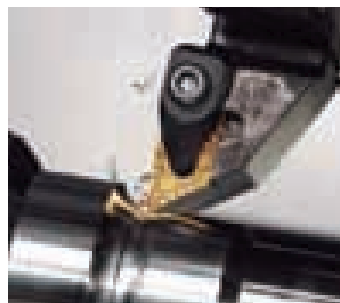


2007

Cutting Tools



TAC Boring Toolholder

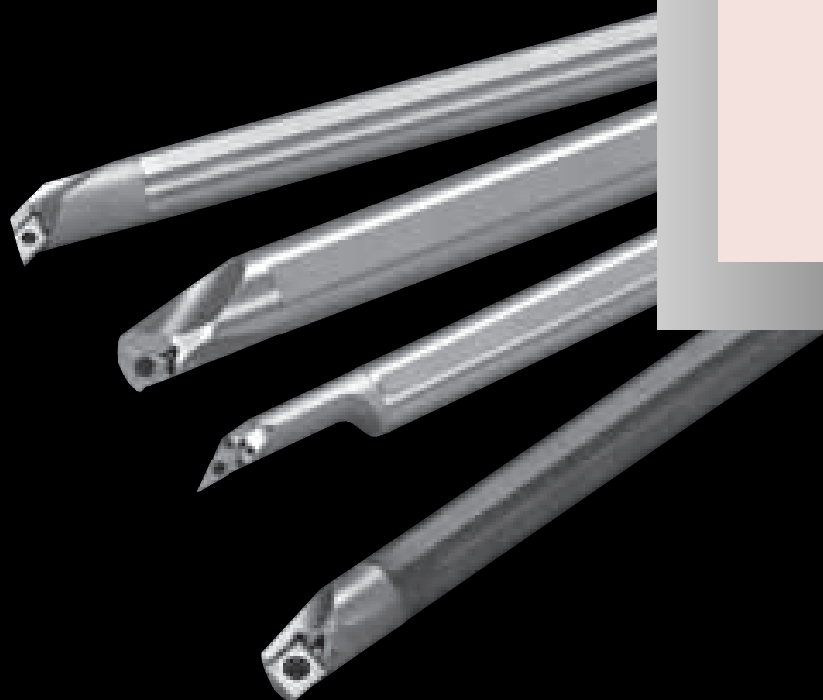
Selection Guides

- Applications and Min. Bore Diameter..... 173
- Types and Applications..... 174
- Clamping Mechanism and Features 175
- Nomenclature for TAC Boring Toolholder 176

Specifications

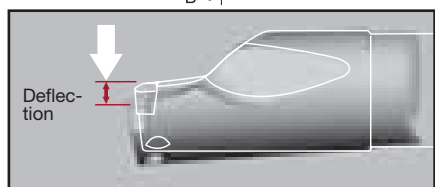
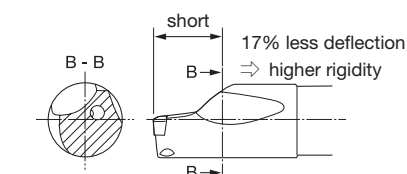
- S-type (Positive · Screw-on type) 178
- C-type (Positive · Clamp-on type)..... 187
- P-type (Negative · Pin-lock type)..... 189
- M-type (Negative · Multi-clamp type)..... 192
- Nomenclature for Top-Borer Tools..... 195

345

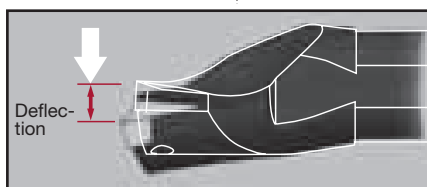
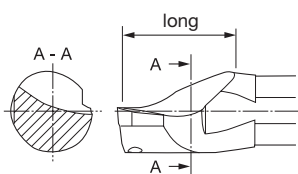




Rigidity and precision



Tungaloy Stream Jet Bars



Conventional boring bar

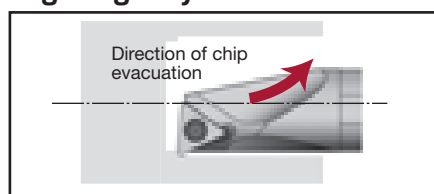


Easy and optimal positioning of insert

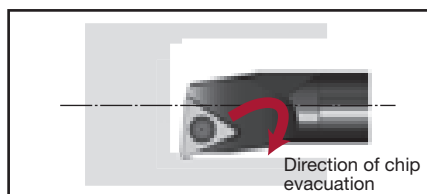
The **Tungaloy Stream Jet Bars** possess a larger material cross section in the area of the insert seat. Cutting forces are easily absorbed and compared to conventional boring bars, only minimal protrusion develops. The result is more than clearly evident:

Low vibration and improved dimensional workpiece accuracy

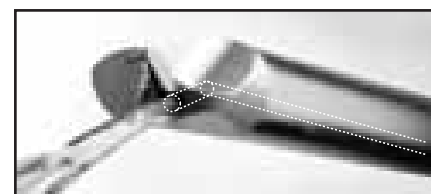
High rigidity for low chatter and vibration



Large chip pocket for excellent chip evacuation



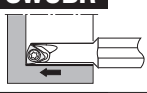
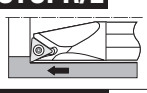
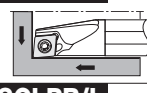
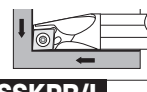
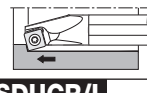
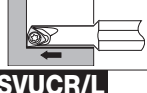
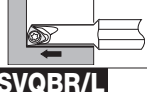
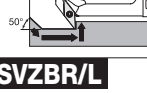
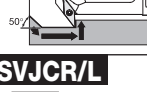
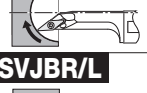
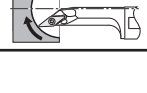
Conventional boring bar with conventional chip flute design

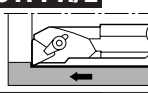
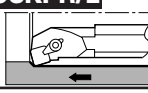


Tungaloy Stream Jet Bars with optimised flute design for process stable chip evacuation
Coolant directed precisely on cutting edge

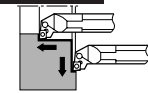
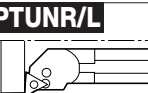
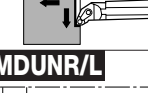
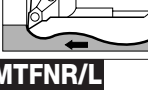
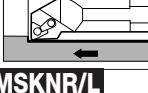
Applications and Min. Bore Diameters by Toolholder type

■ Positive rake type (Conformed to ISO)

Type	Style	Min. bore diameter (mm)	Page
		5 10 20 30 40 50	
S	SWUBR	 ○ $\phi 6 \sim \phi 7$ Steel ○ $\phi 6 \sim \phi 7$ Carbide	181
	STUPR/L	 $\phi 8 \sim \phi 34$ Steel $\phi 8 \sim \phi 27$ Carbide	179
	SEXPR/L	 ○ $\phi 5.5 \sim \phi 7$ Steel ○ $\phi 5.5 \sim \phi 7$ Carbide	181
	SCLCR/L	 $\phi 10 \sim \phi 27$ Steel $\phi 10 \sim \phi 27$ Carbide	180
	SCLPR/L	 $\phi 12 \sim \phi 27$ Steel $\phi 12 \sim \phi 18$ Carbide	180
	SSKPR/L	 $\phi 20 \sim \phi 31$ Steel	185
	SDUCR/L	 $\phi 13 \sim \phi 32$ Steel $\phi 14 \sim \phi 27$ Carbide	182
	SDQCR/L	 $\phi 13 \sim \phi 30$ Steel $\phi 13 \sim \phi 25$ Carbide	182
	SVUBR/L	 $\phi 20 \sim \phi 32$ Steel $\phi 24.5 \sim \phi 34$ Carbide	183
	SVUCR/L	 $\phi 16 \sim \phi 32$ Steel $\phi 18 \sim \phi 32$ Carbide	183
	SVQBR/L	 $\phi 17 \sim \phi 30.5$ Steel $\phi 17 \sim \phi 30.5$ Carbide	184
	SVQCR/L	 $\phi 13.5$ Steel $\phi 13.5$ Carbide	184
	SDZCR/L	 $\phi 14 \sim \phi 25$ Steel $\phi 18 \sim \phi 22$ Carbide	183
	SVZCR/L	 $\phi 16$ Steel	185
	SVZBR/L	 Steel $\phi 20 \sim \phi 40$	184
	SVJCR/L	 $\phi 16 \sim \phi 20$ Steel	185
	SVJBR/L	 $\phi 25 \sim \phi 30$ Steel	185

Type	Style	Min. bore diameter (mm)	Page
		5 10 20 30 40 50	
C	CTFPR/L	 $\phi 16 \sim \phi 40$ Steel $\phi 10 \sim \phi 32$ Carbide	187
	CSKPR/L	 $\phi 20 \sim \phi 40$ Steel $\phi 20$ Carbide	187

■ Negative rake type

Type	Style	Min. bore diameter (mm)	Page
		15 20 30 40 50 60	
P	PCLNR/L	 Steel $\phi 20 \sim \phi 63$	189
	PDUNR/L	 Steel $\phi 25 \sim \phi 63$	189
	PTFNR/L	 Steel $\phi 40 \sim \phi 63$	191
	PTUNR/L	 Steel $\phi 20 \sim \phi 32$	191
	PSKNR/L	 Steel $\phi 40 \sim \phi 63$	190
	PDZNR/L	 Steel $\phi 40 \sim \phi 60$	190
	MCLNR/L	 Steel $\phi 32$	192
	MWLN/L	 Steel $\phi 32 \sim \phi 70$	192
	MDUNR/L	 Steel $\phi 32$	193
	MTFNR/L	 Steel $\phi 32$	194
M	MSKNR/L	 Steel $\phi 32$	193

Note: Shank material

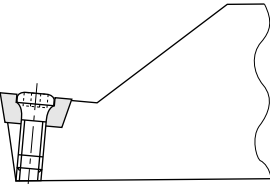
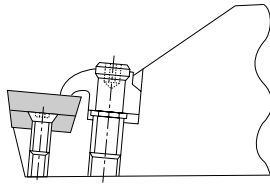
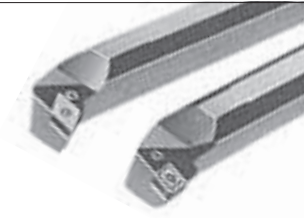
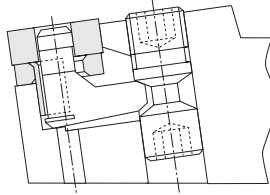
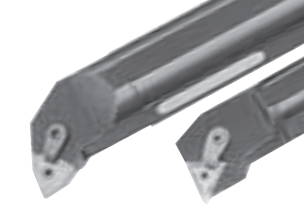
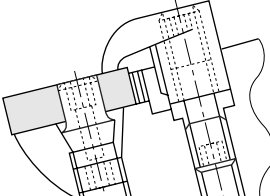
 : Steel shank
 : Carbide shank

