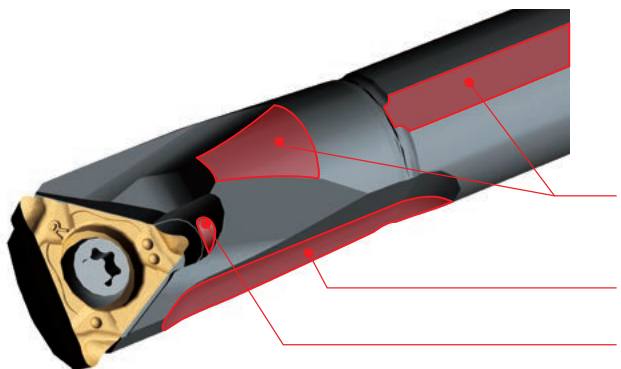


Mogul Bar

High rigidity boring bars



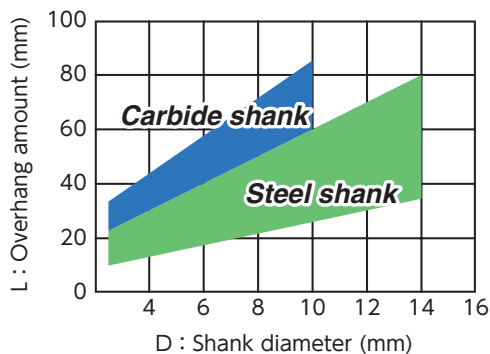
Features

- **High rigidity + Minimal flat widths**
Reduce vibration
- **Large clearance for improved chip evacuation**
- **All Mogul Bar boring bars are coolant through**

Recommended amount of overhang

Steel Shank $L/D \leq 5$

Carbide Shank $L/D \leq 7$



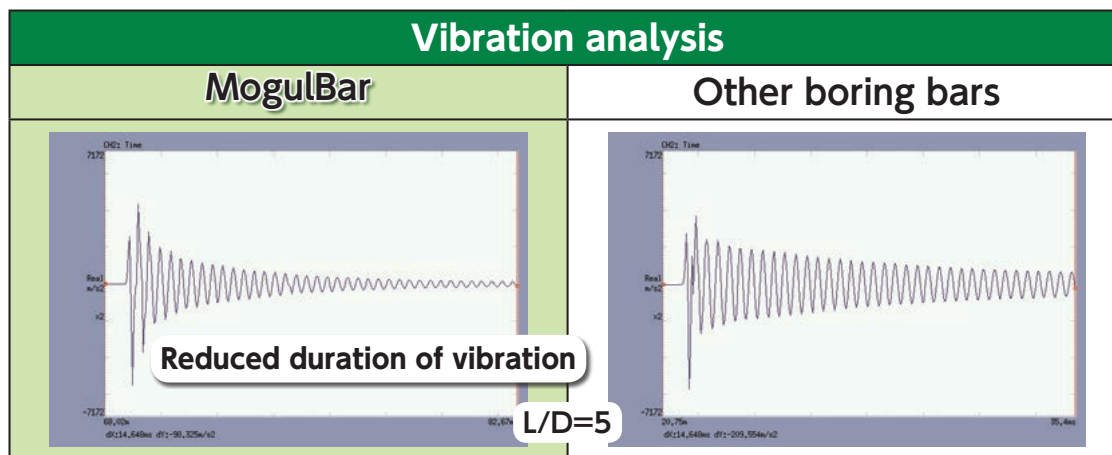
L : Overhang
D : Shank diameter

[Cutting condition example]

Work materials: Alloy steel, stainless

$V_c=80\text{m/min}$ $f=0.05 \sim 0.1\text{mm/rev}$ $a_p=0.1 \sim 0.5\text{mm(DOC)}$ WET

Vibration analysis



Note: Assuming a 100N load is applied. An equal amount of force was applied to both bars for vibration analysis.

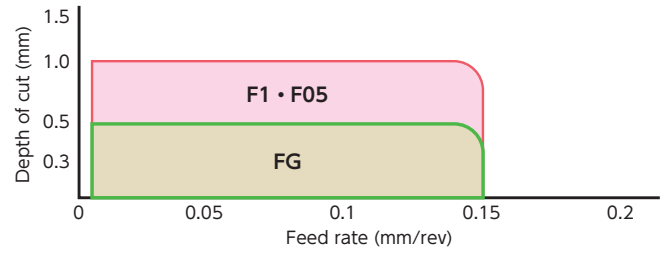
Boring bar used in above analysis: S08H-STUPR09D10-OH

F Chipbreakers - Evacuate chips BACKWARD

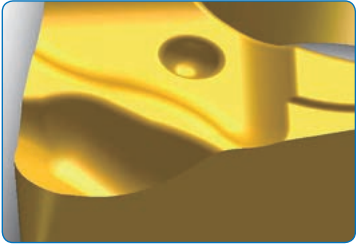

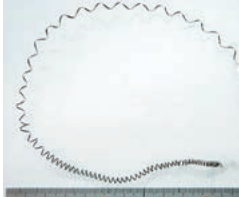
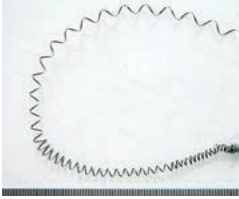
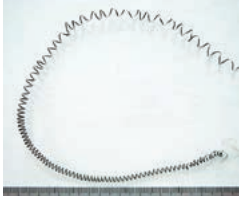



