

D-type double-clamping tool holder





General Turning Tools

Applications sketch map of turning tools

External and internal turning

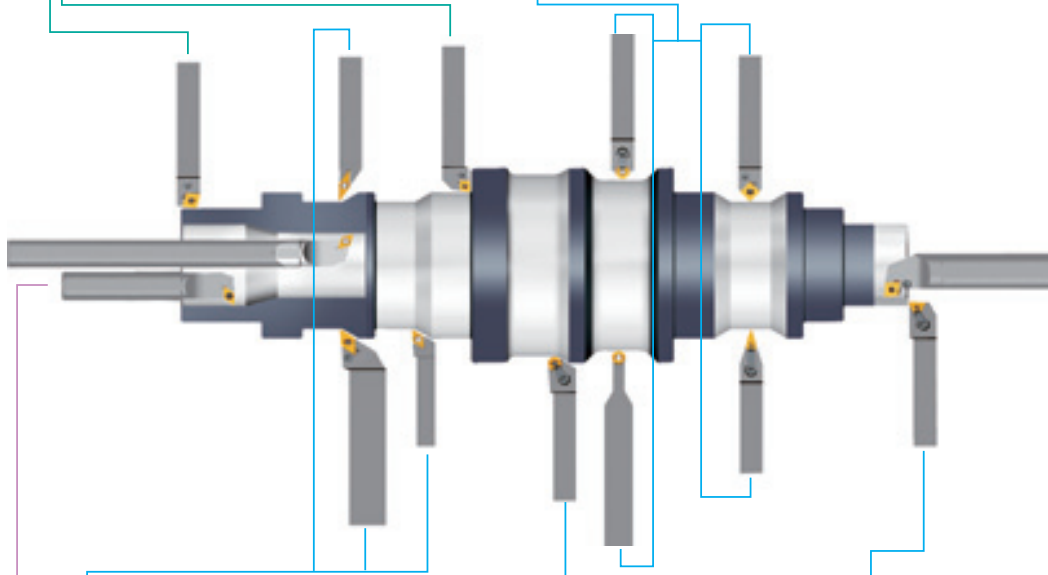
General turning

Applications sketch map of turning tools

External turning	Tool holder type						
	DTGMR/L□□	DSBMR/L□□	PCBMR/L□□	PSBMR/L□□	PSSMR/L□□	PTGMR/L□□	PTTMR/L□□
	SCACR/L□□	SSBCR/L□□	SSSCR/L□□	STACR/L□□	STGCR/L□□	STECR/L□□	SWACR/L□□

External and end surface turning	Tool holder type
	DCLNR/L□□ DWLNR/L□□
	PCLNR/L□□ PWLNR/L□□
	SCLCR/L□□

Profile turning	Tool holder type
	DVVRN□□ PDPNR□□ PSDNR□□ SDNCN□□
	SVVRN□□ SVVCN□□ SSDCN□□ SRDCN□□
	CKNNR/L□□



Profile turning	Tool holder type
	DDJNR/L□□ DVJNR/L□□ PDJNR/L□□
	SDACR/L□□ SDJCR/L□□ SVABR/L□□
	SVJBR/L□□ SVJCR/L□□ CKJNR/L□□

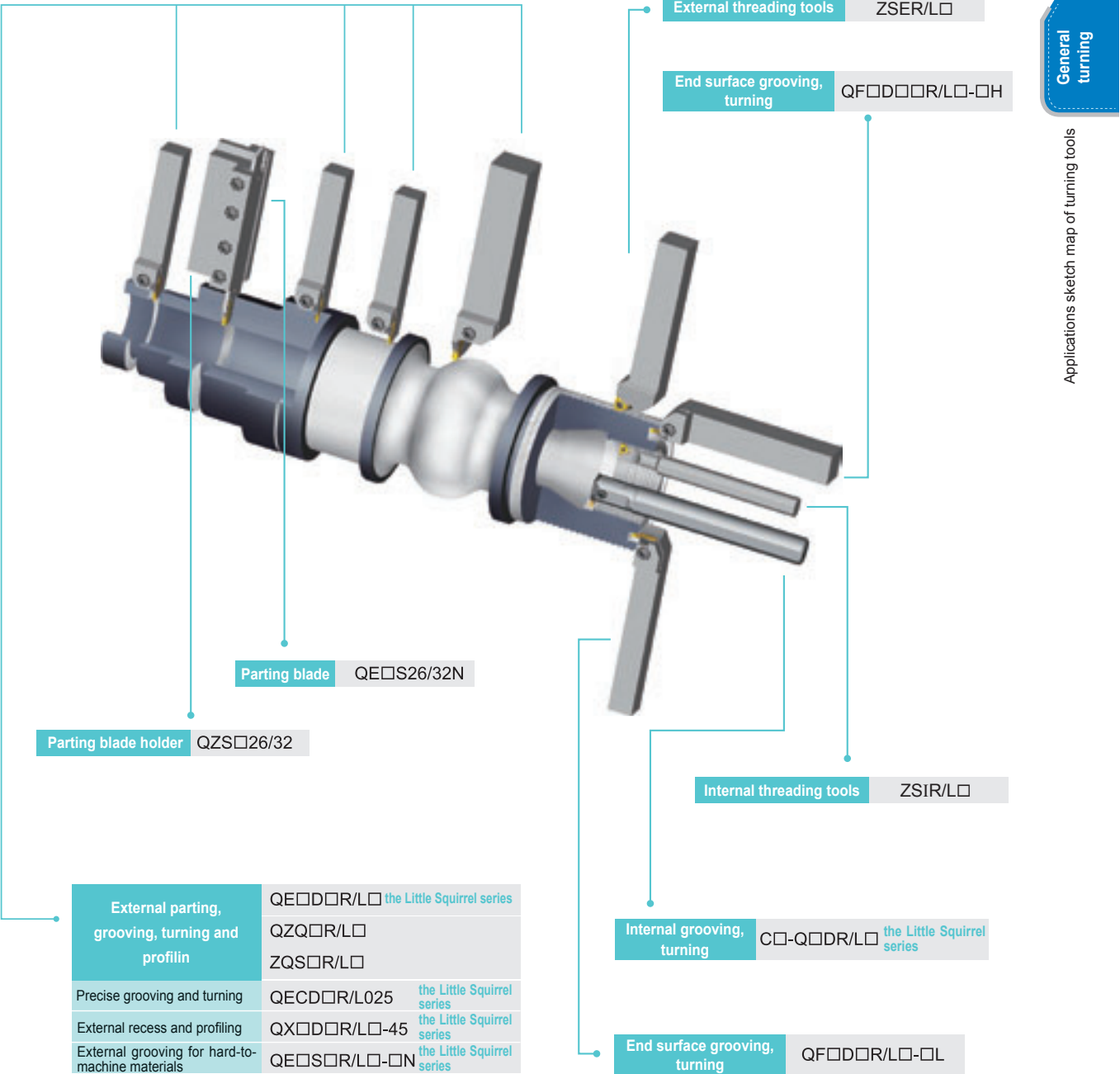
Profile turning	Tool holder type
	SRGCR/L□□

End surface turning	Tool holder type
	PSKNR/L□□ PTFNR/L□□
	SSKCR/L□□ STFCR/L□□

Tool holders for internal turning (Steel tool shank)						
	S□-PSKNR/L□	S□-PCLNR/L□	S□-PDPNR/L□	S□-PDUNR/L□	S□-SDQCR/L□	S□-SDZCR/L□
	S□-PTFNR/L□	S□-PWLNR/L□		S□-SDUCR/L□	S□-SDQPR/L□	
	S□-SCFCR/L□	S□-SCLCR/L□		S□-SDUPR/L□	S□-SVQBR/L□	
	S□-SSKCR/L□	S□-SCLPR/L□		S□-SVUBR/L□	S□-SVQCR/L□	
	S□-STFCR/L□			S□-SVUCR/L□		
	S□-STUPR/L□					

Tool holders for internal turning (Cemented carbide tool shank)				
	C□-STUPR/L□	C□-SCLPR/L□	C□-SDUPR/L□ C□-SVUCR/L□	C□-SDQPR/L□ C□-SVQCR/L□

Parting, grooving and threading tools





General Turning Tools

How to select external turning tools

How to select external turning tools

Explanation of external turning tools detailed table

- Listed according to clamping types.

Approach angle of tools

Tools type

The first 4 letters in the type description stands for tool shape and application

Inserts type

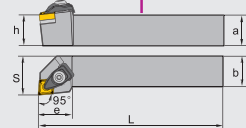
Specification chart

Application chart

The arrow shows suitable applications such as external turning, profiling and end turning, etc.

Corresponding tool holders of insert **CN** ☐ ☐ D-type clamping

DCLNR/L
Kr:95°



Type	Stock		Basic dimensions(mm)							Screw	Shim	Wrench	Clamp	Shim screw	Spring
	R	L	a	b	L	h	s	e							
DCLNR/L	▲	△	16	16	100	16	20	24							
	▲	△	20	20	125	20	25	24	CM5×22C	C09BM	WH30L	C1RA	SM5×8.65XA1	SPR6	
	▲	△	25	25	150	25	32	24							
	▲	△	20	20	125	20	25	28							
	▲	△	25	25	150	25	32	28	CM6×25C	C12BM	WH40L	C2RA	SM6×10XA1	SPR4	
	▲	△	32	25	170	32	32	28							

▲ Stock available △ Make-to-order

Applicable inserts							
Application		For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A54	WGM Wiper  A55	DR Double side  A58	HDR  A59	 A59	 A118	
	WGF Wiper  A54	PM  A55	DR Single side  A58	HPR  A59		 A118 A119	
	SF  A54	DM  A56	ER Double side  A58			 A119	
	EF  A54	EM  A56	ER Single side  A58				
	NF  A55	NM  A57	SNR Double side  A58				
			LR Single side  A57				
Tool holder type		DCLNR/L□□H/K/M09		CN□□0903□□		CN□□0903□□	
		DCLNR/L□□K/M/P12		CN□□1204□□		CN□□1204□□	
				CN□□1204□□		CN□□1204□□	
				CN□□1204□□		CN□□1204□□	

Products specification

Including product description, stock (left and right hand), basic dimensions and applicable spare parts.

Applicable inserts

Including applications of inserts, reference page, insert shape and corresponding tool holders.



TURNING

External Turning

External turning tools overview • A158-A161

External turning tools code key • A162-A163

Detailed table of external turning tools • A166-A204

External turning tool holders by D type clamping • A166-A171

External turning tool holders by P type clamping • A172-A183

External turning tool holders by S type clamping • A184-A203

External turning tool holders by C type clamping • A204

Detailed table of external turning tools (ceramic) • A205





TURNING

General Turning Tools

External turning tools overview

General
turning

External turning tools overview

Clamping system	Tool type	Approach angle(Kr°)	Turning type						Applicable workpiece shape		Page
			External turning	End surface turning	External and end surface turning	Profile turning	Profile turning	Profile turning	Short, Thick	Thin, Long	
D	DCLNR/L	95			☺				☺		A166
	DDJNR/L	93					☺		☺	☺	A167
	DSBNR/L	75	☺						☺		A168
	DTGNR/L	91	☺						☺	☺	A169
	DVVNN	72.5						☺	☺		A170
	DVJNR/L	93					☺		☺	☺	A170
	DWLNR/L	95			☺				☺		A171
P	PCBNR/L	75	☺						☺		A172
	PCLNR/L	95			☺				☺		A173
	PDJNR/L	93					☺		☺	☺	A174
	PDPNN	62.5						☺	☺		A175

☺ Recommended ☺ Available



Clamping system	Tool type	Approach angle(Kr°)	Turning type						Applicable workpiece shape		Page
			External turning	End surface turning	External and end surface turning	Profile turning	Profile turning	Profile turning	Short, Thick	Thin, Long	
P	PSBNR/L	75	☺						☺		A176
	PSDNN	45						☺	☺		A177
	PSKNR/L	75		☺					☺		A178
	PSSNR/L	45	☺						☺		A179
	PTFNR/L	90		☺					☺	☺	A180
	PTTNR/L	60	☺						☺		A181
	PTGNR/L	90	☺						☺	☺	A182
	PWLNR/L	95			☺				☺		A183
S	SCACR/L	90	☺						☺	☺	A184
	SCLCR/L	95			☺				☺	☺	A185
	SDACR/L	90					☺		☺	☺	A186

☺ Recommended ☹ Available



TURNING

General Turning Tools

External turning tools overview

General
turning

External turning tools overview

Clamping system	Tool type	Approach angle(κ_r°)	Turning type						Applicable workpiece shape		Page
			External turning	End surface turning	External and end surface turning	Profile turning	Profile turning	Profile turning	Short, Thick	Thin, Long	
											
S	 SDJCR/L	93					☺		☺	☺	A187
	 SDNCN	62.5						☺	☺	☺	A188
	 SVJBR/L	93					☺		☺	☺	A189
	 SVABR/L	90					☺		☺	☺	A190
	 SVVBN	72.5						☺	☺	☺	A191
	 SVVCN	72.5						☺	☺	☺	A192
	 SVJCR/L	93					☺		☺	☺	A193
	 SSBCR/L	75	☺						☺		A194
	 SSDCN	45						☺	☺		A195
	 SSKCR/L	75		☺					☺		A196
	 SSSCR/L	45	☺						☺		A197

☺ Recommended ☹ Available



Clamping system	Tool type	Approach angle (K α)	Turning type						Applicable workpiece shape		Page
			External turning	End surface turning	External and end surface turning	Profile turning	Profile turning	Profile turning	Short, Thick	Thin, Long	
											
S	STACR/L 	90	☺						☺	☺	A198
	STFCR/L 	90		☺					☺		A198
	STGCR/L 	91	☺						☺	☺	A199
	STECR/L 	60	☺						☺		A200
	SWACR/L 	90	☺						☺	☺	A201
	SRDCN 	--						☺	☺		A202
	SRGCR/L 	--				☺			☺		A203
C	CKJNR/L 	93					☺		☺		A204
	CKNNR/L 	63						☺	☺		A204
	CRDCR/L CRDPR/L 	--					☺		☺		A205

☺ Recommended ☹ Available

General turning

External turning tools overview



TURNING / General Turning Tools

External turning tools code key

General turning

External turning tools code key

Clamping system	Insert shape		Clearance angle of insert	Cutting direction
D – double clamping	C	D	B	L – Left-hand
P – Hole clamping	R	S	C	R – Right-hand
S – Screw on	T	V	D	R – Right-hand
C – Top clamping	W		E	N – Right and left hand
			N	
			P	

P

C

L

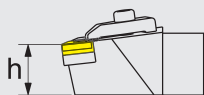
N

L

Tool holder style and approach angle							
A	B	C	D	E	F	G	H
J	K	L	M	N	O	P	Q
R	S	T	U	V	W	X	



Nose height (mm)



Code	Height
------	--------

12	12
16	16
20	20
25	25
32	32
40	40
50	50

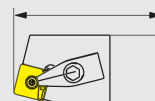
Width of tool holder (mm)



Code	Width
------	-------

12	12
16	16
20	20
25	25
32	32
40	40
50	50

Length of tool holder (mm)



Code	Length
------	--------

E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

General turning

External turning tools code key

25

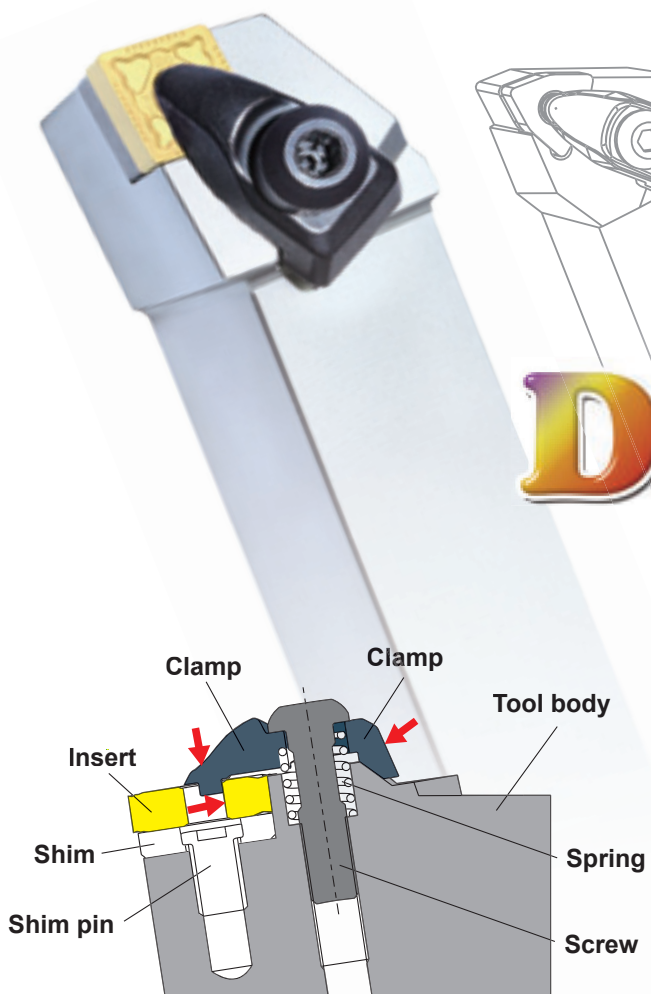
25

M

12

Length of cutting edge

Inserts shape	C	D	R	S	T	V	W
Inscribed circle (mm)	Length of cutting edge(mm)						
5.556	---	---	---	---	09	---	---
6.350	06	07	---	---	11	---	---
9.525	09	11	09	09	16	16	06
12.700	12	15	12	12	22	22	08
15.875	16	19	15	15	27	---	---
19.050	19	---	19	19	33	---	---
25.400	25	---	25	25	44	---	---
32.000	---	---	32	---	---	---	---



D

-type double-clamping tool holder

With newly developed double-clamping structure, D-type turning tools have high clamping rigidity and high positioning accuracy, achieving easy and secure clamping of inserts. It is the best choice for the clamping of straight hole negative inserts.

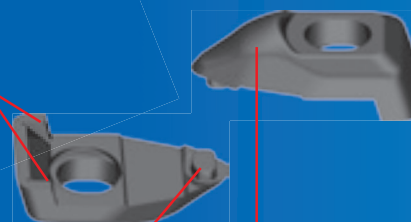
Convenient secure clamping device



Slots in the tool body match perfectly with the clamp, realizing simple and easy clamping.

Uniquely clamp

The clamp and the inner wall of insert hole make an arc contact. The stable and evenly distributed clamping force ensures more secure clamping.



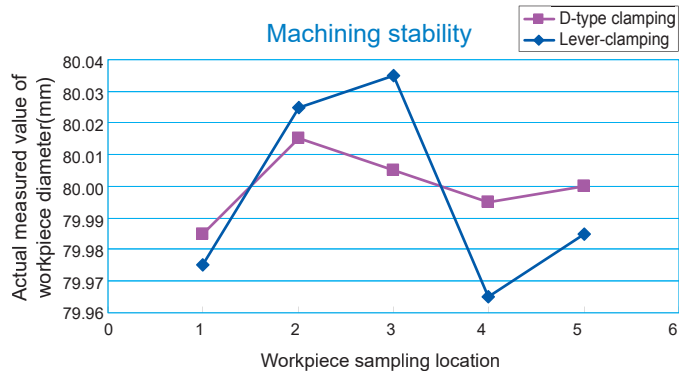
Lug boss on both ends and double-locating make more insert clamp secure.

Arc locating surface makes large contact area and the force is evenly distributed.

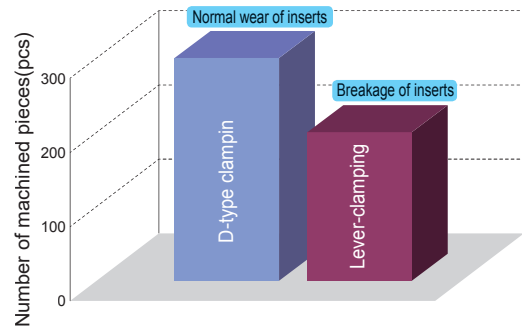
Simple and compact structure effectively prevents chip blocking while ensuring high clamping rigidity.

Compared with lever-clamping:

① Accurate locating ensures more stable machining accuracy.



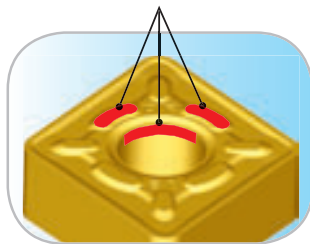
② High clamping rigidity effectively improves resistance to breakage of insert.



Compared with similar products of company A:

① Locating surface contact: (checking the contact location of clamp by dyeing)

Force evenly distributed, firm clamping, high locating accuracy.