Types and Applications

Type	Specifi- cations				L	X	U	Q	F	U	K	Z	J
	Shank	Rigidity	Oil hole	Rake angle									
					95° 	100° 	93° 	45° 	90° 	93° 	75° 	93° 	93°
S Screw on	Steel	3	○	Positive	 SCLCR/L (P.180)	 SEXPR/L (P.181)	 SDUCR/L (P.182) SVUCR/L (P.183)	 SDQCR/L (P.182) SVQCR/L (P.184)	 STFPR/L (P.185)	 STUPR/L (P.179) SWUBR/L (P.181)	 SSKPR/L (P.184)	 SDZCR/L (P.183)	 SVJCR/L (P.185) SVJBR/L (P.185)
	Carbide	1	○	Positive									
C Clamp-on	Steel	3		Positive					 CTFPR/L (P.187)		 CSKPR/L (P.187)		
	Carbide	1		Positive									
P Pin-lock	Steel	3		Negative	 PCLNR/L (P.189)		 PDUNR/L (P.189)		 PTFNR/L (P.191)	 PTUNR/L (P.191)	 PSKNR/L (P.190)	 PDZNR/L (P.190)	
				Negative									
M Multi-clamp	Steel	3		Negative	 MCLNR/L (P.192) MWLNR/L (P.192)		 MDUNR/L (P.193)		 MTFNR/L (P.194)		 MSKNR/L (P.193)		
				Negative									

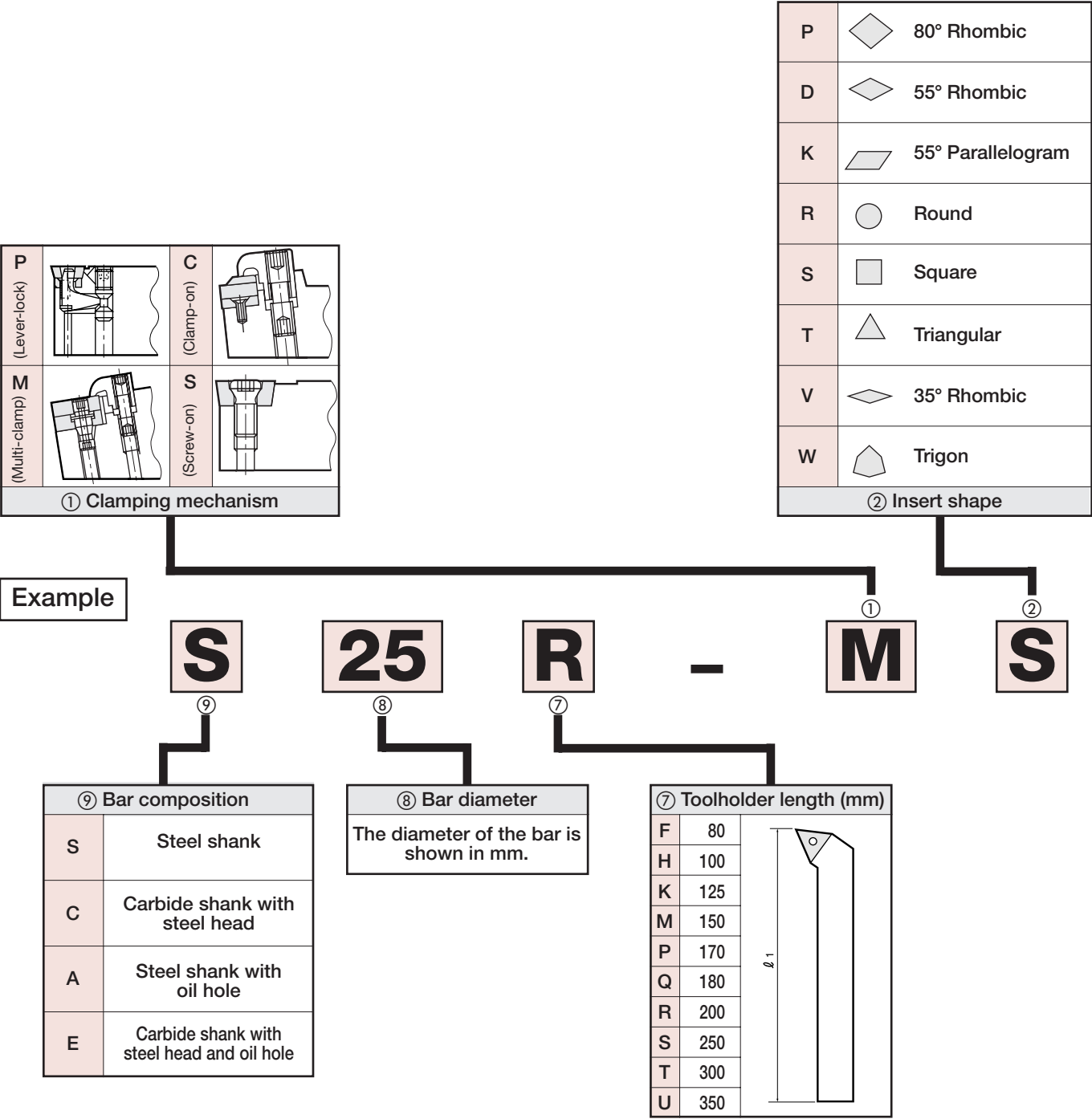
Note: Rigidity 1: excellent 2: good 3: fair

Clamping Mechanism and Features

Type	Appearance	Clamping mechanism	Features	Page
S Screw-on type			● Simple mechanism with a few parts. ● Smart shape having no protrusions such as screw heads or clams at holder head. ● Minimum bore diameter: $\varnothing 5.5$ mm. ● Free cutting action due to positive rake. ● Cemented carbide shank is available for suppressing chatter vibration.	179
C Clamp-on type			● Clamp-on type insert locking mechanism assures secure holding and accurate indexing. ● Without-hole insert provides stronger cutting-edge strength than S-type tools and can withstand heavier cutting conditions. ● Used for medium to large diameter boring. Minimum bore diameter is $\varnothing 16$ mm.	187
P Lever-lock type			● Negative rake, lever-lock type, round shank boring bars. ● As insert is positively held into two-wall pocket, excels in indexing accuracy. ● Minimum bore diameter: $\varnothing 40$ mm.	189
M Multi-clamp type			● Combination of lock-pin and top clamp provides positive insert holding and superior indexing accuracy. ● Suitable for medium to large diameter boring. ● Minimum bore diameter: $\varnothing 32$ mm	192

Nomenclature of TAC Boring Toolholder

TAC Boring Tools



K



55° Parallelogram

R



Round

S



Square

T



Triangular

V



35° Rhombic

W



Trigon

② Insert shape

Example

S

25

R

-

M

S

⑨ Bar composition

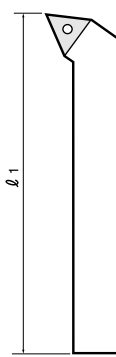
S	Steel shank
C	Carbide shank with steel head
A	Steel shank with oil hole
E	Carbide shank with steel head and oil hole

⑧ Bar diameter

The diameter of the bar is shown in mm.

⑦ Toolholder length (mm)

F	80
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300
U	350



Symbol	Style	Offset						
A		With-out	G		With	S		With
			J		With	V		With-out
B		With-out	K		With	U		With
C		With-out	L		With	X*		With
D		With-out	N		With	Y		With
E		With-out	P*		With-out	Z		With-out
F		With	Q*		With-out	Note * mark: Tungaloy standard No mark: ISO standard		

③ Cutting edge style

C	
B	
N	
P	

④ Relief angle of insert

③
K

④
N

⑤
R

⑥
12

⑩
C - D120

⑤ Hand of tool	
L	
	Left hand
R	
	Right hand

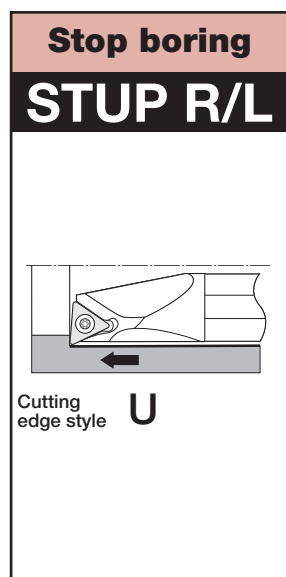
⑥ Insert size		
Symbol	I.C. (mm)	For M, S and C types which conform to ISO:
3	9.525	
4	12.70	
5	15.875	
6	19.05	
8	25.40	

⑩ Oil hole	
C	With oil hole

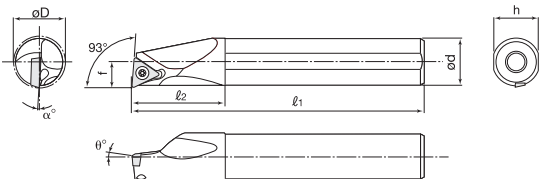
⑪ Min. bore diameter ϕ	
Stream Jet Bars	
140	ϕ 14.0 mm



S-Type (Positive ·Screw-on type)



Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing to medium cutting	Finishing	Finishing to medium cutting
Type	01	W□□	PF	PS
Shape				
	(09, 11, 13, 16)	(09, 11, 13, 16)	(11, 13, 16)	(09, 11, 13, 16)

Appl.	Medium cutting	Finishing to medium cutting	Precision finishing	Finishing to medium cutting
Type	PM	SS	PCBN	—
Shape				
	(11, 13, 16)	(11, 13, 16)	(09, 11, 13, 16)	(07, 09, 11, 13, 16)

Appl.	Medium cutting	Precision finishing		
Type	24	PCBN		
Shape				
	(9, 11, 13, 16)	(9, 11, 13, 16)		