- F chipbreakers allow chips to evacuate backward
- Combination of the F-chipbreakers and Mogul Bar delivers the best performance



Recommended Cutting Condition Range



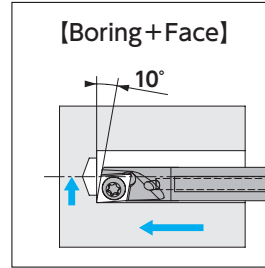
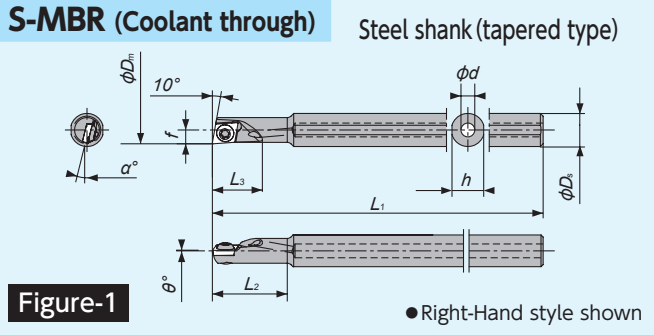
F Chipbreakers - Features

	DOC (mm)	Feed(mm/rev)	
		0.05	0.1
FG Chipbreaker <ul style="list-style-type: none"> ● Best for finishing ● Works for small DOC (0.5mm or less) ● High rake angle 	0.1		
	0.3		
F1/F05 Chipbreakers <ul style="list-style-type: none"> ● Cover wide condition range ● Ground chipbreaker 	0.5		
Note: Right-hand inserts with FG and F1 chipbreakers should be used with right-hand holders		[Cutting condition example] SCM435 Diameter : $\phi 12.0$ $V_c=80\text{m/min}$ Depth of Bore : 20mm Wet Holder : S10K-STUPR11D12-OH Insert : TPGH110304	

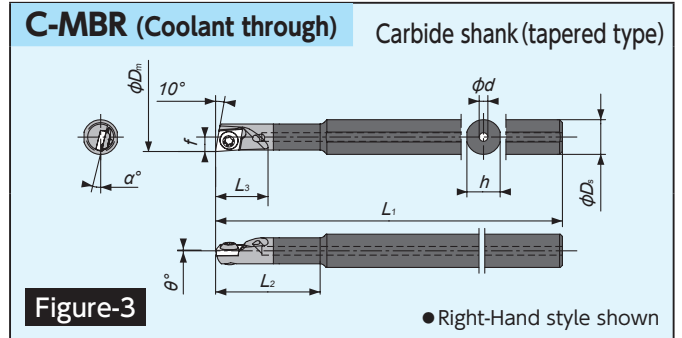
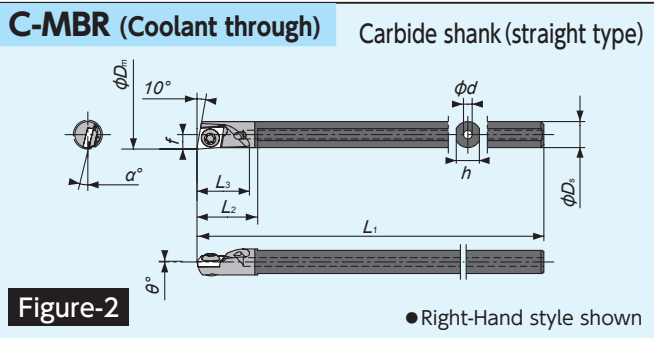
Tool List

Mogul Bar for 75° Diamond (MBL style)

Minimum Bore Diameter 5.0mm



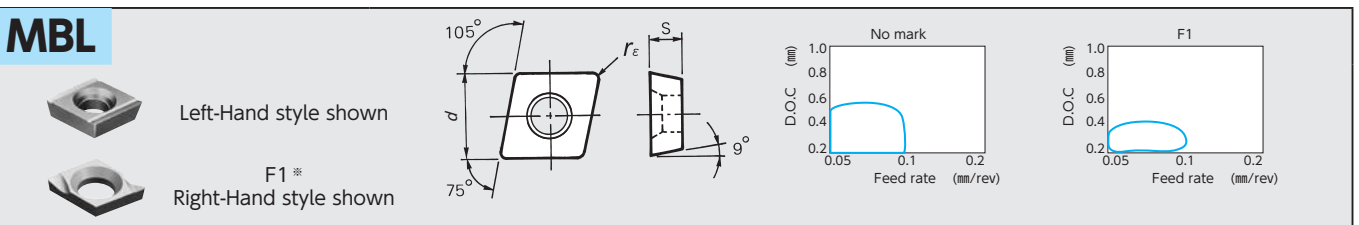
F1 chipbreakers evacuate chips BACKWARD (S-STUC style shown)



