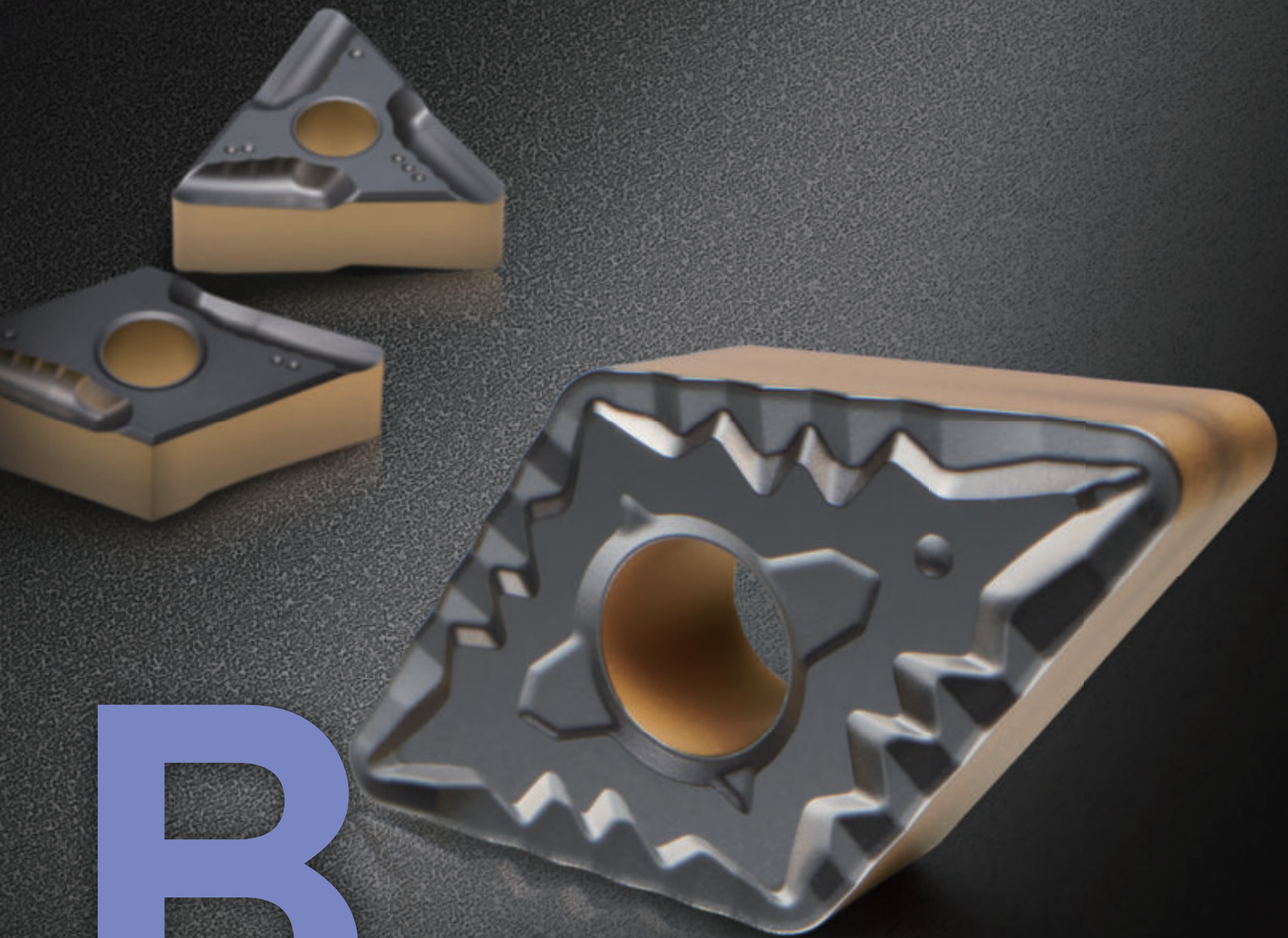


TURNING

Korloy turning tools cover a wide application range with a full line-up of ISO tools that produce high quality and high precision parts all for manufacturers' requirements.



B

Turning Chip Breakers

- B02** Application range of KORLOY Main Chip Breakers
- B04** Recommended Chip Breakers for workpiece
- B16** Feature of Chip Breakers

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- B36** Turning Insert (Negative)
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SAVE TURN

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- B122** ISO Type
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- B167** Double Clamp System
- B172** Lever Lock System
- B179** Wedge Clamp System
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- B199** Technical Information for KHP Coolant
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- B204** Boring Bar Code System (ISO)
- B205** Index for Boring Bar
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- B208** Double Clamp System
- B210** Lever Lock System
- B212** Clamp On System
- B213** Multi Lock System
- B215** Screw On System
- B225** Compact Mini

HSK/KM Tooling System

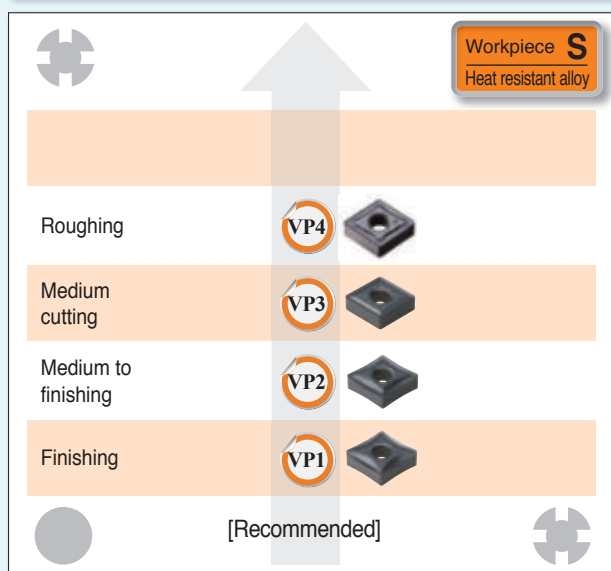
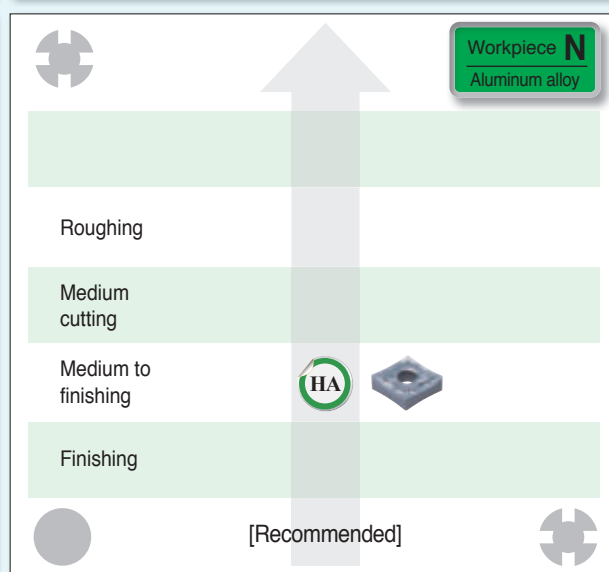
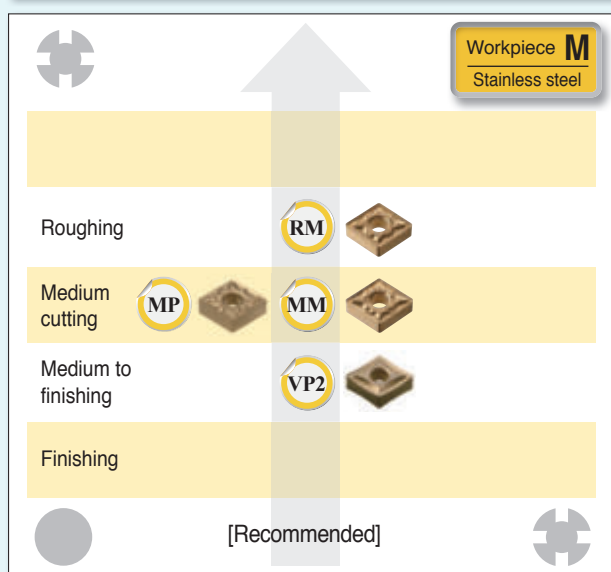
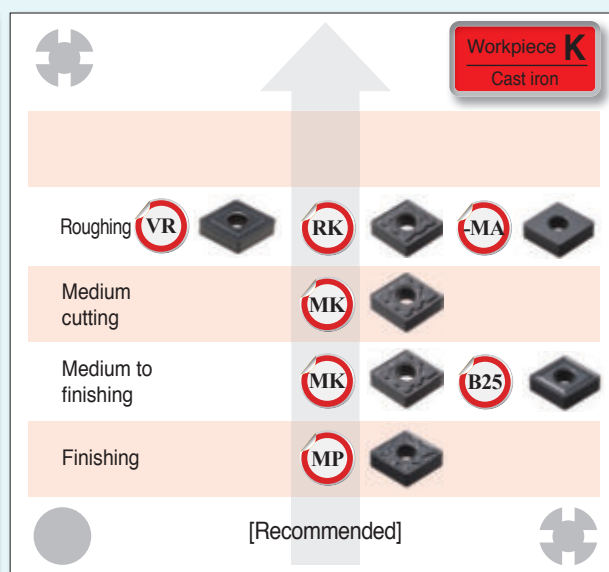
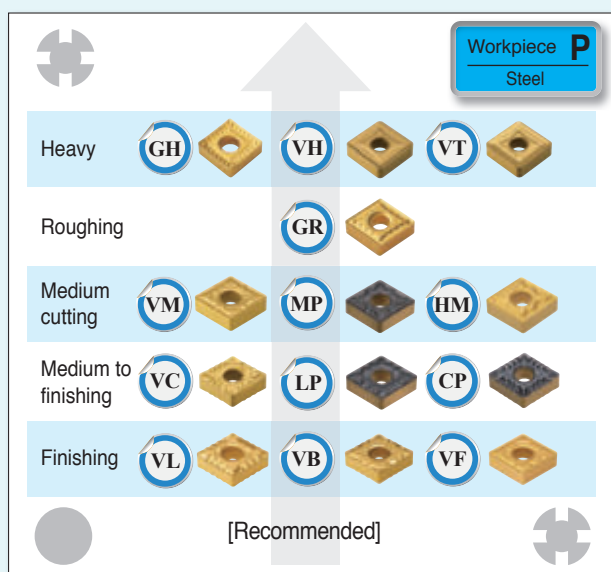
- B228** Technical Information for HSK/KM Tooling System
- B230** Index for HSK/KM Tooling System
- B231** HSK Tooling System
- B237** KM Tooling System

Cartridges

- B241** Cartridge Code System (ISO)
- B242** Index for Cartridge
- B243** Clamp On System
- B245** Screw On System

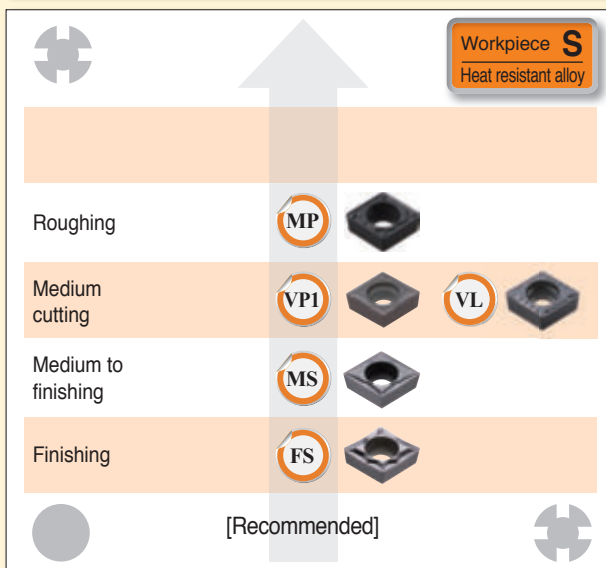
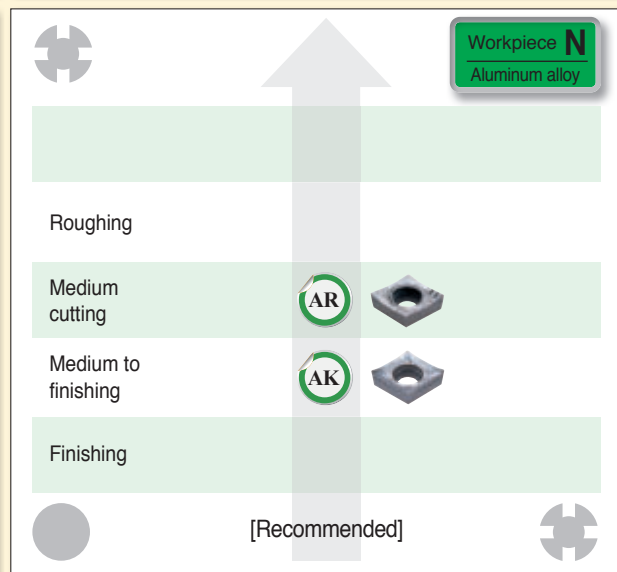
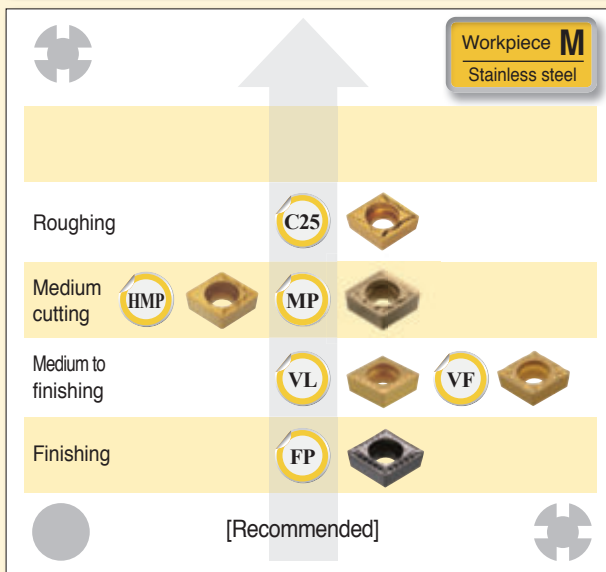
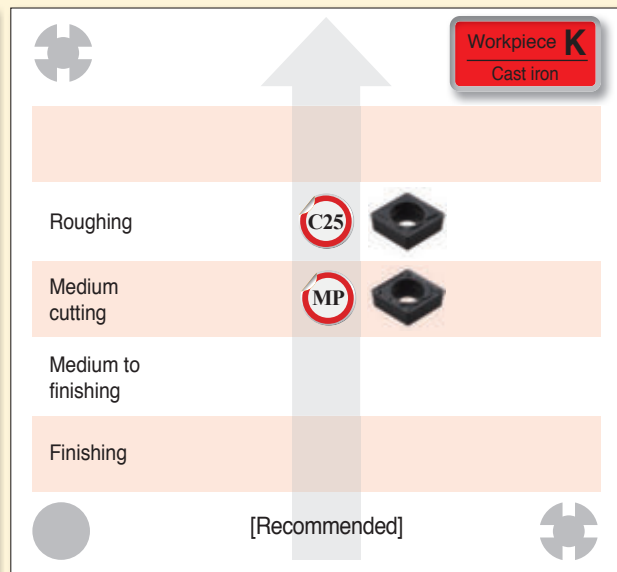
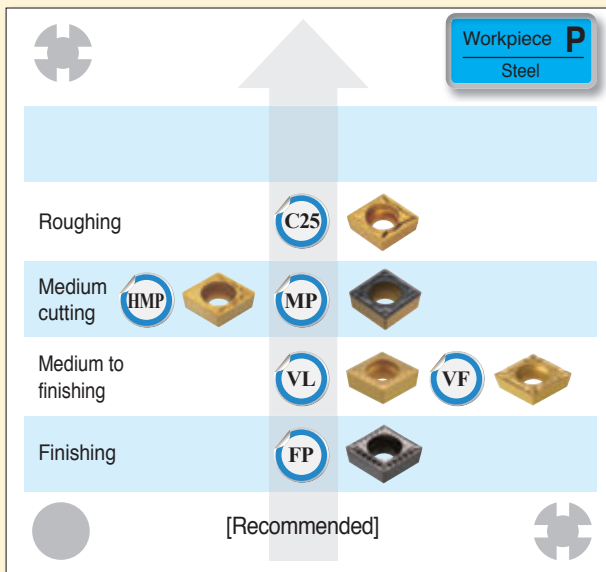
Applications range of chip breakers

➤ Negative inserts



Applications range of chip breakers

Positive inserts



Recommended chip breaker for workpiece

Workpiece
P
Steel

Materials: SM10C, SM15C, SM25C, SS400, SCr415, SCM415, etc. Soft steel

Hardness: under 180HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
Negative	VL		0.10 ~ 0.20 ~ 0.35	NC3215 NC3225 CN1500 CN2500	305 250 260 230	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	VB		0.15 ~ 0.20 ~ 0.40	NC3215 NC3225 CN1500 CN2500	340 250 240 210	CNMG 	DNMG 		TNMG 		WNMG
	VF		0.05 ~ 0.15 ~ 0.35	NC3215 NC3220 NC3225 NC5330	305 270 270 210	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	VC		0.12 ~ 0.25 ~ 0.45	NC3215 NC3220 NC3225 NC5330	285 250 255 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	LP		0.10 ~ 0.25 ~ 0.40	NC3215 NC3225 NC5330	300 250 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	VQ		0.12 ~ 0.2 ~ 0.42	NC3215 NC3225 NC5330	300 250 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	CP		0.1 ~ 0.28 ~ 0.35	NC3215P NC3225P	285 250	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	MP		0.15 ~ 0.30 ~ 0.45	NC3215 NC3225 NC5330	300 265 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	VM		0.10 ~ 0.25 ~ 0.50	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	295 260 260 205 220 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG
	HM		0.12 ~ 0.28 ~ 0.52	NC3215 NC3225 NC5330	300 265 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG

• The first recommended cutting condition

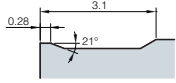
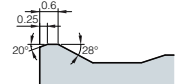
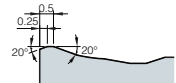


Recommended chip breaker for workpiece

Workpiece
P
Steel

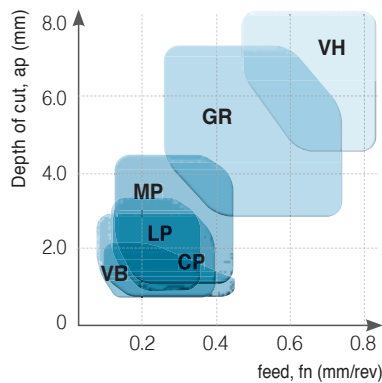
Materials: SM10C, SM15C, SM25C, SS400, SCr415, SCM415, etc. Soft steel

Hardness: under 180HB

	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
							80°	55°	90°	60°	35°	80°
Negative	1.0 ~ 3.0 ~ 4.5 Roughing	GR 		0.20 ~ 0.35 ~ 0.50	NC3125 NC3225 NC5330	180~370 150~330 130~280	CNMG  p. B38	DNMG  p. B45	SNMG  p. B52	TNMG  p. B60		WNMG  p. B69
	3.0 ~ 7.0 ~ 11.0 Heavy	GH 		0.30 ~ 0.80 ~ 1.30	NC3125 NC3225 NC5330	180~370 150~330 130~280	CNMM  p. B42		SNMM  p. B57			
	6.0 ~ 10.0 ~ 15.0 Heavy (General)	VH 		0.70 ~ 1.00 ~ 1.40	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM  p. B42		SNMM  p. B57			
	7.0 ~ 12.0 ~ 17.0 Heavy (High feed cutting)	VT 		0.75 ~ 1.20 ~ 1.60	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM  p. B42		SNMM  p. B57			

• The first recommended cutting condition

P Negative



B Turning Chip Breakers

Recommended chip breaker for workpiece

Workpiece
P
Steel

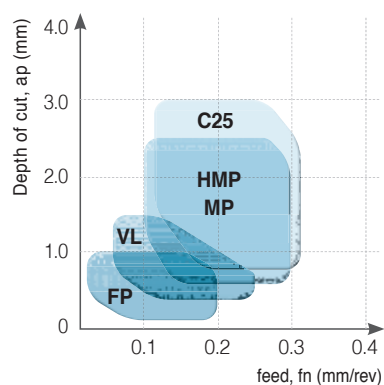
Materials: SM10C, SM15C, SM25C, SS400, SCr415, SCM415, etc. Soft steel

Hardness: under 180HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
						80°	55°	90°	60°	35°	80°
Positive	0.1 ~ 0.5 ~ 1.0 Finishing	FP	0.01 ~ 0.06 ~ 0.20	NC3215 NC3225 CN1500 CN2500	350 270 260 240	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)MT p. B94	
	0.1 ~ 0.5 ~ 1.0 Medium to finishing	VL	0.05 ~ 0.10 ~ 0.20	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	305 270 270 210 260 240	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)MT p. B94	
	0.1 ~ 0.5 ~ 1.5 Medium to finishing	VF	0.05 ~ 0.15 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CC1500 CN1500 CN2500	305 270 270 210 260 250 230	CCMT p. B73	DCMT p. B79	SCMT p. B84	TC(P)MT p. B88	VB(C)MT p. B94	
	0.6 ~ 1.5 ~ 2.5 Medium cutting	HMP	0.10 ~ 0.20 ~ 0.30	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 240 220	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)MT p. B94	
	0.6 ~ 1.0 ~ 2.5 Medium cutting	MP	0.10 ~ 0.20 ~ 0.30	NC3215 NC3225 CN1500 CN2500	300 250 240 200	CCMT p. B73	DCMT p. B79	SCMT p. B84	TC(P)MT p. B88	VB(C)MT p. B94	
	0.8 ~ 2.0 ~ 3.0 Roughing	C25	0.12 ~ 0.25 ~ 0.32	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 230 210	CCMT p. B74	DCMT p. B80	SCMT p. B84	TCMT p. B89		

• The first recommended cutting condition

P Positive

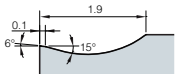
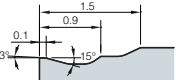
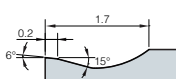
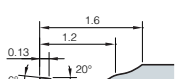
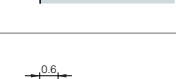


Recommended chip breaker for workpiece

Workpiece
P
Steel

Materials: SM45C, SM55C, SCM430, SCM440, etc. General steel

Hardness: under 180~260HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
						80°	55°	90°	60°	35°	80°
Negative	VB		0.15 ~ 0.20 ~ 0.40	NC3215 NC3225 CN1500 CN2500	340 250 230 190	CNMG 	DNMG 		TNMG 		WNMG 
	VF		0.08 ~ 0.15 ~ 0.35	NC3215 NC3225 NC5330	305 270 250	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG 
	VC		0.12 ~ 0.25 ~ 0.45	NC3215 NC3220 NC3225 NC5330	285 255 250 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG 
	LP		0.10 ~ 0.25 ~ 0.40	NC3215 NC3225 NC5330	300 250 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG 
	MP		0.15 ~ 0.30 ~ 0.45	NC3215 NC3225 NC5330	300 250 200	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG 
	VM		0.15 ~ 0.25 ~ 0.50	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	260 245 245 205 210 170	CNMG 	DNMG 	SNMG 	TNMG 	VNMG 	WNMG 
	GR		0.20 ~ 0.35 ~ 0.50	NC3125 NC3225 NC5330	180~370 150~330 130~280	CNMG 	DNMG 	SNMG 	TNMG 		WNMG 
	VH		0.70 ~ 1.00 ~ 1.40	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM 		SNMM 			
	VT		0.75 ~ 1.20 ~ 1.60	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM 		SNMM 			

• The first recommended cutting condition

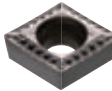
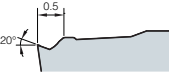
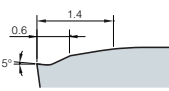
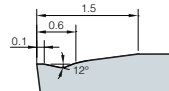
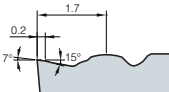
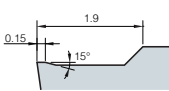
B Turning Chip Breakers

Recommended chip breaker for workpiece

Workpiece
P
Steel

Materials: SM45C, SM55C, SCM430, SCM440, etc. General steel

Hardness: under 180~260HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
											
Positive	0.1 ~ 1.0 Finishing	FP 	 0.01 ~ 0.06 ~ 0.20	NC3215 NC3225 CN1500 CN2500	350 270 260 240	CCMT  p. B73	DCMT  p. B79	SCMT  p. B84	TCMT  p. B88	VB(C)/MT  p. B94	
	0.4 ~ 1.0 Medium to finishing	VL 	 0.05 ~ 0.10 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	345 310 310 240 250 210	CCMT  p. B73	DCMT  p. B79	SCMT  p. B84	TCMT  p. B88	VB(C)/MT  p. B94	
	0.1 ~ 1.5 Medium to finishing	VF 	 0.05 ~ 0.15 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CC1500 CN1500 CN2500	265 300 300 230 260 240 210	CCMT  p. B73	DCMT  p. B79	SCMT  p. B84	TC(P)/MT  p. B88	VB(C)/MT  p. B94	
	0.6 ~ 2.5 Medium cutting	MP 	 0.10 ~ 0.15 ~ 0.30	NC3215 NC3225	300 250	CCMT  p. B73	DCMT  p. B79	SCMT  p. B84	TC(P)/MT  p. B88	VB(C)/MT  p. B94	
	0.8 ~ 3.0 Roughing	C25 	 0.12 ~ 0.15 ~ 0.32	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 230 200	CCMT  p. B74	DCMT  p. B80	SCMT  p. B84	TCMT  p. B89		

●: The first recommended cutting condition

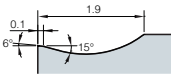
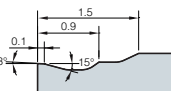
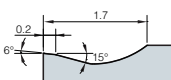
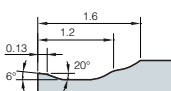
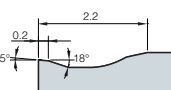
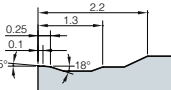
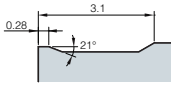
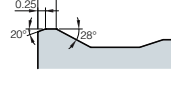
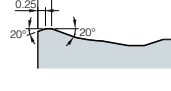


Recommended chip breaker for workpiece

Workpiece
P
Steel

Materials: SNC415, SNC815, SNCM240, SNCM439, STS12, STS61, etc
SCM440, Hardened steel

Hardness: 260~350HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
						80°	55°	90°	60°	35°	80°
Negative	VB		0.15 ~ 0.20 ~ 0.40	NC3215 NC3225 CN1500 CN2500	200 148 220 200	CNMG p. B36	DNMG p. B43		TNMG p. B58		WNMG p. B68
	VF		0.08 ~ 0.15 ~ 0.30	NC3215 NC3220 NC3225	180 159 159	CNMG p. B36	DNMG p. B43	SNMG p. B50	TNMG p. B58	VNMG p. B66	WNMG p. B68
	VC		0.12 ~ 0.25 ~ 0.45	NC3215 NC3220 NC3225 NC5330	168 148 150 200	CNMG p. B36	DNMG p. B44	SNMG p. B50	TNMG p. B59	VNMG p. B66	WNMG p. B68
	LP		0.10 ~ 0.25 ~ 0.40	NC3215 NC3225 NC5330	250 200 200	CNMG p. B36	DNMG p. B43	SNMG p. B50	TNMG p. B58	VNMG p. B66	WNMG p. B68
	MP		0.15 ~ 0.25 ~ 0.45	NC3215 NC3225 NC5330	250 200 200	CNMG p. B37	DNMG p. B44	SNMG p. B51	TNMG p. B59	VNMG p. B66	WNMG p. B69
	VM		0.15 ~ 0.25 ~ 0.50	NC3215 NC3220 NC3225 CN1500 CN2500	174 153 153 120 100	CNMG p. B37	DNMG p. B45	SNMG p. B51	TNMG p. B59	VNMG p. B67	WNMG p. B69
	GR		0.20 ~ 0.35 ~ 0.50	NC3125 NC3225 NC5330	180~370 150~330 130~280	CNMG p. B38	DNMG p. B45	SNMG p. B52	TNMG p. B60		WNMG p. B69
	VH		0.70 ~ 1.00 ~ 1.40	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B42		SNMM p. B57			
	VT		0.75 ~ 1.20 ~ 1.60	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B42		SNMM p. B57			

• The first recommended cutting condition

B Turning Chip Breakers

Recommended chip breaker for workpiece

Workpiece
P
Steel

Materials: SNC415, SNC815, SNCM240, SNCM439, STS12, STS61, etc

SCM440, Hardened steel

Hardness: 260~350HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
Positive	FP		0.01 ~ 0.06 ~ 0.20	NC3215 NC3225 CN1500 CN2500	350 270 260 240	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)/MT p. B94	
	VL		0.05 ~ 0.10 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	305 310 310 240 210 190	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)/MT p. B94	
	VF		0.05 ~ 0.15 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CC1500 CN1500 CN2500	330 300 300 230 260 250 240	CCMT p. B73	DCMT p. B79	SCMT p. B84	TC(P)/MT p. B88	VB(C)/MT p. B94	
	MP		0.10 ~ 0.15 ~ 0.30	NC3215 NC3225 NC5300 CN1500 CN2500	305 285 225 240 220	CCMT p. B73	DCMT p. B79	SCMT p. B84	TC(P)/MT p. B88	VB(C)/MT p. B94	
	C25		0.12 ~ 0.15 ~ 0.32	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 100 80	CCMT p. B74	DCMT p. B80	SCMT p. B84	TCMT p. B89		

• The first recommended cutting condition



Recommended chip breaker for workpiece

Workpiece
M
Stainless steel

Materials: STS304, STS316, STS430, STS630

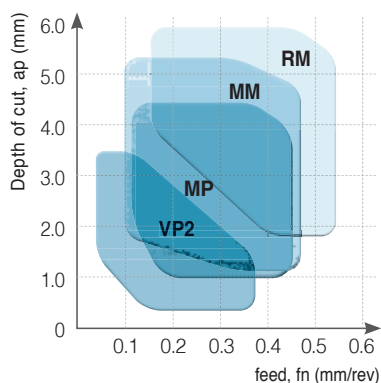
Ferrite, austenite, martensite, precipitation hardening stainless steels

Hardness: 135~300HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
						80°	55°	90°	60°	35°	80°
Negative	VP2		0.10 ~ 0.20 ~ 0.40	PC8105 PC8110 PC8115 PC5300 PC5400	185 170 160 135 120	CNMG p. B41	DNMG p. B47	SNMG p. B55	TNMG p. B63		WNMG p. B71
	MP		0.15 ~ 0.23 ~ 0.45	PC8105 PC8110 PC8115 PC5300 PC5400	175 160 150 130 110	CNMG p. B37	DNMG p. B44	SNMG p. B51	TNMG p. B59	VNMG p. B66	WNMG p. B69
	MM		0.12 ~ 0.25 ~ 0.45	NC9115 NC9125 NC9135 PC8110 PC8115 PC5300	190 170 130 160 150 130	CNMG p. B40	DNMG p. B46	SNMG p. B54	TNMG p. B62	VNMG p. B67	WNMG p. B71
	RM		0.15 ~ 0.30 ~ 0.55	NC9115 NC9125 NC9135 PC8110 PC8115 PC5300	190 170 130 160 150 130	CNMG p. B40	DNMG p. B47	SNMG p. B55	TNMG p. B63	VNMG p. B67	WNMG p. B71

• The first recommended cutting condition

M Negative



B Turning Chip Breakers

Recommended chip breaker for workpiece

Workpiece
M
Stainless steel

Materials: STS304, STS316, STS430, STS630

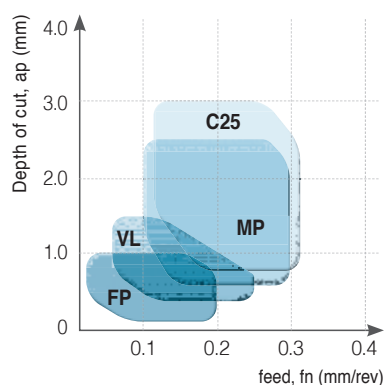
Ferrite, austenite, martensite, precipitation hardening stainless steels

Hardness: 135~300HB

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
						80°	55°	90°	60°	35°	80°
Positive	VL		0.05 ~ 0.10 ~ 0.20	PC8105 PC8110 PC8115 PC5300 PC5400 NC5330 NC9025	215 195 190 165 135 165 165	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)/MT p. B94	
	HMP		0.05 ~ 0.10 ~ 0.25	PC8105 PC8110 PC8115 PC5300 PC5400 NC5330 NC9025	190 175 170 135 120 150 150	CCMT p. B73	DCMT p. B79	SCMT p. B84	TCMT p. B88	VB(C)/MT p. B94	
	MP		0.05 ~ 0.15 ~ 0.35	PC8105 PC8110 PC8115 PC5300 PC5400 NC5330 NC9025	190 175 170 135 120 150 150	CCMT p. B73	DCMT p. B79	SCMT p. B84	TC(P)/MT p. B88	VB(C)/MT p. B94	
	C25		0.08 ~ 0.13 ~ 0.25	PC8110 PC5300 PC9030	170 155	CCMT p. B74	DCMT p. B80	SCMT p. B84	TCMT p. B89		

● The first recommended cutting condition

M Positive



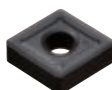
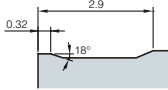
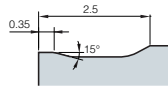
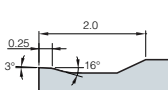
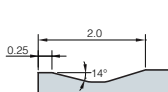
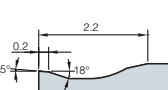
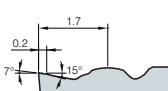
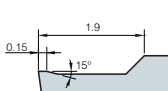
Recommended chip breaker for workpiece

Workpiece
K
Cast iron

Materials: GC250, GC300, GCD400, GCD700, etc : Gray cast iron, Ductile cast iron

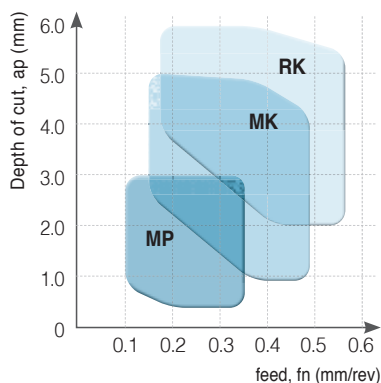
Hardness: 135~185HB

Tensile strength: under 450N/mm²

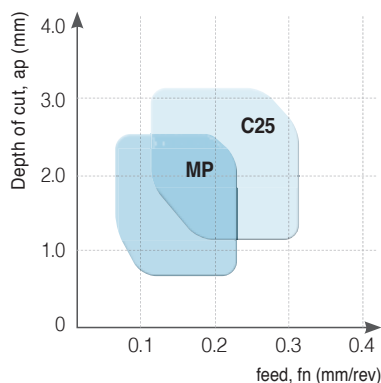
Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape						
												
Negative	1.0 ~ 3.0 ~ 4.5 Roughing	VR 		0.20 ~ 0.35 ~ 0.60	NC6310	220~420	CNMG  p. B39	DNMG  p. B46	SNMG  p. B54	TNMG  p. B62	WNMG  p. B70	
	1.5 ~ 3.0 ~ 6.0 Roughing	RK 		0.20 ~ 0.30 ~ 0.60	NC6310	350~550	CNMG  p. B39	DNMG  p. B46	SNMG  p. B54	TNMG  p. B62	WNMG  p. B70	
	1.0 ~ 2.5 ~ 6.0 Roughing	C/B none 		0.15 ~ 0.30 ~ 0.60	DB1000 DBN500 DBN700A NC6310 NC6315	150 ~ 200 200 ~ 500 500 ~ 2000 140 ~ 420 120 ~ 290	CNMA  p. B39	DNMA  p. B46	SNMA  p. B53	TNMA  p. B61		
	1.0 ~ 2.5 ~ 5.0 Medium ~ Medium to finishing	MK 		0.10 ~ 0.25 ~ 0.50	NC6310	350~550	CNMG  p. B38	DNMG  p. B46	SNMG  p. B53	TNMG  p. B61	VNMG  p. B67	WNMG  p. B70
	0.5 ~ 2.0 ~ 3.5 Medium to finishing	B25 		0.20 ~ 0.35 ~ 0.60	NC6310 NC6315	140~380 120~290	CNMG  p. B38	DNMG  p. B45	SNMG  p. B52	TNMG  p. B60		
	0.5 ~ 1.0 ~ 2.5 Finishing	MP 		0.10 ~ 0.25 ~ 0.45	NC6310 NC6315	140~380 120~290	CNMG  p. B37	DNMG  p. B44	SNMG  p. B51	TNMG  p. B59	VNMG  p. B66	WNMG  p. B69
Positive	1.0 ~ 3.0 ~ 4.5 Roughing	MP 		0.10 ~ 0.20 ~ 0.35	NC6310	225~290	CCMT  p. B73	DCMT  p. B79	SCMT  p. B84	TC(P)MT  p. B88	VB(C)MT  p. B94	
	1.5 ~ 3.0 ~ 6.0 Roughing	C25 		0.10 ~ 0.25 ~ 0.40	NC6310 NC6315	285~340 200	CCMT  p. B74	DCMT  p. B80	SCMT  p. B84	TCMT  p. B89		

• The first recommended cutting condition

K Negative



K Positive



B Turning Chip Breakers

Recommended chip breaker for workpiece

Workpiece
N
Aluminum alloy

Materials: Aluminum alloy

Hardness: 20~110HB

	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
							80°	55°	90°	60°	35°	80°
Negative	0.5 ~ 2.0 ~ 6.0 Medium cutting	HA		0.10 ~ 0.20 ~ 0.50	H01	500	CNMG p. B41	DNMG p. B48	SNMG p. B56	TNMG p. B63	VNMG p. B67	WNMG p. B72
	0.1 ~ 1.0 ~ 4.0 Medium to finishing	AK		0.03 ~ 0.20 ~ 0.40	H01 ND1000 PD1000	1000	CCGT p. B103	DCGT p. B104	SCGT p. B106	TCGT p. B107	VB(C)GT p. B108	RCGT p. B105
Positive	0.5 ~ 1.5 ~ 4.0 Medium cutting	AR		0.05 ~ 0.30 ~ 0.50	H01 ND1000 PD1000	1000	CCGT p. B103	DCGT p. B104	SCGT p. B106	TCGT p. B107	VB(C)GT p. B108	RCGT p. B105
	0.1 ~ 1.0 ~ 3.0 Medium to finishing	AK		0.03 ~ 0.20 ~ 0.30	H01	1000	CCGT p. B103	DCGT p. B104	SCGT p. B106	TCGT p. B107	VB(C)GT p. B108	RCGT p. B105

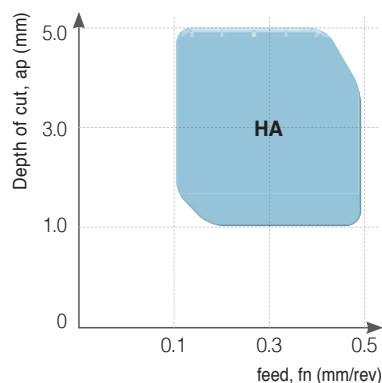
Materials: Copper, Bronze alloy

Hardness: 20~110HB

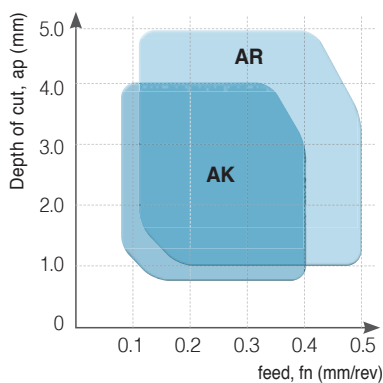
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
							80°	55°	90°	60°	35°	80°
Negative	0.5 ~ 2.0 ~ 4.0 Medium to finishing	HA		0.10 ~ 0.20 ~ 0.50	H01	1000	CNMG p. B41	DNMG p. B48	SNMG p. B56	TNMG p. B63	VNMG p. B67	WNMG p. B72
	0.1 ~ 1.0 ~ 3.0 Medium to finishing	AK		0.03 ~ 0.20 ~ 0.30	H01	1000	CCGT p. B103	DCGT p. B104	SCGT p. B106	TCGT p. B107	VB(C)GT p. B108	RCGT p. B105
Positive	0.5 ~ 1.5 ~ 3.0 Medium cutting	AR		0.05 ~ 0.25 ~ 0.40	H01	1000	CCGT p. B103	DCGT p. B104	SCGT p. B106	TCGT p. B107	VB(C)GT p. B108	RCGT p. B105
	0.1 ~ 1.0 ~ 3.0 Medium to finishing	AK		0.03 ~ 0.20 ~ 0.30	H01	1000	CCGT p. B103	DCGT p. B104	SCGT p. B106	TCGT p. B107	VB(C)GT p. B108	RCGT p. B105

•: The first recommended cutting condition

N Negative



N Positive



Recommended chip breaker for workpiece

Workpiece
S
Heat resistant
alloy

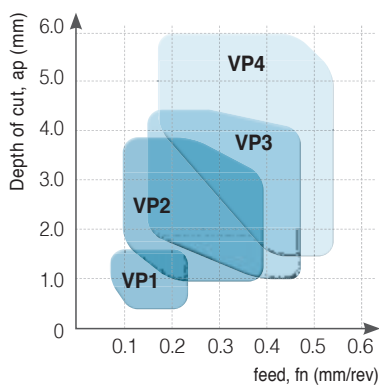
Materials: Inconel, Nimonic, Stellite, Ti alloy

Hardness: 160~350HB

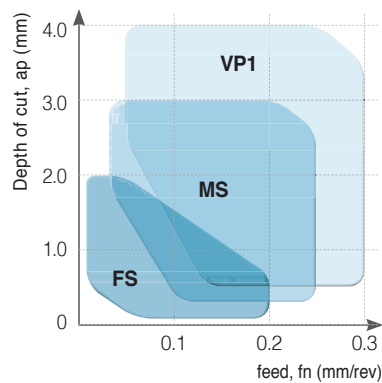
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape					
							80°	55°	90°	60°	35°	80°
Negative	0.1 ~ 0.5 ~ 1.5 Finishing	VP1		0.05 ~ 0.10 ~ 0.20	PC8110 PC5300 NC5330	60 50 50	CNMG p. B40	DNMG p. B47				
	0.5 ~ 1.5 ~ 4.0 Medium to finishing	VP2		0.10 ~ 0.20 ~ 0.40	PC8110 PC5300	60 45	CNMG p. B41	DNMG p. B47	SNMG p. B55	TNMG p. B63		WNMG p. B71
	0.05 ~ 2.0 ~ 3.0 Medium cutting	VP3		0.05 ~ 0.15 ~ 0.25	PC8110 PC5300	60 40	CNMG p. B41	DNMG p. B47	SNMG p. B55	TNMG p. B63	VNMG p. B67	WNMG p. B71
	1.0 ~ 2.5 ~ 4.0 Roughing	VP4		0.15 ~ 0.20 ~ 0.35	PC8115	60 40	CNMG p. B41	DNMG p. B48	SNMG p. B55	TNMG p. B63		WNMG p. B71
Positive	0.5 ~ 2.0 ~ 4.0 Medium cutting	VP1		0.05 ~ 0.23 ~ 0.30	PC8110 PC5300	60 45	CCGT p. B74	DCGT p. B81			VCGT p. B98	
	0.2 ~ 1.0 ~ 2.5 Medium cutting	MS		0.03 ~ 0.10 ~ 0.25	PC8110 PC5300	60 45	CCGT p. B74	DCGT p. B80			VCGT p. B98	
	0.1 ~ 0.8 ~ 1.5 Finishing	FS		0.01 ~ 0.08 ~ 0.20	PC8110 PC5300	60 45	CCGT p. B74	DCGT p. B80		TCGT p. B89	VCGT p. B98	

●: The first recommended cutting condition

S Negative



S Positive



Features of Chip Breaker

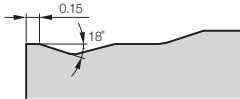
CP Chip Breaker ^{new} [For medium to finishing]

- Chip breaker with strong cutting edge for heavy interruption in the range of medium to finishing
- Effective chip control in the range from low depth of cut to high depth of cut due to 2-stepped back angle
- Stable chip evacuation and breaking long chip in deep cutting by side rake angle and continuous bumps

Features of CP chip breaker

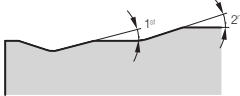
► Flat land

- Strong cutting edge in interrupted roughing
- Keeping the balance between continuous cutting and interrupted cutting
- Expanded versatility



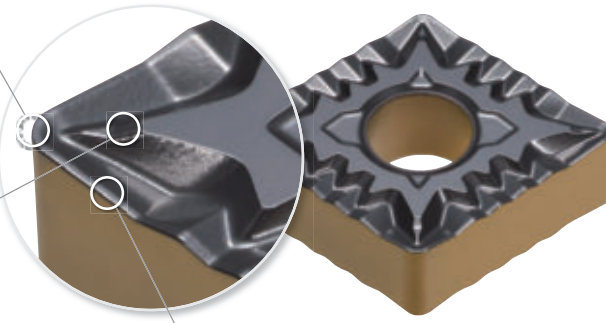
► 2-stepped back side

- Better chip control in low depth of cut machining
- Improved chip evacuation in high feed machining
- Expanded versatility by 2-stepped rake angle



► Side rake angle + continuous bumps

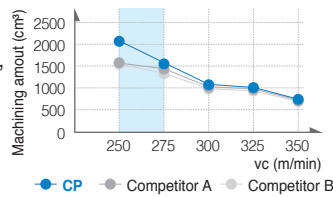
- Enhanced surface finish
- Improved chip evacuation
- Breaking long chips



Performance evaluation

V-T (Vc-Tool life)

- **Workpiece** Alloy steel (SCM440), External machining
- **Cutting condition** vc (m/min) = 250, 300, 350, fn (mm/rev) = 0.3, ap (mm) = 0.5, wet
- **Tools** Insert : CNMG120408-RM (NC9115)
Holder : PCLNL2525-M12



CP

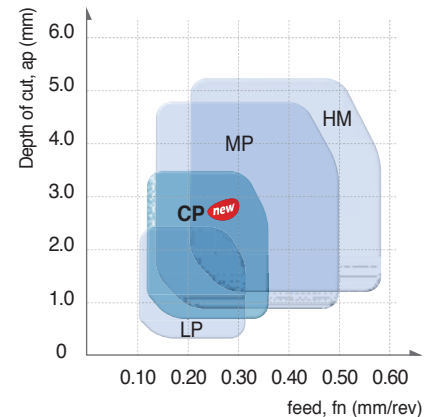


Competitor A



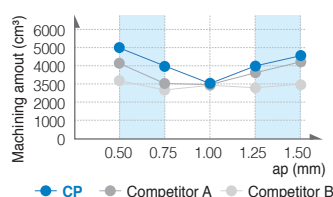
Competitor B

Application range



D-T (Depth of cut-Tool life)

- **Workpiece** Alloy steel (SCM440), External machining
- **Cutting condition** vc (m/min) = 250, fn (mm/rev) = 0.2, ap (mm) = 0.50, 0.75, 1.00, 1.25, 1.50, wet
- **Tools** Insert : CNMG120408-CP (NC3215P)
Holder : PCLNL2525-M12



CP



Competitor A



Competitor B

Features of Chip Breaker

FP Chip Breaker ^{new} [For chip control in finishing]

- Chip breaker applied on one side of insert controls chip in mild steel machining with low depth of cut
- Chip control in poor machining (with lower depth of cut than nose R, in machining minor cutting edge and in back cutting)
- Decreased cutting load and excellent surface finish due to 3-dimensional cutting edge and side rake angle

Features of FP chip breaker

► Concave form of semicircle-shaped bump

- Better chip curling in mild steel machining
- Enhanced chip control in low depth of cut and low feed machining

► Semicircle-shaped bump

- Enhanced chip control in low depth of cut machining
- Advanced chip control in machining of minor cutting edge
- Improved chip control in machining with lower depth of cut than nose R

► 3-dimensional side rake angle

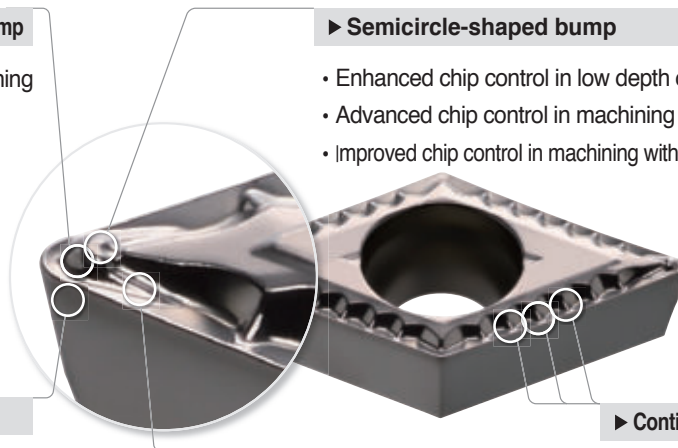
- Ensuring surface finish and guiding chip to right direction

► Assistant bump on flank surface

- Better chip curling in high depth of cut and low feed machining
- Preventing chip twist

► Continuous bump on flank surface

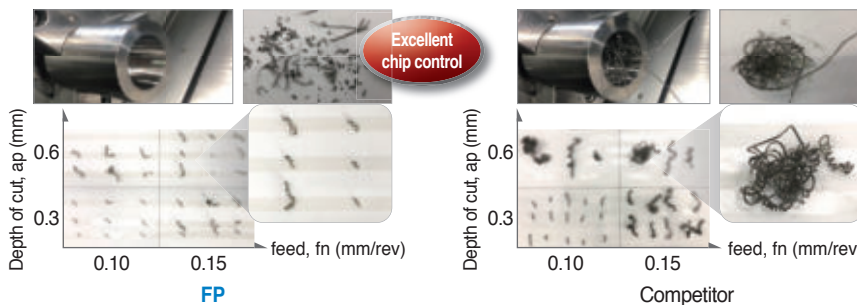
- Cutting long chip



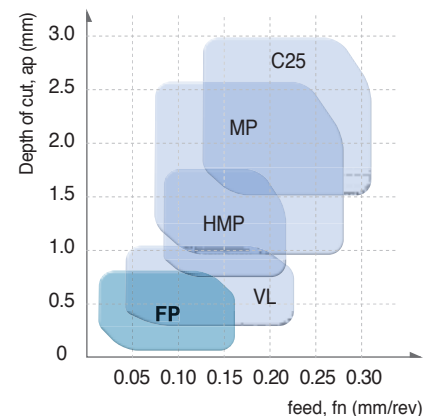
Performance evaluation

Chip control

- **Workpiece** Mild steel (SM20C), Ø40 Internal machining
- **Cutting condition** vc (m/min) = 200, n (rpm) = 1,600, fn (mm/rev) = 0.03, ap (mm) = 0.5, wet
- **Tools** Insert : CCMT09T304-FP (NC3215)
Holder : S16M-SCLCR-M09

