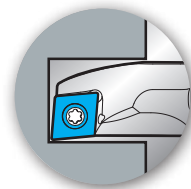


THE NEW VALUE FRONTIER



New Boring Bar

Dynamic Bar

AeroDynamic Design for

- Improved chip evacuation
- Reduced chattering
- Stable machining



AeroDynamic Design

**Improved Chip Control
and High Rigidity**

ADVANCING PRODUCTIVITY

New Boring Bar

Dynamic Bar

Dynamic design driven by the latest computer simulation technology

Tool holder design through stress analysis:
Maximum structural thickness for high tool holder rigidity.
Controls chattering to achieve stable machining

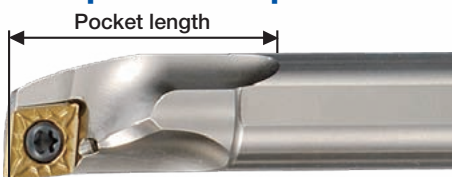
Large chip pocket:
Exhibits superior chip evacuation

■ Superior chip evacuation (external coolant)

	Dynamic Bar	Competitor A	Competitor B
Inside the workpiece			

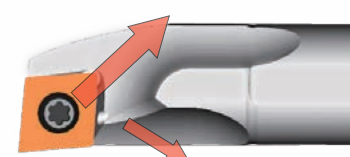
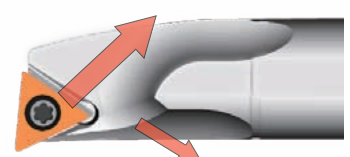
In the products of competitors A and B chips remain inside the workpiece, but chips from the Dynamic Bar are all evacuated from the workpiece.

■ Comparison of pocket length



item/description	Pocket length	
	Dynamic Bar	Competitor A
A16-SCLPR09-18 Type	37	29
A20-SCLCR09-22 Type	48	32

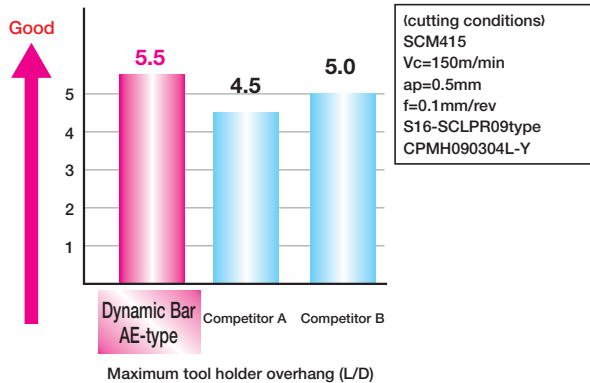
■ Chip evacuation direction

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

The Dynamic Bar achieves superior chip evacuation

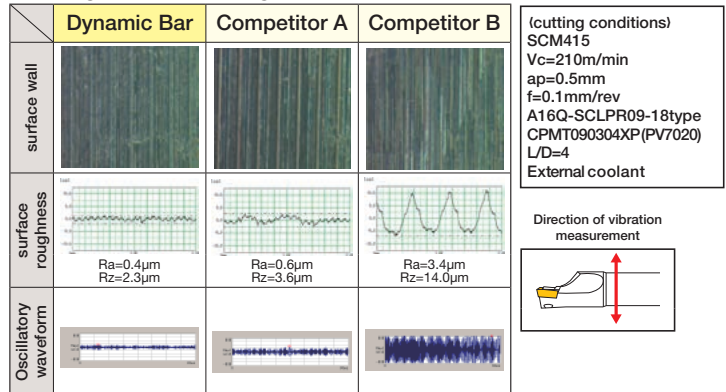
High rigidity and chattering resistance are ensured through the use of a special alloy and stress analysis technology. Previously unattained surface finish and dimensional accuracy are now achieved.

