	12	10	9	120	20			6	0.5	8°	0.4		SB-2TR	FT-8			
A12X -STUP ^{R/L} 09-16E		☐	☐	16	12	11	120	25			8	0.5	5°	0.4						
A10X -STUP ^{R/L} 11-12E		☐	☐	12	10	9	120	20			6	0.6	8°	0.4						
A12X -STUP ^{R/L} 11-14E		☐	☐	14	12	11	120	25			7	0.6	7°	0.4		Fig.1	SB-3TR	FT-10		
STUP ^{R/L} 11-16E		☐	☐	16							8	0.5	5°							
A16M -STUP ^{R/L} 11-18E		☐	☐	18	16	15	150	27			9	0.7	4°	0.8					SB-4TR	FT-15
STUP ^{R/L} 11-20E		☐	☐	20							10	0.9	3°							
A20Q -STUP ^{R/L} 11-25E		2520B-11EH	☐	☐	25	20	19	180			33	12.5	0.9	0°						
A20Q -STUP ^{R/L} 16-25E	2520B-16EH	☐	☐	25	20	19	180	33	12.5	0.9	0°									
A25R -STUP ^{R/L} 16-32E	3225B-16EH	☐	☐	32	25	23.4	200	42	16	0.6										
E08L -STUP ^{R/L} 08-10	STUP ^{R/L} 1008B-08WH	☐	☐	10	8	7	140	10	-	-	5	0.4	10°	0.4	Fig.2	SB-1TR	FT-6			
E10N -STUP ^{R/L} 09-12		☐	☐	12	10	9	160	11			6	0.5	8°	0.4		SB-2TR	FT-8			
E12Q -STUP ^{R/L} 09-16		☐	☐	16	12	11	180	12			8	0.5	5°	0.4						
E10N -STUP ^{R/L} 11-12		☐	☐	12	10	9	160	11			6	0.6	8°	0.4		Fig.2	SB-3TR	FT-10		
E12Q -STUP ^{R/L} 11-14		☐	☐	14	12	11	180	12			7	0.6	7°							
STUP ^{R/L} 11-16		☐	☐	16							8	0.5	5°							
E16X -STUP ^{R/L} 11-18		1816B-11WH	☐	☐	18	16	15	220			14	9	0.7	4°					0.8	SB-4TR
STUP ^{R/L} 11-20		2016B-11WH	☐	☐	20							10	0.9	3°						
E20S -STUP ^{R/L} 11-25		2520B-11WH	☐	☐	25	20	19	250			17	12.5	0.9	0°						
E20S -STUP ^{R/L} 16-25	2520B-16WH	☐	☐	25	20	19	250	17	12.5	0.9	0°									

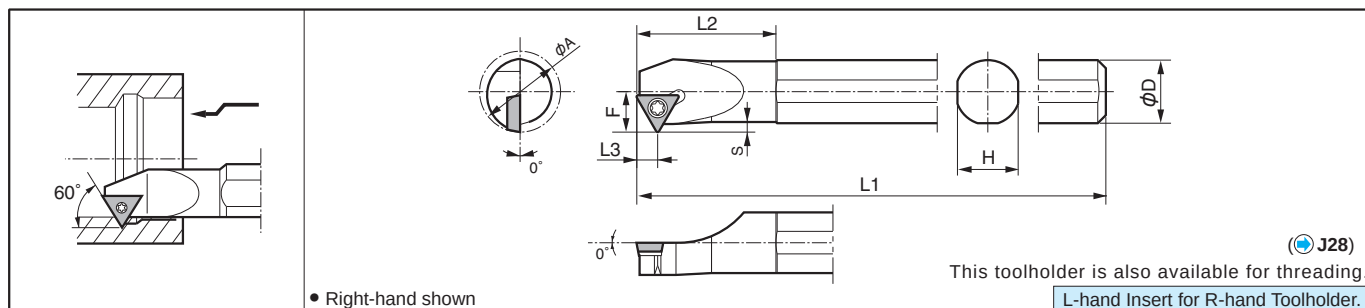
• Refer Page for details of the applicable Coolant Sleeve / Joint [F77~F79](#)

S...STWP-E Excellent Bar (Copying)

Max. Overhang Length L/D=5

**S...STWP** Steel Bar (Copying)

Max. Overhang Length L/D=3



● Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (°)	Spare Parts	
		R	L		øA	øD	H	L1	L2	L3	F			S	Clamp Screw
															
S10M-STWP ^{R/L} 11 -12E	-	●	●	12	10	9.2	150	23	5.5	6	1.0	0°	0.1	SB-3STR	FT-10
S12M-STWP ^{R/L} 11 -16E		●	●	16	12	11	150	30		8	1.5				
S16R-STWP ^{R/L} 11 -20E		●	●	20	16	15	200	35		10	2.0				
S20X-STWP ^{R/L} 11 -25E		●	●	25	20	19	220	40	12.5	2.5	0°	0.8	SB-4TR	FT-15	
S20X-STWP ^{R/L} 16 -25E		●	●	25	20	19	220	40	14	4.0					
S25X-STWP ^{R/L} 16 -32E		●	●	32	25	23	270	42	7.7	16.5					
S10M-STWP ^{R/L} 11 -12	SIT ^{R/L} 1210-11	●		12	10	9.2	150	23	5.5	6	1.0	0°	0.1	SB-3STR	FT-10
S12M-STWP ^{R/L} 11 -16	SIT ^{R/L} 1612-11	●		16	12	11	150	30		8	1.5				
S16Q-STWP ^{R/L} 11 -20	2016-11	●		20	16	15	180	35		10	2.0				
S20R-STWP ^{R/L} 11 -25	2520-11	●		25	20	19	200	40		12.5	2.5				

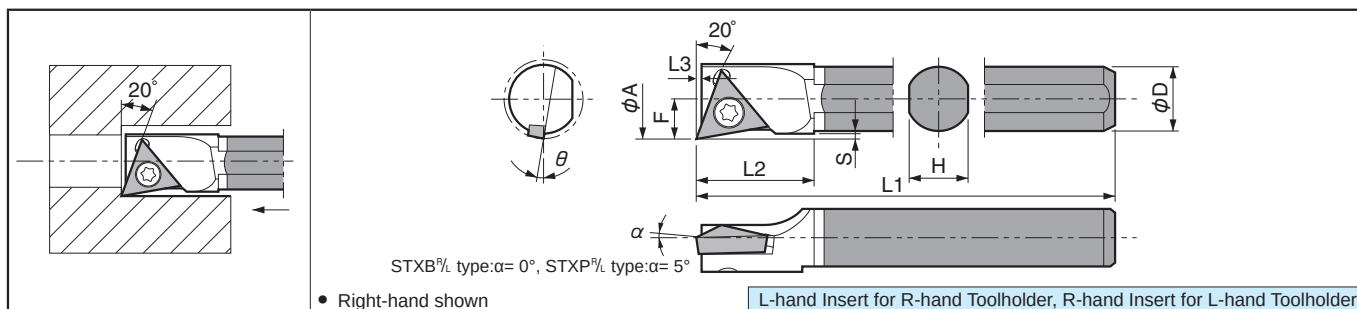
● Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Medium cutting	Low Feed / Precision	Soft Steel Finishing	Soft Steel Finishing-Medium	Cast Iron
Ref. Page	B66	B66	B67	B68	B67	B68	B66	B66	B68
Insert	GP	HQ	$\frac{R}{L}$	$\frac{R}{L}$ -FSF	$\frac{R}{L}$ -H	$\frac{R}{L}$ -USF	XP	XQ	Without Chipbreaker
Toolholder									
S10M-STWP ^{R/L} 11-12(E)	-	-	TPGH1102..	-	-	-	-	-	TPGB1102..
---STWP ^{R/L} 11---	TPMT1103..	TPMT1103..	TPGH1103..	TPET1103..	TPGH1103..	TPET1103..	TPMT1103..	TPMT1103..	TPGB1103..
---STWP ^{R/L} 16---	TPMT1603..	TPMT1603..	TPGH1603..	-	TPGH1603..	-	TPMT1603..	TPMT1603..	TPGB1603..
Applications	Non-ferrous Metals	Hard Materials							
Ref. Page	C20, C21	C12							
Insert	PCD	CBN							
Toolholder									
S10M-STWP ^{R/L} 11-12(E)	-	-							
---STWP ^{R/L} 11---	TPMH1103.. TPGB1103..	TPGB1103..							
---STWP ^{R/L} 16---	TPMH1603.. TPGB1603..	TPGB1603..							

For recommended cutting conditions, see page ● F82~F83

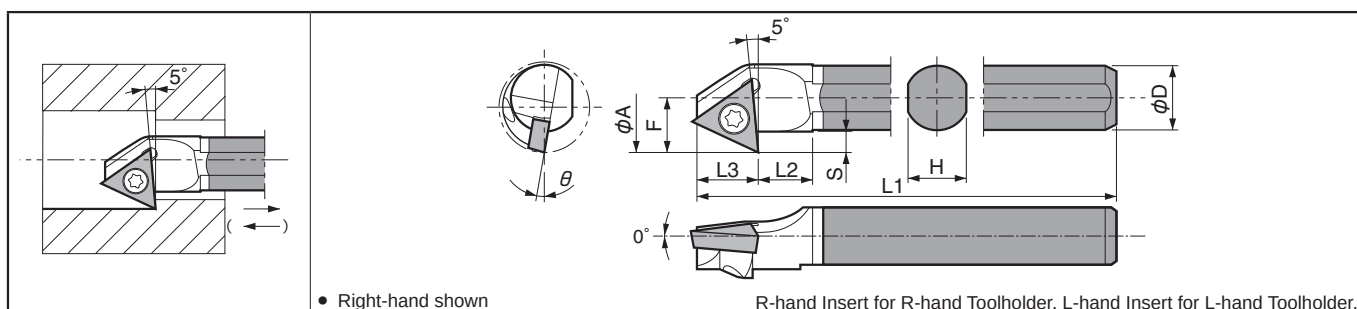
C...STXP(B) Carbide Shank Bar (Boring / Internal Facing)

Max. Overhang Length $L/D \sim 7$



C...STZB Carbide Shank Bar (Back Boring)

Max. Overhang Length $L/D \sim 7$



* When using R-hand Toolholder, use R-hand insert if machining from back to front in this direction (→).
Use L-hand insert if machining from front to back in this direction (←).

● Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Spare Parts	
		R	L	øA	øD	H	L1	L2	L3	F	S					
C06J-STXB ^{R/L} 06 -075	STXB ^{R/L} 07506B-06W	●	●	7.5	6	5.4	110	11	0.5	3.75	0.5	10°	0.03	SB-1STR	FT-6	
C08X-STXP ^{R/L} 08 -09	STXP ^{R/L} 09008B-08W	●	●	9.0	8	7.0	143	14	0.6	4.6						
C10X-STXP ^{R/L} 09 -11	11010B-09W	●	●	11.0	10	9.0	164	17		5.6	SB-2TR			FT-8		
C06J-STZB ^{R/L} 06 -085	STZB ^{R/L} 08506B-06W	●	●	8.5	6	5.4	110	5	5.7	5.1	2.0			SB-1STR	FT-6	

● Applicable Inserts

[illegible]

◆ C···STXP(B) Type Boring Bar Cutting Conditions

For recommended cutting conditions, see page **F82~F83**

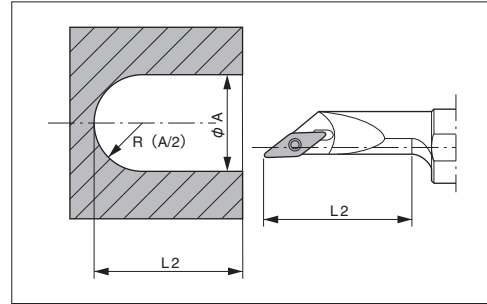
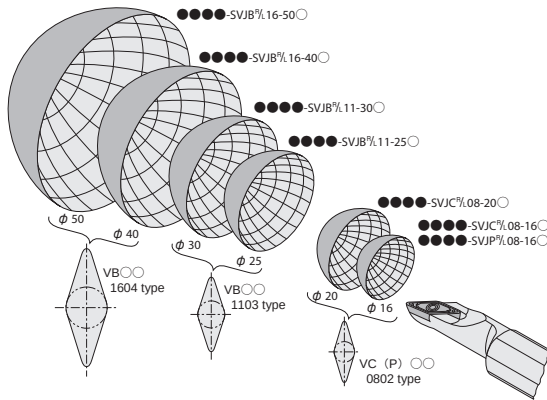
Toolholder	Insert Description (Grade)	Vc (m/min)	ap (mm)	f (mm/rev)	Coolant
C06J-STXB^R/06-075	TBGT0601003 ¹/₈ (PR930)	30~100	0.02~0.1	0.02~0.04	Yes
C08X-STXP^R/08-09	TPGH080201 ¹/₈ (PR930)	30~100	0.05~0.15	0.03~0.08	Yes
C10X-STXP^R/09-11	TPGH090201 ¹/₈ (PR930)	30~100	0.05~0.15	0.03~0.08	Yes

(Workpiece Material: Alloy Steel)

Application of ○...SVJB (C) - ○, S...SVJP- ○

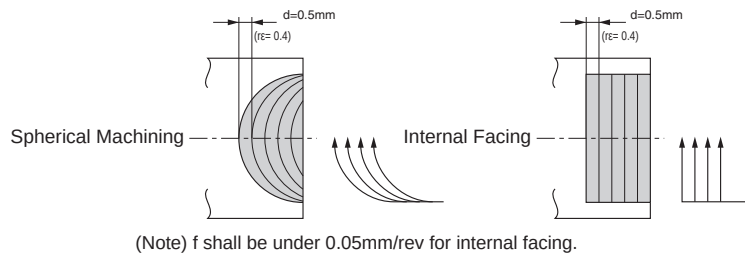
[Toolholder Refer Page for details ➡ F50 (Dynamic Bar), F54]

1. Application Range

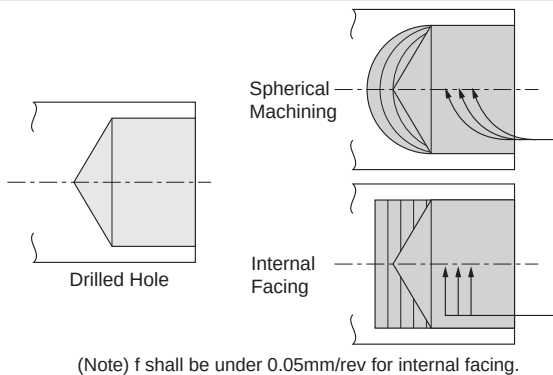


2. Machining method

Case with No Existing Hole

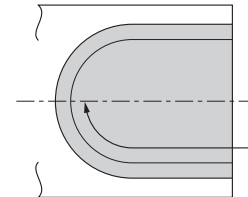


Case with Drilled Hole

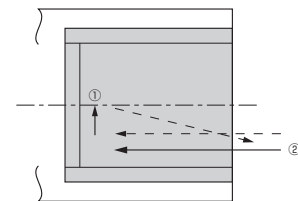


Finishing

Spherical Machining

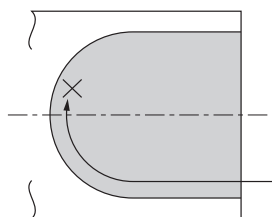


Internal Facing

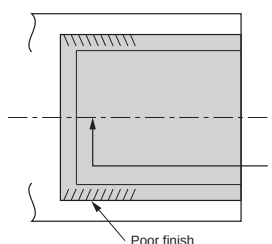
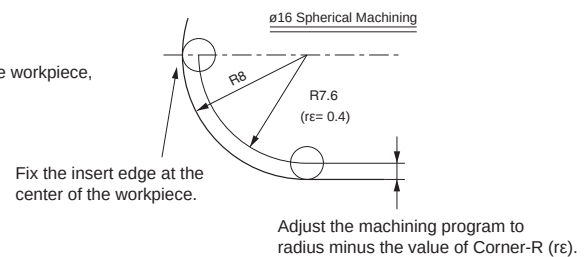


Machining Process
① Finish the internal face first.
② Next, finish the internal diameter.

3. Caution

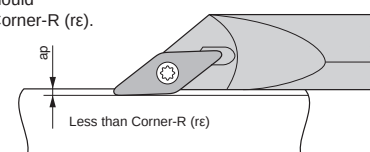


When machining past the center of the workpiece, insert may break.



This type of machining is possible, but the chips might scratch the surface.

For internal profiling, a_p should be less than the value of Corner-R (r_e).



[Burs may occur, if a_p is bigger than Corner-R (r_e).]

F



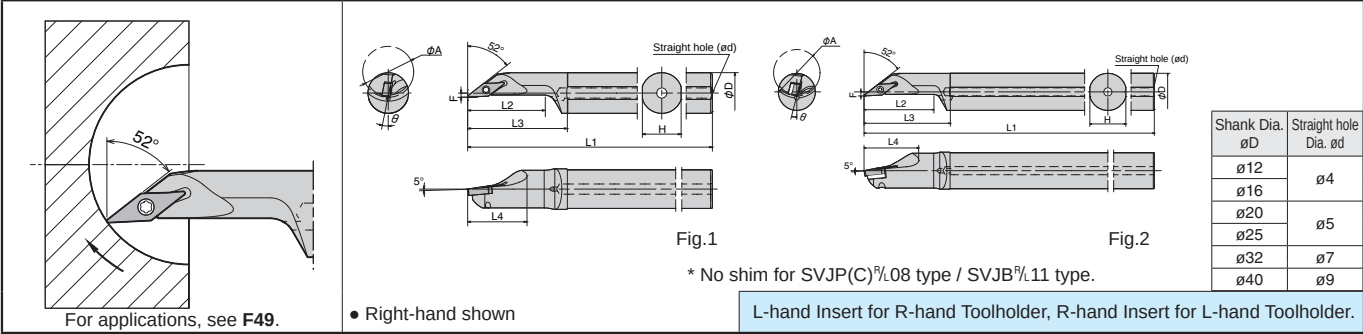
Boring



Dynamic Bar [VB□□, VC□□, VP□□Insert]

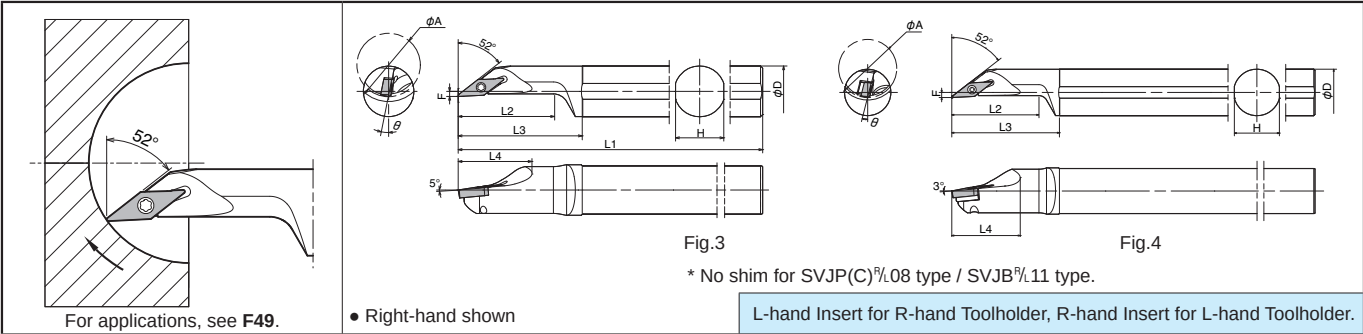
A-SVJP(C)(B)-AE Excellent Bar (Internal Spherical Machining / Internal Facing)

Max. Overhang Length L/D≈5.5



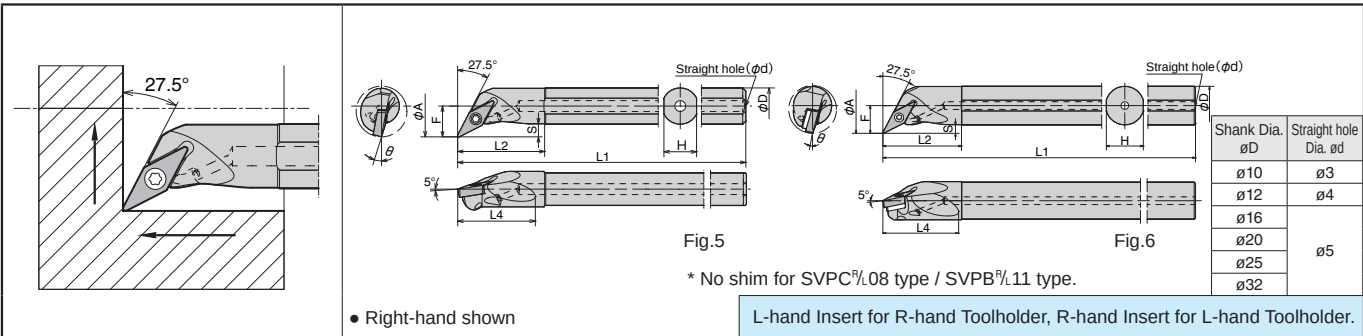
S-SVJP(C)(B)-A Steel Bar (Internal Spherical Machining / Internal Facing)

Max. Overhang Length L/D≈4



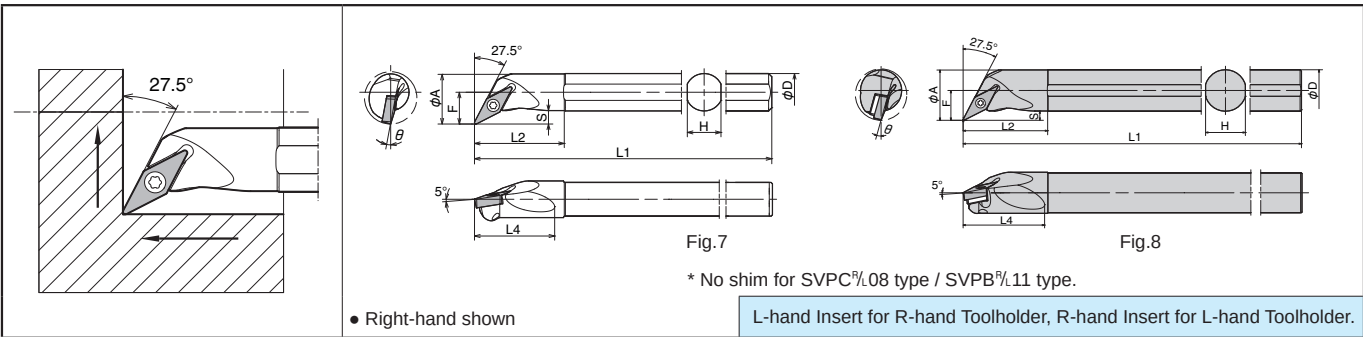
A-SVPC(B)-AE Excellent Bar (Copying / Undercutting)

Max. Overhang Length L/D≈5.5



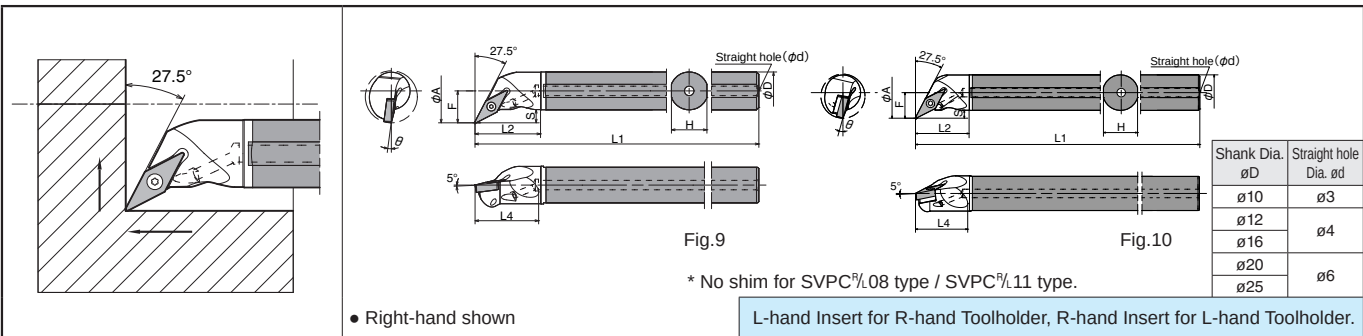
S-SVPC(B)-A Steel Bar (Copying / Undercutting)

Max. Overhang Length L/D≈4



E-SVPC(B)-A Carbide Shank Bar (Copying / Undercutting)

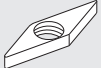
Max. Overhang Length L/D≈7



● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Coolant Hole	Drawing	Spare Parts		
		R	L	øA	øD	H	L1	L2	L3	L4	F	S							
Excellent Bar	A12M-SVJP ^{R/L} 08-16AE	●	●	16	12	11	150	26	33	21	2	-	5°	0.2	Yes	Fig.1	SB-2050TR	FT-6	
	A12M-SVJC ^{R/L} 08-16AE	●	●	16	12	11	150	26	33	20	2	-	5°	0.4			SB-2570TR	FT-8	
	A16Q-SVJC ^{R/L} 08-20AE	●	●	20	16	15	180	36	43	22	2	-	5°				Fig.2	SB-40125TRN	FT-15
	A20R-SVJB ^{R/L} 11-25AE	●	●	25	20	19	200	37.5	48	30	2	-	5°						
	A25S-SVJB ^{R/L} 11-30AE	●	●	30	25	24	250	45	58	33	3.5	-	5°						
	A32S-SVJB ^{R/L} 16-40AE	●	●	40	32	31	250	60	74	45	3.5	-	8°						
A40T-SVJB ^{R/L} 16-50AE	●	●	50	40	39	300	75	91	49	4.5	-	7°							
Steel	S12M-SVJP ^{R/L} 08-16A	●	●	16	12	11	150	26	33	21	2	-	5°	0.2	No	Fig.3	SB-2050TR	FT-6	
	S12M-SVJC ^{R/L} 08-16A	●	●	16	12	11	150	26	33	20	2	-	5°	0.4			SB-2570TR	FT-8	
	S16Q-SVJC ^{R/L} 08-20A	●	●	20	16	15	180	36	43	22	2	-	5°				Fig.4	SB-40125TRN	FT-15
	S20R-SVJB ^{R/L} 11-25A	●	●	25	20	19	200	37.5	48	30	2	-	5°						
	S25S-SVJB ^{R/L} 11-30A	●	●	30	25	24	250	45	58	33	3.5	-	5°						
	S32S-SVJB ^{R/L} 16-40A	●	●	40	32	31	250	60	74	45	3.5	-	8°						
S40T-SVJB ^{R/L} 16-50A	●	●	50	40	39	300	75	91	49	4.5	-	7°							
Excellent Bar	A10L-SVPC ^{R/L} 08-14AE	●	●	14	10	9	140	24	-	21	8.5	3	8°	0.4	Yes	Fig.5	SB-2050TR	FT-6	
	A12M-SVPB ^{R/L} 11-18AE	●	●	18	12	11	150	29	-	26	11	4.5	8°				Fig.6	SB-2570TR	FT-8
	A16Q-SVPB ^{R/L} 11-22AE	●	●	22	16	15	180	35	-	33	13.5	5	5°						
	A20R-SVPB ^{R/L} 11-26AE	●	●	26	20	19	200	41	-	39	15.5	5	5°			Fig.7		SB-40125TRN	FT-15
	A25S-SVPB ^{R/L} 16-31AE	●	●	31	25	24	250	51	-	49	18	5	13°						
	A32S-SVPB ^{R/L} 16-40AE	●	●	40	32	31	250	54	-	53	23	6.5	9°						
Steel	S10L-SVPC ^{R/L} 08-14A	●	●	14	10	9	140	24	-	21	8.5	3	8°	0.4	No	Fig.7	SB-2050TR	FT-6	
	S12M-SVPB ^{R/L} 11-18A	●	●	18	12	11	150	29	-	26	11	4.5	8°				Fig.8	SB-2570TR	FT-8
	S16Q-SVPB ^{R/L} 11-22A	●	●	22	16	15	180	35	-	33	13.5	5	5°						
	S20R-SVPB ^{R/L} 11-26A	●	●	26	20	19	200	41	-	39	15.5	5	5°			Fig.9		SB-40125TRN	FT-15
	S25S-SVPB ^{R/L} 16-31A	●	●	31	25	24	250	51	-	49	18	5	13°						
	S32S-SVPB ^{R/L} 16-40A	●	●	40	32	31	250	54	-	53	23	6.5	9°						
Carbide	E10N-SVPC ^{R/L} 08-14A	●		14	10	9	160	20	-	18.5	8.5	3	8°	0.4	Yes	Fig.9	SB-2050TR	FT-6	
	E12Q-SVPB ^{R/L} 11-18A	●		18	12	11	180	23	-	22	11	4.5	8°				Fig.10	SB-2570TR	FT-8
	E16X-SVPB ^{R/L} 11-22A	●		22	16	15	220	28	-	27	13.5	5	5°						
	E20S-SVPB ^{R/L} 11-26A	●		26	20	19	250	32	-	31	15.5	5	5°						
	E25T-SVPB ^{R/L} 16-31A	●		31	25	24	300	38	-	37	18	5	13°						

● Spare Parts

Description	Spare Parts		
	Shim	Shim Screw	Wrench (for Shim Screw)
			
32S-SVJB ^{R/L} 16-40A	SVN-32N	SS-4N	LW-4
40T-SVJB ^{R/L} 16-50A			
25S-SVPB ^{R/L} 16-31A			
32S-SVPB ^{R/L} 16-40A			

● Applicable Inserts

Applications	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Low Feed / Precision	Non-ferrous Metals	Non-ferrous Metals	
Ref. Page	B75	B72, B73	B72	B72, B73	B72	B72, B76	B73	B76	B73	B73	
Toolholder	Insert	CK	VF	GP	HQ	^{R/L} -F	^{R/L} -FSF	^{R/L} -Y	F ^{R/L} -USF	AH	^{R/L} -A3
											
	...-SVJP ^{R/L} 08-...	VPGT0802..	-	-	-	-	VPET0802..	-	VPET0802..	-	-
	...-SVJC ^{R/L} 08-...	-	VCMT0802..	-	VCMT0802..	-	-	-	-	-	-
	...-SVJB ^{R/L} 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-	-
	...-SVJB ^{R/L} 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..	VCGT1604..
	...-SVPC ^{R/L} 08-...	-	VCMT0802..	-	VCMT0802..	-	-	-	-	-	-
	...-SVPB ^{R/L} 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-	-
	...-SVPB ^{R/L} 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..	VCGT1604..
Applications	Non-ferrous Metals	Hard Materials									
Ref. Page	C22	C14									
Toolholder	Insert	PCD	CBN								
											
	...-SVJP ^{R/L} 08-...	-	-								
	...-SVJC ^{R/L} 08-...	VCMT0802..	VCGW0802..								
	...-SVJB ^{R/L} 11-...	VBMT1103..	VBGW1103..								
	...-SVJB ^{R/L} 16-...	VBMT1604..	VBGW1604..								
	...-SVPC ^{R/L} 08-...	VCMT0802..	VCGW0802..								
	...-SVPB ^{R/L} 11-...	VBMT1103..	VBGW1103..								
	...-SVPB ^{R/L} 16-...	VBMT1604..	VBGW1604..								