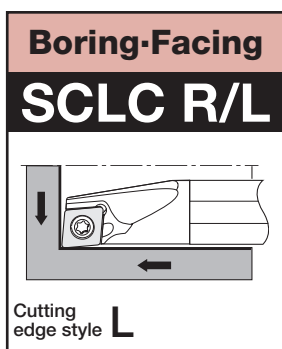
For details see pp. 110 - 115

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench		
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ						
Steel	A08H-STUPR/L07-D080	●	●	TPGM0701□□	8	0.4	8	4	100	19.5	7.5	-	-10°	+5			CSTB-2.2L038	T-7F		
	A08H-STUPR/L09-D100	●	●	TP□□0902□□	10			5.5		16			-8°							
	A10K-STUPR/L1102-D120	●	●	TP□□1102□□	12		10	6.5	125	20	9		-6°						CSTB2.5S	T-8F
	A10K-STUPR/L1103-D120	○	○	TP□□1103□□									-10°						CSTB-3L050	T-9F
	A12M-STUPR/L1102-D140	●	●	TP□□1102□□	14		12	7	150	24	11		-4°						CSTB-2.5B	T-8F
	A12M-STUPR/L1103-D140	○	○	TP□□1103□□									-6°						CSTB3L050	
	A16Q-STUPR/L1103-D180	○	○		18		16	9	180	32	15		-4°				CSTB-3S	T-9F		
	A16Q-STUPR/L13-D180	●	●										TP□□1303□□						-3°	
	A20R-STUPR/L1103-D220	●	●	TP□□1103□□	22		20	11	200	36	18		-2°				CSTB-3			
	A20R-STUPR/L13-D220	●	●	TP□□1303□□																
	A25S-STUPR/L16-D270	●	●	TP□□16T3□□	27	25	13.5	250	45	23	-1°		CSTB-4M				T-15F			
	A32T-STUPR/L16-D340	●	●		34						0.8							32	17	300
Carbide	E08K-STUPR/L07-D080	●	●	TPGM0701□□	8	0.4	8	4	125	44.5	7.5	-	-10°	+5			CSTB-2.2L038	T-7F		
	E08G-STUPR/L07-D080	●											90							
	E08K-STUPR/L09-D100	●	●	TP□□0902□□	10		8		125	22	7		-8°							
	E08G-STUPR/L09-D100	●						5.5					90							
	E10M-STUPR/L1102-D120	●	●	TP□□1102□□	12		10	6.5	100	25	9		-6°				CSTB2.5S	T-8F		
	E10H-STUPR/L1102-D120	●											150							
	E10M-STUPR/L1103-D120	○	○	TP□□1103□□	14		10	7	150	27	11		-10°				CSTB-3L050	T-9F		
	E12Q-STUPR/L1102-D140	●	●	TP□□1102□□									180							
	E12J-STUPR/L1102-D140	●		TP□□1102□□			12	7	110	27	11		-4°				CSTB-2.5B	T-8F		
	E12Q-STUPR/L1103-D140	○	○										TP□□1103□□				180			
	E16R-STUPR/L1103-D180	○	○	TP□□1103□□	18		16	9	200	32	15		-4°				CSTB-3L050			
	E16R-STUPR/L13-D180	●	●										TP□□1303□□						-3°	CSTB-3S
	E16L-STUPR/L13-D180	●																		
	E20S-STUPR/L1103-D220	○		TP□□1103□□	22		20	11	250	36	18		-2°				CSTB-3			
	E20S-STUPR/L13-D220	●		TP□□1303□□																
	E25T-STUPR/L16-D270	●		TP□□16T3□□	27	0.8	25	13.5	300	45	23		-1°				CSTB-4m	T-15F		

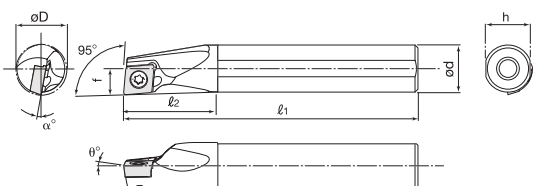
Notes: ● The hole of insert conform to ISO standard.

● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

S-Type (Positive ·Screw-on type)



Drawing shows style A



Right hand (R) shown

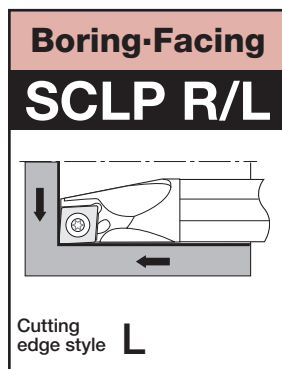
● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Finishing	Finishing to medium cutting	Medium cutting
Type	W□□	PF	PS	PM
Shape				
	(06, 09)	(06, 09)	(06, 09)	(06, 09)

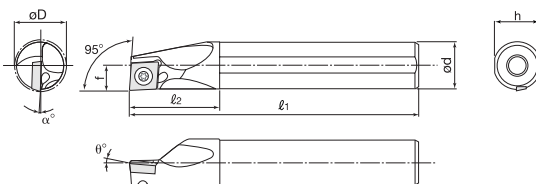
Appl.	Precision finishing	Finishing to medium cutting	Aluminium
Type	PCBN/PCD	—	24
Shape			
	(06, 09)	(06, 09)	(06, 09)

For details see pp. 92 - 95

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)											
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A08H-SCLCR/L06-D100	●	●	CC□□0602□□	10	0.4	8	5.5	100	16	7.5	-	-13°	0°	CSTB-2.5S	T-8F		
	A10K-SCLCR/L06-D120	●	●		12		10	6	125	20	9		-10°					
	A12M-SCLCR/L06-D140	●	●		14		12	7	150	24	11		-8°					
	A16Q-SCLCR/L09-D180	●	●	CC□□09T3□□	18	0.8	16	9	180	32	15	-10°	CSTB-4S		T-15F			
	A20R-SCLCR/L09-D220	●	●		22		20	11	200		18	-8°						
	A25S-SCLCR/L09-D270	●	●		27		25	13.5	250		45	23				-6°		
Carbide	E08K-SCLCR/L06-D100	●	●	CC□□0602□□	10	0.4	8	5.5	125	22	7.5	-	-13°	0°	CSTB2.5S	T-8F		
	E08G-SCLCR/L06-D100	●			12		10	6	150		25		9				-10°	
	E10M-SCLCR/L06-D120	●	●		14		12	7	180		27		11				-8°	
	E12Q-SCLCR/L06-D140	●	●		18		16	9	200		32		15				-10°	
	E16R-SCLCR/L09-D180	●	●	CC□□09T3□□	18	0.8	20	11	250	36	18	-8°	CSTB-4S		T-15F			
	E20S-SCLCR/L09-D220	●			22		20	11	250		36	18				-8°		
	E25T-SCLCR/L09-D270	●			27		25	13.5	300		45	23				-6°		



Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Finishing	Finishing to medium cutting	Medium cutting
Type	W□□	PF	PS	PM
Shape				
	(09)	(09)	(06, 08, 09)	(09)

Appl.	Precision finishing	Finishing to medium cutting	Finishing to medium cutting
Type	PCBN	—	24
Shape			
	(06, 09)	(09)	(06, 08, 09)

For details see pp. 92 - 95

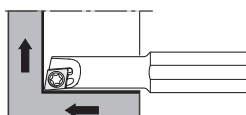
Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Carbide	A10K-SCLPR/L08-D120	○	○	CP□□0802□□	12	0.4	10	6	125	20	9		-5°	+5°	CSTB-3L042	T-9F		
	A12M-SCLPR/L08-D140	○	○		14		12	7	150	24	11		-4°		CSTB-3L050			
	A16Q-SCLPR/L09-D180	○	○	CP□□0903□□	18	0.8	16	9	180	32	15		-3.5°		CSTB-4L060	T-15F		
	A20R-SCLCR/L09-D220	○	○		22		20	11	200	36	18		-2°					
	A25S-SCLPR/L09-D270	○	○		27		25	3.5	250	45	23		-1°					
Steel	E10M-SCLPR/L08-D120	○	○	CP□□0802□□	12	0.4	10	6	150	25	9		-5°	+5°	CSTB-3L042	T-9F		
	E10H-SCLPR/L08-D120	○					12	7	180	27	11		-4°		CSTB-3L050			
	E12Q-SCLPR/L08-D140	○	○	CP□□0903□□	14	0.8	16	9	200	32	15		-3.5°		CSTB-3L060	T-15F		
	E16R-SCLPR/L09-D180	○	○		18		16	9	200	32	15		-3.5°					

Notes: ● The hole of insert conform to ISO standard.

● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

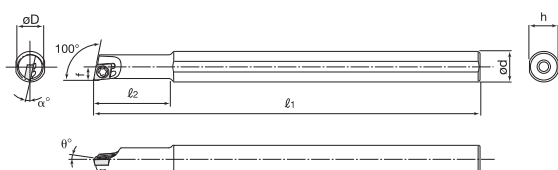
Boring-Facing

SEXP R/L



Cutting edge style **X**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Finishing	
Type	W□□	J08	DIA
Shape	(04)	(04)	(04)

For details see p. 123

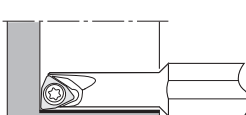
Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A08H-SEXPR/L04-D055	●	●	EP□□0401□□	5.5	0.4	8	2.75	100	16	7.5	-	-12°	0°	CSTB-2	T-6F		
	A08H-SEXPR/L04-D070	●	●		7			3.6		20								
Carbide	E08K-SEXPR/L04-D055	●	●	EP□□0401□□	5.5	0.4	8	2.75	125	28	7.5	-	-12°	0°	CSTB-2	T-6F		
	E08K-SEXPR/L04-D070	●	●		7			3.6		40								

Notes: ● The hole of insert conform to ISO standard.

● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

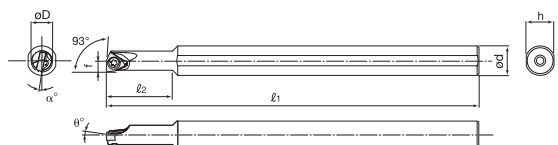
Boring-Facing

SWUB R/L



Cutting edge style **U**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting		
Type	W□□		
Shape	(03)		

For details see p. 119

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)								Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ		
Steel	A08H-SWUBR/L03-D060	●		WB□□0301□□	6	0.4	8	3.1	100	18	7.5	-	-12°	0°	CSTB-2	T-6F
	A08H-SWUBR/L03-D070	●			7			3.6		20						
Carbide	E08K-SWUBR/L03-D060	●		WB□□0301□□	6	0.4	8	3.1	125	30	7.5	-	-12°	0°	CSTB-2	T-6F
	E08K-SWUBR/L03-D070	●			7			3.6		40						

Notes: ● The hole of insert conform to ISO standard.

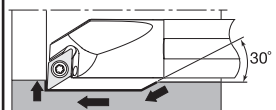
● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

● Clamping screw for left hand: CSTB-2ZL.

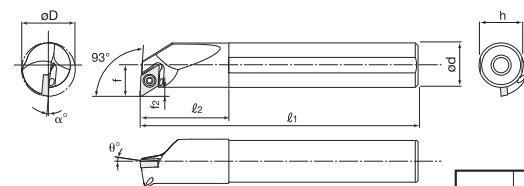
S-Type (Positive ·Screw-on type)

Boring-Profiling

SDUC R/L

Cutting edge style **U**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Finishing	Finishing to medium cutting	Medium cutting
Type	W□□	PF	PS	PM
Shape				
	(07, 11)	(07, 11)	(07, 11)	(07, 11)

Appl.	Precision finishing		Medium cutting	Finishing to medium cutting	Aluminium
Type	01	PCBN/PCD	24	—	AL
Shape	 (07, 11)	 (07, 11)	 (07, 11)	 (07, 11)	 (07, 11)

For details see pp. 98 - 101

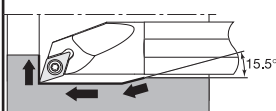
Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)											
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A10K-SDUCR/L07-D130	●	●	DC□□0702□□	13	0.4	10	7	125	20	9	2	-10°	0°	CSTB-2.5S	T-8F		
	A12M-SDUCR/L07-D160	●	●		16		12	9.3	150	24	11	3.3	-6°					
	A16Q-SDUCR/L07-D200	●	●		20		16	11.3	180	32	15		-5°					
	A20R-SDUCR/L11-D270	●	●	DC□□11T3□□	27	0.8	20	16.1	200	36	18	6.1	-4°		CSTB-4S	T-15F		
	A25S-SDUCR/L11-D320	●	●		32		25	18.6	250	45	23							
Carbide	E10M-SDUCR/L07-D130	●	●	DC□□0702□□	13	0.4	10	7	150	25	9	2	-10°	0°	CSTB-2.5S	T-8F		
	E12Q-SDUCR/L07-D160	●	●		16		12	9.3	180	27	11	3.3	-6°					
	E16R-SDUCR/L07-D200	●	●		20		16	11.3	200	32	15		-5°					
	E20S-SDUCR/L11-D270	●	●	DC□□11T3□□	27	0.8	20	16.1	250	36	18	6.1	-5°		CSTB-4S	T-15F		

Notes: ● The hole of insert conform to ISO standard.