■ Anti chatter vibration performance



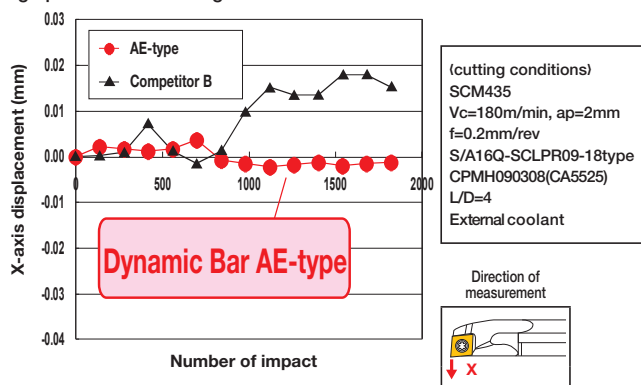
■ Comparison of surface finish

Vibration of the dynamic bar was minimal even at high cutting speeds, enabling stable machining.



■ Cutting Point Precision

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



■ Toolholder Lineup

Excellent Bar(AE type)

Excellent Bar with coolant hole (internal coolant) provides better chip evacuation



Steel Bar

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



■ Advantages of Dynamic Bar SDUC

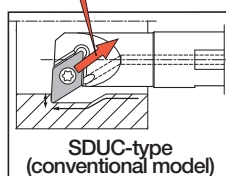
New design and concept focusing on chip evacuation