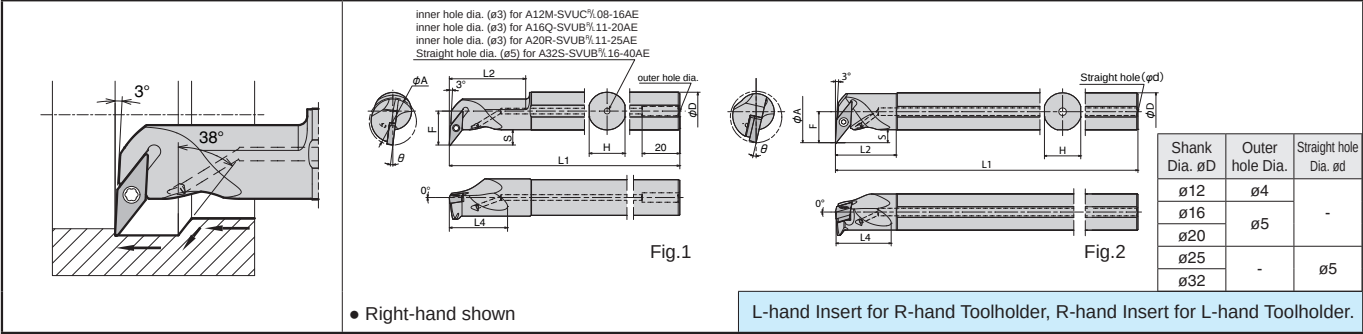
* Use of VBGT1103..-Y / VBGT1604..-Y with A-SVJB-AE / S-SVJB-A is not recommended. For recommended cutting conditions, see page ● F82~F83

● : Std. Item

Dynamic Bar [VB□□, VC□□Insert]

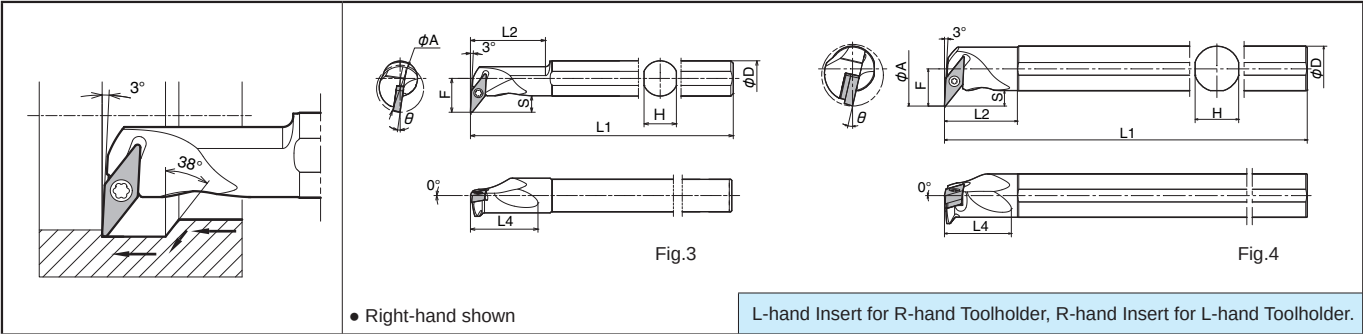
A-SVUC(B)-AE Excellent Bar (Copying)

Max. Overhang Length L/D≈5.5



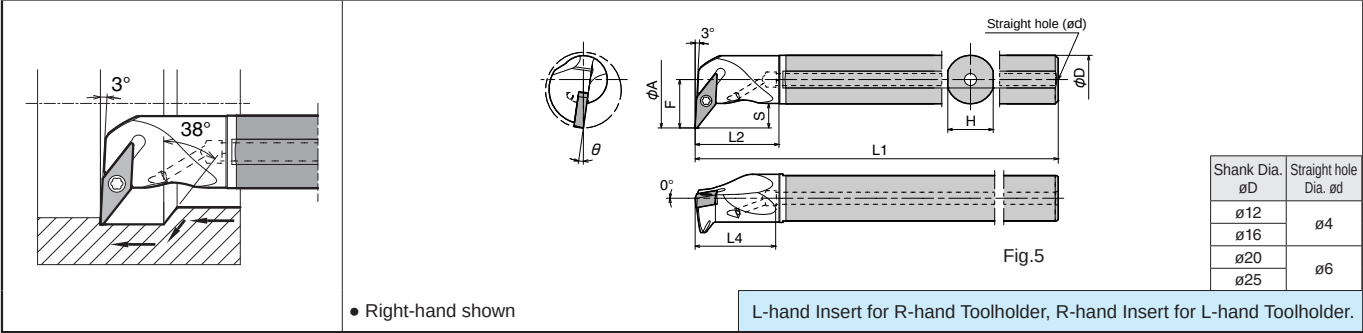
S-SVUC(B)-A Steel Bar (Copying)

Max. Overhang Length L/D≈4



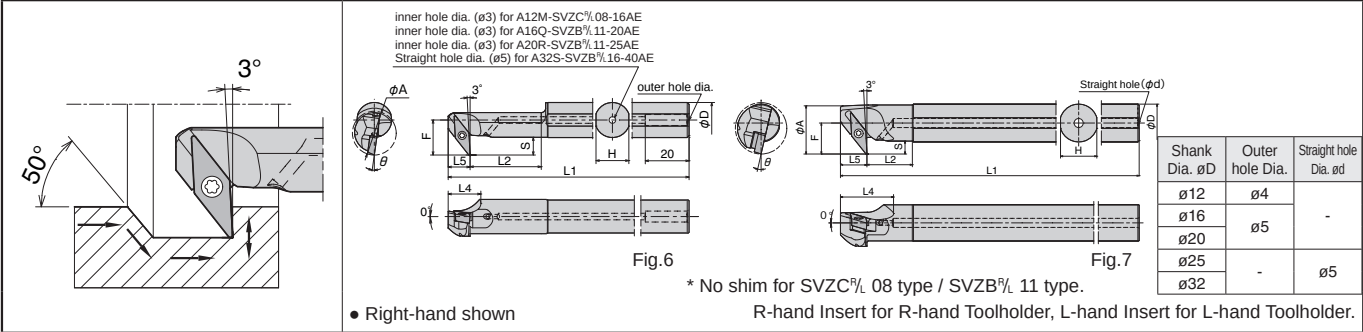
E-SVUC(B)-A Carbide Shank Bar (Copying)

Max. Overhang Length L/D≈7



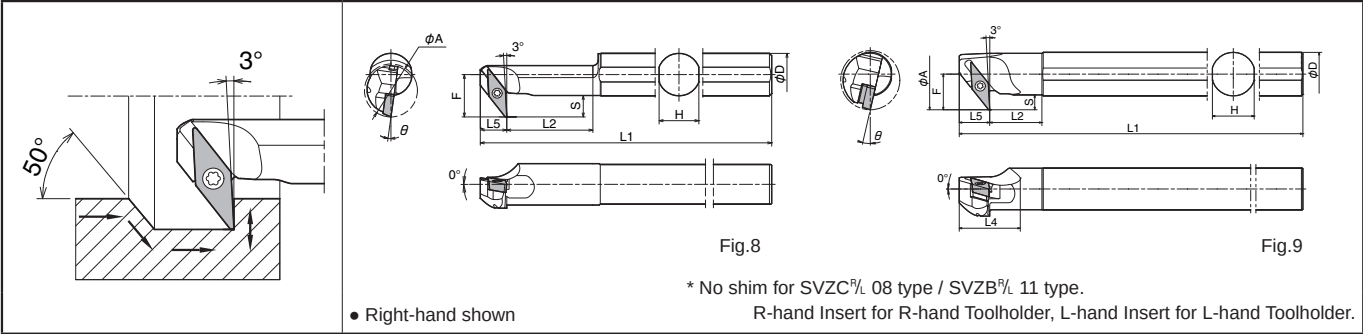
A-SVZC(B)-AE Excellent Bar (Back Boring)

Max. Overhang Length L/D≈5.5

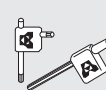


S-SVZC(B)-A Steel Bar (Back Boring)

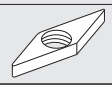
Max. Overhang Length L/D≈4



● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Coolant Hole	Drawing	Spare Parts	
		R	L		øA	øD	H	L1	L2	L4	L5	F					S	Clamp Screw
																		
Excellent Bar	A12M-SVUC ^{R/L} 08-16AE	●	●	16	12	11	150	25.5	23	-	11.5	5.5	8°	0.4	Yes	Fig.1	SB-2050TR	FT-6
	A16Q-SVUB ^{R/L} 11-20AE	●	●	20	16	15	180	32.5	27	-	16	8	8°				SB-2570TR	FT-8
	A20R-SVUB ^{R/L} 11-25AE	●	●	25	20	19	200	40.5	31	-	18	8	7°			Fig.2 Fig.1	SB-40125TRN	FT-15
	A25S-SVUB ^{R/L} 16-34AE	●	●	34	25	24	250	40	37	-	20.5	8.5	13°					
	A32S-SVUB ^{R/L} 16-40AE	●	●	40	32	31	250	84	47	-	28	12	9°					
Steel	S12M-SVUC ^{R/L} 08-16A	●	●	16	12	11	150	25.5	23	-	11.5	5.5	8°	0.4	No	Fig.3	SB-2050TR	FT-6
	S16Q-SVUB ^{R/L} 11-20A	●	●	20	16	15	180	32.5	27	-	16	8	8°				SB-2570TR	FT-8
	S20R-SVUB ^{R/L} 11-25A	●	●	25	20	19	200	40.5	31	-	18	8	7°			Fig.4 Fig.3	SB-40125TRN	FT-15
	S25S-SVUB ^{R/L} 16-34A	●	●	34	25	24	250	40	37	-	20.5	8.5	13°					
	S32S-SVUB ^{R/L} 16-40A	●	●	40	32	31	250	84	47	-	28	12	9°					
Carbide	E12Q-SVUC ^{R/L} 08-18A	●		18	12	11	180	23	22	-	11.5	5.5	8°	0.4	Yes	Fig.5	SB-2050TR	FT-6
	E16X-SVUB ^{R/L} 11-25A	●		25	16	15	220	28	27	-	16	8	8°				SB-2570TR	FT-8
	E20S-SVUB ^{R/L} 11-29A	●		29	20	19	250	32	30	-	18	8	7°				SB-40125TRN	FT-15
	E25T-SVUB ^{R/L} 16-34A	●		34	25	24	300	38	37	-	21	8.5	13°					
Excellent Bar	A12M-SVZC ^{R/L} 08-16AE	●	●	16	12	11	150	25.5	14	7.5	11.5	5.5	8°	0.4	Yes	Fig.6	SB-2050TR	FT-6
	A16Q-SVZB ^{R/L} 11-20AE	●	●	20	16	15	180	32.5	20	10	16	8	8°				SB-2570TR	FT-8
	A20R-SVZB ^{R/L} 11-25AE	●	●	25	20	19	200	40.5	23	10	18	8	7°			Fig.7 Fig.6	SB-40125TRN	FT-15
	A25S-SVZB ^{R/L} 16-34AE	●	●	34	25	24	250	30	34	17.5	20.5	8.5	13°					
	A32S-SVZB ^{R/L} 16-40AE	●	●	40	32	31	250	72.5	36	17.5	28	12	9°					
Steel	S12M-SVZC ^{R/L} 08-16A	●	●	16	12	11	150	25.5	14	7.5	11.5	5.5	8°	0.4	No	Fig.8	SB-2050TR	FT-6
	S16Q-SVZB ^{R/L} 11-20A	●	●	20	16	15	180	32.5	20	10	16	8	8°				SB-2570TR	FT-8
	S20R-SVZB ^{R/L} 11-25A	●	●	25	20	19	200	40.5	23	10	18	8	7°			Fig.9 Fig.8	SB-40125TRN	FT-15
	S25S-SVZB ^{R/L} 16-34A	●	●	34	25	24	250	30	34	17.5	20.5	8.5	13°					
	S32S-SVZB ^{R/L} 16-40A	●	●	40	32	31	250	72.5	36	17.5	28	12	9°					

● Spare Parts

Description	Spare Parts		
	Shim	Shim Screw	Wrench (for Shim Screw)
			
25 -SVUB ^{R/L} 16-34A	SVN-32N	SS-4N	LW-4
32S-SVUB ^{R/L} 16-40A			
25S-SVZB ^{R/L} 16-34A			
32S-SVZB ^{R/L} 16-40A			

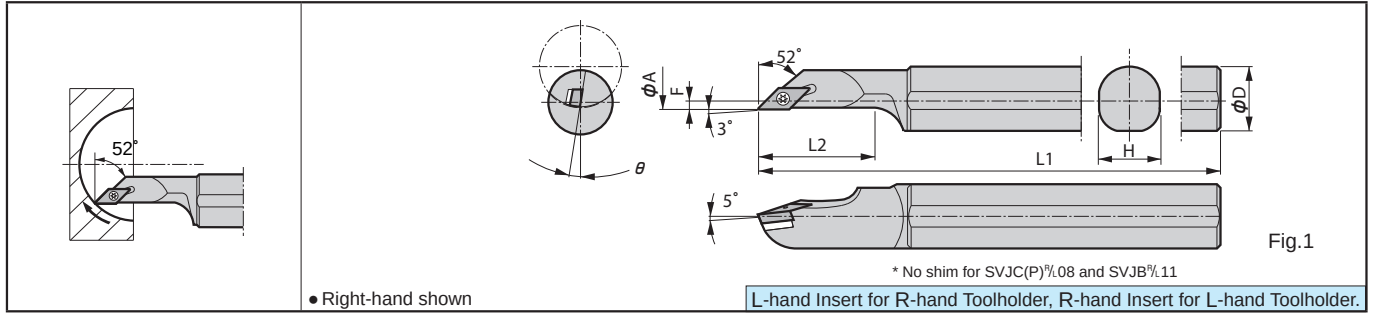
● Applicable Inserts

Applications	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Low Feed / Precision	Non-ferrous Metals	Non-ferrous Metals
Ref. Page	-	B72, B73	B72	B72, B73	B72	B72	B73	-	B73	B73
Insert	CK	VF	GP	HQ	^{R/L} -F	^{R/L} -FSF	^{R/L} -Y	F ^{R/L} -USF	AH	^{R/L} -A3
Toolholder										
...SVUC ^{R/L} 08-...	-	VCMT0802..	-	VCMT0802..	-	-	-	-	-	-
...SVUB ^{R/L} 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-	-
...SVUB ^{R/L} 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..	VCGT1604..
...SVZC ^{R/L} 08-...	-	VCMT0802..	-	VCMT0802..	-	-	-	-	-	-
...SVZB ^{R/L} 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-	-
...SVZB ^{R/L} 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..	VCGT1604..
Applications	Non-ferrous Metals	Hard Materials								
Ref. Page	C22	C14								
Insert	PCD	CBN								
Toolholder										
...SVUC ^{R/L} 08-...	VCMT0802..	VCGW0802..								
...SVUB ^{R/L} 11-...	VBMT1103..	VBGW1103..								
...SVUB ^{R/L} 16-...	VBMT1604..	VBGW1604..								
...SVZC ^{R/L} 08-...	VCMT0802..	VCGW0802..								
...SVZB ^{R/L} 11-...	VBMT1103..	VBGW1103..								
...SVZB ^{R/L} 16-...	VBMT1604..	VBGW1604..								

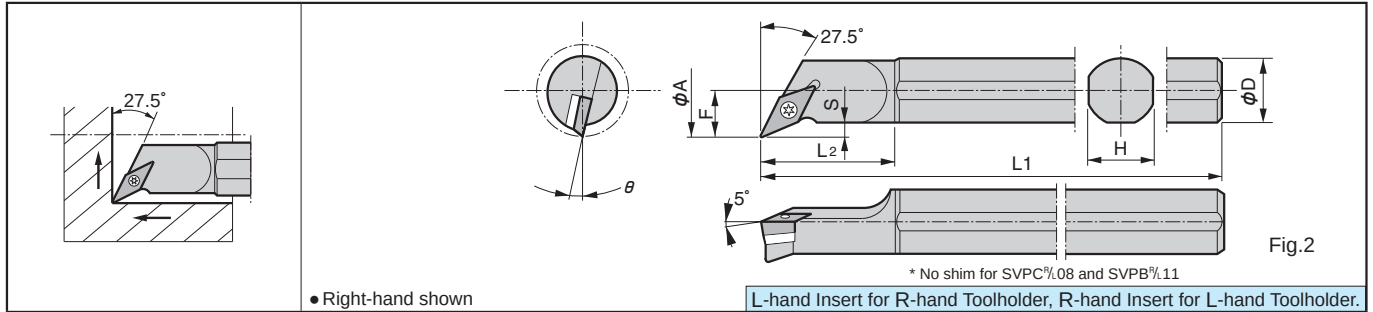
For recommended cutting conditions, see page ● F82~F83

S...SVJB(C)-E / S...SVJP-E Excellent Bar (Internal Spherical Machining / Internal Facing)

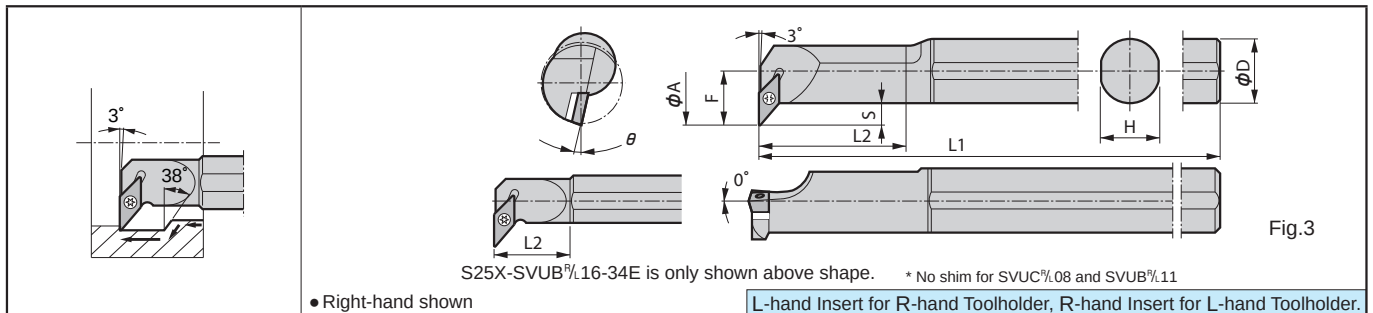
Max. Overhang Length L/D=--5

**S...SVPB(C)-E** Excellent Bar (Copying / Undercutting)

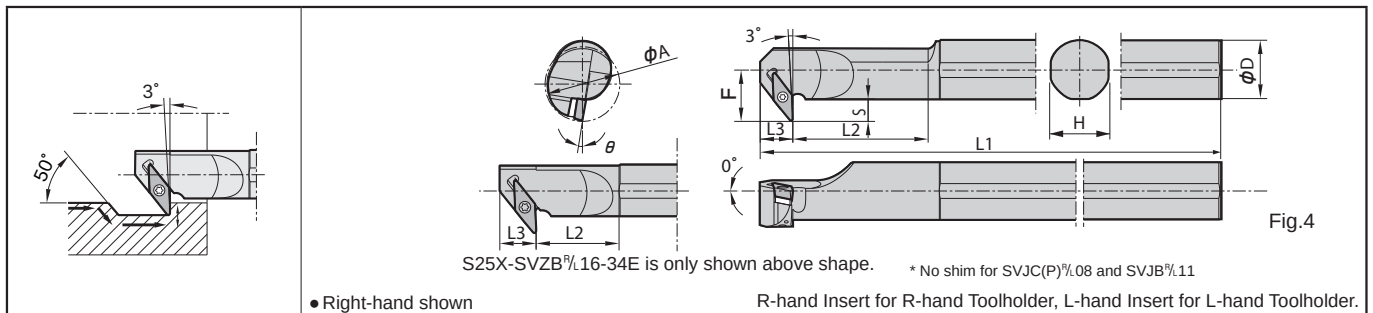
Max. Overhang Length L/D=--5

**S...SVUB(C)-E** Excellent Bar (Copying)

Max. Overhang Length L/D=--5

**S...SVZB(C)-E** Excellent Bar (Back Boring)

Max. Overhang Length L/D=--5



● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● **F85-F88** (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Dimension (mm)										θ	Standard Corner R (r)	Drawing
		R	L	ϕA	ϕD	H	L1	L2	L3	F	S			
S12M-SVJP ^{R/L} 08-16E	SVJP ^{R/L} 1612B-08E	□	□	16	12	11	150	26	-	2	-	5°	0.2	Fig.1
S12M-SVJC ^{R/L} 08-16E	SVJC ^{R/L} 1612B-08E	□	□	16	12	11	150	26	-	2	-	5°	0.4	
S16Q-SVJC ^{R/L} 08-20E	2016B-08E	□	□	20	16	15	180	36	-	2	-	5°	0.4	
S20R-SVJB ^{R/L} 11-25E	SVJB ^{R/L} 2520B-11E	□	□	25	20	19	200	37.5	-	2	-	5°	0.4	
S25S-SVJB ^{R/L} 11-30E	3025B-11E	□	□	30	25	24	250	45	-	3.5	-	5°	0.4	
S32S-SVJB ^{R/L} 16-40EN	-	□	□	40	32	31	250	60	-	3.5	-	8°	0.8	Fig.2
S40T-SVJB ^{R/L} 16-50EN	-	□	□	50	40	39	300	75	-	4.5	-	7°	0.8	
S10M-SVPC ^{R/L} 08-16E	SVQC ^{R/L} 1610B-08E	□	□	16	10	9	150	25	-	8	3	8°	0.4	
S12M-SVPB ^{R/L} 11-20E	SVQB ^{R/L} 2012B-11E	□	□	20	12	10.6	150	28	-	10	4.5	8°	0.4	
S16Q-SVPB ^{R/L} 11-25E	2516B-11E	□	□	25	16	14.6	180	-	-	12.5	5	5°	0.4	
S25X-SVPB ^{R/L} 16-34EN	-	□	□	34	25	23.6	220	50	-	17	5	13°	0.8	
S32S-SVPB ^{R/L} 16-40EN	-	□	□	40	32	30.6	250	55	-	22	6.5	9°	0.8	

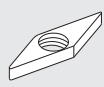
* For applications of S- SVJO type, see F49.

□ : Check Availability

● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Drawing
		R	L		ϕD	H	L1	L2	L3	F	S				
S12M-SVUC ^{R/L} 08-16E	SVUC ^{R/L} 1612B-08E	☐	☐	16	12	11	150	25.5	-	11	5.5		8°	0.4	Fig.3
S16Q-SVUB ^{R/L} 11-20E	SVUB ^{R/L} 2016B-11E	☐	☐	20	16	14.6	180	32.5	-	15.5	8		8°	0.4	
S20R-SVUB ^{R/L} 11-25E	2520B-11E	☐	☐	25	20	18.6	200	40.5	-	17.5	8		7°	0.4	
S25X-SVUB ^{R/L} 16-34EN	-	☐	☐	34	25	23.6	220	40	-	20.5	8.5		13°	0.8	
S32S-SVUB ^{R/L} 16-40EN	-	☐	☐	40	32	30.6	250	84	-	27.5	12		9°	0.8	Fig.4
S12M-SVZC ^{R/L} 08-16E	-	☐	☐	16	12	11	150	25.5	7.5	11	5.5		8°	0.4	
S16Q-SVZB ^{R/L} 11-20E	-	☐	☐	20	16	15	180	32.5	10	15.5	8		8°	0.4	
S20R-SVZB ^{R/L} 11-25E	-	☐	☐	25	20	19	200	40.5	10	17.5			7°	0.4	
S25X-SVZB ^{R/L} 16-34EN	-	☐	☐	34	25	24	220	40	17.5	20.5	8.5		13°	0.8	
S32S-SVZB ^{R/L} 16-40EN	-	☐	☐	40	32	31	250	72.5	17.5	27.5	12		9°	0.8	

● Spare Parts

Description	Spare Parts							
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench (for Shim Screw)			
								
S12M-SVJP ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-			
S12M-SVJC ^{R/L} 08-16E								
S16Q-SVJC ^{R/L} 08-20E								
S20R-SVJB ^{R/L} 11-25E	SB-2570TR	FT-8	-	-	-			
S25S-SVJB ^{R/L} 11-30E								
S32S-SVJB ^{R/L} 16-40EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4			
S40T-SVJB ^{R/L} 16-50EN								
S10M-SVPC ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-			
S12M-SVPB ^{R/L} 11-20E	SB-2570TR	FT-8						
S16Q-SVPB ^{R/L} 11-25E								
S25X-SVPB ^{R/L} 16-34EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4			
S32S-SVPB ^{R/L} 16-40EN								
S12M-SVUC ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-			
S16Q-SVUB ^{R/L} 11-20E	SB-2570TR	FT-8						
S20R-SVUB ^{R/L} 11-25E								
S25X-SVUB ^{R/L} 16-34EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4			
S32S-SVUB ^{R/L} 16-40EN								
S12M-SVZC ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-			
S16Q-SVZB ^{R/L} 11-20E	SB-2570TR	FT-8						
S20R-SVZB ^{R/L} 11-25E								
S25X-SVZB ^{R/L} 16-34EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4			
S32S-SVZB ^{R/L} 16-40EN								

● Applicable Inserts

Applications	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Medium	Low Feed / Precision	Non-ferrous Metals
Ref. Page	B75	B72, B73	B72	B72, B73	B72	B72, B76	B73	B72	B76	B73
Insert	CK	VF	GP	HQ	^{R/L} -F	^{R/L} -FSF	^{R/L} -Y	FN-Z	F ^{R/L} -USF	Without Indication
Toolholder										
...-SVOP ^{R/L} 08-...	VPGT0802..	-	-	-	-	VPET0802..	-	-	VPET0802..	-
...-SVOC ^{R/L} 08-...	-	VCMT0802..	-	VCMT0802..	-	-	-	-	-	-
...-SVOB ^{R/L} 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	VBGT1103..	-	-
...-SVOB ^{R/L} 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	-	VCGT1604..
Applications	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials						
Ref. Page	B73	B73	C22	C14						
Insert	AH	^{R/L} -A3	PCD	CBN						
Toolholder										
...-SVOP ^{R/L} 08-...	-	-	-	-						
...-SVOC ^{R/L} 08-...	-	-	VCMT0802..	VCGW0802..						
...-SVOB ^{R/L} 11-...	-	-	VBMT1103..	VBGW1103..						
...-SVOB ^{R/L} 16-...	VCGT1604..	VCGT1604..	VBMT1604..	VBGW1604..						