ZCC-CT

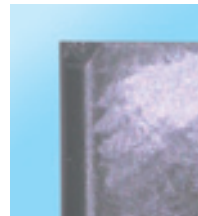


Similar product of company A

② Effect on tool life:

Tool holder: DCLNL3225P12
 Insert: YBC252/CNMG120408-DR
 Cutting material: 45# steel
 Cutting parameters: $V_c=250\text{m/min}$
 $a_p=2\text{mm}$
 $f=0.6\text{mm/r}$

After 60 minutes of cutting



ZCC-CT



Similar product of company A



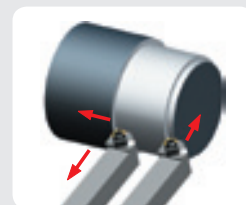
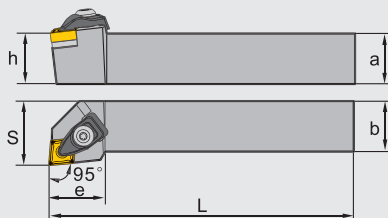
TURNING / General Turning Tools

External turning tools

Corresponding tool holders of insert **CN** ☐ ☐ D-type clamping

DCLNR/L

Kr:95°



Type		Stock		Basic dimensions(mm)					Screw	Shim	Wrench	Clamp	Shim screw	Spring	
		R	L	a	b	L	h	s	e						
DCLNR/L	1616H09	▲	△	16	16	100	16	20	24						
	2020K09	▲	△	20	20	125	20	25	24						
	2525M09	▲	△	25	25	150	25	32	24						
	2020K12	▲	▲	20	20	125	20	25	28						
	2525M12	▲	▲	25	25	150	25	32	28						
	3225P12	▲	▲	32	25	170	32	32	28						

▲Stock available

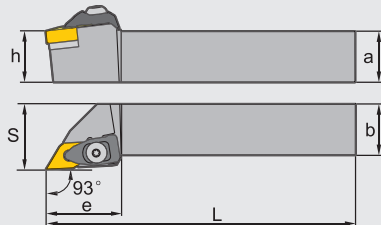
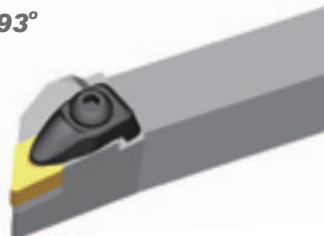
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF Wiper A54	WGM Wiper A55	DR Double-side A58	HDR A59	Without chipbreaker A59	A118
	WGF Wiper A54	PM A55	DR Single-side A58	HPR A59		A118 -A119
	SF A54	DM A56	ER Double-side A58			A119
	EF A54	EM A56	ER Single-side A58			
	NF A55	NM A57	SNR Double-side A58			
			LR Single-side A57			

Tool holder type

DCLNR/L□□H/K/M09	CN□□0903□□	CN□□0903□□				
DCLNR/L□□K/M/P12	CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□

Corresponding tool holders of insert **DN** ☐ ☐ D-type clamping**DDJNR/L****Kr:93°**

Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Clamp	Shim screw	Spring
		R	L	a	b	L	h	s	e						
DDJNR/L	1616H11	△	△	16	16	100	16	20	30	CM5×22C	D11BM	WH30L	C1RA	SM5×8.65XA1	SPR6
	2020K11	▲	△	20	20	125	20	25	30						
	2525M11	▲	△	25	25	150	25	32	30						
	3225P11	△	△	32	25	170	32	32	30						
	2020K15	▲	▲	20	20	125	20	25	35	CM6×25C	D15BM	WH40L	C2RA	SM6×10XA1	SPR4
	2525M15	▲	▲	25	25	150	25	32	35						
	3232P15	▲	▲	32	32	170	32	40	35						

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF Wiper A61	WGM Wiper A63	DR Double-side A65	HDR A66	Without chipbreaker A66	A121 -A122
	WGF Wiper A61	PM A63	DR Single-side A65			A122 -A123
	SF A62	DM A64	ER Double-side A65			A124
	EF A62	EM A64	ER Single-side A65			
	NF A62	NM A64	SNR Double-side A65			
	NGF A62		LR Single-side A65			
Tool holder type	DDJNR/L□□H/K/M/P11	DN□□1104□□	DN□□1104□□		DN□□1104□□	
	DDJNR/L□□K/M/P15	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□

General turning

External turning tools



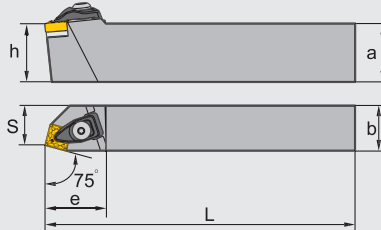
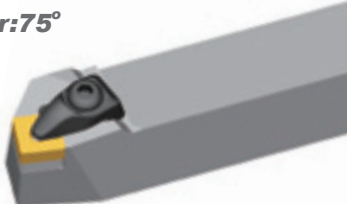
TURNING / General Turning Tools

External turning tools

Corresponding tool holders of insert **SN** ☐ ☐ D-type clamping

DSBNR/L

Kr:75°



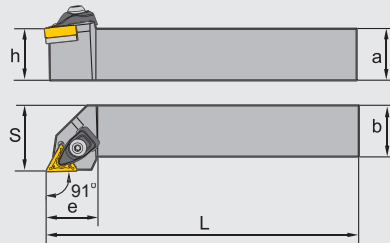
Type		Stock		Basic dimensions(mm)					Screw	Shim	Wrench	Clamp	Shim screw	Spring	
		R	L	a	b	L	h	s	e						
DSBNR/L	1616H09	▲	△	16	16	100	16	13	26	CM5×22C	S09BM	WH30L	C1RA	SM5×8.65XA1	SPR6
	2020K12	▲	▲	20	20	125	20	17	34						
	2525M12	▲	▲	25	25	150	25	22	34	CM6×25C	S12BM	WH40L	C2RA	SM6×10XA1	SPR4
	3225P12	▲	▲	32	25	170	32	22	34						
	3232P15	▲	▲	32	32	170	32	27	41	CM6×25C	S15BM	WH40L	C3RA	SM6×10XA2	SPR4

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A67	PM  A68	DR Double-side  A70	HDR  A72	Without chipbreaker  A74	 A126
	EF  A67	DM  A68	DR Single-side  A70 -71	HPR  A72		 A127
	SF  A67	EM  A69	ER Double-side  A71			 A128
		NM  A69	ER Single-side  A71			
			SNR Double-side  A71			
			LR Single-side  A69			
Tool holder type	DSBNR/L ☐ ☐ H09	SN ☐ ☐ 0903 ☐ ☐	SN ☐ ☐ 0903 ☐ ☐		SN ☐ ☐ 0903 ☐ ☐	
	DSBNR/L ☐ ☐ K/M/P12	SN ☐ ☐ 1204 ☐ ☐	SN ☐ ☐ 1204 ☐ ☐	SN ☐ ☐ 1204 ☐ ☐	SN ☐ ☐ 1204 ☐ ☐	SN ☐ ☐ 1204 ☐ ☐
	DSBNR/L ☐ ☐ P15	SN ☐ ☐ 1506 ☐ ☐	SN ☐ ☐ 1506 ☐ ☐	SN ☐ ☐ 1506 ☐ ☐	SN ☐ ☐ 1506 ☐ ☐	

Corresponding tool holders of insert **TN** ☐ ☐ D-type clamping**DTGNR/L****Kr:91°**

Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Clamp	Shim screw	Spring
		R	L	a	b	L	h	s	e						
DTGNR/L	1616H16	△	△	16	16	100	16	20	25						
	2020K16	▲	▲	20	20	125	20	25	25	CM5×22C	T16BM	WH30L	C1RA	SM5×8.65XA1	SPR6
	2525M16	▲	▲	25	25	150	25	32	25						

▲Stock available

△Make-to-order

General turning

External turning tools

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF A75	WGM Wiper A76	DR Double-side A78	HDR A79	Without chipbreaker A80	A130
	WGF Wiper A75	PM A76	DR Single-side A78			A130 -A131
	SF A75	DM A77	ER Double-side A78			A131
	EF A76	EM A77	SNR Double-side A78			
			LR Single-side A77			
Tool holder type	DTGNR/L□□H/K/M16	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□



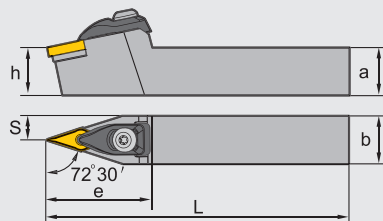
General Turning Tools

External turning tools

Corresponding tool holders of insert **VN** ☐ ☐ D-type clamping

DVVNN

Kr:72°30'

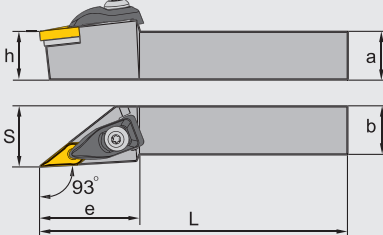


Type		Stock	Basic dimensions(mm)						Screw	Shim	Wrench	Clamp	Shim screw	Spring
			a	b	L	h	s	e						
DVVNN	2020K16	△	20	20	125	20	10	44	CM5×22C	V16BM	WH30L	C6RA	SM5×8.65XA1	SPR6
	2525M16	▲	25	25	150	25	12.5	44						

▲Stock available △Make-to-order

DVJNR/L

Kr:93°

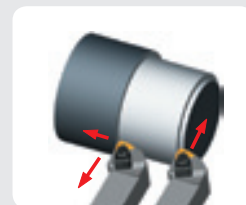
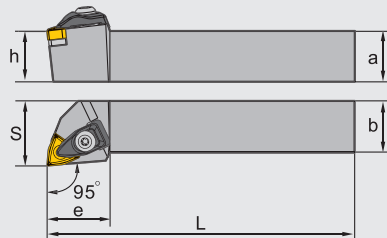


Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Clamp	Shim screw	Spring
		R	L	a	b	L	h	s	e						
DVJNR/L	2020K16	▲	▲	20	20	125	20	25	41	CM5×22C	V16BM	WH30L	C6RA	SM5×8.65XA1	SPR6
	2525M16	▲	▲	25	25	150	25	32	41						

▲Stock available △Make-to-order

Applicable inserts

Application	For finishing		For semi-finishing		For roughing		PCBN&PCD inserts	
Inserts shape	DF	 A81	PM	 A82	SNR	 A82	 A133	
	EF	 A81	DM	 A82			 A133-A134	
	SF	 A81	EM	 A82			 A134	
	NF	 A81	NM	 A82				
	NGF	 A81						
Tool holder type	DVVNN□□K/M16		VN□□1604□□		VN□□1604□□		VN□□1604□□	
	DVJNR/L□□K/M16		VN□□1604□□		VN□□1604□□		VN□□1604□□	

Corresponding tool holders of insert **WN** ☐ ☐ D-type clamping**DWLNRL****Kr:95°**

Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Clamp	Shim screw	Spring
		R	L	a	b	L	h	s	e						
DWLNRL	1616H06	▲	△	16	16	100	16	25	25						
	2020K06	▲	▲	20	20	125	20	25	24	CM5×22C	W06BM	WH30L	C1RA	SM5×8.65XA1	SPR6
	2525M06	▲	▲	25	25	150	25	32	24						
	2020K08	▲	▲	20	20	125	20	25	31						
	2525M08	▲	▲	25	25	150	25	32	31	CM6×25C	W08BM	WH40L	C2RA	SM6×10XA1	SPR4
	3225P08	△	△	32	25	170	32	32	31						

▲Stock available

△Make-to-order

General turning

External turning tools

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For cast iron machining	PCBN&PCD inserts	
Inserts shape	DF  A83	WGM Wiper  A84	DR Double-side  A86	Without chipbreaker  A86	 A136	
	WGF Wiper  A83	PM  A85	SNR Double-side  A86		 A136 -A137	
	SF  A83	DM  A85			 A137	
	EF  A84	EM  A85				
	NF  A84	NM  A86				
Tool holder type	DWLNRL /□□H/K/M06	WN□□0604□□	WN□□0604□□	WN□□0604□□	WN□□0604□□	
	DWLNRL /□□K/M/P08	WN□□0804□□	WN□□0804□□	WN□□0804□□	WN□□0804□□	WN□□0804□□



TURNING / General Turning Tools

External turning tools

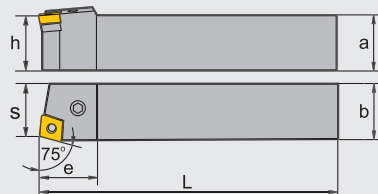
Corresponding tool holders of insert **CN** ☐ ☐ P-type clamping

PCBNR/L

Kr:75°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PCBNR/L	2020K12	▲	▲	20	20	125	20	17	27	LEM8×21	C12AP	WH30L	L4	SP4
	2525M12	▲	▲	25	25	150	25	22	27					
	3232P12	▲	▲	32	32	170	32	27	33					
	2525M16	▲	▲	25	25	150	25	22	33	LEM8×25	C16AP	WH30L	L5	SP5
	3232P16	▲	▲	32	32	170	32	27	33					
	4040R16	▲	▲	40	40	200	40	35	38					
	3232P19	▲	▲	32	32	170	32	27	38	LEM10×27	C19AP	WH40L	L6	SP6
	4040R19	▲	▲	40	40	200	40	35	40					
	4040S2507	▲	▲	40	40	250	40	35	50		C25AP-07	WH50L	L8	SP8
	4040S2509	▲	▲	40	40	250	40	35	50	LEM12×36A	C25AP			

▲Stock available

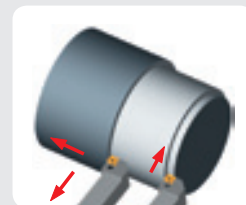
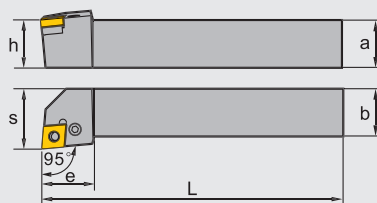
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining
Inserts shape	DF A54	WGM Wiper A55	DR Double-side A58	HDR A59	Without chipbreaker A59
	WGF Wiper A54	PM A55	DR Single-side A58	HPR A59	
	SF A54	DM A55	ER Double-side A58		
	EF A54	EM A56	ER Single-side A58		
	NF A55	NM A57	SNR Double-side A58		
			LR Single-side A57		
Tool holder type	PCBNR/L□□K/M/P12	CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□
	PCBNR/L□□M/P/R16	CN□□1606□□	CN□□1606□□	CN□□1606□□	CN□□1606□□
	PCBNR/L□□P/R19		CN□□1906□□	CN□□1906□□	CN□□1906□□
	PCBNR/L□□S2507		CN□□2507□□		
	PCBNR/L□□S2509		CN□□2509□□		

Corresponding tool holders of insert **CN** ☐ ☐ P-type clamping**PCLNR/L****Kr:95°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PCLNR/L	2020K12	▲	▲	20	20	125	20	25	28	LEM8×21	C12AP	WH30L	L4	SP4
	2525M12	▲	▲	25	25	150	25	32	28					
	3225P12	△	△	32	25	170	32	32	33					
	3232P12	▲	▲	32	32	170	32	40	28					
	2525M16	▲	▲	25	25	150	25	32	33	LEM8×25	C16AP	WH30L	L5	SP5
	3225P16	△	△	32	25	170	32	32	33					
	3232P16	▲	▲	32	32	170	32	40	33					
	4040R16	△	△	40	40	200	40	50	42					
	3232P19	▲	▲	32	32	170	32	40	38	LEM10×27	C19AP	WH40L	L6	SP6
	4040R19	▲	▲	40	40	200	40	50	40					
4040S2507	▲	▲	40	40	250	40	50	49	LEM12×36A	C25AP-07	WH50L	L8	SP8	
4040S2509	▲	▲	40	40	250	40	50	49		C25AP				

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF Wiper A54	WGM Wiper A55	DR Double-side A58	HDR A59	Without chipbreaker A59	A118
	WGF Wiper A54	PM A55	DR Single-side A58	HPR A59		A118 -A119
	SF A54	DM A56	ER Double-side A58			A119
	EF A54	EM A56	ER Single-side A58			
	NF A55	NM A57	SNR Double-side A58			
			LR Single-side A57			
Tool holder type	PCLNR/L□□K/M/P12	CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□
	PCLNR/L□□M/P/R16	CN□□1606□□	CN□□1606□□	CN□□1606□□	CN□□1606□□	CN□□1606□□
	PCLNR/L□□P/R19		CN□□1906□□	CN□□1906□□	CN□□1906□□	CN□□1906□□
	PCLNR/L□□S2507			CN□□2507□□		
	PCLNR/L□□S2509			CN□□2509□□		

General turning

External turning tools



TURNING / General Turning Tools

External turning tools

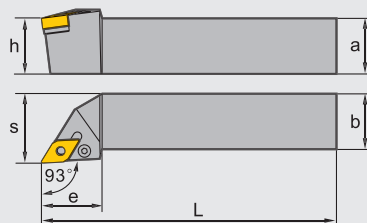
Corresponding tool holders of insert **DN** ☐ ☐ P-type clamping

PDJNR/L

Kr:93°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PDJNR/L	1616H11	▲	▲	16	16	100	16	20	25	LEM6×17	D11AP	WH25L	L3	SP3
	2020K11	▲	▲	20	20	125	20	25	25					
	2525M11	▲	▲	25	25	150	25	32	30					
	2020K15	▲	▲	20	20	125	20	25	35	LEM8×21	D15AP	WH30L	L4B	SP4
	2525M15	▲	▲	25	25	150	25	32	35					
	3232P15	▲	▲	32	32	170	32	40	35					
	2020K15-3	▲	△	20	20	125	20	25	35	LEM8×21	D15AP	WH30L	L4	SP4
	2525M15-3	▲	▲	25	25	150	25	32	35					
	3232P15-3	▲	△	32	32	170	32	40	35					

▲Stock available

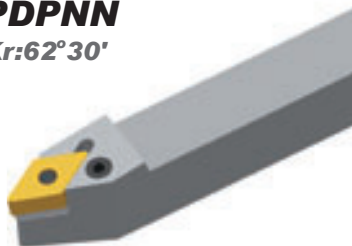
△Make-to-order

Applicable inserts

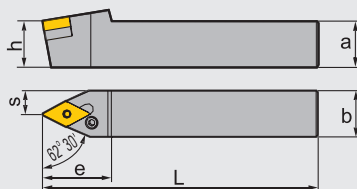
Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF A61	WGM Wiper A63	DR Double-side A65	HDR A66	Without chipbreaker A66	A121 -A122
	WGF Wiper A61	PM A63	DR Single-side A65			A122 -A123
	SF A62	DM A64	ER Double-side A65			A124
	EF A62	EM A64	ER Single-side A65			
	NF A62	NM A64	SNR Double-side A65			
	NGF A62		LR Single-side A65			
Tool holder type	PDJNR/L□□H/K/M11	DN□□1104□□	DN□□1104□□		DN□□1104□□	
	PDJNR/L□□K/M/P15	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□
	PDJNR/L□□K/M/P15-3	DN□□1504□□	DN□□1504□□		DN□□1504□□	DN□□1504□□

Corresponding tool holders of insert **DN** ☐ ☐ P-type clamping**PDPNN**

Kr:62°30'



R-type shown



Type		Stock	Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
			a	b	L	h	s	e					
PDPNN	2020K15	▲	20	20	125	20	8	38	LEM8×21	D15AP	WH30L	L4B	SP4
	2525M15	▲	25	25	150	25	12.5	38					
	3232P15	▲	32	32	170	32	16	38					
	2020K15-3	▲	20	20	125	20	8	38	LEM8×21	D15AP	WH30L	L4	SP4
	2525M15-3	▲	25	25	150	25	12.5	38					
	3232P15-3	▲	32	32	170	32	16	38					

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF A61	WGM Wiper A63	DR Double-side A65	HDR A66	Without chipbreaker A66	A121 -A122
	WGF Wiper A61	PM A63	DR Single-side A65			A122 -A123
	SF A62	DM A64	ER Double-side A65			A124
	EF A62	EM A64	ER Single-side A65			
	NF A62	NM A64	SNR Double-side A65			
	NGF A62		LR Single-side A65			
Tool holder type	PDPNN □□K/M/P15	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□
	PDPNN □□K/M/P15-3	DN□□1504□□	DN□□1504□□		DN□□1504□□	DN□□1504□□

General turning

External turning tools



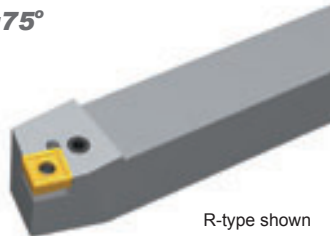
TURNING / General Turning Tools

External turning tools

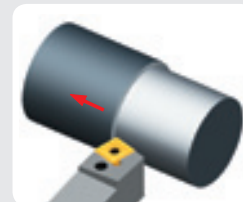
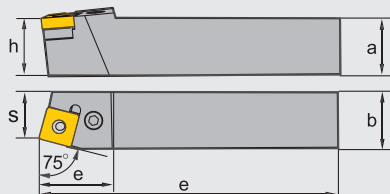
Corresponding tool holders of insert **SN** ☐ ☐ P-type clamping

PSBNR/L

Kr:75°



R-type shown



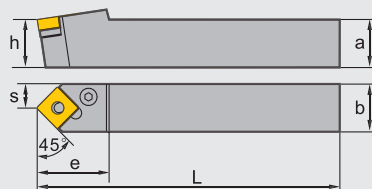
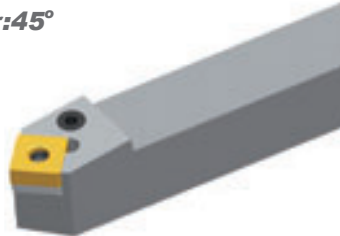
Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PSBNR/L	1616H09	▲	▲	16	16	100	16	13	21	LEM6×13.4A	S09AP	WH25L	L3	SP3
	2020K09	▲	▲	20	20	125	20	17	23					
	2020K12	▲	▲	20	20	125	20	17	28					
	2525M12	▲	▲	25	25	150	25	22	28	LEM8×21	S12AP	WH30L	L4	SP4
	3225P12	▲	△	32	25	170	32	22	28					
	3232P12	▲	▲	32	32	170	32	27	28					
	2525M15	▲	▲	25	25	150	25	22	35	LEM8×25	S15AP	WH30L	L5	SP5
	3232P15	▲	▲	32	32	170	32	27	35					
	3232P19	▲	▲	32	32	170	32	27	40	LEM10×27	S19AP	WH40L	L6	SP6
	4040R19	▲	▲	40	40	200	40	35	40					
	4040S2507	▲	▲	40	40	250	40	35	48	LEM12×36A	S25AP	WH50L	L8	SP8
4040S2509	▲	▲	40	40	250	40	35	48	S25AP-09					