New design

Streamlined pocket provides effective chip evacuation

Large chip pocket allows chips to flow through the backside of the bar

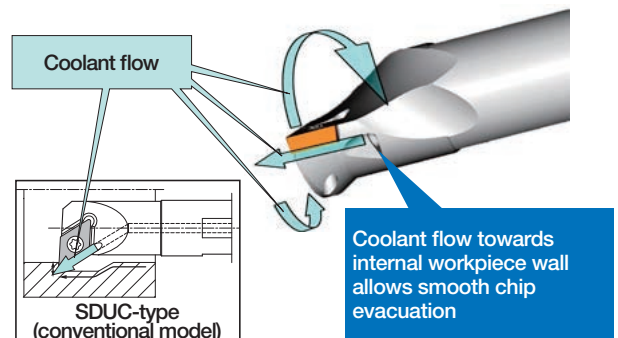
Chip flow



Side chip pocket directs chips to outside of workpiece

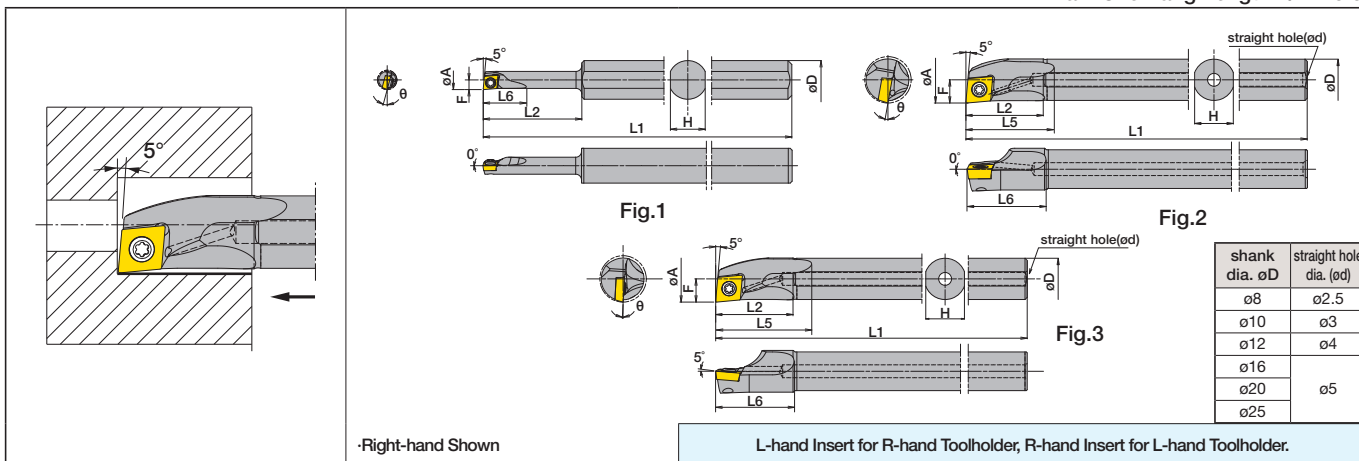
New concept

Coolant flows toward workpiece internal wall

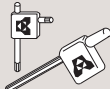


■S/A-SCLC(P)-AE type Excellent Bar (Boring /Internal Facing)

Max. Overhang Length L/D=-5.5



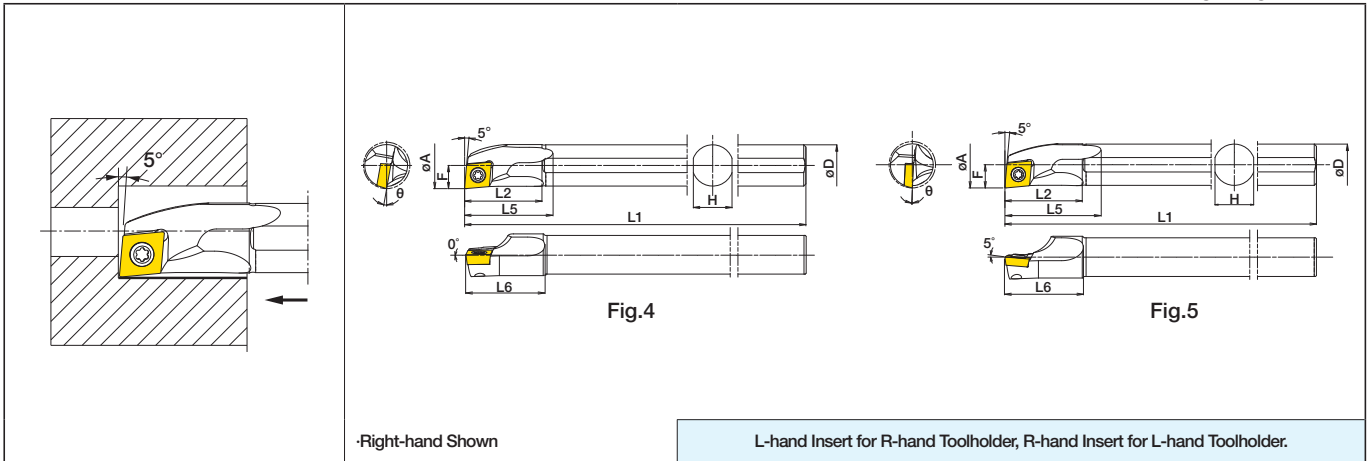
● Toolholder Dimension

Description		Stock		Min.Bore Dia.	Dimension (mm)							θ	Std. Corner-R(rε)	Shape	Spare Parts		Applicable Insert	
		R	L		ØA	ØD	H	L1	L2	L5	L6				F			
Excellent Bar	SCLC Type	S10H-SCLC%03-05AE	●	●	5	10	9	100	25.5	-	11	2.5	15°	0.2	Fig.1	SB-1635TR	FT-6	CC○○0301..
		S10H-SCLC%03-06AE	●	●	6				29.5	-	13	3	13°					
		S10H-SCLC%04-07AE	●	●	7				34.6	-	15	3.5						
		S10H-SCLC%04-08AE	●	●	8				39.1	-	15	4				11°		
	A08X-SCLC%06-10AE	●	●	10	8	7	120	16	20	17	5	14°	0.4	Fig.2	SB-2545TR	FT-8	CC○○0602..	
	A10L-SCLC%06-12AE	●	●	12	10	9	140	20	25	21	6	12°						
	A12M-SCLC%06-14AE	●	●	14	12	11	150	24	30	25	7	10°						
	A16Q-SCLC%09-18AE	●	●	18	16	15	180	30	34	31	9				8°			
	A20R-SCLC%09-22AE	●	●	22	20	19	200	36	49	37	11							
	A25S-SCLC%09-27AE	●	●	27	25	24	250	46	55	46	13.5	6°						
	SCLP Type	A10L-SCLP%08-12AE	●	●	12	10	9	140	20	25	20	6	5°	0.4	Fig.3	SB-3060TR	FT-10	CP○○0802..
		A12M-SCLP%08-14AE	●	●	14	12	11	150	24	29	24	7	4°					
		A12M-SCLP%09-16AE	●	●	16					31	24	8				3.5°		
		A16Q-SCLP%09-18AE	●	●	18	16	15	180	30	37	30	9						
		A20R-SCLP%09-22AE	●	●	22	20	19	200	36	47	37	11	2°					
		A25S-SCLP%09-27AE	●	●	27	25	24	250	46	55	46	13.5	0°					