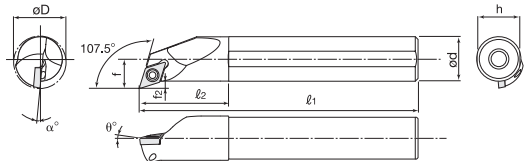
● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

Boring-Profiling

SDQC R/L

Cutting edge style **Q**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Finishing	Finishing to medium cutting	Medium cutting
Type	W□□	PF	PS	PM
Shape				
	(07, 11)	(07, 11)	(07, 11)	(07, 11)

Appl.	Precision finishing		Medium cutting	Finishing to medium cutting	Aluminium
Type	01	PCBN/PCD	24	—	AL
Shape					
	(07, 11)	(07, 11)	(07, 11)	(07, 11)	(07, 11)

For details see pp. 98 - 101

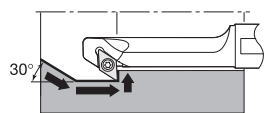
Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A10K-SDQCR/L07-D130	●	●	DC□□0702□□	13	0.4	10	7.6	125	20	9		-8°	0°	CSTB-2.5	T-8F		
	A12M-SDQCR/L07-D160	●	●		16		12	8.6	150	24	11	2.6	-6°					
	A16Q-SDQCR/L07-D200	●	●		20		16	10.6	180	32	15		-5°					
	A20R-SDQCR/L11-D250	●	●	DC□□11T3□□	25	0.8	20	13.7	200	36	18	3.7	-7°		CSTB-4S	T-15F		
	A25S-SDQCR/L11-D300	●	●		30		25	16.2	250	45	23		-4°					
Carbide	E10M-SDQCR/L07-D130	●	●	DC□□0702□□	13	0.4	10	7.6	150	25	9		-8°	0°	CSTB-2.5	T-8F		
	E12Q-SDQCR/L07-D160	●	●		16		12	8.6	180	27	11	2.6	-6°					
	E16R-SDQCR/L07-D200	●	●		20		16	10.6	200	32	15		-5°					
	E20S-SDQCR/L11-D250	●	●	DC□□11T3□□	25	0.8	20	13.7	250	36	18	3.7	-7°		CSTB-4	T-15F		

Notes: ● The hole of insert conform to ISO standard.

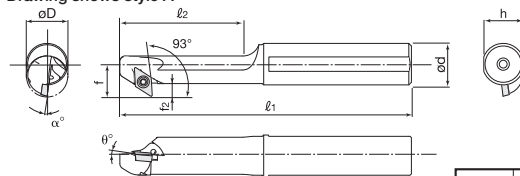
● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

Retract boring

SDZC R/L

Cutting edge style **Z**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Finishing	Finishing to medium cutting	Medium cutting
Type	W□□	PF	PS	PM
Shape	(07, 11)	(07, 11)	(07, 11)	(07, 11)

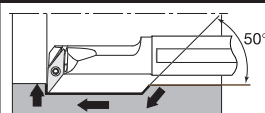
Appl.	Precision finishing	Medium cutting	Finishing to medium cutting	Aluminium
Type	01	PCBN/PCD	24	—
Shape	(07, 11)	(07, 11)	(07, 11)	(07, 11)

For details see pp. 98 - 101

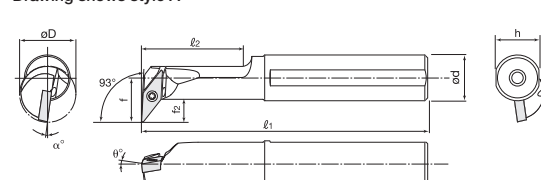
Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw 	Wrench 
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A12M-SDZCR/L07-D140	●	●	DC□□0702□□	14	0.4	12	10.5	150	30	11	4.5	-9°	0°	CSTB-2.5	T-8F		
	A16Q-SDZCR/L07-D160	●	●		16		12.5	180	35	15	-8°							
	A20R-SDZCR/L11-D200	●	●	DC□□11T3□□	20	0.8	20	15.5	200	40	18	5.5	-6°		CSTB-4S	T-15F		
	A25S-SDZCR/L11-D250	●	●		25		25	18	250	50	23							
Carbide	E12Q-SDZCR/L07-D180	●	●	DC□□0702□□	18	0.4	12	10.5	180	27	11	4.5	-8°	0°	CSTB-2.5	T-8F		
	E16R-SDZCR/L07-D220	●	●		22		16	12.5	200	32	15		-6°					

Boring-Profiling

SVUB R/L

Cutting edge style **U**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

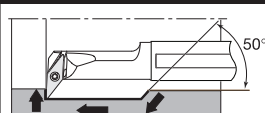
Appl.	Finishing to medium cutting	Medium cutting	
Type	PF	PS	24
Shape	(11, 16)	(11, 16)	(16)

For details see pp. 120

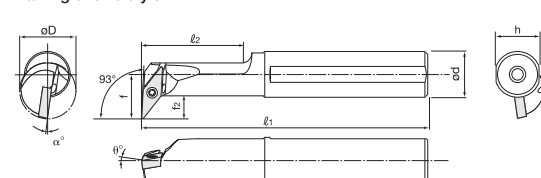
Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)								Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ		
Steel	A16Q-SVUBR/L11-D200	●	●	VB□□1103□□	20	0.4	16	15.5	180	35	15	8	-8°	0°	CSTB-2.5	T-8F
	A20R-SVUBR/L11-D250	●	●		25		20	17.5	200	40	19		-7°			
	A25S-SVUBR/L16-D320	●	●	VB□□1604□□	32	0.8	25	20.5	250	50	23	8.5	-6°		CSTB-3.5	T-15F
Carbide	E16R-SVUBR/L11-D245	●	●	VB□□1103□□	24.5	0.4	16	16	200	32	15	8	-8°	0°	CSTB-2.5	T-8F
	E20S-SVUBR/L11-D285	●	●		28.5		20	18	250	36	19		-7°			
	E25T-SVUBR/L16-D340	●	●	VB□□1604□□	34	0.8	25	21	300	45	23	8.5	-6°		CSTB-3.5	T-15F

Boring-Profiling

SVUC R/L

Cutting edge style **U**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting	Medium cutting	Aluminium
Type	PF	PS	24
Shape	(8, 16)	(16)	(16)

Appl.	Precision finishing		
Type	PCBN/PCD		
Shape	(16)		

For details see pp. 121

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)									Clamping screw 	Wrench 
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ			
Steel	A12M-SVUCR/L08-D160	●	●	VC□□0802□□	16	0.4	12	11	150	30	11	5.5	-8°	0°	CSTB-2L	T-6F	
	A25S-SVUCR/L16-D320	●	●	VC□□1604□□	32	0.8	25	19	250	45	23	6.5	-5°		CSTB-3.5	T-15F	
	A32T-SVUCR/L16-D400				40		32	22	300	50	30	6	-3°		CSTB-3.5L		
	A40U-SVUCR/L16-D500				50		40	27	350	60	37	7	-1°				
Carbide	E12Q-SVUCR/L08-D180	●	●	VC□□0802□□	18	0.4	12	11.5	180	27	11	5.5	-8°	0°	CSTB-2L	T-6F	
	E25T-SVUCR/L16-D320	●	●	VC□□1604□□	32	0.8	25	19	300	45	23	6.5	-5°		CSTB-3.5	T-15F	

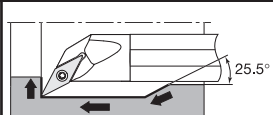
Notes: ● The hole of insert conform to ISO standard.

● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

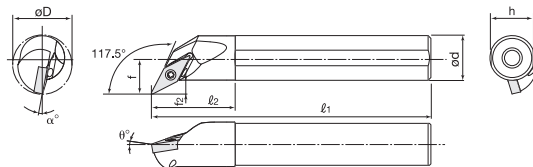
S-Type (Positive Screw-on type)

Boring-Profiling

SVQB R/L

Cutting edge style **Q**

Drawing shows style A



Right hand (R) shown

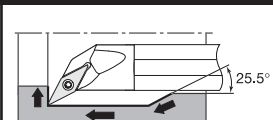
● Basic-choice chipbreaker

Appl.	Finishing to medium cutting		Medium cutting	
Type	PF	PS	24	
Shape				
	(11,16)	(11,16)	(16)	

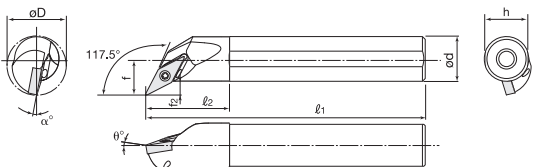
Shank material	Cat. No.	Stock		Insert	Min. bore ϕD	Std. Nose R	Dimensions (mm)								Clamping screw	Wrench
		R	L				ϕd	f	ℓ_1	ℓ_2	h	f_2	α°	θ		
Steel	A12M-SVQBR/L11-D170	●	●	VB□□1103□□	17	0.4	12	10.5	150	24	11	4.5	-10°	-5°	CSTB-2.5	T-8F
	A16Q-SVQBR/L11-D215	●	●		21.5		16	13	180	30	15		-8°			
	A20R-SVQBR/L11-D255	●	●		25.5		20	15	200	36	18	5	-6°			
	A25S-SVQBR/L16-D305	●	●	VB□□1604□□	30.5	0.8	25	17.5	250	45	23		-8°		CSTB-3.5	T-15F
Carbide	E12Q-SVQBR/L11-D170	●	●	VB□□1103□□	17	0.4	12	10.5	180	27	11	4.5	-10°	-5°	CSTB-2.5	T-8F
	E16R-SVQBR/L11-D215	●	●		21.5		16	13	200	32	15		-8°			
	E20S-SVQBR/L11-D255	●	●		25.5		20	15	250	36	18	5	-6°			
	E25T-SVQBR/L16-D305	●	●	VB□□1604□□	30.5	0.8	25	17.5	300	45	23		-8°		CSTB-3.5	T-15F

Boring-Profiling

SVQC R/L

Cutting edge style **Q**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

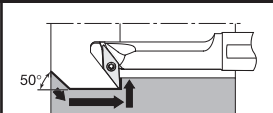
Appl.	Finishing to medium cutting		Medium cutting	Aluminium
Type	PF	PS	24	AL
Shape				
	(08,16)	(16)	(16)	(16)
Appl.	Precision finishing			
Type	PCBN/PCD			
Shape				
	(16)			

