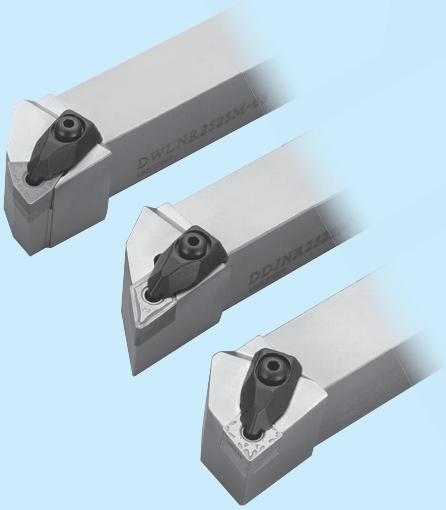
External

D

D1~D40



Parts Compatibility of Lever Lock Toolholders ➡ R42

High rigidity toolholder

Double Clamp Series

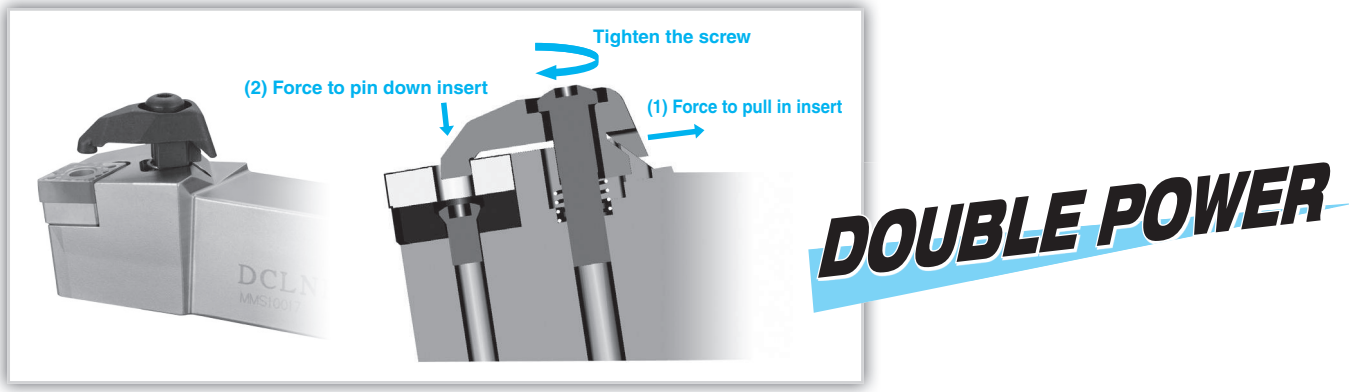
Securely clamps the insert with a single action

D

External

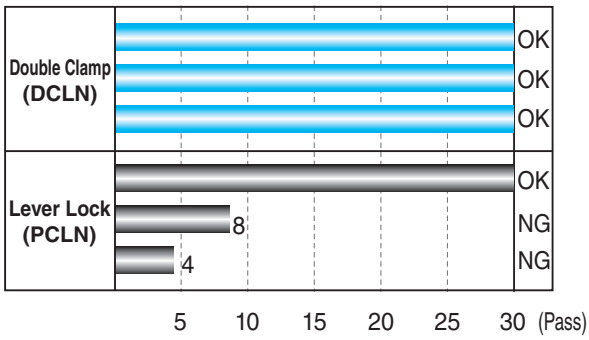
Improved Clamping Rigidity

Firmly clamp the insert in two directions with one action



Achieving long Insert Life

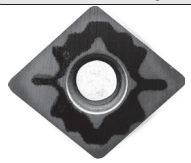
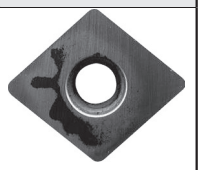
By strongly clamping the insert in two directions, good contact between the shim and insert can be maintained, even with high feed rates. Along with improving the accuracy of the insert position, long insert life can be achieved.



<Cutting Conditions>
SCM435, Vc=150m/min, ap=1mm, f=0.4mm/rev
CNMG120408PS, 30 Pass Interrupted Machining

Comparison of shim and insert contact

Coating material is applied to the shim side of the insert, which is installed on the toolholder. Compare the shim contact surface after tightening.

PS Chipbreaker	Shim contact surface of double clamp	Shim contact surface of lever lock
	Cutting edge side 	Cutting edge side 
	The shape of insert chipbreaker is transferred. There is a high level of contact.	Only a part of the shape of insert chipbreaker is transferred. There is a low level of contact.

Convenient marking design

Screw	Tightening Torque (N•m)
CS-2D	1.7
CS-3D	3.9
CS-5D	3.0

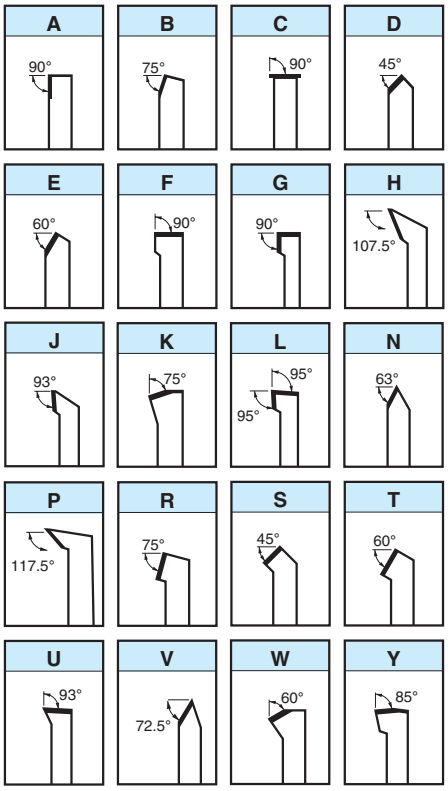
Use the part-description for convenient ordering. The screw tightening torque is also indicated.

Identification System for Turning Toolholders (Square Shank)

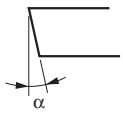
Clamping System	Insert Shape	Hand of Tool	Shank Height	Shank Width	Others
A: Back Clamp **C**: Top Clamp **D**: Double Clamp **M**: Multi Lock **P**: Lock Pin Only or Lever Lock **S**: Screw Clamp **W**: Wedge Lock	**C**: 80° Rhombic **D**: 55° Rhombic **R**: Round **S**: 90° Square **T**: 60° Triangle **V**: 35° Rhombic **W**: 80° Trigon	**R**: Right-hand **L**: Left-hand **N**: Neutral	Shank Height (mm)	Shank Width (mm)	Manufacture's Option Optional Mark or Number

D	C	L	N	R	20	20	K	—	12	

Cutting Edge Angle

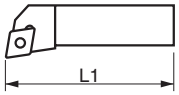


Insert Relief Angle



B: 5° **Positive**
C: 7° **Positive**
D: 15° **Positive**
E: 20° **Positive**
N: 0° **Negative**
P: 11°**Positive**

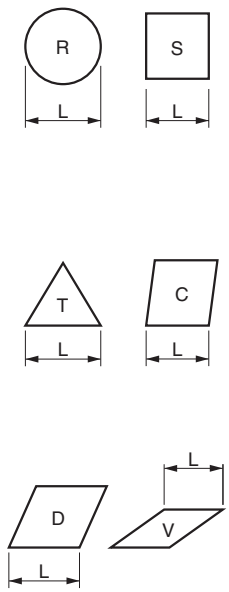
Toolholder Length



(mm)

A: 32	**J**: 110	**R**: 200
B: 40	**JX**: 120	**S**: 250
C: 50	**K**: 125	**T**: 300
D: 60	**L**: 140	**U**: 350
E: 70	**M**: 150	**V**: 400
F: 80	**N**: 160	**W**: 450
G: 90	**P**: 170	**Y**: 500
H: 100	**Q**: 180	**X**: **Special**

Insert Size



- Specification may change without any prior notice.
- Due to the installation size contrains on the machine, the toolholder length of some products may not match with the symbol.

Toolholders for General Purpose

Applicable Insert Shape	CN..	WN..	TN..	DN..	RC..		RN..	VN..
Applications	External / Facing		External / Facing / Copying					External / Facing / Copying / Undercutting
Cutting Edge Angle	95°		105°	107.5°	Special			117.5°
Lever Lock (Pin Lock)	PCLN	PWLN		PDHN	PRGC	PRXC	PRGN	PVPN (Pin Lock)
Ref. to Page	**D8**	**D20**		**D11**	**D19**	**D19**	**D19**	**D18**
Wedge Lock Multi Lock		WWLN	WTKN-N					
Ref. to Page		**D20**	**D15**					
Double Clamp	DCLN	DWLN		DDHN				DVPN
Ref. to Page	**D8**	**D20**		**D10**				**D16**

Toolholders for Ceramic Tools

Applications	External / Facing			External / Copying			External / Chamfering	External / Facing / Chamfering
Cutting Edge Angle	95°	97.5°	Special	93°	107.5°	Special	45°	45°
Top Clamp	CCLN	CELN	CRSN	CDJN		CRDN	CSDN	CSSN
Ref. to Page	**D22**	**D23**	**D27**	**D23**		**D27**	**D25**	**D25**
Dimpled Clamp	CCLN-GX			CDJN-GX	CDHN-GX		CSDN-GX	CSSN-GX
Ref. to Page	**D28**			**D29**	**D29**		**D30**	**D30**

Toolholders for Solid CBN Tools

Applications	External / Facing		External / Copying	External / Chamfering	External / Facing / Chamfering	External		
Cutting Edge Angle	95°	Special	Special	45°	45°	75°		93°
Top Clamp	CCLN-A	CRSN-A	CRDN-A	CSDN-A	CSSN-A	CCRN-A	CSRN-A	CTJN-A
Ref. to Page	**D32**	**D33**	**D33**	**D35**	**D35**	**D32**	**D34**	**D36**

	VN..		DN.. TN..	SN..	TN..	SN..	SN..	TN..	SN..	TN..
	External / Copying			External / Chamfering		External / Facing / Chamfering	External		Facing	
	72.5°	95°	93°	45°	60°	45°	75°	91°	15°	-1°
	PVVN (Pin Lock)	PVLN (Pin Lock)	PDJN	PSDN		PSSN	PSBN	PTGN	PSKN	PTFN
	D18	**D18**	**D11**	**D13**		**D13**	**D12**	**D14**	**D12**	**D14**
	MVVN	MVLN	WTJN-N		WTEN-N					
	D17	**D17**	**D15**		**D15**					
	DVVN	DVLN	DDJN				DSBN	DTGN		
	D16	**D16**	**D10**				**D12**	**D14**		

External			Facing		
75°	85°	93°	5°	15°	-3°
CSRN	CS-N	CTJN	CSYN	CSKN	CTUN
D25	**D25**	**D26**	**D25**	**D25**	**D26**
CSRN-GX	CS-N-GX		CSYN-GX	CSKN-GX	
D30	**D31**		**D31**	**D31**	

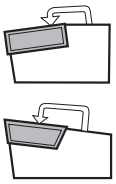
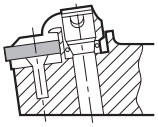
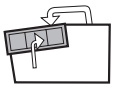
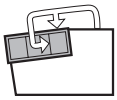
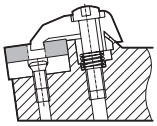
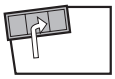
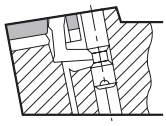
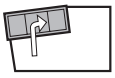
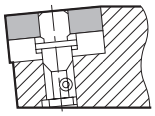
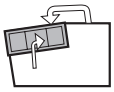
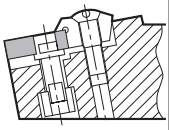
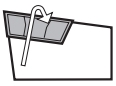
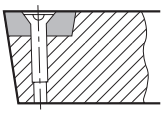
Facing		
5°	15°	-3°
CSYN-A	CSKN-A	CTUN-A
D34	**D34**	**D36**

Toolholders for Bearing Machining

Applications	External	Facing
Cutting Edge Angle	Special	Special
Lever Lock	PRGC-BE	PRGC-BF
Ref. to Page	**D37**	**D37**

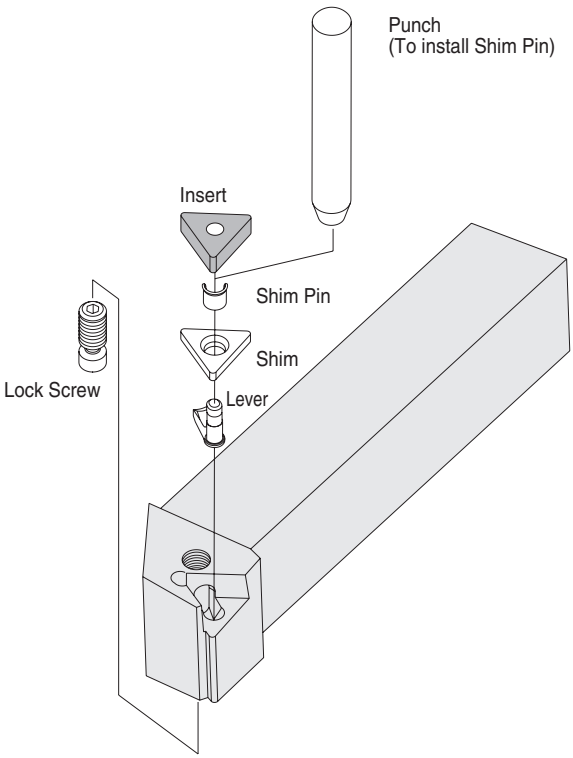
Applications	Round Chamfering
Cutting Edge Angle	Special
Top Clamp	CBSN
Ref. to Page	**D38**

Clamping System

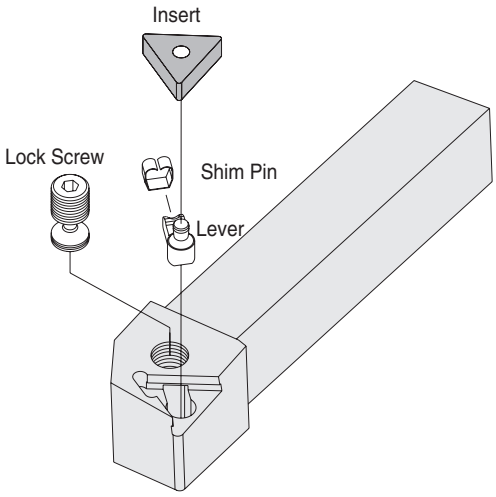
Series	Design		Features	Series	Design		Features
Top Clamp (C)			· Rigid Clamping · Negative Insert : Medium to Heavy Machining (Mainly for Ceramic Insert) · Positive Insert : Low Cutting Force	Multi Lock (M)			· Combination of Top Clamp and Pin Lock · Rigid Clamping · Heavy Machining
Double Clamp (D)			· Firmly clamp the insert in two directions with one action.	Lever Lock (P)			· Easy Insert Replacement · General Use
Pin Lock (P)			· Easy Insert Replacement	Wedge Lock (W)			· Rigid Clamping · Heavy Machining
Screw Clamp (S)			· Simple Mechanism · Fewer Parts · Finishing to Medium Machining				

Lever Lock

PCLN
PWLN
PTGN / PTFN / PTLN
PDJN / PDHN
PSBN / PSKN / PSSN / PSDN
PRGN
PRGC / PRXC



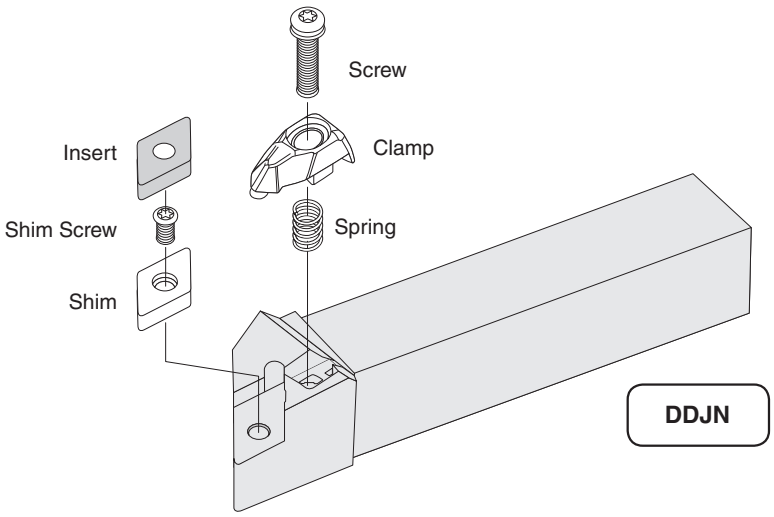
With Shim



Without Shim

PTGN-11 / PTFN-11

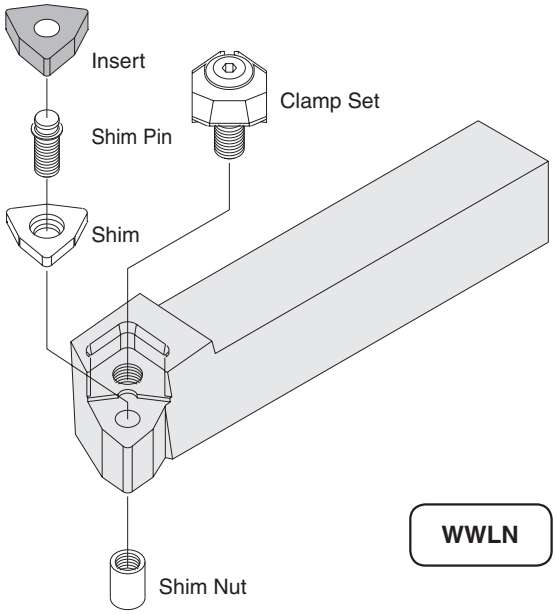
Double Clamp



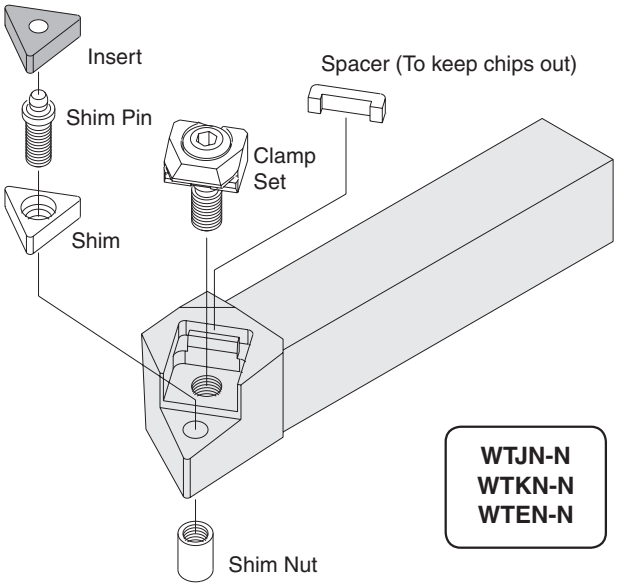
DDJN

DCLN
DDJN / DDHN
DSBN
DTGN
DVLN / DVPN / DVVN
DWLN

Wedge Lock

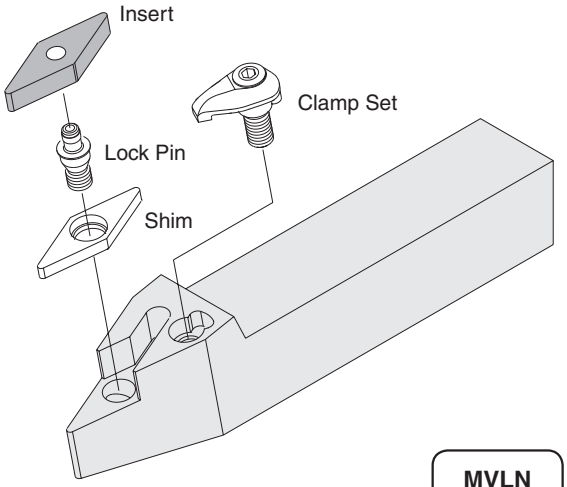


WWLN



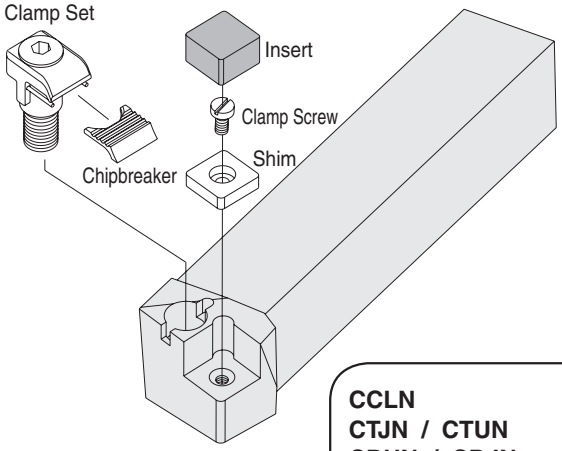
WTJN-N
WTKN-N
WTEN-N

Multi Lock



MVLN
MVVN

Top Clamp

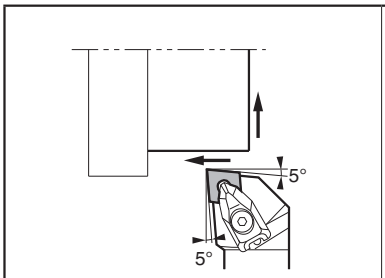


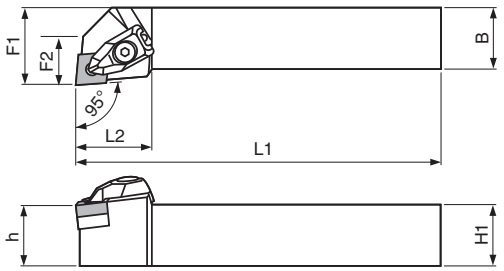
CCLN
CTJN / CTUN
CDHN / CDJN
CELN
CSRN / CS-N / CSKN
CSYN / CSSN / CSDN
*** CRSN / * CRDN**

* A chipbreaker is not included with CRSN / CRDN.

Toolholders for General Purpose [CN□□ Insert]

DCLN (External / Facing)





● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

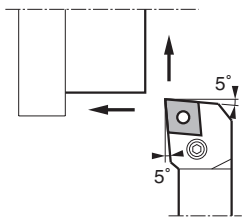
Toolholder Description	Insert Description	
DCLN R/L...-12	CN□A CN□G CN□M	1204..

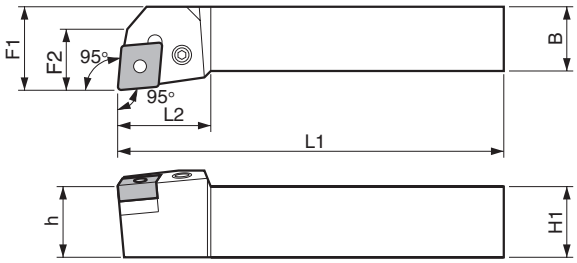
● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DCLN R/L	2020K -12	●	●	20	20	125	33	25	20	0.8	CP-3D	CS-3D	SP-3D	*DC-44	SB-4085TR	LW-3 (For Clamp)	FT-15 (For Shim)
	2525M -12	●	●	25	25	150	32	32									

*When using inserts whose corner-R(rε) is greater than 1.6mm, it will be necessary additional modifications of the shim in order to prevent workpiece and shim from interfering each other.

PCLN (External / Facing)





● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder Description	Insert Description	
PCLN R/L...-09	CN□G	0904..
PCLN R/L...-12	CN□A CN□G CN□M	1204..
PCLN R/L...-16		1606..

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PCLN R/L	1616H -09	●	●	16	16	100	22	20	14	0.8	LL-1N	LS-1N	LC-32N	LSP-1	PC-1	FH-2.5
	2020K -09	●	●	20	20	125		25	15							
	2525M -09	●	●	25	25	150		32	18							
	2020H -12*	●		20	20	100	27	25	20	0.8	LL-2N	LS-2N	LC-42N *LC-42N-20	LSP-2	PC-2	LW-3
	2020K -12	●	●			125										
	2525M -12	●	●	25	25	150		32								
	3225P -12	●	●	32		170										
	2525M -16	●	●	25	25	150	32	32	25	0.8	LL-5N	LS-4N	LC-53N	LSP-3	-	LW-3
	3232P -16	●	●	32	32	170		40	27							

* mark indicates short shank type

· When using inserts whose corner-R(rε) is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering each other.

● : Std. Item

Applicable Inserts

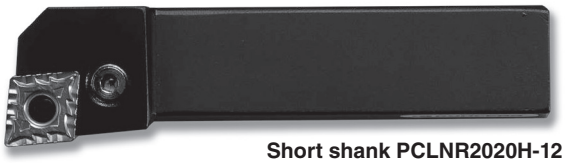
Applications	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Insert	**WP**(Wiper)	**WQ**(Wiper)	**PP**	**PQ**	**CQ**	**CJ**	**GS**	**PG**
Size	12	12	12	12	12,16	12,16	09,12	12
Page	**B14**	**B14**	**B14**	**B14**	**B14**	**B14**	**B15**	**B15**
Applications	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed Rate	Finishing	Medium
Insert	**PS**	**HS**	**PT**	**Standard**	**PH**	**PX**	R/L-**S**	R/L
Size	12,16	12,16	12,16	12,16	12,16	12,16	09	09,12
Page	**B15**	**B15**	**B15**	**B16**	**B16**	**B16**	**B20**	**B20**
Applications	Soft Steel / Small ap	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron
Insert	**XF**	**XP**	**XQ**	**XS**	**MQ**	**MS**	**MU**	**C**
Size	12	12	12	12	12	12	12,16	12,16
Page	**B17**	**B17**	**B17**	**B17**	**B18**	**B18**	**B18**	**B19**
Applications	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	**ZS**	**GC**	**Without Chipbreaker**	**Ceramic**	**AH**	**A3**	**PCD**	**CBN**
Size	12	12	12	12	12	12	12	12
Page	**B19**	**B19**	**B19**	**B86**	**B19**	**B19**	**C23**	**C6, C7**

Recommended Cutting Conditions ➔ **D39~D40**

Short Shank Toolholders for small lathes and turning mill

Length of 100mm for 20mm square shank

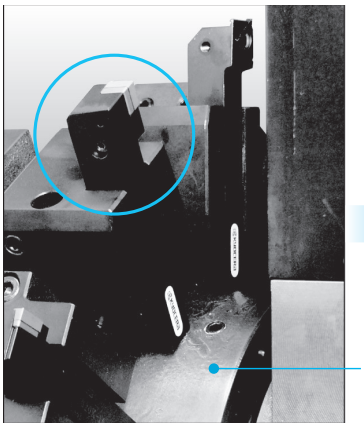
- Optimal toolholder length for small lathe, conventionally for which shank was cut off
- Available also as toolholder for quick change system of turning mill



Short shank PCLNR2020H-12

Conventional toolholder PCLNR2020K-12

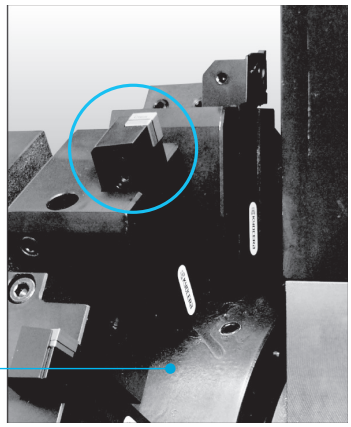
Conventional Toolholder



Large overhang length due to contact of shank with toolpost drum.

Toolpost drum

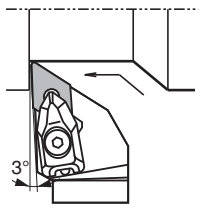
Short Shank

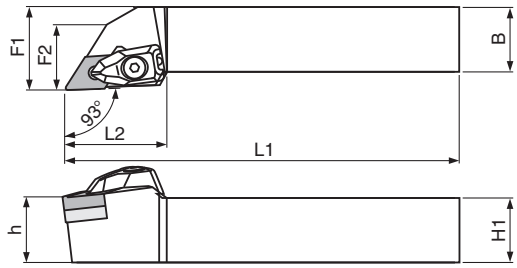


May be set to optional overhang length since there is no interference with tool-post drum.

Toolholders for General Purpose [DN□□ Insert]

DDJN (External / Copying)





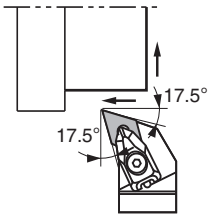
● Right-hand shown

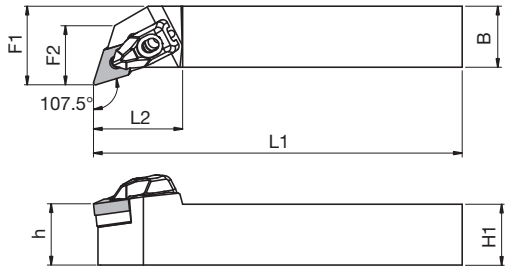
Side Rake Angle: -6°
Angle of Inclination: -7°

● Applicable Inserts

Toolholder Description	Insert Description	
DDJN R/L...-1504	DN□A DN□G DN□M	1504.. (1506..)
DDJN R/L...-1506		1506.. (1504..)

DDHN (External / Face Grooving / Copying)





● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder Description	Insert Description	
DDHN R/L...-1504	DN□A DN□G DN□M	1504.. (1506..)
DDHN R/L...-1506		1506.. (1504..)

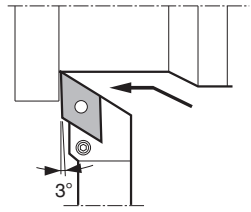
● Toolholder Dimensions

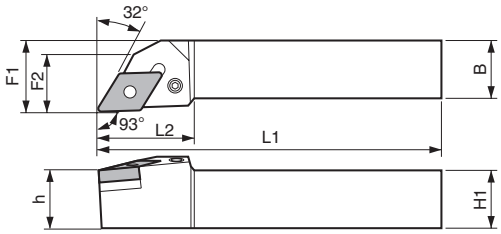
Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Wrench (For Clamp)	Wrench (sold separately) (For Shim)
DDJN R/L	2020K-1504	●	●	20	20	125	39	25	-	0.8	CP-3D	CS-3D	SP-3D	*DD-44 (DD-43)	SB-4085TR	LW-3	FT-15
	2525M-1504	●	●	25	25	150		32	25								
DDJN R/L	2020K-1506	●	●	20	20	125		25	-					DD-43 (*DD-44)			
	2525M-1506	●	●	25	25	150		32	25								
DDHN R/L	2020K-1504	●	●	20	20	125	37	25	22					*DD-44 (DD-43)			
	2525M-1504	●	●	25	25	150		32									
DDHN R/L	2020K-1506	●	●	20	20	125		25						DD-43 (*DD-44)			
	2525M-1506	●	●	25	25	150		32									

Shims indicated within brackets ( ) are not included with the toolholder. To change insert thickness, please purchase it separately.
*When using inserts whose corner-R(rε) is greater than 1.6mm, it will be necessary additional modifications of the shim in order to prevent workpiece and shim from interfering each other.

● : Std. Item

PDJN (External / Copying)





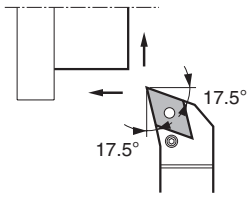
● Right-hand shown

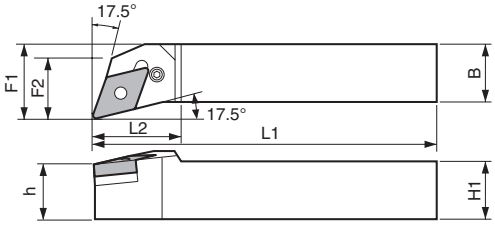
Side Rake Angle: -6°
Angle of Inclination: -7°

● Applicable Inserts

Toolholder Description	Insert Description	
PDJNR/L...-11	DN□A DN□G	1104..
PDJNR/L...-15	DN□A DN□G DN□M	1504..
PDJNR/L...-15U		1506.. (1504..)

PDHN (External / Face Grooving / Copying)





● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder Description	Insert Description	
PDHNR/L...15	DN□A DN□G DN□M	1504.. (1506..)

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PDJNR/L	1616H -11	●	●	16	16	100	28	20	-	0.4	LL-1DN	LS-1N	LD-32N	LSP-1	PC-1	FH-2.5
	2020K -11	●	●	20	20	125		25								
	2525M -11	●	●	25	25	150		32	27							
	2020H -15*	●		20	20	100	36	25	-	0.8	LL-3N	LS-2N	LD-42 *LD-42-20	LSP-2	PC-2	LW-3
	2020K -15	●	●			125										
	2525M -15	●	●	25	25	150		32	25							
	3225P -15	●	●	32		170										
	2525M -15U	●	●	25	25	150	34	32	24	0.8	LL-4	LS-3	LD-42 *LD-42-20 (LD-43) (*LD-43-20)	LSP-2	PC-2	LW-3
	3232P -15U	●	●	32	32	170	36	40	28							
PDHNR/L	2020K -15	●	●	20	20	125	35	25	22	0.8	LL-4	LS-3	LD-43 *LD-43-20 (LD-42) (*LD-42-20)	LSP-2	PC-2	LW-3
	2525M -15	●	●	25	25	150	34	32	24							

*mark indicates short shank type
· Shim: PDJNR/L-15U...LD-42 is attached to PDJNR/L-15U. When using DN□□1504 type insert, prepare LD-43 separately.
PDHN ...LD-43 is attached to PDHN. When using DN□□1506 type Insert, prepare LD-42 separately.
· When using inserts whose corner-R(rε) is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering each other.

● Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing
Insert	PP	PQ	CQ	CJ	GS	PG	PS	PT	Standard	PH
Size	1504,1506	1504,1506	1504,1506	1504,1506	1104,1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506
Page	B21	B21	B22	B22	B22	B22	B23	B23	B23	B24

Applications	Single Sided / Roughing / High Feed Rate	Finishing	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Insert	PX	R/L-S	R/L	XP	XQ	XS	MQ	MS	MU
Size	1504,1506	1104	1104,1504	1504,1506	1504,1506	1504	1504,1506	1504,1506	1504,1506
Page	B24	B27	B27	B24	B24	B24	B25	B25	B25

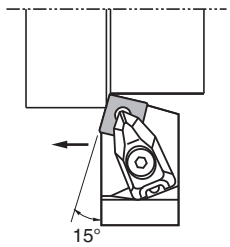
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	TK	C	ZS	GC	Ceramic	AH	R/L-A3	PCD	CBN
Size	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	1504	1504	1504,1506
Page	B25	B26	B26	B26	B87	B26	B26	C23	C8, C9

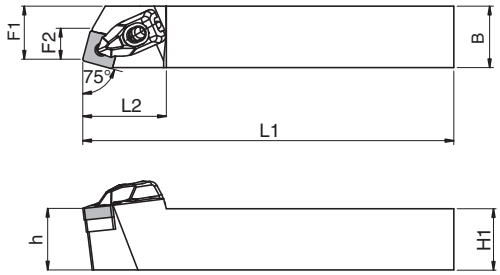
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

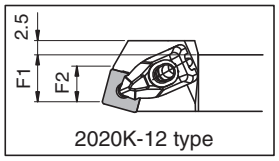
Toolholders for General Purpose [SN□□ Insert]

DSBN (External)





● Right-hand shown



Side Rake Angle: -6°
Angle of Inclination: -6°

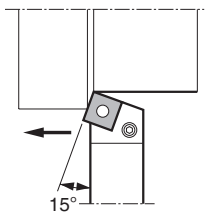
● **Applicable Inserts**

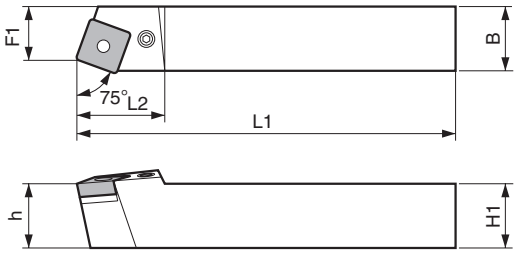
Toolholder Description	Insert Description	
DSBN R/L...-12	SN□A SN□G SN□M	1204..

● **Toolholder Dimensions**

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DSBN R/L	2020K -12	●	●	20	20	125	34	17	13	0.8	CP-3D	CS-3D	SP-3D	DS-44	SB-4085TR	LW-3 (For Clamp)	FT-15 (For Shim)
	2525M -12	●	●	25	25	150		22									

PSBN (External)

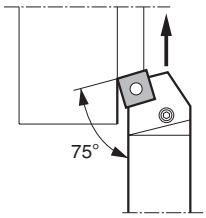


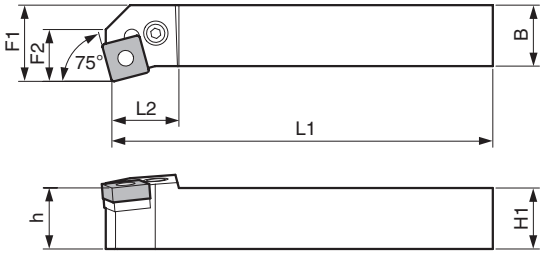


● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

PSKN (Facing)





● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

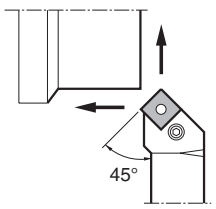
● **Toolholder Dimensions**

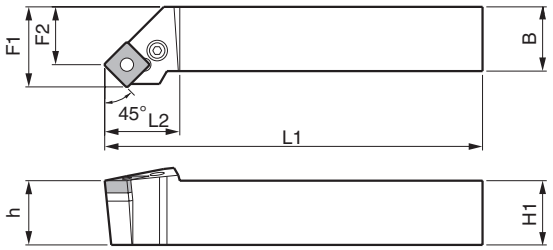
Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PSBN R/L	1616H -09	●	●	16	16	100	21	13	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K -12	●	●	20	20	125	27	17	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M -12	●	●	25	25	150	24	22								
PSKN R/L	1616H -09	●	●	16	16	100	19	20	12.7	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K -12	●	●	20	20	125	22.5	25	17	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M -12	●	●	25	25	150		32	19							

· PSKN R/L : Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

● : Std. Item

PSSN (External / Facing / Chamfering)

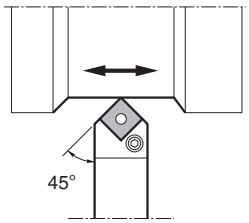


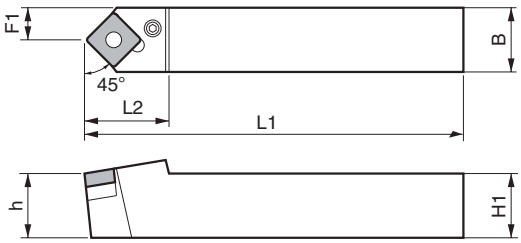


Side Rake Angle: -8°
Angle of Inclination: 0°

● Right-hand shown

PSDN (External / Chamfering)





Back Rake Angle: -8.5°

● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PSSN R/L	1616H-09	●		●	16	16	100	22	20	13.6	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12	●		●	20	20	125	29	25	16.4	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12	●		●	25	25	150		32	23.4							
PSDNN	1616H-09		●		16	16	100	21	8	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12		●		20	20	125	30	10	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12		●		25	25	150		12.5								

● Applicable Inserts

Toolholder Description	Insert Description	
PSBN R/L...-09	SN□G	0903..
PSKN R/L...-09		
PSSN R/L...-09		
PSDNN...-09		
PSBN R/L...-12	SN□A SN□G SN□M	1204..
PSKN R/L...-12		
PSSN R/L...-12		
PSDNN...-12		

Applications	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed
Insert	PQ	PG	PS	HS	PT	Standard	PH	PX
Size	12	12	12	12	12	09, 12	12	12
Page	B29	B29	B29	B29	B29	B29	B30	B30
Applications	Finishing-Roughing	Medium-Roughing / Low Cutting Force	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Cast Iron
Insert	R/L-□	R/L-25R	XP	XQ	XS	MQ	MS	C
Size	09, 12	12	12	12	12	12	12	12
Page	B32	B32	B30	B30	B30	B31	B31	B31
Applications	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Hard Materials			
Insert	ZS	GC	Without Chipbreaker	Ceramic	CBN			
Size	12	12	12	12	12			
Page	B31	B31	B31	B89	C10			

· PSSN R/L: For External Turning, Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder
For Facing, Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Recommended Cutting Conditions ➡ D39~D40

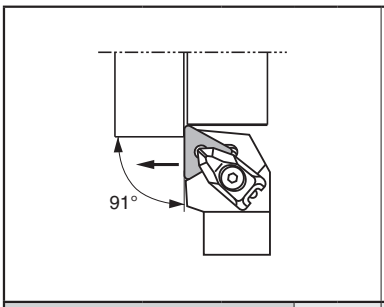
● : Std. Item

Toolholders for General Purpose [TN□□ Insert]

D

External

DTGN (External)



● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

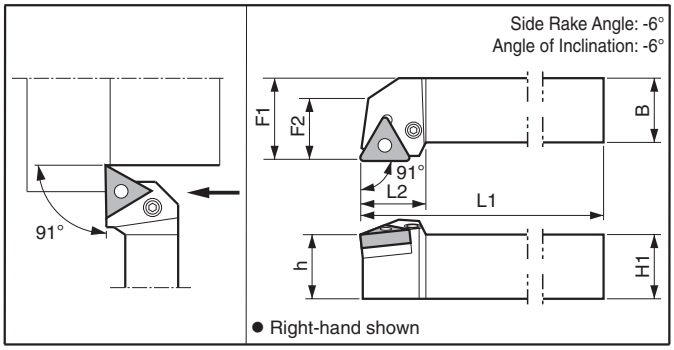
● **Applicable Inserts**

Toolholder Description	Insert Description	
DTGN R/L...-16	TN□A TN□G TN□M	1604..

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DTGN R/L	2020K -16	●	●	20	20	125	25	25	20	0.8	CP-2D	CS-2D	SP-2D	*DT-32	SB-3080TR	LW-2.5 (For Clamp)	FT-10 (For Shim)
	2525M -16	●	●	25	25	150		32									

*When using inserts whose corner-R(rε) is greater than 1.6mm, it will be necessary additional modifications of the shim in order to prevent workpiece and shim from interfering each other.

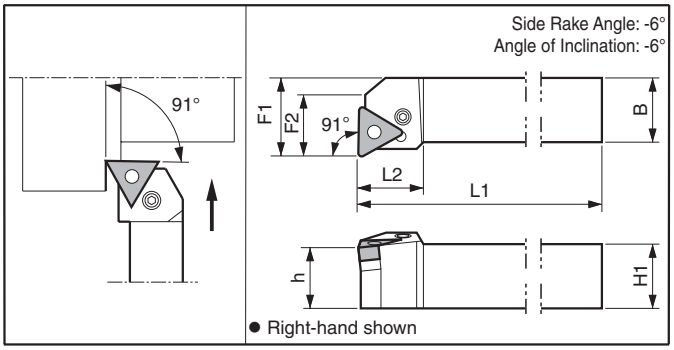
PTGN (External)



Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

PTFN (Facing)



Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PTGN R/L	1212F -11	●	●	12	12	80	18	16	12	0.8	LL-03N	LS-03N	-	P-03	-	FH-2
	1616H -11	●	●	16	16	100	22	20	14	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
	2020K -11	●	●	20	20	125		25	20							
	2525M -11	●	●	25	25	150		32	22							
	1616H -16	●	●	16	16	100	24	20	17	0.8	LL-1N	LS-1N	LT-32N *LT-32N-20	LSP-1	PC-1	FH-2.5
	2020H -16*	●		20	20			25	20							
	2020K -16	●	●			125										
	2525M -16	●	●	25	25	150		32								
	2525M -22	●	●	25	25	150	29	32	24	0.8	LL-2N	LS-2N	LT-42N *LT-42N-20	LSP-2	PC-2	LW-3
PTFN R/L	1212F -11	●	●	12	12	80	15	16	12.5	0.8	LL-03N	LS-03N	-	P-03	-	FH-2
	1616H -11	●	●	16	16	100	22.5	20	15	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
	2020K -11	●	●	20	20	125		25	19							
	2525M -11	●	●	25	25	150		32	25							
	2020K -16	●	●	20	20	125	22	25	21	0.8	LL-1N	LS-1N	LT-32N *LT-32N-20	LSP-1	PC-1	FH-2.5
	2525M -16	●	●	25	25	150	23	32	22							
	2525M -22	●	●	25	25	150	28	32	25	0.8	LL-2N	LS-2N	LT-42N *LT-42N-20	LSP-2	PC-2	LW-3

*mark indicates short shank type.
·When using inserts whose corner-R(rε) is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering each other.

● **Applicable Inserts**

Toolholder Description	Insert Description	
PT□N R/L 12...-11	TN□□	1103..
PT□N R/L...-11		1104..
PT□N R/L...-16	TN□A TN□G TN□M	1604..
PT□N R/L...-22		2204..

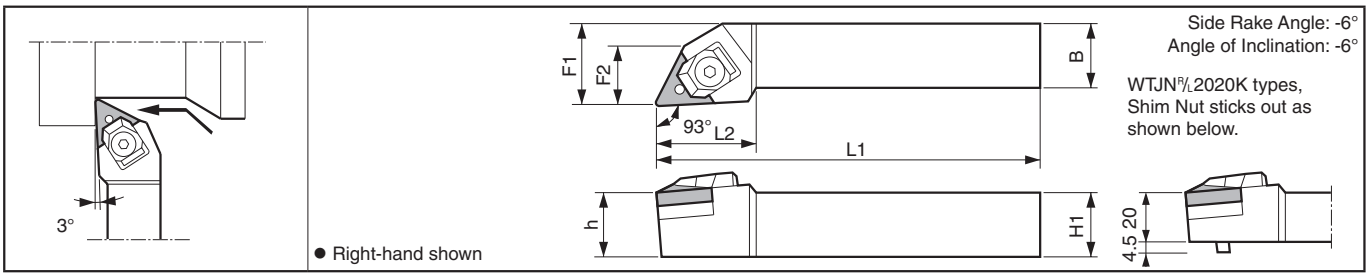
PTGN R/L 1212F-11
PTFN R/L 1212F-11
} Insert applicable for above

TN□□1103-type Insert is applicable.

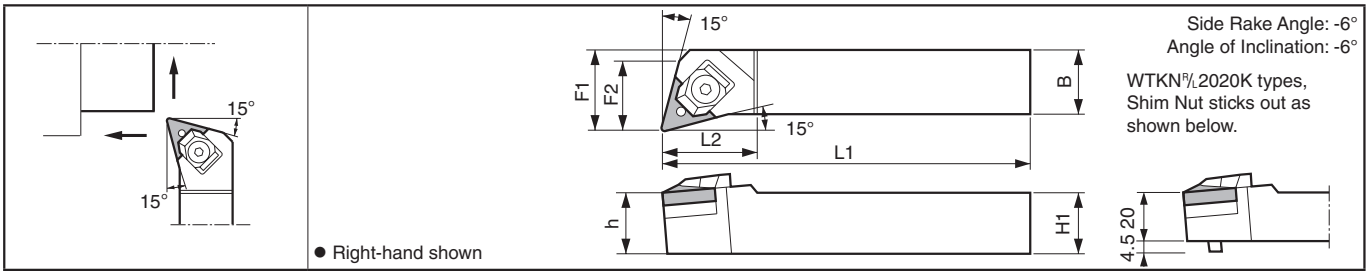
· PTFN R/L: Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

● : Std. Item

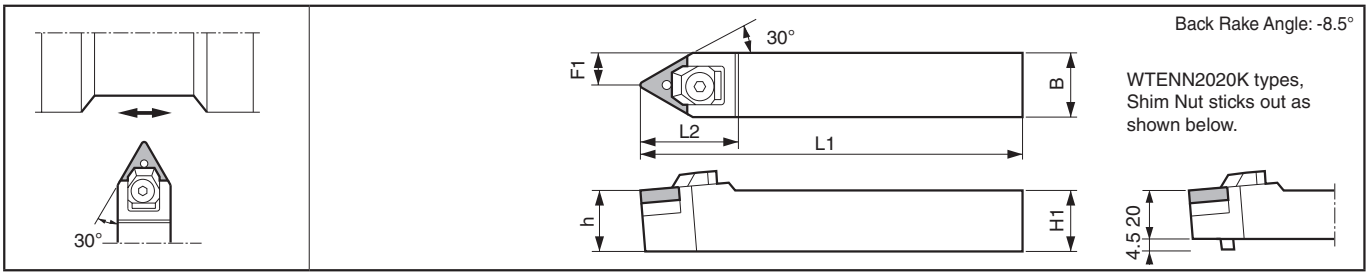
WTJN-N (External / Copying)



WTKN (External / Facing / Copying)



WTEN-N (External / Chamfering)



● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp Set	Shim	Shim Pin	Shim Nut	Wrench	Spacer
WTJNR/L	2020K-16N	●		●	20	20	125	32	25	24	0.8	WCS-1N	WTN-33 *WTN -33-20	WP-1S	WN-1	LW-3	WSP-1
	2525M-16N	●		●	25	25	150		32								
WTKNR/L	2020K-16N	●		●	20	20	125	32	25	-							
	2525M-16N	●		●	25	25	150		32	30							
WTENN	2020K-16N		●		20	20	125	32	10	-							
	2525M-16N		●		25	25	150		12.5								

· When using inserts whose corner-R (rε) is greater than 1.6mm, please purchase a shim (WTN-33-20) with * mark and use it in order to prevent workpiece and shim from interfering with each other.

● Applicable Inserts

Toolholder Description	Insert Description	
WTJNR/L...-16N	TN□A TN□G TN□M	1604..
WTKNR/L...-16N		
WTENN...-16N		

Applications	Finishing	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Medium-Roughing / High Feed Rate	Roughing
Insert	PP	PQ	CQ	GS	PG	PS	PT	GT	PH
Size	16	16	16,22	1104,16	16	16,22	16	16	16,22
Page	B33	B33	B33	B33	B33	B33	B34	B34	B34

Applications	Single Sided / Roughing / High Feed	Roughing	Finishing	Finishing-Roughing	Medium-Roughing / Low Cutting Force	Soft Steel / Small ap	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing
Insert	PX	Standard	R/L-S	R/L-□	R/L-25R	XF	XP	XQ	XS
Size	16,22	16,22	1104,16	1103,1104,16,22	16	16	16	16	16
Page	B34	B34	B38	B38	B38	B35	B35	B35	B35

Applications	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	MQ	MS	MU	C	ZS	GC	Without Chipbreaker	Ceramic	AH	R/L-A3	PCD	CBN
Size	16	16	16	16	16	16	1103,16	16	16	16	16	16
Page	B36	B36	B36	B37	B37	B37	B37	B91	B37	B37	C23	C11

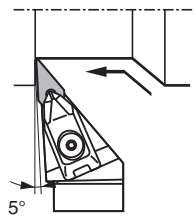
· In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restrain force.

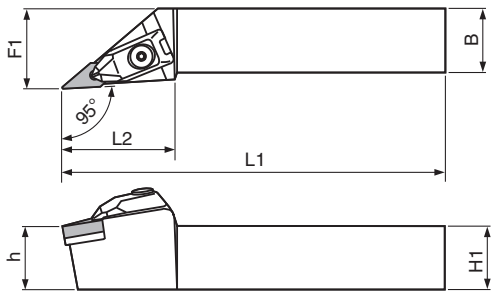
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

Toolholders for General Purpose [VN□□ Insert]

DVLN (External / Copying)





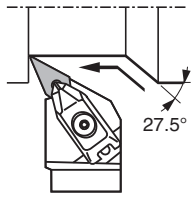
● Right-hand shown

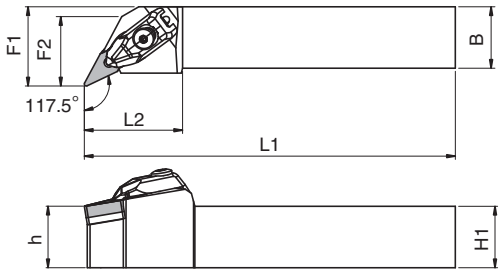
Side Rake Angle: -6°
Angle of Inclination: -9°

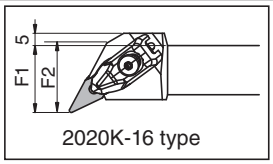
● **Applicable Inserts**

Toolholder Description	Insert Description	
DVLN R/L...-16	**VN□A VN□G VN□M**	**1604..**

DVPN (External / Facing / Copying / Undercutting)







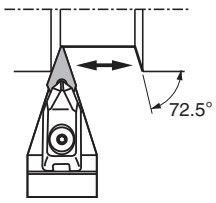
● Right-hand shown

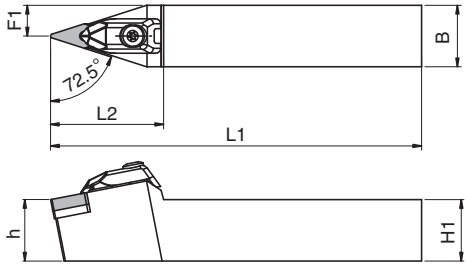
Side Rake Angle: -13°
Angle of Inclination: -10°

● **Applicable Inserts**

Toolholder Description	Insert Description	
DVPN R/L...-16	**VN□A VN□G VN□M**	**1604..**

DVVN (External / Copying)



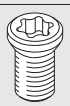


Back Rake Angle: -11°

● **Applicable Inserts**

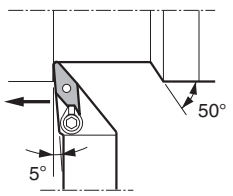
Toolholder Description	Insert Description	
DVVNN...-16	**VN□A VN□G VN□M**	**1604..**

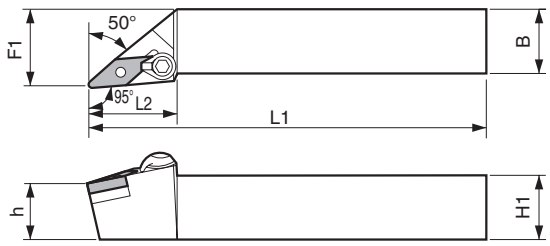
● **Toolholder Dimensions**

Description		Std.			Dimension (mm)						Standard Corner-R(rε)	Spare Parts						
												Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
		R	N	L	H1=h	B	L1	L2	F1	F2							 For Clamp	For Shim
DVLN R/L	**2020K-16**	●		●	20	20	125	45	25	-	0.8	**CP-5D**	**CS-5D**	**SP-5D**	**DV-33**	**SB-4085TR**	**LW-3**	**FT-15**
	2525M-16	●		●	25	25	150		32									
DVPN R/L	**2020K-16**	●		●	20	20	125	40	27	28								
	2525M-16	●		●	25	25	150		32									
DVVNN	**2020K-16**		●		20	20	125	46	10	-								
	2525M-16		●		25	25	150		12.5									

● : Std. Item

MVLN (External / Copying)

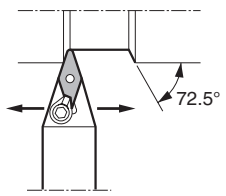


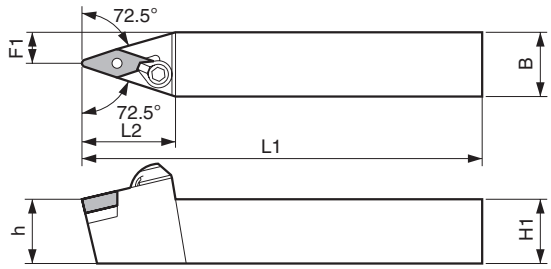


Side Rake Angle: -6°
Angle of Inclination: -9°

● Right-hand shown

MVVN (External / Copying)





Back Rake Angle: -11°

● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Lock Pin	Wrench
MVLN R/L	2020K-16	●		●	20	20	125	38	25	0.8	CPS-5R/L	FH-2.5	MVN-32	TS-3S	FH-2
	2525M-16	●		●	25	25	150		32						
MVVNN	2020K-16		●		20	20	125	39	10	0.8	CPS-5R	FH-2.5	MVN-32	TS-3S	FH-2
	2525M-16		●		25	25	150		12.5						

· Clamp Set: CPS-5R for Right-hand Toolholder, CPS-5L for Left-hand Toolholder.

● Applicable Inserts

Toolholder Description	Insert Description	
MVLN R/L...-16 MVVNN...-16	VN□A VN□G VN□M	1604..

Applications	Finishing	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Insert	PP	VF	PQ	TN-V	Standard	R/L	MQ	MS
Size	16	16	16	16	16	16	16	16
Page	B39	B39	B39	B39	B39	B40	B40	B40

Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials			
Insert	MU	Without Chipbreaker	Ceramic	PCD	CBN			
Size	16	16	16	16	16			
Page	B40	B40	B92	C23	C12			

Recommended Cutting Conditions ➡ D39~D40

◆ Regarding rotation directions of the clamp set

MVVNN type
(Neutral)

MVLNR type
(Right-hand Toolholder)

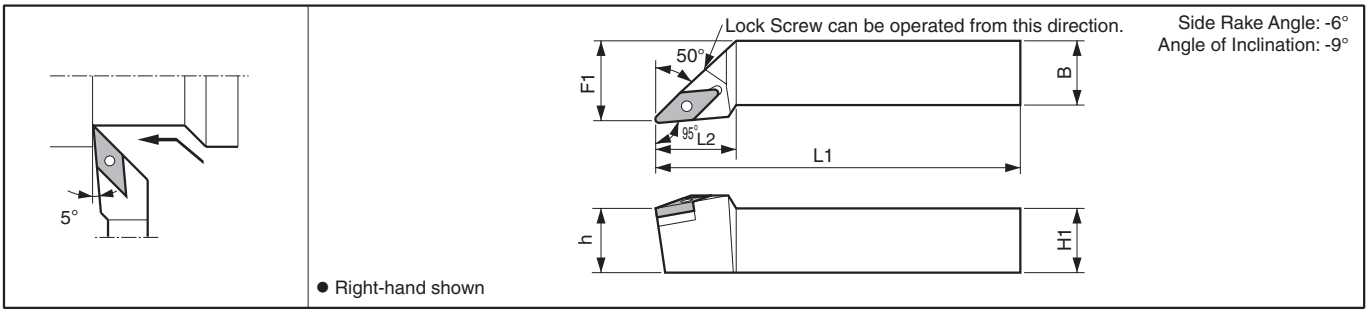
Clamp set: (CPS-5R) has Right-hand thread.
When clamping the insert, turn the screw in the arrow direction (clockwise).
When removing the insert, turn the screw away from the arrow (counterclockwise).

MVLNL type
(Left-hand Toolholder)

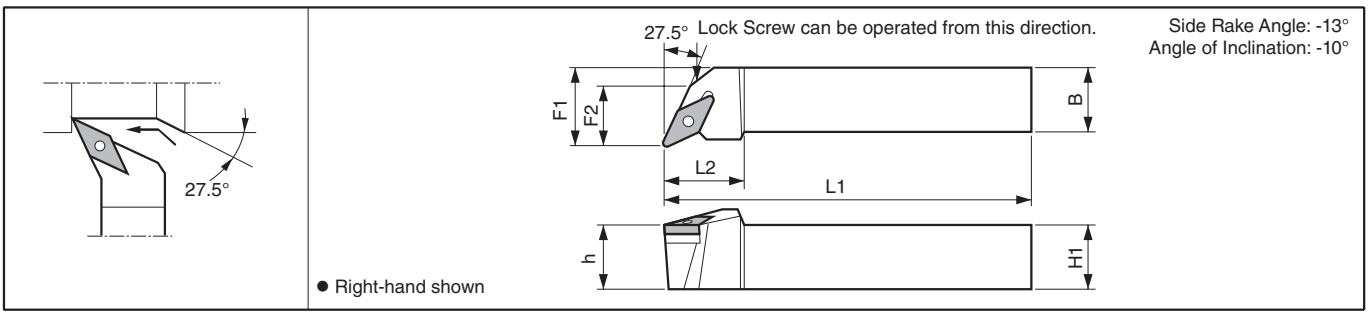
Clamp set: (CPS-5L) has Left-hand thread.
When clamping the insert, turn the screw in the arrow direction (counterclockwise).
When removing the insert, turn the screw away from the arrow (clockwise).

● : Std. Item

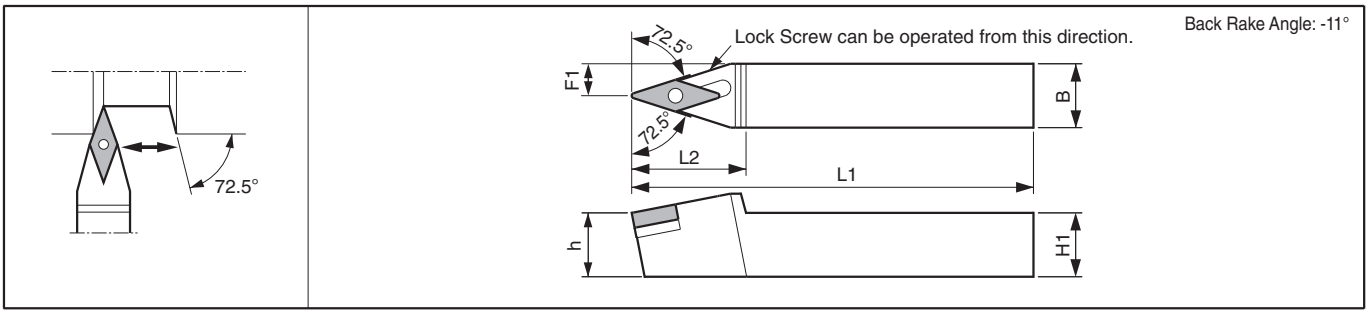
PVLN (External / Copying)



PVPN (External / Facing / Copying / Undercutting)



PVVN (External / Copying)



Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Lock Pin	Lock Screw	Shim	Wrench		
PVLN R/L	2525M-16Q	●		●	25	25	150	37	32	-	0.8	LP-6S	LS-15	KVN-32	LW-3		
PVPN R/L	2020K-16Q	●		●	20	20	125	30	25	22	0.8	LP-2S	LS-11	KVN-32	LW-3		
	2525M-16Q	●		●	25	25	150		32	28		LP-6S					
PVVNN	2020K-16Q		●		20	20	125	35	10	-	0.8	LP-2S	LS-15	KVN-32	LW-3		
	2525M-16Q		●		25	25	150	40	12.5			LP-6S					

Applicable Inserts

Toolholder Description	Insert Description	
PVLN R/L...-16Q	VN□A	1604..
PVPN R/L...-16Q	VN□G	
PVVNN...-16Q	VN□M	

Applications	Finishing	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Insert	PP	VF	PQ	TN-V	Standard	R/L	MQ	MS
Size	16	16	16	16	16	16	16	16
Page	B39	B39	B39	B39	B39	B40	B40	B40

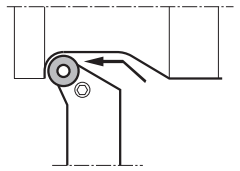
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials			
Insert	MU	Without Chipbreaker	Ceramic	PCD	CBN			
Size	16	16	16	16	16			
Page	B40	B40	B92	C23	C12			

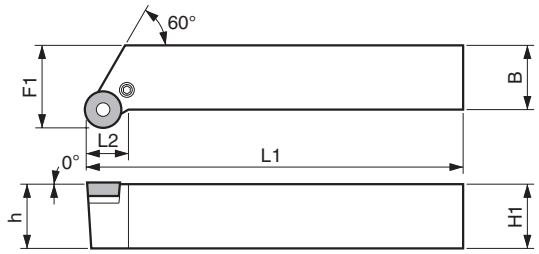
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

PRGC / PRXC / PRGN (External / Facing / Undercutting)

PRGC

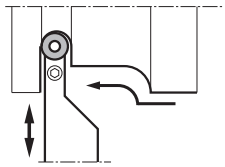


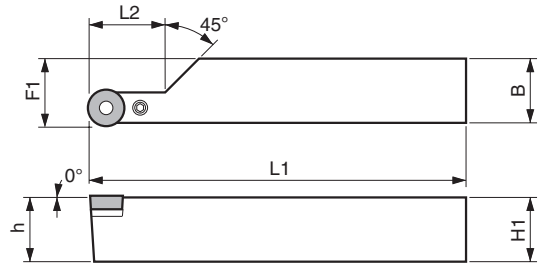


Side Rake Angle: 0°
Angle of Inclination: 0°

● Right-hand shown

PRXC

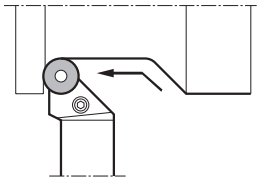


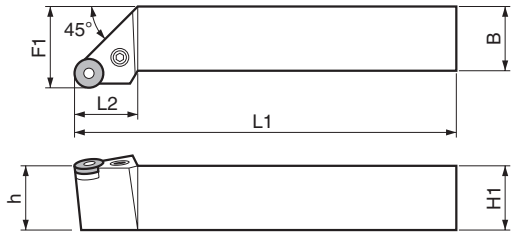


Side Rake Angle: 0°
Angle of Inclination: 0°

● Right-hand shown

PRGN





Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PRGC R/L	2020K-10	●	●	20	20	125	15	25	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2525M-10	●	●	25	25	150		32							
	2020K-12	●	●	20	20	125	14	25	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
	2525M-12	●	●	25	25	150	17	32							
PRXC R/L	2020K-10	●	●	20	20	125	25	20.5	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2525M-10	●	●	25	25	150	30	25.5							
	2525Q-10	●	●			180									
	2525M-12	●	●	25	25	150	30	25.7	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
PRGN R/L	2020K-09	●	●	20	20	125	19	25	-	LL-1N	LS-1N	LR-80	LSP-1	PC-1	FH-2.5
	2525M-12	●	●	25	25	150	26	32	-	LL-2N	LS-2N	LR-81	LSP-2	PC-2	LW-3

● Applicable Inserts

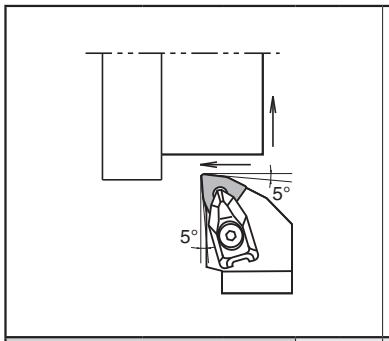
Toolholder Description	Insert Description	
PRGC R/L...-10	RCGX RCMX	1003M0
PRGC R/L...-12		1204M0
PRXC R/L...-10		1003M0
PRXC R/L...-12		1204M0
PRGN R/L...-09	RNMG	090300
PRGN R/L...-12		120400

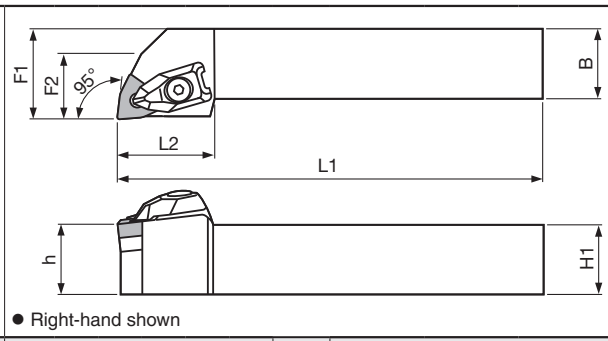
Applications	Medium	Non-ferrous Metals
Insert	Standard 	AQ 
Size	10, 12	10
Page	B62	B62
Applications	Medium-Roughing	
Insert	Standard 	
Size	09, 12	
Page	B28	

Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

DWLN (External / Facing)





● Right-hand shown

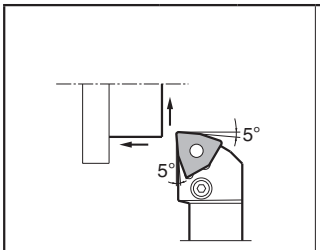
Side Rake Angle: -6°
Angle of Inclination: -6°

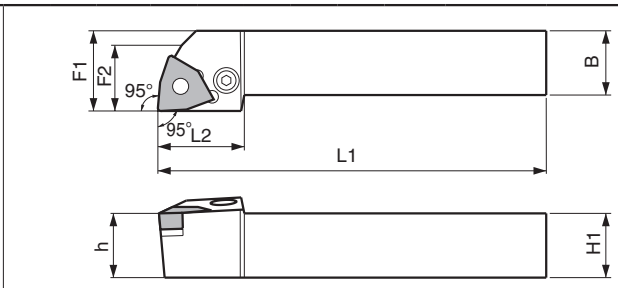
● **Applicable Inserts**

Toolholder Description	Insert Description	
DWLNR/L...-08	WN□A WN□G WN□M	0804...

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DWLNR/L	2020K -08	●	●	20	20	125	34	25	20	0.8	CP-3D	CS-3D	SP-3D	DW-44	SB-4085TR	LW-3 (For Clamp)	FT-15 (For Shim)
	2525M -08	●	●	25	25	150		32									

PWLN (External / Facing)





● Right-hand shown

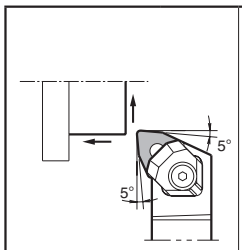
Side Rake Angle: -6°
Angle of Inclination: -6°

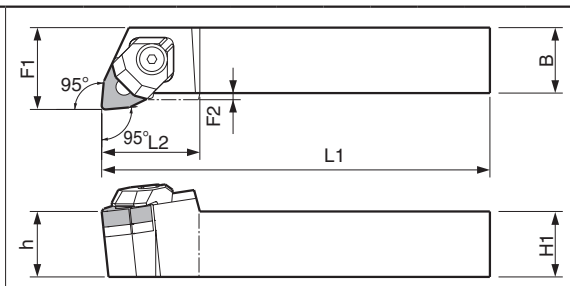
● **Applicable Inserts**

Toolholder Description	Insert Description	
PWLNR/L...-06	WN□A WN□G WN□M	0604..
PWLNR/L...-08		0804..

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PWLNR/L	1616H -06	●	●	16	16	100	22	20	-	0.8	LL-1N	LS-1N	LW-32N	LSP-1	PC-1	FH-2.5 (FH, LW)
	2020K -06	●	●	20	20	125		25								
	2525M -06	●	●	25	25	150		32								
	2020K -08	●	●	20	20	125	26	25	-	0.8	LL-2N	LS-2N	LW-42N	LSP-2	PC-2	LW-3
	2525M -08	●	●	25	25	150		32	23							

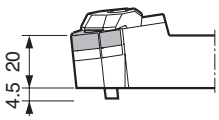
WWLN (External / Facing)





● Right-hand shown

WWLNR/L2020K types, Shim Nut sticks out as shown below.



Side Rake Angle: -6°
Angle of Inclination: -6°

● **Applicable Inserts**

Toolholder Description	Insert Description	
WWLNR/L...-08	WN□A WN□G WN□M	0804..

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts Clamp Set	Shim	Shim Pin	Shim Nut	Wrench
WWLNR/L	2020K -08	●	●	20	20	125	30	25	-	1.2	WCS-8	WWN-42	WP5X15	WN-1	LW-3
	2525M -08	●	●	25	25	150		32	2.5						

● : Std. Item

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing
Insert	**WP**(Wiper) 	**WQ**(Wiper) 	**PP** 	**PQ** 	**CQ** 	**CJ** 	**GS** 	**PG** 	**PS** 
Size	08	08	08	08	08	08	06,08	08	08
Page	**B41**	**B41**	**B41**	**B41**	**B41**	**B41**	**B42**	**B42**	**B42**

Applications	Medium-Roughing / High Feed Rate	Roughing	Finishing	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing
Insert	**PT** 	**Standard** 	**R/L-S** 	**R/L** 	**XP** 	**XQ** 	**XS** 	**MQ** 
Size	08	08	06	06	08	08	08	08
Page	**B42**	**B42**	**B44**	**B44**	**B43**	**B43**	**B43**	**B43**

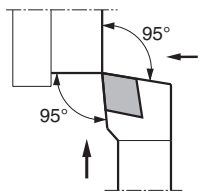
Applications	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	**MS** 	**MU** 	**C** 	**ZS** 	**GC** 	**AH** 	**PCD** 	**CBN** 
Size	08	08	08	08	08	08	08	08
Page	**B43**	**B43**	**B44**	**B44**	**B44**	**B44**	**C23**	**C13**

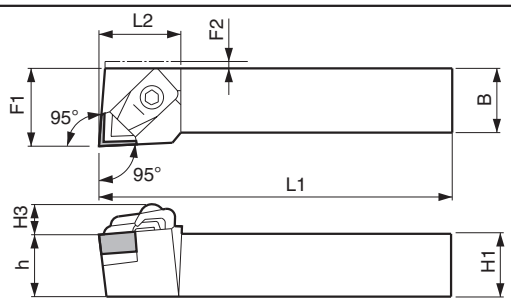
· In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restrain force.

Recommended Cutting Conditions ➡ **D39~D40**

Toolholders for Ceramic Tools [CN□□ Insert]

CCLN (External / Facing)





Side Rake Angle: -6°
Angle of Inclination: -6°

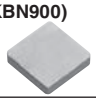
● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CCLN R/L	2020K -12	●	●	20	14	20	125	32	27	5	0.8	CB-16	CE-010	LW-4	SP-441 (SP-443)	M3X8 (M3X12)
	2525M -12	●	●	25		25	150		32	-						
	3225P -16	●	●	32	14	25	170	35	32	-	0.8	CB-17	CE-220	LW-4	SP-454	M4X10

· Shim & Shim Screw: When using CN□□1204 Insert, purchase spare parts in ( ) separately.

● Applicable Inserts

Applications	Cast Iron / Hard Materials	Hard Materials / Cast Iron
Ref. to Page	B86	C19
Insert / Toolholder Description	Ceramic 	CBN(KBN900) 
CCLN R/L...-12	CNGN1207..(CNGN1204..) CNMN1207	(CNMN1204)
CCLN R/L...-16	CNGN1607..	-

Recommended Cutting Conditions ➔ D39~D40

◆Selection of Ceramic Insert

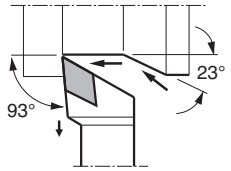
Select the suitable Ceramic Insert and specifications (Corner-R(rε), Feed Rate, Chamfer, etc.) from the table below.

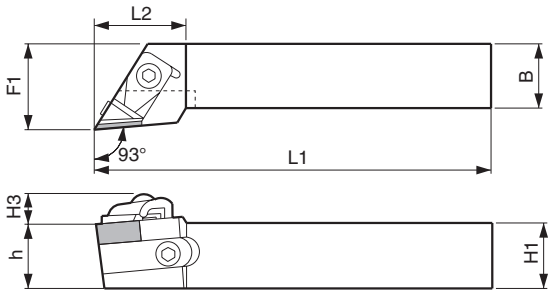
(FC250, Cutting Edge Angle: 0°~15)

Insert Shape	Corner-R (rε)	f (mm/rev) 0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	ap (mm)
RN	–	→	→	→	→	→	→	→	→	→	→	0.3~4
SN, EN, CN	2.0	→	→	→	→	→	→	→	→	→	→	0.3~4
	1.6	→	→	→	→	→	→	→	→			
	1.2	→	→	→	→	→	→					
	0.8	→	→	→	→							
	0.4	→	→									
TN, DN	1.6	→	→	→	→	→	For Finishing					0.3~2
	1.2	→	→	→	→							
	0.8	→	→	→								
Chamfer		0.05mm×20°		(0.1~0.2)mm×(20°~25°)				0.3mm×30°				–
Insert Thickness		7.94mm										

● : Std. Item

CDJN (External / Copying / Back Turning)





Side Rake Angle: -5°
Angle of Inclination: -8°

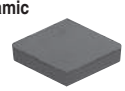
● Right-hand shown

Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CDJN R/L	2525M-15	●	●	25	16	25	150	32	32		0.8	CB-14/15	CE-010	LW-4	556C R/L	HH5X16
	3225P -15	●	●	32			170									

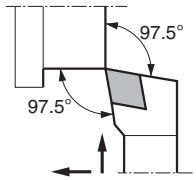
· Chipbreaker: CB-14 for Right-hand Toolholder, and CB-15 for Left-hand Toolholder.
· Shim: 556CR for Right-hand Toolholder, and 556CL for Left-hand Toolholder.

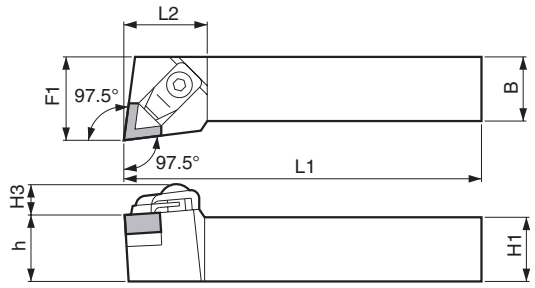
Applicable Inserts

Applications	Cast Iron / Hard Materials
Ref. to Page	B87
Insert / Toolholder Description	Ceramic 
CDJN R/L...-15	DNGN1507..

Recommended Cutting Conditions ➡ D39~D40

CELN (External / Facing)





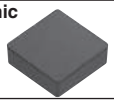
Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CELN R/L	2525M-13	●	●	25	15	25	150	32	32		0.8	CB-16	CE-010	LW-4	SP-342	M3X8

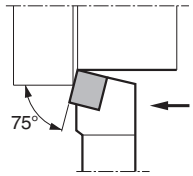
Applicable Inserts

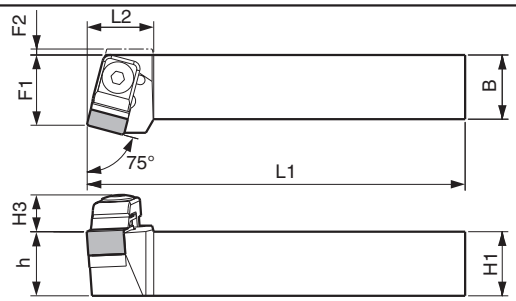
Applications	Cast Iron / Hard Materials
Ref. to Page	B87
Insert / Toolholder Description	Ceramic 
CELN R/L...-13	ENGN1307..

Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

CSRN (External)

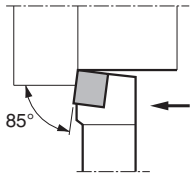


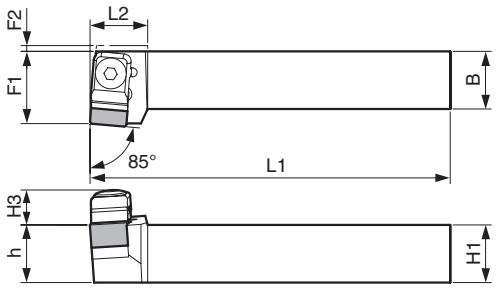


Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

CS-N (External)

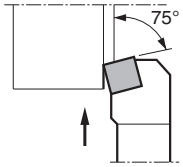


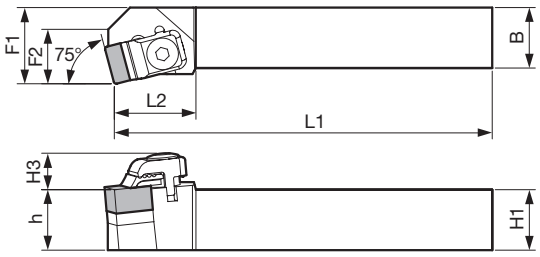


Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

CSKN (Facing)

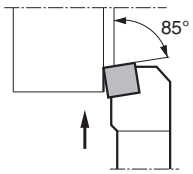


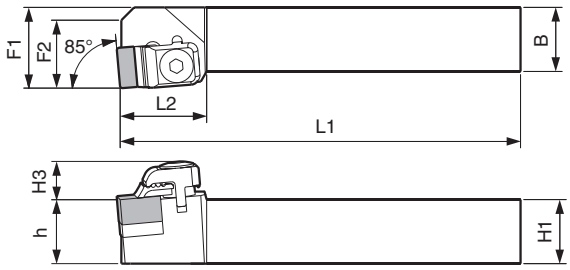


Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

CSYN (Facing)

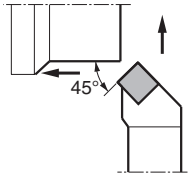


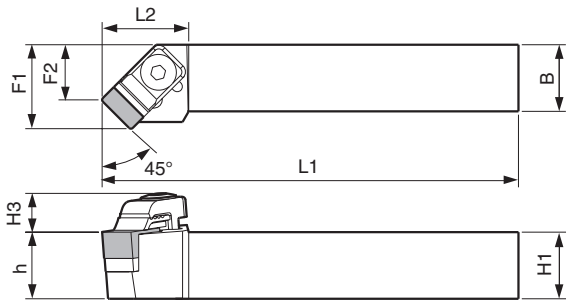


Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

CSSN (External / Facing / Chamfering)

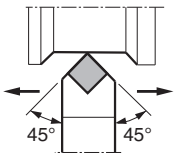




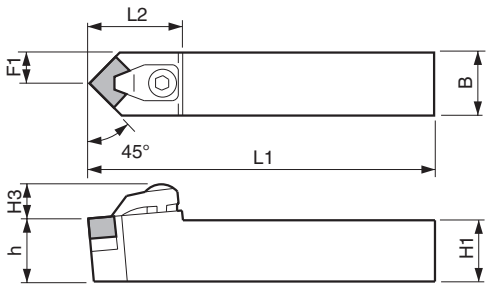
Side Rake Angle: -6°
Angle of Inclination: 0°

● Right-hand shown

CSDN (External / Chamfering)



Back Rake Angle: -8.5°



Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set (020 / 220 / 040)	Wrench	Shim	Shim Screw
CSRN R/L	2020K -12	●		●	20	12	20	125	22	22	2	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)
	2525M -12	●		●	25		25	150		27	-						
	3225P -12	●		●	32			170									
	3225P -15	●			32	15	25	170	30	32.4	-	0.8	CB-51	CE-220	LW-4	SP-162	M4X10
	4040R -15	●		●	40		40	200		43							
CS-N R/L	2525M -12	●		●	25	12	25	150	20	32	-	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)
CSKN R/L	2020K -12	●		●	20	12	20	125	27	25	18	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)
	2525M -12	●		●	25		25	150		32							
	3225P -15	●			32	15	25	170	37	32	20	0.8	CB-51	CE-220	LW-4	SP-162	M4X10
CSYN R/L	2020K -12	●		●	20	12	20	125	27	25	21	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)
	2525M -12	●		●	25		25	150		32							
CSSN R/L	2020K -12	●		●	20	12	20	125	26	25	16	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)
	2525M -12	●		●	25		25	150		32	23						
CSDNN	2020K -12		●		20	13	20	125	32	10	-	0.8	-	CE-040	LW-4	SP-141 (SP-143)	M3X8 (M3X12)
	2525M -12		●		25		25	150		12.5							
	3225P -12		●		32			170									

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

Applicable Inserts

Applications	Cast Iron / Hard Materials	Cast Iron
Ref. to Page	B89,B90	B31
Insert / Toolholder Description	Ceramic	Coated Carbide
CSRN R/L ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)
CSRN R/L ...-15	SNGN1507..	-
CS-N R/L ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)
CSKN R/L ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)
CSKN R/L ...-15	SNGN1507..	-
CSYN R/L ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)
CSSN R/L ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)
CSDNN ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)

Hard Materials / Cast Iron	When using as toolholder for CBN tools (KBN900), prepare spare parts below separately.		
C19	Clamp Set	Shim	Shim Screw
CBN (KBN900)			
(SNMN1204..)	CE-030A	SP-143	M3X12
-	-		
(SNMN1204..)	CE-030A	SP-143	M3X12
(SNMN1204..)	CE-030A	SP-143	M3X12
-	-		
(SNMN1204..)	CE-030A	SP-143	M3X12
(SNMN1204..)	CE-030A	SP-143	M3X12
(SNMN1204..)	*-	SP-143	M3X12

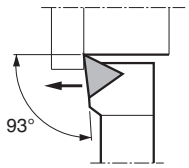
*CSDNN...-12: Clamp Set CE-040 is used continuously.