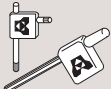
●Standard Stock

■S-SCLC(P)-A type (Boring /Internal Facing)

Max. Overhang Length L/D=-4



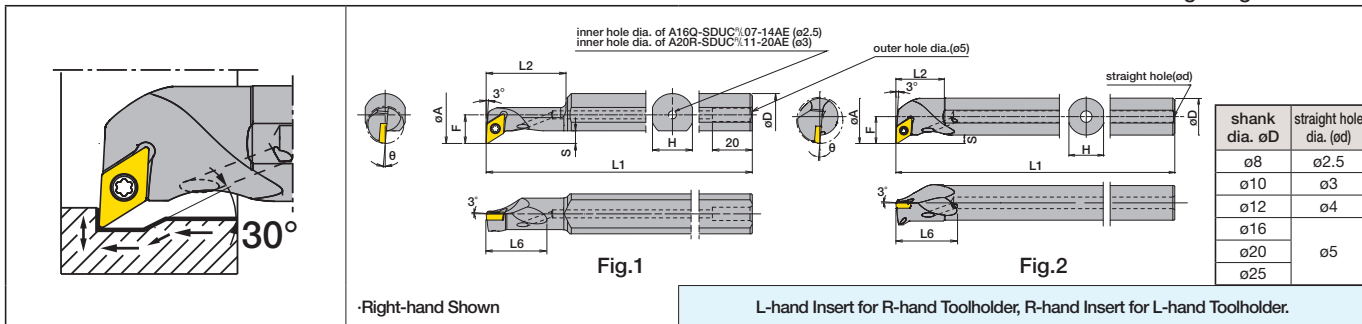
● Toolholder Dimension

Description			Stock		Min.Bore Dia.	Dimension (mm)							θ	Std. Corner- R(℞)	Shape	Spare Parts		Applicable Insert	
			R	L		ØA	ØD	H	L1	L2	L5	L6				F	Clamp Screw		Wrench
																			
Steel Bar	SCLC Type	S08X-SCLC℞\06-10A	●	●	10	8	7	120	16	20	17	5	14°	0.4	Fig.4	SB-2545TR	FT-6	CC○○0602..	
		S10L-SCLC℞\06-12A	●	●	12	10	9	140	20	25	21	6	12°						
		S12M-SCLC℞\06-14A	●	●	14	12	11	150	24	30	25	7	10°						
		S16Q-SCLC℞\09-18A	●	●	18	16	15	180	30	34	31	9	10°						
		S20R-SCLC℞\09-22A	●	●	22	20	19	200	36	49	37	11	8°						
		S25S-SCLC℞\09-27A	●	●	27	25	24	250	46	55	46	13.5	6°						
	SCLP Type	S10L-SCLP℞\08-12A	●	●	12	10	9	140	20	25	20	6	5°	0.4	Fig.5	SB-3060TR	FT-10	CP○○0802..	
		S12M-SCLP℞\08-14A	●	●	14	12	11	150	24	29	24	7	4°						
		S12M-SCLP℞\09-16A	●	●	16					31	24	8							
		S16Q-SCLP℞\09-18A	●	●	18	16	15	180	30	37	30	9	3.5°			SB-4065TR	FT-15		CP○○0903..
		S20R-SCLP℞\09-22A	●	●	22	20	19	200	36	47	37	11	2°						
		S25S-SCLP℞\09-27A	●	●	27	25	24	250	46	55	46	13.5	0°						