For details see pp. 121

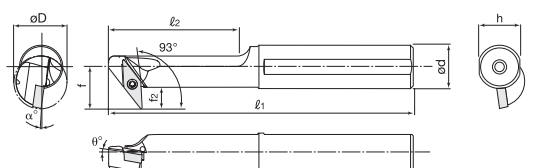
Shank material	Cat. No.	Stock		Insert	Min. bore ϕD	Std. Nose R	Dimensions (mm)								Clamping screw	Wrench
		R	L				ϕd	f	ℓ_1	ℓ_2	h	f_2	α°	θ		
Steel	A10K-SVQCR/L08-D135	●	●	VC□□0802□□	13.5	0.4	10	8	125	20	9	3	-8°	-5°	CSTB-2L	T-6F
	A25S-SVQCR/L16-D320				32	0.8	25	17	250	45		4.5	-5°			
	A32T-SVQCR/L16-D400			VC□□1604□□	40		32	22	300	50	23	6	-3°	-0°	CSTB-3.5	T-15F
	A40U-SVQCR/L16-D500				50		40	27	350	60		7	-1°			
Carbide	E10M-SVQCR/L08-D135	●	●	VC□□0802□□	13.5	0.4	10	8	150	25	9	3	-8°	-5°	CSTB-2L	T-6F

Retract boring

SVZB R/L

Cutting edge style **Z**

Drawing shows style A



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting		Medium cutting	
Type	PF	PS	24	
Shape				
	(11,16)	(11,16)	(16)	

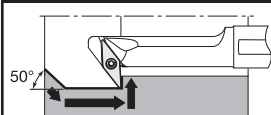
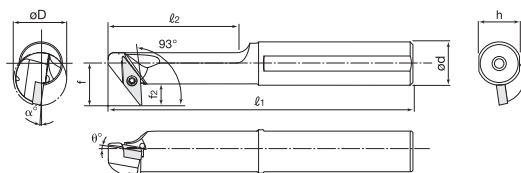
Shank material	Cat. No.	Stock		Insert	Min. bore ϕD	Std. Nose R	Dimensions (mm)								Clamping screw	Wrench
		R	L				ϕd	f	ℓ_1	ℓ_2	h	f_2	α°	θ		
Steel	A16Q-SVZBR/L11-D200	●	●	VB□□1103□□	20	0.4	16	15.5	180	35	15	8	-8°	-0°	CSTB-2.5	T-8F
	A20R-SVZBR/L11-D250	●	●		25		20	17.5	200	40	18		-7°			
	A25S-SVZBR/L16-D320	●	●	VB□□1604□□	32	0.8	25	24	250	50	23	12	-6°		CSTB-3.5	T-15F
	A32T-SVZBR/L16-D400	●	●		40		32	27.5	300	72	30		-5°			

Notes: ● The hole of insert conform to ISO standard.

● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

Retract boring

SVZC R/L

Cutting edge style **Z**

Right hand (R) shown

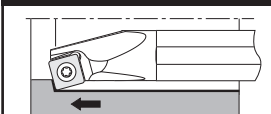
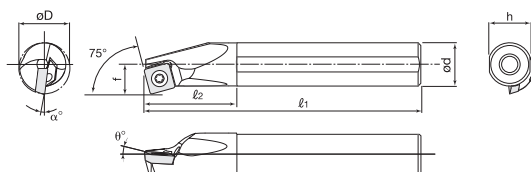
● Basic-choice chipbreaker

Appl.	Finishing to medium cutting				
Type	PF				
Shape					
	(08)				

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)								Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ		
Steel	A12M-SVZCR/L08-D160	●	●	VC□□0802□□	16	0.4	12	11	150	30	11	5.5	-8°	0°	CSTB-2L	T-6F

Through boring

SSKP R/L

Cutting edge style **K**

Right hand (R) shown

● Basic-choice chipbreaker

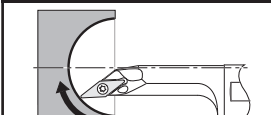
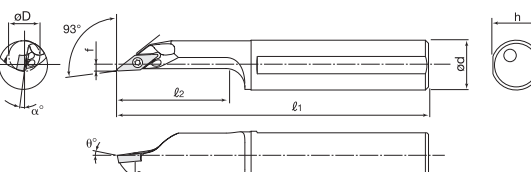
Appl.	Finishing to medium cutting	Medium cutting	Finishing		
Type	PS	24	W15		
Shape					
	(09, 12)	(09, 12)	(09)		

For details see p. 103

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A16Q-SSKPR/L09-D200	●		SP□□0903□□	20	0.8	16	11	180	32	15	-	-6°	5°		T-15F		
	A20R-SSKPR/L09-D240	●			24		20	13	200	36	18		-2°					
	A25S-SSKPR/L12-D310	●		SP□□1204□□	31		25	17	250	45	23							

Boring-Profiling

SVJB R/L

Cutting edge style **J**

Right hand (R) shown

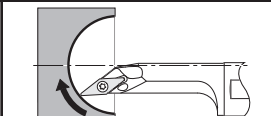
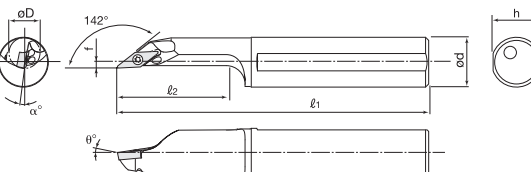
● Basic-choice chipbreaker

Appl.	Finishing to medium cutting				
Type	PF	PS			
Shape					
	(11)	(11)			

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A20R-SVJBR/L11-D250	●	●	VB□□1103□□	25	0.4	20	2	200	40	18	-	-5°	-5°	CSTB-2.5	T-8F		
	A25S-SVJBR/L11-D300	●	●		30		25	3.5	250	50	23							

Boring-Profiling

SVJC R/L

Cutting edge style **J**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Finishing to medium cutting				
Type	PF				
Shape					
	(08)				

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)										Clamping screw	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	f ₂	α°	θ				
Steel	A12M-SVJCR/L08-D160	●	●	VC□□0802□□	16	0.4	12	2	150	28	11	-	-5°	-5°	CSTB-2L	T-6F		
	A16Q-SVJCR/L08-D200	●	●		20		16	2	180	35	15							

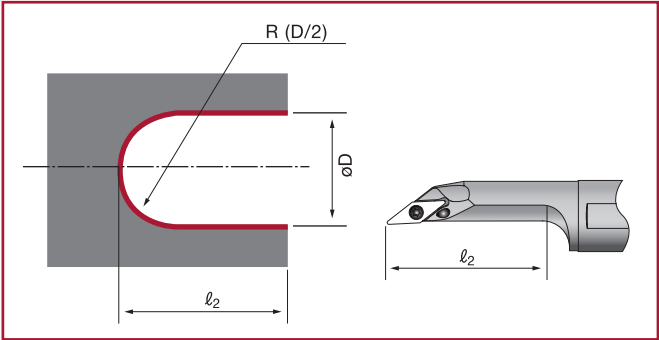
Notes: ● The hole of insert conform to ISO standard.

● When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

SVJC(B) R/L

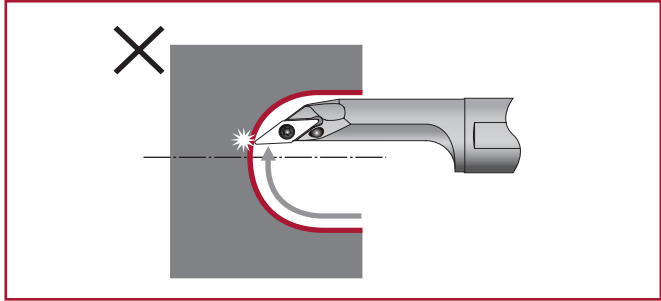
General machining information

The minimum machinable radius “R” of the internal sphere is ½ of the minimum bore diameter
Minimum bore diameter is shown in right drawing.
Maximum bore depth l_2 remains unchanged.

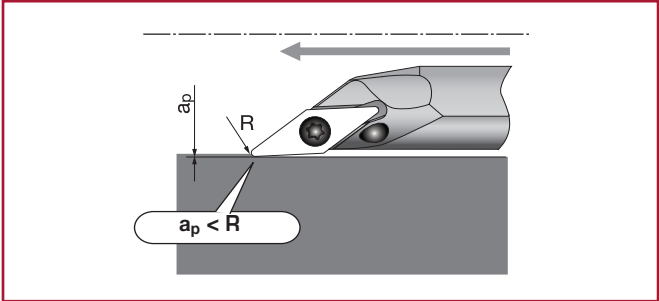


Cautionary points

To avoid insert breakage the tool point should not overrun the bore center.



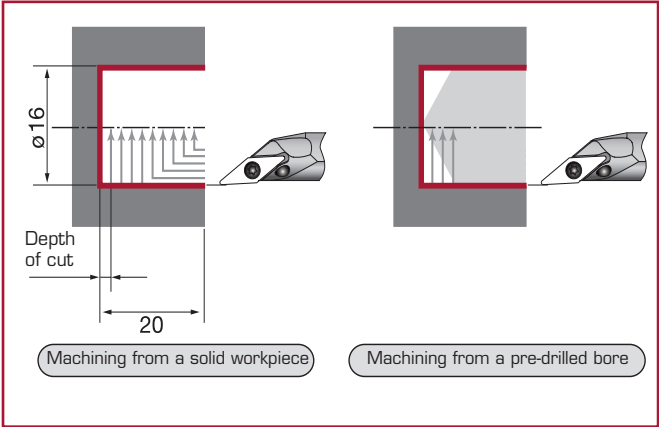
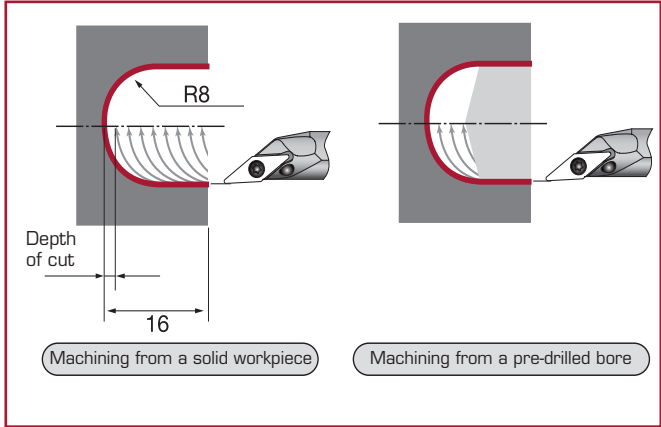
To avoid burr, the depth of cut should be within the corner radius.