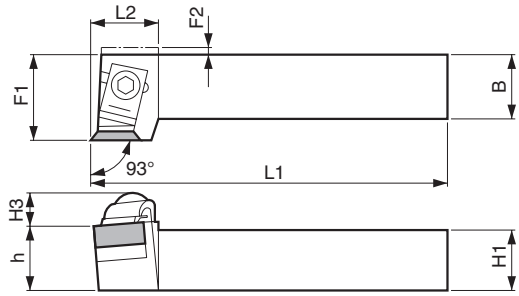
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

Toolholders for Ceramic Tools [TN□□Insert]

CTJN (External)

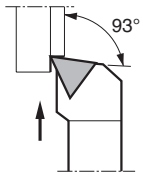


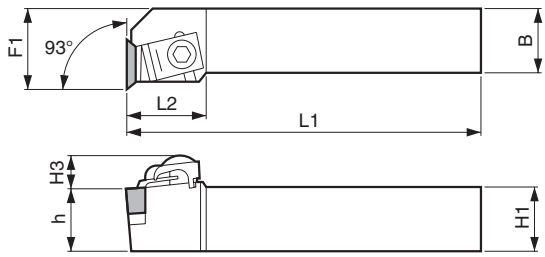


Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

CTUN (Facing)





Side Rake Angle: -6°
Angle of Inclination: -4°

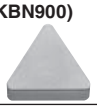
● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CTJN R/L	2020K-16	●	●	20	11	20	125	21	25	2	0.8	CB-12/13	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)
	2525M-16	●	●	25		25	150		32	-						
CTUN R/L	2020K-16	●	●	20	11	20	125	27	25	-	0.8	CB-13/12	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)
	2525M-16	●	●	25		25	150		32							

· CTJN (Chipbreaker): CB-12 for Right-hand Toolholder, CB-13 for Left-hand Toolholder.
CTUN (Chipbreaker): CB-13 for Right-hand Toolholder, CB-12 for Left-hand Toolholder.
· Shim & Shim Screw: When using TN□□1604 Insert, purchase spare parts in ( ) separately.

● Applicable Inserts

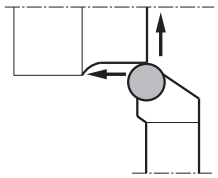
Applications	Cast Iron / Hard Materials	Hard Materials / Cast Iron
Ref. to Page	B91	C19
Insert / Toolholder Description	Ceramic 	CBN (KBN900) 
CTJN R/L...-16	TNGN1607.. (TNGN1604..) (TNMN1604..)	(TNMN1604..)
CTUN R/L...-16		

Recommended Cutting Conditions ➡ D39~D40

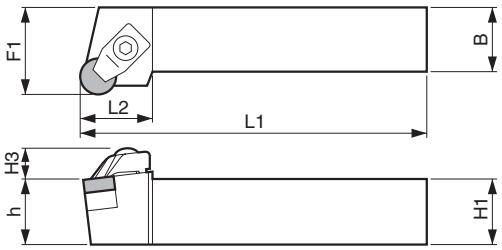
● : Std. Item

Toolholders for Ceramic Tools [RN□□Insert]

CRSN (External / Facing)

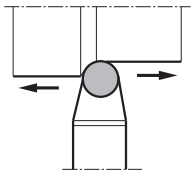


Side Rake Angle: -6°
Angle of Inclination: -6°

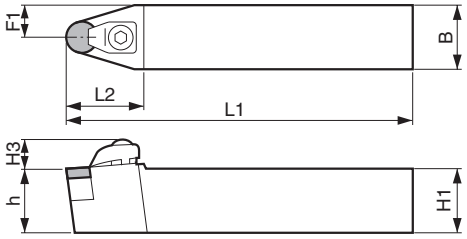


● Right-hand shown

CRDN (External / Copying)



Back Rake Angle: -8.5°



● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw
CRSN R/L	2020K -12	●		●	20	11	20	125	26	25	-	CE-030	LW-4	SP-841 (SP-843)	M3X8 (M3X12)
	2525M -12	●		●	25		25	150		32					
	3225P -12	●		●	32			170							
CRDNN	2020K -12		●		20	11	20	125	28	10	-	CE-030	LW-4	SP-841 (SP-843)	M3X8 (M3X12)
	2525M -12		●		25		25	150		12.5					
	3225P -12		●		32			170							
	3232P -15		●		32	13	32	170	35	16	-	CE-040	LW-4	SP-861	M4X10
	4040R -15		●		40		40	200		20					

· Shim & Shim Screw: When using RN□□1204 Insert, purchase spare parts in ( ) separately.

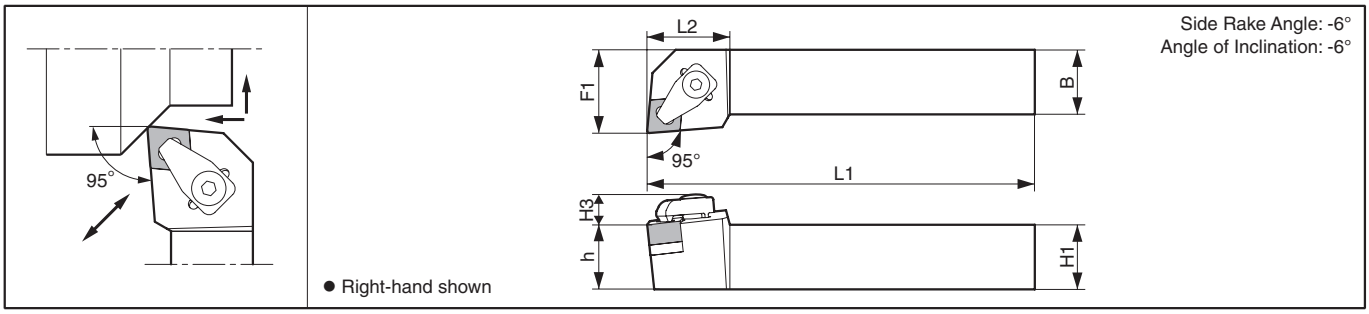
● Applicable Inserts

Applications	Cast Iron / Hard Materials	Hard Materials / Cast Iron	When using as toolholder for CBN tools (KBN900), prepare spare parts below separately.		
Ref. to Page	B88	C19			
Insert / Toolholder Description	Ceramic	CBN(KBN900)	Clamp Set	Shim	Shim Screw
CRSN R/L ...-12	RNGN120700(RNGN120400)	(RNMN120400)	CE-030A	SP-843	M3X12
CRDNN ...-12	RNGN120700(RNGN120400)	(RNMN120400)	CE-030A	SP-843	M3X12
CRDNN ...-15	RNGN150700	-	-		

Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

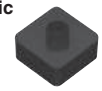
CCLN-GX (External / Facing / Back Turning)



● Toolholder Dimensions

Description	Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	
CCLN R/L 2525M-12GX	●	●	25	13	25	150	30	32		1.2	CE-410	LW-4	SP-441	M3X8	

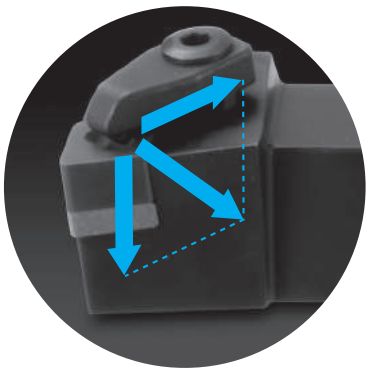
● Applicable Inserts

Applications	Cast Iron
Ref. to Page	B86
Insert / Toolholder Description	Ceramic 
CCLN R/L...12GX	CNGX1207..

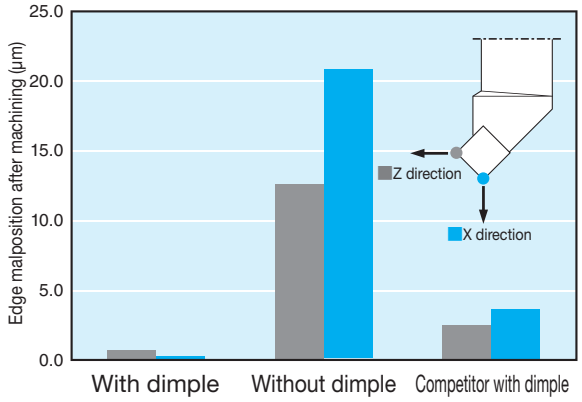
Recommended Cutting Conditions ➡ D39~D40

Features

- **Improved clamping stability due to the dimple design**
- **Improve machine stability and machinability**

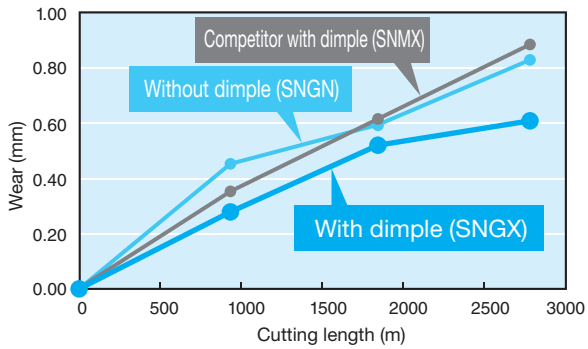


● Edge displacement



(Internal evaluation)

● Cutting capability

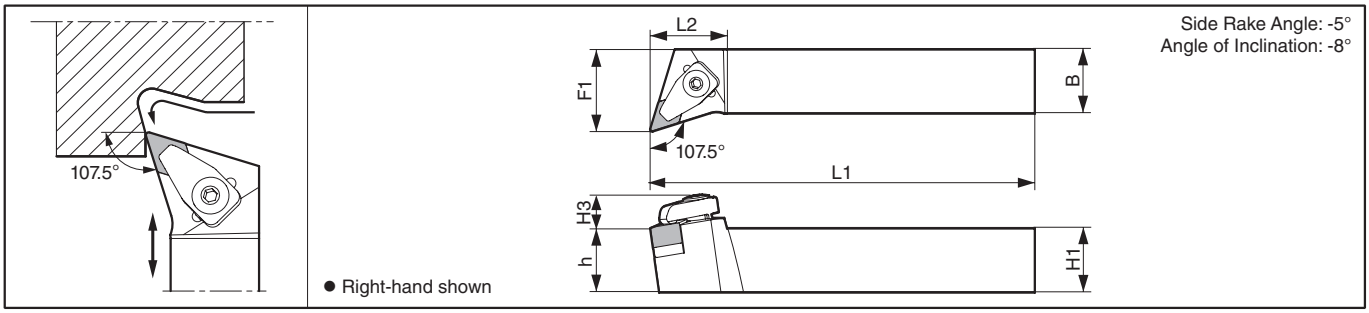


Vc=800m/min, ap=1.5~2.0 mm, f=0.6mm/rev
FC250 with scale, Dry

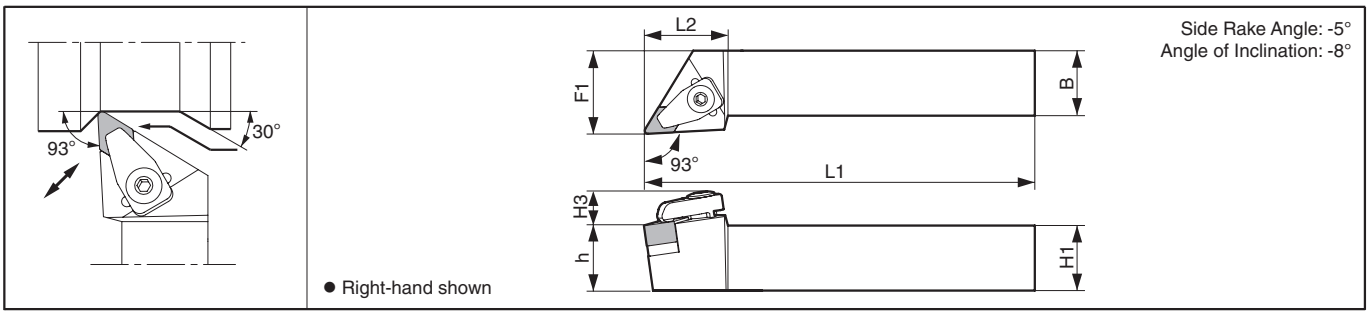
(Internal evaluation)

● : Std. Item

CDHN-GX (External / Copying / Back Turning)



CDJN-GX (External / Copying / Back Turning)



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	
CDHN R/L	2525M-12GX	●	○	25	14	25	150	30	32		1.2	CE-410	LW-4	SP-521	M3X8	
	2525M-15GX	●	○		15			33				CE-430		SP-541		
CDJN R/L	2525M-12GX	●	○	25	14	25	150	32	32		1.2	CE-410	LW-4	SP-521	M3X8	
	2525M-15GX	●	○		15			38				CE-430		SP-541		

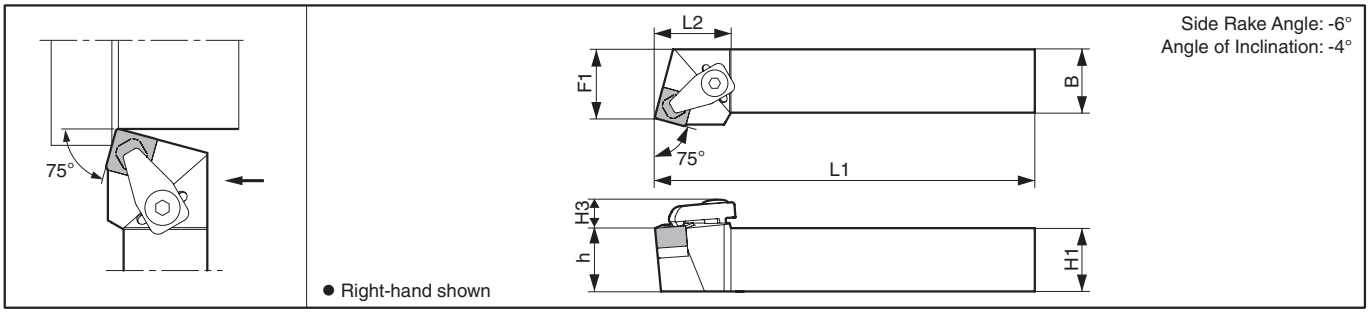
● Applicable Inserts

Applications		Cast Iron
Ref. to Page		B87
Insert / Toolholder Description		Ceramic
CDHN R/L	2525M-12GX	DNGX1207 ···
	2525M-15GX	DNGX1507 ···
CDJN R/L	2525M-12GX	DNGX1207 ···
	2525M-15GX	DNGX1507 ···

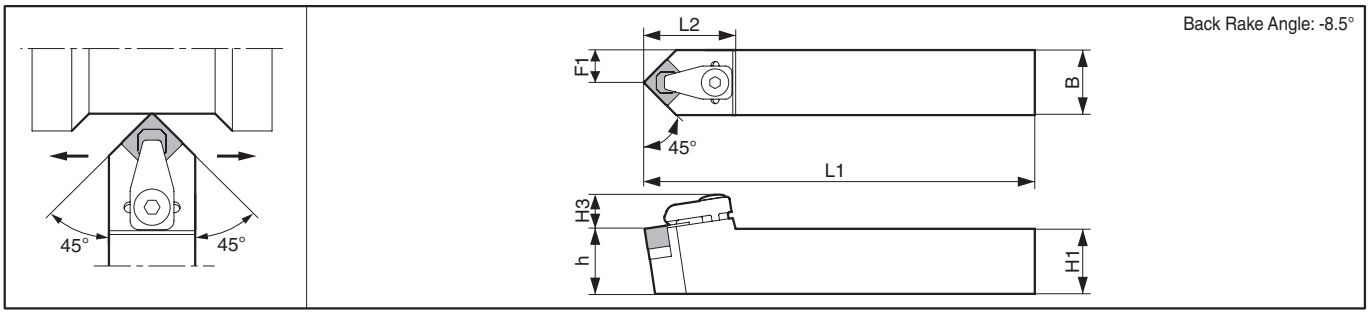
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item
○ : Check Availability

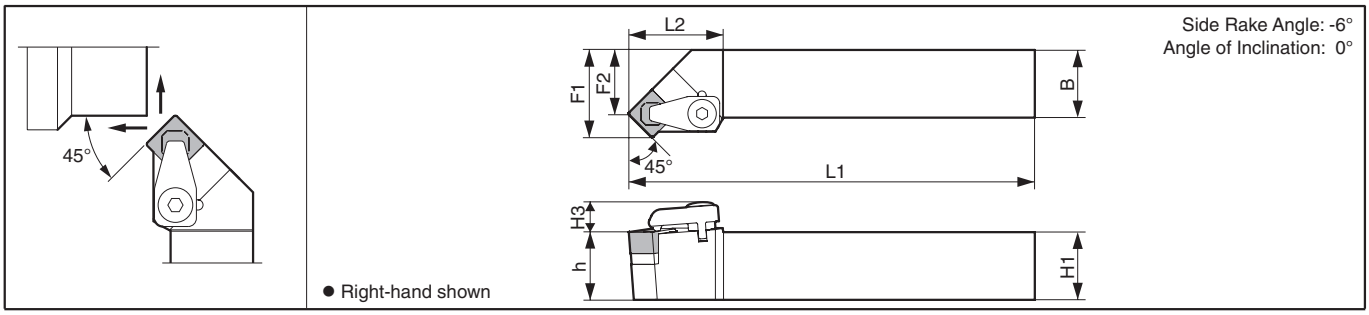
CSRN-GX (External)



CSDN-GX (External / Chamfering)



CSSN-GX (External / Facing / Chamfering)



● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(r_ε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw
CSRN R/L	2525M-12GX	○		○	25	12	25	150	30	27	-	1.2	CE-410	LW-4	SP-141	M3X8
	2525M-15GX	○		○		13			35						SP-162	M4X10
CSDNN	2525M-12GX		●		25	13	25	150	35	12.5	-	1.2	CE-410	LW-4	SP-141	M3X8
	2525M-15GX		●			14			40						SP-162	M4X10
CSSN R/L	2525M-12GX	●		●	25	12	25	150	35	32	23.6	1.2	CE-410	LW-4	SP-141	M3X8
	2525M-15GX	●		●		13			40		21.1				SP-162	M4X10

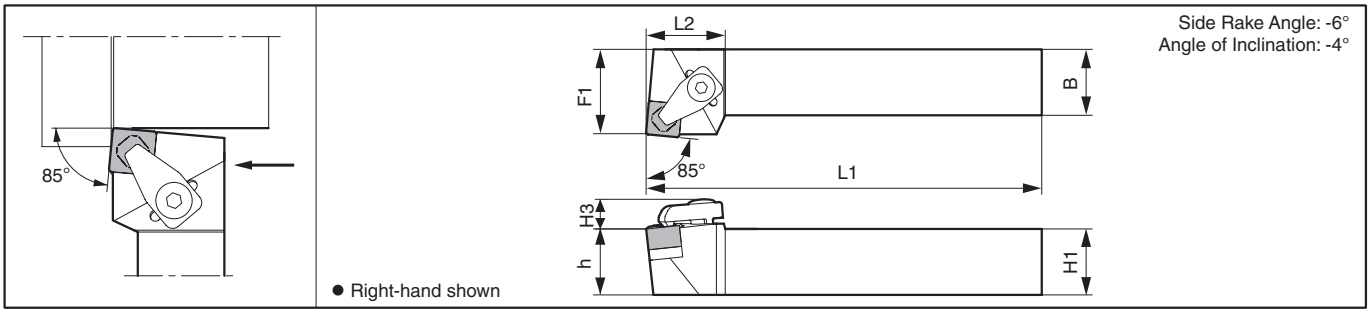
● Applicable Inserts

Applications		Cast Iron
Ref. to Page		B90
Toolholder Description \ Insert		Ceramic 
CSRN R/L	2525M-12GX	SNGX1207 ···
	2525M-15GX	SNGX1507 ···
CSDNN	2525M-12GX	SNGX1207 ···
	2525M-15GX	SNGX1507 ···
CSSN R/L	2525M-12GX	SNGX1207 ···
	2525M-15GX	SNGX1507 ···

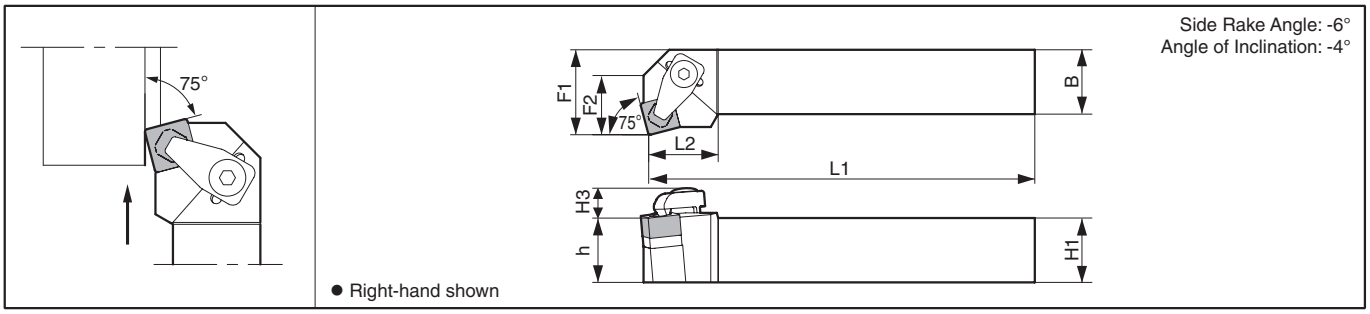
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item
○ : Check Availability

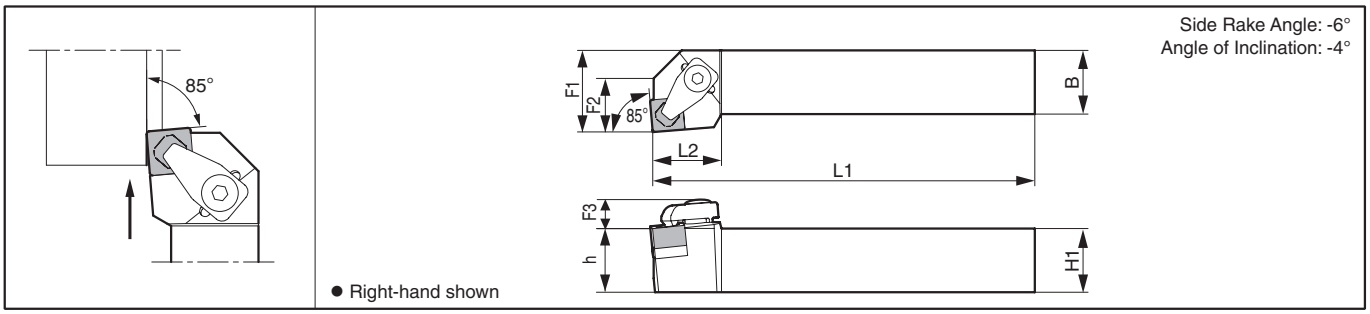
CS-N-GX (External)



CSKN-GX (Facing)



CSYN-GX (Facing)



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw
CS-N R/L	2525M-12GX	○	○	25	12	25	150	30	32	-	1.2	CE-410	LW-4	SP-141	M3X8
	2525M-15GX	○	○		13									SP-162	M4X10
CSKN R/L	2525M-12GX	○	○	25	12	25	150	27	32	23	1.2	CE-410	LW-4	SP-141	M3X8
	2525M-15GX	○	○		13			26						SP-162	M4X10
CSYN R/L	2525M-12GX	○	○	25	12	25	150	27	32	21	1.2	CE-410	LW-4	SP-141	M3X8
	2525M-15GX	○	○		13			29		23				SP-162	M4X10

● Applicable Inserts

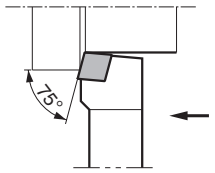
Applications		Cast Iron
Ref. to Page		B90
Toolholder Description \ Insert		Ceramic 
CS-N R/L	2525M-12GX	SNGX1207 ···
	2525M-15GX	SNGX1507 ···
CSKN R/L	2525M-12GX	SNGX1207 ···
	2525M-15GX	SNGX1507 ···
CSYN R/L	2525M-12GX	SNGX1207 ···
	2525M-15GX	SNGX1507 ···

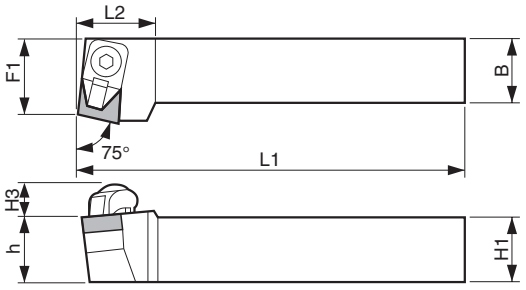
Recommended Cutting Conditions ➡ D39~D40

○ : Check Availability

Toolholders for Solid CBN Tools [CNMN Insert]

CCRN-A (External)

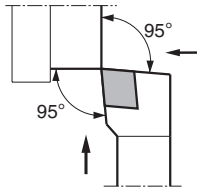


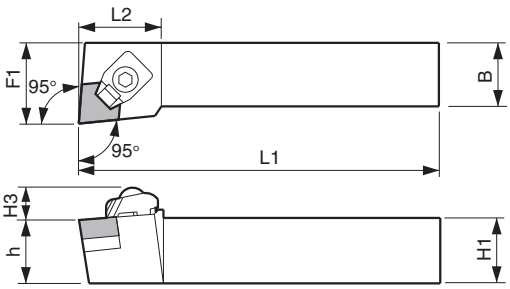


Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

CCLN-A (External / Facing)





Side Rake Angle: -5°
Angle of Inclination: -5°

● Right-hand shown

● Toolholder Dimensions

Description	Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw
CCRN R/L 2525M-09A	○	○	25	11	25	150	27	27	0.8	CE-030A	LW-4	SP-429	HH3X12
CCLN R/L 2525M-09A	●	●	25	11	25	150	28	32	0.8	CE-030A	LW-4	SP-429	HH3X12

● Applicable Inserts

Applications	Hard Materials / Cast Iron
Ref. to Page	C19
Insert / Toolholder Description	CBN (KBN900) 
CCRN R/L...-09A	CNMN0903..
CCLN R/L...-09A	

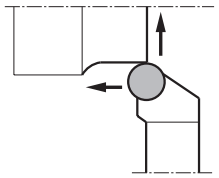
* For CNMN1204 Insert toolholder, ref. to page **D22**

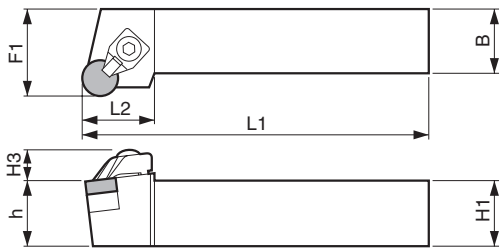
Recommended Cutting Conditions ➡ **D39~D40**

● : Std. Item
○ : Check Availability

Toolholders for Solid CBN Tools [RNMN Insert]

CRSN-A (External / Facing)

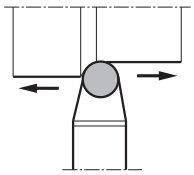


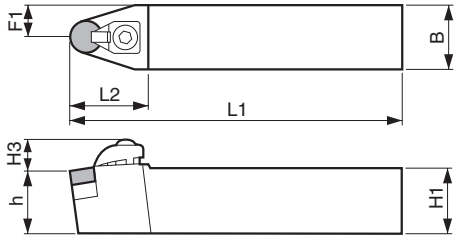


Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

CRDN-A (External / Copying)





Back Rake Angle: -8.5°

Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim	Shim Screw HH	Shim Screw BH
CRSN R/L	2525M-09A	●		●	25	11	25	150	26	32		-	CE-030A	LW-4	SP-829	-	HH3X12	
	3225P -09A	●		●	32			170										
	2525M-12A	●		●	25	11	25	150	26	32		-			-	SP-849 (SP-843)	BH3X12	
	3225P -12A	●		●	32			170										
CRDNN	2525M-09A		●		25	11	25	150	29	12.5		-	CE-030A	LW-4	SP-829	-	HH3X12	
	3225P -09A		●		32			170										
	2525M-12A		●		25	11	25	150	28	12.5		-			-	SP-849 (SP-843)	BH3X12	
	3225P -12A		●		32			170										

· -12A toolholder Shim: When using RN□□1204 Insert, purchase spare parts: SP-843 in ( ) separately.

Applicable Inserts

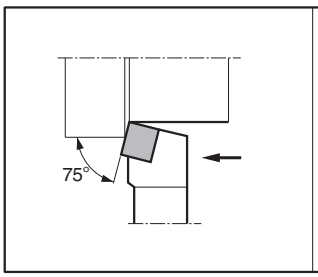
Applications	Hard Materials / Cast Iron	Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately.	
Ref. to Page	C19	B88		
Insert / Toolholder Description	CBN(KBN900)	Ceramic	Shim	Shim Screw
CRSN R/L...-09A	RNMN090300	(RNGN090400)	SP-826	-
CRSN R/L...-12A	RNMN120300 (RNMN120400)	(RNGN120400)	SP-843	M3X12
		(RNGN120700)	SP-841	M3X8
CRDNN...-09A	RNMN090300	(RNGN090400)	SP-826	-
CRDNN...-12A	RNMN120300 (RNMN120400)	(RNGN120400)	SP-843	M3X12
		(RNGN120700)	SP-841	M3X8

Recommended Cutting Conditions ➔ D39~D40

● : Std. Item

Toolholders for Solid CBN Tools [SNMN Insert]

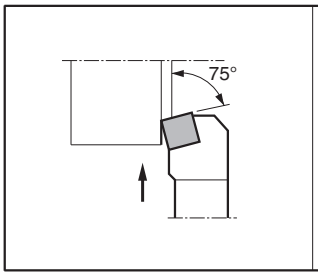
CSRN-A (External)



● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -4°

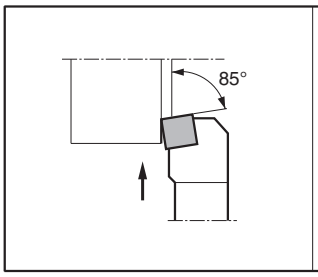
CSKN-A (Facing)



● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -4°

CSYN-A (Facing)



● Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -4°

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1		Standard Corner-R(r_ε)	Spare Parts: Clamp Set	Wrench	Shim		Shim Screw HH	Shim Screw BH
CSRN R/L	2525M-09A	●	●	25	11	25	150	22	27		0.8	CE-030A	LW-4	SP-129	-	HH3X12	
	2525M-12A	●	●											-	SP-148 (SP-143)	BH3X12	
CSKNR	2525M-09A	○		25	11	25	150	27	32		0.8	CE-030A	LW-4	SP-129	-	HH3X12	
	2525M-12A	○						29						-	SP-148 (SP-143)	BH3X12	
CSYN R/L	2525M-09A	●	●	25	11	25	150	27	32		0.8	CE-030A	LW-4	SP-129	-	HH3X12	
	2525M-12A	●	●											-	SP-148 (SP-143)	BH3X12	

· -12A toolholder Shim: When using SN□□1204 Insert, purchase spare parts: SP-143 in ( ) separately.

● Applicable Inserts

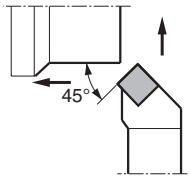
Applications	Hard Materials / Cast Iron	Cast Iron
Ref. to Page	C19	B31
Insert / Toolholder Description	CBN (KBN900)	Coated Carbide
CSRN R/L...-09A	SNMN0903..	-
CSRN R/L...-12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)
CSKN R/L...-09A	SNMN0903..	-
CSKN R/L...-12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)
CSYN R/L...-09A	SNMN0903..	-
CSYN R/L...-12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)

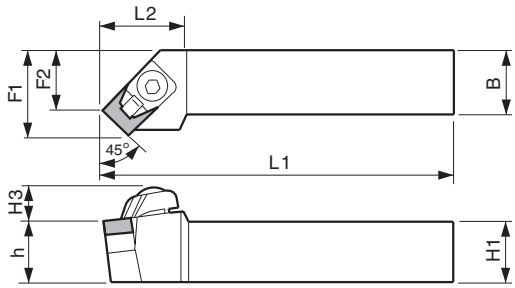
Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately. Chipbreaker	Clamp Set	Shim	Shim Screw
B89,B90				
Ceramic				
-	-			
(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12
(SNGN1207..) (SNMN1207..)			SP-141	M3X8
-	-			
(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12
(SNGN1207..) (SNMN1207..)			SP-141	M3X8
-	-			
(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12
(SNGN1207..) (SNMN1207..)			SP-141	M3X8

Recommended Cutting Conditions ➡ D39~D40

● : Std. Item
○ : Check Availability

CSSN-A (External / Facing / Chamfering)

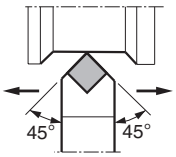


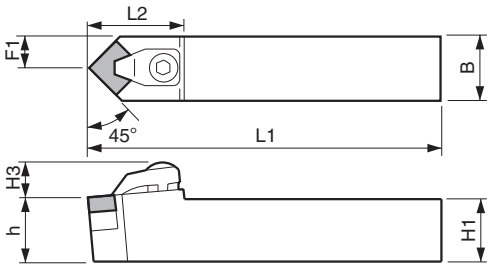


Side Rake Angle: -6°
Angle of Inclination: 0°

● Right-hand shown

CSDN-A (External / Chamfering)





Back Rake Angle: -8.5°

● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp Set 030A	Clamp Set 040	Wrench	Shim	Shim	Shim Screw HH	Shim Screw BH
CSSN R/L	2525M-09A	●		●	25	11	25	150	26	32	25	0.8	CE-030A		LW-4	SP-129	-	HH3X12	
	2525M-12A	●		●							23					-	SP-148 (SP-143)	BH3X12	
CSDNN	2525M-09A		●		25	13	25	150	32	12.5	-	0.8	CE-040		LW-4	SP-129	-	HH3X12	
	3225P -09A		●		32			170											
	2525M-12A		●		25			150								-	SP-148 (SP-143)	BH3X12	

· -12A toolholder Shim: When using SN□□1204 Insert, purchase spare parts: SP-143 in ( ) separately.

● Applicable Inserts

Applications	Hard Materials / Cast Iron	Cast Iron
Ref. to Page	C19	B31
Insert / Toolholder Description	CBN (KBN900)	Coated Carbide
CSSN R/L...-09A	SNMN0903..	-
CSSN R/L...-12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)
CSDNN...-09A	SNMN0903..	-
CSDNN...-12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)

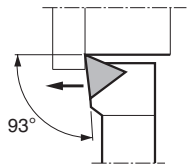
Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately.			
B89,B90	Chipbreaker	Clamp Set	Shim	Shim Screw
Ceramic				
-	-			
(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12
(SNGN1207..) (SNMN1207..)			SP-141	M3X8
-	-			
(SNGN1204..) (SNMN1204..)	-	-	SP-143	M3X12
(SNGN1207..) (SNMN1207..)			SP-141	M3X8

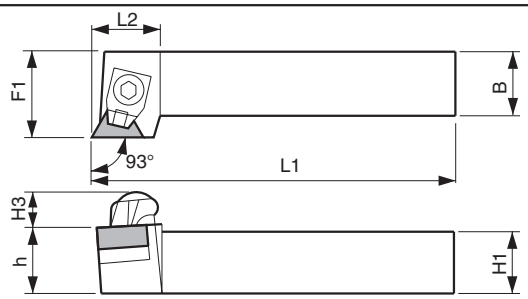
Recommended Cutting Conditions ➡ D39~D40

● : Std. Item

Toolholders for Solid CBN Tools [TNMN Insert]

CTJN-A (External)

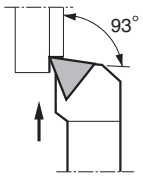


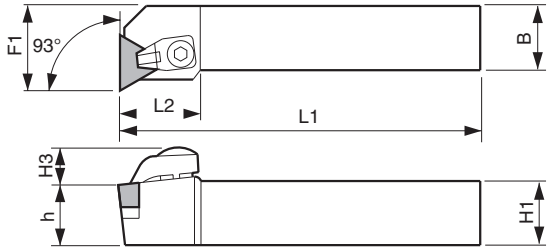


Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

CTUN-A (Facing)





Side Rake Angle: -6°
Angle of Inclination: -4°

● Right-hand shown

● Toolholder Dimensions

Description	Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	Standard Corner-R(r_ε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw
CTJN R/L 2525M-11A	●	●	25	11	25	150	22	32	0.8	CE-030A	LW-4	SP-219	HH3X12
CTUN R/L 2525M-11A	●	○	25	11	25	150	27	32	0.8	CE-030A	LW-4	SP-219	HH3X12

● Applicable Inserts

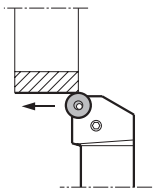
Applications	Hard Materials / Cast Iron	Cast Iron / Hard Materials
Ref. to Page	C19	B91
Insert / Toolholder Description	CBN (KBN900) 	Ceramic 
CTJN R/L...-11A	TNMN1103..	TNGN1103..
CTUN R/L...-11A		

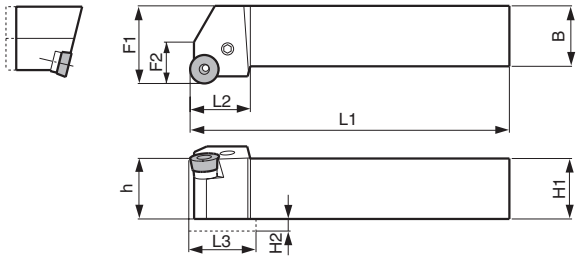
* TNMN1604 Insert toolholder is described in **D26**.

Recommended Cutting Conditions ➡ **D39~D40**

● : Std. Item
○ : Check Availability

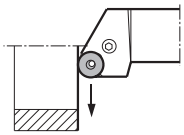
PRGC-BE (External)

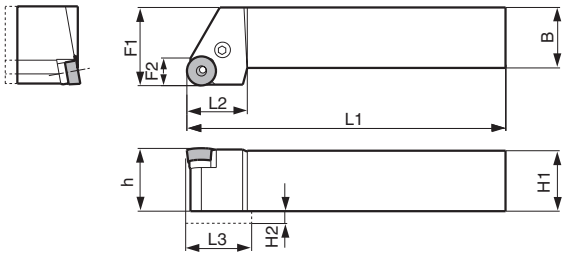




● Right-hand shown

PRGC-BF (Facing)





● Right-hand shown

● Toolholder Dimensions

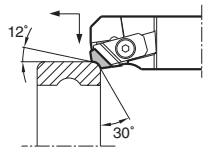
Description		Std.	Dimension (mm)								Spare Parts						Applicable Inserts ➡B83
			H1=h	H2	B	L1	L2	L3	F1	F2	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	
PRGCR	2020K-12BE	●	20	-	20	125	22	-	25	15	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5	RCMT 1204M0-BB
	2525M-12BE	●	25		25	150	25		32	17							
	2020K-16BE	●	20	5	20	125	27	27	29	22	LL-2C	LS-1T	LR-16C	LSP-2	PC-2		RCMT 1606M0-BB
	2525M-16BE	●	25	-	25	150		-	32								
PRGCR	2020K-12BF	●	20	-	20	125	22	-	25	10	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5	RCMT 1204M0-BB
	2525M-12BF	●	25		25	150	25		32	11							
	2020K-16BF	●	20	5	20	125	27	27	25	17	LL-2C	LS-1T	LR-16C	LSP-2	PC-2		RCMT 1606M0-BB
	2525M-16BF	●	25	-	25	150		-	32								

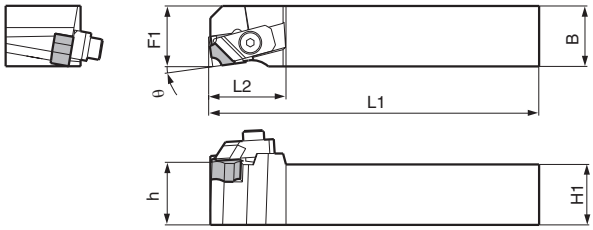
Recommended Cutting Conditions ➡D39~D40

● : Std. Item

Toolholders for Bearing Machining [SNMF Insert]

CBSN (External Round Chamfering)





● Right-hand shown

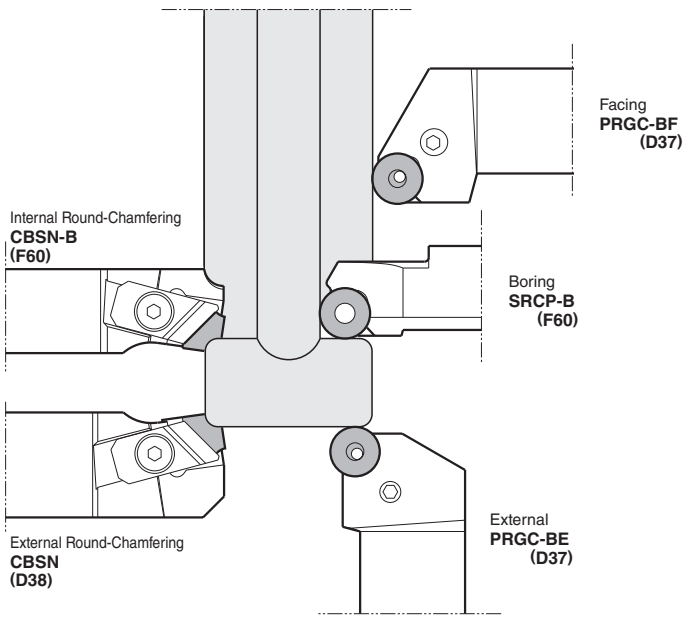
● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	θ	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	Applicable Inserts ➡B83
CBSN R/L	2020K-12	●	●	20	20	125	32	20	9°	CP-RC R/L	LW-5	SP-RC	SP3X8	SNMF1204○○-21
	2525M-12	●	●	25	25	150		25						

· Clamp Set: CP-RCR for Right-hand Toolholder, and CP-RCL for Left-hand Toolholder.

Recommended Cutting Conditions ➡D39~D40

◆ Tooling for Bearing Machining



● : Std. Item

Recommended Cutting Conditions - External Turning (Negative Insert) [ap indicates radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Applications	Recommended Chipbreaker	Recommended Insert 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 (Small ap)	Continuous	XF	PV7010	0.4	260 - 340 - 500	0.05 - 0.12 - 0.6	0.03 - 0.1 - 0.22
				Interruption		PV720	0.8	240 - 320 - 480	0.05 - 0.15 - 0.6	0.04 - 0.12 - 0.25
			Finishing (Gloss Oriented)	Continuous	XP	TN6010	0.4	250 - 320 - 380	0.2 - 0.5 - 0.7	0.07 - 0.12 - 0.2
				Interruption		TN620	0.8	240 - 310 - 370	0.2 - 0.5 - 0.7	0.07 - 0.12 - 0.2
			Finishing (Tool Life Oriented)	Continuous	XP	PV7010	0.4	250 - 300 - 350	0.2 - 0.5 - 0.7	0.07 - 0.12 - 0.2
				Interruption		PV720	0.8	240 - 290 - 340	0.2 - 0.5 - 0.7	0.07 - 0.12 - 0.2
			Finishing-Medium (Gloss Oriented)	Continuous	XQ	TN6020	0.4	250 - 300 - 350	0.5 - 1.0 - 1.5	0.17 - 0.25 - 0.3
				Interruption		TN620	0.8	240 - 280 - 340	0.5 - 1.0 - 1.5	0.17 - 0.25 - 0.3
			Finishing-Medium (Tool Life Oriented)	Continuous	XQ	PV7010	0.8	250 - 300 - 350	0.5 - 1.0 - 1.5	0.17 - 0.25 - 0.3
				Interruption		PV720	0.8	240 - 280 - 340	0.5 - 1.0 - 1.5	0.17 - 0.25 - 0.3
			Medium-Roughing	Continuous	XS	PV720	0.8	220 - 260 - 320	0.8 - 1.5 - 2.0	0.25 - 0.3 - 0.4
				Interruption		CA515	0.8	160 - 210 - 260	0.8 - 1.5 - 2.0	0.25 - 0.3 - 0.4
			Roughing	Continuous	PG	CA515	0.8	180 - 220 - 260	1.0 - 2.5 - 3.5	0.2 - 0.3 - 0.4
				Interruption		CA525	1.2	150 - 200 - 240	1.0 - 2.5 - 3.5	0.2 - 0.3 - 0.4
			Medium-Roughing High Feed Rate	Continuous	PT	CA515	0.8	150 - 200 - 240	1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45
				Interruption		CA525	1.2	120 - 180 - 220	1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45
			Roughing High Feed Rate	Continuous	PH	CA515	1.2	150 - 200 - 240	2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8
				Interruption		CA525	1.6	120 - 180 - 220	2.0 - 5.0 - 8.0	0.3 - 0.5 - 0.7
			Roughing (Low Cutting Force)	Continuous	PX (Single Side)	CA515	1.2	150 - 200 - 240	2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8
				Interruption		CA525	1.6	120 - 180 - 220	2.0 - 5.0 - 8.0	0.3 - 0.5 - 0.7
	Medium Carbon Steel Medium Carbon Alloy	HB ≤ 300	Finishing (Time Oriented)	Continuous	WP (Wiper)	PV7010	0.8	200 - 250 - 300	0.3 - 0.5 - 1.0	0.2 - 0.3 - 0.4
				Interruption		CA515	0.8	160 - 220 - 280	0.3 - 0.5 - 1.0	0.2 - 0.3 - 0.4
			Finishing-Medium (Time Oriented)	Continuous	WQ (Wiper)	PV7010	0.8	180 - 220 - 260	1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.4
				Interruption		CA525	0.8	130 - 180 - 240	1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.4
			Finishing (Gloss Oriented)	Continuous	PP	TN6010	0.4	200 - 250 - 300	0.2 - 0.5 - 1.5	0.04 - 0.16 - 0.28
				Interruption		TN6010	0.8	180 - 230 - 280	0.2 - 0.5 - 1.5	0.05 - 0.2 - 0.35
			Finishing (Tool Life Oriented)	Continuous	PP	PV7010	0.4	200 - 250 - 300	0.2 - 0.5 - 1.5	0.04 - 0.16 - 0.28
				Interruption		PV720	0.8	200 - 240 - 290	0.2 - 0.5 - 1.5	0.05 - 0.2 - 0.35
			Finishing-Medium (Gloss Oriented)	Continuous	PQ	TN6010	0.8	180 - 230 - 270	0.5 - 1.5 - 2.5	0.1 - 0.2 - 0.3
				Interruption		TN620	1.2	160 - 220 - 260	0.5 - 1.5 - 2.5	0.1 - 0.17 - 0.25
			Finishing-Medium (Tool Life Oriented)	Continuous	PQ	PV7010	0.8	160 - 210 - 260	0.5 - 1.5 - 2.5	0.1 - 0.2 - 0.3
				Interruption		CA525	0.8	140 - 200 - 240	0.5 - 1.5 - 2.5	0.1 - 0.17 - 0.25
			Medium-Roughing	Continuous	PG	CA515	0.8	150 - 200 - 240	1.0 - 2.5 - 3.5	0.2 - 0.3 - 0.4
				Interruption		CA525	1.2	120 - 160 - 200	1.0 - 2.5 - 3.5	0.2 - 0.3 - 0.4
			Medium-Roughing High Feed Rate	Continuous	PT	CA515	0.8	120 - 180 - 230	1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45
				Interruption		CA525	1.2	100 - 150 - 200	1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45
			Roughing High Feed Rate	Continuous	PH	CA515	1.2	120 - 180 - 230	2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8
				Interruption		CA525	1.6	100 - 150 - 200	2.0 - 5.0 - 8.0	0.3 - 0.5 - 0.7
			Roughing (Low Cutting Force)	Continuous	PX (Single Side)	CA515	1.2	120 - 180 - 230	2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8
				Interruption		CA525	1.6	100 - 150 - 200	2.0 - 5.0 - 8.0	0.3 - 0.5 - 0.7
	High Carbon Alloy	HB ≤ 280	Finishing (Gloss Oriented)	Continuous	PP	TN6010	0.4	150 - 200 - 250	0.2 - 0.5 - 1.5	0.04 - 0.16 - 0.28
				Interruption		TN620	0.8	140 - 180 - 240	0.2 - 0.5 - 1.5	0.05 - 0.2 - 0.35
			Finishing (Tool Life Oriented)	Continuous	PP	PV7010	0.4	120 - 180 - 240	0.2 - 0.5 - 1.5	0.04 - 0.16 - 0.28
				Interruption		CA515	0.8	100 - 150 - 200	0.2 - 0.5 - 1.5	0.05 - 0.2 - 0.35
			Finishing-Medium	Continuous	PQ	CA515	0.8	120 - 160 - 220	0.5 - 1.5 - 2.5	0.15 - 0.25 - 0.3
				Interruption		CA525	0.8	100 - 140 - 180	0.5 - 1.5 - 2.5	0.15 - 0.2 - 0.25
			Medium-Roughing	Continuous	PG	CA515	0.8	120 - 150 - 200	1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.5
				Interruption		CA525	0.8	100 - 130 - 180	1.0 - 2.0 - 3.0	0.15 - 0.2 - 0.3
			Medium-Roughing High Feed Rate	Continuous	PT	CA515	0.8	100 - 140 - 180	1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45
				Interruption		CA525	1.2	80 - 120 - 160	1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45
			Roughing High Feed Rate	Continuous	PH	CA515	1.2	100 - 140 - 180	2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8
				Interruption		CA525	1.6	80 - 120 - 160	2.0 - 5.0 - 8.0	0.3 - 0.5 - 0.7
			Roughing (Low Cutting Force)	Continuous	PX (Single Side)	CA515	1.2	100 - 140 - 180	2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8
				Interruption		CA525	1.6	80 - 120 - 160	2.0 - 5.0 - 8.0	0.3 - 0.5 - 0.7

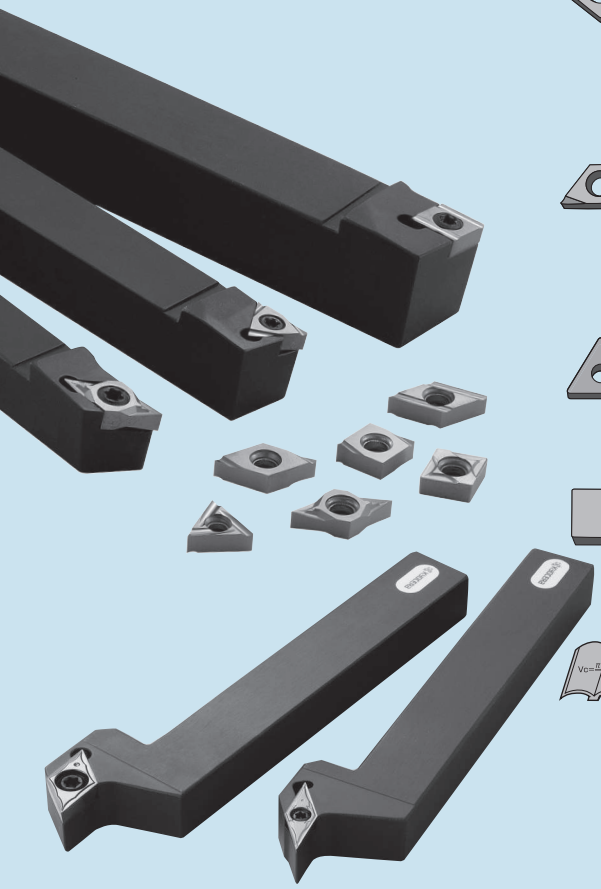
Recommended Cutting Conditions - External Turning (Negative Insert) [ap indicates radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Applications	Recommended Chipbreaker	Recommended Insert Grade	Corner-R (rε)	Lower Limit - Recommendation - Upper Limit Vc (m/min)	ap (mm)	f (mm/rev)
M	Stainless Steel	HB ≤ 220	Finishing (Gloss Oriented)	Continuous	PQ	TN620	0.8	120 - 160 - 200	0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2
				Interruption		TN620	0.8	100 - 120 - 150	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15
			Finishing	Continuous	MQ	CA6515	0.4	120 - 180 - 240	0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2
				Interruption		CA6525	0.8	100 - 160 - 220	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15
			Medium-Roughing (Chip Control Oriented)	Continuous	MS	CA6515	0.4	120 - 160 - 200	1.0 - 2.0 - 3.0	0.1 - 0.2 - 0.3
				Interruption		CA6525	0.8	80 - 140 - 180	1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.4
			Medium-Roughing (Sharpness Oriented)	Continuous	MU	CA6515	0.4	120 - 160 - 200	1.0 - 2.0 - 3.0	0.15 - 0.25 - 0.35
				Interruption		CA6525	0.8	80 - 140 - 180	1.0 - 2.0 - 3.0	0.15 - 0.25 - 0.3
			Roughing	Continuous	Standard	CA6515	0.8	100 - 140 - 180	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
				Interruption		CA6525	1.2	80 - 120 - 150	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
	Stainless Steel	HB ≤ 300	Finishing (Gloss Oriented)	Continuous	PQ	TN620	0.8	100 - 120 - 150	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15
				Interruption		TN620	0.8	80 - 100 - 120	0.5 - 1.0 - 1.5	0.05 - 0.08 - 0.1
			Finishing	Continuous	MQ	CA6515	0.4	100 - 120 - 150	0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2
				Interruption		CA6525	0.8	80 - 100 - 120	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15
			Medium-Roughing (Chip Control Oriented)	Continuous	MS	CA6515	0.4	100 - 120 - 150	1.0 - 1.5 - 2.0	0.1 - 0.15 - 0.25
				Interruption		CA6525	0.8	80 - 100 - 120	1.0 - 2.0 - 3.0	0.1 - 0.15 - 0.2
			Medium-Roughing (Sharpness Oriented)	Continuous	MU	CA6515	0.4	100 - 120 - 150	1.0 - 1.5 - 2.0	0.1 - 0.15 - 0.25
				Interruption		CA6525	0.8	80 - 100 - 120	1.0 - 2.0 - 3.0	0.1 - 0.15 - 0.2
			Roughing	Continuous	Standard	CA6515	0.8	80 - 100 - 120	1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.4
				Interruption		CA6525	1.2	60 - 80 - 100	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
K	Gray Cast Iron	HB ≤ 250	High Speed Machining	Continuous	Without Chipbreaker	KBN475	0.8	400 - 800 - 1200	0.05 - 0.2 - 0.5	0.1 - 0.2 - 0.3
				Continuous		KBN900	1.2	500 - 900 - 1200	0.1 - 0.5 - 1.0	0.05 - 0.1 - 0.2
				Interruption		KBN900	1.2	500 - 700 - 900	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.2
			Finishing (Gloss Oriented)	Continuous	Standard	PV7005	0.8	300 - 350 - 400	0.5 - 1.0 - 1.5	0.1 - 0.2 - 0.3
				Interruption		PV720	0.8	150 - 200 - 300	0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2
			Finishing (Ceramic)	Continuous	Without Chipbreaker	KA30	1.2	300 - 500 - 700	0.3 - 0.5 - 1.0	0.1 - 0.2 - 0.3
				Continuous		PT600M	0.8	300 - 450 - 600	0.3 - 0.5 - 1.0	0.1 - 0.2 - 0.3
			Medium (Ceramic)	Continuous		CS7050	1.2	300 - 450 - 550	1.0 - 2.0 - 3.0	0.15 - 0.25 - 0.35
				Interruption		KS6050	1.2	250 - 400 - 500	1.0 - 2.0 - 3.0	0.15 - 0.2 - 0.3
			Medium	Continuous	Standard	CA4505	0.8	200 - 250 - 300	0.5 - 2.0 - 2.5	0.1 - 0.2 - 0.3
				Interruption		CA4515	1.2	150 - 200 - 250	0.5 - 2.0 - 2.5	0.08 - 0.15 - 0.2
			Roughing	Continuous	ZS	CA4505	0.8	200 - 250 - 300	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
				Interruption		CA4515	1.2	150 - 200 - 250	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
	Nodular Cast Iron	HB ≤ 270	High Speed Machining	Continuous	Without Chipbreaker	KBN60M	0.4	200 - 300 - 400	0.1 - 0.3 - 0.5	0.1 - 0.15 - 0.2
				Continuous		PT600M	0.8	200 - 250 - 350	0.1 - 0.5 - 1.0	0.1 - 0.2 - 0.4
			Finishing (Gloss Oriented)	Continuous	Standard	PV7005	0.8	150 - 250 - 300	0.5 - 1.0 - 1.5	0.1 - 0.2 - 0.3
				Interruption		PV720	0.8	120 - 200 - 250	0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2
			Medium	Continuous	Standard	CA4505	0.8	150 - 200 - 250	0.5 - 2.0 - 2.5	0.1 - 0.2 - 0.3
				Interruption		CA4515	1.2	120 - 180 - 220	0.5 - 2.0 - 2.5	0.08 - 0.15 - 0.2
			Roughing	Continuous	ZS	CA4505	0.8	150 - 200 - 250	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
				Interruption		CA4515	1.2	120 - 180 - 220	1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4
N	Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloys	HB ≤ 100	High Speed Machining (Rainbow Surface Gross)	Continuous	Without Chipbreaker	KPD001	0.4	300 - 800 - 2000	0.05 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Finishing	Continuous	A3	KW10	0.8	400 - 500 - 700	0.5 - 1.0 - 2.0	0.1 - 0.2 - 0.25
				Interruption		KW10	0.8	400 - 500 - 700	0.5 - 1.0 - 2.0	0.1 - 0.2 - 0.25
			Medium	Continuous	AH	KW10	0.8	200 - 300 - 500	1.0 - 2.0 - 3.5	0.1 - 0.3 - 0.4
				Interruption		KW10	0.8	200 - 300 - 500	1.0 - 2.0 - 3.5	0.1 - 0.3 - 0.4
S	Titanium Alloys	HB ≤ 400	Precision Finishing (Rainbow Surface Gross)	Continuous	Without Chipbreaker	KPD001	0.4	100 - 150 - 180	0.05 - 0.3 - 0.5	0.03 - 0.1 - 0.15
				Interruption		KPD001	0.4	70 - 120 - 150	0.05 - 0.3 - 0.5	0.03 - 0.07 - 0.1
			Finishing	Continuous	MQ	SW05	0.4	40 - 70 - 100	0.2 - 0.5 - 1.0	0.05 - 0.2 - 0.3
				Interruption		SW05	0.4	40 - 70 - 100	0.2 - 0.5 - 1.0	0.05 - 0.15 - 0.2
			Medium	Continuous	MU	SW05	0.8	40 - 60 - 80	0.5 - 1.0 - 3.0	0.1 - 0.25 - 0.35
				Interruption		SW05	0.8	40 - 60 - 80	0.5 - 1.0 - 3.0	0.1 - 0.2 - 0.3
	Heat-resistant Alloys	HB ≤ 350	Finishing	Continuous	MQ	PR1310	0.4	40 - 60 - 80	0.2 - 0.5 - 1.5	0.03 - 0.08 - 0.12
				Interruption		PR1310	0.8	40 - 60 - 80	0.2 - 0.5 - 1.5	0.05 - 0.1 - 0.15
			Medium	Continuous	MS	PR1310	0.8	40 - 60 - 80	0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.15
				Interruption		PR1310	1.2	40 - 60 - 80	0.5 - 1.0 - 2.0	0.1 - 0.15 - 0.2
H	Hardened Steel Hard Materials	40~50 HRC	Finishing	Continuous	PQ	CA515	0.8	60 - 100 - 120	0.1 - 0.3 - 0.5	0.05 - 0.08 - 0.1
				Interruption	Standard	CA515	0.8	30 - 50 - 70	0.1 - 0.3 - 0.5	0.05 - 0.08 - 0.1
		40~50 HRC	Finishing	Continuous	Without Chipbreaker	PT600M	0.8	60 - 80 - 100	0.2 - 0.5 - 0.7	0.05 - 0.1 - 0.15
		50~65 HRC		Continuous		PT600M	1.2	30 - 40 - 60	0.2 - 0.5 - 0.7	0.05 - 0.1 - 0.15
		50~68 HRC	Finishing	Continuous	ME	KBN05M	0.8	100 - 150 - 200	0.05 - 0.3 - 0.5	0.05 - 0.08 - 0.1
				Interruption	MET	KBN05M	1.2	90 - 140 - 180	0.05 - 0.3 - 0.5	0.05 - 0.08 - 0.1
			Medium	Continuous	Without Chipbreaker	KBN900	1.2	80 - 100 - 120	0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.2
				Interruption		KBN900	Radius	70 - 90 - 110	0.3 - 0.7 - 1.0	0.05 - 0.1 - 0.15

Small Tools

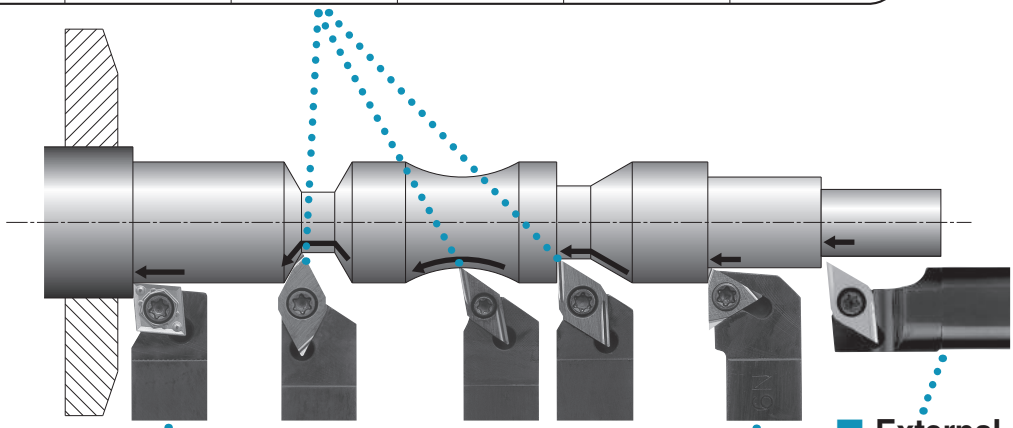
E1~E48

E



External / Copying

ADJC-FF	SDJC-FF	SDJC	SDLC-FF SDLP-FF	SDLN-FF	SDNC-F	SDNC
Back Clamp Without Offset	Screw Clamp Without Offset	Screw Clamp	Screw Clamp Without Offset	Screw Clamp Without Offset	Screw Clamp	Screw Clamp
E24	E25	E25	E26,E28	E38	E27	E27



External / Facing

ACLC-FF	SCLC-FF	SCLC	SCLN-FF
Back Clamp Without Offset	Screw Clamp Without Offset	Screw Clamp	Screw Clamp Without Offset
E22	E23	E23	E38

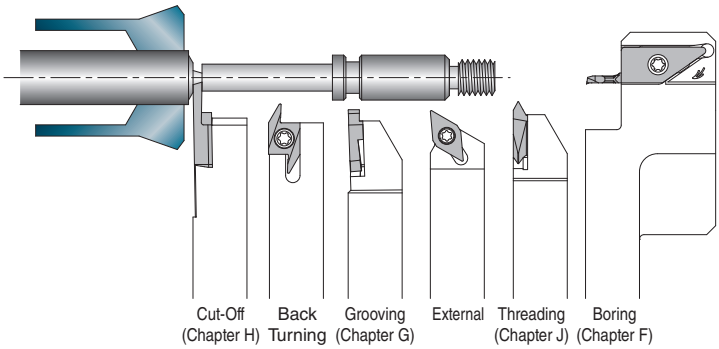
External

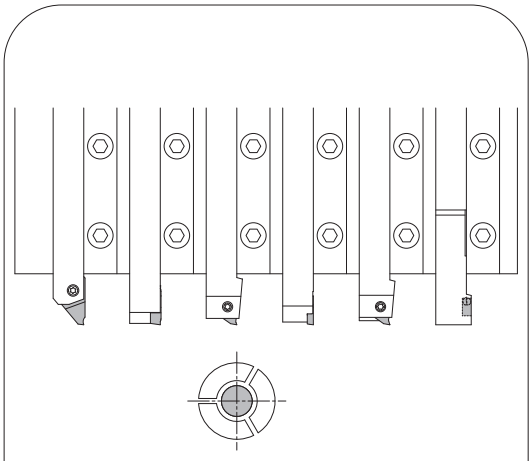
STGC(P)	STLN-FF
Screw Clamp	Screw Clamp Without Offset
E29	E39

External Sleeve Holder

S...SDLC
Screw Clamp Shank Dia. ϕ12~ϕ25.4
E35

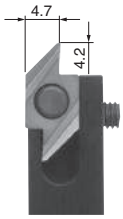
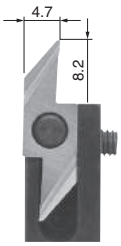
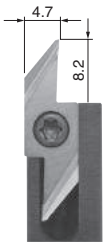
Tooling example (1) CNC Automatic lathe (Gang Type)

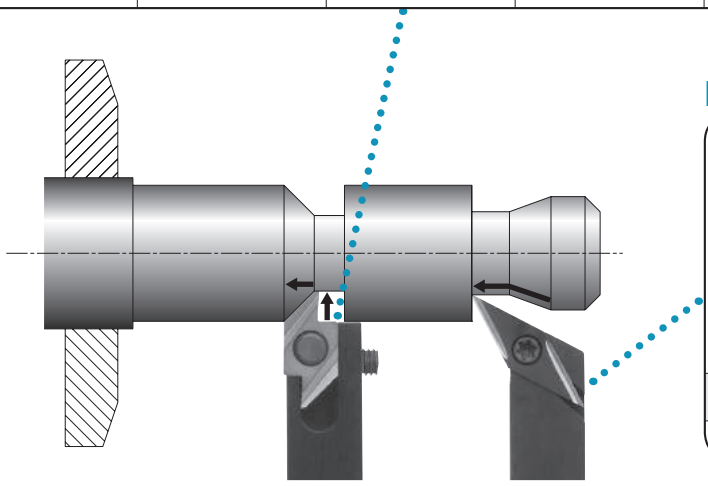




Tools installed on Gang Type Automatic Lathe

Back Turning

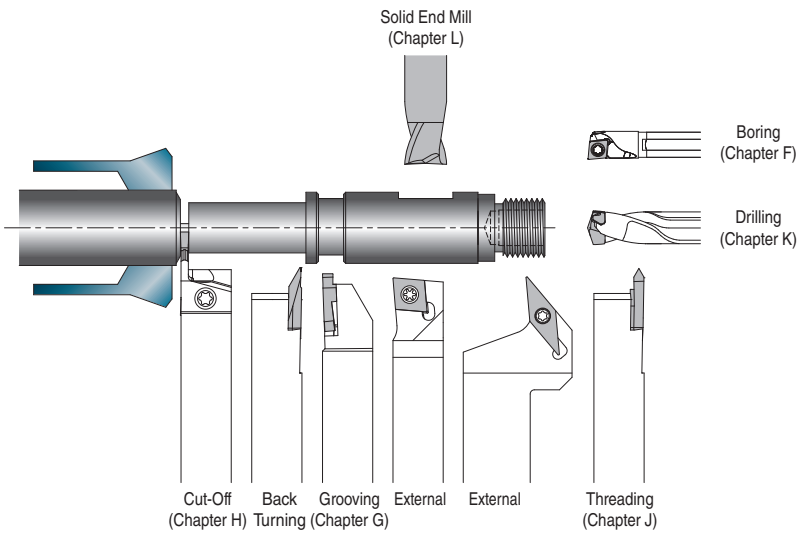
AABS-40F	SABS-40F	AABW-40F	SABW-40F	AABW-50F	SABW-50F	KTKF
						
Back Clamp Edge Width: 2.8 ap: ~4.0	Screw Clamp Edge Width: 2.8 ap: ~4.0	Back Clamp Edge Width: 4.7 ap: ~4.0	Screw Clamp Edge Width: 4.7 ap: ~4.0	Back Clamp Edge Width: 4.7 ap: ~5.0	Screw Clamp Edge Width: 4.7 ap: ~5.0	Screw Clamp Edge Width: 1.5~3.8 Max. ap: 1.8~5.5
E17	E17	E18	E18	E19	E19	E12

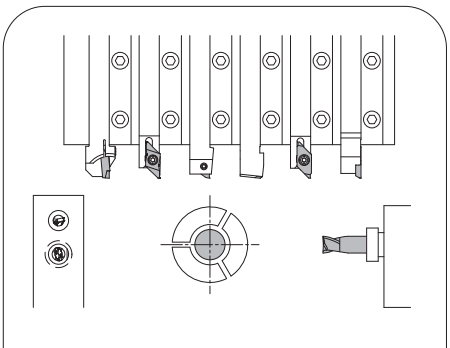


External / Facing / Copying / Undercutting

SVPB	SVPP-FF
	
Screw Clamp	Screw Clamp Without Offset
E31	E33

Tooling example (2) CNC Automatic lathe (Gang Type)





Tools installed on gang tool post + milling toolholder

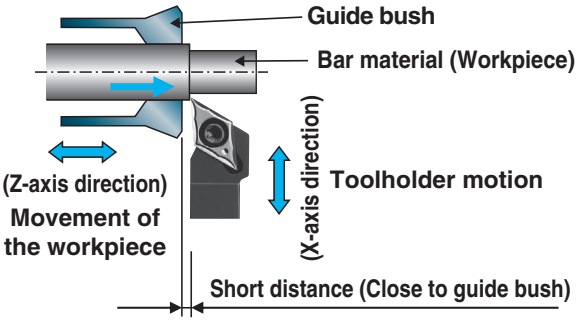
For Swiss tool automatic lathe (Gang type tool post)

How to use
Goose-neck holder

Swiss tool automatic lathe (Guide bush system)

Goose-neck holder is applicable to automatic lathes whose toolholder does not move to longitudinal direction (Z-axis direction).

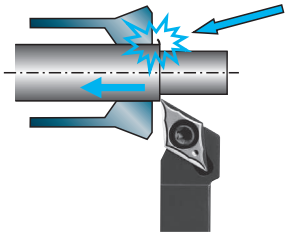
In case of machining with the conventional toolholder



Goose-neck Holder is applicable to automatic lathe that toolholder does not move to longitudinal direction (Z-axis direction)

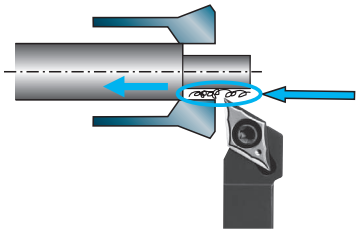
Problems of machining with the conventional toolholder

Problems of machining with a conventional toolholder

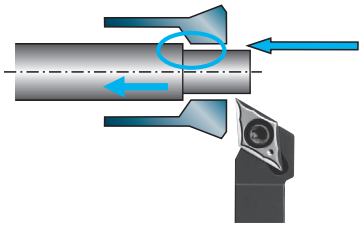


<Case 1>
During multiple passes, when bar material returns into guide bush, the burr contacts and breaks guide bush.

<Case 2>
The workpiece burr contacts the guide bush and causes dimensional variation.



<Case 3>
During multiple passes, when bar material returns into guide bush, the chips contacts and breaks guide bush.

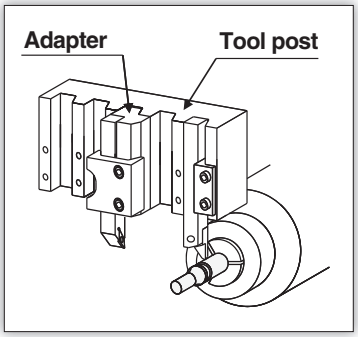


<Case 4>
Bar material deviation from the guide bush disables machining.

Problems of Toolholder Installation

When using a conventional toolholder,

1) Additional space is required for an adapter.
2) Toolholder's handling is difficult due to limited space.
3) Necessary to buy an adapter.
4) An adapter may interfere with the next toolpost.



Advantages of Goose-neck Holder

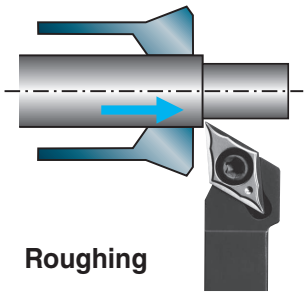
Advantages of Using Goose-neck Holder

When using Goose-neck Holder

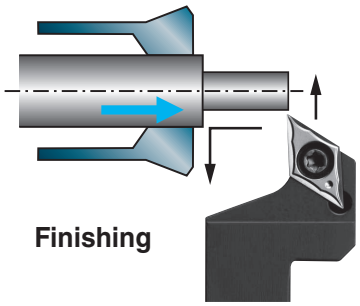
1) Machining precision improves by additional finishing process.
2) Chips do not come into the guide bush.
3) Better chip control due to large chip evacuation space.

Available for machining after roughing without returning bar material into guide bush, preventing damages and improving precision.

Pattern 1



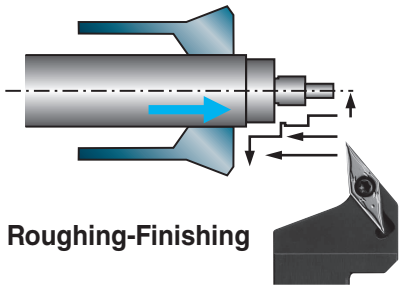
Roughing



Finishing

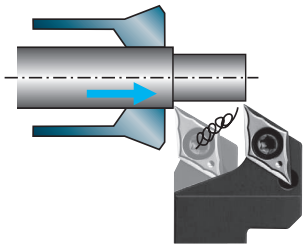
Available for roughing and finishing with one Goose-neck Holder.

Pattern 2

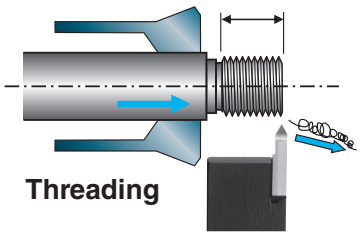


Roughing-Finishing

For better chip control



Optimum cutting edge position and large space for efficient chip evacuation.



Threading

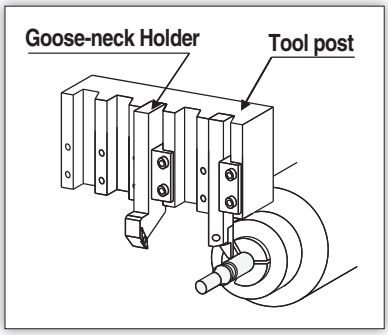
* With conventional threading toolholders, chip biting into guide bush can cause damages on threads.

Advantages of Toolholder installation

When using a Goose-neck holder

1) Maximum number of toolholders can be attached.

2) No interference with next toolpost.

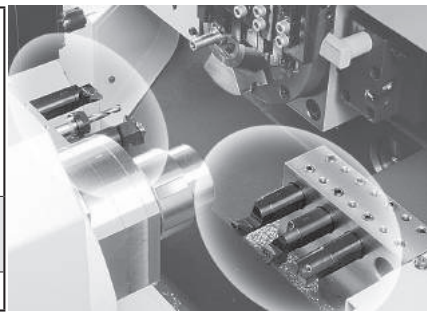


External Sleeve Holder

More tools attachable to CNC Automatic Lathe!

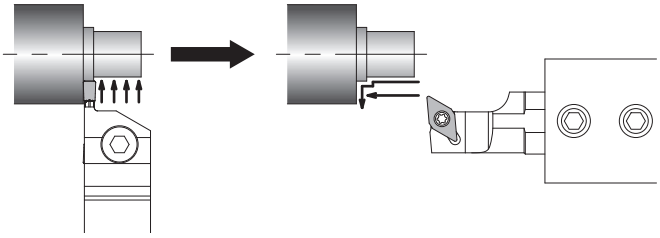
Limit to attachable tools at intricate part machining ►►► Use External Sleeve Holder Tools

			
S...SCLC	S...SDUC	S...SDLC	S...SVUB(C)
Screw Clamp Shank Dia. ϕ12~ϕ25.4	Screw Clamp Shank Dia ϕ14~ϕ25.4	Screw Clamp Shank Dia ϕ12~ϕ25.4	Screw Clamp Shank Dia ϕ12~ϕ25.4
E34	E35	E35	E36



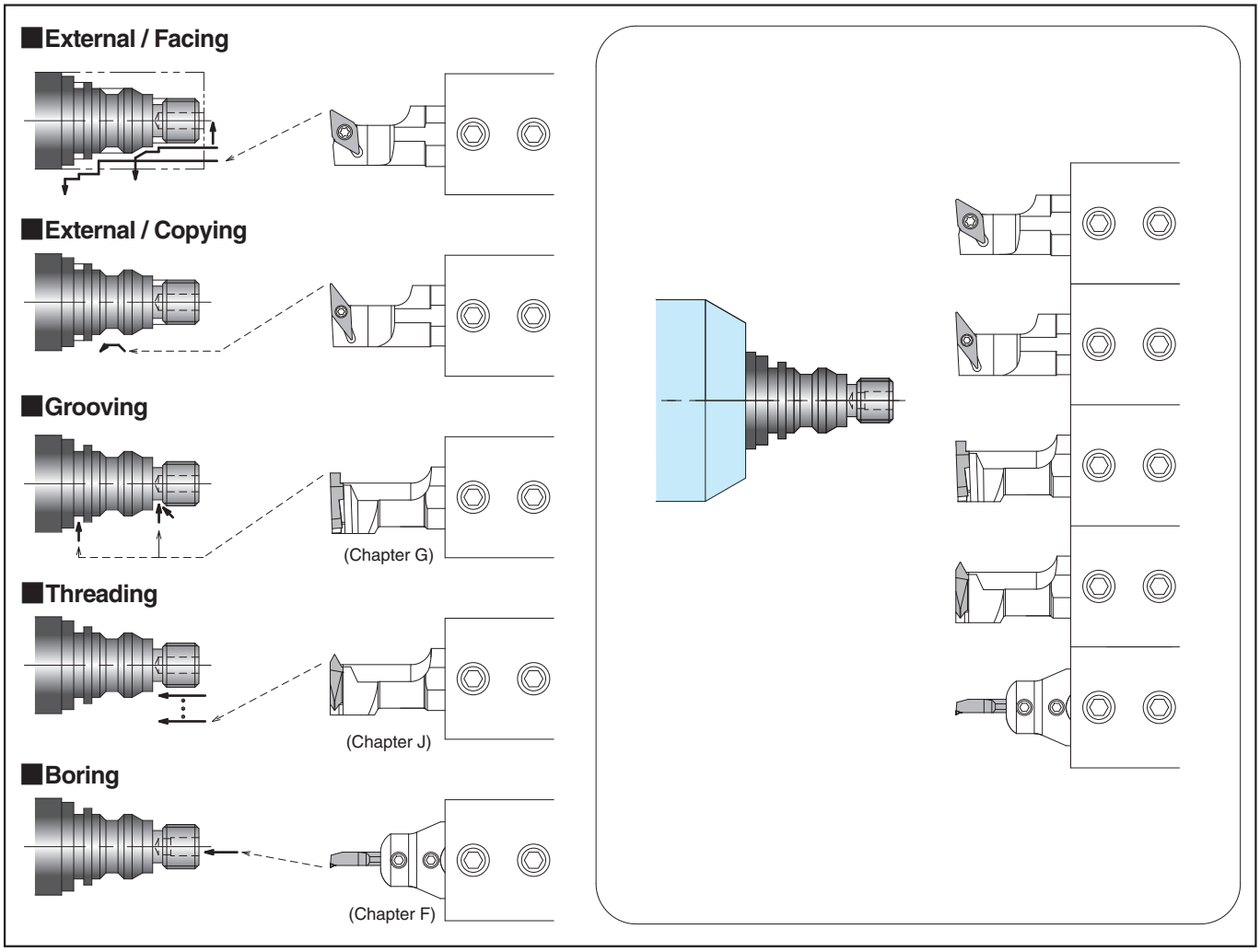
Ref. to Page R34~R41 for Tooling Layout and Automatic Lathe List by Manufacturer.

● **Finishing by Sleeve Holder**



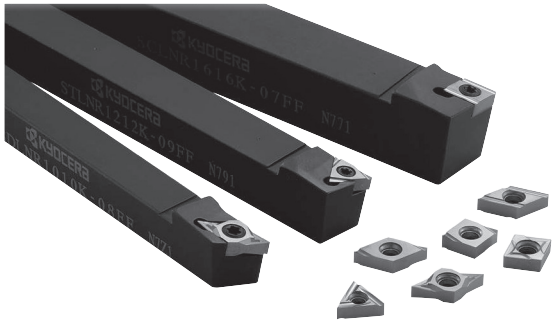
1) Roughing by grooving toolholder
2) Finishing by Sleeve Holder improves chip control and reduces cutting time

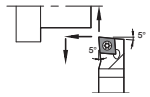
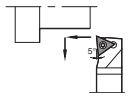
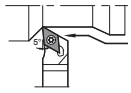
Tooling Example (3) CNC Automatic Lathe (Opposed Gang Type)



Ref. to Page R34~R41 for Tooling Layout and Automatic Lathe List by Manufacturer.

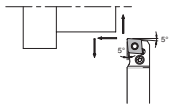
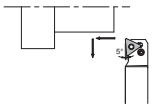
Toolholders for Small Double Sided Tooling (Screw Clamp)



Applications	External / Facing	External / Up Facing	External / Copying
Cutting Edge Angle	95°	95°	95°
Screw Clamp (Without Offset)	 SCLN	 STLN	 SDLN
Ref. to Page	E38	E39	E38

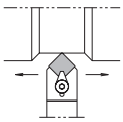
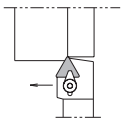
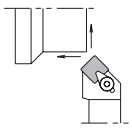
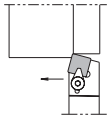
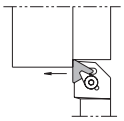
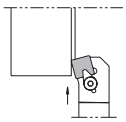
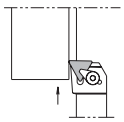
Newly designed negative inserts (double-sided) enable high productivity and stability by economical doubled insert edge numbers
Sharp cutting equivalent to positive inserts (single-sided)

Toolholder for Double Sided Tooling for Automatic Lathe
(Lever Lock, Without Offset)

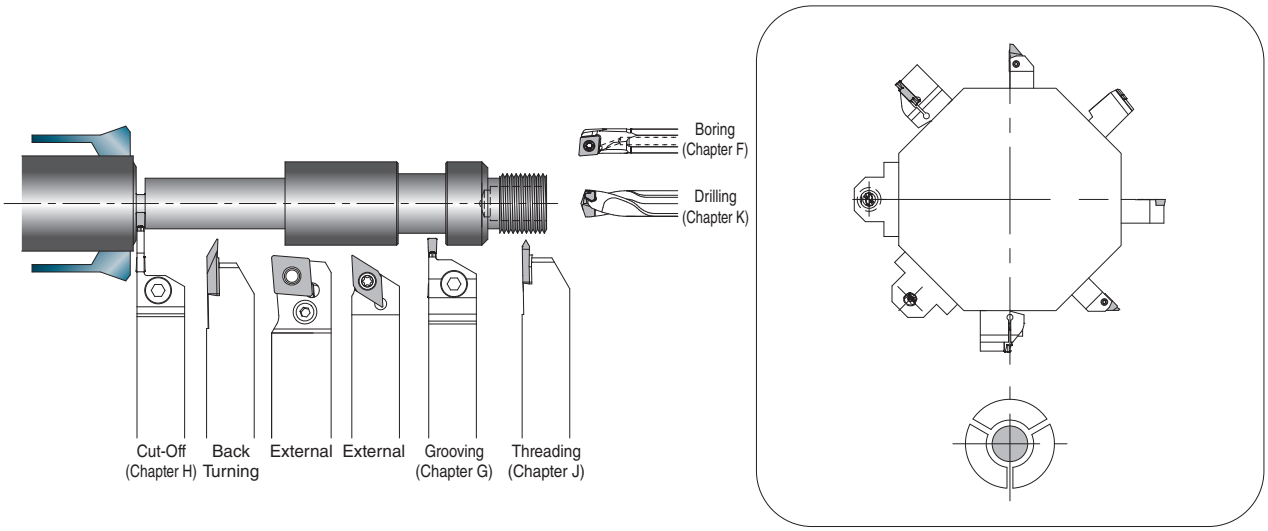
Applications	External / Facing	External / Up Facing
Cutting Edge Angle	95°	95°
Lever Lock (Without Offset)	 PCLN-FF	 PTLN-FF
Ref. to Page	E40	E41

The Lever lock type is available for small tools for external machining.