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A67	PM  A68	DR Double-side  A70	HDR  A72	Without chipbreaker  A74	 A126
	EF  A67	DM  A68	DR Single-side  A70 -71	HPR  A72		 A127
	SF  A67	EM  A69	ER Double-side  A71			 A128
		NM  A69	ER Single-side  A71			
			SNR Double-side  A71			
			LR Single-side  A69			
Tool holder type	PSBNR/L□□H/K09	SN□□0903□□	SN□□0903□□		SN□□0903□□	
	PSBNR/L□□K/M/P12	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□
	PSBNR/L□□M/P15	SN□□1506□□	SN□□1506□□	SN□□1506□□	SN□□1506□□	SN□□1506□□
	PSBNR/L□□P/R19		SN□□1906□□	SN□□1906□□	SN□□1906□□	SN□□1906□□
	PSBNR/L□□S2507		SN□□2507□□	SN□□2507□□		
	PSBNR/L□□S2509		SN□□2509□□	SN□□2509□□		

Corresponding tool holders of insert **SN** ☐ ☐ P-type clamping**PSDNN****Kr:45°**

General turning

External turning tools

Type		Stock	Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
			a	b	L	h	s	e					
PSDNN	2020K12	▲	20	20	125	20	10	30	LEM8×21	S12AP	WH30L	L4	SP4
	2525M12	▲	25	25	150	25	12.5	30					
	3232P12	▲	32	32	170	32	16	40					
	2525M15	▲	25	25	150	25	12.5	40	LEM8×25	S15AP	WH30L	L5	SP5
	3232P15	▲	32	32	170	32	16	40					
	3232P19	▲	32	32	170	32	16	40	LEM10×27	S19AP	WH40L	L6	SP6
	4040R19	▲	40	40	200	40	20	40					

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A67	PM  A68	DR Double-side  A70	HDR  A72	Without chipbreaker  A74	 A126
	EF  A67	DM  A68	DR Single-side  A70 -71	HPR  A72		 A127
	SF  A67	EM  A69	ER Double-side  A71			 A128
		NM  A69	ER Single-side  A71			
			SNR Double-side  A71			
			LR Single-side  A69			
Tool holder type	PSDNN□□K/M/P12	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□
	PSDNN□□M/P15	SN□□1506□□	SN□□1506□□	SN□□1506□□	SN□□1506□□	
	PSDNN□□P/R19		SN□□1906□□	SN□□1906□□	SN□□1906□□	



TURNING / General Turning Tools

External turning tools

Corresponding tool holders of insert **SN** ☐ ☐ P-type clamping

PSKNR/L

Kr:75°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PSKNR/L	1616H09	▲	▲	16	16	100	16	20	17	LEM6×13.4A	S09AP	WH25L	L3	SP3
	2020K09	▲	△	20	20	125	20	25	20					
	2020K12	▲	▲	20	20	125	20	25	26	LEM8×21	S12AP	WH30L	L4	SP4
	2525M12	▲	▲	25	25	150	25	32	26					
	3232P12	▲	▲	32	32	170	32	40	26					
	2525M15	▲	▲	25	25	150	25	32	32	LEM8×25	S15AP	WH30L	L5	SP5
	3232P15	▲	▲	32	32	170	32	40	32					
	3232P19	▲	▲	32	32	170	32	40	36	LEM10×27	S19AP	WH40L	L6	SP6
4040R19	▲	▲	40	40	200	40	50	40						

▲Stock available

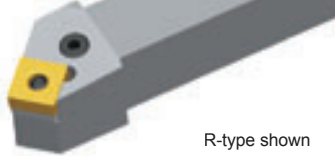
△Make-to-order

Applicable inserts

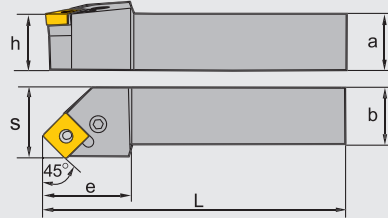
Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A67	PM  A68	DR Double-side  A70	HDR  A72	Without chipbreaker  A74	 A126
	EF  A67	DM  A68	DR Single-side  A70 -71	HPR  A72		 A127
	SF  A67	EM  A69	ER Double-side  A71			 A128
		NM  A69	ER Single-side  A71			
			SNR Double-side  A71			
			LR Single-side  A69			
Tool holder type	PSKNR/L□□H/K09	SN□□0903□□	SN□□0903□□		SN□□0903□□	
	PSKNR/L□□K/M/P12	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□
	PSKNR/L□□M/P15	SN□□1506□□	SN□□1506□□	SN□□1506□□	SN□□1506□□	
	PSKNR/L□□P/R19		SN□□1906□□	SN□□1906□□	SN□□1906□□	

Corresponding tool holders of insert **SN** ☐ ☐

P-type clamping

PSSNR/L**Kr:45°**

R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Shim	Wrench	Lever	Shim pin
	R	L	a	b	L	h	s	e						
PSSNR/L	1616H09	▲	▲	16	16	100	16	20	25	LEM6×13.4A	S09AP	WH25L	L3	SP3
	2020K09	△	△	20	20	125	20	25	25					
	2020K12	▲	▲	20	20	125	20	25	30					
	2525M12	▲	▲	25	25	150	25	32	30	LEM8×21	S12AP	WH30L	L4	SP4
	3232P12	▲	▲	32	32	170	32	40	40					
	2525M15	▲	▲	25	25	150	25	32	30	LEM8×25	S15AP	WH30L	L5	SP5
	3232P15	▲	▲	32	32	170	32	40	40					
	3232P19	▲	▲	32	32	170	32	40	40	LEM10×27	S19AP	WH40L	L6	SP6
	4040R19	▲	▲	40	40	200	40	50	40					
	4040S2507	▲	▲	40	40	250	40	50	50	LEM12×36A	S25AP	WH50L	L8	SP8
	4040S2509	▲	▲	40	40	250	40	50	50		S25AP-09			

▲Stock available △Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A67	PM  A68	DR Double-side  A70	HDR  A72	Without chipbreaker  A74	 A126
	EF  A67	DM  A68	DR Single-side  A70 -71	HPR  A72		 A127
	SF  A67	EM  A69	ER Double-side  A71			 A128
		NM  A69	ER Single-side  A71			
			SNR Double-side  A71			
			LR Single-side  A69			
Tool holder type	PSSNR/L□□H/K09	SN□□0903□□	SN□□0903□□	SN□□0903□□	SN□□0903□□	SN□□1204□□
	PSSNR/L□□K/M/P12	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□	SN□□1204□□
	PSSNR/L□□M/P15	SN□□1506□□	SN□□1506□□	SN□□1506□□	SN□□1506□□	SN□□1506□□
	PSSNR/L□□P/R19		SN□□1906□□	SN□□1906□□	SN□□1906□□	SN□□1906□□
	PSSNR/L□□S2507		SN□□2507□□	SN□□2507□□		
	PSSNR/L□□S2509		SN□□2509□□	SN□□2509□□		

General turning

External turning tools



TURNING / General Turning Tools

External turning tools

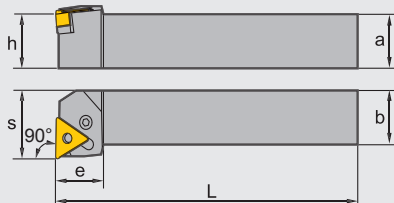
Corresponding tool holders of insert **TN** ☐ ☐ P-type clamping

PTFNR/L

Kr:90°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PTFNR/L	1616H16	△	▲	16	16	100	16	20	20	LEM6×13.4A	T16AP	WH25L	L3	SP3
	2020K16	▲	▲	20	20	125	20	25	20					
	2525M16	▲	▲	25	25	150	25	32	20					
	2525M22	▲	▲	25	25	150	25	32	25	LEM8×21	T22AP	WH30L	L4	SP4
	3232P22	▲	▲	32	32	170	32	40	25					
	3232P27	▲	▲	32	32	170	32	40	34	LEM8×25	T27AP	WH30L	L5	SP5
	4040S27	▲	▲	40	40	250	40	50	34					

▲Stock available

△Make-to-order

Applicable inserts

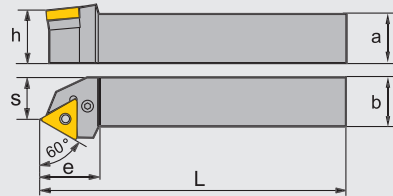
Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF Wiper A75	WGM Wiper A76	DR Double-side A78	HDR A79	Without chipbreaker A80	A130
	WGF Wiper A75	PM A76	DR Single-side A78			A130 -A131
	SF A75	DM A77	ER Double-side A78			A131
	EF A76	EM A77	SNR A78			
			LR Single-side A77			
Tool holder type	PTFNR/L□□H/K/M16	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□
	PTFNR/L□□M/P22	TN□□2204□□	TN□□2204□□	TN□□2204□□	TN□□2204□□	TN□□2204□□
	PTFNR/L□□P/S27		TN□□2706□□	TN□□2706□□	TN□□2706□□	

Corresponding tool holders of insert **TN** ☐ ☐

P-type clamping

PTTNR/L**Kr:60°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PTTNR/L	1616H16	▲	▲	16	16	100	16	13	25	LEM6×13.4A	T16AP	WH25L	L3	SP3
	2020K16	▲	▲	20	20	125	20	17	25					
	2525M16	△	△	25	25	150	25	22	25	LEM8×21	T22AP	WH30L	L4	SP4
	2525M22	▲	▲	25	25	150	20	22	32					

▲Stock available

△Make-to-order

General turning

External turning tools

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts	
Inserts shape	DF  A75	WGM Wiper  A76	DR Double-side  A78	HDR  A79	Without chipbreaker  A80	 A130	
	WGF Wiper  A75	PM  A76	DR Single-side  A78			 A130 -A131	
	SF  A75	DM  A77	ER Double-side  A78			 A131	
	EF  A76	EM  A77	SNR  A78				
			LR Single-side  A77				
Tool holder type	PTTNR/L□□H/K/M16	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□
	PTTNR/L□□M22	TN□□2204□□	TN□□2204□□	TN□□2204□□	TN□□2204□□		



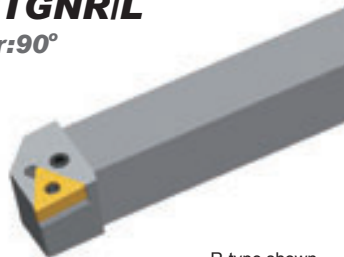
TURNING / General Turning Tools

External turning tools

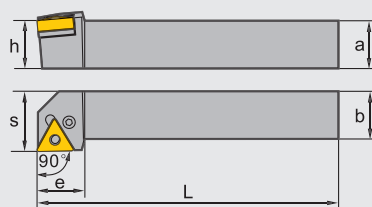
Corresponding tool holders of insert **TN** ☐ ☐ P-type clamping

PTGNR/L

Kr:90°



R-type shown



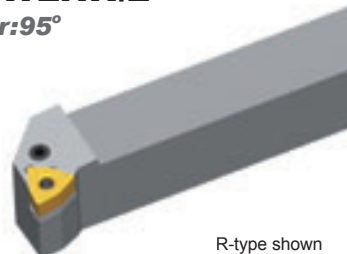
Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PTGNR/L	1616H16	▲	▲	16	16	100	16	20	20	LEM6×13.4A	T16AP	WH25L	L3	SP3
	2020K16	▲	▲	20	20	125	20	25	20					
	2525M16	▲	▲	25	25	150	25	32	20					
	3232P16	▲	▲	32	32	170	32	40	20					
	2525M22	▲	▲	25	25	150	25	32	28	LEM8×21	T22AP	WH30L	L4	SP4
	3232P22	▲	▲	32	32	170	32	40	28					
	3232P27	▲	▲	32	32	170	32	40	33	LEM8×25	T27AP	WH30L	L5	SP5
	4040S27	▲	▲	40	40	250	40	50	33					

▲Stock available

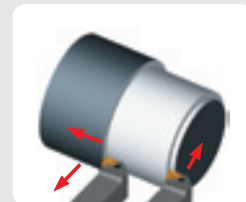
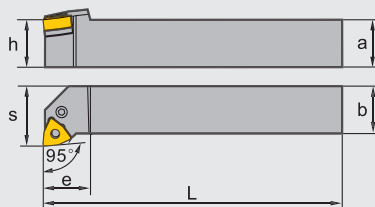
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF  A75	WGM Wiper  A76	DR Double-side  A78	HDR  A79	Without chipbreaker  A80	 A130
	WGF Wiper  A75	PM  A76	DR Single-side  A78			 A130-A131
	SF  A75	DM  A77	ER Double-side  A78			 A131
	EF  A76	EM  A77	SNR  A78			
				LR Single-side  A77		
Tool holder type	PTGNR/L□□H/K/M/P16	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□	TN□□1604□□
	PTGNR/L□□M/P22	TN□□2204□□	TN□□2204□□	TN□□2204□□	TN□□2204□□	
	PTGNR/L□□P/S27			TN□□2706□□	TN□□2706□□	

Corresponding tool holders of insert **WN** ☐ ☐ P-type clamping**PWLNRL****Kr:95°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Wrench	Lever	Shim pin
		R	L	a	b	L	h	s	e					
PWLNRL	1616H06	▲	▲	16	16	100	16	20	20	LEM6×13.4A	W06AP	WH25L	L3	SP3
	2020K06	▲	▲	20	20	125	20	25	20					
	2525M06	▲	▲	25	25	150	25	32	20					
	2020K08	▲	▲	20	20	125	20	25	26	LEM8×21	W08AP	WH30L	L4	SP4
	2525M08	▲	▲	25	25	150	25	32	26					
	3232P08	△	△	32	32	170	32	40	28					

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For cast iron machining	PCBN&PCD inserts
Inserts shape	DF Wiper A83	WGM Wiper A84	DR Double-side A86	Without chipbreaker A86	A136
	WGF Wiper A83	PM A85	SNR Double-side A86		A136 -A137
	SF A83	DM A85			A137
	EF A84	EM A85			
	NF A84	NM A86			
Tool holder type	PWLNRL/□□H/K/M06	WN□□0604□□	WN□□0604□□	WN□□0604□□	WN□□0604□□
	PWLNRL/□□K/M/P08	WN□□0804□□	WN□□0804□□	WN□□0804□□	WN□□0804□□

General turning

External turning tools



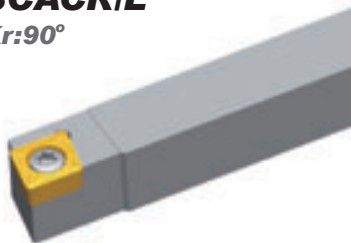
TURNING / General Turning Tools

External turning tools

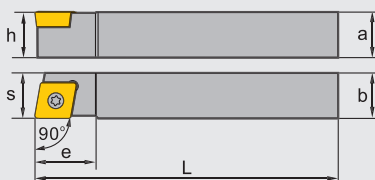
Corresponding tool holders of insert **CC** ☐ ☐ S-type clamping

SCACR/L

Kr:90°



R-type shown



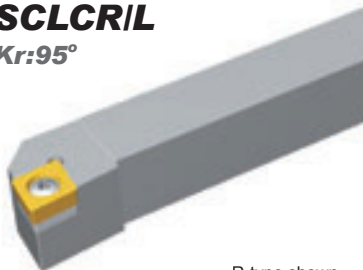
Type		Stock		Basic dimensions(mm)						Screw	Wrench
		R	L	a	b	L	h	s	e		
SCACR/L	0808F06	△	△	8	8	80	8	8	16	I60M2.5×6.5	WT071P
	1010H06	▲	△	10	10	100	10	10	16		
	1212H06	△	△	12	12	100	12	12	16		
	1212H09	▲	▲	12	12	100	12	12	20	I60M3.5×8	WT151P
	1616H09	△	△	16	16	100	16	16	20		

▲ Stock available

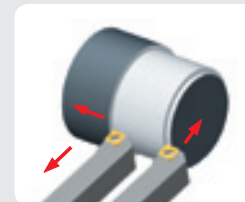
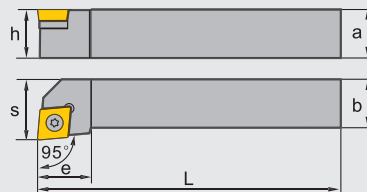
△ Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts	
Inserts shape	USF  A89	HF  A89	HM  A90	HR  A91	LH  A91-92	Without chipbreaker  A92	 A139	
	SF  A89	EF  A90	EM  A90		LC  A91		 A144	
Tool holder type	SCACR/L□□H/F06	CC□□0602□□	CC□□0602□□	CC□□0602□□	CC□□0602□□	CCGX 0602□□	CC□□ 0602□□	CC□□ 0602□□
	SCACR/L□□H09	CC□□09T3□□	CC□□09T3□□	CC□□09T3□□	CC□□09T3□□	CCGX 09T3□□	CC□□ 09T3□□	CC□□ 09T3□□

Corresponding tool holders of insert **CC** ☐ ☐ S-type clamping**SCLCR/L****Kr:95°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SCLCR/L	0808F06	▲	△	08	08	80	08	10	12	I60M2.5×6.5	---	---	WT07IP
	1010F06	▲	▲	10	10	80	10	12	12				
	1212H06	△	△	12	12	100	12	16	12				
	1616H06	△	△	16	16	100	16	20	16				
	1212H09	▲	▲	12	12	100	12	16	16	I60M3.5×8	---	---	WT15IP
	1616H09	▲	▲	16	16	100	16	20	16				
	2020K09	△	△	20	20	125	20	25	16				
	2525M09	△	△	25	25	150	25	32	16				
	2020K12	▲	▲	20	20	125	20	25	20	I60M4×11X	C12BS	SM6×10XA	WT15IP WH40L
	2525M12	▲	▲	25	25	150	25	32	20				
	3225M12	▲	▲	32	25	150	32	32	20				

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	USF  A89	HF  A89	HM  A90	HR  A91	LH  A91-92	Without chipbreaker  A92	 A139
	SF  A89	EF  A90	EM  A90		LC  A91		 A144
Tool holder type	SCLCR/L□□H/F06	CC□□ 0602□□	CC□□ 0602□□	CC□□ 0602□□	CC□□ 0602□□	CCGX 0602□□	CC□□ 0602□□
	SCLCR/L□□H/K/M09	CC□□ 09T3□□	CC□□ 09T3□□	CC□□ 09T3□□	CC□□ 09T3□□	CCGX 09T3□□	CC□□ 09T3□□
	SCLCR/L□□K/M12		CC□□ 1204□□	CC□□ 1204□□	CC□□ 1204□□	CCGX 1204□□	CC□□ 1204□□

General turning

External turning tools



TURNING / General Turning Tools

External turning tools

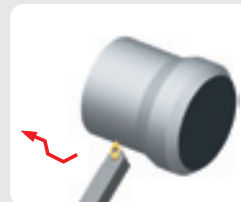
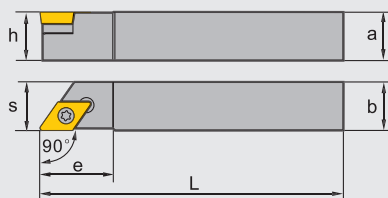
Corresponding tool holders of insert **DC** ☐ ☐ S-type clamping

SDACR/L

Kr:90°



R-type shown

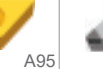


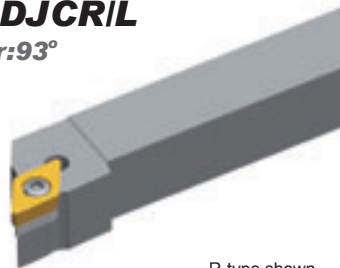
Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SDACR/L	0808K07	△	△	8	8	125	8	8	15	I60M2.5×6.5	---	---	WT07IP
	1010K07	△	△	10	10	125	10	10	15				
	1212K07	△	△	12	12	125	10	10	15				
	1212K11	△	△	12	12	125	12	12	22	I60M3.5×8	---	---	WT15IP
	1616K11	△	△	16	16	125	16	16	22	I60M3.5×12	D11BS	SM5×8.65XA	WT15IP WH35L
	2020K11	△	△	20	20	125	20	20	22				
	2525M11	△	△	25	25	150	25	25	22				

▲Stock available

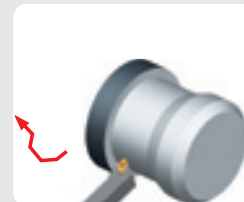
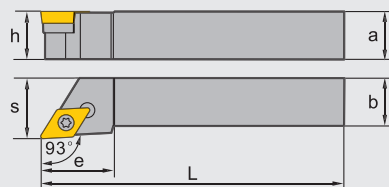
△Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	USF  A93	HF  A93	HM  A94	HR  A95	LH  A95	 A95 Without chipbreaker	 A140
	SF  A93	EF  A94	EM  A94		LC  A95		 A145
Tool holder type	SDACR/L□□K07	DC□□ 0702□□	DC□□ 0702□□	DC□□ 0702□□	DCGX 0702□□	DC□□0702□□	DC□□0702□□
	SDACR/L□□K/M11	DC□□ 11T3□□	DC□□ 11T3□□	DC□□ 11T3□□	DCGX 11T3□□	DC□□ 11T3□□	DC□□ 11T3□□