Machining examples

Work material : Ck45
Boring bar : A12M-SVJCR08-D160
Insert : VCMT080204-PF
Grade : NS730
Cutting speed : ~ 100 m/min
No of revs. : $n = 3000 \text{ min}^{-1}$ constant
Depth of cut : $a_p = 0.5 \text{ mm}$
Feed rate : $f = 0.1 \text{ mm/rev}$

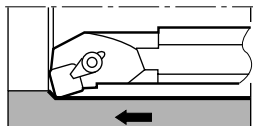
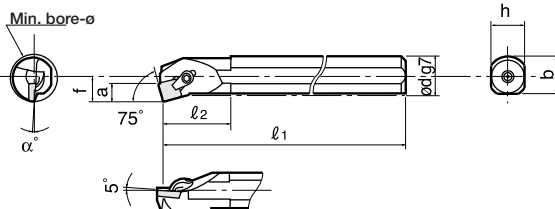
Work material : Ck45
Boring bar : A12M-SVJCR08-D160
Insert : VCMT080204-PF
Grade : T9015
Cutting speed : ~ 100 m/min
No of revs. : $n = 3000 \text{ min}^{-1}$ constant
Depth of cut : $a_p = 0.5 \text{ mm}$
Feed rate : $f = 0.1 \text{ mm/rev}$ (Only for plunging: 0.05 mm/rev)



C-Type (Positive-Screw-on type)

Through boring

CSKP R/L

Cutting edge style **K**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Medium cutting	Precision finishing	Finishing to medium cutting	
Type	23	PCBN/PCD	—	
Shape				
	(09, 12)	(09, 12)	(09, 12)	

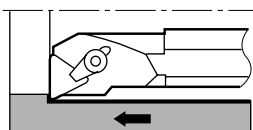
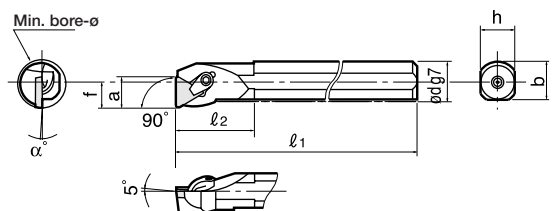
For details see pp. 104 - 106

Shank material	Cat. No.	Stock		Insert	Min. bore ØD	Std. Nose R	Dimensions (mm)								Parts			
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a	Clamping set	Wrench	Shim	Shim screw
Carbide	C16R-CSKPR/L09	○		SP□□0903□□	20	0.8	16	11	200	—	14	—	4°	8.2	CSG-5S	P-2.5	—	—
Steel	S16Q-CSKPR/L09	○			20		16	11	180	30	14	15	4°	8.2	CSG-5S	P-2.5	—	—
	S20R-CSKPR/L09	○	○		25		20	13	200	40	18	18.5	2°	8.2	CSG-5	P-2.5	—	—
	S25S-CSKPR/L12	○		32	25		17	250	45	23	22.5	0°	11.3	CSG-6	P-3	—	—	
	S32T-CSKPR/L12			40	32		22	300	50	30	29.5	0°	11.3	CSG-6	P-3	PAS-42	SM3×0.5×6	
				SP□□1203□□														

Note: When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

Stop boring

CTFP R/L

Cutting edge style **F**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Medium cutting	Precision finishing	Finishing to medium cutting	
Type	24	PCBN/PCD	—	
Shape				
	(11, 16)	(11, 16)	(11, 16)	

For details see pp. 116 - 118

Shank material	Cat. No.	Stock		Insert	Min. bore øD	Std. Nose R	Dimensions (mm)								Parts			
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a	Clamping set	Wrench	Shim	Shim screw
Carbide	C12Q-CTFPR/L11	●	○	TP□□1103□□	16	0.4	12	9	180	–	11	–	6°	10	CSW-00	P-2.5	–	–
	C16R-CTFPR/L11	○	○		20		16	11	200	–	15	–	4°	10	CSG-5S	P-2.5	–	–
Steel	S12M-CTFPR/L11	●	●		16		12	9	150	25	11	11.5	6°	10	CSW-00	P-2.5	–	–
	S16Q-CTFPR/L11	●	●		20		16	11	180	30	14	15	4°	10	CSG-5S	P-2.5	–	–
	S20R-CTFPR/L16	●	●	25	20	13	200	40	18	18.5	2°	14.5	CSG-6S	P-3	–	–		
	S25S-CTFPR/L16	●	○	TP□□1603□□	32	0.8	25	17	250	45	23	22.5	0°	14.5	CSG-6	P-3	–	–
	S32T-CTFPR/L16	○	○	40	32	22	300	50	30	29.5	0°	14.5	CSG-6	P-3	PAT-32	SM3x0.5x6		

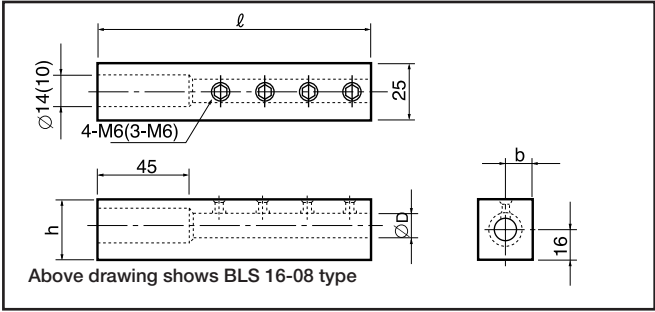
Note: When using right or left hand insert, right hand holder use left hand insert and left hand holder use right hand insert.

Sleeves

(For S-type and C-type boring bars having shank dias. of 8, 10, 12 and 16 mm)

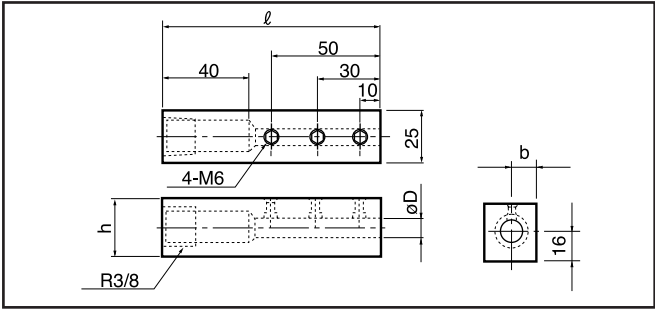
BLS (Square shank)

Cat. No.	Stock	Applicable shank dia. $\varnothing D$ (mm)	Dimensions (mm)		
			ℓ	h	b
BLS16-08	○	8	125	28	12.5
BLS16-10	○	10	125	28	12.5
BLS16-12	○	12	125	28	12.5



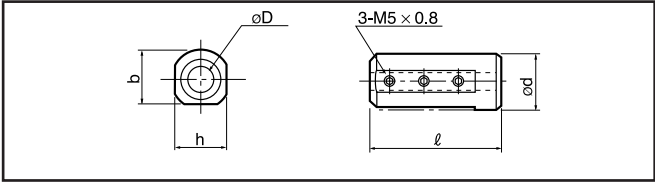
BLS-C (Square shank)

Cat. No.	Stock	Applicable shank dia. $\varnothing D$ (mm)	Dimensions (mm)		
			ℓ	h	b
BLS16-08C	○	8	100	28	12.5
BLS16-10C	○	10	100	28	12.5
BLS16-12C	○	12	100	28	12.5



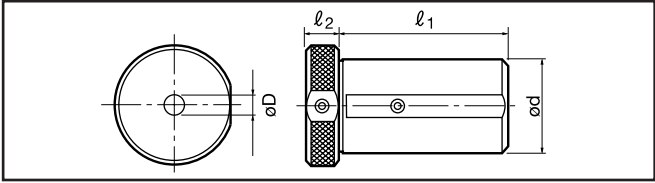
BLM (Round shank)

Cat. No.	Stock	Applicable shank dia. $\varnothing D$ (mm)	Dimensions (mm)			
			$\varnothing d$	ℓ	b	h
BLM20-08	○	8	20	100	19	18
BLM25-08C	○	8	25	55	24	23
BLM25-10C	○	10	25	55	24	23
BLM25-12C	○	12	25	55	24	23



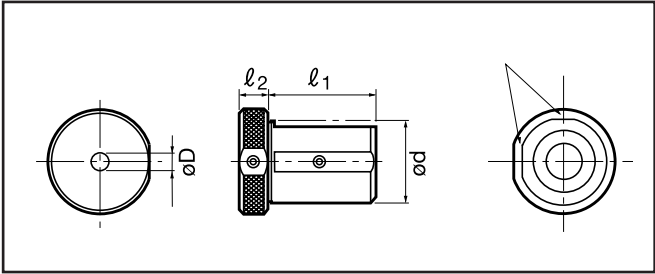
BLC (Standard type)

Cat. No.	Stock	Applicable shank dia. $\varnothing D$ (mm)	Dimensions (mm)		
			$\varnothing d$	ℓ_1	ℓ_2
BLC40-08	○	8	40	73	13
BLC40-10	○	10			
BLC40-12	○	12			
BLC40-16	○	16			

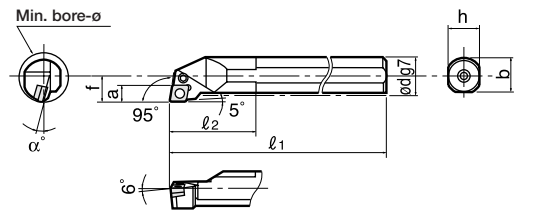
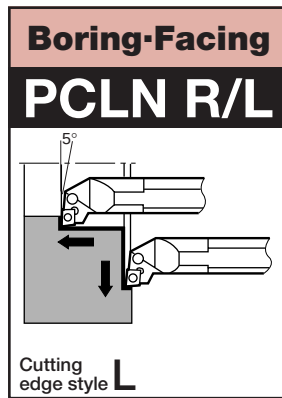


BLC (Short type)

Cat. No.	Stock	Applicable shank dia. $\varnothing D$ (mm)	Dimensions (mm)		
			$\varnothing d$	ℓ_1	ℓ_2
BLC32-8C	○	8	45	20	32
BLC32-10C	○	10			
BLC32-12C	○	12			
BLC40-8C	○	8	55	13	40
BLC40-10C	○	10			
BLC40-12C	○	12			
BLC40-16C	○	16			



P-Type (Negative-Pin-lock type)



Right hand (R) shown

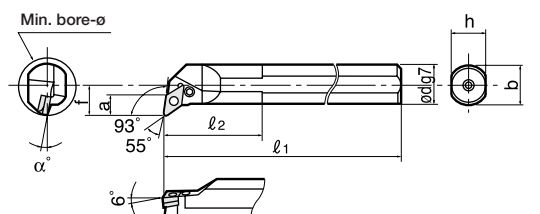
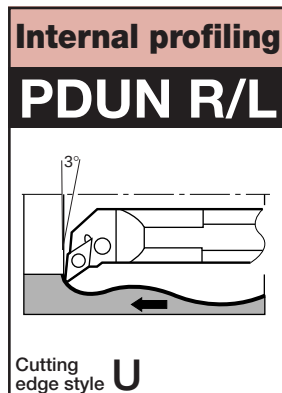
● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape	(12)	(12)	(09, 12)	(12)

Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	CB	PCBN/PCD
Shape	(12)	(12)	(09)	(12)