Top Clamp (For Insert without Hole)

Applications	External / Chamfering		External / Facing / Chamfering	External		Facing	
Cutting Edge Angle	45°	60°	45°	75°	91°	15°	-1°
Top Clamp	 CSDP	 CTTP	 CSSP	 CSBP	 CTGP	 CSKP	 CTFP
Ref. to Page	E42	E43	E42	E42	E43	E42	E43

Tooling Example (4)

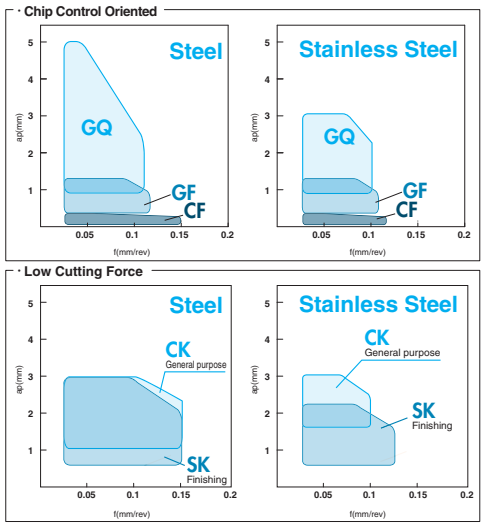


Ref. to Page R34~R41 for Tooling Layout and Automatic Lathe List by Manufacturer.

Chip control improvement at external machining

1) Choose a chipbreaker applicable for varying ap

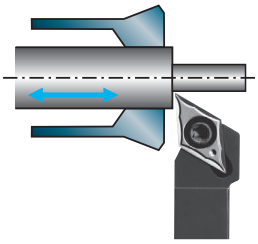
- Applicable to high precision cutting, sharp cutting due to periphery ground edge
- Superior surface finish due to anti-adhesion polished edge



2) Improve chip control dividing tool passes into 2; roughing and finishing

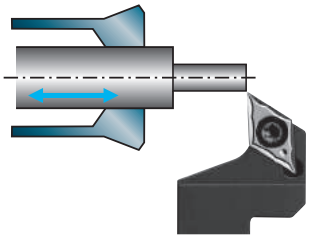
- When chip control is not good in 1 pass machining,
  ⇨ Use Goose-neck Holders or Sleeve Holders

Roughing and finishing at one time by conventional toolholder
<Case>
Bad chip control

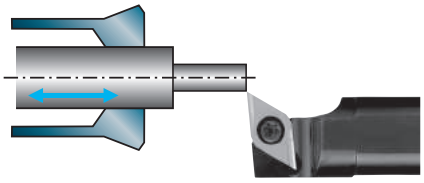


After roughing

Countermeasures (1)
Finishing by Goose-neck Holder



Countermeasures (2)
Finishing: Move Sleeve Holder forward



How to choose toolholders to improve productivity in external turning

Applications	Tooling Example	Toolholder	Advantages	Workpiece Dia.	Medium-roughing of steel (Radial ap: mm)
Medium-roughing	SCLN-FF SDLN-FF STLN-FF	Small Double Sided Tooling (Screw Clamp)	Cost reduction	Over ϕ6	ap=~2.5mm
	PCLN-FF PTLN-FF	Toolholder for Double Sided Tooling for Automatic Lathe (Lever Lock) + FP-TK Chipbreaker	Cost reduction	Over ϕ16	ap=1.5~5mm
Medium-roughing + Finishing	**Ref. to Page E9 Fig.1**	Small Double Sided Tooling (Screw Clamp)	Cost reduction	Under ϕ16	ap=~2.5mm
		Goose-neck Holder (External Sleeve Holder)	Chip Control	-	-
	Ref. to Page E9 Fig.2	Toolholder for Double Sided Tooling for Automatic Lathe (Lever Lock) + FP-TK Chipbreaker	Cost reduction	ϕ16~ϕ32	ap=1.5~5mm
		Goose-neck Holder (External Sleeve Holder)	Chip Control	-	-
	Ref. to Page E9 Fig.3	Toolholder for Grooving	Long curled chips are evacuated toward a fixed direction.	ϕ16~ϕ32	ap=over 4mm
		Goose-neck Holder (External Sleeve Holder)	Chip Control	-	-

External toolholder selection for productivity improvement

Guideline for roughing: ap=~2.5mm

<Roughing>
Use Small Double Sided Tooling

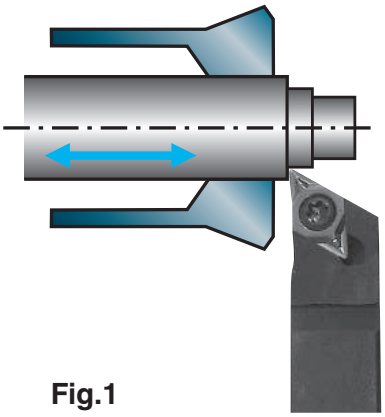
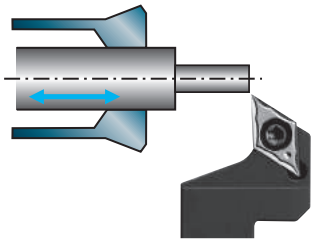
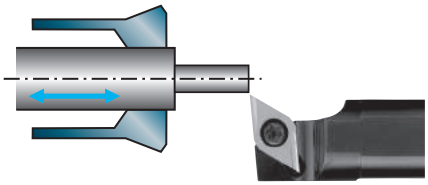


Fig.1

Improvement of Finishing (1)
Use Goose-neck Holder



Improvement of Finishing (2)
Use External Sleeve Holder



Guideline for roughing: ap=1.5~5mm

<Roughing>
Use FP-TK Chipbreaker (G-class negative insert)

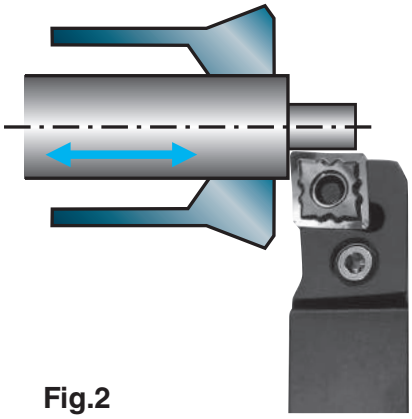
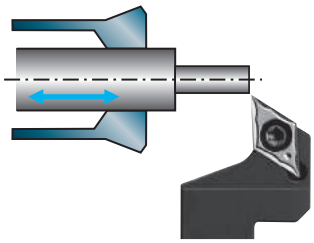
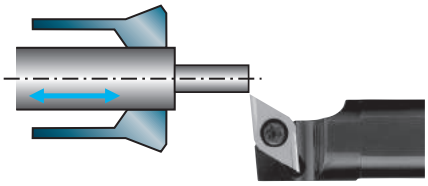


Fig.2

Improvement of Finishing (1)
Use Goose-neck Holder



Improvement of Finishing (2)
Use External Sleeve Holder



Guideline for roughing: ap= over 4mm

<Roughing>
Use grooving toolholder

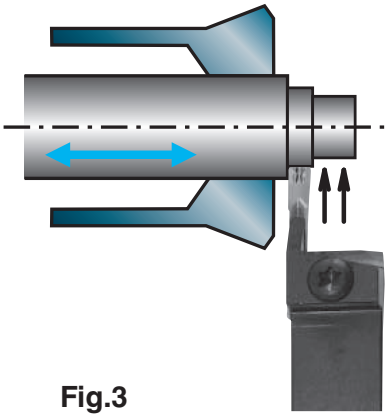
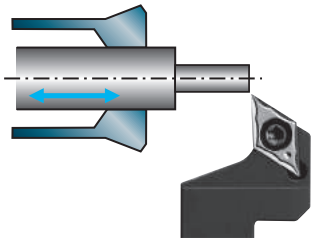
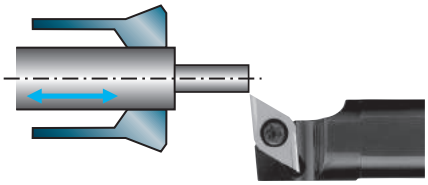


Fig.3

Improvement of Finishing (1)
Use Goose-neck Holder



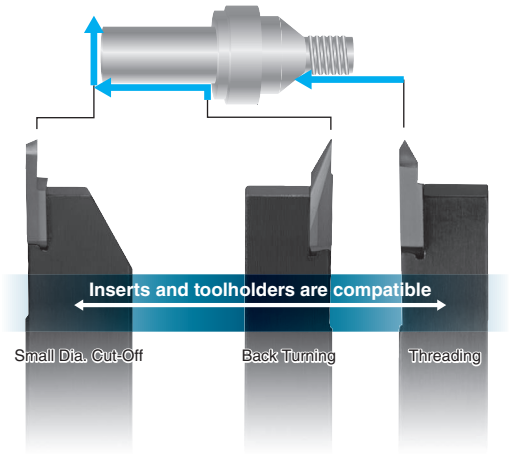
Improvement of Finishing (2)
Use External Sleeve Holder



Cutting tool for small workpiece

KTKF

Ref. to Page ➡ E12



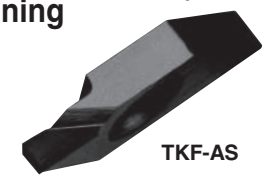
Inserts for back turning

TKFB

Ref. to Page ➡ E12

- Molded Chipbreaker (GQ Chipbreaker) Improved chip control
- Insert Grades for Steel Machining PR1425
- Insert Grades for Stainless Steel Machining PR1535 NEW
- "TKF..L-ASR" type is added in "TKF-AS" PCD inserts

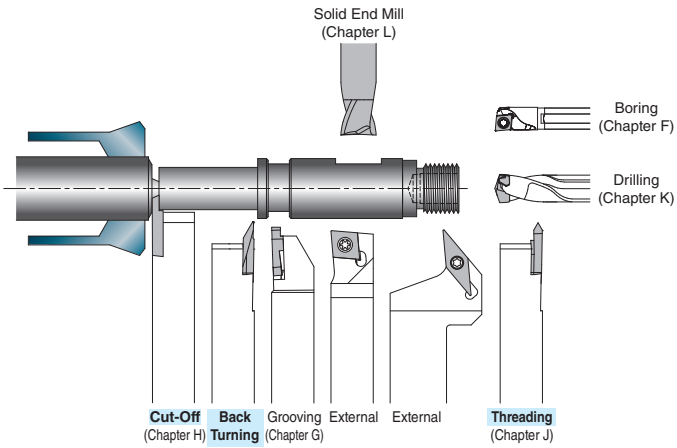
GQ Chipbreaker

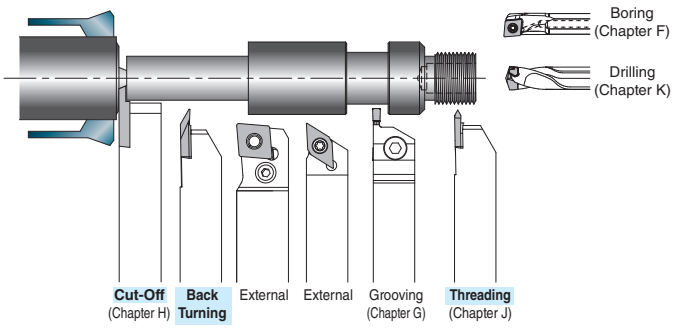


TKF-AS

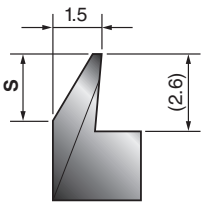
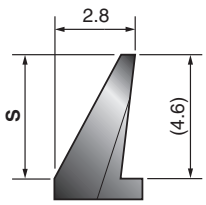
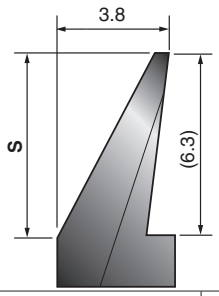
KTKF is applicable to back turning, threading and cut-off with one toolholder

Tooling example of KTKF toolholder





Details of cutting edge

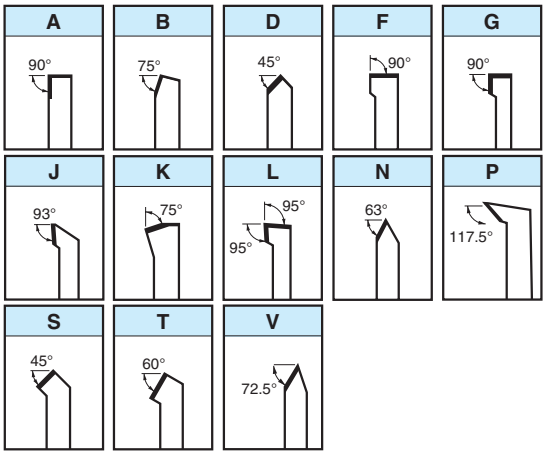
Small machining		General purpose		Large machining	
					
Description	Cutting Edge Length S	Description	Cutting Edge Length S	Description	Cutting Edge Length S
TKFB12R15..	2.1	TKFB12R28..	4.2	TKFB16R38..	5.8
-	-	TKFB12L28..	4.4	TKFB16L38..	6.2
For small diameter and short length workpiece Stable machining with minimum overhang		For general purpose Good chip control		Large ap at one pass	

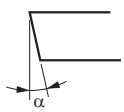
Square Shank Identification System

Clamping System	Insert Shape	Hand of Tool	Shank Height	Shank Width	Others
A: Back Clamp **C**: Top Clamp **P**: Lever Lock **S**: Screw Clamp	**C**: 80° Rhombic **D**: 55° Rhombic **S**: 90° Square **T**: 60° Triangle **V**: 35° Rhombic	**R**: Right-hand **L**: Left-hand **N**: Neutral	Shank Height (mm)	Shank Width (mm)	Manufacture's Option Optional Mark or Number e.g.) FF: Without Offset

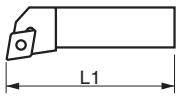
S C L C R 12 12 JX - 09 FF

Cutting Edge Angle	Insert Relief Angle	Toolholder Length	Insert Size



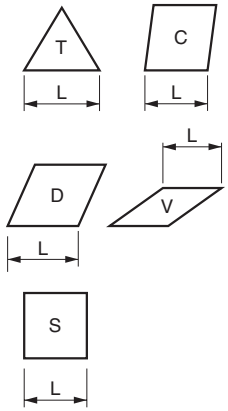


B: 5° **Positive**
C: 7° **Positive**
N: 0° **Negative**
P: 11° **Positive**



(mm)

F: 80 (85) **H**: 100	**JX**: 120 **K**: 125 **M**: 150



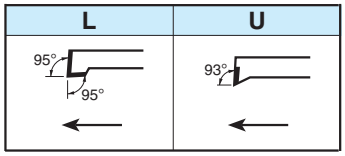
● Some back turning toolholders are Kyocera's original products, therefore their descriptions are not accordant with international standards.

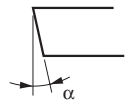
External Sleeve Holder Identification System

Shank	Toolholder Length	Clamping System	Insert Shape	Hand of Tool
S Steel	**F**: 80 (85) **G**: 90 **H**: 100 **K**: 125 (120)	**S**: Screw Clamp	**C**: 80° Rhombic **D**: 55° Rhombic **V**: 35° Rhombic	**L**: Left-hand

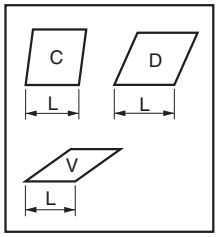
S 20 K - S C L C L 09

Bar Diameter	Cutting Edge Angle	Insert Relief Angle	Insert Size





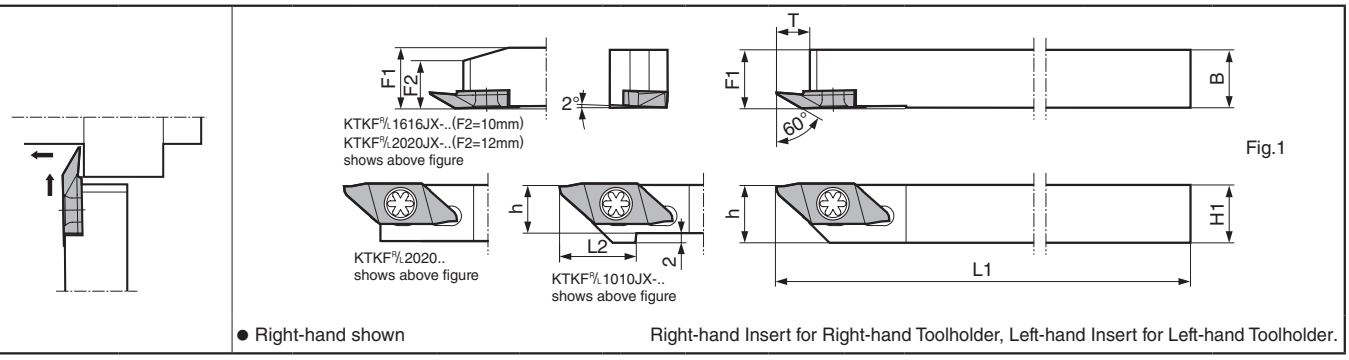
B: 5° Positive
C: 7° Positive

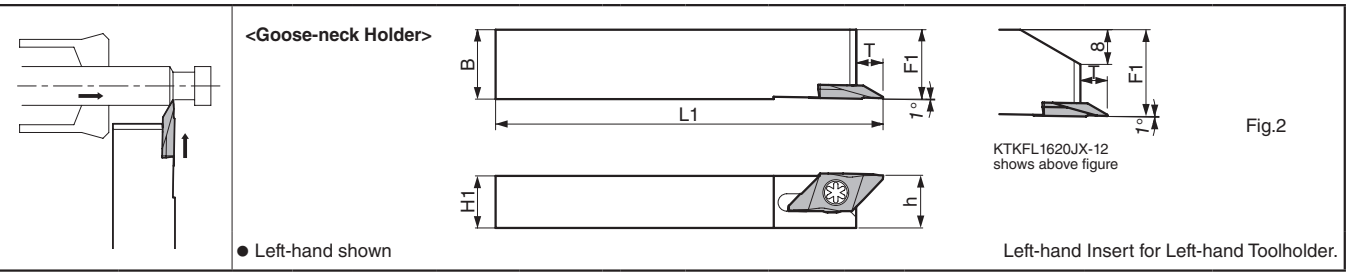


● Specification may change without any prior notice.
● Due to the installation size contrains on the machine, the toolholder length of some products may not match with the symbol.

Toolholders for Back Turning (TKFB Insert)

KTKF / KTKF Goose-neck Holder



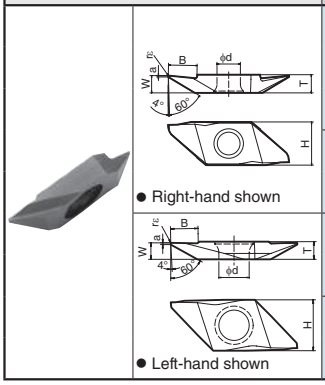


● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	T	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
KTKF R/L	1010JX-12	●	●	10	10	120	15	10	6	Fig.1	SB-4590TRWN	LTW-10S	TKFB12 R/L …
	1212JX-12	●	●	12	12		-	12					
	1616JX-12	●	●	16	16			16					
	2020JX-12	●	●	20	20			20					
KTKF R/L	1010JX-16	●	●	10	10	120	20	10	8		SB-4590TRWN	LTW-10S	TKFB16 R/L …
	1212JX-16	●	●	12	12		-	12					
	1616JX-16	●	●	16	16			16					
	2020JX-16	●	●	20	20			20					
KTKF R/L	1212F-12	●	●	12	12	85	-	12	6		SB-4590TRWN	LTW-10S	TKFB12 R/L …
	1212F-16	●	●						8				TKFB16 R/L …
KTKFL	1216JX-12		●	12	16	120	-	16	6	Fig.2	SB-4590TRWN	LTW-10S	TKFB12L …
	1620JX-12		●	16	20			20					

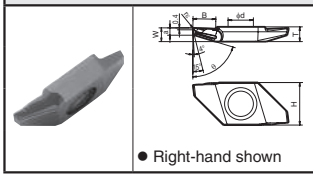
· Dimension T shows the distance from the Toolholder to the cutting edge.

● Applicable Inserts (Ref. to Page B80)

Insert (Photo shows Right-hand)	Description		Corner-R (rε) (mm)
 ● Right-hand shown ● Left-hand shown	TKFB	12R15005M	< 0.05
		12R28005M	< 0.05
		12R28010M	< 0.1
	TKFB	16R38005M	< 0.05
		16R38010M	< 0.1
	TKFB	12L28005MR	< 0.05
		12L28010MR	< 0.1
	TKFB	16L38005MR	< 0.05
		16L38010MR	< 0.1

Recommended Cutting Conditions ➡ E45

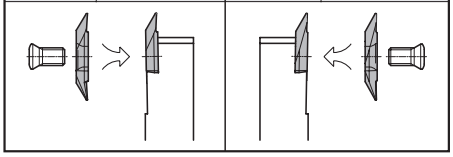
● Applicable Inserts (Molded Chipbreaker, Ref. to Page B81)

Insert	Description		Corner-R (rε) (mm)
 ● Right-hand shown	TKFB	12R28005-GQ	0.05
		12R28015-GQ	0.15
	TKFB	16R38005-GQ	0.05
		16R38015-GQ	0.15

Recommended Cutting Conditions ➡ E45

◆ Combination of Toolholders and Inserts

Toolholder	Right-hand(R)	Toolholder	Left-hand(L)
Insert	Right-hand(R)	Insert	Left-hand(L)



● : Std. Item

TKFB type GQ Chipbreaker for back Turning

Solution for problems in the conventional back-turning tools
Original 3D molded chipbreaker realizes excellent surface finish by smooth chip control

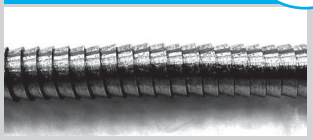
Point 1 Original double-function chipbreaker for improved chip control

Function 1: Turning

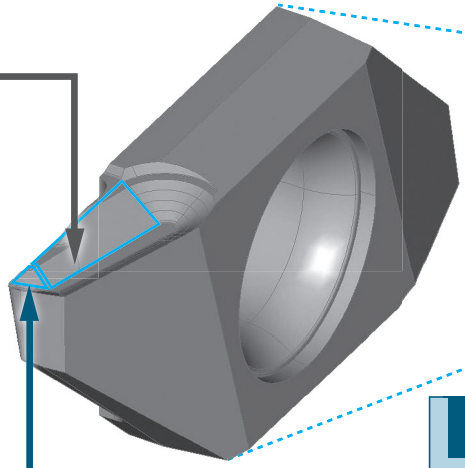
Preventing chip entanglement

Stable chip control

GQ Chipbreaker



Competitor A (Ground Chipbreaker)



Function 2: Grooving

Preventing chip biting

Good surface roughness

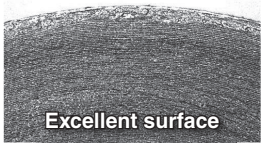
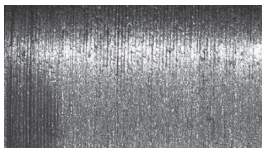
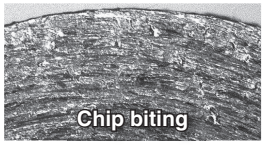
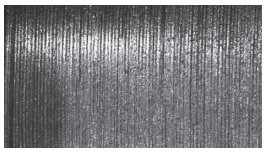
GQ Chipbreaker

Competitor A (Ground Chipbreaker)

Point 2 Excellent surface finish by preventing chip biting and clogging

Surface finish comparison

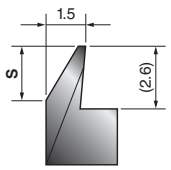
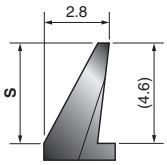
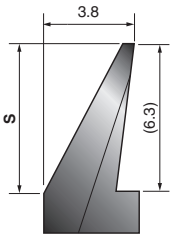
Cutting Conditions : Vc=100m/min ap=3.0mm f=0.02mm/rev (Grooving), 0.05mm/rev (Turning)
Workpiece material : S45C Wet

	TKFB GQ Chipbreaker		Competitor B (Ground Chipbreaker)	
	Facing	External	Facing	External
Workpiece surface	 Excellent surface		 Chip biting	
	Rz=2.92μm	Rz=3.85μm	Rz=31.23μm	Rz=7.67μm

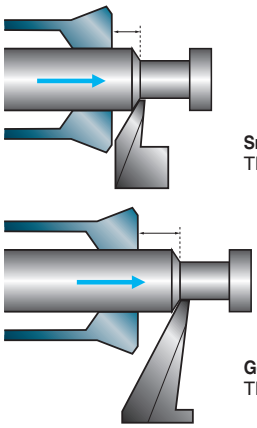
GQ Chipbreaker realizes excellent surface finish with single pass. Suitable for cycle time reduction.

Details of cutting edge and how to select

Details of cutting edge

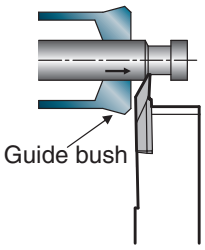
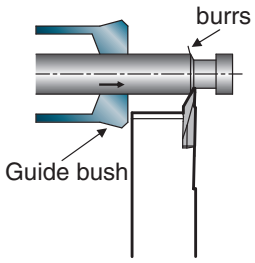
Small machining		General purpose		Large machining	
					
Description	Cutting Edge Length S	Description	Cutting Edge Length S	Description	Cutting Edge Length S
TKFB12R15..	2.1	**TKFB12R28..**	4.2	**TKFB16R38..**	5.8
-	-	**TKFB12L28..**	4.4	**TKFB16L38..**	6.2
For small diameter and short length workpiece Stable machining with minimum overhang		For general purpose Good chip control		Large ap at one pass	

Selection



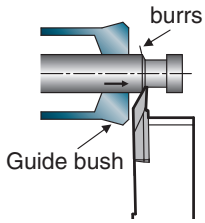
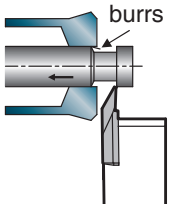
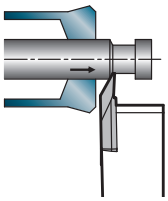
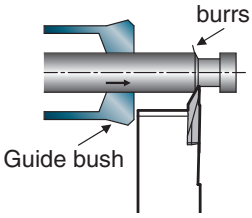
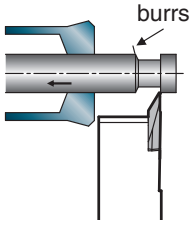
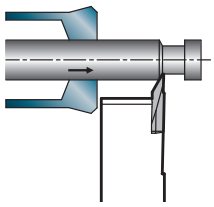
In case ap is same, if the insert with narrower edge width is used, overhang length from the guide bush is shorter, which enables better stability due to less workpiece deflection.
⇨High precision machining

How to select back turning toolholder hand

Right-hand		Machining near the guide bush is possible Narrow cutting edge width of TKFB12R15005M →Optimum for small parts and high precision machining
Left-hand	The workpiece burr does not contact the guide bush. 	Machining with a distance from guide bush Good chip control due to large space between the guide bush and the tool. →Excellent chip control in roughing and finishing (plural passes) Stable accuracy of external diameter dimension: When burrs occur, if a Left-hand toolholder is used, it is not necessary to return workpiece into guide bush in finishing. Also, Left-hand toolholders prevent guide bush wear caused by chip biting.

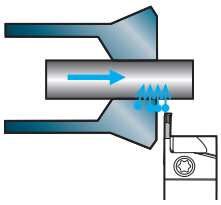
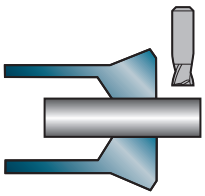
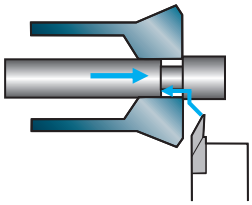
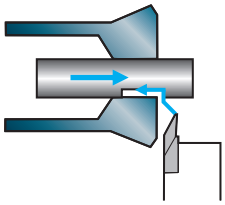
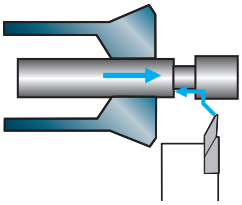
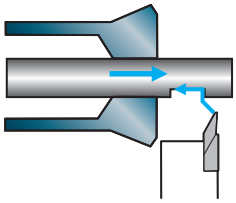
Workpiece movement and tool hand selection

In roughing and finishing

	Roughing	Workpiece position after roughing	Finishing
Right-hand			
Left-hand			

* Good dimension accuracy: If a Left-hand toolholder is used, burrs on workpiece generated in roughing do not damage the guide bush in finishing.

Chip control improvement in back turning

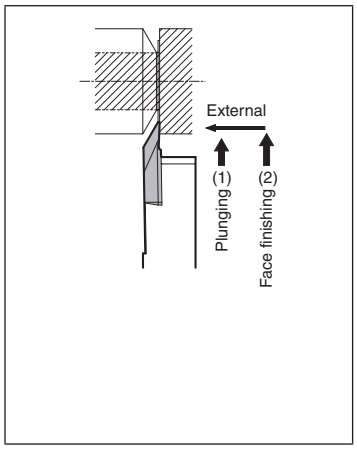
	Chip control improvement by tool pass changes I	Chip control improvement by tool pass changes II
Roughing	● Roughing with grooving tools (1) GMM2420-020MW (Grooving) 	● Pre-Stage machining is processed with solid end mill (1) 2FESW040-040-04(Solid End Mill) 
Finishing (Countermeasures 1) Use Right-hand toolholder	(1) When using TKFB12R28010M (for back turning / right hand)  Advantages: Good surface roughness Disadvantages : If a machining pass is long, the guide bush can not support the workpiece.	(1) When using TKFB12R28010M (for back turning / right hand)  Advantages: 1. Minimal deflection in long machining passes 2. Chips are broken into small pieces, though the workpiece material is sticky. Disadvantages: The pre-stage machining may cause fractures, because of interrupted machining.
Finishing (Countermeasures 2) Use Left-hand toolholder	(2) When using TKFB12L28010M (for back turning / left hand)  Advantages: 1. Good surface roughness 2. High precision machining if the machined portion does not contact the guide bush. Disadvantages: If a machining pass is long, the guide bush can not support the workpiece.	(2) When using TKFB12L28010M (for back turning / left hand)  Advantages: 1. Minimal deflection in long machining passes 2. Chips are broken into small pieces, though the workpiece material is sticky. 3. High precision machining if the machined portion does not contact the guide bush. Disadvantages: The pre-stage machining may cause fractures, because of interrupted machining.

Countermeasure against peeled surface in face back turning

When peeled surface occurs on the workpiece face, please apply the countermeasures below.

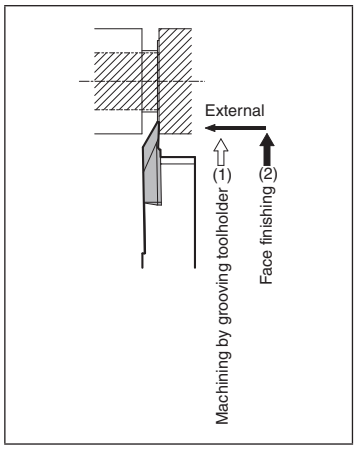
● **Countermeasures 1**

Face finishing



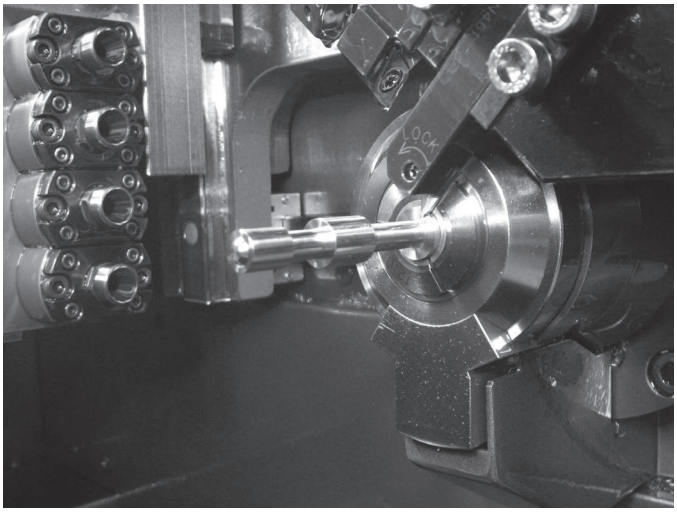
● **Countermeasures 2**

Face finishing after grooving



When using TKF-AS type Inserts

The KTKF toolholder can be used as a multi-functional tooling for non-ferrous metals and non-metals when combined with a TKF-AS insert. (Fig.1)



Example of spool machining

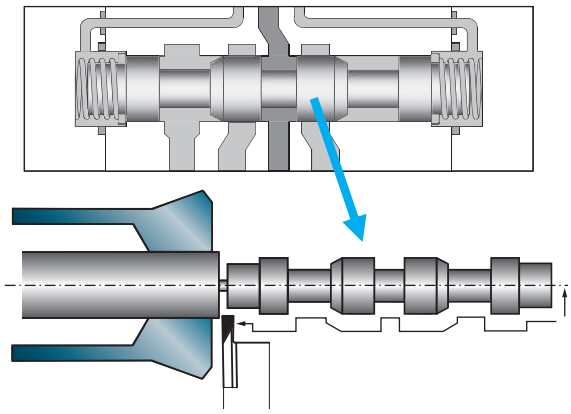
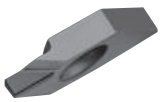
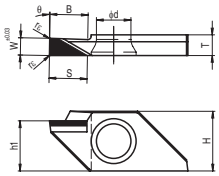
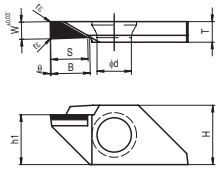
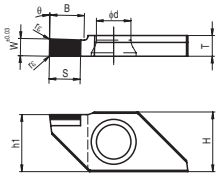


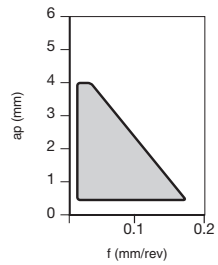
Fig.1 Example of the pass of KTKF toolholder + TKF-AS insert

Applicable Inserts (Ref. to Page C32)

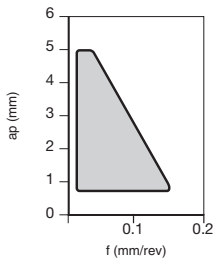
Insert Photo shows Right-hand		Description	
	 ● Right-hand shown	TKF12R/L	200-AS
			250-AS
		TKF16R/L	250-AS
	 ● Insert hand: Left-hand / PCD edge hand: Right-hand	TKF12L	200-ASR
			250-ASR
Turning / Grooving		TKF16L	250-ASR
		TKF12R/L	150-NB
			200-NB
			250-NB
Grooving (Turning is possible)	● Right-hand shown		250-NB4.5

Applicable Range

TKF12-AS/-ASR



TKF16-AS/-ASR



*PCD Inserts for turning and Grooving
*Not recommended for cut-off

Inserts Identification System

TKF	12	R	200	-	AS	
TKF	12	L	200	-	AS	R

- Insert Type: TKF
- Insert Size: 12
- Insert Hand: R: Right-hand / L: Left-hand
- Width (Edge Width): 200
- Name of Chipbreaker: AS: AS Chipbreaker / NB: Without Chipbreaker
- PCD insert hand: Without Indication: The edge hand is same as the insert hand. / R: Right-hand

Applicable Toolholders ➡ E12
Recommended Cutting Conditions ➡ E45

Note 1) The cutting edge of the TKF-AS / -ASR will be 1 mm lower than the center line when attached to the KTKF toolholder (Ref. to Fig.2). Adjust the height by making NC lathe parameter settings or inserting a plate.
2) If the 1 mm adjustment is not possible, use the TKF..-NB. (Ref. to Fig.3)

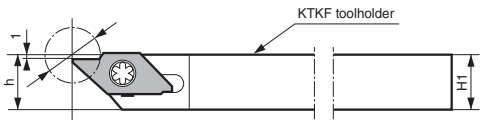


Fig.2 When a TKF-AS / -ASR insert is attached
(The cutting edge is 1mm lower than the center line)

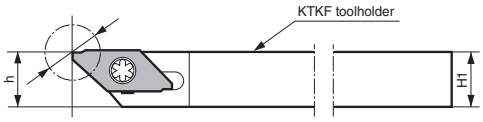
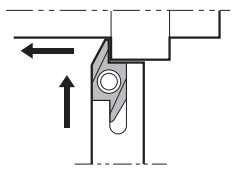
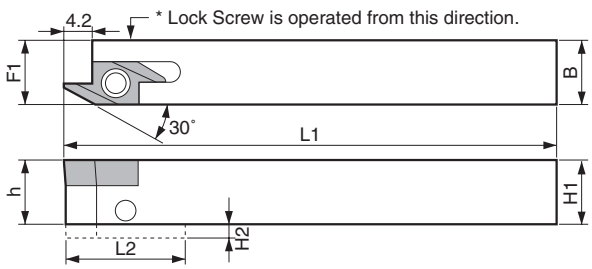


Fig.3 When a TKF-NB inserts is attached

Toolholders for Back Turning [ABS15 Insert]

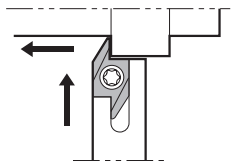
AABS-40F (Edge Width: 2.8mm, MAX. Depth: 4mm)

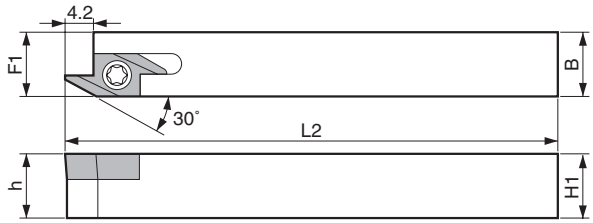




● Right-hand shown

SABS-40F (Edge Width: 2.8mm, MAX. Depth: 4mm)



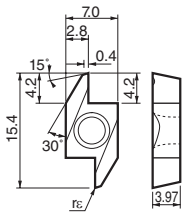


● Right-hand shown

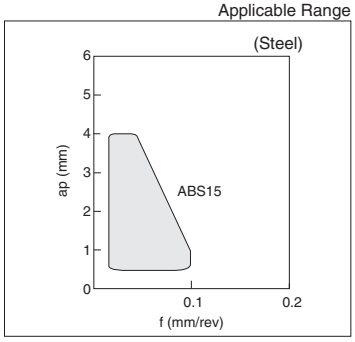
● Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	H2	B	L1	L2	F1	Standard Corner-R (rε)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
AABSR	1010JX-40F	●	10	-	10	120	-	10.2	0.15	LPA-11	HSB4X8R	-	FH-2
	1212JX-40F	●	12		12			12.2		LPA-13			
	1616JX-40F	●	16		16			16.2		LPA-17			
SABSR	1010JX-40F	●	10	-	10	120	-	10.2	0.15	-	-	SB-3080TR	FT-10
	1212JX-40F	●	12		12			12.2					
	1616JX-40F	●	16		16			16.2					
SABSR	1212F -40F	●	12	-	12	85	-	12.2	0.15	-	-	SB-3080TR	FT-10
	2020K -40F	●	20		20	125		20.2					

● Applicable Inserts

Insert		Description	Corner-R (rε) (mm)	Ref. to Page
		ABS15R4005	0.05	B82
		15R4015	0.15	
		ABS15R4005M	< 0.05	
		15R4015M	< 0.15	

Applicable Range

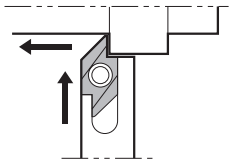


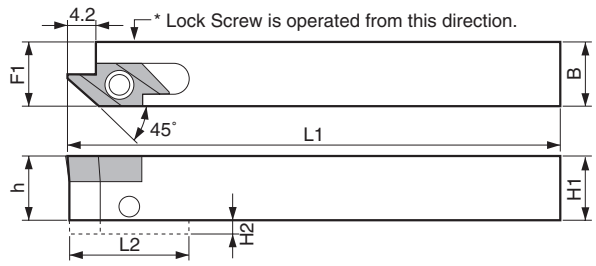
Recommended Cutting Conditions ➔ E45

● : Std. Item

Toolholders for Back Turning [ABW15 Insert]

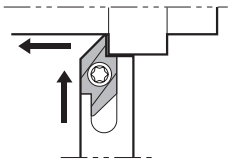
AABW-40F (Edge Width: 4.7mm, MAX. Depth: 4mm)

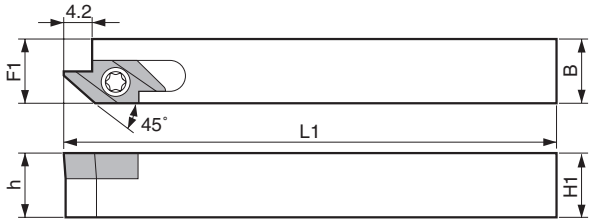




● Right-hand shown

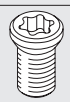
SABW-40F (Edge Width: 4.7mm, MAX. Depth: 4mm)



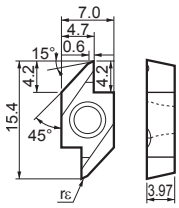


● Right-hand shown

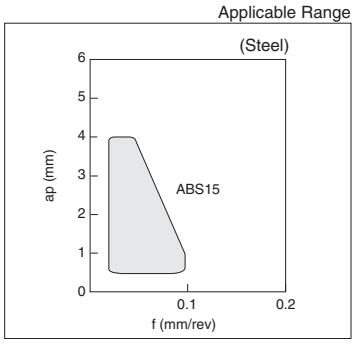
● Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	H2	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
														
AABWR	1010JX-40F	●	10		10			10.2			LPA-11			
	1212JX-40F	●	12	-	12	120	-	12.2		0.15	LPA-13	HSB4X8R	-	FH-2
	1616JX-40F	●	16		16			16.2			LPA-17			
SABWR	1010JX-40F	●	10		10			10.2						
	1212JX-40F	●	12	-	12	120	-	12.2		0.15	-	-	SB-3080TR	FT-10
	1616JX-40F	●	16		16			16.2						
SABWR	2020K -40F	●	20	-	20	125	-	20.2		0.15	-	-	SB-3080TR	FT-10

● Applicable Inserts

Insert		Description	Corner-R (rε) (mm)	Ref. to Page
		ABW15R4005 15R4015	0.05 0.15	B82
		ABW15R4005M 15R4015M	< 0.05 < 0.15	

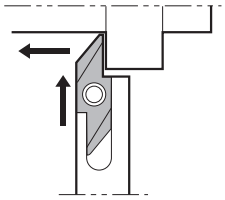
Recommended Cutting Conditions ➜ E45

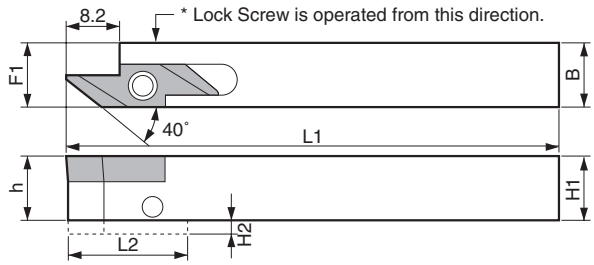


● : Std. Item

Toolholders for Back Turning [ABW23 Insert]

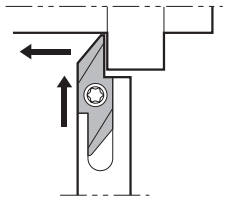
AABW-50F (Edge Width: 4.7mm, MAX. Depth: 5mm)

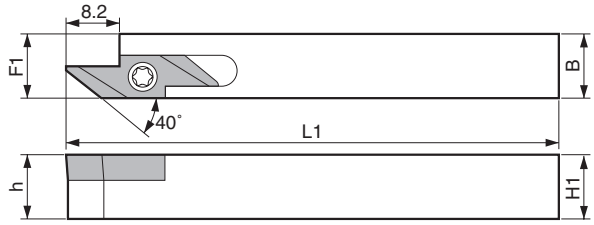




● Right-hand shown

SABW-50F (Edge Width: 4.7mm, MAX. Depth: 5mm)



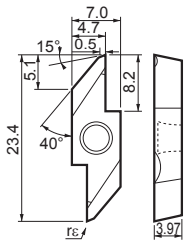


● Right-hand shown

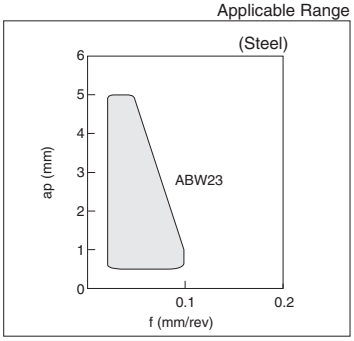
● Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	H2	B	L1	L2	F1		Standard Corner-R(rε)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
AABWR	1010JX-50F	●	10	-	10	120	-	10.2		0.15	LPA-11	HSB4X8R	-	FH-2
	1212JX-50F	●	12		12			12.2			LPA-13			
	1616JX-50F	●	16		16			16.2			LPA-17			
SABWR	1010JX-50F	●	10	-	10	120	-	10.2		0.15	-	-	SB-3080TR	FT-10
	1212JX-50F	●	12		12			12.2						
	1616JX-50F	●	16		16			16.2						
SABWR	2020K -50F	●	20	-	20	125	-	20.2		0.15	-	-	SB-3080TR	FT-10

● Applicable Inserts

Insert		Description	Corner-R (rε) (mm)	Ref. to Page
		ABW23R5005 23R5015	0.05 0.15	B82
		ABW23R5005M 23R5015M	< 0.05 < 0.15	

Applicable Range

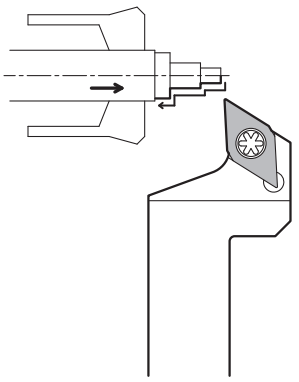


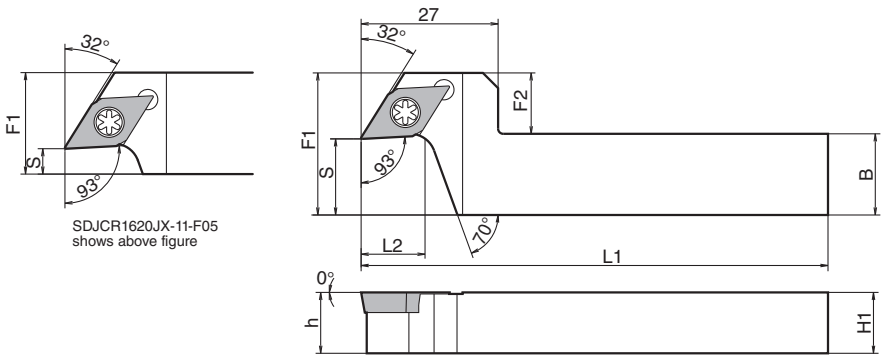
Recommended Cutting Conditions ➔ E45

● : Std. Item

Goose-neck Holder [DC□□Insert]

SDJC (External / Copying)





● Right-hand shown

● Toolholder Dimensions

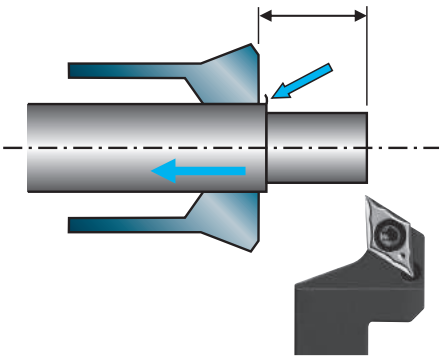
Description		Std.	Dimension (mm) H1=h	B	L1	L2	F1	F2	S	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench	
SDJCR	1216JX-11-F05	●	12	16	120	12.6	18	2	5	0.2	SB-4085TR	FT-15	
	1216JX-11-F15	●					28	12	15				
	1620JX-11-F05	●	16	20			20	-	5				
	1620JX-11-F15	●					28	8	15				

● Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision	Low Feed
Ref. to Page	B55	B55	B56	B56	B56	B58	B58	B59	B59	B60
Insert / Toolholder Description	CF	GF	PP	GK	GQ	R-F	R-FSF	(E/F) R-U	FR-USF	(E/F)R-J
SDJCR..-11-F..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..
Applications	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. to Page	B60	B57	B57	B57	B61	B61	B61	C25	C15	
Insert / Toolholder Description	FR-JSF	XP	XQ	MQ	Without Chipbreaker	AH	R-A3	PCD	CBN	
SDJCR..-11-F..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..	

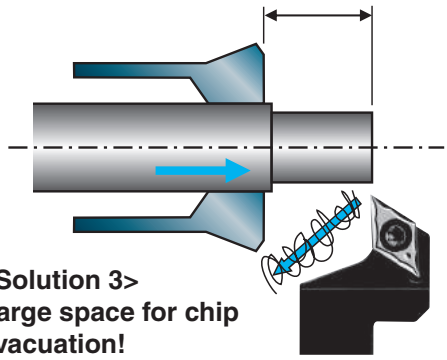
Recommended Cutting Conditions ➡ E44

● Goose-neck holder is available for multiple passes at roughing and finishing!



<Solution 1>
The workpiece burr does not contact the guide bush and no breakage will be caused!

<Solution 2>
Longitudinal dimension will be stable. External diameter will be stable owing to multiple pass machining (roughing and finishing).

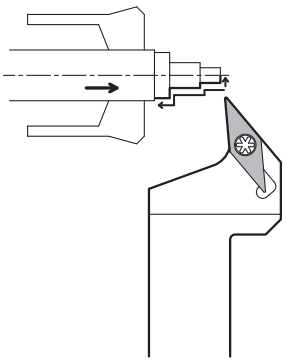


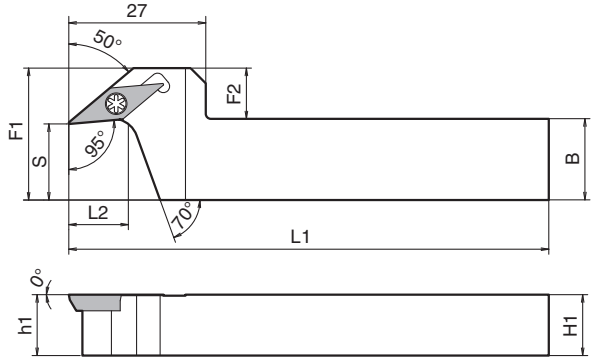
<Solution 3>
Large space for chip evacuation!
Better and smooth chip control.

● : Std. Item

Goose-neck Holder [VP□□Insert]

SVLP (External / Copying)





● Right-hand shown

● Toolholder Dimensions

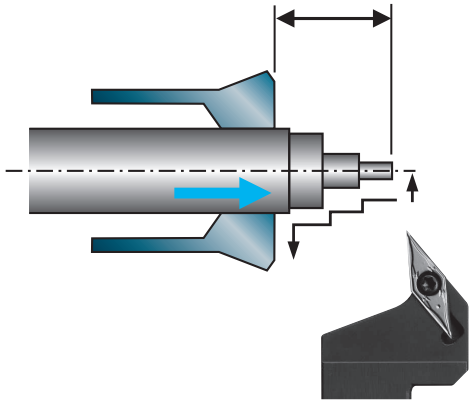
Description	Std.	Dimension (mm)							Standard Corner-R(rε)	Spare Parts		
		H1=h	B	L1	L2	F1	F2	S		Clamp Screw	Wrench	
SVLPR 1216JX-11-F15	●	12	16	120	12	26	10	15	0.2	SB-2570TR	FT-8	
1620JX-11-F15	●	16	20				6					

● Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision				
Ref. to Page	B76	B76	B76	B77	B77	B77				
Insert / Toolholder Description	CF	CK	GF	R-FSF	FR-U	FR-USF				
SVLPR...-11-F..	VPGT1103..	VPGT1103..	VPGT1103..	VPET1103..	VPET1103..	VPET1103..				

Recommended Cutting Conditions ➔ E44

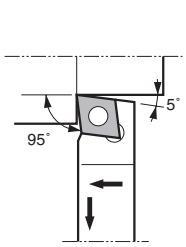
● One toolholder for complex shape workpiece

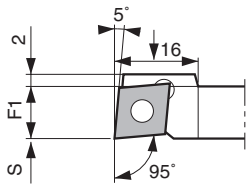


Toolholder for VP type insert is available!
Complex shape workpiece can be processed with one toolholder.
It can be used for undercutting and external / face finishing.

● : Std. Item

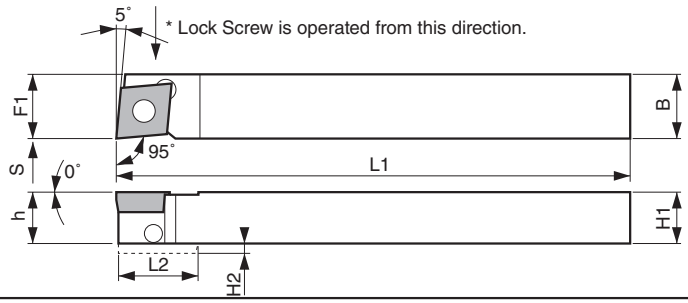
ACLC-FF (Without Offset) (External / Facing)





ACLC R/L 1010JX-09FF shows above figure

● Right-hand shown



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H2	B	L1	L2	F1	S	Standard Corner-R(rε)	Spare Parts: Anchor Pin	Lock Screw	Wrench		
ACLC R/L	1010JX-06FF	●	●	10	-	10	120	-	10	0	0.2	LPF-11	HSB4X8 R/L	FH-2		
	1010JX-09FF	●	●	10	2	10	120	16	10			LPF-13				
	1212JX-09FF	●	●	12	-	12		-	12							
	1616JX-09FF	●	●	16		16			16			LPF-17				

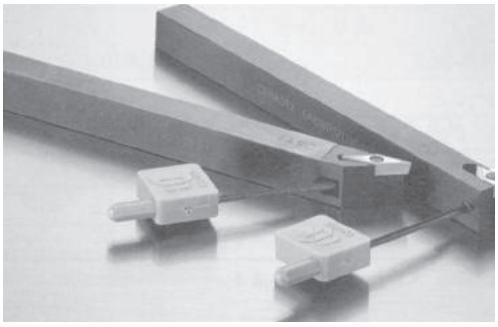
· Lock Screw: HSB4×8R for Right-hand Toolholder, HSB4×8L for Left-hand Toolholder.

● Applicable Inserts

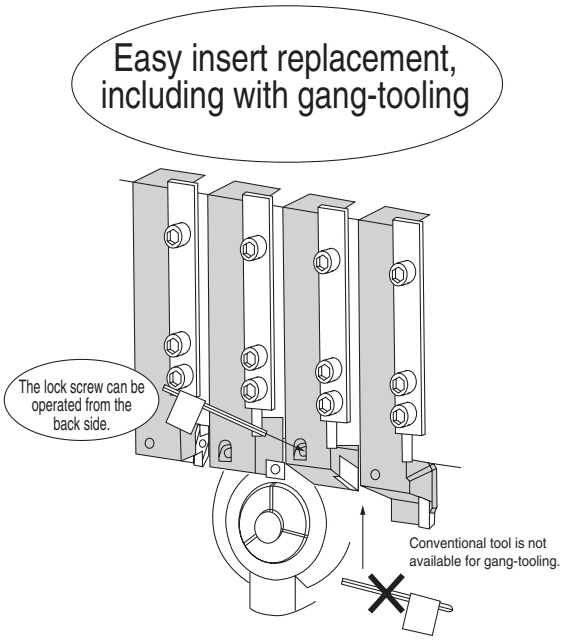
Applications	Finishing	Finishing-Medium	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B48	B49	B48, B49	B52	B50	B53	B52	B53	C24	C14
Insert / Toolholder Description	GF	GK	GQ	(E/F) R/L-U	MQ	Without Chipbreaker	AH	R/L-A3	PCD	CBN
ACLC R/L...-06FF	CCGT0602..	CCMT0602..	CCGT0602..	CCGT0602..	-	CCGW0602..	-	-	CCMT0602.. CCGW0602..	CCMW0602..
ACLC R/L...-09FF	CCGT09T3..	CCMT09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3..	CCGW09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3.. CCGW09T3..	CCMW09T3..

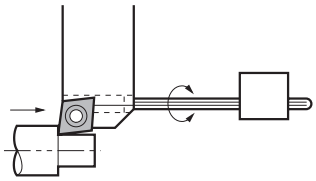
Recommended Cutting Conditions ➡ E44

● Back Clamp Holders

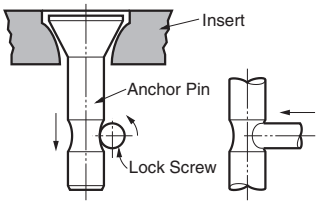


1. The lock screw can be operated from the back side and allows simple insert replacement on Swiss type automatic lathes. (Fig.1)
2. Simple insert replacement by slightly turning the wrench.
3. Rigid clamping with anchor pin and lock screw. (Fig.2)





(Fig.1)

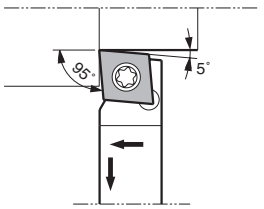


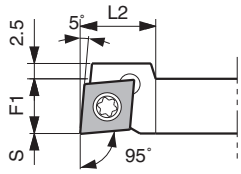
(Fig.2)

● : Std. Item

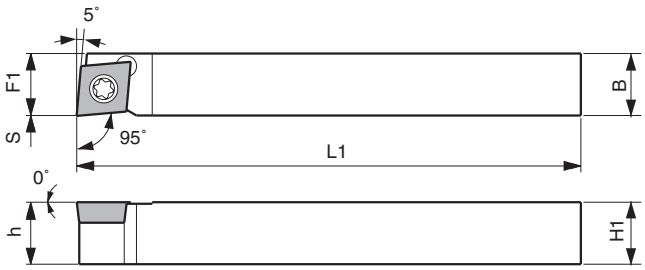
External Toolholders [CC□□Insert]

SCLC-FF (Without Offset) (External / Facing)





SCLC R/L 1010JX-09FF
shows above figure

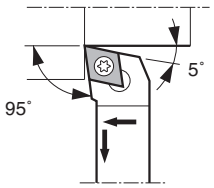


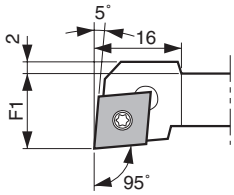
● Right-hand shown

● Toolholder Dimensions

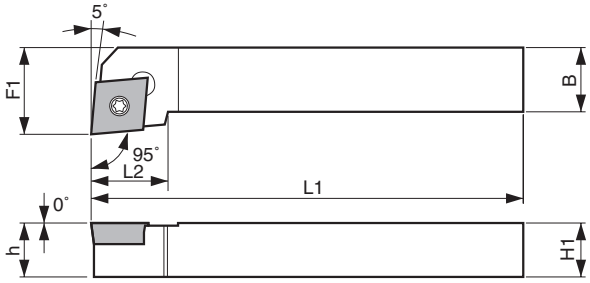
Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	S		Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench			
SCLC R/L	0808F-06FF	●	●	8	8	85	-	8	0		0.2	SB-2570TR	FT-8			
	1212F-09FF	●	●	12	12			12				SB-4085TR	FT-15			
SCLC R/L	1010JX-06FF	●	●	10	10	120	-	10	0		0.2	SB-2570TR	FT-8			
	1010JX-09FF	●	●	10	10		15	10				SB-4085TR	FT-15			
	1212JX-09FF	●	●	12	12		-	12								
	1616JX-09FF	●	●	16	16			16								

SCLC (External / Facing)





SCLC R/L 1010F-09
shows above figure



● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1			Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench	Wrench		
SCLC R/L	1010F -06	●	●	10	10	80	9	12			0.2	SB-2570TR	FT-8	-		
	1010F -09	●	●	10	10	80	14	14			0.2	SB-4085TR	FT-15	-		
	1212H -09	●	●	12	12	100		16								
	1616H -09	●	●	16	16		15	20								
	2020K -09	●	●	20	20	125	20	25								
	2525M -09	●	●	25	25	150	22	32								
	1616H -12	●	●	16	16	100	20	20			0.4	SB-5090TR	-	LTW-20		
	2020K -12	●	●	20	20	125	22	25								
	2525M -12	●	●	25	25	150		32								

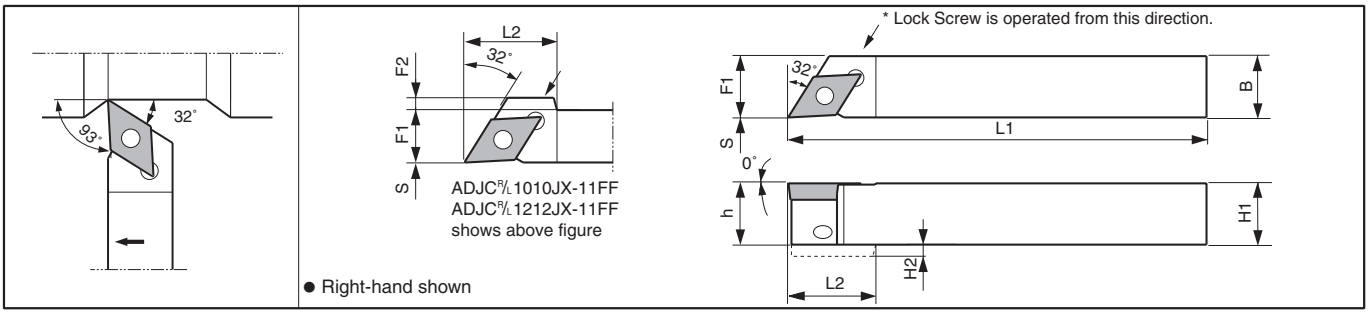
● Applicable Inserts (SCLC-FF / SCLC)

Applications	Finishing	Finishing-Medium	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B48	B49	B48, B49	B52	B50	B53	B52	B53	C24	C14
Insert / Toolholder Description	GF	GK	GQ	(E/F) R/L-U	MQ	Without Chipbreaker	AH	R/L-A3	PCD	CBN
SCLC R/L...-06FF/-06	CCGT0602..	CCMT0602..	CCGT0602..	CCGT0602..	-	CCGW0602..	-	-	CCMT0602.. CCGW0602..	CCMW0602..
SCLC R/L...-09FF/-09	CCGT09T3..	CCMT09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3..	CCGW09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3.. CCGW09T3..	CCMW09T3..
SCLC R/L...-12	-	CCMT1204..	-	-	-	-	-	CCGT1204..	-	-

Recommended Cutting Conditions ➡ E44

● : Std. Item

ADJC-FF (Without Offset) (External / Copying)



● Right-hand shown

Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H2	B	L1	L2	F1	F2	S	Standard Corner-R(rε)	Spare Parts: Anchor Pin	Lock Screw	Wrench
ADJCR/L	1010JX-07FF	●	●	10	-	10	120	-	10	-	0	0.2	LPF-11	HSB4X8R/L	FH-2
	1010JX-11FF	●	●	10	2	10		20	10	3		0.2	LPF-13		
	1212JX-11FF	●	●	12	-	12			12	1					
	1616JX-11FF	●	●	16		16		-	16	-			LPF-17		

· Lock Screw: HSB4×8R for Right-hand Toolholder, HSB4×8L for Left-hand Toolholder.

Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. to Page	B55	B55	B55,B56	B56	B56	B56	B58	B58	B59	B59
Insert / Toolholder Description	CF	GF	CK	PP	GK	GQ	R/L-F	R/L-FSF	(E/F) R/L-U	FR/L-USF
ADJCR/L...-07FF	DCGT0702..	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
ADJCR/L...-11FF	DCGT11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..

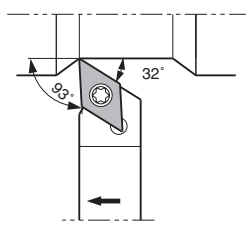
Applications	Low Feed	Low Feed / Precision	Soft Steel / Finishing	Soft Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B60	B60	B57	B57	B57	B61	B61	B61	C25	C15
Insert / Toolholder Description	(E/F)R/L-J	FR/L-JSF	XP	XQ	MQ	Without Chipbreaker	AH	R/L-A3	PCD	CBN
ADJCR/L...-07FF	DCET0702..	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
ADJCR/L...-11FF	DC_T11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

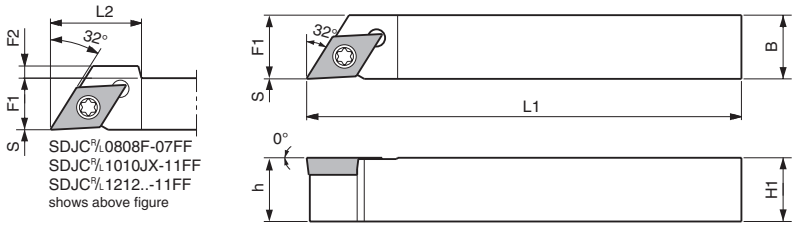
Recommended Cutting Conditions ➡ E44

● : Std. Item

External Toolholders [DC□□Insert]

SDJC-FF (Without Offset) (External / Copying)



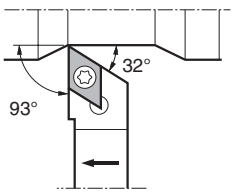


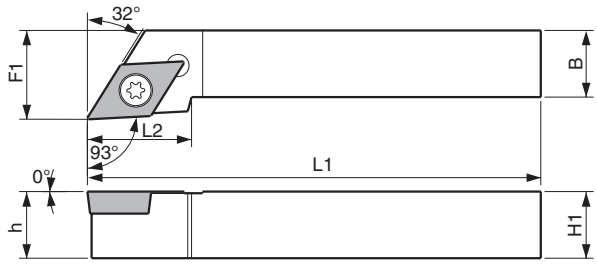
● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	S	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench
SDJC R/L	0808F -07FF	●	●	8	8	85	14	8	0.5	0	0.2	SB-2570TR	FT-8
	1212F -11FF	●	●	12	12		20	12	1			SB-4085TR	FT-15
SDJC R/L	1010JX-07FF	●	●	10	10	120	-	10	-	0	0.2	SB-2570TR	FT-8
	1010JX-11FF	●	●	10	10		20	10	3		0.2	SB-4085TR	FT-15
	1212JX-11FF	●	●	12	12			12	1				
	1616JX-11FF	●	●	16	16		-	16	-				

SDJC (External / Copying)





● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench
SDJC R/L	1010F -07	●	●	10	10	80	12	12	0.2	SB-2570TR	FT-8
SDJC R/L	1010F -11	●	●	10	10	80	18	12	0.2	SB-4085TR	FT-15
	1212H -11	●	●	12	12	100		16			
	1616H -11	●	●	16	16			20			
	2020K -11	●	●	20	20	125		25			
	2525M -11	●	●	25	25	150	23	32			

● Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. to Page	B55	B55	B55,B56	B56	B56	B56	B58	B58	B59	B59
Insert / Toolholder Description	CF	GF	CK	PP	GK	GQ	R/L-F	R/L-FSF	(E/F)R/L-U	FR/L-USF
SDJC R/L...-07FF/-07	DCGT0702..	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
SDJC R/L...-11FF/-11	DCGT11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..

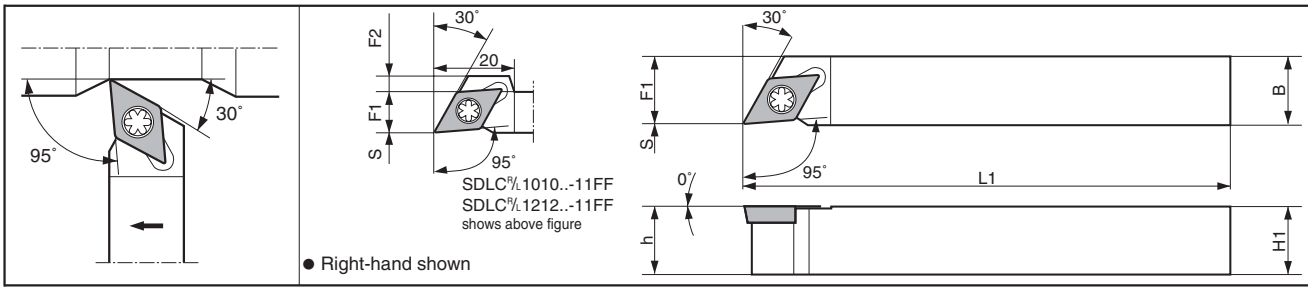
Applications	Low Feed	Low Feed / Precision	Soft Steel / Finishing	Soft Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B60	B60	B57	B57	B57	B61	B61	B61	C25	C15
Insert / Toolholder Description	(E/F) R/L-J	FR/L-JSF	XP	XQ	MQ	Without Chipbreaker	AH	R/L-A3	PCD	CBN
SDJC R/L...-07FF/-07	DCET0702..	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
SDJC R/L...-11FF/-11	DC_T11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

Recommended Cutting Conditions ➡ E44

● : Std. Item

External Toolholders [DC□□Insert]

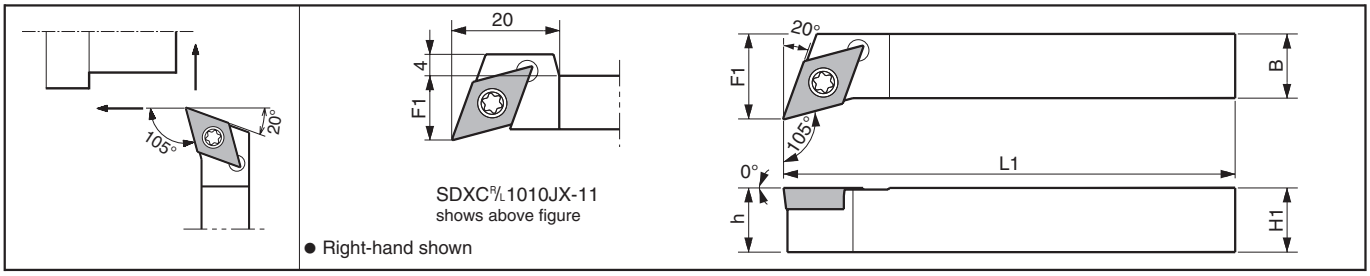
SDLC-FF (Without Offset) (External / Copying)



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	F1	F2	S		Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench			
SDLCR/L	1010JX-07FF	●	●	10	10	120	10	-	0		0.2	SB-2570TR	FT-8			
	1212JX-07FF	●	●	12	12		12									
	1616JX-07FF	●	●	16	16		16									
SDLCR/L	1010JX-11FF	●	●	10	10	120	10	4	0		0.2	SB-4085TR	FT-15			
	1212JX-11FF	●	●	12	12		12	2								
	1616JX-11FF	●	●	16	16		16	-								
SDLCR/L	1212F -07FF	●	●	12	12	85	12	-	0		0.2	SB-2570TR	FT-8			
SDLCR/L	1010F -11FF	●	●	10	10	80	10	4	0		0.2	SB-4085TR	FT-15			
	1212F -11FF	●	●	12	12	85	12	2								
	1616H -11FF	●		16	16	100	16	-								

SDXC (External / Facing / Copying)



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	F1				Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench			
SDXCR/L	1010JX-07	●	●	10	10	120	12				0.2	SB-2570TR	FT-8			
	1010JX-11	●	●	10	10		12				0.2	SB-4085TR	FT-15			
	1212JX-11	●	●	12	12		16									
	1616JX-11	●	●	16	16		20									

● Applicable Inserts (SDLC-FF / SDXC)

Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. to Page	B55	B55	B55, B56	B56	B56	B56	B58	B58	B59	B59
Insert / Toolholder Description	CF	GF	CK	PP	GK	GQ	R/L-F	R/L-FSF	(E/F) R/L-U	FR/L-USF
SDLCR/L...-07FF / SDXCR/L...-07	DCGT0702..	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
SDLCR/L...-11FF / SDXCR/L...-11	DCGT11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..

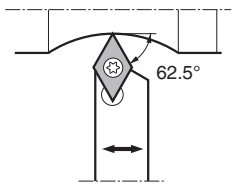
Applications	Low Feed	Low Feed / Precision	Soft Steel / Finishing	Soft Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B60	B60	B57	B57	B57	B61	B61	B61	C25	C15
Insert / Toolholder Description	(E/F)R/L-J	FR/L-JSF	XP	XQ	MQ	Without Chipbreaker	AH	R/L-A3	PCD	CBN
SDLCR/L...-07FF / SDXCR/L...-07	DCET0702..	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
SDLCR/L...-11FF / SDXCR/L...-11	DC_T11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

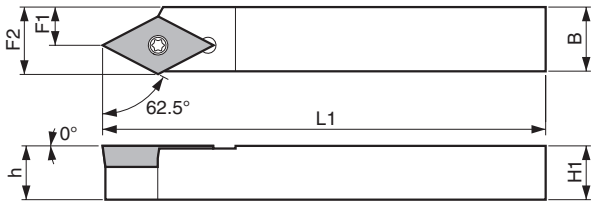
Recommended Cutting Conditions ➡ E44

● : Std. Item

External Toolholders [DC□□Insert]

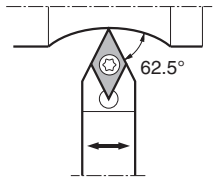
SDNC-F (External / Copying)

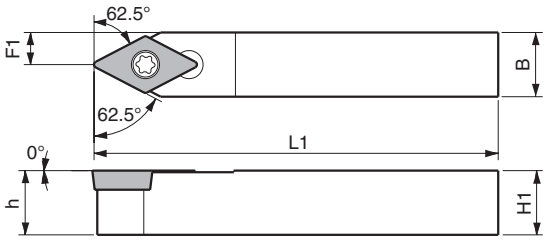




● Right-hand shown

SDNC (External / Copying)





Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	B	L1	F1	F2			Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench		
SDNC R/L	1010JX-07F	●		●	10	10	120	7	10.5			0.2	SB-2570TR	FT-8		
SDNCN	1010JX-07		●		10	10	120	5	-			0.2	SB-2570TR	FT-8		
	1212JX-07		●		12	12		6								
	1010JX-11		●		10	10		5	-			0.2	SB-4085TR	FT-15		
	1212JX-11		●		12	12		6								
	1616JX-11		●		16	16		8								
SDNCN	0808F -07		●		8	8	85	4	-			0.2	SB-2570TR	FT-8		
SDNCN	1010F -11		●		10	10	80	5	-			0.2	SB-4085TR	FT-15		
	1212F -11		●		12	12	85	6								
	1616H -11		●		16	16	100	8								

Applicable Inserts

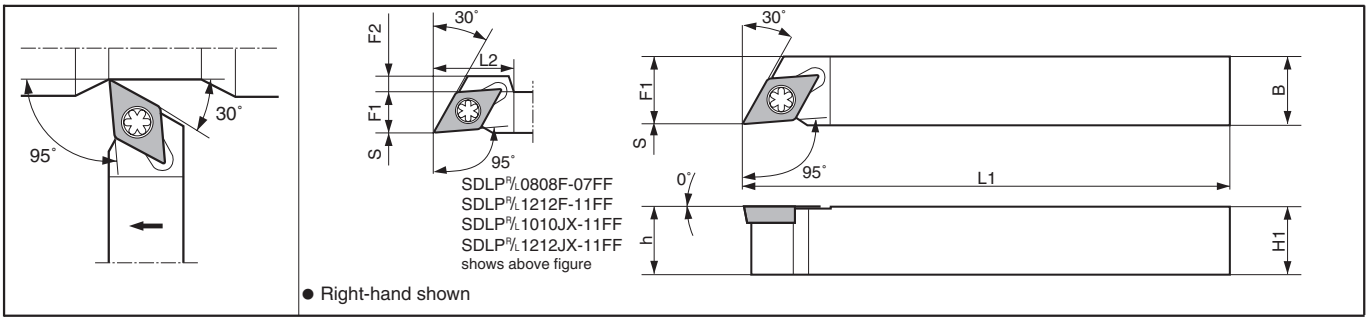
Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. to Page	B55	B55	B55, B56	B56	B56	B56	B58	B58	B59	B59
Insert / Toolholder Description	CF	GF	CK	PP	GK	GQ	R/L-F	R/L-FSF	(E/F) R/L-U	F R/L-USF
SDNC R/L...-07F	DCGT0702..	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
SDNCN...-07										
SDNCN...-11	DCGT11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	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. to Page	B60	B60	B57	B57	B57	B61	B61	B61	C25	C15
Insert / Toolholder Description	(E/F) R/L-J	F R/L-JSF	XP	XQ	MQ	Without Chipbreaker	AH	R/L-A3	PCD	CBN
SDNC R/L...-07F	DCET0702..	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
SDNCN...-07										
SDNCN...-11	DC_T11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

Recommended Cutting Conditions ➡ E44

● : Std. Item

SDLP-FF (Without Offset) (External / Copying)



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	F2	S	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench			
SDLP R/L	0808F -07FF	●	●	8	8	85	14	8	0.5	0	0.2	SB-2570TR	FT-8			
	1212F -11FF	●	●	12	12		20	12	2			SB-4085TR	FT-15			
SDLP R/L	1010JX-07FF	●	●	10	10	120	-	10	-	0	0.2	SB-2570TR	FT-8			
	1010JX-11FF	●	●	10	10		20	10	4		0.2	SB-4085TR	FT-15			
	1212JX-11FF	●	●	12	12			12	2							
	1616JX-11FF	●	●	16	16		-	16	-							

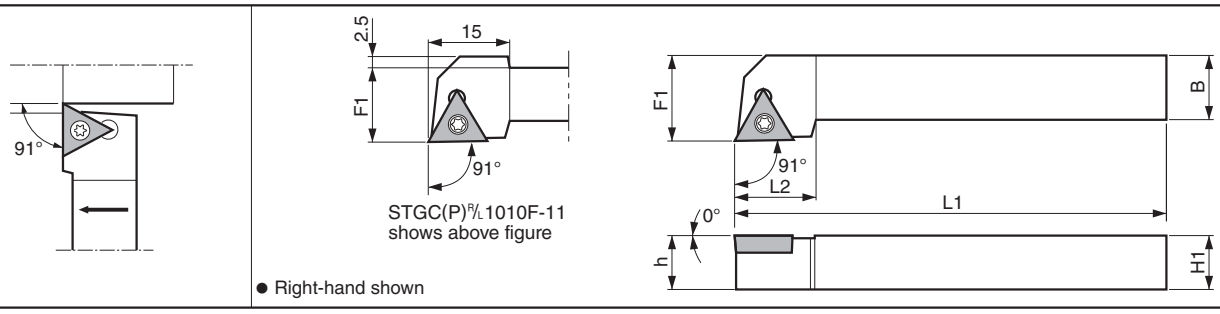
● Applicable Inserts

Applications	Finishing / Precision	Low Feed / Precision								
Ref. to Page	B61	B61								
Insert / Toolholder Description	R/L-FSF	F R/L-USF								
SDLP R/L...-07FF	DPET0702..	DPET0702..								
SDLP R/L...-11FF	DPET11T3..	DPET11T3..								

Recommended Cutting Conditions ➡ E44

● : Std. Item

STGC(P) (External)



● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1			Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench			
STGCR/L	0808E -08	●	●	8	8	70	12	10			0.2	SB-2050TR	FT-6			
	1010F -08	●	●	10	10	80		12								
STGCR/L	1010F -11	●	●	10	10	80	15	14			0.4	SB-2570TR	FT-8			
	1212H -11	●	●	12	12	100		16								
	1616H -11	●	●	16	16			20								
	2020K -11	●	●	20	20	125		25								
	2525M -11	●	●	25	25	150	20	32								
STGPR/L	0808E -08	●		8	8	70	12	10			0.2	SB-2050TR	FT-6			
	1010F -08	●	●	10	10	80		12								
STGPR/L	1010F -11	●	●	10	10	80	15	14			0.2	SB-3080TR	FT-10			
	1212H -11	●	●	12	12	100		16								
	1616H -11	●	●	16	16			20								

● Applicable Inserts (STGC)

Applications	Low Feed	Low Feed / Precision	Cast Iron	Non-ferrous Metals	Non-ferrous Metals					
Ref. to Page	B65	B65	B66	B65	C26					
Insert / Toolholder Description	(E/F) R/L-U	FR/L-USF	Without Chipbreaker	R/L-A3	PCD					
STGCR/L...-08	TCGT0802..	TCET0802..	TCGW0802..	-	TCMT0802..					
STGCR/L...-11	TCGT1103..	TCET1103..	TCGW1103..	TCGT1103..	TCMT1103.. TCGW1103..					

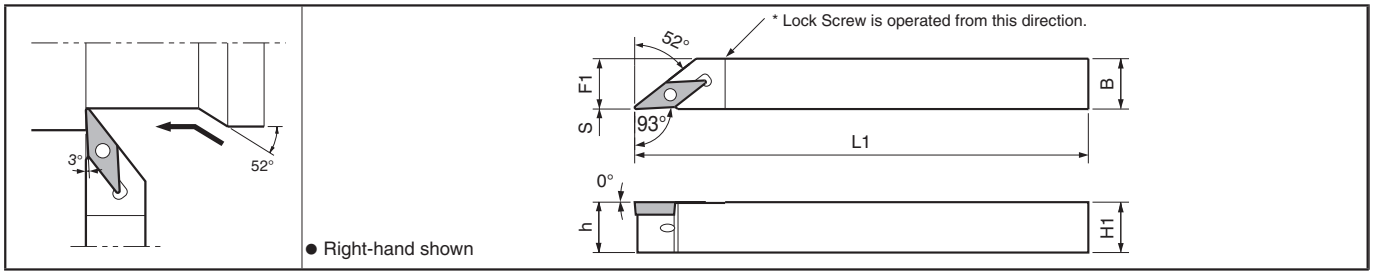
● Applicable Inserts (STGP)

Applications	Minute ap	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Low Feed / Precision	Medium	Soft Steel / Finishing	Soft Steel / Finishing-Medium	Cast Iron
Ref. to Page	B67	B67	B67	B68	B69	B69	B69	B67	B68	B70
Insert / Toolholder Description	CF	PP	HQ	R/L	R/L-FSF	FR/L-USF	R/L-H	XP	XQ	Without Chipbreaker
STGPR/L...-08	TPGT0802..	-	-	TPGH0802..	TPET0802..	TPET0802..	-	-	-	TPGB0802..
STGPR/L...-11	-	TPMT1103..	TPMT1103..	TPGH1103..	TPET1103..	TPET1103..	TPGH1103..	TPMT1103..	TPMT1103..	TPGB1103..
Applications	Non-ferrous Metals	Hard Materials								
Ref. to Page	C26 ~ C28	C16								
Insert / Toolholder Description	PCD	CBN								
STGPR/L...-08	TPMH0802.. TPGB0802..	TPGB0802..								
STGPR/L...-11	TPMH1103.. TPGB1103..	TPGB1103..								