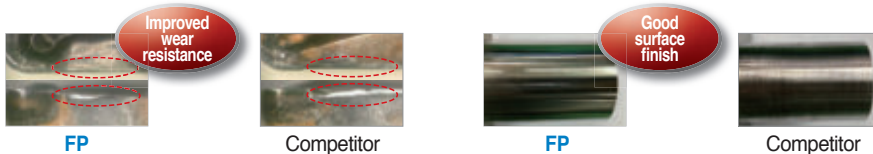


Application range



Surface finish

- **Workpiece** Mild steel (SM20C), Ø30 External machining
- **Cutting condition** vc (m/min) = 200, n (rpm) = 2,000, fn (mm/rev) = 0.08, ap (mm) = 0.8, wet
- **Tools** Insert : CCMT09T304-FP (NC3215)
Holder : SCLCR1616-M09



Features of Chip Breaker

FS Chip Breaker new [For finishing]

- Chip breaker for ultra-precision automatic Swiss lathe machining (for lower depth of cut and lower feed cutting range than VP1 and MS)
- Available for various workpieces, P, M and S
- Reduced cutting load and good surface finish due to sharp cutting edge

Features of FS chip breaker

► Variable elevated triangular pyramid shape

- Applicable for various cutting range due to optimally designed chip breaker
- Enhanced chip evacuation function per variation of cutting depth
- Enhanced chip control with low depth of cut
- Lowered cutting load in high feed machining

► Side high rake angle

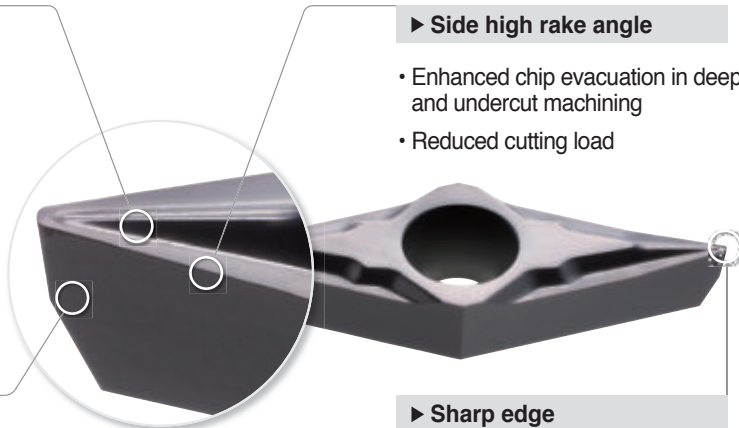
- Enhanced chip evacuation in deep grooving and undercut machining
- Reduced cutting load

► Side grinding

- Periphery grinding G class
- High precision grinding

► Sharp edge

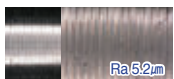
- Reduced cutting resistance
- Improved chip control



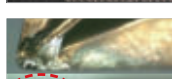
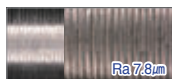
Performance evaluation

Workpiece size and surface finish

- **Workpiece** Stainless steel (STS406)
- **Cutting condition** vc (m/min) = 80, n (rpm) = 1,000, fn (mm/rev) = 0.05, ap (mm) = 0.1, wet
- **Tools** Insert : VCGT110301-FS (PC8110)
Holder : SVJCR1212-X11A

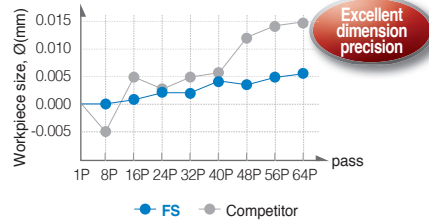


Good surface finish

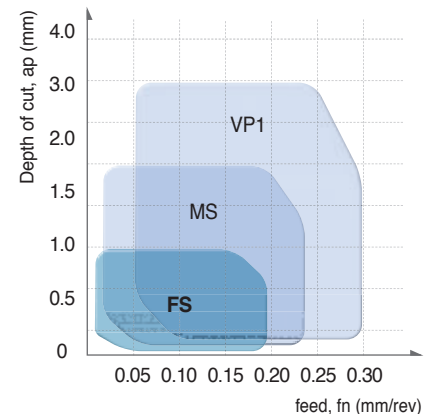


FS

Competitor

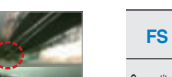
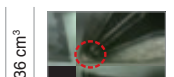


Application range



Wear resistance

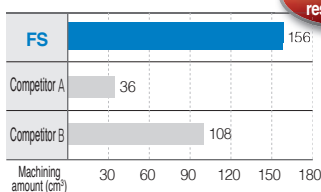
- **Workpiece** Alloy steel (SCM440)
- **Cutting condition** vc (m/min) = 100, n (rpm) = 1,000, fn (mm/rev) = 0.05, ap (mm) = 0.5, wet
- **Tools** Insert : CCGT09T304-FS (PC8110)
Holder : SCLCR1212-X09A



FS

Competitor A

Competitor B



Features of Chip Breaker

MS Chip Breaker new [For medium to finishing]

- Sharp cutting edge with welding resistance reducing the cutting heat is necessary for machining hard-to-cut materials
- Chip evacuation is increased in low to high feed cutting conditions

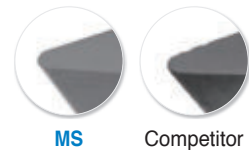
Features of MS chip breaker

► Sharp cutting edge

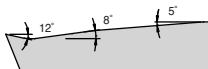
- Decreased cutting heat
- Minimized welding

► Flank surface grinding

- G grade of periphery grinding
- Precise grinding



► 2-level angle back area



- Improved chip curl and chip control in low feed cutting range
- Better chip evacuation in high feed cutting range
- Reduced cutting resistance
- Protected cutting edge without chip blockage

Performance evaluation

Wear resistance

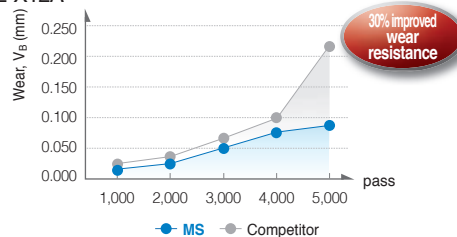
- Workpiece: Pure titanium (Grade4)
- Cutting condition: vc (m/min) = 100, n (rpm) = 3,500, fn (mm/rev) = 0.03, ap (mm) = 0.5, wet
- Tools: Insert : VCGT1203008FN-MS (PC8110)
Holder : SVJCR1212-X12A



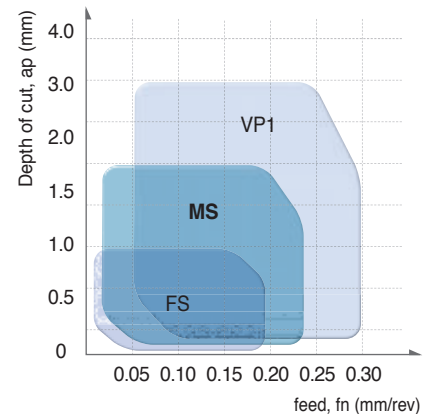
MS

Competitor

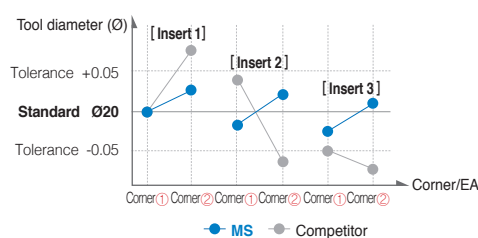
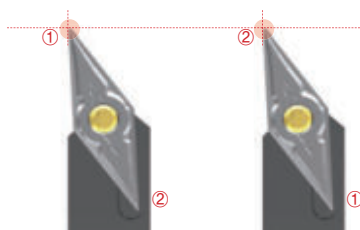
- Ultra-fine substrate and high hardness coating ensure stable tool life.



Application range



Dimension precision



- Changing tool offset in switching insert corners and items is not necessary using MS chip breaker due to tight dimension deviation management.

Features of Chip Breaker

LP Chip Breaker new [For medium to finishing]

- Chip breaker for forged steel of automobile parts and normal steel
- Quad dots improve productivity through efficient chip control at high feed
- Angle land minimizes cutting force

Features of LP chip breaker

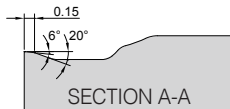
► Front dot

- Higher stability of chip curls at high feed
- Excellent chip control when copying
- Lower cutting force at low depth of cut and high feed

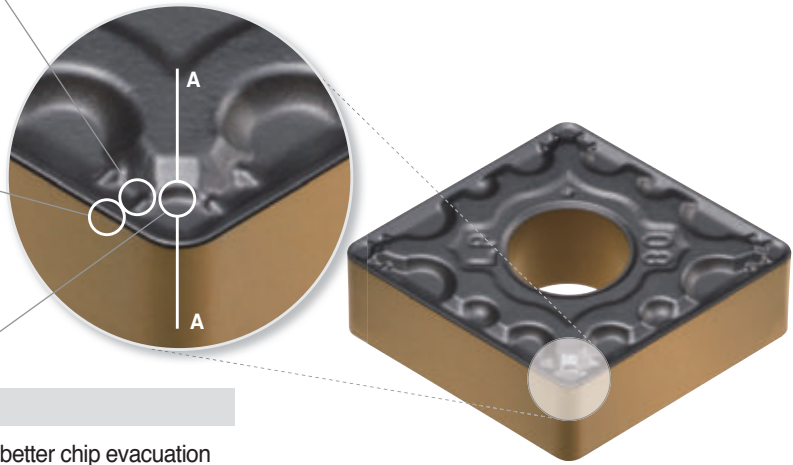
► Variable land

- Less crater wear
- Prevents chipping on minor cutting edge

► Flat zone



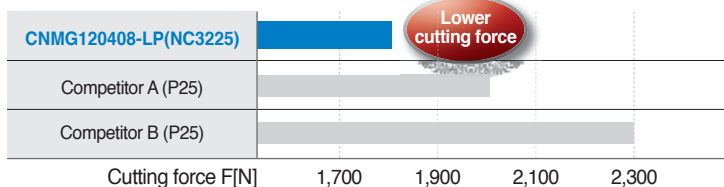
- Larger chip pocket for better chip evacuation at high feed
- Reduced cutting force with larger contact surface of chips



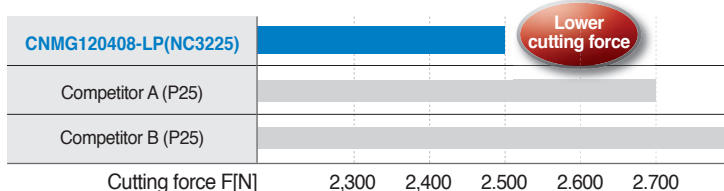
Performance evaluation (Evaluation of cutting force)

- **Workpiece** SM45C, Ø100, External machining
- **Cutting condition** vc (m/min) = 250, ap (mm) = 1.0, fn (mm/rev) = 0.25/0.40, wet
- **Tools** CNMG120408-□□

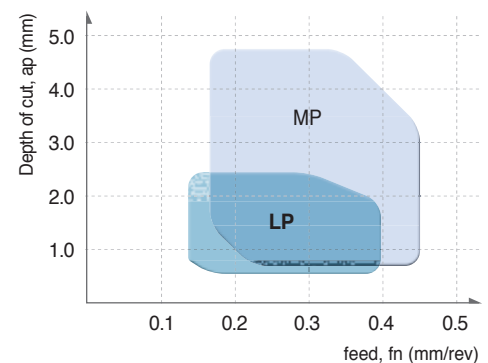
Medium feed (0.25 mm/rev)



High feed (0.40 mm/rev)



Application range



Features of Chip Breaker

MP Chip Breaker ^{new} [For medium cutting]

- Chip breaker for forged steel of automobile parts and all other steels
- Quad dots improve productivity through efficient chip control at high feed
- Angle land minimizes cutting force

Features of MP chip breaker

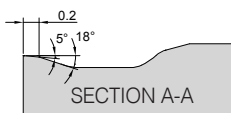
► Front two step dot

- Higher stability of chip curls at high feed
- Excellent chip control when copying
- Lower cutting force at high depth of cut

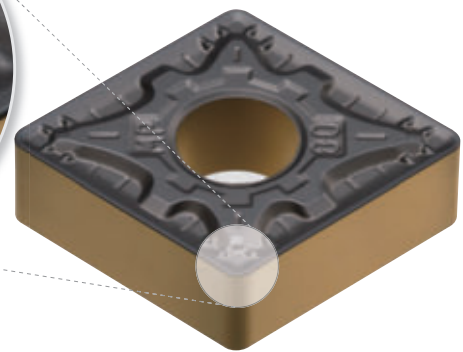
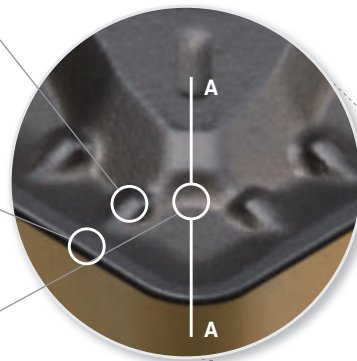
► Variable land

- Less crater wear
- Prevents chipping on minor cutting edge
- Higher toughness at high depth of cut and interrupted cutting

► Flat zone



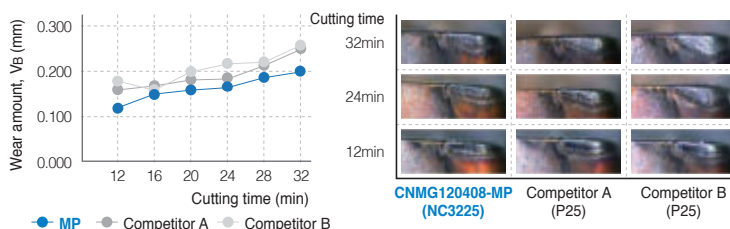
- Larger chip pocket for better chip evacuation at high feed
- Reduced cutting force with larger contact surface of chips



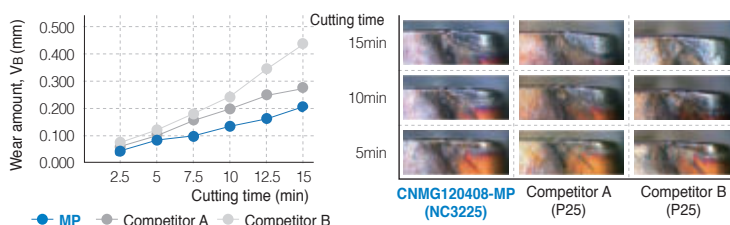
Performance evaluation

- **Workpiece** Alloy steel (SCM440), Ø100, External machining
- **Cutting condition** v_c (m/min) = 280, a_p (mm) = 1.5, f_n (mm/rev) = 0.25/0.40, wet
- **Tools** CNMG120408-□□

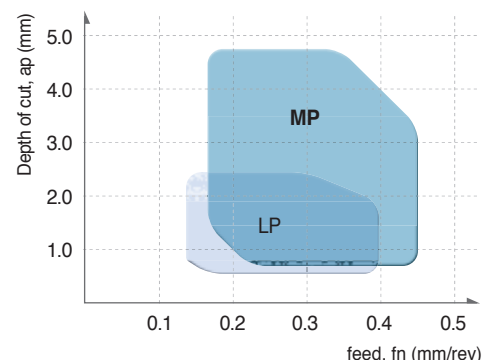
Medium feed (0.25 mm/rev)



High feed (0.40 mm/rev)



Application range



Features of Chip Breaker

MM Chip Breaker new [For medium cutting]

- The 1st recommended chip breaker for stainless steel machining
- Change to: A dual land achieves sharp cutting performance and insert toughness
- Wide chip pockets for stable chip evacuation at high feeds/depths of cut

Features of MM chip breaker

► Variable Land

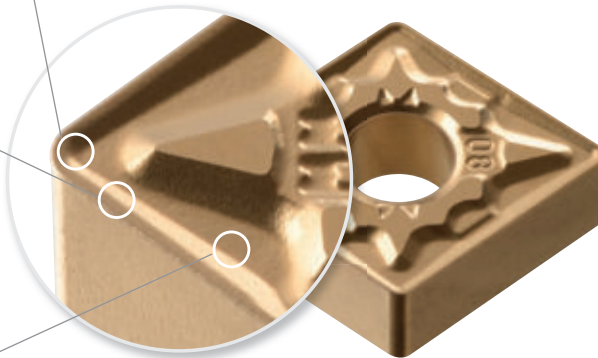
- Excellent chip control and sharp cutting at low depths of cut
- Delays crater wear
- Prevents plastic deformation

► Dual Land

- Balance between requirements of sharp and tough cutting edges
- Sharp cutting edge for high speed machining
- Prevents chipping in interrupted machining

► Wide Chip Pocket

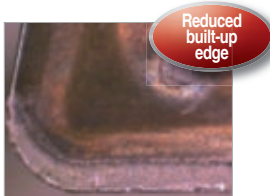
- Stable chip evacuation at high speeds/feeds
- Improved surface finishes by reduced workpiece scratches caused by work-hardened chips at high depths of cut
- Prevents built-up edge



Performance evaluation

Built-up edge

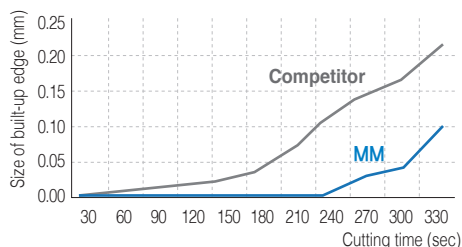
- **Workpiece** STS405 (Ferrite)
- **Cutting condition** vc (m/min) = 180, fn (mm/rev) = 0.3, ap (mm) = 3.0, wet
- **Tools** **Insert** : CNMG120408-MM (NC9125)
Holder : PCLNL2525-M12



MM(NC9125)

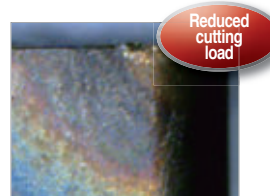


Competitor

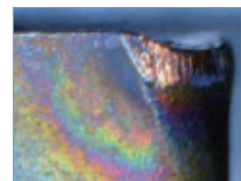


Plastic deformation

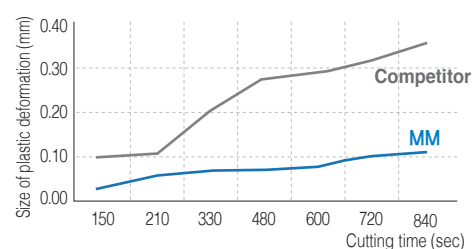
- **Workpiece** STS316 (Austenite)
- **Cutting condition** vc (m/min) = 200, fn (mm/rev) = 0.35, ap (mm) = 2.0, dry
- **Tools** **Insert** : CNMG120408-MM (NC9135)
Holder : PCLNL2525-M12



MM(NC9135)



Competitor



Features of Chip Breaker

RM Chip Breaker ^{new} [For roughing]

- The 1st recommended chip breaker for rough and interrupted machining of stainless steel
- Prevents notch wear and burrs at high feeds and depths of cut
- Reduced cutting force extends tool life in high feed machining

Features of RM chip breaker

► Variable Land

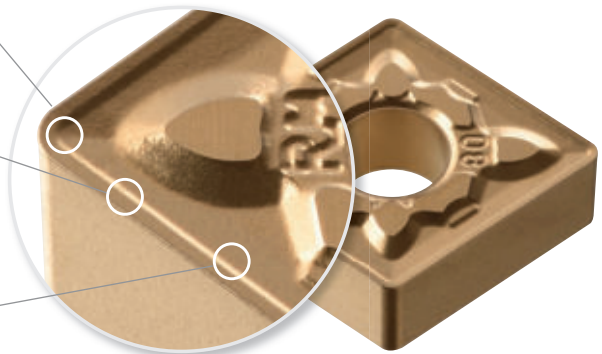
- Excellent chip control and sharp cutting at low depths of cut
- Delays crater wear
- Prevents plastic deformation

► Wide land & Gentle front angle

- Sharp cutting edges and a wide land reduce cutting force
- Reduced burrs
- Dispersed cutting load enables higher toughness

► Stepped Design

- Stepped design makes chip evacuation easier
- Smooth chip evacuation prevents plastic deformation



Performance evaluation

Notch wear

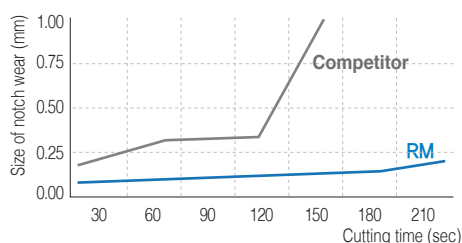
- **Workpiece** STS410 (Martensite)
- **Cutting condition** vc (m/min) = 150, f_n (mm/rev) = 0.25, ap (mm) = 3.0, wet
- **Tools** Insert : CNMG120408-RM (NC9115)
Holder : PCLNL2525-M12



RM(NC9115)



Competitor



Burr

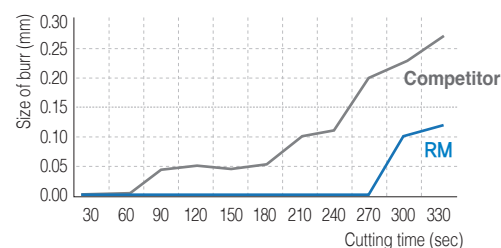
- **Workpiece** Duplex
- **Cutting condition** vc (m/min) = 120, f_n (mm/rev) = 0.2, ap (mm) = 2.0, dry
- **Tools** Insert : CNMG120408-RM (NC9125)
Holder : PCLNL2525-M12



RM(NC9125)



Competitor



Features of Chip Breaker

MK Chip Breaker ^{new} [For medium cutting]

- Ideally suited for continuous cutting of ductile cast iron and gray cast iron
- Angle lands provide upgraded surface finish

Features of MK chip breaker

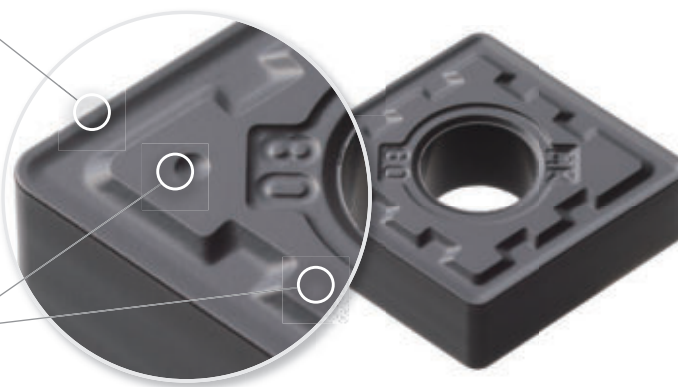
► Angle land

- Angle lands provide sharper cutting performance
- Maximized wear resistance in continuous cutting
- High quality results in surface finish



► Wide supporting area

- Higher clamping stability
- Prevents chipping at vibrations during operation



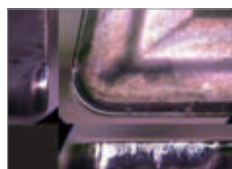
Performance evaluation

Wear resistance

- **Workpiece** GCD500(KS), Ø90 (Spherical tube) → Ø30 machining
- **Cutting conditions** vc (m/min) = 400, f_n (mm/rev) = 0.35, ap (mm) = 2.5, wet
- **Cutting time** 30 passes with results of normal wear on rake/flank surface
- **Tools** Insert : CNMG120408-MK (NC6315)
Holder: DCLNR2525-M12

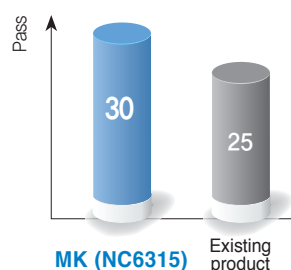


MK (NC6315)

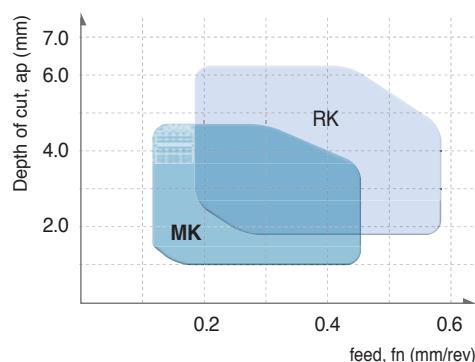


Existing product

130% increased flank wear resistance



Application range



Features of Chip Breaker

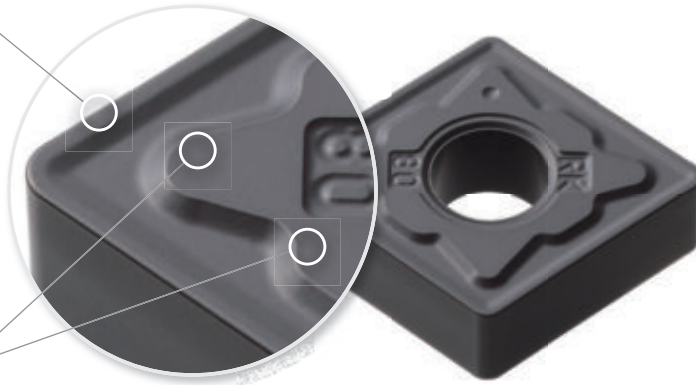
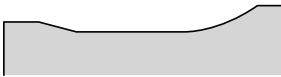
RK Chip Breaker ^{new} [For roughing]

- Ideally suited for high speed / high feed cutting of ductile cast iron and gray cast iron
- Flat lands provide upgraded toughness and chipping resistance

Features of RK chip breaker

► Flat land

- Flat lands provide upgraded toughness and chipping resistance
- Stable machining availability under high cutting loads at high depth of cuts or interrupted cutting
- Optimized land width for high feed machining



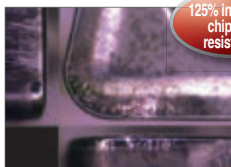
► Wide supporting area

- Higher clamping stability
- Minimizes vibration and chipping.

Performance evaluation

Impact resistance

- **Workpiece** GCD500 (KS), Ø90 (Triangular tube) → Ø30 machining
- **Cutting conditions** vc (m/min) = 380, fn (mm/rev) = 0.35, ap (mm) = 2, wet
- **Cutting time** 15 passes with results of normal rake surface wear and good chipping resistance
- **Tools** Insert : CNMG120408-RK (NC6315)
Holder: DCLNR2525-M12

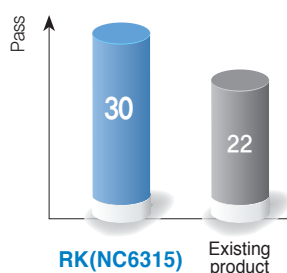


RK(NC6315)

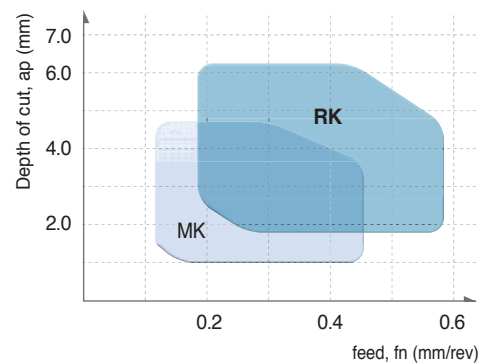


Existing product

125% increased
chipping
resistance



Application range



Features of Chip Breaker

VP1 Chip Breaker [For finishing]

- Cutting edges designed in high-positive
 - Reduced contact area between rake surface and chip minimizes cutting heat and improved tool life
- Recommended cutting conditions: f_n (mm/rev) = 0.05~0.2, a_p (mm) = 0.1~1.5

Features of VP1 chip breaker

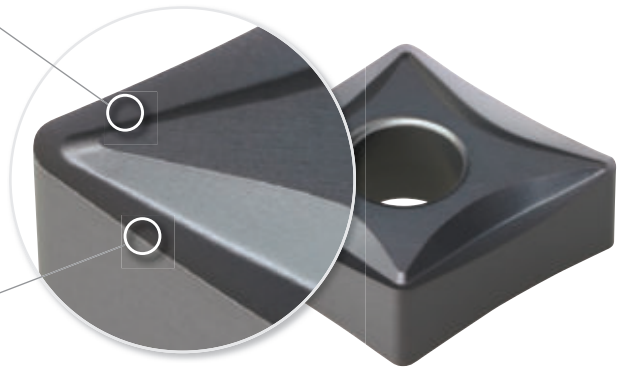
► Optimized design for finishing

- Obtains excellent cutting performance and quality surface finish at low depth of cut and high speed



► High-positive blade design

- Minimizes cutting heat by reducing the contact area between flank surface and chips
- Prevents built-up edge and extends tool life



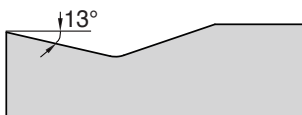
VP2 Chip Breaker [For medium to finishing]

- High-positive cutting edge design/Side rake angle applied
 - Stable chip control improves machinability when ball machining at variable depths of cut
- Recommended cutting conditions: f_n (mm/rev) = 0.1~0.4, a_p (mm) = 0.5~4.5

Features of VP2 chip breaker

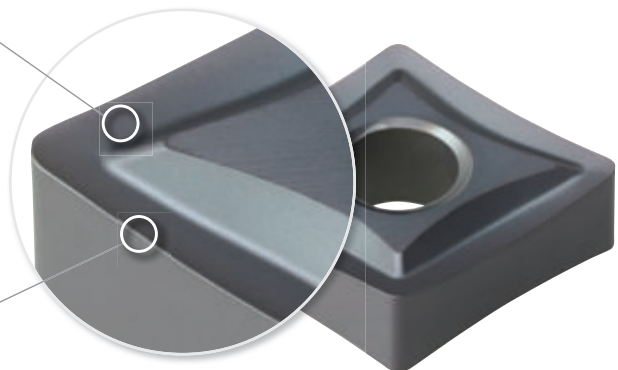
► Sharp blades and wide chip pockets

- Increase productivity
- Ideal for medium to finish cutting



► High-positive blade design

- Improves cutting performance with its stable chip control at varying depth of cuts



Features of Chip Breaker

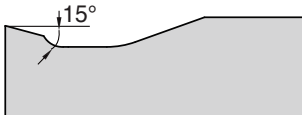
VP3 Chip Breaker [For medium cutting]

- High-positive cutting edge design/Wide land applied
 - Improved stability at interrupted cutting when toughness is required. Stable chip control and machinability at high depth of cut
- Recommended cutting conditions: f_n (mm/rev) = 0.1~0.45, a_p (mm) = 0.5~5.0

Features of VP3 chip breaker

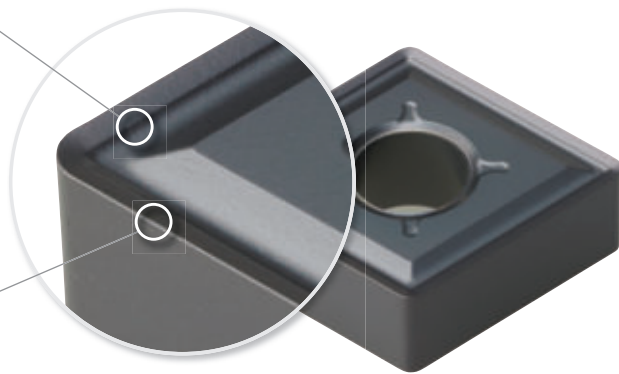
► Chip pocket design leading to a R-shaped cutting edge

- Creates a stepped space between edge and land to make smooth chip flow at low and high depth of cuts



► High-positive blade design / Wide land

- Minimize heat concentration at high depth of cut
- Improves stability in interrupted machining of a tough workpiece



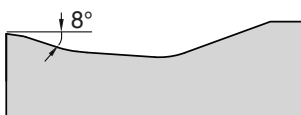
VP4 Chip Breaker **new** [For roughing]

- The 1st recommended chip breakers for machining Inconel which remains highly resistant to and hard at high temperature
- Rough machining stability resulting from reinforced cutting edges and wide chip pockets

Features of VP4 chip breaker

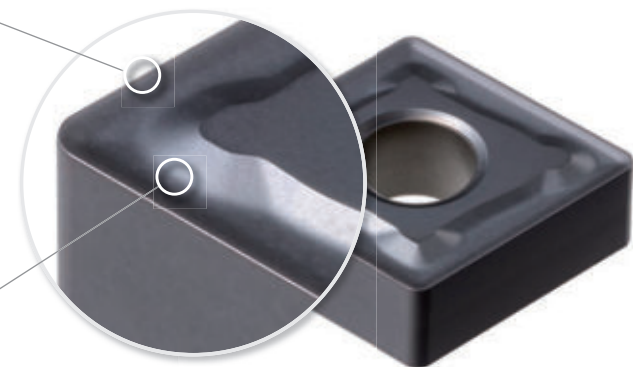
► Rake angle design resistant to high hardness cutting

- Reinforces cutting edges and prevents notch wear in rough surface machining
- Prevents chipping in interrupted cutting



► Wide chip pockets

- Reduce cutting loads and improve stability even at high depth of cut in roughing

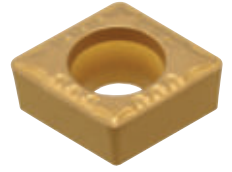


Features of Chip Breaker

Single-sided VL Chip Breaker

[For finishing]

- The sharp flank surface and the chip breaker design significantly improve chip control when machining tough materials such as low carbon steel, pipe steel, and iron plates
- Sharp cutting edges reduce cutting resistance and provide excellent chip control at low depth of cuts, leading to stable machining on automated production lines

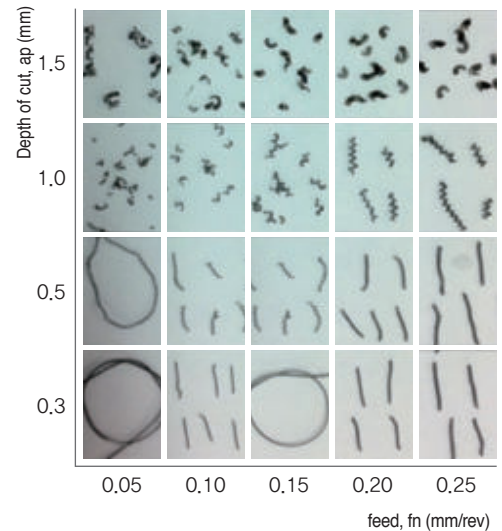


Features of VL chip breaker

- **Sharp cutting edges**
 - High rake cutting edges provide improved surface finishes
 - Low cutting resistance reduces cutting heat
- **2-step rear rake angle**
 - Stable chip control regardless of varying feed rates
 - Excellent machinability even when machining mild workpieces

Chip control test

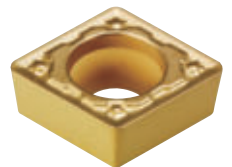
- **Workpiece** SCM440(Alloy steel), Ø50, Internal diameter turning
- **Cutting condition** $vc = 250$ m/min, $ap = 0.3 \sim 1.5$ mm, $fn = 0.05 \sim 0.25$ mm/rev
- **Tools** CCMT09T304-VL



Single-sided MP Chip Breaker

[For medium to finishing]

- For continuous cutting of forged steel at high feed
- Turning insert for internal machining of automobile components

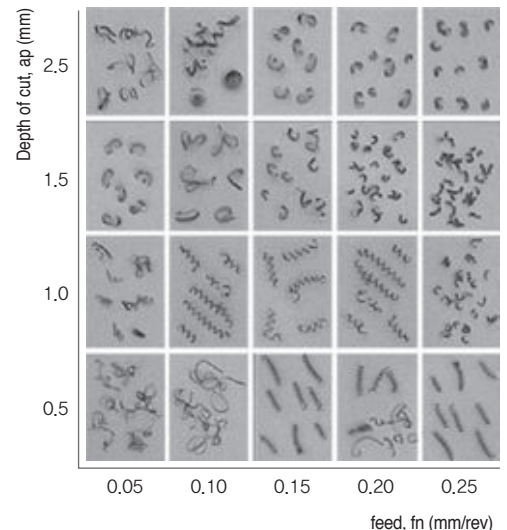


Features of MP chip breaker

- **Three-dimensional 2 step chip breaker**
 - Stable chip control in unstable internal machining
 - Prevents chip blocking at internal diameter at varying depth of cut and feed.
- **Stronger cutting edge and wide chip pocket**
 - Increased chipping resistance in unstable internal machining

Chip control test

- **Workpiece** SCM440
- **Cutting condition** $vc = 200$ m/min, $ap = 0.5 \sim 2.5$ mm, $fn = 0.05 \sim 0.25$ mm/rev
- **Tools** CCMT09T304-MP



Features of Chip Breaker

VL Chip Breaker [For finishing]

- Improved chip control for machining material that have high toughness such as low carbon steel, pipe, steel plate etc
- Improved chip control and decreased cutting load on external, facing, and copying applications
- Improved strength of the cutting edge for measurable efficiency in automated production



Features of VL chip breaker

- **2 steps designed chip-breaker** - Suitable Mild steel
- Stable chip control on the low feed and cutting depth
- **Designed with special dots** - Stable chip breaking on the low cutting depth
- **Applied side rake angle** - Improved chip control on facing, copying applications
- Decreased cutting load and better surface finish

Chip control test

- **Workpiece** SM20C
- **Cutting conditions** $vc = 250 \text{ m/min}$, $ap = 0.5 \text{ mm}$
 $fn = 0.2 \text{ mm/rev}$ (Side), dry
- **Tools** DNMG150408-VL



VL
Chip Breakers

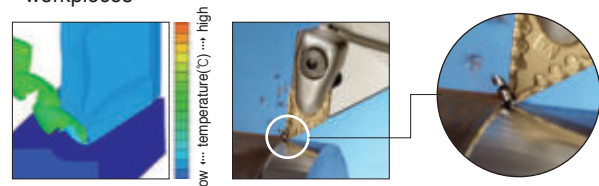
Competitor A

Competitor B

Competitor C

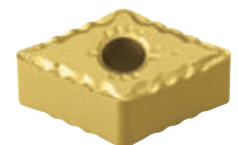
FEM Cutting simulation analysis in the design

- For design of geometry, chip shapes and chip flow are predictable
- Optimal chip breaker design by various cutting conditions and workpieces



VB Chip Breaker [For finishing]

- Excellent chip evacuation in continuous and high speed machining of various workpieces
- 3-dimensional chip breaker achieves lower cutting resistance, high rigidity of the cutting edge, and longer tool life
- Stable chip control in copying and internal machining

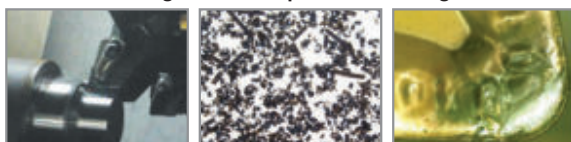


Features of VB chip breaker

- **6 bumps on the insert corner** - Superior chip control and chip cutting in copying with various depths of cut
- **Side rake angle** - Superb chip cutting in facing and copying. Superior tool life due to improved surface roughness and lower cutting resistance
- **Cutting edge on 100° part for medium machining (For CNMG)** - Excellent chip evacuation and toughness in machining with high depth of cut

Performance

Better machining Better Chip control Longer tool life



VB Chip Breakers



Conventional chip breaker

Features of Chip Breaker

VC Chip Breaker [For medium to finishing]

- Superior chip evacuation in high speed and continuous machining of various workpieces (carbon steel, alloy steel etc)
- KORLOY 3 dimensional chip breaker ensures longer tool life due to low cutting load and improved cutting edge strength
- Stable chip control in copying and internal machining



Features of VC chip breaker

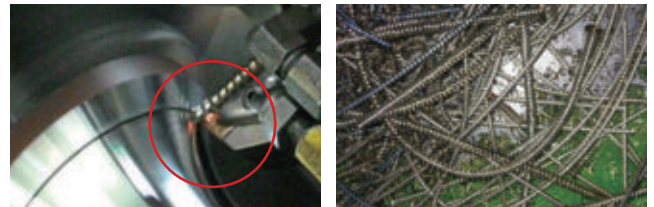
- 4 bumps on the insert corner
 - Excellent chip control in various depths of cut and superb chip cutting in external, internal, copy machining and facing

Evaluation of chip control (Copying)

VC Chip Breakers

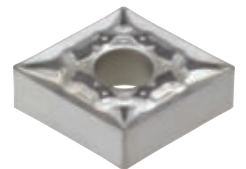


Conventional chip breaker



VQ Chip Breaker [For medium to finishing_For cermet]

- Excellent cutting performance and reinforced cutting edges
- Improved chip control at low depth of cuts

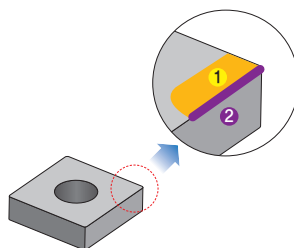


Features of VQ chip breaker

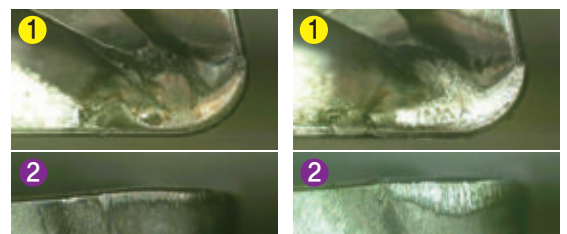
- Three dimensional rake angle
 - Improved surface finish thanks to sharp cutting performance
 - Less cutting heat and longer tool life thanks to low cutting resistance
- Beveled protruding structure
 - Smooth chip flow at low depth of cuts
 - Wide application range

Performance evaluation

- **Workpiece** SCM440(Alloy steel), Ø100, External diameter turning
- **Cutting conditions** $v_c = 280$ m/min, $a_p = 1.5$ mm, $f_n = 0.25$ mm/rev
- **Tools** CNMG120408-VQ (CN2500)



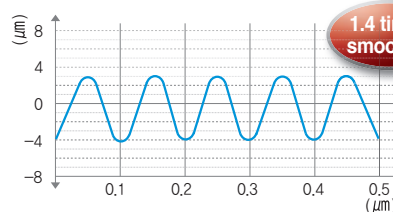
Wear comparison



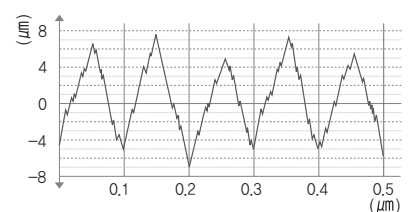
CN2500-VQ

Competitor

Surface roughness comparison



CN2500 (Ra 3.0 μ m)



Competitor (Ra 7.0 μ m)



Features of Chip Breaker

VH/VT Chip Breaker [For heavy duty machining]

- Heavy duty chip breaker suitable for Heavy machining in the ship building and power plant industries
- Suitable for large vertical machines when machining shafts, rollers, rotors and optimal for the big flange machining

Features of VH chip breaker

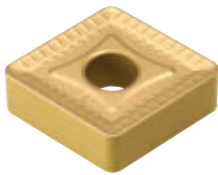
► For good chip control in heavy machining (comprehensive type)



- Designed from the study of heavy cutting mechanism
- Smooth chip control from the high rake angle
- Wider cutting edge land provides stronger cutting
- Unique cutting edge treatment provides smooth cutting
- Optimized chip pocket design provides smooth chip flow

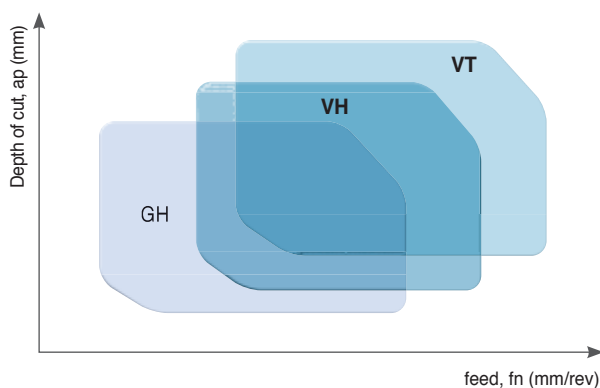
Features of VT chip breaker

► For long tool life and stable cutting (higher feeds, big depth) in heavy machining



- Designed from the study of heavy cutting mechanism
- Strong edge design provides long and stable cutting (2 step rake angle of cutting edge)
- Varied cutting edge land strengthens the cutting edge
- The positioning of the chip breaking convex dot deflect the machining heat, optimizes inserts wear & absorb shock

Applications range of chip breakers

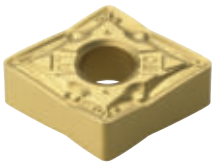


Features of Chip Breaker

LW/VW Chip Breaker [For high feed cutting]

- Improved productivity with higher feed rates and surface finishes
- Improved wear resistance and toughness

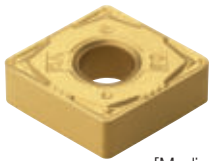
Features of LW chip breaker



[For medium cutting]

- **Curvilinear cutting edge** - Reduces cutting force
- **Cutting edge design able to handle deeper depth of cuts** - lower cutting load & reduces heat
- **Greater chip control at shallow depths of cuts** - Chip pocket design improves smooth chip flow
- **For shallow depth cutting and low speed machining** - 3D design at the corner

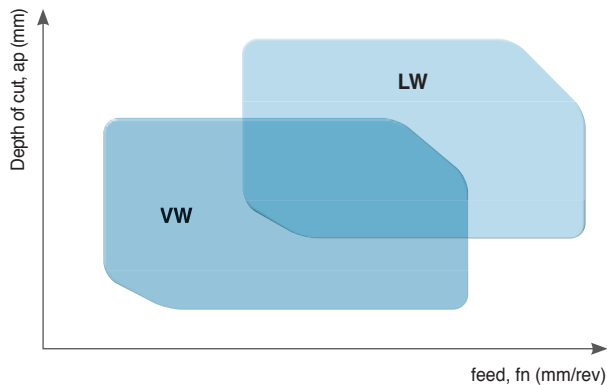
Features of VW chip breaker



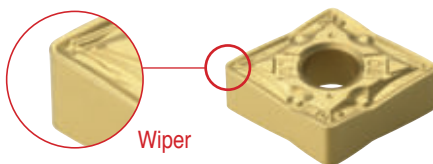
[Medium to finishing]

- **Excellent Finishing applications** - Excellent chip control
- **Insert design great for stable clamping** - Chip breaker designed close to the cutting edge
- **Similar cutting edge to C/B for medium** - strong cutting edge
- **3 Dimensional dot design on cutting corner**
 - reduces cutting force and good chip control at shallow depth of cut

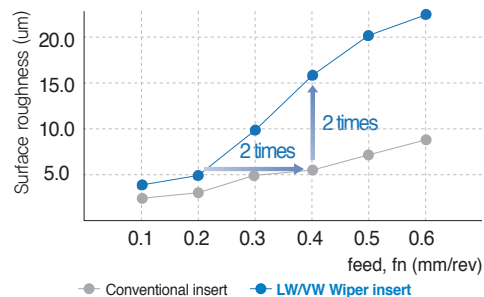
Applications range of chip breakers



Wiper Insert



- High productivity
- Improved surface roughness
- High feed-reducing machining time
- Improved tool life due to reduce cutting force

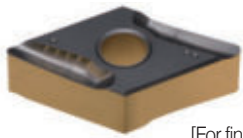


Features of Chip Breaker

SR/SH Chip Breaker ^{new} [For machining a shaft]

- Specialized for machining slender bars and thin walls
- High rake helix angle to reduce cutting resistance
- For machining steel and stainless steel

Features of SR chip breaker



[For finishing]

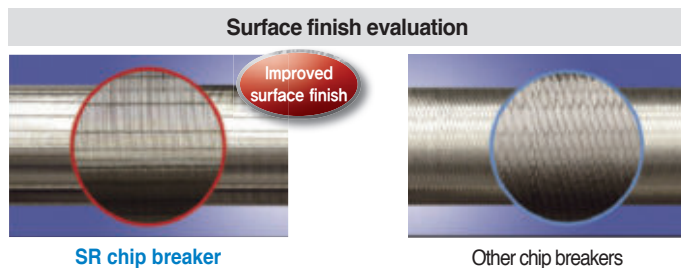
- The first recommended chip breaker for machining a shaft
- For continuous finishing
- Improved chip and heat evacuation due to high rake cutting edge and 3-dimensional shape
- Good surface finish
- Preventing fracture due to chamfering on the cutting edge

Features of SH chip breaker

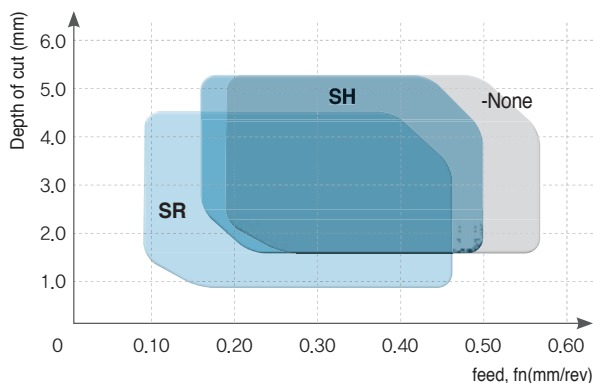


[For medium cutting]

- Specialized for interrupted and medium cutting
- Efficient heat evacuation due to concave shaped back side of insert

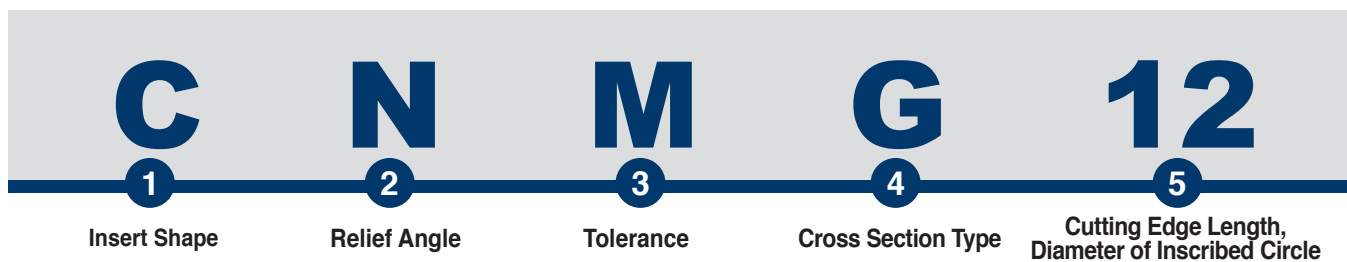


Applications range of chip breakers



Machining	C/B	ap (mm)	fn (mm/rev)
Medium to rough cutting	-None	1.5~5.0	0.20~0.55
Medium cutting	SH	1.5~5.0	0.15~0.50
Finish cutting	SR	1.0~4.5	0.12~0.45