For details see pp. 44 - 50

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)								Shim	Lever	Clamping screw	Spring	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a					
Steel	S16M-PCLNR/L09	●	●		20	0.8	16	11	150	30	15	15.5	14°	9.525	—	LCL32N	LCS22A	—	P-2F
	S20Q-PCLNR/L09	●	●	CN□□0903□□	25		20	13	180	35	18	19	12°	9.525					
	S25R-PCLNR/L09	●	●		32		25	17	200	40	23	24	11°	9.525					
	S32S-PCLNR/L12E	●	●		40		32	22	250	50	30	29.5	11°	12.5	ELSC42	LCL43S	LCS4CA	LSP4S	P-3
	S40T-PCLNR/L12E	●	●	CN□□1204□□	50		40	27	300	55	37	37.5	10°	12.5		LCL43M	LCS4		
	S50U-PCLNR/L12E	●			63		50	35	350	65	47	47.5	8°	12.5					



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape	(15)	(15)	(11, 15)	(15)

Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	CB	PCBN/PCD
Shape	(15)	(15)	(11)	(15)

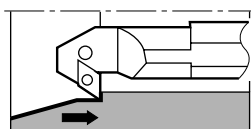
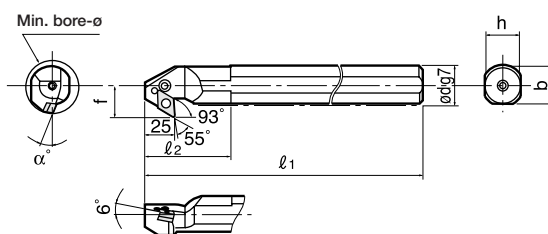
For details see pp. 52 - 59

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)								Shim	Lever	Clamping screw	Spring	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a					
Steel	S20Q-PDUNR/L11	●	●	DN□□1104□□	25	0.8	20	13	180	35	18	19	14°	—	LCL33NL	LCS22A	—	P-2F	
	S25R-PDUNR/L11	●	●		32		25	17	200	40	23	24	12°		ELSD317B R/L	LCL33L	LCS3	LSP3	P-2.5
	S32S-PDUNR/L15E	●	●	DN□□1504□□	40		32	22	250	50	30	29.5	13°	14.5	ELSD42	LCL43S	LCS4CA	LSP4S	P-3
	S40T-PDUNR/L15E	●	●	DN□□1506□□	50		40	27	300	55	37	37.5	10°	14.5					
	S50U-PDUNR/L15E				63		50	35	350	65	47	47.5	8°	14.5					

P-Type (Negative · Pin-lock type)

Boring · Profiling

PDZN R/L

Cutting edge style **Z**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape				
	(15)	(15)	(15)	(15)

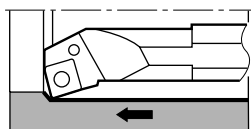
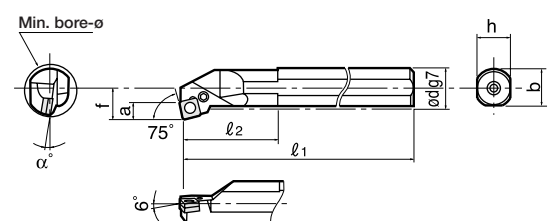
Appl.	Medium cutting	Medium cutting	Precision finishing	
Type	SM	CM	PCBN/PCD	
Shape				
	(15)	(15)	(15)	

For details see pp. 52 - 59

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)								Shim	Lever	Clamping screw	Spring	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°						
Steel	S32S-PDZNR/L15E				40		32	22	250	55	30	29.5	13°			LCL43S	LCS4CA		
	S40T-PDZNR/L15E			DN□□1504□□	50	0.8	40	27	300	60	37	37.5	10°	ELSD42	LCL44	ELCS4	LSP4S	P-3	
	S50U-PDZNR/L15E				60		50	35	350	65	47	47.5	8°						

Through boring

PSKN R/L

Cutting edge style **K**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape				
	(12)	(12)	(12)	(12)

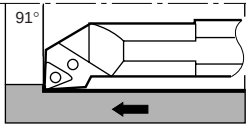
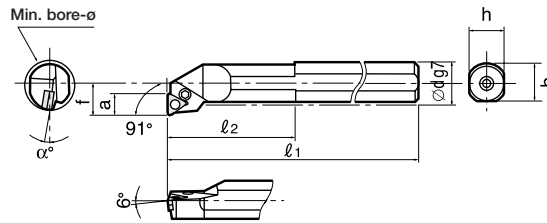
Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	P	PCBN/PCD
Shape				
	(12)	(12)	(12)	(12)

For details see pp. 61 - 67

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)								Shim	Lever	Clamping screw	Spring	Wrench
		R	L				ød	f	l ₁	l ₂	h	b	α°	a					
Steel	S32S-PSKNR/L12E			●	40		32	22	250	55	30	29.5	10°	11		LCL43S	LCS4CA		
	S40T-PSKNR/L12E			●	50	0.8	40	27	300	60	37	37.5	10°	11	ELSS42	LCL43M	LCS4	LSP4S	P-3
	S50U-PSKNR/L12E				60		50	35	350	65	47	47.5	8°	11					

Stop boring

PTFN R/L

Cutting edge style **F**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape				
	(16)	(16)	(16)	(16)

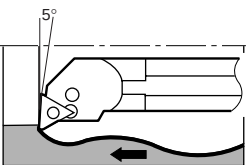
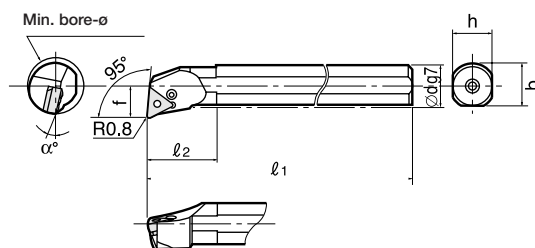
Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	P	PCBN/PCD
Shape				
	(16)	(16)	(16)	(16)

For details see pp. 70 - 76

Shank material	Cat. No.	Stock		Insert	Min. bore dia. ØD	Std. Nose R	Dimensions (mm)								Shim	Lever	Clamping screw	Spring	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a					
Steel	S32S-PTFNR/L16E	●			40		32	22	250	50	30	29.5	10°	14.5					
	S40T-PTFNR/L16E			TN□□1604□□	50	0.8	40	27	300	55	37	37.5	10°	14.5	ELST317	LCL33	LCS3	LSP3	P-2.5
	S50U-PTFNR/L16E				60		50	35	350	65	47	47.5	8°	14.5					

Internal profiling

PTUN R/L

Cutting edge style **U**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Medium cutting
Type	TF	TS	TM	CB
Shape				
	(16)	(16)	(11, 16)	(11, 16)

Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	P	PCBN/PCD
Shape				
	(16)	(16)	(16)	(16)

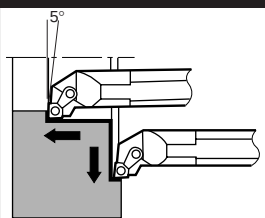
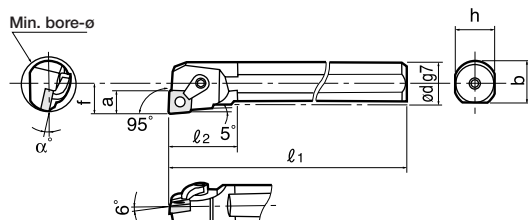
For details see pp. 70 - 76

Shank material	Cat. No.	Stock		Insert	Min. bore dia. ØD	Std. Nose R	Dimensions (mm)												
		R	L				Ød	f	ℓ ₁	ℓ ₂	h	b	α°						
Steel	S16M-PTUNR/L11	●	●	TN□□1103□□	20	0.4	16	11	150	30	15	15.5	14°	—	LCL22N	LCS22A	—	P-2F	
	S20Q-PTUNR/L11	●	●		25		20	13	180	35	18	19	12°						
	S25R-PTUNR/L16	●	●	TN□□1604□□	32	0.8	25	17	200	40	23	24	12°	ELST317B R/L	LCL33	LCS3	LSP3	P-2.5	

M-Type (Negative · Multi-clamp type)

Boring-Facing

MCLN R/L

Cutting edge style **L**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape				
	(12)	(12)	(12)	(12)

Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	P	PCBN/PCD
Shape				
	(12)	(12)	(12)	(12)

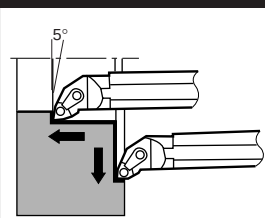
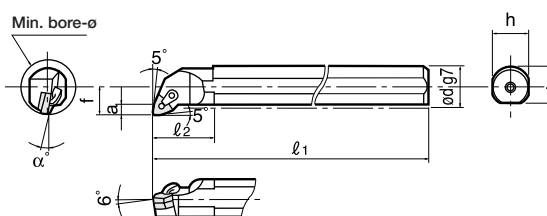
For details see pp. 44 - 50

Shank material	Cat. No.	Stock		Insert	Min. bore dia. $\varnothing D$	Std. Nose R	Dimensions (mm)										Lock pin	Clamp	Clamping screw	Shim	Lock pin wrench	Wrench
		R	L				$\varnothing d$	f	ℓ_1	ℓ_2	h	b	α°	a								
Steel	S25R-MCLNR/L12	●	●	CN□□1204□□	32	0.8	25	17	200	40	23	22.5	12°	12.5	MLP44	MCL-6* MCPM-21	MCS620-3	—	P-2.5F	P-3		

Note:★ marked part is former Cat. No. Former and present Cat. Nos. are compatible

Boring-Facing

MWLN R/L

Cutting edge style **L**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape				
	(08)	(08)	(08)	(08)

Appl.	Medium cutting	Medium cutting	Medium cutting	
Type	SM	CM	All-round type	
Shape				
	(08)	(08)	(08)	

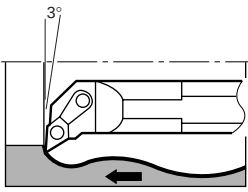
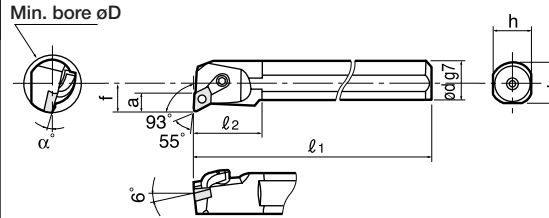
For details see pages 78 - 82

Shank material	Cat. No.	Stock		Insert	Min. bore dia. $\varnothing D$	Std. Nose R	Dimensions (mm)								Lock pin	Clamp	Clamping screw	Shim	Lock pin wrench	Wrench
		R	L				$\varnothing d$	f	ℓ_1	ℓ_2	h	b	α°	a						
Steel	S25R-MWLNR/L08	●	●	WN□□0804□□	32	0.8	25	17	200	40	23	22.5	12°	7.5	MLP44	MCL-5M*	MCS520-2.5	MSW-432BR/L	P-2.5F	P-2.5
	S32S-MWLNR/L08	●	●		44		32	22	250	50	30	29.5	10°	7.5						
	S40T-MWLNR/L08	●			54		40	27	300	60	37	37.5	10°	7.5	MLP46	MCPM-6				
	S50U-MWLNR/L08				70		50	35	350	75	47	47.5	10°	7.5						