MBL style - Toolholders

Figure	Code No.	Item Number	Stock	Min Bore Dia. (mm) D_m	Dimensions (mm)								Std. corner radius (mm) r_ϵ	Gage insert	Spare Parts		
					ϕD_s	h	L_1	f	L_2	L_3	ϕd	θ			α	Clamp Screw	Wrench
1	5789888	S06F-MBRD05-OH	●	5.0	6.0	5.7				13.5		2.5			MBL	LR-5-2*3.5	CLR-13S
2	5789896	C045F-MBRD05-OH	●		4.5	4.0	80	2.5	-	9.0		1.5	0° -13°	0.15			
3	5789904	C06F-MBRD05-OH	●		6.0	5.7											

MBL style - Insert



Item Number	Dimensions (mm)			PVD Coated Carbide							
	d	s	r_ϵ	ST4	Stock	ZM3	Stock	TM4	Stock	QM3	Stock
MBL005FL	3.6	1.0	0.05			5161252	●	5696018	●	5036884	●
MBL015FL			0.15			5161245	●	5696026	●	5168000	●
MBL005FRF1*	3.6	1.0	0.05	5038872	●			5789763	●	5036892	●
MBL015FRF1*			0.15	5038955	●			5789771	●	5933858	●

*F1 chipbreaker, right-hand inserts fit to right-hand toolholder
Note : F1 chipbreaker evacuates chips BACKWARD

Standard Bar for 75° Diamond (MBL style) Minimum Bore Diameter 5.0mm

C-MBR
Carbide shank (straight type)

Figure-1

● Right-Hand style shown

C-MBR
Carbide shank (tapered type)

Figure-2

● Right-Hand style shown

C-MSBR
Carbide shank (straight type)

Figure-3

● Right-Hand style shown

MBL style - Toolholders

Figure	Code No.	Item Number	Stock	Min Bore Dia. (mm) D_m	Max. shoulder height (mm) g	Dimensions (mm)*					Gage insert	Spare Parts	
						D_s	h	L_1	f	L_2		Clamp Screw	Wrench
1	5610175	C045F-MBR	●	5.0	—	4.5	4.0	80	2.5	—	MBL	LR-S-2 * 3.5	CLR-13S
2	5162706	C06F-MBR	●	5.0	—	6.0	5.5	80	2.5	18			
3	5161054	C04J-MSBR	●	5.7	1.0	4.0	3.5	110	3.2	—			
	5161047	C06J-MSBR	●	7.7		6.0	5.5		4.2	—			

* Std. corner radius $r_\epsilon = 0.15\text{mm}$

MBL style - Insert

MBL

Left-Hand style shown

Right-Hand style shown $F1^*$

No mark

F1

Item Number	Dimensions (mm)			PVD Coated Carbide							
	d	s	r_ϵ	ST4	Stock	ZM3	Stock	TM4	Stock	QM3	Stock
MBL005FL	3.6	1.0	0.05			5161252	●	5696018	●	5036884	●
MBL015FL			0.15			5161245	●	5696026	●	5168000	●
MBL005FRF1*	3.6	1.0	0.05	5038872	●			5789763	●	5036892	●
MBL015FRF1*			0.15	5038955	●			5789771	●	5933858	●

※F1 chipbreaker, right-hand inserts fit to right-hand toolholder
Note : F1 chipbreaker evacuates chips BACKWARD

Mogul Bar for 75° Diamond (ERGP style)

Minimum Bore Diameter 6.0mm

S-SEXR (Coolant through)

Steel shank
(tapered type)

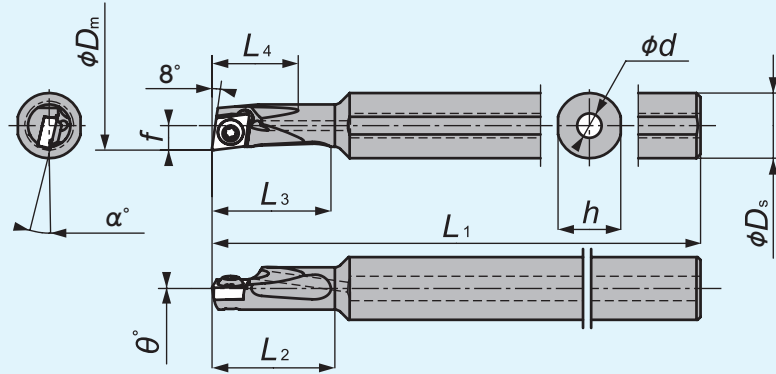


Figure-1

● Right-Hand style shown

C-SEXR (Coolant through)

Carbide shank
(straight type)