B Turning Insert Code System (ISO)



1 Insert Shape

C N M G 12 04 08 - MP

C D E K L
R S T V W

2 Relief Angle

C N M G 12 04 08 - MP

B C D E
F N P O

3 Tolerance

C N M G 12 04 08 - MP

d: Inscribed circle
t: Thickness
m: Refer to figure

Class	d	m	t
A	±0.025	±0.005	±0.025
C	±0.025	±0.013	±0.025
H	±0.013	±0.013	±0.025
E	±0.025	±0.025	±0.025
G	±0.025	±0.025	±0.13
J*	±0.05~±0.15	±0.005	±0.025
K*	±0.05~±0.15	±0.013	±0.025
L*	±0.05~±0.15	±0.025	±0.025
M*	±0.05~±0.15	±0.08~±0.20	±0.13
N*	±0.05~±0.15	±0.08~±0.18	±0.025
U*	±0.08~±0.25	±0.13~±0.38	±0.13

(mm)

* Sides are based on unground insert

Tolerance on C, H, R, T, W Insert Shape (Exceptional case)

d	Tolerance on d		Tolerance on m	
	J, K, L, M, N	U	M, N	U
6.35	±0.05	±0.08	±0.08	±0.13
9.525	±0.05	±0.08	±0.08	±0.13
12.7	±0.08	±0.13	±0.13	±0.20
15.875	±0.10	±0.18	±0.15	±0.27
19.05	±0.10	±0.18	±0.15	±0.27
25.4	±0.13	±0.25	±0.18	±0.38

Tolerance on D Insert Shape (Exceptional case)

d	Tolerance on d	Tolerance on m
6.35	±0.05	±0.11
9.525	±0.05	±0.11
12.7	±0.08	±0.15
15.875	±0.10	±0.18
19.05	±0.10	±0.18

4 Cross Section Type

C N M G 12 04 08 - MP

A B C
F G H
J M N
Q R T
U W X



04**08****-****MP****6**

Height of Cutting Edge

7

Nose "r"

8

Chip Breaker for Turning

5

Cutting Edge Length, Diameter of Inscribed Circle

C N M G 12 04 08 - MP

Symbol							Inch	IC d (mm)
C	d	S	T	R	V	W		
03	04	03	06	03	-	02	1.2 (5)	3.97
04	05	04	08	04	08	S3	1.5 (6)	4.76
05	06	05	09	05	09	03	1.8 (7)	5.56
-	-	-	-	06	-	-	-	6.00
06	07	06	11	06	11	04	2	6.35
08	09	07	13	07	13	05	2.5	7.94
-	-	-	-	08	-	-	-	8.00
09	11	09	16	09	16	06	3	9.525
-	-	-	-	10	-	-	-	10.00
11	13	11	19	11	19	07	3.5	11.11
-	-	-	-	12	-	-	-	12.00
12	15	12	22	12	22	08	4	12.70
14	17	14	24	14	24	09	4.5	14.29
16	19	15	27	15	27	10	5	15.875
-	-	-	-	16	-	-	-	16.00
17	21	17	30	17	30	11	5.5	17.46
19	23	19	33	19	33	13	6	19.05
-	-	-	-	20	-	-	-	20.00
22	27	22	38	22	38	15	7	22.225
-	-	-	-	25	-	-	-	25.00
25	31	25	44	25	44	17	8	25.40
32	38	31	54	31	54	21	10	31.75
-	-	-	-	32	-	-	-	32.00

() Symbol for small size insert

7

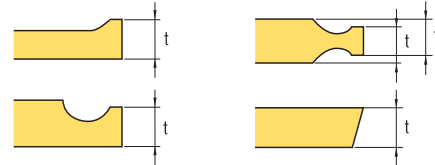
Nose "r"

C N M G 12 04 08 - MP

Symbol		Nose "r"	
Metric	Inch	Metric	Inch
003	0.1	0.03	0.0012
005	0.13	0.05	0.002
01	0.2	0.1	0.004
02	0.5	0.2	0.008
04	1	0.4	1/64
08	2	0.8	1/32
12	3	1.2	3/64
16	4	1.6	1/16
20	5	2.0	5/64
24	6	2.4	3/32
28	7	2.8	7/64
32	8	3.2	1/8
00	-	Round insert (Inch)	
M0	-	Round insert (Metric)	

6

Height of Cutting Edge

C N M G 12 04 08 - MP

Symbol		Height of Cutting Edge (t)	
Metric	Inch	mm	Inch
01	1 (2)	1.59	1/16
T0	1.125	1.79	9/128
T1	1.2	1.98	5/64
02	1.5 (3)	2.38	3/32
T2	1.75	2.78	7/64
03	2	3.18	1/8
T3	2.5	3.97	5/32
04	3	4.76	3/16
05	3.5	5.56	7/32
06	4	6.35	1/4
07	5	7.94	5/16
09	6	9.52	3/8
11	7	11.11	7/16
12	8	12.70	1/2

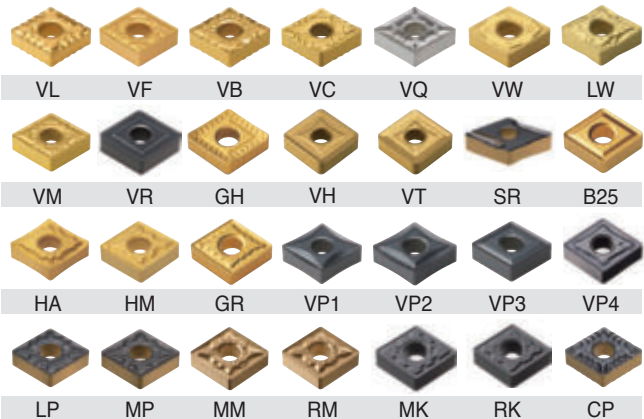
() Symbol for small size insert

8

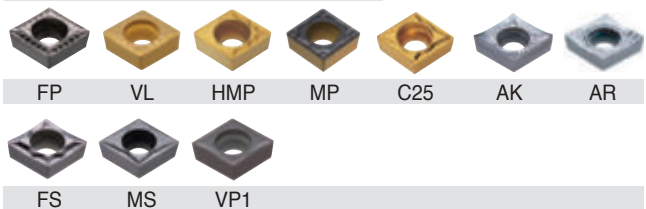
Chip Breaker for Turning

C N M G 12 04 08 - MP

Negative Insert Chip Breaker

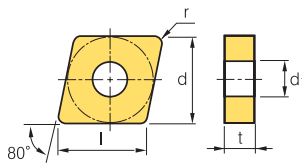


Positive Insert Chip Breaker



Turning Insert (Negative)

CN ○ ○



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35

Workpiece	Steel	P																							Machining types
	Stainless steel	M																							
	Cast iron	K																							
	Non-ferrous metal	N																							
	Heat resistant alloy, Titanium alloy	S																							
	Hardened steel	H																							

[illegible]

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

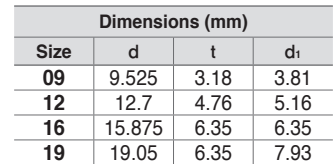
- : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173





Rhombic 80° Negative



Workpiece	Steel																																																																																																																													
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[illegible]

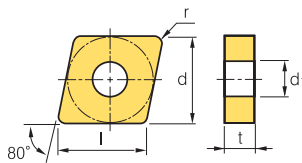
 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173

Turning Insert (Negative)

CN ○ ○



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

Workpiece	Steel																										Machining types
	Stainless steel																										
	Cast iron																										
	Non-ferrous metal																										
	Heat resistant alloy, Titanium alloy																										
	Hardened steel																										

[illegible]

➡ Cutting edge geometry A37~A49

➡ Recommended chip breaker B04~B15

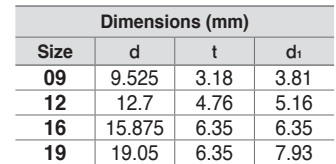
➡ Code system B34~B35

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173



 Rhombic **80° Negative**

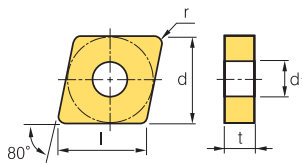
[illegible]

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCINR/L	B173

Turning Insert (Negative)

CN ○ ○



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

[illegible]

Inserts		Designation	Cermet		Coated		Coated													Uncoated		Cutting Condition							
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)		
Medium cutting		CNMG	090304-MM																							0.08~0.35	0.50~5.00		
			090308-MM														●	●						●			0.10~0.40	0.50~5.00	
			090312-MM																									0.12~0.45	0.50~5.00
			090404-MM																									0.08~0.35	0.50~5.00
			090408-MM																									0.10~0.40	0.50~5.00
			090412-MM																									0.12~0.45	0.50~5.00
			120404-MM														●	●	●				●	●	●			0.10~0.40	0.50~5.50
			120408-MM														●	●	●	●			●	●	●			0.12~0.45	0.50~5.50
			120412-MM														●	●	●	●			●	●	●			0.15~0.60	0.50~5.50
			120416-MM															●	●	●				●				0.20~0.65	0.50~5.50
			160608-MM															●	●	●				●				0.12~0.45	0.50~7.00
			160612-MM															●	●	●				●	●			0.15~0.60	0.50~7.00
			160616-MM															●	●	●				●	●			0.18~0.65	0.50~7.00
			190608-MM															●	●	●				●				0.12~0.45	0.50~8.50
			190612-MM															●	●	●			●	●	●			0.15~0.60	0.50~8.50
			190616-MM															●	●	●				●	●			0.18~0.65	0.50~8.50
Roughing		CNMG	120404-RM													●	●	●				●	●			0.10~0.50	2.00~6.00		
			120408-RM													●	●	●	●			●	●	●			0.15~0.55	2.00~6.00	
			120412-RM													●	●	●	●			●	●	●			0.20~0.60	2.00~6.00	
			120416-RM														●	●	●				●				0.25~0.70	2.00~6.00	
			160608-RM														●	●	●				●				0.15~0.55	2.00~8.00	
			160612-RM														●	●	●				●				0.20~0.60	2.00~8.00	
			160616-RM														●	●	●				●				0.25~0.70	2.00~8.00	
			190608-RM														●	●	●				●				0.15~0.55	2.00~10.00	
			1																										

➡ Cutting edge geometry A37~A49

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

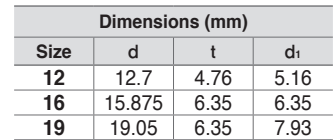
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173





Rhombic 80° Negative



Dimensions (mm)			
Size	d	t	d ₁
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93

Workpiece	Steel																																																																																																																													
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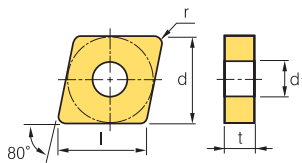
[illegible]

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173

Turning Insert (Negative)

CN ○ ○



Dimensions (mm)			
Size	d	t	d ₁
12	12.7	4.76	5.16
16	15.875	4.76~6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

Workpiece	Steel																																																																																																																																																																																																																																																																																																																										
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Inserts		Designation	Cermet		Coated		Coated												Uncoated		Cutting Condition							
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Medium cutting	 [Wiper]	CNMG	120408-LW				●	●				●			●											0.15~0.60	1.00~5.00	
			120412-LW				●	●								●										0.20~0.70	1.00~6.00	
Medium cutting		CNMM	120408-GR																							0.20~0.50	1.00~7.00	
			120412-GR																							0.25~0.50	1.30~7.00	
			190612-GR							●																	0.30~0.75	1.70~10.00
			190616-GR																								0.30~0.80	1.80~10.00
Heavy		CNMM	120408-GH					●		●		●														0.30~0.60	2.50~8.00	
			120412-GH					●	●	●																	0.30~0.70	2.50~8.00
			160412-GH																								0.30~0.70	2.50~8.00
			160424-GH																								0.30~1.20	2.50~8.00
			160612-GH								●																0.30~0.90	2.50~8.00
			160616-GH																								0.30~1.20	2.50~8.00
			160624-GH																								0.30~1.50	2.50~8.00
			190608-GH										●														0.30~0.60	2.50~8.00
			190612-GH					●		●	●		●														0.30~0.70	3.00~8.00
			190616-GH					●		●	●		●														0.45~0.90	3.00~8.00
			190624-GH					●		●			●														0.55~1.20	4.00~9.00
			250716-GH																								0.50~1.00	4.50~10.00
			250724-GH					●		●																	0.55~1.20	5.00~12.00
			250924-GH					●		●	●		●														0.55~1.20	5.00~12.00
Heavy		CNMM	190612-VH				●																			0.50~0.90	5.00~10.00	
			190616-VH				●																			0.50~1.10	5.00~10.00	
			190624-VH				●																			0.60~1.20	6.00~12.00	
			250724-VH				●																			0.70~1.40	6.00~15.00	
			250924-VH				●																			0.70~1.40	6.00~15.00	
Heavy	 [High feed cutting]	CNMM	190612-VT				●			●		●														0.60~1.00	6.00~13.00	
			190616-VT				●																			0.60~1.10	5.00~10.00	
			190624-VT				●																			0.60~1.60	7.00~13.00	
			250724-VT				●																			0.75~16.0	7.00~17.00	
			250924-VT				●																			0.75~16.0	7.00~17.00	

 Cutting edge geometry **A37~A49**

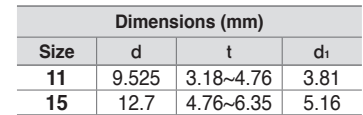
➡ Recommended chip breaker **B04~B15**

 Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173



 Rhombic 55° Negative

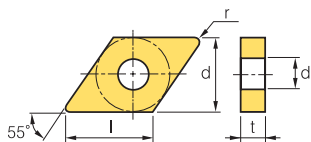
Inserts		Designation	Cermet		Coated		Coated														Uncoated		Cutting Condition					
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Finishing		DNMG 110404-VB	●	●	●	●	●	●																			0.05~0.25	0.30~2.00
		150404-VB					●	●																			0.10~0.35	0.30~2.00
		150408-VB	●	●	●	●	●	●				●									●						0.15~0.45	0.50~2.00
		150412-VB					●	●																			0.15~0.45	0.50~2.00
		150604-VB	●	●	●	●	●	●				●															0.10~0.35	0.30~2.00
		150608-VB	●	●	●	●	●	●				●						●									0.15~0.45	0.50~2.00
		150612-VB					●	●				●															0.20~0.50	0.50~2.50
Finishing		DNMG 110402-VF																									0.05~0.20	0.20~1.00
		110404-VF										●															0.07~0.30	0.50~1.50
		110408-VF																									0.10~0.40	0.50~1.50
		150404-VF																									0.07~0.30	0.50~1.50
		150408-VF																									0.10~0.40	0.50~1.50
		150412-VF																									0.15~0.50	0.60~1.50
		150604-VF							●			●															0.13~0.30	0.50~1.50
		150608-VF							●			●															0.10~0.40	0.50~1.50
150612-VF																									0.15~0.50	0.60~1.50		
Finishing		DNMG 110408-VL																									0.05~0.20	0.10~1.00
		150404-VL						●				●															0.05~0.25	0.10~1.50
		150408-VL					●	●				●															0.05~0.30	0.20~1.50
		150412-VL																									0.10~0.30	0.25~1.50
		150604-VL	●																								0.05~0.25	0.10~1.50
		150608-VL	●				●	●				●															0.05~0.30	0.20~1.50
		150612-VL																									0.10~0.30	0.25~1.50
Medium to finishing		DNMG 110402-LP																									0.06~0.30	0.25~1.20
		110404-LP					●	●																			0.07~0.30	0.30~1.50
		110408-LP																									0.10~0.40	0.30~1.50
		110504-LP																									0.07~0.30	0.30~1.50
		110508-LP																									0.10~0.40	0.30~1.50
		150404-LP					●	●				●															0.10~0.35	0.30~2.00
		150408-LP					●	●				●															0.10~0.40	0.50~2.50
		150412-LP					●	●				●															0.13~0.45	0.80~3.00
		150604-LP					●	●				●															0.10~0.35	0.30~2.00
		150608-LP					●	●				●															0.10~0.40	0.50~2.50
		150612-LP					●	●				●															0.13~0.45	0.80~3.00

● : Stock item



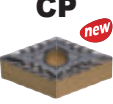
Turning Insert (Negative)

DN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	9.525	3.18~4.76	3.81
15	12.7	4.76~6.35	5.16

[illegible]

Inserts		Designation	Cermet		Coated		Coated														Uncoated		Cutting Condition					
			CN1500	CN2500	CC1500	CC2500	NC3215P	NC3225P	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Medium to finishing		DNMG	110404-CP																								0.08~0.30	0.40~3.00
			110408-CP																								0.10~0.30	0.40~3.00
			110504-CP																								0.08~0.30	0.40~3.00
			110508-CP																								0.10~0.30	0.40~3.00
			150404-CP					●	●																		0.10~0.35	0.50~3.50
			150408-CP					●	●																		0.12~0.35	0.50~3.50
			150412-CP					●	●																		0.13~0.35	0.80~3.50
			150604-CP					●	●																		0.10~0.35	0.50~3.50
			150608-CP					●	●																		0.12~0.35	0.50~3.50
150612-CP					●	●																		0.13~0.35	0.80~3.50			
Medium to finishing		DNMG	150404-VC					●	●																	0.10~0.35	0.30~2.00	
			150408-VC					●	●				●													0.15~0.40	0.50~3.00	
			150412-VC					●	●																	0.15~0.45	0.50~3.00	
			150604-VC					●	●																	0.10~0.35	0.30~2.00	
			150608-VC					●	●					●												0.15~0.40	0.50~3.00	
			150612-VC					●	●																	0.15~0.45	0.50~3.00	
Medium cutting		DNMG	110404-HM								●												●		0.05~0.50	0.80~4.00		
			110408-HM																				●		0.10~0.50	1.00~4.00		
			150404-HM							●																0.05~0.30	0.90~5.00	
			150408-HM								●															0.10~0.50	1.00~5.00	
			150604-HM								●	●				●								●		0.05~0.30	0.90~5.00	
			150608-HM							●	●	●												●		0.10~0.50	1.00~5.00	
150612-HM									●														0.18~0.50	1.00~5.00				
Medium cutting		DNMG	110404-MP					●	●				●				●	●								0.10~0.40	0.40~3.80	
			110408-MP					●	●				●				●	●								0.15~0.40	0.50~4.00	
			110412-MP																							0.15~0.50	0.80~4.20	
			110504-MP																							0.10~0.40	0.40~3.80	
			110508-MP																							0.15~0.40	0.50~4.00	
			110512-MP																							0.15~0.50	0.80~4.20	
			150404-MP						●	●				●			●	●	●		●					0.10~0.40	0.40~4.00	
			150408-MP						●	●				●			●	●	●	●	●					0.15~0.45	0.50~4.50	
			150412-MP						●	●				●			●				●					0.15~0.50	0.80~5.00	
			150416-MP																							0.15~0.50	0.85~5.00	
			150604-MP						●	●				●	●		●	●	●	●	●	●				0.10~0.40	0.40~4.00	
			150608-MP						●	●				●	●		●	●	●	●	●	●				0.15~0.45	0.50~4.50	
			150612-MP						●	●				●			●	●	●	●	●	●				0.15~0.50	0.80~5.00	
			150616-MP																							0.15~0.55	0.85~5.00	

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

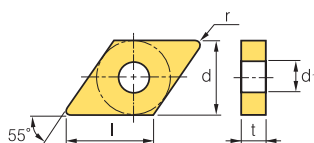
 Code system **B34~B35**

- : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173



 Rhombic 55° Negative



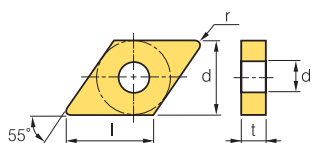
Dimensions (mm)			
Size	d	t	d ₁
11	9.525	4.76	3.81
15	12.7	4.76~6.35	5.16

[illegible][illegible]

● : Stock item

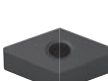
Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173

DN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	9.525	3.18~4.76	3.81
15	12.7	4.76~6.35	5.16
19	19.05	6.35	7.93

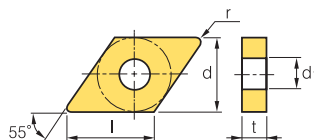
 Rhombic **55° Negative**

Inserts		Designation	Cermet		Coated		Coated											Uncoated		Cutting Condition								
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Medium cutting		DNMG	150404-MK										●													0.05~0.30	0.90~5.00	
			150408-MK											●													0.10~0.50	1.00~5.00
			150412-MK																								0.13~0.60	1.30~5.00
			150604-MK										●	●													0.05~0.30	0.90~5.00
			150608-MK										●	●													0.10~0.50	1.00~5.00
			150612-MK											●													0.13~0.60	1.30~5.00
Roughing		DNMA	110408																							0.17~0.45	0.80~3.00	
			150404																							0.17~0.55	0.40~4.00	
			150408																							0.25~0.55	0.80~4.00	
			150412											●												0.25~0.65	0.50~4.00	
			150604																							0.17~0.55	0.40~4.00	
			150608											●												0.25~0.55	0.80~4.00	
			150612											●												0.25~0.65	1.20~4.00	
			190608																							0.30~0.80	2.50~13.00	
Roughing		DNMG	150408-RK																						0.15~0.50	1.50~5.00		
			150412-RK											●											0.20~0.60	1.80~5.00		
			150608-RK										●	●											0.15~0.50	1.50~5.00		
			150612-RK											●											0.20~0.60	1.80~5.00		
Roughing		DNMG	150408-VR																						0.25~0.55	1.20~7.00		
			150412-VR																						0.30~0.60	1.50~7.00		
			150608-VR																						0.25~0.55	1.20~7.00		
			150612-VR																						0.30~0.60	1.50~7.00		
Medium cutting		DNMG	110404-MM																			●			0.08~0.35	0.50~5.00		
			110408-MM													●	●						●			0.10~0.40	0.50~5.00	
			110412-MM																							0.12~0.45	0.50~5.00	
			110504-MM																							0.08~0.35	0.50~5.00	
			110508-MM	</																								

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNRL/L	B173

 Rhombic 55° Negative



Dimensions (mm)			
Size	d	t	d ₁
15	12.7	4.76~6.35	5.16

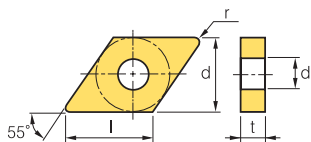
Inserts		Designation	Cermet		Coated		Coated												Uncoated		Cutting Condition							
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Roughing		DNMG	150404-RM													●	●	●					●			0.10~0.50	2.00~6.00	
			150408-RM												●	●	●	●					●			0.15~0.55	2.00~6.00	
			150412-RM																●				●			0.20~0.60	2.00~6.00	
			150416-RM																				●			0.25~0.70	2.00~6.00	
			150604-RM															●					●	●		0.10~0.50	2.00~6.00	
			150608-RM													●	●	●				●		●		0.15~0.55	2.00~6.00	
			150612-RM													●	●	●								0.20~0.60	2.00~6.00	
			150616-RM																							0.25~0.70	2.00~6.00	
Finishing		DNMG	150404-VP1																●	●	●		●		0.05~0.15	0.10~1.50		
			150408-VP1																	●	●	●		●		0.07~0.20	0.10~1.50	
			150604-VP1																	●	●	●		●		0.05~0.15	0.10~1.50	
			150608-VP1																	●	●	●		●		0.07~0.20	0.10~1.50	
Finishing		DNMG	150404-VP1																						0.05~0.15	0.10~1.50		
			150408-VP1																						0.07~0.20	0.10~1.50		
			150604-VP1																						0.05~0.15	0.10~1.50		
			150608-VP1																						0.07~0.20	0.10~1.50		
Medium to finishing		DNMG	150404-VP2														●	●	●	●	●		●		0.05~0.30	0.10~3.00		
			150408-VP2															●	●	●	●	●		●		0.10~0.40	0.50~4.50	
			150604-VP2															●	●	●	●	●		●		0.05~0.30	0.10~3.00	
			150608-VP2				●											●	●	●	●	●		●		0.10~0.40	0.50~4.50	
Medium to finishing		DNMG	150404-VP3														●	●			●	●	●	●	●	0.05~0.30	0.10~3.00	
			150408-VP3															●	●			●	●		●	●	0.10~0.45	0.50~5.00
			150412-VP3															●	●	●	●	●		●		0.12~0.50	0.50~5.00	
			150604-VP3															●	●	●	●	●		●		0.05~0.30	0.10~3.00	
			150608-VP3															●	●	●	●	●		●				

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
 : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PC1NR/L	B173

Turning Insert (Negative)

DN ○○



Dimensions (mm)			
Size	d	t	d ₁
15	12.7	4.76~6.35	5.16

 Rhombic **55° Negative**

[illegible][illegible]

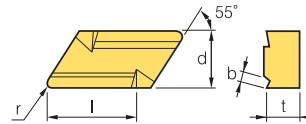
 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B183	MCRNR/L	B184
MCLNR/L	B183	PCBNR/L	B172
MCMNN	B183	PCLNR/L	B173

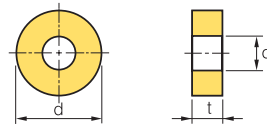
 Parallelogram **55° Negative**

Workpiece	Steel																																																																																																																					
-----------	-------	---	---	---	---	---	---	---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--

➡ Cutting edge geometry **A37~A49** ➡ Recommended chip breaker **B04~B15** ➡ Code system **B34~B35** ●: Stock item

RN ○○

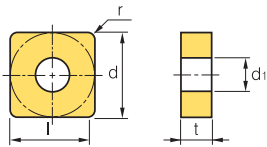
○ Round **Negative**

[illegible]

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
 : Stock item

Turning Insert (Negative)

SN ○○



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	4.76	5.16

 Square **90° Negative**

[illegible][illegible]

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

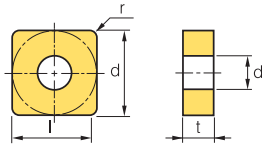
 Code system **B34~B35**

- : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177

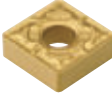
SN

 Square 90° Negative



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	3.18~4.76	5.16
15	15.875	4.76~6.35	6.35
19	19.05	4.76~6.35	7.93

Workpiece	Steel													Machining types	
	Stainless steel														
	Cast iron														
	Non-ferrous metal														
	Heat resistant alloy, Titanium alloy														
	Hardened steel														

Inserts		Designation	Cermet		Coated		Coated												Uncoated		Cutting Condition								
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)		
Medium cutting		SNMG	120404-HM																				●			0.15~0.42	0.60~4.20		
			120408-HM					●		●				●										●			0.10~0.50	1.00~5.00	
			120412-HM					●																●			0.18~0.50	1.00~5.00	
Medium cutting	 new	SNMG	090304-MP				●	●				●														0.10~0.40	0.40~3.80		
			090308-MP				●	●				●															0.15~0.40	0.50~4.00	
			090312-MP																								0.15~0.50	0.80~4.20	
			090404-MP																								0.10~0.40	0.40~3.80	
			090408-MP																								0.15~0.40	0.50~4.00	
			090412-MP																								0.15~0.50	0.80~4.20	
			120404-MP				●	●				●			●	●	●		●	●							0.10~0.40	0.40~4.00	
			120408-MP				●	●				●			●	●	●		●	●							0.15~0.45	0.50~4.50	
			120412-MP				●	●				●			●	●	●										0.15~0.50	0.80~5.00	
			120416-MP				●	●				●																0.18~0.60	0.80~7.00
			150608-MP																									0.15~0.50	0.50~7.00
			150612-MP																									0.18~0.60	0.80~8.50
			190608-MP																									0.15~0.50	0.50~8.50
		190612-MP																									0.18~0.60	0.80~8.50	
Medium cutting		SNMG	090304-VM																							0.05~0.30	0.90~3.50		
			090308-VM																							0.10~0.50	1.00~3.50		
			120404-VM	●								●						●	●							0.05~0.30	0.90~5.00		
			120408-VM	●						●	●		●					●	●		●		●			0.10~0.50	1.00~5.00		
			120412-VM									●						●	●								0.13~0.60	1.30~5.00	
			190612-VM																								0.25~0.60	2.50~7.50	
		190616-VM																								0.25~0.60	2.50~7.50		

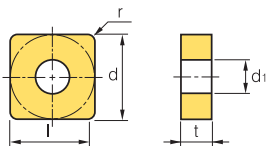
 Cutting edge geometry A37~A49
  Recommended chip breaker B04~B15
  Code system B34~B35
 ● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177



Turning Insert (Negative)

SN ○○



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	3.18~4.76	5.16
15	15.875	4.76~6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

 Square **90° Negative**

Workpiece	Steel	P																												Machining types ● Continuous cutting ⦿ General cutting ✱ Interrupted cutting
	Stainless steel	M																												
	Cast iron	K																												
	Non-ferrous metal	N																												
	Heat resistant alloy, Titanium alloy	S																												
	Hardened steel	H																												

Inserts		Designation	Cermet		Coated		Coated													Uncoated		Cutting Condition						
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Medium to roughing	 B25	SNMG 090308-B25																									0.17~0.45	0.80~3.50
		120404-B25	●	●			●	●		●	●																0.17~0.45	1.00~3.50
		120408-B25	●	●			●	●		●	●							●	●				●				0.23~0.60	1.50~5.00
		120412-B25		●			●	●		●	●																0.25~0.60	2.00~5.00
		120416-B25					●	●		●	●																0.35~0.70	2.50~5.00
		120420-B25																									0.40~0.70	3.00~5.00
		150608-B25								●																	0.25~0.60	1.50~6.00
		150612-B25																									0.25~0.60	2.00~6.00
		150616-B25							●																		0.35~0.70	2.00~6.00
		190608-B25					●	●		●																	0.25~0.60	3.00~8.00
		190612-B25					●	●		●		●															0.30~0.60	3.00~8.00
		190616-B25					●	●		●											●						0.35~0.70	3.00~8.00
		250716-B25																									0.35~0.70	4.00~12.00
		250724-B25					●					●															0.50 ~1.00	5.00~12.00
		250924-B25					●																				0.50~1.00	5.00~12.00
Roughing	 GR	SNMG 120404-GR																								0.15~0.45	0.08~6.00	
		120408-GR									●	●	●													0.20~0.50	1.00~7.00	
		120412-GR								●			●													0.20~0.50	1.00~7.00	
		150608-GR							●																	0.25~0.60	1.00~7.00	
		150612-GR					●	●	●	●																		

 Cutting edge geometry A37~A49

➡ Recommended chip breaker B04~B15

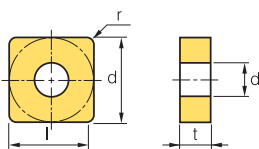
 Code system **B34~B35**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177



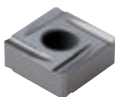
 Square **90° Negative**



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	3.18~4.76	5.16
15	15.875	4.76~6.35	6.35
19	19.05	4.76~6.35	7.93
25	25.4	6.35~9.52	9.12

Workpiece

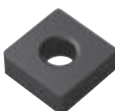
Medium cutting



Medium cutting



Roughing



 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

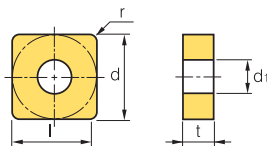
- : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177

B Turning Insert (Negative)

SN

 Square **90° Negative**



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94	9.12

Workpiece	Steel	P																	Machining types	
	Stainless steel	M																		
	Cast iron	K																		
	Non-ferrous metal	N																		
	Heat resistant alloy, Titanium alloy	S																		
	Hardened steel	H																		
			●	✱	●	✱	●	✱	●	✱	●	✱	●	✱	●	✱	●	✱	● Continuous cutting ✱ General cutting ✱ Interrupted cutting	

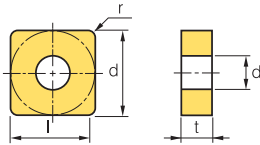
Inserts	Designation	Cermet		Coated		Coated												Uncoated		Cutting Condition						
		CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	f _n (mm/rev)	a _p (mm)
Roughing		SNGA		090304																					0.17~0.50	0.50~4.50
				090308																					0.17~0.50	0.50~4.50
				120404																					0.15~0.60	1.50~8.00
				120408																					0.15~0.60	1.50~8.00
				120412																					0.20~0.80	1.50~8.00
				150608																					0.20~0.80	2.00~10.00
				150616																					0.20~0.90	2.00~10.00
				190608																					0.15~0.60	3.00~12.00
				190612																					0.20~0.80	3.00~12.00
Roughing		SNMG		120404-RK																					0.15~0.50	1.20~6.00
				120408-RK								●	●												0.23~0.53	1.50~6.00
				120412-RK								●	●												0.28~0.53	1.80~6.00
				120416-RK									●												0.28~0.53	2.00~6.00
				150612-RK																					0.20~0.70	1.80~7.00
				150616-RK																					0.23~0.70	2.00~7.50
				190612-RK																					0.33~0.78	2.50~10.00
Roughing		SNMG		120408-VR																					0.25~0.55	1.20~7.00
				120412-VR																					0.30~0.60	1.50~7.00
				120416-VR																					0.35~0.60	2.00~7.00
				190612-VR					●	●															0.35~0.70	2.00~10.00
				190616-VR					●	●															0.35~0.75	2.20~10.00
Medium cutting		SNMG		090304-MM																					0.08~0.35	0.50~5.00
				090308-MM																					0.10~0.40	0.50~5.00
				090312-MM																					0.12~0.45	0.50~5.00
				090404-MM																					0.08~0.35	0.50~5.00
				090408-MM																					0.10~0.40	0.50~5.00
				120404-MM										●	●	●	●				●	●			0.10~0.40	0.50~6.40
				120408-MM									●	●	●	●			●	●	●				0.12~0.45	0.50~6.40
				120412-MM										●	●	●				●	●				0.15~0.60	0.50~6.40
				120416-MM											●	●	●								0.18~0.65	0.50~6.40
				150608-MM																					0.12~0.45	0.50~8.00
				150612-MM										●	●	●				●	●				0.15~0.60	0.50~8.00
				150616-MM										●	●										0.18~0.65	0.50~8.00
				190608-MM										●	●	●				●					0.12~0.45	0.50~9.50
				190612-MM										●	●	●				●	●				0.15~0.60	0.50~9.50
				190616-MM										●	●						●				0.18~0.65	0.50~9.50
				250924-MM											●										0.20~0.80	1.00~10.00

 Cutting edge geometry A37~A49
  Recommended chip breaker B04~B15
  Code system B34~B35
 ● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177



 Square **90° Negative**



Dimensions (mm)			
Size	d	t	d _i
12	12.7	4.76	5.16
15	15.875	6.35	6.35
16	9.525	3.18–4.76	3.81
19	19.05	6.35	7.93
25	25.4	7.94	9.12

Workpiece	Steel	P	                              																		Machining types
	Stainless steel	M																			
	Cast iron	K																			
	Non-ferrous metal	N																			
	Heat resistant alloy, Titanium alloy	S																			
	Hardened steel	H																			

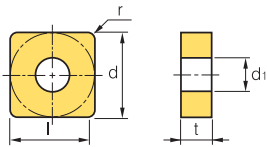
[illegible]

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177

Turning Insert (Negative)

SN ○○



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94–9.52	9.12

 Square **90° Negative**

[illegible][illegible]

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

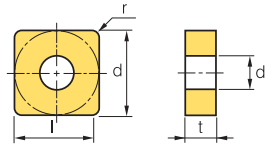
 Code system **B34~B35**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177

SN

 Square **90° Negative**



Dimensions (mm)			
Size	d	t	d ₁
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

Workpiece	Steel														Machining types
	Stainless steel														
	Cast iron														
	Non-ferrous metal														
	Heat resistant alloy, Titanium alloy														
	Hardened steel														

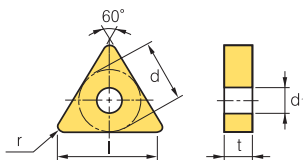
Inserts		Designation	Cermet		Coated		Coated												Uncoated		Cutting Condition						
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium cutting		SNGX 120408R																								0.15~0.35	1.00~4.00
Roughing		SNMM 120408-GR																								0.20~0.50	1.00~7.00
			120412-GR																							0.25~0.65	1.30~7.00
			190612-GR																							0.25~0.65	1.30~11.50
			190616-GR																							0.32~0.85	1.80~11.50
Heavy		SNMM 120408-GH																								0.30~0.60	2.50~8.00
			120412-GH																							0.30~0.70	2.50~8.00
			150612-GH																							0.30~0.70	2.50~8.00
			190612-GH																							0.30~0.70	3.00~8.00
			190616-GH																							0.45~1.00	4.00~9.00
			190624-GH																							0.55~1.20	4.00~9.00
			250724-GH																							0.55~1.20	5.00~12.00
			250924-GH																							0.55~1.20	5.00~12.00
Heavy	 [General]	SNMM 190612-VH																								0.50~0.90	5.00~10.00
			190616-VH																							0.50~1.10	5.00~10.00
			190624-VH																							0.60~1.20	6.00~12.00
			250716-VH																							0.70~1.50	6.00~14.00
			250724-VH																							0.70~1.40	6.00~15.00
			250920-VH																							0.70~1.40	6.00~15.00
			250924-VH																							0.70~1.40	6.00~15.00
Heavy	 [High feed cutting]	SNMM 190612-VT																								0.60~1.00	6.00~13.00
			190616-VT																							0.60~1.10	6.00~13.00
			190624-VT																							0.60~1.60	7.00~13.00
			250716-VT																							0.75~1.60	7.00~15.00
			250724-VT																							0.75~1.60	7.00~15.00
			250920-VT																							0.75~1.60	7.00~15.00
			250924-VT																							0.75~1.60	7.00~17.00

 Cutting edge geometry A37~A49  Recommended chip breaker B04~B15  Code system B34~B35 ● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B185	MSRNR/L	B186	PSDNN	B175
MSDNN	B185	MSSNR/L	B187	PSKNR/L	B176
MSKNR/L	B186	PSBNR/L	B175	PSSNR/L	B177

Turning Insert (Negative)

TN ○○



Dimensions (mm)			
Size	d	t	d _i
11	6.35	3.18	2.40
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16

Workpiece	Steel	P																							Machining types
	Stainless steel	M																							
	Cast iron	K																							
	Non-ferrous metal	N																							
	Heat resistant alloy, Titanium alloy	S																							
	Hardened steel	H																							

[illegible]

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

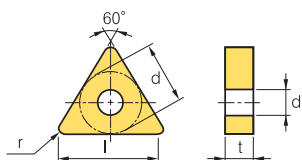
 Code system **B34~B35**

- : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		



 Triangular **60° Negative**



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

[illegible]

Inserts		Designation	Cermet		Coated		Coated													Uncoated		Cutting Condition					
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		TNMG	160404-VC				●	●				●														0.10~0.35	0.30~2.00
			160408-VC				●	●				●														0.15~4.00	0.50~3.00
			160412-VC				●	●				●														0.15~4.50	0.50~3.00
			220408-VC				●	●																		0.15~0.40	0.50~3.00
			220412-VC				●	●																		0.15~0.45	0.50~3.00
Medium cutting		TNMG	110308-HM						●																	0.17~0.40	1.50~3.00
			160404-HM					●	●	●	●							●					●			0.05~0.30	0.90~4.00
			160408-HM				●	●	●	●													●			0.10~0.50	1.00~4.00
			160412-HM																				●			0.13~0.60	1.30~4.00
			220404-HM					●																		0.15~0.45	0.60~5.00
			220408-HM					●	●	●																	0.18~0.48
Medium cutting		TNMG	110308-MP				●	●																		0.15~0.42	0.50~3.50
			160404-MP				●	●				●	●		●	●	●			●	●					0.10~0.40	0.40~3.50
			160408-MP				●	●				●			●	●	●			●	●					0.15~0.45	0.50~4.00
			160412-MP				●	●				●			●	●	●			●	●					0.15~0.50	0.80~4.50
			160416-MP																							0.18~0.50	1.00~4.50
			220404-MP				●	●				●			●	●	●									0.10~0.35	0.40~5.00
			220408-MP				●	●				●			●	●	●									0.15~0.45	0.50~5.50
			220412-MP				●	●				●			●	●	●									0.15~0.50	0.80~6.00
			220416-MP				●	●				●														0.20~0.55	1.00~6.00
270612-MP																							0.28~0.60	1.20~8.00			
Medium cutting		TNMG	110308-VM																						0.05~0.30	0.80~4.00	
			160404-VM	●					●	●		●						●	●						0.05~0.30	0.90	

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

TN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	9.52	7.93

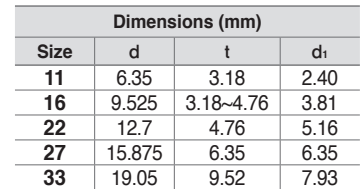
[illegible]

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		



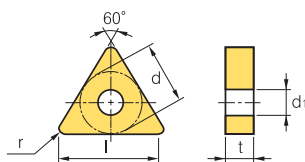
 Triangular **60° Negative**

[illegible]

●: Stock item



TN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

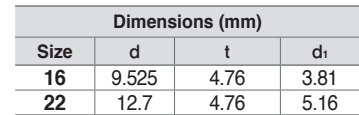
 Triangular **60° Negative**

Inserts		Designation	Cermet	Coated	Coated																Uncoated		Cutting Condition					
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Roughing		TNGA	110302																							0.05~0.30	0.20~3.00	
			110304																								0.05~0.30	0.40~3.00
		160304																									0.10~0.35	0.40~4.00
		160402																									0.10~0.30	0.20~4.00
		160404																									0.10~0.35	0.40~5.00
		160408																									0.12~0.40	0.50~5.00
		220304																									0.10~0.35	0.50~5.00
		220402																									0.05~0.30	0.20~3.00
		220404																									0.10~0.35	0.40~5.00
		220408																									0.10~0.40	0.50~5.00
		220412																									0.12~0.45	1.00~5.50
		270612																									0.12~0.45	1.00~7.00
		270624																									0.20~0.55	2.00~7.00
Roughing		TNMG	160408-RK									●	●													0.23~0.53	1.50~5.00	
			160412-RK										●	●												0.28~0.53	1.80~5.00	
		160416-RK												●												0.28~0.53	1.80~5.00	
		220408-RK											●													0.23~0.53	1.50~6.00	
		220412-RK											●													0.28~0.53	1.80~6.00	
		220416-RK											●													0.28~0.63	2.00~6.00	
Roughing		TNMG	160404-VR																							0.20~0.50	0.80~7.00	
			160408-VR																							0.25~0.55	1.20~7.00	
		160412-VR																								0.35~0.65	1.70~7.00	
		160416-VR																								0.35~0.70	2.00~10.0	
		220408-VR																								0.35~0.70	2.00~10.0	
		220412-VR																								0.35~0.70	2.00~10.0	
		220416-VR																										

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

 Triangular **60° Negative**



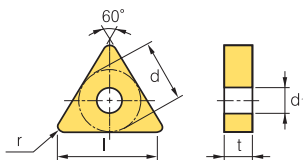
Inserts		Designation		Cermet		Coated		Coated																Uncoated		Cutting Condition			
				CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC8120	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Roughing		TNMG	160404-RM												●	●	●	●			●	●	●				0.10~0.50	2.00~5.50	
			160408-RM												●	●	●	●			●	●	●				0.15~0.55	2.00~5.50	
			160412-RM														●	●	●				●	●				0.20~0.60	2.00~5.50
			220408-RM														●	●	●					●				0.10~0.50	2.00~7.50
			220412-RM														●	●	●					●				0.15~0.55	2.00~7.50
			220416-RM																									0.25~0.70	2.00~7.50
Medium to finishing		TNMG	160404-VP2															●	●	●	●	●			●		0.05~0.30	0.10~3.00	
			160408-VP2																●	●	●	●	●			●		0.10~0.45	0.50~5.00
			160412-VP2																	●	●	●	●			●		0.13~0.55	0.80~3.30
			220404-VP2																●	●		●						0.05~0.30	0.80~5.00
			220408-VP2																●	●		●						0.10~0.40	0.80~5.00
Medium cutting		TNMG	160404-VP3															●	●	●	●	●			●		0.05~0.30	0.10~3.00	
			160408-VP3																●	●	●	●	●			● ●		0.10~0.45	0.50~5.00
			160412-VP3																									0.20~0.40	0.50~3.50
			220404-VP3																									0.20~0.30	0.80~4.00
			220408-VP3																									0.25~0.35	0.80~5.00
			220412-VP3																									0.30~0.40	1.00~5.00
			220416-VP3																									0.30~0.40	1.00~5.00
Medium cutting		TNGG	160404-VP3																	●	●	●			●		0.05~0.30	0.10~3.00	
			160408-VP3																		●	●	●			●		0.10~0.45	0.50~5.00
Roughing		TNMG	160408-VP4																			●	●				0.15~0.35	1.00~4.00	
			160412-VP4</																										

● : Stock item



Turning Insert (Negative)

TN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

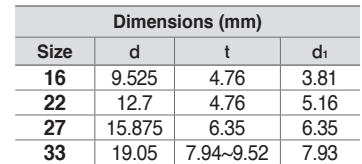
 Code system **B34~B35**

- : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		



 Triangular **60° Negative**

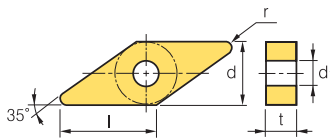
[illegible]

●: Stock item



Turning Insert (Negative)

VN ○○



Dimensions (mm)			
Size	d	t	d ₁
16	9.525	4.76	3.81

[illegible]

➡ Cutting edge geometry A37~A49

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MVJNR/L	B188	MVVNN	B189
MVQNR/L	B189	MVUNR/L	B214

The diagram shows a mechanical part with a circular hole of diameter d and a fillet of radius r at the right end. The total length of the part is l . The left end is at a 35° angle. A cross-section view shows a rectangular profile with thickness t and height d .

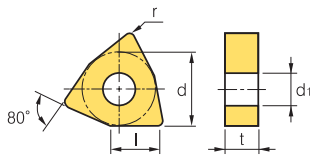
 Rhombic **35° Negative**

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
 ● : Stock item



Turning Insert (Negative)

WN ○ ○



Dimensions (mm)			
Size	d	t	d ₁
06	9.525	4.76	3.81
08	12.7	4.76	5.16

[illegible]

 Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLN/R/L	B189	WWLN/R/L	B180
PWLN/R/L	B211		



Technical drawing of a triangular plate with a central hole. The plate has a base length l , a height d , and a corner radius r . The top-left corner is marked with an 80° angle. A side view shows the plate's thickness t .