* Use of VBGT1103...Y / VBGT1604...Y with A-SVJB-AE / S-SVJB-A is not recommended. For recommended cutting conditions, see page ● F82~F83

☐ : Check Availability

F

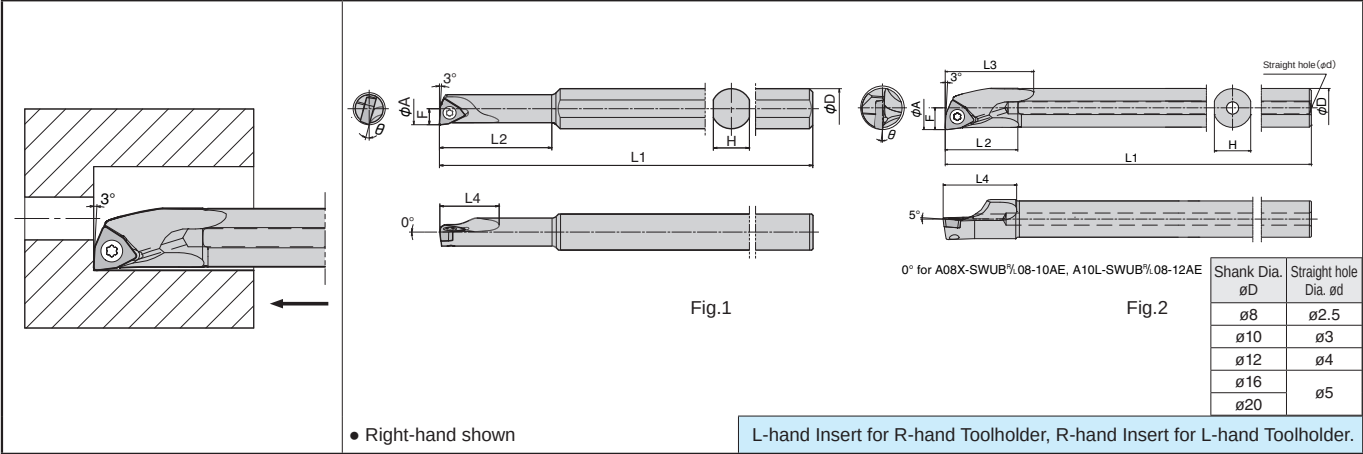


Boring

Dynamic Bar [WB ☐☐ , WP ☐☐ Insert]

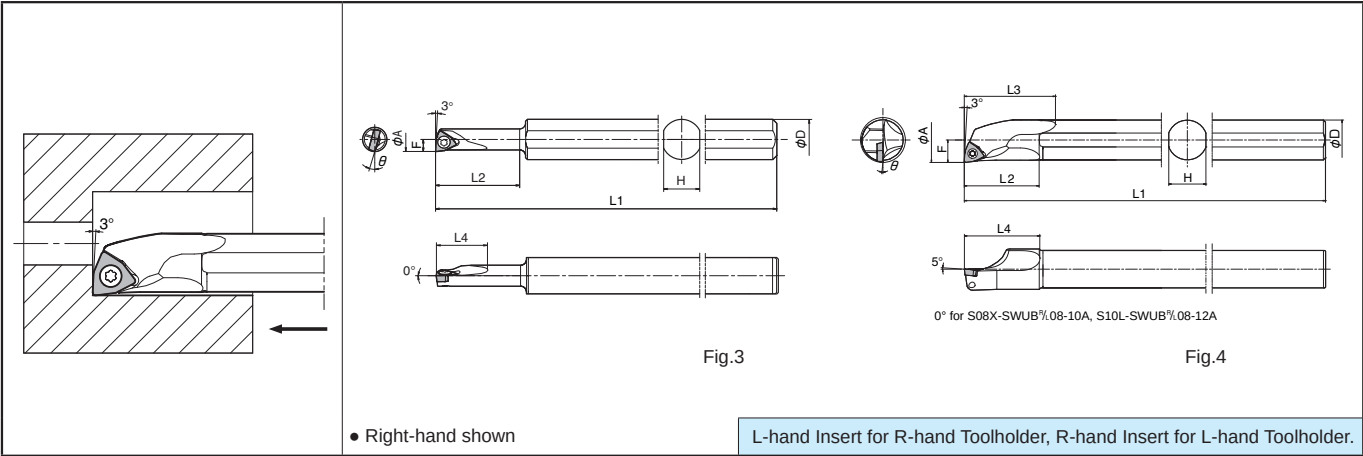
S / A-SWUB(P)-AE Excellent Bar (Boring)

Max. Overhang Length L/D=~5.5



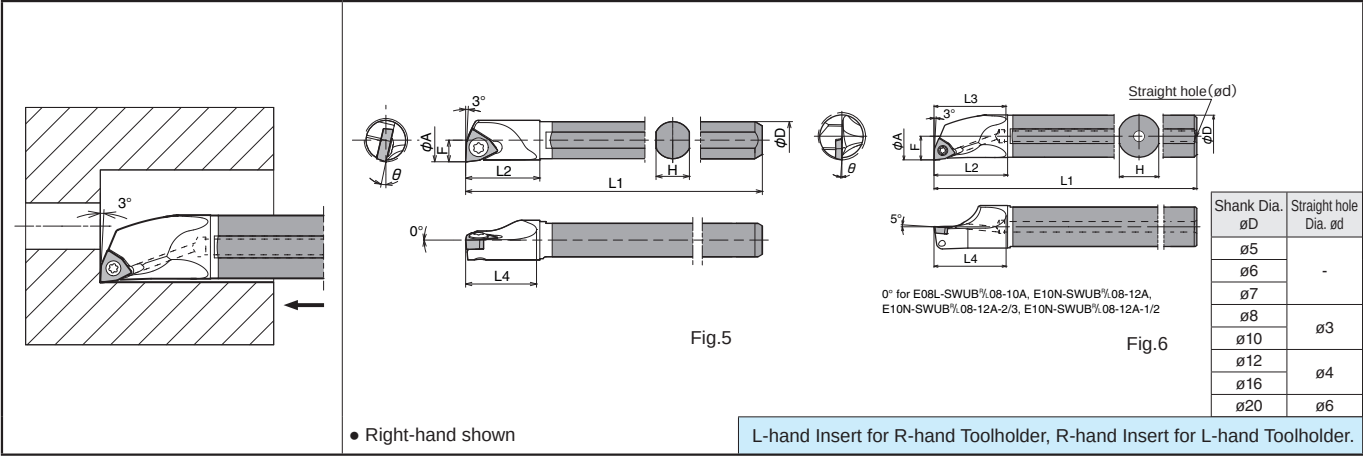
S-SWUB(P)-A Steel Bar (Boring)

Max. Overhang Length L/D=~4



E(C)-SWUB(P)-A Carbide Shank Bar (Boring)

Max. Overhang Length L/D=~7



F

Boring

● Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (R)	Coolant Hole	Drawing	Spare Parts	
		R	L	øA	øD	H	L1	L2	L3	L4	F	S					Clamp Screw	Wrench
																		
Excellent Bar	S10H-SWUB ^{R/L} 06-06AE	●	●	6	10	9	100	21	-	13	3	-	15°	0.2	No	Fig.1	SB-2035TR	FT-6
	S10H-SWUB ^{R/L} 06-07AE	●	●	7	10	9	100	24.5	-	15	3.5	-	13°				SB-2050TR	
	S10H-SWUB ^{R/L} 08-08AE	●	●	8	10	9	100	28	-	15	4	-	15°					
	A08X-SWUB ^{R/L} 08-10AE	●	●	10	8	7	120	16	21	16	5	-	13°					
	A10L-SWUB ^{R/L} 08-12AE	●	●	12	10	9	140	20	25	20	6	-	10°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A12M-SWUP ^{R/L} 11-14AE	●	●	14	12	11	150	24	30	24	7	-	4°				SB-4065TR	FT-15
	A16Q-SWUP ^{R/L} 11-18AE	●	●	18	16	15	180	30	37	30	9	-	1°					
	A16Q-SWUP ^{R/L} 16-18AE	●	●										3.5°					
	A20R-SWUP ^{R/L} 16-22AE	●	●	22	20	19	200	36	46	37	11	-	2°	0.8				
Steel	S10H-SWUB ^{R/L} 06-06A	●	●	6	10	9	100	21	-	13	3	-	15°	0.2		Fig.3	SB-2035TR	FT-6
	S10H-SWUB ^{R/L} 06-07A	●	●	7	10	9	100	25	-	15	3.5	-	13°				SB-2050TR	
	S10H-SWUB ^{R/L} 08-08A	●	●	8	10	9	100	28	-	15	4	-	15°					
	S08X-SWUB ^{R/L} 08-10A	●	●	10	8	7	120	16	21	16	5	-	13°					
	S10L-SWUB ^{R/L} 08-12A	●	●	12	10	9	140	20	25	20	6	-	10°	0.4		Fig.4	SB-2545TR	FT-8
	S12M-SWUP ^{R/L} 11-14A	●	●	14	12	11	150	24	30	24	7	-	4°				SB-4065TR	FT-15
	S16Q-SWUP ^{R/L} 11-18A	●	●	18	16	15	180	30	37	30	9	-	1°					
	S16Q-SWUP ^{R/L} 16-18A	●	●										3.5°					
	S20R-SWUP ^{R/L} 16-22A	●	●	22	20	19	200	36	46	37	11	-	2°	0.8				
Carbide	C05H-SWUB ^{R/L} 06-06A	●	●	6	5	4.4	100	11	-	11	3	-	13°	0.2	No	Fig.5	SB-2035TR	FT-6
	C06J-SWUB ^{R/L} 06-07A	●	●	7	6	5.4	110	12	-	12	3.5	-	13°					
	C07K-SWUB ^{R/L} 08-08A	●	●	8	7	6.4	125	13	-	13	4	-	13°					
	E08L-SWUB ^{R/L} 08-10A	●	●	10	8	7	140	16	15	15	5	-	13°					
	E10N-SWUB ^{R/L} 08-12A	●	●	12	10	9	160	20	19	19	6	-	10°	0.4	Yes	Fig.6	SB-2050TR	FT-6
	E10N-SWUB ^{R/L} 08-12A-2 / 3	●					105					-						
	E10N-SWUB ^{R/L} 08-12A-1 / 2	●					80					-						
	E12Q-SWUP ^{R/L} 11-14A	●	●	14	12	11	180	23	22	22	7	-	4°				SB-2545TR	FT-8
	E12Q-SWUP ^{R/L} 11-14A-2 / 3	●					120					-						
	E12Q-SWUP ^{R/L} 11-14A-1 / 2	●					90					-						
	E16X-SWUP ^{R/L} 11-18A	●	●	18	16	15	220	28	27	27	9	-	1°	0.4	Yes	Fig.6	SB-2545TR	FT-8
	E16X-SWUP ^{R/L} 11-18A-2 / 3	●					145					-						
	E16X-SWUP ^{R/L} 11-18A-1 / 2	●					110					-						
	E16X-SWUP ^{R/L} 16-18A	●	●				220					-	3.5°					
	E16X-SWUP ^{R/L} 16-18A-2 / 3	●					145					-						
	E16X-SWUP ^{R/L} 16-18A-1 / 2	●					110					-						
	E20S-SWUP ^{R/L} 16-22A	●	●	22	20	19	250	32	31	31	11	-	2°	0.8		Fig.6	SB-4065TR	FT-15
	E20S-SWUP ^{R/L} 16-22A-2 / 3	●					165					-						
	E20S-SWUP ^{R/L} 16-22A-1 / 2	●					125					-						

● Applicable Inserts

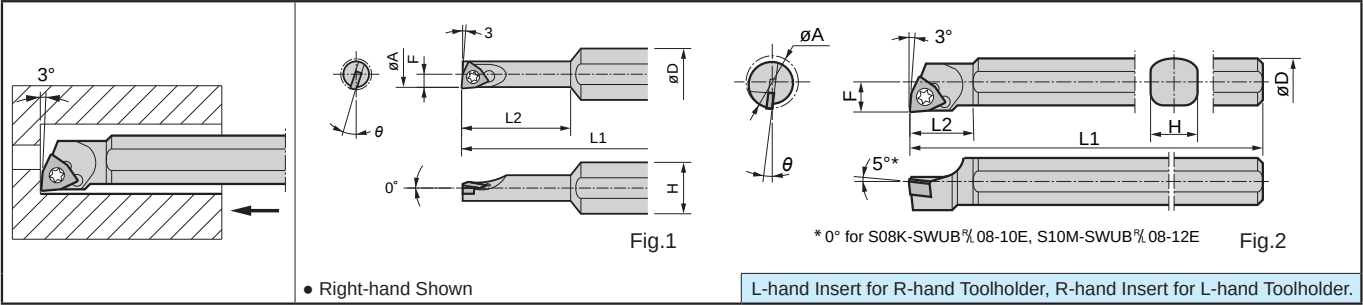
Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard Materials	
Ref. Page	B77	B79	B77	B79	B77	B79	B77, B79	C22	C15	
Insert	CF	GP	^{R/L} -DP	HQ	^{R/L} -F	^{R/L} -Y	Without Chipbreaker	PCD	CBN	
Toolholder										
...-SWUB ^{R/L} 06-...	WBGTO601..	-	WBMT0601..	-	WBGTO601..	-	WBGW0601..	WBMT0601..	WBGW0601..	
...-SWUB ^{R/L} 08-...	-	-	WBMT0802..	-	WBGTO802..	-	WBGW0802..	WBMT0802..	WBGW0802..	
...-SWUP ^{R/L} 11-...	-	WPMT1102..	-	WPMT1102..	-	WPGT1102..	WPGW1102..	WPMT1102..	-	
...-SWUP ^{R/L} 16-...	-	WPMT1603..	-	WPMT1603..	-	WPGT1603..	WPGW1603..	-	-	

For recommended cutting conditions, see page ● F82~F83

● : Std. Item □ : Check Availability

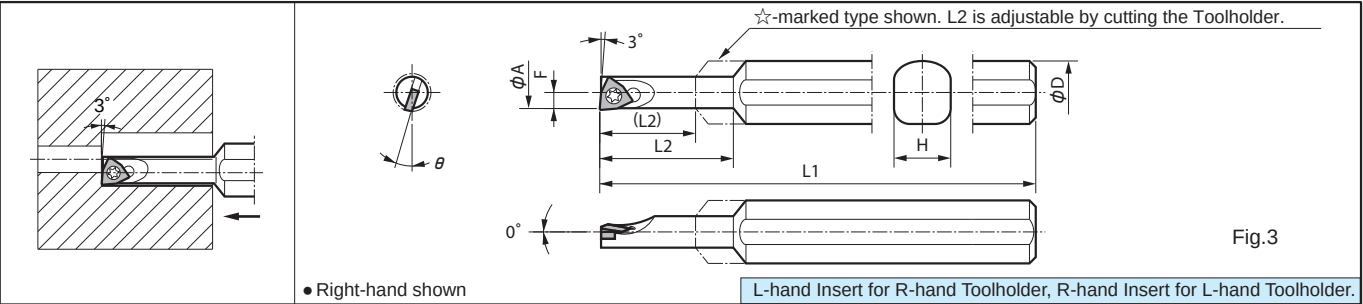
S...SWUP(B)-E Excellent Bar (Boring)

Max. Overhang Length $L/D \sim 5$



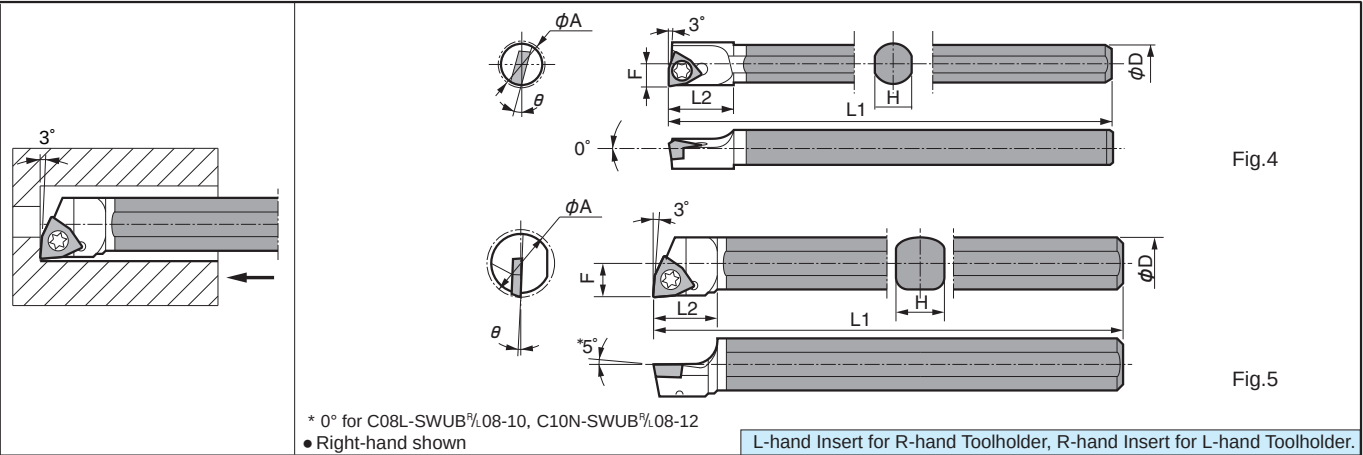
S...SWUB Steel Bar (Boring)

Max. Overhang Length $L/D \sim 3$



C...SWUP (B) Carbide Shank Bar (Boring)

Max. Overhang Length $L/D \sim 7$



● Toolholder Dimensions [Will be switched to Dynamic Bar, see ● F85~F88 (Alternative Toolholder Reference Table for Boring Bar)].

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R (°)	Drawing	Spare Parts		
		R	L		øA	øD	H	L1	L2	F						Clamp Screw	Wrench
																	
S10H -SWUB ^{R/L} 06 -06E	-	☐	☐	6	10	9	100	28	3			15°	0.2	Fig.1	SB-2040TR	FT-6	
SWUB ^{R/L} 06 -07E		☐	☐	7	10	9	100	32	3.5			13°			SB-2050TR		
S10J -SWUB ^{R/L} 08 -08E		☐	☐	8	10	9	110	37	4			15°			SB-2050TR		
S08K -SWUB ^{R/L} 08 -10E	SWUB ^{R/L} 1008B-08E	☐	☐	10	8	7	125	17	5			13°	0.2		SB-2050TR	FT-8	
S10M -SWUB ^{R/L} 08 -12E	1210B-08E	☐	☐	12	10	9	150	23	6			10°			SB-2545TR		
S12M -SWUP ^{R/L} 11 -14E	SWUP ^{R/L} 1412B-11E	☐	☐	14	12	11	150	26	7			4°			0.4		Fig.2
SWUP ^{R/L} 11 -16E	1612B-11E	☐	☐	16	12	11	150	29	8			2°	SB-4065TR				
S16N -SWUP ^{R/L} 11 -18E	1816B-11E	☐	☐	18	16	15	160	32	9			1°	SB-4065TR				
S16Q -SWUP ^{R/L} 16 -20E	2016B-16E	☐	☐	20	16	15	180	34	10			3°	0.8		SB-4065TR	FT-15	
S20R -SWUP ^{R/L} 16 -25E	2520B-16E	☐	☐	25	20	19	200	37	12.5			2°			SB-4065TR		
S10H -SWUB ^{R/L} 06 -06	SWUB ^{R/L} 0610B-06	☐	☐	6	10	9	100	21	3			15°	0.2		SB-2040TR	FT-6	
SWUB ^{R/L} 06 -06-15	0610B-06-15	☐	☐	6	10	9	100	(15)	3			13°			SB-2040TR		
S10H -SWUB ^{R/L} 06 -07	0710B-06	☐	☐	7	10	9	100	24.5	3.5			13°	0.2	Fig.3	SB-2050TR	FT-6	
S10J -SWUB ^{R/L} 08 -08	0810B-08	☐	☐	8	10	9	110	28	4			15°			SB-2050TR		
SWUB ^{R/L} 08 -08-20	0810B-08-20	☐	☐	8	10	9	110	(20)	4			15°	0.2		SB-2050TR	FT-6	
C05H -SWUB ^{R/L} 06 -06	SWUB ^{R/L} 0605B-06W	☐	☐	6	5	4.4	100	8	3			15°	0.2	Fig.4	SB-2040TR	FT-6	
C06J -SWUB ^{R/L} 06 -07	0706B-06W	☐	☐	7	6	5.4	110	9	3.5			13°			SB-2040TR		
C07K -SWUB ^{R/L} 08 -08	0807B-08W	☐	☐	8	7	6.4	125	11	4			15°	0.2		SB-2050TR	FT-6	
C08L -SWUB ^{R/L} 08 -10	1008B-08W	☐	☐	10	8	7	140	10	5			13°			SB-2050TR		
C10N -SWUB ^{R/L} 08 -12	1210B-08W	☐	☐	12	10	9	160	80	12	6		10°	0.4	Fig.5	SB-2545TR	FT-8	
SWUB ^{R/L} 08 -12-1 / 2	1210B-08W-1 / 2	☐	☐	12	10	9	80	12	6			10°			SB-2560TR		
SWUB ^{R/L} 08 -12-2 / 3	1210B-08W-2 / 3	☐	☐	12	10	9	105	12	6			10°			SB-2560TR		
C12Q -SWUP ^{R/L} 11 -14	SWUP ^{R/L} 1412B-11W	☐	☐	14	12	11	180	90	14	7		4°	0.4		SB-2545TR	FT-8	
SWUP ^{R/L} 11 -14-1 / 2	1412B-11W-1 / 2	☐	☐	14	12	11	90	14	7			4°			SB-2545TR		
SWUP ^{R/L} 11 -14-2 / 3	1412B-11W-2 / 3	☐	☐	14	12	11	120	14	7			4°			SB-2545TR		
C12Q -SWUP ^{R/L} 11 -16	1612B-11W	☐	☐	16	12	11	180	90	14	8		2°	0.4		SB-2560TR	FT-8	
SWUP ^{R/L} 11 -16-1 / 2	1612B-11W-1 / 2	☐	☐	16	12	11	90	14	8			2°			SB-2560TR		
SWUP ^{R/L} 11 -16-2 / 3	1612B-11W-2 / 3	☐	☐	16	12	11	120	14	8			2°			SB-2560TR		
C16X -SWUP ^{R/L} 11 -18	1816B-11W	☐	☐	18	16	15	220	110	14	9		1°	0.8	Fig.5	SB-4065TR	FT-15	
SWUP ^{R/L} 11 -18-1 / 2	1816B-11W-1 / 2	☐	☐	18	16	15	110	14	9			1°			SB-4065TR		
SWUP ^{R/L} 11 -18-2 / 3	1816B-11W-2 / 3	☐	☐	18	16	15	145	14	9			1°			SB-4065TR		
C16X -SWUP ^{R/L} 16 -20	2016B-16W	☐	☐	20	16	15	220	110	17	10		3°	0.8		SB-4065TR	FT-15	
SWUP ^{R/L} 16 -20-1 / 2	2016B-16W-1 / 2	☐	☐	20	16	15	110	17	10			3°			SB-4065TR		
SWUP ^{R/L} 16 -20-2 / 3	2016B-16W-2 / 3	☐	☐	20	16	15	145	17	10			3°			SB-4065TR		
C20S -SWUP ^{R/L} 16 -25	2520B-16W	☐	☐	25	20	19	250	125	19	12.5		2°			SB-4065TR	FT-15	
SWUP ^{R/L} 16 -25-1 / 2	2520B-16W-1 / 2	☐	☐	25	20	19	125	19	12.5			2°			SB-4065TR		
SWUP ^{R/L} 16 -25-2 / 3	2520B-16W-2 / 3	☐	☐	25	20	19	165	19	12.5			2°			SB-4065TR		

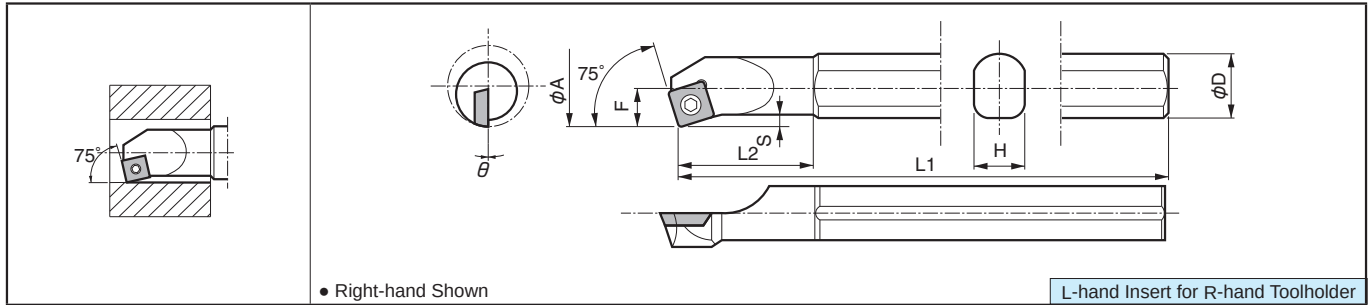
● Applicable Inserts

Applications	Finishing	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard Materials		
Ref. Page	B79	B77	B79	B77	B79	B77, B79	C22	C15		
Insert	GP	^{R/L} -DP	HQ	^{R/L} -F	^{R/L} -Y	Without Chipbreaker	PCD	CBN		
Toolholder										
---SWUB ^{R/L} 06---	-	WBMT0601..	-	WBGTO601..	-	WBGW0601..	WBMT0601..	WBGW0601..		
---SWUB ^{R/L} 08---	-	WBMT0802..	-	WBGTO802..	-	WBGW0802..	WBMT0802..	WBGW0802..		
---SWUP ^{R/L} 11---	WPMT1102..	-	WPMT1102..	-	WPGT1102..	WPGW1102..	WPMT1102..	-		
---SWUP ^{R/L} 16---	WPMT1603..	-	WPMT1603..	-	WPGT1603..	WPGW1603..	-	-		

For recommended cutting conditions, see page ● F82~F83

S...SSKP (Boring)

Max. Overhang Length L/D=--3



Toolholder Dimensions

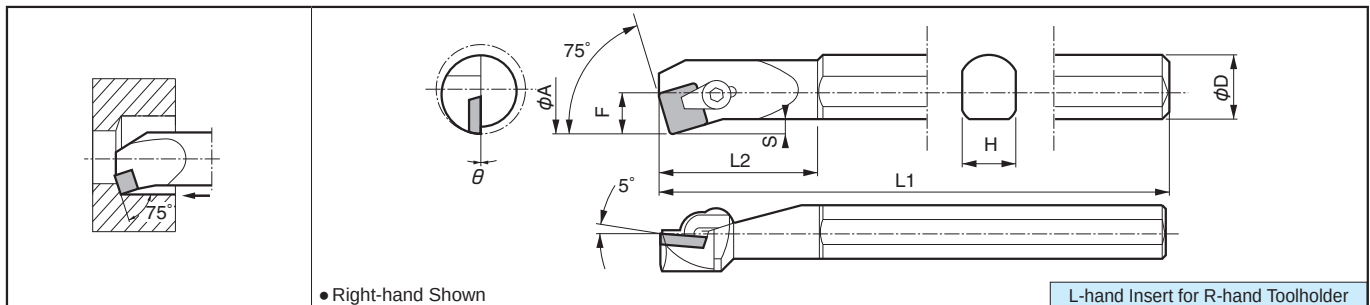
Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)						θ	Standard Corner-R (r)	Spare Parts	
		R	L		ϕA	ϕD	H	L1	L2	F	S		Clamp Screw	Wrench
S16Q-SSKP ^{R/L} 09-20	SSKP ^{R/L} 2016B-09	●		20	16	14	180	30	10	2.0	-3°	0.8	SB-4TR	FT-15
S20R-SSKP ^{R/L} 09-25		●		25	20	18	200	35	12.5	2.5	0°	0.8	GS-50S	FT-15
S25X-SSKP ^{R/L} 12-32	SSKP ^{R/L} 3225B-12	□		32	25	23	220	45	16	3.5	0°	0.8	GS-50S	LW-3
S32S-SSKP ^{R/L} 12-40		□		40	32	30	250	60	20	4.0	0°	0.8	GS-50	LW-3

Applicable Inserts

Applications	Finishing													
Ref. Page	B61													
Insert														
Toolholder														
...SSKP ^{R/L} 09...	SPGH0903..													
...SSKP ^{R/L} 12...	SPGH1203..													