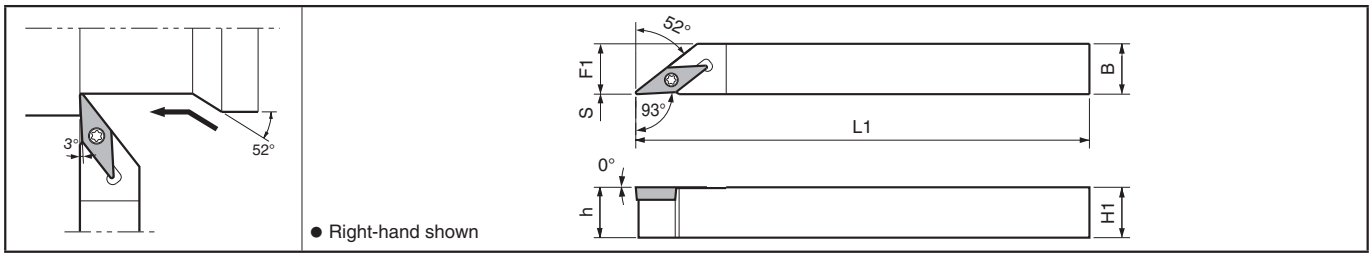
Recommended Cutting Conditions ➡ E44

● : Std. Item

AVJB-FF (Without Offset) (External / Copying)



SVJB-FF (Without Offset) (External / Copying)

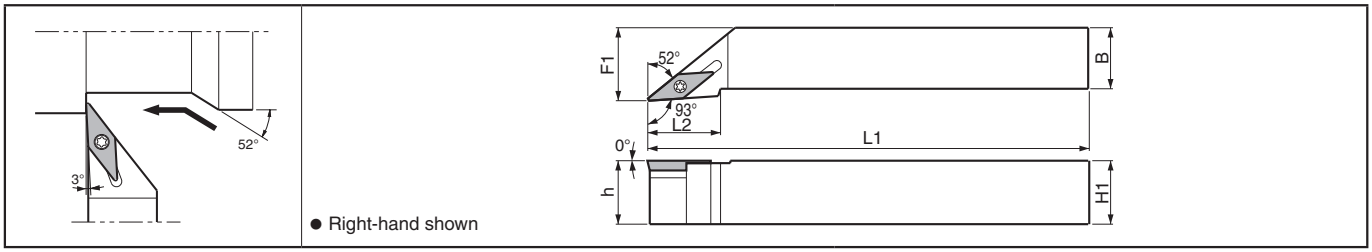


● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1	S		Standard Corner-R(rε)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
AVJB R/L	1010JX-11FF	●	●	10	10	120	-	10	0		0.4	LPF-11	HSB4X8 R/L	-	FH-2
	1212JX-11FF	●	●	12	12			12				LPF-1113			
	1616JX-11FF	●	●	16	16			16				LPF-1117			
SVJB R/L	1010JX-11FF	●	●	10	10	120	-	10	0		0.4	-	-	SB-2570TR	FT-8
	1212JX-11FF	●	●	12	12			12							
	1616JX-11FF	●	●	16	16			16							

· Lock Screw: HSB4×8R for Right-hand Toolholder, HSB4×8L for Left-hand Toolholder.

SVJB (External / Copying)



● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1			Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVJB R/L	2020K-11	●	●	20	20	125	30	25			0.4	SB-2570TR	FT-8	-	-	-
	2525M-11	●	●	25	25	150	35	32								
SVJB R/L	2020K-16N	●	●	20	20	125	30	25			0.8	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
	2525M-16N	●	●	25	25	150		32								

● Applicable Inserts (AVJB-FF / SVJB-FF / SVJB)

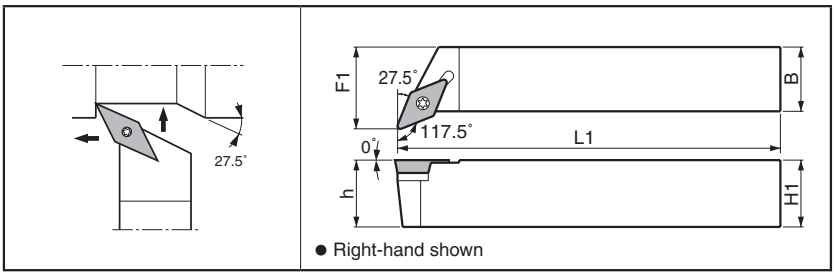
Applications	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B73	B73	B73	B74	B73	B74	B75	B75	C28	C17
Insert / Toolholder Description	GP	VF	HQ	R/L-F	R/L-FSF	R/L-Y	AH	R/L-A3	PCD	CBN
☐ VJB R/L ...-11FF/-11	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-	VBMT1103..	VBGW1103..
SVJB R/L ...-16 N	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	VCGT1604..	VCGT1604..	VBMT1604..	VBGW1604..

Recommended Cutting Conditions ➡ E44

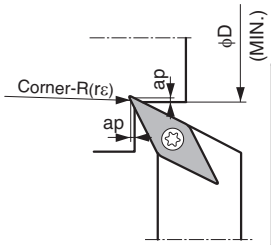
● : Std. Item

External Toolholders [VB / VC□□Insert]

SVPB (External / Facing / Copying / Undercutting)



● Undercutting diameter of SVPB

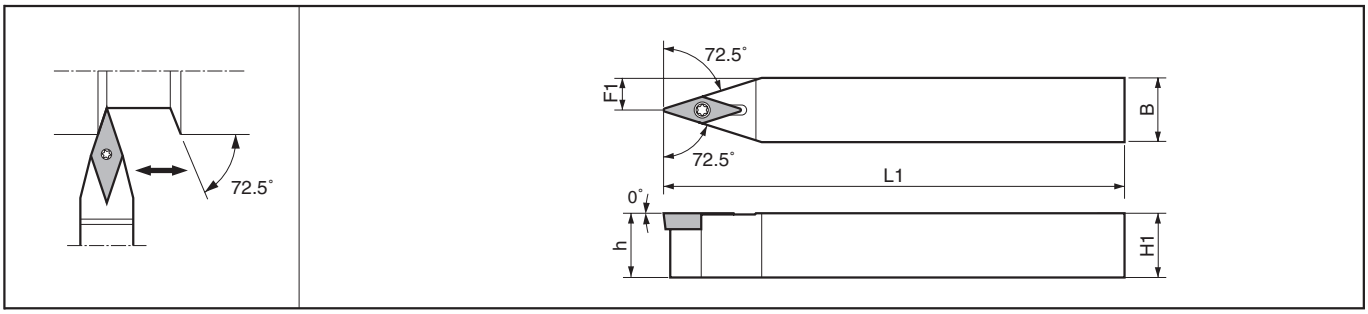


Corner-R (rε)	ap	⊠D (MIN.)
0.4	0.5	⊠25
	1	⊠30
0.8	0.5	⊠45
	1	⊠55

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	F1			Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVPB R/L	1010JX-11	●	●	10	10	120	-	14.5			0.4	SB-2570TR	FT-8	-	-	-
	1212JX-11	●	●	12	12			16.5								
	1616JX-11	●	●	16	16			20.5								
SVPB R/L	2020K-11	●	●	20	20	125	-	25			0.4	SB-2570TR	FT-8	-	-	-
	2525M-11	●	●	25	25	150		32								
SVPB R/L	2020K-16N	●	●	20	20	125	-	25			0.8	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
	2525M-16N	●	●	25	25	150		32								

SVVB (External / Copying)



● Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	B	L1	F1				Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
ÍSVVBN	1212F-11	●	12	12	85	6				0.4	SB-2570TR	FT-8	-	-	-
SVVBN	1010JX-11	●	10	10	120	5									
	1212JX-11	●	12	12		6									
	1616JX-11	●	16	16		8									
SVVBN	1010F-11	●	10	10	80	5				0.4	SB-2570TR	FT-8	-	-	-
	1616H-11	●	16	16	100	8									
	2020K-11	●	20	20	125	10									
	2525M-11	●	25	25	150	12.5									
SVVBN	2020K-16N	●	20	20	125	10				0.8	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
	2525M-16N	●	25	25	150	12.5									

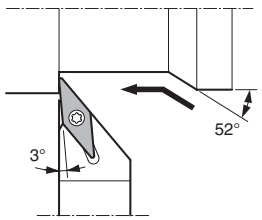
● Applicable Inserts (SVPB / SVVB)

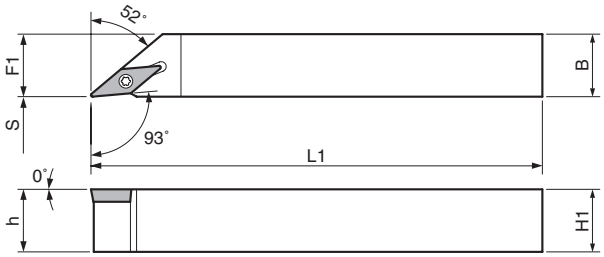
Applications	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B73	B73	B73	B74	B73	B74	B75	B75	C28	C17
Insert / Toolholder Description	GP	VF	HQ	R/L-F	R/L-FSF	R/L-Y	AH	R/L-A3	PCD	CBN
SVPB R/L ...-11 / SVVBN...-11	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-	VBMT1103..	VBGW1103..
SVPB R/L ...-16N / SVVBN...-16N	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	VCGT1604..	VCGT1604..	VBMT1604..	VBGW1604..

Recommended Cutting Conditions ➡ E44

● : Std. Item

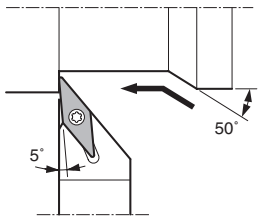
SVJP-FF (Without Offset) (External / Copying)

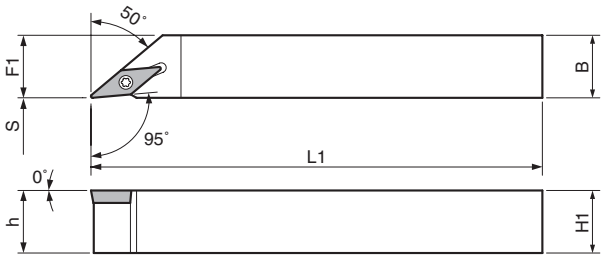




● Right-hand shown

SVLP-FF (Without Offset) (External / Copying)





● Right-hand shown

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	B	L1	L2	L3	F1	S	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench			
SVJPR/L	1212F -11FF	●	●	12	12	85	-	-	12	0	0.2	SB-2570TR	FT-8			
	1212JX -11FF	●	●	12	12	120			12							
	1616JX -11FF	●	●	16	16				16							
SVLPR/L	1010JX -08FF	●	●	10	10	120	-	-	10	0	0.1	SB-2050TR	FT-6			
	1212JX -08FF	●	●	12	12				12							
	1616JX -08FF	●	●	16	16				16							
SVLPR/L	1212JX -11FF	●	●	12	12	120	-	-	12	0	0.2	SB-2570TR	FT-8			
	1616JX -11FF	●	●	16	16				16							
SVLPR/L	1212F -08FF	●	●	12	12	85	-	-	12	0	0.1	SB-2050TR	FT-6			
	1212F -11FF	●	●	12	12	85	-	-	12	0	0.2	SB-2570TR	FT-8			

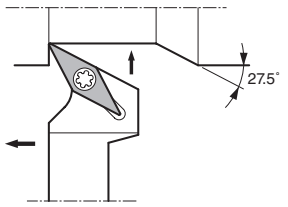
● Applicable Inserts

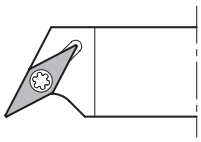
Applications	Minute ap	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision				
Ref. to Page	B76	B76	B76	B77	B77	B77				
Insert / Toolholder Description	CF	CK	GF	R/L-FSF	FR/L-U	FR/L-USF				
SVLPR/L...-08FF	-	VPGT0802..	-	VPET0802..	-	VPET0802..				
SV□PR/L...-11FF	VPGT1103..	VPGT1103..	VPGT1103..	VPET1103..	VPET1103..	VPET1103..				

Recommended Cutting Conditions ➡ E44

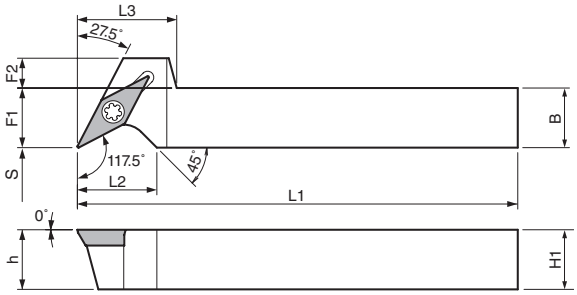
● : Std. Item

SVPP-FF (Without Offset) (External / Facing / Copying / Undercutting)





SVPPR1616..-08FF
shows above figure



● Right-hand shown

● Toolholder Dimensions

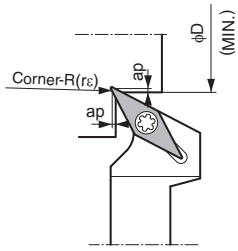
Description		Std.	Dimension (mm) H1=h	B	L1	L2	L3	F1	F2	S	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench			
SVPPR	1010JX-08FF	●	10	10	120	12	16	10	4	0	0.1	SB-2050TR	FT-6			
	1212JX-08FF	●	12	12				12	2							
	1616JX-08FF	●	16	16			-	16	-							
SVPPR	1010JX-11FF	●	10	10	120	16	20	10	8	0	0.2	SB-2570TR	FT-8			
	1212JX-11FF	●	12	12				12	6							
	1616JX-11FF	●	16	16				16	2							
SVPPR	1212F -08FF	●	12	12	85	12	16	12	2	0	0.1	SB-2050TR	FT-6			
	1212F -11FF	●	12	12	85	16	20	12	6	0	0.2	SB-2570TR	FT-8			

● Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. to Page	B76	B76	B76	B77	B77	B77
Insert / Toolholder Description	CF	CK	GF	F⁵/L-FSF	F⁵/L-U	F⁵/L-USF
SVPPR...-08FF	-	VPGT0802..	-	VPET0802..	-	VPET0802..
SVPPR...-11FF	VPGT1103..	VPGT1103..	VPGT1103..	VPET1103..	VPET1103..	VPET1103..

Recommended Cutting Conditions ➡ E44

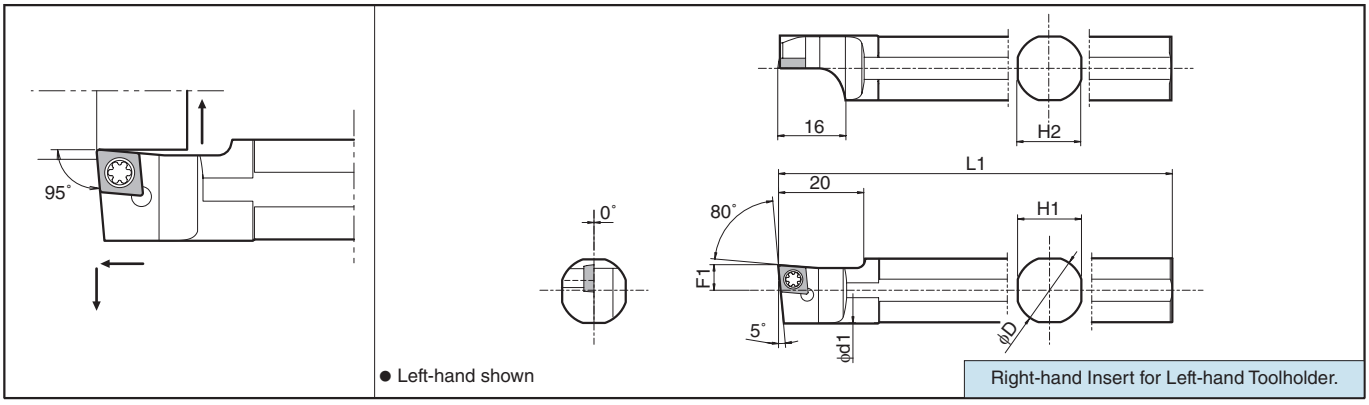
● Undercutting diameter of SVPP-FF



Corner-R (rε)	ap	φD (MIN.)
0.2	0.5	φ20
	1	φ25

● : Std. Item

S...SCLC (External / Facing)



● Toolholder Dimensions

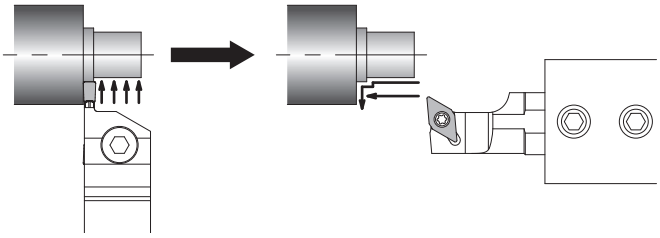
Description	Std.	Dimension (mm) φD	L1	F1	φd1	H1=H2		Standard Corner-R(rε)	Spare Parts: Clamp Screw	Wrench		
S12F -SCLCL06	●	12	80	6	13.4	11		0.4	SB-2560TR	FT-8		
S14H -SCLCL06	●	14	100			13						
S15F -SCLCL06	●	15.875	85		15.4	15			SB-2570TR			
S16F -SCLCL06	●	16										
S19G -SCLCL06	●	19.05	90		18.4	17						
S19K -SCLCL06	●		120									
S20G -SCLCL06	●	20	90		19.4	18						
S20K -SCLCL06	●		120									
S19G -SCLCL09	●	19.05	90	10	18.4	17		0.4	SB-4065TR	FT-15		
S19K -SCLCL09	●		120									
S20G -SCLCL09	●	20	90		19.4	18						
S20K -SCLCL09	●		120									
S25.0H-SCLCL09	●	25	100		24.4	23						
S25K -SCLCL09	●	25.4	120		24.8							

● Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B48	B49	B48, B49	B52	B50	B53	B52	B53	C24	C14
Insert / Toolholder Description	GF	GK	GQ	(E/F)R-U	MQ	Without Chipbreaker	AH	R-A3	PCD	CBN
S...SCLCL06	CCGT0602..	CCMT0602..	CCGT0602..	CCGT0602..	-	CCGW0602..	-	-	CCMT0602.. CCGW0602..	CCMW0602..
S...SCLCL09	CCGT09T3..	CCMT09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3..	CCGW09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3.. CCGW09T3..	CCMW09T3..

Recommended Cutting Conditions ➡ E44

● Finishing by Sleeve Holder

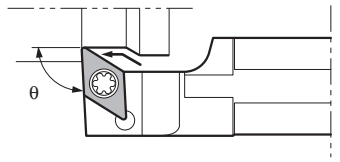


1) Roughing by grooving toolholder
2) Finishing by Sleeve Holder improves chip control and reduces cutting time

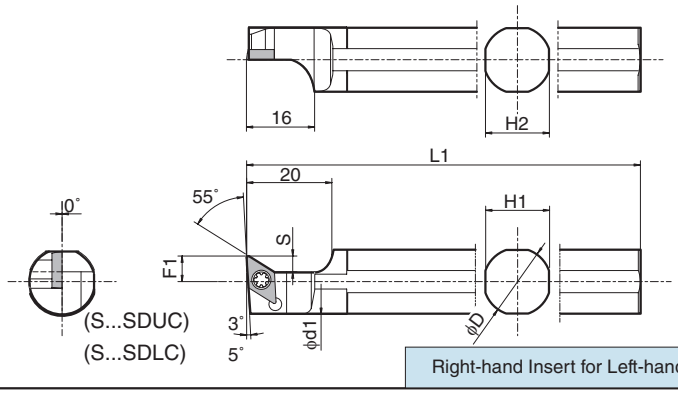
● : Std. Item

External Sleeve Holder [DC□□Insert]

S...SDUC (External / Copying) / S...SDLC (External / Copying)



θ=93° (S...SDUC)
θ=95° (S...SDLC)



● Left-hand shown

Right-hand Insert for Left-hand Toolholder.

● Toolholder Dimensions

Description	Std.	Dimension (mm) φD	L1	F1	φd1	H1=H2	S	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench		
S14H -SDUCL07	●	14	100	6	13.4	13	3.8	0.4	SB-2560TR	FT-8		
S15F -SDUCL07	●	15.875	85		15.4	15						
S19G -SDUCL07	●	19.05	90		18.4	17						
S19K -SDUCL07	●		120									
S20G -SDUCL07	●	20	90		19.4	18						
S20K -SDUCL07	●		120									
S19G -SDUCL11	●	19.05	90	10	18.4	17	5.8	0.4	SB-4085TR	FT-15		
S19K -SDUCL11	●		120									
S20G -SDUCL11	●	20	90		19.4	18						
S20K -SDUCL11	●		120									
S22K -SDUCL11	●	22	120		21.4	20						
S25.0H-SDUCL11	●	25	100		24.4	23						
S25K -SDUCL11	●	25.4	120		24.8							
S12F -SDLCL07	●	12	80	6	13.4	11	3.8	0.4	SB-2560TR	FT-8		
S14H -SDLCL07	●	14	100			13						
S15F -SDLCL07	●	15.875	85		15.4	15						
S16F -SDLCL07	●	16										
S19G -SDLCL07	●	19.05	90		18.4	17						
S19K -SDLCL07	●		120									
S20G -SDLCL07	●	20	90		19.4	18						
S20K -SDLCL07	●		120									
S19G -SDLCL11	●	19.05	90	10	18.4	17	5.8	0.4	SB-4085TR	FT-15		
S19K -SDLCL11	●		120									
S20G -SDLCL11	●	20	90		19.4	18						
S20K -SDLCL11	●		120									
S22K -SDLCL11	●	22	120		21.4	20						
S25.0H-SDLCL11	●	25	100		24.4	23						
S25K -SDLCL11	●	25.4	120		24.8							

● Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. to Page	B55	B55	B55, B56	B56	B56	B56	B58	B58	B59	B59
Insert / Toolholder Description	CF	GF	CK	PP	GK	GQ	R-F	R-FSF	(E/F) R-U	FR-USF
S...SD□CL07	DCGT0702..	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
S...SD□CL11	DCGT11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..

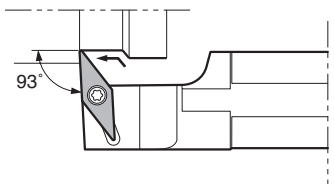
Applications	Low Feed	Low Feed / Precision	Soft Steel / Finishing	Soft Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B60	B60	B57	B57	B57	B61	B61	B61	C25	C15
Insert / Toolholder Description	(E/F)R-J	FR-JSF	XP	XQ	MQ	Without Chipbreaker	AH	R-A3	PCD	CBN
S...SD□CL07	DCET0702..	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
S...SD□CL11	DC_T11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..

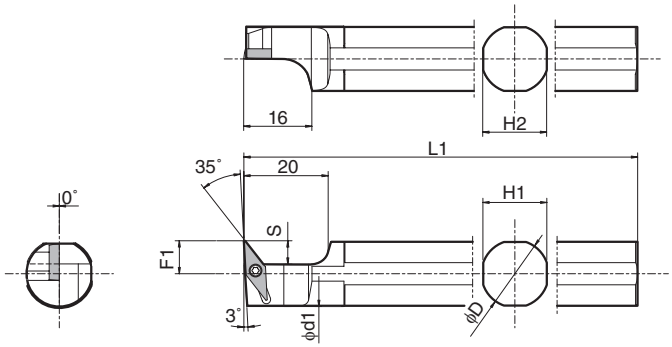
● : Std. Item

Recommended Cutting Conditions ➡ E44

External Sleeve Holder [VB / VC□□Insert]

S...SVUB(C) (External / Copying)





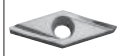
● Left-hand shown

Right-hand Insert for Left-hand Toolholder.

● Toolholder Dimensions

Description	Std.	Dimension (mm) φD	L1	F1	φd1	H1=H2	S		Standard Corner-R(r_ε)	Spare Parts: Clamp Screw	Wrench			
														
S12F -SVUCL08	●	12	80	7.5	13.4	11	5.5		0.4	SB-2050TR	FT-6			
S14H -SVUCL08	●	14	100			13								
S15F -SVUCL08	●	15.875	85	8	15.4	15								
S16F -SVUCL08	●	16												
S19G -SVUBL11	●	19.05	90	10.5	18.4	17	8		0.4	SB-2570TR	FT-8			
S19K -SVUBL11	●		120											
S20G -SVUBL11	●	20	90		19.4	18								
S20K -SVUBL11	●		120											
S25.0H-SVUBL11	●	25	100		24.4	23								
S25K -SVUBL11	●	25.4	120		24.8									

● Applicable Inserts

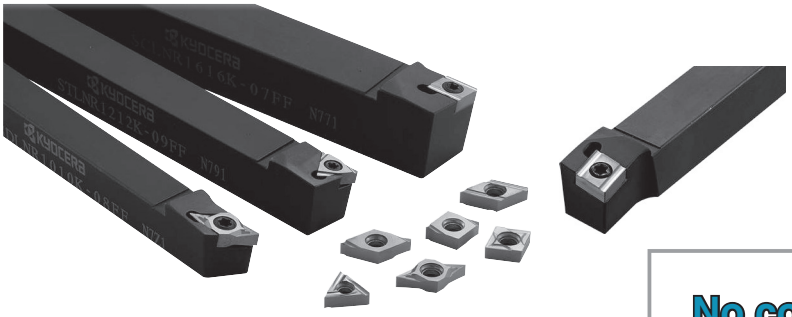
Applications	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Hard Materials
Ref. to Page	B73	B73, B75	B73, B75	B73	B73	B74	C28	C17
Insert / Toolholder Description	GP 	VF 	HQ 	R-F 	R-FSF 	R-Y 	PCD 	CBN 
S...SVUCL08	–	VCMT0802..	VCMT0802..	-	-	-	VCMT0802..	VCGW0802..
S...SVUBL11	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	VBMT1103..	VBGW1103..

Recommended Cutting Conditions ➡ E44

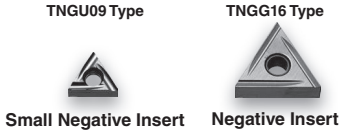
● : Std. Item

Small Double Sided Tooling for Automatic Lathe
(Screw Clamp, Without off-set)

Specially designed negative inserts (double-sided) for small workpieces enables sharp cutting equivalent to positive inserts, achieving high productivity due to economical doubled insert edge numbers.

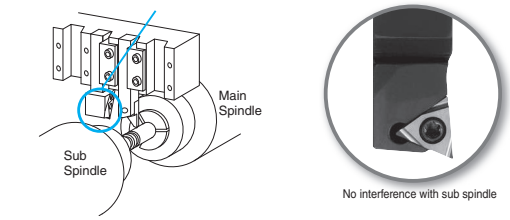


Designed small negative insert



No constraint of tool position
against tool post into the newly designed small negative insert.

The conventional toolholders for negative insert possibly interferes with sub spindle.

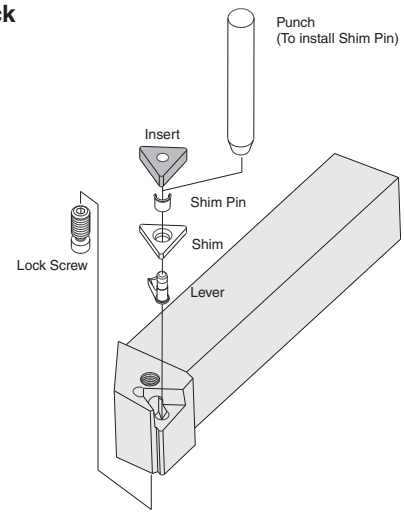


Toolholder for Double Sided Tooling for Automatic Lathe
(Without off-set, Lever Lock)

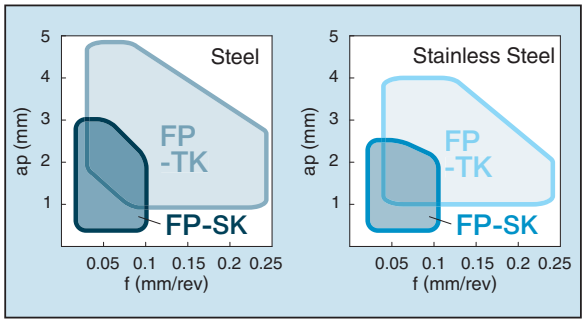
For medium to large ap in automatic lathes (When machining workpieces of medium to large dia.)

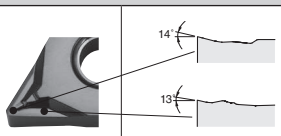
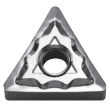
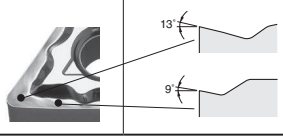
Sharp cutting oriented FP-SK/TK Chipbreaker with polished and sharp edge preparation.

● **Lever Lock**

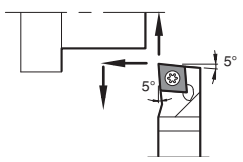


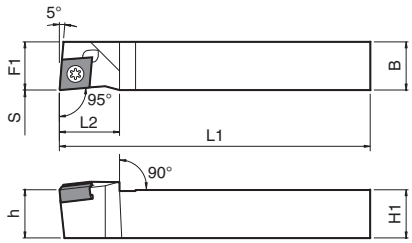
● **Applicable Chipbreaker Range**



Design			Advantages
FP-SK			2-step dot design provides reliable chip control at various ap.
FP-TK			Polished chipbreaker. Smooth chip control and less adhesion.

SCLN (Without Offset) (External / Facing)





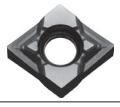
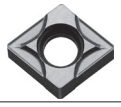
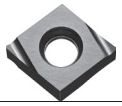
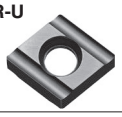
Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

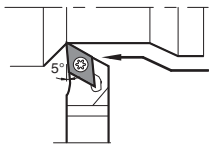
● Toolholder Dimensions

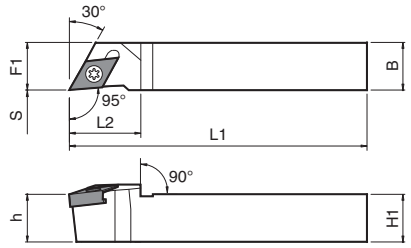
Description		Std.	Dimension (mm) H1=h	B	L1	L2	F1	S		Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
SCLNR	1010K-07FF	●	10	10	120	15	10	0		0.2	SB-3080TR	LTW-10SS	CNGU0703.. CNMU0703..
	1212F-07FF	●	12	12	85		12						
	1212K-07FF	●			120								
	1616K-07FF	●	16	16			16						

● Applicable Inserts

Applications	Finishing-Medium	Medium-Roughing	Finishing	Low Feed
Ref. to Page	B45	B45	B45	B45
Insert / Toolholder Description	SK 	GK 	FR-F 	(F/E)R-U 
SCLNR...-07FF	CNGU0703..	CNMU0703..	CNGU0703..	CNGU0703..

SDLN (Without Offset) (External / Copying)





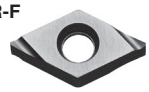
Side Rake Angle: -6°
Angle of Inclination: -7°

● Right-hand shown

● Toolholder Dimensions

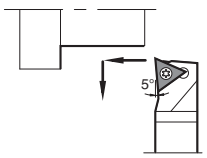
Description		Std.	Dimension (mm) H1=h	B	L1	L2	F1	S		Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
SDLNR	1010K-08FF	●	10	10	120	18	10	0		0.2	SB-3080TR	LTW-10SS	DNGU0803.. DNMU0803..
	1212F-08FF	●	12	12	85		12						
	1212K-08FF	●			120								
	1616K-08FF	●	16	16			16						

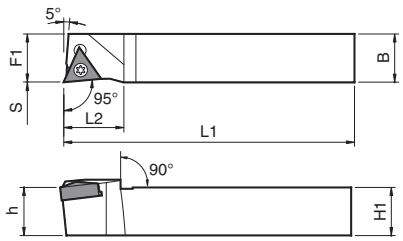
● Applicable Inserts

Applications	Finishing-Medium	Medium-Roughing	Finishing	Low Feed
Ref. to Page	B46	B46	B46	B46
Insert / Toolholder Description	SK 	GK 	FR-F 	(F/E)R-U 
SDLNR...-08FF	DNGU0803..	DNMU0803..	DNGU0803..	DNGU0803..

● : Std. Item

STLN (Without Off-set) (External / Up Facing)





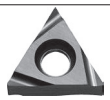
Side Rake Angle: -6°
Angle of Inclination: -7°

● Right-hand shown

● Toolholder Dimensions

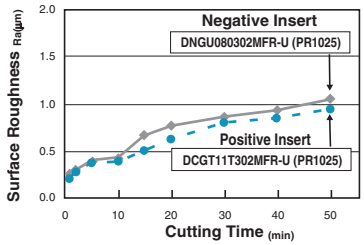
Description		Std.	Dimension (mm) H1=h	B	L1	L2	F1	S		Standard Corner-R(r_ε)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
STLNR	1010K-09FF	●	10	10	120	15	10	0		0.2	SB-2570TR	LTW-8SS	TNGU0903..
	1212F-09FF	●	12	12	85		12						
	1212K-09FF	●			120								
	1616K-09FF	●	16	16			16						

● Applicable Inserts

Applications	Finishing	Low Feed
Ref. to Page	B47	B47
Insert / Toolholder Description	FR-F 	(E/F)R-U 
STLNR...-09FF	TNGU0903..	TNGU0903..

Double-sided design allows all edges to be used. Compared to the positive type, the double-sided design offers less cost per insert and more stability.

● Comparison of surface finish (Sharp edge)



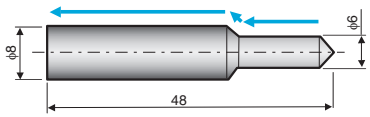
<Cutting Conditions>
Workpiece Material: S45C Vc=100m/min, ap=1.5mm, f=0.03mm/rev, WET

(Internal evaluation)

Case Studies

SUS303

· Spool
<Dia. 6mm portion>
· Vc=66m/min
· ap=1.25mm
· f=0.025mm/rev
· WET
<Dia. 8mm portion>
· Vc=130m/min
· ap=0.25mm
· f=0.025mm/rev
· WET



Required Surface Roughness 0.8μmRa

DNGU080302MF-SK (PR1025)	60,000pcs/insert (4 edges)
Competitor D (DCGT type)	20,000 pcs/insert (2 edges)

Competitor D (DCGT type) machined 10,000 pcs/edge. PR1025 machined 15,000 pcs./edge resulting in 3 times longer tool life per insert.

(Evaluation by the user)

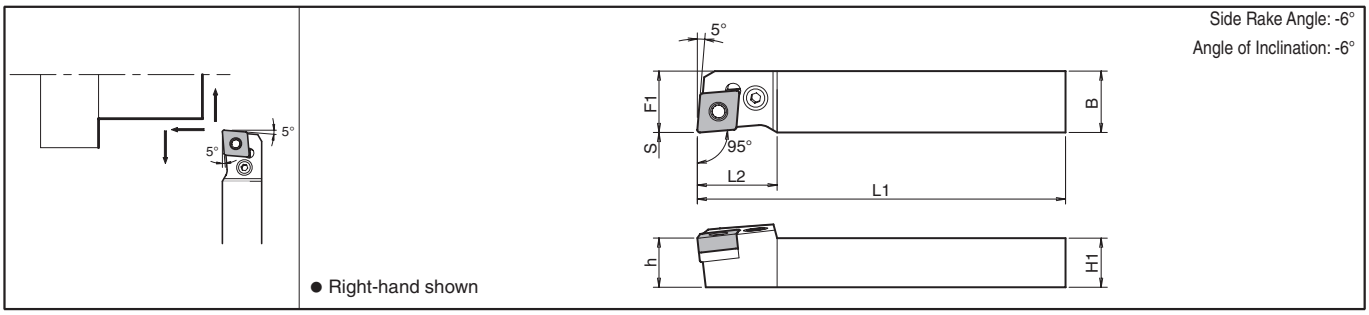
Recommended Cutting Conditions

Workpiece Material	Insert Grades PR1005	PR1025	PR1225	PR1425
Free-cutting steel	◕ Vc=100m/min (60~150)	–	–	–
Carbon steel / Alloy steel	◔ Vc=100m/min (60~150)	◔ Vc=100m/min (60~150)	◔ Vc=100m/min (60~150)	● Vc=120m/min (60~200)
Stainless Steel	–	◔ Vc=100m/min (60~150)	◕ Vc=80m/min (50~150)	○ Vc=100m/min (80~150)

◕ :Continuous to Light interruption / 1st Recommendation
◔ :Continuous to Light interruption / 2nd Recommendation
● :Continuous / 1st Recommendation
○ :Continuous / 2nd Recommendation

● : Std. Item

PCLN-FF (Without Offset)(External / Facing)



● Toolholder Dimensions

Description		Std.	Dimension (mm)						Standard Corner-R(rε)	Spare Parts					
			H1=h	B	L1	L2	F1	S		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PCLNR	1620JX-12FF	●	16	20	120	26	20	0	0.8	LL-2N	LS-2N	LC-42N	LSP-2	PC-2	LW-3
	2020JX-12FF	●	20												

● Applicable Inserts (1st Choice)

Applications	Finishing-Medium	Medium-Roughing
Ref. to Page	B17	B17
Insert / Toolholder Description	FP-SK	FP-TK
PCLNR...-12FF	CNGG1204..FP-SK	CNGG1204..FP-TK

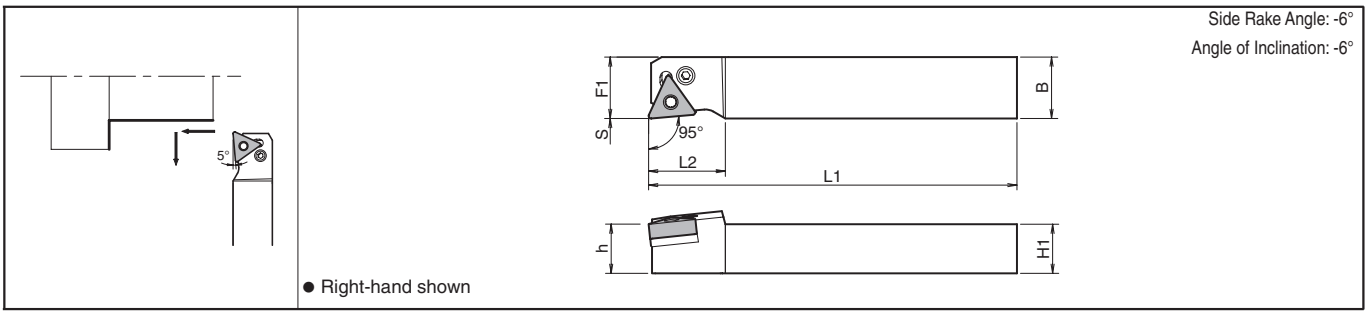
Recommended Cutting Conditions ➡ E39

● Applicable Inserts (Optional)

Applications	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Insert	WP (Wiper)	WQ (Wiper)	PP	PQ	CQ	CJ	GS	PG
Size	12	12	12	12	12	12	12	12
Page	B14	B14	B14	B14	B14	B14	B15	B15
Applications	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed Rate	Medium	Medium-Roughing / Low Cutting Force
Insert	PS	HS	PT	Standard	PH	PX	R	R-25R
Size	12	12	12	12	12	12	12	12
Page	B15	B15	B15	B16	B16	B16	B20	B20
Applications	Soft Steel / Small ap	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron
Insert	XF	XP	XQ	XS	MQ	MS	MU	C
Size	12	12	12	12	12	12	12	12
Page	B17	B17	B17	B17	B18	B18	B18	B19
Applications	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	ZS	GC	Without Chipbreaker	Ceramic	AH	A3	PCD	CBN
Size	12	12	12	12	12	12	12	12
Page	B19	B19	B19	B86	B19	B19	C23	C6, C7

● : Std. Item

PTLN-FF (Without Offset)(External / Up Facing)



Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	B	L1	L2	F1	S	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PTLNR	1620JX-16FF	●	16	20	120	24	20	0	0.8	LL-1N	LS-1N	LT-32N *LT-32N-20	LSP-1	PC-1	FH-2.5
	2020JX-16FF	●	20												

· When using inserts whose corner-R(rε) is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering each other.

Applicable Inserts (1st Choice)

Applications	Finishing-Medium	Medium-Roughing
Ref. to Page	B35	B35
Insert / Toolholder Description	FP-SK	FP-TK
PTLNR...-16FF	TNGG1604..FP-SK	TNGG1604..FP-TK

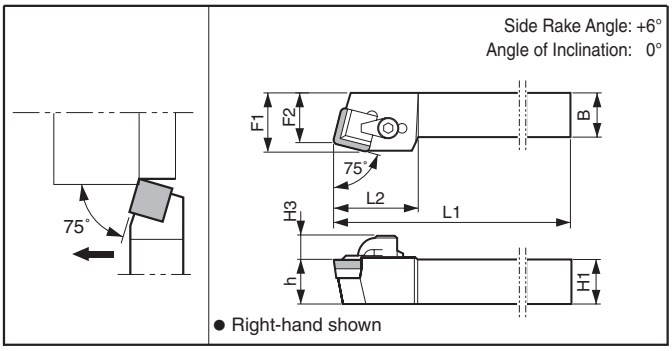
Recommended Cutting Conditions ➡ E39

Applicable Inserts (Optional)

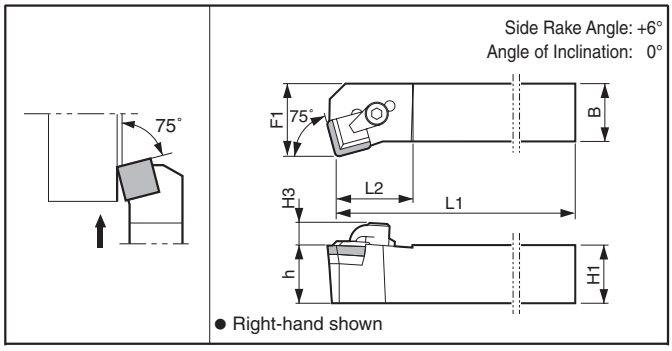
Applications	Finishing	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Medium-Roughing / High Feed Rate	Roughing
Insert	PP	PQ	CQ	GS	PG	PS	PT	GT	PH
Size	16	16	16	16	16	16	16	16	16
Page	B33	B33	B33	B33	B33	B33	B34	B34	B34
Applications	Single Sided / Roughing / High Feed Rate	Roughing	Finishing	Finishing-Roughing	Medium-Roughing / Low Cutting Force	Soft Steel / Small ap	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing
Insert	PX	Standard	R-S	R-□	R-25R	XF	XP	XQ	XS
Size	16	16	16	16	16	16	16	16	16
Page	B34	B34	B38	B38	B38	B35	B35	B35	B35
Applications	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals
Insert	MQ	MS	MU	C	ZS	GC	Without Chipbreaker	Ceramic	AH
Size	16	16	16	16	16	16	16	16	16
Page	B36	B36	B36	B37	B37	B37	B37	B91	B37
Applications	Non-ferrous Metals	Non-ferrous Metals	Hard Materials						
Insert	R-A3	PCD	CBN						
Size	16	16	16						
Page	B37	C23	C11						

● : Std. Item

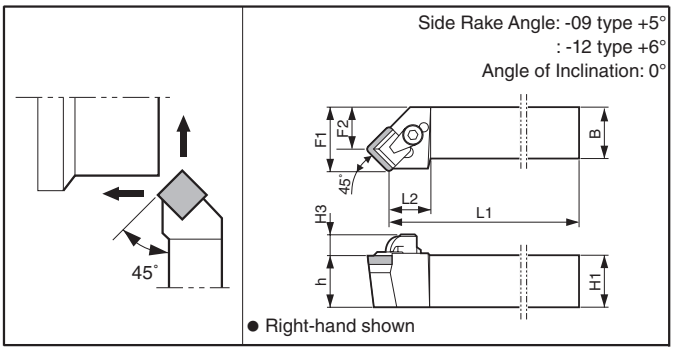
CSBP (External)



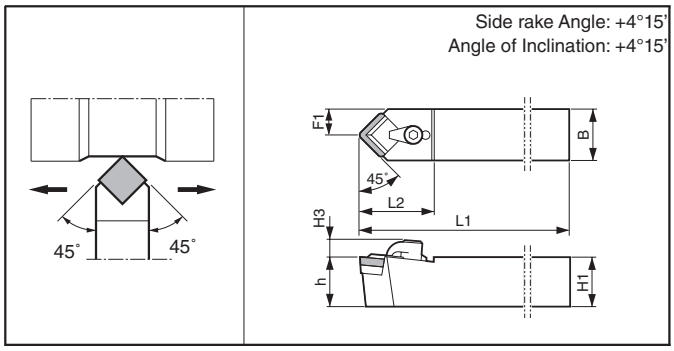
CSKP (Facing)



CSSP (External / Facing / Chamfering)



CSDP (External / Chamfering)



● Toolholder Dimensions

Description		Std. R	Std. N	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	F2	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	*Chipbreaker
CSBPR	1212F -09N	●			12	7.5	12	80	23	15.7	13	0.4	CPS-2P	LW-2.5	-	-	CB-S3220
CSKPR	1616H -09N	●			16	7.5	16	100	21	20	-	0.4	CPS-2P	LW-2.5	-	-	CB-S3220
CSKPR	2020K -12N	●			20	8.5	20	125	28	25	-	0.8	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
	2525M -12N	●			25		25	150		32							
CSSP R/L	1212F -09N	●		●	12	7.5	12	80	15	16	9	0.4	CPS-2P	LW-2.5	-	-	CB-S3220
	1616H -09N	●		●	16		16	100	16	20	13						
CSSP R/L	2020K -12N	●		●	20	8.5	20	125	19	25	16	0.8	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
	2525M -12N	●		●	25		25	150		32	23						
CSDPN	2020K -12N		●		20	8.5	20	125	32	10	-	0.8	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
	2525M -12N		●		25		25	150		12.5							

* Chipbreaker is not included. Purchase separately.

● Applicable Inserts

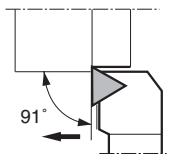
Applications	Medium	Medium	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals
Ref. to Page	B63	B63	B63	B63	B93	C29
Insert / Toolholder Description	G	Standard	R/L	Without Chipbreaker	Ceramic	PCD
CSBPR...-09N	SPMR0903..	SPMR0903..	SPGR0903..	SPMN0903.. SPGN0903..	SPGN0903..	-
CSKPR...-09N	SPMR0903..	SPMR0903..	SPGR0903..	SPMN0903.. SPGN0903..	SPGN0903..	-
CSKPR...-12N	SPMR1203..	SPMR1203..	SPGR1203..	SPMN1203.. SPGN1203..	SPGN1203..	SPGN1203..
CSSP R/L...-09N	SPMR0903..	SPMR0903..	SPGR0903..	SPMN0903.. SPGN0903..	SPGN0903..	-
CSSP R/L...-12N	SPMR1203..	SPMR1203..	SPGR1203..	SPMN1203.. SPGN1203..	SPGN1203..	SPGN1203..
CSDPN...-12N	SPMR1203..	SPMR1203..	SPGR1203..	SPMN1203.. SPGN1203..	SPGN1203..	SPGN1203..

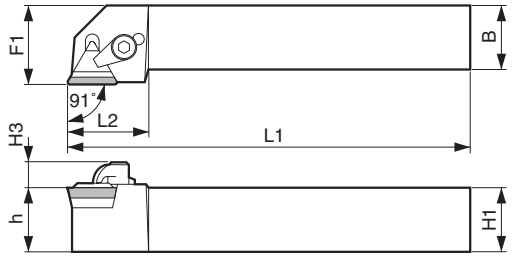
· CSKPR: Left-hand Insert for Right-hand Toolholder.
· CSSP R/L: For External Turning, Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.
For Facing,Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Recommended Cutting Conditions ➡ E44

● : Std. Item

CTGP (External)

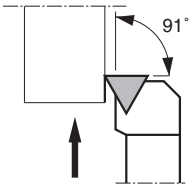


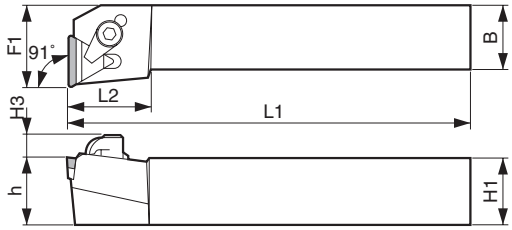


● Right-hand shown

Side Rake Angle: +6°
Angle of Inclination: 0°

CTFP (Facing)

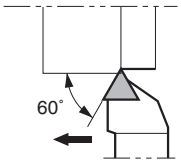


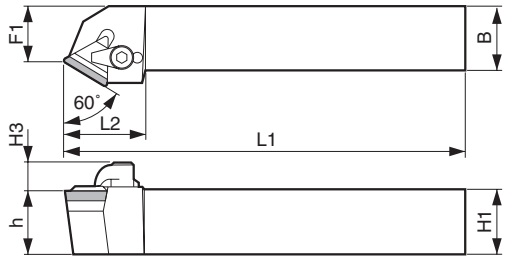


● Right-hand shown

Side Rake Angle: +6°
Angle of Inclination: 0°

CTTP (External / Chamfering)





● Right-hand shown

Side Rake Angle: +6°
Angle of Inclination: 0°

● Toolholder Dimensions

Description		Std. R	Std. L	Dimension (mm) H1=h	H3	B	L1	L2	F1	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	*Chipbreaker
CTGP R/L	1212F -11N	●	●	12	8	12	80	18	16	0.4	CPS-2P	LW-2.5	-	-	CB-T2212
	1616H -11N	●	●	16		16	100		20						
CTGP R/L	2020K -16N	●	●	20	8.5	20	125	26	25	0.8	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
	2525M -16N	●	●	25		25	150		32						
CTFP R/L	1212F -11N	●	●	12	8	12	80	18	16	0.4	CPS-2P	LW-2.5	-	-	CB-T2212
	1616H -11N	●	●	16		16	100		20						
CTFP R/L	2020K -16N	●	●	20	8.5	20	125	22	25	0.8	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
	2525M -16N	●	●	25		25	150		32						
CTTP R/L	1212F -11N	●	●	12	8	12	80	22.5	9	0.4	CPS-2P	LW-2.5	-	-	CB-T2212
	1616H -11N	●		16		16	100		13						
CTTP R/L	2020K -16N	●		20	8.5	20	125	28	17	0.8	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
	2525M -16N	●	●	25		25	150		22						

* Chipbreaker is not included. Purchase separately.

● Applicable Inserts

Applications	Finishing	Finishing	Finishing-Medium	Medium	Medium	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials
Ref. to Page	B71	B71	B71	B71	B71	B72	B72	B93	C29	C18
Insert / Toolholder Description	GP	DP	HQ	G	Standard	R/L-□	Without Chipbreaker	Ceramic	PCD	CBN
CTGP R/L...-11N	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	TPGR1103..	TPMN1103.. TPGN1103..	TPGN1103..	TPGN1103..	TPGN1103..
CTGP R/L...-16N	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	TPGR1603..	TPMN1603.. TPGN1603..	TPGN1603..	TPGN1603..	TPGN1603..
CTFP R/L...-11N	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	TPGR1103..	TPMN1103.. TPGN1103..	TPGN1103..	TPGN1103..	TPGN1103..
CTFP R/L...-16N	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	TPGR1603..	TPMN1603.. TPGN1603..	TPGN1603..	TPGN1603..	TPGN1603..
CTTP R/L...-11N	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	TPMR1103..	TPGR1103..	TPMN1103.. TPGN1103..	TPGN1103..	TPGN1103..	TPGN1103..
CTTP R/L...-16N	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	TPMR1603..	TPGR1603..	TPMN1603.. TPGN1603..	TPGN1603..	TPGN1603..	TPGN1603..

· CTFP R/L: Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Recommended Cutting Conditions ➡ E44

● : Std. Item

Recommended Cutting Conditions - External Turning (Positive Insert)

[ap indicates radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Applications	Recommended Chipbreaker	Recommended Insert 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 Finishing	Continuous	F	PR1425	0.05	100 - 150 - 200	0.05 - 0.07 - 0.15	0.03 - 0.05 - 0.1
				Interruption		PR1425	0.2	80 - 120 - 160	0.05 - 0.1 - 0.2	0.03 - 0.1 - 0.15
			Precision Finishing (Molded Chipbreaker)	Continuous	CF	PR1425	0.2	100 - 150 - 200	0.02 - 0.05 - 0.1	0.02 - 0.05 - 0.12
			Finishing	Continuous	GF	PR1425	0.2	100 - 140 - 180	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
				Interruption		PR1425	0.4	80 - 120 - 160	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous	GQ	PR1425	0.2	80 - 120 - 160	0.8 - 3.0 - 5.0	0.03 - 0.05 - 0.1
				Interruption		PR1425	0.4	60 - 100 - 140	0.8 - 2.0 - 3.0	0.03 - 0.05 - 0.1
			Low Feed & Large ap	Continuous	J, U	PR1425	0.2	80 - 100 - 140	0.5 - 2.0 - 3.5	0.02 - 0.05 - 0.1
	Medium Carbon Steel Medium Carbon Alloy	HB ≤ 330	Precision Finishing	Continuous	F	PR1425	0.05	100 - 150 - 200	0.05 - 0.07 - 0.15	0.03 - 0.05 - 0.1
				Interruption		PR1425	0.2	80 - 120 - 160	0.05 - 0.1 - 0.2	0.03 - 0.1 - 0.15
			Precision Finishing (Molded Chipbreaker)	Continuous	CF	PR1425	0.2	100 - 150 - 200	0.02 - 0.05 - 0.1	0.02 - 0.05 - 0.12
			Finishing	Continuous	GF	PR1425	0.2	100 - 140 - 180	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
				Interruption		PR1425	0.4	80 - 120 - 160	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous	GQ	PR1425	0.2	80 - 120 - 160	0.8 - 3.0 - 5.0	0.03 - 0.05 - 0.1
				Interruption		PR1425	0.4	60 - 100 - 140	0.8 - 2.0 - 3.0	0.03 - 0.05 - 0.1
			Low Feed & Large ap	Continuous	J, U	PR1425	0.2	80 - 100 - 140	0.5 - 2.0 - 3.5	0.02 - 0.05 - 0.1
	High Carbon Alloy	HB ≤ 280	Precision Finishing	Continuous	F	PR1425	0.05	100 - 150 - 200	0.05 - 0.07 - 0.15	0.03 - 0.05 - 0.1
				Interruption		PR1425	0.2	80 - 120 - 160	0.05 - 0.1 - 0.2	0.03 - 0.1 - 0.15
			Precision Finishing (Molded Chipbreaker)	Continuous	CF	PR1425	0.2	100 - 150 - 200	0.02 - 0.05 - 0.1	0.02 - 0.05 - 0.12
			Finishing	Continuous	GF	PR1425	0.2	100 - 140 - 180	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
				Interruption		PR1425	0.4	80 - 120 - 160	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous	GQ	PR1425	0.2	80 - 120 - 160	0.3 - 1.5 - 3.0	0.03 - 0.05 - 0.1
				Interruption		PR1425	0.4	60 - 100 - 140	0.3 - 1.0 - 2.0	0.03 - 0.05 - 0.1
			Low Feed & Large ap	Continuous	J, U	PR1425	0.2	80 - 100 - 140	0.5 - 2.0 - 3.5	0.02 - 0.05 - 0.1
M	Stainless Steel	HB ≤ 220	Finishing	Continuous	GF	PR1225	0.2	80 - 100 - 120	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
				Interruption		PR1225	0.4	60 - 80 - 100	0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous	GQ	PR1225	0.2	80 - 100 - 120	0.5 - 1.5 - 3.0	0.03 - 0.08 - 0.12
				Interruption		PR1225	0.4	60 - 80 - 100	0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.15
	Stainless Steel	HB ≤ 300	Finishing	Continuous	GF	PR1225	0.2	40 - 60 - 80	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
				Interruption		PR1225	0.4	30 - 50 - 70	0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous	GQ	PR1225	0.2	40 - 60 - 80	0.5 - 1.0 - 2.0	0.03 - 0.08 - 0.12
				Interruption		PR1225	0.4	30 - 50 - 70	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15
K	Gray Cast Iron	HB ≤ 250	Finishing	Continuous	Standard	CA4505	0.4	100 - 120 - 150	0.2 - 0.5 - 1.0	0.1 - 0.15 - 0.2
				Interruption		CA4505	0.4	80 - 100 - 120	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous	Standard	CA4505	0.4	100 - 120 - 150	0.5 - 1.0 - 2.0	0.1 - 0.15 - 0.2
				Interruption		CA4505	0.8	80 - 100 - 120	0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.15
	Nodular Cast Iron	HB ≤ 270	Finishing	Continuous	Standard	CA4515	0.4	80 - 100 - 120	0.2 - 0.5 - 1.0	0.1 - 0.15 - 0.2
				Interruption		CA4515	0.4	60 - 80 - 100	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous	Standard	CA4515	0.4	80 - 100 - 120	0.5 - 1.0 - 2.0	0.1 - 0.15 - 0.2
				Interruption		CA4515	0.8	60 - 80 - 100	0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.15
N	Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloys (Si10% or less) etc.	HB ≤ 100	High Speed Machining (Rainbow Surface Gloss)	Continuous	Without Chipbreaker	KPD001	0.2	150 - 250 - 350	0.05 - 0.1 - 0.3	0.05 - 0.1 - 0.15
			Finishing	Continuous	F, FSF	KW10	0.2	100 - 150 - 200	0.05 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption		KW10	0.4	100 - 150 - 200	0.05 - 0.3 - 0.5	0.02 - 0.07 - 0.1
			Medium	Continuous	U, USF	KW10	0.2	100 - 150 - 200	0.2 - 0.5 - 1.5	0.03 - 0.1 - 0.2
				Interruption		KW10	0.4	100 - 150 - 200	0.2 - 0.5 - 1.5	0.03 - 0.1 - 0.2
S	Titanium Alloys	HB ≤ 400	Precision Finishing (Rainbow Surface Gloss)	Continuous	Without Chipbreaker	KPD001	0.2	100 - 120 - 150	0.05 - 0.1 - 0.3	0.03 - 0.07 - 0.1
				Interruption		KPD001	0.4	70 - 100 - 120	0.05 - 0.1 - 0.3	0.03 - 0.07 - 0.1
			Medium	Continuous	FSF, USF	KW10	0.4	30 - 50 - 70	0.1 - 0.5 - 1.0	0.03 - 0.1 - 0.2
				Interruption		KW10	0.4	30 - 50 - 70	0.1 - 0.5 - 1.0	0.03 - 0.1 - 0.2
	Heat-resistant Alloys	HB ≤ 350	Finishing	Continuous	F, U	KW10	0.4	10 - 30 - 50	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
				Interruption	Without Chipbreaker	KW10	0.8	10 - 30 - 50	0.2 - 0.5 - 0.7	0.03 - 0.05 - 0.1
			Finishing	Continuous	MQ	PR1310	0.4	40 - 60 - 80	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
				Interruption		PR1310	0.8	40 - 60 - 80	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
H	Hardened Steel Hard Materials	40~50 HRC	Finishing	Continuous	GK	PR1425	0.2	40 - 60 - 80	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption		PR1425	0.4	40 - 60 - 80	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1
		50~68 HRC	Finishing	Continuous	ME	KBN05M	0.2	80 - 120 - 150	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption	MET	KBN05M	0.4	60 - 100 - 120	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1

* For machining free-cutting steels, such as SUM, etc., use PR1005 at Vc=200m/min or less. For ap and f, refer to specs for low carbon steels.

Recommended Cutting Conditions - Back Turning

● **KTKF** ➡ **E12**

Workpiece Material		MEGACOAT NANO				MEGACOAT		Remarks
		PR1535		**PR1425**		**PR1225**		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon steel / Alloy steel	Vc (m/min)	☆60~150		★80~200		☆60~150		Coolant
	f (mm/rev)	0.01~0.03	0.02~0.15	0.01~0.03	0.02~0.15	0.01~0.03	0.02~0.15	
Stainless Steel	Vc (m/min)	★60~130		☆60~150		☆60~130		
	f (mm/rev)	0.01~0.02	0.02~0.1	0.01~0.02	0.02~0.1	0.01~0.02	0.02~0.1	

Workpiece Material		PVD Coated Carbide		Carbide		PCD		Remarks
		PR1025		**KW10**		**KPD001**		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon steel / Alloy steel	Vc (m/min)	☆60~150		-		-		Coolant
	f (mm/rev)	0.01~0.03	0.02~0.15	-		-		
Stainless Steel	Vc (m/min)	☆50~120		-		-		
	f (mm/rev)	0.01~0.02	0.02~0.1	-		-		
Cast Iron	Vc (m/min)	-		50~100		-		
	f (mm/rev)	-		0.01~0.02	0.02~0.15	-		
Aluminum	Vc (m/min)	-		200~450		200~500		
	f (mm/rev)	-		0.01~0.03	0.02~0.15	0.01~0.03	0.02~0.12	
Brass	Vc (m/min)	-		100~200		100~350		
	f (mm/rev)	-		0.01~0.05	0.02~0.2	0.01~0.05	0.02~0.15	

★: 1 st Recommendation
☆: 2nd Recommendation

● **KTKF (GQ Chipbreaker)** ➡ **E12**

Workpiece Material		MEGACOAT NANO				MEGACOAT		Remarks
		PR1535		**PR1425**		**PR1225**		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon steel / Alloy steel	Vc (m/min)	☆60~150		★80~200		☆60~150		Coolant
	f (mm/rev)	0.01~0.04	0.02~0.15	0.01~0.04	0.02~0.15	0.01~0.04	0.02~0.15	
Stainless Steel	Vc (m/min)	★60~130		☆60~150		☆60~130		
	f (mm/rev)	0.01~0.03	0.02~0.1	0.01~0.03	0.02~0.1	0.01~0.03	0.02~0.1	

★: 1 st Recommendation
☆: 2nd Recommendation

● **ABS15,ABW15,ABW23** ➡ **E17~E19**

Workpiece Material		MEGACOAT NANO		MEGACOAT		PVD Coated Carbide		Remarks
		PR1425		**PR1225**		**PR1025 (PR930)**		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon steel / Alloy steel	Vc (m/min)	★80~180		☆60~150		☆80~100		Coolant
	f (mm/rev)	0.02	0.02~0.07	0.02	0.02~0.07	0.02	0.02 ~0.07	
Stainless Steel	Vc (m/min)	☆40~130		★40~120		☆30~50		
	f (mm/rev)	0.02	0.02~0.05	0.02	0.02~0.05	0.02	0.02 ~0.05	

★: 1 st Recommendation
☆: 2nd Recommendation

Workpiece Material		Carbide		Remarks
		KW10		
		Grooving	Turning	
Aluminum	Vc (m/min)	150~200		Coolant
	f (mm/rev)	0.02	0.02~0.10	
Brass	Vc (m/min)	100~160		
	f (mm/rev)	0.03	0.02~0.15	

Alternative Toolholder Reference Table for Small Tools (Back Clamp)

Conventional Toolholder						Alternative Toolholder			
Insert Shape	Description	Overall length (mm)	Spare Parts: Anchor Pin	Spare Parts: Lock Screw	Spare Parts: Wrench	Description	Overall length (mm)	Remarks	Ref. to Page
ABS.. 40	AABSR0810K-40F	125	LPA-11	HSB4x8R	FH-2	-	-	No Alternative	-
	AABSR1010K-40F	125				AABSR1010JX-40F	120		E17
	AABSR1212M-40F	150	LPA-13			AABSR1212JX-40F	120		
	AABSR1616M-40F	150	LPA-17			AABSR1616JX-40F	120		
ABW.. 40	AABWR0810K-40F	125	LPA-11	HSB4x8R	FH-2	-	-	No Alternative	-
	AABWR1010K-40F	125				AABWR1010JX-40F	120		E18
	AABWR1212M-40F	150	LPA-13			AABWR1212JX-40F	120		
	AABWR1616M-40F	150	LPA-17			AABWR1616JX-40F	120		
ABW.. 50	AABWR0810K-50F	125	LPA-11	HSB4x8R	FH-2	-	-	No Alternative	-
	AABWR1010K-50F	125				AABWR1010JX-50F	120		E19
	AABWR1212M-50F	150	LPA-13			AABWR1212JX-50F	120		
	AABWR1616M-50F	150	LPA-17			AABWR1616JX-50F	120		
CC..	ACLC R/L0810K-06F	125	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	SCLC R/L0808F-06FF	120	Clamping system is different.	E23
	ACLC R/L1010K-06F	125				ACLC R/L1010JX-06FF	120		E22
	ACLC R/L1010K-09F	125	LPF-13			ACLC R/L1010JX-09FF	120		
	ACLC R/L1212M-09F	150				ACLC R/L1212JX-09FF	120		
	ACLC R/L1616M-09F	150	LPF-17			ACLC R/L1616JX-09FF	120		
DC..	ADJC R/L0810K-07F	125	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	SDJC R/L0808F-07FF	120	Clamping system is different.	E25
	ADJC R/L1010K-07F	125				ADJC R/L1010JX-07FF	120		E24
	ADJC R/L1010K-11F	125	LPF-13			ADJC R/L1010JX-11FF	120		
	ADJC R/L1212M-11F	150				ADJC R/L1212JX-11FF	120		
	ADJC R/L1616M-11F	150	LPF-17			ADJC R/L1616JX-11FF	120		
	ADNCR0810K-07F	125	LPF-11	HSB4x8R	FH-2	-	-	No Alternative	-
	ADNCR1010K-07F	125				SDNCN1010JX-07	120	Clamping system is different. Neutral	E27
	ADNCR1010K-11F	125	LPF-13			SDNCN1010JX-11	120		
	ADNCR1212M-11F	150				SDNCN1212JX-11	120		
	ADNCR1616M-11F	150	LPF-17			SDNCN1616JX-11	120		
VB..	AVJB R/L1010K-11F	125	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	AVJB R/L1010JX-11FF	120		E30
	AVJB R/L1212M-11F	150	LPF-1113			AVJB R/L1212JX-11FF	120		
	AVJB R/L1616M-11F	150	LPF-1117			AVJB R/L1616JX-11FF	120		
	AVVB R/L1010K-11F	125	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	SVVBN1010JX-11	120	Clamping system is different. Neutral	E31
	AVVB R/L1212M-11F	150	LPF-1113			SVVBN1212JX-11	120		
	AVVB R/L1616M-11F	150	LPF-1117			SVVBN1616JX-11	120		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

Alternative Toolholder Reference Table for Small Tools (Screw Clamp)

Conventional Toolholder					Alternative Toolholder			
Insert Shape	Description	Overall length (mm)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Description	Overall length (mm)	Remarks	Ref. to Page
ABS.. 40	SABSR0810K-40F	125	SB-3080TR	FT-10	-	-	No Alternative	-
	SABSR1010K-40F	125			SABSR1010JX-40F	120		E17
	SABSR1212M-40F	150			SABSR1212JX-40F	120		
	SABSR1616M-40F	150			SABSR1616JX-40F	120		
ABW.. 40	SABWR0810K-40F	125	SB-3080TR	FT-10	-	-	No Alternative	-
	SABWR1010K-40F	125			SABWR1010JX-40F	120		E18
	SABWR1212M-40F	150			SABWR1212JX-40F	120		
	SABWR1616M-40F	150			SABWR1616JX-40F	120		
ABW.. 50	SABWR0810K-50F	125	SB-3080TR	FT-10	-	-	No Alternative	-
	SABWR1010K-50F	125			SABWR1010JX-50F	120		E19
	SABWR1212M-50F	150			SABWR1212JX-50F	120		
	SABWR1616M-50F	150			SABWR1616JX-50F	120		
CC..	SCACR/L0808K-06	125	SB-2570TR	FT-8	SCLCR/L0808F-06FF	85	Cutting edge angle is different.	E23
	SCACR/L1010K-06	125			SCLCR/L1010JX-06FF	120		
	SCACR/L1010K-09	125	SB-4085TR	FT-15	SCLCR/L1010JX-09FF	120		
	SCACR/L1212M-09	150			SCLCR/L1212JX-09FF	120		
	SCACR/L1616M-09	150			SCLCR/L1616JX-09FF	120		
	SCACR1212F-09FF	85	SB-4085TR	FT-15	SCLCR1212JX-09FF	120		
	SCLCR/L0808E-06	70	SB-2570TR	FT-8	SCLCR/L0808F-06FF	85		
DC..	SDJCR/L0808F-07F	80	SB-2570TR	FT-8	SDJCR/L0808F-07FF	85		E25
	SDJCR/L1010F-07F	80			SDJCR/L1010JX-07FF	120		
	SDJCR/L1010F-11F	80	SB-4085TR	FT-15	SDJCR/L1010JX-11FF	120		
	SDJCR/L1212H-11F	100			SDJCR/L1212JX-11FF	120		
	SDJCR/L1616H-11F	100			SDJCR/L1616JX-11FF	120		
	SDLCR/L1010F-07FF	80	SB-2570TR	FT-8	SDLCR/L1010JX-07FF	120		E26
	SDLCR/L1212H-07FF	100			SDLCR/L1212F-07FF	85	Short length type	
					SDLCR/L1212JX-07FF	120		
	SDLCR/L1616H-07FF	100			SDLCR/L1616JX-07FF	120		
	SDLCR/L1212H-11FF	100	SB-4085TR	FT-15	SDLCR/L1212JX-11FF	120		
	SDLCL1616H-11FF	100			SDLCL1616JX-11FF	120		
	SDNCR/L1010F-07F	80	SB-2570TR	FT-8	SDNCR/L1010JX-07F	120		E27
	SDNCR/L1010F-11F	80	SB-4085TR	FT-15	SDNCR/L1010JX-07F	120	Insert size is different.	
					SDNCN1010JX-11	120	Neutral	
	SDNCR/L1212H-11F	100	SB-4085TR	FT-15	SDNCN1212F-11	85	Neutral Short length type	
					SDNCN1212JX-11	120	Neutral	
	SDNCR/L1616H-11F	100	SB-4085TR	FT-15	SDNCN1616JX-11	120	Neutral	
	SDNCN0808E-07	70	SB-2570TR	FT-8	SDNCN0808F-07	85		
	SDNCN1010F-07	80			SDNCN1010JX-07	120		
	SDNCN1212H-07	100			SDNCN1212JX-07	120		
	SDNCN1212H-11	100	SB-4085TR	FT-15	SDNCN1212F-11	85	Short length type	
					SDNCN1212JX-11	120		
	SDXCR/L1010F-07	80	SB-2570TR	FT-8	SDXCR/L1010JX-07	120		E26
	SDXCR/L1010F-11	80	SB-4085TR	FT-15	SDXCR/L1010JX-11	120		
	SDXCR/L1212H-11	100			SDXCR/L1212JX-11	120		
	SDXCR/L1616H-11	100			SDXCR/L1616JX-11	120		
DP..	SDLPR/L0808F-07F	80	SB-2570TR	FT-8	SDLPR/L0808F-07FF	85		E28
	SDLPR/L1010F-07F	80			SDLPR/L1010JX-07FF	120		
	SDLPR/L1010F-11F	80	SB-4085TR	FT-15	SDLPR/L1010JX-11FF	120		
	SDLPR/L1212H-11F	100			SDLPR/L1212JX-11FF	120		
	SDLPR/L1616H-11F	100			SDLPR/L1616JX-11FF	120		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

Alternative Toolholder Reference Table for Small Tools (Screw Clamp)

Conventional Toolholder					Alternative Toolholder			
Insert Shape	Description	Overall length (mm)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Description	Overall length (mm)	Remarks	Ref. to Page
VB..	SVJB R/L1010F-11F	80	SB-2570TR	FT-8	SVJB R/L1010JX-11FF	120		E30
	SVJB R/L1212H-11F	100			SVJB R/L1212JX-11FF	120		
	SVJB R/L1616H-11F	100			SVJB R/L1616JX-11FF	120		
	SVPB R/L1010F-11	80	SB-2570TR	FT-8	SVPB R/L1010JX-11	120		E31
	SVPB R/L1212H-11	100			SVPB R/L1212JX-11	120		
	SVPB R/L1616H-11	100			SVPB R/L1616JX-11	120		
	SVVBN1212H-11	100	SB-2570TR	FT-8	SVVBN1212JX-11	120		
VP..	SVLP R/L1010F-08FF	80	SB-2050TR	FT-6	SVLP R/L1010JX-08FF	120		E32
	SVLP R/L1212H-08FF	100			SVLP R/L1212F-08FF	85	Short length type	
					SVLP R/L1212JX-08FF	120		
	SVLP R/L1616H-08FF	100			SVLP R/L1616JX-08FF	120		
	SVLP R/L1010F-11F	80	SB-2570TR	FT-8	SVLP R/L1010JX-08FF	120	Insert size is different.	
	SVLP R/L1212H-11F	100			SVLP R/L1212F-11FF	85	Short length type	
					SVLP R/L1212JX-11FF	120		
	SVLP R/L1616H-11F	100			SVLP R/L1616JX-11FF	120		
	SVPPR1010F-11	80	SB-2570TR	FT-8	SVPBR1010JX-11	120	Insert relief angle is different.	E31
					SVPPR1010JX-11FF		Without Offset	E33
	SVPPR1212H-11	100			SVPBR1212JX-11	120	Insert relief angle is different.	E31
					SVPPR1212JX-11FF		Without Offset	E33
	SVPPR1616H-11	100			SVPBR1616JX-11	120	Insert relief angle is different.	E31
					SVPPR1616JX-11FF		Without Offset	E33
	SVPPL1616H-11	100	SB-2570TR	FT-8	SVPBL1616JX-11	120	Insert relief angle is different.	E31

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

Alternative Toolholder Reference Table for Small Tools (Screw Clamp) Toolholders for Back Turning

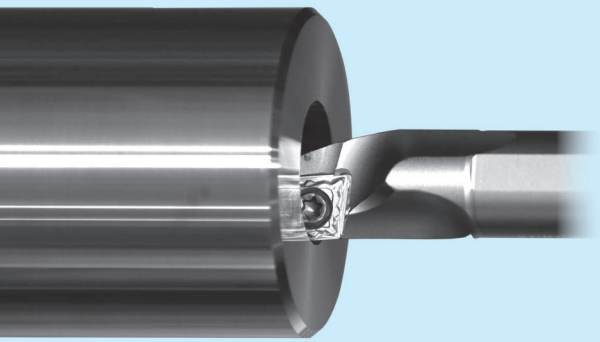
Conventional Toolholder					Alternative Toolholder			
Insert Shape	Description	Overall length (mm)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Description	Overall length (mm)	Remarks	Ref. to Page
TKFB..	KTKF R/L1010K-12	125	SB-4590TRWN	LTW-10S	KTKF R/L1010JX-12	120		E12
	KTKF R/L1212M-12	150			KTKF R/L1212JX-12	120		
	KTKF R/L1616M-12	150			KTKF R/L1616JX-12	120		
	KTKF R/L1010K-16	125			KTKF R/L1010JX-16	120		
	KTKF R/L1212M-16	150			KTKF R/L1212JX-16	120		
	KTKF R/L1616M-16	150			KTKF R/L1616JX-16	120		

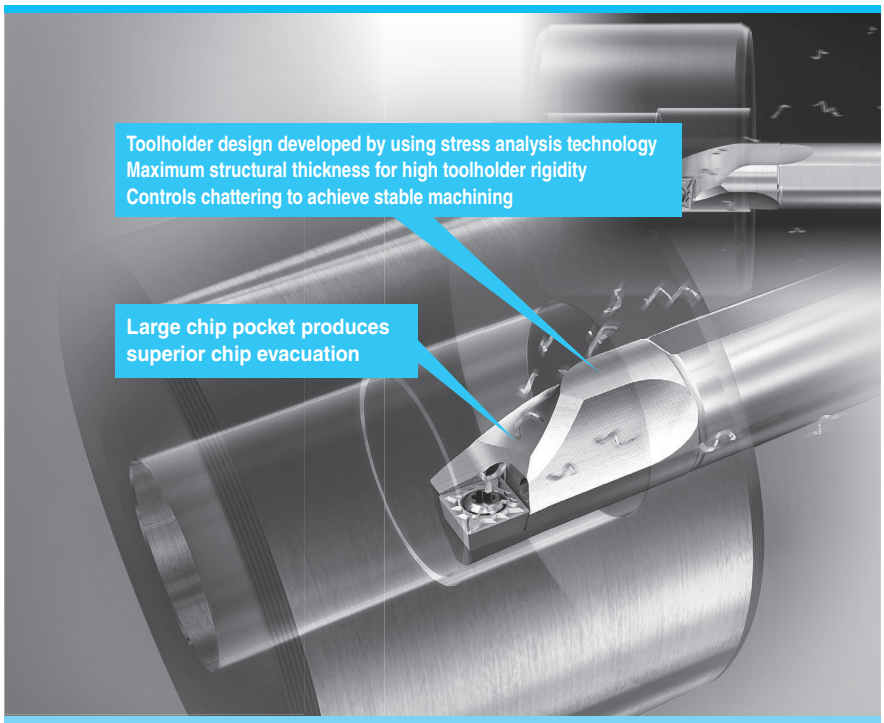
Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

Boring

F1~F92

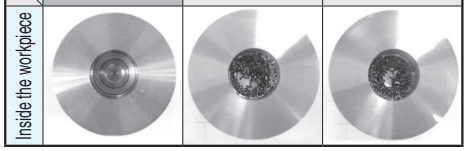
F



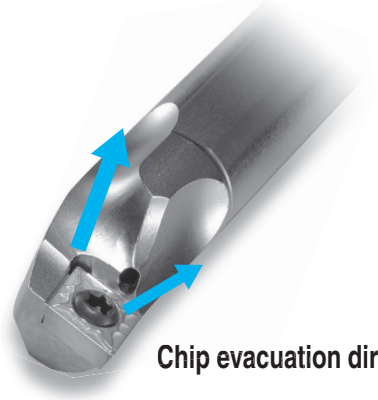


Dynamic design by using the latest computer simulation technology

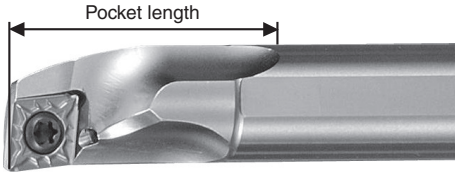
Superior chip evacuation (External coolant)

	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.

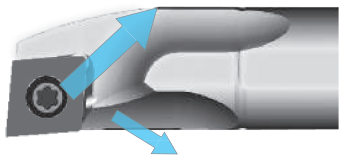
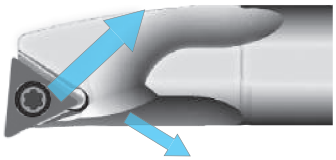


Comparison of pocket length



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

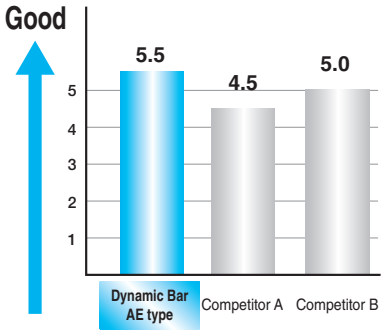
Chip evacuation direction

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.

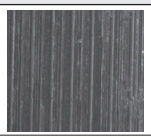
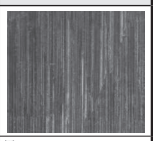
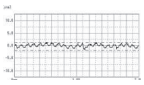
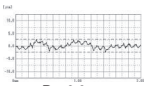
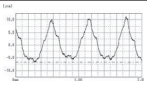
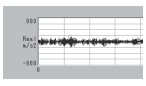
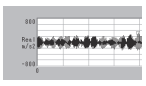
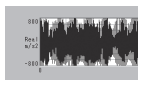
Comparison of vibration tendency



<Cutting Conditions>
15CrMo4
Vc=150m/min
ap=0.5mm
f=0.1mm/rev
S16-SCLPR09 type
CPMH090304L-Y

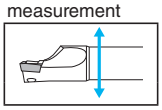
Comparison of surface finish

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			

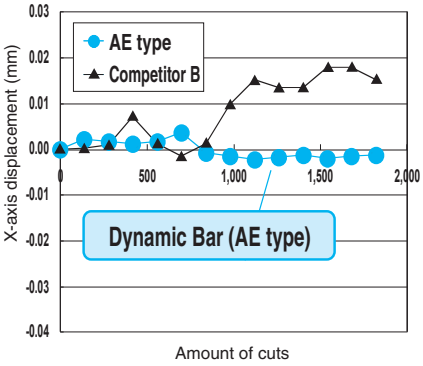
<Cutting Conditions>
15CrMo4
Vc=210m/min
ap=0.5mm
f=0.1mm/rev
A16Q-SCLPR09-18 type
CPMT090304XP(PV7020)
L/D=4
External Coolant

Direction of vibration measurement



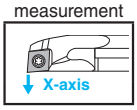
Cutting Point Precision

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



<Cutting Conditions>
34CrMo4
Vc=180m/min
ap=2mm
f=0.2mm/rev
S/A16Q-SCLPR09-18 type
CPMH090308(CA5525)
L/D=4
External Coolant

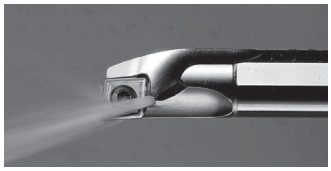
Direction of measurement



Toolholder Lineup

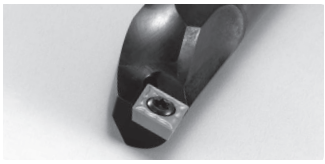
· Excellent Bar (AE Type)

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



· Steel Bar

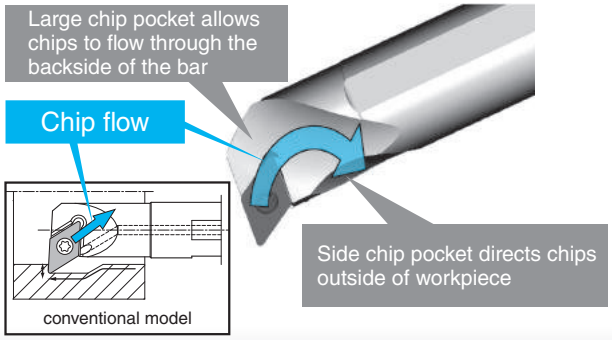
The steel shank bar (without coolant hole) provides superior cost performance



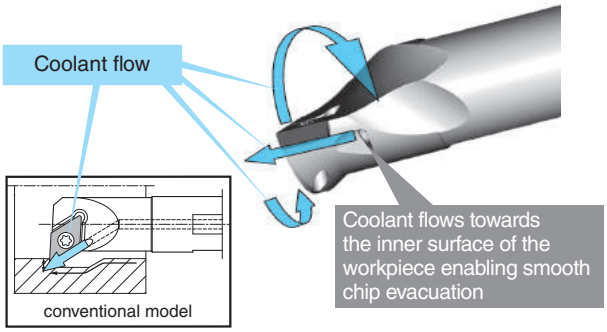
Advantages of Dynamic Bar SDUC

New design and concept focusing on chip evacuation

New design Streamlined pocket enables an effective chip evacuation

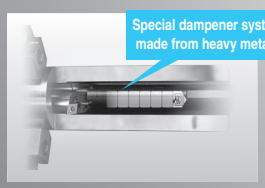


New concept Coolant flows toward the workpiece's inner surface



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

- The AD (Advanced Dampener) system enables a maximum overhang of 6 times 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.