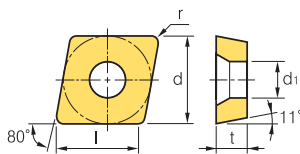
 Trigon **80° Negative**

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
 : Stock item



Turning Insert (Positive)

CP ○○



Dimensions (mm)			
Size	d	t	d ₁
06	6.35	2.38	2.8
08	7.94	2.38	3.4
09	9.525	3.18	4.4

[illegible][illegible]

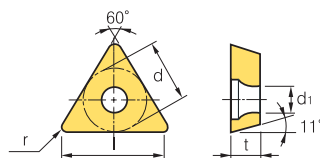
● : Stock item



Available tool holders	
Designation	Page
SCLPR/L	B216

Turning Insert (Positive)

TP ○○



Dimensions (mm)			
Size	d	t	d ₁
09	5.56	2.38	-
11	6.35	2.38–3.18	3.4
16	9.525	3.18–4.76	4.4
22	12.7	4.76	-
27	15.875	4.76–6.35	-
33	19.05	7.94–9.52	7.93

[illegible][illegible]

➡ Cutting edge geometry **A37~A49**

➡ Recommended chip breaker B04~B15

 Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B221	STUPR/L	B226
CTFPR/L	B182	CTGPR/L	B182

B

VB ○○



Relief Angle: 5°

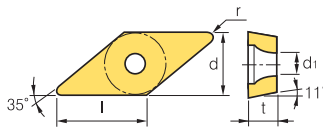
[illegible]

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
 : Stock item

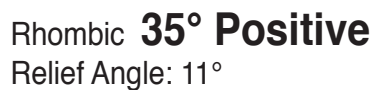


B Turning Insert (Positive)

VP ○○



Dimensions (mm)			
Size	d	t	d ₁
08	6.35	2.38	2.3
11	6.35	3.18	2.8



Workpiece	Steel																	Machining types				
	Stainless steel																					
	Cast iron																					
	Non-ferrous metal																					
	Heat resistant alloy, Titanium alloy																					
	Hardened steel																					

[illegible]

● : Stock item

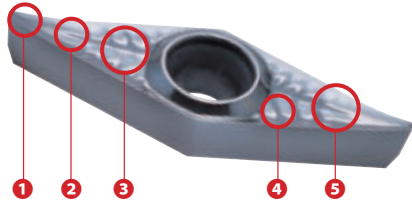
Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B195	SVVBN	B196
SVJBR/L	B125, 195		



Technical Information for Aluminum

AK special chip breaker for aluminum

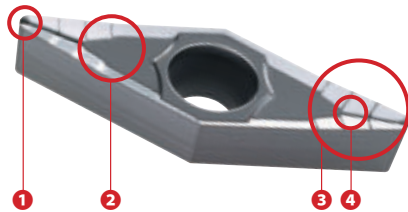
- Unique and 3-dimensional rake angle controls chip breaking and chip flow ensuring longer tool life and reducing cutting load
- High rake angle at cutting edge part reduces cutting load to increase tool life
- Buffed finish on top face controls chip flow reducing built-up edge



- 1 High rake angle & tabby pattern chip pocket - Low cutting load
- 2 Unique rake angle design - Effective chip breaking and good chip flow
- 3 Unique and 3-dimensional top face - Longer tool life & Excellent surface roughness
- 4 Tabby pattern & Sharp cutting edge - Distributing cutting load, long tool life
- 5 Buffed on top face - Excellent machining, Reducing built-up edge, Excellent chip flow

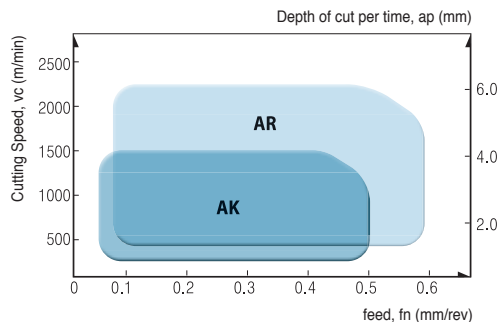
AR special chip breaker for aluminum

- AR chip breaker ensures reliability and good cutting performance at high feed, speed and interrupted machining

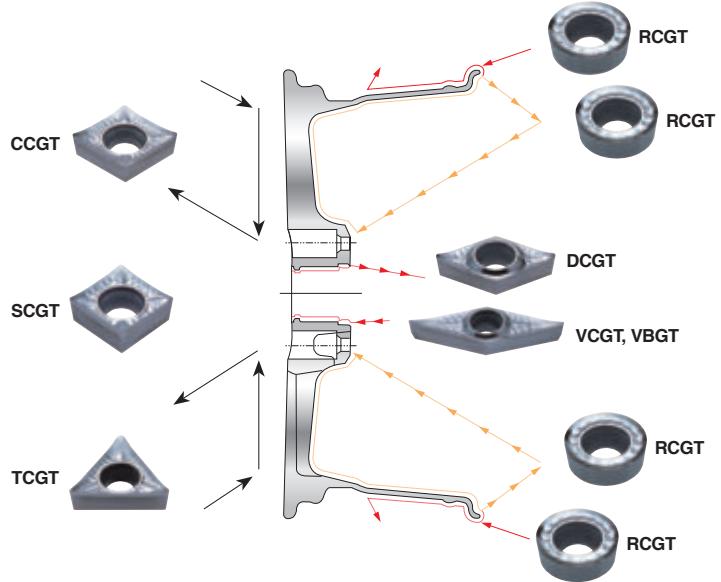


- 1 Flat corner cutting edge improved productivity at high feed machining and ensures good surface roughness and reliability owing to strong cutting edge
- 2 Specially buffed on top face controls chip flow reducing built-up edge
- 3 KORLOY's own technology applied for cutting edge and corner shape controlling chip flow ensures longer tool life
- 4 KORLOY special chip breaker design controls chip flow at high speed machining

AK and AR chip breaker specially developed for aluminum



	Recommendation range	Grades
AK	ap = 0.1~5.0 mm fn = 0.03~0.5 mm/rev	H01 (Uncoated cemented carbides K10~K20) ND1000 (Diamond coating) PD1000 (DLC coating)
AR	ap = 0.5~6.0 mm fn = 0.05~0.6 mm/rev	H01 (Uncoated cemented carbides K10~K20) ND1000 (Diamond coating) PD1000 (DLC coating)



Features of H01 and cutting conditions

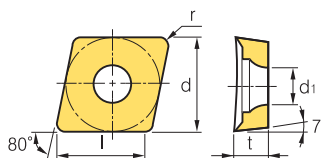
- Good for aluminum and alloy steel machining - Surface treatment reduces built-up edge
- 3-dimensional design reduces cutting resistance and ensures high machinability in high feed and speed machining

Workpiece		Hardness (HB)	kc (MPa)	vc (m/min)	fn (mm/rev)
Aluminum alloy (forged)	before heat treatment	50~70	500~600	1000~2500	0.1~0.6
	after heat treatment	90~110	700~900	300~1000	0.1~0.5
Aluminum alloy (cast)	before heat treatment	70~80	700~800	300~1000	0.1~0.6
	after heat treatment	80~100	800~950	200~600	0.1~0.4
Copper alloy	—	90~110	700	250~600	0.1~0.5
Non-ferrous metal, etc.	—	100	1700	150~300	0.1~0.6





Rhombic 80° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d ₁
06	6.35	2.38	2.8
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Workpiece	Steel	P						Machining types
	Stainless steel	M						
	Cast iron	K						
	Non-ferrous metal	N	*	●	*	●	*	
	Heat resistant alloy, Titanium alloy	S						
	Hardened steel	H						
● Continuous cutting ● General cutting * Interrupted cutting								

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	f _n (mm/rev)	a _p (mm)
AK 	CCGT 060202-AK	●			●	●	0.01~0.12	0.05~3.00
	060204-AK	●		●	●	●	0.02~0.15	0.10~3.00
	060208-AK				●	●	0.02~0.20	0.10~4.00
	09T302-AK	●		●	●	●	0.02~0.20	0.05~3.00
	09T304-AK	●		●	●	●	0.02~0.30	0.10~5.00
	09T308-AK	●			●	●	0.03~0.50	0.10~5.00
	120402-AK				●	●	0.02~0.30	0.05~4.00
	120404-AK	●		●	●	●	0.03~0.50	0.10~5.00
	120408-AK				●	●	0.04~0.80	0.10~5.50
AR 	CCGT 060202-AR				●	●	0.02~0.30	0.30~4.00
	060204-AR						0.03~0.35	0.50~4.50
	060208-AR						0.04~0.50	0.50~4.50
	09T302-AR				●	●	0.03~0.45	0.30~4.00
	09T304-AR				●	●	0.04~0.50	0.50~4.50
	09T308-AR				●	●	0.05~0.60	0.50~6.00
	120402-AR						0.04~0.50	0.30~5.00
	120404-AR				●	●	0.05~0.60	0.50~6.00
	120408-AR				●	●	0.06~0.65	0.50~6.00
	120412-AR						0.08~0.70	0.50~6.50

Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
 ● : Stock item

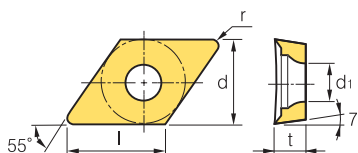
Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 190	SCLCR/L	B123, 190, 215



B Aluminum Insert (Positive)

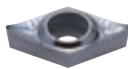
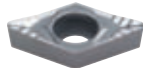
DC ○ ○

 Rhombic **55° Positive**
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d ₁
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Workpiece	Steel							Machining types
	Stainless steel							
	Cast iron							
	Non-ferrous metal							
	Heat resistant alloy, Titanium alloy							
	Hardened steel							
								 Continuous cutting
								 General cutting
								 Interrupted cutting

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	f _n (mm/rev)	a _p (mm)
AK 	DCGT 070202-AK	●			●	●	0.01~0.20	0.05~3.00
	070204-AK	●		●	●	●	0.02~0.30	0.10~4.00
	070208-AK	●			●	●	0.03~0.40	0.10~4.00
	11T302-AK	●		●	●	●	0.02~0.30	0.05~4.00
	11T304-AK	●		●	●	●	0.03~0.50	0.10~5.00
	11T308-AK	●		●	●	●	0.03~0.50	0.10~5.00
	11T312-AK				●	●	0.04~0.60	0.15~5.00
AR 	DCGT 070202-AR				●	●	0.02~0.30	0.30~4.00
	070204-AR				●	●	0.03~0.40	0.50~5.00
	070208-AR				●	●	0.04~0.50	0.50~5.00
	11T302-AR						0.03~0.45	0.30~6.00
	11T304-AR				●	●	0.04~0.50	0.50~6.00
	11T308-AR				●	●	0.05~0.60	0.50~6.00
	11T312-AR				●	●	0.08~0.65	0.50~6.50

➡ Cutting edge geometry **A37~A49**

➡ Recommended chip breaker **B04~B15**

➡ Code system **B34~B35**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B190	SDQCR/L	B217
SDJCR/L	B123, 191	SDUCR/L	B218
SDNCN	B124, 191	SDZCR/L	B219

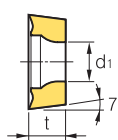
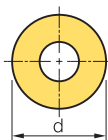


B

Turning

RC

Round **Positive**
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d ₁
06	6.0	2.38	2.8
08	8.0	3.18	3.35
10	10.0	3.18~3.97	4.4
12	12.0	4.76	4.4

Workpiece	Steel	P						Machining types
	Stainless steel	M						
	Cast iron	K						
	Non-ferrous metal	N	*	●	*	●	*	
	Heat resistant alloy, Titanium alloy	S						
	Hardened steel	H						
● Continuous cutting ● General cutting * Interrupted cutting								

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	f _n (mm/rev)	a _p (mm)
AK 	RCGT 0602M0-AK				●	●	0.05~0.20	0.50~2.00
	0803M0-AK				●	●	0.05~0.25	0.50~2.50
	1003M0-AK				●	●	0.10~0.30	1.00~3.00
	1204M0-AK				●	●	0.10~0.35	1.00~3.50
AR 	RCGT 0602M0-AR						0.05~0.20	0.50~2.00
	0803M0-AR						0.05~0.25	0.50~2.50
	1003M0-AR				●	●	0.10~0.30	1.00~3.00
	10T3M0-AR						0.10~0.30	1.00~3.00
	1204M0-AR						0.10~0.35	1.00~3.50

➡ Cutting edge geometry A37~A49

➡ Recommended chip breaker B04~B15

➡ Code system B34~B35

● : Stock item

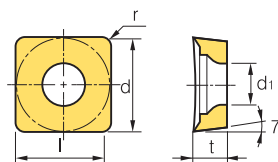
Available tool holders			
Designation	Page	Designation	Page
SRDCN	B191	SRGCR/L	B192



B Aluminum Insert (Positive)

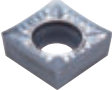
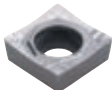
SC ○ ○

 Square **90° Positive**
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d ₁
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Workpiece	Steel							Machining types
	Stainless steel							
	Cast iron							
	Non-ferrous metal		✱	●	✱	●	✱	
	Heat resistant alloy, Titanium alloy							
	Hardened steel							
● Continuous cutting ● General cutting ✱ Interrupted cutting								

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	f _n (mm/rev)	a _p (mm)
AK 	SCGT 09T302-AK	●				●	0.02~0.30	0.10~4.00
	09T304-AK	●			●	●	0.04~0.40	0.10~5.00
	09T308-AK				●	●	0.03~0.40	0.10~5.00
	120404-AK				●	●	0.03~0.50	0.10~5.00
	120408-AK				●	●	0.04~0.60	0.15~5.50
	120416-AK						0.04~0.60	0.15~5.50
AR 	SCGT 09T302-AR						0.03~0.40	0.50~5.00
	09T304-AR				●	●	0.04~0.50	0.50~6.00
	09T308-AR						0.04~0.50	0.50~6.50
	120404-AR				●	●	0.05~0.60	0.50~6.50
	120408-AR						0.05~0.60	0.50~7.00
	120416-AR						0.05~0.60	0.50~7.00

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
● : Stock item

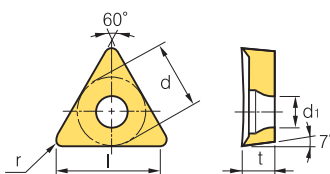
Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B192	SSKCR/L	B193
SSDCN	B192	SSSCR/L	B193



TC



Triangular 60° Positive
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d ₁
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.97	4.4

Workpiece	Steel	P						Machining types
	Stainless steel	M						
	Cast iron	K						
	Non-ferrous metal	N	*	●	*	●	*	
	Heat resistant alloy, Titanium alloy	S						
	Hardened steel	H						
● Continuous cutting ● General cutting * Interrupted cutting								

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	f _n (mm/rev)	a _p (mm)
AK 	TCGT 090202-AK				●	●	0.01~0.12	0.05~3.00
	090204-AK				●	●	0.02~0.15	0.10~4.00
	110202-AK	●			●	●	0.02~0.20	0.05~4.00
	110204-AK	●			●	●	0.03~0.30	0.10~4.00
	110208-AK				●	●	0.03~0.40	0.10~5.00
	16T302-AK				●	●	0.02~0.30	0.05~5.00
	16T304-AK				●	●	0.03~0.40	0.10~5.50
	16T308-AK				●	●	0.03~0.50	0.10~5.50
	16T312-AK				●	●	0.04~0.60	0.15~5.50
	16T316-AK				●	●	0.05~0.80	0.15~5.50
	16T325-AK						0.06~0.90	0.20~7.00
AR 	TCGT 090202-AR						0.02~0.18	0.30~3.00
	090204-AR				●	●	0.02~0.25	0.30~5.00
	110202-AR						0.02~0.30	0.30~4.00
	110204-AR				●	●	0.03~0.40	0.30~5.00
	110208-AR						0.04~0.45	0.50~6.00
	16T302-AR				●	●	0.03~0.45	0.30~5.00
	16T304-AR				●	●	0.04~0.50	0.50~6.00
	16T308-AR				●	●	0.05~0.60	0.50~6.00
	16T312-AR						0.06~0.65	0.50~6.00
	16T316-AR						0.08~0.70	0.50~6.50
	16T325-AR						0.10~0.10	0.80~7.00

Cutting edge geometry A37~A49
 Recommended chip breaker B04~B15
 Code system B34~B35
 ● : Stock item

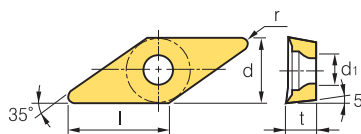
Available tool holders			
Designation	Page	Designation	Page
STACR/L	B193	STTCR/L	B194, 246
STFCR/L	B194	STWCR/L	B246
STGCR/L	B194		



B Aluminum Insert (Positive)

VB

 Rhombic **35° Positive**
Relief Angle: 5°



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.8
16	9.525	4.76	4.4

Workpiece	Steel							Machining types
	Stainless steel							
	Cast iron							 Continuous cutting General cutting  Interrupted cutting
	Non-ferrous metal							
	Heat resistant alloy, Titanium alloy							
	Hardened steel							

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	fn (mm/rev)	ap (mm)
AK 	VBGT 110302-AK				●	●	0.02~0.15	0.05~3.00
	110304-AK				●	●	0.02~0.15	0.10~4.00
	110308-AK					●	0.03~0.18	0.10~5.00
	160402-AK						0.03~0.30	0.05~4.00
	160404-AK				●	●	0.03~0.40	0.10~5.00
	160408-AK				●	●	0.03~0.50	0.10~5.00
	160412-AK					●	0.05~0.60	0.10~5.50
AR 	VBGT 110302-AR						0.02~0.35	0.30~3.00
	110304-AR						0.03~0.45	0.30~4.00
	110308-AR						0.03~0.50	0.50~6.00
	160402-AR						0.04~0.45	0.30~5.00
	160404-AR				●	●	0.04~0.50	0.50~6.00
	160408-AR				●	●	0.05~0.60	0.50~6.00
	160412-AR						0.05~0.70	0.50~6.50

➡ Cutting edge geometry **A37~A49**

➡ Recommended chip breaker **B04~B15**

➡ Code system **B34~B35**

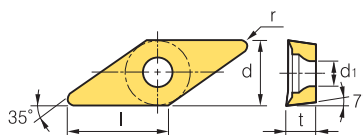
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B195	SVVBN	B196
SVHBR/L	B195	SVQBR/L	B222
SVJBR/L	B125, 195	SVUBR/L	B223



VC ○ ○

 Rhombic **35° Positive**
Relief Angle: 7°



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.8
13	7.94	3.18	3.4
16	9.525	4.76	4.4
22	12.7	5.56	5.6

Workpiece	Steel	P						Machining types
	Stainless steel	M						
	Cast iron	K						
	Non-ferrous metal	N	✱	●	✱	✱	✱	
	Heat resistant alloy, Titanium alloy	S						
	Hardened steel	H						
● Continuous cutting ● General cutting ✱ Interrupted cutting								

Inserts	Designation	Coated			Uncoated		Cutting Condition	
		PC5040	PD1005	PD1010	H01	H05	f _n (mm/rev)	a _p (mm)
AK 	VC GT 110301-AK				●		0.02~0.15	0.05~3.00
	110302-AK	●			●	●	0.02~0.20	0.05~3.00
	110304-AK	●		●	●	●	0.02~0.25	0.10~4.00
	110308-AK				●	●	0.03~0.30	0.10~5.00
	130302-AK	●			●	●	0.02~0.35	0.10~5.00
	130304-AK	●			●	●	0.03~0.35	0.10~5.00
	130308-AK						0.04~0.40	0.10~5.00
	160402-AK				●	●	0.02~0.30	0.05~5.00
	160404-AK			●	●	●	0.03~0.40	0.10~5.00
	160408-AK			●	●	●	0.03~0.50	0.10~5.00
	160412-AK				●	●	0.03~0.50	0.10~5.00
	220516-AK				●	●	0.03~0.60	0.10~7.00
	220525-AK					●	0.05~0.70	0.10~7.00
	220530-AK				●	●	0.08~1.00	0.10~7.00
AR 	VC GT 110301-AR						0.02~0.20	0.10~3.00
	110302-AR				●	●	0.02~0.25	0.30~3.00
	110304-AR				●	●	0.03~0.35	0.30~4.00
	110308-AR						0.04~0.45	0.50~6.00
	130302-AR					●	0.02~0.40	0.50~3.00
	130304-AR				●	●	0.03~0.45	0.50~4.00
	130308-AR						0.04~0.50	0.50~5.00
	160402-AR				●	●	0.03~0.40	0.30~5.00
	160404-AR				●	●	0.04~0.50	0.50~6.00
	160408-AR				●	●	0.05~0.60	0.50~6.00
	160412-AR						0.06~0.65	0.50~6.50
	220516-AR						0.10~0.65	0.80~6.50
	220525-AR						0.10~0.70	0.80~7.00
	220530-AR				●	●	0.12~0.75	1.00~7.00

 Cutting edge geometry **A37~A49**
 Recommended chip breaker **B04~B15**
 Code system **B34~B35**
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B125, 196, 222	SVQCR/L	B223
SVVCN	B196	SVUCR/L	B223



cBN

Multi-Corner Type (Negative)

Dimensions (mm)			
Size	d	t	d ₁
12	12.7	4.76	5.16
15	12.7	4.76~6.358	3.4
16	9.525	4.76	3.81

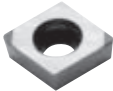
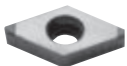
Inserts	Designation	Coated					Uncoated					Available tool holders				
		DNC100	DNC250	DNC300	DNC350	DNC400	DB1000	DB2000	DBN250	DBN350	DBN700A	DBNX20	Designation	Page		
CN 80° Nega	2NU-CNGA	120404	●	●	●	●	●				●		DCBNR/L	B167		
		120404F		●		●							DCLNR/L	B167/B208		
		120404T		●		●		●					MCKNR/L	B183		
		120404W		●									MCLNR/L	B183/B213		
		120404WF		●									MCMNN	B183		
		120408	●	●	●	●		●	●			●	PCBNR/L	B172		
		120408F		●		●							PCLNR/L	B173/B210		
		120408T		●		●		●								
		120408W		●		●		●				●				
		120408WF							●							
		120412	●	●	●	●										
		120412F		●		●										
	120412T		●		●											
	120412W		●				●				●					
	120412WT						●									
	T-2NU-CNGA	120404		●												
120408			●		●											
4NU-CNGA	120404		●													
	120408		●		●											
4NS-CNGA	120408					●										
	120412					●										
DN 55° Nega	2NU-DNGA	150404		●	●	●			●	●			DDJNR/L	B168		
		150404F		●		●							MDJNR/L	B184		
		150404T		●		●							MDNNN	B184		
		150408		●	●	●		●	●	●			MDQNR/L	B185		
		150408F		●		●							MDUNR/L	B213		
		150408T		●		●		●	●				PDJNR/L	B173		
		150412		●		●							PDNNR/L	B174		
		150412F		●		●							PDSNR/L	B210		
		150412T		●		●							PDUNR/L	B211		
		150604	●	●		●										
	150608	●	●		●											
	4NU-DNGA	150404		●		●										
		150408		●		●										
		150412		●		●										
		150608		●												
	4NS-DNGA	150608					●									
150612						●										
4NU-SNGA	120404		●								●	DSBNR/L	MSBNR/L	B168	B185	
	120408		●								●	MSDNN	MSKNR/L	B185	B186/B213	
												MSRNR/L	MSSNR/L	B186	B187	
												PSBNR/L	PSDNN	B175	B176	
												PSKNR/L		B176/B211		
TN 60° Nega	3NU-TNGA	160404		●		●		●	●	●		●	MTENN	MTFNR/L	B187	B187/B214
		160404T		●									MTGNR/L	MTJNR/L	B188	B188
		160408		●		●						●	PTFNR/L	PTGNR/L	B177/B211	B178
		160408F		●									PTTNR/L	WTENN	B178	B179
		160408T		●									WTJNR/L	WTXNR/L	B179	B179
		160412				●										
VN 35° Nega	2NU-VNGA	160404	●	●	●	●				●		●	MVJNR/L		B188	
		160404F		●		●							MVQNR/L		B189	
		160404T		●		●							MVUNR/L		B214	
		160408	●	●	●	●		●	●	●		●	MVVNN		B189	
		160408F		●		●										
	160408T		●		●			●								
T-2NU-VNGA	160408		●				●									

● : Stock item



cBN**Multi-Corner Type (Positive)**

Dimensions (mm)			
Size	d	t	d ₁
06	6.35	2.38	2.8
07	6.35	2.38	2.8
09	9.525	3.97	4.4
11	9.525	3.97	4.4
16	9.525	4.76	3.81

Inserts	Designation	Coated					Uncoated					Available tool holders			
		DNC100	DNC250	DNC300	DNC350	DNC400	DB1000	DB2000	DBN250	DBN350	DBN700A	DBNX20	Designation	Page	
 	2NU-CCGW	060202	●										SCACR/L	B190	
		060202T	●										SCLCR/L	B190/B215/B225	
		060204	●						●						
		060204F	●												
		060204T	●												
		060208						●							
		09T302		●											
		09T304	●	●		●		●		●		●			
		09T304T		●											
		09T308	●	●		●			●	●		●			
 	2NU-DCGW	070204	●					●					SDACR/L	B190	
		070208	●										SDJCR/L	B191	
		070208T							●				SDNCN	B191	
		11T302		●									SDQCR/L	B217	
		11T304	●	●		●		●		●			SDUCR/L	B218	
		11T304F		●									SDZCR/L	B219	
		11T304T		●											
		11T308	●	●		●				●		●			
		11T308T		●											
		T-2NU-DCGW	11T304		●										
11T308			●		●										
 	3NU-TCGW	090204	●										STACR/L	B193	
		090204F	●										STFCR/L	B194/B220	
		090204T	●										STGCR/L	B194	
													STTCR/L	B194	
 	3NU-TPGW	110304	●		●			●	●			●			
		110304F	●												
		110304T	●												
		110308	●		●			●	●			●			
		110308F	●												
		110308T	●												
	3NU-TPGN	110308							●	●				CTFPR/L	B182/B212
		160304	●										CTGPR/L	B182	
		160308	●												
	 	3NU-TPGB	110304	●							●			CTFPR/L	B182/B212
110304T			●										CTGPR/L	B182	
110308			●								●				
110308F			●												
110308T			●												
 	2NU-VBGW	160402	●										SVABR/L	B195	
		160404	●	●		●		●		●		●	SVHBR/L	B195	
		160404F	●										SVJBR/L	B195	
		160404T	●										SVQBR/L	B222	
		160408	●	●		●			●	●			SVUBR/L	B223	
		160408F	●												
		160408T	●												
	T-2NU-VBGW	160408				●									
 	2NU-VCGW	160404	●		●										
		160404F	●												
		160404T	●												
		160408	●												
		160408F	●												
		160408T	●					●	●						
	T-2NU-VCGW	160404	●												
		160408	●												

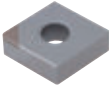
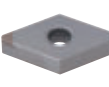
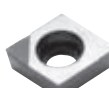
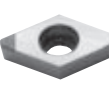
● : Stock item

cBN

Regrinding Type (Negative/Positive)

Dimensions (mm)			
Size	d	t	d _i
09	9.525	3.97	4.4
11	6.35~9.525	3.8~3.97	3.4~4.4
12	12.7	4.76	5.16

Dimensions (mm)			
Size	d	t	d _i
15	12.7	4.76	5.16
16	9.525	4.76	3.81~4.4

Inserts	Designation		Coated					Uncoated					Available tool holders			
			DNC100	DNC250	DNC300	DNC350	DNC400	DB1000	DB2000	DBN250	DBN350	DBN700A	DBNX20	Designation		Page
CN ○○○  80° Nega 	CNMA	120404							●				DCBNR/L	MCKNR/L	B167	B183
		120408							●			●	DCLNR/L	MCLNR/L	B167/B208	B183/B213
	T-CNMA	120408							●				PCBNR/L	MCMNN	B172	B183
													PCLNR/L		B173/B210	
DN ○○○  55° Nega 	DNMA	150404							●				DDJNR/L	MDJNR/L	B168	B184
		150408							●	●			MDNNN	MDQNR/L	B184	B185
													MDUNR/L	PDJNR/L	B213	B173
													PDNNR/L	PDSNR/L	B174	B210
TN ○○○  60° Nega 	TNMA	160404							●				MTENN	MTFNR/L	B187	B187/B214
		160408							●				MTGNR/L	MTJNR/L	B188	B188
													PTFNR/L	PTGNR/L	B177/B211	B178
													PTTNR/L	WTENN	B178	B179
VN ○○○  35° Nega 	T-VNMA	160404							●				MVJNR/L		B188	
	VNMA	160404							●				MVQNR/L		B189	
		160408							●				MVUNR/L		B214	
													MVVNN		B189	
CC ○○○  80° Posi 	CCMW	09T304							●				SCACR/L		B190	
													SCLCR/L		B190/B215/B225	
DC ○○○  50° Posi 	DCGW	11T308							●				SDACR/L		B190	
	T-DCGW	11T308							●				SDJCR/L		B191	
													SDNCN		B191	
VB ○○○  35° Posi 	VBMW	160404							●				SVABR/L		B195	
		160408							●				SVHBR/L		B195	
													SVJBR/L		B195	
													SVQBR/L		B222	
TP ○○○  60° Posi 	T-TPGB	110304								●			CTFPR/L		B182/B212	
	TPGB	110304							●	●			CTGPR/L		B182	
		110308							●							

● : Stock item



PCD**Insert (Negative/Positive)**

Dimensions (mm)				Dimensions (mm)			
Size	d	t	d ₁	Size	d	t	d ₁
06	6.35	2.38	2.8	11	9.525	3.97	4.4
07	6.35	2.38	2.8	12	12.7	4.76	5.16
08	7.94	2.38	3.4	15	12.7	4.76	5.16
09	9.525	3.18	4.4	16	9.525	4.76	3.81

Inserts	Designation	PCD			Available tool holders			
		DP90	DP150	DP200	Designation	Page		
CN  80° Nega	CNMM	120404 120408	●		DCBNR/L	DCLNR/L	B167	B167
			●		MCKNR/L	MCLNR/L	B183	B183
					MCMNN	PCBNR/L	B183	B172
					PCLNR/L		B173	
DN  55° Nega	DNMM	150404 150408	●		DDJNR/L	MDJNR/L	B168	B184
			●		MDNNN	MDQNR/L	B184	B185
					MDUNR/L	PDJNR/L	B213	B173
					PDNNR/L	PDSNR/L	B174	B210
					PDUNR/L		B210	
CC  80° Posi	CCMW CCMT	120404 060202 060204 09T304 09T308	●		SCACR/L		B190	
			●		SCLCR/L		B190/B215/B225	
			●					
			●					
			●					
DC  55° Posi	DCMT	070202 070204 11T302 11T304 11T308	●		SDACR/L		B195	
			●		SDJCR/L		B191	
			●		SDNCN		B191	
			●		SDQCR/L		B217	
			●		SDUCR/L		B218	
	DCGT	11T304	●		SDZCR/L		B219	
			●					
			●					
VB  35° Posi VC  35° Posi	VBGW VBMT	160404 110304 110308 160404 160408	●		SVHBR/L		B195	
			●		SVJBR/L		B195	
			●		SVUBR/L		B223	
			●					
			●					
	VCMT	110304 110308 160404 160408	●		SVVCN		B196	
			●					
			●					
			●					
			●					
TP  60° Posi	TPGN	110304 110308	●					
			●					
SP  90° Posi	SPGN	090304	●		CSDPN		B181	
					CSKPR/L		B182/B212	

● : Stock item

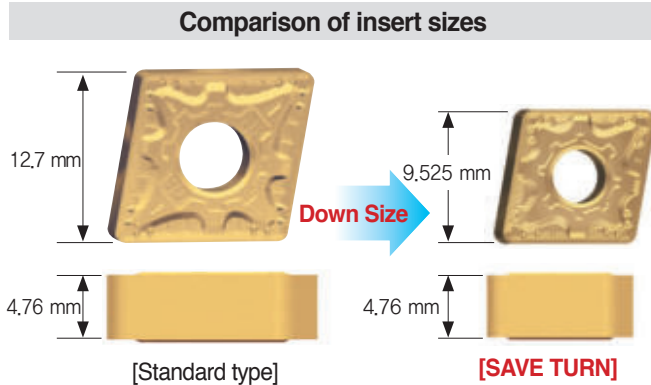
B Technical Information for SAVE TURN

Economical small insert with powerful cutting performance

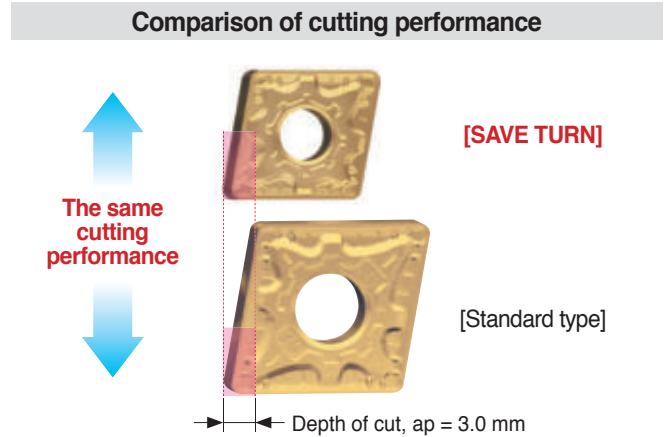
SAVE TURN

- Strongly recommended turning insert for machining smaller diameter than $\varnothing 100$
- Small but powerful and economical insert which performs the same like standard-sized inserts under the depth of cut of 3.0 mm

Features



- Optimized size of the same performance like the standard type

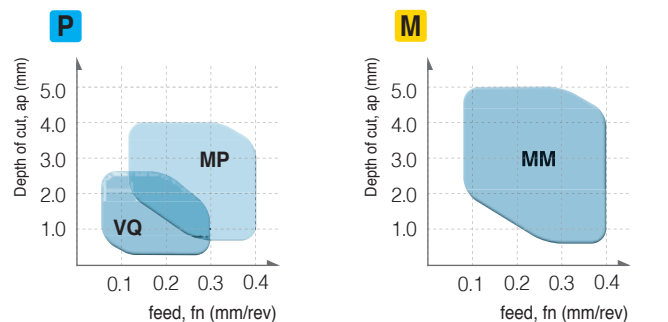


- Performs the same like standard type inserts under the depth of cut of 3.0 mm

Features of chip breaker

Insert shape	Cutting edge	Features
VQ 		• For finishing steel • Efficient chip breaking and low cutting resistance • Various application available at low depth of cut • Recommended depth of cut: 0.5~2.5 mm
MP 		• For medium cutting of steel • 4 dots for improved chip control in medium cutting to finishing • Stable chip evacuation at high depth of cut • Stable tool life due to lower cutting loads at high feed • Recommended depth of cut: 0.5~4.0 mm
MM 		• For medium cutting of stainless steel • Limits plastic deformation caused by heat • Stable tool life thanks to the balanced cutting performance and toughness • Stable chip flow at high speeds and feeds • Recommended depth of cut: 0.5~5.0 mm

Application area of chip breaker



VQ: Depth of cut, $a_p = 0.5 \sim 2.5$ mm/feed, $f_n = 0.05 \sim 0.30$ mm/rev

MP: Depth of cut, $a_p = 0.5 \sim 4.0$ mm/feed, $f_n = 0.15 \sim 0.40$ mm/rev

MM: Depth of cut, $a_p = 0.5 \sim 5.0$ mm/feed, $f_n = 0.10 \sim 0.40$ mm/rev

Application example

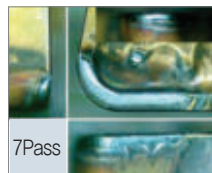
Alloy steel (SCM440)

- **Cutting conditions** vc (m/min) = 250, f_n (mm/rev) = 0.25
 a_p (mm) = 2.0~3.0, continuous cutting, wet

- **Cutting Result**



CNMG090408-HM
SAVE TURN

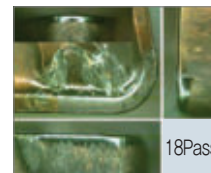


CNMG120408-HM
Standard type

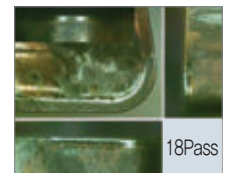
Alloy steel (SCM440)

- **Cutting conditions** vc (m/min) = 250, f_n (mm/rev) = 0.25
 a_p (mm) = 2.0~3.0, interrupted cutting, wet

- **Cutting Result**



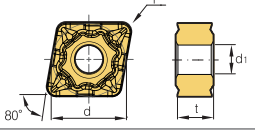
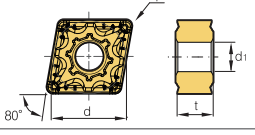
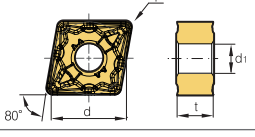
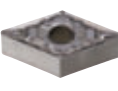
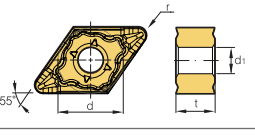
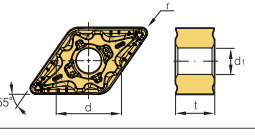
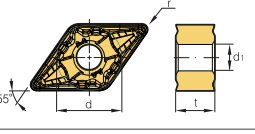
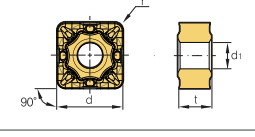
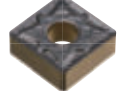
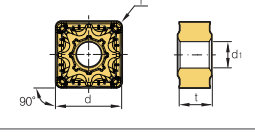
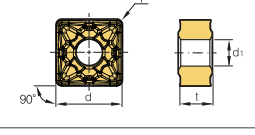
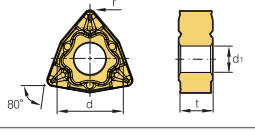
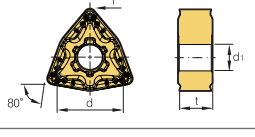
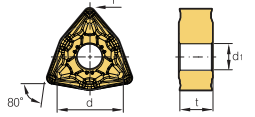
CNMG090408-HM
SAVE TURN



CNMG120408-HM
Standard type





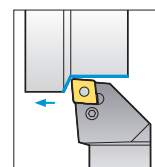
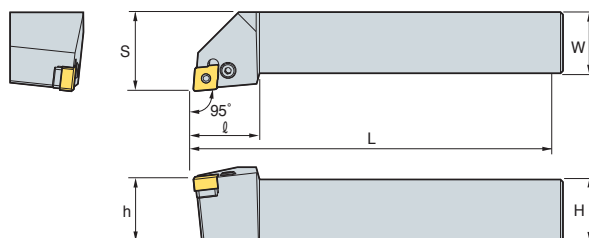
Type	Picture	Designation	Coated						Dimensions (mm)				cutting conditions		Configuration	Available tool holders page	
			NC3215	NC3225	NC5330	NC6310	NC9125	NC9135	PC9030	d	t	r	d ₁	ap (mm)			fn (mm/rev)
C type		CNMG 090408-VQ		●					9.525	4.76	0.8	3.81	0.50~2.50	0.08~0.30		B116 B119	
		090412-VQ		●					9.525	4.76	1.2	3.81	0.50~2.50	0.10~0.30			
		CNMG 090404-MP							9.525	4.76	0.4	3.81	0.50~4.00	0.10~0.40		B116 B119	
		090408-MP							9.525	4.76	0.8	3.81	0.50~4.00	0.15~0.40			
		090412-MP							9.525	4.76	1.2	3.81	0.50~4.00	0.15~0.45			
		CNMG 090404-MM							9.525	4.76	0.4	3.81	0.50~5.00	0.08~0.35		B116 B119	
		090408-MM							9.525	4.76	0.8	3.81	0.50~5.00	0.10~0.40			
		090412-MM							9.525	4.76	1.2	3.81	0.50~5.00	0.12~0.45			
D type		DNMG 110508-VQ		●					9.525	5.56	0.4	3.81	0.50~2.50	0.08~0.30		B116 B117 B119 B120	
		110512-VQ		●					9.525	5.56	0.8	3.81	0.50~2.50	0.10~0.30			
		DNMG 110504-MP							9.525	5.56	0.4	3.81	0.50~4.00	0.10~0.40		B116 B117 B119 B120	
		110508-MP							9.525	5.56	0.8	3.81	0.50~4.00	0.15~0.40			
		110512-MP							9.525	5.56	1.2	3.81	0.50~4.00	0.15~0.45			
		DNMG 110504-MM							9.525	5.56	0.4	3.81	0.50~5.00	0.08~0.35		B116 B117 B119 B120	
		110508-MM							9.525	5.56	0.8	3.81	0.50~5.00	0.10~0.40			
		110512-MM							9.525	5.56	1.2	3.81	0.50~5.00	0.12~0.45			
S type		SNMG 090408-VQ		●					9.525	4.76	0.4	3.81	0.50~2.50	0.08~0.30		B117 B118 B120	
		090412-VQ							9.525	4.76	0.8	3.81	0.50~2.50	0.10~0.30			
		SNMG 090404-MP							9.525	4.76	0.4	3.81	0.50~4.00	0.10~0.40		B117 B118 B120	
		090408-MP							9.525	4.76	0.8	3.81	0.50~4.00	0.15~0.40			
		090412-MP							9.525	4.76	1.2	3.81	0.50~4.00	0.15~0.45			
		SNMG 090404-MM							9.525	4.76	0.4	3.81	0.50~5.00	0.08~0.35		B117 B118 B120	
		090408-MM							9.525	4.76	0.8	3.81	0.50~5.00	0.10~0.40			
		090412-MM							9.525	4.76	1.2	3.81	0.50~5.00	0.12~0.45			
W type		WNMG 060404-VQ							9.525	4.76	0.4	3.81	0.30~2.00	0.06~0.30		B119 B120	
		060408-VQ							9.525	4.76	0.8	3.81	0.50~2.00	0.08~0.30			
		060412-VQ							9.525	4.76	1.2	3.81	0.50~2.00	0.10~0.30			
		WNMG 060404-MP	●	●	●		●		9.525	4.76	0.4	3.81	0.50~3.50	0.10~0.40		B119 B120	
		060408-MP	●	●	●	●	●		9.525	4.76	0.8	3.81	0.50~3.50	0.15~0.40			
		060412-MP							9.525	4.76	1.2	3.81	0.50~3.50	0.15~0.45			
		WNMG 060404-MM							9.525	4.76	0.4	3.81	0.50~4.00	0.08~0.35		B119 B120	
		060408-MM					●	●	●	9.525	4.76	0.8	3.81	0.50~4.00			0.10~0.40
		060412-MM					●	●	●	9.525	4.76	1.2	3.81	0.50~4.00			0.12~0.45

● : Stock item

PCLNR/L



CN□□



95°

• R type insert
(mm)

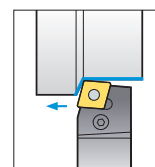
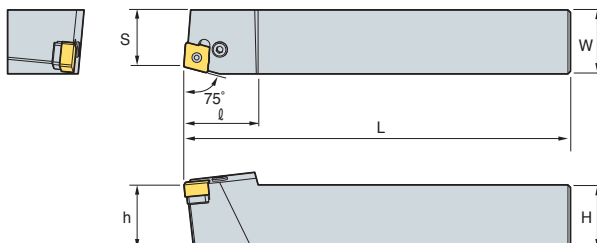
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PCLNR/L 1616-H09-4N	16	16	100	20	16	20	CN□□ 0904□□						
2020-K09-4N	20	20	125	25	20	25							
2525-M09-4N	25	25	150	32	25	27							

➔ Applicable inserts B115

PCBNR/L



CN□□



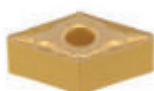
75°

• R type insert
(mm)

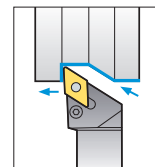
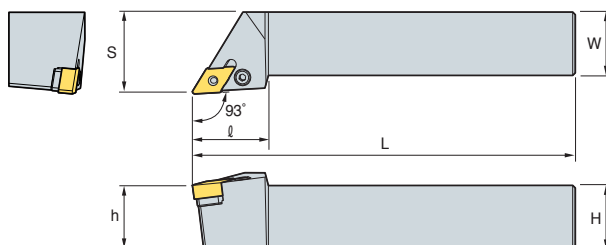
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PCBNR/L 2020-K09-4N	20	20	125	17	20	27	CN□□ 0904□□						
2525-M09-4N	25	25	150	22	25	29							

➔ Applicable inserts B115

PDJNR/L



DN□□



93°

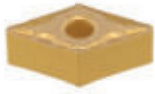
• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PDJNR/L 2020-K11-5N	20	20	125	25	20	25	DN□□ 1105□□						
2525-M11-5N	25	25	150	32	25	30							

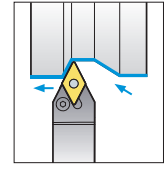
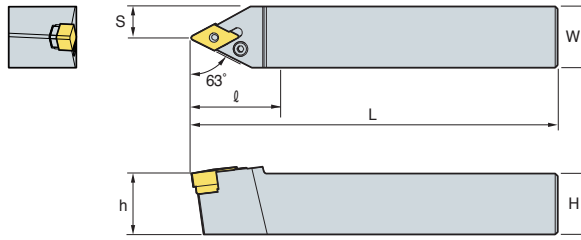
➔ Applicable inserts B115



PDNNR/L



DN□□



63°

• R type insert
(mm)

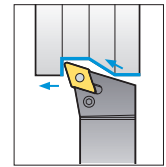
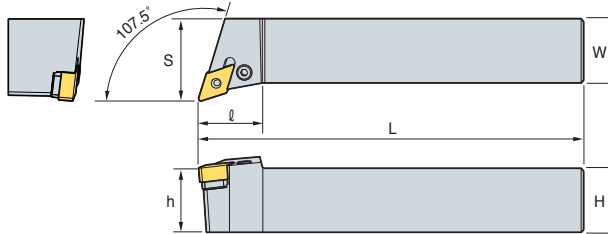
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PDNNR/L 2020-K11-5N	20	20	125	25	20	30	DN□□ 1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	LSPS3
2525-M11-5N	25	25	150	32	25	30							

↻ Applicable inserts B115

PDQNR/L



DN□□



107.5°

• R type insert
(mm)

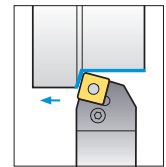
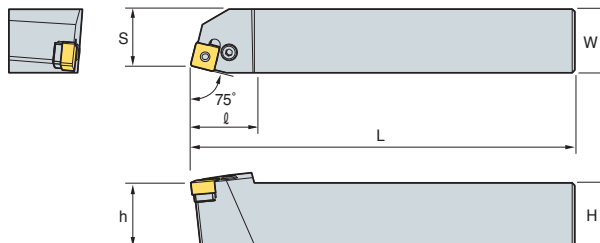
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PDQNR/L 2020-K11-5N	20	20	125	25	20	30	DN□□ 1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	LSPS3
2525-M11-5N	25	25	150	32	25	30							

↻ Applicable inserts B115

PSBNR/L



SN□□



75°

• R type insert
(mm)

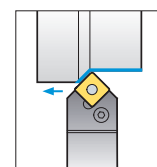
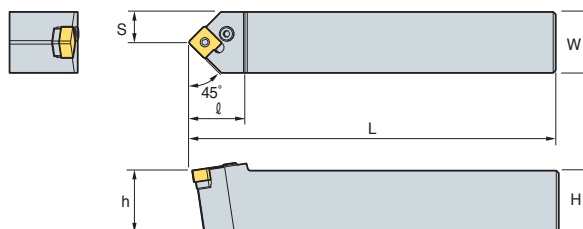
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PSBNR/L 2020-K09-4N	20	20	125	17	20	25	SN□□ 0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
2525-M09-4N	25	25	150	22	25	25							

↻ Applicable inserts B115

PSDNN



SN□□



45°

• R type insert
(mm)

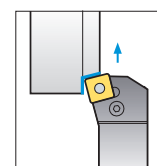
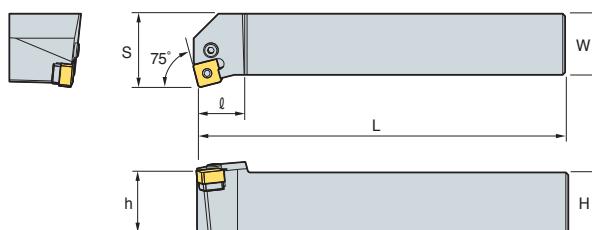
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PSDNN 2020-K09-4N	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
2525-M09-4N	25	25	150	22	25	25							

➔ Applicable inserts B115

PSKNR/L



SN□□



75°

• R type insert
(mm)

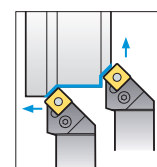
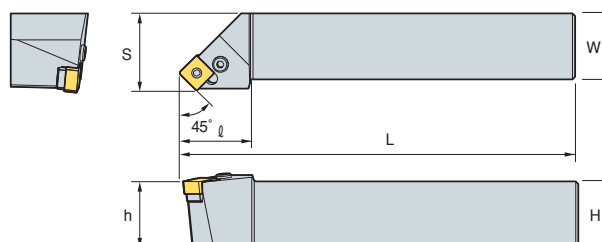
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PSKNR/L 2020-K09-4N	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
2525-M09-4N	25	25	150	22	25	25							

➔ Applicable inserts B115

PSSNR/L



SN□□



45°

• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PSSNR/L 2020-K09-4N	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
2525-M09-4N	25	25	150	22	25	25							

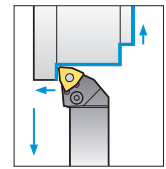
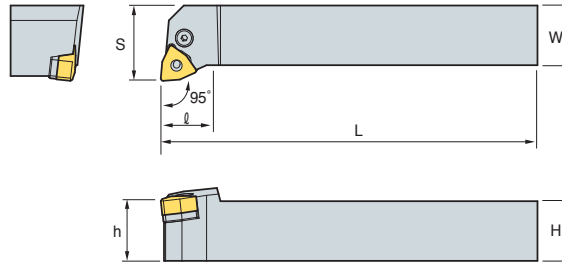
➔ Applicable inserts B115



PWLNRL



WN□□



95°

• R type insert
(mm)

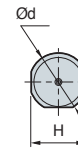
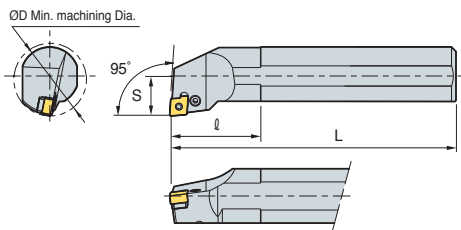
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
PWLNRL 1616-H06	16	16	100	20	16	20	WN□□0604□□						
2020-K06	20	20	125	25	20	20							
2525-M06	25	25	150	32	25	20							
								LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3

➔ Applicable inserts **B115**

PCLNR/L



CN□□



95°

• R type insert
(mm)

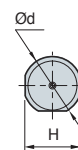
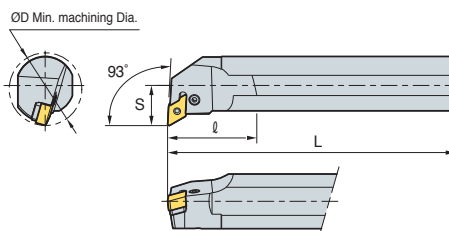
Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
S20Q-PCLNR/L-09-4N	25	20	18	180	13	50	CN□□0904□□						
S25R-PCLNR/L-09-4N	32	25	23	200	17	50							
S32S-PCLNR/L-09-4N	40	32	30	250	22	50							
								LV3B	VHX0512B	—	—	HW20L	—
								LV3B	VHX0512B	SC32N	SP3	HW20L	—
								LV3N	VHX0617N	SC32N	SP3	HW25L	—

➔ Applicable inserts **B115**

PDUNR/L



DN□□



93°

• R type insert
(mm)

Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
S32S-PDUNR/L-11-5N	40	32	30	250	22	30	DN□□1105□□						
S40T-PDUNR/L-11-5N	50	40	38	300	27	50							
								LV3AN	VHX0617N	SD32N	SP3	HW25L	—

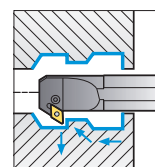
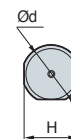
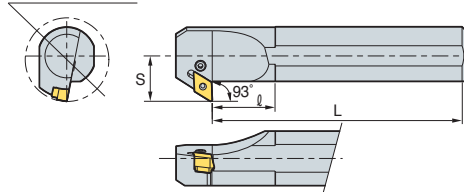
➔ Applicable inserts **B115**

PDZNR/L



DN□□

ØD Min. machining Dia.



93°

• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
S32S-PDZNR/L-11-5N	40	32	30	250	22	30	DN□□1105□□						
S40T-PDZNR/L-11-5N	50	40	38	300	27	50							

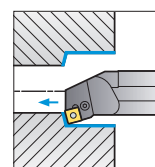
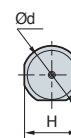
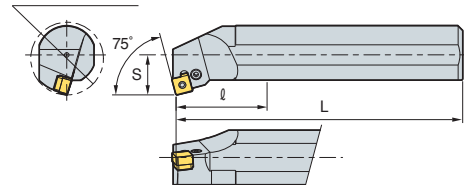
➔ Applicable inserts B115

PSKNR/L



SN□□

ØD Min. machining Dia.



75°

• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
S25R-PSKNR/L-09-4N	32	25	23	200	17	32	SN□□0904□□						
S32S-PSKNR/L-09-4N	40	32	30	250	22	32							

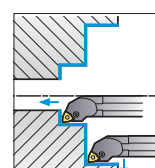
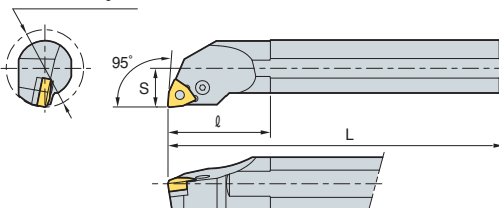
➔ Applicable inserts B115

PWLNRL



WN□□

ØD Min. machining Dia.