S...CSKP (Boring)

Max. Overhang Length L/D=--3



Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)						θ	Standard Corner-R (r)	Spare Parts			
		R	L		ϕA	D	H	L1	L2	F	S		Clamp Set	Wrench	Shim	Shim Screw
S16N-CSKP ^{R/L} 09-20	CSKP ^{R/L} 2016B-09	●		20	16	14	160	40	10	2.0	0°	0.8	CPS-2	FH-2.5	-	-
S20Q-CSKP ^{R/L} 09-27		●		27	20	18	180	45	13.5	3.5	0°	0.8	CPS-2	FH-2.5	-	-
S25X-CSKP ^{R/L} 12-34	CSKP ^{R/L} 3425B-12	●		34	25	23	220	60	17	4.5	0°	0.8	CPS-3	-	LW-3	-
S32S-CSKP ^{R/L} 12-43		●		43	32	30	250	75	21.5	5.5	0°	0.8	CPS-3	-	LW-3	KPS-42

Applicable Inserts

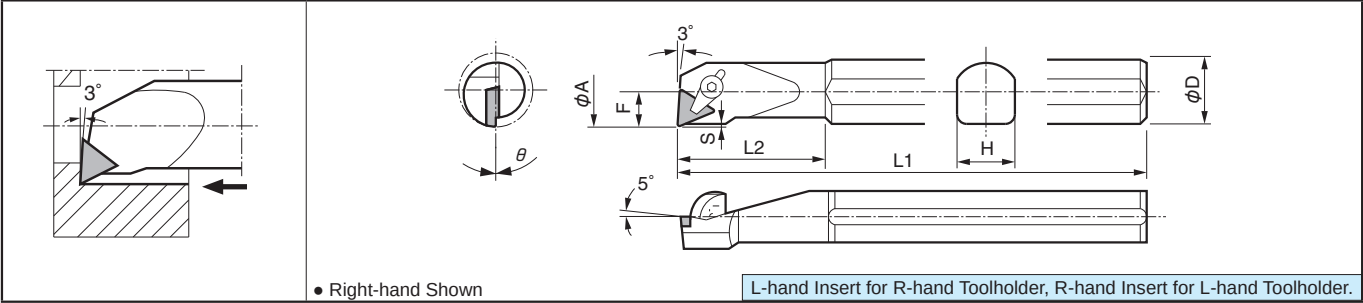
Applications	Medium	Medium	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals										
Ref. Page	B61	B61	B61	B61	B92	C23										
Insert	G	Standard		Without Chipbreaker	Ceramic	PCD										
Toolholder																
...CSKP ^{R/L} 09...	SPMR0903..	SPMR0903..	SPGR0903..	SPMN0903..	SPGN0903..	-										
...CSKP ^{R/L} 12...	SPMR1203..	SPMR1203..	SPGR1203..	SPMN1203..	SPGN1203..	SPGN1203..										

For recommended cutting conditions, see page [F82~F83](#)

● : Std. Item □ : Check Availability

S...CTUP (Boring)

Max. Overhang Length L/D=~3



Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)						θ	Standard Corner-R (r)	Spare Parts					
		R	L		$\varnothing A$	$\varnothing D$	H	L1	L2	F			S	Clamp Set		Wrench		Shim
																		
S12L-CTUP ^{R/L} 09-16	CTUP ^{R/L} 1612B-09	●	□	16	12	11	140	32	8	0.5	0°	0.4	CPS-1	-	FH-2	-	-	-
S16N-CTUP ^{R/L} 11-20	2016B-11	●	●	20	16	14	160	30	10	0.5	0°	0.4	-	CPS-2	FH-2.5	-	-	-
S20Q-CTUP ^{R/L} 11-27	2720B-11	●	●	27	20	18	180	40	13.5	1.3			-	CPS-2	FH-2.5	-	-	-
S25X-CTUP ^{R/L} 16-34	3425B-16	●	●	34	25	23	220	60	17	1.0	0°	0.8	-	CPS-3	-	LW-3	-	-
S32S-CTUP ^{R/L} 16-43	4332B-16	●	●	43	32	30	250	70	21.5				-	CPS-3	-	LW-3	KPT-32	SP3X10
S40X-CTUP ^{R/L} 16-50	5040B-16	●	●	50	40	37	315	80	25				-	CPS-3	-	LW-3	KPT-32	SP3X10

Applicable Inserts

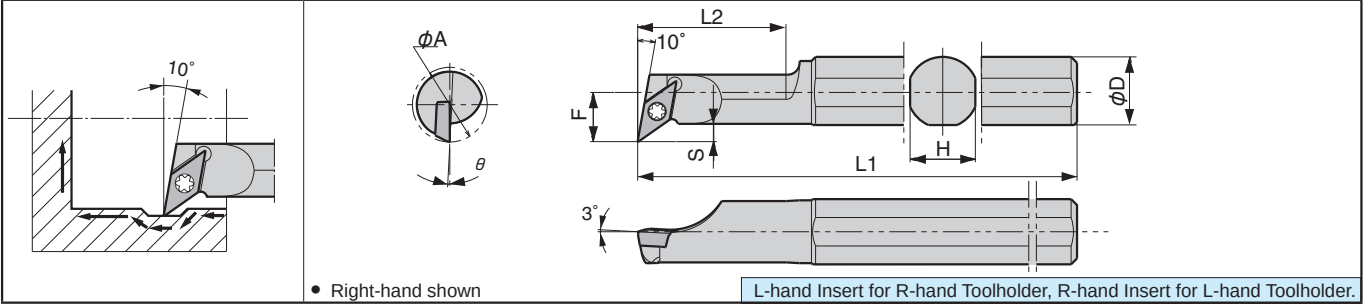
Applications	Finishing	Finishing-Medium	Medium	Medium	Finishing	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials
Ref. Page	B70	B70	B70	B70	B70	B70	B70	B92	C23	C15
Insert	GP	HQ	G	Standard	^{R/L} -F	^{R/L} -□	Without Chipbreaker	Ceramic	PCD	CBN
Toolholder										
...CTUP ^{R/L} 09...	-	-	TPMR0902..	-	TPGR0902..	-	TPGN0902..	-	TPGN0902..	-
...CTUP ^{R/L} 11...	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	-	TPGR1103..	TPMN1103.. TPGN1103..	TPGN1103..	TPGN1103..	TPGN1103..
...CTUP ^{R/L} 16...	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	-	TPGR1603..	TPMN1603.. TPGN1603..	TPGN1603..	TPGN1603..	TPGN1603..

For recommended cutting conditions, see page [F82~F83](#)

Boring Bar [YP ☐ ☐ Insert]

S...SYXP-E Excellent Bar (Boring / Internal Facing / Copying)

Max. Overhang Length L/D=--5



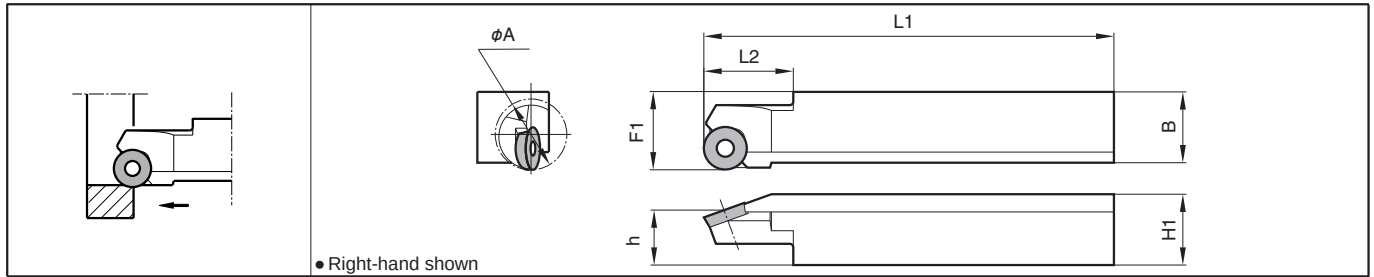
● Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)								θ	Standard Corner-R (°)	Spare Parts	
		R	L	øA	øD	H	L1	L2	F	S					Clamp Screw	Wrench
																
S12M-SYXP ^{R/L} 06-12E	-	☐	☐	12	12	11	150	25	8.3	3			3°	0.2	SB-2040TR	FT-6
S16Q-SYXP ^{R/L} 06-16E		☐	☐	16	16	15	180	30	10						SB-2045TR	

● Applicable Inserts

Applications	Finishing	Low Feed														
Ref. Page	B80	B80														
Insert	^{R/L} -F	F ^{R/L} -U														
Toolholder																
....SYXP ^{R/L} 06....	YPGT0602..	YPGT0602..														

For recommended cutting conditions, see page [F82~F83](#)

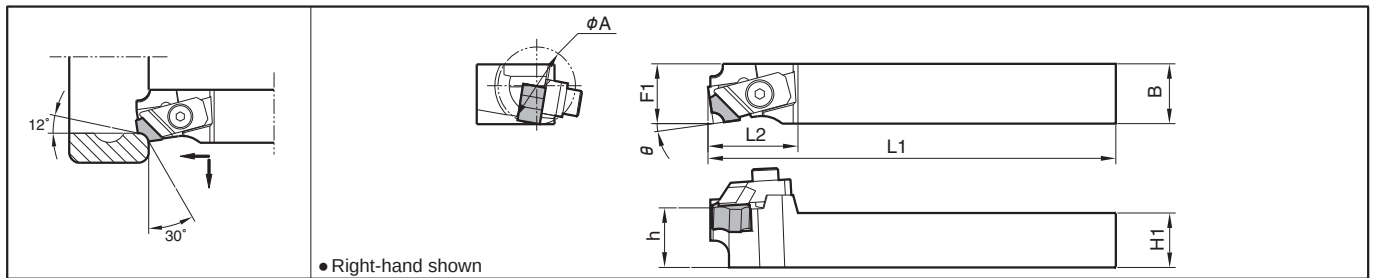
SRCP-B (Boring)

Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)							Spare Parts			Applicable Inserts  B80
		R	L		øA	H1	h	B	L1	L2	F1		Wrench		
															
SRCP ^{R/L}	2020B-12-A20	●	●	20	20	15.5	20	125	25	22		SB-4TR	FT-15	-	RPMT1203M0-BB
	2525B-16-A32	●	●	32	25	20	25	150	31	27		SB-5090TR	-	LTW-20	RPMT1604M0-BB

Applicable Inserts

Insert	Description	Dimension (mm)			Angle (°)
		A	T	ød	
	RPMT 1203M0-BB 1604M0-BB	12.0	3.18	4.4	11°
		16.0	4.76	5.5	

CBSN-B (Internal Round Chamfering)

Toolholder Dimensions

Description		Std.		Min. Bore Dia.	Dimension (mm)						θ	Spare Parts			Applicable Inserts  B80	
		R	L		øA	H1	h	B	L1	L2		F1	Clamp Set	Wrench		
																
CBSN ^{R/L}	2020B-12-A20	●	●	20	20	21	20	125	32	20	9°	CP-RC ^{R/L}	LW-5		SNMF1204 ○○ -21	
	2525B-12-A20	●	●		25	26	25	150		25						

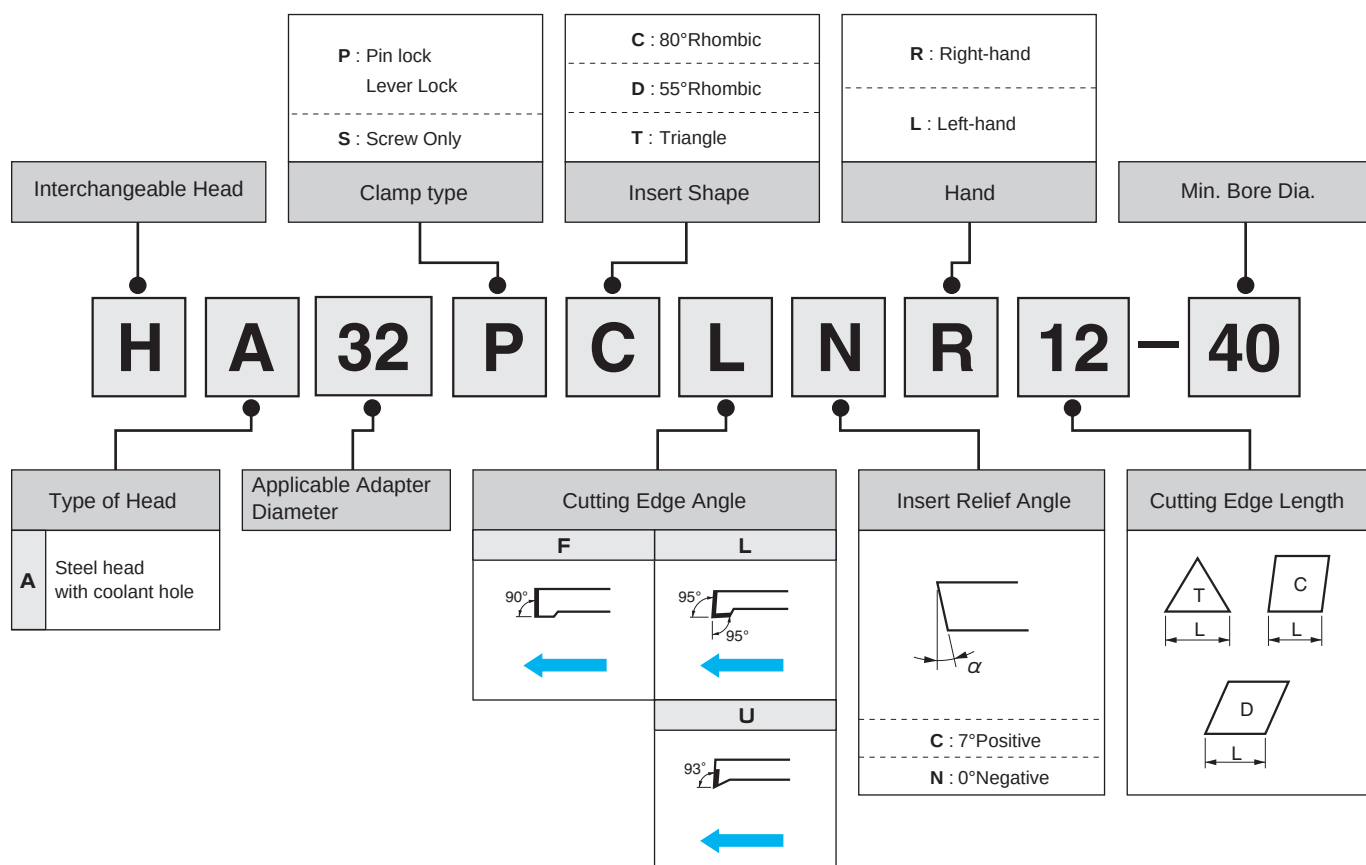
• Clamp Set: RP-RCR for R-hand Toolholder, and CP-RCL for L-hand Toolholder.

Applicable Inserts

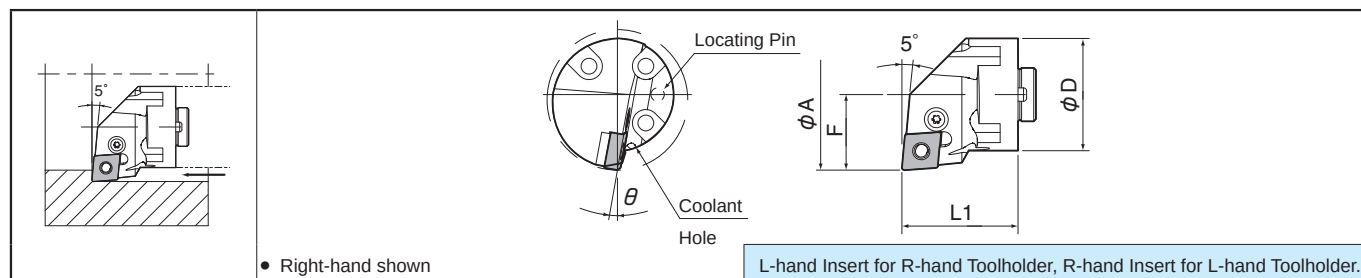
Insert	Description	Dimension (mm)				Angle (°)
		A	T	B	re	
	SNMF 120406-21	12.70	4.76	1.5	0.6	21°
	120410-21			3.0	1.0	
	120416-21			3.1	1.6	
	120421-21			3.2	2.1	
	120426-21			3.3	2.6	

AD Bar Interchangeable Head Boring Bars with Anti-vibration Dampener System

Identification System for Interchangeable Heads



HA...PCLN12 (Boring / Internal Facing: with Coolant Hole)



Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)			θ	Standard Corner-R (r)	Spare Parts						Applicable Boring Adapter F67
	R	L		ϕA	ϕD	L1			Lever	Lock Screw	Shim	Shim Pin	* Punch	Wrench	
HA32PCLN ^F /12-40	●	●	40	32		22	10°	0.8							AD32U
HA40PCLN ^F /12-50	●	●	50	40	41	27									AD40V
HA50PCLN ^F /12-63	●	●	63	50		35									AD50W

* Punch: Not included. Purchase separately.

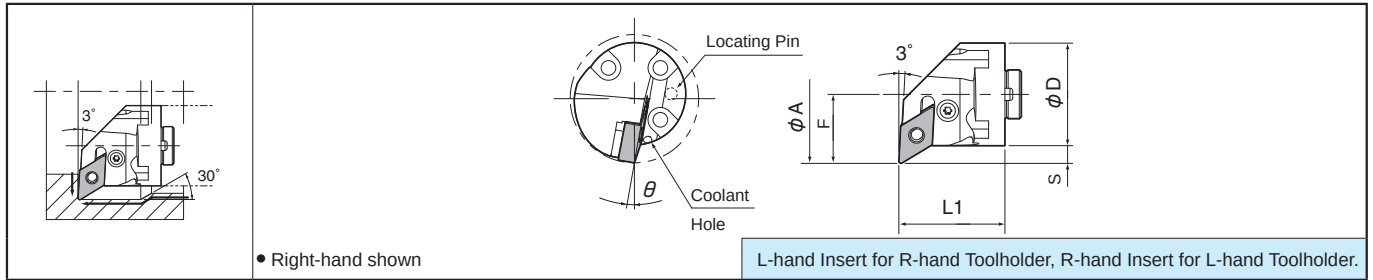
Applicable Inserts

Toolholder	Description		Ref. Page			
			Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PCLN ^F /12-40	CN○A	1204..	B14~B18	B85	C17	C5
HA40PCLN ^F /12-50	CN○G					
HA50PCLN ^F /12-63	CN○M					

For recommended cutting conditions, see page **F82~F83**

● : Std. Item □ : Check Availability

HA...PDUN15 (Copying: with Coolant Hole)



Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)				θ	Standard Corner-R (°)	Spare Parts						Applicable Boring Adapter F67
	R	L		ϕD	L1	F	S			Lever	Lock Screw	Shim	Shim Pin	* Punch	Wrench	
HA32PDUN [®] /L15-43	●	●	43	32		25	9	12°	0.8							AD32U
HA40PDUN [®] /L15-50	●	●	50	40	41	27	7	10°								AD40V
HA50PDUN [®] /L15-63	●	●	63	50		35	10									AD50W

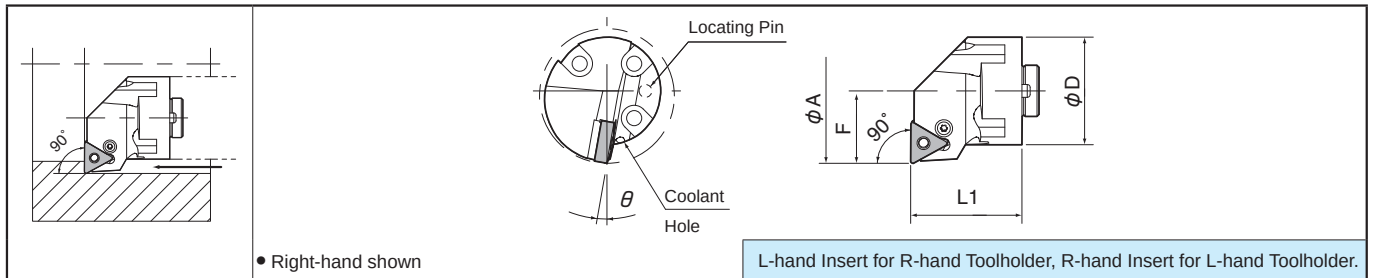
* Punch: Not included. Purchase separately.

* Shim: LD-4K43 is attached to Toolholder. When using DN □□ 1506 Insert, purchase LD-4K separately.

Applicable Inserts

Toolholder	Description				Ref. Page			
	Shim: LD-4K43		Shim: LD-4K		Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PDUN [®] /L15-43	DN○A		DN○A		B20~B23	B86	C17	C6
HA40PDUN [®] /L15-50	DN○G	1504..	DN○G	1506..				
HA50PDUN [®] /L15-63	DN○M		DN○M					

HA...PTFN16 (Internal: with Coolant Hole)



Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)				θ	Standard Corner-R (°)	Spare Parts						Applicable Boring Adapter F67
	R	L		ϕD	L1	F				Lever	Lock Screw	Shim	Shim Pin	* Punch	Wrench	
HA32PTFN [®] /L16-40	●	●	40	32		22		10°	0.8							AD32U
HA40PTFN [®] /L16-50	●	●	50	40	41	27										AD40V
HA50PTFN [®] /L16-63	●	●	63	50		35		8°								AD50W

* Punch: Not included. Purchase separately.

Applicable Inserts

Toolholder	Description	Ref. Page				For recommended cutting conditions, see page F82~F83
		Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN	
HA32PTFN [®] /L16-40	TN○A	B30~B34	B90	C17	C7	
HA40PTFN [®] /L16-50	TN○G					
HA50PTFN [®] /L16-63	TN○M					

Reference

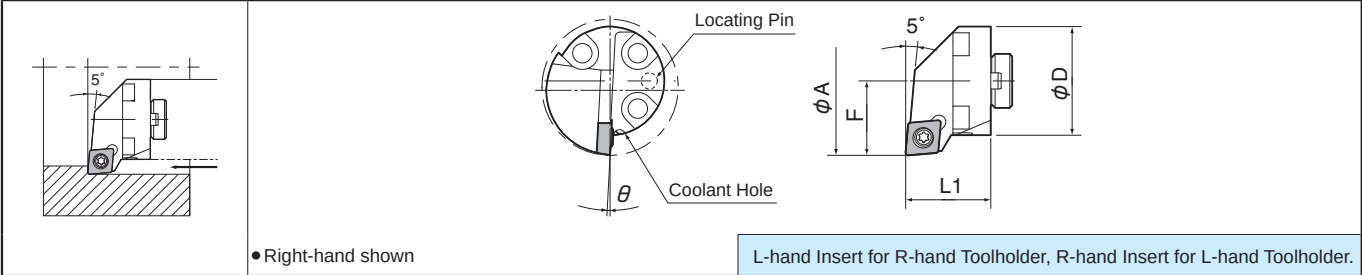
Wrenches (LTP-10, LTP-15) are **Torx Plus**.

The size of **Torx Plus** is engraved on the long shaft.

Wrench description	LTP-10	LTP-15
Engraved size	10IP	15IP

AD Bar Interchangeable Head Boring Bars with Anti-vibration Dampener System

HA...SCLC09 (Boring / Internal Facing: with Coolant Hole)



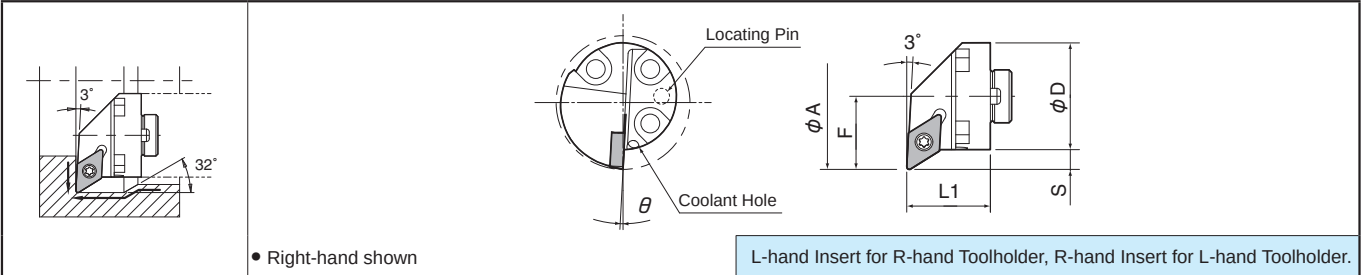
Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)				θ	Standard Corner-R (°)	Spare Parts		Applicable Boring Adapter F67	Applicable Inserts
	R	L		ϕD	L1	F	S			Clamp Screw	Wrench		
HA32SCLC ^{R/L} 09-40	●	●	40	32	25	22	-	3°	0.8	SB-3580TR	FTS-15	AD32U	CC..09T3..

Applicable Inserts

Description	Ref. Page		
	Cermet / Coated Carbide / Carbide	PCD	CBN
CC..09T3..	B45~B48	C18	C10

HA...SDUC11 (Copying: with Coolant Hole)



Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)				θ	Standard Corner-R (°)	Spare Parts		Applicable Boring Adapter F67	Applicable Inserts
	R	L		ϕD	L1	F	S			Clamp Screw	Wrench		
HA32SDUC ^{R/L} 11-40	●	●	40	32	25	22	6	3°	0.8	SB-3580TR	FTS-15	AD32U	DC..11T3..