●:Standard Stock

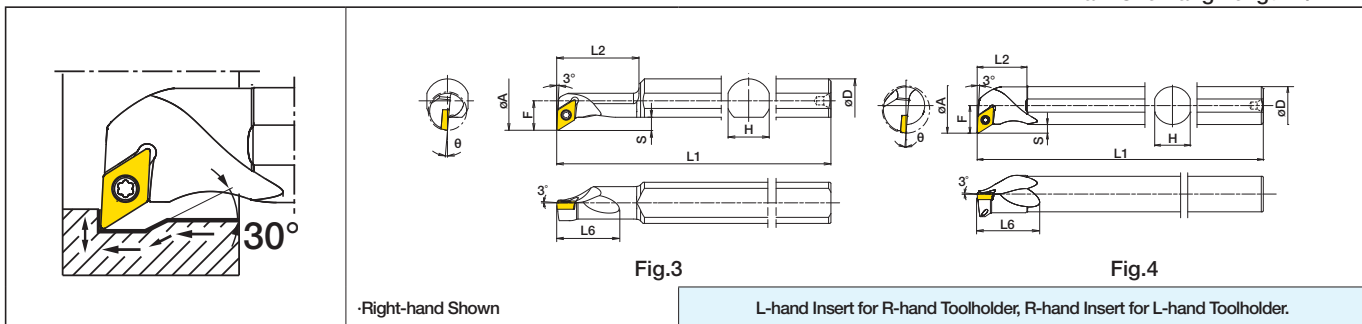
■A-SDUC-AE type Excellent Bar (Copying)

Max. Overhang Length L/D=-5.5

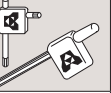


■S-SDUC-A type (Copying)

Max. Overhang Length L/D=-4



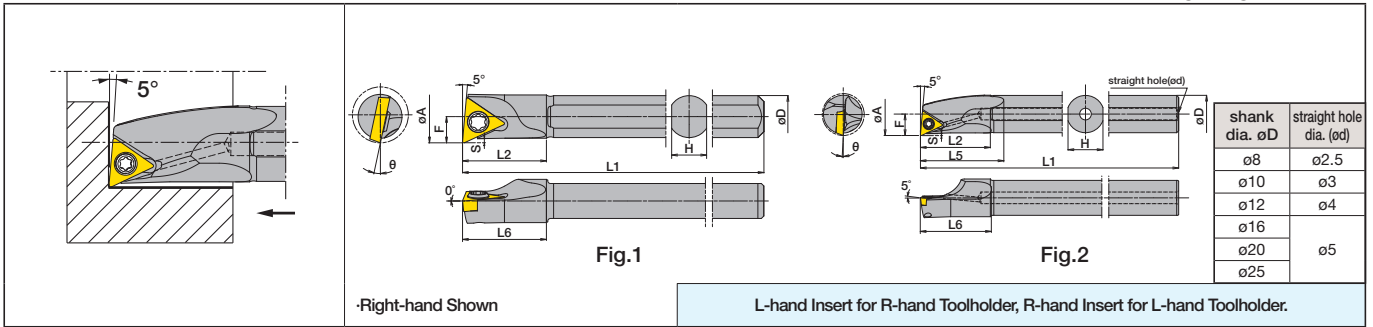
● Toolholder Dimension

Description		Stock		Min.Bore Dia.	Dimension (mm)								θ	Std. Corner- R(ε)	Shape	Spare Parts		Applicable Insert
		R	L		ØA	ØD	H	L1	L2	L5	L6	F				S	Clamp Screw	
																		