95°

• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shim Pin Punch
S20S-PWLNRL/L-06	25	20	18	250	13	40	WN□□0604□□						
S25R-PWLNRL/L-06	32	25	23	200	17	40							
S32S-PWLNRL/L-06	44	32	30	250	22	45							

➔ Applicable inserts B115



Excellent for precision machining

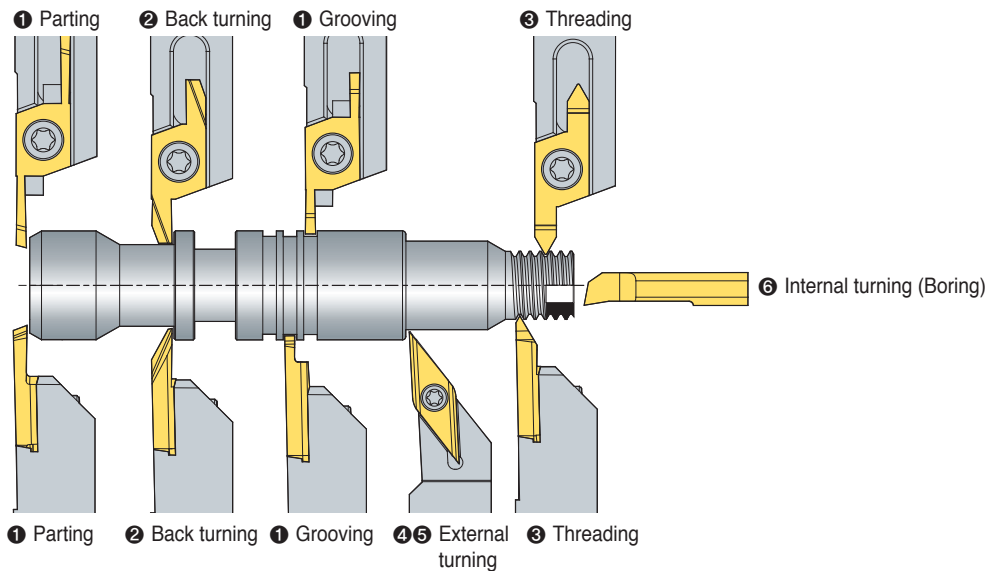
Auto Tools

- High precision machining of small parts and complex forms, etc.
- High quality products through stable machining
- Exclusive insert for automatic lathes

Type



Application example



Index

Specification	1 Parting and Grooving						2 Back turning			Specification	3 Threading	
Holder	SXGNR/L	SXGNR/L	SBHR/L	SBHR/L	MGEHR/L	KGEHR/L	SXGNR/L	SXGNR/L	SBHR/L	Holder	SXGNR/L	SBHR/L
Insert	SG	SC	SBG	SBC	MGMN	KGMN	SB	SGB	SBB	Insert	ST	SBT
Holder size	10~20mm	10~20mm	10~16mm	10~16mm	10~16mm	10~16mm	10~20mm	10~20mm	10~16mm	Shank diameter	10~20mm	10~16mm
Insert shape										Insert shape		
Cutting width	1~3mm	1~3mm	0.7~2.0mm	0.7~2.0mm	1.5~2.5mm	1.5~2.5mm	2~4mm	2~3mm	3.18mm	ØDmin	Pitch ranges 0.5~1.5 / 1.5~3.0	Pitch ranges 0.2~1.5 / 1.0~2.0
ØDmax	Ø18	Ø18	Ø16	Ø16	Ø32	Ø32	Tmax 8.0	Tmax 8.5	Tmax 8.0	Page	B140	B137
Page	B140	B140	B137	B137	B144	B143	B140	B140	B137			

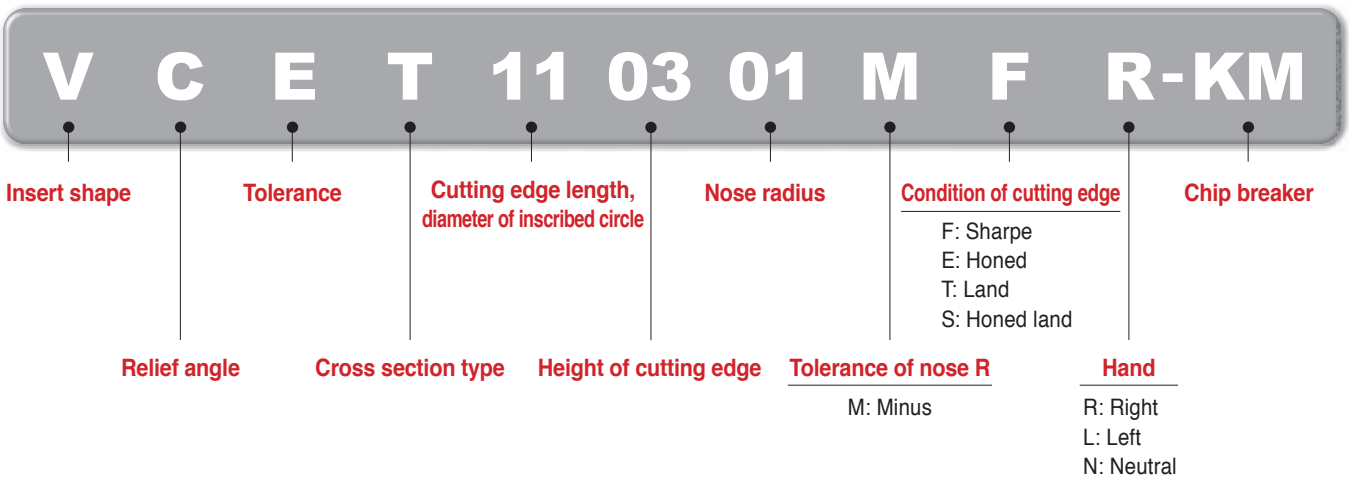
Specification	4 External turning and Copy machining				5 External turning and Facing			Specification	6 Internal turning (Boring)				
Holder	SDJCR/L	SDNCN	SVJBR/L	SVJCR/L	SCACR/L	SCLCR/L	STACR/L	Holder	SCLCR/L	STUBR/L	STUPR/L	SWUBR/L	MSB
Insert	DC□T	DC□T	VB□T	VC□T	CC□T	CC□T	TC□T	Insert	CC□T	TB□T	TP□T	WB□T	-
Holder size	8~16mm	8~16mm	10~16mm	10~16mm	8~16mm	8~16mm	8~10mm	Shank diameter	Ø4~Ø10	Ø8	Ø8	Ø5~Ø8	Ø4~Ø6
Insert shape								Insert shape					
Feature	Offset "0"				Offset "0"			ØDmin	Ø5	Ø8	Ø10	Ø5.5	Ø3.2
Page	B123	B124	B125	B125	B123	B123	B124	Page	B225	B225	B226	B227	B147~B151

Auto Tools (ISO type)

- ISO inserts for automatic lathes
- Precise R shape with the use of minus tolerance of nose R
- Tolerance class precise enough in no need for adjusting tools with the use of accurate cutting edge height
- Sharp blade for excellent chip control and surface roughness with low cutting force
- High precision tools for electrical/ electronics instruments and medical instruments

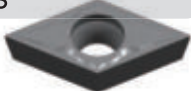


Code system (ISO type)



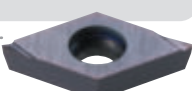
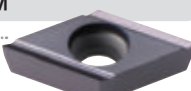
VP1/MS/FS chip breaker

- Exclusive chip breaker for hard-to-cut materials such as titanium alloy, Inconel, stainless steel, etc.
- Minimized cutting heat by reducing contact area between chips and rake surface with the use of high positive blade

VP1  • Hard cutting edge for medium cutting • Optimal width of chip breaker by each depth of cuts realizes wide workpiece machining	MS  • Good surface finish for medium cutting • Preventing welding in titanium machining • Increasing chip evacuation in high feed machining • Protecting cutting edge due to structure for good chip evacuation	FS  • For finishing (for surface roughness) • 1st recommended chip breaker for chip control • Better surface roughness, surface finish and chip control
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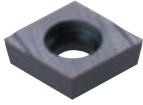
KF/KM chip breaker, ground type for grooving

- Ground chip breaker with sharp cutting edge
- High precision insert of E-class tolerance with accurate nose radius

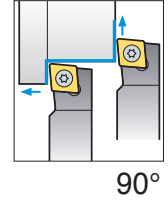
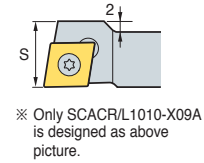
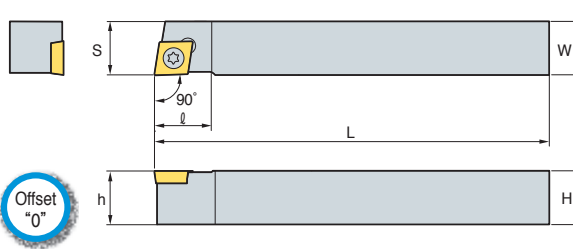
KF  • For finishing • Low cutting loads with sharp cutting edges • Longer tool life due to lower chip evacuation resistance at high speed • Excellent surface roughness	KM  • For medium cutting to finishing • Better chip flow due to wide chip pockets • Longer tool life and better cutting action due to improved chip evacuation • Excellent surface roughness
---	---



SCACR/L



CC□T

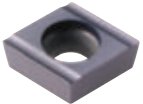


• R type insert (mm)

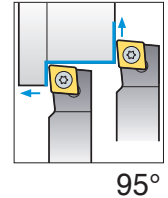
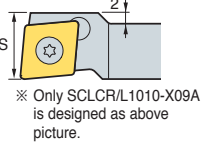
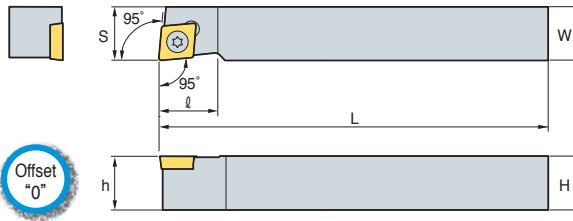
Designation	H	W	L	S	h	l	Insert	Screw	Wrench
SCACR/L 0808-X06A	8	8	120	8	8	10	CC□T0602□□	FTKA02565	TW07P
1010-X06A	10	10	120	10	10	10			
1010-X09A	10	10	120	12	10	13			
1212-X09A	12	12	120	12	12	16	CC□T09T3□□	FTKA0410	TW15P
1616-X09A	16	16	120	16	16	16			

➡ Applicable inserts B73~B77, B103

SCLCR/L



CC□T

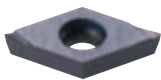


• R type insert (mm)

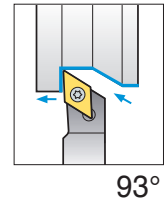
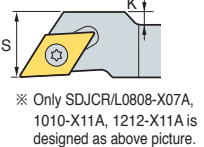
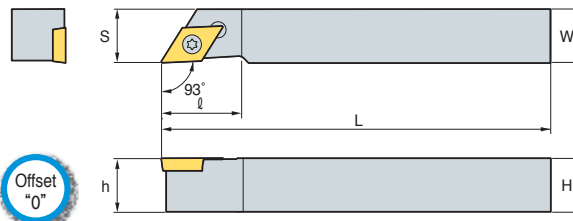
Designation	H	W	L	S	h	l	Insert	Screw	Wrench
SCLCR/L 0808-X06A	8	8	120	8	8	10	CC□T0602□□	FTKA02565	TW07P
1010-X06A	10	10	120	10	10	10			
1010-X09A	10	10	120	12	10	13			
1212-X09A	12	12	120	12	12	16	CC□T09T3□□	FTKA0410	TW15P
1616-X09A	16	16	120	16	16	16			

➡ Applicable inserts B73~B77, B103

SDJCR/L



DC□T

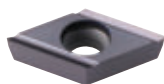


• R type insert (mm)

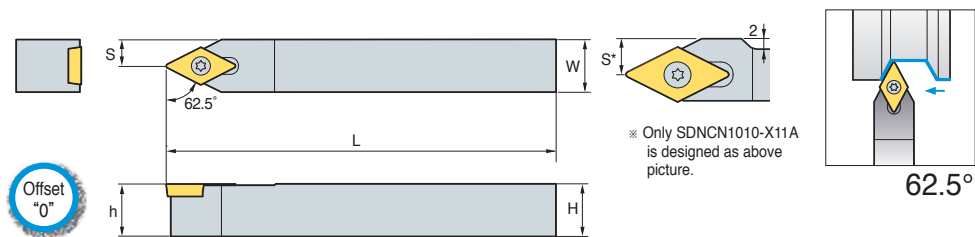
Designation	H	W	L	S	h	K	l	Insert	Screw	Wrench
SDJCR/L 0808-X07A	8	8	120	10	8	2	18	DC□T0702□□	FTKA02565	TW07P
1010-X07A	10	10	120	10	10	-	15			
1010-X11A	10	10	120	14	10	4	18			
1212-X11A	12	12	120	14	12	2	18	DC□T11T3□□	FTKA0410	TW15P
1616-X11A	16	16	120	16	16	-	22			

➡ Applicable inserts B79~B82, B104

SDNCN



DC□□T

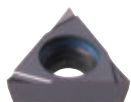


• R type insert (mm)

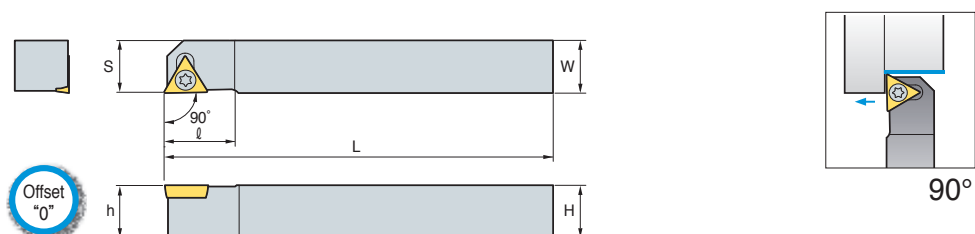
Designation	H	W	L	S	h	Insert	Screw	Wrench
SDNCN 0808-X07A	8	8	120	4	8	DC□T0702□□	FTKA02565	TW 07P
1010-X07A	10	10	120	5	10			
1010-X11A	10	10	120	7	10			
1212-X11A	12	12	120	6	12	DC□T11T3□□	FTKA0410	TW 15P
1616-X11A	16	16	120	8	16			

➔ Applicable inserts B79~B82, B104

STACR/L



TC□□T



• R type insert (mm)

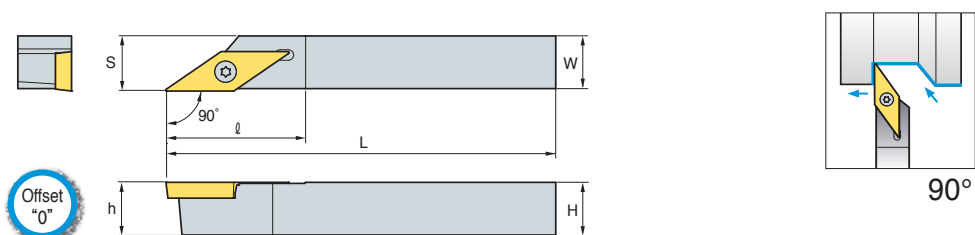
Designation	H	W	L	S	h	K	l	Insert	Screw	Wrench
STACR/L 0808-X08A	8	8	120	8	8	1	12	TC□T0802□□	FTNA0206	TW06P
1010-X08A	10	10	120	10	10	3	12			

➔ Applicable inserts B88~B89, B107

SVACR/L



VC□□□



• R type insert (mm)

Designation	H	W	L	S	h	l	Insert	Screw	Wrench
SVACR/L 0808-X12A	8	8	120	8.5	8	26	VC□□T1203□□	FTKA02565	TW07P
1010-X12A	10	10	120	10.5	10	26			
1212-X12A	12	12	120	12.5	12	26			
1616-X12A	16	16	120	16.5	16	26			
SVACR/L 0808-X12C	8	8	120	8.5	8	26	VC□□X1203□□	FTKA02565	TW07P
1010-X12C	10	10	120	10.5	10	26			
1212-X12C	12	12	120	12.5	12	26			
1616-X12C	16	16	120	16.5	16	26			

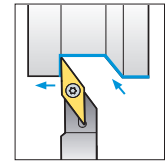
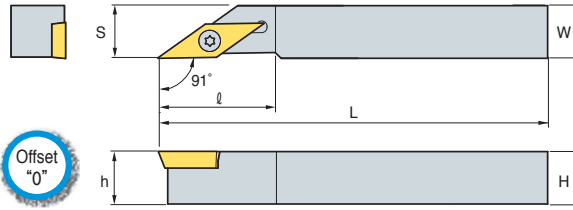
➔ Applicable inserts B97~B99, B109



SVAPR/L



VP□T



91°

• R type insert
(mm)

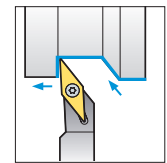
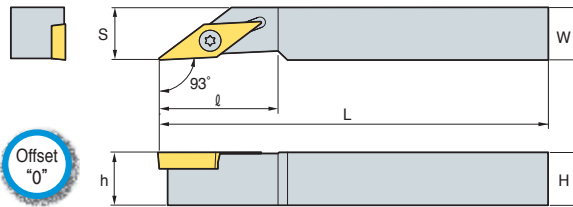
Designation	H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVAPR/L 0808-X11A	8	8	120	8	8	22	VP□T1103□□	FTKA02565	TW07P
1010-X11A	10	10	120	10	10	22			
1212-X11A	12	12	120	12	12	22			
1616-X11A	16	16	120	16	16	24			

Applicable inserts B100

SVJBR/L



VB□T



93°

• R type insert
(mm)

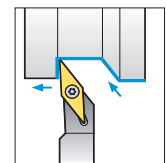
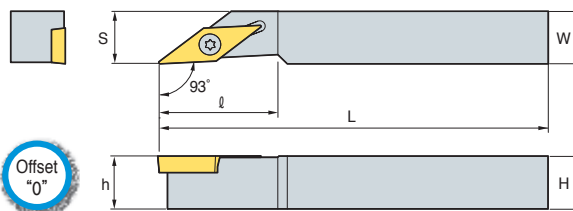
Designation	H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJBR/L 1010-X11A	10	10	120	10	10	22	VB□T1103□□	FTKA02565	TW07P
1212-X11A	12	12	120	12	12	22			
1616-X11A	16	16	120	16	16	24			

Applicable inserts B94~B96, B108

SVJCR/L



VC□□



93°

• R type insert
(mm)

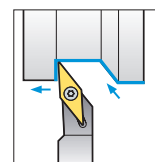
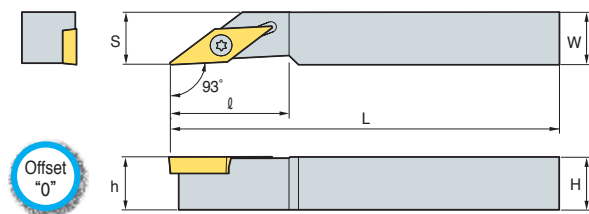
Designation	H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJCR/L 1010-X11A	10	10	120	10	10	22	VC□T1103□□	FTKA02565	TW07P
1212-X11A	12	12	120	12	12	22			
1616-X11A	16	16	120	16	16	24			
0810-X12A	8	10	120	10	8	26	VC□T1203□□	FTKA02565	TW07P
1010-X12A	10	10	120	10	10	26			
1212-X12A	12	12	120	12	12	26			
1616-X12A	16	16	120	16	16	26			
SVJCR/L 0810-X12C	8	10	120	10	8	26	VC□X1203□□	FTKA02565	TW07P
1010-X12C	10	10	120	10	10	26			
1212-X12C	12	12	120	12	12	26			
1616-X12C	16	16	120	16	16	26			

Applicable inserts B97~B99, B109

SVJPR/L



VP□T



93°

• R type insert
(mm)

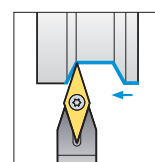
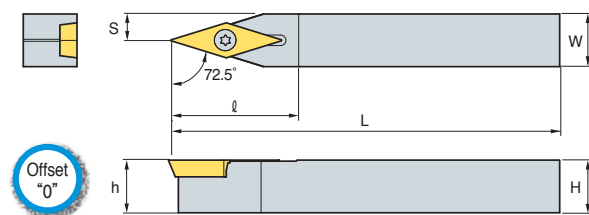
Designation	H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJPR/L 0810-X11A	8	10	120	8	10	22	VP□T1103□□	FTKA02565	TW07P
1010-X11A	10	10	120	10	10	22			
1212-X11A	12	12	120	12	12	22			
1616-X11A	16	16	120	16	16	24			

➔ Applicable inserts **B100**

SVVPN



VP□T



72.5°

• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVVPN 0808-X11A	8	8	120	4	8	24	VP□T1103□□	FTKA02565	TW07P
1010-X11A	10	10	120	5	10	24			
1212-X11A	12	12	120	6	12	24			
1616-X11A	16	16	120	8	16	28			

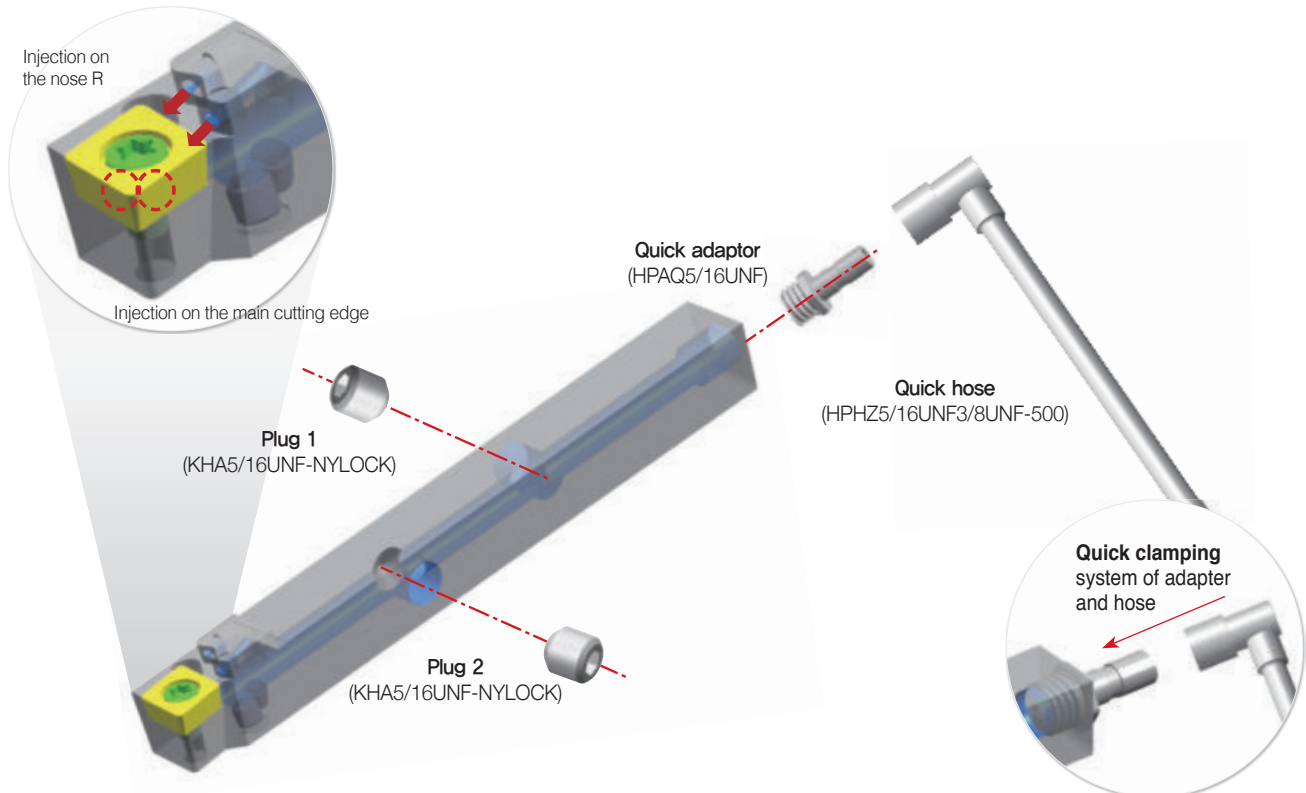
➔ Applicable inserts **B100**



Auto Tools (KHP Coolant)

- KORLOY High pressure coolant for high productivity of automatic lathe
- High pressure coolant holder for high productivity of precise parts machining on automatic lathe
- Improved cooling and chip control due to injecting coolant through two holes to the main cutting edge and nose R concentrically
- Two holes with different injection angles each other increase chip control
- Easy clamping system of quick hose adaptor and quick hose provides convenient using

Structure of holder



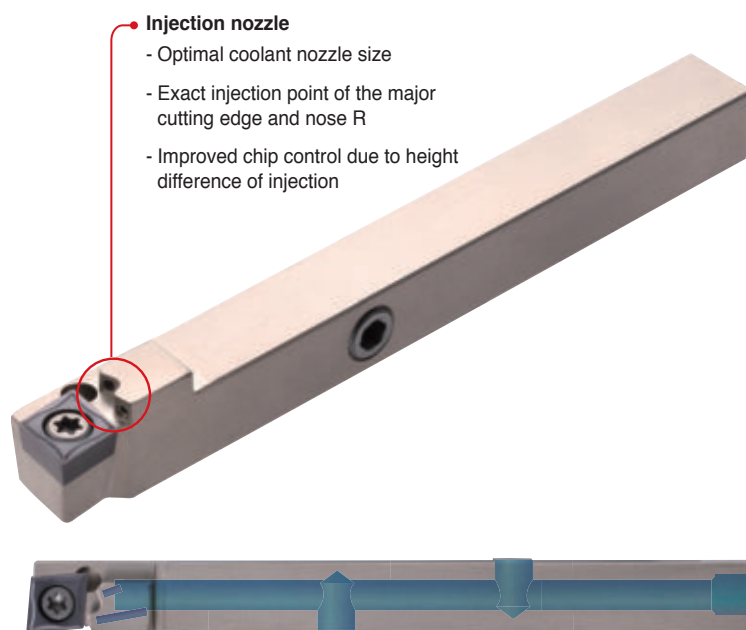
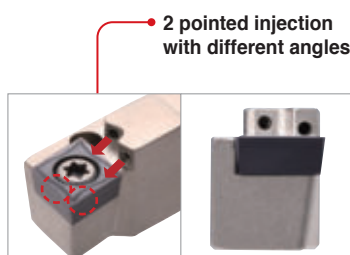
※ Quick adaptor and quick hose are sold separately

Parts

	Shape	Configuration	Length	Q clamping dimensions	S clamping dimensions
Quick to straight	HPHZ5/16UNF3/8UNF-500 	 UNF3/8 QUICK	500 mm	UNF5/16	-
Quick adaptor	HPAQ5/16UNF 	 UNF5/16 QUICK	18.5 mm	UNF5/16	

B Auto Tools (KHP Coolant)

Features

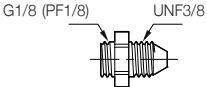
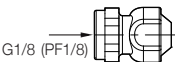
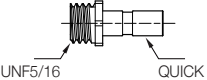


- Injection nozzle**
- Optimal coolant nozzle size
 - Exact injection point of the major cutting edge and nose R
 - Improved chip control due to height difference of injection

Max 300 bar

Workpiece	The minimum pressure	The maximum pressure
P	100	300
M	120	
K	110	
N	100	
S	120	

Parts

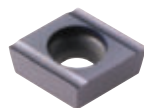
Devision	Designation	Shape	
Adaptor	HPA3/8UNF1/8PF		
Blank	HPB1/8PF		
Quick adaptor	HPAQ5/16UNF		

High pressure hose

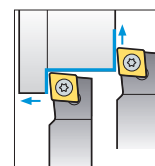
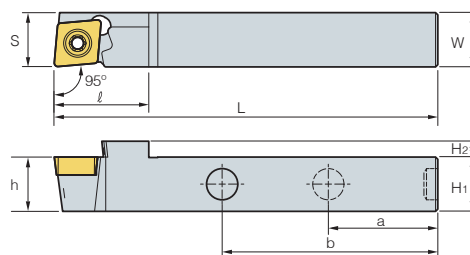
Shape		length	Q clamping dimensions	S clamping dimensions
Quick to straight (HPHZ5/16UNF3/8UNF-500)		500 mm	UNF5/16	-



SCLCR/L



CC□T



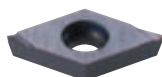
95°

• R type insert
(mm)

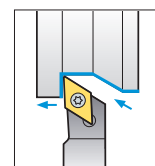
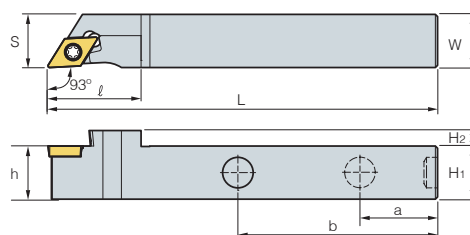
Designation	H ₁	H ₂	W	L	S	h	l	a	b	Insert	Screw	Plug	Wrench
SCLCR/L 1212-X09A-KHP	12	3.5	12	120	12	12	21	40	70	CC□T09T3□□	FTKA0410	KHA0404-NYLOCK	TW15P

➔ Applicable inserts **B66-69, B91**

SDJCR/L



DC□T



93°

• R type insert
(mm)

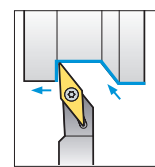
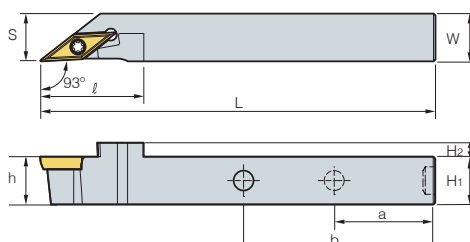
Designation	H ₁	H ₂	W	L	S	h	l	a	b	Insert	Screw	Plug	Wrench
SDJCR/L 1212-X07A-KHP	12	3.5	12	120	12	12	21	40	70	DC□T0702□□	FTKA02565	KHA0404-NYLOCK	TW07P
1212-X11A-KHP	12	3.5	12	120	14	12	29.8	40	70	DC□T11T3□□	FTKA0408	KHA0404-NYLOCK	TW15P

➔ Applicable inserts **B71-73, B92**

SVJCR/L



VC□□



93°

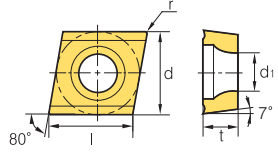
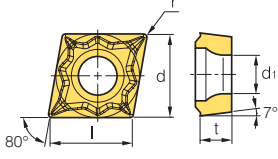
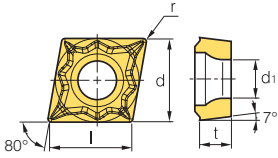
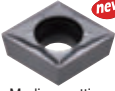
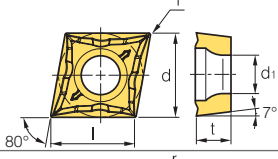
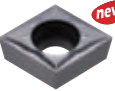
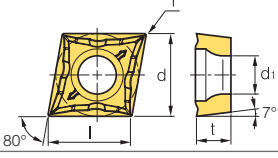
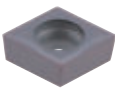
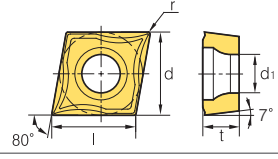
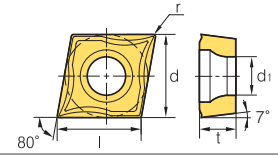
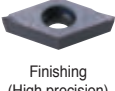
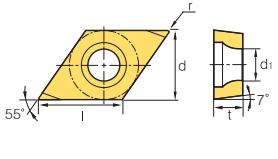
• R type insert
(mm)

Designation	H ₁	H ₂	W	L	S	h	l	a	b	Insert	Screw	Plug	Wrench
SVJCR/L 1212-X11A-KHP	12	3.5	12	120	12	12	26	40	70	VC□T1103□□	FTKA02565	KHA0404-NYLOCK	TW07P
1212-X12A-KHP	12	3.5	12	120	12	12	26	40	70	VC□□1203□□	FTKA02565	KHA0404-NYLOCK	TW07P

➔ Applicable inserts **B86~B87, B97**

● : Stock item

Insert

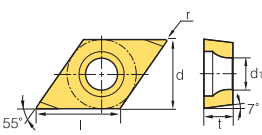
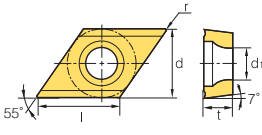
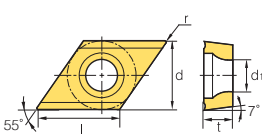
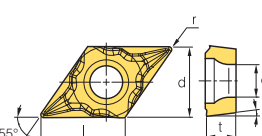
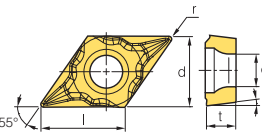
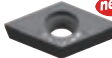
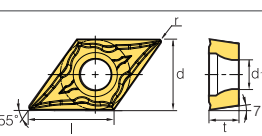
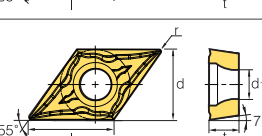
Picture	Designation	Coated				Uncoated H01	Dimensions (mm)					Configuration
		PC5300	PC8105	PC8110	PC8115		l	d	t	r	d ₁	
CCET-KM  Medium to finishing (Ultra high precision)	0602005MFR-KM	●		●			6.6	6.35	2.38	< 0.05	2.8	
	060201MFR-KM	●		●			6.4	6.35	2.38	< 0.10	2.8	
	060202MFR-KM	●		●			6.2	6.35	2.38	< 0.20	2.8	
	09T3005MFR-KM	●		●			9.8	9.525	3.97	< 0.05	4.4	
	09T301MFR-KM	●		●			9.6	9.525	3.97	< 0.10	4.4	
	09T302MFR-KM	●		●			9.2	9.525	3.97	< 0.20	4.4	
	0602005MFL-KM	●		●			6.6	6.35	2.38	< 0.05	2.8	
	060201MFL-KM	●		●			6.4	6.35	2.38	< 0.10	2.8	
	060202MFL-KM	●		●			6.2	6.35	2.38	< 0.20	2.8	
	09T3005MFL-KM	●		●			9.8	9.525	3.97	< 0.05	4.4	
	09T301MFL-KM	●		●			9.6	9.525	3.97	< 0.10	4.4	
	09T302MFL-KM	●		●			9.2	9.525	3.97	< 0.20	4.4	
CCGT-FS  Finishing (High precision)	060201-FS	●		●			6.3	6.35	2.38	0.10	2.8	
	060202-FS	●		●			6.2	6.35	2.38	0.20	2.8	
	060204-FS	●		●			6.0	6.35	2.38	0.40	2.8	
	09T301-FS	●		●			9.8	9.525	3.97	0.10	4.4	
	09T302-FS	●		●			9.6	9.525	3.97	0.20	4.4	
	09T304-FS	●		●			9.2	9.525	3.97	0.40	4.4	
	09T308-FS	●		●			8.8	9.525	3.97	0.80	4.4	
CCGT-FS  Finishing (Ultra high precision)	060201MFN-FS	●		●			6.3	6.35	2.38	< 0.10	2.8	
	060202MFN-FS	●		●			6.2	6.35	2.38	< 0.20	2.8	
	060204MFN-FS	●		●			6.0	6.35	2.38	< 0.40	2.8	
	09T301MFN-FS	●		●			9.8	9.525	3.97	< 0.10	4.4	
	09T302MFN-FS	●		●			9.6	9.525	3.97	< 0.20	4.4	
	09T304MFN-FS	●		●			9.2	9.525	3.97	< 0.40	4.4	
	09T308MFN-FS	●		●			8.8	9.525	3.97	< 0.80	4.4	
CCGT-MS  Medium cutting (High precision)	09T301-MS	●		●			9.8	9.525	3.97	0.10	4.4	
	09T302-MS	●		●			9.6	9.525	3.97	0.20	4.4	
	09T304-MS	●		●			9.2	9.525	3.97	0.40	4.4	
CCGT-MS  Medium cutting (Ultra high precision)	09T301MFN-MS	●		●			9.8	9.525	3.97	< 0.10	4.4	
	09T302MFN-MS	●		●			9.6	9.525	3.97	< 0.20	4.4	
	09T304MFN-MS	●		●			9.2	9.525	3.97	< 0.40	4.4	
CCGT-VP1  Finishing (High precision)	60201-VP1	●	●	●	●	●	6.6	6.35	2.38	0.10	2.8	
	60202-VP1	●	●	●	●	●	6.4	6.35	2.38	0.20	2.8	
	60204-VP1	●	●	●	●	●	6.2	6.35	2.38	0.40	2.8	
	09T301-VP1	●	●	●	●	●	9.8	9.525	3.97	0.10	4.4	
	09T302-VP1	●	●	●	●	●	9.6	9.525	3.97	0.20	4.4	
	09T304-VP1	●	●	●	●	●	9.2	9.525	3.97	0.40	4.4	
CCGT-VP1  Finishing (Ultra high precision)	060201MFN-VP1	●		●			6.6	6.35	2.38	< 0.10	2.8	
	060202MFN-VP1	●		●			6.4	6.35	2.38	< 0.20	2.8	
	060204MFN-VP1	●		●			6.2	6.35	2.38	< 0.40	2.8	
	09T301MFN-VP1	●		●			9.8	9.525	3.97	< 0.10	4.4	
	09T302MFN-VP1	●		●			9.6	9.525	3.97	< 0.20	4.4	
	09T304MFN-VP1	●		●			9.2	9.525	3.97	< 0.40	4.4	
DCGT-KF  Finishing (High precision)	0702003R-KF	●		●			7.8	6.35	2.38	0.03	2.8	
	070201R-KF	●		●			7.8	6.35	2.38	0.10	2.8	
	070202R-KF	●		●			7.8	6.35	2.38	0.20	2.8	
	070204R-KF	●		●			7.8	6.35	2.38	0.40	2.8	
	11T3003R-KF	●		●			11.6	9.525	3.97	0.03	4.4	
	11T301R-KF	●		●			11.6	9.525	3.97	0.10	4.4	
	11T302R-KF	●		●			11.6	9.525	3.97	0.20	4.4	
	11T304R-KF	●		●			11.6	9.525	3.97	0.40	4.4	
	0702003L-KF	●		●			7.8	6.35	2.38	0.03	2.8	
	070201L-KF	●		●			7.8	6.35	2.38	0.10	2.8	
	070202L-KF	●		●			7.8	6.35	2.38	0.20	2.8	
	070204L-KF	●		●			7.8	6.35	2.38	0.40	2.8	
	11T3003L-KF	●		●			11.6	9.525	3.97	0.03	4.4	
	11T301L-KF	●		●			11.6	9.525	3.97	0.10	4.4	
	11T302L-KF	●		●			11.6	9.525	3.97	0.20	4.4	
	11T304L-KF	●		●			11.6	9.525	3.97	0.40	4.4	

●: Stock item

Turning


B

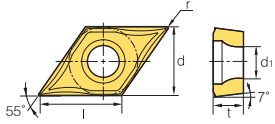
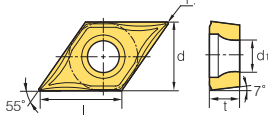
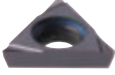
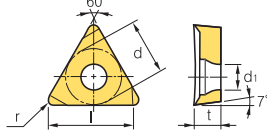
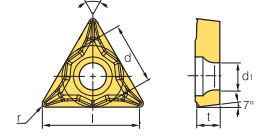
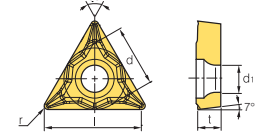
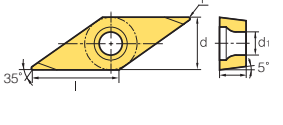
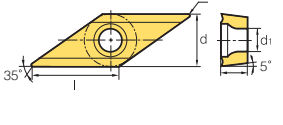
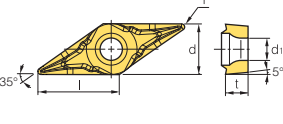
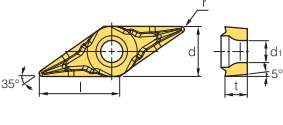
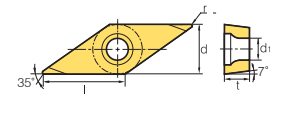
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Picture	Designation	Coated				Uncoated H01	Dimensions (mm)					Configuration
		PC5300	PC8105	PC8110	PC8115		l	d	t	r	d ₁	
DCET-KF  Finishing (Ultra high precision)	0702005MFR-KF	●		●			7.8	6.35	2.38	< 0.05	2.8	
	070201MFR-KF	●		●			7.8	6.35	2.38	< 0.10	2.8	
	070202MFR-KF	●		●			7.8	6.35	2.38	< 0.20	2.8	
	11T3005MFR-KF	●		●			11.6	9.525	3.97	< 0.05	4.4	
	11T301MFR-KF	●		●			11.6	9.525	3.97	< 0.10	4.4	
	11T302MFR-KF	●		●			11.6	9.525	3.97	< 0.20	4.4	
	0702005MFL-KF	●		●			7.8	6.35	2.38	< 0.05	2.8	
	070201MFL-KF	●		●			7.8	6.35	2.38	< 0.10	2.8	
	070202MFL-KF	●		●			7.8	6.35	2.38	< 0.20	2.8	
	11T3005MFL-KF	●		●			11.6	9.525	3.97	< 0.05	4.4	
	11T301MFL-KF	●		●			11.6	9.525	3.97	< 0.10	4.4	
	11T302MFL-KF	●		●			11.6	9.525	3.97	< 0.20	4.4	
DCGT-KM  Medium to finishing (High precision)	0702003R-KM	●		●			7.8	6.35	2.38	0.03	2.8	
	070201R-KM	●		●			7.8	6.35	2.38	0.10	2.8	
	070202R-KM	●		●			7.8	6.35	2.38	0.20	2.8	
	070204R-KM	●		●			7.8	6.35	2.38	0.40	2.8	
	11T3003R-KM	●		●			11.6	9.525	3.97	0.03	4.4	
	11T301R-KM	●		●			11.6	9.525	3.97	0.10	4.4	
	11T302R-KM	●		●			11.6	9.525	3.97	0.20	4.4	
	11T304R-KM	●		●			11.6	9.525	3.97	0.40	4.4	
	0702003L-KM	●		●			7.8	6.35	2.38	0.03	2.8	
	070201L-KM	●		●			7.8	6.35	2.38	0.10	2.8	
	070202L-KM	●		●			7.8	6.35	2.38	0.20	2.8	
	070204L-KM	●		●			7.8	6.35	2.38	0.40	2.8	
	11T3003L-KM	●		●			11.6	9.525	3.97	0.03	4.4	
	11T301L-KM	●		●			11.6	9.525	3.97	0.10	4.4	
	11T302L-KM	●		●			11.6	9.525	3.97	0.20	4.4	
	11T304L-KM	●		●			11.6	9.525	3.97	0.40	4.4	
DCET-KM  Medium to finishing (Ultra high precision)	0702005MFR-KM	●		●			7.8	6.35	2.38	< 0.05	2.8	
	070201MFR-KM	●		●			7.8	6.35	2.38	< 0.10	2.8	
	070202MFR-KM	●		●			7.8	6.35	2.38	< 0.20	2.8	
	11T3005MFR-KM	●		●			11.6	9.525	3.97	< 0.05	4.4	
	11T301MFR-KM	●		●			11.6	9.525	3.97	< 0.10	4.4	
	11T302MFR-KM	●		●			11.6	9.525	3.97	< 0.20	4.4	
	0702005MFL-KM	●		●			7.8	6.35	2.38	< 0.05	2.8	
	070201MFL-KM	●		●			7.8	6.35	2.38	< 0.10	2.8	
	070202MFL-KM	●		●			7.8	6.35	2.38	< 0.20	2.8	
	11T3005MFL-KM	●		●			11.6	9.525	3.97	< 0.05	4.4	
	11T301MFL-KM	●		●			11.6	9.525	3.97	< 0.10	4.4	
	11T302MFL-KM	●		●			11.6	9.525	3.97	< 0.20	4.4	
DCGT-FS  Finishing (High precision)	070201-FS	●		●			7.6	6.35	2.38	0.10	2.8	
	070202-FS	●		●			7.5	6.35	2.38	0.20	2.8	
	11T301-FS	●		●			11.6	9.525	3.97	0.10	4.4	
	11T302-FS	●		●			11.6	9.525	3.97	0.20	4.4	
	11T304-FS	●		●			11.6	9.525	3.97	0.40	4.4	
	11T308-FS	●		●			11.6	9.525	3.97	0.80	4.4	
DCGT-FS  Finishing (Ultra high precision)	070201MFN-FS						7.6	6.35	2.38	< 0.10	2.8	
	070202MFN-FS						7.5	6.35	2.38	< 0.20	2.8	
	11T301MFN-FS						11.6	9.525	3.97	< 0.10	4.4	
	11T302MFN-FS						11.4	9.525	3.97	< 0.20	4.4	
	11T304MFN-FS						11.2	9.525	3.97	< 0.40	4.4	
	11T308MFN-FS						11.0	9.525	3.97	< 0.80	4.4	
DCGT-MS  Medium cutting (High precision)	11T301-MS	●		●			11.6	9.525	3.97	0.10	4.4	
	11T302-MS	●		●			11.6	9.525	3.97	0.20	4.4	
	11T304-MS	●		●			11.6	9.525	3.97	0.40	4.4	
DCGT-MS  Medium cutting (Ultra high precision)	11T301MFN-MS	●		●			11.6	9.525	3.97	< 0.10	4.4	
	11T302MFN-MS	●		●			11.6	9.525	3.97	< 0.20	4.4	
	11T304MFN-MS	●		●			11.6	9.525	3.97	< 0.40	4.4	

● : Stock item



Insert

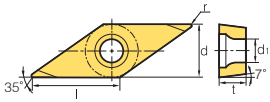
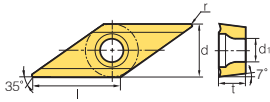
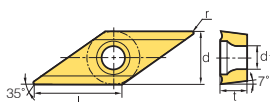
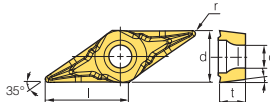
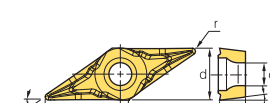
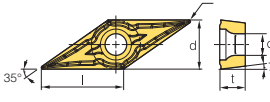
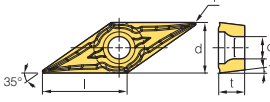
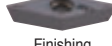
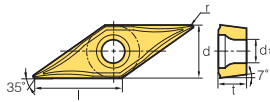
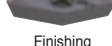
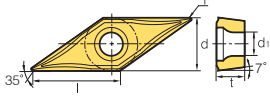
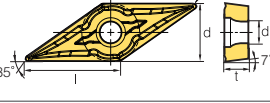
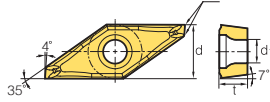
Picture	Designation	Coated				Uncoated H01	Dimensions (mm)					Configuration
		PC5300	PC8105	PC8110	PC8115		l	d	t	r	d ₁	
DCGT-VP1  Finishing (High precision)	070201-VP1	●	●	●	●	●	7.8	6.35	2.38	0.10	2.8	
	070202-VP1	●	●	●	●	●	7.8	6.35	2.38	0.20	2.8	
	070204-VP1	●	●	●	●	●	7.8	6.35	2.38	0.40	2.8	
	11T301-VP1	●	●	●	●	●	11.6	9.525	3.97	0.10	4.4	
	11T302-VP1	●	●	●	●	●	11.6	9.525	3.97	0.20	4.4	
	11T304-VP1	●	●	●	●	●	11.6	9.525	3.97	0.40	4.4	
DCGT-VP1  Finishing (Ultra high precision)	070201MFN-VP1	●	●	●	●	●	7.8	6.35	2.38	< 0.10	2.8	
	070202MFN-VP1	●	●	●	●	●	7.8	6.35	2.38	< 0.20	2.8	
	070204MFN-VP1	●	●	●	●	●	7.8	6.35	2.38	< 0.40	2.8	
	11T301MFN-VP1	●	●	●	●	●	11.6	9.525	3.97	< 0.10	4.4	
	11T302MFN-VP1	●	●	●	●	●	11.6	9.525	3.97	< 0.20	4.4	
	11T304MFN-VP1	●	●	●	●	●	11.6	9.525	3.97	< 0.40	4.4	
TCGT-KF  Finishing (High precision)	0802003R-KF	●	●	●	●	●	8.15	4.76	2.38	0.03	2.38	
	080201R-KF	●	●	●	●	●	8.0	4.76	2.38	0.10	2.38	
	080202R-KF	●	●	●	●	●	7.7	4.76	2.38	0.20	2.38	
	08020003L-KF	●	●	●	●	●	8.15	4.76	2.38	0.03	2.38	
	080201L-KF	●	●	●	●	●	8.0	4.76	2.38	0.10	2.38	
	080202L-KF	●	●	●	●	●	7.7	4.76	2.38	0.20	2.38	
TCGT-FS  Finishing (High precision)	110201-FS	●	●	●	●	●	9.3	6.35	2.38	0.10	2.8	
	110202-FS	●	●	●	●	●	9.1	6.35	2.38	0.20	2.8	
	110204-FS	●	●	●	●	●	8.6	6.35	2.38	0.40	2.8	
TCGT-FS  Finishing (Ultra high precision)	110201MFN-FS	●	●	●	●	●	9.3	6.35	3.18	< 0.10	3.4	
	110202MFN-FS	●	●	●	●	●	9.1	6.35	3.18	< 0.20	3.4	
	110204MFN-FS	●	●	●	●	●	8.6	6.35	3.18	< 0.40	3.4	
VBGT-KF  Finishing (High precision)	1103003R-KF	●	●	●	●	●	7.8	6.35	2.38	0.03	2.8	
	110301R-KF	●	●	●	●	●	7.8	6.35	2.38	0.10	2.8	
	110302R-KF	●	●	●	●	●	7.8	6.35	2.38	0.20	2.8	
	1103003L-KF	●	●	●	●	●	11.6	9.525	3.97	0.03	4.4	
	110301L-KF	●	●	●	●	●	11.6	9.525	3.97	0.10	4.4	
	110302L-KF	●	●	●	●	●	11.6	9.525	3.97	0.20	4.4	
VBGT-KM  Medium to finishing (High precision)	1103003R-KM	●	●	●	●	●	7.8	6.35	2.38	0.03	2.8	
	110301R-KM	●	●	●	●	●	7.8	6.35	2.38	0.10	2.8	
	110302R-KM	●	●	●	●	●	7.8	6.35	2.38	0.20	2.8	
	1103003L-KM	●	●	●	●	●	11.6	9.525	3.97	0.03	4.4	
	110301L-KM	●	●	●	●	●	11.6	9.525	3.97	0.10	4.4	
	110302L-KM	●	●	●	●	●	11.6	9.525	3.97	0.20	4.4	
VBGT-FS  Finishing (High precision)	110301-FS	●	●	●	●	●	11.0	6.35	3.18	0.10	2.8	
	110302-FS	●	●	●	●	●	11.0	6.35	3.18	0.20	2.8	
	110304-FS	●	●	●	●	●	11.0	6.35	3.18	0.40	2.8	
	160401-FS	●	●	●	●	●	16.3	9.525	4.76	0.10	4.4	
	160402-FS	●	●	●	●	●	16.1	9.525	4.76	0.20	4.4	
	160404-FS	●	●	●	●	●	15.7	9.525	4.76	0.40	4.4	
VBGT-FS  Finishing (Ultra high precision)	110301MFN-FS	●	●	●	●	●	10.8	6.35	3.18	< 0.10	2.8	
	110302MFN-FS	●	●	●	●	●	10.6	6.35	3.18	< 0.20	2.8	
	110304MFN-FS	●	●	●	●	●	11.4	6.35	3.18	< 0.40	2.8	
	160401MFN-FS	●	●	●	●	●	16.3	9.525	4.76	< 0.10	4.4	
	160402MFN-FS	●	●	●	●	●	16.1	9.525	4.76	< 0.20	4.4	
	160404MFN-FS	●	●	●	●	●	15.7	9.525	4.76	< 0.40	4.4	
VCGT-KF  Finishing (High precision)	1103003R-KF	●	●	●	●	●	11.0	6.35	3.18	0.03	2.8	
	110301R-KF	●	●	●	●	●	11.0	6.35	3.18	0.10	2.8	
	110302R-KF	●	●	●	●	●	11.0	6.35	3.18	0.20	2.8	
	1103003L-KF	●	●	●	●	●	11.0	6.35	3.18	0.03	2.8	
	110301L-KF	●	●	●	●	●	11.0	6.35	3.18	0.10	2.8	
	110302L-KF	●	●	●	●	●	11.0	6.35	3.18	0.20	2.8	