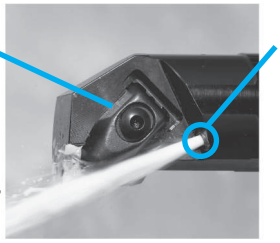


Double Clamp Boring Bars for Negative Inserts

Stable machining is realized in Double Clamp and Direction adjustment mechanism coolant hole.

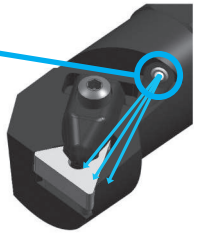
- **Improved Clamping Rigidity**

Firmly clamp the insert in two directions with one action. Along with improving the accuracy of the insert position, long tool life can be achieved.



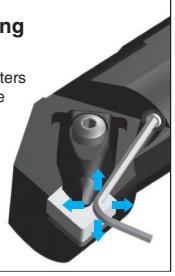
- **Direction adjustment mechanism coolant hole**

Discharge direction of coolant is adjustment flexible focusing on Coolant to Edge reliably builds up
*Not applicable to high-pressure coolant



Nozzle setting

Wrench etc. that enters 2.5 or less holes are used, and adjust.



Kyocera's original EZ adjust structure

- Easy adjustment and high precision
- EZ Bars prevent deviation with high-rigidity clamping

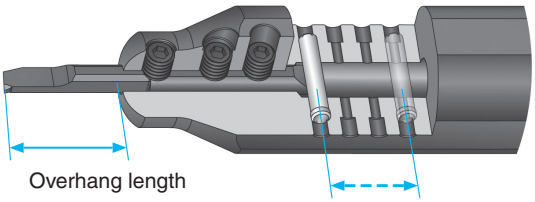
Wide range of items applicable to various applications

MEGACOAT PR1225 for stable machining and extended tool life

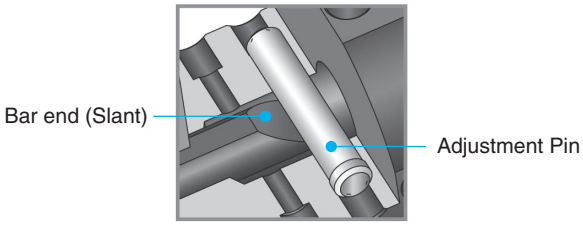
EZ adjust structure

Bar overhang is adjustable by replacing adjustment pin. Internal coolant sleeve (EZH-CT) is available.

1 Easy adjustment and high precision



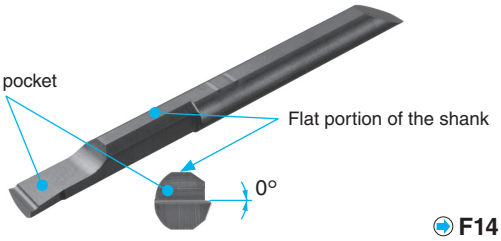
Excellent clamping force



Bar is firmly clamped on the slanted end by the Adjustment Pin

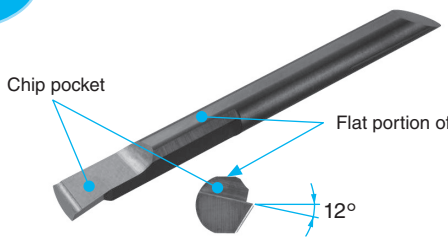
2 2 types of bars

Precision-oriented — HP type (High precision)



➡ F14

Cost-oriented — ST type (standard)

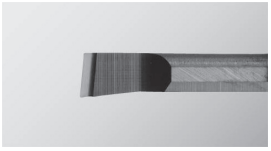


➡ F15

3 2 Chipbreakers for various applications

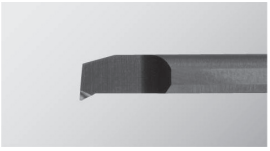
* Chip pocket angles are different.
* Even when using a same sleeve, the Min, Bore Dia. can be different depending on which bar to attach.

H Chipbreaker (Without lead angle)



Tough edge (General purpose)

F Chipbreaker (With lead angle)



Sharp cutting (For finishing)

· 2 types of corner-R for each chipbreaker

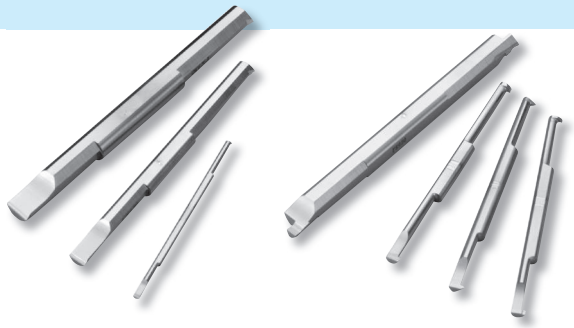
H Chipbreaker: 0.08mm, 0.15mm
F Chipbreaker: 0.05mm, 0.15mm

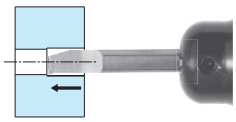
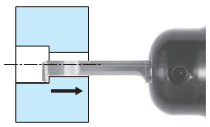
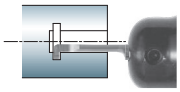
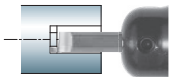
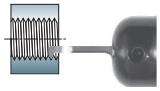
* Lineup depend on description

Along with the solid type, EZVB (for Boring , Internal Facing and Copying) and indexable type "EZ Bar PLUS" are added to the lineup

HP Type 2-Edge Tip-Bars for Micro Boring

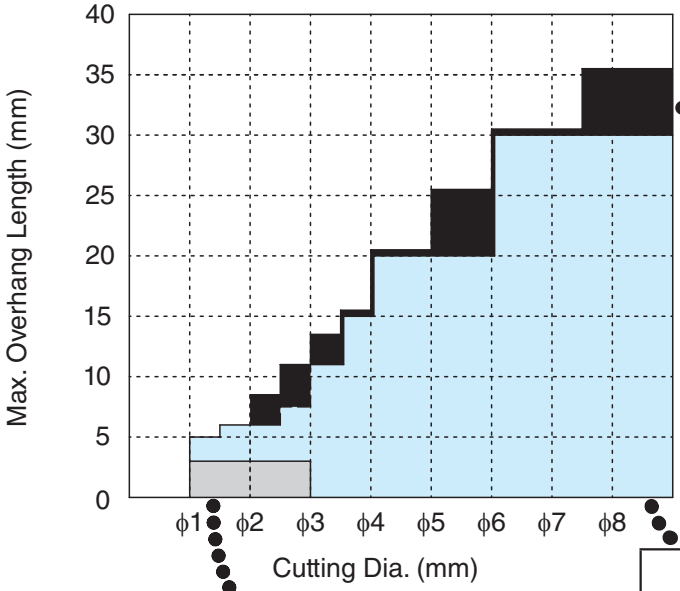
- Economically excellent 2-Edge
- Min. Bore Dia. Line Up from ϕ2.0 to Up
- Easy-to-Use Adjustable Overhang Length
- Integrated shank enables installation with standard sleeves
- Special sleeves for various machine types



Boring	Back boring	Grooving	Face Grooving	Threading
				
HPB ➡ F34	**HPBT** ➡ F34	**HPG** ➡ G44	**HPFG** ➡ G67	**HPT** ➡ J28
Min. Bore Dia.: ϕ2~ϕ7 Corner-R (rε): 0.05	Min. Bore Dia.: ϕ4~ϕ5 Corner-R (rε): 0.05	Min. Bore Dia.: ϕ4~ϕ7 Edge Width: 1.0~2.0mm Depth: 1.0~2.0mm	Min. Face Groove Dia.: ϕ8 Edge Width: 1.0~3.0mm Depth: 2.0~3.0mm	Min. Pilot Hole Dia.: ϕ4.5~ϕ8 M : 0.75~1.5mm UN : 28~16 TPI W : 24~18 TPI Rc : 28~19 TPI

● Guide for usage (Adjustable overhang type)

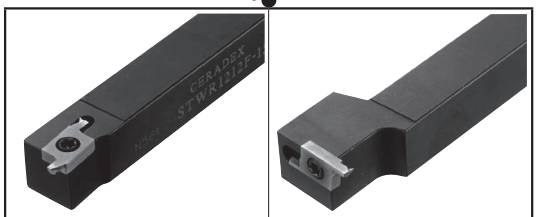
Solid Bars Type: Min. Bore Dia. ϕ1~



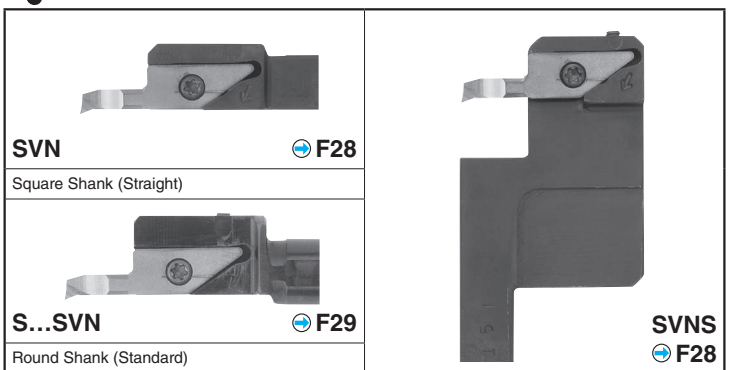
Easy adjustment and high precision

EZ Bars

➡ F12



Twin-Bars ➡ F32~F33



SVN ➡ F28

Square Shank (Straight)

S...SVN ➡ F29

Round Shank (Standard)

SVNS ➡ F28

System Tip-Bars ➡ F26

Boring Bar Identification System (Round Shank)

Shank Type

S	Steel
A	Steel (with Coolant Hole)
C	Carbide
E	Carbide (with Coolant Hole)

Bar Length

F : 80	Q : 180
G : 90	R : 200
H : 100	S : 250
J : 110	T : 300
K : 125	U : 350
L : 140	V : 400
M : 150	W : 450
N : 160	Y : 500
P : 170	X : Special

Clamping System

- C : Top Clamp
- M : Multi Lock
- P : Lock Pin Only or Lever Lock
- S : Screw Clamp
- W : Wedge Lock

Insert Shape

- C : 80° Rhombic
- D : 55° Rhombic
- J : 70° Rhombic
- R : Round
- S : 90° Square
- T : 60° Triangle
- V : 35° Rhombic
- W : 80° Trigon

Hand of Tool

- R: Right-hand
- L: Left-hand

Others

Manufacture's Option

Optional Mark or Number

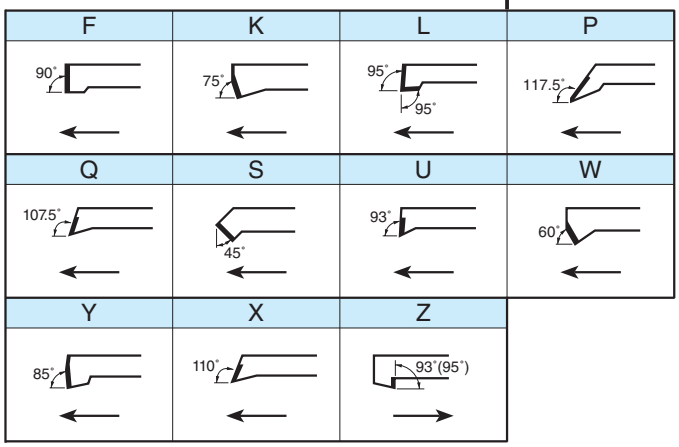
Example

- A : Dynamic Bar
- AE : Excellent Bar which is Dynamic Bar type
- E : Excellent Bar

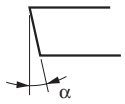
S 12 M – S C L P R 09 – 16

Bar Diameter

Cutting Edge Angle

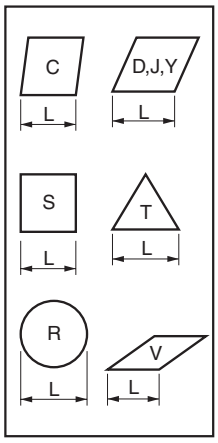


Insert Relief Angle



- B : 5° Positive
- C : 7° Positive
- D :15° Positive
- E : 20° Positive
- N : 0° Negative
- P : 11° Positive

Insert Size

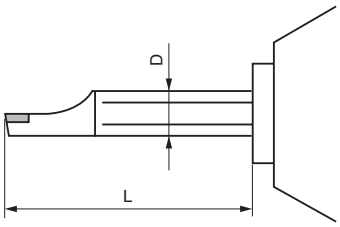


Min. Bore Dia.

- **Anti-vibration interchangeable head mechanism Boring Bar "AD Bar"**
  For the identification system for boring bars with interchangeable head, Ref. to page F61

Guide Line for Overhang Length of Boring Bar (Workpiece material : S45C)

Overhang Length (L / D)	Shank Material
3	Steel
4	Steel (Dynamic Bar)
5	Excellent
5.5	Excellent (Dynamic Bar)
6	AD Bars (with Anti-vibration Dampener System)
7	Carbide



Carbide Shank Boring Bar

Short Shank Series

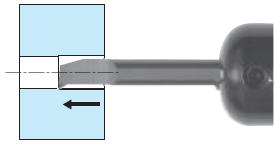
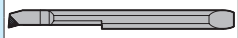
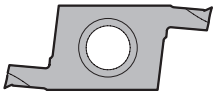
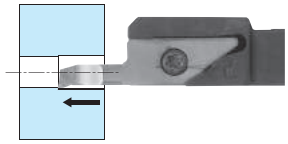
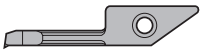
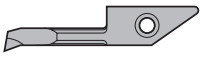
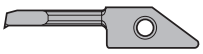
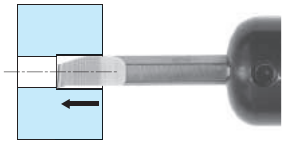
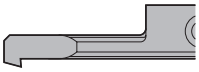
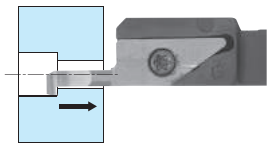
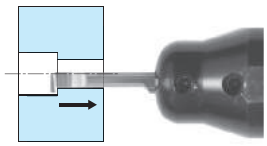
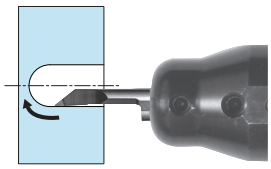
Short Shank Types with length of 1/2 and 2/3 of standard type are available. (-1/2 or -2/3 is shown at the end of the description)
When installing on machines, no additional machining (to change toolholder length) is required.


Standard Size

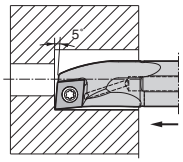
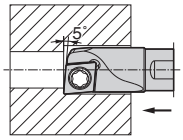
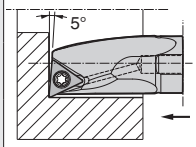
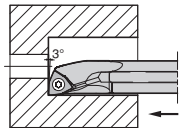

2/3 Size


1/2 Size

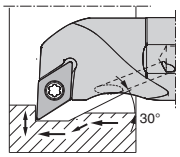
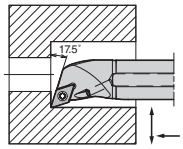
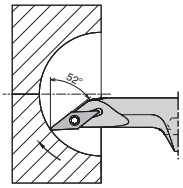
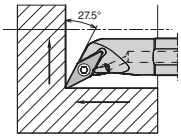
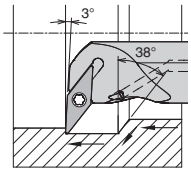
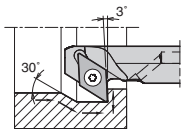
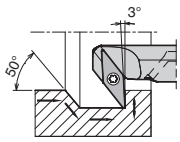
Solid Tip-Bars for Micro Boring

Applications	Solid Tip-Bars Type	Shape	Shank Type Max. Overhang Length (L/D)	Min. Bore Dia. ϕA 1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	Ref. to Page for Toolholders	Summary
Boring	**EZB-HP** EZ Bars ➔ F14		Solid L/D=~5			●	●	●	●	●		●		●				F20~ F25	
Boring	**EZB-ST** EZ Bars ➔ F15		Solid L/D=~5			●	●	●	●	●	●		●		●		●		
Boring	**EZB-NB** EZ Bars (MEGACOAT) ➔ F16		Solid L/D=~5			●	●	●	●	●	●		●		●		●		
Boring	**EZB-NB** EZ Bars CBN / PCD ➔ F16		Solid L/D=~5					●		●		●		●		●			
Boring			Solid L/D=~5							●		●		●		●			
Boring	**TWB** Twin-Bars ➔ F32		Solid	●	●	●	●	●										F32	
Boring	**TWBT** Twin-Bars ➔ F33		Solid	●	●	●	●	●										F33	
Boring	**VNB-S** System Tip-Bars ➔ F26		Solid	●	●	●	●	●	●	●								F28 F29	
Boring	**VNB** System Tip-Bars ➔ F26		Solid			●		●		●		●		●		●			
Boring	**VNBX-S** System Tip-Bars ➔ F30		Solid	●	●	●		●	●	●								F31	
Boring	**HPB** 2-Edge Tip-Bars ➔ F34		Solid L/D=~5			●		●		●		●		●		●		F24 F25	
Boring	**PSB-S** Tip-Bars ➔ F35		Solid L/D=~5			●		●		●		●		●		●		F82	
Back Boring	**VNBT** System Tip-Bars ➔ F26		Solid							●		●						F28 F29	
Back Boring	**HPBT** 2-Edge Tip-Bars ➔ F34		Solid L/D=~5							●		●						F24 F25	
Back Boring	**PSBT-S** Tip-Bars ➔ F35		Solid L/D=~5							●		●						F82	
Copying	NEW **EZVB** EZ Bars ➔ F19		Solid						●		●		●		●			F21~ F25	

Dynamic Bar / EZ Bar PLUS

Applications	Overview Shape	Boring Bar Type	Shank Type Max. Overhang Length (L/D)	Coolant Hole Yes	Coolant Hole No	Min. Bore Dia. ϕA 5	6	7	8	10	12	13	14	16	18	20	22	23	25	26	27	30	31	32	34	40	50	Ref. to Page for Toolholders
Boring / Internal Facing		A...SCLC-AE	Excellent L/D = ~5.5	●						●	●		●		●		●				●							F37
		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	●							●		●	●	●		●				●							F39
		S...SCLP-A	Steel L/D = ~4		○						●		●	●	●		●				●							
		E...SCLP-A	Carbide L/D = ~7	●							●		●	●	●		●				●							
	EZ Bar PLUS 	S...SCLC-EZ	Steel L/D = ~3		○	●		●																				F18
		C...SCLC-EZ	Carbide L/D = ~5		○	●		●																				
		A...STLP-AE	Excellent L/D = ~5.5	●						●	●		●	●	●		●		●		●							F47
		S...STLB-AE			○				●																			
		S...STLB(P)-A	Steel L/D = ~4		○				●	●	●		●	●	●		●				●							
		E...STLP-A	Carbide L/D = ~7	●						●	●		●	●	●		●		●		●							
		C...STLB-A			○				●																			
		A...STLC-AE	Excellent L/D = ~5.5	●						●	●		●		●		●											F45
		S...STLC-A	Steel L/D = ~4		○					●	●		●		●		●											
Boring		S...SWUB-AE	Excellent L/D = ~5.5		○		●	●	●																			F57
		A...SWUB(P)-AE	Excellent L/D = ~5.5	●						●	●		●		●		●											
		S...SWUB(P)-A	Steel L/D = ~4		○		●	●	●	●	●		●		●		●											
		C...SWUB-A	Carbide L/D = ~7		○		●	●	●																			
		E...SWUB(P)-A	Carbide L/D = ~7	●						●	●		●		●		●											

Dynamic Bar

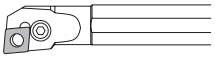
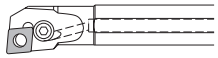
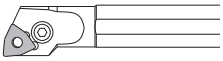
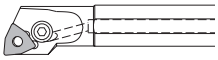
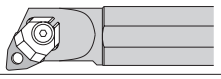
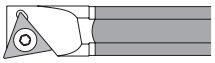
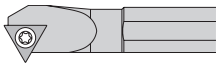
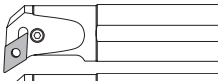
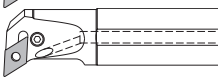
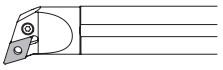
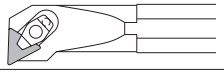
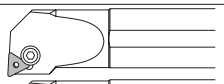
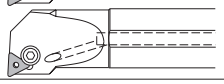
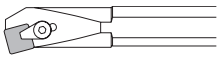
Applications	Overview Shape	Boring Bar Type	Shank Type Max. Overhang Length (L/D)	Coolant Hole Yes	Coolant Hole No	Min. Bore Dia. ϕA 5	6	7	8	10	12	13	14	16	18	20	22	23	25	26	27	30	31	32	34	40	50	Ref. to Page for Toolholders
Copying		A...SDUC-AE	Excellent L/D = ~5.5	●									●	●		●		●			●			●				F41
		S...SDUC-A	Steel L/D = ~4		○								●	●		●		●			●			●				
		E...SDUC-A	Carbide L/D = ~7	●									●	●		●		●			●			●				
		A...SDQC-AE	Excellent L/D = ~5.5	●								●		●		●			●			●						F42
		S...SDQC-A	Steel L/D = ~4		○							●		●		●			●			●						
		E...SDQC-A	Carbide L/D = ~7	●								●		●		●			●			●						
		A...SVJB(C)-AE	Excellent L/D = ~5.5	●										●		●			●			●				●	●	F50
		A...SVJP-AE		●										●														
		S...SVJB(C)-A	Steel L/D = ~4		○									●		●			●			●				●	●	
		S...SVJP-A			○									●														
		A...SVPB(C)-AE	Excellent L/D = ~5.5	●									●		●		●			●			●			●		F52
		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	●										●		●			●						●	●		F55
		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	●									●	●		●		●			●			●				F43
		S...SDZC-A	Steel L/D = ~4		○								●	●		●		●			●			●				
		E...SDZC-A	Carbide L/D = ~7	●									●	●		●		●			●							
		A...SVZB(C)-AE	Excellent L/D = ~5.5	●										●		●			●						●	●		F55
		S...SVZB(C)-A	Steel L/D = ~4		○									●		●			●						●	●		

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

F

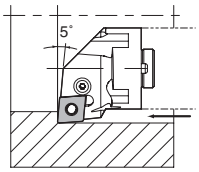
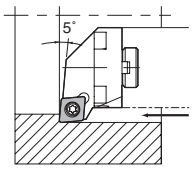
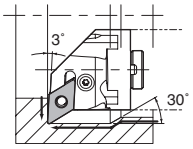
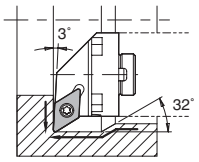
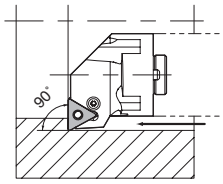
Boring

Boring Bars for General Purpose

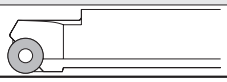
Applications	Boring Bar Type	Shape	Shank Type Max. Overhang Length (L/D)	Coolant Hole Yes	Coolant Hole No	Insert Type	Min. Bore Dia. ϕA 5	6	7	8	10	12	14	16	18	20	25	30	32	40	50	63	Ref. to Page for Toolholders
Boring / Internal Facing	NEW A···DCLN12		Steel L/D=~3	●		Negative													●	●	●		F65
	S···PCLN○○		Steel L/D=~3		○	Negative										●	● 27		●	●	●		F66
	A···PCLN09		Steel L/D=~3	●		Negative										●	● 27		●				
	NEW A···DWLN08		Steel L/D=~3	●		Negative													●	●	●		F75
	S···PWLN○○		Steel L/D=~3		○	Negative										●	● 27		●	●	●		F74 F76
	A···PWLN06		Steel L/D=~3	●		Negative										●	● 27		●				F74
	S···WWLN08-E		Excellent L/D=~5		○	Negative											● 28		● 34	●			F76
	C···STXP(B)		Carbide L/D=~7		○	Positive			● 7.5	● 9	● 11												F49
	C···SJLC		Carbide L/D=~7		○	Positive	● 5.5																F44
Copying	S···STWP-E		Excellent L/D=~5		○	Positive						●		●		●	●		●				F48
	S···STWP		Steel L/D=~3		○	Positive						●		●		●	●						
	NEW A···DDUN15		Steel L/D=~3	●		Negative														●	●	●	F68
	S···PDUN11		Steel L/D=~3		○	Negative											● 27		●	●			F67
	A···PDUN11		Steel L/D=~3	●		Negative											● 27		●	●			
	S···PDUN15		Steel L/D=~3		○	Negative													●	● 44	● 54		F69
	S···PDQN15		Steel L/D=~3		○	Negative													●	● 44	● 54		F69
Back Copying	C···STZB		Carbide L/D=~7		○	Positive				● 8.5													F49
	C···SJZC		Carbide L/D=~7		○	Positive		● 6.5															F44
	S···PDZN15		Steel L/D=~3		○	Negative													●	● 44	● 54		F69
Boring	S···CTUP		Steel L/D=~3		○	Positive								●		●	● 27		● 34	● 43	●		F59
	NEW A···DTFN○○		Steel L/D=~3	●		Negative													●	●	●		F72
	S···PTUN○○		Steel L/D=~3		○	Negative										●	●	●	●	●	●		F73
	A···PTUN11		Steel L/D=~3	●		Negative										●	●		●				
	NEW A···DSKN12		Steel L/D=~3	●		Negative													●	●	●		F71
	S···SSKP		Steel L/D=~3		○	Positive										●	●						F58
	S···CSKP		Steel L/D=~3		○	Positive										●	● 27		● 34	● 43			

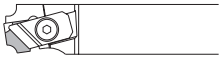
For Min. Bore Dia. ϕA, the figure under ● may be applied depending on the toolholder type.

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

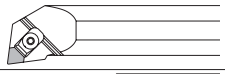
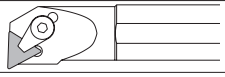
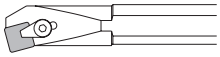
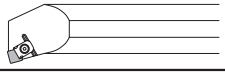
Applications	Boring Bar Type	Shape	Shank Type Max. Overhang Length (L/D)	Coolant Hole Yes	Coolant Hole No	Insert Type	Min. Bore Dia. ϕA 7	8	10	12	14	16	18	20	25	30	32	40	43	50	63	Ref. to Page for Toolholders
Boring / Internal Facing	HA···PCLN12		Anti-Vibration Dampener L/D=~5.5	●		Negative												●		●	●	F61
	HA···SCLC09		Anti-Vibration Dampener L/D=~6	●		Positive												●				F63
Copying	HA···PDUN15		Anti-Vibration Dampener L/D=~6	●		Negative													●	●	●	F62
	HA···SDUC11		Anti-Vibration Dampener L/D=~6	●		Positive												●				F63
Boring	HA···PTFN16		Anti-Vibration Dampener L/D=~6	●		Negative												●		●	●	F62

Toolholders for Bearing Machining (Square Shank)

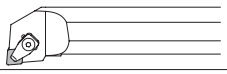
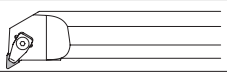
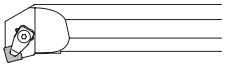
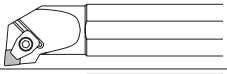
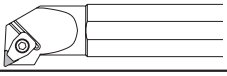
Applications	Boring Bar Type	Shape	Min. Bore Dia.ϕA 20	25	30	32	40	50	Ref. to Page for Toolholders
Boring	SRCP-B		●			●			F60

Applications	Boring Bar Type	Shape	Min. Bore Dia. ϕA 20	25	30	32	40	50	Ref. to Page for Toolholders
Round-Chamfering	CBSN-B		●						F60

Boring Bars for Ceramic / Solid CBN Tools (L/D=~3)

Applications	Boring Bar Type	Shape	Min. Bore Dia. ϕA 16	18	20	25	30	32	40	50	Ref. to Page for Toolholders
Boring / Internal Facing	S···CELN									●	F77
Boring	S···CTUP		●		●	● 27		● 34	● 43	●	F59
	S···CSKP				●	● 27		● 34	● 43		F58
	S···CSKN									●	F77

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

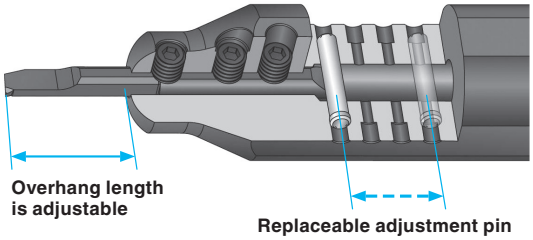
Applications	Boring Bar Type	Shape	Min. Bore Dia. ϕA 20	25	30	32	40	50	Ref. to Page for Toolholders
Boring / Internal Facing	S···CCLN-GX						●	●	F78
Boring / Copying	S···CDUN-GX						●	●	F78
Boring	S···CSKN-GX						●	●	F78
Boring / Internal Facing	S···CCLN-A						●		F79
Boring	S···CTUN-A				●				F79

Kyocera's original EZ adjust structure

- Easy adjustment and high precision
- EZ Bars prevent deviation with high-rigidity clamping

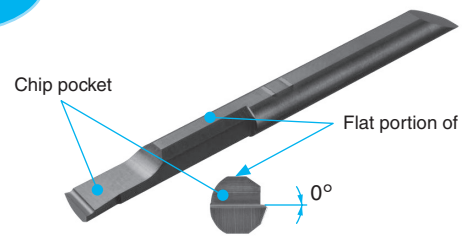
Wide range of items applicable to various applications

Kyocera's original EZ adjust structure



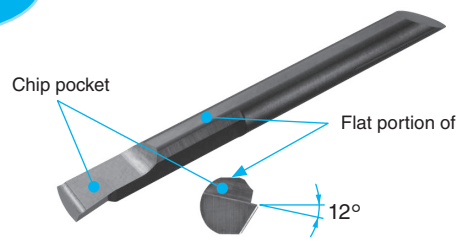
2 types of bars

Precision-oriented — **HP** type (High precision)



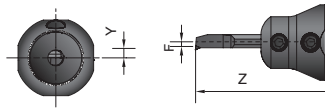
F14

Cost-oriented — **ST** type (standard)



F15

● Insert Tolerance

Insert setting image	Insert Tolerance	Offset (F)	Overall length (Z)	Edge Height (Y)	Min. Bore Dia.
 Y = Edge Height; F = Offset; Z = Insert length	Precision-oriented HP type (High precision)	±0.025mm	±0.05mm	+0.05/0mm	Same as Shank Dia.
	Cost-oriented ST type (standard)	±0.06mm	±0.1mm	+0.06/0mm	Not same as Shank Dia.

* Ref. to page of "Dimension" for details.

Lineup expansion Along with the solid type, indexable type "EZ Bar PLUS" is newly added

3 types of sleeve (EZH-CT , EZH-HP , EZH-ST)

NEW **EZH-CT**

High precision , with coolant hole (Adjustable)

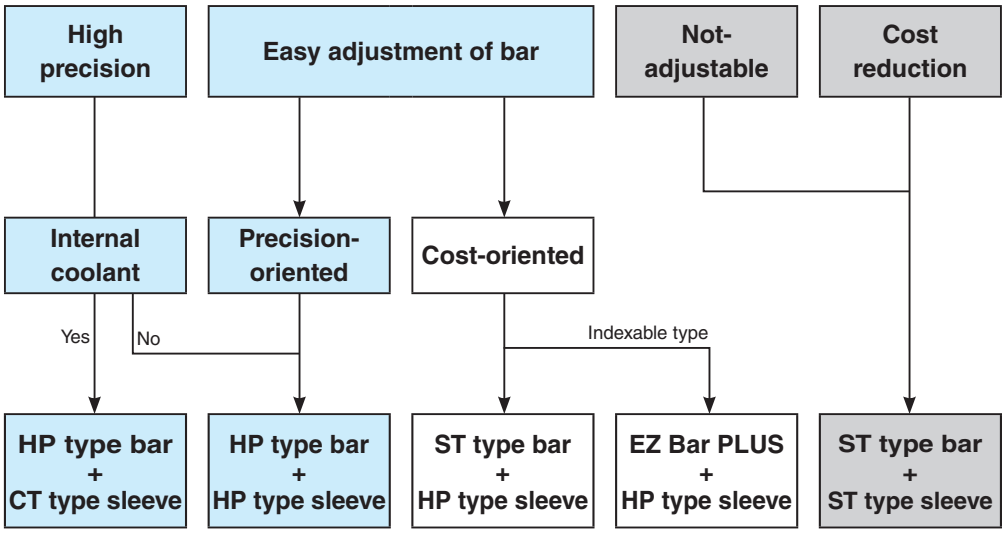
EZH-HP

Overhang length is adjustable (Adjustable)

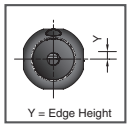
EZH-ST

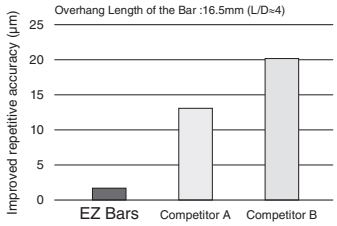
Not-adjustable

How to select bars and sleeves for each application



· Excellent repeat accuracy by the combination of HP bar + CT / HP sleeve

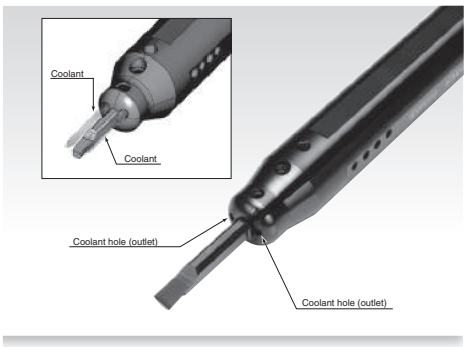




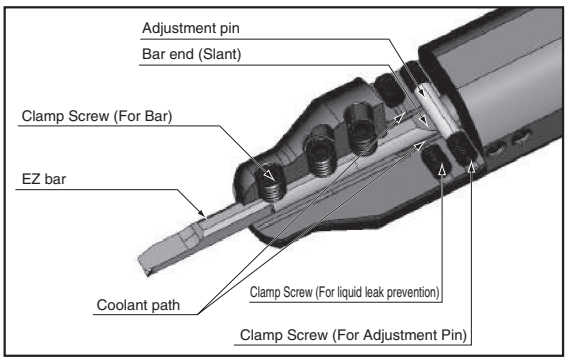
EZH-CT type (high precision / with coolant hole) is added in the EZH sleeve lineup!

Kyocera's unique EZ adjust structure and internal coolant system improve dimensional accuracy and surface roughness

Coolant discharge system of EZH-CT



Structure of EZH-CT



How to fix EZ-Bars (EZH-CT sleeve)

●How to use adjustment pin and prevent liquid leak (Fig.1)

(1) Put the adjustment pin into the hole according to the overhang length. Push it into the sleeve, using the wrench (LW-1.5).
(2) Tighten the clamp screw for the adjustment pin "HS3x4P" using the wrench "LW-1.5" from the both sides of the sleeve.
(3) Put the clamp screws "HS3x4P" into the holes for liquid leak prevention, using the wrench "LW-1.5" and fix them from the both sides of the sleeve.

●How to fix bar (Fig.2)

(1) With the chip pocket upward, set the bar into the sleeve.
Press the slant of the end of the bar with the adjustment pin.
Make sure that the bar does not move (Fig.3)
(2) Tighten the clamp screw with wrench (LW-2) and fix the bar.
(Use LW-1.5 if shank dia. is 3mm or less)

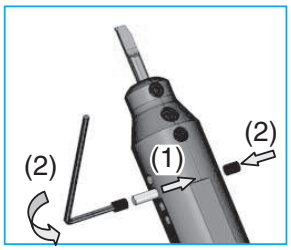


Fig.1 How to use adjustment pin

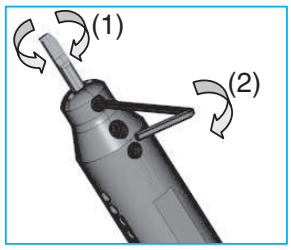


Fig.2 How to fix bar

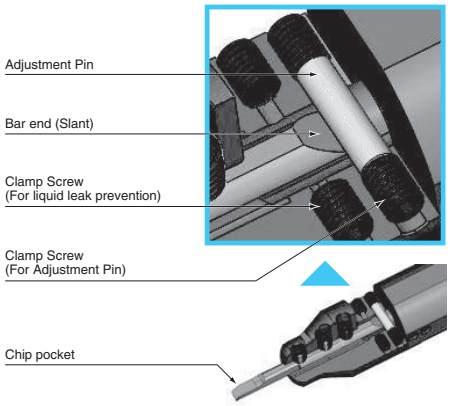
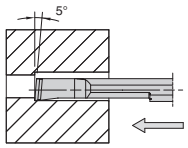
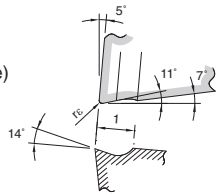


Fig.3 Fixed bar

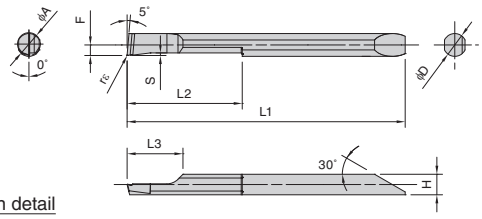
EZB-HP (Boring)

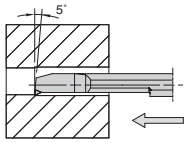


H Chipbreaker
- Without lead angle
- Tough edge (General purpose)
- Right-hand shown

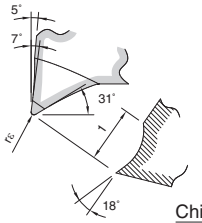


Chipbreaker in detail

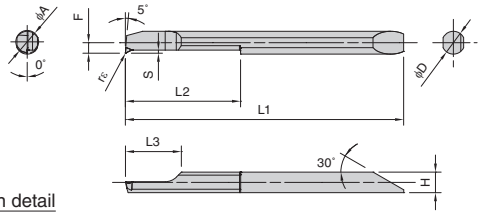




F Chipbreaker
- With lead angle
- Sharp cutting (For finishing)
- Right-hand shown



Chipbreaker in detail



EZ Bars Dimensions

Description		Min. Bore Dia.	Dimension (mm)								Grades		Applicable Sleeves
											MEGACOAT	Carbide NEW	
		φA	φD	H	L1	L2	L3	F	S	rε	PR1225	GW05	F20~F25
EZBR	020020HP-008H	2	2	1.8	32	8	4.9	0.85	0.25	0.08 ±0.015	●	●	EZH020…
	025025HP-008H	2.5	2.5	2.3	35	10.5	4.9	1.1	0.25	0.08 ±0.015	●		EZH025…
	025025HP-015H									0.15 ±0.02	●		
	030030HP-008H	3	3	2.7	38.9	13	6.9	1.35	0.3	0.08 ±0.015	●	●	EZH030…
	030030HP-015H									0.15 ±0.02	●		
	035035HP-008H	3.5	3.5	3.2	41.9	15	6.9	1.6	0.4	0.08 ±0.015	●		EZH035…
	035035HP-015H									0.15 ±0.02	●		
	040040HP-008H	4	4	3.6	48.8	20	9.8	1.85	0.4	0.08 ±0.015	●	●	EZH040…
	040040HP-015H									0.15 ±0.02	●		
	050050HP-008H	5	5	4.6	58.1	25	9.8	2.35	0.5	0.08 ±0.015	●	●	EZH050…
	050050HP-015H									0.15 ±0.02	●		
	060060HP-008H	6	6	5.6	66.1	30	11.8	2.85	0.6	0.08 ±0.015	●	●	EZH060…
	060060HP-015H									0.15 ±0.02	●		
EZBR	020020HP-005F	2	2	1.8	32	8	4.9	0.85	0.25	0.05 ±0.01	●		EZH020…
	025025HP-005F	2.5	2.5	2.3	35	10.5	4.9	1.1	0.3	0.05 ±0.01	●		EZH025…
	025025HP-015F									0.15 ±0.02	●		
	030030HP-005F	3	3	2.7	38.9	13	6.9	1.35	0.4	0.05 ±0.01	●		EZH030…
	030030HP-015F									0.15 ±0.02	●		
	035035HP-005F	3.5	3.5	3.2	41.9	15	6.9	1.6	0.5	0.05 ±0.01	●		EZH035…
	035035HP-015F									0.15 ±0.02	●		
	040040HP-005F	4	4	3.6	48.8	20	9.8	1.85	0.5	0.05 ±0.01	●		EZH040…
	040040HP-015F									0.15 ±0.02	●		
	050050HP-005F	5	5	4.6	58.1	25	9.8	2.35	0.7	0.05 ±0.01	●		EZH050…
	050050HP-015F									0.15 ±0.02	●		
	060060HP-005F	6	6	5.6	66.1	30	11.8	2.85	0.9	0.05 ±0.01	●		EZH060…
	060060HP-015F									0.15 ±0.02	●		

Tolerance: Offset ±0.025mm (of the reference pin), overall length ±0.05mm, edge height +0.05/0mm

Recommended Cutting Conditions ➡F17

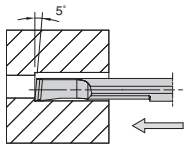
EZ Bars Identification System

EZ	B	R	020	020	HP	-	008	H
Symbol of EZ Bars	Applications	Insert Hand	Min. Bore Dia.	Shank Dia.	Symbol of Precision		Corner-R(rε)	Name of Chipbreaker
	B: Boring Bar	R: Right-hand	020: 2mm 025: 2.5mm ⋮	020: 2mm 025: 2.5mm ⋮	HP: High Precision ST: Standard		008: 0.08mm 015: 0.15mm ⋮	H: Without lead angle F: With lead angle NB: Without chipbreaker

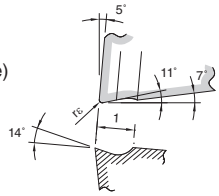
● : Std. Item

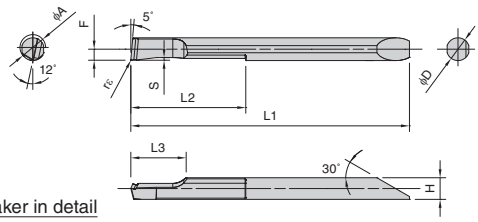
EZ Bars are sold in 1 piece boxes

EZB-ST (Boring)



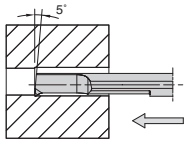
H Chipbreaker
- Without lead angle
- Tough edge (General purpose)



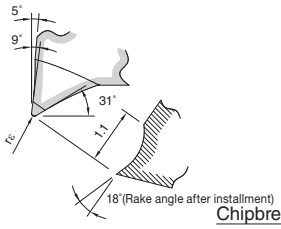


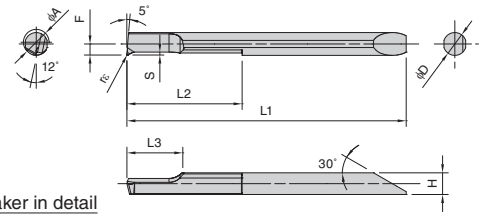
- Right-hand shown

Chipbreaker in detail



F Chipbreaker
- With lead angle
- Sharp cutting (For finishing)





- Right-hand shown

Chipbreaker in detail

EZ Bars Dimensions

Description		Min. Bore Dia.	Dimension (mm)								Grades MEGACOAT	Applicable Sleeves
		φA	φD	H	L1	L2	L3	F	S	rε	PR1225	F20~F25
EZBR	020017ST-008H	2	1.7	1.5	27.3	7	4.7	0.79	0.19	0.08 ±0.015	●	EZH017…
	025020ST-008H	2.5	2	1.82	32	8	4.8	0.94	0.16	0.08 ±0.015	●	EZH020…
	025020ST-015H									0.15 ±0.02	●	
	030025ST-008H	3	2.5	2.3	35	10.5	4.8	1.19	0.15	0.08 ±0.015	●	EZH025…
	030025ST-015H									0.15 ±0.02	●	
	035030ST-008H	3.5	3	2.8	39	13	6.8	1.44	0.18	0.08 ±0.015	●	EZH030…
	035030ST-015H									0.15 ±0.02	●	
	040035ST-008H	4	3.5	3.3	42	15	6.7	1.69	0.24	0.08 ±0.015	●	EZH035…
	040035ST-015H									0.15 ±0.02	●	
	045040ST-008H	4.5	4	3.8	49	20	9.7	1.94	0.27	0.08 ±0.015	●	EZH040…
	045040ST-015H									0.15 ±0.02	●	
	055050ST-008H	5.5	5	4.8	58.2	25	9.7	2.44	0.33	0.08 ±0.015	●	EZH050…
	055050ST-015H									0.15 ±0.02	●	
	065060ST-008H	6.5	6	5.8	66.2	30	11.8	2.94	0.38	0.08 ±0.015	●	EZH060…
	065060ST-015H									0.15 ±0.02	●	
	075070ST-008H	7.5	7	6.8	74.2	35	11.7	3.44	0.44	0.08 ±0.015	●	EZH070…
	075070ST-015H									0.15 ±0.02	●	
EZBR	020017ST-005F	2	1.7	1.5	27.3	7	4.7	0.79	0.2	0.05 ±0.01	●	EZH017…
	025020ST-005F	2.5	2	1.82	32	8	4.8	0.94	0.16	0.05 ±0.01	●	EZH020…
	025020ST-015F									0.15 ±0.02	●	
	030025ST-005F	3	2.5	2.3	35	10.5	4.8	1.19	0.2	0.05 ±0.01	●	EZH025…
	030025ST-015F									0.15 ±0.02	●	
	035030ST-005F	3.5	3	2.8	39	13	6.8	1.44	0.26	0.05 ±0.01	●	EZH030…
	035030ST-015F									0.15 ±0.02	●	
	040035ST-005F	4	3.5	3.3	42	15	6.7	1.69	0.33	0.05 ±0.01	●	EZH035…
	040035ST-015F									0.15 ±0.02	●	
	045040ST-005F	4.5	4	3.8	49	20	9.7	1.94	0.31	0.05 ±0.01	●	EZH040…
	045040ST-015F									0.15 ±0.02	●	
	055050ST-005F	5.5	5	4.8	58.2	25	9.7	2.44	0.45	0.05 ±0.01	●	EZH050…
	055050ST-015F									0.15 ±0.02	●	
	065060ST-005F	6.5	6	5.8	66.2	30	11.7	2.94	0.59	0.05 ±0.01	●	EZH060…
	065060ST-015F									0.15 ±0.02	●	
	075070ST-005F	7.5	7	6.8	74.2	35	11.7	3.44	0.65	0.05 ±0.01	●	EZH070…
	075070ST-015F									0.15 ±0.02	●	

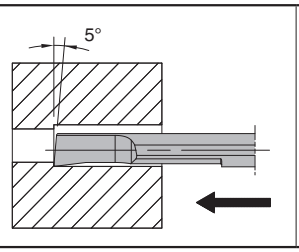
Tolerance: Offset ±0.06mm, overall length ±0.1mm, edge height +0.06/0mm

Recommended Cutting Conditions ➡F17

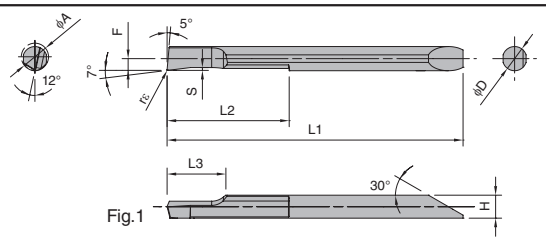
● : Std. Item

EZ Bars are sold in 1 piece boxes

EZB-NB (Boring)

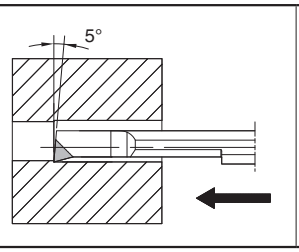


<PR1225>



• Right-hand shown

Fig.1



<KBN,KPD>

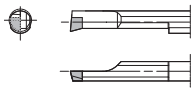
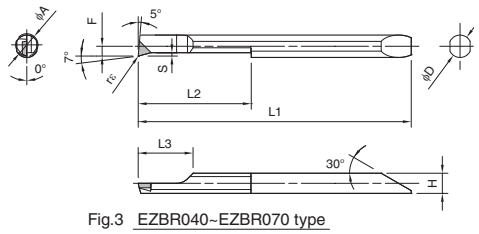


Fig.2 EZBR030 type



• Right-hand shown

Fig.3 EZBR040~EZBR070 type

EZ Bars Dimensions

Description		Min. Bore Dia.	Dimension (mm)								Drawing	Grades			Applicable Sleeves
												MEGA COAT	MEGA COAT CBN	PCD	
		φA	φD	H	L1	L2	L3	F	S	rε		PR1225	KBN05M	KPD001	F20~F25
EZBR	020017-005NB	2	1.7	1.5	27.3	7	4.7	0.79	0.2	±0.015 0.05	Fig.1	●			EZH017…
	025020-005NB	2.5	2	1.82	32	8	4.8	0.94	0.16			●			EZH020…
	030025-005NB	3	2.5	2.3	35	10.5	4.8	1.19	0.16			●			EZH025…
	035030-005NB	3.5	3	2.8	39	13	6.8	1.44	0.19			●			EZH030…
	040035-005NB	4	3.5	3.3	42	15	6.7	1.69	0.25			●			EZH035…
	045040-005NB	4.5	4	3.8	49	20	9.7	1.94	0.28			●			EZH040…
	055050-005NB	5.5	5	4.8	58.2	25	9.7	2.44	0.33			●			EZH050…
	065060-005NB	6.5	6	5.8	66.2	30	11.7	2.94	0.39			●			EZH060…
	075070-005NB	7.5	7	6.8	74.2	35	11.7	3.44	0.45			●			EZH070…
EZBR	030030-003NB	3	3	2.6	38.8	13	6.8	1.25	0.3	±0.015 0.035	Fig.2		●		EZH030…
	040040-003NB	4	4	3.6	48.8	20	9.8	1.75	0.5		Fig.3		●		EZH040…
	050050-003NB	5	5	4.6	58.1	25	9.8	2.25					●		EZH050…
	060060-003NB	6	6	5.6	66.1	30	11.8	2.75					●		EZH060…
	070070-003NB	7	7	6.6	74.1	35	11.8	3.25					●		EZH070…
EZBR	040040-003NB	4	4	3.6	48.8	20	9.8	1.75	0.5	±0.015 0.035	Fig.3			●	EZH040…
	050050-003NB	5	5	4.6	58.1	25	9.8	2.25						●	EZH050…
	060060-003NB	6	6	5.6	66.1	30	11.8	2.75						●	EZH060…
	070070-003NB	7	7	6.6	74.1	35	11.8	3.25						●	EZH070…

Recommended Cutting Conditions ➡F17

Edge Preparation

Grades	Edge Prep.	Remarks
PR1225	Sharp Edge	-
KBN05M	T00815	0.08mm x 15°Chamfered Cutting Edge
KPD001	Sharp Edge	-

● : Std. Item

EZ Bars are sold in 1 piece boxes

◆Recommended Cutting Conditions

● **H Chipbreaker (EZB-HP··H type EZB-ST··H type)**

Workpiece Material	Insert Grades (Cutting Speed Vc: m/min)		EZB020/025 type		EZB030/035 type		EZB040/045 type		EZB050/055/060/065/075 type		Remarks
	MEGACOAT	Carbide	ap (mm), f (mm/rev)								
	PR1225	**GW05**	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	-	~0.2	~0.02	~0.3	~0.03	~0.35	~0.05	~0.4	~0.07	
Non-ferrous Metals	-	~100	~0.3	~0.05	~0.4	~0.06	~0.45	~0.1	~0.5	~0.15	

● **F Chipbreaker (EZB-HP··F type EZB-ST··F type)**

Workpiece Material	Insert Grades (Cutting Speed Vc: m/min)	EZB020/025 type		EZB030/035 type		EZB040/045 type		EZB050/055/060/065/075 type		Remarks
	MEGACOAT	ap (mm), f (mm/rev)								
	PR1225	ap	f	ap	f	ap	f	ap	f	
Carbon steel / Alloy steel	30~100	~0.2	~0.03	~0.2	~0.05	~0.3	~0.07	~0.3	~0.07	Coolant
Stainless Steel	30~80	~0.2	~0.02	~0.2	~0.03	~0.25	~0.05	~0.25	~0.05	

● **NB (Without chipbreaker)**

Workpiece Material	Insert Grades (Cutting Speed Vc: m/min)	EZB020/025 type		EZB030/035 type		EZB040/045 type		EZB050/055/060/065/075 type		Remarks
	MEGACOAT	ap (mm), f (mm/rev)								
	PR1225	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	~0.2	~0.02	~0.3	~0.03	~0.35	~0.05	~0.4	~0.07	
Non-ferrous Metals	60~100	~0.3	~0.05	~0.4	~0.06	~0.45	~0.07	~0.5	~0.1	

Workpiece Material	Insert Grades (Cutting Speed Vc: m/min)		EZB030 type		EZB040/045 type		EZB050/060/070 type		Remarks
	MEGACOAT CBN	PCD	ap (mm), f (mm/rev)						
	KBN05M	**KPD001**	ap	f	ap	f	ap	f	
Non-ferrous Metals	-	~300	-	-	~0.45	~0.1	~0.5	~0.15	Coolant
Hard Materials	~100	-	~0.07	~0.03	~0.10	~0.05	~0.15	~0.07	

■ Compatibility of EZ Bars

EZ Bars are compatible with conventional Tip-Bars.

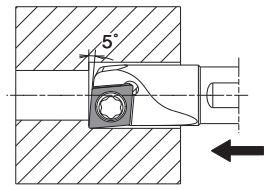
Sleeve \ Insert	**EZB···HP**	**EZB···ST/NB**	**HPB···**(Conventional)
EZH···CT/HP	✓	✓	*1 *2 ✓ (Compatible)
EZH···ST	✓	✓	*1 ✓ (Compatible)
PSH··· (Discontinued Description)	*1 ✓ (Compatible)	*1 ✓ (Compatible)	✓

*1 Some diameter types of conventional Tip-Bars are incompatible.
*2 Use them without Adjustment Pins. Overhang length of bar is not adjustable.

EZ Bar PLUS (Indexable boring bar)

S-SCLC-EZ

Max. Overhang Length L/D=~3



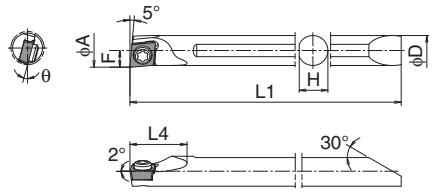


Fig.1

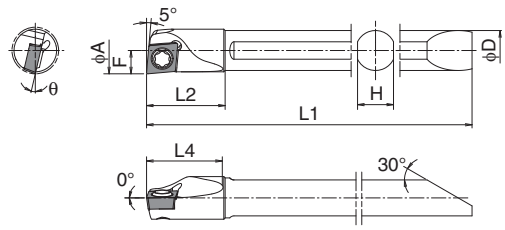


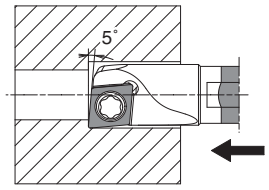
Fig.2

• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

C-SCLC-EZ

Max. Overhang Length L/D=~5



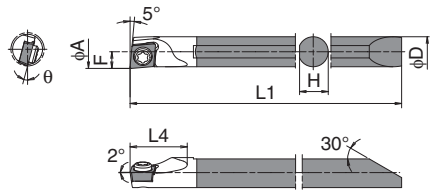


Fig.3

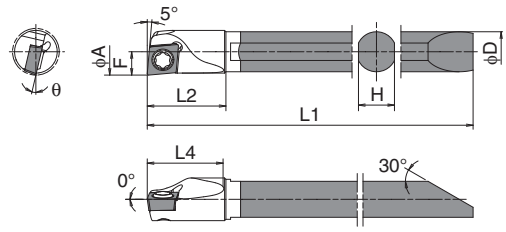


Fig.4

• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Description		Std.	Min. Bore Dia.	Dimension (mm)							θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Sleeves ➡F23
		R	ϕA	ϕD	H	L1	L2	L3	L4	F							
Steel	S045X-SCLCR03-050EZ	●	5	4.5	4.3	42.4	-	-	8.5	2.5	15°	0.2	No	Fig.1	SB-1635TR	FT-6	EZH045…
Steel	S060X-SCLCR04-070EZ	●	7	6	5.4	53.9	11.8	-	11.5	3.5	13°	0.2	No	Fig.2	SB-2035TR	FT-6	EZH060…
Carbide	C045X-SCLCR03-050EZ	●	5	4.5	4.3	51.4	-	-	8.5	2.5	15°	0.2	No	Fig.3	SB-1635TR	FT-6	EZH045…
Carbide	C060X-SCLCR04-070EZ	●	7	6	5.4	65.9	11.8	-	11.5	3.5	13°	0.2	No	Fig.4	SB-2035TR	FT-6	EZH060…

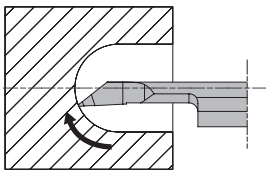
Applicable Inserts

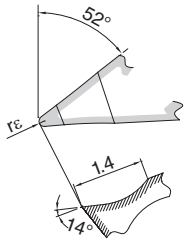
Applications	Minute ap	Finishing	Finishing / Precision	Non-ferrous Metals	Hard Materials
Ref. to Page	B48	B50, B51	B50	C24	C14
Insert / Toolholder Description	CF	L-F	L-FSF	PCD	CBN
----SCLCR03----	CCGT0301..	CCGT0301..	CCET0301..	-	CCMW0301..
----SCLCR04----	CCGT0401..	CCGT0401..	CCET0401..	CCGW0401..	CCMW0401..

Recommended Cutting Conditions ➡F91~F92

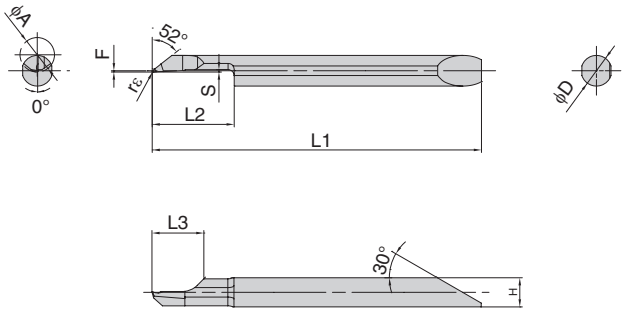
● : Std. Item

EZVB (Boring / Internal Facing / Copying) NEW





Chipbreaker in detail



• Right-hand shown

● EZ Bars Dimensions

Description		Min. Bore Dia.	Dimension (mm)								Grades MEGACOAT	Applicable Sleeves ➡F21~F25
		φA	φD	H	L1	L2	L3	F	S	rε	PR1225	
EZVBR	035030-010	3.5	3	2.8	38	8	5.8	0.17	0.22	0.1 ±0.015	●	EZH030…
	045040-010	4.5	4	3.8	43	10	6.8	0.17	0.26	0.1 ±0.015	●	EZH040…
	055050-010	5.5	5	4.8	50.2	12	7.7	0.17	0.29	0.1 ±0.015	●	EZH050…
	065060-010	6.5	6	5.8	55.2	14	8.6	0.17	0.32	0.1 ±0.015	●	EZH060…

◆Recommended Cutting Conditions

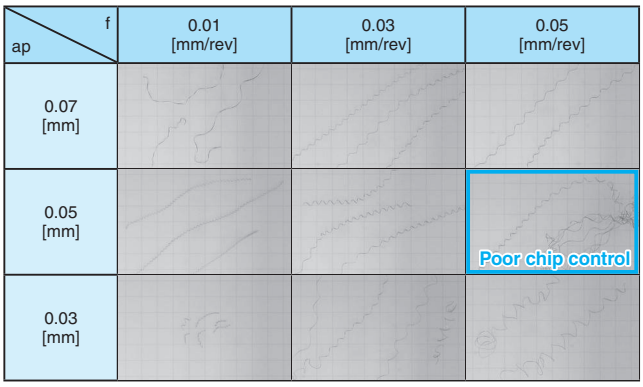
Workpiece Material	Insert Grades (Cutting Speed Vc: m/min)	EZVB035 type		EZVB045 type		EZVB055/065 type		Remarks
	MEGACOAT	ap (mm), f (mm/rev)						
	PR1225	ap	f	ap	f	ap	f	
Carbon steel / Alloy steel	30~100	~0.05	~0.04	~0.07	~0.07	~0.1	~0.07	Coolant
Stainless Steel	30~80	~0.03	~0.03	~0.05	~0.05	~0.07	~0.05	

EZVB Spherical Machining Comparison of Chip Control

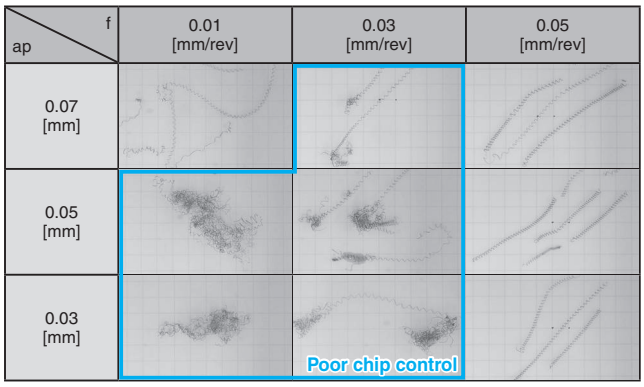
Stable machining with chip control-oriented chipbreaker

Spherical Machining

EZVBR045040-010



Competitor



Cutting Conditions: Vc=100m/min Workpiece Material: SUS304 Wet

● : Std. Item

EZH-CT sleeve NEW

Adjustable with Coolant Hole

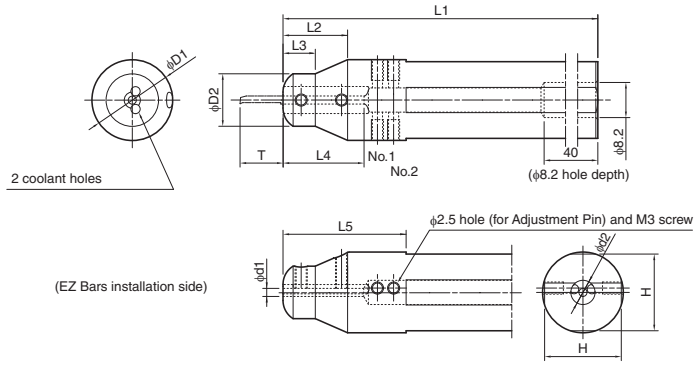


Fig.1

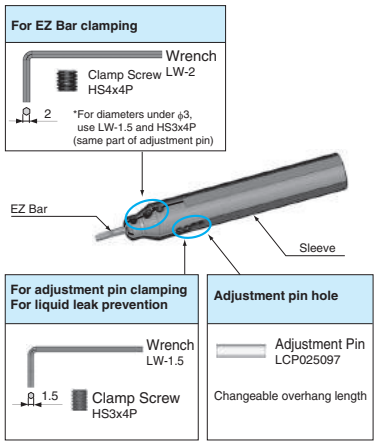
Sleeve Dimensions

Description		Std.	Dimension (mm) ϕd1	ϕD1	ϕD2	ϕd2	H	L1	L2	L3	*1L4	L5	Overhang Length of the Bar *2T (mm) Adjustment Pin Setting Position No.1	No.2	No.3	No.4	Drawing	Applicable EZ Bars F14~F16 J24
EZH	01719CT-120	●	1.7	19.05	13	6	18	120	16	8	16	30.5	7.5	3.5	-	-	Fig.1	EZBR…017…
	01720CT-120	●		20			19	120										
	01722CT-135	●		22			21	135				41.5						
	01725.0CT-135	●		25			24	135				30.5						
	01725.4CT-120	●		25.4			24.4	120										
EZH	02019CT-120	●	2	19.05	13	6	18	120	16	8	20	30.5	8.5	4.5	-	-	Fig.1	EZBR…020… *3 HPB R/L 0202-…
	02020CT-120	●		20			19	120										
	02022CT-135	●		22			21	135				41.5						
	02025.0CT-135	●		25			24	135				30.5						
	02025.4CT-120	●		25.4			24.4	120										
EZH	02519CT-120	●	2.5	19.05	13	6	18	120	16	8	20	30.5	11	7	-	-	Fig.1	EZBR…025… EZTR…025-…
	02520CT-120	●		20			19	120										
	02522CT-135	●		22			21	135				41.5						
	02525.0CT-135	●		25			24	135				30.5						
	02525.4CT-120	●		25.4			24.4	120										

*1. L4 shows ϕd1 length.
*2. Dimension T shows Overhang length of the EZB Bar when attached to sleeve.
*3. Use them without Adjustment Pins. Overhang length of bar is not adjustable.
· Choose sleeves (ϕd1) to meet with ϕD dimension of bar.
· ϕ8.2 hole on the sleeve end is prepared hole for Rc1/8 threading. Please modify by additional processing if necessary. The body hardness is 42HRC.

Spare Parts Description (for EZH-CT Sleeves)

Description		Spare Parts: Clamp Screw	Wrench	Clamp Screw	Wrench	Adjustment Pin
EZH	017…CT-..	HS3×4P (for adjustment pin, liquid leak prevention and bar)	LW-1.5 Tightening Torque 1N·m	-	-	LCP025097
	020…CT-..					
	025…CT-..					
	030…CT-..					
EZH	035…CT-..	HS3×4P (for adjustment pin and liquid leak prevention)	LW-1.5 Tightening Torque 1N·m	HS4×4P (for bar)	LW-2 Tightening Torque 2N·m	LCP025097
	040…CT-..					
	050…CT-..					
	060…CT-..					
	070…CT-..					



1) If shank dia. is ϕ2.5mm or less, Use clamp screw (HS3x4P)
For adjustment pin 2 pcs
For liquid leak prevention 2 pcs
For bar 2 pcs

2) If shank dia. is ϕ3mm, Use clamp screw (HS3x4P)
For adjustment pin 2 pcs
For liquid leak prevention 4 pcs
For bar 3 pcs

● : Std. Item

EZH-CT sleeve NEW

Adjustable with Coolant Hole

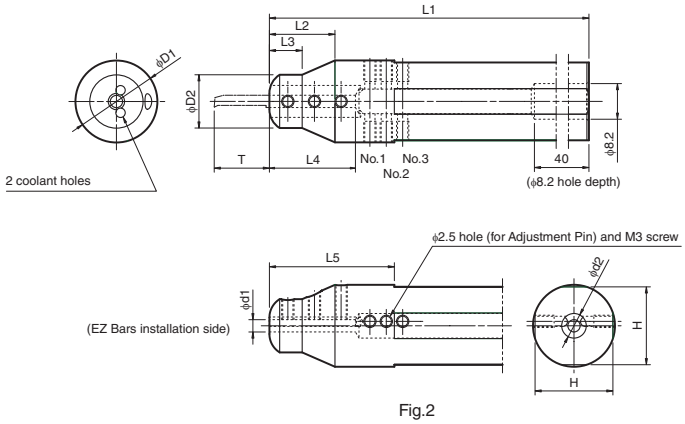
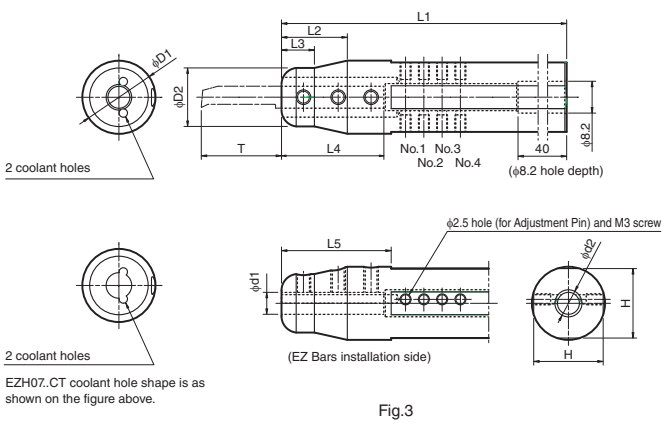


Fig.2



EZH07..CT coolant hole shape is as shown on the figure above.

Fig.3

Sleeve Dimensions

Description		Std.	Dimension (mm) ϕd1	ϕD1	ϕD2	ϕd2	H	L1	L2	L3	*1L4	L5	Overhang Length of the Bar *2T (mm) Adjustment Pin Setting Position No.1	No.2	No.3	No.4	Drawing	Applicable EZ Bars / EZ Bar PLUS ➡ F14~F16 F18, F19 ➡ G41, G64 ➡ J24
EZH	03019CT-120	●		19.05			18	120				30.5						EZBR...030...
	03020CT-120	●		20			19	120										EZVBR035030-...
	03022CT-135	●	3	22	13	6	21	135	16	8	21	41.5	13.5	9.5	5.5	-	Fig.2	EZGR...030-...
	03025.0CT-135	●		25			24	135				30.5						EZTR...030-...
	03025.4CT-120	●		25.4			24.4	120										*3 HPB^{R}/L0303-...
EZH	03519CT-120	●		19.05			18	120				31.1						
	03520CT-120	●		20			19	120										
	03522CT-135	●	3.5	22	13	6	21	135	16	8	21	41.5	15.5	11.5	7.5	-	Fig.2	EZBR...035...
	03525.0CT-135	●		25			24	135				31.1						EZTR...035-...
	03525.4CT-120	●		25.4			24.4	120										
EZH	04019CT-120	●		19.05			18	120				32.7						EZBR...040...
	04020CT-120	●		20			19	120										EZVBR045040-...
	04022CT-135	●	4	22	13	6	21	135	16	8	22	41.5	20.5	16.5	12.5	8.5	Fig.3	EZGR...040-...
	04025.0CT-135	●		25			24	135				32.7						EZFGR...040-...
	04025.4CT-120	●		25.4			24.4	120										EZTR...040-...
																		*3 HP...04-...
EZH	05019CT-120	●		19.05			18	120				30.0						EZBR...050...
	05020CT-120	●		20			19	120										EZVBR055050-...
	05022CT-135	●	5	22	16	6	21	135	18	9	26	44.0	25.5	20.5	15.5	10.5	Fig.3	EZGR...050-...
	05025.0CT-135	●		25			24	135				30.0						EZFGR...050-...
	05025.4CT-120	●		25.4			24.4	120										EZTR...050-...
																		*3 HP...05-...
EZH	06019CT-120	●		19.05			18	120				30.0						EZBR...060...
	06020CT-120	●		20			19	120										EZVBR065060-...
	06022CT-135	●	6	22	16	7.4	21	135	18	9	28	41.5	30.5 (18.5)	25.5 (13.5)	20.5 (–)	15.5 (–)	Fig.3	EZGR...060-...
	06025.0CT-135	●		25			24	135				30.0						EZTR...060-...
	06025.4CT-120	●		25.4			24.4	120										_060X-...-070EZ
																		*3 HP...0606-...
EZH	07019CT-120	●		19.05			18	120				30.0						EZBR...070...
	07020CT-120	●		20			19	120										EZGR...070-...
	07022CT-135	●	7	22	16	7.4	21	135	18	9	29	44.0	35.5	30.5	25.5	20.5	Fig.3	EZFGR...070-...
	07025.0CT-135	●		25			24	135				30.0						EZTR...070-...
	07025.4CT-120	●		25.4			24.4	120										*3 HP...07-...

*1. L4 shows ϕd1 length.
*2. Dimension T shows Overhang length of the EZB Bar when attached to sleeve. ( ) value indicates the overhang length when installed the steel boring bar (EZ Bar PLUS).
*3. Use them without Adjustment Pins. Overhang length of bar is not adjustable.
· Choose sleeves (ϕd1) to meet with ϕD dimension of bar.
· ϕ8.2 hole on the sleeve end is prepared hole for Rc1/8 threading. Please modify by additional processing if necessary. The body hardness is 42HRC.

◆ For how to fix EZ Bars (EZH-CT sleeve), please refer to F13.

● : Std. Item

EZH-HP sleeve

Adjustable

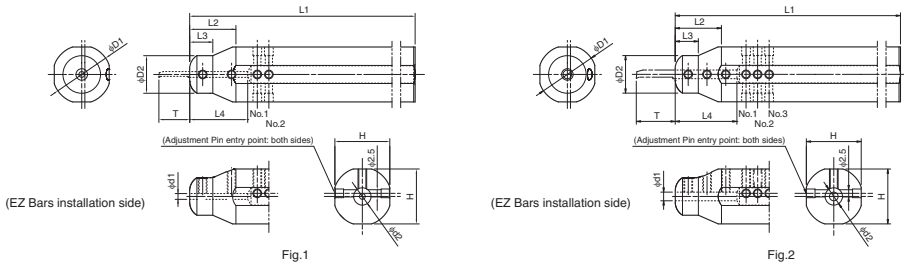


Fig.1 Fig.2

Description		Std.	Dimension (mm) φd1	φD1	φD2	φd2	H	L1	L2	L3	*1L4	Overhang Length of the Bar *2T (mm) Adjustment Pin Setting Position No.1	No.2	No.3	No.4	Drawing	Applicable EZ Bars / EZ Bar PLUS ➡ F14~F16, F19 ➡ G41, G64 ➡ J24
EZH	01716HP-100	●	1.7	16	13	6	15	100	16	8	16	7.5	3.5	-	-	Fig.1	EZBR…017…
	01719HP-120	●		19.05			18	120									
	01720HP-120	●		20			19	120									
	01722HP-135	●		22			21	135									
	01725.0HP-135	●		25			24	135									
	01725.4HP-120	●		25.4			24.4	120									
EZH	02016HP-100	●	2	16	13	6	15	100	16	8	20	8.5	4.5	-	-	Fig.1	EZBR…020… *3 HPB®0202-…
	02019HP-120	●		19.05			18	120									
	02020HP-120	●		20			19	120									
	02022HP-135	●		22			21	135									
	02025.0HP-135	●		25			24	135									
	02025.4HP-120	●		25.4			24.4	120									
EZH	02516HP-100	●	2.5	16	13	6	15	100	16	8	20	11	7	-	-	Fig.1	EZBR…025… EZTR…025-…
	02519HP-120	●		19.05			18	120									
	02520HP-120	●		20			19	120									
	02522HP-135	●		22			21	135									
	02525.0HP-135	●		25			24	135									
	02525.4HP-120	●		25.4			24.4	120									
EZH	03016HP-100	●	3	16	13	6	15	100	16	8	21	13.5	9.5	5.5	-	Fig.2	EZBR…030… EZVBR035030-… EZGR…030-… EZTR…030-… *3 HPB®0303-…
	03019HP-120	●		19.05			18	120									
	03020HP-120	●		20			19	120									
	03022HP-135	●		22			21	135									
	03025.0HP-135	●		25			24	135									
	03025.4HP-120	●		25.4			24.4	120									
EZH	03516HP-100	●	3.5	16	13	6	15	100	16	8	22	15.5	11.5	7.5	-	Fig.2	EZBR…035… EZTR…035-…
	03519HP-120	●		19.05			18	120									
	03520HP-120	●		20			19	120									
	03522HP-135	●		22			21	135									
	03525.0HP-135	●		25			24	135									
	03525.4HP-120	●		25.4			24.4	120									
EZH	04016HP-100	●	4	16	13	6	15	100	16	8	24	20.5	16.5	12.5	8.5	Fig.4	EZBR…040… EZVBR045040-… EZGR…040-… EZFGR…040-… EZTR…040-… *3 HP…04-…
	04019HP-120	●		19.05			18	120									
	04020HP-120	●		20			19	120									
	04022HP-135	●		22			21	135									
	04025.0HP-135	●		25			24	135									
	04025.4HP-120	●		25.4			24.4	120									

*1. L4 shows φd1 length.
*2. Dimension T shows Overhang length of the EZB Bar when attached to sleeve.
*3. Use them without Adjustment Pins. Overhang length of bar is not adjustable.
· Choose sleeves (φd1) to meet with φD dimension of bar.

● Spare Parts Description (for EZH-HP Sleeves)

Description		Spare Parts: Clamp Screw	Wrench	Clamp Screw	Wrench	Adjustment Pin	Applicable EZ Bars / EZ Bar PLUS	
EZH	017...HP-..	HS3×4P (for both Adjustment Pin and Bar)	LW-1.5 Tightening Torque 1N·m	-	-	LCP025140	EZBR…017…	
	020...HP-..						EZBR…020…	
	025...HP-..						EZBR…025…	EZ_R…025-…
	030...HP-..						EZBR…030…	EZ_R…030-…
EZH	035...HP-..	HS3×4P (only for Adjustment Pin)	LW-1.5 Tightening Torque 1N·m	HS4×4P (for bar)	LW-2 Tightening Torque 2N·m	LCP025140	EZBR…035…	EZ_R…035-…
	040...HP-..						EZBR…040…	EZ_R…040-…
	045...HP-..						_045X-…-050EZ	
	050...HP-..						EZBR…050…	EZ_R…050-…
	060...HP-..						EZBR…060… _060X-…-070EZ	EZ_R…060-…
	070...HP-..						EZBR…070…	EZ_R…070-…

● : Std. Item

EZH-HP sleeve

Adjustable

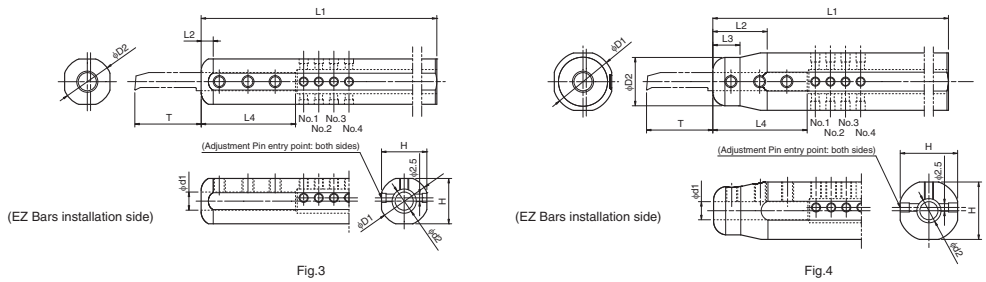


Fig.3 Fig.4

Description		Std.	Dimension (mm) φd1	φD1	φD2	φd2	H	L1	L2	L3	*1L4	Overhang Length of the Bar *2T (mm) Adjustment Pin Setting Position No.1	No.2	No.3	No.4	Drawing	Applicable EZ Bars / EZ Bar PLUS ➡ F14~F16 F18, F19 ➡ G41, G64 ➡ J24
EZH	04516HP-100	●	4.5	16	16	6	15	100	4	-	25.3	23 (14)	18.5 (9.5)	14 (-)	9.5 (-)	Fig.3	_045X-...050EZ
	04519HP-120	●		19.05			18	120	18	9						Fig.4	
	04520HP-120	●		20			19	120									
	04522HP-135	●		22			21	135									
	04525.0HP-135	●		25			24	135									
	04525.4HP-120	●		25.4			24.4	120									
EZH	05016HP-100	●	5	16	16	6	15	100	4	-	29	25.5	20.5	15.5	10.5	Fig.3	EZBR…050… EZVBR055050-… EZGR…050-… EZFGR…050-… EZTR…050-… *3 HP…05-…
	05019HP-120	●		19.05			18	120	18	9						Fig.4	
	05020HP-120	●		20			19	120									
	05022HP-135	●		22			21	135									
	05025.0HP-135	●		25			24	135									
	05025.4HP-120	●		25.4			24.4	120									
EZH	06016HP-100	●	6	16	16	8	15	100	4	-	31	30.5 (18.5)	25.5 (13.5)	20.5 (-)	15.5 (-)	Fig.3	EZBR…060… EZVBR065060-… EZGR…060-… EZTR…060-… _060X-…-070EZ *3 HP…0606-…
	06019HP-120	●		19.05			18	120	18	9						Fig.4	
	06020HP-120	●		20			19	120									
	06022HP-135	●		22			21	135									
	06025.0HP-135	●		25			24	135									
	06025.4HP-120	●		25.4			24.4	120									
EZH	07016HP-100	●	7	16	16	8	15	100	4	-	33	35.5	30.5	25.5	20.5	Fig.3	EZBR…070… EZGR…070-… EZFGR…070-… EZTR…070-… *3 HP…07-…
	07019HP-120	●		19.05			18	120	18	9						Fig.4	
	07020HP-120	●		20			19	120									
	07022HP-135	●		22			21	135									
	07025.0HP-135	●		25			24	135									
	07025.4HP-120	●		25.4			24.4	120									

*1. L4 shows φd1 length.
*2. Dimension T shows Overhang length of the EZB Bar when attached to sleeve. ( ) value indicates the overhang length when installed the steel boring bar (EZ Bar PLUS).
*3. Use them without Adjustment Pins. Overhang length of bar is not adjustable.
· Choose sleeves (φd1) to meet withφD dimension of bar.

Sleeve Identification System

EZ H 017 16 HP - 100

Symbol of EZ Bars	Applications	Shank Dia. of EZ Bars	Sleeve Shank Dia.	Symbol of Precision		Overall length of sleeve
	H: Sleeve	017: 1.7mm, 025: 2.5mm···	16: 16mm, 25.4: 25.4mm···	CT: High precision, with coolant hole		100: 100mm, 120: 120mm···
				HP: High Precision	ST: Standard	

How to attach bar to sleeve

■ How to use adjustment pin (Fig.5)
(1) Put the adjustment pin into the hole.
(2) Push it into the sleeve, using the wrench (LW-1.5).
(3) Tightening the clamp screw (HS3X4P) with wrench (LW-1.5) to fix the adjustment screw.