Excellent Bar	A16Q-SDUC%07-14AE	●	●	14	16	15	180	28	-	23	10.8	4.4	5°	0.4	Fig.1	SB-2560TR	FT-8	DC○○0702..
	A20R-SDUC%11-20AE	●	●	20	20	19	200	48	-	30	15.6	6.1				SB-4065TR	FT-15	DC○○11T3..
	A10L-SDUC%07-14AE	●	●	14	10	9	140	19.5	-	20	8.7	3.3	5°	0.4	Fig.2	SB-2560TR	FT-8	DC○○0702..
	A12M-SDUC%07-16AE	●	●	16	12	11	150	21.5	-	24	9.7							
	A16Q-SDUC%07-20AE	●	●	20	16	15	180		-	26	11.7							
	A16Q-SDUC%11-23AE	●	●	23				22.5	-	31	14.5	6.1						
	A20R-SDUC%11-27AE	●	●	27	20	19	200	23.5	-	36	16.5							
	A25S-SDUC%11-32AE	●	●	32	25	24	250	24.5	-	39	19							
Steel Bar	S16Q-SDUC%07-14A	●	●	14	16	15	180	28	-	23	10.8	4.4	5°	0.4	Fig.3	SB-2560TR	FT-8	DC○○0702..
	S20R-SDUC%11-20A	●	●	20	20	19	200	48	-	30	15.6	6.1				SB-4065TR	FT-15	DC○○11T3..
	S10L-SDUC%07-14A	●	●	14	10	9	140	19.5	-	20	8.7	3.3			Fig.4	SB-2560TR	FT-8	DC○○0702..
	S12M-SDUC%07-16A	●	●	16	12	11	150	21.5	-	24	9.7							
	S16Q-SDUC%07-20A	●	●	20	16	15	180		-	26	11.7							
	S16Q-SDUC%11-23A	●	●	23				22.5	-	31	14.5	6.1						
	S20R-SDUC%11-27A	●	●	27	20	19	200	23.5	-	36	16.5							
	S25S-SDUC%11-32A	●	●	32	25	24	250	24.5	-	39	19							

●:Standard Stock

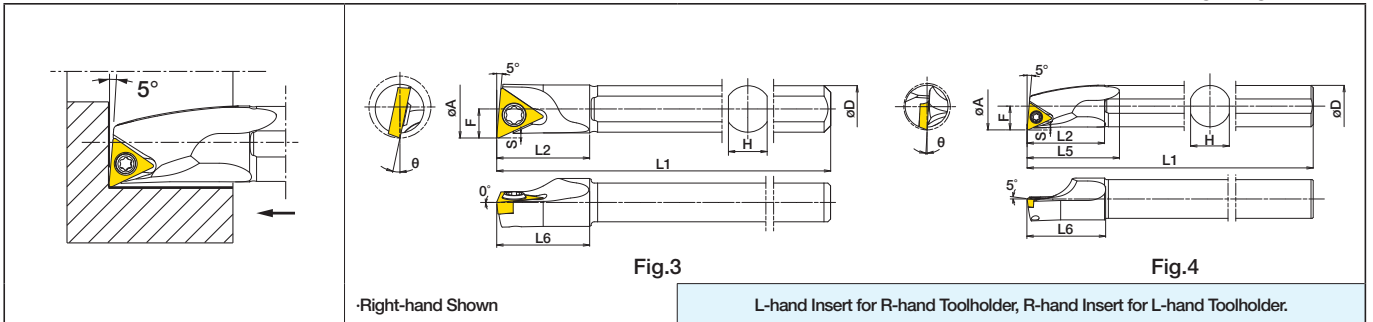
■S/A-STLB(P)-AE type Excellent Bar (Boring /Internal Facing)