●: Stock item

Turning


B

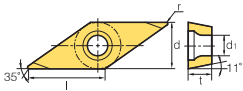
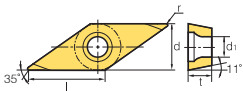
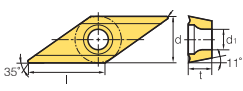
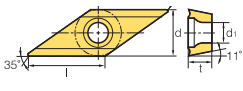
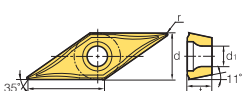
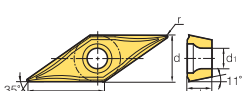
Insert

Picture	Designation	Coated				Uncoated H01	Dimensions (mm)					Configuration
		PC5300	PC8105	PC8110	PC8115		l	d	t	r	d ₁	
VCET-KF  Finishing (Ultra high precision)	1103005MFR-KF	●		●			11.0	6.35	3.18	< 0.05	2.8	
	110301MFR-KF	●		●			11.0	6.35	3.18	< 0.10	2.8	
	110302MFR-KF	●		●			11.0	6.35	3.18	< 0.20	2.8	
	1103005MFL-KF	●		●			11.0	6.35	3.18	< 0.05	2.8	
	110301MFL-KF	●		●			11.0	6.35	3.18	< 0.10	2.8	
	110302MFL-KF	●		●			11.0	6.35	3.18	< 0.20	2.8	
VCGT-KM  Medium to finishing (High precision)	1103003R-KM						11.0	6.35	3.18	0.03	2.8	
	110301R-KM						11.0	6.35	3.18	0.10	2.8	
	110302R-KM						11.0	6.35	3.18	0.20	2.8	
	1103003L-KM						11.0	6.35	3.18	0.03	2.8	
	110301L-KM						11.0	6.35	3.18	0.10	2.8	
	110302L-KM						11.0	6.35	3.18	0.20	2.8	
VCET-KM  Medium to finishing (Ultra high precision)	1103005MFR-KM	●		●			11.0	6.35	3.18	< 0.05	2.8	
	110301MFR-KM	●		●			11.0	6.35	3.18	< 0.10	2.8	
	110302MFR-KM	●		●			11.0	6.35	3.18	< 0.20	2.8	
	3005MFL-KM	●		●			11.0	6.35	3.18	< 0.05	2.8	
	301MFL-KM	●		●			11.0	6.35	3.18	< 0.10	2.8	
	302MFL-KM	●		●			11.0	6.35	3.18	< 0.20	2.8	
VCGT-FS  Finishing (High precision)	110301-FS	●		●			11.0	6.35	3.18	0.10	2.8	
	110302-FS	●		●			11.0	6.35	3.18	0.20	2.8	
	110304-FS	●		●			11.0	6.35	3.18	0.40	2.8	
	160401-FS	●		●			16.3	9.525	4.76	0.10	4.4	
	160402-FS	●		●			16.1	9.525	4.76	0.20	4.4	
	160404-FS	●		●			15.7	9.525	4.76	0.40	4.4	
VCGT-FS  Finishing (Ultra high precision)	110301MFN-FS						10.8	6.35	3.18	< 0.10	2.8	
	110302MFN-FS						10.6	6.35	3.18	< 0.20	2.8	
	110304MFN-FS						11.4	6.35	3.18	< 0.40	2.8	
	160401MFN-FS						16.3	9.525	4.76	< 0.10	4.4	
	160402MFN-FS						16.1	9.525	4.76	< 0.20	4.4	
	160404MFN-FS						15.7	9.525	4.76	< 0.40	4.4	
VCGT-MS  Medium cutting (High precision)	110301-MS	●		●			10.8	6.35	3.18	0.10	2.8	
	110302-MS	●		●			10.6	6.35	3.18	0.20	2.8	
	110304-MS	●		●			11.4	6.35	3.18	0.40	2.8	
VCGT-MS  Medium cutting (Ultra high precision)	11T301MFN-MS	●		●			10.8	6.35	3.18	< 0.10	2.8	
	11T302MFN-MS	●		●			10.6	6.35	3.18	< 0.20	2.8	
	11T304MFN-MS	●		●			11.4	6.35	3.18	< 0.40	2.8	
VCGT-VP1  Finishing (High precision)	110301-VP1	●	●	●	●	●	11.0	6.35	3.18	0.10	2.8	
	110302-VP1	●	●	●	●	●	11.0	6.35	3.18	0.20	2.8	
	110304-VP1	●	●	●	●	●	11.0	6.35	3.18	0.40	2.8	
VCGT-VP1  Finishing (Ultra high precision)	110301MFN-VP1	●		●			11.0	6.35	3.18	< 0.10	2.8	
	110302MFN-VP1	●		●			11.0	6.35	3.18	< 0.20	2.8	
	110304MFN-VP1	●		●			11.0	6.35	3.18	< 0.40	2.8	
VCGT-MS  Medium cutting (Ultra high precision)	1203008FN-MS	●		●			11.0	7.50	3.00	< 0.08	2.8	
	120301FN-MS	●		●			11.0	7.50	3.00	< 0.10	2.8	
	120302FN-MS	●		●			11.0	7.50	3.00	< 0.20	2.8	
	120304FN-MS	●		●			11.0	7.50	3.00	< 0.40	2.8	
VCGX-VP1  Finishing (Ultra high precision) Chamfer type	120300MFR-VP1	●		●			11.0	7.50	3.18	< 0.00	2.8	
	120301MFR-VP1	●		●			11.0	7.50	3.18	< 0.10	2.8	
	120302MFR-VP1	●		●			11.0	7.50	3.18	< 0.20	2.8	
	120304MFR-VP1	●		●			11.0	7.50	3.18	< 0.40	2.8	
	120308MFR-VP1	●		●			11.0	7.50	3.18	< 0.80	2.8	

● : Stock item



Insert

Picture	Designation	Coated				Uncoated H01	Dimensions (mm)					Configuration
		PC5300	PC8105	PC8110	PC8115		l	d	t	r	d ₁	
VPGT-KF  Finishing (High precision)	080201R-KF	●		●			8.0	4.76	2.38	0.10	2.3	
	080202R-KF	●		●			8.0	4.76	2.38	0.20	2.3	
	1103003R-KF	●		●			11.0	6.35	3.18	0.03	2.8	
	110301R-KF	●		●			11.0	6.35	3.18	0.10	2.8	
	110302R-KF	●		●			11.0	6.35	3.18	0.20	2.8	
	080201L-KF	●		●			8.0	4.76	2.38	0.10	2.3	
	080202L-KF	●		●			8.0	4.76	2.38	0.20	2.3	
	1103003L-KF	●		●			11.0	6.35	3.18	0.03	2.8	
	110301L-KF	●		●			11.0	6.35	3.18	0.10	2.8	
	110302L-KF	●		●			11.0	6.35	3.18	0.20	2.8	
VPET-KF  Finishing (Ultra high precision)	0802005MFR-KF	●		●			8.0	6.35	2.38	< 0.05	2.3	
	080201MFR-KF	●		●			8.0	6.35	2.38	< 0.10	2.3	
	080202MFR-KF	●		●			8.0	6.35	2.38	< 0.20	2.3	
	0802005MFL-KF	●		●			8.0	6.35	2.38	< 0.05	2.3	
	080201MFL-KF	●		●			8.0	6.35	2.38	< 0.10	2.3	
	080202MFL-KF	●		●			8.0	6.35	2.38	< 0.20	2.3	
VPGT-KM  Medium to finishing (High precision)	080201R-KM	●		●			8.0	4.76	2.38	0.10	2.3	
	080202R-KM	●		●			8.0	4.76	2.38	0.20	2.3	
	1103003R-KM	●		●			11.0	6.35	3.18	0.03	2.8	
	110301R-KM	●		●			11.0	6.35	3.18	0.10	2.8	
	110302R-KM	●		●			11.0	6.35	3.18	0.20	2.8	
	080201L-KM	●		●			8.0	4.76	2.38	0.10	2.3	
	080202L-KM	●		●			8.0	4.76	2.38	0.20	2.3	
	1103003L-KM	●		●			11.0	6.35	3.18	0.03	2.8	
	110301L-KM	●		●			11.0	6.35	3.18	0.10	2.8	
	110302L-KM	●		●			11.0	6.35	3.18	0.20	2.8	
VPET-KM  Medium to finishing (Ultra high precision)	0802005MFR-KM	●		●			8.0	6.35	3.18	< 0.05	2.8	
	080201MFR-KM	●		●			8.0	6.35	3.18	< 0.10	2.8	
	080202MFR-KM	●		●			8.0	6.35	3.18	< 0.20	2.8	
	0802005MFL-KM	●		●			8.0	6.35	3.18	< 0.05	2.8	
	080201MFL-KM	●		●			8.0	6.35	3.18	< 0.10	2.8	
	080202MFL-KM	●		●			8.0	6.35	3.18	< 0.20	2.8	
VPGT-VP1  Medium cutting (High precision)	110301-VP1	●	●	●	●	●	11.0	6.35	3.18	0.10	2.8	
	110302-VP1	●	●	●	●	●	11.0	6.35	3.18	0.20	2.8	
	110304-VP1	●	●	●	●	●	11.0	6.35	3.18	0.40	2.8	
VPGT-VP1  Medium cutting (Ultra high precision)	110301MFN-VP1	●		●			11.0	6.35	3.18	< 0.10	2.8	
	110302MFN-VP1	●		●			11.0	6.35	3.18	< 0.20	2.8	
	110304MFN-VP1	●		●			11.0	6.35	3.18	< 0.40	2.8	

● : Stock item

Turning


B

Auto tools (Blade type)

- Blade insert for automatic lathes
- For external machining of precise small parts
- 4 types - SSB (for back turning), SGB (for grooving), SBT (for threading), SBC (for parting off)
- Convenient use of one holder to all blade inserts
- Exclusive holder for close cutting action to the sub spindle

Code system

• Insert

Turning
(Back turning)

SB

B

R

25

005

Small blade

Back turning

Hand

Length of insert

Nose radius

R: Right

L: Left

Grooving

SB

G

R

25

20

Small blade

Grooving

Hand

Length of insert

Width of cutting edge

R: Right

L: Left

Threading

SB

T

R

25

60

–

N

–

010

Small blade

Threading

Hand

Length of insert

Angle of thread

Hand of thread

Nose radius

R: Right

L: Left

R: Right

L: Left

N: Neutral

Parting

SB

C

R

25

20

16

–

N

Small blade

Cut off / Parting

Hand

Length of insert

Width of cutting edge

Max. machining diameter

Hand of thread

R: Right

L: Left

R: Right

L: Left

N: None

Holder

• Holder

SB	H	R	10	10	– K25 –	X
Small blade	Holder	Hand	Height of shank	Width of shank	Length of insert	Sub spindle
R: Right L: Left						

Types of blade insert

Possible to apply various types of blade inserts to one holder



SB B: For back turning

- Approach angle: 59°
- Max. cutting depth: 4 mm
- Nose R: 0.05, 0.1, 0.2 mm



SB G: For grooving

- Width: 0.5~2.5 mm
- Nose R: 0.05 mm



SB T: For threading

- V profile: 60°
- Pitch: 0.2~1.0 mm
- Nose R: 0.05 mm



SB C: For cut off/Parting

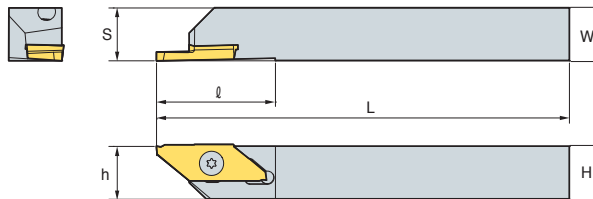
- Cutting width: 0.7~2.0
- DMax.: 16 mm
- Nose R: 0.05 mm



SBHR/L



SBBR SBGR
SBTR SBCR



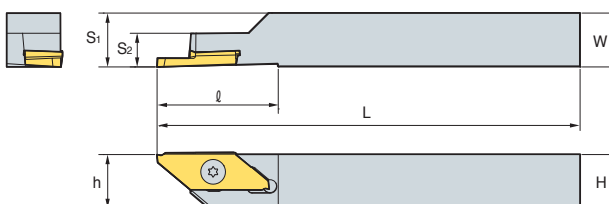
Designation	H	W	L	S	h	l	Insert	Screw	Wrench
SBHR/L 1010-K25	10	10	125	10	10	27	SB□R/L25	FTKA0409S	TW09P
1212-K25	12	12	125	12	12	27			
1616-K25	16	16	125	16	16	27			

(mm)

SBHR/L-X (Sub spindle)



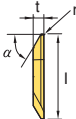
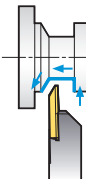
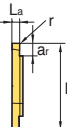
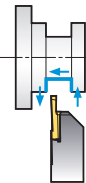
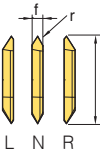
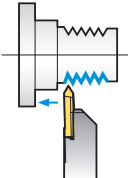
SBBR SBGR
SBTR SBCR



Designation	H	W	L	S1	S2	h	l	Insert	Screw	Wrench
SBHR/L 1010-K25-X	10	10	125	10	7.5	10	27	SB□R/L25	FTKA0407S	TW09P
1212-K25-X	12	12	125	12	7.5	12	27			

(mm)

Insert

Application	Picture	Designation	Coated				Dimensions (mm)											Configuration	Feed direction
			PC8110		PC5300		l	α	t	r	La	ar	f	D-MAX	Pitch range				
			R	L	R	L									Min.	Max.			
Back turning	 SBBR/L	SBBR/L 25005	●	●	●	●	25	59	3.18	0.05	-	-	-	-	-	-			
		25010	●	●	●	●	25	59	3.18	0.10	-	-	-	-	-	-			
		25020	●	●	●	●	25	59	3.18	0.20	-	-	-	-	-	-			
Grooving	 SBGR/L	SBGR/L 2505	●	●	●	●	25	-	-	0.05	0.5	1.35	-	-	-	-			
		2510	●	●	●	●	25	-	-	0.05	1.0	2.75	-	-	-	-			
		2515	●	●	●	●	25	-	-	0.05	1.5	3.75	-	-	-	-			
		2520	●	●	●	●	25	-	-	0.05	2.0	3.75	-	-	-	-			
		2525	●	●	●	●	25	-	-	0.05	2.5	3.75	-	-	-	-			
Threading	 SBTR/L	SBTR/L 2560-N-005	●	●	●	●	25	-	-	0.05	-	-	1.59	-	0.2	2.0	 L N R		
		2560-N-010	●	●	●	●	25	-	-	0.10	-	-	1.59	-	1.0	2.0			
		2560-R-005	●	●	●	●	25	-	-	0.05	-	-	0.6	-	0.2	1.5			
		2560-R-010	●	●	●	●	25	-	-	0.10	-	-	0.6	-	1.0	1.5			
		2560-L-005	●	●	●	●	25	-	-	0.05	-	-	0.6	-	0.2	1.5			
		2560-L-010	●	●	●	●	25	-	-	0.10	-	-	0.6	-	1.0	1.5			

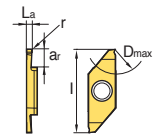
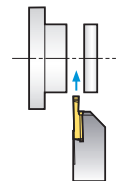
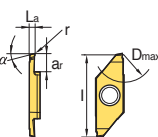
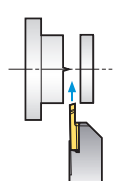
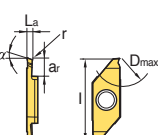
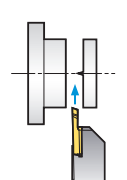
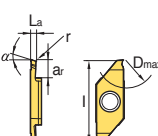
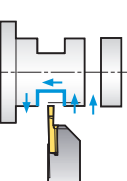
● : Stock item

Turning


B

B Auto Tools (Blade type)

Insert

Application	Picture	Designation	Coated				Dimensions (mm)												Configuration	Feed direction
			PC8110		PC5300		l	α	t	r	La	ar	f	D-MAX	Pitch range					
			R	L	R	L									Min.	Max.				
Parting off		SBCR/L 250708-N	●	●	●	●	25	0	-	0.05	0.7	4.3	-	8	-	-				
		251012-N	●	●	●	●	25	0	-	0.05	1.0	6.3	-	12	-	-				
		251512-N	●	●	●	●	25	0	-	0.05	1.5	6.3	-	12	-	-				
		252016-N	●	●	●	●	25	0	-	0.05	2.0	8.3	-	16	-	-				
		250708-R	●	●	●	●	25	15	-	0.05	0.7	4.3	-	8	-	-				
		251012-R	●	●	●	●	25	15	-	0.05	1.0	6.3	-	12	-	-				
		251512-R	●	●	●	●	25	15	-	0.05	1.5	6.3	-	12	-	-				
		252016-R	●	●	●	●	25	15	-	0.05	2.0	8.3	-	16	-	-				
		250708-L	●	●	●	●	25	15	-	0.05	0.7	4.3	-	8	-	-				
		251012-L	●	●	●	●	25	15	-	0.05	1.0	6.3	-	12	-	-				
		251512-L	●	●	●	●	25	15	-	0.05	1.5	6.3	-	12	-	-				
		252016-L	●	●	●	●	25	15	-	0.05	2.0	8.3	-	16	-	-				
		251012-T	●	●	●	●	25	0	-	0.05	1.0	6.3	-	12	-	-				
		251512-T	●	●	●	●	25	0	-	0.05	1.5	6.3	-	12	-	-				
		252016-T	●	●	●	●	25	0	-	0.05	2.0	8.3	-	16	-	-				

● : Stock item

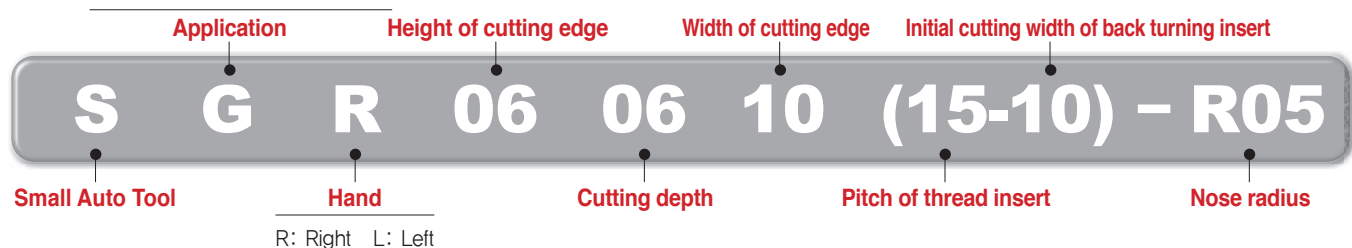


Auto Tools (For multi utility)

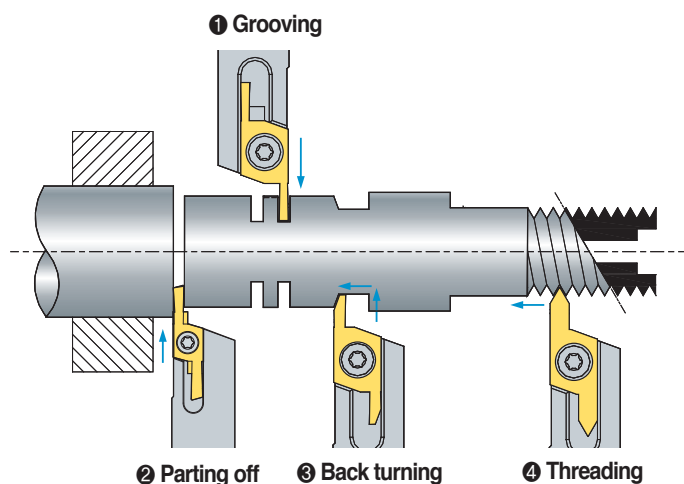
- Multifunctional insert for automatic lathes
- For external machining of precise small parts
- 5 types - SB (for back turning), SG (for grooving), ST (for threading), SC (for parting off), SGB (for grooving and back turning)
- Convenient use of one holder to all inserts
- Offset "0" to all ISO type holders

Code system

B: Back turning G: Grooving
C: Parting off T: Threading
GB: Grooving and back turning

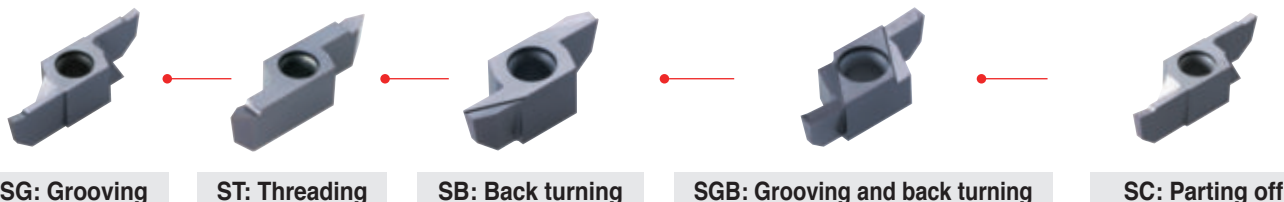


Application example



Types of multifunctional insert

Possible to apply various types of blade inserts to one holder (Ex: All designations of 06 size inserts can be applied to one 06 size holder.)

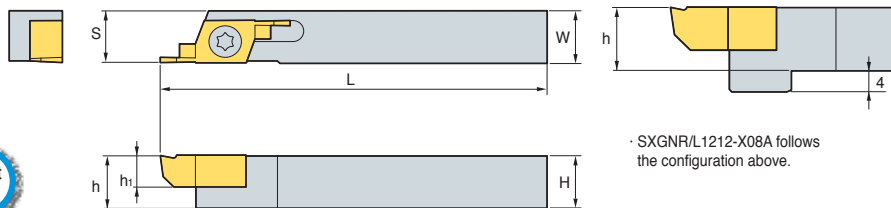


Recommended cutting conditions

Workpiece	Turning		Grooving		Parting off		Back turning	
	Cutting speed, vc (m/min)	Feed, fn (mm/rev)	Cutting speed, vc (m/min)	Feed, fn (mm/rev)	Cutting speed, vc (m/min)	Feed, fn (mm/rev)	Cutting speed, vc (m/min)	Feed, fn (mm/rev)
P Carbon steel	50~150	0.01~0.25	50~150	0.02~0.08	50~150	0.01~0.08	50~150	0.01~0.25
Free cutting steel	30~150	0.02~0.25	30~150	0.02~0.08	30~150	0.01~0.08	30~150	0.01~0.25
M Stainless steel	50~120	0.02~0.20	30~120	0.02~0.05	30~120	0.02~0.05	30~120	0.02~0.20
N Non-ferrous metal	70~200	0.03~0.25	70~200	0.03~0.10	70~200	0.03~0.10	70~200	0.03~0.30

SXGNR/L

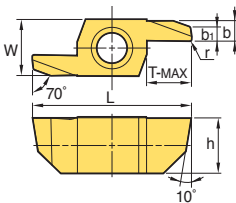
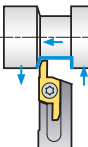
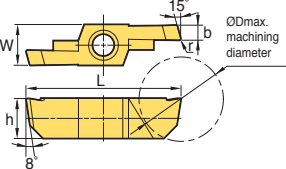
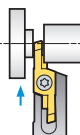
SBR, SGBR
SCR, STR, SGR



• R type insert (mm)

Designation	H	W	L	S	h	h1	Insert	Screw	Wrench
SXGNR/L 1010-X06A	10	10	125	10	10	6	S□R/L 06	FTNA 0408	TW 15P
1212-X06A	12	12	125	12	12	6			
1616-X06A	16	16	125	16	16	6			
2020-X06A	20	20	125	20	20	6			
1212-X08A	12	12	130	12	12	8	S□R/L 08	FTNA 0411	TW 15P
1616-X08A	16	16	130	16	16	8			
2020-X08A	20	20	130	20	20	8			

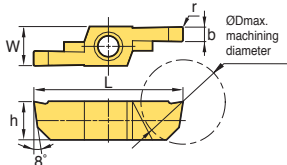
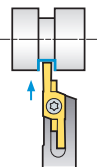
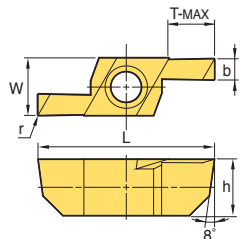
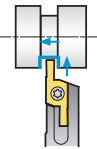
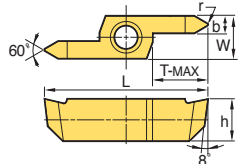
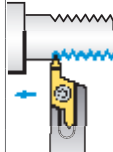
Insert

Application	Picture	Designation	Coated		Dimensions (mm)								Configuration	Feed direction	
			PC9030		b1	b	W	L	r	h	T-MAX	ØD			
			R	L											
Back turning		SBR/L	060520-10-R00			1	2	8	22	0	6	5.5	-		
			060520-10-R05			1	2	8	22	0.05	6	5.5	-		
			060520-10-R10			1	2	8	22	0.1	6	5.5	-		
			060630-20-R00			2	3	8	24	0	6	6.5	-		
			060630-20-R05			2	3	8	24	0.05	6	6.5	-		
			060630-20-R10			2	3	8	24	0.1	6	6.5	-		
			080630-20-R00			2	3	8	23	0	8	6.5	-		
			080630-20-R05			2	3	8	23	0.05	8	6.5	-		
			080630-20-R10			2	3	8	23	0.1	8	6.5	-		
			080840-20-R00			2	4	8	27	0	8	8.5	-		
			080840-20-R05			2	4	8	27	0.05	8	8.5	-		
080840-20-R10			2	4	8	27	0.1	8	8.5	-					
Parting off		SCR/L	060610-R00			-	1	8	24	0	6	-	11		
			060610-R05	●		-	1	8	24	0.05	6	-	11		
			060610-R10	●		-	1	8	24	0.1	6	-	11		
			060615-R00			-	1.5	8	24	0	6	-	11		
			060615-R05	●		-	1.5	8	24	0.05	6	-	11		
			060615-R10	●		-	1.5	8	24	0.1	6	-	11		
			060620-R00			-	2	8	24	0	6	-	11		
			060620-R05	●		-	2	8	24	0.05	6	-	11		
			060620-R10	●		-	2	8	24	0.1	6	-	11		
			081015-R00			-	1.5	8	31	0	8	-	18		
			081015-R05			-	1.5	8	31	0.05	8	-	18		
			081015-R10			-	1.5	8	31	0.1	8	-	18		
			081020-R00			-	2	8	31	0	8	-	18		
			081020-R05			-	2	8	31	0.05	8	-	18		
			081020-R10	●		-	2	8	31	0.1	8	-	18		
			081025-R00			-	2.5	8	31	0	8	-	18		
			081025-R05	●		-	2.5	8	31	0.05	8	-	18		
			081025-R10	●		-	2.5	8	31	0.1	8	-	18		
			081030-R00			-	3	8	31	0	8	-	18		
			081030-R05	●		-	3	8	31	0.05	8	-	18		
081030-R10			-	3	8	31	0.1	8	-	18					

● : Stock item



Insert

Application	Picture	Designation	Coated		Dimensions (mm)								Configuration	Feed direction
			PC9030		b	W	L	r	h	T-MAX	ØD	Pitch		
			R	L										
Grooving		SGR/L	060610-R00		1	8	24	0	6	-	11	-		
			060610-R05	●	1	8	24	0.05	6	-	11	-		
			060610-R10	●	1	8	24	0.1	6	-	11	-		
			060615-R00		1.5	8	24	0	6	-	11	-		
			060615-R05	●	1.5	8	24	0.05	6	-	11	-		
			060615-R10	●	1.5	8	24	0.1	6	-	11	-		
			060620-R00		2	8	24	0	6	-	11	-		
			060620-R05	●	2	8	24	0.05	6	-	11	-		
			060620-R10	●	2	8	24	0.1	6	-	11	-		
			081015-R00		1.5	8	31	0	8	-	18	-		
			081015-R05		1.5	8	31	0.05	8	-	18	-		
			081015-R10		1.5	8	31	0.1	8	-	18	-		
			081020-R00		2	8	31	0	8	-	18	-		
			081020-R05	●	2	8	31	0.05	8	-	18	-		
			081020-R10		2	8	31	0.1	8	-	18	-		
			081025-R00		2.5	8	31	0	8	-	18	-		
			081025-R05		2.5	8	31	0.05	8	-	18	-		
			081025-R10		2.5	8	31	0.1	8	-	18	-		
			081030-R00		3	8	31	0	8	-	18	-		
			081030-R05		3	8	31	0.05	8	-	18	-		
			081030-R10		3	8	31	0.1	8	-	18	-		
Grooving and back turning		SGBR/L	0604520-R00		2	8	22	0	6	4.5	-	-		
			0604520-R05		2	8	22	0.05	6	4.5	-	-		
			0604520-R10		2	8	22	0.1	6	4.5	-	-		
			0604525-R00		2.5	8	22	0	6	4.5	-	-		
			0604525-R05		2.5	8	22	0.05	6	4.5	-	-		
			0604525-R10		2.5	8	22	0.1	6	4.5	-	-		
			0605530-R00		3	8	24	0	6	5.5	-	-		
			0605530-R05		3	8	24	0.05	6	5.5	-	-		
			0605530-R10		3	8	24	0.1	6	5.5	-	-		
			0805525-R00		2.5	8	24	0	8	5.5	-	-		
			0805525-R05		2.5	8	24	0.05	8	5.5	-	-		
			0805525-R10		2.5	8	24	0.1	8	5.5	-	-		
			0806530-R00		3	8	26	0	8	6.5	-	-		
			0806530-R05		3	8	26	0.05	8	6.5	-	-		
			0806530-R10		3	8	26	0.1	8	6.5	-	-		
Threading		STR/L	06073215		3.2	8	25	0.06	6	7	-	0.5-1.5		
			06073230		3.2	8	25	0.19	6	7	-	1.5-3.0		
			08103215		3.2	8	31	0.06	8	10.5	-	0.5-1.5		
			08103230		3.2	8	31	0.19	8	10.5	-	1.5-3.0		

● : Stock item

AutoTools (KGT/MGT type)

- Grooving insert for automatic lathes
- Exclusive holder for automatic lathes
- Economic double sided insert
- Strong clamping system secures stable machining and precision.
- A wide selection of chip breakers according to various cutting conditions such as low/high feed, continuous/interrupted machining, etc.

Code system

• Insert

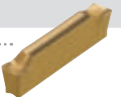
KG	M	N	300	-	04	-	T
System code	Tolerance	Hand	Width of cutting edge		Corner nose radius of insert		Chip breaker
KG SYSTEM (KORLOY Grooving) MG SYSTEM (Multi Grooving)	M: Pressed class G: Ground class	N: Neutral R: Right L: Left I: Internal	2,0~8,0 mm		0,2 mm 0,3 mm 0,4 mm		L/R/T/C LP/RP

• Holder

KG	E	H	R/L	1212	-	3	D25A
System code	Application	Holder type	Hand	Shank size	Cutting width		Max. cutting diameter
KG SYSTEM (KORLOY Grooving) MG SYSTEM (Multi Grooving)	E: External machining I: Internal machining	H: Horizontal type V: Vertical type U: Undercut type	R: Right L: Left	Height 12 mm, width 12 mm (For internal machining: Min. machining diameter)	2,0~3,0 mm		Ø15~Ø32 mm

Chip breaker line-up

KGT Type

KGMN-L  • Sharp cutting edge • For low feed machining • For small diameter parts	KGMN-R  • Reinforced cutting edge • For high feed machining • For interrupted cutting
KGMN-T  • Sharp cutting edge • Stronger chip control • For turning and grooving	KGMR/L-LP  • Sharp cutting edge • For low feed machining • Small diameter component • Right/Left handed
KGMR/L-RP  • Strong cutting edge • For high feed machining • For interrupted cutting • Right/Left handed	KGMN-C  • Improved chip control • Relief • Carbon steel • Copying • Cast iron • Alloy steel • Stainless

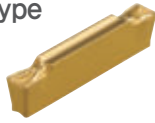
MGT Type

MGM(G)N-M  • Easier chip control by narrowing chip width with the use of chip breaker on rake surface center • Smooth chip flow by small dots in external machining • Available for both external machining and grooving	MGMN-G  • Specially designed chip breaker allows narrower chips to promote better chip flow with the use of center dots • Exclusive chip breaker for grooving
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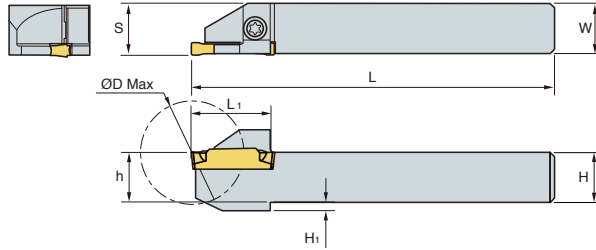


KGEHR/L-D00A

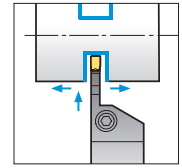
Compact type



KGGN KGMN KGMR/L
KRGN KRMN



Grooving, turning, parting off



• R type insert
(mm)

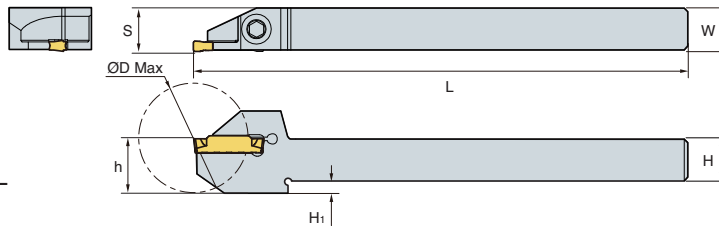
Designation		Dimensions (mm)							Insert	Screw 	Wrench 
		H	W	L1	L	S	h1	ØD_MAX			
KGEHR/L	1010-2-D20A	10	10	19	125	10.2	2	20	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C	ETNA0412	TW15L
	1212-2-D25A	12	12	19	125	12.2	2	25			
	1414-2-D25A	14	14	19	125	14.2	-	25			
	1616-2-D32A	16	16	24	125	16.2	-	32			
	1212-3-D25A	12	12	19	130	12.4	2	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C		
	1616-3-D32A	16	16	24	130	16.4	-	32			

KGEHR/L-D00B

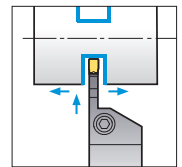
High rigidity type



KGGN KGMN KGMR/L
KRGN KRMN



Grooving, turning, parting off



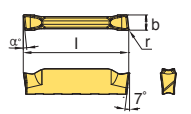
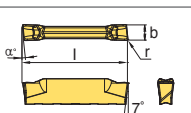
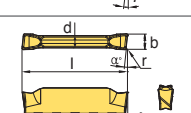
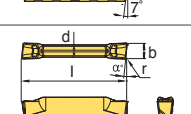
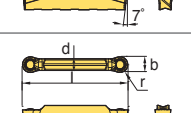
• R type insert
(mm)

Designation		Dimensions (mm)						Insert		
		H	W	L	S	h1	ØD_MAX			
KGEHR/L	1010-2-D30B	10	10	125	10.2	6.6	30	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C	MHA0512	HW40L
	1212-2-D25B	12	12	125	12.5	3.5	25			
	1212-2-D30B	12	12	125	12.2	3.5	30			
	1616-2-D32B	16	16	125	16.2	-	32			
	1212-3-D25B	12	12	125	12.4	3.5	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C		
	1212-3-D32B	12	12	125	12.4	3.5	32			
	1616-3-D32B	16	16	125	16.4	-	32			

KGT Insert

Application	Picture	Designation	Coated							Dimensions (mm)					Configuration
			NC3120	NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	b	r	l	d	α°	
Grooving		KGMN 200-02-L 300-02-L	•	•	•	•	•	•	•	2.0	0.2	20	1.7	-	
			•	•	•	•	•	•	•	3.0	0.2	20	2.3	-	
Grooving-Parting off		KGMN 200-02-R 300-02-R	•	•	•	•	•	•	•	2.0	0.2	20	1.7	-	
			•	•	•	•	•	•	•	3.0	0.2	20	2.3	-	
Grooving-turning		KGMN 200-02-T 300-02-T 300-04-T	•	•	•	•	•	•	•	2.0	0.2	20	1.7	-	
			•	•	•	•	•	•	•	3.0	0.2	20	2.3	-	
			•	•	•	•	•	•	•	3.0	0.4	20	2.3	-	

KGT Insert

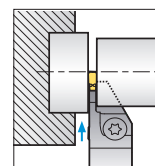
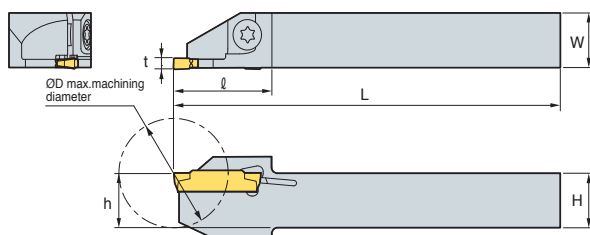
Application	Picture	Designation		Coated						Dimensions (mm)					Configuration	
				NC3120	NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	b	r	l	d		α°
Parting off (Right handed)		KGMR	200-6D-LP			●			●		2.0	0.2	20	-	6	
			200-15D-LP			●			●		2.0	0.2	20	-	15	
			300-6D-LP			●			●		3.0	0.2	20	-	6	
			300-15D-LP			●			●		3.0	0.2	20	-	15	
Parting off (Right handed)		KGMR	200-6D-RP			●			●		2.0	0.2	20	-	6	
			200-15D-RP			●			●		2.0	0.2	20	-	15	
			300-6D-RP			●			●		3.0	0.2	20	-	6	
			300-15D-RP			●			●		3.0	0.2	20	-	15	
Parting off (Left handed)		KGML	200-6D-LP								2.0	0.2	20	1.7	6	
			200-15D-LP								2.0	0.2	20	1.7	15	
			300-6D-LP								3.0	0.2	20	2.3	6	
			300-15D-LP								3.0	0.2	20	2.3	15	
Parting off (Left handed)		KGML	200-6D-RP								2.0	0.2	20	1.7	6	
			200-15D-RP								2.0	0.2	20	1.7	15	
			300-6D-RP								3.0	0.2	20	2.3	6	
			300-15D-RP								3.0	0.2	20	2.3	15	
Copying		KRMN	200-C		●	●	●	●	●		2.0	1.0	20	1.7	-	
			300-C		●	●	●	●	●		3.0	1.5	20	2.2	-	

● : Stock item

MGEHR/L



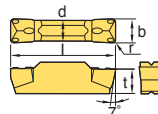
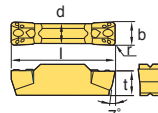
MGMN



• R type insert
(mm)

Designation		ØD	H = h	W	L	l	t	Insert	Screw	Wrench
MGEHR/L	1010-X15A	20	10	10	125	18	1.5	MGMN150-G		
	1212-X15A	25	12	12	125	19.5	1.5			
	1010-X20A	20	10	10	125	18	2	MGMN200-M MGMN200-G	ETNA 0412	TW 15L
	1212-X20A	25	12	12	125	19.5	2			
	1616-X20A	32	16	16	125	25	2	MGMN250-M MGMN250-G	ETNA 0412	TW 15L
	1010-X25A	20	10	10	125	20	2.5			
	1212-X25A	25	12	12	125	20	2.5			
	1616-X25A	32	16	16	125	25	2.5			

MGT Insert

Application	Picture	Designation	Coateda							Uncoated			Dimensions (mm)					Configuration
			NC3120	NC3225	NC3030	NC5330	NC6315	PC5300	PC9030	H01	G10	ST30A	b	r	l	d	t	
Grooving		MGMN 150-G		●	●			●	●	●			1.5	0.15	16.0	1.2	3.5	
		200-G	●	●	●			●	●	●			2.0	0.2	16.0	1.6	3.5	
		250-G		●	●			●	●				2.5	0.2	18.5	2.0	3.85	
Grooving		MGMN 200-M	●	●	●	●		●	●	●			2.0	0.2	16.0	1.6	3.5	
		250-M	●	●	●			●	●	●			2.5	0.2	18.5	2.0	3.85	

● : Stock item



Auto Tools (MSB tool)

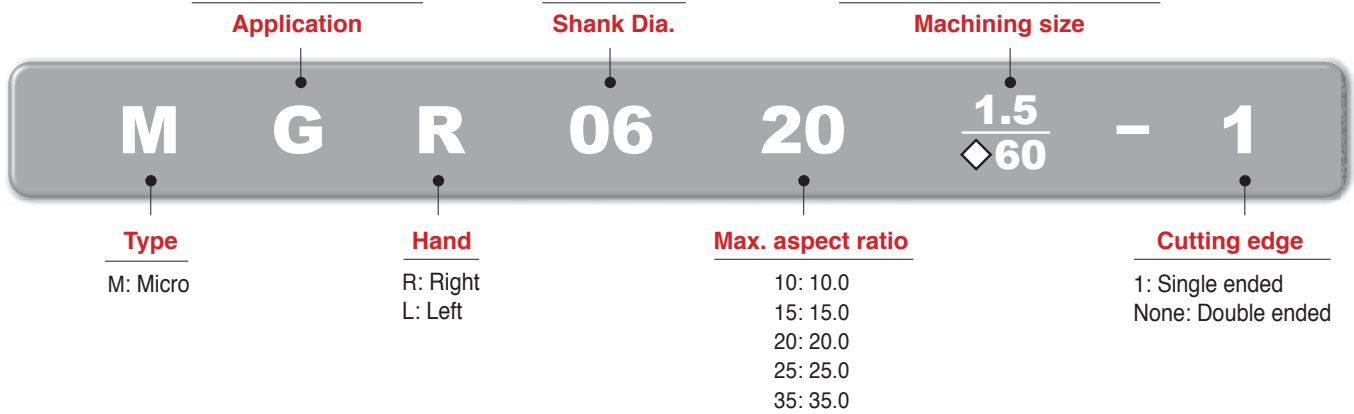
- High hardness grade guarantees longer tool life
- Various kinds of machining (Fitting, Valve, Medical parts, Automobile component, and Semiconductor equipment) are available
- Various types of MSB tools (Boring, Grooving, Threading)

Code system

B : Boring
 BC : Copying
 BB : Back Boring
 BF : Chamfering
 G : Square Grooving
 GR : Round Grooving
 GF : Face Grooving
 T : Threading

03: 3.0
 04: 4.0
 06: 6.0
 08: 8.0
 10: 10.0

Boring		No Code	
Copying		Width of Groove	
Threading		60°	55°
		Pitch	tpi
◇	F	0.25~1.0	72~24
	A	0.5~1.5	48~16
	AG	0.5~3.0	48~8



MSB tool code system

Types		Application		Designation
01	Boring	Boring		MBR/LOO☆☆
02		Copying		MBCR/LOO☆☆
03		Back Boring		MBBR/LOO☆☆
04		Chamfering		MBFR/LOO☆☆
05	Grooving	Square Grooving		MGR/LOO☆☆-□□
06		Round Grooving		MGRR/LOO☆☆-□□
07		Face Grooving		MGFR/LOO00-□□
08	Threading	Partial	60°	MTR/LOO☆☆-◇60
			55°	MTR/LOO☆☆-◇55

Details

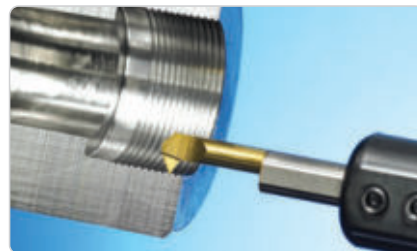
Marks	○○	Shank Dia.			
	☆☆	Max. depth of boring			
	□□	Width of groove			
	◇	Pitch/tpi	F	0.25~1.0	72~24
			A	0.5~1.5	48~16
AG			0.5~3.0	48~8	



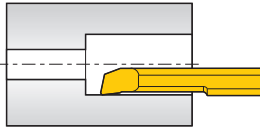
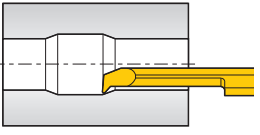
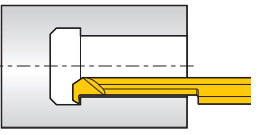
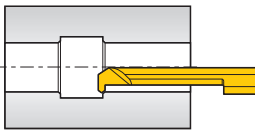
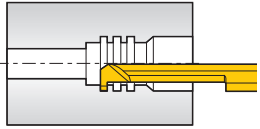
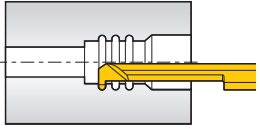
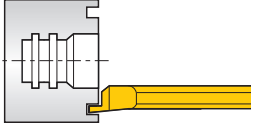
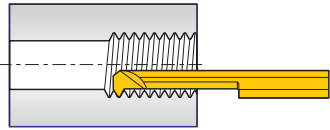
Grades

Grades	Coating	Application and features
Z12M	Carbide	Ultra fine grain substrate ensures superior wear resistance and toughness Application: Cast iron, Aluminum alloy and Non-ferrous metals machining
PC30M	TiN coating	TiN coated ultra fine grain substrate ensures long tool life Application: Stainless steel, heat resisting alloy and hard-to-cut material machining

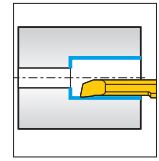
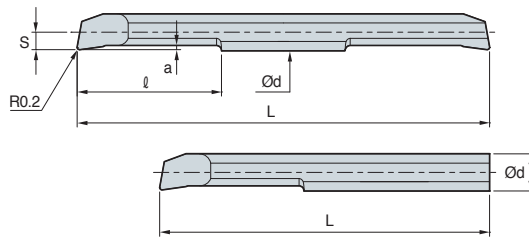
Machining types



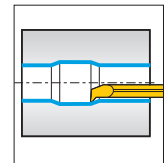
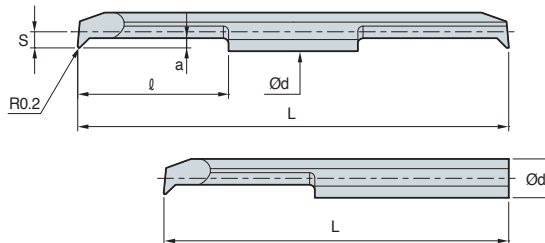
Types

Boring				
	Boring Min. dia. of machining: Ø3.2	Copying Min. dia. of machining: Ø4.2	Back Boring Min. dia. of machining: Ø3.2	Chamfering Min. dia. of machining: Ø4.2
				
	Square Grooving Min. dia. of machining: Ø3.2	Round Grooving Min. dia. of machining: Ø3.2	Face Grooving Min. dia. of machining: Ø6.0	
Threading				
	Threading Min. dia. of machining: Ø3.3			

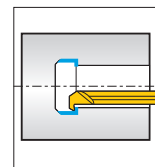
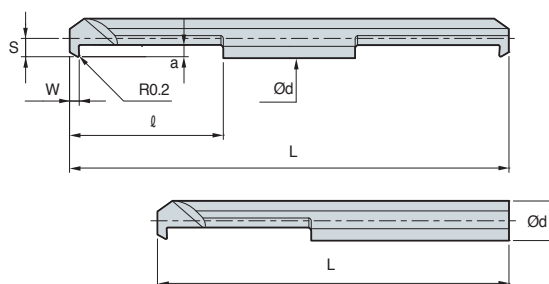




Twin Edge				Single Edge			Ød	Min.dia. of ma- chining	ℓ	Overall length		Detailed cutting edge		
Designation		Coated PC30M	Uncoated Z12M	Designation		Coated PC30M				Uncoated Z12M	L		a	S
											Double ended	Single ended		
MBR	0310	●		MBR	0310-1			3.0	3.2	10	40	35	0.5	1.4
	0315	●			0315-1					15	50	45		
	0410	●			0410-1			4.0	4.2	10	40	35	0.6	1.9
	0415	●			0415-1					15	50	45		
	0420	●			0420-1					20	60	50		
	0610	●			0610-1			6.0	6.2	10	45	40	0.75	2.9
	0615	●			0615-1					15	55	45		
	0620	●			0620-1					20	65	50		
	0810	●			0810-1			8.0	8.2	10	50	45	0.8	3.9
	0820	●			0820-1					20	70	60		
	0830				0830-1					30	80	70		
	1015	●			1015-1			10.0	10.2	15	60	60	1.0	4.9
	1025	●			1025-1					25	80	70		
	1035	●			1035-1					35	100	80		