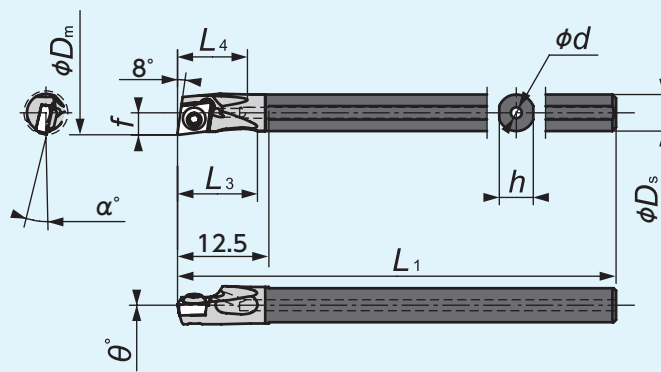


Figure-2

● Right-Hand style shown

C-SEXR (Coolant through)

Carbide shank
(tapered type)

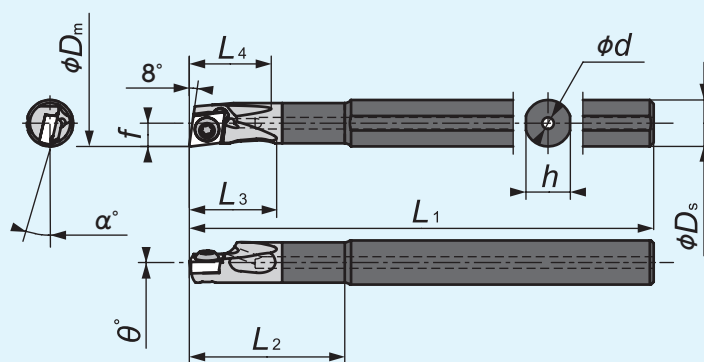





Figure-3

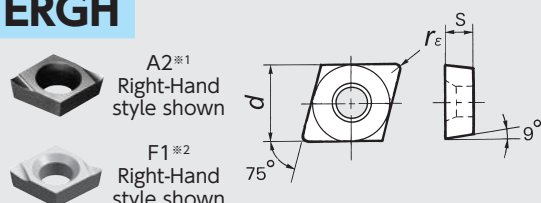
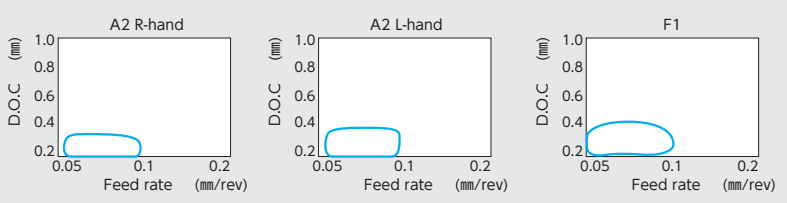
● Right-Hand style shown

ERGP style - Toolholders

Figure	Code No.		Item Number	Stock		Min Bore Dia. (mm) D_m	Dimensions (mm)										Std. corner radius (mm) r_ϵ	Gage insert 	Spare Parts			
	R	L		R	L		ϕD_s	h	L_1	f	L_2	L_3	L_4	ϕd	θ	α			Clamp Screw 	Wrench 		
1	5789912		S08G-SEXR $\frac{R}{L}$ T3D06-OH	●		6.0	8.0	7.7		15	15		3.0					0.2	ERGHT301	LR-S-2*3.7	CLR-13S	
2	5789920		C05G-SEXR $\frac{R}{L}$ T3D06-OH	●			5.0	4.0		90	3.0			1.5	0°	-13°						
3	5789938 5800487		C06G-SEXR $\frac{R}{L}$ T3D06-OH	●	●		6.0	5.7				11										

ERGP style - Insert

ERGH

A2^{※1} Right-Hand style shown
 F1^{※2} Right-Hand style shown

ISO Item Number	Item Number	Dimensions (mm)			PVD Coated Carbide																
		ϕd	s	r_ϵ	ST4				ZM3				TM4				QM3				
					R	Stock	L	Stock	R	Stock	L	Stock	R	Stock	L	Stock	R	Stock	L	Stock	
ERGHT30102F $\frac{R}{L}$ A2	ERGP52Y-F $\frac{R}{L}$ --A2	3.97	1.6	0.2						5899158	●	5889670	●	5696034	●	5696059	●				
T30104F $\frac{R}{L}$ A2	521-F $\frac{R}{L}$ --A2			0.4								5146063	●	5696067	●	5969035	●				
ERGHT30101F $\frac{R}{L}$ F1	—	3.97	1.6	0.1	5038971	●								5793039	●			5036868	●		
T30102F $\frac{R}{L}$ F1	—			0.2	5039003	●								5789789	●			5012703	●		
T30104F $\frac{R}{L}$ F1	—			0.4	5039011	●								5789797	●			5036876	●		

※1 A2 chipbreaker. Control chips at light feed and light depth of cut
 ※2 F1 chipbreaker, right-hand inserts fit to right-hand toolholder
 F1 chipbreaker evacuates chips BACKWARD

Tool List

Mogul Bar for 80° Diamond (CC/CP style)

Minimum Bore Diameter 7.0mm

S-SCLP (C) (Coolant through)