■ How to fix bar (Fig.6)
(1) With the chip pocket upward, set the bar in sleeve. Press the slant of the end of the bar with the adjustment pin. Make sure that the bar does not move (Fig.7)
(2) Tighten the clamp screw with wrench (LW-2) and fix the bar.
(Use LW-1.5 if shank dia. is 3mm or less)

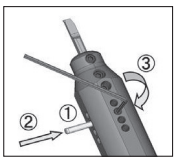


Fig.5
How to use adjustment pin

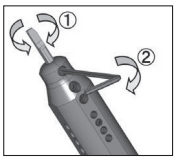


Fig.6
How to fix bar

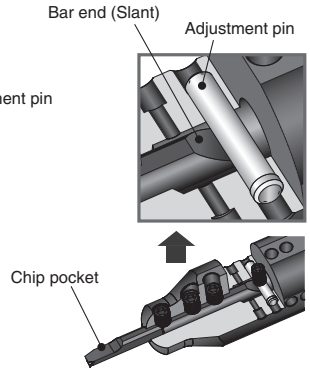
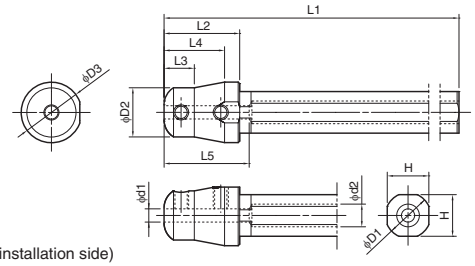


Fig.7: Fixed bar

● : Std. Item

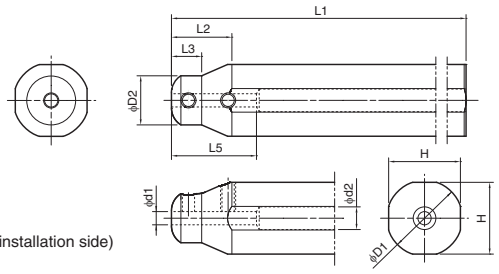
EZH-ST sleeve

Not-adjustable



(EZ Bars installation side)

Fig.1



(EZ Bars installation side)

Fig.2

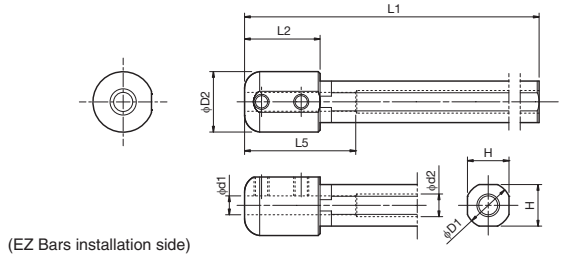
Description		Std.	Dimension (mm) ϕd1	ϕD1	ϕD2	ϕD3	ϕd2	H	L1	L2	L3	L4	*L5	Drawing	Applicable Bars ➡ F14~F16, F19, F34 ➡ G41, G44, G64, G67 ➡ J24, J28
EZH	01712ST-80	●	1.7	12	13	16	6	11	80	20	8	16	16	Fig.1	EZBR…017…
	01716ST-100	●		16		-		15	100	16		-		Fig.2	
	01719ST-120	●		19.05				18	120						
	01720ST-120	●		20				19	120						
	01722ST-135	●		22				21	135						
	01725.0ST-135	●		25				24	135						
	01725.4ST-120	●		25.4				24.4	120						
EZH	02012ST-80	●	2	12	13	16	6	11	80	20	8	16	20	Fig.1	EZBR…020… HPB R/L0202-…
	02016ST-100	●		16		-		15	100	16		-		Fig.2	
	02019ST-120	●		19.05				18	120						
	02020ST-120	●		20				19	120						
	02022ST-135	●		22				21	135						
	02025.0ST-135	●		25				24	135						
	02025.4ST-120	●		25.4				24.4	120						
EZH	02512ST-80	●	2.5	12	13	16	6	11	80	20	8	16	20	Fig.1	EZBR…025… EZTR…025-…
	02516ST-100	●		16		-		15	100	16		-		Fig.2	
	02519ST-120	●		19.05				18	120						
	02520ST-120	●		20				19	120						
	02522ST-135	●		22				21	135						
	02525.0ST-135	●		25				24	135						
	02525.4ST-120	●		25.4				24.4	120						
EZH	03012ST-80	●	3	12	13	16	6	11	80	20	8	16	21	Fig.1	EZBR…030… EZVBR035030-… EZGR…030-… EZTR…030-… HPB R/L0303-…
	03016ST-100	●		16		-		15	100	16		-		Fig.2	
	03019ST-120	●		19.05				18	120						
	03020ST-120	●		20				19	120						
	03022ST-135	●		22				21	135						
	03025.0ST-135	●		25				24	135						
	03025.4ST-120	●		25.4				24.4	120						
EZH	03512ST-80	●	3.5	12	13	16	6	11	80	20	8	16	22	Fig.1	EZBR…035… EZTR…035-…
	03516ST-100	●		16		-		15	100	16		-		Fig.2	
	03519ST-120	●		19.05				18	120						
	03520ST-120	●		20				19	120						
	03522ST-135	●		22				21	135						
	03525.0ST-135	●		25				24	135						
	03525.4ST-120	●		25.4				24.4	120						
EZH	04012ST-80	●	4	12	13	16	6	11	80	20	8	16	24	Fig.1	EZBR…040… EZVBR045040-… EZGR…040-… EZFGR…040-… EZTR…040-… HP…04-…
	04016ST-100	●		16		-		15	100	16		-		Fig.2	
	04019ST-120	●		19.05				18	120						
	04020ST-120	●		20				19	120						
	04022ST-135	●		22				21	135						
	04025.0ST-135	●		25				24	135						
	04025.4ST-120	●		25.4				24.4	120						

*L5 shows ϕd1 length
· Choose sleeves (ϕd1) to meet with ϕD dimension of bar.
· Adjustment Pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT / HP sleeves.

● : Std. Item

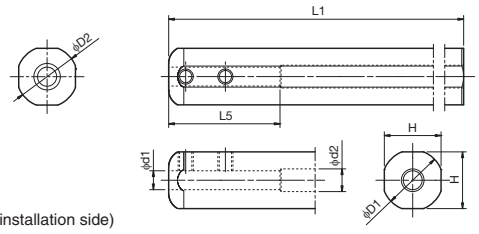
EZH-ST sleeve

Not-adjustable



(EZ Bars installation side)

Fig.3



(EZ Bars installation side)

Fig.4

Description		Std.	Dimension (mm) ϕd1	ϕD1	ϕD2	ϕD3	ϕd2	H	L1	L2	L3	L4	*L5	Drawing	Applicable Bars F14~F16, F18, F19, F34 / G41, G44, G64, G67 / J24, J28
EZH	05012ST-80	●	5	12	16	-	6	11	80	20	-	-	29	Fig.3	EZBR…050… EZVBR055050-… EZGR…050-… EZFGR…050-… EZTR…050-… HP…05-…
	05016ST-100	●		16				15	100	-				Fig.4	
	05019ST-120	●		19.05				18	120	18	9			Fig.2	
	05020ST-120	●		20				19	120						
	05022ST-135	●		22				21	135						
	05025.0ST-135	●		25				24	135						
	05025.4ST-120	●		25.4				24.4	120						
EZH	06012ST-80	●	6	12	16	-	8	11	80	20	-	-	31	Fig.3	EZBR…060… EZVBR065060-… EZGR…060-… EZTR…060-… _060X-…-070EZ HP…0606-…
	06016ST-100	●		16				15	100	-				Fig.4	
	06019ST-120	●		19.05				18	120	18	9			Fig.2	
	06020ST-120	●		20				19	120						
	06022ST-135	●		22				21	135						
	06025.0ST-135	●		25				24	135						
	06025.4ST-120	●		25.4				24.4	120						
EZH	07012ST-80	●	7	12	16	-	8	11	80	20	-	-	33	Fig.3	EZBR…070… EZGR…070-… EZFGR…070-… EZTR…070-… HP…07-…
	07016ST-100	●		16				15	100	-				Fig.4	
	07019ST-120	●		19.05				18	120	18	9			Fig.2	
	07020ST-120	●		20				19	120						
	07022ST-135	●		22				21	135						
	07025.0ST-135	●		25				24	135						
	07025.4ST-120	●		25.4				24.4	120						

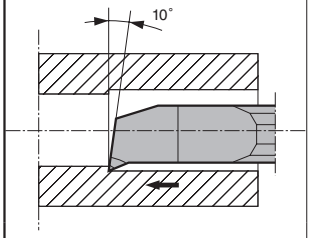
*L5 shows ϕd1 length
· Choose sleeves (ϕd1) to meet with ϕD dimension of bar.
· Adjustment Pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT / HP sleeves.

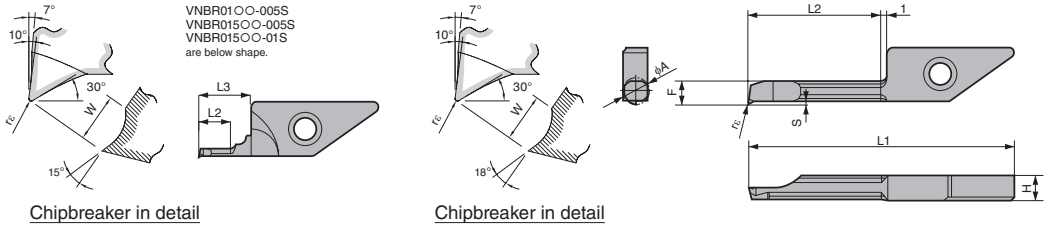
Spare Parts Description (for EZH-ST Sleeves)

Description		Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable EZ Bars: EZB-HP EZB-ST EZB-NB	Applicable EZ Bars: EZG EZFG EZT EZVB	EZ Bar PLUS: S-SCLC C-SCLC	2-Edge Tip-Bars: HP
EZH	017...ST-..	HS3×4P	LW-1.5 Tightening Torque 1N·m	EZBR…017…	-	-	-
	020...ST-..			EZBR…020…			HPB R/L0202-…
	025...ST-..			EZBR…025…	EZTR…025-…	-	-
	030...ST-..			EZBR…030…	EZ_R…030-…	-	HPB R/L0303-…
EZH	035...ST-..	HS4×4P	LW-2 Tightening Torque 2N·m	EZBR…035…	EZTR…035-…	-	-
	040...ST-..			EZBR…040…	EZ_R…040-…	-	HP…04-…
	050...ST-..			EZBR…050…	EZ_R…050-…	-	HP…05-…
	060...ST-..			EZBR…060…	EZ_R…060-…	_060X-…-070EZ	HP…0606-…
	070...ST-..			EZBR…070…	EZ_R…070-…	-	HP…07-…

● : Std. Item

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



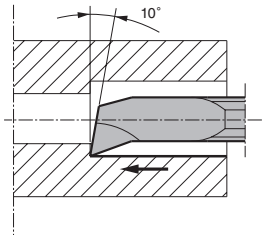


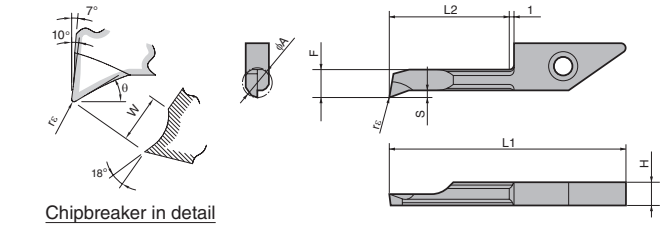
Chipbreaker in detail

Chipbreaker in detail

• Right-hand shown

VNB (Boring)





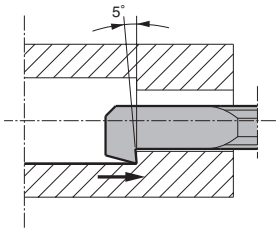
Chipbreaker in detail

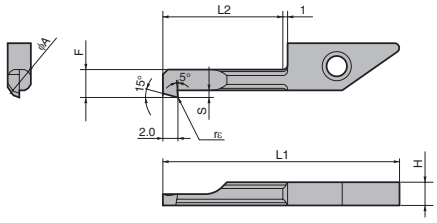
• Right-hand shown

–NB Type (without Chipbreaker) Top Shape

Top Shape	Grades
	Coated Carbide Carbide
	PCD

VNBT (Back Boring)





• Right-hand shown

● Insert Dimensions (VNB-S)

Description		Min. Bore Dia.	Dimension (mm)								Grades				
											MEGA COAT	PVD	Carbide	PCD	
		ϕA	H	L1	L2	L3	F	S	rε	W	PR1225	PR930	KW10	KPD001	KPD010
VNBR	0103-005S	1.0	3.9	26.5	3	7	0.85	0.2	0.05 (+0 -0.02)	0.7	●	●			
	0105-005S				5						●	●			
	01503-005S	1.5			3		1.3				●	●			
	01505-005S				5						●	●			
	0206-005S	2.0			6	-	1.8	0.25		0.8	●	●			
	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		3.0	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	3	7	1.3	0.2	0.1 (+0 -0.03)	0.7	●	●			
	01505-01S				5						●	●			
	0206-01S	2.0			6	-	1.8	0.25		0.8	●	●			
	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		3.0	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	0.2 (+0 -0.04)	0.8	●	●			
	0420-02S			39.8	20						●	●			

Recommended Cutting Conditions ➡ F90

● : Std. Item

System Tip-Bars are sold in 5 piece boxes

● Insert Dimensions (VNB / VNB-NB / VNBT)

Description		Min. Bore Dia.	Dimension (mm)								Grades				
											MEGA COAT	PVD	Carbide	PCD	
		φA	H	L1	L2	F	S	rε	W	θ	PR1225	PR930	KW10	KPD001	KPD010
VNBR	0206-003	2	3.9	26.5	6	1.8	0.25	0.03	1.2	24°	●	●	●		
	0311-003	3		30.8	11	2.6	0.4		1.8		●	●	●		
	0411-003	4				3.5	0.5		2.7	23°	●	●	●		
	0420-003			39.8	20						●	●	●		
	0511-003	5		30.8	11	4.5	0.7		3.0		●	●	●		
	0520-003			39.8	20						●	●	●		
	0620-003	6				5.3	1.0			24°	●	●	●		
	0630-003			49.8	30						●	●	●		
	0720-003	7		39.8	20	6.2	1.0					●	●		
	0730-003			49.8	30							●	●		
VNBR	0206-01	2	3.9	26.5	6	1.8	0.25	0.1	1.2	24°	●	●	●		
	0311-01	3		30.8	11	2.6	0.4		1.8		●	●	●		
	0411-01	4				3.5	0.5		2.7	23°	●	●	●		
	0420-01			39.8	20						●	●	●		
	0511-01	5		30.8	11	4.5	0.7		3.0		●	●	●		
	0520-01			39.8	20						●	●	●		
	0620-01	6				5.3	1.0			24°	●	●	●		
	0630-01			49.8	30						●	●			
	0720-01	7		39.8	20	6.2	1.0					●	●		
	0730-01			49.8	30							●			
VNBR	0206-02	2	3.9	26.5	6	1.8	0.25	0.2	1.2	24°	●	●	●		
	0311-02	3		30.8	11	2.6	0.4		1.8		●	●	●		
	0411-02	4				3.5	0.5		2.7	23°	●	●	●		
	0420-02			39.8	20						●	●	●		
	0511-02	5		30.8	11	4.5	0.7		3.0		●	●	●		
	0520-02			39.8	20						●	●	●		
	0620-02	6				5.3	1.0			24°	●	●	●		
	0630-02			49.8	30						●	●	●		
	0720-02	7		39.8	20	6.2	1.0				●	●	●		
	0730-02			49.8	30						●	●	●		
VNBR	0206-003NB	2	3.9	26.5	6	1.8	0.25	0.03	-	15°		●	●		
	0311-003NB	3		30.8	11	2.6	0.4					●	●		
	0411-003NB	4				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				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	-	15°			●		
	0311-02NB	3		30.8	11	2.6	0.4						●		
	0411-02NB	4				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				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					●	●		
	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 ➡ F90

● : Std. Item

System Tip-Bars are sold in 5 piece boxes

SVN-N (without side stopper)

SVNS-N (without side stopper / without setscrew)

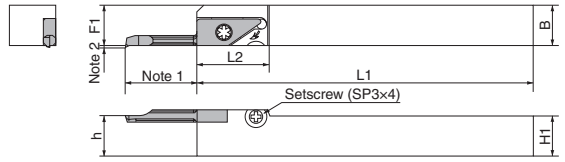


Fig.1 (SVN-N)

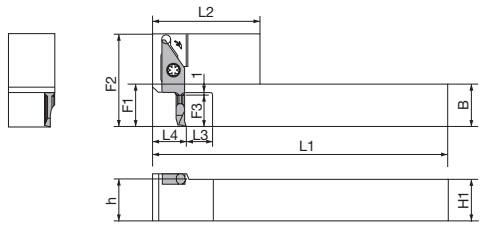


Fig.2 (SVNS-N)

• Right-hand shown

Right-hand Insert for Right-hand Toolholder.

Note 1 & Note 2: For insert dimensions, ref. to page **F26~F27**

Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	B	L1	L2	L3	L4	F1	F2	F3	Drawing	Spare Parts: Clamp Screw	Wrench	Setscrew	Applicable Inserts (F26~F27, G43, G66, J30)
SVNR	1010H-12N	●	10	10	100	22	-	-	10	-	-	Fig.1	SB-3080TR	FT-10	SP3×4	VNBR....-...
	1212K-12N	●	12	12	125				12							VNBTR....-...
	1616K-12N	●	16	16					16							VNGR....-..
	2020K-12N	●	20	20					20							VNFGR....-..
	2525M-12N	●	25	25	150				25							VNTR...-..
SVNSR	1010K-12-06N	●	10	10	125	45	10	12	10	29	6	Fig.2	SB-3080TR	LTW-10S	-	(VNBR..06-...)*
	1010K-12-11N	●	10	10	125		10	12	10	33	11					(VNBR..11-...)* (VNBTR..11-...)* (VNGR....-11)* (VNTR...-11)*
	1212M-12-06N	●	12	12	150		10	12	12	29	6					(VNBR..06-...)*
	1212M-12-11N	●	12	12	150		10	12	12	33	11					(VNBR..11-...)* (VNBTR..11-...)* (VNGR....-11)* (VNTR...-11)*
	1212M-12-20N	●	12	12	150		10	13	12	42	20					(VNBR..20-...)* (VNBTR..20-...)* (VNGR....-20)*
	1616M-12-06N	●	16	16	150		16	12	16	29	6					(VNBR..06-...)*
	1616M-12-11N	●	16	16	150		16	12	16	33	11					(VNBR..11-...)* (VNBTR..11-...)* (VNGR....-11)* (VNTR...-11)*
	1616M-12-20N	●	16	16	150		16	13	16	42	20					(VNBR..20-...)* (VNBTR..20-...)* (VNGR....-20)*

1. SVN-N / S···SVN-N / S···SVN-SN (without side stopper) retains high index accuracy by simple restraint.
2. SVN-N (without side stopper) has a setscrew SP3X4. Changing the setscrew SP3X4 to a screw HS3x4 (sold separately) enables the toolholder to be used as a binding effect toolholder similar to the side stopper toolholder.

* All system Tip-Bars Inserts are used with a SVNSR-N Toolholders. 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 toolholders corresponds to the L2 dimension of the insert.

Spare Parts (Optional)

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

● : Std. Item

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

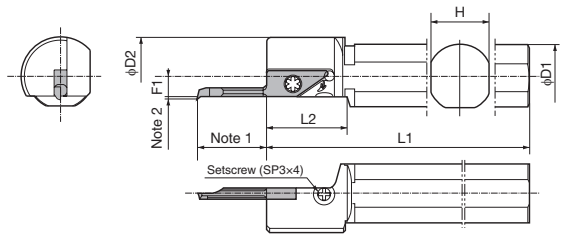


Fig.1 (S···SVN-N)

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

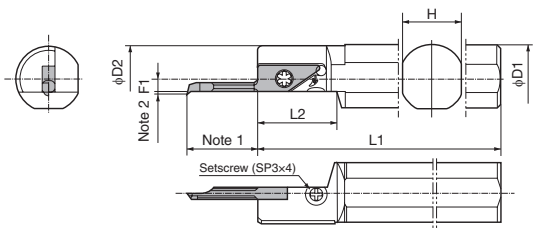


Fig.2 (S···SVN-SN)

• Right-hand shown

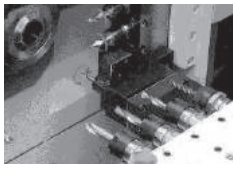
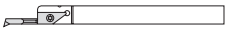
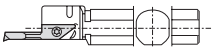
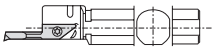
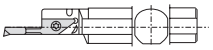
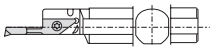
Right-hand Insert for Right-hand Toolholder.

Note 1 & Note 2: For insert dimensions, ref. to page **F26~F27**

Toolholder Dimensions

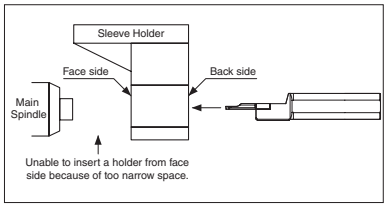
Description	Std.	Dimension (mm) φD1	φD2	H	L1	L2	F1		Drawing	Spare Parts: Clamp Screw	Wrench	Screw Side Stopper	Setscrew	Wrench	Applicable Inserts
S12F-SVNR12N	●	12	20	11	80	23	4		Fig.1	SB-3080TR	FT-10	-	SP3×4	-	F26~F27, G43, G66, J30
S14G-SVNR12N	●	14	20	13	90										VNBR....-.. VNBTR....-... VNGR....-.. VNFGR....-.. VNTR....-..
S16H-SVNR12N	●	16	24	15	100		6								
S19H-SVNR12N	●	19.05	24	17	100	24									
S19N-SVNR12N	●				160										
S20H-SVNR12N	●	20	24	18	100										
S25H-SVNR12N	●	25.4	30	23	100										
S25Q-SVNR12N	●				180										
S19H-SVNR12SN	●	19.05	18.5	17	100	23	4		Fig.2	SB-3080TR	FT-10	-	SP3×4	-	
S20H-SVNR12SN	●	20	19.5	18											
S22K-SVNR12SN	●	22	21.5	20	125										
S25.0G-SVNR12SN	●	25	24.5	23	90										

Selection of System Tip-Bars

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) 

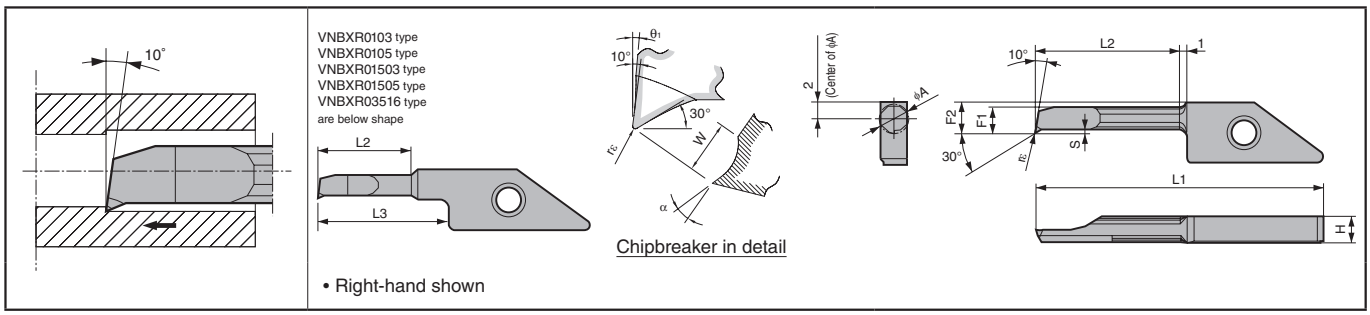
Q: There are standard types (head dia. is larger than shank) and straight types for round shanks. What is each one used for?

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. below). 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.



● : Std. Item

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



Insert Dimensions (VNBX-S)

Description		Min. Bore Dia.	Dimension (mm)											Grades PVD Coated Carbide		
		ϕA	H	L1	L2	L3	F1	F2	S	rε	W	θ1	α	PR930		
VNBXR	0103-005S	1.0	3.9	26.5	3	7	0.85	2.95	0.2	+0 -0.02 0.05	0.7	7°	15°	●		
	0105-005S				5									●		
	01503-005S	1.5			3		1.3							●		
	01505-005S				5									●		
	0206-005S	2.0			6	-	1.8	3	0.25		0.8	8°	18°	●		
	0311-005S	3.0		30.8	11		2.6	3.5	0.4					●		
	03511-005S	3.5					3.1	3.75	0.45					●		
	03516-005S			39.8	16	21								●		
	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	2.95	0.2	+0 -0.03 0.1	0.7	7°	15°	●		
	01505-01S				5									●		
	0206-01S	2.0			6	-	1.8	3	0.25		0.8	8°	18°	●		
	0311-01S	3.0		30.8	11		2.6	3.5	0.4					●		
	03511-01S	3.5					3.1	3.75	0.45					●		
	03516-01S			39.8	16	21								●		
	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	+0 -0.04 0.2				●		
	0420-02S			39.8	20									●		

Recommended Cutting Conditions ➡ F90

Attachment toolholder for VNBX-S System Tip-Bars

1. There are three different types of attachment toolholder for the VNBX-S System Tip-Bars (Ref. to Page **F31**).
   (1) SVNS-XN Type (without Side Stopper)
   (2) S···SVN-XN Type (without Side Stopper)
   (3) S···SVN-SXN Type (without Side Stopper)
2. Above toolholders assure high index accuracy by easy restraint.
3. Setscrews (SP3x4) are attached. Toolholders without Side Stopper can be used as a binding effect toolholder when removing the clamp screws and inserting screws (HS3x4: sold separately) with a wrench (LW-1.5: sold separately).

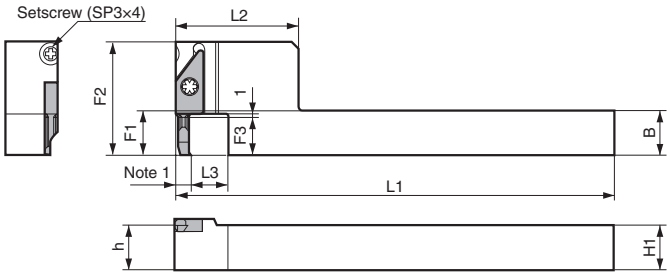
Spare Parts (Optional)

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

● : Std. Item

System Tip-Bars are sold in 5 piece boxes

SVNS-XN (Square Shank: L-shape)



• Right-hand shown

Right-hand Insert for Right-hand Toolholder.

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

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

Description	Std.	Dimension (mm)										Spare Parts			*Applicable Inserts ➡ F30
		H1=h	B	L1	L2	L3	F1	F2	F3			Clamp Screw	Wrench	Setscrew	
SVNSR 1010K-12-06XN	●	10	10	125	45	10	10	29	6			SB-3080TR	LTW-10S	SP3×4	(VNBXR02..)
1010K-12-11XN	●							33	11						(VNBXR..11..)
1212M-12-06XN	●	12	12	150			12	29	6						(VNBXR02..)
1212M-12-11XN	●							33	11						(VNBXR..11..)
1212M-12-20XN	●							42	20						(VNBXR0420..)
1616M-12-06XN	●	16	16			16	16	29	6						(VNBXR02..)
1616M-12-11XN	●							33	11						(VNBXR..11..)
1616M-12-20XN	●							42	20						(VNBXR0420..)

* All VNBXR Inserts can be attached to 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)

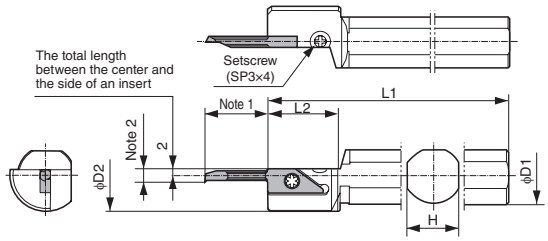


Fig.1 (S···SVN-XN)

S···SVN-SXN (Round Shank: Straight type)

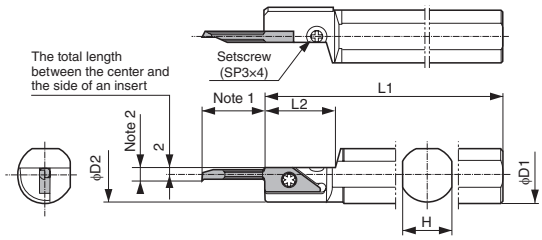


Fig.2 (S···SVN-SXN)

• Right-hand shown

Right-hand Insert for Right-hand Toolholder.

Note 1: The dimension of Note 1 shows the applicable insert (VNBX) L2 dimension +1 mm.
Note 2: The dimension of Note 1 is same size as the applicable insert (VNBX) F2 dimension.

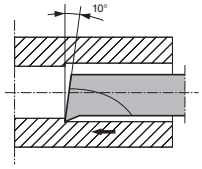
● Toolholder Dimensions (Holder center axis core and insert center are coaxial type)

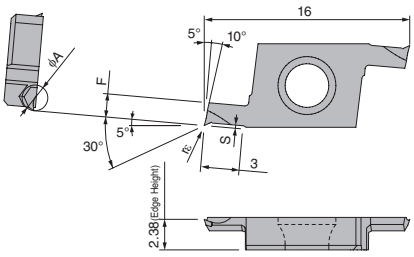
Description	Std.	Dimension (mm)								Drawing	Spare Parts			Applicable Inserts ➡ F30
		φD1	φD2	H	L1	L2					Clamp Screw	Wrench	Setscrew	
S12F -SVNR12XN	●	12	20	11	80	23				Fig.1	SB-3080TR	FT-10	SP3×4	VNBXR...
S14G -SVNR12XN	●	14		13	90									
S16H -SVNR12XN	●	16	24	15	100									
S19H -SVNR12XN	●	19.05		17		24								
S19N -SVNR12XN	○				160									
S20H -SVNR12XN	●	20		18	100									
S25H -SVNR12XN	●	25.4	30	23										
S25Q -SVNR12XN	●				180									
S19H -SVNR12SXN	●	19.05	18.5	17	100	23				Fig.2	SB-3080TR	FT-10	SP3×4	VNBXR...
S20H -SVNR12SXN	●	20	19.5	18										
S22K -SVNR12SXN	●	22	21.5	20	125									
S25.0G -SVNR12SXN	●	25	24.5	23	90									

*Reminder of applicable insert.

● : Std. Item ○ : Check Availability

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





• Right-hand shown

Description		Min. Bore Dia. φA	Dimension (mm) F	S	rε	Grades PVD Coated Carbide PR1025	
TWBR	01003-005	1.0	0.85	0.2	+0 -0.02 0.05	●	
	01503-005	1.5	1.30			●	
	02003-005	2.0	1.75	0.25		●	
	02503-005	2.5	2.10	0.3		●	
	03003-005	3.0	2.40	0.4		●	
TWBR	01503-010	1.5	1.30	0.2	+0 -0.03 0.1	●	
	02003-010	2.0	1.75	0.25		●	
	02503-010	2.5	2.10	0.3		●	
	03003-010	3.0	2.40	0.4		●	

STW (Square Shank for Horizontal type insert)

(For Left-hand toolholders for grooving,please ref. to page **G68**.)

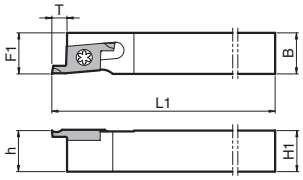


Fig.1

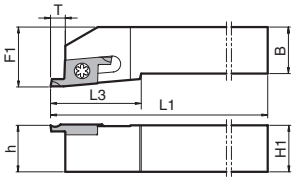


Fig.2

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, (Left-hand Insert for Left-hand Toolholder.)

● Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	B	L1	L2	L3	F1	F2	T		Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts ➔ F32
STWR	1212F-15	●	12	12	85	-	-	12	-	3		Fig.1	SB-3080TR	LTW-10S	TWBROOOOO-OOO
	1212K-15	●	12	12	125			12							
	1616K-15	●	16	16				16							
	2020K-15	●	20	20			25	25				Fig.2			
	2525M-15	●	25	25	150			32							

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

(For Left-hand toolholders for grooving,please ref. to page **G68**.)

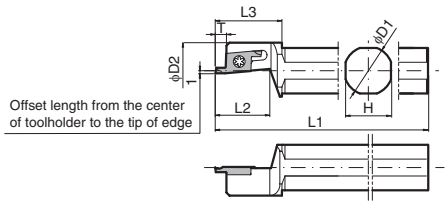


Fig.1

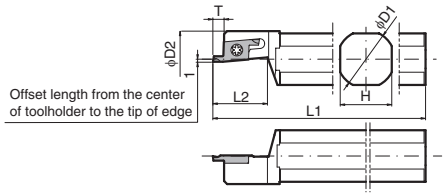


Fig.2

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, (Left-hand Insert for Left-hand Toolholder.)

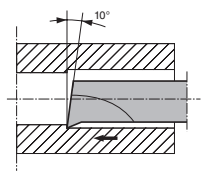
● Toolholder Dimensions

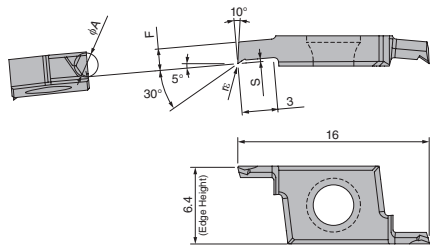
Description		Std.	Dimension (mm) φD1	φD2	H	L1	L2	L3	T	Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts ➔ F32
S12F-	STWR15	●	12	20	11	80	18	22	3	Fig.1	SB-3080TR	LTW-10S	TWBROOOOO-OOO
S14H-	STWR15	●	14		13	100							
S15F-	STWR15	●	15.875		15	85							
S16F-	STWR15	●	16										
S19G-	STWR15	●	19.05	18.5	17	90		-	3	Fig.2			
S19K-	STWR15	●				120							
S20G-	STWR15	●	20	19.5	18	90							
S20K-	STWR15	●				120							
S22K-	STWR15	●	22	21.5	20	125	22						
S25.0J-	STWR15	●	25	24.5	23	110							
S25K-	STWR15	●	25.4	25	23	120							

● : Std. Item

Twin-Bars are sold in 5 piece boxes

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

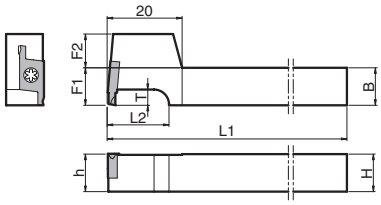




• Right-hand shown

Description		Min. Bore Dia. φA	Dimension (mm) F	S	rε	Grades PVD Coated Carbide PR1025	
TWBTR	01003-005	1.0	0.85	0.2	0.05 +0 -0.02	●	
	01503-005	1.5	1.30			●	
	02003-005	2.0	1.75	0.25		●	
	02503-005	2.5	2.10	0.3		●	
	03003-005	3.0	2.30	0.4		●	
TWBTR	01503-010	1.5	1.30	0.2	0.1 +0 -0.03	●	
	02003-010	2.0	1.75	0.25		●	
	02503-010	2.5	2.10	0.3		●	
	03003-010	3.0	2.30	0.4		●	

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



• Right-hand shown

● Toolholder Dimensions

Description		Std.	Dimension (mm) H1=h	B	L1	L2	L3	F1	F2	T		Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts ➡ F33 ➡ G69
STWSR	1010JX-15T	●	10	10	120	16	-	10	9	3		-	SB-3080TR	LTW-10S	TWBTROOOOO-OOO TWFGTROOO
	1212JX-15T	●	12	12				12	7						
	1616JX-15T	●	16	16		20		16	3						
STWSR	1010F-15T	●	10	10	85	16	-	10	9						
	1212F-15T	●	12	12				12	7						

◆ Recommended Cutting Conditions (TWB / TWBT)

Workpiece Material	Recommended Insert Grades (Cutting Speed Vc: m/min) PVD Coated Carbide PR1025	TWBR01003 type TWBR01503 type TWBTR01003 type TWBTR01503 type		TWBR02003 type TWBR02503 type TWBR03003 type TWBTR02003 type TWBTR02503 type TWBTR03003 type		Remarks
		ap (mm), 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	

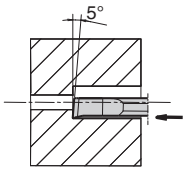
★: 1st Recommendation

● : Std. Item

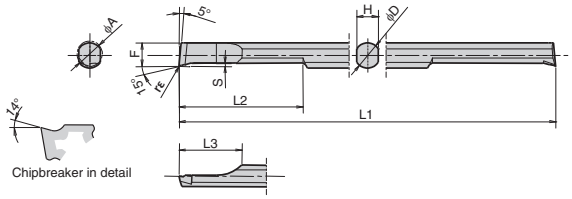
Twin-Bars are sold in 5 piece boxes

2-Edge Tip-Bars HPB / HPBT

HPB (Boring)

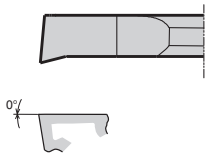


Ref. to Page for Applicable Sleeve ➡ **F24, F25**

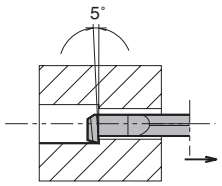


• Right-hand shown

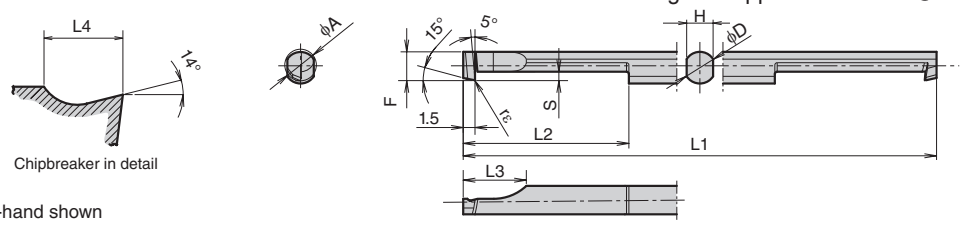
NB Type Top Shape
(without Chipbreaker)



HPBT (Back Boring)



Ref. to Page for Applicable Sleeve ➡ **F24, F25**



• Right-hand shown

● Tip-Bars Dimensions

Description		Min. Bore Dia.	Dimension (mm)								Grades			
											PVD Coated Carbide		Carbide	
											PR930		KW10	
		ϕA	ϕD	H	L1	L2	L3	F	S	rε	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	●	●	●	
	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			●	●	●	
HPBR	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	●	○	●	
	0505-005	5	5	4.3	70	26		4.55	1.3		●	●	●	

◆ Description Table for Tip-Bars and Applicable Sleeves

Tip-Bars Description		Applicable Sleeves ➡ F24,F25	
HPB R/L	0202-···	EZH	02…
	0303-···		03…
	0404-···		04…
	0505-···		05…
	0606-···		06…
	0707-···		07…
HPBT R/L	0404-···	EZH	04…
	0505-···		05…

◆ Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grades (Cutting Speed Vc: m/min)		HPB02 type		HPB03 type		HPB04 type HPBT04 type		HPB05/06/07 type HPBT05 type		Remarks
	PVD Coated Carbide	Carbide	ap (mm), 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	

★: 1st Recommendation

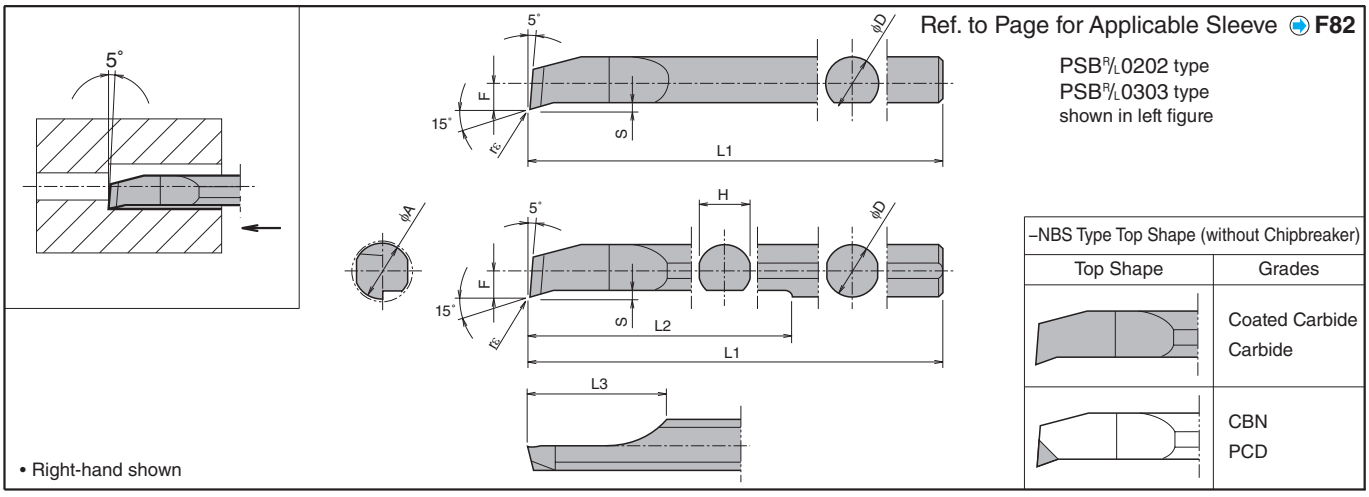
● : Std. Item ○ : Check Availability

Tip-Bars are sold in 1 piece boxes.

Tip-Bars for Micro Boring

PSB-S (Boring) <Adjustable Overhang Length>

This insert will be switched to **EZB** type (EZ Bars, ref. to page **F14**)



Ref. to Page for Applicable Sleeve **F82**

PSB R/L 0202 type
PSB R/L 0303 type
shown in left figure

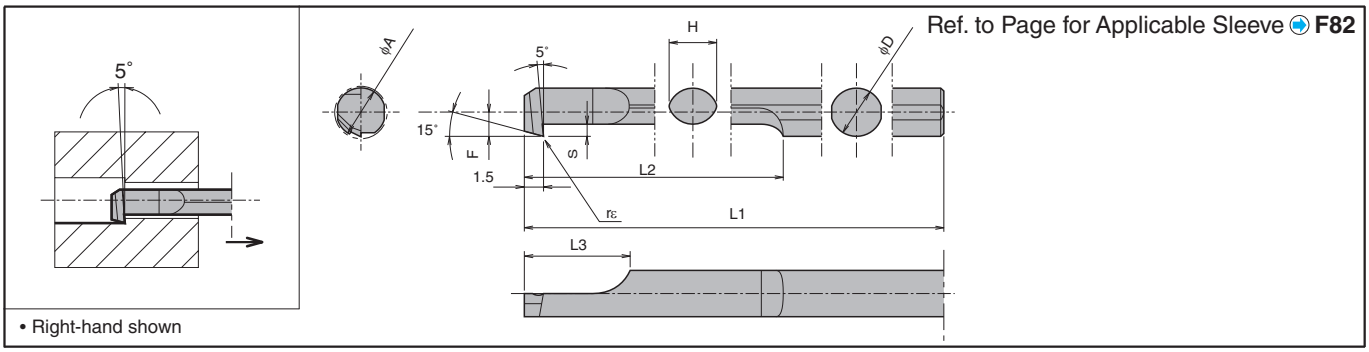
–NBS Type Top Shape (without Chipbreaker)

Top Shape	Grades
	Coated Carbide Carbide
	CBN PCD

• Right-hand shown

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

This insert will be switched to **HPBT** type (2-Edge, ref. to page **F34**).



Ref. to Page for Applicable Sleeve **F82**

• Right-hand shown

Tip-Bars Dimensions

Description		Min. Bore Dia.	Dimension (mm)									Grades						
												PVD Coated Carbide		Carbide	CBN		PCD	
		φA	φD	H	L1	L2	L3	F	S	rε		PR915	PR930	KW10	KBN510	KBN525	KPD001	KPD010
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	●
	0606-70NBS	6	5.8	5.2		45		2.9							R	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				△					

Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grades (Cutting Speed Vc: m/min)						PSB02 type		PSB03 type		PSB04 PSBT04 type		PSB05 PSB06 PSB07 PSBT05 type		Remarks
	PVD Coated Carbide		Carbide	CBN	PCD										
	PR915	PR930	KW10	KBN510 KBN525	KPD001	KPD010	ap (mm), f (mm/rev)								
							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			☆ ~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	

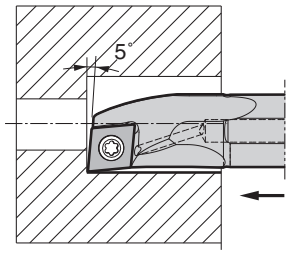
★: 1st Recommendation ☆: 2nd Recommendation

● : Std. Item
R : Std. Item (R-hand Only)
△ : Will be switched to new item (Check Availability)

Tip-Bars are sold in 1 piece boxes.

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

Max. Overhang Length L/D=~5.5



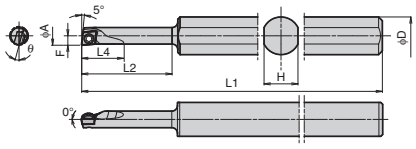


Fig.1

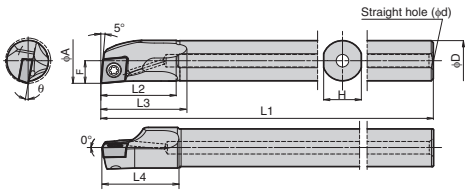


Fig.2

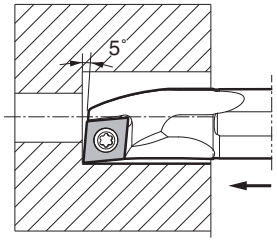
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ8	ϕ2.5
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



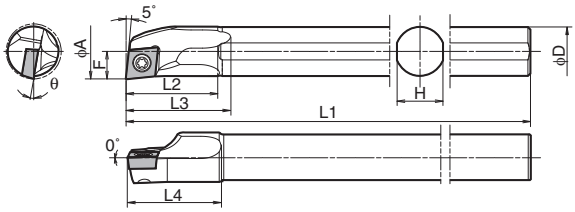


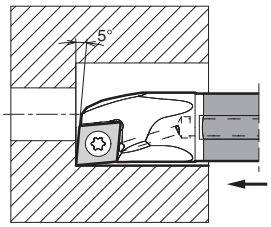
Fig.3

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7



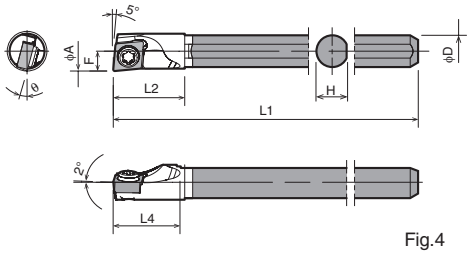


Fig.4

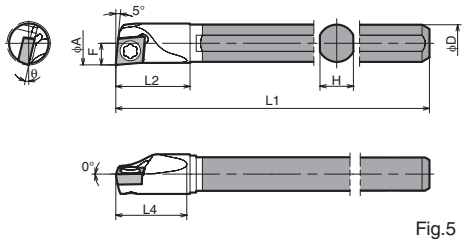


Fig.5

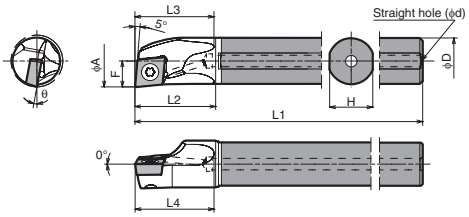


Fig.6

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ8	ϕ3
ϕ10	
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

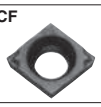
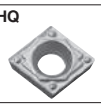
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L3	L4	F	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	S10H-SCLCR/L03-05AE	●	●	5	10	9	100	24	-	11	2.5	15°	0.2	No	Fig.1	SB-1635TR	FT-6
	S10H-SCLCR/L03-06AE	●	●	6				28		13	3	13°					
	S10H-SCLCR/L04-07AE	●	●	7				32		15	3.5					SB-2035TR	
	S10H-SCLCR/L04-08AE	●	●	8				37		15	4	11°					
	A08X-SCLCR/L06-10AE	●	●	10	8	7	120	16	20	17	5	14°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A10L-SCLCR/L06-12AE	●	●	12	10	9	140	20	25	21	6	12°					
	A12M-SCLCR/L06-14AE	●	●	14	12	11	150	24	30	25	7	10°					
	A16Q-SCLCR/L09-18AE	●	●	18	16	15	180	30	34	31	9					SB-4065TR	FT-15
	A20R-SCLCR/L09-22AE	●	●	22	20	19	200	36	49	37	11	8°					
	A25S-SCLCR/L09-27AE	●	●	27	25	24	250	46	55	46	13.5	6°					
Steel	S08X-SCLCR/L06-10A	●	●	10	8	7	120	16	20	17	5	14°	0.4	No	Fig.3	SB-2545TR	FT-8
	S10L-SCLCR/L06-12A	●	●	12	10	9	140	20	25	21	6	12°					
	S12M-SCLCR/L06-14A	●	●	14	12	11	150	24	30	25	7	10°					
	S16Q-SCLCR/L09-18A	●	●	18	16	15	180	30	34	31	9					SB-4065TR	FT-15
	S20R-SCLCR/L09-22A	●	●	22	20	19	200	36	49	37	11	8°					
	S25S-SCLCR/L09-27A	●	●	27	25	24	250	46	55	46	13.5	6°					
Carbide	C04G-SCLCR/L03-05A	●	●	5	4	3.8	90	9	-	8	2.5	15°	0.2	No	Fig.4	SB-1635TR	FT-6
	C05H-SCLCR/L03-06A	●	●	6	5	4.4	100	11		11	3	13°			Fig.5		
	C06J-SCLCR/L04-07A	●	●	7	6	5.4	110	12		12	3.5					SB-2035TR	
	C07K-SCLCR/L04-08A	●	●	8	7	6.4	125	13		13	4	11°					
	E08L-SCLCR/L 06-10A	●	●	10	8	7	140	16	15	15	5	14°	0.4	Yes	Fig.6	SB-2545TR	FT-8
	E08L-SCLCR 06-10A-2/3	●					90										
	E10N-SCLCR/L 06-12A	●	●	12	10	9	160	20	19	19	6	12°					
	E10N-SCLCR 06-12A-2/3	●					105										
	E12Q-SCLCR/L06-14A	●	●	14	12	11	180	23	22	22	7	10°					
	E12Q-SCLCR 06-14A-2/3	●					120										
	E16X-SCLCR/L 09-18A	●	●	18	16	15	220	28	27	27	9					SB-4065TR	FT-15
	E16X-SCLCR 09-18A-2/3	●					145										
	E20S-SCLCR/L 09-22A	●	●	22	20	19	250	32	31	31	11	8°					
	E20S-SCLCR 09-22A-2/3	●					165										
	E25T-SCLCR/L 09-27A	●	●	27	25	24	300	38	37	37	13.5	6°					
	E25T-SCLCR 09-27A-2/3	●					200										

Applicable Inserts

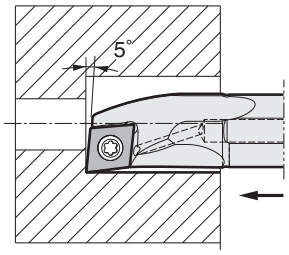
Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed
Ref. to Page	B48	B48	B49	B49	B49	B49, B50	B48, B49	B50, B51	B50	B51, B52
Insert / Toolholder Description	CF 	GF 	PP 	GK 	HQ 	Standard 	GQ 	R/L-F 	R/L-FSF 	(E/F) R/L-U 
----SCLCR/L03----	CCGT0301..	-	-	-	-	-	-	CCGT0301..	CCET0301..	-
----SCLCR/L04----	CCGT0401..	-	-	-	-	-	-	CCGT0401..	CCET0401..	-
----SCLCR/L06----	-	CCGT0602..	CCMT0602..	CCMT0602..	CCMT0602..	CCGT0602..	CCGT0602..	-	-	CCGT0602..
----SCLCR/L09----	-	CCGT09T3..	CCMT09T3..	CCMT09T3..	CCMT09T3..	CCGT09T3.. CCMT09T3..	CCGT09T3..	-	-	CCGT09T3..
Applications	Low Feed / Precision	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials			
Ref. to Page	B51	B50	B53	B52	B53	C24	C14			
Insert / Toolholder Description	F R/L-USF 	MQ 	Without Chipbreaker 	AH 	A3 	PCD 	CBN 			
----SCLCR/L03----	-	-	-	-	-	-	CCMW0301..			
----SCLCR/L04----	-	-	-	-	-	CCGW0401..	CCMW0401..			
----SCLCR/L06----	CCET0602..	-	CCGW0602..	-	-	CCMT0602.. CCGW0602..	CCMW0602..			
----SCLCR/L09----	CCET09T3..	CCMT09T3..	CCGW09T3..	CCGT09T3..	CCGT09T3..	CCMT09T3.. CCGW09T3..	CCMW09T3..			

Recommended Cutting Conditions ➔ F91~F92
Applicable Sleeve ➔ F81~F84

● : Std. Item

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

Max. Overhang Length L/D=~5.5



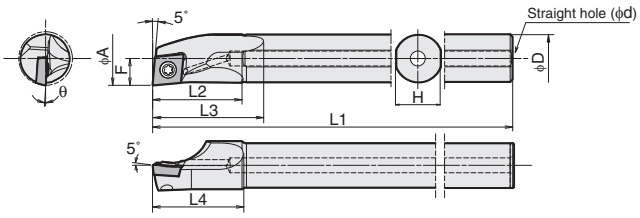


Fig.1

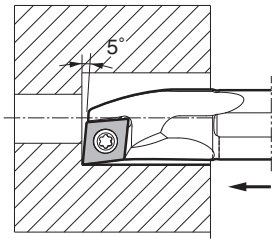
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



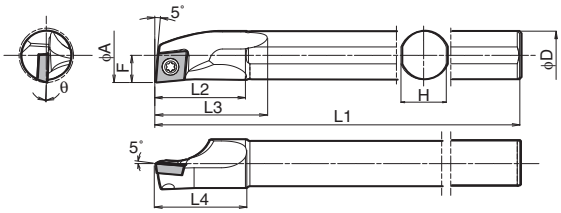


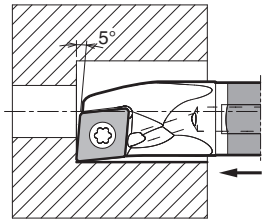
Fig.2

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7



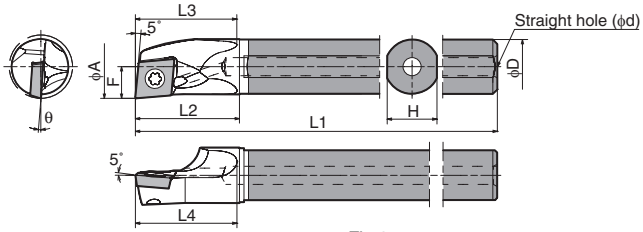


Fig.3

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L3	L4	F	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: 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		8					SB-4065TR	FT-15
	A16Q-SCLP R/L 09-18AE	●	●	18	16	15	180	30	37	30	9	3.5°					
	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		8					SB-4065TR	FT-15
	S16Q-SCLP R/L 09-18A	●	●	18	16	15	180	30	37	30	9	3.5°					
	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-SCLPR 08-12A-2/3	●					105										
	E10N-SCLPR 08-12A-1/2	●					80										
	E12Q-SCLP R/L 08-14A	●	●	14	12	11	180	23	22	22	7	4°					
	E12Q-SCLPR 08-14A-2/3	●					120										
	E12Q-SCLPR 08-14A-1/2	●					90										
	NEW E12Q-SCLP R/L 09-16A	●	●	16	12	11	180	23	22	22	8	5°				SB-4065TR	FT-15
	E12Q-SCLPR 09-16A-2/3	●					120										
	E12Q-SCLPR 09-16A-1/2	●					90										
	E16X-SCLP R/L 09-18A	●	●	18	16	15	220	28	27	27	9	3.5°					
	E16X-SCLPR 09-18A-2/3	●					145										
	E16X-SCLPR 09-18A-1/2	●					110										
	E20S-SCLP R/L 09-22A	●	●	22	20	19	250	32	31	31	11	2°					
	E20S-SCLPR 09-22A-2/3	●					165										
	E20S-SCLPR 09-22A-1/2	●					125										
	E25T-SCLP R/L 09-27A	●	●	27	25	24	300	38	37	37	13.5	0°					
	E25T-SCLPR 09-27A-2/3	●					200										

Applicable Inserts

Applications	Finishing	Finishing	Finishing-Medium	Medium	Finishing-Medium	Soft Steel / Finishing	Soft Steel / Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard Materials
Ref. to Page	B54	B54	B54	B54	B54	B54	B54	B54	C25	C14
Insert / Toolholder Description	PP	GP	HQ	Standard	R/L-Y	XP	XQ	Without Chipbreaker	PCD	CBN
----SCLP R/L 08----	CPMT0802..	CPMT0802..	CPMH0802..	CPMH0802..	CPMH0802..	CPMT0802..	-	CPMB0802..	CPMH0802..	CPGB0802..
----SCLP R/L 09----	CPMT0903..	CPMT0903..	CPMH0903..	CPMH0903..	CPMH0903..	CPMT0903..	CPMT0903..	CPMB0903..	CPMH0903..	CPGB0903..

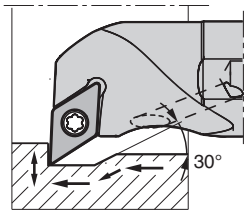
Recommended Cutting Conditions ➔ F91~F92
Applicable Sleeve ➔ F82~F84

● : Std. Item

Dynamic Bar [DC□□Insert]

A-SDUC-AE Excellent Bar (Copying)

Max. Overhang Length L/D=~5.5



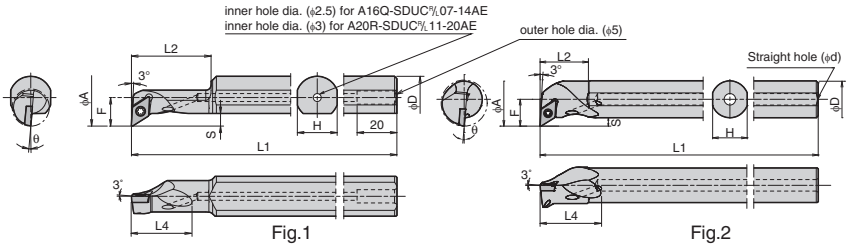


Fig.1 Fig.2

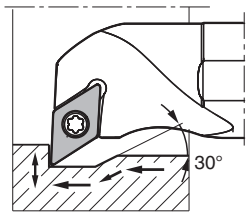
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

S-SDUC-A Steel Bar (Copying)

Max. Overhang Length L/D=~4



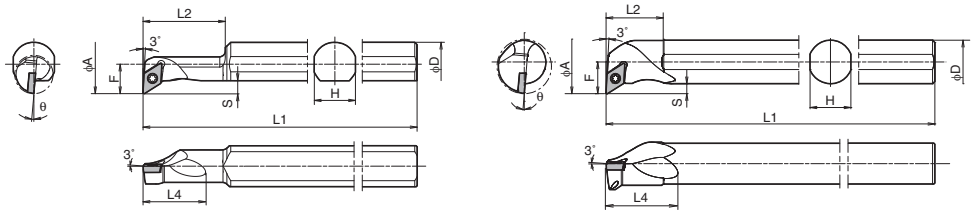


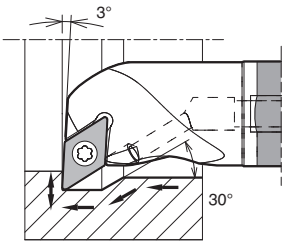
Fig.3 Fig.4

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

E-SDUC-A Carbide Shank Bar (Copying)

Max. Overhang Length L/D=~7



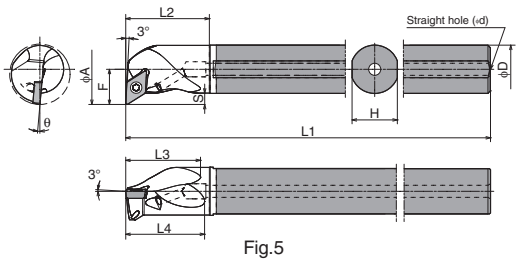


Fig.5

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L3	L4	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A10L-SDUC$^{R}/_{L}$07-14AE	●	●	14	10	9	140	19	-	20	8.7	3.3	5°	0.4	Yes	Fig.2	SB-2560TR	FT-8
	A16Q-SDUC$^{R}/_{L}$07-14AE	●	●		16	15	180	28		23	10.8	4.4				Fig.1		
	A12M-SDUC$^{R}/_{L}$07-16AE	●	●	16	12	11	150	21		24	9.7	3.3				Fig.2		
	A16Q-SDUC$^{R}/_{L}$07-20AE	●	●	20	16	15	180			26	11.7							
	A20R-SDUC$^{R}/_{L}$11-20AE	●	●		20	19	200	48		30	15.6	6.1				Fig.1	SB-4065TR	FT-15
	A16Q-SDUC$^{R}/_{L}$11-23AE	●	●	23	16	15	180	21		31	14.5					Fig.2		
	A20R-SDUC$^{R}/_{L}$11-27AE	●	●	27	20	19	200	23		36	16.5							
	A25S-SDUC$^{R}/_{L}$11-32AE	●	●	32	25	24	250	24		39	19							
Steel	S10L-SDUC$^{R}/_{L}$07-14A	●	●	14	10	9	140	19	-	20	8.7	3.3	5°	0.4	No	Fig.4	SB-2560TR	FT-8
	S16Q-SDUC$^{R}/_{L}$07-14A	●	●		16	15	180	28		23	10.8	4.4				Fig.3		
	S12M-SDUC$^{R}/_{L}$07-16A	●	●	16	12	11	150	21		24	9.7	3.3				Fig.4		
	S16Q-SDUC$^{R}/_{L}$07-20A	●	●	20	16	15	180			26	11.7							
	S20R-SDUC$^{R}/_{L}$11-20A	●	●		20	19	200	48		30	15.6	6.1				Fig.3	SB-4065TR	FT-15
	S16Q-SDUC$^{R}/_{L}$11-23A	●	●	23	16	15	180	21		31	14.5					Fig.4		
	S20R-SDUC$^{R}/_{L}$11-27A	●	●	27	20	19	200	23		36	16.5							
	S25S-SDUC$^{R}/_{L}$11-32A	●	●	32	25	24	250	24		39	19							
Carbide	E10N-SDUC$^{R}/_{L}$07-14A	●	●	14	10	9	160	20	-	19	8.7	3.3	5°	0.4	Yes	Fig.5	SB-2560TR	FT-8
	E10N-SDUCR 07-14A-2/3	●					105											
	E12Q-SDUC$^{R}/_{L}$07-16A	●	●	16	12	11	180	23		22	9.7							
	E12Q-SDUCR 07-16A-2/3	●					120											
	E16X-SDUC$^{R}/_{L}$ 07-20A	●	●	20	16	15	220	28		26	11.7							
	E16X-SDUCR 07-20A-2/3	●					145											
	E16X-SDUC$^{R}/_{L}$ 11-23A	●	●	23			220			27	14.5	6.1					SB-4065TR	FT-15
	E16X-SDUCR 11-23A-2/3	●					145											
	E20S-SDUC$^{R}/_{L}$ 11-27A	●	●	27	20	19	250	32		31	16.5							
	E20S-SDUCR 11-27A-2/3	●					165											
	E25T-SDUC$^{R}/_{L}$ 11-32A	●	●	32	25	24	300	38		37	19							
	E25T-SDUCR 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. to Page	B55	B55, B56	B56	B56	B56	B57	B58	B58	B59, B60	B59
Insert / Toolholder Description	CF	CK	PP	GK	HQ	Standard	$^{R}/_{L}$ -F	$^{R}/_{L}$-FSF	(E/F)$^{R}/_{L}$-U	F$^{R}/_{L}$-USF
----SDUC$^{R}/_{L}$07----	DCGT0702..	DCGT0702..	DCMT0702..	DCMT0702..	DCMT0702..	DCGT0702..	DCGT0702..	DCET0702..	DCGT0702..	DCET0702..
----SDQC$^{R}/_{L}$07----										
----SDZC$^{R}/_{L}$07----										
----SDUC$^{R}/_{L}$11----	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3.. DCGT11T3..	DCGT11T3..	DCET11T3..	DCGT11T3..	DCET11T3..
----SDQC$^{R}/_{L}$11----										
----SDZC$^{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. to Page	B60	B60	B57	B57	B57	B61	B61	B61	C25	C15
Insert / Toolholder Description	(E/F)$^{R}/_{L}$-J	F$^{R}/_{L}$-JSF	XP	XQ	MQ	Without Chipbreaker	AH	$^{R}/_{L}$-A3	PCD	CBN
----SDUC$^{R}/_{L}$07----	DCET0702..	-	DCMT0702..	-	DCMT0702..	DCGW0702..	-	-	DCMT0702..	DCMW0702..
----SDQC$^{R}/_{L}$07----										
----SDZC$^{R}/_{L}$07----										
----SDUC$^{R}/_{L}$11----	DC_T11T3..	DCET11T3..	DCMT11T3..	DCMT11T3..	DCMT11T3..	DCGW11T3..	DCGT11T3..	DCGT11T3..	DCMT11T3..	DCMW11T3..
----SDQC$^{R}/_{L}$11----										
----SDZC$^{R}/_{L}$11----										

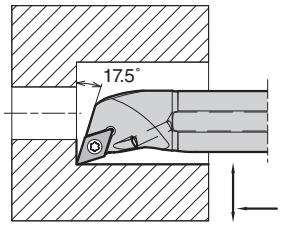
Recommended Cutting Conditions ➔ F91~F92
Applicable Sleeve ➔ F82~F84

● : Std. Item

Dynamic Bar [DC□□Insert]

A-SDQC-AE Excellent Bar (Copying)

Max. Overhang Length L/D=~5.5



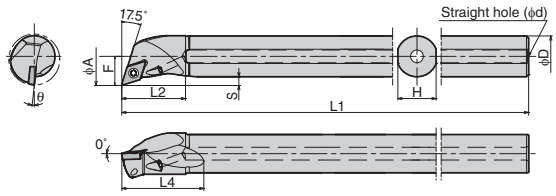


Fig.1

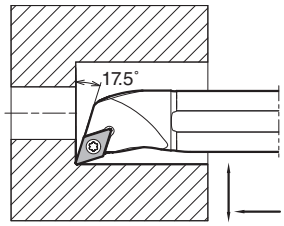
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

S-SDQC-A Steel Bar (Copying)

Max. Overhang Length L/D=~4



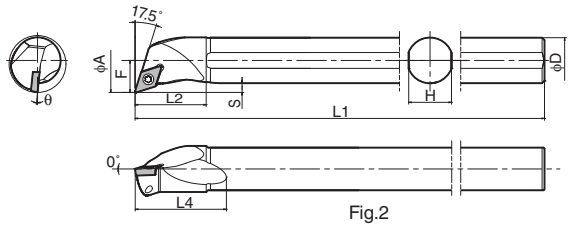


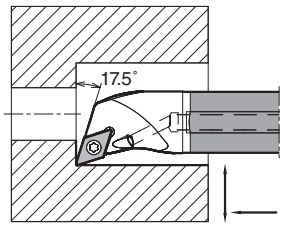
Fig.2

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

E-SDQC-A Carbide Shank Bar (Copying)

Max. Overhang Length L/D=~7



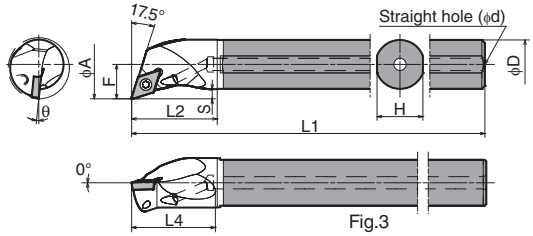


Fig.3

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

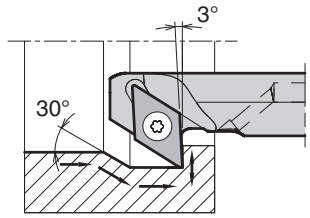
● Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	L3	L4	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: 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		6°					
	A20R-SDQC R/L 11-25AE	●	●	25	20	19	200	31		37	14.4	3.7	5°				SB-4065TR	FT-15
	A25S-SDQC R/L 11-30AE	●	●	30	25	24	250	38		45	16.9		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		6°					
	S20R-SDQC R/L 11-25A	●	●	25	20	19	200	31		37	14.4	3.7	5°				SB-4065TR	FT-15
	S25S-SDQC R/L 11-30A	●	●	30	25	24	250	38		45	16.9		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-SDQCR 07-13A-2/3	●					105											
	E12Q-SDQC R/L 07-16A	●	●	16	12	11	180	23	-	22	9.25	2.6	8°					
	E12Q-SDQCR 07-16A-2/3	●					120											
	E16X-SDQC R/L 07-20A	●	●	20	16	15	220	28	-	27	11.3	2.6	6°					
	E16X-SDQCR 07-20A-2/3	●					145											
	E20S-SDQC R/L 11-25A	●	●	25	20	19	250	32	-	31	14.4	3.7	5°				SB-4065TR	FT-15
	E20S-SDQCR 11-25A-2/3	●					165											
	E25T-SDQC R/L 11-30A	●	●	30	25	24	300	38	-	37	16.9	3.7	4°					
	E25T-SDQCR 11-30A-2/3	●					200											

● : Std. Item

A-SDZC-AE Excellent Bar (Back Boring)

Max. Overhang Length L/D=~5.5



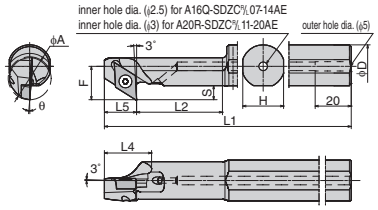


Fig.1

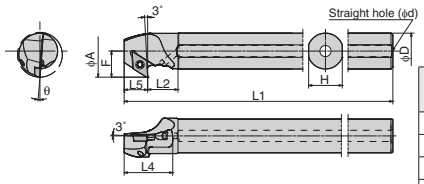


Fig.2

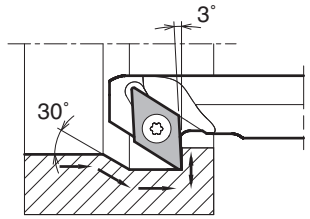
Shank Dia. φD	Straight hole Dia. φd
φ10	φ3
φ12	φ4
φ16	φ5
φ20	
φ25	

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

S-SDZC-A Steel Bar (Back Boring)

Max. Overhang Length L/D=~4



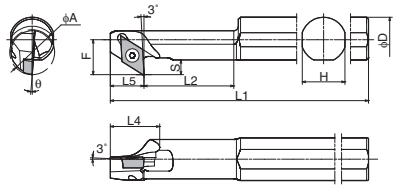


Fig.3

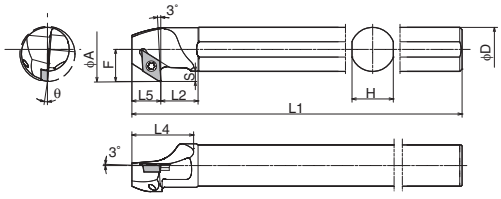


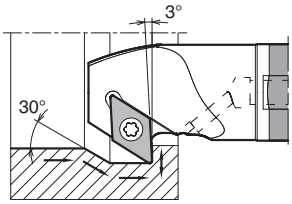
Fig.4

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

E-SDZC-A Carbide Shank Bar (Back Boring)

Max. Overhang Length L/D=~7



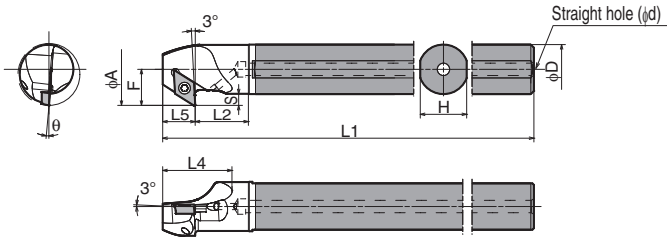


Fig.5

Shank Dia. φD	Straight hole Dia. φd
φ10	φ3
φ12	φ4
φ16	
φ20	φ6

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

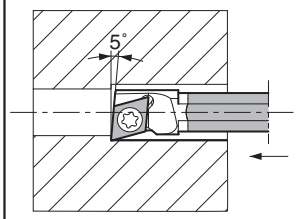
	Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L4	L5	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A10L-SDZC R/L 07-14AE	●	●	14	10	9	140	14	16	9.5	8.7	3.3	5°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A16Q-SDZC R/L 07-14AE	●	●		16	15	180	30	17	10	10.8	4.4				Fig.1		
	A12M-SDZC R/L 07-16AE	●	●	16	12	11	150	14	20	10.5	9.7	3.3				Fig.2	SB-2560TR	
	A16Q-SDZC R/L 07-20AE	●	●	20	16	15	180		22		11.7							
	A20R-SDZC R/L 11-20AE	●	●		20	19	200	40	24	15	15.6	6.1				Fig.1	SB-4065TR	FT-15
	A16Q-SDZC R/L 11-23AE	●	●	23	16	15	180	15	22		14.5					Fig.2		
	A20R-SDZC R/L 11-27AE	●	●	27	20	19	200		25		16.5							
	A25S-SDZC R/L 11-32AE	●	●	32	25	24	250		26		19							
Steel	S10L-SDZC R/L 07-14A	●	●	14	10	9	140	14	16	9.5	8.7	3.3	5°	0.4	No	Fig.4	SB-2545TR	FT-8
	S16Q-SDZC R/L 07-14A	●	●		16	15	180	30	17	10	10.8	4.4				Fig.3		
	S12M-SDZC R/L 07-16A	●	●	16	12	11	150	14	20	10.5	9.7	3.3				Fig.4	SB-2560TR	
	S16Q-SDZC R/L 07-20A	●	●	20	16	15	180		22		11.7							
	S20R-SDZC R/L 11-20A	●	●		20	19	200	40	24	15	15.6	6.1				Fig.3	SB-4065TR	FT-15
	S16Q-SDZC R/L 11-23A	●	●	23	16	15	180	15	22		14.5					Fig.4		
	S20R-SDZC R/L 11-27A	●	●	27	20	19	200		25		16.5							
	S25S-SDZC R/L 11-32A	●	●	32	25	24	250		26		19							
Carbide	E10N-SDZCR07-14A	●		14	10	9	160	10.5	16	9.5	8.7	3.3	5°	0.4	Yes	Fig.5	SB-2545TR	FT-8
	E12Q-SDZCR07-16A	●		16	12	11	180	12.5	20	10.5	9.7						SB-2560TR	
	E16X-SDZCR07-20A	●		20	16	15	220	17.5	22		11.7							
	E16X-SDZCR11-23A	●		23				13		15	14.5	6.1					SB-4065TR	FT-15
	E20S-SDZCR11-27A	●		27	20	19	250	17	25		16.5							

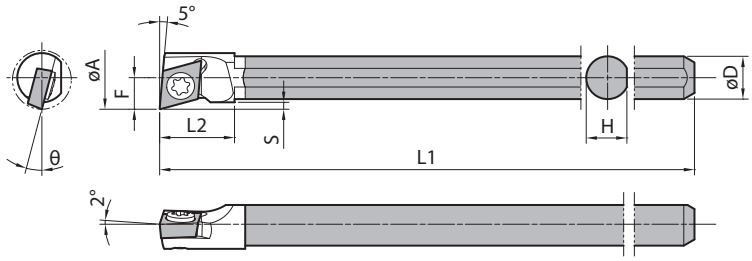
● : Std. Item

Boring Bar [JC □□Insert]

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

Max. Overhang Length L/D=~7



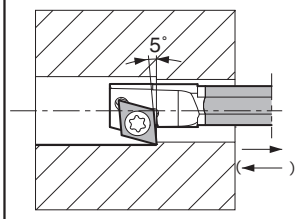


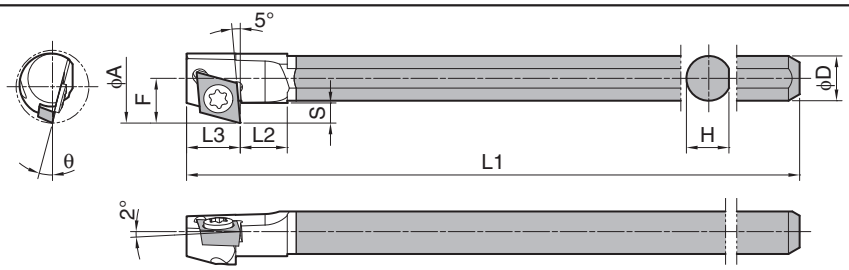
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7





• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

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

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	L3	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: 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. to Page	B62	B62
Insert / Toolholder Description	R/L-F 	R/L-FSF 
----SJLC R/L 03----	JCGT0301..	JCET0301..
----SJZC R/L 03----	JCGT0301..	JCET0301..

Recommended Cutting Conditions ➡ F91~F92
Applicable Sleeve ➡ F81,F83,F84

• Features of C···SJLC

1. Specially designed for minimized bore dia.
2. A relief angle of 15°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

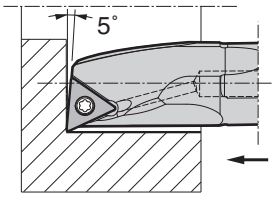
1. Back boring bars for workpiece that require high concentric circle accuracy and when a change of chuck is not possible.
2. Available for back boring and necking.
3. Despite the small size of minimum boring dia. as ϕ6.5, the edge gap is retained as large as 1.8 mm.

● : Std. Item

Dynamic Bar [TC□□Insert]

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

Max. Overhang Length L/D=~5.5



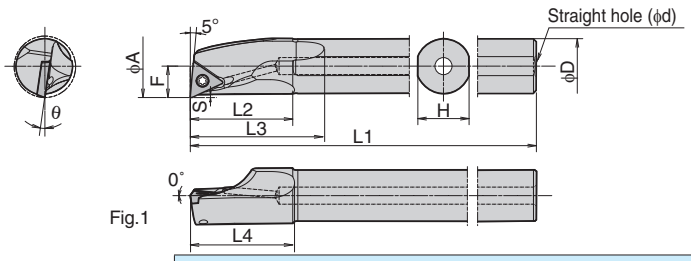


Fig.1

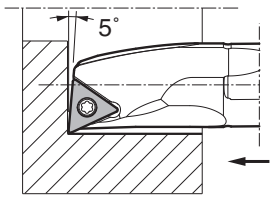
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ8	ϕ2.5
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



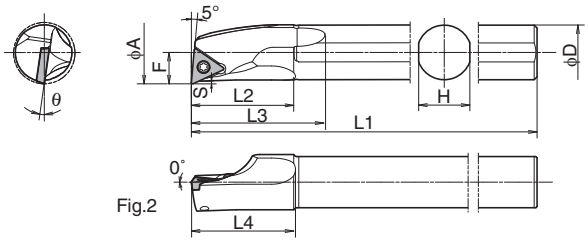


Fig.2

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	L3	L4	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A08X-STLC R/L09-10AE	●	●	10	8	7	120	16	22	16	5	0.5	14°	0.4	Yes	Fig.1	SB-2250TR	FT-7
	A10L-STLC R/L09-12AE	●	●	12	10	9	140	20	26	20	6.2	0.9	12°					
	A10L-STLC R/L11-12AE	●	●														SB-2560TR	FT-8
	A12M-STLC R/L11-14AE	●	●	14	12	11	150	24	30	25	7.2	0.7	10°					
	A16Q-STLC R/L11-18AE	●	●	18	16	15	180	30	39	31	9.2		8°					
	A20R-STLC R/L11-22AE	●	●	22	20	19	200	36	44	36	11.2		6°					
Steel	S08X-STLC R/L09-10A	●	●	10	8	7	120	16	22	16	5	0.5	14°	0.4	No	Fig.2	SB-2250TR	FT-7
	S10L-STLC R/L09-12A	●	●	12	10	9	140	20	26	20	6.2	0.9	12°					
	S10L-STLC R/L11-12A	●	●														SB-2560TR	FT-8
	S12M-STLC R/L11-14A	●	●	14	12	11	150	24	30	25	7.2	0.7	10°					
	S16Q-STLC R/L11-18A	●	●	18	16	15	180	30	39	31	9.2		8°					
	S20R-STLC R/L11-22A	●	●	22	20	19	200	36	44	36	11.2		6°					

Applicable Inserts

Applications	Finishing-Medium									
Ref. to Page	B64									
Insert / Toolholder Description	HQ 									
...-STLC R/L09-...	TCMT0902..									
...-STLC R/L11-...	TCMT1102..									

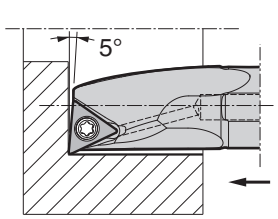
Recommended Cutting Conditions ➡ F91~F92
Applicable Sleeve ➡ F82~F84

● : Std. Item

Dynamic Bar [TB□□, TP□□Insert]

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

Max. Overhang Length L/D=~5.5



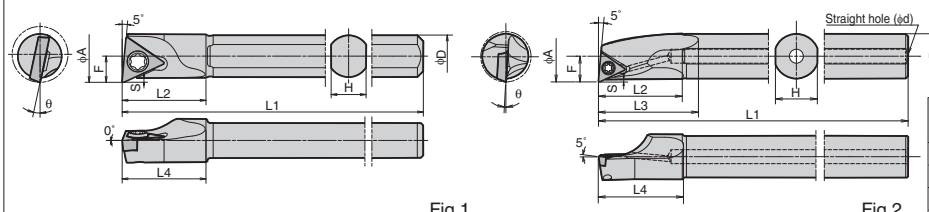


Fig.1 Fig.2

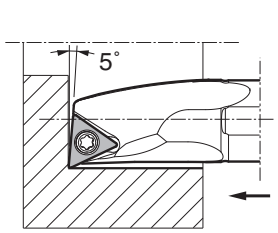
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ8	ϕ2.5
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



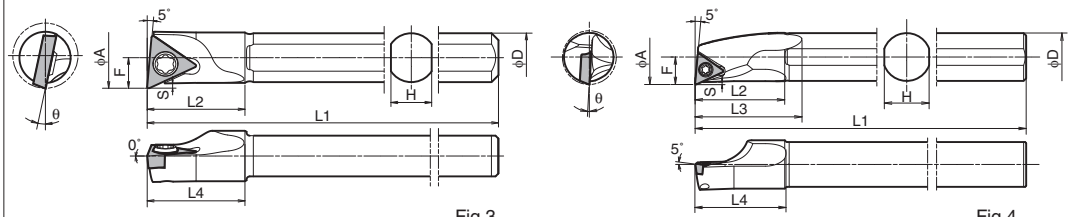


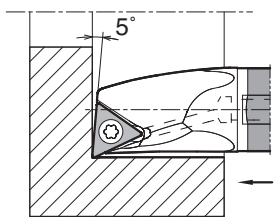
Fig.3 Fig.4

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7



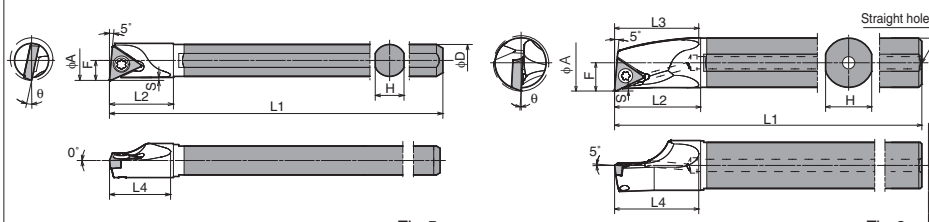


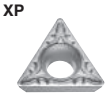
Fig.5 Fig.6

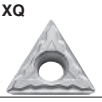
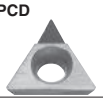
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ8	ϕ3
ϕ10	
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Medium	Low Feed / Precision	Soft Steel / Finishing
Ref. to Page	**B64, B67**	**B67**	**B67**	**B64**	**B67**	**B64, B68**	**B69**	**B69**	**B69**	**B67**
Insert / Toolholder Description	**CF** 	**PP** 	**GP** 	**DP** 	**HQ** 	**R/L** 	**R/L-FSF** 	**R/L-H** 	**FR/L-USF** 	**XP** 
...-STLBR/L06-...	TBGT0601..	–	–	TBMT0601..	–	TBGT0601..	–	–	–	–
...-STLPR/L08-...	TPGT0802..	–	–	–	–	TPGH0802..	TPET0802..	–	TPET0802..	–
...-STLPR/L09-...	TPGT0902..	TPMT0902..	TPMT0902..	–	TPMT0902..	TPGH0902..	–	–	–	TPMT0902..
...-STLPR/L11-...	–	TPMT1103..	TPMT1103..	–	TPMT1103..	TPGH1103..	TPET1103..	TPGH1103..	TPET1103..	TPMT1103..
...-STLPR/L16-...	–	–	TPMT1603..	–	TPMT1603..	TPGH1603..	–	TPGH1603..	–	TPMT1603..