Corresponding tool holders of insert **DC** ☐ ☐ S-type clamping
SDJCR/L
Kr:93°


R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SDJCR/L	0808F07	△	△	8	8	80	8	10	15	I60M2.5×6.5	---	---	WT07IP
	1010F07	▲	△	10	10	80	10	12	15				
	1212H07	▲	▲	12	12	100	12	16	15				
	1414H07	△	△	14	14	100	14	18	15				
	1616H07	▲	▲	16	16	100	16	20	15				
	2020K07	△	△	20	20	125	20	25	28				
	2525M07	△	△	25	25	150	25	32	28				
	1212K11	△	△	12	12	125	12	16	22	I60M3.5×12	D11BS	SM5×8.65XA	WT15IP WH35L
	1616K11	▲	▲	16	16	125	16	20	22				
	2020K11	▲	▲	20	20	125	20	25	22				
	2525M11	▲	▲	25	25	150	25	32	22				

▲ Stock available △ Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	USF A93	HF A93	HM A94	HR A95	LH A95	Without chipbreaker A95	 A140
	SF A93	EF A94	EM A94		LC A95		 A145
Tool holder type	SDJCR/L□□F/H/K/M07	DC□□0702□□	DC□□0702□□	DC□□0702□□	DCGX 0702□□	DC□□0702□□	DC□□0702□□
	SDJCR/L□□K/M11	DC□□11T3□□	DC□□11T3□□	DC□□11T3□□	DCGX 11T3□□	DC□□11T3□□	DC□□11T3□□

General turning

External turning tools



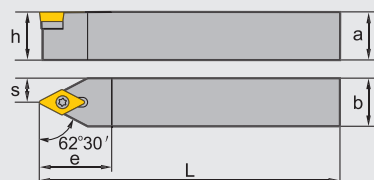
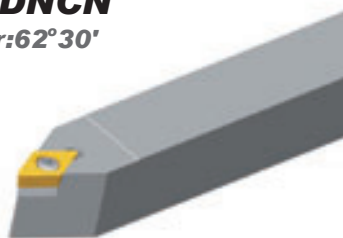
TURNING / General Turning Tools

External turning tools

Corresponding tool holders of insert **DC** ☐ ☐ S-type clamping

SDNCN

Kr:62°30'



Type	Stock	Basic dimensions(mm)							Screw	Shim	Shim screw	Wrench
		a	b	L	h	s	e					
SDNCN	0808F07	△	8	8	80	8	4	15	I60M2.5×6.5	---	---	WT07IP
	1010F07	▲	10	10	80	10	5	15				
	1212H07	▲	12	12	100	12	6	15				
	1616H07	△	16	16	100	16	8	15				
	2020K07	△	20	20	125	20	10	20				
	2525M07	△	25	25	150	25	12.5	20				
	1616K11	▲	16	16	125	16	8	22	I60M3.5×12	D11BS	SM5×8.65XA	WT15IP WH35L
	2020K11	▲	20	20	125	20	10	22				
	2525M11	▲	25	25	150	25	12.5	22				
	3225M11	△	32	25	150	32	12.5	22				
	3232P11	△	32	32	170	32	16	22				

▲ Stock available △ Make-to-order

Applicable inserts

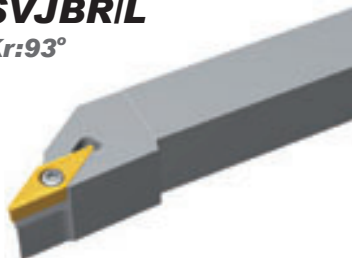
Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts
Inserts shape	USF  A93	HF  A93	HM  A94	HR  A95	LH  A95	Without chipbreaker  A95	 A140
	SF  A93	EF  A94	EM  A94		LC  A95		 A145
Tool holder type	SDNCN□□F/H/K/M07	DC□□0702□□	DC□□0702□□	DC□□0702□□	DCGX 0702□□	DC□□0702□□	DC□□0702□□
	SDNCN□□K/M/P11	DC□□11T3□□	DC□□11T3□□	DC□□11T3□□	DCGX 11T3□□	DC□□11T3□□	DC□□11T3□□

Corresponding tool holders of insert **VB** ☐ ☐

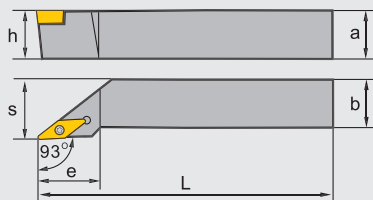
S-type clamping

SVJBR/L

Kr:93°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SVJBR/L	1212H11	▲	▲	12	12	100	12	16	25	I60M2.5×6.5	---	---	WT071P
	1616H11	▲	▲	16	16	100	16	20	25				
	2020K11	▲	▲	20	20	125	20	25	25				
	2525M11	▲	▲	25	25	150	25	32	25				
	1616H16	▲	▲	16	16	100	16	20	35	I60M3.5×12	V16BS	SM5×8.65XA	WT151P WH35L
	2020K16	▲	▲	20	20	125	20	25	35				
	2525M16	▲	▲	25	25	150	25	32	35				

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	PCBN&PCD inserts
Inserts shape	SF  A108	HF  A108	HM  A109	HR  A109	 A142
		NF  A108	EM  A109	SNR  A109	 A147
		EF  A108			
		NGF  A108			
Tool holder type	SVJBR/L□□H/K/M11	VB□□1103□□	VB□□1103□□	VB□□1103□□	
	SVJBR/L□□H/K/M16		VB□□1604□□	VB□□1604□□	VB□□1604□□

General turning

External turning tools



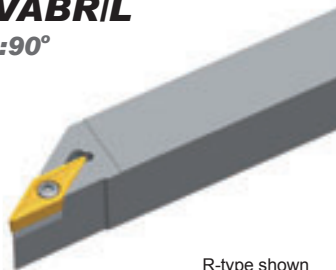
TURNING / General Turning Tools

External turning tools

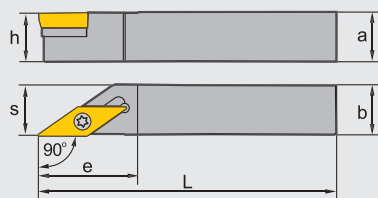
Corresponding tool holders of insert **VB** ☐ ☐ S-type clamping

SVABRIL

Kr:90°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SVABR/L	1010F11	△	△	10	10	80	10	10	25	I60M2.5×6.5	---	---	WT07IP
	1616H16	△	△	16	16	100	16	16	28				
	2020K16	△	△	20	20	125	20	20	28	I60M3.5×12	V16BS	SM5×8.65XA	WT15IP WH35L
	2525M16	△	△	25	25	150	25	25	28				

▲Stock available

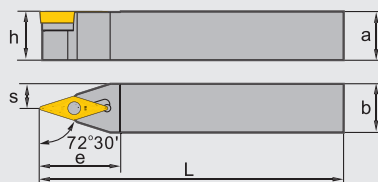
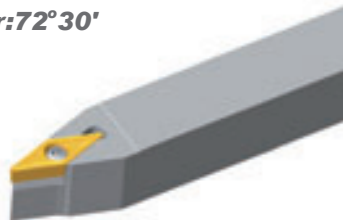
△Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	PCBN&PCD inserts
Inserts shape	SF  A108	HF  A108	HM  A109	HR  A109	 A142
		NF  A108	EM  A109	SNR  A109	 A147
		EF  A108			
		NGF  A108			
Tool holder type	SVABR/L□□F11	VB□□1103□□	VB□□1103□□	VB□□1103□□	
	SVABR/L□□H/K/M16		VB□□1604□□	VB□□1604□□	VB□□1604□□

Corresponding tool holders of insert **VB** ☐ ☐ S-type clamping**SVVBN**

Kr:72°30'



Type		Stock	Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
			a	b	L	h	s	e				
SVVBN	1212H11	▲	12	12	100	12	6	25	I60M2.5×6.5	---	---	WT07IP
	1616H11	▲	16	16	100	16	8	25				
	2020K11	▲	20	20	125	20	10	25				
	2525M11	△	25	25	150	25	12.5	35				
	1616H16	▲	16	16	100	16	8	35	I60M3.5×12	V16BS	SM5×8.65XA	WT15IP WH35L
	2020K16	▲	20	20	125	20	10	35				
	2525M16	▲	25	25	150	25	12.5	35				

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	PCBN&PCD inserts
Inserts shape	SF  A108	HF  A108	HM  A109	HR  A109	 A142
		NF  A108	EM  A109	SNR  A109	 A147
		EF  A108			
		NGF  A108			
Tool holder type	SVVBN□□H/K/M11	VB□□1103□□	VB□□1103□□	VB□□1103□□	
	SVVBN□□H/K/M16		VB□□1604□□	VB□□1604□□	VB□□1604□□

General turning

External turning tools



TURNING / General Turning Tools

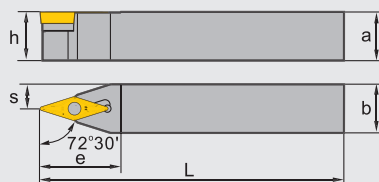
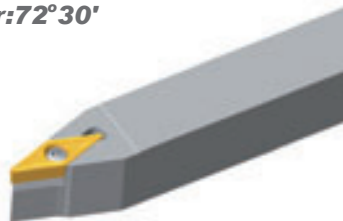
External turning tools

Corresponding tool holders of insert **VC** ☐ ☐

S-type clamping

SVVCN

Kr:72°30'



Type	Stock	Basic dimensions(mm)							Screw	Shim	Shim screw	Wrench
		a	b	L	h	s	e					
SVVCN	1212H11	▲	12	12	100	12	6	25	I60M2.5×6.5	---	---	WT071P
	1616H11	▲	16	16	100	16	8	27				
	2020K11	▲	20	20	125	20	10	30				
	2525M11	△	25	25	150	25	12.5	38				
	1616H16	▲	16	16	100	16	8	33	I60M3.5×12	V16BSC	SM5×8.65XA	WT151P WH35L
	2020K16	▲	20	20	125	20	10	33				
	2525M16	▲	25	25	150	25	12.5	38				

▲Stock available

△Make-to-order

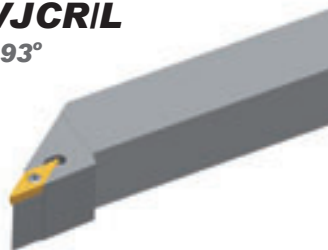
Applicable inserts

Application	For extra finishing	For finishing	For AI machining	PCBN&PCD inserts
Inserts shape	USF  A105	HF  A105	LH  A106	 A143
	SF  A105	NF  A105	LC  A106	 A148
		NGF  A105		
Tool holder type	SVVCN□□H/K/M11	VC□□1103□□	VC□□1103□□	VCGX1103□□
	SVVCN□□H/K/M16	VC□□1604□□	VCGX1604□□	VC□□1604□□

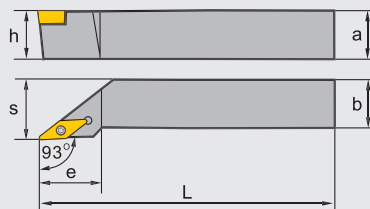


Corresponding tool holders of insert VC□□

S-type clamping

SVJCR/L**Kr:93°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SVJCR/L	1212H11	△	△	12	12	100	12	16	25	I60M2.5×6.5	---	---	WT07IP
	1616H11	▲	▲	16	16	100	16	20	25				
	2020K11	▲	▲	20	20	125	20	25	25				
	2525M11	▲	▲	25	25	150	25	32	35				
	1616H16	▲	▲	16	16	100	16	20	35	I60M3.5×12	V16BSC	SM5×8.65XA	WT15IP WH35L
	2020K16	▲	▲	20	20	125	20	25	35				
	2525M16	▲	▲	25	25	150	25	32	35				

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing		For finishing		For AI machining	PCBN&PCD inserts	
Inserts shape	USF		HF		LH		
		A105		A105		A106	A143
	SF		NF		LC		
		A105		A105		A106	A148
			NGF				
				A105			
Tool holder type	SVJCR/L□□H/K/M11		VC□□1103□□		VCGX1103□□		
	SVJCR/L□□H/K/M16		VC□□1604□□		VCGX1604□□		VC□□1604□□

General turning

External turning tools



General Turning Tools

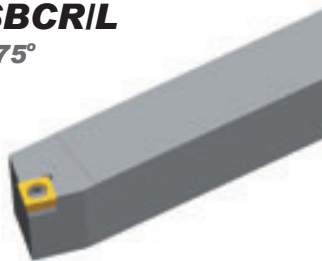
External turning tools

Corresponding tool holders of insert **SC** ☐ ☐

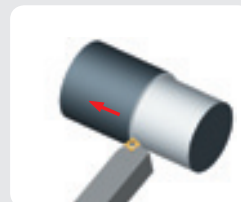
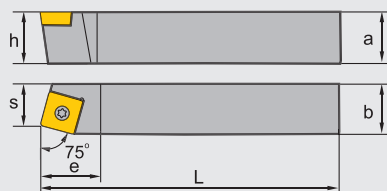
S-type clamping

SSBCR/L

Kr:75°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SSBCR/L	1212H09	▲	▲	12	12	100	12	9	16	I60M3.5×8	---	---	WT15IP
	1616H09	▲	▲	16	16	100	16	13	16				
	2020K09	△	△	20	20	125	20	17	20	I60M3.5×12	S09BS	SM5×8.65XA	WT15IP WH35L
	2525M09	△	△	25	25	150	25	22	20				
	2020K12	▲	▲	20	20	125	20	17	25	I60M4×11X	S12BS	SM6×10XA	WT15IP WH40L
	2525M12	△	△	25	25	150	25	22	25				

▲ Stock available

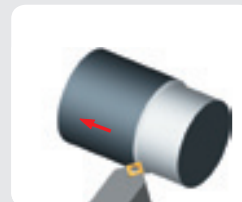
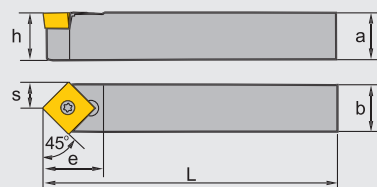
△ Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining
Inserts shape	HF  A98	HM  A98	HR  A99	LH  A99	Without chipbreaker  A99
	EF  A98	EM  A98		LC  A99	
Tool holder type	SSBCR/L□□H/K/M09	SC□□09T3□□	SC□□09T3□□	SC□□09T3□□	SCGX09T3□□
	SSBCR/L□□K/M12		SC□□1204□□	SC□□1204□□	SCGX1204□□

Corresponding tool holders of insert **SC** ☐ ☐

S-type clamping

SSDCN**Kr:45°**General
turning

External turning tools

Type	Stock	Basic dimensions(mm)							Screw	Shim	Shim screw	Wrench
		a	b	L	h	s	e					
SSDCN	1212H09	▲	12	12	100	12	6	16	I60M3.5×8	---	---	WT15IP
	1616H09	▲	16	16	100	16	8	16				
	2020K09	△	20	20	125	20	10	20	I60M3.5×12	S09BS	SM5×8.65XA	WT15IP WH35L
	2525M09	△	25	25	150	25	12.5	20				
	2525M12	▲	25	25	150	25	12.5	22	I60M4×11	S12BS	SM6×10XA	WT15IP WH40L

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For AI machining	For cast iron machining
Inserts shape	HF  A98	HM  A98	HR  A99	LH  A99	Without chipbreaker  A99
	EF  A98	EM  A98		LC  A99	
Tool holder type	SSDCN□□H/K/M09	SC□□09T3□□	SC□□09T3□□	SCGX09T3□□	SC□□09T3□□
	SSDCN□□M12		SC□□1204□□	SCGX1204□□	SC□□1204□□



TURNING / General Turning Tools

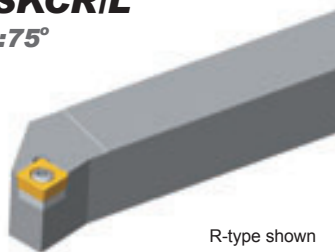
External turning tools

Corresponding tool holders of insert **SC** ☐ ☐

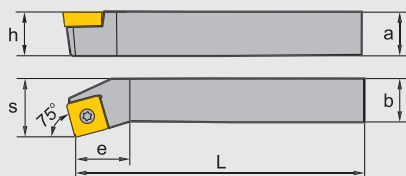
S-type clamping

SSKCR/L

Kr:75°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SSKCR/L	1212H09	△	△	12	12	100	12	16	16	I60M3.5×8	---	---	WT15IP
	1616H09	▲	△	16	16	100	16	20	16	I60M3.5×12	S09BS	SM5×8.65XA	WT15IP WH35L
	2020K09	△	△	20	20	125	20	25	20				
	2525M09	△	△	25	25	150	25	32	20				
	2020K12	△	△	20	20	125	20	25	22	I60M4×11X	S12BS	SM6×10XA	WT15IP WH40L
	2525M12	△	△	25	25	150	25	32	22				

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining
Inserts shape	HF  A98	HM  A98	HR  A99	LH  A99	Without chipbreaker  A99
	EF  A98	EM  A98		LC  A99	
Tool holder type	SSKCR/L□□H/K/M09	SC□□09T3□□	SC□□09T3□□	SCGX09T3□□	SC□□09T3□□
	SSKCR/L□□K/M12		SC□□1204□□	SCGX1204□□	SC□□1204□□

Corresponding tool holders of insert **SC** ☐ ☐

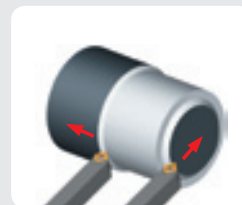
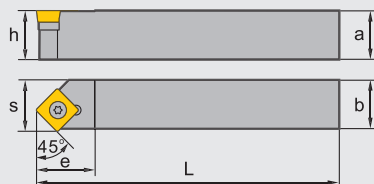
S-type clamping

SSSCR/L

Kr:45°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
SSSCR/L	1212H09	△	△	12	12	100	12	16	16	I60M3.5×8	---	---	WT15IP
	1616H09	▲	▲	16	16	100	16	17	16	I60M3.5×12	S09BS	SM5×8.65XA	WT15IP WH35L
	2020K09	△	△	20	20	125	20	21	20				
	2525M09	△	△	25	25	150	25	32	20				
	2020K12	▲	▲	20	20	125	20	21	24	I60M4×11X	S12BS	SM6×10XA	WT15IP WH40L
	2525M12	△	△	25	25	150	25	32	22				

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining
Inserts shape	HF  A98	HM  A98	HR  A99	LH  A99	Without chipbreaker  A99
	EF  A98	EM  A98		LC  A99	
Tool holder type	SSSCR/L□□H/K/M09	SC□□09T3□□	SC□□09T3□□	SCGX09T3□□	SC□□09T3□□
	SSSCR/L□□K/M12		SC□□1204□□	SCGX1204□□	SC□□1204□□

General turning

External turning tools



TURNING / General Turning Tools

External turning tools

Corresponding tool holders of insert **TC** ☐ ☐

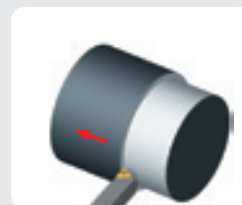
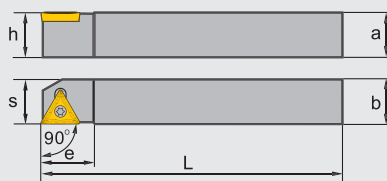
S-type clamping

STACR/L

Kr:90°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Wrench	---	---
		R	L	a	b	L	h	s	e			---	---
STACR/L	1010K11	△	△	10	10	100	10	10	12	I60M2.5×6.5	WT07IP	---	---
	1212F11	△	△	12	12	100	12	12	14			---	---
	1616K11	△	△	16	16	100	16	16	16			---	---

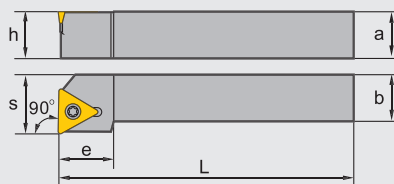
▲Stock available △Make-to-order

STFCR/L

Kr:90°



R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
STFCR/L	1212H11	▲	▲	12	12	100	12	16	14	I60M2.5×6.5	---	---	WT07IP
	1616H11	▲	▲	16	16	100	16	20	14				
	2020K11	△	△	20	20	125	20	25	20				
	2525M11	△	△	25	25	150	25	32	20				
	1616K16	▲	▲	16	16	125	16	20	20	I60M3.5×12	T16BS	SM5×8.65XA	WT15IP WH35L
	2020K16	▲	▲	20	20	125	20	25	20				
	2525M16	△	△	25	25	150	25	32	25				

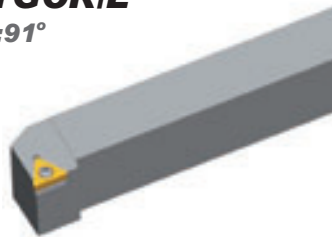
▲Stock available △Make-to-order

Applicable inserts

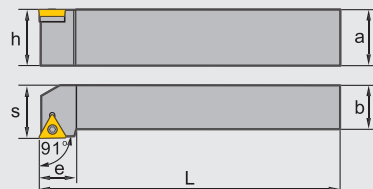
Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining Without chipbreaker	PCBN&PCD inserts
Inserts shape	HF A101	HM A103	HR A103	LH A104	A104	A141
	EF A102	EM A102		LC A103		
Tool holder type	STACR/L□□K/F11	TC□□1102□□	TC□□1102□□	TC□□1102□□	TCGX1102□□	TC□□1102□□
	STFCR/L□□H/K/M11	TC□□1102□□	TC□□1102□□	TC□□1102□□	TCGX1102□□	TC□□1102□□
	STFCR/L□□K/M16	TC□□16T3□□	TC□□16T3□□	TC□□16T3□□	TCGX16T3□□	TC□□16T3□□