[illegible]

Back Boring

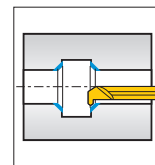
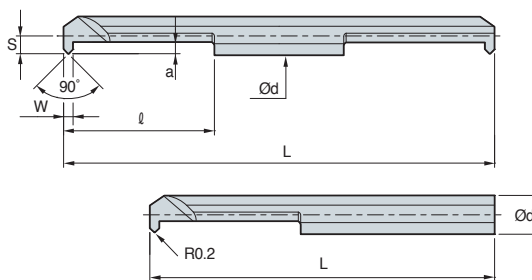


(mm)

Twin Edge			Single Edge			Ød	Min.dia. of machining	l	Overall length		Detailed cutting edge		
Designation	Coated	Uncoated	Designation	Coated	Uncoated				L		W	a	S
	PC30M	Z12M		PC30M	Z12M				Double ended	Single ended			
MBBR 0310	●		MBBR 0310-1			3.0	3.2	10	40	35	1.5	0.8	1.4
0315	●		0315-1					15	50	45			
0410	●		0410-1			4.0	4.2	10	40	35	2.0	1.3	1.9
0415	●		0415-1					15	50	45			
0420	●		0420-1					20	60	50			
0610	●		0610-1			6.0	6.2	10	45	40	2.0	1.9	2.9
0615	●		0615-1					15	55	45			
0620	●		0620-1					20	65	50			

● : Stock item

Chamfering



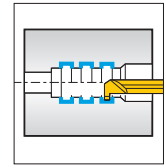
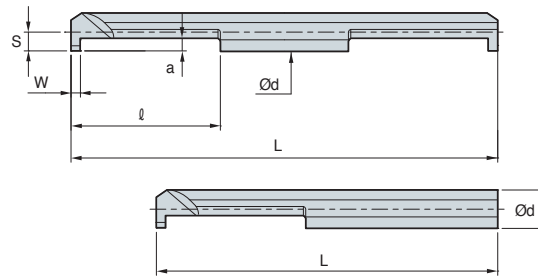
(mm)

Twin Edge			Single Edge			Ød	Min.dia. of machining	l	Overall length		Detailed cutting edge		
Designation	Coated	Uncoated	Designation	Coated	Uncoated				L		W	a	S
	PC30M	Z12M		PC30M	Z12M				Double ended	Single ended			
MBFR 0410	●		MBFR 0410-1			4.0	4.2	10	40	35	0.8	1.0	1.9
0415	●		0415-1					15	50	45			
0420	●		0420-1					20	60	50			
0610	●		0610-1			6.0	6.2	10	45	40	1.4	1.2	2.9
0615	●		0615-1					15	55	45			
0620	●		0620-1					20	65	50			

● : Stock item



Square Grooving

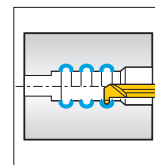
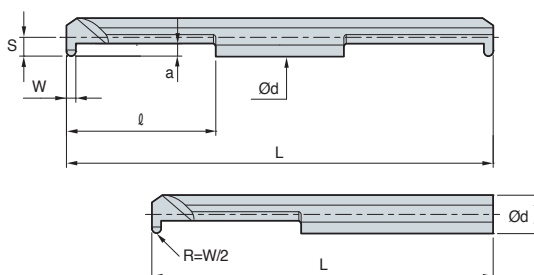


(mm)

Twin Edge				Single Edge			Ød	Min.dia. of ma- chining	ℓ	Overall length		Detailed cutting edge			
Designation		Coated	Uncoated	Designation		Coated				Uncoated	L		W	a	S
		PC30M	Z12M			PC30M				Z12M	Double ended	Single ended			
MGR	0310-1.0	●		MGR	0310-1.0-1			3.0	3.2	10	40	35	1.0	0.8	1.4
	0315-1.0	●			0315-1.0-1					15	50	45			
	0310-1.5	●			0310-1.5-1					10	40	35	1.5		
	0315-1.5	●			0315-1.5-1					15	50	45			
	0410-1.0	●			0410-1.0-1			4.0	4.2	10	40	35	1.0	1.4	1.9
	0420-1.0				0420-1.0-1					20	60	50			
	0410-1.5				0410-1.5-1					10	40	35	1.5		
	0420-1.5				0420-1.5-1					20	60	50			
	0410-2.0	●			0410-2.0-1					10	40	35	2.0		
	0420-2.0				0420-2.0-1					20	60	50			
	0610-1.0	●			0610-1.0-1			6.0	6.2	10	45	40	1.0	1.8	2.9
	0620-1.0	●			0620-1.0-1					20	65	50			
	0610-1.5	●			0610-1.5-1					10	45	40	1.5		
	0620-1.5	●			0620-1.5-1					20	65	50			
	0610-2.0	●			0610-2.0-1					10	45	40	2.0		
	0620-2.0	●			0620-2.0-1					20	65	50			
	0610-2.5	●			0610-2.5-1					10	45	40	2.5		
	0620-2.5	●			0620-2.5-1					20	65	50			
	0820-1.5	●			0820-1.5-1			8.0	8.2	20	70	60	1.5	2.5	3.9
	0820-2.0	●			0820-2.0-1								2.0		
	0820-2.5	●			0820-2.5-1								2.5		
	0820-3.0	●			0820-3.0-1								3.0		
	1025-1.5	●			1025-1.5-1			10.0	10.2	25	80	70	1.5	2.5	4.9
	1025-2.0	●			1025-2.0-1								2.0		
	1025-2.5	●			1025-2.5-1								2.5		
	1025-3.0	●			1025-3.0-1								3.0		

● : Stock item

Round Grooving

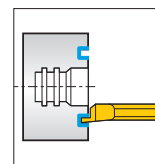
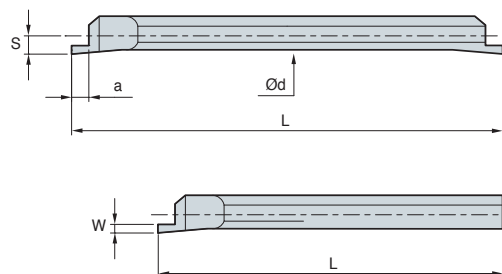
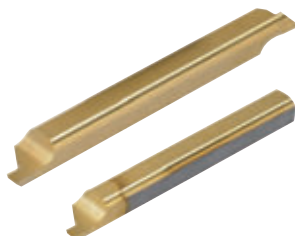


(mm)

Twin Edge			Single Edge			Ød	Min.dia. of ma- chining	ℓ	Overall length		Detailed cutting edge				
Designation	Coated	Uncoated	Designation	Coated	Uncoated				L		W	a	S		
	PC30M	Z12M		PC30M	Z12M				Double ended	Single ended					
MGRR	0310-0.8	●		MGRR	0310-0.8-1			3.0	3.2	10	40	35	0.8	0.8	1.4
	0315-0.8	●			0315-0.8-1					15	50	45			
	0410-1.0	●			0410-1.0-1			4.0	4.2	10	40	35	1.0	1.0	1.9
	0420-1.0	●			0420-1.0-1					20	60	50			
	0610-1.0	●			0610-1.0-1			6.0	6.2	10	45	40	1.0	2.0	2.9
	0620-1.0	●			0620-1.0-1					20	65	50			
	0610-1.5	●			0610-1.5-1					10	45	40	1.5		
	0620-1.5	●			0620-1.5-1					20	65	50			
	0610-2.0	●			0610-2.0-1					10	45	40	2.0		
	0620-2.0	●			0620-2.0-1					20	65	50			
	0820-1.0	●			0820-1.0-1			8.0	8.2	20	70	60	1.0	2.3	3.9
	0820-1.5	●			0820-1.5-1								1.5		
	0820-2.0				0820-2.0-1								2.0		
	1025-1.0	●			1025-1.0-1			10.0	10.2	25	80	70	1.0	2.8	4.9
	1025-1.5	●			1025-1.5-1								1.5		
	1025-2.0	●			1025-2.0-1								2.0		

● : Stock item

Face Grooving



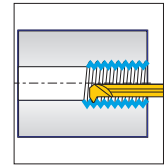
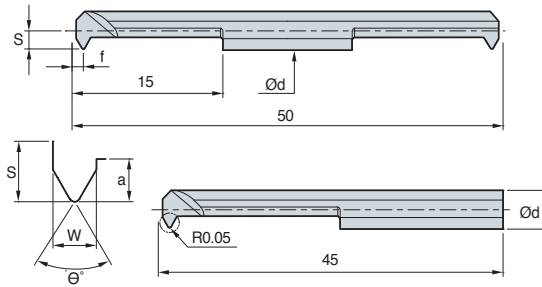
(mm)

Twin Edge			Single Edge			Ød	Min.dia. of machining	Overall length		Detailed cutting edge		
Designation	Coated	Uncoated	Designation	Coated	Uncoated			L		W	a	S
	PC30M	Z12M		PC30M	Z12M			Double ended	Single ended			
MGFR	0400-1.0	●	MGFR	0400-1.0-1		4.0	6.0	50	45	1.0	1.5	1.8
	0400-1.5	●		0400-1.5-1						1.5	2.0	
	0600-1.0	●		0600-1.0-1		6.0	8.5	50	45	1.0	1.5	2.9
	0600-1.5	●		0600-1.5-1						1.5	2.0	
	0600-2.0	●		0600-2.0-1		8.0	10.4	70	60	2.0	2.5	3.9
	0800-1.0	●		0800-1.0-1						1.0	1.5	
	0800-1.5	●		0800-1.5-1						1.5	2.0	
	0800-2.0	●		0800-2.0-1						2.0	2.5	
	0800-2.5	●		0800-2.5-1						2.5	3.0	
	0800-3.0	●		0800-3.0-1						3.0	3.5	
				0800-3.5-1						3.5	4.0	
	1000-2.0	●		1000-2.0-1		10.0	12.4	80	70	2.0	2.5	4.9
	1000-2.5	●		1000-2.5-1						2.5	3.0	
	1000-3.0	●		1000-3.0-1						3.0	3.5	
	1000-3.5	●		1000-3.5-1						3.5	4.0	
	1000-4.0	●		1000-4.0-1						4.0	4.5	
	1000-4.5	●		1000-4.5-1						4.5	5.0	

● : Stock item



Threading



(mm)

Twin Edge			Single Edge			Ød	Min.dia. of machining	Threading			Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M			W	Pitch / tpi	θ°	S	a	f
MTR 0315-F60			MTR 0315-F60-1			3.0	3.3	1.2	0.5~1.0	60°	1.45	1.2	0.6
	●					4.0	4.3				1.95		
	●					6.0	6.2				2.90		
	●					3.0	3.3	1.2	48~24	55°	1.45	1.2	0.6
	●					4.0	4.3				1.95		
	●					6.0	6.2				2.90		

● : Stock item

SLEEVE

SL (SLEEVE)

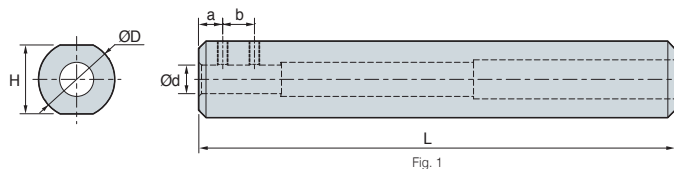


Fig. 1

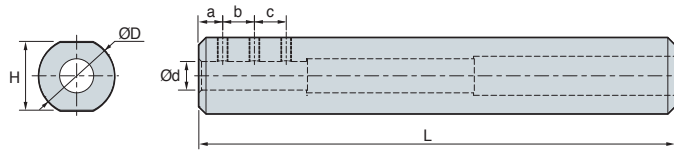


Fig. 2

(mm)

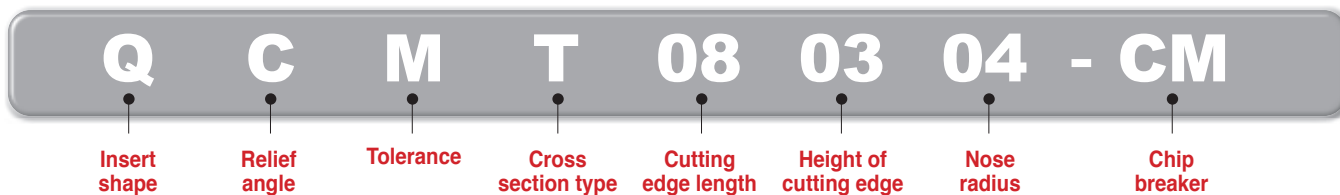
Designation	Ød	a	b	c	ØD	H	L	Screw	Wrench	Fig.
SL1603	3	5	-	-	16	14	100	M3	HW15L	1
SL1604	4	5	6	-	16	14	100	M4	HW20L	
SL1605	5	5	8	-	16	14	100	M4	HW20L	
SL1606	6	5	6	6	16	14	100	M4	HW20L	2
SL1607	7	5	6	8	16	14	100	M4	HW20L	
SL2008	8	5	10	10	20	18	100	M4	HW20L	
SL2010	10	5	10	10	20	18	100	M5	HW20L	2

* Fine tolerance and surface roughness

Multi Turn

Code system

• Insert

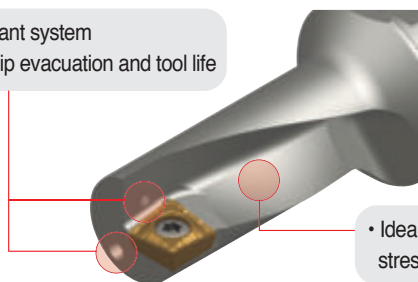


• Holder

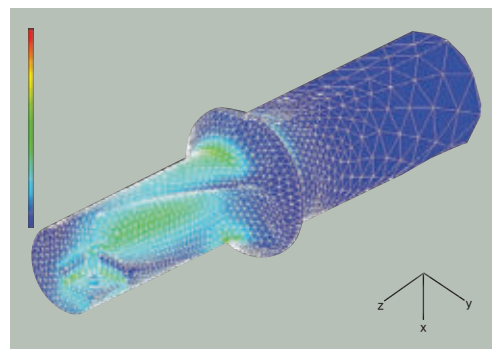


Tool design by FEM analysis

- Double coolant system
- Excellent chip evacuation and tool life



※ Notice: Clamp an insert shown as in the picture

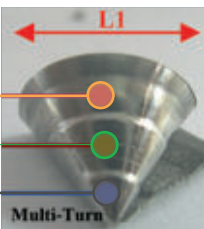
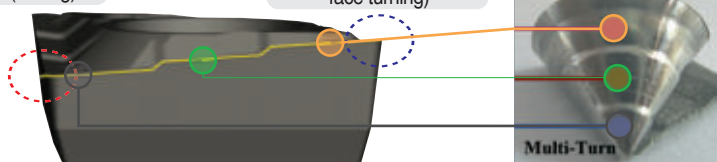


- Minimized stress during cutting, prevented damage from vibration and longer tool life
- Optimized design

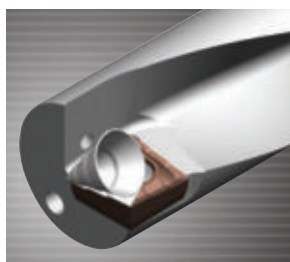
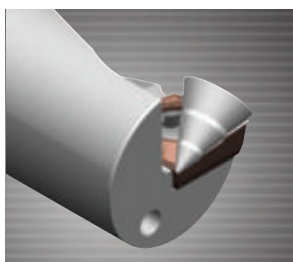
Creative stepping cutting edge

Drilling edge
(Drilling)

Turning edge
(Internal, external and face turning)



- Special chip formed by edge geometry better chip
- Evacuation due to small radius width of chip curl

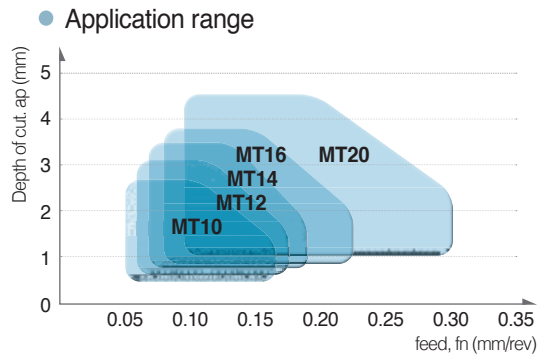
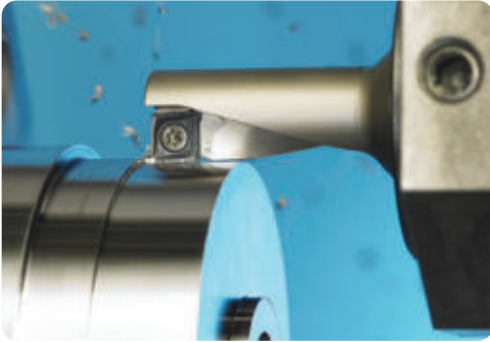


Comparison	Multi turn	Competitor A	Competitor B
Feed f_n (mm/rev) = 0.08			
Feed f_n (mm/rev) = 0.10			
Chip width (rate)	80%	100%	120%

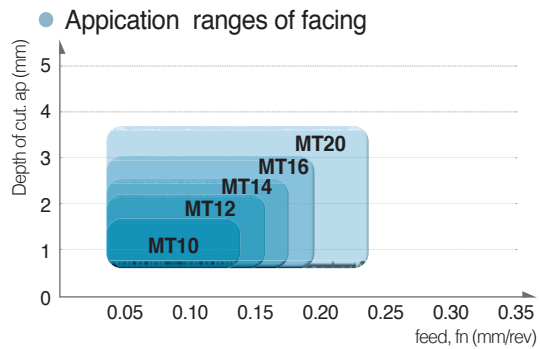
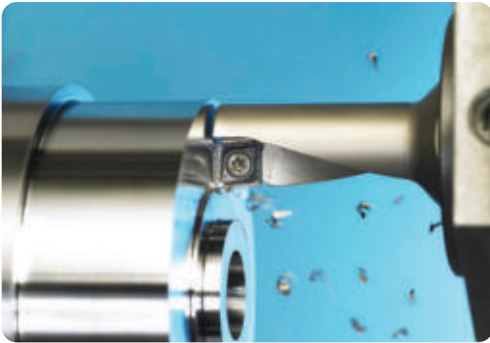


User's guide

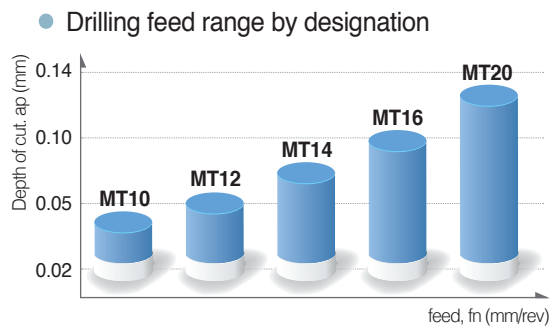
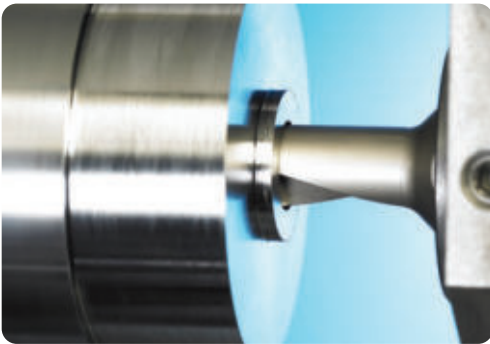
External / Internal turning



Facing

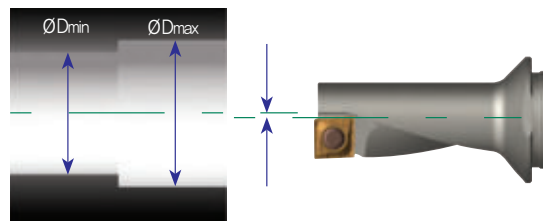


Drilling



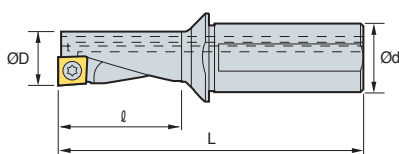
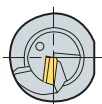
Offset (Diameter compensation)

Disignation	Machined diameter (mm)	ØDmin (mm)	ØDmax (mm)
MT10R/L-2.25D	10	9.85	10.35
MT12R/L-2.25D	12	11.85	12.35
MT14R/L-2.25D	14	13.85	14.35
MT16R/L-2.25D	16	15.85	16.35
MT20R/L-2.25D	20	19.85	20.35
MT25R/L-2.25D	25	24.85	25.35
MT32R/L-2.25D	32	31.85	32.35



Drill diameter is adjustable by the offset compensation

MT(Multi-Turn)



(mm)

Designation		ØD	Ød	l	L	Insert	Screw	Wrench
MT	10R/L-2.25D	10	12	22.5	69.5	QC□T050204	FTNA0204S	TW06P
	12R/L-2.25D	12	16	27.0	78.0	QC□T060204	FTNA02205S	TW06P
	14R/L-2.25D	14	16	31.5	83.5	QC□T070304	FTKA02555	TW07P
	16R/L-2.25D	16	20	36.0	94.0	QC□T080304	FTNA0306	TW09P
	20R/L-2.25D	20	25	45.0	111.0	QC□T10T304	FTNA03508	TW15P
	25R/L-2.25D	25	32	56.5	130.0	QC□T130408	FTNC04509	TW20S
	32R/L-2.25D	32	40	72.0	160.0	QC□T170508	FTNC04511	TW20S

Insert

Picture	Designation	Coated				Uncoated		Dimensions (mm)					Configuration
		NC3120	NC3225	NC6315	PC5300	H01	H05	l	d	t	r	Ød ₁	
	QCMT	050204-CM	●	●	●			5.0	5.4	2.10	0.4	2.3	
		060204-CM	●	●	●			6.0	6.4	2.38	0.4	2.5	
		070304-CM	●	●	●			7.0	7.4	3.18	0.4	2.8	
		080304-CM	●	●	●			8.0	8.4	3.18	0.4	3.4	
		10T304-CM	●		●			10.0	10.4	3.97	0.4	4.0	
		130408-CM	●		●			12.7	13.5	4.76	0.8	5.5	
		170508-CM	●	●	●			16.7	17.5	5.56	0.8	5.5	
	QCGT	050204-CA				●		5.0	5.4	2.10	0.4	2.3	
		060204-CA				●		6.0	6.4	2.38	0.4	2.5	
		070304-CA				●		7.0	7.4	3.18	0.4	2.8	
		080304-CA				●		8.0	8.4	3.18	0.4	3.4	
		10T304-CA				●		10.0	10.4	3.97	0.4	4.0	
		130408-CA				●		12.7	13.5	4.76	0.8	5.5	
		170508-CA				●		16.7	17.5	5.56	0.8	5.5	



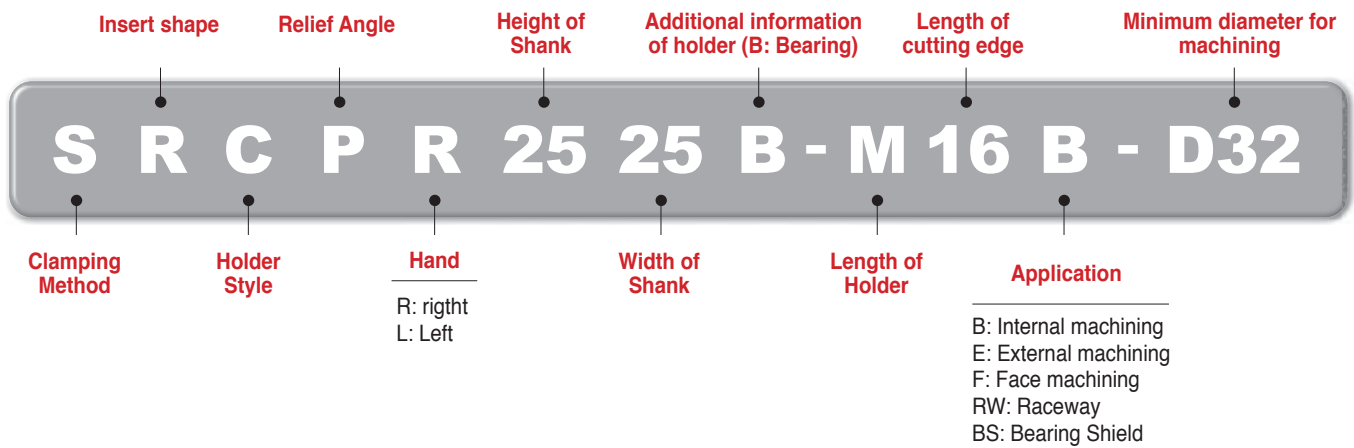
Bearing Solution

Code system

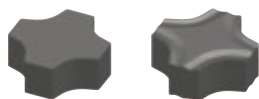
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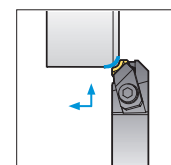
• Holder



CMSN...F Type



MC12□□ MC12□□-BR
MC15□□



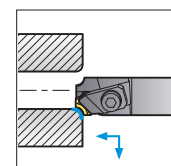
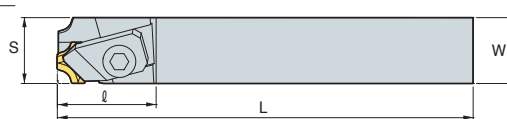
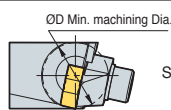
• R type insert (mm)

Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CMSNR/L 2020B-L12F	20	20	140	21	20	33	MC12□□	CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L
2023B-L12F	20	23	140	24	20	33	MC12□□-BR	CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L
2525B-L15F	25	25	140	26	25	35	MC15□□	CH6R/L1B	BHA0620	SX52CB	SS0408	HW50L

CMSN...B Type



MC12□□ MC12□□-BR



• R type insert (mm)

Designation	ØD	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CMSNR/L 2020B-L12B-D28	28	20	20	140	21	20	33	MC12□□	CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L
2525B-L12B-D28	28	25	25	140	26	25	33	MC12□□-BR	CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L
1620B-L12B-D20	20	16	20	140	18	16	32	MC12□□-BR	CH6R/L1B	BHA0620	-	-	HW50L
2023B-L12B-D28	28	20	23	140	24	20	33	MC12□□-BR	CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L

Insert

Application	Picture	Designation	Cermet	Dimensions (mm)					Configuration
			CN2500	R	θ°	B	d	t	
R-Chamfering		MC0906		0.6	12	1.8	9.525	3.18	
		MC0910		1.0	12	2.4	9.525	3.18	
		MC1206		0.6	18	1.8	12.7	4.76	
		MC1210		1.0	18	2.4	12.7	4.76	
		MC1212		1.2	18	2.2	12.7	4.76	
		MC1215		1.5	18	3.0	12.7	4.76	
		MC1220		2.0	18	3.8	12.7	4.76	
		MC1225		2.5	18	2.8	12.7	4.76	
		MC1525		2.5	18	4.0	15.875	5.56	
		MC1530		3.0	18	4.7	15.875	5.56	
		MC1540		4.0	20	4.7	15.875	5.56	
		MC1206-BR		0.6	18	1.8	12.7	4.76	
		MC1210-BR		1.0	18	2.4	12.7	4.76	
		MC1212-BR		1.2	18	2.2	12.7	4.76	
		MC1215-BR		1.5	18	3.0	12.7	4.76	
		MC1220-BR		2.0	18	3.2	12.7	4.76	
		MC1230-BR		3.0	18	3.7	12.7	4.76	
		MC1235-BR		3.5	18	3.9	12.7	4.76	

● : Stock item

Special order-form

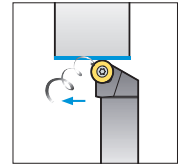
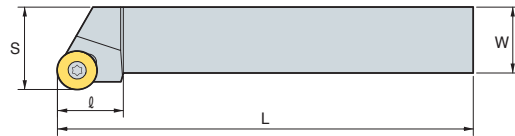
Designation	CN2500	R	θ°	B	d	t	Configuration
MC...							



SRGP...E Type



RPGT1203M0
RPGT1604M0
RPGT2004M0



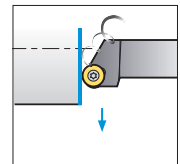
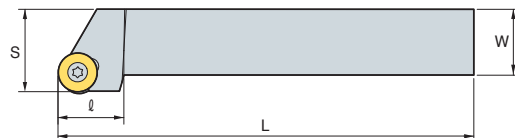
• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Wrench
SRGPR/L 2020B-L12E	20	20	140	25	20	20	RPGT1203M0	FTKA0410	SR1203S	SHXN0609F	TW15P
2020B-L16E	20	20	140	25	20	20	RPGT1604M0	FTNA0513	SR16T3S	SHXN0712F	TW20P
2525B-L20E	25	25	140	32	25	30	RPGT2004M0	FTNA0513	SR20T3S	SHXN0712F	TW20P

SRGP...F Type



RPGT1203M0
RPGT1604M0
RPGT2004M0



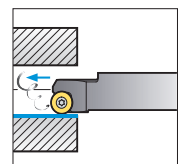
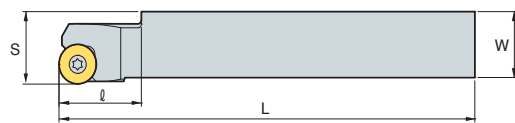
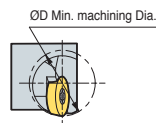
• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Wrench
SRGPR/L 2020B-L12F	20	20	140	25	20	20	RPGT1203M0	FTKA0410	SR1203S	SHXN0609F	TW15P
2020B-L16F	20	20	140	25	20	20	RPGT1604M0	FTNA0513	SR16T3S	SHXN0712F	TW20P
2525B-L20F	25	25	140	32	25	30	RPGT2004M0	FTNA0513	SR20T3S	SHXN0712F	TW20P

SRCP...B Type



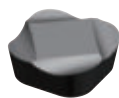
RPGT0802M0
RPGT1203M0
RPGT1604M0



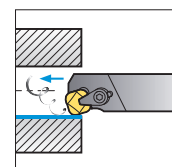
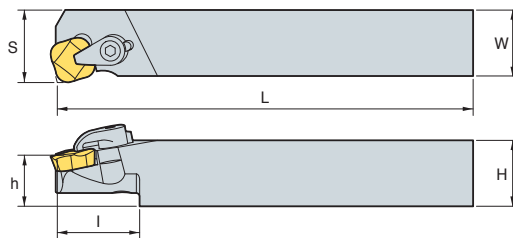
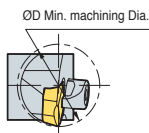
• R type insert
(mm)

Designation	ØD	H	W	L	S	h	l	Insert	Screw	Wrench
SRCPR/L 2020B-L08B-D12	12	20	20	140	21.5	15.5	25	RPGT0802M0	FTKA0305	TW09P
1919B-L12B-D15	15	19	19	140	21	16	25	RPGT1203M0	FTNA0408	TW15P
2020B-L12B-D20	20	20	20	140	22	15.5	25	RPGT1203M0	FTNA0408	TW15P
2525B-L16B-D32	32	25	25	140	27	20	30	RPGT1604M0	FTKA0510	TW20P

CSKP...B Type



SPGR120440L



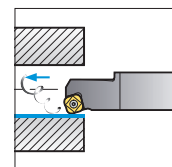
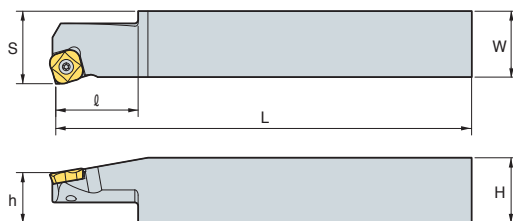
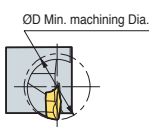
• R type insert
(mm)

Designation	ØD	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Wrench
CSKPR/L 2022B-L12B-D30	30	20	22	140	27	20	37	SPGR120440R/L	CH5R1	CHX0510	HW30L

SSKP...B Type



SPGH090330L



• R type insert
(mm)

Designation	ØD	H	W	L	S	h	l	Insert	Screw	Wrench
SSKPR/L 2020B-L09B-D12	12	20	20	140	21.7	19	20	SPGH090330R/L	FTNA0307	TW09P
2020B-L09B-D13	13	20	20	140	21.7	19	20			
2020B-L09B-D20	20	20	20	140	21.7	19	20			

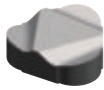
Insert

Application	Picture	Designation	Cermet	Dimensions (mm)				Configuration
			CN2500	r	d	d ₁	t	
Internal turning		RPTG0802M0		-	8	3.4	2.38	
		RPTG1203M0		-	12	4.4	3.18	
		RPTG1604M0		-	16	5.5	4.76	
		RPTG2004M0		-	20	5.5	4.76	
		SPGR120440L		4.0	12.7	-	4.76	
		SPGH090330L		3.0	9.525	3.4	3.18	

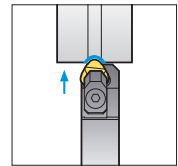
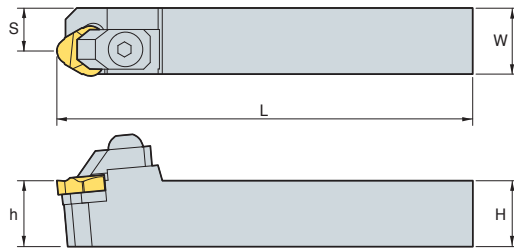
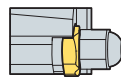
• : Stock item



CKFN...RW Type



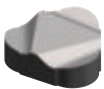
KORIC



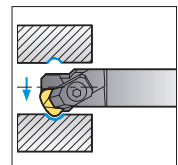
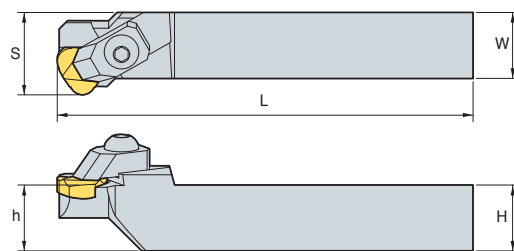
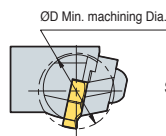
• R type insert
(mm)

Designation	H	W	L	S	h	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CKFNR/L 2020B-L22RW	20	20	140	12.5	20	KORIC2204R/L	CH6N1B	BHA0620	ST42CB	SS0408	HW50L
2022B-L27RW	20	22	140	13	20	KORIC2704R/L	CH8R/L1B	BHA0820	ST52CB	SS0408	HW60L
2025B-L33RW	20	25	140	16	20	KORIC3306R/L	CH8R/L1B	BHA0820	ST62CB	SS0408	HW60L
2533B-L44RW	25	33	140	21	25	KORIC4408R/L	CH8R/L1B	BHA0820	ST82CB	SS0408	HW60L

CKGN...RW Type



KORIC



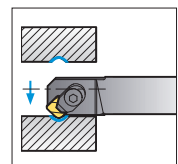
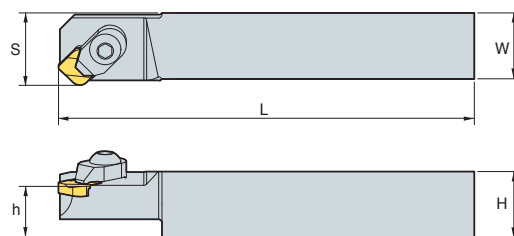
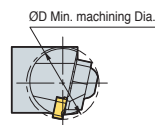
• R type insert
(mm)

Designation	ØD	H	W	L	S	h	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CKGNR/L 2022B-L22RW-D23	23	20	22	140	30	20	KORIC2204R/L	CH6R/L3B	BHA0620	ST42CB	SS0408	HW50L
2022B-L27RW-D29	29	20	22	140	34	20	KORIC2704R/L	CH6R/L7B	BHA0620	ST52CB	SS0408	HW50L
2025B-L33RW-D38	38	20	25	140	33	20	KORIC3306R/L	CH6R/L5B	BHA0620	ST62CB	SS0408	HW50L
2528B-L38RW-D50	50	25	28	140	46	25	KORIC3806R/L	CH8R/L2B	BHA0820	ST72CB	SS0408	HW60L
2528B-L44RW-D52	52	25	28	140	50	25	KORIC4408R/L	CH8R/L2B	BHA0820	ST82CB	SS0408	HW60L

CSGN...RW Type



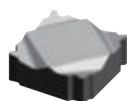
SNGN



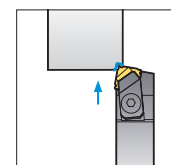
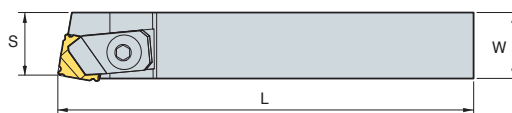
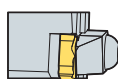
• R type insert
(mm)

Designation	ØD	H	W	L	S	h	Insert	Clamp	Clamp Screw	Wrench
CSGNR/L 2020B-L09RW-D17	17	20	20	140	22	20	SNGN0903WR/L	CH5R1	CHX0510	HW30L
2020B-L09RW-D22	22	20	20	140	22	20	SNGN0903WR/L	CH5R1	CHX0510	HW30L

CSBN...BS Type



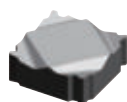
SNGN



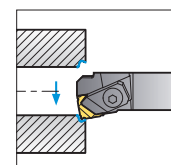
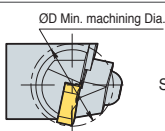
• R type insert (mm)

Designation	H	W	L	S	h	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CSBNR/L 2023B-L12BS	20	23	140	21	20	SNGN1204SR/L	CH6N1B	BHA0620	SS42CB	SS0308	HW50L
2525B-L15BS	25	25	140	23	25	SNGN1504SR/L	CH6N1B	BHA0620	SS52CB	SS0408	HW50L

CSKN...BS Type



SNGN



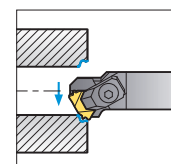
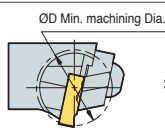
• R type insert (mm)

Designation	ØD	H	W	L	S	h	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CSKNR/L 1622B-L09BS-D14	14	16	22	140	16	16	SNGN0903SR/L	CH6R/L2B	BHA0620	-	-	HW50L
2022B-L12BS-D26	26	20	22	140	27	20	SNGN1204SR/L	CH6R/L1B	BHA0620	SS42CB	SS0308	HW50L
2525B-L15BS-D35	35	25	25	140	31	25	SNGN1504SR/L	CH6R/L3B	BHA0620	SS52CB	SS0408	HW50L

CTGN...BS Type



TNGN



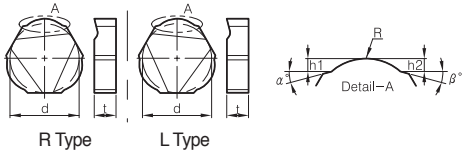
• R type insert (mm)

Designation	ØD	H	W	L	S	h	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CTGNR/L 2021B-K22BS-D25	25	20	21	140	30	20	TNGN2204SR/L	CH6R/L7B	BHA0620	ST42CB	SS0408	HW50L



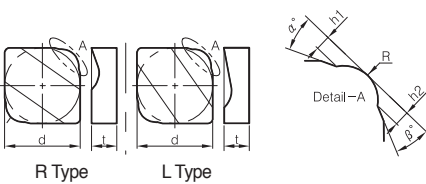
Machining Race-way

KORIC... R/L Type



		d	t	R	h ₁	h ₂	α°	β°
KORIC	2204R/L	12.7	4.76					
	2704R/L	15.875	4.76					
	3306R/L	19.05	6.0					
	3806R/L	22.225	6.0					
	4408R/L	25.4	8.0					

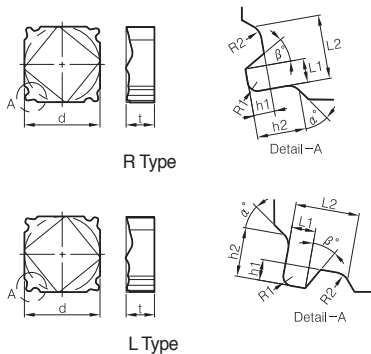
SNGN... WR/L Type



		d	t	R	h ₁	h ₂	α°	β°
SNGN	0903WR/L	9.525	3.18					
	1504WR/L	15.875	4.76					
	1905WR/L	19.05	5.56					

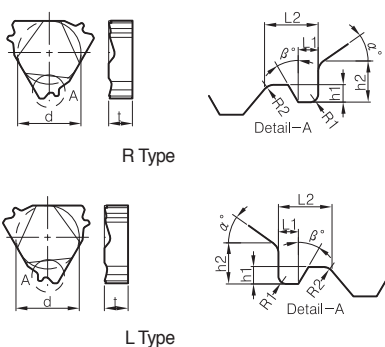
Machining for Bearing shield

KORIC... R/L Type



		d	t	L ₁	L ₂	h ₁	h ₂	R ₁	R ₂	α°	β°
SNGN	0903SR/L	9.525	3.18								
	1204SR/L	12.7	4.76								
	1504SR/L	15.875	4.76								

TNGN...SR/L Type



		d	t	L ₁	L ₂	h ₁	h ₂	R ₁	R ₂	α°	β°
TNGN	02204SR/L	12.7	4.76								

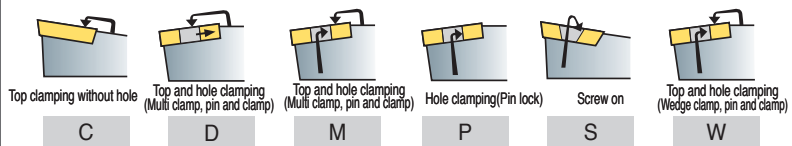
P S K N R 25 25 - M 12

1 2 3 4 5 6 7 8 9

Clamping Method of Insert Insert Shape Holder Style Clearance Angle of Insert Hand Height of Shank Width of Shank Length of Holder Length of Insert Cutting Edge

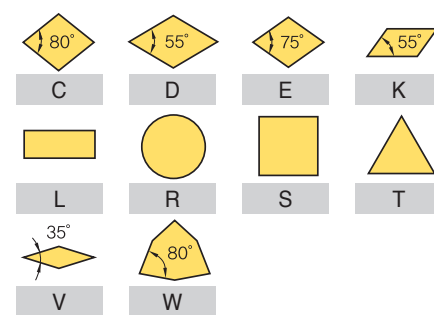
1 Clamping Method of Insert

PSKNR 2525 - M 12



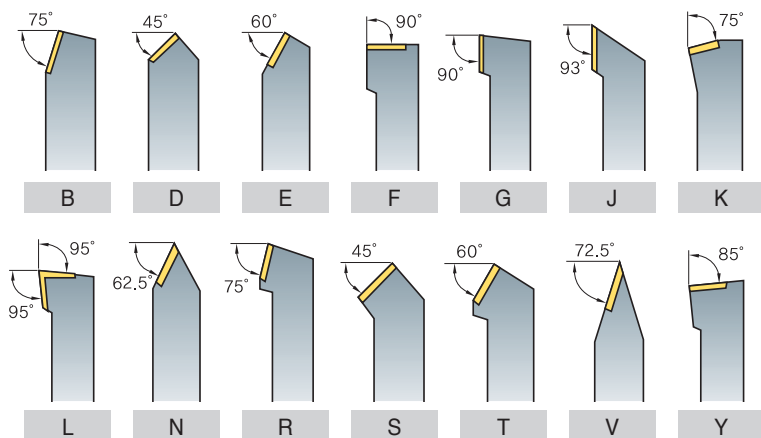
Insert Shape

PSKNR 25 25 - M 12



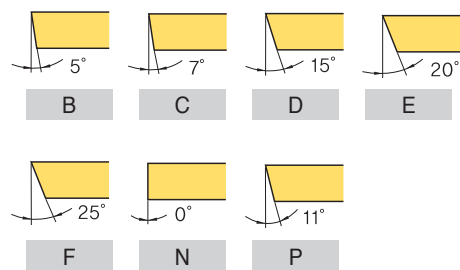
2 Holder Style

PSKNR2525-M12

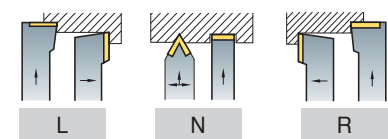


4 Clearance Angle of Insert

PSKNR2525-M12

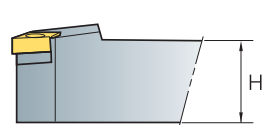


5 Hand

PSKN **R** 25 25 - M 12

Height of Shank

PSKNR 25 25 - M 12



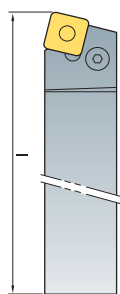
7 Width of Shank

PSKNR2525-M12



Length of Holder

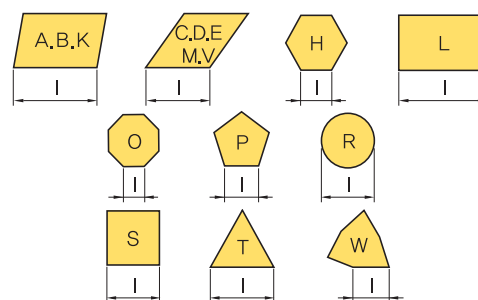
PSKNR2525-M12



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

Length of Insert Cutting Edge

PSKNR 25 25 - M 12



Double Clamp System

Cutting Shape										
Designation	DCBNR/L	DCKNR/L	DCLNR/L	DDJNR/L	DSBNR/L	DSDNN	DSKNR/L	DSSNR/L	DTFNR/L	DTGNR/L
Approach angle	75°	75°	95°	93°	75°	45°	75°	45°	90°	90°
Page	B167	B167	B167	B168	B168	B169	B169	B169	B170	B170
Turning	●		●	●	●	●		●		●
Copying				●						
Facing		●	●				●	●	●	
Chamfering						●				
Back turning			●	●						

Cutting Shape										
Designation	DVJNR/L	DVVNN	DWLNR/L							
Approach angle	93°	72.5°	95°							
Page	B170	B171	B171							
Turning	●	●	●							
Copying	●	●								
Facing			●							
Chamfering										
Back turning	●		●							

Lever Lock System

Cutting Shape										
Designation	PCBNR/L	PCKNR/L	PCLNR/L	PDJNR/L	PDNNR/L	PRDCN	PRGCR/L	PSBNR/L	PSDNN	PSKNR/L
Approach angle	75°	75°	95°	93°	62.5°	-	-	75°	45°	75°
Page	B172	B172	B173	B173	B174	B174	B175	B175	B176	B176
Turning	●	●	●	●	●	●	●	●	●	
Copying				●	●	●	●			
Facing			●							●
Chamfering										
Back turning			●	●						

Cutting Shape										
Designation	PSSNR/L	PTFNR/L	PTGNR/L	PTTNR/L	PWLNR/L					
Approach angle	45°	90°	90°	60°	95°					
Page	B177	B177	B178	B178	B178					
Turning	●		●	●	●					
Copying										
Facing	●	●			●					
Chamfering				●						
Back turning					●					

Wedge Clamp System

Cutting Shape									
Designation	WTENN	WTJNR/L	WTXNR/L	WWLNR/L					
Approach angle	60°	93°	105°	95°					
Page	B179	B179	B179	B180					
Turning	●	●	●	●					
Copying	●	●	●						
Facing				●					
Chamfering									
Back turning		●	●	●					

Clamp on System

Cutting Shape									
Designation	CKJNR/L	CKNNR/L	CSDPN	CSKPR/L	CTFPR/L	CTGPR/L			
Approach angle	93°	62.5°	45°	75°	90°	90°			
Page	B181	B181	B181	B182	B182	B182			
Turning	●	●	●			●			
Copying	●	●							
Facing				●	●				
Chamfering									
Back turning	●								

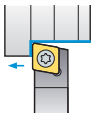
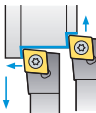
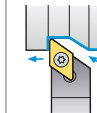
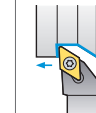
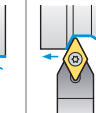
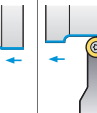
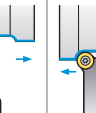
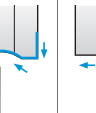
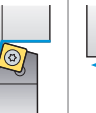
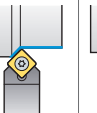
Multi Lock System

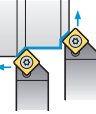
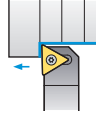
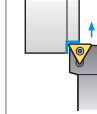
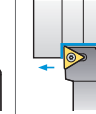
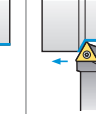
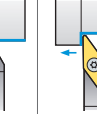
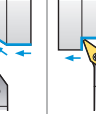
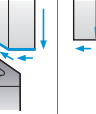
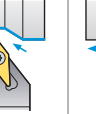
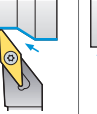
Cutting Shape										
Designation	MCKNR/L	MCLNR/L	MCMNN	MCRNR/L	MDJNR/L	MDNNN	MDQNR/L	MSBNR/L	MSDNN	MSKNR/L
Approach angle	75°	95°	50°	75°	93°	62.5°	107.5°	75°	45°	75°
Page	B183	B183	B183	B184	B184	B184	B185	B185	B185	B186
Turning		●	●	●	●	●	●	●	●	
Copying					●	●	●			
Facing	●	●								●
Chamfering										
Back turning		●			●		●			

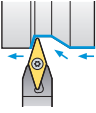
Cutting Shape										
Designation	MSRNR/L	MSSNR/L	MTENN	MTFNR/L	MTGNR/L	MTJNR/L	MVJNR/L	MVQNR/L	MVVNN	MWLNR/L
Approach angle	75°	45°	60°	90°	90°	93°	93°	117.5°	72.5°	95°
Page	B186	B187	B187	B187	B188	B188	B188	B189	B189	B189
Turning	●	●	●		●	●	●	●	●	●
Copying			●			●	●	●	●	
Facing		●		●		●				●
Chamfering										
Back turning						●	●	●		●



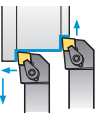
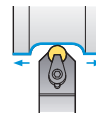
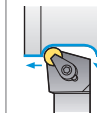
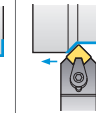
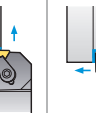
Screw on System