Applications	Soft Steel / Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard Materials
Ref. to Page	**B68**	**B64, B70**	**C26~C28**	**C16**
Insert / Toolholder Description	**XQ** 	Without Chipbreaker 	**PCD** 	**CBN** 
...-STLBR/L06-...	–	TBGW0601..	TBMT0601.. TBGW0601..	–
...-STLPR/L08-...	–	TPGB0802..	TPMH0802.. TPGB0802..	TPGB0802..
...-STLPR/L09-...	–	TPGB0902..	TPMH0902.. TPGB0902..	TPGB0902..
...-STLPR/L11-...	TPMT1103..	TPGB1103..	TPMH1103.. TPGB1103..	TPGB1103..
...-STLPR/L16-...	TPMT1603..	TPGB1603..	TPMH1603.. TPGB1603..	TPGB1603..

Recommended Cutting Conditions ➡ **F91~F92**
Applicable Sleeve ➡ **F82~F84**

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L3	L4	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
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
	NEW A08X-STLP R/L 08-10AE	●	●	10	8	7	120	16	22	16	5	0.5	10°	0.4	Yes	Fig.2	SB-1TR	
	A08X-STLP R/L 09-10AE	●	●														SB-2545TR	FT-8
	A10L-STLP R/L 09-12AE	●	●	12	10	9	140	20	25	20	6.2	0.9	8°					
	A10L-STLP R/L 11-12AE	●	●						26		6	0.7	10°				SB-3060TR	FT-10
	A12M-STLP R/L 11-14AE	●	●	14	12	11	150	24	30	24	7.2	0.8	7°					
	NEW A12M-STLP R/L 09-16AE	●	●	16							8	0.6	5°				SB-2545TR	FT-8
	A16Q-STLP R/L 11-18AE	●	●	18	16	15	180	30	36	30	9.2	0.7	3.5°				SB-3060TR	FT-10
	A20R-STLP R/L 11-22AE	●	●	22	20	19	200	36	46	37	11.2		2°					
	NEW A20R-STLP R/L 16-25AE	●	●	25							13		0°				SB-4065TR	FT-15
	A25S-STLP R/L 16-27AE	●	●	27	25	24	250	46	55	46	13.7							
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
	NEW S08X-STLP R/L 08-10A	●	●	10	8	7	120	16	22	16	5	0.5	10°	0.4		Fig.4	SB-1TR	
	S08X-STLP R/L 09-10A	●	●														SB-2545TR	FT-8
	S10L-STLP R/L 09-12A	●	●	12	10	9	140	20	25	20	6.2	0.9	8°					
	S10L-STLP R/L 11-12A	●	●						26		6	0.7	10°				SB-3060TR	FT-10
	S12M-STLP R/L 11-14A	●	●	14	12	11	150	24	30	24	7.2	0.8	7°					
	NEW S12M-STLP R/L 09-16A	●	●	16							8	0.6	5°				SB-2545TR	FT-8
	S16Q-STLP R/L 11-18A	●	●	18	16	15	180	30	36	30	9.2	0.7	3.5°				SB-3060TR	FT-10
	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						SB-4065TR	FT-15
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
	NEW E08L-STLP R/L 08-10A	●	●	10	8	7	140	16	15	15	5	0.5	10°	0.4	Yes	Fig.6	SB-1TR	
	E08L-STLP R/L 09-10A	●	●														SB-2545TR	FT-8
	E10N-STLP R/L 09-12A	●	●	12	10	9	160	20	19	19	6.2	0.9	8°					
	E10N-STLPR 09-12A-2/3	●					105											
	E10N-STLPR 09-12A-1/2	●					80											
	E10N-STLP R/L 11-12A	●	●				160				6	0.7	10°				SB-3060TR	FT-10
	E10N-STLPR 11-12A-2/3	●					105											
	E10N-STLPR 11-12A-1/2	●					80											
	E12Q-STLP R/L 11-14A	●	●	14	12	11	180	23	22	22	7.2	0.8	7°					
	E12Q-STLPR 11-14A-2/3	●					120											
	E12Q-STLPR 11-14A-1/2	●					90											
	NEW E12Q-STLP R/L 09-16A	●	●	16			180				8	0.6	5°				SB-2545TR	FT-8
	E12Q-STLPR 09-16A-2/3	●					120											
	E12Q-STLPR 09-16A-1/2	●					90											
	E16X-STLP R/L 11-18A	●	●	18	16	15	220	28	27	27	9.2	0.7	3.5°					
	E16X-STLPR 11-18A-2/3	●					145											
	E16X-STLPR 11-18A-1/2	●					110										SB-3060TR	FT-10
	E20S-STLP R/L 11-22A	●	●	22	20	19	250	32	31	31	11.2		2°					
	E20S-STLPR 11-22A-2/3	●					165											
	E20S-STLPR 11-22A-1/2	●					125											
	NEW E20S-STLP R/L 16-25A	●	●	25			250				13		0°					
	E20S-STLPR 16-25A-2/3	●					165											
	E20S-STLPR 16-25A-1/2	●					125										SB-4065TR	FT-15
	E25T-STLP R/L 16-27A	●	●	27	25	24	300	38	37	37	13.7							
	E25T-STLPR 16-27A-2/3	●					200											

● : Std. Item

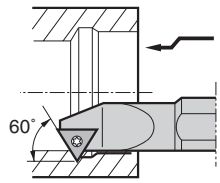
F

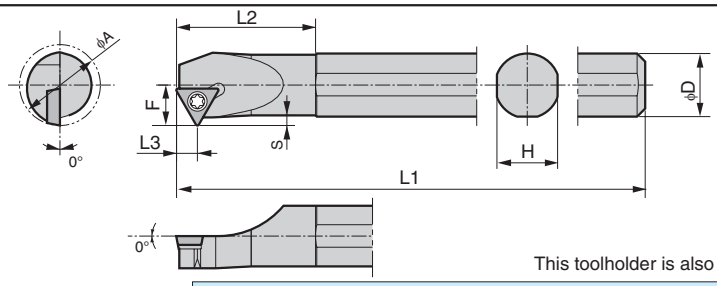
Boring

Boring Bar [TB□□, TP□□Insert]

S···STWP-E Excellent Bar (Copying)

Max. Overhang Length L/D=~5





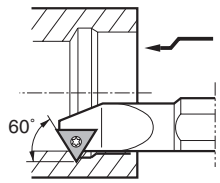
(➡ J31)
This toolholder is also available for threading.

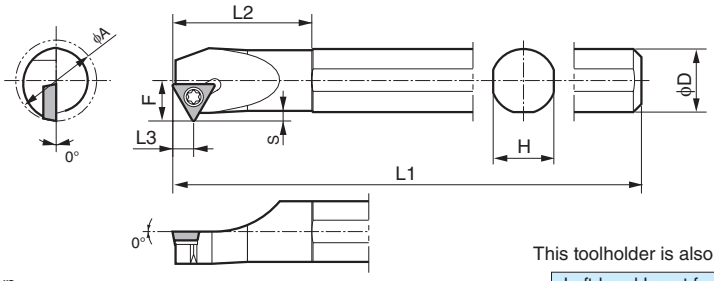
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

S···STWP Steel Bar (Copying)

Max. Overhang Length L/D=~3





(➡ J31)
This toolholder is also available for threading.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L3	F	S		θ	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench
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				SB-3TR	
S20X-STWP R/L 11 -25E		●	●	25	20	19	220	40		12.5	2.5					
S20X-STWP R/L 16 -25E		●	●	25	20	19	220	40	7.7	14	4.0		0°	0.8	SB-4TR	FT-15
S25X-STWP R/L 16 -32E		●	●	32	25	23	270	42		16.5						
S10M-STWPR11 -12	SITR 1210-11	●		12	10	9.2	150	23	5.5	6	1.0		0°	0.1	SB-3STR	FT-10
S12M-STWPR11 -16	SITR 1612-11	●		16	12	11	150	30		8	1.5					
S16Q-STWPR11 -20	2016-11	●		20	16	15	180	35		10	2.0				SB-3TR	
S20R-STWPR11 -25	2520-11	●		25	20	19	200	40		12.5	2.5					

Applicable Inserts

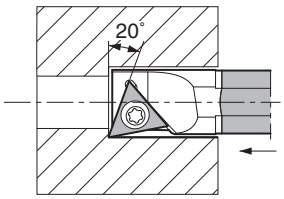
Applications	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Medium	Low Feed / Precision	Soft Steel / Finishing	Soft Steel / Finishing-Medium
Ref. to Page	B67	B67	B67	B68	B69	B69	B69	B67	B68
Insert / Toolholder Description	PP	GP	HQ	R/L	R/L-FSF	R/L-H	F R/L-USF	XP	XQ
S10M-STWP R/L 11-12(E)	-	-	-	TPGH1102..	-	-	-	-	-
...-STWP R/L 11-16~25(E)	TPMT1103..	TPMT1103..	TPMT1103..	TPGH1103..	TPET1103..	TPGH1103..	TPET1103..	TPMT1103..	TPMT1103..
...-STWP R/L 16-...	-	TPMT1603..	TPMT1603..	TPGH1603..	-	TPGH1603..	-	TPMT1603..	TPMT1603..
Applications	Cast Iron	Non-ferrous Metals	Hard Materials						
Ref. to Page	B70	C26~C28	C16						
Insert / Toolholder Description	Without Chipbreaker	PCD	CBN						
S10M-STWP R/L 11-12(E)	TPGB1102..	-	-						
...-STWP R/L 11-16~25(E)	TPGB1103..	TPMH1103.. TPGB1103..	TPGB1103..						
...-STWP R/L 16-...	TPGB1603..	TPMH1603.. TPGB1603..	TPGB1603..						

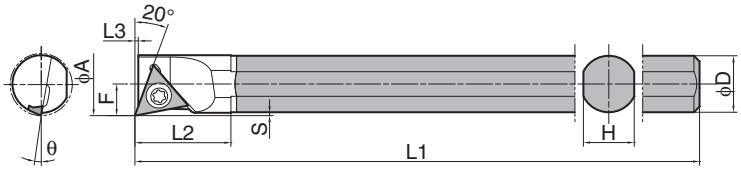
Recommended Cutting Conditions ➡ F91~F92
Applicable Sleeve ➡ F82~F84

● : Std. Item

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

Max. Overhang Length L/D=~7





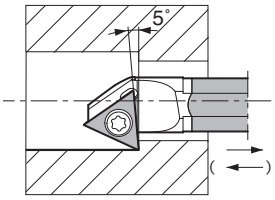
C···STXB R/L type···α=0°
C···STXP R/L type···α=5°

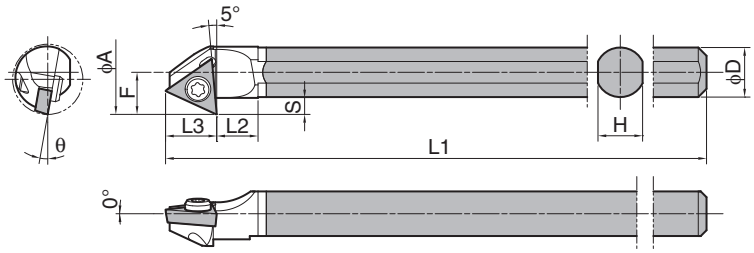
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7





• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

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

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L3	F	S		θ	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench
C06J-STXB R/L06-075	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/L08-09	STXP R/L 09008B-08W	●	●	9.0	8	7.0	143	14	0.6	4.6					SB-1TR	
C10X-STXP R/L09-11	11010B-09W	●	●	11.0	10	9.0	164	17		5.6					SB-2TR	FT-8
C06J-STZB R/L06-085	STZB R/L 08506B-06W	●	●	8.5	6	5.4	110	5	5.7	5.1	2.0				SB-1STR	FT-6

Applicable Inserts

Applications	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Low Feed / Precision	Soft Steel / Finishing	Cast Iron
Ref. to Page	B64, B67	B67	B67	B64	B67	B64, B68	B69	B69	B67	B64, B70
Insert / Toolholder Description	CF 	PP 	GP 	DP 	HQ 	R/L 	R/L-FSF 	FR/L-USF 	XP 	Without Chipbreaker 
...-STXB R/L06-...	TBGT0601..	-	-	TBMT0601..	-	TBGT0601..	-	-	-	TBGW0601..
...-STXP R/L08-...	TPGT0802..	-	-	-	-	TPGH0802..	TPET0802..	TPET0802..	-	TPGB0802..
...-STXP R/L09-...	TPGT0902..	TPMT0902..	TPMT0902..	-	TPMT0902..	TPGH0902..	-	-	TPMT0902..	TPGB0902..
...-STZB R/L06-...	TBGT0601..	-	-	TBMT0601..	-	TBGT0601..	-	-	-	TBGW0601..

Applications	Non-ferrous Metals	Hard Materials
Ref. to Page	C26, C27	C16
Insert / Toolholder Description	PCD 	CBN 
...-STXB R/L06-...	TBMT0601..	-
...-STXP R/L08-...	TPMH0802.. TPGB0802..	TPGB0802..
...-STXP R/L09-...	TPMH0902.. TPGB0902..	TPGB0902..
...-STZB R/L06-...	TBMT0601..	-

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

Recommended Cutting Conditions ➡ F91~F92
Applicable Sleeve ➡ F81~F84

Toolholder Description	Insert Description (Grades)	Vc (m/min)	ap (mm)	f (mm/rev)	Coolant
C06J-STXB R/L06-075	TBGT0601003 L/R (PR930)	30~100	0.02~0.1	0.02~0.04	Yes
C08X-STXP R/L08-09	TPGH080201 L/R (PR930)	30~100	0.05~0.15	0.03~0.08	Yes
C10X-STXP R/L09-11	TPGH090201 L/R (PR930)	30~100	0.05~0.15	0.03~0.08	Yes

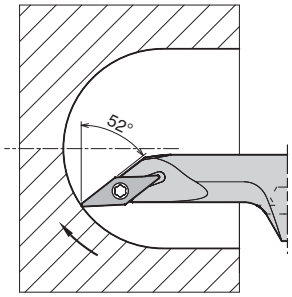
(Workpiece Material: Alloy Steel)

● : Std. Item

Dynamic Bar [VB□□, VC□□, VP□□Insert]

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

Max. Overhang Length L/D=~5.5



For applications, ref. to page **F51**

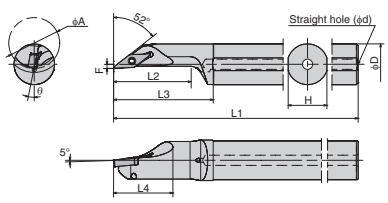


Fig.1

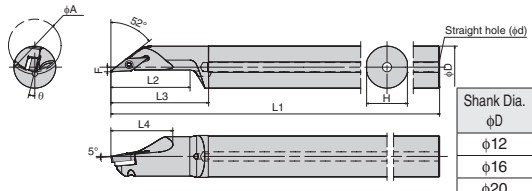


Fig.2

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ5
ϕ25	
ϕ32	ϕ7
ϕ40	ϕ9

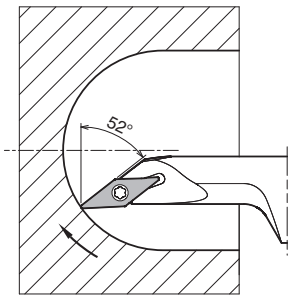
* No shim for SVJP(C)R/L08 / SVJBR/L11.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



For applications, ref. to page **F51**

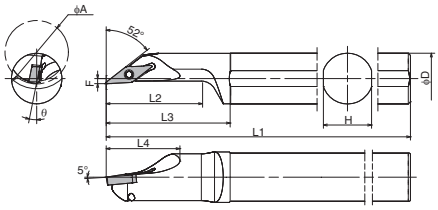


Fig.3

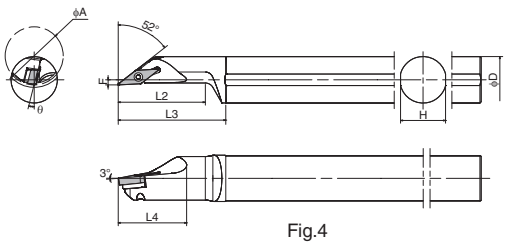


Fig.4

* No shim for SVJP(C)R/L08 / SVJBR/L11.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	L3	L4	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A12M-SVJPR/L08-16AE	●	●	16	12	11	150	26	33	21	2	-	5°	0.2	Yes	Fig.1	SB-2050TR	FT-6
	A12M-SVJCR/L08-16AE	●	●							20				0.4				
	A16Q-SVJCR/L08-20AE	●	●	20	16	15	180	36	43	22								
	A20R-SVJBR/L11-25AE	●	●	25	20	19	200	37.5	48	30							SB-2570TR	FT-8
	A25S-SVJBR/L11-30AE	●	●	30	25	24	250	45	58	33	3.5							
	A32S-SVJBR/L16-40AE	●	●	40	32	31		60	74	45			8°			Fig.2	SB-40125TRN	FT-15
	A40T-SVJBR/L16-50AE	●	●	50	40	39	300	75	91	49	4.5		7°					
Steel	S12M-SVJPR/L08-16A	●	●	16	12	11	150	26	33	21	2	-	5°	0.2	No	Fig.3	SB-2050TR	FT-6
	S12M-SVJCR/L08-16A	●	●							20				0.4				
	S16Q-SVJCR/L08-20A	●	●	20	16	15	180	36	43	22								
	S20R-SVJBR/L11-25A	●	●	25	20	19	200	37.5	48	30							SB-2570TR	FT-8
	S25S-SVJBR/L11-30A	●	●	30	25	24	250	45	58	33	3.5							
	S32S-SVJBR/L16-40A	●	●	40	32	31		60	74	45			8°			Fig.4	SB-40125TRN	FT-15
	S40T-SVJBR/L16-50A	●	●	50	40	39	300	75	91	49	4.5		7°					

Applicable Inserts

Applications	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Low Feed / Precision	Non-ferrous Metals	Non-ferrous Metals
Ref. to Page	B76	B73,B75	B73,B75	B73	B73,B75	B74	B73,B77	B77	B75	B75
Insert / Toolholder Description	CK	VF	PP	GP	HQ	R/L-F	R/L-FSF	FR/L-USF	AH	R/L-A3
...-SVJPR/L08-...	VPGT0802..	-	-	-	-	-	VPET0802..	VPET0802..	-	-
...-SVJCR/L08-...	-	VCMT0802..	VCMT0802..	-	VCMT0802..	-	-	-	-	-
...-SVJBR/L11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	-	-	-
...-SVJBR/L16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	VBMT1604..	-	-	-	VCGT1604..	VCGT1604..

Applications	Non-ferrous Metals	Hard Materials
Ref. to Page	C28	C17
Insert / Toolholder Description	PCD	CBN
...-SVJPR/L08-...	-	-
...-SVJCR/L08-...	VCMT0802..	VCGW0802..
...-SVJBR/L11-...	VBMT1103..	VBGW1103..
...-SVJBR/L16-...	VBMT1604..	VBGW1604..

* Use of VBGT1103..-Y / VBGT1604..-Y with A-SVJB-AE / S-SVJB-A is not recommended.

Spare Parts

Description	Spare Parts: Shim	Spare Parts: Shim Screw	Spare Parts: Wrench (for Shim Screw)
□32S-SVJBR/L16-40A□	SVN-32N	SS-4N	LW-4
□40T-SVJBR/L16-50A□			

* See **P24** for spare parts of old products.

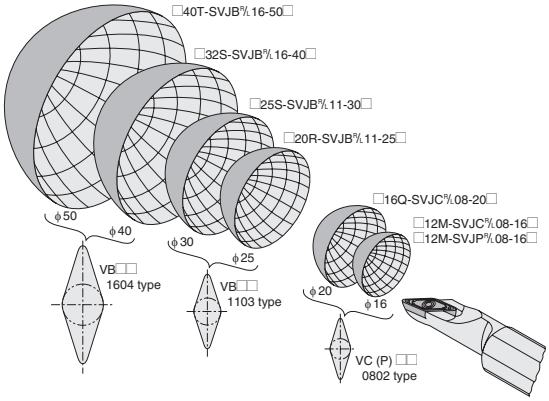
Recommended Cutting Conditions ➡ **F91~F92**
Applicable Sleeves ➡ **F82~F84**

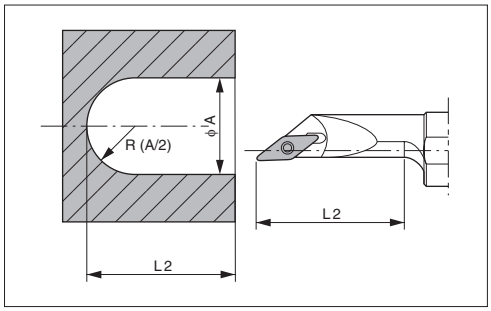
● : Std. Item

Application of □···SVJB(C)-□, S···SVJP-□

Ref. to Page for Toolholders ➡ F50

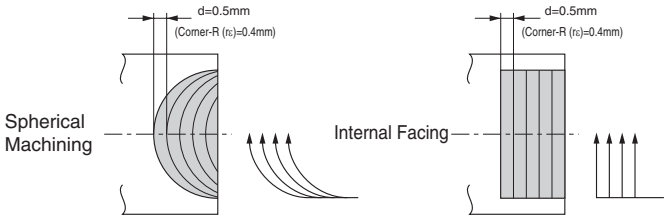
1. Application Range





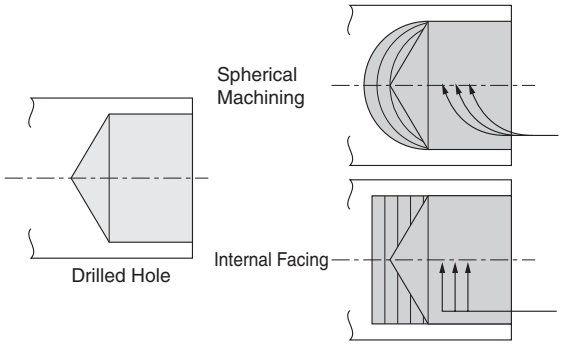
2. Machining method

Case with No Existing Hole



(Note) f shall be under 0.05mm/rev at internal facing.

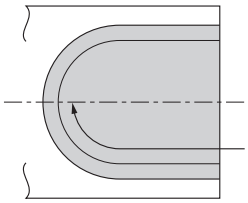
Case with Drilled Hole



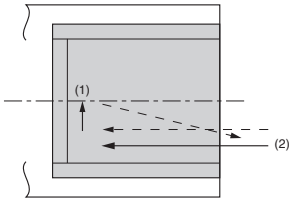
(Note) f shall be under 0.05mm/rev at internal facing.

Finishing

Spherical Machining

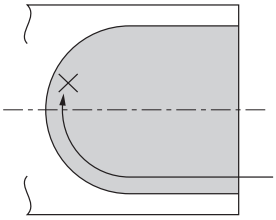


Internal Facing

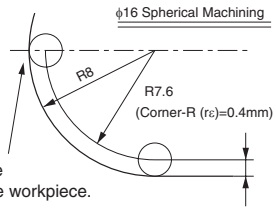


Machining Process
(1) Finish the internal face first.
(2) Next, finish the internal diameter.

3. Caution

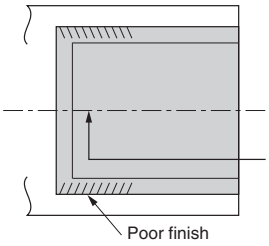


When machining past the center of the workpiece, insert may break.



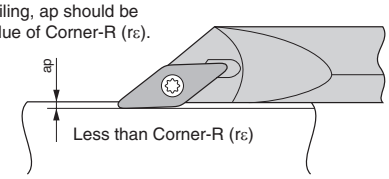
Fix the insert edge at the center of the workpiece.

Adjust the machining program to radius minus the value of Corner-R (rε).



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

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



[Burrs may occur, if ap is bigger than Corner-R (rε)]

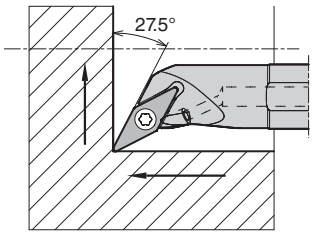
F

Boring

Dynamic Bar [VB□□, VC□□Insert]

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

Max. Overhang Length L/D=~5.5



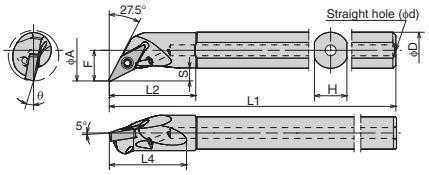


Fig.1

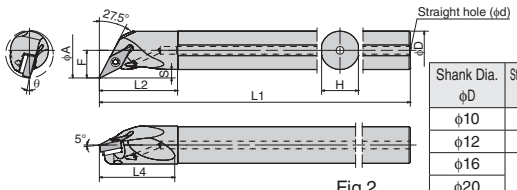


Fig.2

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	
ϕ25	
ϕ32	

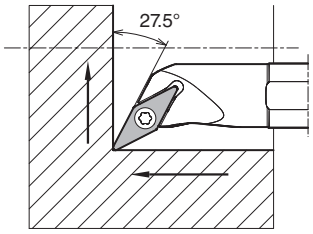
* No shim for SVPC$^{R/L}$08 / SVPB$^{R/L}$11.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



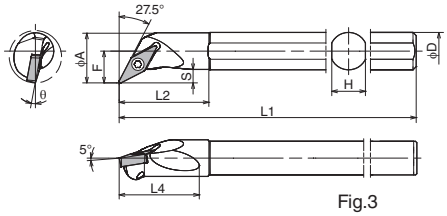


Fig.3

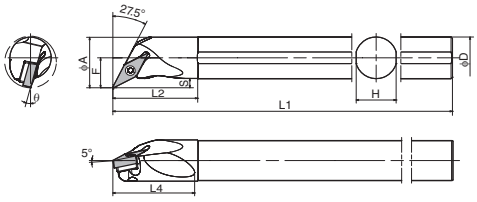


Fig.4

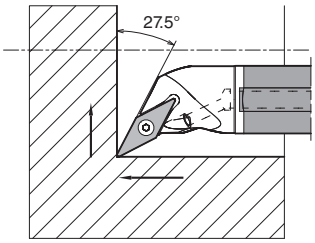
* No shim for SVPC$^{R/L}$08 / SVPB$^{R/L}$11.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7



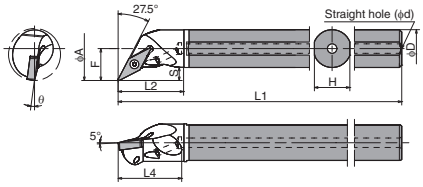


Fig.5

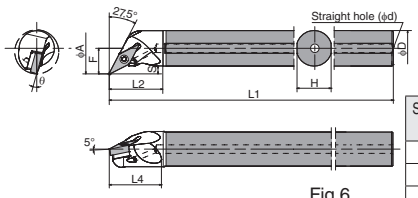


Fig.6

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

* No shim for SVPC$^{R/L}$08 / SVPB$^{R/L}$11.

• Right-hand shown

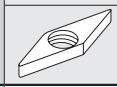
Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	L3	L4	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A10L-SVPC$^{R/L}$08-14AE	●	●	14	10	9	140	24	-	21	8.5	3	8°	0.4	Yes	Fig.1	SB-2050TR	FT-6
	A12M-SVPB$^{R/L}$11-18AE	●	●	18	12	11	150	29		26	11	4.5					SB-2570TR	FT-8
	A16Q-SVPB$^{R/L}$11-22AE	●	●	22	16	15	180	35		33	13.5	5	5°					
	A20R-SVPB$^{R/L}$11-26AE	●	●	26	20	19	200	41		39	15.5							
	A25S-SVPB$^{R/L}$16-31AE	●	●	31	25	24	250	51		49	18		13°			Fig.2	SB-40125TRN	FT-15
	A32S-SVPB$^{R/L}$16-40AE	●	●	40	32	31		54		53	23	6.5	9°					
Steel	S10L-SVPC$^{R/L}$08-14A	●	●	14	10	9	140	24	-	21	8.5	3	8°	0.4	No	Fig.3	SB-2050TR	FT-6
	S12M-SVPB$^{R/L}$11-18A	●	●	18	12	11	150	29		26	11	4.5					SB-2570TR	FT-8
	S16Q-SVPB$^{R/L}$11-22A	●	●	22	16	15	180	35		33	13.5	5	5°					
	S20R-SVPB$^{R/L}$11-26A	●	●	26	20	19	200	41		39	15.5							
	S25S-SVPB$^{R/L}$16-31A	●	●	31	25	24	250	51		49	18		13°			Fig.4	SB-40125TRN	FT-15
	S32S-SVPB$^{R/L}$16-40A	●	●	40	32	31		54		53	23	6.5	9°					
Carbide	E10N-SVPCR08-14A	●		14	10	9	160	20	-	18.5	8.5	3	8°	0.4	Yes	Fig.5	SB-2050TR	FT-6
	E12Q-SVPBR11-18A	●		18	12	11	180	23		22	11	4.5					SB-2570TR	FT-8
	E16X-SVPBR11-22A	●		22	16	15	220	28		27	13.5	5	5°					
	E20S-SVPBR11-26A	●		26	20	19	250	32		31	15.5							
	E25T-SVPBR 16-31A	●		31	25	24	300	38		37	18		13°			Fig.6	SB-40125TRN	FT-15

● : Std. Item

Spare Parts

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

* See **P24** for spare parts of old products.

Applicable Inserts

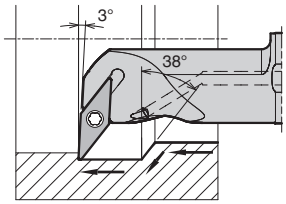
Applications	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Low Feed / Precision	Non-ferrous Metals
Ref. to Page	-	**B73, B75**	**B73, B75**	**B73**	**B73, B75**	**B74**	**B73, B77**	**B74**	-	**B75**
Insert / Toolholder Description	**CK** 	**VF** 	**PP** 	**GP** 	**HQ** 	$^{R}/_{L}$**-F** 	$^{R}/_{L}$**-FSF** 	$^{R}/_{L}$**-Y** 	**F**$^{R}/_{L}$**-USF** 	**AH** 
...-SVPC$^{R}/_{L}$08-...	-	VCMT0802..	VCMT0802..	-	VCMT0802..	-	-	-	-	-
...-SVPB$^{R}/_{L}$11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-
...-SVPB$^{R}/_{L}$16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..

Applications	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	**B75**	**C28**	**C17**
Insert / Toolholder Description	$^{R}/_{L}$**-A3** 	**PCD** 	**CBN** 
...-SVPC$^{R}/_{L}$08-...	-	VCMT0802..	VCGW0802..
...-SVPB$^{R}/_{L}$11-...	-	VBMT1103..	VBGW1103..
...-SVPB$^{R}/_{L}$16-...	VCGT1604..	VBMT1604..	VBGW1604..

Recommended Cutting Conditions ➔ **F91~F92**
Applicable Sleeves ➔ **F82~F84**

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

Max. Overhang Length L/D=~5.5



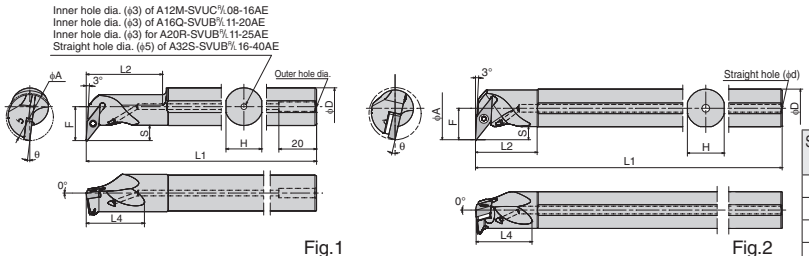


Fig.1 Fig.2

Shank Dia. ϕD	Outer hole dia.	Straight hole Dia. ϕd
ϕ12	ϕ4	-
ϕ16	ϕ5	
ϕ20		
ϕ25	-	ϕ5
ϕ32		

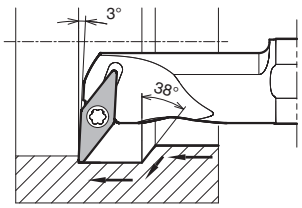
* No shim for SVUC R/L 08 / SVUB R/L 11.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



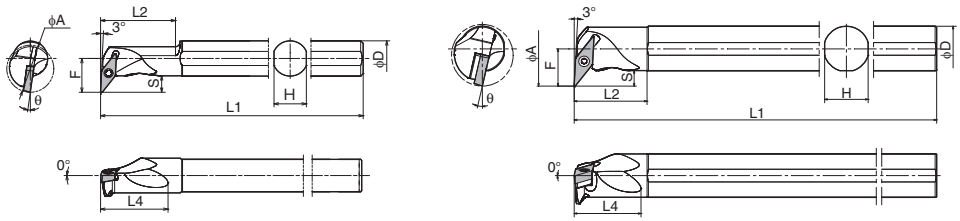


Fig.3 Fig.4

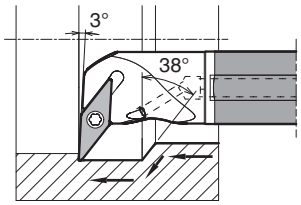
* No shim for SVUC R/L 08 / SVUB R/L 11.

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7



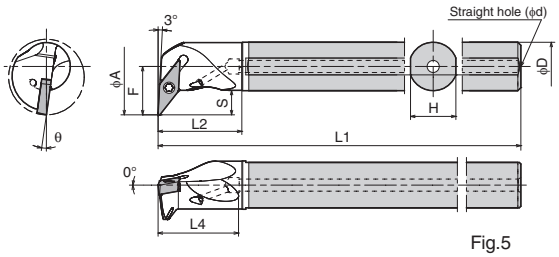


Fig.5

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6
ϕ25	

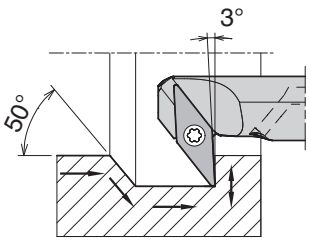
* Shim is attached only for SVUBR16

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~5.5



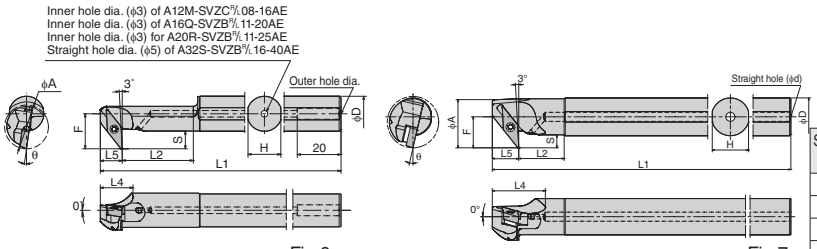


Fig.6 Fig.7

Shank Dia. ϕD	Outer hole dia.	Straight hole Dia. ϕd
ϕ12	ϕ4	-
ϕ16	ϕ5	
ϕ20		
ϕ25	-	ϕ5
ϕ32		

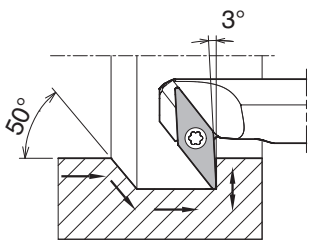
* No shim for SVZC R/L 08 / SVZB R/L 11

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



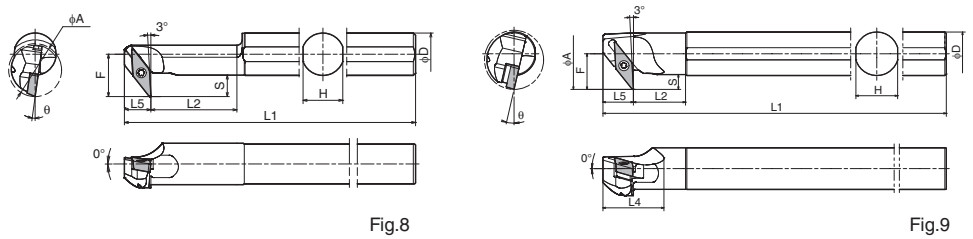


Fig.8 Fig.9

* No shim for SVZC R/L 08 / SVZB R/L 11

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

	Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	L4	L5	F	S	θ	Standard Corner-R(rε)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
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
Excellent Bar	A16Q-SVUB R/L 11-20AE	●	●	20	16	15	180	32.5	27	-	16	8	8°	0.4	Yes	Fig.1	SB-2570TR	FT-8
Excellent Bar	A20R-SVUB R/L 11-25AE	●	●	25	20	19	200	40.5	31	-	18	8	7°	0.4	Yes	Fig.1	SB-2570TR	FT-8
Excellent Bar	A25S-SVUB R/L 16-34AE	●	●	34	25	24	250	40	37	-	20.5	8.5	13°	0.4	Yes	Fig.2	SB-40125TRN	FT-15
Excellent Bar	A32S-SVUB R/L 16-40AE	●	●	40	32	31	250	84	47	-	28	12	9°	0.4	Yes	Fig.1	SB-40125TRN	FT-15
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
Steel	S16Q-SVUB R/L 11-20A	●	●	20	16	15	180	32.5	27	-	16	8	8°	0.4	No	Fig.3	SB-2570TR	FT-8
Steel	S20R-SVUB R/L 11-25A	●	●	25	20	19	200	40.5	31	-	18	8	7°	0.4	No	Fig.3	SB-2570TR	FT-8
Steel	S25S-SVUB R/L 16-34A	●	●	34	25	24	250	40	37	-	20.5	8.5	13°	0.4	No	Fig.4	SB-40125TRN	FT-15
Steel	S32S-SVUB R/L 16-40A	●	●	40	32	31	250	84	47	-	28	12	9°	0.4	No	Fig.3	SB-40125TRN	FT-15
Carbide	E12Q-SVUCR08-18A	●		18	12	11	180	23	22	-	11.5	5.5	8°	0.4	Yes	Fig.5	SB-2050TR	FT-6
Carbide	E16X-SVUBR11-25A	●		25	16	15	220	28	27	-	16	8	8°	0.4	Yes	Fig.5	SB-2570TR	FT-8
Carbide	E20S-SVUBR11-29A	●		29	20	19	250	32	30	-	18	8	7°	0.4	Yes	Fig.5	SB-2570TR	FT-8
Carbide	E25T-SVUBR16-34A	●		34	25	24	300	38	37	-	21	8.5	13°	0.4	Yes	Fig.5	SB-40125TRN	FT-15
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
Excellent Bar	A16Q-SVZB R/L 11-20AE	●	●	20	16	15	180	32.5	20	10	16	8	8°	0.4	Yes	Fig.6	SB-2570TR	FT-8
Excellent Bar	A20R-SVZB R/L 11-25AE	●	●	25	20	19	200	40.5	23	10	18	8	7°	0.4	Yes	Fig.6	SB-2570TR	FT-8
Excellent Bar	A25S-SVZB R/L 16-34AE	●	●	34	25	24	250	30	34	17.5	20.5	8.5	13°	0.4	Yes	Fig.7	SB-40125TRN	FT-15
Excellent Bar	A32S-SVZB R/L 16-40AE	●	●	40	32	31	250	72.5	36	17.5	28	12	9°	0.4	Yes	Fig.6	SB-40125TRN	FT-15
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
Steel	S16Q-SVZB R/L 11-20A	●	●	20	16	15	180	32.5	20	10	16	8	8°	0.4	No	Fig.8	SB-2570TR	FT-8
Steel	S20R-SVZB R/L 11-25A	●	●	25	20	19	200	40.5	23	10	18	8	7°	0.4	No	Fig.8	SB-2570TR	FT-8
Steel	S25S-SVZB R/L 16-34A	●	●	34	25	24	250	30	34	17.5	20.5	8.5	13°	0.4	No	Fig.9	SB-40125TRN	FT-15
Steel	S32S-SVZB R/L 16-40A	●	●	40	32	31	250	72.5	36	17.5	28	12	9°	0.4	No	Fig.8	SB-40125TRN	FT-15

Spare Parts

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

* See **P24** for spare parts of old products.

Applicable Inserts

Applications	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Low Feed / Precision	Non-ferrous Metals
Ref. to Page	-	B73, B75	B73, B75	B73	B73, B75	B74	B73	B74	-	B75
Insert / Toolholder Description	CK	VF	PP	GP	HQ	R/L-F	R/L-FSF	R/L-Y	F R/L-USF	AH
...-SVUC R/L 08-...	-	VCMT0802..	VCMT0802..	-	VCMT0802..	-	-	-	-	-
...-SVUB R/L 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-
...-SVUB R/L 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..
...-SVZC R/L 08-...	-	VCMT0802..	VCMT0802..	-	VCMT0802..	-	-	-	-	-
...-SVZB R/L 11-...	-	VBMT1103..	VBMT1103..	VBMT1103..	VBMT1103..	VBGT1103..	VBET1103..	VBGT1103..	-	-
...-SVZB R/L 16-...	-	VBMT1604..	VBMT1604..	VBMT1604..	VBMT1604..	-	-	VBGT1604..	-	VCGT1604..

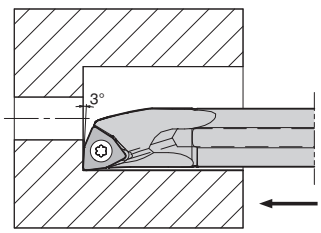
Applications	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B75	C28	C17
Insert / Toolholder Description	R/L-A3	PCD	CBN
...-SVUC R/L 08-...	-	VCMT0802..	VCGW0802..
...-SVUB R/L 11-...	-	VBMT1103..	VBGW1103..
...-SVUB R/L 16-...	VCGT1604..	VBMT1604..	VBGW1604..
...-SVZC R/L 08-...	-	VCMT0802..	VCGW0802..
...-SVZB R/L 11-...	-	VBMT1103..	VBGW1103..
...-SVZB R/L 16-...	VCGT1604..	VBMT1604..	VBGW1604..

Recommended Cutting Conditions ➔ **F91~F92**
Applicable Sleeves ➔ **F82~F84**

● : Std. Item

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

Max. Overhang Length L/D=~5.5



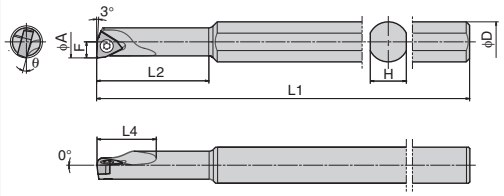
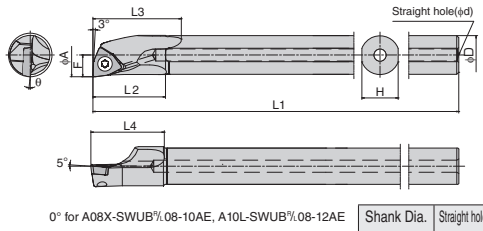


Fig.1



0° for A08X-SWUB[9]/.08-10AE, A10L-SWUB[9]/.08-12AE

Fig.2

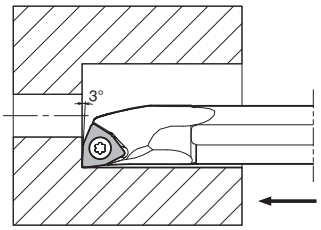
Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ8	ϕ2.5
ϕ10	ϕ3
ϕ12	ϕ4
ϕ16	ϕ5
ϕ20	

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~4



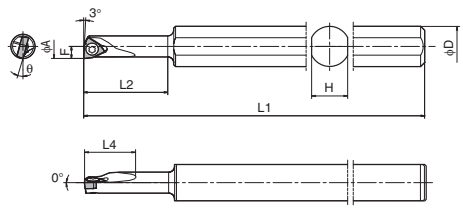
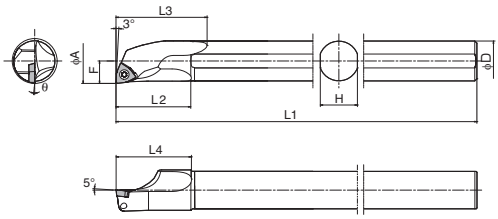


Fig.3



0° for S08X-SWUB[9]/.08-10A, S10L-SWUB[9]/.08-12A

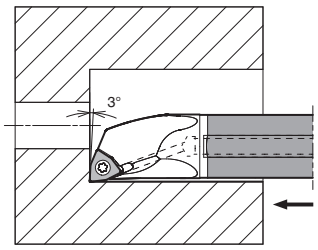
Fig.4

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

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

Max. Overhang Length L/D=~7



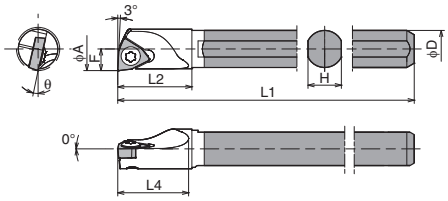
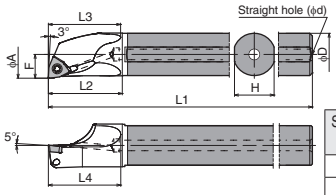


Fig.5



0° for E08L-SWUB[9]/.08-10A,E10N-SWUB[9]/.08-12A,
E10N-SWUB[9]/.08-12A-2/3, E10N-SWUB[9]/.08-12A-1/2

Fig.6

Shank Dia. ϕD	Straight hole Dia. ϕd
ϕ5	-
ϕ6	
ϕ7	
ϕ8	ϕ3
ϕ10	
ϕ12	ϕ4
ϕ16	
ϕ20	ϕ6

• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

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

Applicable Inserts

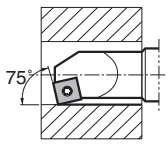
Applications	Minute ap	Finishing	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Cast Iron	Non-ferrous Metals	Hard Materials
Ref. to Page	B78	B79	B78	B79	B78	B79	B78, B79	C28, C29	C18
Insert / Toolholder Description	CF	GP	R/L-DP	HQ	R/L-F	R/L-Y	Without Chipbreaker	PCD	CBN
...-SWUB R/L 06-...	WBGT0601..	-	WBMT0601..	-	WBGT0601..	-	WBGW0601..	WBMT0601..	WBGW0601..
...-SWUB R/L 08-...	-	-	WBMT0802..	-	WBGT0802..	-	WBGW0802..	WBMT0802..	WBGW0802..
...-SWUP R/L 11-...	-	WPMT1102..	-	WPMT1102..	-	WPGT1102..	WPGW1102..	WPMT1102..	-
...-SWUP R/L 16-...	-	WPMT1603..	-	WPMT1603..	-	WPGT1603..	WPGW1603..	-	-

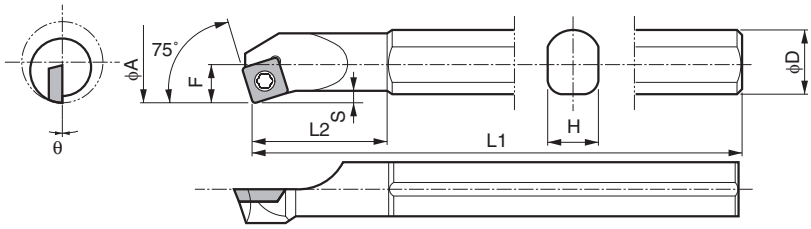
Recommended Cutting Conditions ➔ F91~F92
Applicable Sleeves ➔ F81~F84

● : Std. Item

S-SSKP (Boring)

Max. Overhang Length L/D=~3





• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

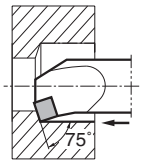
Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench
S16Q-SSKPR09 -20	SSKPR 2016B-09	●		20	16	14	180	30	10	2.0	-3°	0.8	SB-4TR	FT-15
S20R-SSKPR09 -25	2520B-09	●		25	20	18	200	35	12.5	2.5	0°			

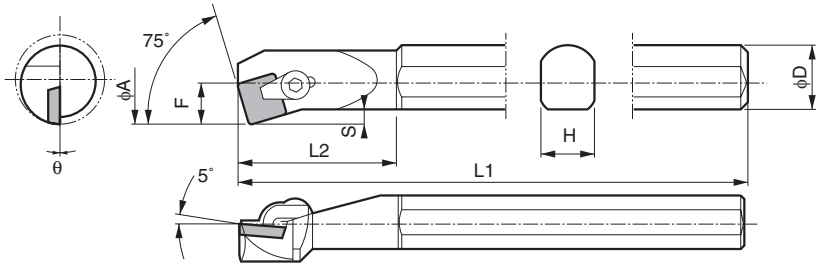
Applicable Inserts

Applications	Finishing									
Ref. to Page	B63									
Insert / Toolholder Description	R/L 									
----SSKPR/L09---	SPGH0903..									

S-CSKP (Boring)

Max. Overhang Length L/D=~3





• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp Set	Spare Parts: Wrench		Spare Parts: Shim	Spare Parts: Shim Screw
S16N -CSKPR09 -20	CSKPR 2016B-09	●		20	16	14	160	40	10	2.0	0°	0.8	CPS-2	FH-2.5	-	-	-
S20Q -CSKPR09 -27	2720B-09	●		27	20	18	180	45	13.5	3.5							
S25X -CSKPR12 -34	3425B-12	●		34	25	23	220	60	17	4.5	0°	0.8	CPS-3	-	LW-3	-	-
S32S -CSKPR12 -43	4332B-12	●		43	32	30	250	75	21.5	5.5						KPS-42	SP3X10

Applicable Inserts

Applications	Medium	Medium	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals				
Ref. to Page	B63	B63	B63	B63	B93	C29				
Insert / Toolholder Description	G 	Standard 	R/L 	Without Chipbreaker 	Ceramic 	PCD 				
----CSKPR09---	SPMR0903..	SPMR0903..	SPGR0903..	SPMN0903.. SPGN0903..	SPGN0903..	-				
----CSKPR12---	SPMR1203..	SPMR1203..	SPGR1203..	SPMN1203.. SPGN1203..	SPGN1203..	SPGN1203..				

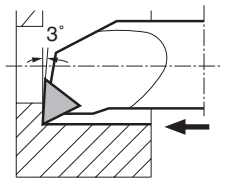
Recommended Cutting Conditions ➡ F91~F92
Applicable Sleeves ➡ F83~F84

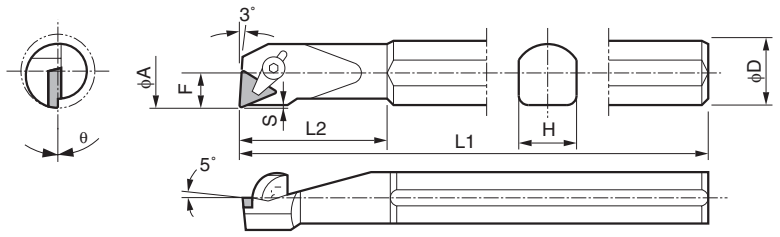
● : Std. Item

Boring Bar [TP□□ Insert]

S-CTUP (Boring)

Max. Overhang Length L/D=~3





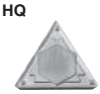
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp Set		Wrench		Shim	Shim Screw
																		
S12L-CTUPR 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								
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								KPT-32	SP3X10
S40X-CTUP R/L 16-50	5040B-16	●	●	50	40	37	315	80	25									

Applicable Inserts

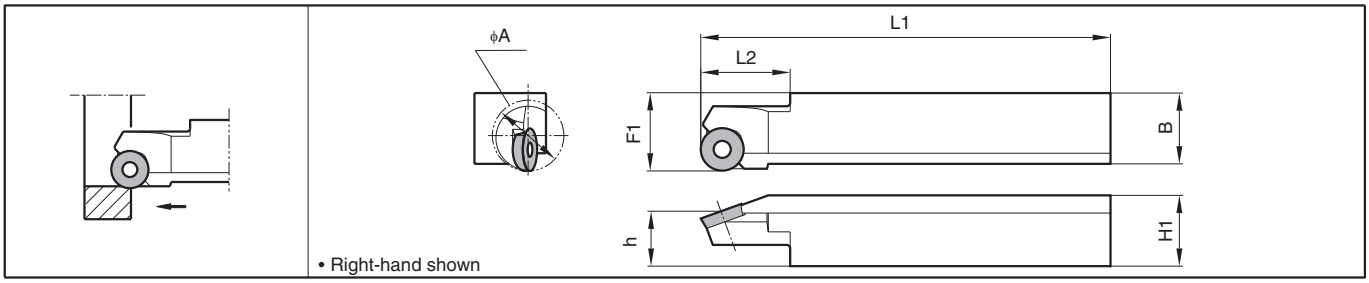
Applications	Finishing	Finishing-Medium	Medium	Medium	Finishing	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials
Ref. to Page	B71	B71	B71	B71	B71	B72	B72	B93	C29	C18
Insert / Toolholder Description	GP 	HQ 	G 	Standard 	R/L-F 	R/L-□ 	Without Chipbreaker 	Ceramic 	PCD 	CBN 
----CTUPR09----	-	-	TPMR0902..	-	TPGR0902..	-	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..

Recommended Cutting Conditions ➡ F91~F92
Applicable Sleeves ➡ F82~F84

● : Std. Item

Boring Toolholders for Bearing Machining (Square Shank)

SRCP-B (Boring)



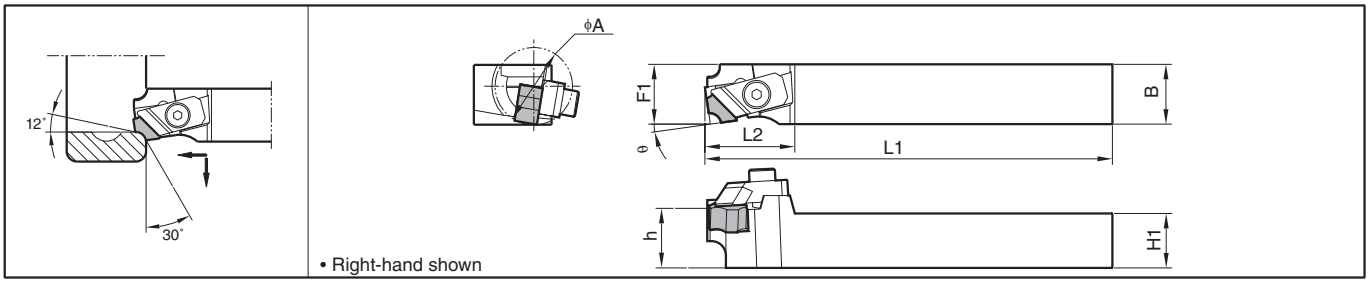
Toolholder Dimensions

Description		Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) H1	h	B	L1	L2	F1		Spare Parts: Clamp Screw	Wrench		Applicable Inserts ➡ B83
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) A	T	ϕd	Angle (˚) α
			RPMT 1203M0-BB	12.0	3.18	4.4	11°
			1604M0-BB	16.0	4.76	5.5	

CBSN-B (Internal Round Chamfering)



Toolholder Dimensions

Description		Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) H1	h	B	L1	L2	F1	θ	Spare Parts: Clamp Set	Wrench		Applicable Inserts ➡ B83
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: CP-RCR for Right-hand Toolholder, and CP-RCL for Left-hand Toolholder.

Applicable Inserts

Insert				Description	Dimension (mm) A	T	B	rε	Angle (˚) θ
				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	

● : Std. Item

Identification System for Interchangeable Heads

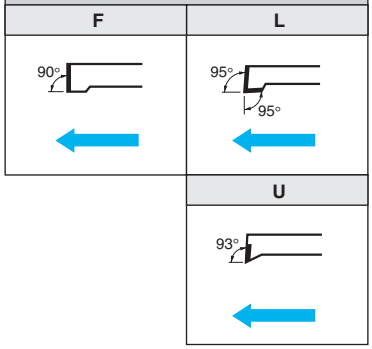
Interchangeable Head	Clamping System	Insert Shape	Hand of Tool	Min. Bore Dia.
	P : Pin Lock (Lever Lock)	C : 80° Rhombic	R: Right-hand	
	S : Screw Clamp	D : 55° Rhombic	L : Left-hand	
		T : Triangle		

H A 32 P C L N R 12 – 40

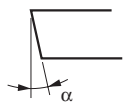
Type of Head	
A	Steel head with coolant hole

Applicable Adapter Diameter

Cutting Edge Angle

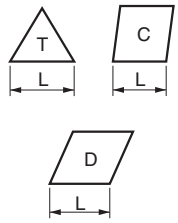


Insert Relief Angle

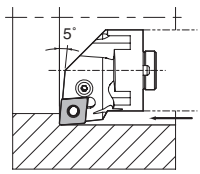


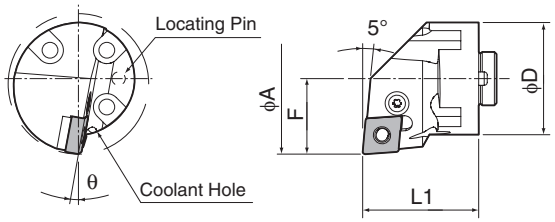
C: 7° Positive
N: 0° Negative

Insert Size



HA···PCLN12 (Boring / Internal Facing, with Coolant Hole)





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	L1	F	θ	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	*Punch	Wrench	Applicable Boring Adapter ➔F64
HA32PCLN R/L 12-40	●	●	40	32	41	22	10°	0.8	LL-2K	LS-2P	LC-4K	LSP-3K	*PC-2K	LTP-15	AD32U
HA40PCLN R/L 12-50	●	●	50	40		27									AD40V
HA50PCLN R/L 12-63	●	●	63	50		35									AD50W

* Punch (*PC-2K): Not included. Purchase separately.

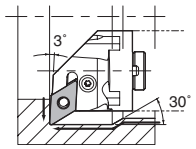
Applicable Inserts

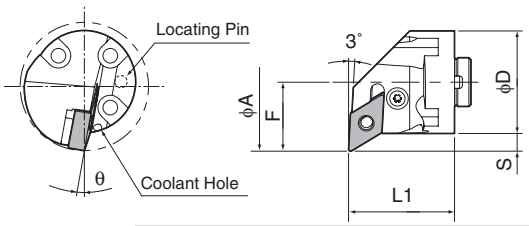
Toolholder Description	Insert Description		Ref. to Page: Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PCLN R/L 12-40	CN□A	1204..	B14~B20	B86	C23	C6,C7
HA40PCLN R/L 12-50	CN□G					
HA50PCLN R/L 12-63	CN□M					

Recommended Cutting Conditions ➔F91~F92

● : Std. Item

HA···PDUN15 (Copying, with Coolant Hole)





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	L1	F	S	θ	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	*Punch	Wrench	Applicable Boring Adapter ➡F64
HA32PDUN R/L 15-43	●	●	43	32	41	25	9	12°	0.8	LL-3K	LS-3P	LD-4K43 (LD-4K)	LSP-3K	*PC-2K	LTP-15	AD32U
HA40PDUN R/L 15-50	●	●	50	40		27	7	10°								AD40V
HA50PDUN R/L 15-63	●	●	63	50		35	10									AD50W

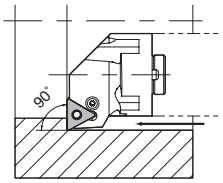
* Punch (*PC-2K): Not included. Purchase separately.
* Shim:LD-4K43 is attached to Toolholder. When using DN□□1506 Insert, purchase LD-4K separately.

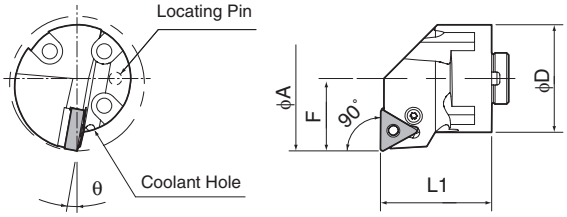
Applicable Inserts

Toolholder Description	Insert Description: Shim: LD-4K43		Shim: LD-4K		Ref. to Page: Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PDUN R/L 15-43	DN□A	1504..	DN□A	1506..	B21~B27	B87	C23	C8,C9
HA40PDUN R/L 15-50	DN□G		DN□G					
HA50PDUN R/L 15-63	DN□M		DN□M					

Recommended Cutting Conditions ➡F91~F92

HA···PTFN16 (Internal, with Coolant Hole)





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	L1	F	θ	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	*Punch	Wrench	Applicable Boring Adapter ➡F64
HA32PTFN R/L 16-40	●	●	40	32	41	22	10°	0.8	LL-1K	LS-1P	LT-3K	LSP-2K	*PC-2K	LTP-10	AD32U
HA40PTFN R/L 16-50	●	●	50	40		27									AD40V
HA50PTFN R/L 16-63	●	●	63	50		35	8°								AD50W

* Punch (*PC-2K): Not included. Purchase separately.

Applicable Inserts

Toolholder Description	Insert Description		Ref. to Page: Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PTFN R/L 16-40	TN□A	1604..	B33~B38	B91	C23	C11
HA40PTFN R/L 16-50	TN□G					
HA50PTFN R/L 16-63	TN□M					

Recommended Cutting Conditions ➡F91~F92

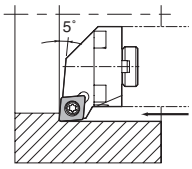
Reference

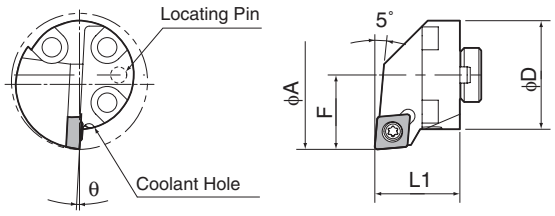
Wrenches (LTP-10, LTP-15) are Torx Plus.
The size of Torx Plus is engraved on the long shaft.

Wrench Description	LTP-10	LTP-15
Engraved Size	10IP	15IP

● : Std. Item

HA···SCLC09 (Boring / Internal Facing, with Coolant Hole)





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

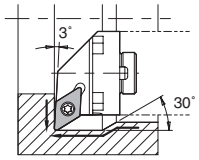
Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	L1	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Boring Adapter ➡F64	Applicable Inserts
HA32SCLC R/L 09-40	●	●	40	32	25	22	-	3°	0.8	SB-3580TR	FTS-15	AD32U	CC..09T3..

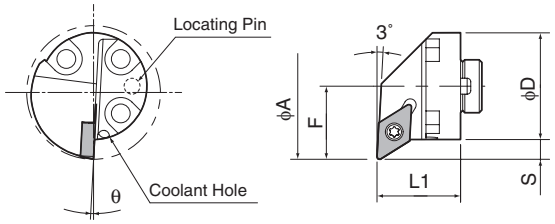
Applicable Inserts

Insert Description	Ref. to Page: Cermet / Coated Carbide / Carbide	PCD	CBN
CC..09T3..	B48~B53	C24	C14

Recommended Cutting Conditions ➡F91~F92

HA···SDUC11 (Copying, with Coolant Hole)





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	L1	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Boring Adapter ➡F64	Applicable Inserts
HA32SDUC R/L 11-40	●	●	40	32	25	22	6	3°	0.8	SB-3580TR	FTS-15	AD32U	DC..11T3..

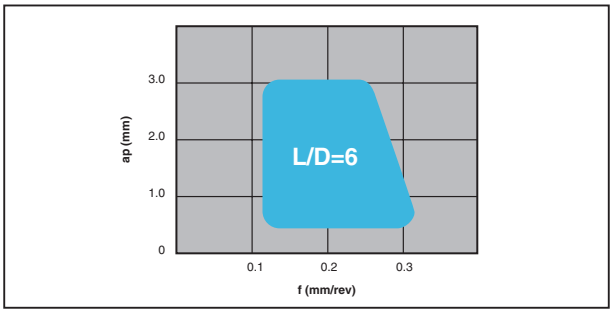
Applicable Inserts

Insert Description	Ref. to Page: Cermet / Coated Carbide / Carbide	PCD	CBN
DC..11T3..	B55~B61	C25	C15

Recommended Cutting Conditions ➡F91~F92

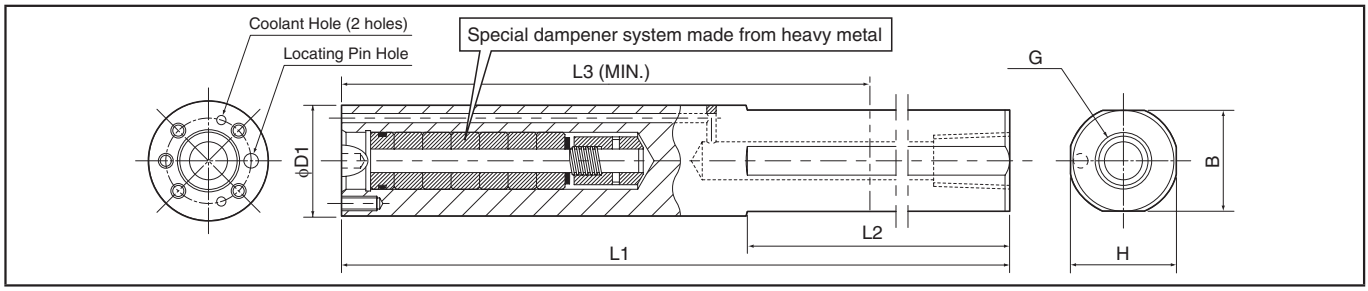
Possible machining area (Guide-Line for Overhang Length of AD Bars)

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



● : Std. Item

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



Dimensions

Description	Std.	Dimension (mm)							Spare Parts		
									Clamp Bolt		Wrench
		ϕD1	H	B	L1	L2	L3 (MIN.)	G			
AD 32U	●	32	31	29	310	200	200	Rp3/8	HH5×20 (3 pcs)	HH5×30 (1 pcs)	LW-4
AD 40V	●	40	39	37	360	248	228				
AD 50W	●	50	47	47	410	280	276		HH6×20 (3 pcs)	HH6×30 (1 pcs)	LW-5

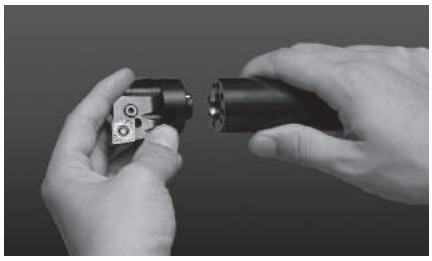
Note) L3 (MIN.) dimension indicates the minimum length in case of the back end of boring adapter is cut for use.
Do not shorten it to less than L3 (MIN.).

Combination of Boring Adapter and Interchangeable Head

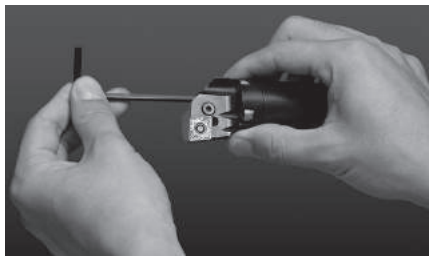
Interchangeable Head Description		Boring Adapter			
		Base Description	Clamp Bolt		Wrench
HA32	**PCLNR/L 12-40**	AD32U	HH5×20	HH5×30	LW-4
	PDUNR/L 15-43				
	PTFNR/L 16-40				
	SCLCR/L 09-40		HH5×20		
	SDUCR/L 11-40				
HA40	**PCLNR/L 12-50**	AD40V	HH5×20	HH5×30	
	PDUNR/L 15-50				
	PTFNR/L 16-50				
HA50	**PCLNR/L 12-63**	AD50W	HH6×20	HH6×30	LW-5
	PDUNR/L 15-63				
	PTFNR/L 16-63				

How to exchange heads

1. No head attached



2. Align hole positions



3. Tighten 3 bolts to attach the head

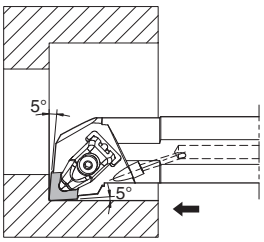
**For lever lock type Interchangeable head, use 2 short bolts for upper side and 1 long bolt for lower side.
HA32 SCLCR/L09-40 and
HA32 SDUCR/L11-40
use HH5 X 20 for all 3 bolts.**

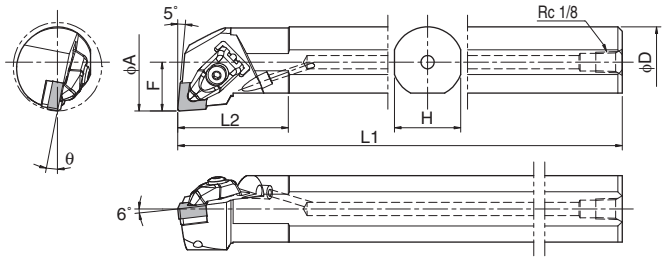
● : Std. Item

Boring Bar [CN□□ Negative Insert]

A-DCLN (Boring / Internal Facing)

Max. Overhang Length L/D=~3





• Right-hand shown

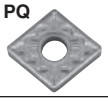
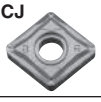
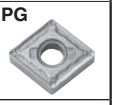
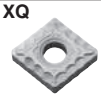
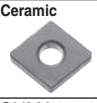
Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
																		 for Clamp	 for Shim
A25R-DCLN R/L 12-32	●	●	32	25	23	200	42	17	-	11°	0.8	CP-3D	CS-3D	SP-3D	DC-42	SB-4085TR	DN10	LW-3	FT-15
A32S-DCLN R/L 12-40	●	●	40	32	30	250	50	22	-	11°									
A40T-DCLN R/L 12-50	●	●	50	40	37	300	60	27	-	11°							DN20		

*When using inserts whose corner-R(rε) is greater than 1.6mm, it will be necessary additional modifications of the shim in order to prevent workpiece and shim from interfering each other.
*Not applicable to high-pressure coolant.

Applicable Inserts

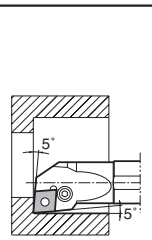
Applications	Finishing	Finishing-Medium	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Ref. to Page	B14	B14	B14	B14	B14	B14	B14	B14	B15	B15
Insert / Toolholder Description	WP (Wiper) 	WQ (Wiper) 	PP 	GP 	PQ 	HQ 	CQ 	CJ 	GS 	PG 
...-DCLN R/L 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..
Applications	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Single Sided / Roughing / High Feed Rate	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Ref. to Page	B15	B15	B16	B17	B20	B17	B17	B17	B18	B18
Insert / Toolholder Description	PS 	PT 	Standard 	PX 	R/L 	XP 	XQ 	XS 	MQ 	MS 
...-DCLN R/L 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMM1204..	CNGG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B18	B19	B19	B19	B19	B86	B19	B19	C23	C6,C7
Insert / Toolholder Description	MU 	C 	ZS 	GC 	Without Chipbreaker 	Ceramic 	AH 	R/L-A3 	PCD 	CBN 
...-DCLN R/L 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMA1204.. CNGA1204..	CNMA1204.. CNGA1204..	CN_G1204..	CNGG1204..	CNMM1204..	CNGA1204..

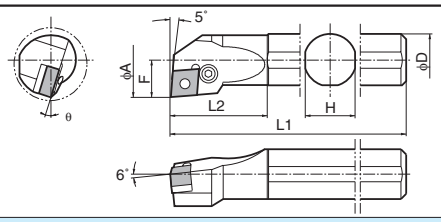
Recommended Cutting Conditions ➡ F91~F92

● : Std. Item

Boring Bar [CN□□ Negative Insert]

S-PCLN○○ (Boring / Internal Facing)



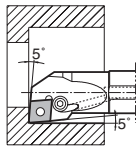


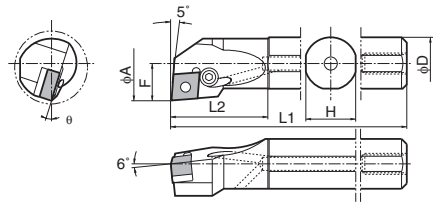
Left-hand Insert for Right-hand Toolholder,
Right-hand Insert for Left-hand Toolholder.

• Right-hand shown Max. Overhang Length L/D=~3

A-PCLN09

(Boring / Internal Facing, with Coolant Hole)
Twin-Hole Bar





Left-hand Insert for Right-hand Toolholder.

• Right-hand shown Max. Overhang Length L/D=~3

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	F	θ	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
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°							
NEW S25R-PCLN R/L 12-32	-	●	●	32	25	24	200	42	16.3	16°	0.8	LL-2N	LS-2N	LC-42N R/L	LSP-2	PC-2	LW-3
S32S-PCLN R/L 12-40	PCLN R/L 4032B-12	●	●	40	32	30	250	50	21	10°							
S40T-PCLN R/L 12-50	5040B-12	●	●	50	40	37	300	60	25								
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°							

· LC-42NR for Right-hand Toolholder, LC-42NL for Left-hand Toolholder.

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Ref. to Page	B14	B14	B14	B14	B14	B14	B14	B14	B15	B15
Insert / Toolholder Description	WP (Wiper)	WQ (Wiper)	PP	GP	PQ	HQ	CQ	CJ	GS	PG
...-PCLN R/L 09-...	-	-	-	CNMG0904..	-	CNMG0904..	-	-	CNMG0904..	-
...-PCLN R/L 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..

Applications	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Single Sided / Roughing / High Feed Rate	Finishing	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing
Ref. to Page	B15	B15	B15	B16	B17	B20	B20	B17	B17	B17
Insert / Toolholder Description	PS	HS	PT	Standard	PX	R/L-S	R/L	XP	XQ	XS
...-PCLN R/L 09-...	-	-	-	-	-	CNGG0904..	CNGG0904..	-	-	-
...-PCLN R/L 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMM1204..	-	CNGG1204..	CNMG1204..	CNMG1204..	CNMG1204..

Applications	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals
Ref. to Page	B18	B18	B18	B19	B19	B19	B19	B86	B19	B19
Insert / Toolholder Description	MQ	MS	MU	C	ZS	GC	Without Chipbreaker	Ceramic	AH	R/L-A3
...-PCLN R/L 09-...	-	-	-	-	-	-	-	-	-	-
...-PCLN R/L 12-...	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMG1204..	CNMA1204.. CNGA1204..	CNMA1204.. CNGA1204..	CN_G1204..	CNGG1204..

Applications	Non-ferrous Metals	Hard Materials
Ref. to Page	C23	C6,C7
Insert / Toolholder Description	PCD	CBN
...-PCLN R/L 09-...	-	-
...-PCLN R/L 12-...	CNMM1204..	CNGA1204..

Recommended Cutting Conditions ➡ F91~F92

Applicable Coolant Sleeve / Joint

Toolholder Description	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	

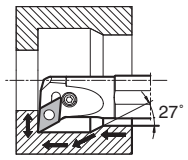
· For Coolant Sleeve, Coolant Joint, ref. to page ➡ F83~F84.

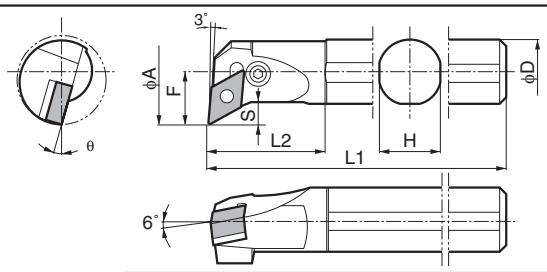
● : Std. Item

Boring Bar [DN11 Small Negative Insert]

S-PDUN11 (Copying)

Max. Overhang Length L/D=~3



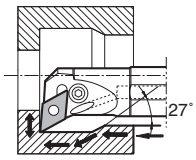


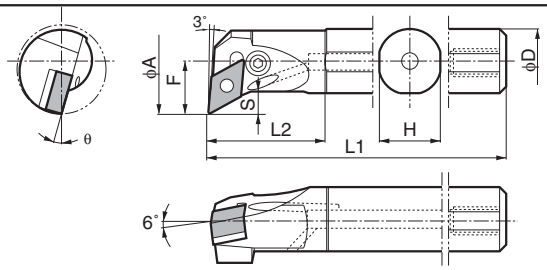
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

A-PDUN11 Twin-Hole Bar (Copying, with Coolant Hole)

Max. Overhang Length L/D=~3





• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
S20Q -PDUN R/L 11-27	PDUN R/L 2720B-11	●	●	27	20	19	180	35	16	7.6	17°	0.4	LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
S25R -PDUN R/L 11-32	3225B-11	●	●	32	25	24	200	40	17	7.6	15°							
S32S -PDUN R/L 11-40	4032B-11	●	●	40	32	31	250	45	22	8.5	12°							
A20Q -PDUNR11-27	PDUNR 2720B-11H	●		27	20	19	180	35	16	7.6	17°	0.4	LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
A25R -PDUNR11-32	3225B-11H	●		32	25	24	200	40	17	7.6	15°							
A32S -PDUNR11-40	4032B-11H	●		40	32	31	250	45	22	8.5	12°							

Applicable Inserts

Applications	Finishing	Finishing-Medium	Medium-Roughing	Finishing	Medium
Ref. to Page	B21	B21	B22	B27	B27
Insert / Toolholder Description	GP	HQ	GS	R/L-S	R/L
----PDUN R/L 11----	DNMG1104..	DNMG1104..	DNMG1104..	DNGG1104..	DNGG1104..

Recommended Cutting Conditions ➡ F91~F92

Applicable Coolant Sleeve / Joint

Toolholder Description	Applicable Coolant Sleeve	Applicable Coolant Joint
A20Q -PDUNR11-27	SHC2040-70, SHC2050-95	SJS-8
A25R -PDUNR11-32	SHC2540-70, SHC2550-95	
A32S -PDUNR11-40	-	

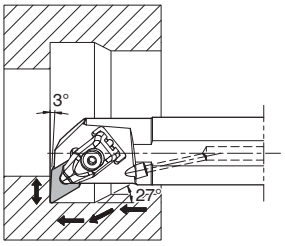
· For Coolant Sleeve, Coolant Joint, ref. to page ➡ F83~F84.

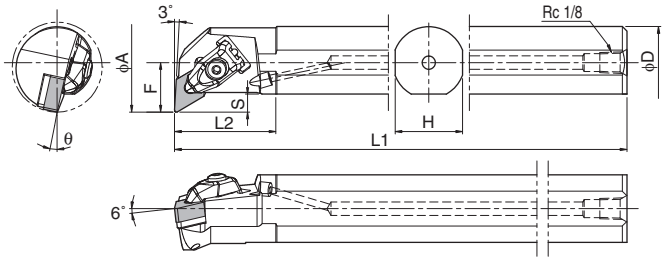
● : Std. Item

Boring Bar [DN15 Negative Insert]

A-DDUN (Boring / Copying)

Max. Overhang Length L/D=~3





• Right-hand shown

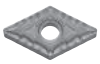
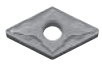
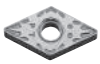
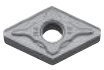
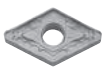
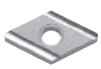
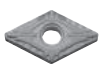
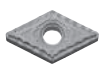
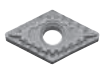
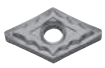
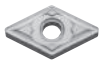
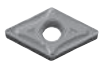
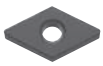
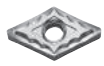
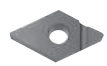
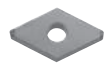
Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
																		 for Clamp	 for Shim
A32S-DDUN$^{R}/_{L}$15-40	●	●	40	32	30	250	45	22	8	12°	0.8	CP-3D	CS-3D	SP-3D	DD-42 *DD-42-16	SB-4085TR	DN10	LW-3	FT-15
A40T- DDUN$^{R}/_{L}$15-50	●	●	50	40	37	300	55	27	8.5										
A50U-DDUN$^{R}/_{L}$15-63	●	●	63	50	47	350	65	35	10.5								DN20		

When using inserts whose corner-R(rε) is greater than 1.6mm, please purchase a shim (DD-42-16) with * mark and use it in order to prevent workpiece and shim from interfering each other.
*Not applicable to high-pressure coolant.

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing
Ref. to Page	B21	B21	B22	B22	B22	B22	B23	B23	B23
Insert / Toolholder Description	PP	PQ	CQ	CJ	GS	PG	PS	PT	Standard
									
----DDUN$^{R}/_{L}$15----	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..
Applications	Roughing	Single Sided / Roughing / High Feed Rate	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Ref. to Page	B24	B24	B27	B24	B24	B24	B25	B25	B25
Insert / Toolholder Description	PH	PX	$^{R}/_{L}$	XP	XQ	XS	MQ	MS	MU
									
----DDUN$^{R}/_{L}$15----	DNMG1504..	DNMM1504..	DNGG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B25	B26	B26	B26	B87	B26	B26	C23	C8,C9
Insert / Toolholder Description	TK	C	ZS	GC	Ceramic	AH	$^{R}/_{L}$-A3	PCD	CBN
									
----DDUN$^{R}/_{L}$15----	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNGA1504..	DN_G1504..	DNGG1504..	DNMM1504..	DNGA1504..