Corresponding tool holders of insert **TC** ☐ ☐

S-type clamping

STGCR/L**Kr:91°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
STGCR/L	0808F09	▲	△	08	08	80	8	10	12	I60M2.2×5.5	---	---	WT06IP
	1010F09	▲	▲	10	10	80	10	12	12				
	1212H09	△	△	12	12	100	12	16	12				
	1212H11	▲	▲	12	12	100	12	16	16	I60M2.5×6.5	---	---	WT07IP
	1616H11	▲	▲	16	16	100	16	20	16				
	2020K11	△	△	20	20	125	20	25	20				
	2525M11	△	△	25	25	150	25	32	20	I60M3.5×12	T16BS	SM5×8.65XA	WT15IP WH35L
	1616K16	△	△	16	16	125	16	20	20				
	2020K16	▲	▲	20	20	125	20	25	21				
	2525M16	▲	▲	25	25	150	25	32	21				

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts	
Inserts shape	USF  A100	HF  A101	HM  A103	HR  A103	LH  A104	Without chipbreaker  A104	 A141	
	SF  A100	EF  A102	EM  A102		LC  A103			
Tool holder type	STGCR/L□□F/H09	TC□□0902□□	TC□□0902□□	TC□□0902□□	TC□□0902□□	TCGX0902□□	TC□□0902□□	TC□□0902□□
	STGCR/L□□H/K/M11		TC□□1102□□	TC□□1102□□	TC□□1102□□	TCGX1102□□	TC□□1102□□	TC□□1102□□
	STGCR/L□□K/M16		TC□□16T3□□	TC□□16T3□□	TC□□16T3□□	TCGX16T3□□	TC□□16T3□□	

General turning

External turning tools



TURNING / General Turning Tools

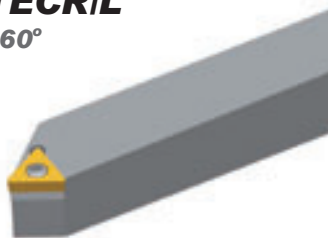
External turning tools

Corresponding tool holders of insert **TC** ☐ ☐

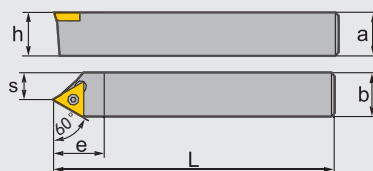
S-type clamping

STECR/L

Kr:60°



R-type shown



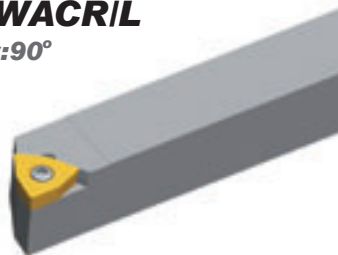
Type		Stock		Basic dimensions(mm)						Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s	e				
STECR/L	1616H11	△	△	16	16	100	16	10.5	16	I60M2.5×6.5	---	---	WT07IP
	2020K11	△	△	20	20	125	20	14.5	20				
	2020K16	△	△	20	20	125	20	12.5	20	I60M3.5×12	T16BS	SM5×8.65XA	WT15IP
	2525M16	△	△	25	25	150	25	17.0	25				

▲Stock available

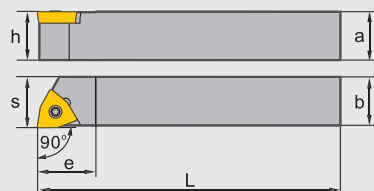
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN&PCD inserts	
Inserts shape	HF  A101	HM  A103	HR  A103	LH  A104	Without chipbreaker  A104	 A14	
	EF  A102	EM  A102		LC  A103			
Tool holder type	STECR/L□□H/K11	TC□□1102□□	TC□□1102□□	TC□□1102□□	TCGX1102□□	TC□□1102□□	TC□□1102□□
	STECR/L□□K/M16	TC□□16T3□□	TC□□16T3□□	TC□□16T3□□	TCGX16T3□□	TC□□16T3□□	

Corresponding tool holders of insert WC ☐ ☐ S-type clamping**SWACR/L****Kr:90°**

R-type shown



Type		Stock		Basic dimensions(mm)						Screw	Wrench	—	—
		R	L	a	b	L	h	s	e			—	—
SWACR/L	1010E04	△	△	10	10	70	10	10	10	I60M2.5×6.5	WT07IP	---	---
	1212F04	▲	△	12	12	80	12	12	14			---	---
	1616H06	▲	△	16	16	100	16	16	20	I60M3×7	WT10IP	---	---
	2020K08	▲	▲	20	20	125	20	20	24	I60M3.5×12	WT15IP	---	---

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	
Inserts shape	53	
Tool holder type	SWACR/L□□E/F04	WC□X0402□□
	SWACR/L□□H06	WC□X06T3□□
	SWACR/L□□K08	WC□X0804□□

A107



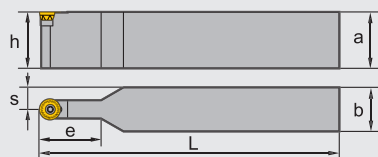
General Turning Tools

External turning tools

Corresponding tool holders of insert **RC** ☐ ☐

S-type clamping

SRDCN



Type	Stock	Basic dimensions(mm)							Screw	Shim	Shim screw	Wrench
		a	b	L	h	s	e					
SRDCN	1616H08	△	16	16	100	16	8	16	I60M3×7	---	---	WT10IP
	2020K08	△	20	20	125	20	10	16				
	2525M08	△	25	25	150	25	12.5	16				
	2020K10	△	20	20	125	20	10	20	I60M3.5×10	---	---	WT15IP
	2525M10	▲	25	25	150	25	12.5	20				
	2525M12	▲	25	25	150	25	12.5	35	I60M3.5×12	R12BS	SM5×8.65XA	WT15IP WH35L
	3232P12	△	32	32	170	32	16	35				
	3225P16	▲	32	25	170	32	12.5	35	I60M4×15X	R16BS	SM6×10XA	WT15IP WH40L
	4040S16	△	40	40	250	40	20	40				

▲ Stock available

△ Make-to-order

Applicable inserts

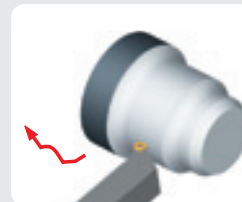
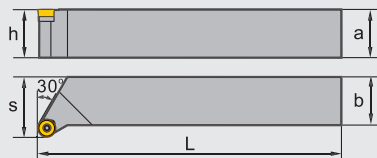
Application	For semi-finishing	For roughing	For AI machining
Inserts shape	 A96	 A96	LH  A96
Tool holder type	SRDCN□□K/M/H08	RCMT0803MO	RCMT0803MO
	SRDCN□□K/M10	RCMT10T3MO	RCMT10T3MO
	SRDCN□□M/P12	RCMT1204MO	RCMT1204MO
	SRDCN□□P/S16	RCMT1606MO	RCMT1606MO

Corresponding tool holders of insert **RC** ☐ ☐

S-type clamping

SRGCR/L

R-type shown



Type		Stock		Basic dimensions(mm)					Screw	Shim	Shim screw	Wrench
		R	L	a	b	L	h	s				
SRGCR/L	1616H08	△	△	16	16	100	16	20	I60M3×7	---	---	WT10IP
	2020K08	△	△	20	20	125	20	25				
	2525M08	△	△	25	25	150	25	32				
	1616H10	△	△	16	16	100	16	20	I60M3.5×10	---	---	WT15IP
	2020K10	▲	▲	20	20	125	20	25				
	2525M10	▲	▲	25	25	150	25	32				
	2020K12	▲	△	20	20	125	20	27	I60M3.5×12	R12BS	SM5×8.65XA	WT15IP WH35L
	2525M12	▲	▲	25	25	150	25	32				
	3232P16	▲	△	32	32	170	32	40				
									I60M4×15X	R16BS	SM6×10XA	WT15IP WH40L

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For semi-finishing	For roughing	For AI machining
Inserts shape	 A96	 A96	LH  A96
Tool holder type	SRGCR/L□□H/K/M08	RCMT0803MO	RCMT0803MO
	SRGCR/L□□H/K/M10	RCMT10T3MO	RCMT10T3MO
	SRGCR/L□□K/M12	RCMT1204MO	RCMT1204MO
	SRGCR/L□□P16	RCMT1606MO	RCMT1606MO

General turning

External turning tools



TURNING / General Turning Tools

External turning tools

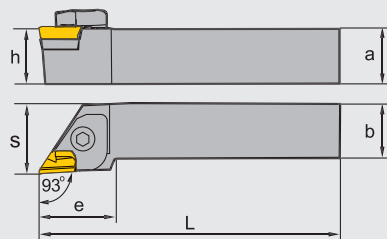
Corresponding tool holders of insert **KNUX** ☐ ☐ C-type clamping

CKJNR/L

Kr:93°



R-type shown



Type		Stock	Basic dimensions(mm)						Applicable inserts	Clamp	Clamp screw	Spring	Clamping stud	Shim	Shim screw	Wrench
			a	b	L	h	s	e								
CKJNR	2525M16	△	25	25	150	25	32	32	KNUX1604□□R A87	C6R1T	CM6×25A	SPR1 SPR2	P0515	K16CC	SM3×10B	WH20L WH40L
	3232P16	△	32	32	170	32	40	32								
	4040R16	△	40	40	200	40	50	32								
CKJNL	2525M16	△	25	25	150	25	32	32	KNUX1604□□L A87	C6L1T	CM6×25A	SPR1 SPR2	P0515	K16CCL	SM3×10B	WH20L WH40L
	3232P16	△	32	32	170	32	40	32								
	4040R16	△	40	40	200	40	50	32								

▲Stock available

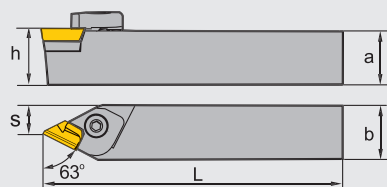
△Make-to-order

CKNNR/L

Kr:63°



R-type shown



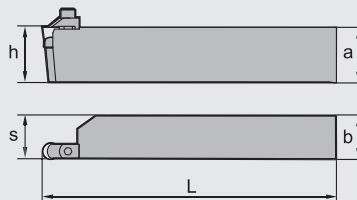
Type		Stock	Basic dimensions(mm)						Applicable inserts	Clamp	Clamp screw	Spring	Clamping stud	Shim	Shim screw	Wrench
			a	b	L	h	s									
CKNNR	2525M16	△	25	25	150	25	14.3		KNUX1604□□R A87	C6R1T	CM6×25A	SPR1 SPR2	P0515	K16CC	SM3×10B	WH20L WH40L
	3232P16	△	32	32	170	32	16.8									
	4040R16	△	40	40	200	40	19.3									
CKNNL	2525M16	△	25	25	150	25	14.3		KNUX1604□□L A87	C6L1T	CM6×25A	SPR1 SPR2	P0515	K16CCL	SM3×10B	WH20L WH40L
	3232P16	△	32	32	170	32	16.8									
	4040R16	△	40	40	200	40	19.3									

▲Stock available

△Make-to-order

Corresponding tool holders of insert **RC/P** ☐ ☐ C-type clamping**CRDCR/L**
CRDPR/L

R-type shown



Type		Stock		Basic dimensions(mm)						Applicable inserts	Clamp	Clamping screw	Wrench	Shim
		R	L	a	b	L	h	s	Ar					
CRDCR/L	2525M09V-19	△	△	25	25	150	25	25.5	19	RCGN0907 ☐ ☐ A152	C3RH	M5*16(GB70-85)	WH40L	RC09XC
	3232P09V-28	△	△	32	32	170	32	32.5	28					
	4040S09V-38	△	△	40	40	250	40	40.5	38					
	2525M12V-19	△	△	25	25	150	25	25.5	19	RCGN1207 ☐ ☐ A152	C4RH	M6*20(GB70-85)	WH50L	RC12XC
	3232P12V-28	△	△	32	32	170	32	32.5	28					
	4040S12V-38	△	△	40	40	250	40	40.5	38					
CRDPR/L	2525M09V-19	△	△	25	25	150	25	25.5	19	RPGN0907 ☐ ☐ A152	C3RH	M5*16(GB70-85)	WH40L	RP09XC
	3232P09V-28	△	△	32	32	170	32	32.5	28					
	4040S09V-38	△	△	40	40	250	40	40.5	38					
	2525M12V-19	△	△	25	25	150	25	25.5	19	RPGN1207 ☐ ☐ A152	C4RH	M6*20(GB70-85)	WH50L	RP12XC
	3232P12V-28	△	△	32	32	170	32	32.5	28					
	4040S12V-38	△	△	40	40	250	40	40.5	38					

▲Stock available

△Make-to-order

General turning

External turning tools for ceramic inserts



TURNING General Turning Tools

How to select internal turning tools

How to select internal turning tools

Explanation of internal turning tools detailed table

- Listed according to clamping types.

Approach angle of tools

Tools type

The first 4 letters in the type description stands for tool shape and applicatio.

Insert type

Specification chart

Application chart

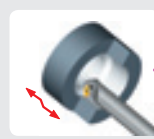
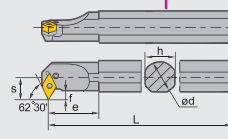
The arrow shows suitable applications such as internal turning, profiling and end turning, etc.

Corresponding tool holders of insert **DN** ☐ ☐ P-type clamping

PDPNR/L
Kr:62° 30°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S32T-PDPNR/L15-3	▲	▲	40	32	30	300	22	LEM8×21	WH30L	L4	D15AP	SP4
S40U-PDPNR/L15-3	▲	▲	50	40	38	350	27					
S32T-PDPNR/L15	△	△	40	32	30	300	22	LEM8×21	WH30L	L4B	D15AP	SP4
S40U-PDPNR/L15	△	△	50	40	38	350	27					

▲ Stock available △ Make-to-order

Applicable inserts		For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	DF	WGM	DR	HDR			
	WGF	PM	DR				
	SF	DM	ER				
	EF	EM	ER				
	NF	NM	SNR				
	NGF		LR				
Tool holder type	□□-PDPNR/L15-3	DN□□1504□□	DN□□1504□□	DN□□1504□□		DN□□1504□□	DN□□1504□□
	□□-PDPNR/L15	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□

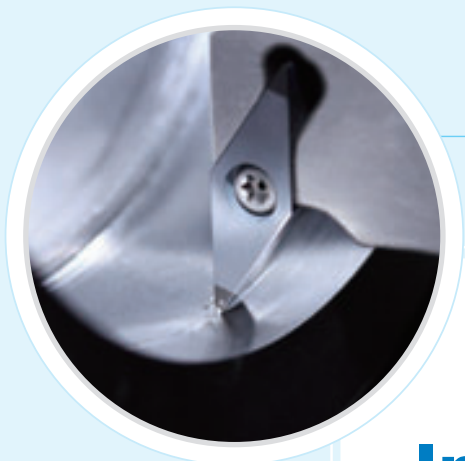
Tool holders with oil hole

Products specification

Including product description, stock (left and right hand), basic dimensions and applicable spare parts.

Applicable inserts

Including applications of inserts, reference page, insert shape and corresponding tool holders.



TURNING



Internal turning >>> tools

Internal turning tools overview • A209

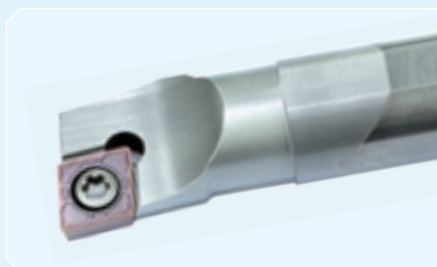
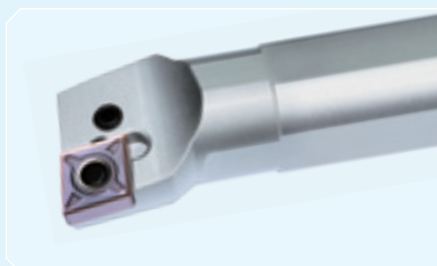
Internal turning tools code key • A210-A211

Detailed table of internal turning tools • A212-A240

Internal turning Tools by P-type clamping • A212-A217

Internal turning tools by S-type clamping • A218-A233

Damping internal turning tools and their features • A234-A240



Internal turning tools





Name	Feature	62°30'	75°	90°	90°	93°	93°	95°	95°	107°30'
P-type internal turning tools	- The minimum machining diameter is 20mm. - Applicable inserts are economic negative inserts. - Hole clamping									
		PDPN A213	PSKN A215	PTFN A216			PDUN A214		PCLN A212	
S-type internal turning tools	- The minimum machining diameter is 10mm. - Applicable inserts are 5°, 7° and 11° positive inserts. - Screw clamping.		SSKC A222	SCFC A232	STFC A223	STUP A231	SDUC A220	SDZC A221		SDQC A219
							SDUP A230		SCLC A218	SDQP A229
							SVUC A225		 A233	SVQB A226
							SVUB A227		SCLP A228	SVQC A224
Damping internal turning tools	- The minimum diameter can be machined is 12mm. - Applicable inserts are 7°, 11° positive inserts. - Good Performance on reducing shake.					STUP A238	SDUP A237		SCLP A235	SDQP A236
							SVUC A240			SVQC A239

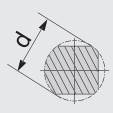
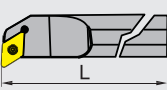
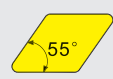
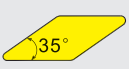


TURNING / General Turning Tools

Internal turning tools code key

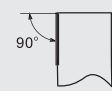
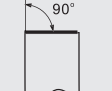
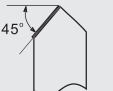
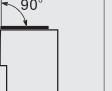
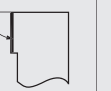
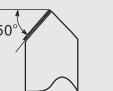
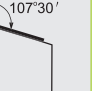
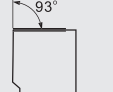
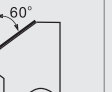
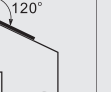
General turning

Internal turning tools code key

Type of tool holder		Diameter of tool holder	Length of tool holder	Clamping system	Inserts shape	
Code	Type					
A	Steel tool holder with oil-hole			 P-Hole clamping	 C	 D
C	Cemented carbide tool holder	Code Diameter	Code Length	 M-Top and hole clamping	 R	 S
E	Cemented carbide tool holder with oil hole	08 08 10 10 16 16 20 20 25 25 32 32 40 40 50 50	H 100 K 125 M 150 N 160 Q 180 R 200 S 250 T 300 U 350 V 400	 S-Screw on	 T	 V
S	Steel tool holder			 C-Top clamping	 W	
X	Special inserts applied					

S 16 R - S D U

Tool holder style and approach angle

A	B	C	D	E	F	G	H
							
J	K	L	M	N	O	P	Q
							
R	S	T	U	V	W	X	
							



Clearance angle of insert	
	B
	C
	D
	E
	N
	P

Cutting direction	
	L - Left hand
	R - Right hand

Manufacture option	
D	Increase offset f size+1.0mm
E	Increase offset f size+2.0mm
R	Round shank
W	Wedge clamping
X	Back boring

C**R****07**

General turning

Internal turning tools code key

Length of cutting edge

Inserts shape	C	D	R	S	T	V	W
Inscribed circle	Length of cutting edge(mm)						
5.556	--	--	--	--	09	---	--
6.350	06	07	--	--	11	---	--
9.525	09	11	09	09	16	16	06
12.700	12	15	12	12	22	22	08
15.875	16	19	15	15	27	---	--
19.050	19	--	19	19	33	---	--
25.400	25	--	25	25	44	---	--



TURNING / General Turning Tools

Internal turning tools

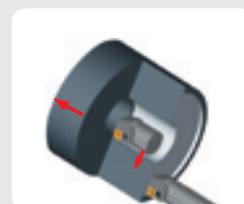
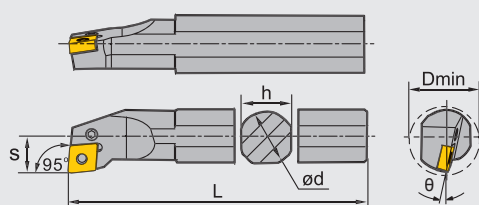
Corresponding tool holders of insert **CN** ☐ ☐ P-type clamping

PCLNR/L

Kr:95°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S16Q-PCLNR/L09	△	△	20	16	15	180	10					
S20R-PCLNR/L09	△	△	25	20	19	200	12.5	LEM5×12	WH20L	L3C	---	---
S25S-PCLNR/L09	△	△	32	25	24	250	15					
S25S-PCLNR/L12	△	△	32	25	24	250	16	LEM6×14	WH25L	L4A	---	---
S32T-PCLNR/L12	▲	▲	40	32	30	300	21					
S40U-PCLNR/L12	▲	▲	50	40	38	350	26	LEM8×21	WH30L	L4	C12APB	SP4
S50V-PCLNR/L12	▲	▲	63	50	48	400	31					
S50V-PCLNR/L16	△	△	63	50	48	400	31	LEM8×25	WH30L	L5	C16AP	SP5
S50S-PCLNR/L19	△	△	63	50	47	250	35					
S50W-PCLNR/L19	▲	▲	63	50	47	450	35	LEM10×27	WH40L	L6	C19AP	SP6