Steel shank

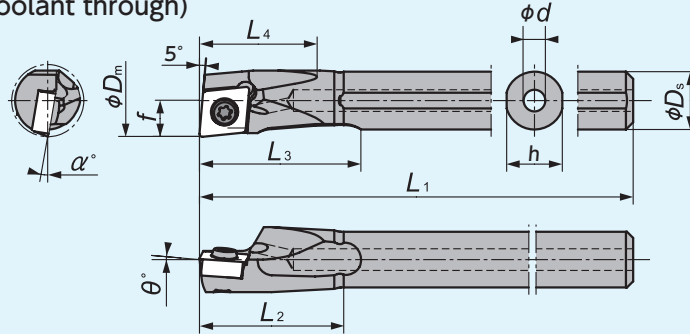


Figure-1

● Right-Hand style shown

C-SCLP (C) (Coolant through)

Carbide shank

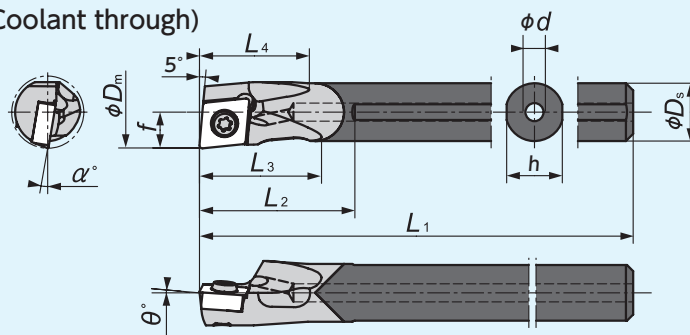


Figure-2

● Right-Hand style shown

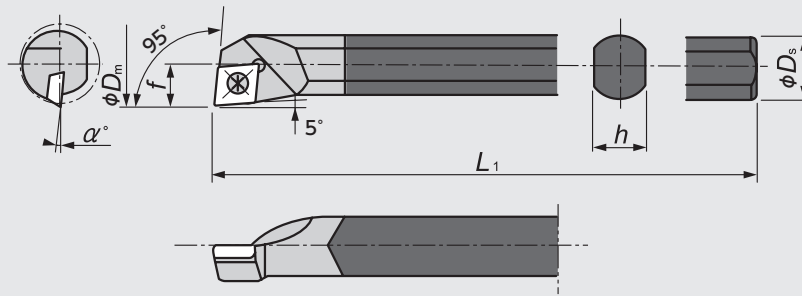
CC/CP style - Toolholders

Figure	Code No.		Item Number	Stock		Min Bore Dia. (mm) ϕD_m	Dimensions (mm)										Std. corner radius (mm)	Gage insert	Spare Parts	
	R	L		R	L		ϕD_s	h	L_1	f	L_2	L_3	L_4	ϕd	θ	α			Clamp Screw	Wrench
1	5770029		S06F-SCLP $\frac{R}{L}$ 04D07-OH	●		7.0	6.0	5.75	80	3.5	14	17	12	2.5		-9°	0.2	CPOO0401 E41	LR-S-2*3.7	CLR-13S (A)
	5770037		S07G-SCLP $\frac{R}{L}$ 04D08-OH	●		8.0	7.0	6.75	90	4.0	16	19.5	13.5	3.0	+5°	-7°				
	5770045		S08H-SCLP $\frac{R}{L}$ 06D10-OH	●		10.0	8.0	7.7	100	5.0	20	22	16	3.0		-10°	0.4	CPOO0602 E41	LR-S-2.5*6	CLR-15S (A)
	5770052		S08H-SCLC $\frac{R}{L}$ 06D10-OH	●		10.0	8.0	7.7	100	5.0	20	22	16	3.0		-13°	0.4	CCOO0602 E39~40	LRIS-2.5*5	CLR-15S (A)
	5770060		S10K-SCLC $\frac{R}{L}$ 06D12-OH	●		12.0	10.0	9.6	125	6.0	24	27.5	20	3.5		-11°				
	5770078		S12M-SCLC $\frac{R}{L}$ 06D14-OH	●		14.0	12.0	11.5	150	7.0	28	32.5	23	4.0	0°	-9°				
	5770086		S16Q-SCLC $\frac{R}{L}$ 09D18-OH	●		18.0	16.0	15.4	180	9.0	36	42.5	30	5.0		-10°		CCOO09T3 E39~40	LRIS-4*8	LLR-25S-20*6.5 (B)
2	5770136		C06H-SCLP $\frac{R}{L}$ 04D07-OH	●	●	7.0	6.0	5.75	100	3.5	15.5	11.5	12	2.0		-9°	0.2	CPOO0401 E41	LR-S-2*3.7	CLR-13S (A)
	5800495		C07J-SCLP $\frac{R}{L}$ 04D08-OH	●		8.0	7.0	6.75	110	4.0	17.5	13	13.5	2.0	+5°	-7°				
	5770169		C08K-SCLP $\frac{R}{L}$ 06D10-OH	●	●	10.0	8.0	7.7	125	5.0	21.5	16.5	15	2.5		-10°	0.4	CPOO0602 E41	LR-S-2.5*6	CLR-15S (A)
	5800503		C08K-SCLC $\frac{R}{L}$ 06D10-OH	●		10.0	8.0	7.7	125	5.0	21.5	16.5	15	2.5		-13°	0.4	CCOO0602 E39~40	LRIS-2.5*5	CLR-15S (A)
	5770185		C10M-SCLC $\frac{R}{L}$ 06D12-OH	●	●	12.0	10.0	9.6	150	6.0	25	20	19.5	2.5	0°	-11°				
	5770193		C12M-SCLC $\frac{R}{L}$ 06D14-OH	●		14.0	12.0	11.5	150	7.0	29	23.5	22.5	3.0		-9°				
	5800511		C12M-SCLC $\frac{R}{L}$ 06D14-OH	●		14.0	12.0	11.5	150	7.0	29	23.5	22.5	3.0		-9°				