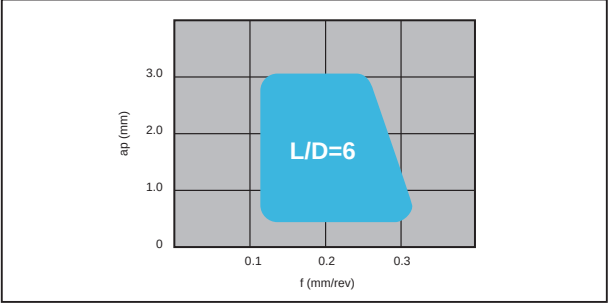
Applicable Inserts

Description	Ref. Page		
	Cermet / Coated Carbide / Carbide	PCD	CBN
DC..11T3..	B52~B57	C19	C11

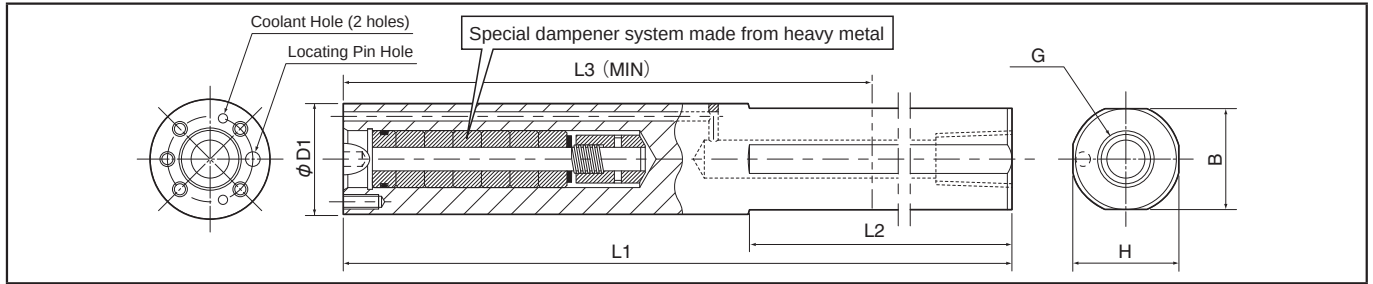
For recommended cutting conditions, see page F82~F83

Possible machining Area (Guide-Line for Overhang Length of AD Bar)

(SCM435 Vc=150m/min ap=0.5~3mm f=0.1~0.3mm/rev TNMG160408)



Boring Adapter (with Coolant Hole / Anti-Vibration Dampener System)



Dimensions

Description	Std.	Dimension (mm)							Spare Parts	
		øD1	H	B	L1	L2	L3 (MIN)	G	Clamp Bolt	Wrench
AD 32U	●	32	31	29	310	200	200	Rp3/8	HH5×20 (3 pcs)	HH5×30 (1 pc)
AD 40V	●	40	39	37	360	248	228		HH6×20 (3 pcs)	HH6×30 (1 pc)
AD 50W	●	50	47	47	410	280	276		HH6×20 (3 pcs)	HH6×30 (1 pc)

* Note: L3 (MIN) dimension indicates the minimum length in case of the back end of boring adapter is cut for use.
Do not shorten it to less than L3 (MIN).

Combination of Boring Adapter and Interchangeable Head

Interchangeable Head Description		Boring Adapter			
		Base Description	Clamp Bolt		Wrench
HA32	PCLN [®] /L 12-40	AD32U	HH5×20	HH5×30	LW-4
	PDUN [®] /L 15-43				
	PTFN [®] /L 16-40				
	SCLC [®] /L 09-40		HH5×20		
	SDUC [®] /L 11-40				
HA40	PCLN [®] /L 12-50	AD40V	HH5×20	HH5×30	
	PDUN [®] /L 15-50				
	PTFN [®] /L 16-50				
HA50	PCLN [®] /L 12-63	AD50W	HH6×20	HH6×30	LW-5
	PDUN [®] /L 15-63				
	PTFN [®] /L 16-63				

How to exchange heads



1. No head attached

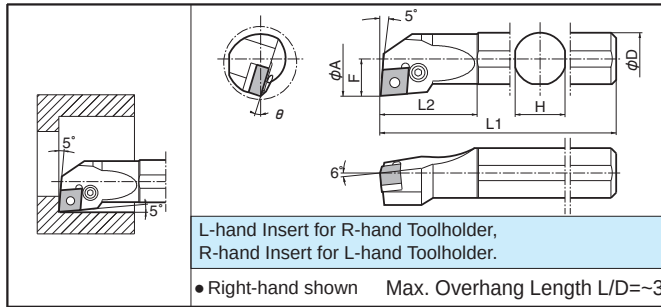
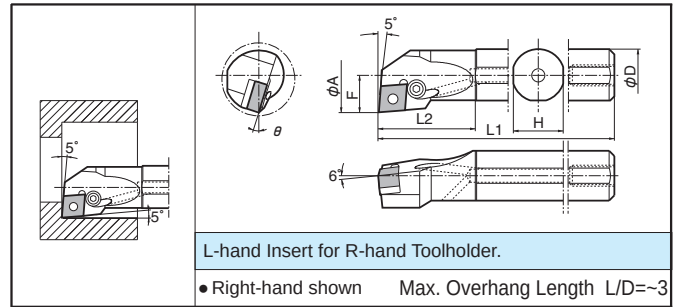


2. Align hole positions



3. Tighten 3 bolts to attach the head

For lever lock type Interchangeable head, use 2 short bolts for upper side and 1 long bolt for lower side.
For HA32 SCLC[®]/L 09-40 and HA32 SDUC[®]/L 11-40, use HH5 X 20 for all 3 bolts.

S...PCLN ☐ ☐ (Boring / Internal Facing)A...PCLN09 ☐ ☐ (Boring / Internal Facing: with Coolant Hole)

Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (°)	Spare Parts					
		R	L		ØA	ØD	H	L1	L2			F	Lever	Lock Screw	Shim	Shim Pin	Punch
															 LSP P 		 FH
S16M-PCLN ^{R/L} 09 -20	PCLN ^{R/L} 2016B-09	●	●	20	16	15	150	34	11	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PCLN ^{R/L} 09 -27	PCLN ^{R/L} 2720B-09	●	●	27	20	19	180	37	14.2	17°		LL-1N	LS-1SN	LC-32N	LSP-1	PC-1	
S25R-PCLN ^{R/L} 09 -32	3225B-09	●	●	32	25	24	200	42	15.7	15°							
S32S-PCLN ^{R/L} 12 -40	PCLN ^{R/L} 4032B-12	●	●	40	32	30	250	50	21	10°	0.8	LL-2N	LS-2N	LC-42N ^{R/L}	LSP-2	PC-2	LW-3
S40T-PCLN ^{R/L} 12 -50	5040B-12	●	●	50	40	37	300	60	25			LL-2N	LS-2N	LC-42N ^{R/L}	LSP-2	PC-2	
A16M-PCLN ^{R/L} 09 -20	PCLN ^{R/L} 2016B-09H	●		20	16	15	150	34	11	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PCLN ^{R/L} 09 -27	PCLN ^{R/L} 2720B-09H	●		27	20	19	180	37	14.2	17°		LL-1N	LS-1SN	LC-32N	LSP-1	PC-1	
A25R-PCLN ^{R/L} 09 -32	3225B-09H	●		32	25	24	200	42	15.7	15°							

• Shim: LC-42NR for R-hand Toolholder, LC-42NL for L-hand Toolholder.

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing
Ref. Page	B14	B14	B14	B14	B14	B14	B14	B14	B15	B15	B15
Insert	WP (Wiper)	WQ (Wiper)	GP	HQ	CQ	CJ	TK	GS	PS	HS / CS	
Toolholder											
...PCLN ^{R/L} 09-...	-	-	CNMG0904..	CNMG0904..	-	-	-	CNMG0904..	-	-	-
...PCLN ^{R/L} 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMP1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..
Applications	Medium-Roughing	Medium-Roughing High Feed Rate	Roughing	One side / Roughing-High Feed Rate	Finishing	Medium cutting	Medium-Roughing / Low Cutting Resistance type	Soft Steel Finishing	Soft Steel / Medium cutting	Soft Steel / Roughing	
Ref. Page	B15	B15	B16	B16	B18	B18	B18	B16	B16	B16	
Insert	PT	GT	Standard	PX	^{R/L} -S	^{R/L}	^{R/L} -25R	XP (-T)	XQ	XS	
Toolholder											
...PCLN ^{R/L} 09-...	-	-	-	-	CNMG0904..	CNMG0904..	-	-	-	-	-
...PCLN ^{R/L} 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	-	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..
Applications	Stainless Finishing	Stainless Medium-Roughing	Stainless Medium to Roughing	Stainless Medium to Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals
Ref. Page	B17	B17	B17	B17	B17	B17	B18	B18	B85	B18	
Insert	MQ	MS	MU	TK	C	ZS	GC	Without Chipbreaker	Ceramic	AH	
Toolholder											
...PCLN ^{R/L} 09-...	-	-	-	-	-	-	-	-	-	-	-
...PCLN ^{R/L} 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMA1204.. CNGA1204..	CNMA1204.. CNGA1204..	CN_G1204..	
Applications	Non-ferrous Metals	Non-ferrous Metals	Hard Materials								
Ref. Page	B18	C17	C5								
Insert	^{R/L} -A3	PCD	CBN								
Toolholder											
...PCLN ^{R/L} 09-...	-	-	-								
...PCLN ^{R/L} 12-...	CNMG1204..	CNMG1204..	CNMA1204..								

For recommended cutting conditions, see page [F82-F83](#)

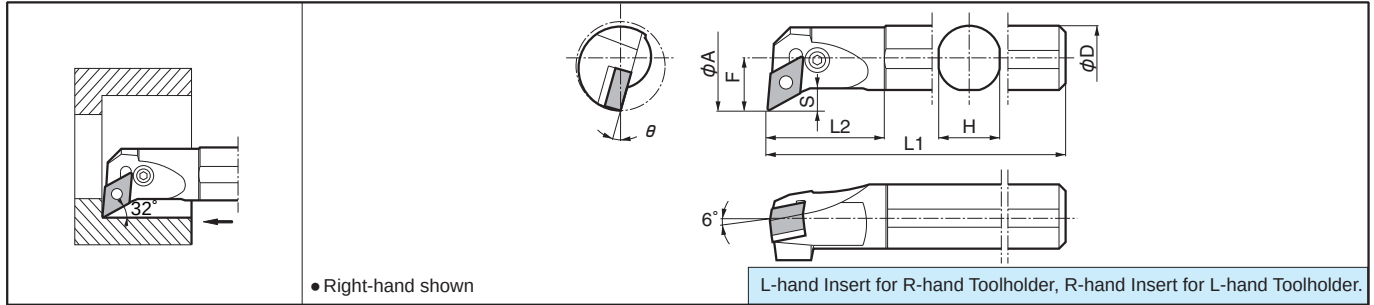
Applicable Coolant Sleeve / Joint

Toolholder	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PCLN ^{R/L} 09-20	SHC1640-70, SHC1650-95	SJS-8
A20Q-PCLN ^{R/L} 09-27	SHC2040-70, SHC2050-95	
A25R-PCLN ^{R/L} 09-32	SHC2540-70, SHC2550-95	

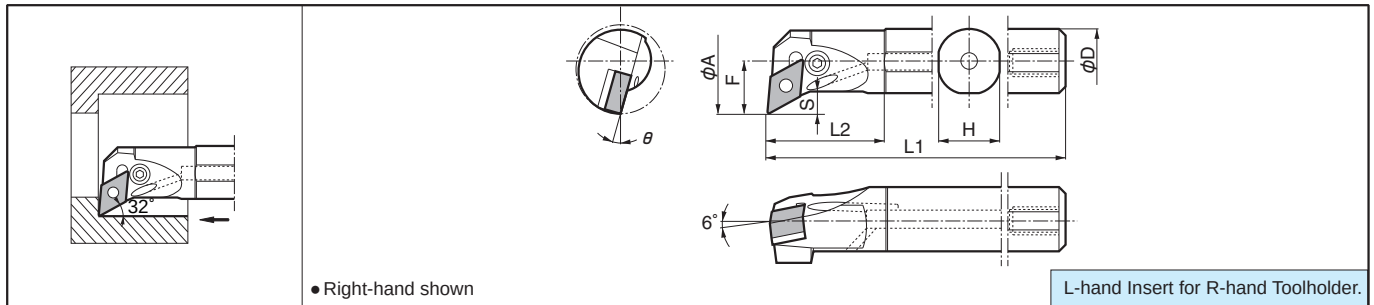
• For Coolant Sleeve, Coolant Joint, see [F78-F79](#).

S...PDUN11 (Copying)

Max. Overhang Length L/D≈3

**A...PDUN11** Twin-Hole Bar (Copying: with Coolant Hole)

Max. Overhang Length L/D≈3



Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)						θ	Standard Corner-R (r)	Spare Parts					
		R	L		øA	øD	H	L1	L2	F			S	Lever	Lock Screw	Shim	Shim Pin	Punch
																		
S20Q -PDUN ^{R/L} 11-27	PDUN ^{R/L} 2720B-11	●	●	27	20	19	180	35	16	7.6	17°	0.4						
S25R -PDUN ^{R/L} 11-32	3225B-11	●	●	32	25	24	200	40	17	7.6	15°		LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
S32S -PDUN ^{R/L} 11-40	4032B-11	●	●	40	32	31	250	45	22	8.5	12°		LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
A20Q -PDUN ^{R/L} 11-27	PDUN ^{R/L} 2720B-11H	●		27	20	19	180	35	16	7.6	17°	0.4						
A25R -PDUN ^{R/L} 11-32	3225B-11H	●		32	25	24	200	40	17	7.6	15°		LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
A32S -PDUN ^{R/L} 11-40	4032B-11H	●		40	32	31	250	45	22	8.5	12°		LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5

Applicable Inserts

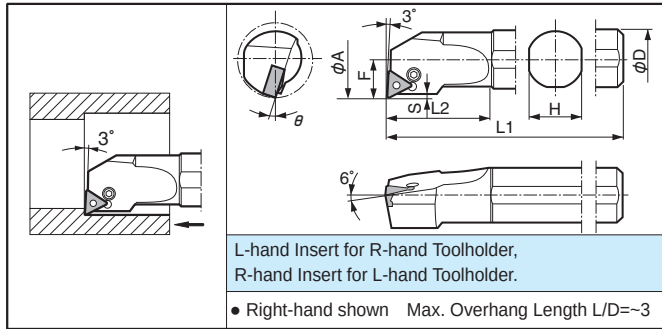
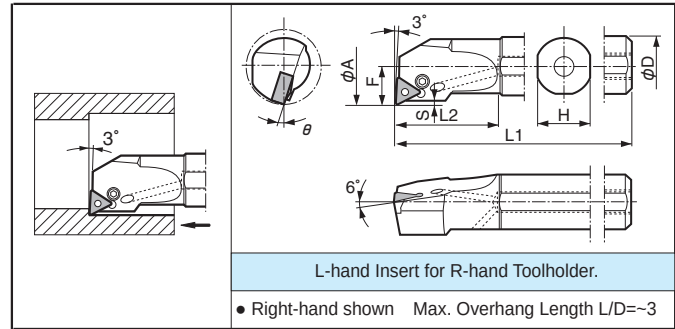
Applications	Finishing	Finishing-Medium	Medium-Roughing	Finishing	Medium					
Ref. Page	B20	B20	B21	B23	B23					
Insert	GP	HQ	GS	^{R/L}-S	^{R/L}					
Toolholder										
...PDUN^{R/L}11-...	DNMG1104..	DNMG1104..	DNMG1104..	DNGG1104..	DNGG1104..					

For recommended cutting conditions, see page [F82~F83](#)

Applicable Coolant Sleeve / Joint

Toolholder	Applicable Coolant Sleeve	Applicable Coolant Joint
A20Q -PDUN^{R/L}11-27	SHC2040-70, SHC2050-95	SJS-8
A25R -PDUN^{R/L}11-32	SHC2540-70, SHC2550-95	
A32S -PDUN^{R/L}11-40	-	

• For Coolant Sleeve, Coolant Joint, see [F78~F79](#)

S...PTUN ☐ ☐ (Boring)A...PTUN11 Twin-Hole Bar
(Boring: with Coolant Hole)

Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)						θ	Standard Corner-R (°)	Spare Parts					
		R	L		ØA	ØD	H	L1	L2	F			S	Lever	Lock Screw	Shim	Shim Pin	Punch
																 LSP P 		
S16M-PTUN ^{R/L} 11-20	PTUN ^{R/L} 2016B-11	●	●	20	16	15	150	34	11	0.3	18°	0.8			-	P-03S	-	FH-2.5
S20Q-PTUN ^{R/L} 11-25	2520B-11	●	●	25	20	19	180	37	13.2	0.2	17°							
S25R-PTUN ^{R/L} 11-32	3225B-11	●	●	32	25	24	200	42	15.7	0.3	16°							
S25R-PTUN ^{R/L} 16-30	-	●	●	30	25	24	200	42	15.5	1.5	13°	0.8			-	P-03S	-	FH-2.5
S32S-PTUN ^{R/L} 16-40		●	●	40	32	30	250	50	22	2.0	13°							
S40T-PTUN ^{R/L} 16-50		●	●	50	40	37	300	60	27	1.8	11°							
A16M-PTUN ^{R/L} 11-20	PTUN ^{R/L} 2016B-11H	●	●	20	16	15	150	34	11	0.3	18°	0.8			-	P-03S	-	FH-2.5
A20Q-PTUN ^{R/L} 11-25	2520B-11H	●	●	25	20	19	180	37	13.2	0.2	17°							
A25R-PTUN ^{R/L} 11-32	3225B-11H	●	●	32	25	24	200	42	15.7	0.3	16°							

• When using insert with corner R = 1.6mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Medium-Roughing / High Feed Rate	Roughing
Ref. Page	B30	B30	B30	B30	B30	B30	B30	B31	B31	B31
Insert	GP	HQ	CQ	TK	GS	PS	HS/CS	PT	GT	Standard
Toolholder										
...PTUN ^{R/L} 11...	TNMG1104..	TNMG1104..	-	-	TNMG1104..	-	-	-	-	-
...PTUN ^{R/L} 16...	TNMG1604..	TNMG1604..	TNMG1604..	TNMP1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..
Applications	One side / Roughing High Feed Rate	Finishing	Medium-Roughing	Medium-Roughing / Low Cutting Resistance type	Soft Steel Finishing	Soft Steel / Medium cutting	Soft Steel / Roughing	Stainless Finishing	Stainless Medium to Roughing	Stainless Medium to Roughing
Ref. Page	B31	B34	B34	B34	B31	B31	B31	B32	B32	B32
Insert	PX	^{R/L} -S	^{R/L} -□	^{R/L} -25R	XP (-T)	XQ	XS	MQ	MS	TK
Toolholder										
...PTUN ^{R/L} 11...	-	TNGG1104..	TNGG1104..	-	-	-	-	-	-	-
...PTUN ^{R/L} 16...	TNMM1604..	TNGG1604..	TNGG1604..	TNGG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..
Applications	Stainless Medium to Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B32	B33	B33	B33	B33	B90	B33	B33	C17	C7
Insert	^{R/L} -ST	C	ZS	GC	Without Chipbreaker	Ceramic	AH	^{R/L} -A3	PCD	CBN
Toolholder										
...PTUN ^{R/L} 11...	-	-	-	-	-	-	-	-	-	-
...PTUN ^{R/L} 16...	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMA1604.. TNGA1604..	TNGA1604..	TN_G1604..	TNGG1604..	TNMM1604..	TNGA1604..

For recommended cutting conditions, see page [F82~F83](#)

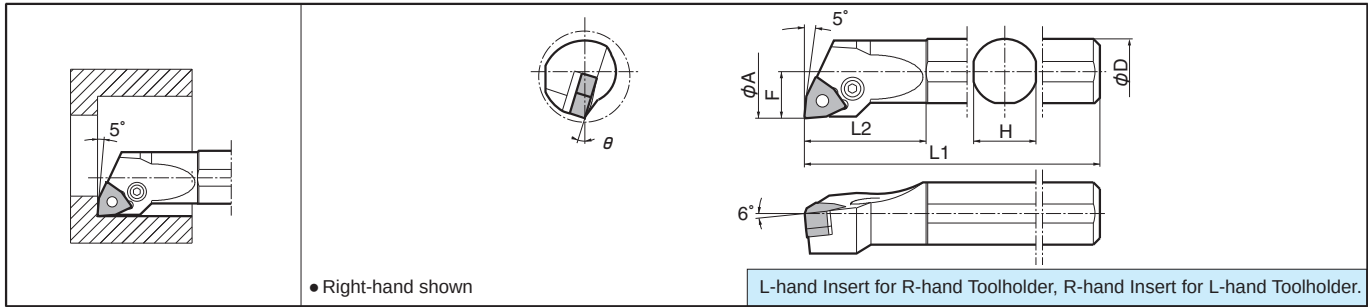
Applicable Coolant Sleeve / Joint

Toolholder	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PTUN ^{R/L} 11-20	SHC1640-70, SHC1650-95	SJS-8
A20Q-PTUN ^{R/L} 11-25	SHC2040-70, SHC2050-95	
A25R-PTUN ^{R/L} 11-32	SHC2540-70, SHC2550-95	

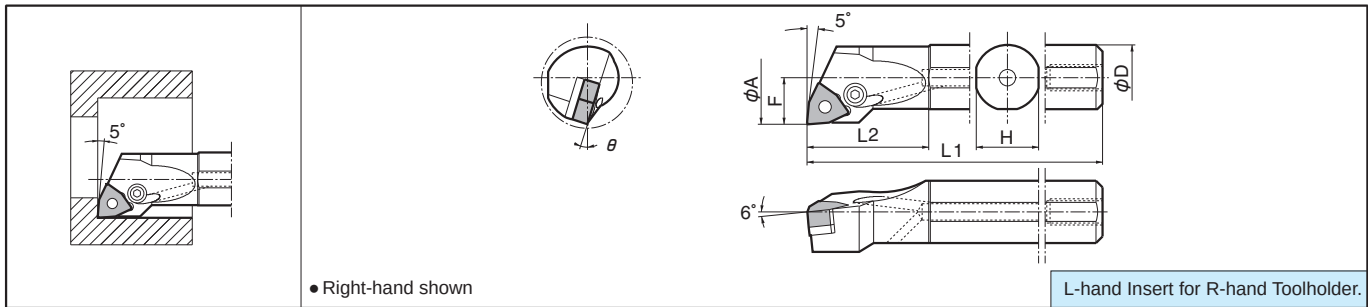
• For Coolant Sleeve, Coolant Joint, see [F78~F79](#).

S...PWLN06 (Boring / Internal Facing)

Max. Overhang Length L/D=-3

**A...PWLN06** Twin-Hole Bar (Boring / Internal Facing: with Coolant Hole)

Max. Overhang Length L/D=-3



Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (°)	Spare Parts					
		R	L		ϕA	ϕD	H	L1	L2	F		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
S16M-PWLN^{R/L}06-20	PWLN^{R/L} 2016B-06	●	●	20	16	15	150	34	11	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PWLN^{R/L}06-27	PWLN^{R/L} 2720B-06	●	●	27	20	19	180	37	14.2	17°			LS-1SN	LW-32N	LSP-1	PC-1	
S25R-PWLN^{R/L}06-32	3225B-06	●	●	32	25	24	200	42	15.7	15°			LS-1SN	LW-32N	LSP-1	PC-1	
A16M-PWLN^{R/L}06-20	PWLN^{R/L} 2016B-06H	●		20	16	15	150	34	11	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PWLN^{R/L}06-27	PWLN^{R/L} 2720B-06H	●		27	20	19	180	37	14.2	17°			LS-1SN	LW-32N	LSP-1	PC-1	
A25R-PWLN^{R/L}06-32	3225B-06H	●		32	25	24	200	42	15.7	15°			LS-1SN	LW-32N	LSP-1	PC-1	

Applicable Inserts

Applications	Finishing	Finishing-Medium	Medium-Roughing	Finishing	Medium					
Ref. Page	B38	B38	B38	B40	B40					
Insert	GP	HQ	GS	^{R/L}-S	^{R/L}					
Toolholder										
...-PWLN^{R/L}06-...	WNMG0604..	WNMG0604..	WNMG0604..	WNGG0604..	WNGG0604..					

For recommended cutting conditions, see page [F82~F83](#)

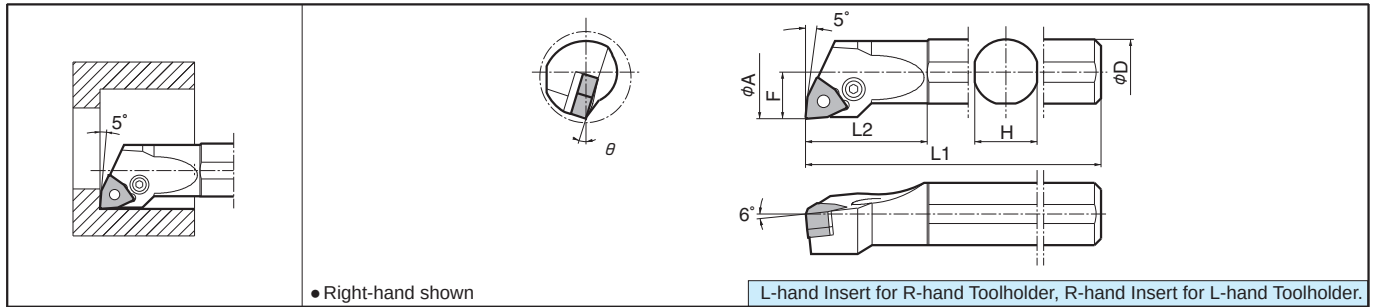
Applicable Coolant Sleeve / Joint

Toolholder	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PWLN^{R/L}06-20	SHC1640-70, SHC1650-95	SJS-8
A20M-PWLN^{R/L}06-27	SHC2040-70, SHC2050-95	
A25R-PWLN^{R/L}06-32	SHC2540-70, SHC2550-95	

• For Coolant Sleeve, Coolant Joint, see [F78~F79](#).