▲Stock available

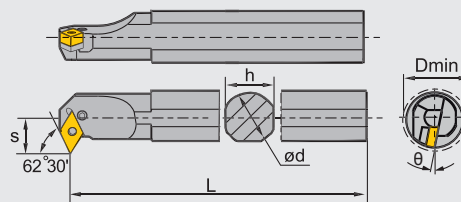
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	DF  A54	WGM Wiper  A55	DR Double-side  A58	HDR  A59	 A59 Without chipbreaker	 A118
	WGF Wiper  A54	PM  A55	DR Single-side  A58	HPR  A59		 A118 -A119
	SF  A54	DM  A56	ER Double-side  A58			 A119
	EF  A54	EM  A56	ER Single-side  A58			
	NF  A55	NM  A57	SNR Double-side  A58			
			LR Single-side  A57			
Tool holder type	□□-PCLNR/L09		CN□□0903□□	CN□□0903□□		
	□□-PCLNR/L12		CN□□1204□□	CN□□1204□□	CN□□1204□□	CN□□1204□□
	□□-PCLNR/L16		CN□□1606□□	CN□□1606□□	CN□□1606□□	CN□□1606□□
	□□-PCLNR/L19		CN□□1906□□	CN□□1906□□	CN□□1906□□	CN□□1906□□

Corresponding tool holders of insert **DN** ☐ ☐ P-type clamping**PDPNR/L****Kr:62°30'**

R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S32T-PDPNR/L15-3	▲	▲	40	32	30	300	22					
S40U-PDPNR/L15-3	▲	▲	50	40	38	350	27					
S32T-PDPNR/L15	△	△	40	32	30	300	22					
S40U-PDPNR/L15	△	△	50	40	38	350	27					

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	DF  A61	WGM Wiper  A63	DR Double-side  A65	HDR  A66	Without chipbreaker  A66	 A121-A122
	WGF Wiper  A61	PM  A63	DR Single-side  A65			 A122-A123
	SF  A62	DM  A64	ER Double-side  A65			 A123
	EF  A62	EM  A64	ER Single-side  A65			
	NF  A62	NM  A64	SNR Double-side  A65			
	NGF  A62		LR Single-side  A65			
Tool holder type	☐ -PDPNR/L15-3	DN□□1504□□	DN□□1504□□	DN□□1504□□	DN□□1504□□	DN□□1504□□
	☐ -PDPNR/L15	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□	DN□□1506□□

General turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

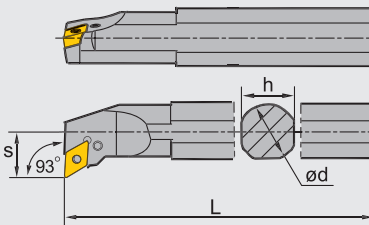
Corresponding tool holders of insert **DN** ☐ ☐ P-type clamping

PDUNR/L

Kr:93°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S20R-PDUNR/L11	△	△	25	20	19	200	13	LEM5×12	WH20L	L3D	---	---
S25S-PDUNR/L11	△	△	32	25	24	250	17					
S32T-PDUNR/L15	△	△	40	32	30	300	23	LEM8×21	WH30L	L4B	D15AP	SP4
S32T-PDUNR/L15-3	△	△	40	32	30	300	23	LEM8×21	WH30L	L4	D15AP	SP4
S40U-PDUNR/L15	△	△	50	40	38	350	27	LEM8×21	WH30L	L4B	D15AP	SP4
S40U-PDUNR/L15-3	▲	▲	50	40	38	350	27	LEM8×21	WH30L	L4	D15AP	SP4

▲Stock available

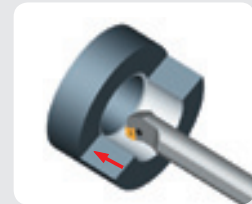
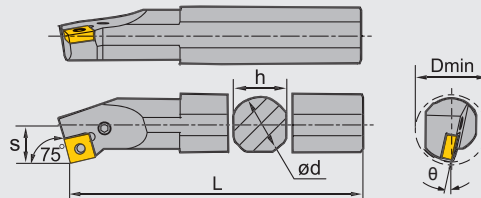
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	DF A61	WGM Wiper A63	DR Double-side A65	HDR A66	Without chipbreaker A66	 A121 -A122
	WGF Wiper A61	PM A63	DR Single-side A65			 A122 -A123
	SF A62	DM A64	ER Double-side A65			 A123
	EF A62	EM A64	ER Single-side A65			
	NF A62	NM A64	SNR Double-side A65			
	NGF A62		LR Single-side A65			
Tool holder type	☐ -PDUNR/L11	DN ☐ 1104 ☐	DN ☐ 1104 ☐	DN ☐ 1104 ☐		
	☐ -PDUNR/L15-3	DN ☐ 1504 ☐	DN ☐ 1504 ☐	DN ☐ 1504 ☐	DN ☐ 1504 ☐	DN ☐ 1504 ☐
	☐ -PDUNR/L15	DN ☐ 1506 ☐	DN ☐ 1506 ☐	DN ☐ 1506 ☐	DN ☐ 1506 ☐	DN ☐ 1506 ☐

Corresponding tool holders of insert **SN** ☐ ☐ P-type clamping**PSKNR/L****Kr:75°**

R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S25S-PSKNR/L12	▲	▲	32	25	24	250	17	LEM6×14	WH25L	L4A	---	---
S32T-PSKNR/L12	△	△	41	32	30	300	22	LEM8×21	WH30L	L4	S12APB	SP4
S40U-PSKNR/L12	△	△	50	40	38	350	27					

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For roughing	PCBN/PCD inserts
Inserts shape	DF  A67	PM  A68	DR Double-side  A70	HDR  A72	Without chipbreaker  A74	 A126
	EF  A67	DM  A68	DR Single-side  A70 -71	HPR  A72		 A127
	SF  A67	EM  A69	ER Double-side  A71			 A128
		NM  A69	ER Single-side  A71			
			SNR Double-side  A71			
			LR Single-side  A69			
Tool holder type	☐ PSKNR/L12	SN ☐ 1204 ☐	SN ☐ 1204 ☐	SN ☐ 1204 ☐	SN ☐ 1204 ☐	SN ☐ 1204 ☐

General turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

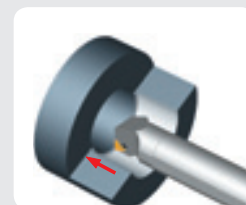
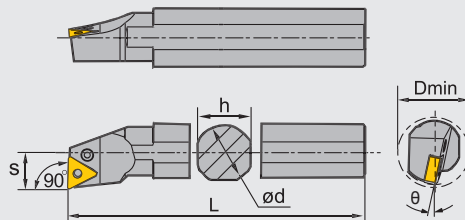
Corresponding tool holders of insert **TN** ☐ ☐ P-type clamping

PTFNR/L

Kr:90°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S25S-PTFNR/L16	▲	▲	32	25	24	250	16	LEM5×12	WH20L	L3B	---	---
S32T-PTFNR/L16	△	△	41	32	30	300	21	LEM6×17	WH25L	L3	T16APB	SP3
S40U-PTFNR/L16	△	△	50	40	38	350	26					

▲Stock available

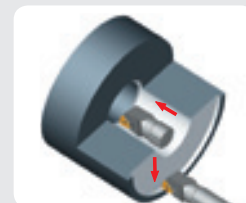
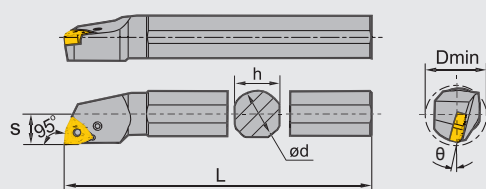
△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For heavy machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	DF  A75	WGM Wiper  A76	DR Double-side  A78	HDR  A79	Without chipbreaker  A80	 A130
	WG Wiper  A75	PM  A76	DR Single-side  A78			 A130-A131
	SF  A75	DM  A77	ER Double-side  A78			 A131
	EF  A76	EM  A77	SNR Double-side  A78			
			LR Single-side  A77			
Tool holder type	☐ -PTFNR/L16	TN ☐ 1604 ☐	TN ☐ 1604 ☐	TN ☐ 1604 ☐	TN ☐ 1604 ☐	TN ☐ 1604 ☐

Corresponding tool holders of insert **WN** ☐ ☐ P-type clamping**PWLNR/L****Kr:95°**

R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Lever	Shim	Shim pin
	R	L	Dmin	ød	h	L	S					
S16R-PWLNR/L06	△	△	20	16	15	200	10	LEM5X12	WH20L	L3D	---	---
S20R-PWLNR/L06	△	△	25	20	19	200	12			L3B	---	---
S25S-PWLNR/L06	△	△	35	25	24	250	15					
S20R-PWLNR/L08	△	△	23	20	19	200	12.5	LEM6X14	WH25L	L4A	---	---
S25S-PWLNR/L08	△	△	32	25	24	250	16					
S32T-PWLNR/L08	△	△	41	32	30	300	21	LEM8X21	WH30L	L4	W08AP	SP4

▲Stock available

△Make-to-order

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For cast iron machining	PCBN/PCD inserts
Inserts shape	DF  A83	WGM Wiper  A84	DR Double-side  A86	Without chipbreaker  A86	 A136
	WGF Wiper  A83	PM  A85	SNR Double-side  A86		 A136 -A137
	SF  A83	DM  A85			 A137
	EF  A84	EM  A85			
	NF  A84	NM  A86			
Tool holder type	□□-PWLNR/L06	WN□□0604□□	WN□□0604□□	WN□□0604□□	WN□□0604□□
	□□-PWLNR/L08	WN□□0804□□	WN□□0804□□	WN□□0804□□	WN□□0804□□

General turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

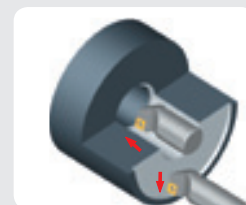
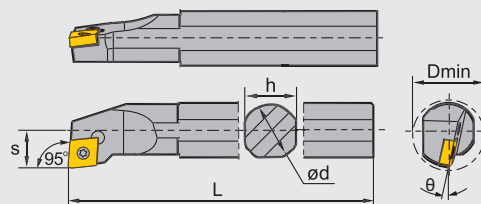
Corresponding tool holders of insert **CC** ☐ ☐ S-type clamping

SCLCR/L

Kr:95°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S08K-SCLCR/L06	▲	▲	10	8	7.4	125	5	I60M2.5×5.5	WT07IP	---	---
S10K-SCLCR/L06	▲	▲	13	10	9	125	6.5				
S12M-SCLCR/L06	▲	▲	16	12	11	150	9				
S12M-SCLCR/L09	▲	▲	16	12	11	150	9	I60M3.5×8	WT15IP	---	---
S14N-SCLCR/L09	△	△	18	14	13	160	9				
S16Q-SCLCR/L09	△	△	20	16	15	180	10				
S20R-SCLCR/L09	△	△	25	20	19	200	12	I60M3.5×10	WT15IP	---	---
S25S-SCLCR/L09	△	△	32	25	24	250	15.5				
S20R-SCLCR/L12	△	△	25	20	19	200	12.5	I60M4×11X	WT15IP	---	---
S25S-SCLCR/L12	▲	▲	32	25	24	250	15.5	I60M4×11X	WT15IP	---	---
S32T-SCLCR/L12	△	△	39	32	30	300	20	I60M4×11X	WH40L WT15IP	C12BS	SM6×10×A
S40U-SCLCR/L12	△	△	50	40	38	350	24.5				

▲ Stock available △ Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining Without chipbreaker	PCBN/PCD inserts
Inserts shape	USF  A89	HF  A89	HM  A90	HR  A91	LH  A91-92	 A92	 A139
	SF  A89	EF  A90	EM  A90		LC  A91		 A144
Tool holder type	□□-SCLCR/L06	CC□□0602□□	CC□□0602□□	CC□□0602□□	CCGX0602□□	CC□□0602□□	CC□□0602□□
	□□-SCLCR/L09	CC□□09T3□□	CC□□09T3□□	CC□□09T3□□	CCGX09T3□□	CC□□09T3□□	CC□□09T3□□
	□□-SCLCR/L12		CC□□1204□□	CC□□1204□□	CCGX1204□□	CC□□1204□□	CC□□1204□□

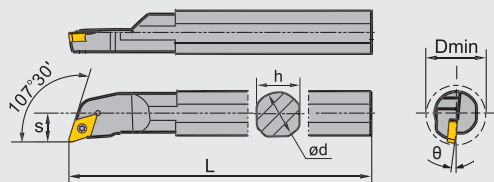
Corresponding tool holders of insert **DC** **S-type clamping**

SDQCR/L

Kr:107°30'



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	---	---
	R	L	Dmin	ød	h	L	S			---	---
S10K-SDQCR/L07	▲	▲	13	10	9	125	7	I60M2.5×5.5	WT07IP	---	---
S12M-SDQCR/L07	▲	▲	16	12	11	150	9	I60M2.5×6.5			
S16Q-SDQCR/L07	△	△	20	16	15	180	11	I60M2.5×6.5			
S20R-SDQCR/L11	△	△	25	20	19	200	13	I60M3.5×8	WT15IP	---	---
S25S-SDQCR/L11	△	△	32	25	24	250	17	I60M3.5×10			
S32T-SDQCR/L11	△	△	40	32	30	300	22				
S40T-SDQCR/L11	△	△	50	40	38	350	27				

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	USF  A93	HF  A93	HM  A94	HR  A95	LH  A95	Without chipbreaker  A95	 A140
	SF  A93	EF  A94	EM  A94			LC  A95	 A145
Tool holder type	□□-SDQCR/L07 DC□□0702□□ DC□□0702□□ DC□□0702□□ DCGX0702□□ DC□□0702□□ DC□□0702□□						
	□□-SDQCR/L11 DC□□11T3□□ DC□□11T3□□ DC□□11T3□□ DC□□11T3□□ DCGX11T3□□ DC□□11T3□□ DC□□11T3□□						



TURNING General Turning Tools

Internal turning tools

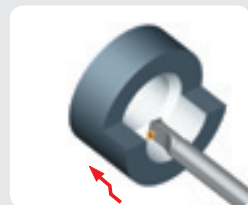
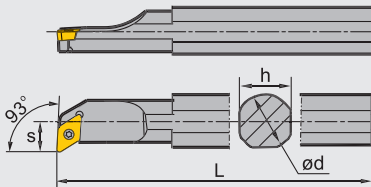
Corresponding tool holders of insert **DC** ☐ ☐ S-type clamping

SDUCR/L

Kr:93°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	---	---
	R	L	Dmin	ød	h	L	S				
S10K-SDUCR/L07	▲	▲	13	10	9	125	7	I60M2.5×5.5	WT07IP	---	---
S12M-SDUCR/L07	▲	▲	16	12	11	150	9			---	---
S16Q-SDUCR/L07	△	△	20	16	15	180	11	I60M2.5×6.5	WT15IP	---	---
S20R-SDUCR/L11	△	△	25	20	19	200	13			---	---
S25S-SDUCR/L11	△	△	32	25	24	250	17	I60M3.5×10	WT15IP	---	---
S32T-SDUCR/L11	△	△	40	32	30	300	22			---	---
S40U-SDUCR/L11	△	△	50	40	38	350	27			---	---

▲Stock available

△Make-to-order

Applicable inserts

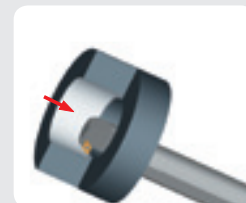
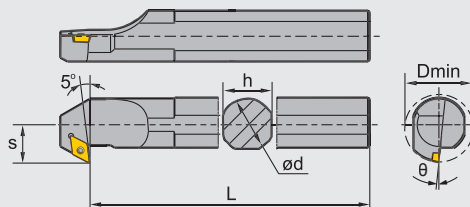
Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	USF  A93	HF  A93	HM  A94	HR  A95	LH  A95	Without chipbreaker  A95	 A140
	SF  A93	EF  A94	EM  A94		LC  A95		 A145
Tool holder type	☐ -SDUCR/L07	DC□□0702□□	DC□□0702□□	DC□□0702□□	DCGX0702□□	DC□□0702□□	DC□□0702□□
	☐ -SDUCR/L11	DC□□11T3□□	DC□□11T3□□	DC□□11T3□□	DCGX11T3□□	DC□□11T3□□	DC□□11T3□□

Corresponding tool holders of insert **DC** ☐ ☐

S-type clamping

SDZCR/L**Kr:95°**

R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S25S-SDZCR/L11	△	△	33	25	24	250	18	I60M3.5×10	WT15IP	---	---
S32T-SDZCR/L11	△	△	40	32	30	300	22	I60M3.5×12	WT15IP	D11BS	SM5×8.65XA
S40U-SDZCR/L11	△	△	48	40	38	350	27		WH35L		

▲Stock available

△Make-to-order

General turning

Internal turning tools

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	USF  A93	HF  A93	HM  A94	HR  A95	LH  A95	Without chipbreaker  A95	 A140
	SF  A93	EF  A94	EM  A94		LC  A95		 A145
Tool holder type	□□-SDZCR/L11						
	DC□□11T3□□						
	DC□□11T3□□						
	DC□□11T3□□						
	DC□□11T3□□						
	DCGX11T3□□						
	DC□□11T3□□						
	DC□□11T3□□						



TURNING / General Turning Tools

Internal turning tools

Corresponding tool holders of insert **SC** ☐ ☐

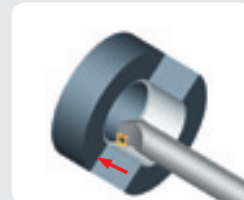
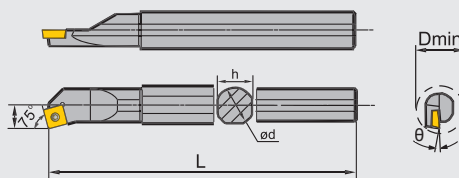
S-type clamping

SSKCR/L

Kr:75°



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S12M-SSKCR/L09	▲	△	16	12	11	150	9	I60M3.5×8	WT15IP	---	---
S16Q-SSKCR/L09	△	△	20	16	15	180	11				
S20R-SSKCR/L09	△	△	25	20	19	200	13				
S25S-SSKCR/L12	△	△	32	25	24	250	17	I60M4×11X	WT15IP	---	---
S32T-SSKCR/L12	△	△	40	32	30	300	22		WT15IP WH40L	S12BS	SM6×10XA

▲Stock available

△Make-to-order

Applicable inserts

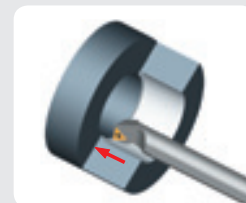
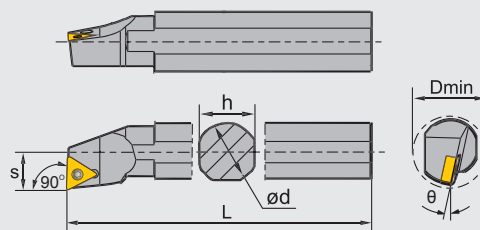
Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining
Inserts shape	HF  A98	HM  A98	HR  A99	LH  A99	Without chipbreaker  A99
	EF  A98	EM  A98		LC  A99	
Tool holder type	☐ ☐ -SSKCR/L09	SC ☐ ☐ 09T3 ☐ ☐	SC ☐ ☐ 09T3 ☐ ☐	SC ☐ ☐ 09T3 ☐ ☐	SC ☐ ☐ 09T3 ☐ ☐
	☐ ☐ -SSKCR/L12		SC ☐ ☐ 1204 ☐ ☐	SC ☐ ☐ 1204 ☐ ☐	SC ☐ ☐ 1204 ☐ ☐

Corresponding tool holders of insert **TC** ☐ ☐

S-type clamping

STFCR/L**Kr:90°**

R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S12M-STFCR/L11	▲	▲	16	12	11	150	9	I60M2.5×6.5	WT07IP	---	---
S16Q-STFCR/L11	△	△	20	16	15	180	10				
S20R-STFCR/L11	△	△	25	20	19	200	12				
S25S-STFCR/L16	△	△	32	25	24	250	16	I60M3.5×10	WT15IP	---	---
S32T-STFCR/L16	△	△	40	32	30	300	21	I60M3.5×12	WT15IP WH35L	T16BS	SM5×8.65XA
S40U-STFCR/L16	△	△	50	40	38	350	25				

▲ Stock available

△ Make-to-order

General turning

Internal turning tools

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN/PCD inserts	
Inserts shape	HF  A101	HM  A103	HR  A103	LH  A104	Without chipbreaker  A104	 A141	
	EF  A102	EM  A102		LC  A103			
Tool holder type	☐ - STFCR/L11	TC ☐ ☐ 1102 ☐ ☐	TC ☐ ☐ 1102 ☐ ☐	TC ☐ ☐ 1102 ☐ ☐	TCGX1102 ☐ ☐	TC ☐ ☐ 1102 ☐ ☐	TC ☐ ☐ 1102 ☐ ☐
	☐ - STFCR/L16	TC ☐ ☐ 16T3 ☐ ☐	TC ☐ ☐ 16T3 ☐ ☐	TC ☐ ☐ 16T3 ☐ ☐	TCGX16T3 ☐ ☐	TC ☐ ☐ 16T3 ☐ ☐	TC ☐ ☐ 16T3 ☐ ☐