Standard Bar for 80° Diamond (CP style) Minimum Bore Diameter 8.0mm



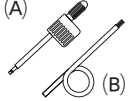

C-SCLP

Carbide shank



● Right-Hand style shown

CP style - Toolholders

Code No.	Item Number	Stock	Min Bore Dia. (mm) ϕD_m	Dimensions (mm)							Gage insert 	Spare Parts	
				ϕD_s	h	b	L_1	f	L_2	α		Clamp Screw 	Wrench (A)  (B) 
5853288	C06J-SCLPR-04-N	●	8.0	6.0	5.2	—	110	4.0	—	-6°	CP000401 E41	LR-S-2*4.4	CLR-13S (A)
5853296	C08K-SCLPR-06-N	●	10.0	8.0	7.0	—	125	5.0	—	-10°	CP000602 E41	LR-S-2.5*5.5	CLR-15S (A)
5853304	C10M-SCLPR-08-N	●	12.0	10.0	9.0	—	150	6.0	—	-6°	CPGH0802 E41	LR-S-3*6.2	RLR-20S (B)

Tool List

Mogul Bar for 60° Triangle (TC/TP style)

Minimum Bore Diameter 8.0mm

S-STUC (P) (Coolant through)

Steel shank

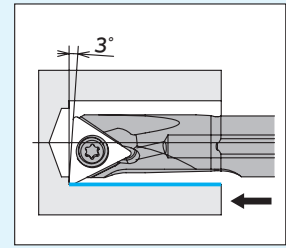
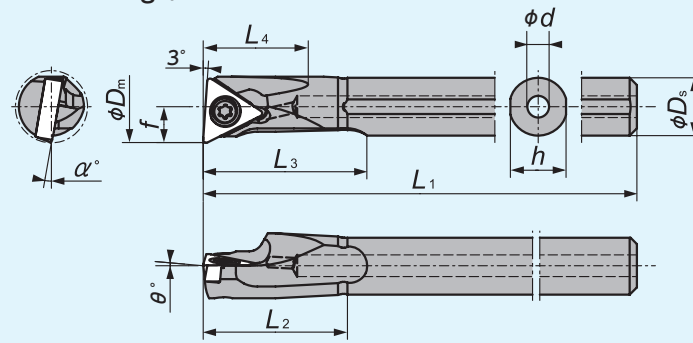


Figure-1

● Right-Hand style shown

C-STUC (P) (Coolant through)

Carbide shank

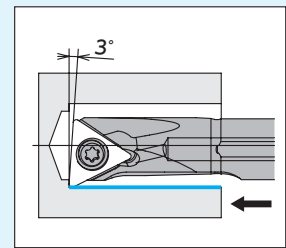
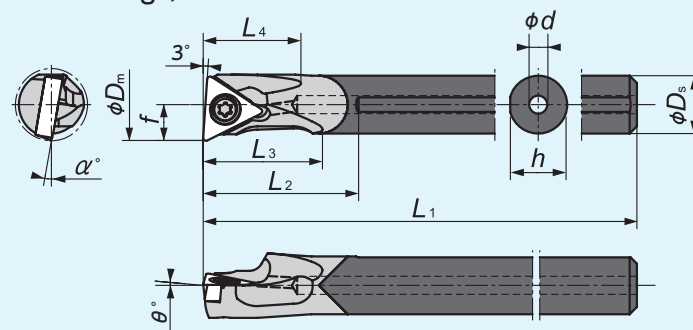