Max. Overhang Length L/D=-5.5



■S-STLB(P)-A type (Boring /Internal Facing)

Max. Overhang Length L/D=-4



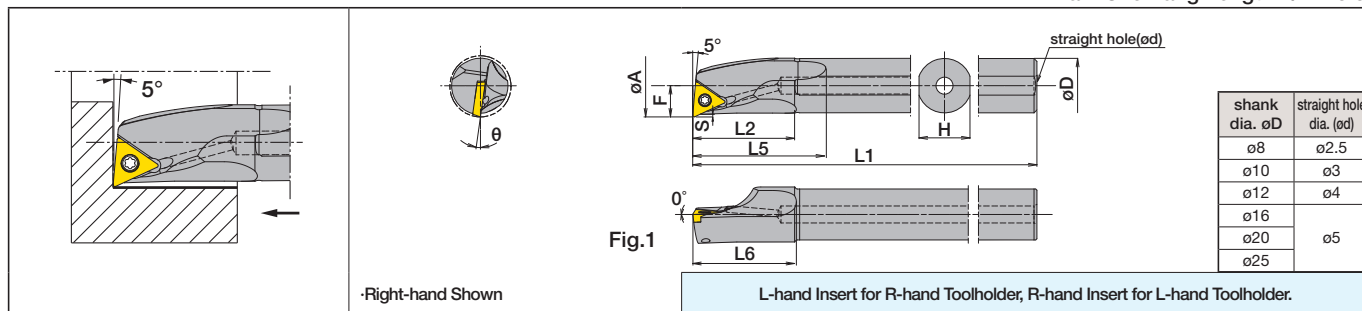
● Toolholder Dimension

Description		Stock		Min.Bore Dia.	Dimension (mm)								θ	Std. Corner- R(℞)	Shape	Spare Parts		Applicable Insert			
		R	L		ØA	ØD	H	L1	L2	L5	L6	F				S					
Excellent Bar	S06H-STLB [®] /06-08AE	●	●	8	6	5	100	12	-	12	3.8	0.5	12°	0.2	Fig.1	SB-2035TR	FT-6	TB○○0601..			
	A08X-STLP [®] /09-10AE	●	●	10	8	7	120	16	22	16	5		10°	0.4	Fig.2	SB-2545TR	FT-8	TP○○0902..			
	A10L-STLP [®] /09-12AE	●	●	12	10	9	140	20	25	20	6.2	0.9	8°			SB-3060TR	FT-10	TP○○1103..			
	A10L-STLP [®] /11-12AE	●	●						26		6	0.7	10°								
	A12M-STLP [®] /11-14AE	●	●	14	12	11	150	24	30	24	7.2	0.8	7°						SB-4065TR	FT-15	TP○○1603..
	A16Q-STLP [®] /11-18AE	●	●	18	16	15	180	30	36	30	9.2	0.7	3.5°								
	A20R-STLP [®] /11-22AE	●	●	22	20	19	200	36	46	37	11.2		2°								
	A25S-STLP [®] /16-27AE	●	●	27	25	24	250	46	55	46	13.7		0°								
Steel Bar	S06H-STLB [®] /06-08A	●	●	8	6	5	100	12	-	12	3.8	0.5	12°	0.2	Fig.3	SB-2035TR	FT-6	TB○○0601..			
	S08X-STLP [®] /09-10A	●	●	10	8	7	120	16	22	16	5		10°	0.4	Fig.4	SB-2545TR	FT-8	TP○○0902..			
	S10L-STLP [®] /09-12A	●	●	12	10	9	140	20	25	20	6.2	0.9	8°			SB-3060TR	FT-10	TP○○1103..			
	S10L-STLP [®] /11-12A	●	●						26		6	0.7	10°								
	S12M-STLP [®] /11-14A	●	●	14	12	11	150	24	30	24	7.2	0.8	7°						SB-4065TR	FT-15	TP○○1603..
	S16Q-STLP [®] /11-18A	●	●	18	16	15	180	30	36	30	9.2	0.7	3.5°								
	S20R-STLP [®] /11-22A	●	●	22	20	19	200	36	46	37	11.2		2°								
	S25S-STLP [®] /16-27A	●	●	27	25	24	250	46	55	46	13.7		0°								