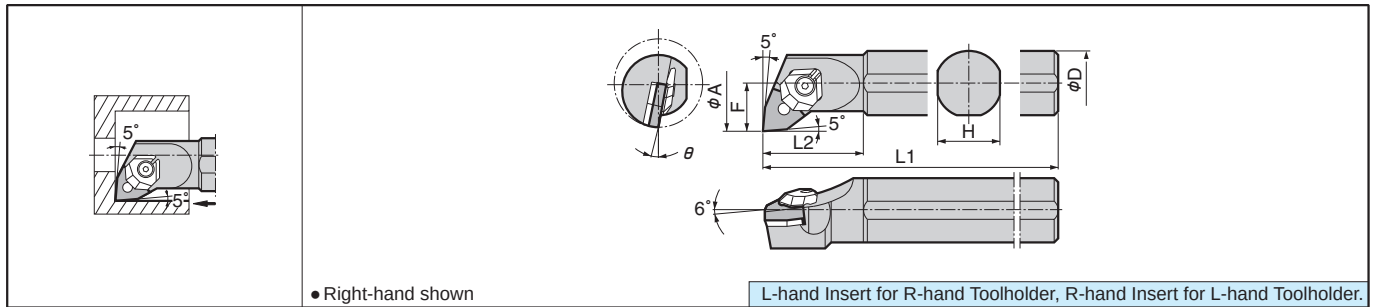
S...PWLN08 (Boring / Internal Facing)

Max. Overhang Length L/D=--3



S...WWLN08-E Excellent Bar (Boring / Internal Facing)

Max. Overhang Length L/D=--5



Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (°)	Spare Parts						
		R	L		øA	øD	H	L1	L2			F	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
																		
S32S-PWLN ^{R/L} 08 -40	-	●	●	40	32	30	250	50	22	10°	0.8	LL-2N	LS-2N	LW-42N ^{R/L}	LSP-2	PC-2	LW-3	
S40T-PWLN ^{R/L} 08 -50		●	●	50	40	37	300	60	27									

* Shim: LW-42NR for R-hand Toolholder, LW-42NL for L-hand Toolholder

Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (°)	Spare Parts						
		R	L		øA	øD	H	L1	L2			F	Clamp Set	Wrench	Shim	Shim Pin	Wrench	
																		
S25S-WWLN ^{R/L} 08 -28E	WWLN ^{R/L} 2825B-08E	●	●	28	25	24		36	14	13°	1.2							
S25S-WWLN ^{R/L} 08 -34E	3425B-08E	●	●	34	25	24	250	40	17	11°								
S32S-WWLN ^{R/L} 08 -40E	4032B-08E	●	●	40	32	30		50	20	10°								

* When using insert with corner R = 1.6mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Medium-Roughing / High Feed Rate
Ref. Page	B38	B38	B38	B38	B38	B38	B38	B38	B38	B39	B39
Insert											
Toolholder	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMP0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..
Applications	Roughing	Soft Steel / Medium cutting	Soft Steel / Medium cutting	Soft Steel / Roughing	Stainless Steel Finishing	Stainless Steel Finishing	Stainless Medium to Roughing	Stainless Medium to Roughing	Stainless Medium to Roughing	Cast Iron	Cast Iron
Ref. Page	B39	B39	B39	B39	B39	B39	B40	B40	B40	B40	B40
Insert											
Toolholder	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMA0804..
Applications	Non-ferrous Metals	Non-ferrous Metals	Hard Materials								
Ref. Page	B40	C17	C8								
Insert											
Toolholder	WNGG0804..	WNMM0804..	WNGA0804..								
Applications	Non-ferrous Metals	Non-ferrous Metals	Hard Materials								
Ref. Page	B40	C17	C8								
Insert											
Toolholder	WNGG0804..	WNMM0804..	WNGA0804..								

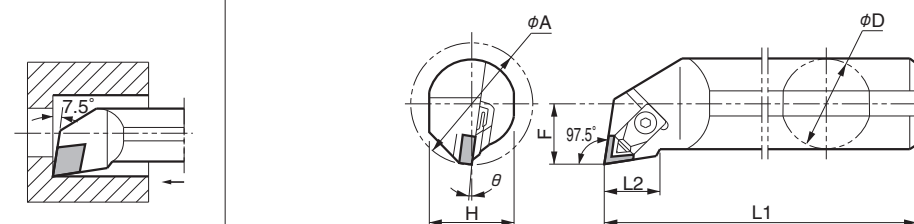
* In wedge lock, use of TN30 / PV30 and ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

For recommended cutting conditions, see page [F82~F83](#)

● : Std. Item □ : Check Availability

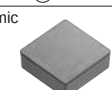
S...CELN (Boring / Internal Facing)

Max. Overhang Length L/D=~-3



• Right-hand shown

● Applicable Inserts

Cast Iron / Hard Materials
● B87
Ceramic

ENG1307..

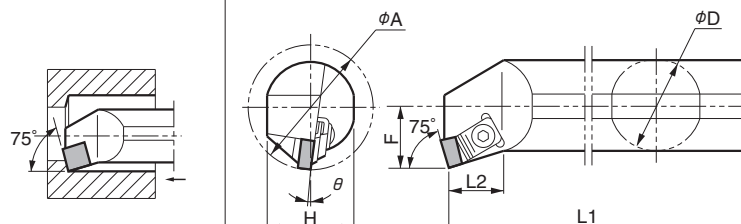
● Toolholder Dimensions

Recommended Cutting Conditions ● **F82~F83**

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (°)	Spare Parts					
		R	L		∅A	∅D	H	L1	L2			F	Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
S40T-CELN ^{R/L} 13-50	CELN ^{R/L} 5040B-13	●		50	40	37	300	32	27	12°	0.8						

S...CSKN (Boring)

Max. Overhang Length L/D=~-3



● Applicable Inserts

Cast Iron / Hard Materials	Cast Iron	Cast Iron / Hard Materials
● B88, B89	● B28	● C9
Ceramic	Coated / Carbide	CBN(KBN900)
		
SNGN1207..(1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)

● Toolholder Dimensions

Recommended Cutting Conditions ● **F82~F83**

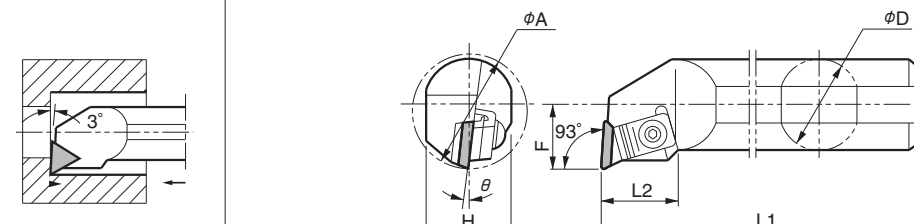
Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (r)	Spare Parts					
		R	L		øA	øD	H	L1	L2			F					
S40T-CSKN ^{R/L} 12-50	CSKN ^{R/L} 5040B-12	●	●	50	40	37	300	26	27	10.5°	0.8	CB-13 / 12	CE-320	LW-4	SP-141P (SP-143P)	M3X8 (M3X12)	

• Chipbreaker: CB-13 for R-hand Toolholder, CB-12 for L-hand Toolholder.

• Shim & Shim Screw: When using SN □□ 1204 type Insert, purchase spare parts in () separately.

S...CTUC (Boring)

Max. Overhang Length L/D=~-3



● Applicable Inserts

Cast Iron
● B92
Ceramic

TCGN1604..

● Toolholder Dimensions

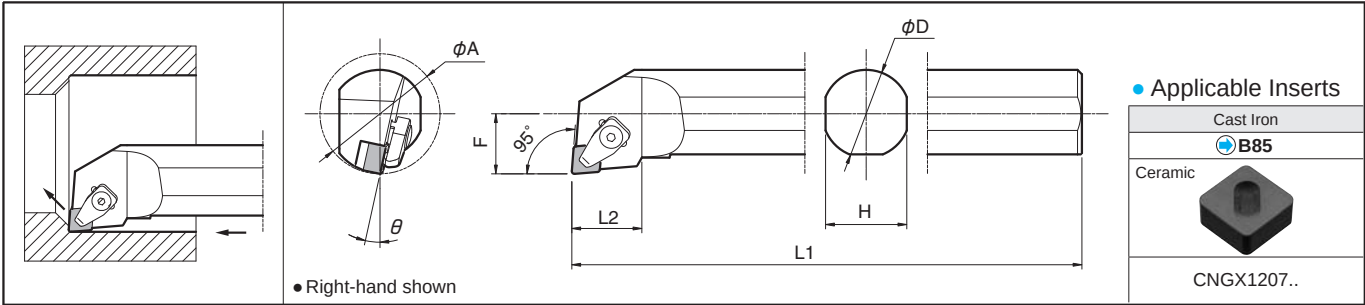
Recommended Cutting Conditions ● **F82~F83**

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (R)	Spare Parts					
		R	L		ØA	ØD	H	L1	L2			F	Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
S32S-CTUC ^{R/L} 16-40	CTUC ^{R/L} 4032B-16	□		40	32	30	250	27	22	6.5°	0.8						
												CB-13 / 12	CE-320	LW-4	SP-230P	SP3X10	

• Chipbreaker: CB-13 for R-hand Toolholder, CB-12 for L-hand Toolholder.

S...CCLN-GX (Boring / Internal Facing)

Max. Overhang Length L/D=--3



Applicable Inserts

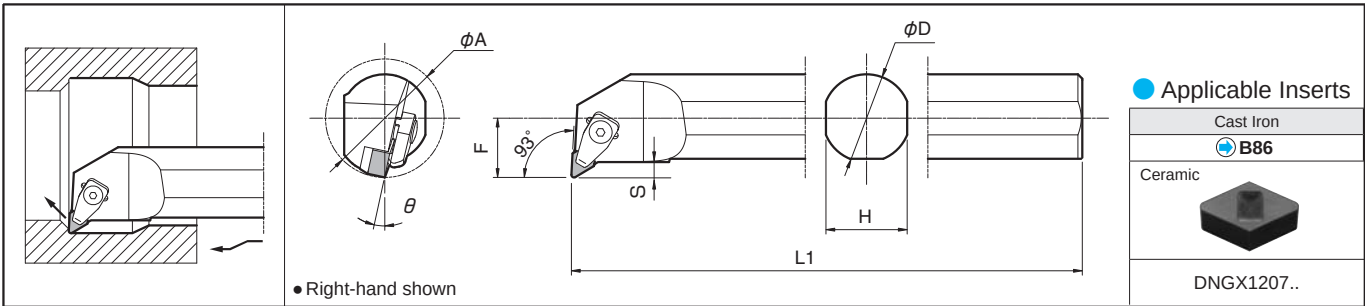
Cast Iron
B85
Ceramic
CNGX1207..

Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)						θ	Standard Corner-R (r)	Spare Parts				Recommended Cutting Conditions
	R	L		øA	øD	H	L1	L2	F			Clamp Set	Wrench	Shim	Shim Screw	
S32S- CCLN ^{R/L} 12-40GX	●	●	40	32	30	250	32	22	14°	1.2					F82~F83	
S40T- CCLN ^{R/L} 12-50GX	●	●	50	40	37	300	32	27	12°	1.2	CE-410	LW-4	SP-441P	M3X8		

S...CDUN-GX (Boring / Copying)

Max. Overhang Length L/D=--3



Applicable Inserts

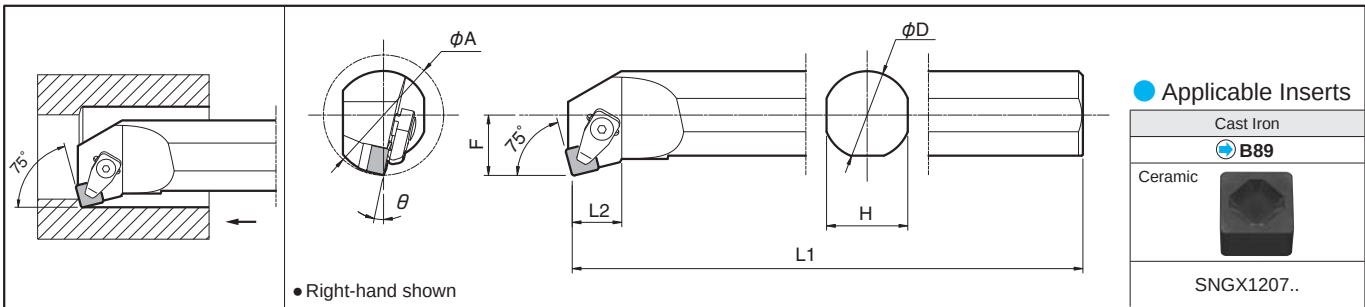
Cast Iron
B86
Ceramic
DNGX1207..

Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (r)	Spare Parts				Recommended Cutting Conditions
	R	L		øA	øD	H	L1	S			F	Clamp Set	Wrench	Shim	
															
S32S- CDUN ^{R/L} 12-40GX	●	●	40	32	30	250	7.5	22	14°	1.2	CE-410	LW-4	-	-	F82~F83
S40T- CDUN ^{R/L} 12-50GX	●	●	50	40	37	300	7.5	27	12°	1.2	CE-410	LW-4	SP-521P	M3X8	

S...CSKN-GX (Boring)

Max. Overhang Length L/D=--3



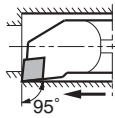
Applicable Inserts

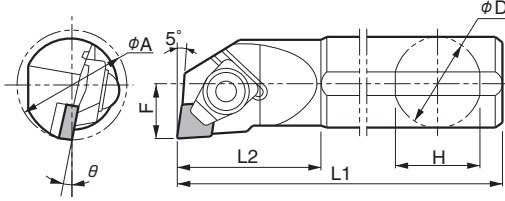
Cast Iron
B89
Ceramic
SNGX1207..

Toolholder Dimensions

Description	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (r)	Spare Parts				Recommended Cutting Conditions
	R	L		øA	øD	H	L1	L2			F	Clamp Set	Wrench	Shim	
S32S- CSKN ^{R/L} 12-40GX	●	●	40	32	30	250	22.5	22	14°	1.2					F82~F83
S40T- CSKN ^{R/L} 12-50GX	●	●	50	40	37	300	22.5	27	12°	1.2					

S...CCLN-A (Boring / Internal Facing)





● Right-hand shown

● Applicable Inserts

Cast Iron / Hard Materials
● C9
CBN(KBN900)

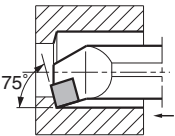
CNMN0903..

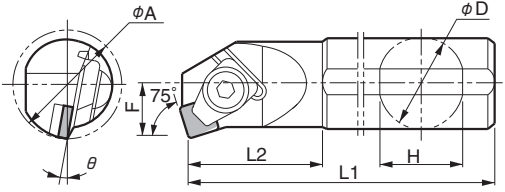
For recommended cutting conditions, see page ● F82~F83

● Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (r)	Spare Parts				
		R	L	øA	øD	H	L1	L2	F							
S25X-CCLN ^{R/L} 09-30A	CCLN ^{R/L} 3025B-09A	☐	☐	30	25	24	220	40	15	10°	0.8					
S32S-CCLN ^{R/L} 09-40A	4032B-09A	☐	☐	40	32	30	250	50	22	8°		CE-360S	LW-4	SP-420A	BH3X6	

S...CSKN-A (Boring)





● Right-hand shown

● Applicable Inserts

Cast Iron / Hard Materials
● C9
CBN(KBN900)

SNMN0903..

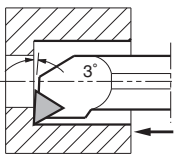
For recommended cutting conditions, see page ● F82~F83

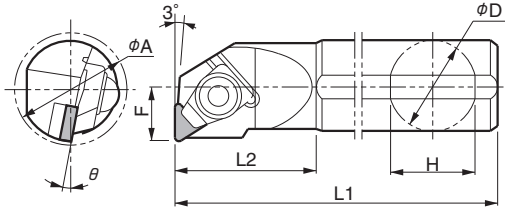
● Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (r)	Spare Parts				
		R	L	øA	øD	H	L1	L2	F			Clamp Set	Wrench	Shim	Shim Screw	
S25X-CSKN ^{R/L} 09-30A	CSKN ^{R/L} 3025B-09A	☐		30	25	24	220	40	15	10°	1.2					
S32S-CSKN ^{R/L} 09-40A	4032B-09A	☐		40	32	30	250	50	22	8°		CE-360S	LW-4	SP-130A	BH3X12	

* Toolholders for SNMN1204 Type Insert are described in F73.

S...CTUN-A (Boring)





● Right-hand shown

● Applicable Inserts

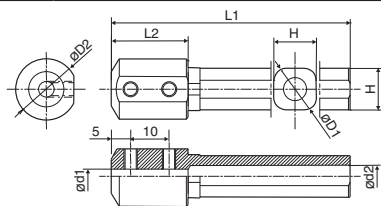
Cast Iron / Hard Materials	Cast Iron / Hard Materials
● C9	● B90
CBN(KBN900)	Ceramic
	
TNMN1103..	TNGN1103..

For recommended cutting conditions, see page ● F82~F83

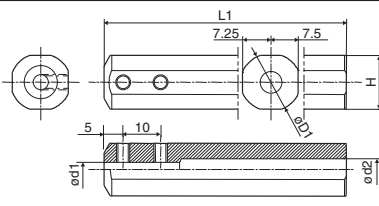
● Toolholder Dimensions

Description	(Previous Description)	Std.		Min. Bore Dia.	Dimension (mm)					θ	Standard Corner-R (r)	Spare Parts				
		R	L	øA	øD	H	L1	L2	F			Clamp Set	Wrench	Shim	Shim Screw	
S25X-CTUN ^{R/L} 11-30A	CTUN ^{R/L} 3025B-11A	☐		30	25	24	220	40	15	10°	0.8					

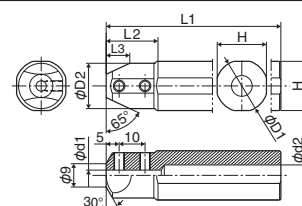
Sleeves for 2-Edge Tip-Bar



(2 Edges Tip-Bar installation side) Fig.1



(2 Edges Tip-Bar installation side) Fig.2



(2 Edges Tip-Bar installation side) Fig.3

Description	Std.	Dimension (mm)								Drawing	Spare Parts		Applicable Machine Manufacturer	Ref. Page for 2 Edges Tip-Bar (Ref. Page for Other Application 2 Edges Tip-Bar)		
		* ød1	øD1	øD2	ød2	H	L1	L2	L3		Screw	Wrench				
																
PSH 0212-80 0312-80 0412-80 0512-80 0612-80 0712-80	●	2	12	16	6	11	80	20	-	Fig.1	HS3×4P	LW-1.5	(General use)			
	●	3									HS4×4P	LW-2				
	●	4														
	●	5			8						HS4×4P	LW-2				
	●	6														
	●	7														
PSH 0216-100 0316-100 0416-100 0516-100 0616-100 0716-100	●	2	16	-	6	15	100	-	-	Fig.2	HS3×4P	LW-1.5				
	●	3									HS4×4P	LW-2				
	●	4														
	●	5			8						HS4×4P	LW-2				
	●	6														
	●	7														
PSH 0220-120 0320-120 0420-120 0520-120 0620-120 0720-120	●	2	20	17.5	6	19	120	20	11	Fig.3	HS3×4P	LW-1.5	Amada Wasino Eguro Citizen Machinery Precision Tsugami Miyano (General use)	Boring (HPB Type) ⇒ F22		
	●	3							9		HS4×4P	LW-2				
	●	4														
	●	5			8				HS4×4P		LW-2					
	●	6														
	●	7														
PSH 0225.0-135 0325.0-135 0425.0-135 0525.0-135 0625.0-135 0725.0-135	●	2	25	18	6	24	135	23	11.5	Fig.3	HS3×4P	LW-1.5	Amada Wasino Eguro Precision Tsugami Miyano (General use)		Internal Back Boring (HPBT Type) ⇒ F22	
	●	3							9.5		HS4×4P	LW-2				
	●	4														
	●	5			8				HS4×4P		LW-2					
	●	6														
	●	7														
PSH 0219-120 0319-120 0419-120 0519-120 0619-120 0719-120	●	2	19.05	17.5	6	18	120	20	11	Fig.3	HS3×4P	LW-1.5	Citizen Machinery	Internal Face Grooving (HPFG Type) ⇒ G65		
	●	3							9		HS4×4P	LW-2				
	●	4														
	●	5			8				HS4×4P		LW-2					
	●	6														
	●	7														
PSH 0225-120 0325-120 0425-120 0525-120 0625-120 0725-120	●	2	25.4	18	6	24.4	120	23	11.5	Fig.3	HS3×4P	LW-1.5				Internal Threading (HPT Type) ⇒ J24
	●	3							9.5		HS4×4P	LW-2				
	●	4														
	●	5			8				HS4×4P		LW-2					
	●	6														
	●	7														
PSH 0222-135 0322-135 0422-135 0522-135 0622-135 0722-135	●	2	22	18	6	21	135	22	11.5	Fig.3	HS3×4P	LW-1.5	Star Micronics Nomura VTC			
	●	3							9.5		HS4×4P	LW-2				
	●	4														
	●	5			8				HS4×4P		LW-2					
	●	6														
	●	7														
PSH 0223-120 0323-120 0423-120 0523-120 0623-120 0723-120	●	2	23	18	6	22	120	22	11.5	Fig.3	HS3×4P	LW-1.5	Nomura VTC			
	●	3							9.5		HS4×4P	LW-2				
	●	4														
	●	5			8				HS4×4P		LW-2					
	●	6														
	●	7														

* : Length of ød1...20 mm (PH02, PH03, PH04 type)
...25 mm (PH05, PH06, PH07 type)

- Choose sleeves ($\phi d1$) to meet with ϕD dimension of 2 Edges Tip-Bar.
- Machine manufactures in random order.

● : Std. Item □ : Check Availability

Sleeves for Boring Bars

PSH Sleeves and Applicable Toolholders

Shank Size (Hole dia. : mm)		02 (2mm)	03 (3mm)	04 (4mm)	05 (5mm)	06 (6mm)	07 (7mm)
PSH Sleeve Description		PSH0212-80	PSH0312-80	PSH0412-80	PSH0512-80	PSH0612-80	PSH0712-80
		PSH0216-100	PSH0316-100	PSH0416-100	PSH0516-100	PSH0616-100	PSH0716-100
		PSH0219-120	PSH0319-120	PSH0419-120	PSH0519-120	PSH0619-120	PSH0719-120
		PSH0220-120	PSH0320-120	PSH0420-120	PSH0520-120	PSH0620-120	PSH0720-120
		PSH0222-135	PSH0322-135	PSH0422-135	PSH0522-135	PSH0622-135	PSH0722-135
		PSH0223-120	PSH0323-120	PSH0423-120	PSH0523-120	PSH0623-120	PSH0723-120
		PSH0225.0-135	PSH0325.0-135	PSH0425.0-135	PSH0525.0-135	PSH0625.0-135	PSH0725.0-135
		PSH0225-120	PSH0325-120	PSH0425-120	PSH0525-120	PSH0625-120	PSH0725-120
2-Edge Tip-Bar	Boring Bars	HPB [®] /L0202-	HPB [®] /L0303-	HPB [®] /L0404- HPBT [®] /L0404-	HPB [®] /L0505- HPBT [®] /L0505-	HPB [®] /L0606-	HPB [®] /L0707-
	Internal Grooving			HPG [®] /L0404-	HPG [®] /L0505-	HPG [®] /L0606-	HPG [®] /L0707-
	Face Grooving						HPFG [®] /L0807-
	Internal Threading			HPTR04504-	HPTR06005-		HPTR07507-
Boring Bars				C04-.....	C05-.....	C06-..... S06-.....	C07-.....

F



Boring

SHA sleeves (Applicable Toolholders F79)

Holder installation side Fig.1										Holder installation side Fig.2					
Description	Std.	Dimension (mm)								Drawing	Spare Parts		Applicable Machine Manufacturer		
		Ød1	ØD1	ØD2	Ød2	H	H1	L1	L2		Screw	Wrench			
															
SHA 0820-120	●	8	20	14	12	19	9.25	120	-	Fig.1	HS6x4P	LW-3	Amada Wasino Eguro Tsugami Miyano		
SHA 1020-120	●	10													
SHA 0825.0-135	●	8	25	14	14	24	11.5	135	17	Fig.2					
SHA 1025.0-135	●	10													
SHA 1225.0-135	●	12													
SHA 0819-120	●	8	19.05	14	12	18	8.75	120	-	Fig.1	HS6x4P	LW-3	Citizen Machinery		
SHA 1019-120	●	10													
SHA 0820-120	●	8	20	14	12	19	9.25	120	-	Fig.1					
SHA 1020-120	●	10													
SHA 0825.4-120	●	8	25.4	14	14	24.4	12	120	17	Fig.2					
SHA 1025.4-120	●	10													
SHA 1225.4-120	●	12													
SHA 0822-125	●	8	22	14	14	21	10	125	-	Fig.1	HS6x4P	LW-3	Star Micronics Nomura VTC Automatic Lathe		
SHA 1022-125	●	10													
SHA 1222-125	●	12													
SHA 0823-120	●	8	23	14	14	22	10.5	120	16	Fig.2					
SHA 1023-120	●	10													
SHA 1223-120	●	12													

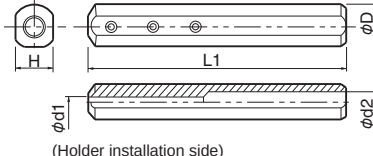
* : Length of Ød1...45mm (All of SHA sleeves)

• Choose sleeves(Ød1) to meet with ØD dimension of toolholder.

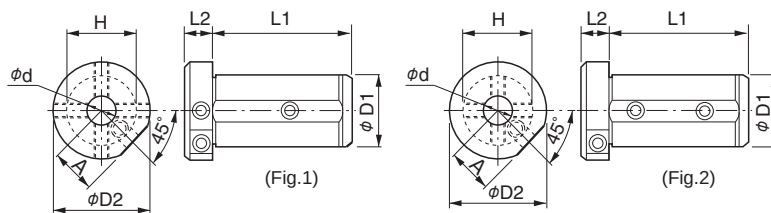
• Machine manufacturers in random order.

● : Std. Item

Sleeves for Boring Bars

Shape	Description	(Previous Description)	Std.	Dimension (mm)					Spare Parts	
									Screw	Wrench
				øD	ød1	ød2	H	L1		
	SH 0416-100	SH -0516	●	16	4	5	14	100	HS4X4	LW-2
	0516-100	-0616	●		5	6				
	0616-100	-0716	●		6	7				
	0716-100	-0816	●		7	8				
	SH 0820-120	SH -1020	●	20	8	9	18	120	HS4X4	LW-2
	1020-120	-1220	●		10	11				
	1225-150	-1625	●	25	12	13	23	150	HS5X5	LW-2.5
	1632-180	-2032	●	32	16	18				
	2032-180	-2532	●		20	22				

Coolant Sleeve Dimension



Accessories

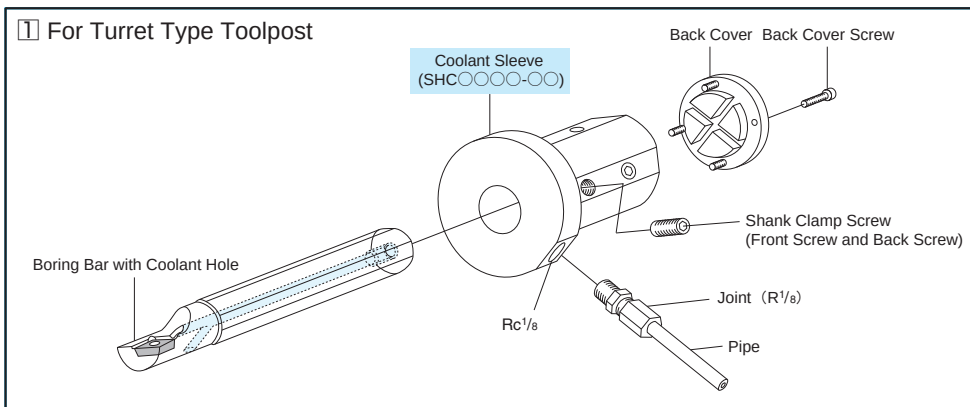
- Back Cover / SHL-4...SHC○○○40-70
SHL-5...SHC○○○50-95
- Back Cover Screw
- Shank Clamp Screw

(Note) To stabilize the Toolholder and to prevent coolant leaks, tighten all 4 screws of coolant sleeve securely.