Note:★ marked part is former Cat. No. Former and present Cat. Nos. are compatible

Stop boring

MDUN R/L

Cutting edge style **U**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Medium cutting	Medium cutting	Medium cutting
Type	TM	All-round type	CB
Shape			
	(11)	(11)	(11)

Appl.				
Type				
Shape				

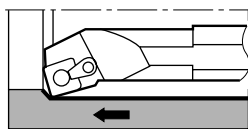
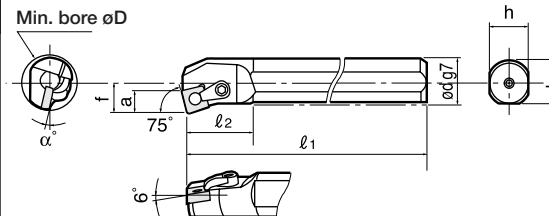
For details see pp. 52 - 59

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)									Lock pin	Clamp	Clamping screw	Shim	Lock pin wrench	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a							
Steel	S25R-MDUNR/L11	●	●	DN□□1104□□	32	0.8	25	17	200	40	23	22.5	12°	10.5	MLP33L	MCL-6* MCPM-20	MCS620-3	—	P-2F	P-3	

Note: * marked part is former Cat. No. Former and present Cat. Nos. are compatible

Through boring

MSKN R/L

Cutting edge style **K**

Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape				
	(12)	(12)	(12)	(12)

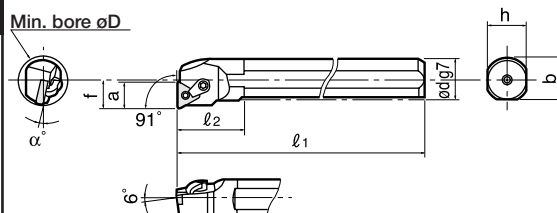
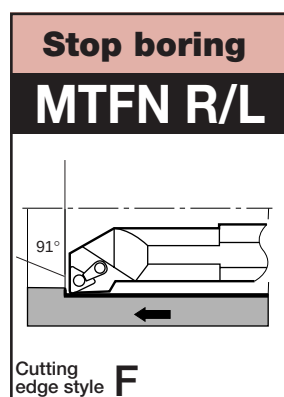
Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	P	PCBN/PCD
Shape				
	(12)	(12)	(12)	(12)

For details see pp. 61 - 69

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)								Lock pin	Clamp	Clamping screw	Shim	Lock pin wrench	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a						
Steel	S25R-MSKNR/L12			SN□□1204□□	32	0.8	25	17	200	40	23	22.5	12°	11	MLP44	MCL-6* MCPM-21	MCS620-3	—	P-2.5F	P-3

Note: * marked part is former Cat. No. Former and present Cat. Nos. are compatible

M-Type (Negative · Multi-clamp type)



Right hand (R) shown

● Basic-choice chipbreaker

Appl.	Precision finishing	Finishing	Medium cutting	Roughing
Type	TF	TS	TM	TH
Shape	(16)	(16)	(16)	(16)

Appl.	Medium cutting	Medium cutting	Medium cutting	Precision finishing
Type	SM	CM	P	PCBN/PCD
Shape	(16)	(16)	(16)	(16)

For details see pp. 70 - 76

Shank material	Cat. No.	Stock		Insert	Min. bore dia. øD	Std. Nose R	Dimensions (mm)									Lock pin	Clamp	Clamping screw	Shim	Lock pin wrench	Wrench
		R	L				ød	f	ℓ ₁	ℓ ₂	h	b	α°	a							
Steel	S25R-MTFNR/L16	●	●	TN□□1604□□	32	0.8	25	17	200	40	23	22.5	12°	14.5	MLP33L	MCL-5M* MCPM-6	MCS520-2.5	—	P-2F	P-2.5	

Note:★ marked part is former Cat, No. Former and present Cat. Nos. are compatible

Top-Borer Tools



- Features
- Indexable insert jig boring tools usable for commercially available adjustable boring heads.
 - Minimum bore diameter is ø5.5 mm.
 - Available in three types of SEXP, SWUB and STUP.

■ Applications by type

SEXP		● Minimum bore diameter: ø5.5 mm ● A 75° rhombic insert is used. Stable insert holding assures precision boring.
SWUB		● Available in two sizes of minimum bore diameters of ø7 mm and ø8 mm. ● Uses an economical trigon insert.
STUP		● Available in five sizes of minimum bore diameters of ø10, ø12, ø14, ø16 and ø18 mm. ● Many standard items make them applicable for a wide range of applications.

■ Nomenclature for Top-Borer Tools

Symbol	Material
S	Steel
C	Carbide

① Shank material

Symbol	(mm)
055	ø5.5
07	ø7
08	ø8
10	ø10

③ Min. bore diameter

Symbol	Insert type
04	EPGT0401□□
03	WBG0301□□
08	TPGT0802□□
11	TPGT1102□□

⑥ Applicable insert

S

08

055

-SEXP

R

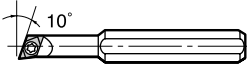
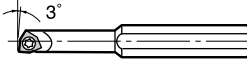
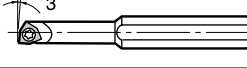
04

② Shank size

④ Tool shape

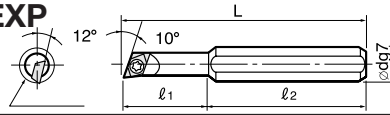
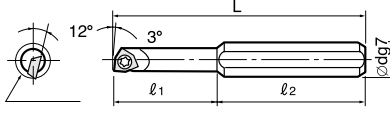
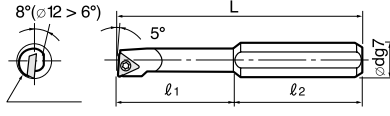
⑤ Hand of tool

Symbol	Shank diameter (mm)
08	ø8
10	ø10
12	ø12
16	ø16

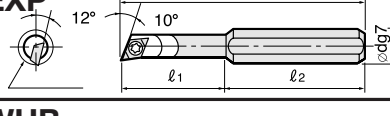
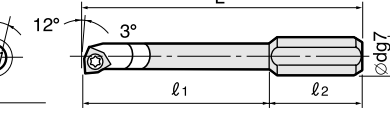
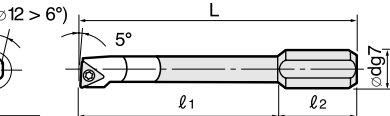
Symbol	Shape
SEXP	
SWUB	
STUP	

Symbol	Hand
R	Right hand
L	Left hand

Steel shank

Shape (Right hand (R) shown)	Cat. No.	Stock		Inserts	Min. bore dia. øD(mm)	Std. corner R	Dimensions (mm)				Parts	
		R	L				ød	L	ℓ ₁	ℓ ₂	Clamping screw	Wrench
SEXP 	S08055-SEXPR/L04	●		EPGT0401□□	5.5	0.4	8	45	19	26	CSTB-2	T-6F
	S10055-SEXPR/L04	●			5.5		10	51	19	32		
	S12055-SEXPR/L04	●			5.5		12	51	19	32		
	S16055-SEXPR/L04				5.5		16	54	19	35		
SWUB 	S0807-SWUBR03			WBG T0301□□	7	0.4	8	50	24	26	CSTB-2	T-6F
	S1007-SWUBR03				7		10	56	24	32		
	S1207-SWUBR03	●			7		12	56	24	32		
	S1607-SWUBR03				7		16	59	24	35		
	S0808-SWUBR03	○			8		8	54	28	26		
	S1008-SWUBR03	●			8		10	60	28	32		
	S1208-SWUBR03				8		12	60	28	32		
	S1608-SWUBR03				8		16	63	28	35		
STUP 	S0810-STUPR/L08			TPGT0802□□	10	0.4	8	61	—	—	CSTB2 L040	T-6F
	S1010-STUPR/L08				10		10	67	35	32		
	S1210-STUPR/L08				10		12	67	35	32		
	S1610-STUPR/L08				10		16	70	35	35		
	S1012-STUPR/L08			TPGT1102□□	12		10	74	—	—	CSTB-2L	T-6F
	S1212-STUPR/L08				12		12	74	42	32		
	S1612-STUPR/L08				12		16	77	42	35		
	S1212-STUPR/L11				12		12	74	42	32	CSTB-2.5	T-8F
	S1614-STUPR/L08			TPGT0802□□	14		16	84	49	35	CSTB-2L	T-6F
	S1214-STUPR/L11			TPGT1102□□	14		12	81	—	—	CSTB-2.5	T-8F
	S1616-STUPR/L08			TPGT0802□□	16		16	91	56	35	CSTB-2L	T-6F
	S1618-STUPR/L11			TPGT1102□□	18		16	98	—	—	CSTB-2.5	T-8F

Carbide shank

Shape (Right hand (R) shown)	Cat. No.	Stock		Inserts	Min. bore dia. øD(mm)	Std. corner R	Dimensions (mm)				Parts	
		R	L				ød	L	ℓ ₁	ℓ ₂	Clamping screw	Wrench
SEXP 	C08055-SEXPR/L04			EPGT0401□□	5.5	0.4	8	56	30	26	CSTB-2	T-6F
	C10055-SEXPR/L04	○			5.5		10	62	30	32		
	C12055-SEXPR/L04	○			5.5		12	62	30	32		
	C16055-SEXPR/L04	○			5.5		16	64	30	34		
SWUB 	C0807-SWUBR03			WBG T0301□□	7	0.4	8	64	38	34	CSTB-2	T-6F
	C1007-SWUBR03				7		10	70	38	40		
	C1207-SWUBR03				7		12	70	38	40		
	C1607-SWUBR03				7		16	73	38	43		
	C0808-SWUBR03				8		8	70	44	26		
	C1008-SWUBR03	○			8		10	76	44	32		
	C1208-SWUBR03	○			8		12	76	44	32		
	C1608-SWUBR03	○			8		16	79	44	35		
STUP 	C0810-STUPR/L08			TPGT0802□□	10	0.4	8	81	—	—	CSTB2 L040	T-6F
	C1010-STUPR/L08	○			10		10	87	55	32		
	C1210-STUPR/L08				10		12	87	55	32		
	C1610-STUPR/L08				10		16	90	55	35		
	C1012-STUPR/L08			TPGT1102□□	12		10	98	—	—	CSTB-2L	T-6F
	C1212-STUPR/L08				12		12	98	66	33		
	C1612-STUPR/L08				12		16	101	66	35		
	C1212-STUPR/L11				12		12	98	66	32	CSTB-2.5	T-8F
	C1614-STUPR/L08			TPGT0802□□	14		16	119	84	35	CSTB-2L	T-6F
	C1214-STUPR/L11			TPGT1102□□	14		12	109	84	25	CSTB-2.5	T-8F
	C1616-STUPR/L08			TPGT0802□□	16		16	123	88	35	CSTB-2L	T-6F
	C1618-STUPR/L11			TPGT1102□□	18		16	134	—	—	CSTB-2.5	T-8F

Notes: ● When using a ground-in chipbreaker insert, right hand (R) holders use a left hand (L) insert.
 ○ Left hand (L) holder use a right hand (R) insert.