TURNING General Turning Tools

Internal turning tools

Corresponding tool holders of insert VC□□

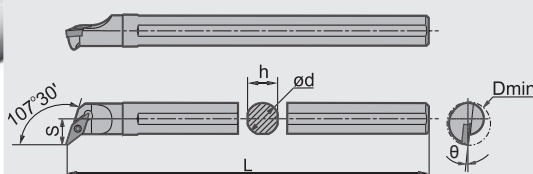
S-type clamping

SVQCR/L

Kr:107° 30'



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S16Q-SVQCR/L11	▲	▲	22	16	15	180	13	I60M2.5×6.5	WT07IP	---	---
S20R-SVQCR/L16	△	△	27	16	19	200	14	I60M3.5×12	WT15IP WH35L	V16BSC	SM5×8.65×A
S25S-SVQCR/L16	△	△	35	25	24	250	20				
S32T-SVQCR/L16	△	△	42	32	30	300	23				

▲Stock available

△Make-to-order

Applicable inserts

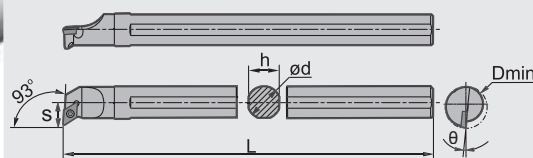
Application	For extra finishing	For finishing	For AI machining	PCBN/PCD inserts
Inserts shape	USF  A105	HF  A105	LH  A106	 A143
	SF  A105	NF  A105	LC  A106	 A148
Tool holder type	□□-SVQCR/L11	VC□□1103□□	VC□□1103□□	VCGX1103□□
	□□-SVQCR/L16	VC□□1604□□	VC□□1604□□	VCGX1604□□

Corresponding tool holders of insert **VC** ☐ ☐

S-type clamping

SVUCR/L**Kr:93°**

R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S16Q-SVUCR/L11	△	△	24	16	15	180	15	I60M2.5×6.5	WT07IP	---	---
S20R-SVUCR/L11	△	△	28	20	19	200	17				
S25S-SVUCR/L16	△	△	35	25	24	250	20	I60M3.5×12	WT15IP	V16BS	SM5×8.65×A
S32T-SVUCR/L16	△	△	42	32	30	300	23		WT15IP WH35L		

▲Stock available

△Make-to-order

General turning

Internal turning tools

Applicable inserts

Application	For extra finishing		For finishing		For AI machining		PCBN/PCD inserts
Inserts shape	USF	 A105	HF	 A105	LH	 A106	 A143
	SF	 A105	NF	 A105	LC	 A106	 A148
Tool holder type	☐ -SVUCR/L11		VC□□1103□□		VCGX1103□□		
	☐ -SVUCR/L16		VC□□1604□□		VC□□1604□□		VC□□1604□□



TURNING / General Turning Tools

Internal turning tools

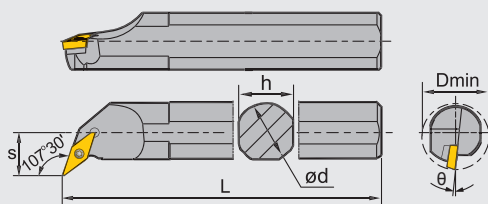
Corresponding tool holders of insert **VB** ☐ ☐ S-type clamping

SVQBR/L

Kr:107° 30'



R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S20R-SVQBR/L16	△	△	27	20	19	200	14	I60M3.5×12	WT15IP WH35L	V16BS	SM5×8.65XA
S25S-SVQBR/L16	△	△	35	25	24	250	20				
S32T-SVQBR/L16	▲	▲	42	32	30	300	23				

▲Stock available

△Make-to-order

Applicable inserts

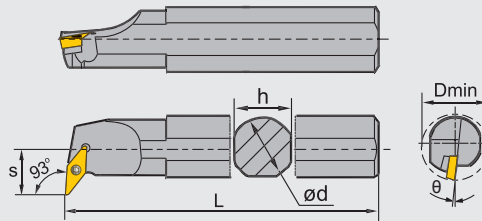
Application	For finishing	For semi-finishing	For roughing	PCBN/PCD inserts
Inserts shape	EF  A108	HM  A109	HR  A109	 A147
	NF  A108	EM  A109	SNR  A109	 A147
	NGF  A108			
Tool holder type	☐ -SVQBR/L16	VB ☐ 1604 ☐	VB ☐ 1604 ☐	VB ☐ 1604 ☐

Corresponding tool holders of insert **VB** ☐ ☐

S-type clamping

SVUBRIL
Kr:93°


R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	Shim	Shim screw
	R	L	Dmin	ød	h	L	S				
S25S-SVUBR/L16	△	△	35	25	24	250	20	I60M3.5×12	WT15IP WH35L	V16BS	SM5×8.65XA
S32T-SVUBR/L16	△	△	42	32	30	300	23				

▲Stock available

△Make-to-order

General
turning

Internal turning tools

Applicable inserts

Application	For finishing	For semi-finishing	For roughing	PCBN/PCD inserts
Inserts shape	EF  A108	HM  A109	HR  A109	 A147
	NF  A108	EM  A109	SNR  A109	 A147
	NGF  A108			
Tool holder type	☐ -SVUBR/L16	VB ☐ 1604 ☐	VB ☐ 1604 ☐	VB ☐ 1604 ☐



General Turning Tools

Internal turning tools

Corresponding tool holders of insert **CP** ☐ ☐

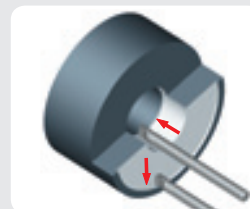
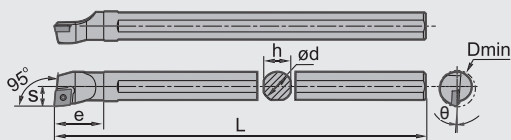
S-type clamping

SCLPR/L

Kr:95°



R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	h	L	S	θ	e			---	---
S10K-SCLPR/L06	▲	▲	12	10	9	125	6	-7°	17	I60M2.5×5.5	WT07IP	---	---
S12M-SCLPR/L06	▲	▲	16	12	11	150	8	-4°	20			---	---
S16Q-SCLPR/L09	▲	▲	20	16	15	180	10	-4°	29	I60M3.5×8	WT15IP	---	---
S20R-SCLPR/L09	△	△	25	20	18	200	13	-4°	35			---	---

▲Stock available

△Make-to-order

Applicable inserts

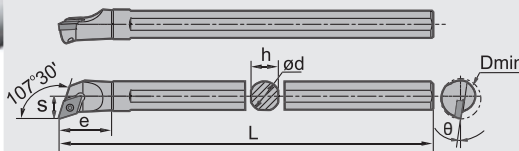
Application	For extra finishing	
Inserts shape	SF	
Tool holder type	A110	
	☐ SCLPR/L06	CP ☐ ☐ 0602 ☐ ☐
	☐ SCLPR/L09	CP ☐ ☐ 09T3 ☐ ☐

Corresponding tool holders of insert **DP** ☐ ☐

S-type clamping

SDQPRIL**Kr:107° 30'**

R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	h	L	S	θ	e			---	---
S10K-SDQPR/L07	△	△	13	10	9	125	7	-8°	20	I60M2.5×5.5	WT07IP	---	---
S12M-SDQPR/L07	▲	△	16	12	11	150	9	-8°	22			---	---
S16Q-SDQPR/L07	▲	△	20	16	15	180	11	-6°	27			---	---
S16Q-SDQPR/L11	▲	△	20	16	15	180	11	-6°	32	I60M3.5×8	WT15IP	---	---
S16Q-SDQPR/L11	△	△	25	20	18	200	13	-6°	33			---	---

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	
Inserts shape	USF	
	SF	
Tool holder type	☐ -SDQPR/L07	DP ☐ 0702 ☐
	☐ -SDQPR/L11	DP ☐ 11T3 ☐

A111

A111



General turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

Corresponding tool holders of insert **DP** ☐ ☐

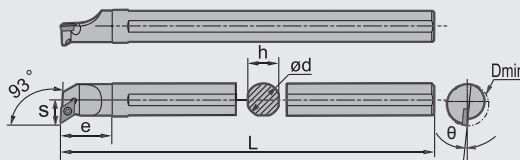
S-type clamping

SDUPRIL

Kr:93°



R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	h	L	S	θ	e			---	---
S10K-SDUPR/L07	▲	▲	15	10	9	125	9	-8°	18	I60M2.5×5.5	WT07IP	---	---
S12M-SDUPR/L07	▲	△	16	12	11	150	9	-8°	19			---	---
S16Q-SDUPR/L07	△	△	20	16	15	180	11	-6°	25			---	---

▲ Stock available

△ Make-to-order

Applicable inserts

Application	For extra finishing
Inserts shape	SF  A111
Tool holder type	DP□□0702□□

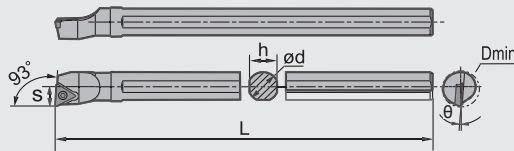


Corresponding tool holders of insert TP□□

S-type clamping

STUPRIL
Kr:93°


R-type shown



Type	Stock		Basic dimensions(mm)					Screw	Wrench	---	---
	R	L	Dmin	ød	h	L	S			---	---
S10M-STUPR/L09	△	△	13	10	9.4	150	6	I60M2.2×5.5	WT07IP	---	---
S10M-STUPR/L11	△	△	13	10	9.4	150	6			---	---
S12Q-STUPR/L11	△	△	16	12	11.4	180	7.5	I60M2.5×6.5	WT07IP	---	---
S16R-STUPR/L11	△	△	20	16	15	200	10			---	---

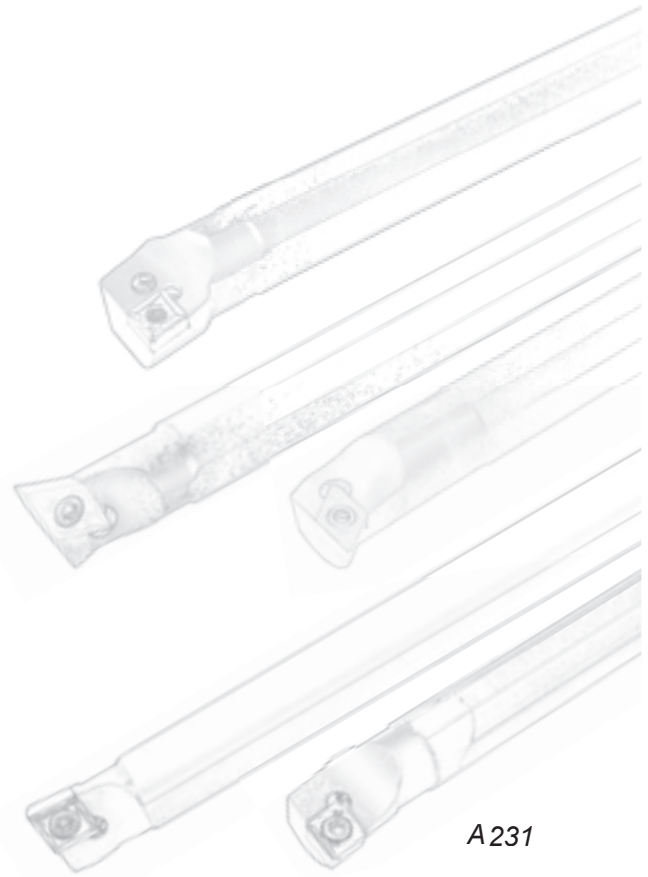
▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	
Inserts shape	SF	
Tool holder type	□□-STUPR/L09	TP□□0902□□
	□□-STUPR/L11	TP□□1103□□

A113



A231

General turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

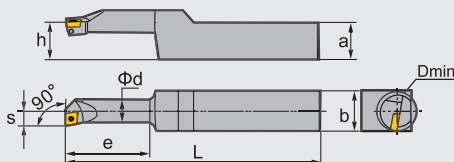
Corresponding tool holders of insert **CC** ☐ ☐ S-type clamping

SCFCR/L

Kr:90°



R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	L	s	a	b	e			---	---
S10M-SCFCR/L06S25	▲	▲	13	10	150	7	27	25	30	I60M2.5×5.5	WT07IP	---	---
S12P-SCFCR/L06S25	▲	▲	16	12	170	9	27	25	35	I60M2.5×6.5		---	---
S16Q-SCFCR/L09S25	▲	▲	20	16	180	11	27	25	40	I60M3.5×8	WT15IP	---	---
S20R-SCFCR/L09S25	△	△	25	20	200	13	27	25	45			---	---
S25R-SCFCR/L12S25	△	△	30	25	200	16	27	25	50	I60M4×11X		---	---

▲Stock available

△Make-to-order

Applicable inserts

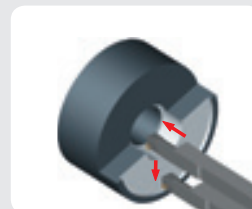
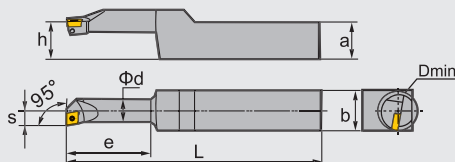
Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	USF  A89	HF  A89	HM  A90	HR  A91	LH  A91-92	Without chipbreaker  A92	 A139
	SF  A89	EF  A90	EM  A90		LC  A91		 A144
Tool holder type	☐ SCFCR/L06S25	☐ CC ☐ 0602 ☐ ☐	☐ CC ☐ 0602 ☐ ☐	☐ CC ☐ 0602 ☐ ☐	☐ CC ☐ 0602 ☐ ☐	☐ CCGX 0602 ☐ ☐	☐ CC ☐ 0602 ☐ ☐
	☐ SCFCR/L09S25	☐ CC ☐ 09T3 ☐ ☐	☐ CC ☐ 09T3 ☐ ☐	☐ CC ☐ 09T3 ☐ ☐	☐ CCGX 09T3 ☐ ☐	☐ CC ☐ 09T3 ☐ ☐	☐ CC ☐ 09T3 ☐ ☐
	☐ SCFCR/L12S25		☐ CC ☐ 1204 ☐ ☐	☐ CC ☐ 1204 ☐ ☐	☐ CCGX 1204 ☐ ☐	☐ CC ☐ 1204 ☐ ☐	☐ CC ☐ 1204 ☐ ☐

Corresponding tool holders of insert **CC** ☐ ☐

S-type clamping

SCLCR/L**Kr:95°**

R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	L	s	a	b	e				
S10M-SCLCR/L06S20	▲	▲	13	10	150	7	22	20	30			---	---
S12P-SCLCR/L06S20	▲	▲	16	12	170	9	22	20	35			---	---
S16Q-SCLCR/L09S20	▲	▲	20	16	180	11	22	20	40			---	---
S20R-SCLCR/L09S20	△	△	25	20	200	13	22	20	60			---	---

▲ Stock available

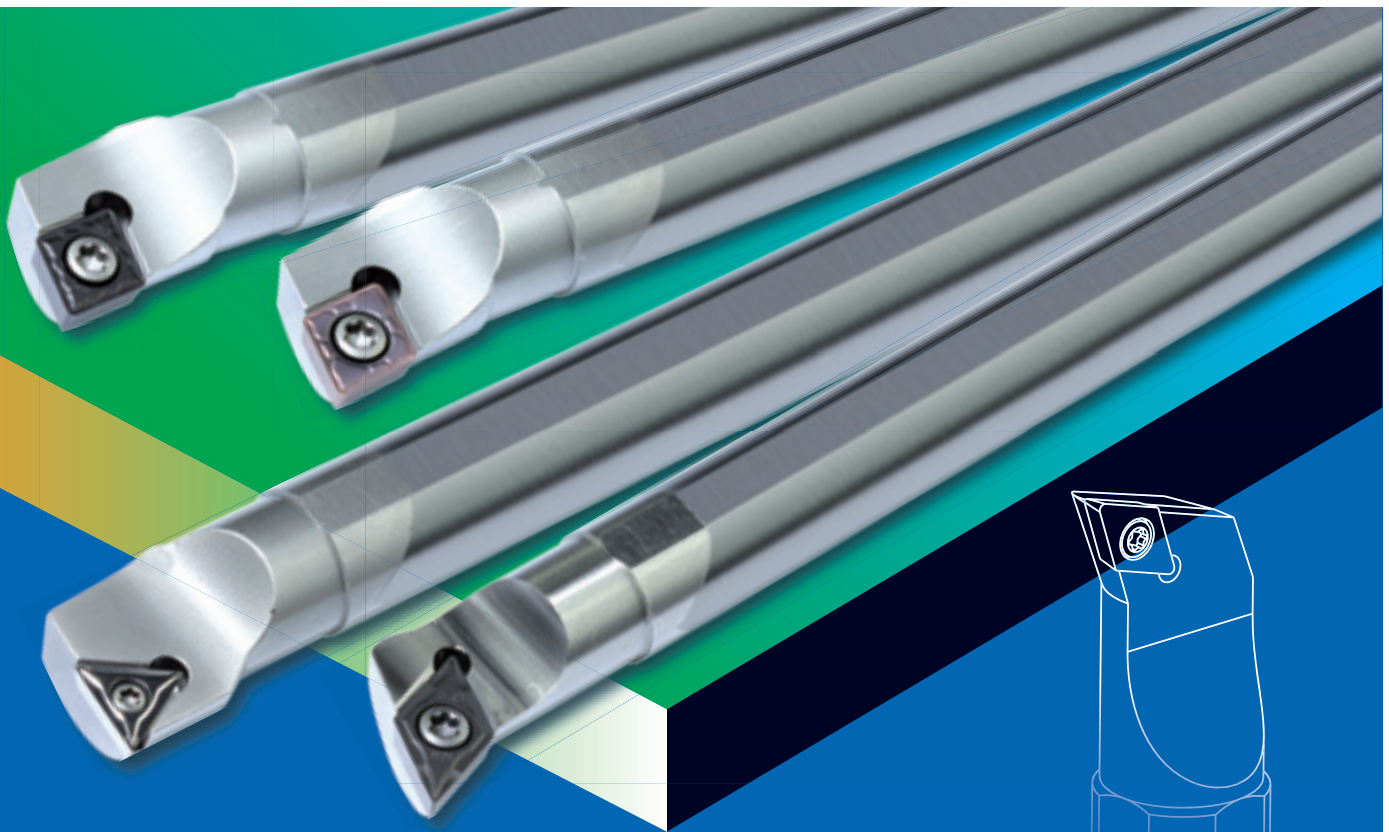
△ Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For semi-finishing	For roughing	For Al machining	For cast iron machining	PCBN/PCD inserts
Inserts shape	USF  A89	HF  A89	HM  A90	HR  A91	LH  A91-92	Without chipbreaker  A92	 A139
	SF  A89	EF  A90	EM  A90		LC  A91		 A144
Tool holder type	☐ SCLCR/L06S20	☐ SCLCR/L06S20	☐ SCLCR/L06S20	☐ SCLCR/L06S20	☐ SCLCR/L06S20	☐ SCLCR/L06S20	☐ SCLCR/L06S20
	☐ SCLCR/L09S20	☐ SCLCR/L09S20	☐ SCLCR/L09S20	☐ SCLCR/L09S20	☐ SCLCR/L09S20	☐ SCLCR/L09S20	☐ SCLCR/L09S20

General turning

Internal turning tools



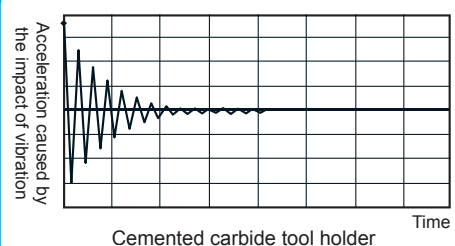
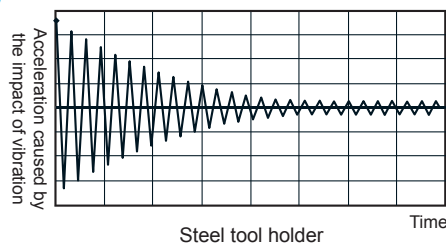
Damping tool holders for internal turning

Technical features

Increasing material rigidity of tool holder can reduce the amplitude, or obtain larger overhang under the condition of same systemic stability. Therefore, compared with steel tool holder, cemented carbide tool holder has better dampening effect, smaller amplitude and reaches convergence point sooner. As for machining under the condition of long overhang and easy vibration, they can exert excellent performance and achieve higher dimensional accuracy and surface quality.

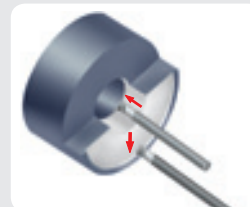
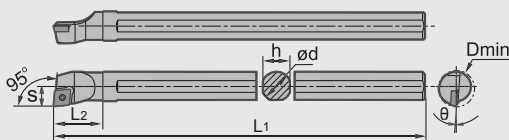
Under the same machining condition

the maximum overhang of cemented carbide tool holder can reach $L \leq 6D$, while the recommended maximum overhang of steel tool holder is $L \leq 3D$.