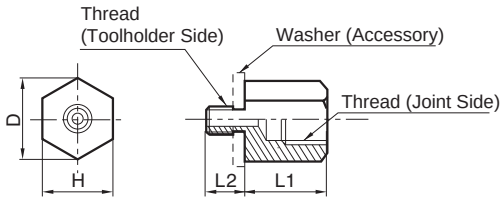
Description	(Previous Description)	Std.	Dimension (mm)							Drawing	Spare Parts						
			øD1	øD2	ød	L1	L2	H	A		Front Screw	Wrench	Back Screw	Wrench	Back Cover	Back Cover Screw	Wrench
																	
SHC 0840-70	SHC-084070	●	40	56	8	70	16	38	27	Fig.1	HS6X22	LW-3	HS6X14	LW-3	SHL-4	HH3X6	LW-2.5
1040-70	-104070	●			10												
1240-70	-124070	●			12												
1640-70	-164070	●			16												
2040-70	-204070	●			20												
2540-70	-254070	●			25												
SHC 0850-95	SHC-085095	●	50	65	8	95	16	47	30.5	Fig.1	HS6X22	LW-3	HS6X14	LW-3	SHL-5	HH3X12	LW-2.5
1050-95	-105095	●			10												
1250-95	-125095	●			12												
1650-95	-165095	●			16												
2050-95	-205095	●			20												
2550-95	-255095	●			25												

How to install

For Turret Type Toolpost



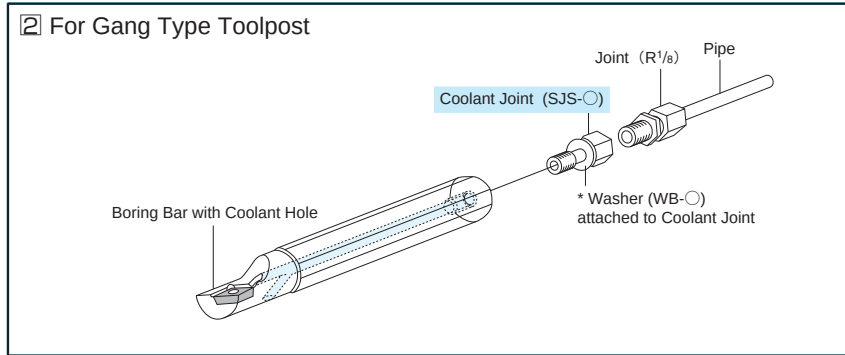
Coolant Joint Dimension

	Description	Std.	Dimension (mm)				Thread (Toolholder Side)	Thread (Joint Side)	Spare Parts	
			D	L1	L2	H			Washer	
	SJS-5	●	15	15	7	13	M5XP0.8	Rc1/8 (PT1/8)		WB-5
	SJS-6	●			9		M6XP1.0			WB-6
	SJS-8	●			13		M8XP1.25			WB-8

List of toolholders and applicable joints

Toolholder	Applicable Coolant Joint
A08-	SJS-5
A10-	
A12-	SJS-6
A16-	
A20-	SJS-8
A25-	
E08-	SJS-5
E10-	
E12-	SJS-6
E16-	
E20-	SJS-8

For Gang Type Toolpost



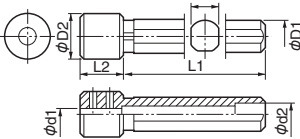
SHA / SH / SHC Sleeves and Applicable Toolholders

Shank Size Hole dia.:mm	04 (4mm)	05 (5mm)	06 (6mm)	07 (7mm)	08 (8mm)	10 (10mm)	12 (12mm)	16 (16mm)	20 (20mm)	25 (25mm)
Sleeve Description	SH0416-100	SH0516-100	SH0616-100	SH0716-100	SH0820-120	SH1020-120	SH1225-150	SH1632-180	SH2032-180	
					SHA0819-120	SHA1019-120				
					SHA0820-120	SHA1020-120				
					SHA0822-125	SHA1022-125	SHA1222-125			
					SHA0823-120	SHA1023-120	SHA1223-120			
					SHA0825.0-135	SHA1025.0-135	SHA1225.0-135			
					SHA0825.4-120	SHA1025.4-120	SHA1225.4-120			
					SHC0840-70	SHC1040-70	SHC1240-70	SHC1640-70	SHC2040-70	SHC2540-70
Boring Bar Description					SHC0850-95	SHC1050-95	SHC1250-95	SHC1650-95	SHC2050-95	SHC2550-95
	C04-....	C05-....	C06-....	C07-....	A08-....	A10-....	A12-....	A16-....	A20-....	A25-....
					E08-....	E10-....	E12-....	E16-....	E20-....	E25-....
Internal Grooving Toolholder Description			S06-....		S08-....	S10-....	S12-....	S16-....	S20-....	S25-....
					SIGE%0808A-EH	SIGE%1010B-EH	SIGE%1412C-EH	SIGE%1616C-EH	SIGE%2020D-EH	SIGE%2525E-EH
						SIGE%1210B-EH	SIGE%1612C-EH			KIGBA%3525-16
					SIGE%0808A-WH	SIGE%1010B-WH	SIGE%1412C-WH	KIGM%2016B-3V	KIGM%2520B-3V	KIGM%3225B-4V
						SIGE%1210B-WH	SIGE%1612C-WH			KITG%3525T-16
					SIGER1008B-WH-90	SIGER1210B-WH-90	SIGER1412C-WH-90			
							GIV%1412-1SE	GIV%1216-1SS	GIV%1420-1S	GIV%2025-1B
							GIV%1612-1AE	GIV%2016-1BE	GIV%1620-1A	GIV%2025-2B
Internal Threading Toolholder Description								GIV%2016-2BE	GIV%2520-1CE	GIV%3225-1CE
								GIV%1616-1AW	GIV%2720-2CE	GIV%3225-2CE
									GIV%2020-1BW	GIV%2525-1CW
									GIV%2020-2BW	GIV%2525-2CW
							SINR0612S-06E	SINR0816S-08E	SIN%2420S-16	CIN%3025S-16
								SIN%1216S-11E	SINR2420S-22	CINR3025S-22
								SIN%1516S-11		
								SIN%2016S-16		

* For SHA sleeves, please see F77.

Sleeves for Boring Bars

Sleeves for Tip-Bar

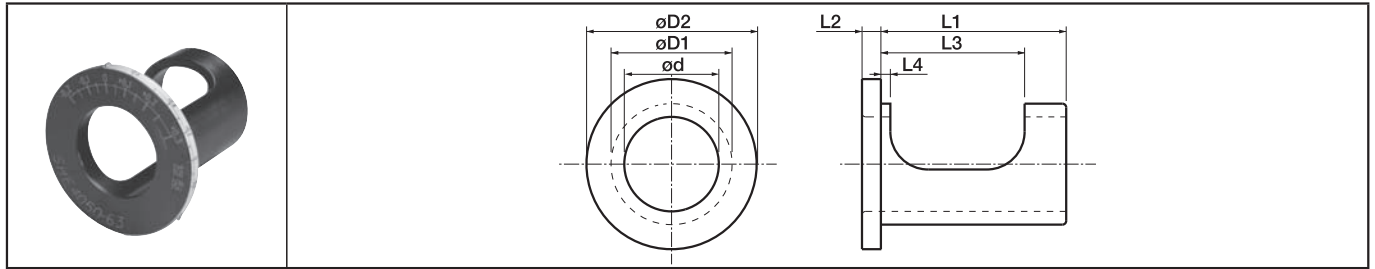
Shape	Description	(Previous Description)	Std.	Dimension (mm)							Spare Parts	
				øD1	øD2	ød1	ød2	H	L1	L2	Screw	Wrench
												
 (Tip-Bar installation side)	PH 0212-60	PH -0212	☐	12	19	1.8	6	11	60	20	HS3X4	LW-1.5
	0312-60	-0312	☐			2.8						
	0412-60	-0412	☐			3.8						
	0512-60	-0512	☐			4.8	8				HS4X4	LW-2
	0612-60	-0612	☐			5.8						
	0712-60	-0712	☐			6.8						
	PH 0216-80	PH -0216	☐	16	22	1.8	Rp1/4 (PS1/4)	15	80	20	HS3X4	LW-1.5
	0316-80	-0316	☐			2.8						
	0416-80	-0416	☐			3.8						
	0516-80	-0516	☐			4.8						
	0616-80	-0616	☐			5.8						
	0716-80	-0716	☐			6.8						

Description Table for PH Sleeves and Applicable Toolholders

Shank Size (Hole dia. : mm)		02 (1.8mm)	03 (2.8mm)	04 (3.8mm)	05 (4.8mm)	06 (5.8mm)	07 (6.8mm)
PH		PH0212-60	PH0312-60	PH0412-60	PH0512-60	PH0612-60	PH0712-60
Sleeve Description		PH0216-80	PH0316-80	PH0416-80	PH0516-80	PH0616-80	PH0716-80
1-Edge Tip-Bars	Boring Bars	PSB [®] /L0202-	PSB [®] /L0303-	PSB [®] /L0404-	PSB [®] /L0505-	PSB [®] /L0606-	PSB [®] /L0707-
				PSBT [®] /L0415-	PSBT [®] /L0515-		
	Internal Grooving			PSG [®] /L0510-	PSG [®] /L0610-	PSG [®] /L0710-	PSG [®] /L0810-
				PSG [®] /L0520-	PSG [®] /L0620-	PSG [®] /L0720-	PSG [®] /L0820-
	Face Grooving						PSFG [®] /L0810-
							PSFG [®] /L0820-
	Internal Threading			PSTR0604-	PSPR0805-		PSFG [®] /L0830-

Adjustable Sleeve

SHE [For cutting dia. / center height adjustment]

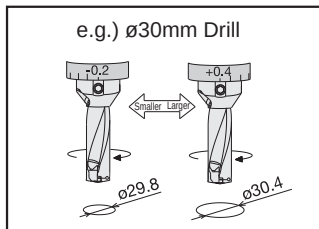


Sleeve Dimensions

Description	Std.	Dimension (mm)							* Cutting Dia. Adjustable Range	Center Height Adjustable Range
		ød	øD1	øD2	L1	L2	L3	L4		
SHE 2025-43	●	20	25	41	43	4	36	3.0	+0.4~-0.2	+0.2~-0.15
2532-48	●	25	32	49	48	6	38	2.5	+0.4~-0.2	+0.2~-0.15
3240-53	●	32	40	58	53	6	43	2.5	+0.4~-0.2	+0.2~-0.15
4050-63	●	40	50	74	63	6	49	3.0	+0.6~-0.2	+0.2~-0.2

• Diameter Adjustment Range adjusts the cutting diameter.

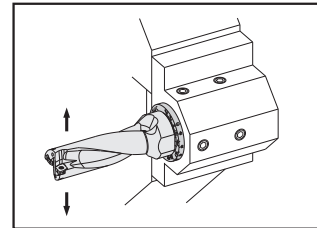
1. Diameter Adjustment ~For Machining Center~



● Diameter Adjustment Range (mm)

Shank Dia.	Adjustment Range
$\phi 20$	+0.4~-0.2
$\phi 25$	
$\phi 32$	
$\phi 40$	+0.6~-0.2

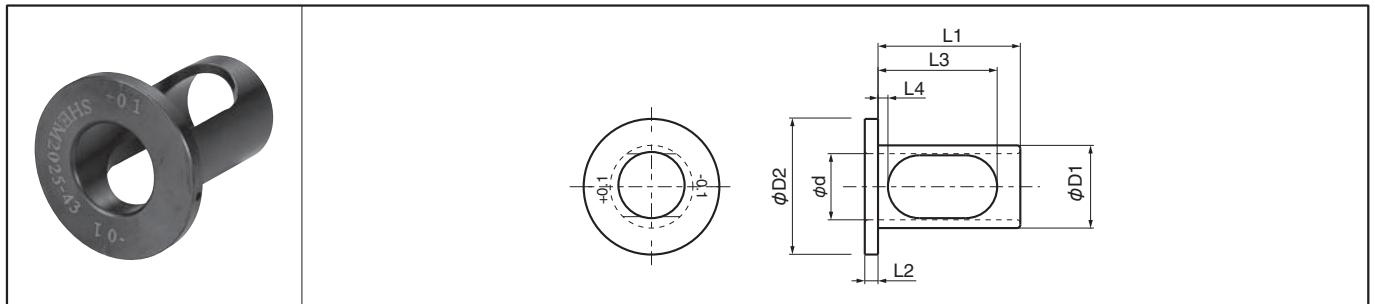
2. Center Height Adjustment ~Relief trouble by height adjustment at lathes~



● Center Height Adjustment Range (mm)

Shank Dia.	Adjustment Range
$\phi 20$	+0.2~-0.15
$\phi 25$	
$\phi 32$	
$\phi 40$	+0.3~-0.2

SHEM [For cutting dia. adjustment]



Sleeve Dimensions

Description	Std.	Dimension (mm)							*Dia. Adjustment Range
		ød	øD1	øD2	L1	L2	L3	L4	
SHEM 2025-43	●	20	25	41	43	4	36	3.0	+0.1, -0.1
2032-43	●		32	49		6		2.5	+0.1, -0.1

• Diameter Adjustment Range adjusts the cutting diameter.

Applications of Eccentric Sleeves (SHE/SHEM) (For Side Lock Toolholders)

- When using with a boring bar
 - Simple adjustment of diameter when fine boring is performed by the machining center.
- When using with an indexable end mill
 - Adjustment of groove width (If in use with 1 edge, the groove width can be adjusted within the range of diameter allowed by the eccentric sleeve.)
 - Widening of groove width (If in use with 2 or more edges, only widening is possible for groove width.)
 - Although multiple edges are used, Feed should be input as 1 edge.
- When using with a MEF counterboring end mill
 - Adjustment of counterbore diameter (If in use with 1 edge, the diameter can be adjusted within the range of diameter allowed by the eccentric sleeve.)
 - Broadening of counterbore diameter (If in use with 2 or more edges, only broadening is possible for the diameter.)
 - Although multiple edges are used, Feed should be input as 1 edge.

● How to adjust the processing diameter (See SHE ● K35, SHEM ● K41)

- Match the cutting edge (of the reference edge) to the "0" point of diameter adjustment scale of eccentric sleeve.
- For 1 edge
 - Set the point within the range allowed by the diameter adjustment scale of eccentric sleeve.
- For multiple edges
 - Set the point at "0" or more on the diameter adjustment scale of eccentric sleeve.
 - A negative value cannot be specified.

● : Std. Item

Recommended Cutting Conditions

Recommended Cutting Conditions - Boring (Positive Insert: Cutting Dia under 10mm) [ap indicates radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Grade	Corner R (rε)	Lower Limit - Recommendation - Upper Limit		
								Vc(m/min)	ap(mm)	f(mm/rev)
*P	Low-carbon Steel Low-carbon Alloy	HB ≦ 300	Finishing (Solid Type)	Continuous Interruption	(VNB)	PR930	0.03 0.2	30 - 60 - 100 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, FSF	PR1025	0.1 0.2	30 - 60 - 100 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium	Continuous Interruption	GQ	PR1025	0.2 0.4	30 - 60 - 100 30 - 60 - 80	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
	Medium-carbon Steel Medium-carbon Alloy	HB ≦ 300	Finishing (Solid Type)	Continuous Interruption	(VNB)	PR930	0.03 0.2	30 - 60 - 100 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, FSF	PR1025	0.1 0.2	30 - 60 - 100 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium cutting	Continuous Interruption	GQ	PR1025	0.2 0.4	30 - 60 - 100 30 - 60 - 80	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
	High-carbon Alloy	HB ≦ 280	Finishing (Solid Type)	Continuous Interruption	(VNB)	PR930	0.03 0.2	30 - 60 - 100 30 - 50 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, FSF	PR1225	0.1 0.2	30 - 60 - 100 30 - 50 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium	Continuous Interruption	GQ	PR1225	0.2 0.4	30 - 60 - 100 30 - 50 - 80	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
	Stainless Steel	HB ≦ 220	Finishing (Solid Type)	Continuous Interruption	(VNB)	PR930	0.03 0.2	30 - 60 - 100 30 - 50 - 70	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, FSF	PR1225	0.1 0.2	30 - 60 - 100 30 - 50 - 70	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium	Continuous Interruption	GQ	PR1225	0.2 0.4	30 - 60 - 100 30 - 50 - 70	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
M	Stainless Steel	HB ≦ 300	Finishing (Solid Type)	Continuous Interruption	(VNB)	PR930	0.03 0.2	30 - 60 - 80 20 - 40 - 60	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, FSF	PR1225	0.1 0.2	30 - 60 - 80 20 - 40 - 60	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium	Continuous Interruption	GQ	PR1225	0.2 0.4	30 - 60 - 80 20 - 40 - 60	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
	Stainless Steel	HB ≦ 250	Finishing (Solid Type)	Continuous Interruption	(VNB)	KW10	0.03 0.2	30 - 60 - 100 30 - 60 - 100	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F	KW10	0.1 0.2	30 - 60 - 100 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium	Continuous Interruption	HQ	CA4505 CA4515	0.2 0.4	30 - 60 - 100 30 - 60 - 80	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
K	Gray Cast Iron	HB ≦ 270	Finishing (Solid Type)	Continuous Interruption	(VNB)	KW10	0.03 0.2	30 - 60 - 80 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, U	KW10	0.1 0.2	30 - 60 - 80 30 - 60 - 80	0.05 - 0.08 - 0.1 0.05 - 0.1 - 0.15	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
			Finishing-Medium	Continuous Interruption	Standard	CA4505 CA4515	0.2 0.4	30 - 60 - 100 30 - 60 - 80	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.03 - 0.05 - 0.07 0.03 - 0.07 - 0.1
	Nodular Cast Iron	HB ≦ 100	High Speed Cutting (Rainbow Surface Gross)	Continuous	Without Chipbreaker	KPD001	0.05	150 - 200 - 300	0.05 - 0.1 - 0.3	0.05 - 0.1 - 0.15
			Finishing	Continuous Interruption	F, U	KW10	0.1 0.2	100 - 150 - 200 100 - 150 - 200	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2
			Finishing	Continuous Interruption	F, U	KW10	0.1 0.2	20 - 40 - 60 20 - 40 - 60	0.05 - 0.2 - 0.5 0.05 - 0.2 - 0.5	0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2
S	Titanium Alloy	HB ≦ 400	Precision Cutting (Rainbow Surface Gross)	Continuous Interruption	Without Chipbreaker	KPD001	0.1 0.2	100 - 120 - 150 70 - 100 - 120	0.05 - 0.1 - 0.3 0.05 - 0.1 - 0.3	0.03 - 0.07 - 0.1 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, U	KW10	0.1 0.2	20 - 40 - 60 20 - 40 - 60	0.05 - 0.2 - 0.5 0.05 - 0.2 - 0.5	0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2
	Heat-resistant Alloys	HB ≦ 350	Finishing (Solid Type)	Continuous Interruption	(VNB)	KW10	0.2 0.2	10 - 30 - 50 10 - 30 - 50	0.05 - 0.1 - 0.3 0.05 - 0.1 - 0.3	0.03 - 0.05 - 0.1 0.03 - 0.05 - 0.08
			Finishing	Continuous Interruption	F, U	KW10	0.2 0.2	10 - 30 - 50 10 - 30 - 50	0.05 - 0.2 - 0.4 0.05 - 0.2 - 0.4	0.03 - 0.05 - 0.1 0.03 - 0.05 - 0.1
H	Hard Materials	40~50 HRC	Finishing	Continuous Interruption	(VNB)	PR930	0.2 0.2	30 - 50 - 70 30 - 50 - 70	0.05 - 0.1 - 0.4 0.05 - 0.1 - 0.2	0.01 - 0.02 - 0.05 0.01 - 0.02 - 0.03
		45~68 HRC	Finishing	Continuous Interruption	SE SET	KBN25M	0.2 0.4	60 - 100 - 120 60 - 80 - 100	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2	0.02 - 0.05 - 0.1 0.02 - 0.05 - 0.1

* Please use it with PR1005 set to Vc=150m/min or below, for machining of free-cutting steel such as small size 11SMn (SUM). For ap and feed, see low carbon steel.

Recommended Cutting Conditions

Recommended Cutting Conditions - Boring (Positive Insert: Cutting Dia over 10mm) [ap indicates radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Grade	Corner R (rε)	Lower Limit - Recommendation - Upper Limit		
								Vc(m/min)	ap(mm)	f(mm/rev)
*P	Low-carbon Steel Low-carbon Alloy	HB ≤ 300	Precision Cutting	Continuous Interruption	FSF, USF	TN6020 PR1025	0.1 0.2	250 - 300 - 350 100 - 150 - 200	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.03 - 0.1 - 0.15 0.03 - 0.1 - 0.15
			Finishing	Continuous Interruption	XP	PV7010 CA5525	0.4 0.4	200 - 250 - 300 150 - 200 - 250	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous Interruption	XQ	PV7010 CA5525	0.4 0.4	150 - 200 - 250 100 - 150 - 200	0.5 - 1.0 - 2.0 0.5 - 1.0 - 1.5	0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2
			Medium cutting	Continuous Interruption	Standard	PV7020 CA5525	0.8 0.8	100 - 150 - 200 80 - 120 - 150	1.0 - 1.5 - 2.5 1.0 - 1.5 - 2.0	0.1 - 0.15 - 0.3 0.1 - 0.15 - 0.2
	Medium-carbon Steel Medium-carbon Alloy	HB ≤ 300	Precision Cutting	Continuous Interruption	FSF, USF	TN6020 PR1025	0.2 0.4	150 - 200 - 250 100 - 120 - 150	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.03 - 0.1 - 0.15 0.03 - 0.1 - 0.15
			Finishing	Continuous Interruption	GP	PV7010 CA5525	0.4 0.4	150 - 200 - 250 120 - 180 - 200	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous Interruption	HQ	PV7010 CA5525	0.4 0.4	120 - 180 - 220 100 - 150 - 200	0.5 - 1.0 - 2.0 0.5 - 1.0 - 1.5	0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2
			Medium cutting	Continuous Interruption	Standard	PV7020 CA5525	0.8 0.8	100 - 150 - 200 80 - 120 - 150	1.0 - 1.5 - 2.5 1.0 - 1.5 - 2.0	0.1 - 0.15 - 0.3 0.1 - 0.15 - 0.2
	High-carbon Alloy	HB ≤ 280	Precision Cutting	Continuous Interruption	FSF, USF	TN6020 PR1025	0.2 0.4	120 - 150 - 180 100 - 120 - 150	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.03 - 0.1 - 0.15 0.03 - 0.1 - 0.15
			Finishing	Continuous Interruption	GP	PV7010 CA5525	0.4 0.4	120 - 150 - 180 100 - 120 - 150	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous Interruption	HQ	PV7010 CA5525	0.4 0.4	120 - 150 - 180 100 - 120 - 150	0.5 - 1.0 - 2.0 0.5 - 1.0 - 1.5	0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2
			Medium cutting	Continuous Interruption	Standard	CA5515 CA5525	0.8 0.8	100 - 120 - 150 80 - 100 - 120	1.0 - 1.5 - 2.5 1.0 - 1.5 - 2.0	0.1 - 0.15 - 0.3 0.1 - 0.15 - 0.2
M	Stainless Steel	HB ≤ 220	Finishing	Continuous Interruption	MQ	CA6525	0.4 0.8	120 - 150 - 180 100 - 120 - 150	0.2 - 0.5 - 0.8 0.2 - 0.5 - 0.8	0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1
			Medium cutting	Continuous Interruption	Standard	CA6525	0.4 0.8	120 - 150 - 180 100 - 120 - 150	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
	Stainless Steel	HB ≤ 300	Finishing	Continuous Interruption	MQ	CA6525	0.4 0.8	80 - 100 - 120 60 - 80 - 100	0.2 - 0.7 - 1.0 0.2 - 0.7 - 1.0	0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15
			Medium cutting	Continuous Interruption	Standard	CA6525	0.4 0.8	80 - 100 - 120 60 - 80 - 100	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
K	Gray Cast Iron	HB ≤ 250	High Speed Cutting	Continuous Interruption	Without Chipbreaker	KBN60M PT600M	0.4 0.8	400 - 500 - 600 200 - 250 - 350	0.05 - 0.2 - 0.5 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15
			Finishing (Gloss Oriented)	Continuous Interruption	Standard	PV7005 TN6020	0.8 0.8	200 - 250 - 300 100 - 150 - 200	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Finishing	Continuous Interruption	Standard	CA4505 CA4515	0.4 0.8	150 - 180 - 200 100 - 150 - 180	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Medium cutting	Continuous Interruption	Conventional Without Chipbreaker	CA4505 CA4515	0.8 0.8	100 - 150 - 200 80 - 120 - 150	0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0	0.1 - 0.15 - 0.2 0.05 - 0.1 - 0.15
	Nodular Cast Iron	HB ≤ 270	High Speed Cutting	Continuous Interruption	Without Chipbreaker	KBN60M PT600M	0.4 0.8	200 - 300 - 400 150 - 200 - 250	0.05 - 0.2 - 0.5 0.2 - 0.5 - 1.0	0.03 - 0.05 - 0.1 0.05 - 0.1 - 0.15
			Finishing (Gloss Oriented)	Continuous Interruption	Standard	PV7005 TN6020	0.8 0.8	150 - 200 - 250 100 - 120 - 150	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Finishing	Continuous Interruption	Standard	CA4505 CA4515	0.4 0.8	120 - 150 - 180 100 - 120 - 150	0.2 - 0.5 - 1.0 0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Medium cutting	Continuous Interruption	Standard	CA4505 CA4515	0.8 0.8	100 - 120 - 150 80 - 100 - 120	0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.15
N	Non-ferrous Metals	HB ≤ 100	High Speed Cutting (Rainbow Gloss Surface)	Continuous	Without Chipbreaker	KPD001	0.2	200 - 400-1000	0.05 - 0.1 - 0.3	0.05 - 0.1 - 0.15
			Finishing	Continuous Interruption	FSF, USF	KW10	0.4 0.4	100 - 200 - 400 100 - 200 - 400	0.05 - 0.5 - 1.0 0.05 - 0.5 - 1.0	0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2
S	Titanium Alloy	HB ≤ 400	Precision Cutting (Rainbow Gloss Surface)	Continuous Interruption	Without Chipbreaker	KPD001	0.2 0.4	100 - 120 - 150 70 - 100 - 120	0.05 - 0.1 - 0.3 0.05 - 0.1 - 0.3	0.03 - 0.07 - 0.1 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	F, U	KW10	0.2 0.4	30 - 50 - 70 30 - 50 - 70	0.05 - 0.5 - 1.0 0.05 - 0.5 - 1.0	0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2
	Heat-resistant Alloys	HB ≤ 350	Finishing	Continuous Interruption	F, U	KW10	0.4 0.4	10 - 30 - 50 10 - 30 - 50	0.05 - 0.5 - 1.0 0.05 - 0.5 - 1.0	0.03 - 0.1 - 0.2 0.03 - 0.1 - 0.2
			Finishing	Continuous Interruption	MQ	PR1310	0.4 0.8	40 - 60 - 80 40 - 60 - 80	0.1 - 0.3 - 0.5 0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1 0.03 - 0.05 - 0.1
H	Hard Materials	40 ~ 50 HRC	Finishing	Continuous Interruption	HQ	CA5515	0.8	60 - 80 - 100 30 - 50 - 70	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1
		45 ~ 68 HRC	Finishing	Continuous Interruption	Without Chipbreaker SET, MET	KBN05M KBN25M	0.4 0.8	80 - 120 - 150 60 - 100 - 120	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3	0.02 - 0.07 - 0.1 0.02 - 0.07 - 0.1
			Medium cutting	Continuous	Without Chipbreaker (Negative)	KBN900	0.8	60 - 80 - 100	0.3 - 0.7 - 1.0	0.03 - 0.1 - 0.15

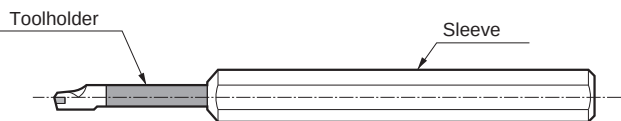
* When machining free-cutting steel such as 11SMn (SUM), please use PR1005 for Vc=200m/min or under and use PV7020 / CA5515, etc. for Vc=200m/min or over.