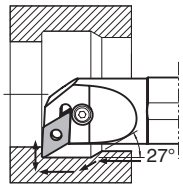
Recommended Cutting Conditions ➔ F91~F92

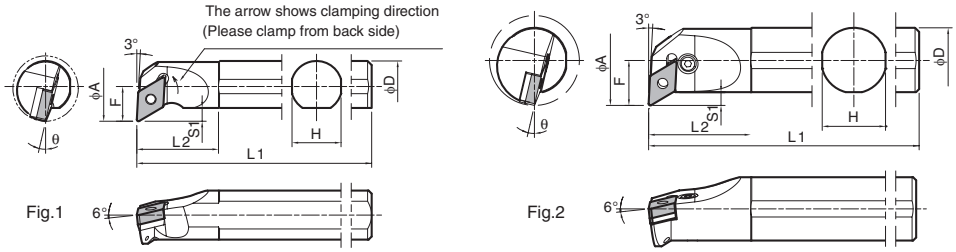
● : Std. Item

Boring Bar [DN15 Negative Insert]

S-PDUN15 (Copying)

Max. Overhang Length L/D=~3



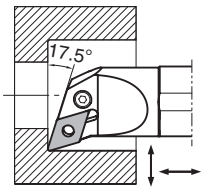


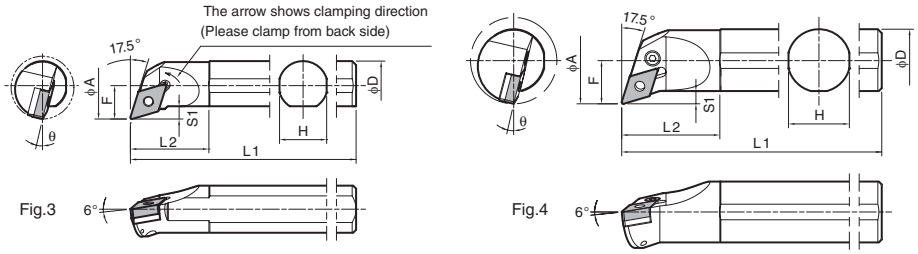
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

S-PDQN15 (Copying)

Max. Overhang Length L/D=~3



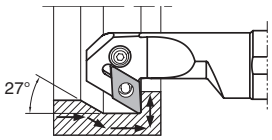


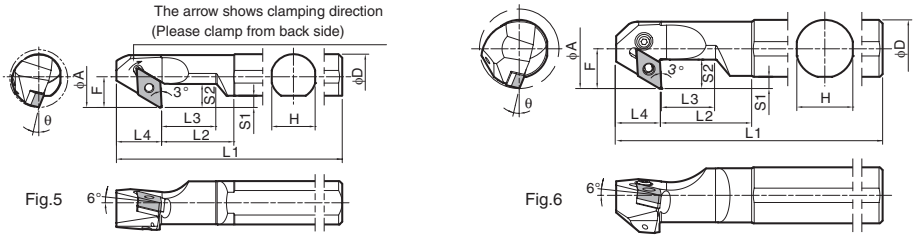
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

S-PDZN15 (Back Boring)

Max. Overhang Length L/D=~3





• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

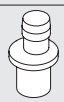
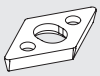
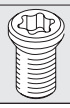
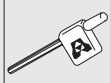
Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	L3	L4	F	S1	S2	θ	Standard Corner-R(rε)	Drawing	Applicable Inserts	
S25R -PDUN R/L 15-32	●	●	32	25	24	200	40	-	-	17	6.5	-	13°	0.8	Fig.1	DN□A	1504..
S32S -PDUN R/L 15-44	●	●	44	32	31	250	50			22					Fig.2	DN□G	
S40T -PDUN R/L 15-54	●	●	54	40	39	300	65			27	7.5		12°			DN□M	
S25R -PDQN R/L 15-32	●	●	32	25	24	200	40	-	-	17	6.5	-	13°	0.8	Fig.3	DN□A	1504..
S32S -PDQN R/L 15-44	●	●	44	32	31	250	50			22					Fig.4	DN□G	
S40T -PDQN R/L 15-54	●	●	54	40	39	300	65			27	7.5		12°			DN□M	
S25R -PDZN R/L 15-32	●	●	32	25	24	225	40	30	25	17	6.5	13	13°	0.8	Fig.5	DN□A	1504..
S32S -PDZN R/L 15-44	●	●	44	32	31	275	50			22		16			Fig.6	DN□G	
S40T -PDZN R/L 15-54	●	●	54	40	39	325	65	50		27	7.5		12°			DN□M	

● : Std. Item

Boring Bar [DN15 Negative Insert]

● Spare Parts (Common)

Toolholder Description	Spare Parts									
	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Lock Pin	Shim	Shim Screw	Wrench (for Shim Screw)
										
S25R - PD□N$^{R}/_{L}$15-32	-	-	-	-	-	LW-3	PP-4	PD-42	SB-2050TR	FT-6
S32S - PD□N$^{R}/_{L}$15-44	LL-3N	LS-2N	LD-42 *LD-42-20	LSP-2	PC-2		-	-	-	-
S40T - PD□N$^{R}/_{L}$15-54										

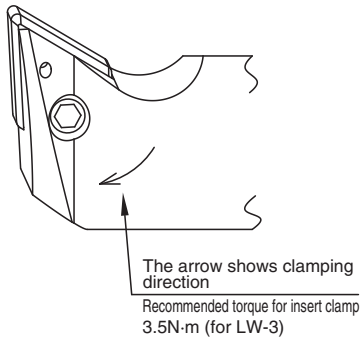
· Shim When using inserts whose corner-R(rε) = 1.6mm or larger for S25R-PD□N$^{R}/_{L}$15-32, use shim modified by additional processing to prevent interference between workpiece and shim.
When using inserts whose corner-R(rε) = 1.6mm or larger for S32S-PD□N$^{R}/_{L}$15-44 and S40T-PD□N$^{R}/_{L}$15-54, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

F

Boring

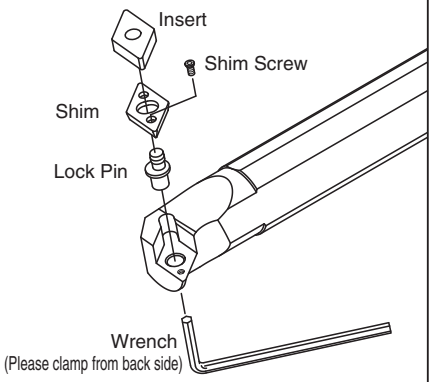
● How to change S25R-PD□N$^{R}/_{L}$15-32 inserts

· Please replace S25R-PD□N$^{R}/_{L}$15-32 insert from the back side

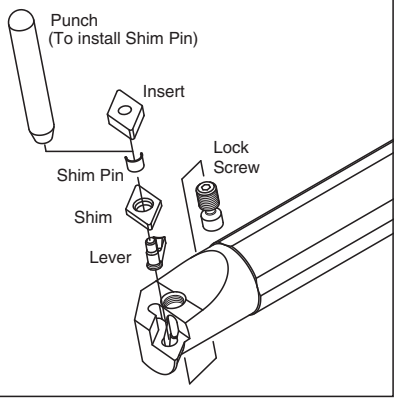


● How to assemble spare parts

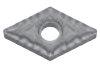
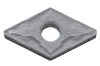
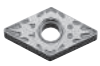
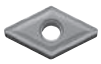
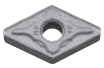
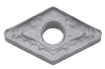
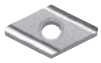
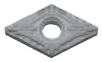
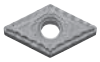
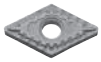
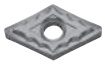
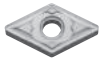
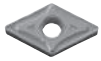
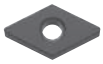
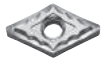
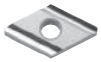
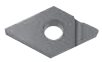
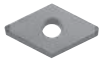
· S25R-PD□N$^{R}/_{L}$15-32 (Pin Lock)



· S32S-PD□N$^{R}/_{L}$15-44 (Lever Lock)
· S40T-PD□N$^{R}/_{L}$15-54 (Lever Lock)



● Applicable Inserts

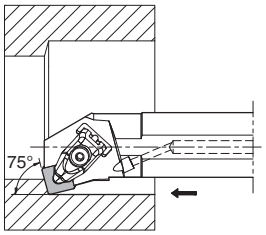
Applications	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing
Ref. to Page	**B21**	**B21**	**B22**	**B22**	**B22**	**B22**	**B23**	**B23**	**B23**
Insert / Toolholder Description	**PP** 	**PQ** 	**CQ** 	**CJ** 	**GS** 	**PG** 	**PS** 	**PT** 	**Standard** 
----PD□N$^{R}/_{L}$15----	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..
Applications	Roughing	Single Sided / Roughing / High Feed Rate	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Ref. to Page	**B24**	**B24**	**B27**	**B24**	**B24**	**B24**	**B25**	**B25**	**B25**
Insert / Toolholder Description	**PH** 	**PX** 	$^{R}/_{L}$ 	**XP** 	**XQ** 	**XS** 	**MQ** 	**MS** 	**MU** 
----PD□N$^{R}/_{L}$15----	DNMG1504..	DNMM1504..	DNGG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	**B25**	**B26**	**B26**	**B26**	**B87**	**B26**	**B26**	**C23**	**C8,C9**
Insert / Toolholder Description	**TK** 	**C** 	**ZS** 	**GC** 	**Ceramic** 	**AH** 	$^{R}/_{L}$**-A3** 	**PCD** 	**CBN** 
----PD□N$^{R}/_{L}$15----	DNMG1504..	DNMG1504..	DNMG1504..	DNMG1504..	DNGA1504..	DN_G1504..	DNGG1504..	DNMM1504..	DNGA1504..

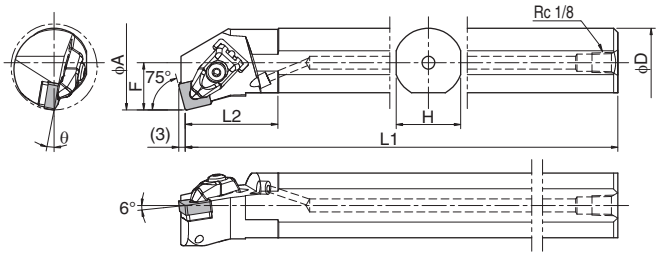
Recommended Cutting Conditions ➔ **F91~F92**

Boring Bar [SN12 Negative Insert]

A-DSKN (Boring)

Max. Overhang Length L/D=~3





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
A25R-DSKN R/L 12-32	●	●	32	25	23	200	43	17	-	11°	0.8	CP-3D	CS-3D	SP-3D	DS-42	SB-4085TR	DN10	LW-3 (for Clamp)	FT-15 (for Shim)
A32S-DSKN R/L 12-40	●	●	40	32	30	250	43	22	-	11°									
A40T- DSKN R/L 12-50	●	●	50	40	37	300	53	27	-	11°							DN20		

*Not applicable to high-pressure coolant.

Applicable Inserts

Applications	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed Rate
Ref. to Page	B29	B29	B29	B29	B29	B29	B30	B30
Insert / Toolholder Description	PQ	PG	PS	HS	PT	Standard	PH	PX
···DSKN R/L 12···	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMM1204..

Applications	Finishing-Roughing	Medium-Roughing / Low Cutting Force	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Cast Iron
Ref. to Page	B32	B32	B30	B30	B30	B31	B31	B31
Insert / Toolholder Description	R/L-□	R/L-25R	XP	XQ	XS	MQ	MS	C
···DSKN R/L 12···	SNGG1204..	SNGG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..	SNMG1204..

Applications	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Hard Materials
Ref. to Page	B31	B31	B31	B89	C10
Insert / Toolholder Description	ZS	GC	Without Chipbreaker	Ceramic	CBN
···DSKN R/L 12···	SNMG1204..	SNMG1204..	SN□A1204..	SN□A1204..	SNGA1204..

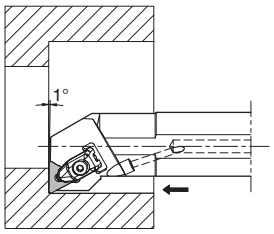
Recommended Cutting Conditions ➡ F91~F92

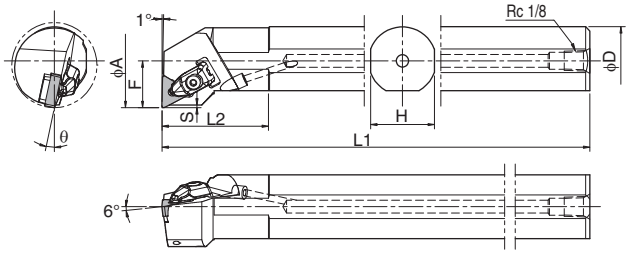
● : Std. Item

Boring Bar [TN16 Negative Insert]

A-DTFN (Boring)

Max. Overhang Length L/D=~3

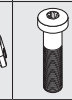




• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
																		 for Clamp	 for Shim
A25R-DTFN$^{R}/_{L}$16-32	●	●	32	25	23	200	42	17	0.8	12°	0.8	CP-2D	CS-2D	SP-3D	DT-32	SB-3080TR	DN10	LW-2.5	FT-10
A32S-DTFN$^{R}/_{L}$16-40	●	●	40	32	30	250	50	22	1.2	12°									
A40T- DTFN$^{R}/_{L}$22-50	●	●	50	40	37	300	60	27	1.5	12°		CP-3D	CS-3D	SP-3D	DT-42	SB-4085TR	DN20	LW-3	FT-15

*Not applicable to high-pressure coolant.

Applicable Inserts

Applications	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate
Ref. to Page	B33	B33	B33	B33	B33	B33	B33	B33	B34	B34
Insert / Toolholder Description	PP 	GP 	PQ 	HQ 	CQ 	GS 	PG 	PS 	HS 	PT 
----DTFN$^{R}/_{L}$16----	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..
----DTFN$^{R}/_{L}$22----	-	-	-	-	TNMG2204..	-	-	TNMG2204..	TNMG2204..	-

Applications	Medium-Roughing / High Feed Rate	Roughing	Finishing	Medium-Roughing	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Ref. to Page	B34	B34	B38	B38	B35	B35	B35	B36	B36	B36
Insert / Toolholder Description	GT 	Standard 	$^{R}/_{L}$-S 	$^{R}/_{L}$-□ 	XP 	XQ 	XS 	MQ 	MS 	MU 
----DTFN$^{R}/_{L}$16----	TNMG1604..	TNMG1604..	TNGG1604..	TNGG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..
----DTFN$^{R}/_{L}$22----	-	TNMG2204..	-	TNGG2204..	-	-	-	-	-	-

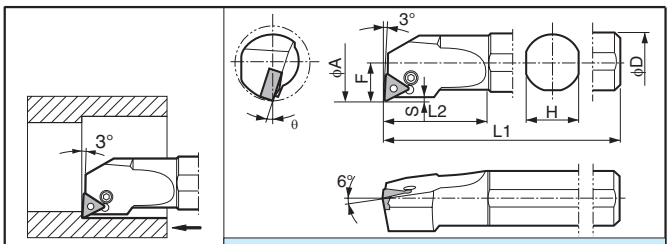
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B36	B37	B37	B37	B37	B91	B37	B37	C23	C11
Insert / Toolholder Description	$^{R}/_{L}$-ST 	C 	ZS 	GC 	Without Chipbreaker 	Ceramic 	AH 	$^{R}/_{L}$-A3 	PCD 	CBN 
----DTFN$^{R}/_{L}$16----	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMA1604.. TNGA1604..	TNGA1604..	TN_G1604..	TNGG1604..	TNMM1604..	TNGA1604..
----DTFN$^{R}/_{L}$22----	-	-	-	-	-	-	-	-	-	-

Recommended Cutting Conditions ➡ F91~F92

● : Std. Item

Boring Bar [TN□□Negative Insert]

S-PTUN○○ (Boring)

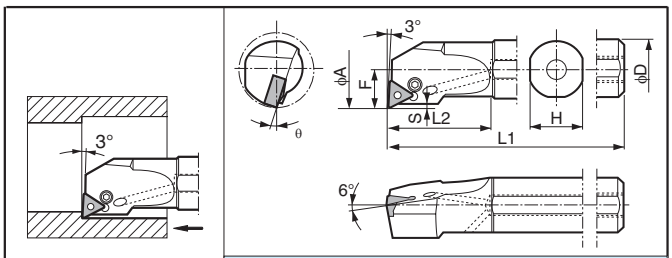


Left-hand Insert for Right-hand Toolholder,
Right-hand Insert for Left-hand Toolholder.

• Right-hand shown Max. Overhang Length L/D=~3

A-PTUN11

(Internal, with Coolant Hole)
Twin-Hole Bar



Left-hand Insert for Right-hand Toolholder.

• Right-hand shown Max. Overhang Length L/D=~3

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
S16M-PTUN R/L 11-20	PTUN R/L 2016B-11	●	●	20	16	15	150	34	11	0.3	18°	0.8	LL-03TN	LS-03SN	-	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°							
S16M-PTUN R/L 16-20	NEW -	●	●	20	16	15	150	34	11	1.3	18°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PTUN R/L 16-25		●	●	25	20	19	180	37	13.2	1.3	17°							
S25R-PTUN R/L 16-30		●	●	30	25	24	200	42	15.5	1.3	13°							
S32S-PTUN R/L 16-40		●	●	40	32	30	250	50	22	0.7	13°		LL-1N	LS-1N	LT-32N *LT-32N-20	LSP-1	PC-1	FH-2.5
S40T-PTUN R/L 16-50		●	●	50	40	37	300	60	27	0.6	11°							
A16M-PTUNR11-20	PTUNR2016B-11H	●		20	16	15	150	34	11	0.3	18°	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PTUNR11-25	2520B-11H	●		25	20	19	180	37	13.2	0.2	17°							
A25R-PTUNR11-32	3225B-11H	●		32	25	24	200	42	15.7	0.3	16°							

· When using inserts whose corner-R(rε) = 1.6mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

Applications	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate
Ref. to Page	B33	B33	B33	B33	B33	B33	B33	B33	B34	B34
Insert / Toolholder Description	PP	GP	PQ	HQ	CQ	GS	PG	PS	HS	PT
----PTUN R/L 11----	-	TNMG1104..	-	TNMG1104..	-	TNMG1104..	-	-	-	-
----PTUN R/L 16----	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..
Applications	Medium-Roughing / High Feed Rate	Roughing	Finishing	Medium-Roughing	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Ref. to Page	B34	B34	B38	B38	B35	B35	B35	B36	B36	B36
Insert / Toolholder Description	GT	Standard	R/L-S	R/L-□	XP	XQ	XS	MQ	MS	MU
----PTUN R/L 11----	-	-	TNGG1104..	TNGG1104..	-	-	-	-	-	-
----PTUN R/L 16----	TNMG1604..	TNMG1604..	TNGG1604..	TNGG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..
Applications	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B36	B37	B37	B37	B37	B91	B37	B37	C23	C11
Insert / Toolholder Description	R/L-ST	C	ZS	GC	Without Chipbreaker	Ceramic	AH	R/L-A3	PCD	CBN
----PTUN R/L 11----	-	-	-	-	-	-	-	-	-	-
----PTUN R/L 16----	TNMG1604..	TNMG1604..	TNMG1604..	TNMG1604..	TNMA1604.. TNGA1604..	TNGA1604..	TN_G1604..	TNGG1604..	TNMM1604..	TNGA1604..

Recommended Cutting Conditions ➡ F91~F92

Applicable Coolant Sleeve / Joint

Toolholder Description	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	

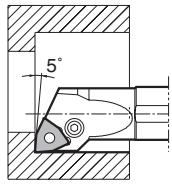
· For Coolant Sleeve, Coolant Joint, ref. to page ➡ F83~F84.

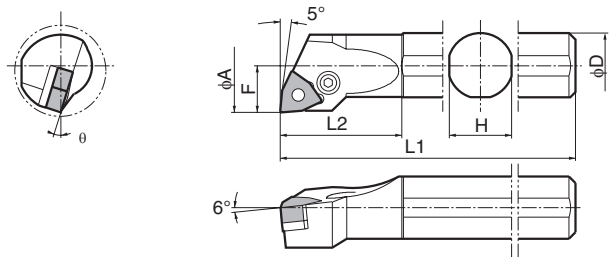
● : Std. Item

Boring Bar [WN06 Small Negative Insert]

S-PWLN06 (Boring / Internal Facing)

Max. Overhang Length L/D=~3



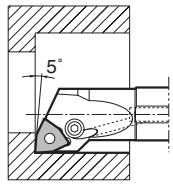


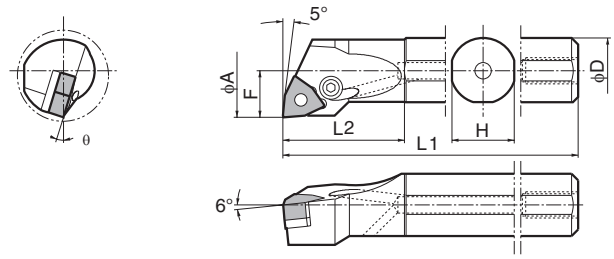
• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

A-PWLN06 Twin-Hole Bar (Boring / Internal Facing, with Coolant Hole)

Max. Overhang Length L/D=~3





• Right-hand shown

Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	θ	Standard Corner-R(εε)	Spare Parts: 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°		LL-1N	LS-1SN	LW-32N	LSP-1	PC-1	
S25R-PWLN R/L 06-32	3225B-06	●	●	32	25	24	200	42	15.7	15°							
A16M-PWLNR06-20	PWLNR 2016B-06H	●		20	16	15	150	34	11	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PWLNR06-27	PWLNR 2720B-06H	●		27	20	19	180	37	14.2	17°		LL-1N	LS-1SN	LW-32N	LSP-1	PC-1	
A25R-PWLNR06-32	3225B-06H	●		32	25	24	200	42	15.7	15°							

Applicable Inserts

Applications	Finishing	Finishing-Medium	Medium-Roughing	Finishing	Medium
Ref. to Page	B41	B41	B42	B44	B44
Insert / Toolholder Description	GP	HQ	GS	R/L-S	R/L
----PWLN R/L 06----	WNMG0604..	WNMG0604..	WNMG0604..	WNGG0604..	WNGG0604..

Recommended Cutting Conditions ➡ F91~F92

Applicable Coolant Sleeve / Joint

Toolholder Description	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PWLNR06-20	SHC1640-70, SHC1650-95	SJS-8
A20M-PWLNR06-27	SHC2040-70, SHC2050-95	
A25R-PWLNR06-32	SHC2540-70, SHC2550-95	

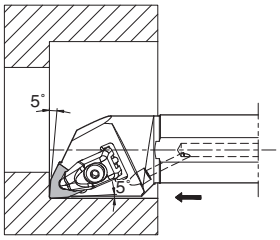
· For Coolant Sleeve, Coolant Joint, ref. to page ➡ F83~F84.

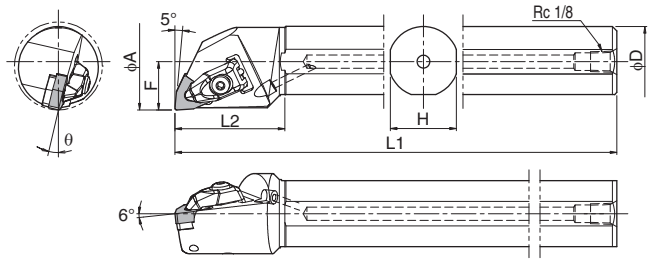
● : Std. Item

Boring Bar [WN08 Negative Insert]

A-DWLN (Boring / Internal Facing)

Max. Overhang Length L/D=~3





• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	S	θ	Standard Corner-R(rε)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
A25R-DWLN R/L 08-32	●	●	32	25	23	200	50	17	-	13°	0.8	CP-3D	CS-3D	SP-3D	DW-42	SB-4085TR	DN10	LW-3 (for Clamp)	FT-15 (for Shim)
A32S-DWLN R/L 08-40	●	●	40	32	30	250	50	22	-	13°									
A40T- DWLN R/L 08-50	●	●	50	40	37	300	60	27	-	13°							DN20		

*Not applicable to high-pressure coolant.

Applicable Inserts

Applications	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium - Roughing	Medium - Roughing	Medium - Roughing / High Feed Rate	Roughing
Ref. to Page	B41	B41	B41	B41	B41	B41	B42	B42	B42	B42	B42
Insert / Toolholder Description	WP (Wiper)	WQ (Wiper)	PP	PQ	CQ	CJ	GS	PG	PS	PT	Standard
...-DWLN R/L 08 -...	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..
Applications	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B43	B43	B43	B43	B43	B43	B44	B44	B44	C23	C13
Insert / Toolholder Description	XP	XQ	XS	MQ	MS	MU	C(GC)	ZS	AH	PCD	CBN
...-DWLN R/L 08 -...	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNGG0804..	WNMM0804..	WNGA0804..

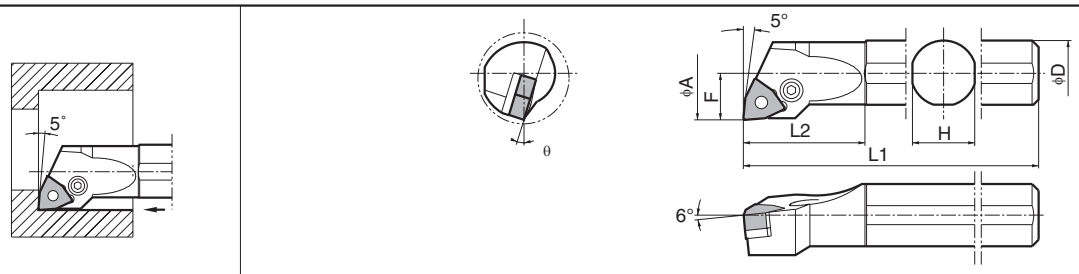
Recommended Cutting Conditions ➡ F91~F92

● : Std. Item

Boring Bar [WN08 Negative Insert]

S-PWLN08 (Boring / Internal Facing)

Max. Overhang Length L/D=~3



• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

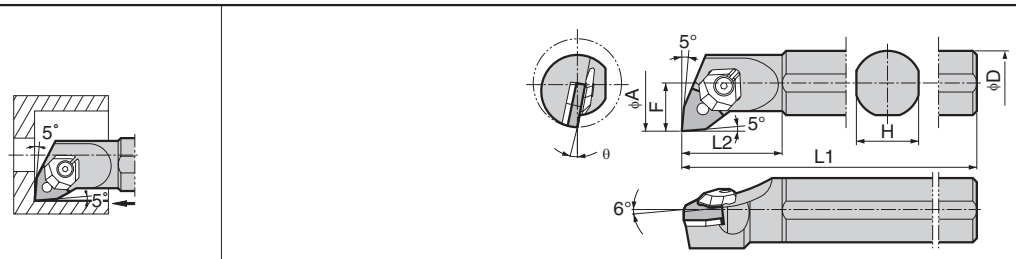
Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	θ	Standard Corner-R(rε)	Spare Parts: 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 Right-hand Toolholder, LW-42NL for Left-hand Toolholder.

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

Max. Overhang Length L/D=~5



• Right-hand shown

Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	θ	Standard Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Pin	Wrench
S25S-WWLN R/L 08-28E	WWLN R/L 2825B-08E	●	●	28	25	24	250	36	14	13°	1.2	WCS-8	LW-3	WWP-42 *WWP -42-16	WP5X11	LW-2
S25S-WWLN R/L 08-34E	3425B-08E	●	●	34	25	24		40	17	11°						
S32S-WWLN R/L 08-40E	4032B-08E	●	●	40	32	30		50	20	10°						

· When using inserts whose corner-R(rε) = 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	Roughing
Ref. to Page	B41	B41	B41	B41	B41	B41	B42	B42	B42	B42	B42
Insert / Toolholder Description	WP (Wiper)	WQ (Wiper)	PP	PQ	CQ	CJ	GS	PG	PS	PT	Standard
...-PWLN R/L 08-... / ...-WWLN R/L 08-...	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..
Applications	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. to Page	B43	B43	B43	B43	B43	B43	B44	B44	B44	C23	C13
Insert / Toolholder Description	XP	XQ	XS	MQ	MS	MU	C(GC)	ZS	AH	PCD	CBN
...-PWLN R/L 08-... / ...-WWLN R/L 08-...	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNMG0804..	WNGG0804..	WNMM0804..	WNGA0804..

· In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

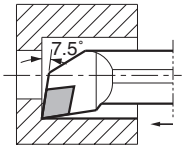
Recommended Cutting Conditions ➡ F91~F92

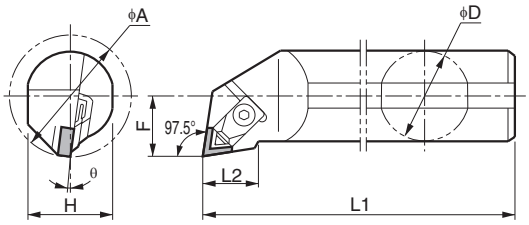
● : Std. Item

Boring Bars for Ceramic Tools [EN□□, SN□□ Insert]

S-CELN (Boring / Internal Facing)

Max. Overhang Length L/D=~3





• Right-hand shown

Applicable Inserts

Cast Iron / Hard Materials
B87
Ceramic 
ENGN1307..

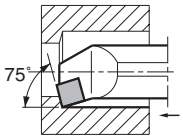
Toolholder Dimensions

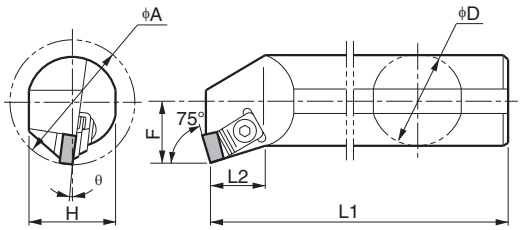
Recommended Cutting Conditions F91~F92

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	F	θ	Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
S40T-CELNR13-50	CELNR 5040B-13	●		50	40	37	300	32	27	12°	0.8	CB-16	CE-010	LW-4	SP-341P	M3X8

S-CSKN (Boring)

Max. Overhang Length L/D=~3





• Right-hand shown

Applicable Inserts

Cast Iron / Hard Materials	Cast Iron	Cast Iron / Hard Materials
B89	B31	C19
Ceramic 	Coated Carbide 	CBN (KBN900) 
SNGN1207..(1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)

Toolholder Dimensions

Recommended Cutting Conditions F91~F92

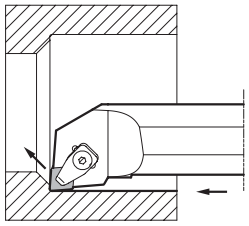
Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	F	θ	Standard Corner-R(rε)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
S40T-CSKN R/L 12-50	CSKN R/L 5040B-12	●	●	50	40	37	300	26	27	10.5°	0.8	CB-13/12	CE-320	LW-4	SP-141P (SP-143P)	M3X8 (M3X12)

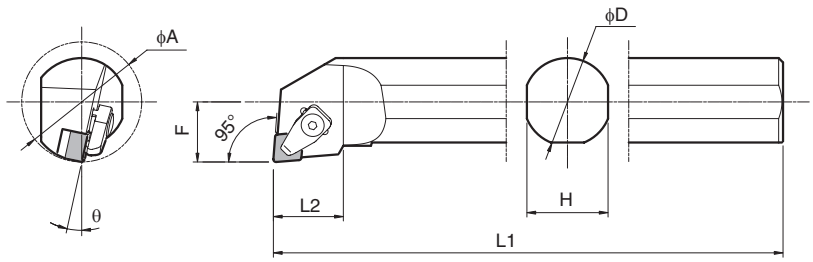
· Chipbreaker: CB-13 for Right-hand Toolholder, CB-12 for Left-hand Toolholder.
· Shim & Shim Screw : When using SN□□1204 Insert, purchase spare parts in ( ) separately.

● : Std. Item

S-CCLN-GX (Boring / Internal Facing)

Max. Overhang Length L/D=~3

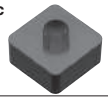




• Right-hand shown

Applicable Inserts

Cast Iron
B86
Ceramic



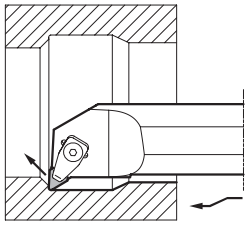
CNGX1207..

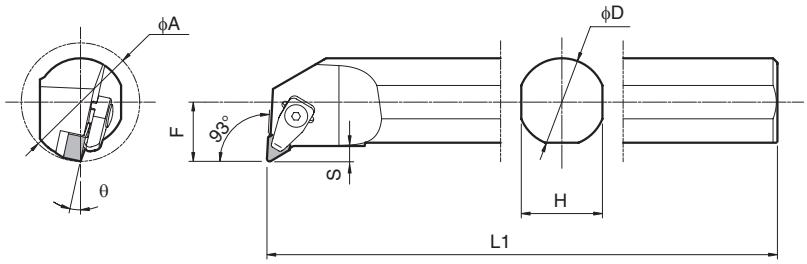
Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	F	θ	Std. Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	Recommended Cutting Conditions
S32S- CCLN R/L 12-40GX	●	●	40	32	30	250	32	22	14°	1.2	CE-410	LW-4	-	-	F91~F92
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

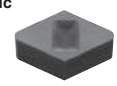




• Right-hand shown

Applicable Inserts

Cast Iron
B87
Ceramic



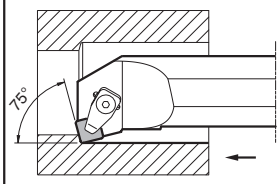
DNGX1207..

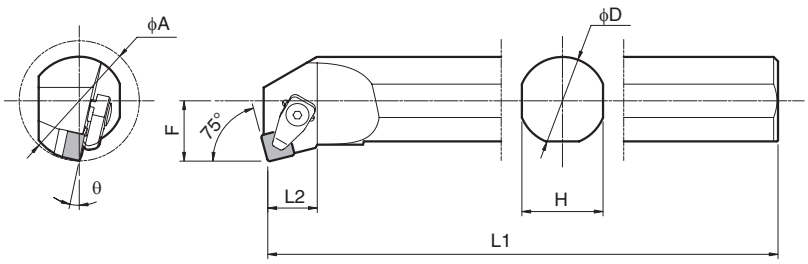
Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	F	θ	Std. Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	Recommended Cutting Conditions
S32S- CDUN R/L 12-40GX	●	○	40	32	30	250	7.5	22	14°	1.2	CE-410	LW-4	-	-	F91~F92
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





• Right-hand shown

Applicable Inserts

Cast Iron
B90
Ceramic

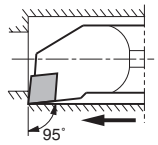
SNGX1207..

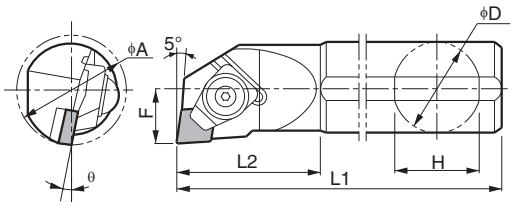
Toolholder Dimensions

Description	Std. R	Std. L	Min. Bore Dia. ϕA	Dimension (mm) ϕD	H	L1	L2	F	θ	Std. Corner-R(rε)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	Recommended Cutting Conditions
S32S- CSKN R/L 12-40GX	●	○	40	32	30	250	22.5	22	14°	1.2	CE-410	LW-4	-	-	F91~F92
S40T- CSKN R/L 12-50GX	●	○	50	40	37	300	22.5	27	12°	1.2	CE-410	LW-4	SP-141P	M3X8	

● : Std. Item ○ : Check Availability

S-CCLN-A (Boring / Internal Facing)





• Right-hand shown

Applicable Inserts

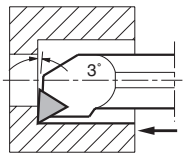
Hard Materials /Cast Iron
C19
CBN(KBN900) 
CNMN0903..

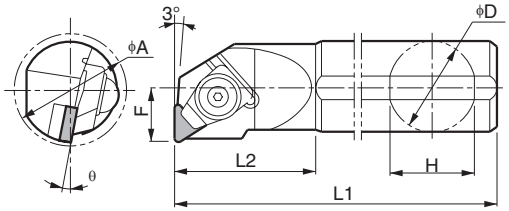
Recommended Cutting Conditions F91~F92

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	θ	Std. Corner-R(rε)	Spare Parts: Clamp Set 	Wrench 	Shim 	Shim Screw
S32S-CCLN R/L 09-40A	CCLN R/L 4032B-09A	●	●	40	32	30	250	50	22	8°	0.8	CE-360S	LW-4	SP-420A	BH3X6

S-CTUN-A (Boring)





• Right-hand shown

Applicable Inserts

Hard Materials /Cast Iron	Cast Iron / Hard Materials
C19	B91
CBN(KBN900) 	Ceramic 
TNMN1103..	TNGN1103..

Recommended Cutting Conditions F91~F92

Toolholder Dimensions

Description	(Previous Description)	Std. R	Std. L	Min. Bore Dia. φA	Dimension (mm) φD	H	L1	L2	F	θ	Std. Corner-R(rε)	Spare Parts: Clamp Set 	Wrench 	Shim 	Shim Screw
S25X-CTUNR11-30A	CTUNR3025B-11A	●		30	25	24	220	40	15	10°	0.8	CE-360S	LW-4	SP-210A	BH3X6

● : Std. Item

EZH Sleeves

Sleeve Description				Applicable Inserts					Applicable Machine Manufacturer
EZH-CT (Adjustable overhang length with coolant hole)	EZH-HP (Adjustable overhang length)	EZH-ST	Sleeve Shank Dia. φD1 (mm)	EZB	EZG EZFG EZT EZVB	EZ Bar PLUS	HP	Shank Dia. φD (mm)	
-	-	EZH 01712ST-80	12	EZBR ...017...	-	-	-	1.7	(General purpose)
		02012ST-80		EZBR ...020...			HPB R/L 0202-...	2	
		02512ST-80		EZBR ...025...	EZ__ ...025-...		-	2.5	
		03012ST-80		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
		03512ST-80		EZBR ...035...	EZ__ ...035-...		-	3.5	
		04012ST-80		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
		05012ST-80		EZBR ...050...	EZ__ ...050-...		HP__ ..05-...	5	
		06012ST-80		EZBR ...060...	EZ__ ...060-...		HP__ 0606-...	6	
		07012ST-80		EZBR ...070...	EZ__ ...070-...		HP__ ..07-...	7	
-	EZH 01716HP-100	EZH 01716ST-100	16	EZBR ...017...	-	-	-	1.7	(General purpose)
	02016HP-100	02016ST-100		EZBR ...020...			HPB R/L 0202-...	2	
	02516HP-100	02516ST-100		EZBR ...025...	EZ__ ...025-...		-	2.5	
	03016HP-100	03016ST-100		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
	03516HP-100	03516ST-100		EZBR ...035...	EZ__ ...035-...		-	3.5	
	04016HP-100	04016ST-100		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
	04516HP-100	-		-	-	_045X- ...-050EZ	-	4.5	
	05016HP-100	05016ST-100		EZBR ...050...	EZ__ ...050-...	-	HP__ ..05-...	5	
	06016HP-100	06016ST-100		EZBR ...060...	EZ__ ...060-...	_060X- ...-070EZ	HP__ 0606-...	6	
	07016HP-100	07016ST-100		EZBR ...070...	EZ__ ...070-...	-	HP__ ..07-...	7	
EZH 01719CT-120	EZH 01719HP-120	EZH 01719ST-120	19.05	EZBR ...017...	-	-	-	1.7	Citizen Machinery
02019CT-120	02019HP-120	02019ST-120		EZBR ...020...			HPB R/L 0202-...	2	
02519CT-120	02519HP-120	02519ST-120		EZBR ...025...	EZ__ ...025-...		-	2.5	
03019CT-120	03019HP-120	03019ST-120		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
03519CT-120	03519HP-120	03519ST-120		EZBR ...035...	EZ__ ...035-...		-	3.5	
04019CT-120	04019HP-120	04019ST-120		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
-	04519HP-120	-		-	-	_045X- ...-050EZ	-	4.5	
05019CT-120	05019HP-120	05019ST-120		EZBR ...050...	EZ__ ...050-...	-	HP__ ..05-...	5	
06019CT-120	06019HP-120	06019ST-120		EZBR ...060...	EZ__ ...060-...	_060X- ...-070EZ	HP__ 0606-...	6	
07019CT-120	07019HP-120	07019ST-120		EZBR ...070...	EZ__ ...070-...	-	HP__ ..07-...	7	
EZH 01720CT-120	EZH 01720HP-120	EZH 01720ST-120	20	EZBR ...017...	-	-	-	1.7	Amada Machine Tools Eguro Tsugami Citizen Machinery (General purpose)
02020CT-120	02020HP-120	02020ST-120		EZBR ...020...			HPB R/L 0202-...	2	
02520CT-120	02520HP-120	02520ST-120		EZBR ...025...	EZ__ ...025-...		-	2.5	
03020CT-120	03020HP-120	03020ST-120		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
03520CT-120	03520HP-120	03520ST-120		EZBR ...035...	EZ__ ...035-...		-	3.5	
04020CT-120	04020HP-120	04020ST-120		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
-	04520HP-120	-		-	-	_045X- ...-050EZ	-	4.5	
05020CT-120	05020HP-120	05020ST-120		EZBR ...050...	EZ__ ...050-...	-	HP__ ..05-...	5	
06020CT-120	06020HP-120	06020ST-120		EZBR ...060...	EZ__ ...060-...	_060X- ...-070EZ	HP__ 0606-...	6	
07020CT-120	07020HP-120	07020ST-120		EZBR ...070...	EZ__ ...070-...	-	HP__ ..07-...	7	
EZH 01722CT-135	EZH 01722HP-135	EZH 01722ST-135	22	EZBR ...017...	-	-	-	1.7	Star Micronics Nomura DS Tsugami
02022CT-135	02022HP-135	02022ST-135		EZBR ...020...			HPB R/L 0202-...	2	
02522CT-135	02522HP-135	02522ST-135		EZBR ...025...	EZ__ ...025-...		-	2.5	
03022CT-135	03022HP-135	03022ST-135		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
03522CT-135	03522HP-135	03522ST-135		EZBR ...035...	EZ__ ...035-...		-	3.5	
04022CT-135	04022HP-135	04022ST-135		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
-	04522HP-135	-		-	-	_045X- ...-050EZ	-	4.5	
05022CT-135	05022HP-135	05022ST-135		EZBR ...050...	EZ__ ...050-...	-	HP__ ..05-...	5	
06022CT-135	06022HP-135	06022ST-135		EZBR ...060...	EZ__ ...060-...	_060X- ...-070EZ	HP__ 0606-...	6	
07022CT-135	07022HP-135	07022ST-135		EZBR ...070...	EZ__ ...070-...	-	HP__ ..07-...	7	
EZH 01725.0CT-135	EZH 01725.0HP-135	EZH 01725.0ST-135	25	EZBR ...017...	-	-	-	1.7	Amada Machine Tools Eguro Tsugami Citizen Machinery (General purpose)
02025.0CT-135	02025.0HP-135	02025.0ST-135		EZBR ...020...			HPB R/L 0202-...	2	
02525.0CT-135	02525.0HP-135	02525.0ST-135		EZBR ...025...	EZ__ ...025-...		-	2.5	
03025.0CT-135	03025.0HP-135	03025.0ST-135		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
03525.0CT-135	03525.0HP-135	03525.0ST-135		EZBR ...035...	EZ__ ...035-...		-	3.5	
04025.0CT-135	04025.0HP-135	04025.0ST-135		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
-	04525.0HP-135	-		-	-	_045X- ...-050EZ	-	4.5	
05025.0CT-135	05025.0HP-135	05025.0ST-135		EZBR ...050...	EZ__ ...050-...	-	HP__ ..05-...	5	
06025.0CT-135	06025.0HP-135	06025.0ST-135		EZBR ...060...	EZ__ ...060-...	_060X- ...-070EZ	HP__ 0606-...	6	
07025.0CT-135	07025.0HP-135	07025.0ST-135		EZBR ...070...	EZ__ ...070-...	-	HP__ ..07-...	7	
EZH 01725.4CT-120	EZH 01725.4HP-120	EZH 01725.4ST-120	25.4	EZBR ...017...	-	-	-	1.7	Citizen Machinery
02025.4CT-120	02025.4HP-120	02025.4ST-120		EZBR ...020...			HPB R/L 0202-...	2	
02525.4CT-120	02525.4HP-120	02525.4ST-120		EZBR ...025...	EZ__ ...025-...		-	2.5	
03025.4CT-120	03025.4HP-120	03025.4ST-120		EZBR ...030...	EZ__ ...030-...		HPB R/L 0303-...	3	
03525.4CT-120	03525.4HP-120	03525.4ST-120		EZBR ...035...	EZ__ ...035-...		-	3.5	
04025.4CT-120	04025.4HP-120	04025.4ST-120		EZBR ...040...	EZ__ ...040-...		HP__ ..04-...	4	
-	04525.4HP-120	-		-	-	_045X- ...-050EZ	-	4.5	
05025.4CT-120	05025.4HP-120	05025.4ST-120		EZBR ...050...	EZ__ ...050-...	-	HP__ ..05-...	5	
06025.4CT-120	06025.4HP-120	06025.4ST-120		EZBR ...060...	EZ__ ...060-...	_060X- ...-070EZ	HP__ 0606-...	6	
07025.4CT-120	07025.4HP-120	07025.4ST-120		EZBR ...070...	EZ__ ...070-...	-	HP__ ..07-...	7	

· Choose sleeves (φd1) to meet with φD dimension of bar.
· Adjustment Pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT/HP sleeves.

EZH Sleeves and Applicable Inserts / Toolholders

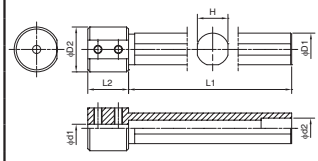
Shank Size (Hole Dia.: mm)		017 (1.7mm)	020 (2mm)	025 (2.5mm)	03 (3mm)	035 (3.5mm)
EZH-CT sleeve (Internal coolant) EZH-HP sleeve description (Adjustable overhang length)		EZH 01716HP-100	EZH 02016HP-100	EZH 02516HP-100	EZH 03016HP-100	EZH 03516HP-100
		01719CT/HP-120	02019CT/HP-120	02519CT/HP-120	03019CT/HP-120	03519CT/HP-120
		01720CT/HP-120	02020CT/HP-120	02520CT/HP-120	03020CT/HP-120	03520CT/HP-120
		01722CT/HP-135	02022CT/HP-135	02522CT/HP-135	03022CT/HP-135	03522CT/HP-135
		01725.0CT/HP-135	02025.0CT/HP-135	02525.0CT/HP-135	03025.0CT/HP-135	03525.0CT/HP-135
		01725.4CT/HP-120	02025.4CT/HP-120	02525.4CT/HP-120	03025.4CT/HP-120	03525.4CT/HP-120
EZH-ST sleeve description		EZH 01712ST-80	EZH 02012ST-80	EZH 02512ST-80	EZH 03012ST-80	EZH 03512ST-80
		01716ST-100	02016ST-100	02516ST-100	03016ST-100	03516ST-100
		01719ST-120	02019ST-120	02519ST-120	03019ST-120	03519ST-120
		01720ST-120	02020ST-120	02520ST-120	03020ST-120	03520ST-120
		01722ST-135	02022ST-135	02522ST-135	03022ST-135	03522ST-135
		01725.0ST-135	02025.0ST-135	02525.0ST-135	03025.0ST-135	03525.0ST-135
		01725.4ST-120	02025.4ST-120	02525.4ST-120	03025.4ST-120	03525.4ST-120
EZ Bars	Boring Bars		EZBR 020020HP-	EZBR 025025HP-	EZBR 030030HP-	EZBR 035035HP-
		EZBR 020017ST-	EZBR 025020ST-	EZBR 030025ST-	EZBR 035030ST-	EZBR 040035ST-
		EZBR 020017-···NB	EZBR 025020-···NB	EZBR 030025-···NB	EZBR ···030-···NB	EZBR 040035-···NB
					EZVBR035030-	
	Internal Grooving				EZGR 030030-	
	Face Grooving					
	Internal Threading			EZTR 030025-	EZTR 035030-	EZTR 040035-
EZ Bar PLUS						
2-Edge Tip-Bars	Boring Bars		HPB R/L 0202-		HPB R/L 0303-	
	Internal Grooving					
	Face Grooving					
	Internal Threading					
Boring Bars						

Shank Size (Hole Dia.: mm)		04 (4mm)	045 (4.5mm)	05 (5mm)	06 (6mm)	07 (7mm)
EZH-CT sleeve (Internal coolant) EZH-HP sleeve description (Adjustable overhang length)		EZH 04016HP-100	EZH 04516HP-100	EZH 05016HP-100	EZH 06016HP-100	EZH 07016HP-100
		04019CT/HP-120	04519HP-120	05019CT/HP-120	06019CT/HP-120	07019CT/HP-120
		04020CT/HP-120	04520HP-120	05020CT/HP-120	06020CT/HP-120	07020CT/HP-120
		04022CT/HP-135	04522HP-135	05022CT/HP-135	06022CT/HP-135	07022CT/HP-135
		04025.0CT/HP-135	04525.0HP-135	05025.0CT/HP-135	06025.0CT/HP-135	07025.0CT/HP-135
		04025.4CT/HP-120	04525.4HP-120	05025.4CT/HP-120	06025.4CT/HP-120	07025.4CT/HP-120
EZH-ST sleeve description		EZH 04012ST-80		EZH 05012ST-80	EZH 06012ST-80	EZH 07012ST-80
		04016ST-100		05016ST-100	06016ST-100	07016ST-100
		04019ST-120		05019ST-120	06019ST-120	07019ST-120
		04020ST-120		05020ST-120	06020ST-120	07020ST-120
		04022ST-135		05022ST-135	06022ST-135	07022ST-135
		04025.0ST-135		05025.0ST-135	06025.0ST-135	07025.0ST-135
		04025.4ST-120		05025.4ST-120	06025.4ST-120	07025.4ST-120
EZ Bars	Boring Bars	EZBR 040040HP-		EZBR 050050HP-	EZBR 060060HP-	
		EZBR 045040ST-		EZBR 055050ST-	EZBR 065060ST-	EZBR 075070ST-
		EZBR ···040-···NB		EZBR ···050-···NB	EZBR ···060-···NB	EZBR ···070-···NB
		EZVBR045040-		EZVBR055050-	EZVBR065060-	
	Internal Grooving	EZGR 040040-		EZGR 050050-	EZGR 060060-	EZGR ···070-···
	Face Grooving	EZFGR050040-		EZFGR060050-		EZFGR080070-
	Internal Threading	EZTR 050040-		EZTR 060050-	EZTR 070060-	EZTR 080070-
EZ Bar PLUS			S045X- SCLCR03-050EZ		S060X- SCLCR04-070EZ	
			C045X- SCLCR03-050EZ		C060X- SCLCR04-070EZ	
2-Edge Tip-Bars	Boring Bars	HPB R/L 0404-		HPB R/L 0505-	HPB R/L 0606-	HPB R/L 0707-
		HPBT R/L 0404-		HPBT R/L 0505-		
	Internal Grooving	HPG R/L 0404-		HPG R/L 0505-	HPG R/L 0606-	HPG R/L 0707-
	Face Grooving					HPFG R/L 0807-
	Internal Threading	HPT R/L 04504-		HPT R/L 06005-		HPT R/L 07507-
Boring Bars		C04-····		C05-····	C06-····	C07-····
					S06-····	

Note 1) When attaching 2-Edge Tip-Bars to EZH-CT/HP Sleeve (Adjustable overhang length), detach Adjustable Pin.
Overhang length of bar is not adjustable.

Sleeves for Boring Bars

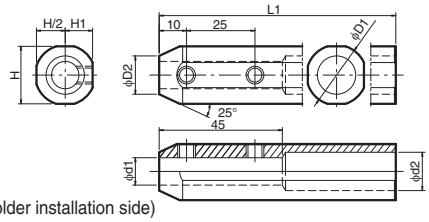
Sleeves for Tip-Bars

Shape	Description	(Previous Description)	Std.	Dimension (mm) φD1	φD2	φd1	φd2	H	L1	L2	Spare Parts 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					HS4X4	LW-2
	0512-60	-0512	○			4.8						
	0612-60	-0612	○			5.8	8					
	0712-60	-0712	○			6.8						
	PH 0216-80	PH -0216	○	16	22	1.8	Rp¼ (PS¼)	15	80	20	HS3X4	LW-1.5
	0316-80	-0316	○			2.8						
	0416-80	-0416	○			3.8					HS4X4	LW-2
	0516-80	-0516	○			4.8						
	0616-80	-0616	○			5.8						
	0716-80	-0716	○			6.8						

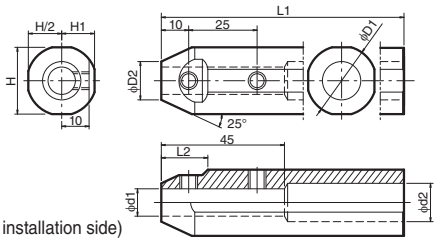
Description Table for PH Sleeves and Applicable Toolholders

Shank Size (Hole Dia.: mm)		02 (1.8mm)	03 (2.8mm)	04 (3.8mm)	05 (4.8mm)	06 (5.8mm)	07 (6.8mm)
PH type sleeve Description		PH0212-60	PH0312-60	PH0412-60	PH0512-60	PH0612-60	PH0712-60
		PH0216-80	PH0316-80	PH0416-80	PH0516-80	PH0616-80	PH0716-80
1-Edge Tip-Bars	Boring Bars	PSBR/L0202-	PSBR/L0303-	PSBR/L0404-	PSBR/L0505-	PSBR/L0606-	PSBR/L0707-
				PSBTR/L0415-	PSBTR/L0515-		
	Internal Grooving			PSGR/L0510-	PSGR/L0610-	PSGR/L0710-	PSGR/L0810-
				PSGR/L0520-	PSGR/L0620-	PSGR/L0720-	PSGR/L0820-
	Face Grooving						PSFGR/L0810-
							PSFGR/L0820-
							PSFGR/L0830-
	Internal Threading			PSTR0604-	PSTR0805-		

SHA sleeves (Applicable Toolholders F84)



(Toolholder installation side)
Fig.1



(Toolholder installation side)
Fig.2

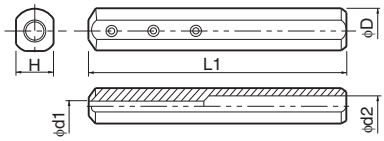
Description		Std.	Dimension (mm) φd1	φD1	φD2	φd2	H	H1	L1	L2	Drawing	Spare Parts Screw	Wrench	Applicable Machine Manufacturer
SHA	0820-120	●	8	20	14	12	19	9.25	120	-	Fig.1	HS6x4P	LW-3	Amada Machine Tools Eguro Tsugami Citizen Machinery
	1020-120	●	10											
SHA	0825.0-135	●	8	25	14	14	24	11.5	135	17	Fig.2			
	1025.0-135	●	10											
	1225.0-135	●	12		16									
SHA	0819-120	●	8	19.05	14	12	18	8.75	120	-	Fig.1	HS6x4P	LW-3	Citizen Machinery
	1019-120	●	10											
SHA	0820-120	●	8	20	14	12	19	9.25	120	-	Fig.1			
	1020-120	●	10											
SHA	0825.4-120	●	8	25.4	14	14	24.4	12	120	17	Fig.2			
	1025.4-120	●	10											
	1225.4-120	●	12		16									
SHA	0822-125	●	8	22	14	14	21	10	125	-	Fig.1	HS6x4P	LW-3	Star Micronics Nomura DS
	1022-125	●	10											
	1222-125	●	12		16									
SHA	0823-120	●	8	23	14	14	22	10.5	120	16	Fig.2	HS6x4P	LW-3	Nomura DS
	1023-120	●	10											
	1223-120	●	12		16									

* Length of φd1···45mm (All of SHA sleeves)
· Choose sleeves(φd1) to meet with φD dimension of toolholder.
· Machine manufacturers in random order.

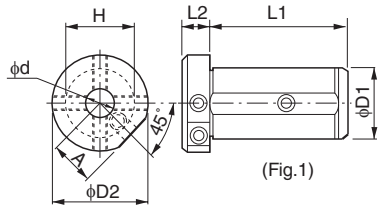
● : Std. Item
○ : Check Availability

Sleeves for Boring Bars

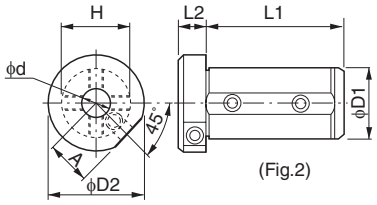
Sleeves for Boring Bars

Shape	Description	(Previous Description)	Std.	Dimension (mm) ϕD	ϕd1	ϕd2	H	L1	Spare Parts Screw	Wrench
 (Toolholder installation side)	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	30	180		
	2032-180	-2532	●		20	22				

Coolant Sleeve Dimensions



(Fig.1)



(Fig.2)

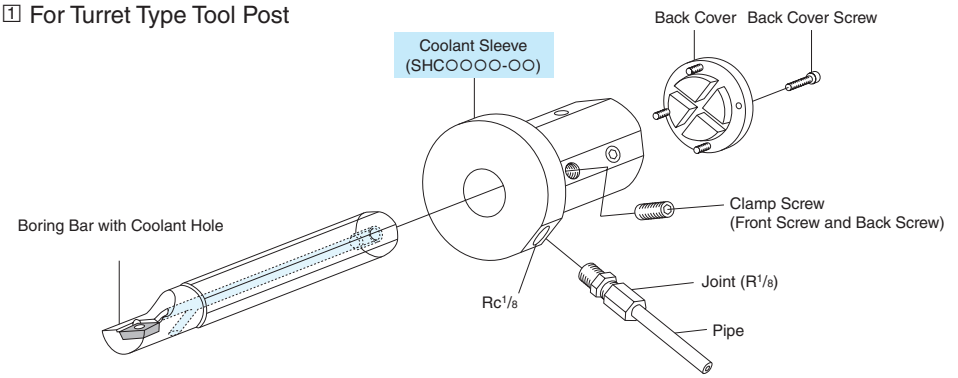
Accessories
- Back Cover / SHL-4···SHC○○40-70
  SHL-5···SHC○○50-95
- Back Cover Screw
- Shank Clamp Screw

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

Description	(Previous Description)	Std.	Dimension (mm) ϕD1	ϕD2	ϕd	L1	L2	H	A	Drawing	Spare Parts 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					Fig.2	HS10X10	LW-5	HS10X10	LW-5			
1640-70	-164070	●			16												
2040-70	-204070	●			20					Fig.1	HS10X10	LW-5	HS6X6	LW-3			
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					Fig.2	HS10X10	LW-5	HS10X10	LW-5			
1650-95	-165095	●			16												
2050-95	-205095	●			20												
2550-95	-255095	●			25												

How to Install

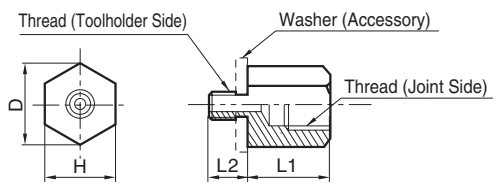
1 For Turret Type Tool Post



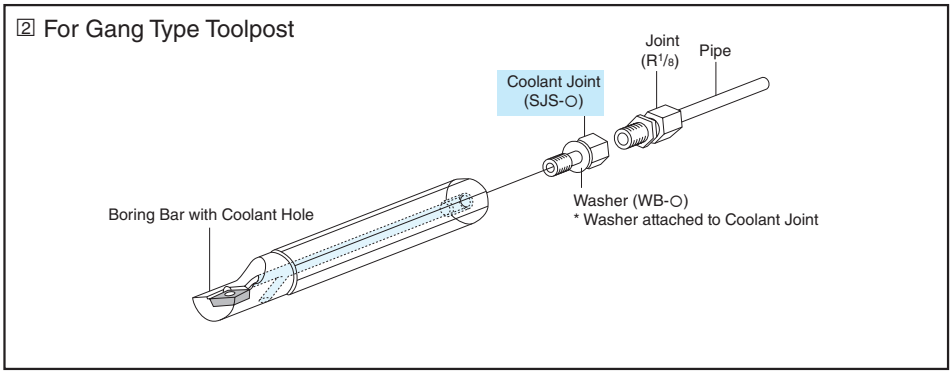
● : Std. Item

Sleeves for Boring Bars

● Coolant Joint Dimensions *This Coolant Joint is not applicable for Dynamic Bar



Description	Std.	Dimension (mm) D	L1	L2	H	Thread (Toolholder Side)	Thread (Joint Side)	Spare Parts 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 Description	Applicable Coolant Joint
A08-···-○○E	SJS-5
A10-···-○○E	
A12-···-○○E	SJS-6
A16-···-○○E	SJS-8
A20-···-○○E	
A25-···-○○E	
E08-···-○○	SJS-5
E10-···-○○	
E12-···-○○	SJS-6
E16-···-○○	SJS-8
E20-···-○○	

* This Coolant Joint is not applicable for Dynamic Bar

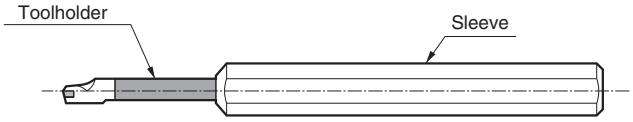
■ SHA / SH / SHC Sleeves and Applicable Toolholders

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
					SHC0850-95	SHC1050-95	SHC1250-95	SHC1650-95	SHC2050-95	SHC2550-95
Boring Bar Description					A08·-···	A10·-···	A12·-···	A16·-···	A20·-···	A25·-···
	C04·-···	C05·-···	C06·-···	C07·-···	C08·-···	C10·-···	C12·-···	C16·-···	C20·-···	C25·-···
					E08·-···	E10·-···	E12·-···	E16·-···	E20·-···	E25·-···
			S06·-···		S08·-···	S10·-···	S12·-···	S16·-···	S20·-···	S25·-···
Internal Grooving Toolholder Description					SIGER/L0808A-EH	SIGER/L1010B-EH	SIGER/L1412C-EH	SIGER/L1616C-EH	SIGER/L2020D-EH	SIGER/L2525E-EH
						SIGER/L1210B-EH	SIGER/L1612C-EH			KIGBAR/L3525-16
					SIGER/L0808A-WH	SIGER/L1010B-WH	SIGER/L1412C-WH	KIGMR/L2016B-3V	KIGMR/L2520B-3V	KIGMR/L3225B-4V
						SIGER/L1210B-WH	SIGER/L1612C-WH			KITGR/L3525T-16
					SIGER1008B-WH-90	SIGER1210B-WH-90	SIGER1412C-WH-90			
							GIVR/L1412-1SE	GIVR/L1216-1SS	GIVR/L1420-1S	GIVR/L2025-1B
							GIVR/L1612-1AE	GIVR/L2016-1BE	GIVR/L1620-1A	GIVR/L2025-2B
								GIVR/L2016-2BE	GIVR/L2520-1CE	GIVR/L3225-1CE
								GIVR/L1616-1AW	GIVR/L2720-2CE	GIVR/L3225-2CE
									GIVR/L2020-1BW	GIVR/L2525-1CW
									GIVR/L2020-2BW	GIVR/L2525-2CW
Internal Threading Toolholder Description							SINR0612S-06E	SINR0816S-08E	SINR/L2420S-16	CINR/L3025S-16
								SINR/L1216S-11E	SINR2420S-22	CINR3025S-22
								SINR/L1516S-11		
								SINR/L1616S-16		
								SINR/L2016S-16		

* For SHA sleeves, please ref. to page **F82**.
For SH / SHC sleeves, please ref. to page **F83**.

● : Std. Item

C...-AS (Assembly List)

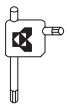
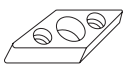
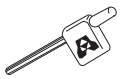


Assembly configuration

Assembly (Discontinued Description)	Toolholder (Discontinued Description) →	Alternative Toolholder (Dynamic Bar)	Sleeve Description	Remarks
C04G- SCLCR03-05-AS	C04G- SCLCR03-05	C04G- SCLCR03-05A	SH0416-100	-
SCLCL03-05-AS	SCLCL03-05	SCLCL03-05A		
C05H- SCLCR03-06-AS	C05H- SCLCR03-06	C05H- SCLCR03-06A	SH0516-100	
SCLCL03-06-AS	SCLCL03-06	SCLCL03-06A		
C05H- SWUBR06-06-AS	C05H- SWUBR06-06	C05H- SWUBR06-06A	SH0516-100	
SWUBL06-06-AS	SWUBL06-06	SWUBL06-06A		
C06J- SCLCR04-07-AS	C06J- SCLCR04-07	C06J- SCLCR04-07A	SH0616-100	
SCLCL04-07-AS	SCLCL04-07	SCLCL04-07A		
C06J- SWUBR06-07-AS	C06J- SWUBR06-07	C06J- SWUBR06-07A	SH0616-100	
SWUBL06-07-AS	SWUBL06-07	SWUBL06-07A		
C07K- SCLCR04-08-AS	C07K- SCLCR04-08	C07K- SCLCR04-08A	SH0716-100	
SCLCL04-08-AS	SCLCL04-08	SCLCL04-08A		
C07K- SWUBR08-08-AS	C07K- SWUBR08-08	C07K- SWUBR08-08A	SH0716-100	
SWUBL08-08-AS	SWUBL08-08	SWUBL08-08A		
C08L- STUPR08-10-AS	C08L- STUPR08-10	E08L- STLPR08-10A	SH0820-120	Difference of alternative toolholder No coolant hole → With coolant hole Front cutting edge angle 3° → 5°
C10N- STUPR09-12-AS	C10N- STUPR09-12	E10N- STLPR09-12A	SH1020-120	
C10N- STUPR11-12-AS	C10N- STUPR11-12	E10N- STLPR11-12A		
C12Q- STUPR09-16-AS	C12Q- STUPR09-16	E12Q- STLPR09-16A	SH1225-150	
C12Q- STUPR11-14-AS	C12Q- STUPR11-14	E12Q- STLPR11-14A		
C12Q- STUPR11-16-AS	C12Q- STUPR11-16			
C16X- STUPR11-18-AS	C16X- STUPR11-18	E16X- STLPR11-18A	SH1632-180	
C16X- STUPR11-20-AS	C16X- STUPR11-20			
C20S- STUPR11-25-AS	C20S- STUPR11-25	E20S- STLPR11-22A	SH2032-180	
C20S- STUPR16-25-AS	C20S- STUPR16-25	E20S- STLPR16-25A		

* "**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}$16-50AE respectively. Ref. to page F50
- S25X-SVPB$^{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}$16-40AE respectively. Ref. to page F52
- S25X-SVUB$^{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}$16-40AE respectively. Ref. to page F55
- S25X-SVZB$^{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. Ref. to page F55

Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Description)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant hole	Description	Coolant hole	Description	Ref. to Page	Coolant hole	Description	Ref. to Page
Excellent Bar	CC..	No	S08X-SCLC R/L 06-10E	Yes	A08X-SCLC R/L 06-10AE	F37	No	S08X-SCLC R/L 06-10A	F37
			S10H-SCLC R/L 03-05E	No	S10H-SCLC R/L 03-05AE		-	-	-
			S10H-SCLC R/L 03-06E		S10H-SCLC R/L 03-06AE				
			S10J-SCLC R/L 04-07E		S10H-SCLC R/L 04-07AE				
			S10J-SCLC R/L 04-08E		S10H-SCLC R/L 04-08AE				
		Yes	A08H-SCLC R/L 06-10E	Yes	A08X-SCLC R/L 06-10AE		No	S08X-SCLC R/L 06-10A	F37
	CP..	No	S10M-SCLP R/L 08-12E	Yes	A10L-SCLP R/L 08-12AE	F39	No	S10L-SCLP R/L 08-12A	F39
			S12M-SCLP R/L 08-14E		A12M-SCLP R/L 08-14AE			S12M-SCLP R/L 08-14A	
			S12M-SCLP R/L 09-16E		A12M-SCLP R/L 09-16AE			S12M-SCLP R/L 09-16A	
			S16Q-SCLP R/L 09-18E		A16Q-SCLP R/L 09-18AE			S16Q-SCLP R/L 09-18A	
			S16R-SCLP R/L 09-20E						
			S20X-SCLP R/L 09-25E		A20R-SCLP R/L 09-22AE			S20R-SCLP R/L 09-22A	
		Yes	A10X-SCLP R/L 08-12E	Yes	A10L-SCLP R/L 08-12AE	F39	No	S10L-SCLP R/L 08-12A	F39
			A12X-SCLP R/L 08-14E		A12M-SCLP R/L 08-14AE			S12M-SCLP R/L 08-14A	
			A12X-SCLP R/L 09-16E		A12M-SCLP R/L 09-16AE			S12M-SCLP R/L 09-16A	
			A16M-SCLP R/L 09-18E		A16Q-SCLP R/L 09-18AE			S16Q-SCLP R/L 09-18A	
			A16M-SCLP R/L 09-20E						
			A20Q-SCLP R/L 09-25E		A20R-SCLP R/L 09-22AE			S20R-SCLP R/L 09-22A	
	DC..	No	S10M-SDUC R/L 07-14E	Yes	A10L-SDUC R/L 07-14AE	F41	No	S10L-SDUC R/L 07-14A	F41
			S12M-SDUC R/L 07-16E		A12M-SDUC R/L 07-16AE			S12M-SDUC R/L 07-16A	
			S16Q-SDUC R/L 07-20E		A16Q-SDUC R/L 07-20AE			S16Q-SDUC R/L 07-20A	
			S16Q-SDUC R/L 11-25E		A16Q-SDUC R/L 11-23AE			S16Q-SDUC R/L 11-23A	
			S20Q-SDUC R/L 11-32E		A20R-SDUC R/L 11-27AE			S20R-SDUC R/L 11-27A	
		No	S10M-SDZC R/L 07-14E	Yes	A10L-SDZC R/L 07-14AE	F43	No	S10L-SDZC R/L 07-14A	F43
			S12M-SDZC R/L 07-16E		A12M-SDZC R/L 07-16AE			S12M-SDZC R/L 07-16A	
			S16Q-SDZC R/L 07-20E		A16Q-SDZC R/L 07-20AE			S16Q-SDZC R/L 07-20A	
			S16Q-SDZC R/L 11-25E		A16Q-SDZC R/L 11-23AE			S16Q-SDZC R/L 11-23A	
			S20Q-SDZC R/L 11-32E		A20R-SDZC R/L 11-27AE			S20R-SDZC R/L 11-27A	
	TB..	No	S06H-STUB R/L 06-08E	No	S06H-STLB R/L 06-08AE	F47	No	S06H-STLB R/L 06-08A	F47
	TP..	No	S08K-STUP R/L 08-10E	Yes	A08X-STLP R/L 08-10AE	F47	No	S08X-STLP R/L 08-10A	F47
			S10M-STUP R/L 09-12E		A10L-STLP R/L 09-12AE			S10L-STLP R/L 09-12A	
			S10M-STUP R/L 11-12E		A10L-STLP R/L 11-12AE			S10L-STLP R/L 11-12A	
			S12M-STUP R/L 09-16E		A12M-STLP R/L 09-16AE			S12M-STLP R/L 09-16A	
			S12M-STUP R/L 11-14E		A12M-STLP R/L 11-14AE			S12M-STLP R/L 11-14A	
			S12M-STUP R/L 11-16E						
			S16R-STUP R/L 11-18E		A16Q-STLP R/L 11-18AE			S16Q-STLP R/L 11-18A	
			S16R-STUP R/L 11-20E						
			S20X-STUP R/L 11-25E		A20R-STLP R/L 11-22AE			S20R-STLP R/L 11-22A	
			S20X-STUP R/L 16-25E		A20R-STLP R/L 16-25AE		-	-	-
			S25X-STUP R/L 16-32E		A25S-STLP R/L 16-27AE		No	S25S-STLP R/L 16-27A	F47
		Yes	A08H-STUP R/L 08-10E	Yes	A08X-STLP R/L 08-10AE	F47	No	S08X-STLP R/L 08-10A	F47
			A10X-STUP R/L 09-12E		A10L-STLP R/L 09-12AE			S10L-STLP R/L 09-12A	
			A10X-STUP R/L 11-12E		A10L-STLP R/L 11-12AE			S10L-STLP R/L 11-12A	
			A12X-STUPR09-16E		A12M-STLPR09-16AE			S12M-STLPR09-16A	
			A12X-STUP R/L 11-14E		A12M-STLP R/L 11-14AE			S12M-STLP R/L 11-14A	
			A12X-STUPR11-16E		A12M-STLPR11-14AE			S12M-STLPR11-14A	
			A16M-STUP R/L 11-18E		A16Q-STLP R/L 11-18AE			S16Q-STLP R/L 11-18A	
			A16M-STUP R/L 11-20E						
			A20Q-STUP R/L 11-25E		A20R-STLP R/L 11-22AE			S20R-STLP R/L 11-22A	
			A20Q-STUP R/L 16-25E		A20R-STLP R/L 16-25AE		-	-	-
			A25R-STUP R/L 16-32E		A25S-STLP R/L 16-27AE		No	S25S-STLP R/L 16-27A	F47
	VB..	No	S20R-SVJB R/L 11-25E	Yes	A20R-SVJB R/L 11-25AE	F50	No	S20R-SVJB R/L 11-25A	F50
			S25S-SVJB R/L 11-30E		A25S-SVJB R/L 11-30AE			S25S-SVJB R/L 11-30A	
			S32S-SVJB R/L 16-40EN		A32S-SVJB R/L 16-40AE			S32S-SVJB R/L 16-40A	
			S40T-SVJB R/L 16-50EN		A40T-SVJB R/L 16-50AE			S40T-SVJB R/L 16-50A	

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.

Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Description)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant hole	Description	Coolant hole	Description	Ref. to Page	Coolant hole	Description	Ref. to Page
Excellent Bar	VB..	No	S12M-SVPB R/L 11-20E	Yes	A12M-SVPB R/L 11-18AE	F52	No	S12M-SVPB R/L 11-18A	F52
			S16Q-SVPB R/L 11-25E		A16Q-SVPB R/L 11-22AE			S16Q-SVPB R/L 11-22A	
			S25X-SVPB R/L 16-34EN		A25S-SVPB R/L 16-31AE			S25S-SVPB R/L 16-31A	
			S32S-SVPB R/L 16-40EN		A32S-SVPB R/L 16-40AE			S32S-SVPB R/L 16-40A	
		No	S16Q-SVUB R/L 11-20E	Yes	A16Q-SVUB R/L 11-20AE	F55	No	S16Q-SVUB R/L 11-20A	F55
			S20R-SVUB R/L 11-25E		A20R-SVUB R/L 11-25AE			S20R-SVUB R/L 11-25A	
			S25X-SVUB R/L 16-34EN		A25S-SVUB R/L 16-34AE			S25S-SVUB R/L 16-34A	
			S32S-SVUB R/L 16-40EN		A32S-SVUB R/L 16-40AE			S32S-SVUB R/L 16-40A	
		No	S16Q-SVZB R/L 11-20E	Yes	A16Q-SVZB R/L 11-20AE	F55	No	S16Q-SVZB R/L 11-20A	F55
			S20R-SVZB R/L 11-25E		A20R-SVZB R/L 11-25AE			S20R-SVZB R/L 11-25A	
			S25X-SVZB R/L 16-34EN		A25S-SVZB R/L 16-34AE			S25S-SVZB R/L 16-34A	
			S32S-SVZB R/L 16-40EN		A32S-SVZB R/L 16-40AE			S32S-SVZB R/L 16-40A	
	VC..	No	S12M-SVJC R/L 08-16E	Yes	A12M-SVJC R/L 08-16AE	F50	No	S12M-SVJC R/L 08-16A	F50
			S16Q-SVJC R/L 08-20E		A16Q-SVJC R/L 08-20AE			S16Q-SVJC R/L 08-20A	
		No	S10M-SVPC R/L 08-16E	Yes	A10L-SVPC R/L 08-14AE	F52	No	S10L-SVPC R/L 08-14A	F52
		No	S12M-SVUC R/L 08-16E	Yes	A12M-SVUC R/L 08-16AE	F55	No	S12M-SVUC R/L 08-16A	F55
		No	S12M-SVZC R/L 08-16E	Yes	A12M-SVZC R/L 08-16AE	F55	No	S12M-SVZC R/L 08-16A	F55
	VP..	No	S12M-SVJP R/L 08-16E	Yes	A12M-SVJP R/L 08-16AE	F50	No	S12M-SVJP R/L 08-16A	F50
	WB..	No	S08K-SWUB R/L 08-10E	Yes	A08X-SWUB R/L 08-10AE	F57	No	S08X-SWUB R/L 08-10A	F57
			S10M-SWUB R/L 08-12E		A10L-SWUB R/L 08-12AE			S10L-SWUB R/L 08-12A	
			S10H-SWUB R/L 06-06E	No	S10H-SWUB R/L 06-06AE			S10H-SWUB R/L 06-06A	
			S10H-SWUB R/L 06-07E		S10H-SWUB R/L 06-07AE			S10H-SWUB R/L 06-07A	
			S10J-SWUB R/L 08-08E		S10H-SWUB R/L 08-08AE			S10H-SWUB R/L 08-08A	
	WP..	No	S12M-SWUP R/L 11-14E	Yes	A12M-SWUP R/L 11-14AE	F57	No	S12M-SWUP R/L 11-14A	F57
			S12M-SWUP R/L 11-16E						
			S16N-SWUP R/L 11-18E		A16Q-SWUP R/L 11-18AE			S16Q-SWUP R/L 11-18A	
			S16Q-SWUP R/L 16-20E		A16Q-SWUP R/L 16-18AE			S16Q-SWUP R/L 16-18A	
			S20R-SWUP R/L 16-25E		A20R-SWUP R/L 16-22AE			S20R-SWUP R/L 16-22A	
Steel Bar	CC..	No	S08X-SCLC R/L 06-10	No	S08X-SCLC R/L 06-10A	F37	-	-	-
	CP..	No	S10M-SCLP R/L 08-12	No	S10L-SCLP R/L 08-12A	F39	-	-	-
			S12M-SCLP R/L 08-14		S12M-SCLP R/L 08-14A				
			S12M-SCLP R/L 09-16		S12M-SCLP R/L 09-16A				
			S16N-SCLP R/L 09-18		S16Q-SCLP R/L 09-18A				
			S16Q-SCLP R/L 09-20						
			S20R-SCLP R/L 09-25		S20R-SCLP R/L 09-22A				
			S25S-SCLP R/L 09-30		S25S-SCLP R/L 09-27A				
	DC..	No	S16Q-SDUC R/L 07-14	No	S16Q-SDUC R/L 07-14A	F41	-	-	-
			S16Q-SDUC R/L 07-16						
			S20R-SDUC R/L 11-20		S20R-SDUC R/L 11-20A				
			S25X-SDUC R/L 11-25		S16Q-SDUC R/L 11-23A		No	S25S-SDUC R/L 11-32A	F41
		No	S16Q-SDZC R/L 07-14	No	S16Q-SDZC R/L 07-14A	F43	-	-	-
			S16Q-SDZC R/L 07-16						
			S20R-SDZC R/L 11-20		S20R-SDZC R/L 11-20A				
			S25X-SDZC R/L 11-25		S16Q-SDZC R/L 11-23A		No	S25S-SDZC R/L 11-32A	F43

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

Boring Bar (Discontinued Description)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant hole	Description	Coolant hole	Description	Ref. to Page	Coolant hole	Description	Ref. to Page
Steel Bar	TB..	No	S06H-STUB R/L 06-08	No	S06H-STLB R/L 06-08A	F47	-	-	-
	TP..	No	S08K-STUP R/L 08-10	No	S08X-STLP R/L 08-10A	F47	-	-	-
			S10M-STUP R/L 09-12		S10L-STLP R/L 09-12A				
			S12M-STUP R/L 09-16		S12M-STLP R/L 09-16A				
			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				
	WB..	No	S10H-SWUB R/L 06-06	No	S10H-SWUB R/L 06-06A	F57	-	-	-
			S10H-SWUB R/L 06-06-15						
			S10H-SWUB R/L 06-07		S10H-SWUB R/L 06-07A				
			S10J-SWUB R/L 08-08		S10H-SWUB R/L 08-08A				
			S10J-SWUB R/L 08-08-20						
Carbide Shank Boring Bar	CC..	No	C04G-SCLC R/L 03-05	No	C04G-SCLC R/L 03-05A	F37	-	-	-
			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	Yes	E08L-SCLC R/L 06-10A				
		Yes	E08L-SCLC R/L 06-10						
	CP..	No	C10N-SCLP R/L 08-12	Yes	E10N-SCLP R/L 08-12A	F39	-	-	-
			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 09-16A				
			C12Q-SCLPR09-16-1/2		E12Q-SCLPR09-16A-1/2				
			C12Q-SCLPR09-16-2/3		E12Q-SCLPR09-16A-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	F39	-	-	-
			E12Q-SCLP R/L 09-16		E12Q-SCLP R/L 09-16A				
			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	F41	-	-	-
			C12Q-SDUC R/L 07-16		E12Q-SDUC R/L 07-16A				
			C12Q-SDUC R/L 11-20						
			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	F47	-	-	-
	TP..	No	C08L-STUP R/L 08-10	Yes	E08L-STLP R/L 08-10A				
			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 09-16		E12Q-STLP R/L 09-16A				
			C12Q-STUPR09-16-1/2		E12Q-STLPR09-16A-1/2				
			C12Q-STUPR09-16-2/3		E12Q-STLPR09-16A-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 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.

Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Description)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant hole	Description	Coolant hole	Description	Ref. to Page	Coolant hole	Description	Ref. to Page
Carbide Shank Boring Bar	TP..	No	C16X-STUP R/L 11-18	Yes	E16X-STLP R/L 11-18A	F47	-	-	-
			C16X-STUPR11-18-1/2		E16X-STLPR11-18A-1/2				
			C16X-STUPR11-18-2/3		E16X-STLPR11-18A-2/3				
			C16X-STUP R/L 11-20		E16X-STLP R/L 11-18A				
			C16X-STUPR11-20-1/2		E16X-STLPR11-18A-1/2				
			C16X-STUPR11-20-2/3		E16X-STLPR11-18A-2/3				
			C20S-STUP R/L 11-25		E20S-STLP R/L 11-22A				
			C20S-STUPR11-25-1/2		E20S-STLPR11-22A-1/2				
			C20S-STUPR11-25-2/3		E20S-STLPR11-22A-2/3				
			C20S-STUP R/L 16-25		E20S-STLP R/L 16-25A				
			C20S-STUPR16-25-1/2		E20S-STLPR16-25A-1/2				
			C20S-STUPR16-25-2/3		E20S-STLPR16-25A-2/3				
		Yes	E08L-STUP R/L 08-10	Yes	E08L-STLP R/L 08-10A	F47	-	-	-
			E10N-STUP R/L 09-12		E10N-STLP R/L 09-12A				
			E10N-STUP R/L 11-12		E10N-STLP R/L 11-12A				
			E12Q-STUP R/L 09-16		E12Q-STLP R/L 09-16A				
			E12Q-STUP R/L 11-14		E12Q-STLP R/L 11-14A				
			E12Q-STUP R/L 11-16						
			E16X-STUP R/L 11-18		E16X-STLP R/L 11-18A				
			E16X-STUP R/L 11-20						
			E20S-STUPR11-25		E20S-STLPR11-22A				
			E20S-STUPR16-25		E20S-STLPR16-25A				
	WB..	No	C05H-SWUB R/L 06-06	No	C05H-SWUB R/L 06-06A	F57	-	-	-
			C06J-SWUB R/L 06-07		C06J-SWUB R/L 06-07A				
			C07K-SWUB R/L 08-08		C07K-SWUB R/L 08-08A				
			C08L-SWUB R/L 08-10	Yes	E08L-SWUB R/L 08-10A				
			C10N-SWUB R/L 08-12		E10N-SWUB R/L 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 R/L 11-14	Yes	E12Q-SWUP R/L 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 R/L 11-16		E12Q-SWUP R/L 11-14A				
			C12Q-SWUPR11-16-1/2		E12Q-SWUPR11-14A-1/2				
			C12Q-SWUPR11-16-2/3		E12Q-SWUPR11-14A-2/3				
			C16X-SWUP R/L 11-18		E16X-SWUP R/L 11-18A				
			C16X-SWUPR11-18-1/2		E16X-SWUPR11-18A-1/2				
			C16X-SWUPR11-18-2/3		E16X-SWUPR11-18A-2/3				
			C16X-SWUP R/L 16-20		E16X-SWUP R/L 16-18A				
			C16X-SWUPR16-20-1/2		E16X-SWUPR16-18A-1/2				
			C16X-SWUPR16-20-2/3		E16X-SWUPR16-18A-2/3				
			C20S-SWUP R/L 16-25		E20S-SWUP R/L 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.