Corresponding tool holders of insert **CP** ☐ ☐ (Damping tool holder) S-type clamping**SCLPR/L****Kr:95°**

R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	s	L1	L2	h	θ			---	---
C10M-SCLPR/L06	▲	△	12	10	6	150	17	9	-7°	I60M2.5×5.5	WT07IP	--	--
C12Q-SCLPR/L06	△	△	16	12	8	180	20	11	-4°			--	--
C16R-SCLPR/L09	▲	△	20	16	10	200	29	15	-4°	I60M3.5×8	WT15IP	--	--
C20S-SCLPR/L09	△	△	25	20	13	250	35	18	-4°			--	--

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	
Inserts shape	SF	
Tool holder type	☐ -SCLPR/L06	CP ☐ ☐ 0602 ☐ ☐
	☐ -SCLPR/L09	CP ☐ ☐ 09T3 ☐ ☐

A110

General
turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

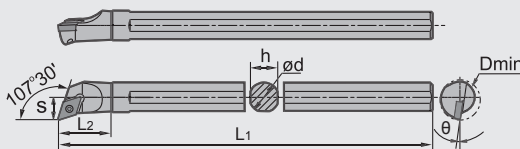
Corresponding tool holders of insert **DP** ☐ ☐ (Damping tool holder) S-type clamping

SDQPRIL

Kr:107° 30'



R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	s	L1	L2	h	θ			---	---
C10M-SDQPR/L07	▲	△	13	10	7	150	20	9	-8°	I60M2.5×5.5	WT07IP	---	---
C12Q-SDQPR/L07	△	△	16	12	9	180	22	11	-8°			---	---
C16R-SDQPR/L07	△	△	20	16	11	200	27	15	-6°			---	---
C16R-SDQPR/L11	△	△	20	16	11	200	32	15	-6°	I60M3.5×8	WT15IP	---	---
C20S-SDQPR/L11	▲	△	25	20	13	250	33	18	-6°			---	---

▲ Stock available

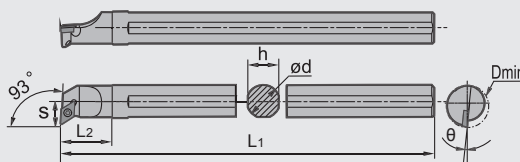
△ Make-to-order

Applicable inserts

Application	For extra finishing
Inserts shape	SF  A111
Tool holder type	
☐ -SDQPR/L07	DP ☐ ☐ 0702 ☐ ☐
☐ -SDQPR/L11	DP ☐ ☐ 11T3 ☐ ☐

Corresponding tool holders of insert **DP** ☐ ☐ (Damping tool holder) S-type clamping**SDUPRIL****Kr:93°**

R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	s	L ₁	L ₂	h	θ			---	---
C10M-SDUPR/L07	△	△	15	10	9	150	18	9	-8°	I60M2.5×5.5	WT07IP	---	---
C12Q-SDUPR/L07	△	△	16	12	9	180	19	11	-8°	I60M2.5×6.5		---	---
C16R-SDUPR/L07	△	△	20	16	11	200	25	15	-6°			---	---

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing
Inserts shape	SF  A111
Tool holder type	☐ ☐ -SDUPR/L07 DP ☐ ☐ 0702 ☐ ☐

General turning

Internal turning tools



TURNING General Turning Tools

Internal turning tools

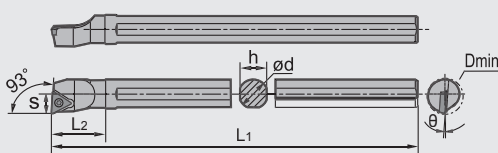
Corresponding tool holders of insert **TP** ☐ ☐ (Damping tool holder) S-type clamping

STUPRIL

Kr:93°



R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	s	L1	L2	h	θ			---	---
C10M-STUPR/L09	▲	△	12	10	6	150	20	9	-6°	I60M2.2×5.5	WT07IP	---	---
C12Q-STUPR/L09	▲	△	16	12	8	180	22	11	-4°			---	---
C12Q-STUPR/L11	▲	△	16	12	8	180	25	11	-4°	I60M2.5×6.5	WT07IP	---	---
C16R-STUPR/L11	▲	△	20	16	10	200	27	15	-3°			---	---

▲Stock available

△Make-to-order

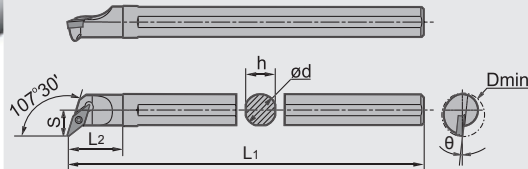
Applicable inserts

Application	For extra finishing	
Inserts shape	SF	
Tool holder type	☐ -STUPR/L09	TP ☐ ☐ 0902 ☐ ☐
	☐ -STUPR/L11	TP ☐ ☐ 1103 ☐ ☐



Corresponding tool holders of insert **VC** (Damping tool holder) S-type clamping**SVQCR/L****Kr:107°30'**

R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	s	L1	L2	h	θ			---	---
C16R-SVQCR/L11	△	△	22	16	13	200	28	15	-6°	I60M2.5×6.5	WT07IP	---	---
C20S-SVQCR/L11	△	△	26	20	15	250	32	18	-4°			---	---

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing		For finishing		For AI machining	
Inserts shape	USF  A105	HF  A105	LH  A106			
	SF  A105			LC  A106		
Tool holder type	□□-SVQCR/L11		VC□□1103□□		VCGX1103□□	

General turning

Internal turning tools



TURNING / General Turning Tools

Internal turning tools

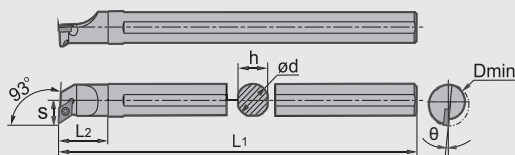
Corresponding tool holders of insert **VC** ☐ ☐ (Damping tool holder) S-type clamping

SVUCRIL

Kr:93°



R-type shown



Type	Stock		Basic dimensions(mm)							Screw	Wrench	---	---
	R	L	Dmin	ød	s	L1	L2	h	θ			---	---
C16R-SVUCR/L11	△	△	24	16	15	200	25	15	-6°	I60M2.5×6.5	WT07IP	---	---
C20S-SVUCR/L11	△	△	28	20	17	250	30	18	-4°			---	---

▲Stock available

△Make-to-order

Applicable inserts

Application	For extra finishing	For finishing	For AI machining
Inserts shape	USF  A105	HF  A105	LH  A106
	SF  A105		LC  A106
☐ ☐ -SVUCR/L11	VC ☐ ☐ 1103 ☐ ☐	VC ☐ ☐ 1103 ☐ ☐	VCGX1103 ☐ ☐



Table of recommended cutting parameters for general turning

ISO	Materials	Hardness HB	CVD Coating						PVD Coating			Cermet	Coated cermet	Cemented carbide		
			YBC151	YBC251	YBC152	YBC252	YBC351	YBC352	YBG102	YBG202	YBG302	YNG151	YNG151C	YC10	YC40	
			Feed rate (mm/rev)													
			0.1-0.6	0.1-0.8	0.1-0.6	0.1-0.8	0.2-1.0	0.2-1.0	0.2-0.4	0.1-0.6	0.05-0.8	0.05-0.2	0.05-0.2	0.1-0.4	0.1-0.5	
			Cutting speed (m/min)													
P	Carbon steel	C=0.15%	125	430-200	430-190	500-270	480-240	380-165	430-220	460-220	380-180	360-165	550-350	580-350	360-165	300-145
		C=0.35%	150	380-180	410-180	460-250	460-230	300-150	350-200	440-210	300-170	280-150	500-300	520-300	280-150	220-130
		C=0.60%	200	330-150	350-150	400-220	400-200	260-130	310-180	380-180	260-150	240-130	460-260	480-260	240-130	180-80
	Alloy steel	Anneal	180	350-170	350-150	400-180	400-200	200-100	250-150	380-180	200-120	180-100	410-240	430-240	180-100	160-80
		Hardened	275	230-100	210-100	280-150	260-140	140-70	200-120	240-120	140-90	120-70	300-180	320-180	120-70	120-50
		Hardened	300	210-100	190-70	260-150	240-120	125-60	180-110	220-100	125-80	100-60	250-170	270-170	100-60	80-40
	High alloy steel	Hardened	350	180-80	170-70	230-120	220-120	110-55	160-100	200-100	110-75	90-55	230-150	250-150	90-55	70-45
		Anneal	200	320-150	260-120	360-190	310-170	175-80	220-130	290-150	175-100	155-80	350-200	370-200	155-80	135-60
	Cast steel	Hardene	325	140-90	100-50	190-130	150-100	85-40	140-90	130-80	85-60	65-40	170-110	190-110	65-40	45-30
		Non-Alloy	180	240-120	200-100	280-160	250-140	135-75	190-130	230-125	135-95	115-75	260-170	280-170	115-75	95-55
		Low alloy	200	230-70	170-60	280-110	220-110	120-80	170-130	200-90	120-100	100-80	260-170	280-170	100-80	80-60
	High alloy	225	160-70	140-50	210-110	190-100	95-55	150-110	170-80	95-55	95-55	260-100	280-100	95-55	75-35	

ISO	Materials	Hardness HB	CVD Coating				PVD Coating				Cermet	Coated cermet	
			YBM151	YBM153	YBM251	YBM253	YBM215	YBG202	YBG205	YBG302	YNG151	YNG151C	
			Feed rate (mm/rev)										
			0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.6	0.2-0.4	0.1-0.4	0.2-0.4	0.2-0.6	0.1-0.3	0.1-0.3	
			Cutting speed (m/min)										
M	Stainless steel	Ferrite	180	280-180	280-180	250-140	260-140	290-190	300-190	290-190	250-150	330-220	350-210
		Austenite	260	250-150	250-150	200-110	210-110	240-160	250-160	240-160	220-120	250-150	270-140
		Martensite	330	200-140	200-140	210-130	220-130	250-170	260-170	250-170	210-120	270-170	290-160



TURNING

General Turning Tools

Application information of general turning

Recommended table of cutting parameters for general turning

ISO	Materials		Hardness HB	CVD Coating				Cermet	Coated cermet	Ceramics	Cemented carbide	
				YBD052	YBD102	YBD152	YBD252	YNG151	YNG151C	CN3100	YC10	YC40
				Feed rate (mm/rev)								
				0.1-0.4	0.1-0.4	0.1-0.5	0.1-0.8	0.1-0.4	0.1-0.4	0.1-1.5	0.1-0.3	0.1-0.4
				Cutting speed (m/min)								
K	Malleable cast iron	Ferrite	130	350-230	330-220	320-105	250-170	280-160	300-180	800-600	150-90	105-45
		Pearlite	230	250-105	230-100	230-100	180-75	220-120	240-150	700-500	120-70	80-30
	Low cast iron		180	520-200	480-200	480-190	380-150	400-250	420-270	700-500	170-100	130-60
	High cast iron		260	230-120	220-115	210-100	170-90	360-240	380-260	800-600	130-70	95-40
	Nodular cast iron	Ferrite	160	310-150	300-150	290-140	220-110	330-190	350-210	600-450	140-80	115-45
		Pearlite	250	230-110	220-105	210-100	170-90	310-200	330-220	500-350	110-70	80-30

ISO	Materials		Hardness HB	PVD Coating					Cemented carbide	Ceramics
				YBG102	YBG105	YBG202	YBS103	YBG212	YD101	CN3100
				Feed rate (mm/rev)						
				0.05-0.15	0.05-0.15	0.05-0.2	0.05-0.2	0.05-0.2	0.05-0.35	0.05-0.2
				Cutting speed (m/min)						
N	Al alloy	No heat treatment	60						1750-800	
		Heat treatment	100						510-250	
	Cast aluminum alloy	No heat treatment	75						460-175	
		Heat treatment	90						300-110	
	Copper alloy	Lead alloy	110						610-205	
		Copper, pure copper	90						310-195	
		Copper, nonlead Copper, electrolytic copper	100						225-115	
S	Ni-base alloy	Ni-base alloy	40	90-30	90-40	90-30	90-20	90-30	70-20	15-260



Recommended table of cutting parameters for general turning

ISO	Materials	PCBN											
		BK1011	BK1021	BK2511	BK2541	BH0121	BH1020	BH2011	BH2511	BH3511	BS1011	BS2011	BS3011
		Feed rate (mm/rev)											
		0.02-0.5		0.1-0.5		0.05-0.5				0.05-0.25			
		Cutting speed (m/min)											
K	Gray cast iron	400-1500		300-600									
	Hard cast iron	80-160		50-150									
S	Powder metallurgy and high temperature alloys										70-180	100-200	50-160
H	Hardened steel					150-250	140-220	100-170	120-180	80-150			

ISO	Materials	PCD			
		DN0121	DN0511	DN1021	DN3021
		Feed rate (mm/rev)			
		0.05~0.4			
		Cutting speed (m/min)			
N	Silumin (si≤12%)	500~1000	900~3500	400~1200	300~700
	fibre reinforced composite materials	200~1000			
	Metal base compound		1500~1800		
	Copper and magnesium alloyssilumin		400~1260	400~1260	
	Cemented carbide		20~40		
	Unsintered ceramic materials				100~200
	Sintered Ceramic				20~50

General turning

Application information of general turning



TURNING / General Turning Tools

Application information of general turning

Table of correctional cutting parameters of internal turning

Internal turning tools by P-type clamping

	Workpiece material	Hardness HB	Machining category	L/D≤3		L/D=3-4 (Diameter of shank ≥ Φ 16mm)	
				Feed rate (mm/rev)	Cutting depth (mm)	Feed rate (mm/rev)	Cutting depth (mm)
P	Carbon steel, Alloy steel 45#, 42CrMo	HB180—280	For semi-finishing	0.1- 0.25 -0.4	<5.0	0.1- 0.2 -0.3	<4.0
M	Stainless steel 1Cr18Ni9Ti 0Cr18Ni9	≤HB220	For semi-finishing	0.1- 0.2 -0.3	<4.0	0.1- 0.15 -0.25	<3.0
K	Cast iron HT250	HB170—230	For semi-finishing	0.1- 0.25 -0.4	<5.0	0.1- 0.2 -0.3	<4.0

Internal turning tools by S-type clamping

	Workpiece material	Hardness HB	Machining category	L/D≤3		L/D=4		L/D=5		L/D=6	
				Feed rate (mm/rev)	Cutting depth (mm)	Feed rate (mm/rev)	Cutting depth (mm)	Feed rate (mm/rev)	Cutting depth (mm)	Feed rate (mm/rev)	Cutting depth (mm)
P	Carbon steel, Alloy steel 45#, 42CrMo	HB180-280	For finishing	0.05- 0.1 -0.15	<0.2	0.05- 0.1 -0.15	<0.2				
			For semi-finishing	0.15- 0.25 -0.35	<3.0	0.1- 0.15 -0.2	<1.5				
M	Stainless steel 1Cr18Ni9Ti 0Cr18Ni9	≤HB220	For finishing	0.05- 0.1 -0.15	<0.2	0.05- 0.1 -0.15	<0.2				
			For semi-finishing	0.15- 0.2 -0.25	<2.0	0.1- 0.15 -0.2	<1.0				
N	Al alloy	---	For finishing	0.05- 0.1 -0.15	<0.2	0.05- 0.1 -0.15	<0.2	0.05- 0.1 -0.15	-0.15	0.05- 0.1 -0.15	<0.1
			For semi-finishing	0.05- 0.1 -0.15	<2.0	0.05- 0.1 -0.15	<1.5	0.05- 0.1 -0.15	-1.0	0.05- 0.1 -0.15	<1.0

Damping internal turning tools

	Workpiece material	Machining conditions	Chipbreaker	Inserts material	Feed rate (mm/rev)	Cutting depth (mm)
P	Steel HB180—280	For finishing	SF	YNG151 YNG151C	0.05- 0.2 -0.35	0.05- 0.1-0.3 -0.5
M	Stainless steel ≤HB220				0.05- 0.2 -0.35	0.05- 0.1-0.3 -0.5
K	Cast iron HB170—230				0.05- 0.2 -0.35	0.05- 0.1-0.3 -0.5

Blue words are recommended cutting parameters.

General turning

Application information of general turning



Frequent problems of turning and solutions

Common problem			Solutions		Tool material		Cutting conditions				Tool shape						Machine clamping system		
					Harder materials	Tougher materials	Cutting speed	Feed rate	Cutting depth	Cutting liquid	Change chipbreaker of inserts	Rake face	Nose radius	Approach angle	Cutting edge strength	Increase precision of inserts	Increase rigidity of tool holder	Clamping of tool holder and workpiece	Overhang of tool holder
Over abrasion on nose	Bad precision during machining	Abrasion intensified on flank	✓									↑							
		Unsuitable cutting conditions			↓	↑													
Surface precision deterioration	Bad surface quality	Abrasion intensified and cutting edge not sharp enough	✓		↓			✓		↑	↑		↓	✓					
		Cutting edge breakage		✓		↓	↓		✓		↑		↑			✓	✓	✓	
		Unsuitable geometrical shape of cutting edge							✓		↑		↓	✓					
		Unsuitable cutting conditions			↑	↓	↓	✓											
		Vibration		✓	↑	↓	↓	✓	✓	↑	↓	↑	↓		✓	✓	✓	✓	
		Built-up edge			↑	↑		✓	✓	↑			↓	✓					
Radiation	Effect of cutting heat	Unsuitable cutting conditions			↓	↓	↓												
		Unsuitable geometrical shape of cutting edge	✓						✓	↑			↓						
Bad precision of dimensions	Dimensions fluctuate during cutting	Insert tolerance											✓						
		Offset of workpiece or tools							✓	↑	↓	↑			✓	✓	✓	✓	
Breakage	Abrasion on flank and rake face	Abrasion on clearance face	✓		↓				✓	↑	↑		↓						
		Abrasion on rake face	✓		↓	↓	↓		✓	↑		↓							
	Edge chipping	Vibration and impact		✓		↓	↓		✓			↓	↑		✓	✓	✓	✓	
	Built-up edge	Unsuitable workpiece hardness for cutting conditions			↑	↑		✓	✓	↑		↓	✓						
	Thermal cracking	Hardness of workpiece material and tool material unsuitable for cutting conditions			↓	↓	↓	✓	✓	↑		↓							
	Cutting edge nose deformation	Occurring during intermittent machining with high feed rate	✓		↑	↓	↓	✓	✓	↑	↑	↓	↓						
	Tool life	Unsuitable materials and cutting conditions		✓		↓	↓		✓		↑	↓	↑		✓	✓	✓	✓	
	Chip controlling	Long, unbroken and snarled chips	Unsuitable cutting condition			↓	↑	↑	✓										
Unsuitable geometry									✓		↓	↑							
Too short and hard chips		Unsuitable cutting condition				↓	↓	✓											
		Unsuitable geometrical shape of cutting edge							✓		↑	↓							
Burr and knockdown flanges	Steel and Al, burrs occurring	Unsuitable cutting condition			↑	↓		✓											
		Tool abrasion and unsuitable geometrical shape	✓						✓	↑	↓	↑	↓						
	Edge break out on cast iron	Unsuitable cutting conditions			↓	↑		✓											
		Tool abrasion and unsuitable geometrical shape	✓						✓	✓	↓	↓	↓						
	Heavy burr on soft steel	Unsuitable cutting condition				↓	↓												
		Tool abrasion and unsuitable geometrical shape	✓						✓	↑	↑		↑		✓	✓	✓	✓	



TURNING / General Turning Tools

Application information of general turning

Abrasion of tools and various damages

Tool damage type	Phenomenon	Cause	Solution
Flank wear	Cutting resistant force increasing Groove wear on flank	Tool material is too soft. Cutting speed is too high. Clearance angle is too small. Feed rate is too low.	◆Select tool materials with good wear resistance. ◆Reduce cutting speed. ◆Enlarge clearance angle. ◆Increase feed rate.
Rake face wear (Crater wear)	Bad chip controlling Surface quality deterioration	Tool material is too soft. Cutting speed is too high. Feed rate is too high.	◆Select tool materials with good wear resistance. ◆Reduce cutting speed. ◆Reduce feed rate.
Cutting edge breakage	Occasional breakage Instability of tool life	Tool material is too hard. Feed rate is high. Cutting edge strength is not high enough. Rigidity of tool holder and tool bar is small.	◆Select tool materials with good toughness. ◆Reduce feed rate. ◆Increase land width (if rounding changes into chamfering). ◆Enlarge tool bar size.
Breakage	Cutting resistant force increasing Deterioration of surface roughness	Tool material is too hard. Feed rate is high. Cutting edge strength is not high enough. Rigidity of tool holder and tool bar is low.	◆Select tool materials with good toughness. ◆Reduce feed rate. ◆Increase land width (if rounding changes into chamfering). ◆Enlarge tool bar size.
Plastic deformation (Cutting edge collapse)	Workpiece dimensions change Nose abrasion	Tool material is too soft. Cutting speed is too high. Cutting depth and feed rate are too high. Cutting edge temperature is too high.	◆Select tool material with good wear resistance ◆Reduce cutting speed. ◆Reduce cutting depth and feed rate. ◆Select tool materials with good heat conductivity.
Built-up edge (Bonding)	Surface quality deterioration during finishing Cutting resistant force increasing	Cutting speed is low. Cutting edge is not sharp enough. Tool material is unsuitable.	◆Increase cutting speed. ◆Enlarge rake angle. ◆Select tool materials that are not easy to adhere together (coating, cermet, etc.)
Thermal cracking	Damage because of thermal circulation Normally occurring during intermittent machining	Premature edge failure due to thermal cracks. Tool material is too hard.	◆Adopt dry cutting. ◆Select tool materials with good toughness.
Chattering	burrs occurring Cutting resistant force increasing	Feed rate and cutting speed are too high.	◆Select tool materials with good wear resistance. ◆Sharpen cutting edge by enlarging rake angle. ◆Reduce cutting speed.
Flaking	Usually occurring when machining super hard materials, which is accompanied with vibration	Bonding occurs on cutting edge. Chip flow is obstructed.	◆Sharpen cutting edge by enlarging rake angle. ◆Enlarge chip pocket.