Boring

C...-AS (Assembly List)

C...-AS (Assembly List)

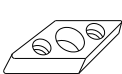


Assembly configuration

Assembly	Toolholder	Sleeve
Description	Description	Description
C04G- SCLCR03-05-AS	C04G- SCLCR03-05	SH0416-100
SCLCL03-05-AS	SCLCL03-05	
C05H- SWUBR06-06-AS	C05H- SWUBR06-06	SH0516-100
SWUBL06-06-AS	SWUBL06-06	
C05H- SCLCR03-06-AS	C05H- SCLCR03-06	SH0516-100
SCLCL03-06-AS	SCLCL03-06	
C06J- SWUBR06-07-AS	C06J- SWUBR06-07	SH0616-100
SWUBL06-07-AS	SWUBL06-07	
C06J- SCLCR04-07-AS	C06J- SCLCR04-07	SH0616-100
SCLCL04-07-AS	SCLCL04-07	
C07K- SWUBR08-08-AS	C07K- SWUBR08-08	SH0716-100
SWUBL08-08-AS	SWUBL08-08	
C07K- SCLCR04-08-AS	C07K- SCLCR04-08	SH0716-100
SCLCL04-08-AS	SCLCL04-08	
C08L- STUPR08-10-AS	C08L- STUPR08-10	SH0820-120
C10N- STUPR09-12-AS	C10N- STUPR09-12	SH1020-120
C10N- STUPR11-12-AS	C10N- STUPR11-12	
C12Q- STUPR09-16-AS	C12Q- STUPR09-16	SH1225-150
C12Q- STUPR11-14-AS	C12Q- STUPR11-14	
C12Q- STUPR11-16-AS	C12Q- STUPR11-16	
C16X- STUPR11-18-AS	C16X- STUPR11-18	SH1632-180
C16X- STUPR11-20-AS	C16X- STUPR11-20	
C20S- STUPR11-25-AS	C20S- STUPR11-25	SH2032-180
C20S- STUPR16-25-AS	C20S- STUPR16-25	

* "AS" indicates an assembly of toolholder and sleeve.
You can purchase the toolholder and sleeve and assemble them to make the corresponding assembly part.

Former Parts List (Boring Bar)

Description (Previous Description)	Spare Parts				
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
					
S32S-SVJB ^{R/L} 16-40E S40T-SVJB ^{R/L} 16-50E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S25X-SVPB ^{R/L} 16-34E S32S-SVPB ^{R/L} 16-40E					
S25X-SVUB ^{R/L} 16-34E S32S-SVUB ^{R/L} 16-40E					
S25X-SVZB ^{R/L} 16-34E S32S-SVZB ^{R/L} 16-40E					

· S32S-SVJB^{R/L} 16-40E and S40T-SVJB^{R/L} 16-50E have been shifted to A32S-SVJB^{R/L} 16-40AE and A40T-SVJB^{R/L} 16-50AE respectively. See  **F51**
· S25X-SVPB^{R/L} 16-34E and S32S-SVPB^{R/L} 16-40E have been shifted to A25S-SVPB^{R/L} 16-31AE and A32S-SVPB^{R/L} 16-40AE respectively. See  **F51**
· S25X-SVUB^{R/L} 16-34E and S32S-SVUB^{R/L} 16-40E have been shifted to A25S-SVUB^{R/L} 16-34AE and A32S-SVUB^{R/L} 16-40AE respectively. See  **F53**
· S25X-SVZB^{R/L} 16-34E and S32S-SVZB^{R/L} 16-40E have been shifted to A25S-SVZB^{R/L} 16-34AE and A32S-SVZB^{R/L} 16-40AE respectively. See  **F53**

Alternative Toolholder Reference Table for Boring Bar

Conventional Boring Bar				Alternative Toolholder					
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Dynamic Bar (2nd Recommendation)		
							Dynamic Bar (1st Recommendation)		
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Coolant Hole	Description	Reference Page
Excellent Bar	CC..	No	S08X-SCLC [®] /L06-10E	Yes	A08X-SCLC [®] /L06-10AE	F27	No	S08X-SCLC [®] /L06-10A	F27
			S10H-SCLC [®] /L03-05E	No	S10H-SCLC [®] /L03-05AE		-	-	-
			S10H-SCLC [®] /L03-06E		S10H-SCLC [®] /L03-06AE				
			S10J-SCLC [®] /L04-07E		S10H-SCLC [®] /L04-07AE				
			S10J-SCLC [®] /L04-08E		S10H-SCLC [®] /L04-08AE				
	CP..	Yes	A08H-SCLC [®] /L06-10E	Yes	A08X-SCLC [®] /L06-10AE	F27	No	S08X-SCLC [®] /L06-10A	F27
		No	S10M-SCLP [®] /L08-12E	Yes	A10L-SCLP [®] /L08-12AE	F31	No	S10L-SCLP [®] /L08-12A	F31
			S12M-SCLP [®] /L08-14E		A12M-SCLP [®] /L08-14AE			S12M-SCLP [®] /L08-14A	
			S12M-SCLP [®] /L09-16E		A12M-SCLP [®] /L09-16AE			S12M-SCLP [®] /L09-16A	
			S16Q-SCLP [®] /L09-18E		A16Q-SCLP [®] /L09-18AE			S16Q-SCLP [®] /L09-18A	
			S16R-SCLP [®] /L09-20E						
			S20X-SCLP [®] /L09-25E		A20R-SCLP [®] /L09-22AE			S20R-SCLP [®] /L09-22A	
		Yes	A10X-SCLP [®] /L08-12E	Yes	A10L-SCLP [®] /L08-12AE	F31	No	S10L-SCLP [®] /L08-12A	F31
			A12X-SCLP [®] /L08-14E		A12M-SCLP [®] /L08-14AE			S12M-SCLP [®] /L08-14A	
			A12X-SCLP [®] /L09-16E		A12M-SCLP [®] /L09-16AE			S12M-SCLP [®] /L09-16A	
			A16M-SCLP [®] /L09-18E		A16Q-SCLP [®] /L09-18AE			S16Q-SCLP [®] /L09-18A	
			A16M-SCLP [®] /L09-20E						
			A20Q-SCLP [®] /L09-25E		A20R-SCLP [®] /L09-22AE			S20R-SCLP [®] /L09-22A	
	DC..	No	S10M-SDUC [®] /L07-14E	Yes	A10L-SDUC [®] /L07-14AE	F35	No	S10L-SDUC [®] /L07-14A	F35
			S12M-SDUC [®] /L07-16E		A12M-SDUC [®] /L07-16AE			S12M-SDUC [®] /L07-16A	
			S16Q-SDUC [®] /L07-20E		A16Q-SDUC [®] /L07-20AE			S16Q-SDUC [®] /L07-20A	
			S16Q-SDUC [®] /L11-25E		A16Q-SDUC [®] /L11-23AE			S16Q-SDUC [®] /L11-23A	
			S20Q-SDUC [®] /L11-32E		A20R-SDUC [®] /L11-27AE			S20R-SDUC [®] /L11-27A	
		No	S10M-SDZC [®] /L07-14E	Yes	A10L-SDZC [®] /L07-14AE	F37	No	S10L-SDZC [®] /L07-14A	F37
			S12M-SDZC [®] /L07-16E		A12M-SDZC [®] /L07-16AE			S12M-SDZC [®] /L07-16A	
			S16Q-SDZC [®] /L07-20E		A16Q-SDZC [®] /L07-20AE			S16Q-SDZC [®] /L07-20A	
			S16Q-SDZC [®] /L11-25E		A16Q-SDZC [®] /L11-23AE			S16Q-SDZC [®] /L11-23A	
			S20Q-SDZC [®] /L11-32E		A20R-SDZC [®] /L11-27AE			S20R-SDZC [®] /L11-27A	
	TB..	No	S06H-STUB [®] /L06-08E	No	S06H-STLB [®] /L06-08AE	F43	No	S06H-STLB [®] /L06-08A	F43
	TP..	No	S08K-STUP [®] /L08-10E	Yes	A08X-STLP [®] /L09-10AE	F43	No	S08X-STLP [®] /L09-10A	F43
			S10M-STUP [®] /L09-12E		A10L-STLP [®] /L09-12AE			S10L-STLP [®] /L09-12A	
			S10M-STUP [®] /L11-12E		A10L-STLP [®] /L11-12AE			S10L-STLP [®] /L11-12A	
			S12M-STUP [®] /L11-14E						
			S12M-STUP [®] /L09-16E		A12M-STLP [®] /L11-14AE			S12M-STLP [®] /L11-14A	
			S12M-STUP [®] /L11-16E						
			S16R-STUP [®] /L11-18E		A16Q-STLP [®] /L11-18AE			S16Q-STLP [®] /L11-18A	
			S16R-STUP [®] /L11-20E						
			S20X-STUP [®] /L11-25E		A20R-STLP [®] /L11-22AE			S20R-STLP [®] /L11-22A	
			S20X-STUP [®] /L16-25E						
		Yes	S25X-STUP [®] /L16-32E		A25S-STLP [®] /L16-27AE			S25S-STLP [®] /L16-27A	
			A08H-STUP [®] /L08-10E		A08X-STLP [®] /L09-10AE			S08X-STLP [®] /L09-10A	
			A10X-STUP [®] /L09-12E		A10L-STLP [®] /L09-12AE			S10L-STLP [®] /L09-12A	
			A10X-STUP [®] /L11-12E		A10L-STLP [®] /L11-12AE			S10L-STLP [®] /L11-12A	
			A12X-STUP [®] /L09-16E		A12M-STLP [®] /L11-14AE			S12M-STLP [®] /L11-14A	
			A12X-STUP [®] /L11-16E						
			A12X-STUP [®] /L11-14E		A12M-STLP [®] /L11-14AE			S12M-STLP [®] /L11-14A	
			A16M-STUP [®] /L11-18E		A16Q-STLP [®] /L11-18AE			S16Q-STLP [®] /L11-18A	
			A16M-STUP [®] /L11-20E						
			A20Q-STUP [®] /L11-25E		A20R-STLP [®] /L11-22AE			S20R-STLP [®] /L11-22A	
			A20Q-STUP [®] /L16-25E						
			A25R-STUP [®] /L16-32E		A25S-STLP [®] /L16-27AE			S25S-STLP [®] /L16-27A	
	VB..	No	S20R-SVJB [®] /L11-25E	Yes	A20R-SVJB [®] /L11-25AE	F51	No	S20R-SVJB [®] /L11-25A	F51
			S25S-SVJB [®] /L11-30E		A25S-SVJB [®] /L11-30AE			S25S-SVJB [®] /L11-30A	
			S32S-SVJB [®] /L16-40EN		A32S-SVJB [®] /L16-40AE			S32S-SVJB [®] /L16-40A	
			S40T-SVJB [®] /L16-50EN		A40T-SVJB [®] /L16-50AE			S40T-SVJB [®] /L16-50A	

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure of their specifications by referring to the catalog or other documents.

F



Boring

Alternative Toolholder Reference Table for Boring Bar

Conventional Boring Bar				Alternative Toolholder						
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)			
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Coolant Hole	Description	Reference Page	
Excellent Bar	VB..	No	S12M-SVPB [®] /11-20E	Yes	A12M-SVPB [®] /11-18AE	F51	No	S12M-SVPB [®] /11-18A	F51	
			S16Q-SVPB [®] /11-25E		A16Q-SVPB [®] /11-22AE			S16Q-SVPB [®] /11-22A		
			S25X-SVPB [®] /16-34EN		A25S-SVPB [®] /16-31AE			S25S-SVPB [®] /16-31A		
			S32S-SVPB [®] /16-40EN		A32S-SVPB [®] /16-40AE			S32S-SVPB [®] /16-40A		
		No	S16Q-SVUB [®] /11-20E	Yes	A16Q-SVUB [®] /11-20AE	F53	No	S16Q-SVUB [®] /11-20A	F53	
			S20R-SVUB [®] /11-25E		A20R-SVUB [®] /11-25AE			S20R-SVUB [®] /11-25A		
			S25X-SVUB [®] /16-34EN		A25S-SVUB [®] /16-34AE			S25S-SVUB [®] /16-34A		
			S32S-SVUB [®] /16-40EN		A32S-SVUB [®] /16-40AE			S32S-SVUB [®] /16-40A		
		No	S16Q-SVZB [®] /11-20E	Yes	A16Q-SVZB [®] /11-20AE	F53	No	S16Q-SVZB [®] /11-20A	F53	
			S20R-SVZB [®] /11-25E		A20R-SVZB [®] /11-25AE			S20R-SVZB [®] /11-25A		
			S25X-SVZB [®] /16-34EN		A25S-SVZB [®] /16-34AE			S25S-SVZB [®] /16-34A		
			S32S-SVZB [®] /16-40EN		A32S-SVZB [®] /16-40AE			S32S-SVZB [®] /16-40A		
	VC..	No	S12M-SVJC [®] /08-16E	Yes	A12M-SVJC [®] /08-16AE	F51	No	S12M-SVJC [®] /08-16A	F51	
			S16Q-SVJC [®] /08-20E		A16Q-SVJC [®] /08-20AE			S16Q-SVJC [®] /08-20A		
		No	S10M-SVPC [®] /08-16E	Yes	A10L-SVPC [®] /08-14AE	F51	No	S10L-SVPC [®] /08-14A	F51	
		No	S12M-SVUC [®] /08-16E	Yes	A12M-SVUC [®] /08-16AE	F53	No	S12M-SVUC [®] /08-16A	F53	
	No	S12M-SVZC [®] /08-16E	Yes	A12M-SVZC [®] /08-16AE	F53	No	S12M-SVZC [®] /08-16A	F53		
	VP..	No	S12M-SVJP [®] /08-16E	Yes	A12M-SVJP [®] /08-16AE	F51	No	S12M-SVJP [®] /08-16A	F51	
	WB..	No	S08K-SWUB [®] /08-10E	Yes	A08X-SWUB [®] /08-10AE	F57	No	S08X-SWUB [®] /08-10A	F57	
			S10M-SWUB [®] /08-12E		A10L-SWUB [®] /08-12AE			S10L-SWUB [®] /08-12A		
			S10H-SWUB [®] /06-06E		S10H-SWUB [®] /06-06AE			S10H-SWUB [®] /06-06A		
			No	S10H-SWUB [®] /06-07E	No			S10H-SWUB [®] /06-07AE		S10H-SWUB [®] /06-07A
				S10J-SWUB [®] /08-08E				S10H-SWUB [®] /08-08AE		S10H-SWUB [®] /08-08A
	WP..	No	S12M-SWUP [®] /11-14E	Yes	A12M-SWUP [®] /11-14AE	F57	No	S12M-SWUP [®] /11-14A	F57	
			S12M-SWUP [®] /11-16E		A16Q-SWUP [®] /11-18AE			S16Q-SWUP [®] /11-18A		
			S16N-SWUP [®] /11-18E		A16Q-SWUP [®] /16-18AE			S16Q-SWUP [®] /16-18A		
			S16Q-SWUP [®] /16-20E		A20R-SWUP [®] /16-22AE			S20R-SWUP [®] /16-22A		
			S20R-SWUP [®] /16-25E							
		Yes	A12X-SWUP [®] /11-14E	Yes	A12M-SWUP [®] /11-14AE	F57	No	S12M-SWUP [®] /11-14A	F57	
			A12X-SWUP [®] /11-16E		A16Q-SWUP [®] /11-18AE			S16Q-SWUP [®] /11-18A		
A16M-SWUP [®] /11-18E			A16Q-SWUP [®] /16-18AE		S16Q-SWUP [®] /16-18A					
A16M-SWUP [®] /16-20E			A20R-SWUP [®] /16-22AE		S20R-SWUP [®] /16-22A					
A20Q-SWUP [®] /16-25E										
Steel Bar	CC..	No	S08X-SCLC [®] /06-10	No	S08X-SCLC [®] /06-10A	F27	-	-	-	
		Yes	A08H-SCLC [®] /06-10		S10L-SCLC [®] /06-12A		Yes	A08X-SCLC [®] /06-10AE	F27	
			A10X-SCLC [®] /06-12		S12M-SCLC [®] /06-14A			A10L-SCLC [®] /06-12AE		
			A12X-SCLC [®] /06-14		S16Q-SCLC [®] /09-18A			A12M-SCLC [®] /06-14AE		
			A12X-SCLC [®] /06-16		S20R-SCLC [®] /09-22A			A16Q-SCLC [®] /09-18AE		
			A12X-SCLC [®] /09-16		S25S-SCLC [®] /09-27A			A20R-SCLC [®] /09-22AE		
			A16M-SCLC [®] /06-20							
			A16M-SCLC [®] /09-18							
			A16M-SCLC [®] /09-20							
			A20Q-SCLC [®] /09-25							
	CP..	No	S10M-SCLP [®] /08-12	No	S10L-SCLP [®] /08-12A	F31	-	-	-	
			S12M-SCLP [®] /08-14		S12M-SCLP [®] /08-14A					
			S12M-SCLP [®] /09-16		S16Q-SCLP [®] /09-18A					
			S16N-SCLP [®] /09-18		S20R-SCLP [®] /09-22A					
			S16Q-SCLP [®] /09-20		S25S-SCLP [®] /09-27A					
			S20R-SCLP [®] /09-25							
S25S-SCLP [®] /09-30										
DC..	No	S16Q-SDUC [®] /07-14	No	S16Q-SDUC [®] /07-14A	F35	-	-	-		
		S16Q-SDUC [®] /07-16		S20R-SDUC [®] /11-20A						
		S20R-SDUC [®] /11-20		S16Q-SDUC [®] /11-23A						
		S25X-SDUC [®] /11-25								
	No	S16Q-SDZC [®] /07-14	No	S16Q-SDZC [®] /07-14A	F37	-	-	-		
		S16Q-SDZC [®] /07-16		S20R-SDZC [®] /11-20A						
		S20R-SDZC [®] /11-20		S16Q-SDZC [®] /11-23A						
		S25X-SDZC [®] /11-25								

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure of their specifications by referring to the catalog or other documents.

Alternative Toolholder Reference Table for Boring Bar

Conventional Boring Bar				Alternative Toolholder					
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Dynamic Bar (2nd Recommendation)		
							Dynamic Bar (1st Recommendation)		
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Coolant Hole	Description	Reference Page
Steel Bar	TB..	No	S06H-STUB ^{R/L} 06-08	No	S06H-STLB ^{R/L} 06-08A	F43	-	-	-
	TP..	No	S08K-STUP ^{R/L} 08-10	No	S08X-STLP ^{R/L} 09-10A	F43	-	-	-
			S10M-STUP ^{R/L} 09-12		S10L-STLP ^{R/L} 09-12A				
			S12M-STUP ^{R/L} 09-16		S12M-STLP ^{R/L} 11-14A				
			S16Q-STUP ^{R/L} 11-20		S16Q-STLP ^{R/L} 11-18A				
			S20R-STUP ^{R/L} 11-25		S20R-STLP ^{R/L} 11-22A				
			S25X-STUP ^{R/L} 16-32		S25S-STLP ^{R/L} 16-27A				
			S10H-SWUB ^{R/L} 06-06	No	S10H-SWUB ^{R/L} 06-06A	F57	-	-	-
	WB..	No	S10H-SWUB ^{R/L} 06-06-15		S10H-SWUB ^{R/L} 06-07A				
			S10H-SWUB ^{R/L} 06-07		S10H-SWUB ^{R/L} 08-08A				
			S10J-SWUB ^{R/L} 08-08						
			S10J-SWUB ^{R/L} 08-08-20						
Carbide Shank Bar	CC..	No	C04G-SCLC ^{R/L} 03-05	No	C04G-SCLC ^{R/L} 03-05A	F27	-	-	-
			C05H-SCLC ^{R/L} 03-06		C05H-SCLC ^{R/L} 03-06A				
			C06J-SCLC ^{R/L} 04-07		C06J-SCLC ^{R/L} 04-07A				
			C07K-SCLC ^{R/L} 04-08		C07K-SCLC ^{R/L} 04-08A				
			C08L-SCLC ^{R/L} 06-10		E08L-SCLC ^{R/L} 06-10A				
		Yes	E08L-SCLC ^{R/L} 06-10	Yes	E08L-SCLC ^{R/L} 06-10A				
	CP..	No	C10N-SCLP ^{R/L} 08-12	Yes	E10N-SCLP ^{R/L} 08-12A	F31	-	-	-
			C10N-SCLPR08-12-1/2		E10N-SCLPR08-12A-1/2				
			C10N-SCLPR08-12-2/3		E10N-SCLPR08-12A-2/3				
			C12Q-SCLP ^{R/L} 09-16		E12Q-SCLP ^{R/L} 08-14A				
			C12Q-SCLPR09-16-1/2		E12Q-SCLPR08-14A-1/2				
			C12Q-SCLPR09-16-2/3		E12Q-SCLPR08-14A-2/3				
			C16X-SCLP ^{R/L} 09-20		E16X-SCLP ^{R/L} 09-18A				
			C16X-SCLPR09-20-1/2		E16X-SCLPR09-18A-1/2				
			C16X-SCLPR09-20-2/3		E16X-SCLPR09-18A-2/3				
			C20S-SCLP ^{R/L} 09-25		E20S-SCLP ^{R/L} 09-22A				
			C20S-SCLPR09-25-1/2		E20S-SCLPR09-22A-1/2				
			C20S-SCLPR09-25-2/3		E20S-SCLPR09-22A-2/3				
		Yes	E10N-SCLP ^{R/L} 08-12	Yes	E10N-SCLP ^{R/L} 08-12A	F31	-	-	-
			E12Q-SCLP ^{R/L} 09-16		E12Q-SCLP ^{R/L} 08-14A				
			E16X-SCLP ^{R/L} 09-20		E16X-SCLP ^{R/L} 09-18A				
			E20S-SCLP ^{R/L} 09-25		E20S-SCLP ^{R/L} 09-22A				
	DC..	No	C10N-SDUC ^{R/L} 07-14	Yes	E10N-SDUC ^{R/L} 07-14A	F35	-	-	-
			C12Q-SDUC ^{R/L} 07-16		E12Q-SDUC ^{R/L} 07-16A				
			C12Q-SDUC ^{R/L} 11-20		E12Q-SDUC ^{R/L} 07-16A				
			C16X-SDUC ^{R/L} 11-25		E16X-SDUC ^{R/L} 11-23A				
			C20S-SDUC ^{R/L} 11-32		E20S-SDUC ^{R/L} 11-27A				
	TB..	No	C10L-STUB ^{R/L} 06-08	No	C06J-STLB ^{R/L} 06-08A	F43	-	-	-
	TP..	No	C08L-STUP ^{R/L} 08-10	Yes	E08L-STLP ^{R/L} 09-10A				
			C10N-STUP ^{R/L} 09-12		E10N-STLP ^{R/L} 09-12A				
			C10N-STUPR09-12-1/2		E10N-STLPR09-12A-1/2				
			C10N-STUPR09-12-2/3		E10N-STLPR09-12A-2/3				
			C10N-STUP ^{R/L} 11-12		E10N-STLP ^{R/L} 11-12A				
			C10N-STUPR11-12-1/2		E10N-STLPR11-12A-1/2				
			C10N-STUPR11-12-2/3		E10N-STLPR11-12A-2/3				
			C12Q-STUP ^{R/L} 11-14		E12Q-STLP ^{R/L} 11-14A				
			C12Q-STUPR11-14-1/2		E12Q-STLPR11-14A-1/2				
			C12Q-STUPR11-14-2/3		E12Q-STLPR11-14A-2/3				
			C12Q-STUP ^{R/L} 09-16		E12Q-STLP ^{R/L} 11-14A				
			C12Q-STUPR09-16-1/2		E12Q-STLPR11-14A-1/2				
			C12Q-STUPR09-16-2/3		E12Q-STLPR11-14A-2/3				
			C12Q-STUP ^{R/L} 11-16		E12Q-STLP ^{R/L} 11-14A				
			C12Q-STUPR11-16-1/2		E12Q-STLPR11-14A-1/2				
			C12Q-STUPR11-16-2/3		E12Q-STLPR11-14A-2/3				

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure of their specifications by referring to the catalog or other documents..



Boring

Alternative Toolholder Reference Table for Boring Bar

Conventional Boring Bar				Alternative Toolholder					
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Dynamic Bar (2nd Recommendation)		
							Dynamic Bar (1st Recommendation)		
Shank	Insert Shape	Coolant Hole	Description	Coolant Hole	Description	Reference Page	Coolant Hole	Description	Reference Page
Excellent Bar	TP..	No	C16X-STUP [®] /11-18	Yes	E16X-STLP [®] /11-18A	F43	-	-	-
			C16X-STUPR11-18-1/2		E16X-STLPR11-18A-1/2				
			C16X-STUPR11-18-2/3		E16X-STLPR11-18A-2/3				
			C16X-STUP [®] /11-20		E16X-STLP [®] /11-18A				
			C16X-STUPR11-20-1/2		E16X-STLPR11-18A-1/2				
			C16X-STUPR11-20-2/3		E16X-STLPR11-18A-2/3				
			C20S-STUP [®] /11-25		E20S-STLP [®] /11-22A				
			C20S-STUPR11-25-1/2		E20S-STLPR11-22A-1/2				
			C20S-STUPR11-25-2/3		E20S-STLPR11-22A-2/3				
			C20S-STUP [®] /16-25		E20S-STLP [®] /11-22A				
			C20S-STUPR16-25-1/2		E20S-STLPR11-22A-1/2				
			C20S-STUPR16-25-2/3		E20S-STLPR11-22A-2/3				
		Yes	E08L-STUP [®] /08-10	Yes	E08L-STLP [®] /09-10A	F43	-	-	-
			E10N-STUP [®] /09-12		E10N-STLP [®] /09-12A				
			E10N-STUP [®] /11-12		E10N-STLP [®] /11-12A				
			E12Q-STUP [®] /09-16		E12Q-STLP [®] /11-14A				
			E12Q-STUP [®] /11-14		E12Q-STLP [®] /11-14A				
			E12Q-STUP [®] /11-16		E12Q-STLP [®] /11-14A				
			E16X-STUP [®] /11-18		E16X-STLP [®] /11-18A				
			E16X-STUP [®] /11-20		E16X-STLP [®] /11-18A				
			E20S-STUPR11-25		E20S-STLPR11-22A				
			E20S-STUPR16-25		E20S-STLPR11-22A				
	WB..	No	C05H-SWUB [®] /06-06	No	C05H-SWUB [®] /06-06A	F57	-	-	-
			C06J-SWUB [®] /06-07		C06J-SWUB [®] /06-07A				
			C07K-SWUB [®] /08-08		C07K-SWUB [®] /08-08A				
			C08L-SWUB [®] /08-10		E08L-SWUB [®] /08-10A				
		Yes	C10N-SWUB [®] /08-12	Yes	E10N-SWUB [®] /08-12A				
			C10N-SWUBR08-12-1/2		E10N-SWUBR08-12A-1/2				
			C10N-SWUBR08-12-2/3		E10N-SWUBR08-12A-2/3				
	WP..	No	C12Q-SWUP [®] /11-14	Yes	E12Q-SWUP [®] /11-14A	F57	-	-	-
			C12Q-SWUPR11-14-1/2		E12Q-SWUPR11-14A-1/2				
			C12Q-SWUPR11-14-2/3		E12Q-SWUPR11-14A-2/3				
			C12Q-SWUP [®] /11-16		E12Q-SWUP [®] /11-14A				
			C12Q-SWUPR11-16-1/2		E12Q-SWUPR11-14A-1/2				
			C12Q-SWUPR11-16-2/3		E12Q-SWUPR11-14A-2/3				
			C16X-SWUP [®] /11-18		E16X-SWUP [®] /11-18A				
			C16X-SWUPR11-18-1/2		E16X-SWUPR11-18A-1/2				
			C16X-SWUPR11-18-2/3		E16X-SWUPR11-18A-2/3				
			C16X-SWUP [®] /16-20		E16X-SWUP [®] /16-18A				
			C16X-SWUPR16-20-1/2		E16X-SWUPR16-18A-1/2				
			C16X-SWUPR16-20-2/3		E16X-SWUPR16-18A-2/3				
			C20S-SWUP [®] /16-25		E20S-SWUP [®] /16-22A				
			C20S-SWUPR16-25-1/2		E20S-SWUPR16-22A-1/2				
			C20S-SWUPR16-25-2/3		E20S-SWUPR16-22A-2/3				

Note) The corresponding replacements may be different from the conventional parts in minimum processing diameter or applicable insert size. Make sure of their specifications by referring to the catalog or other documents..