●Standard Stock

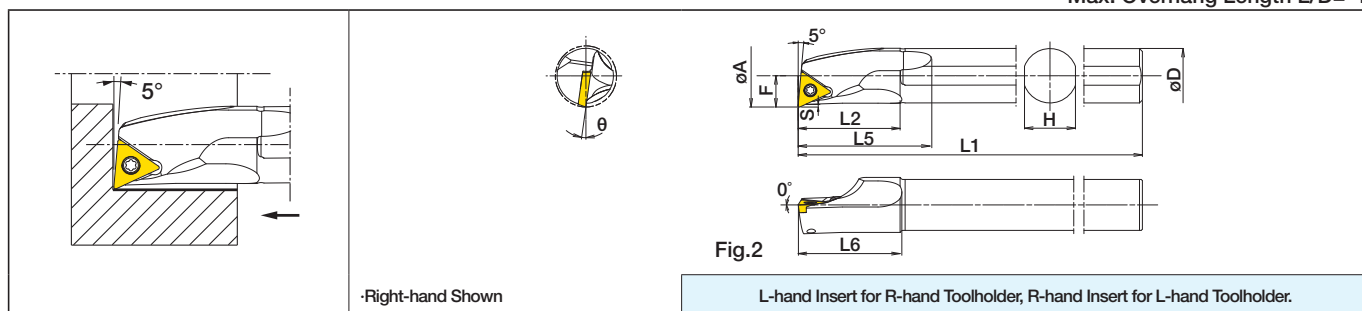
■A-STLC-AE type Excellent Bar (Boring /Internal Facing)

Max. Overhang Length L/D=-5.5

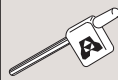


■S-STLC-A type (Boring /Internal Facing)

Max. Overhang Length L/D=-4



● Toolholder Dimension

Description		Stock		Min.Bore Dia.	Dimension (mm)								θ	Std. Corner-R(re)	Shape	Spare Parts		Applicable Insert	
		R	L		ØA	ØD	H	L1	L2	L5	L6	F				S	Clamp Screw		Wrench
																			
Excellent Bar	A08X-STLC%09-10AE	●	●	10	8	7	120	16	22	16	5	0.5	14°	0.4	Fig.1	SB-2260TR	FT-7	TC○○0902..○○	
	A10L-STLC%09-12AE	●	●	12	10	9	140	20	26	20	6.2	0.9	12°						
	A10L-STLC%11-12AE	●	●										10°						
	A12M-STLC%11-14AE	●	●	14	12	11	150	24	30	25	7.2	0.7	8°						
	A16Q-STLC%11-18AE	●	●	18	16	15	180	30	39	31	9.2		6°						
	A20R-STLC%11-22AE	●	●	22	20	19	200	36	44	36	11.2		14°						
Steel Bar	S08X-STLC%09-10A	●	●	10	8	7	120	16	22	16	5	0.5	14°	0.4	Fig.2	SB-2260TR	FT-7	TC○○0902..○○	
	S10L-STLC%09-12A	●	●	12	10	9	140	20	26	20	6.2	0.9	12°						
	S10L-STLC%11-12A	●	●										10°						
	S12M-STLC%11-14A	●	●	14	12	11	150	24	30	25	7.2	0.7	8°						
	S16Q-STLC%11-18A	●	●	18	16	15	180	30	39	31	9.2		6°						
	S20R-STLC%11-22A	●	●	22	20	19	200	36	44	36	11.2		14°						

●:Standard Stock