Figure-2

● Right-Hand style shown

TC/TP style - Toolholders

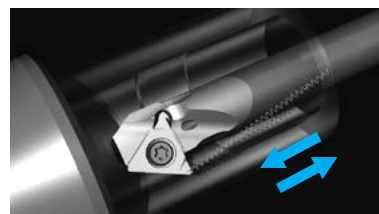
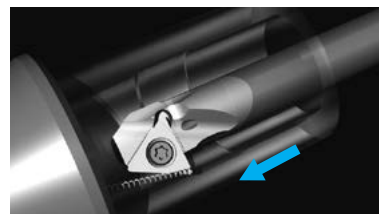
Figure	Code No.		Item Number	Stock		Min Bore Dia. (mm)	Dimensions (mm)										Std. corner radius (mm)	Gage insert	Spare Parts	
	R	L		R	L		ϕD_m	ϕD_s	h	L_1	f	L_2	L_3	L_4	ϕd	θ			α	Clamp Screw
1	5769971		S07G-STUC $\frac{1}{2}$ L06D08-OH	●		8.0	7.0	6.75	90	4.0	16.0	19.5	12.5	2.5	0°	-11°	0.2	TC $\circ\circ$ 0601 E46	LR-S-2*4.4	CLR-13S (A)
	5769989		S08H-STUP $\frac{1}{2}$ L09D10-OH	●		10.0	8.0	7.7	100	5.0	20.0	22.5	14.5	3.0		-10°		TP $\circ\circ$ 0902 E32~33.47	LR-S-2.5*4.8	CLR-15S (A)
	5769997		S10K-STUP $\frac{1}{2}$ L11D12-OH	●		12.0	10.0	9.6	125	6.0	24.0	27.5	18.5	3.5		-7.5°		TP $\circ\circ$ 1103 E32~33.47	LR-S-3*5.8	RLR-20S (B)
	5770003		S12M-STUP $\frac{1}{2}$ L11D14-OH	●		14.0	12.0	11.5	150	7.0	28.0	32.5	22	4.0	+5°	-5°	0.4			
	5770011		S16Q-STUP $\frac{1}{2}$ L11D18-OH	●		18.0	16.0	15.4	180	9.0	32.0	42.5	28.5	5.0		-3°				
	5886817		S20Q-STUPR11D22-OH	●		22.0	20.0	19.4	180	11	40	46	38	5.0		-3°				
2	5770094 (R)		C07J-STUC $\frac{1}{2}$ L06D08-OH	●	●	8.0	7.0	6.75	110	4.0	17.5	13.0	12.5	2.0	0°	-11°	0.2	TC $\circ\circ$ 0601 E46	LR-S-2*4.4	CLR-13S (A)
	5800529 (L)																			
	5770102 (R)		C08K-STUP $\frac{1}{2}$ L09D10-OH	●	●	10.0	8.0	7.7	125	5.0	21.5	16.5	14.5	2.5		-10°		TP $\circ\circ$ 0902 E32~33.47	LR-S-2.5*4.8	CLR-15S (A)
	5800537 (L)																			
	5770110 (R)		C10M-STUP $\frac{1}{2}$ L11D12-OH	●	●	12.0	10.0	9.6	150	6.0	25.0	20.0	17.5	2.5	+5°	-7.5°	0.4	TP $\circ\circ$ 1103 E32~33.47	LR-S-3*5.8	RLR-20S (B)
	5800545 (L)																			
	5770128		C12M-STUP $\frac{1}{2}$ L11D14-OH	●		14.0	12.0	11.5	150	7.0	29.0	23.0	21.5	3.0		-5°				
5821814		C16Q-STUP $\frac{1}{2}$ L11D18-OH	●		18.0	16.0	15.4	180	9.0	37.0	29.0	28.0	4.0		-3°					

Tool List

Anti vibration boring bar for internal backturning "C-STZP" type

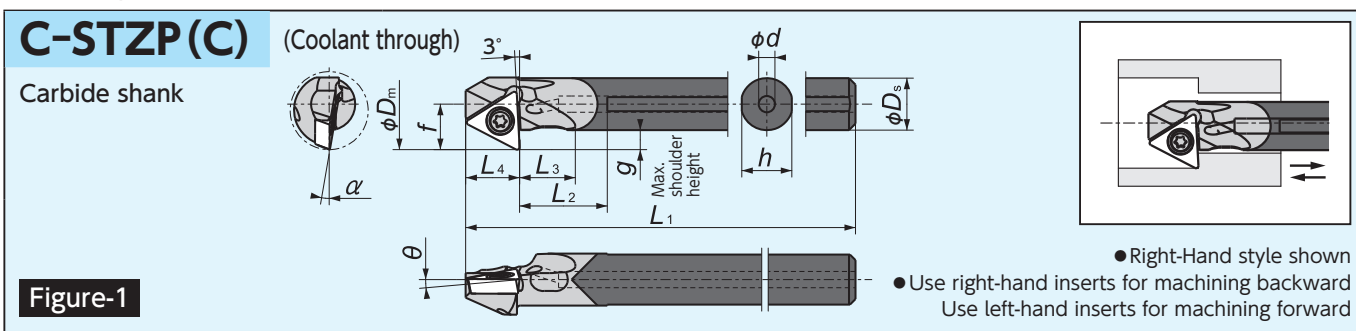
Prevent chattering with higher rigidity toolholder design
Higher rigidity toolholder offers max. machining length L/D ≤ 7

Both machining directions are available



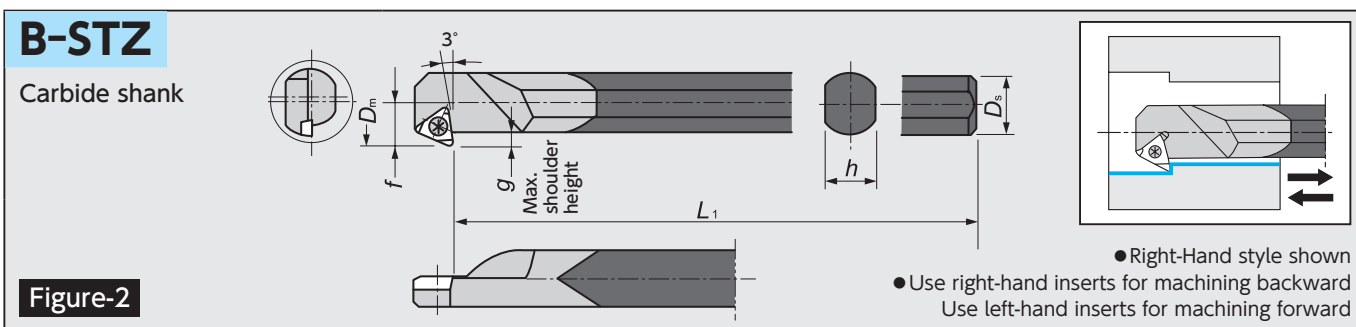
Mogul Bar for 60° Triangle (TC/TP style)

Minimum Bore Diameter 10.0mm






Standard Bar for 60° Triangle (TC/TP style)

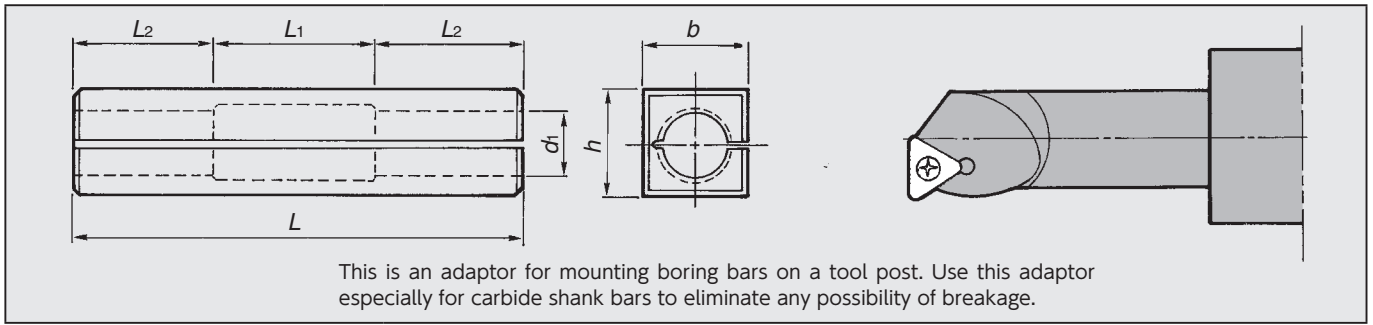
Minimum Bore Diameter 10.0mm



TC/TP style - Toolholders

Figure	Code No.	Item Number	Stock R	Min Bore Dia. (mm) ϕD_m	Max. shoulder height (mm) g	Dimensions (mm)										Std. corner radius (mm)	Gage insert 	Spare Parts	
	R					ϕD_s	h	L ₁	f	L ₂	L ₃	L ₄	ϕd	θ	α			Clamp Screw 	Wrench 
1	5842851	C06H-STZCR06D10-OH	●	10.0	2.5	6.0	5.8	100	5.5	10.5	6	6	2.0	0°	-10°	0.2	TC000601 E46	LR-S-2*4.4	CLR-13S
	5842869	C08K-STZPRO9D12-OH	●	12.0	3.0	8.0	7.7	125	7.0	13.5	8.5	8.3	2.5	+5°	-10°	0.4	TPO00902 E32~33*47	LR-S-2.5*4.8	CLR-15S
	5842877	C10M-STZPRO9D14-OH	●	14.0		10.0	9.6	150	8.0	18.5	12	8.3	2.5		-7°		TPO01103 E32~33*47	LR-S-3*5.8	RLR-20S
	5842885	C12N-STZPR11D175-OH	●	17.5	4.5	12.0	11.5	150	10.5	22	14.5	9.6	3.0	-5°	-5°	0.4	TPO01103 E32~33*47	LR-S-3*5.8	RLR-20S
2	5852819	B06J-STZCR-06-N	●	10.0	2.5	6.0	5.2	110	5.5	-	-	-	-	-	-	0.2	TC000601 E46	LR-S-2*4.4	CLR-13S
	5852801	B12Q-STZPR-09-N	●	16.0	3.0	12.0	11.0	180	9.0	-	-	-	-	-	-	0.2	TPO00902 E32~33*47	LR-S-2.5*6.8	CLR-15S

Boring bar adaptors.



Code No.	Adaptor P/N	Stock	Dimensions (mm)						Applicable holder
			h_1	b	L	L_1	L_2	d_1	
5764204	S06-H	●	20	20	60	20	20	6	For shank of $\phi 6$
5580717	S08-H	●	20	20	60	20	20	8	For shank of $\phi 8$
5632286	S10-H	●	20	20	60	20	20	10	For shank of $\phi 10$
5758198	S12-H	●	25	25	70	20	25	12	For shank of $\phi 12$