Cutting Shape										
Designation	SCACR/L	SCLCR/L	SDACR/L	SDJCR/L	SDNCN	SRDCN	SRGCR/L	SSBCR/L	SSDCN	SSKCR/L
Approach angle	90°	95°	90°	93°	62.5°	-	-	75°	45°	75°
Page	B190	B190	B190	B191	B191	B191	B192	B192	B192	B193
Turning	●	●	●	●	●	●	●	●	●	
Copying			●	●	●	●	●			
Facing		●								●
Chamfering										
Back turning		●		●						

Cutting Shape										
Designation	SSSCR/L	STACR/L	STFCR/L	STGCR/L	STTCR/L	SVABR/L	SVHBR/L	SVJBR/L	SVJCR/L	SVVBN
Approach angle	45°	90°	90°	90°	60°	90°	107.5°	93°	93°	72.5°
Page	B193	B193	B194	B194	B194	B195	B195	B195	B196	B196
Turning	●	●		●	●	●	●	●	●	●
Copying						●	●	●	●	●
Facing	●		●							
Chamfering										
Back turning						●	●	●	●	

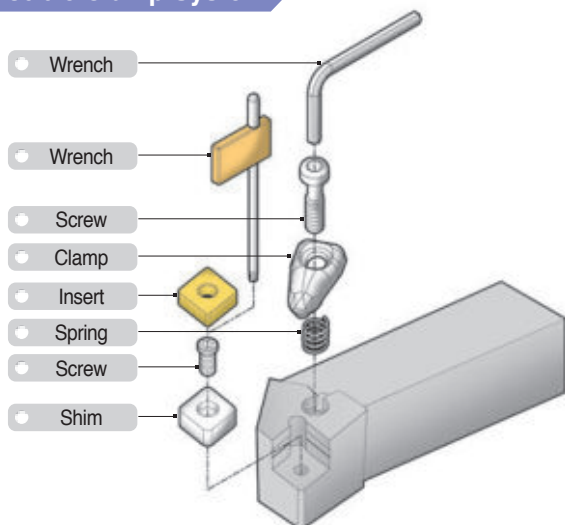
Cutting Shape										
Designation	SVVCN									
Approach angle	72.5°									
Page	B196									
Turning	●									
Copying	●									
Facing										
Chamfering										
Back turning										

Ceramic Holder

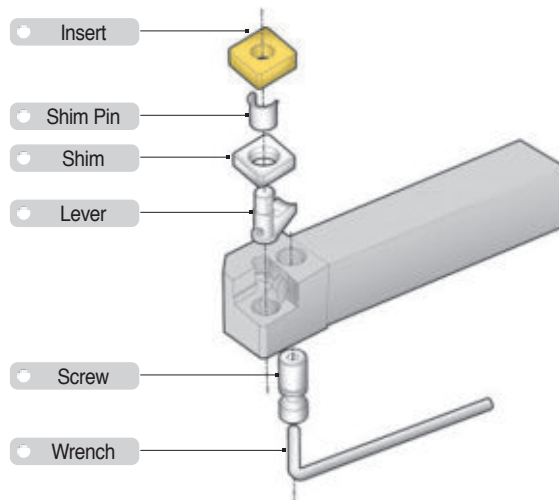
Cutting Shape										
Designation	CCNLR/L	CRDNN	CRGNR/L	CSDNN	CSKNR/L	CTFNR/L	CTGNR/L			
Approach angle	95°	-	-	45°	75°	90°	90°			
Page	B197	B197	B197	B197	B198	B198	B198			
Turning	●	●	●	●			●			
Copying			●							
Facing	●				●	●				
Chamfering										
Back turning	●									

Instruction of External Holder

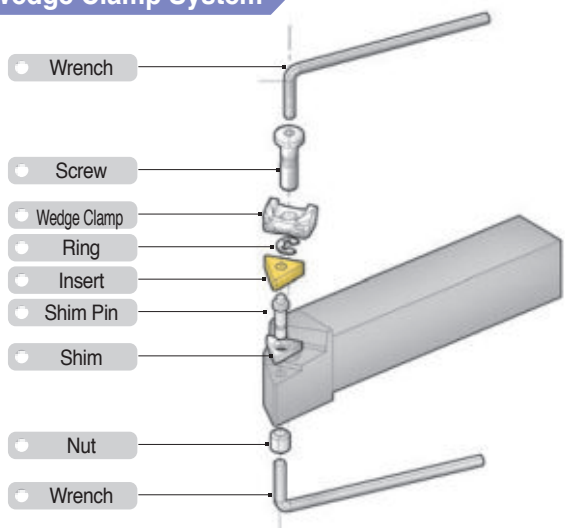
Double Clamp System



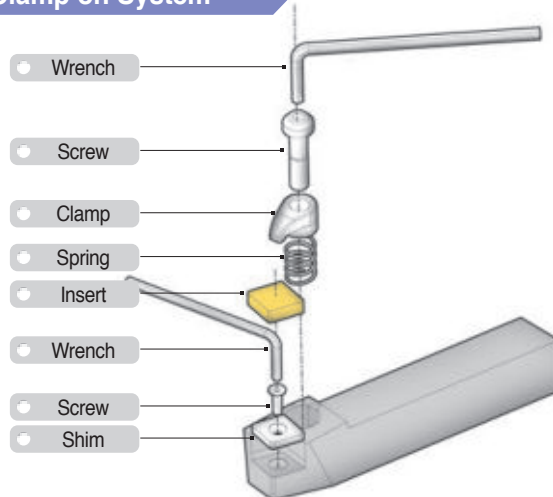
Lever Lock System



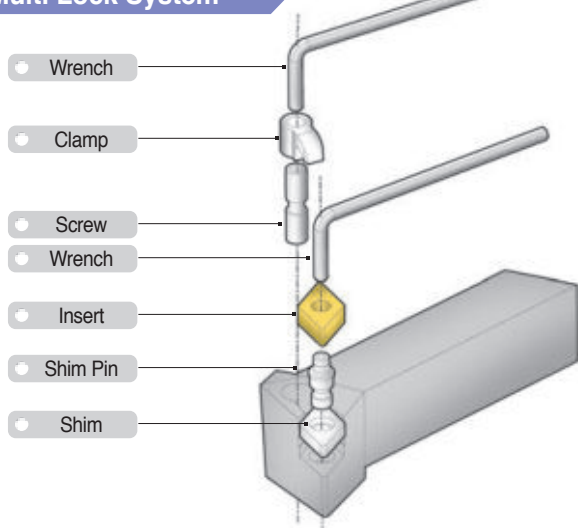
Wedge Clamp System



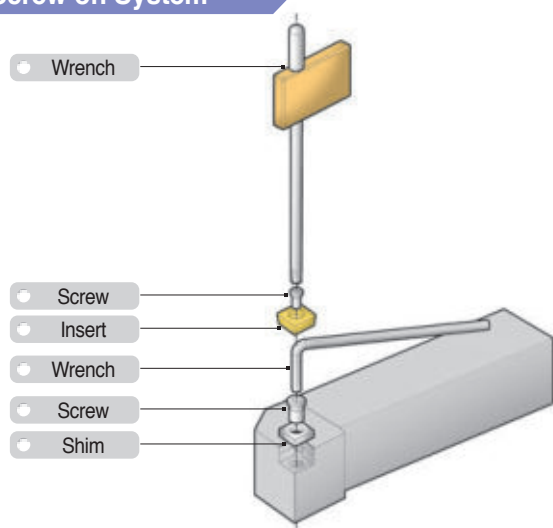
Clamp on System



Multi Lock System



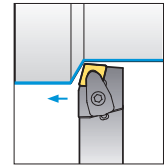
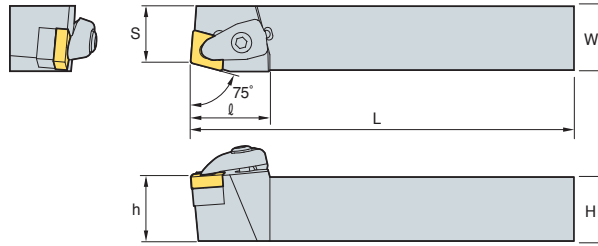
Screw on System



DCBNR/L



CN□□



75°

• R type insert
(mm)

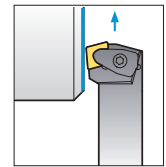
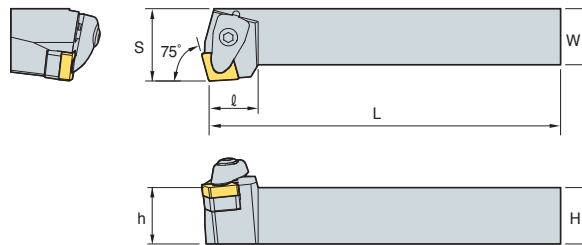
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DCBNR/L 2020-K12	20	20	125	17	20	31	CN□□1204□□						
2525-M12	25	25	150	22	25	31							
3225-P12	32	25	170	22	32	31							
2525-M16	25	25	150	22	25	36	CN□□1606□□						
3232-P16	32	32	170	27	32	36							
3232-P19	32	32	170	27	32	40							
4040-S19	40	40	250	35	40	40	CN□□1906□□						

→ Applicable inserts B36~B42

DCKNR/L



CN□□



75°

• R type insert
(mm)

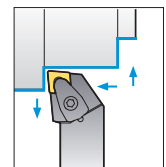
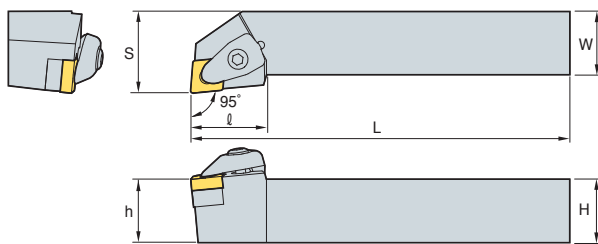
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DCKNR/L 2020-K12	20	20	125	25	20	21	CN□□1204□□						
2525-M12	25	25	150	32	25	21							
3225-P12	32	25	170	32	32	21							
3232-P16	32	32	170	40	32	26	CN□□1606□□						
4040-S16	40	40	250	50	40	26							

→ Applicable inserts B36~B42

DCLNR/L



CN□□



95°

• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DCLNR/L 2020-K09	20	20	125	25	20	24.5	CN□□0903□□						
2525-M09	25	25	150	32	25	24.5							
2020-K12	20	20	125	25	20	30	CN□□1204□□						
2525-M12	25	25	150	32	25	30							
3225-P12	32	25	170	32	32	30							
3232-P12	32	32	170	40	32	30							
2525-M16	25	25	150	32	25	36	CN□□1606□□						
3225-P16	32	25	170	32	32	36							
3232-P16	32	32	170	40	32	36							
2525-M19	25	25	150	32	25	40	CN□□1906□□						
3225-P19	32	25	170	32	32	40							
3232-P19	32	32	170	40	32	40							
4040-S19	40	40	250	50	40	40							

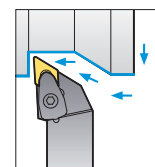
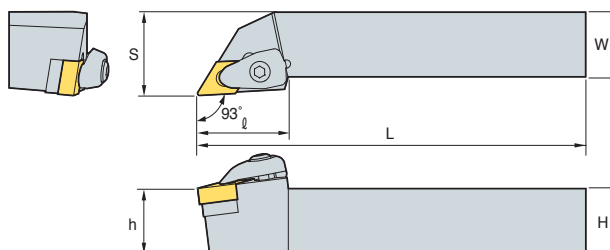
→ Applicable inserts B36~B42

B Double Clamp System

DDJNR/L



DN□□



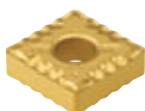
93°

• R type insert (mm)

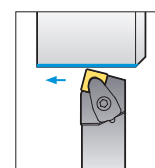
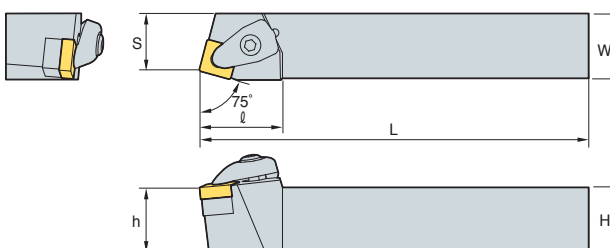
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DDJNR/L 2020-K11	20	20	125	25	20	30	DN□□1104□□						
2525-M11	25	25	150	32	25	30							
3225-P11	32	25	170	32	32	30							
3232-P11	32	32	170	40	32	30							
2020-K15	20	20	125	25	20	35	DN□□1506□□						
2525-M15	25	25	150	32	25	35							
3225-P15	32	25	170	32	32	35							
3232-P15	32	32	170	40	32	35							
2020-K15-3	20	20	125	25	20	35	DN□□1504□□						
2525-M15-3	25	25	150	32	25	35							
3232-P15-3	32	32	170	40	32	35							

Applicable inserts B43~B48

DSBNR/L



SN□□



75°

• R type insert (mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSBNR/L 2020-K09	20	20	125	17	20	25	SN□□0903□□						
2525-M09	25	25	150	22	25	25							
2020-K12	20	20	125	17	20	32							
2525-M12	25	25	150	22	25	32	SN□□1204□□						
3225-P12	32	25	170	22	32	32							
3232-P12	32	32	170	27	32	32							
2525-M15	25	25	150	22	25	38	SN□□1506□□						
3225-P15	32	25	170	22	32	38							
3232-P15	32	32	170	27	32	38							
3232-P19	32	32	170	27	32	43	SN□□1906□□						
4040-S19	40	40	250	35	40	43							

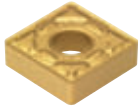
Applicable inserts B50~B57



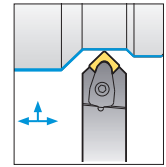
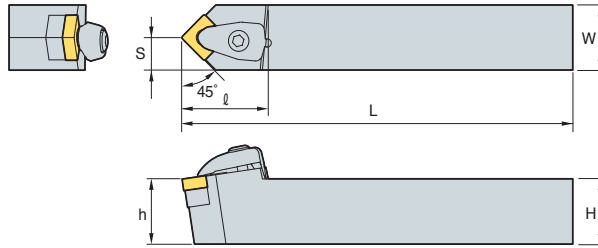
B

Turning

DSDNN



SN□□



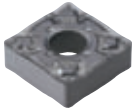
45°

• R type insert (mm)

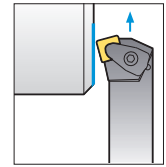
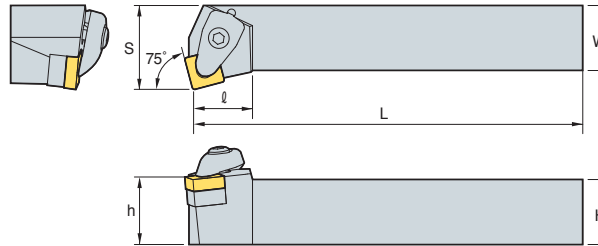
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSDNN 2020-K09	20	20	125	10	20	26.5	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
2020-K12	20	20	125	10	20	33	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
2525-M12	25	25	150	12.5	25	33							
3225-P12	32	25	170	12.5	32	33							
3232-P12	32	32	170	16	32	33	SN□□1506□□	CVH5	CHX0622	SS54V	FTNA0511	SPR0811	HW25P
2525-M15	25	25	150	12.5	25	39.4							
3232-P15	32	32	170	16	32	38							
3232-P19	32	32	170	16	32	43	SN□□1906□□	CVH6	CHX0622	SS64V	FTNA0511	SPR0811	HW40L
4040-S19	40	40	250	20	40	45							

Applicable inserts B50~B57

DSKNR/L



SN□□



75°

• R type insert (mm)

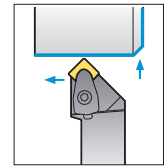
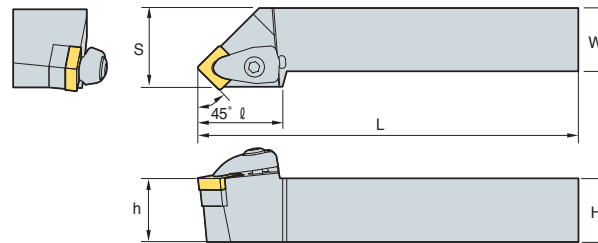
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSKNR/L 2020-K09	20	20	125	25	20	20	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
2020-K12	20	20	125	25	20	23	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
2525-M12	25	25	150	32	25	23							
3232-P12	32	32	170	40	32	23							
3232-P15	32	32	170	40	32	28	SN□□1506□□	CVH5	CHX0622	SS54V	FTNA0511	SPR0811	HW40L
3232-P19	32	32	170	40	32	35	SN□□1906□□	CVH6	CHX0622	SC64V	FTNA0511	SPR0811	HW40L
4040-S19	40	40	250	50	40	43							

Applicable inserts B50~B57

DSSNR/L



SN□□



45°

• R type insert (mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSSNR/L 2020-K09	20	20	125	25	20	28.5	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
2020-K12	20	20	125	25	20	35	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
2525-M12	25	25	150	32	25	35							
3225-P12	32	25	170	32	32	35							
3232-P12	32	32	170	40	32	35	SN□□1506□□	CVH5	CHX0622	SS54V	FTNA0511	SPR0811	HW40L
2525-M15	25	25	150	32	25	38.5							
3232-P15	32	32	170	40	32	38.5							
3232-P19	32	32	170	40	32	46	SN□□1906□□	CVH6	CHX0622	SS64V	FTNA0511	SPR0811	HW40L
4040-S19	40	40	250	50	40	46							

Applicable inserts B50~B57

Turning



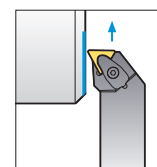
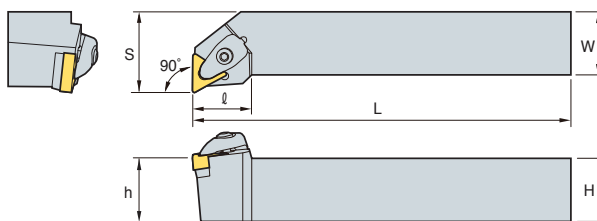
B

B Double Clamp System

DTFNR/L



TN□□



90°

• R type insert
(mm)

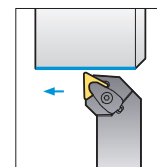
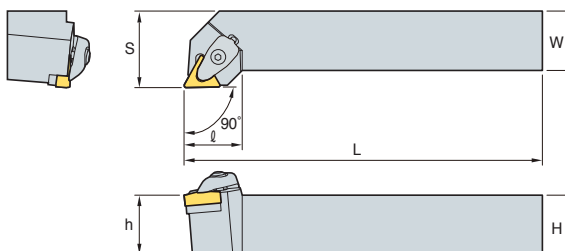
Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DTFNR/L 2020-K16	20	20	125	25	20	24.5	TN□□1604□□						
2525-M16	25	25	150	32	25	24.5							
3232-P16	32	32	170	40	32	23.5							
2525-M22	25	25	150	32	25	33	TN□□2204□□						
3225-P22	32	25	170	32	32	33							
3232-P22	32	32	170	40	32	33							

➔ Applicable inserts B58~B65

DTGNR/L



TN□□



90°

• R type insert
(mm)

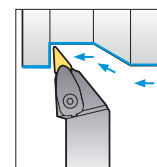
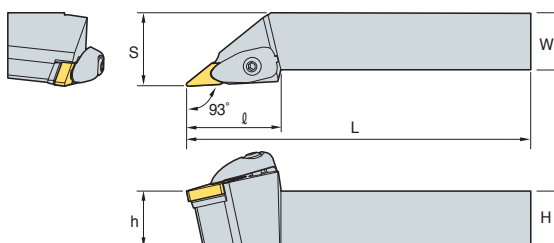
Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DTGNR/L 2020-K16	20	20	125	25	20	24.5	TN□□1604□□						
2525-M16	25	25	150	32	25	24.5							
3232-P16	32	32	170	40	32	24.5							
2525-M22	25	25	150	32	25	32.6	TN□□2204□□						
3225-P22	32	25	170	32	32	32.6							
3232-P22	32	32	170	40	32	32.6							

➔ Applicable inserts B58~B65

DVJNR/L



VN□□



93°

• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DVJNR/L 2020-K16	20	20	125	25	20	41.5	VN□□1604□□						
2525-M16	25	25	150	32	25	41.5							
3232-P16	32	32	170	40	32	41.5							

➔ Applicable inserts B66~B67



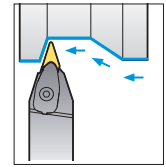
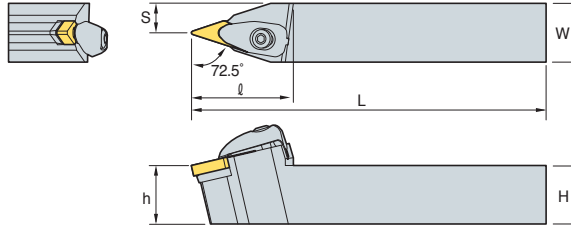
B

Turning

DVVNN



VN□□



72.5°

• R type insert (mm)

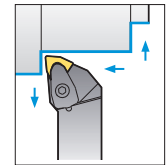
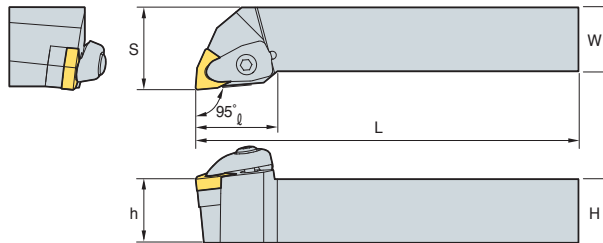
Designation		H	W	L	S	h	ℓ	Insert						
DVVNN	2020-K16	20	20	125	10	20	40	VN□□1604□□						
	2525-M16	25	25	150	12.5	25	40							
	3232-P16	32	32	170	16	32	40							
								CVH3V	CHX0518	SV32V	FTNA03508	SPR0714	HW30P	

Applicable inserts **B66~B67**

DWLNR/L



WN□□



95°

• R type insert (mm)

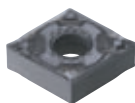
Designation		H	W	L	S	h	ℓ	Insert						
DWLNR/L	2020-K06	20	20	125	25	20	26	WN□□ 0604□□						
	2525-M06	25	25	150	32	25	26							
	2020-K08	20	20	125	25	20	32	WN□□ 0804□□						
	2525-M08	25	25	150	32	25	32							
									CVH3	CHX0415	SW32V	FTKA0307	SPR0510	HW25P
									CVH4	CHX0518	SW44V	FTKA0410	SPR0714	HW30P

Applicable inserts **B68~B72**

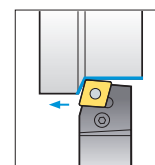
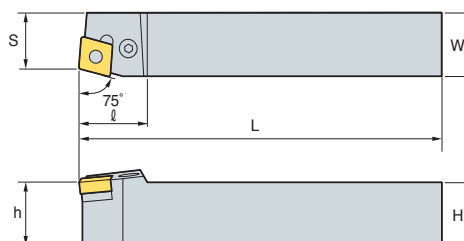


B Lever Lock System

PCBNR/L



CN□□



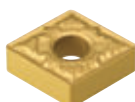
75°

• R type insert (mm)

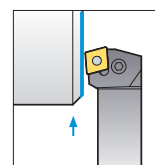
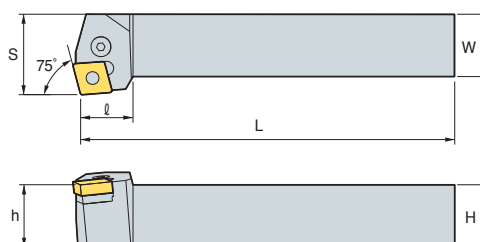
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PCBNR/L 2020-K12	20	20	125	17	20	27	CN□□ 1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
2525-M12	25	25	150	22	25	27							
3225-P12	32	25	170	22	32	27	CN□□ 1606□□	LV5	VHX0825	SC53	SP5	HW30L	LSPS6
2525-M16	25	25	150	22	25	33							
3232-P16	32	32	170	27	32	33	CN□□ 1906□□	LV6N	VHX1027N	SC63N	SP6N	HW40L	LSPS6
3232-P19	32	32	170	27	32	36							
4040-S19	40	40	250	35	40	36	CN□□ 2509□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
4040-S25	40	40	250	35	40	47	CN□□ 2507□□						
4040-S25-5	40	40	250	35	40	47	CN□□ 2507□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
5050-T25	50	50	300	43	50	47	CN□□ 2509□□						

Applicable inserts B36~B42

PCKNR/L



CN□□



95°

• R type insert (mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PCKNR/L 2020-K12	20	20	125	25	20	27	CN□□ 1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
2525-M12	25	25	150	32	25	27							
3225-P12	32	25	170	40	32	30	CN□□ 1606□□	LV5	VHX0825	SC53	SP5	HW30L	HW30L
3232-P16	32	32	170	40	32	26							
4040-S16	40	40	250	50	40	25							

Applicable inserts B36~B42



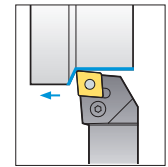
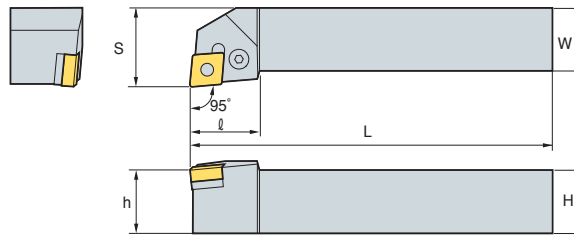
B

Turning

PCLNR/L



CN□□



95°

• R type insert
(mm)

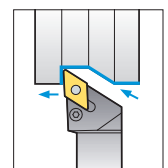
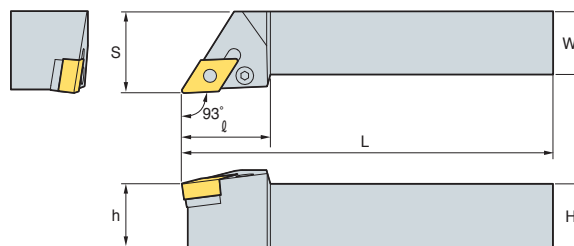
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PCLNR/L 1616-H09	16	16	100	20	16	20	CN□□ 0903□□	LV3	VHX0617	SC32	SP3	HW25L	LSPS3
2020-K09	20	20	125	25	20	22							
2525-M09	25	25	150	32	25	22							
1616-H12	16	16	100	20	16	28	CN□□ 1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
2020-K12	20	20	125	25	20	28							
2525-M12	25	25	150	32	25	28							
3225-P12	32	25	170	32	32	28							
3232-P12	32	32	170	40	32	28	CN□□ 1606□□	LV5	VHX0825	SC53	SP5	HW30L	LSPS5
2525-M16	25	25	150	32	25	33							
3232-P16	32	32	170	40	32	33							
2525-M19	25	25	150	32	25	36	CN□□ 1906□□	LV6N	VHX1027N	SC63N	SP6N	HW40L	LSPS6
3225-P19	32	25	170	32	32	36							
3232-P19	32	32	170	40	32	36							
4040-P19	40	40	170	50	40	36							
4040-S19	40	40	250	50	40	36	CN□□ 2509□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
4040-S25	40	40	250	50	40	47							
5050-T25	50	50	300	60	50	47							
4040-S25-5	40	40	250	50	40	47	CN□□ 2507□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
5050-S25-5	50	50	300	60	50	47							

Applicable inserts B36~B42

PDJNR/L



DN□□



93°

• R type insert
(mm)

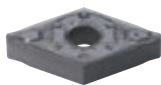
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PDJNR/L 1616-H11	16	16	100	20	16	25	DN□□ 1104□□	LV3	VHX0617	SD317	SP3	HW25L	LSPS3
2020-K11	20	20	125	25	20	25							
2525-M11	25	25	150	32	25	30							
2020-K15	20	20	125	25	20	35	DN□□ 1506□□	LV4B	VHX0821	SD42	SP4	HW30L	LSPS4
2525-M15	25	25	150	32	25	35							
3225-P15	32	25	170	32	32	35							
3232-P15	32	32	170	40	32	35							
2020-K15-3	20	20	125	25	20	35	DN□□ 1504□□	LV4	VHX0821	SD42	SP4	HW30L	LSPS4
2525-M15-3	25	25	150	32	25	35							
3232-P15-3	32	32	170	40	32	35							

Applicable inserts B43~B48

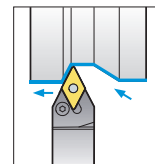
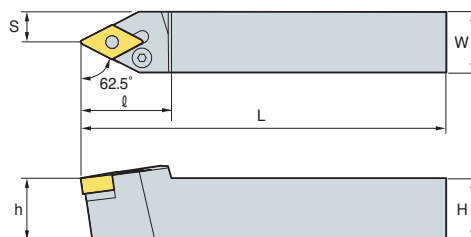


B Lever Lock System

PDNNR/L



DN□□



62.5°

• R type insert
(mm)

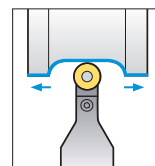
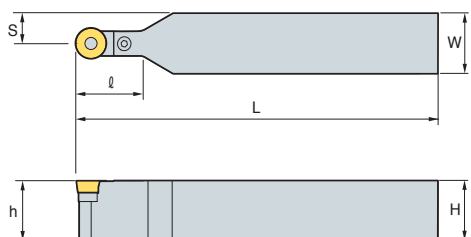
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PDNNR/L 2020-K15	20	20	125	8	20	37	DN□□ 1506□□						
2525-M15	25	25	150	12.5	25	37							
3232-P15	32	32	150	16	32	37							
4025-M15	40	25	170	12.5	32	37							
2525-M15-3	25	25	150	12.5	25	37	DN□□ 1504□□						
4025-M15-3	40	25	150	12.5	25	37							

Applicable inserts B43~B48

PRDCN



RCMX



(mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PRDCN 2020-M10	20	20	150	10	20	24	RCMX1003M0						
2525-M10	25	25	150	12.5	25	24							
2525-M12	25	25	150	12.5	25	24							
2020-K12	20	20	125	10	20	24	RCMX1204M0						
3225-Q12	32	25	180	12.5	32	24							
2525-Q16	25	25	180	12.5	25	30							
3225-Q16	32	25	180	12.5	32	30	RCMX1606M0						
3232-Q16	32	32	180	16	32	35							
3232-Q20	32	32	180	16	32	40							
4040-S25	40	40	250	20	40	42	RCMX2507M0						
4040-T25	40	40	300	20	40	42							
5050-U32	50	50	350	25	50	52	RCMX3209M0						

Applicable inserts B83, B105



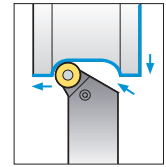
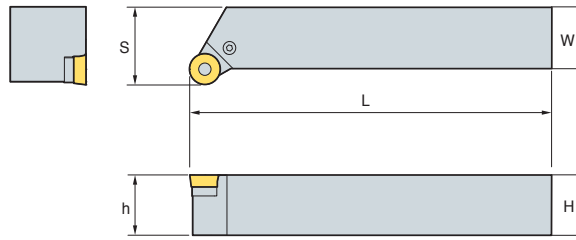
B

Turning

PRGCR/L



RCMX



• R type insert
(mm)

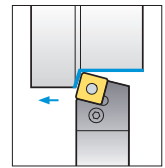
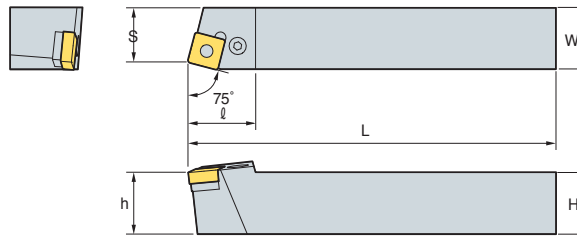
Designation	H	W	L	S	h	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PRGCR/L 2020-K10	20	20	125	25	20	RCMX1003M0	LR10	VHX0514	SR10	SP3	HW20L	LSPS3
	25	25	150	32	25							
2020-K12	20	20	125	25	20	RCMX1204M0	LR12	VHX0617	SR12	SP3	HW25L	LSPS3
	25	25	150	32	25							
3225-P12	32	25	170	32	32	RCMX1606M0	LR16	VHX0621	SR16	SP4	HW25L	LSPS4
2525-M16	25	25	150	32	25							
3225-P16	32	25	170	32	32	RCMX2006M0	LR20	VHX0823	SR20	SP5-1	HW30L	LSPS5
3232-P20	32	32	170	40	32							
4040-S25	40	40	250	50	40	RCMX2507M0	LR25	VHX1030	SR25	SP6N	HW40L	LSPS6

➔ Applicable inserts B83, B105

PSBNR/L



SN□□□



75°

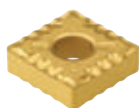
• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PSBNR/L 1616-H09	16	16	100	13	16	21	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	20	20	125	17	20	23							
2020-K12	20	20	125	17	20	28	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
2525-M12	25	25	150	22	25	28							
3225-P12	32	25	170	22	32	28	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
3232-P12	32	32	170	27	32	28							
2525-M15	25	25	150	22	25	35	SN□□1906□□	LV6N	VHX1027N	SS63N	SP6N	HW40L	LSPS6
3232-P15	32	32	170	27	32	35							
3232-P19	32	32	170	27	32	40	SN□□2507□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
4040-S19	40	40	250	35	40	40							
4040-S25	40	40	250	35	40	50	SN□□2509□□						
4040-S25-6	40	40	250	35	40	50							
5050-T25	50	50	300	43	50	50	SN□□2507□□						
5050-T25-6	50	50	300	43	50	46	SN□□2509□□						

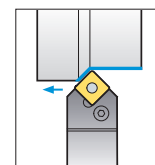
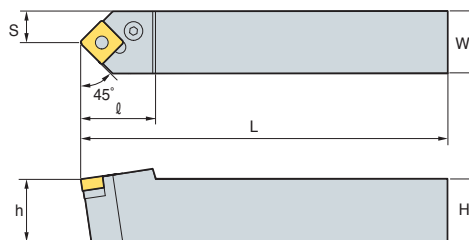
➔ Applicable inserts B50~B57

B Lever Lock System

PSDNN



SN□□



45°

(mm)

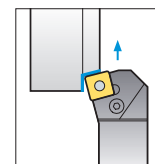
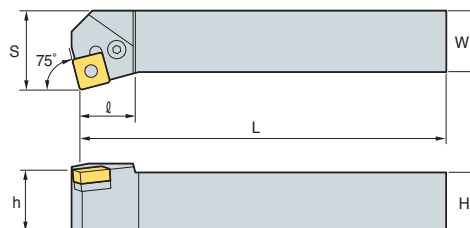
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PSDNN 1616-H09	16	16	100	8	16	23	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
2020-K12	20	20	125	10	20	30	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
2525-M12	25	25	150	12.5	25	30							
3225-P12	32	25	170	12.5	32	30							
3232-P12	32	32	170	16	32	40	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
2525-M15	25	25	150	12.5	25	40							
3232-P15	32	32	170	16	32	40							
3225-P19	32	25	170	12.5	32	40	SN□□1906□□	LV6N	VHX1027N	SS63N	SP6N	HW40L	LSPS6
3232-P19	32	32	170	16	32	40							
4040-S19	40	40	250	20	40	40							
4040-S25	40	40	250	20	40	50	SN□□2507□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
5050-T25	50	50	300	25	50	50							
4040-S25-6	40	40	250	20	40	50							
5050-T25-6	50	50	300	25	50	50	SN□□2509□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8

➔ Applicable inserts B50~B57

PSKNR/L



SN□□



75°

• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PSKNR/L 1616-H09	16	16	100	20	16	17	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
2020-K09	20	20	125	25	20	20	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
2020-K12	20	20	125	25	20	23							
2525-M12	25	25	150	32	25	23							
3232-P12	32	32	170	40	32	23	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
2525-M15	25	25	150	32	25	28							
3232-P15	32	32	170	40	32	28							
3225-P19	32	32	170	40	32	41.5	SN□□1906□□	LV6N	VHX1027N	SS63N	SP6N	HW40L	LSPS6
4040-S19	40	40	250	50	40	41.5							
4040-S25	40	40	250	50	40	46							
4040-S25-6	40	40	250	50	40	46	SN□□2509□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
5050-T25-6	50	50	300	60	50	37.5	SN□□2509□□						

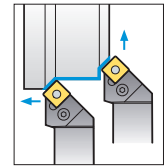
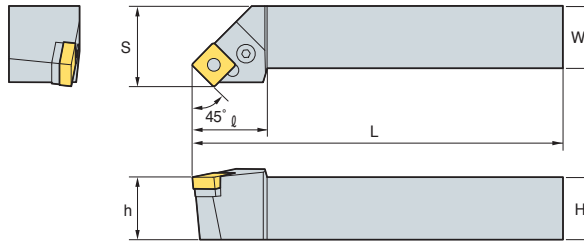
➔ Applicable inserts B50~B57



PSSNR/L



SN□□



45°

• R type insert (mm)

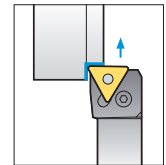
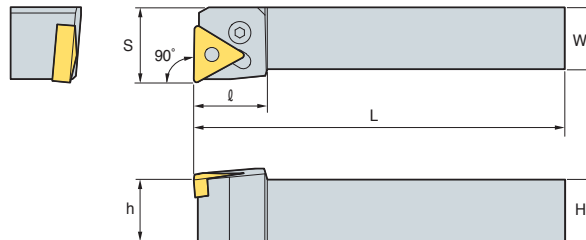
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PSSNR/L 1616-H09	16	16	100	20	16	25	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
2020-K12	20	20	125	25	20	30	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
2525-M12	25	25	150	32	25	36							
3225-P12	32	25	170	32	32	36							
3232-P12	32	32	170	40	32	40	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
2525-M15	25	25	150	32	25	36							
3232-P15	32	32	170	40	32	45							
3232-P19	32	32	170	40	32	41.5	SN□□1906□□	LV6N	VHX1027N	SS63N	SP6N	HW40L	LSPS6
4040-R19	40	40	200	50	40	41.5							
4040-S19	40	40	250	50	40	41.5							
4040-S25	40	40	250	50	40	48	SN□□2507□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
4040-S25-6	40	40	250	50	40	48	SN□□2509□□						

➔ Applicable inserts B50~B57

PTFNR/L



TN□□



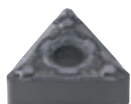
90°

• R type insert (mm)

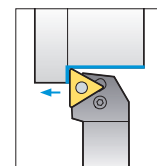
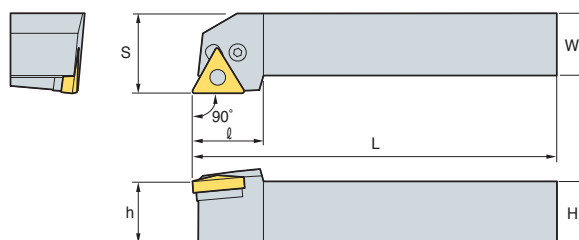
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PTFNR/L 1616-H16	16	16	100	20	16	20	TN□□1604□□	LV3	VHX0617	ST317	SP3	HW25L	LSPS3
2020-K16	20	20	125	25	20	20							
2525-M16	25	25	150	32	25	20							
2525-M22	25	25	150	32	25	25	TN□□2204□□	LV4	VHX0821	ST42	SP4	HW30L	LSPS4
3232-P22	32	32	170	40	32	25							
3232-P27	32	32	170	40	32	34							
4040-S27	40	40	250	50	40	34	TN□□2706□□	LV5	VHX0825	ST53	SP5	HW30L	LSPS5

➔ Applicable inserts B58~B65

PTGNR/L



TN□□



90°

• R type insert (mm)

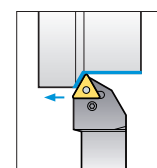
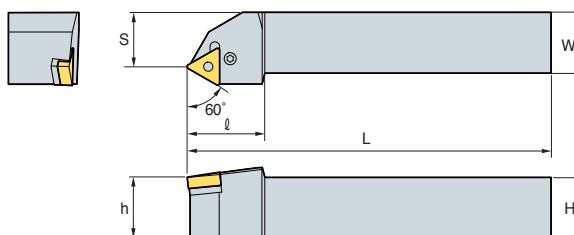
Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PTGNR/L 1212-F11	12	12	80	16	12	16	TN□□1103□□	LV2	VHX0509B	-	-	HW20L	-
1616-H11	16	16	100	20	16	18							
2020-K11	20	20	125	25	20	19							
2525-M11	25	25	150	32	25	20							
1616-H16	16	16	100	20	16	20	TN□□1604□□	LV3	VHX0617	ST317	SP3	HW25L	LSPS3
2020-K16	20	20	125	25	20	20							
2525-M16	25	25	150	32	25	20							
3232-P16	32	32	170	40	32	20							
2525-M22	25	25	150	32	25	28	TN□□2204□□	LV4	VHX0821	ST42	SP4	HW30L	LSPS4
3232-P22	32	32	170	40	32	28							
3232-P27	32	32	170	40	32	33	TN□□2706□□	LV5	VHX0825	ST53	SP5	HW30L	LSPS5
4040-S27	40	40	250	50	40	33							

Applicable inserts B58~B65

PTTNR/L



TN□□



60°

• R type insert (mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch
PTTNR/L 1616-H16	16	16	100	13	16	25	TN□□1604□□	LV3	VHX0617	ST317	SP3	HW25L	LSPS3
2020-K16	20	20	125	17	20	25							
2525-M16	25	25	150	22	25	32							
2525-M22	25	25	150	22	25	32	TN□□2204□□	LV4	VHX0821	ST42	SP4	HW30L	LSPS4

Applicable inserts B58~B65

PWLNR/L



WN□□

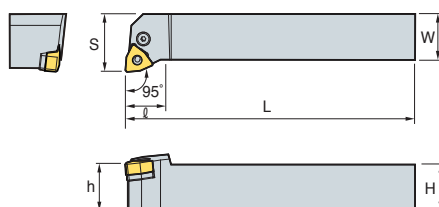


Fig. 1

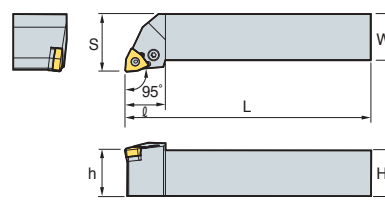
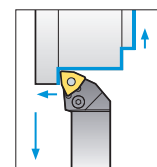


Fig. 2



95°

• R type insert (mm)

Designation	H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shim Pin Punch	Fig.
PWLNR/L 1616-H06	16	16	100	20	16	20	WN□□0604□□	LV3	VHX0617	SW317	SP3	HW25L	LSPS3	1
2020-K06	20	20	125	25	20	20								
2525-M06	25	25	150	32	25	20								
2020-K08	20	20	125	25	20	26	WN□□0804□□	LV4	VHX0821	SW42	SP4	HW30L	LSPS4	2
2525-M08	25	25	150	32	25	26								

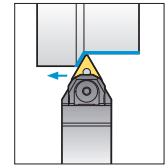
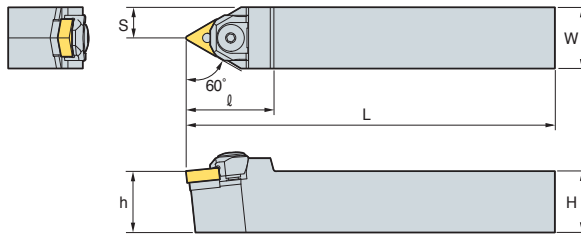
Applicable inserts B68~B72



WTENN



TN□□



60°

• R type insert (mm)

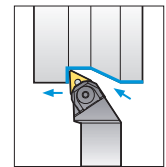
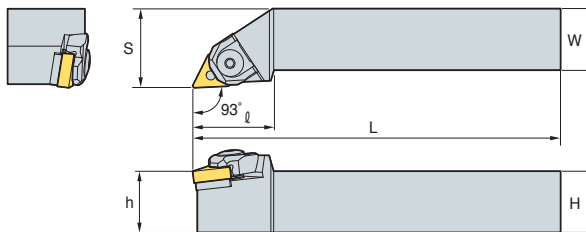
Designation	H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WTENN	2020-K16	20	20	125	10	20	36	TN□□1604□□	CMH6R6 MHX0626	ER04	ST32M	SP3M-1	N0407	HW30L
	2525-M16	25	25	150	12.5	25	36					SP3M		
	2525-M22	25	25	150	12.5	25	42					SP4M		
	3232-P22	32	32	170	16	32	42	TN□□2204□□	CMH6R1 MHX0626	ER04	ST43M	SP4M	N0508	HW30L

➡ Applicable inserts B58~B65

WTJNR/L



TN□□



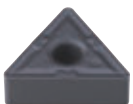
93°

• R type insert (mm)

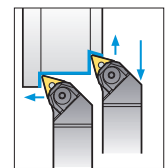
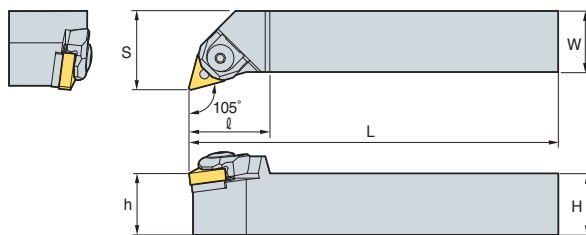
Designation	H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WTJNR/L	2020-K16	20	20	125	25	20	33	TN□□1604□□	CMH6R6 MHX0626	ER04	ST32M	SP3M-1	N0407	HW30L
	2525-M16	25	25	150	32	25	33					SP3M		
	3232-P16	32	32	170	40	32	33					SP3M		
	2525-M22	25	25	150	32	25	35	TN□□2204□□	CMH6R1 MHX0626	ER04	ST43M	SP4M	N0508	HW30L
	3232-P22	32	32	170	40	32	35							

➡ Applicable inserts B58~B65

WTXNR/L



TN□□



105°

• R type insert (mm)

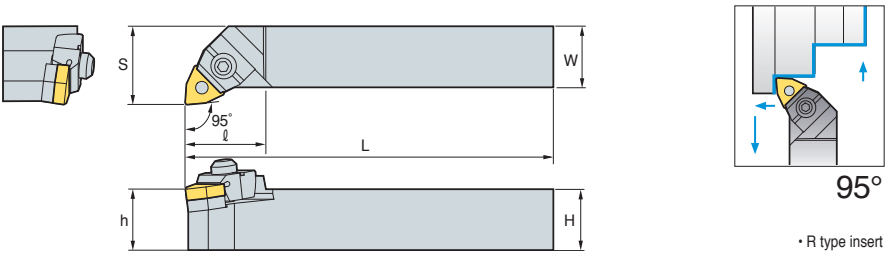
Designation	H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WTXNR/L	2020-K16	20	20	125	25	20	30	TN□□1604□□	CMH6R6 MHX0626	ER04	ST32M	SP3M-1	N0407	HW30L
	2525-M16	25	25	150	32	25	33					SP3M		
	3232-P16	32	32	170	40	32	33					SP3M		

➡ Applicable inserts B58~B65

WWLNR/L



WN□□



• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WWLNR/L 2020-K08	20	20	125	25	20	32	WN□□0804□□	CMH6R/L3				SP2M		
2525-M08	25	25	150	32	25	33		CMH6R2	MHX0630	CR05	SW43M		N0508	HW30L
3232-P08	32	32	170	40	32	33		CMH6R2				SP4M		HW40L

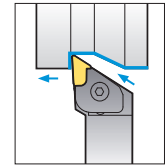
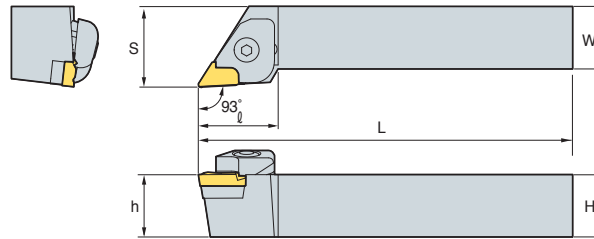
⚙ Applicable inserts B68~B72



CKJNR/L



KN□□



93°

• R type insert (mm)

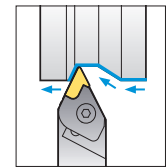
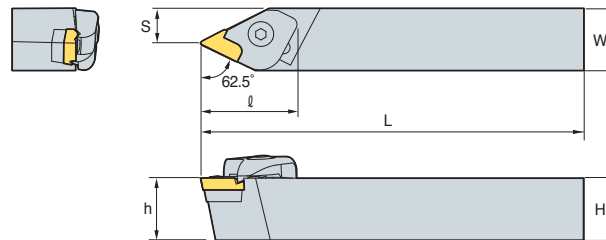
Designation		H	W	L	S	h	ℓ	Insert							
CKJNR	2020-K16	20	20	125	25	20	32	KN□□1604□□R							
	2525-M16	25	25	150	32	25	32								
	3225-M16	32	25	150	32	32	32								
	3225-P16	32	25	170	32	32	32								
	3232-P16	32	32	170	40	32	32								
	4040-R16	40	40	200	50	40	32								
CKJNL	2020-K16	20	20	125	25	20	32	KN□□1604□□L							
	2525-M16	25	25	150	32	25	32								
	3232-P16	32	32	170	40	32	32								
	4040-R16	40	40	200	50	40	32								

➔ Applicable inserts **B49**

CKNNR/L



KN□□



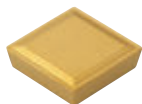
62.5°

• R type insert (mm)

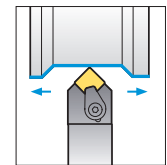
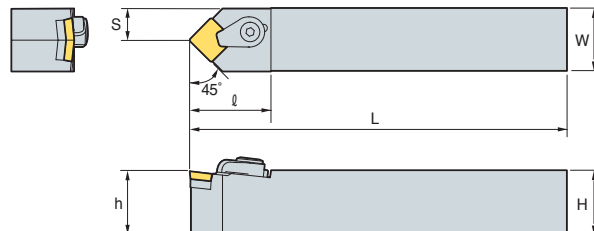
Designation		H	W	L	S	h	ℓ	Insert							
CKNNR	2525-M16	25	25	150	14.3	25	37	KN□□1604□□R	CTH6R1	CHX0625	SR3	SK33C	PN0515 SR4	SHX0310	HW20L HW40L
	3232-P16	32	32	170	16.8	32	37								
CKNNL	2525-M16	25	25	150	14.3	25	37	KN□□1604□□L	CTH6L1	CHX0625	SR3	SK33CL	PN0515 SR4	SHX0310	HW20L HW40L
	3232-P16	32	32	170	16.8	32	37								

➔ Applicable inserts **B49**

CSDPN



SP□R



45°

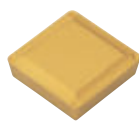
• R type insert (mm)

Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-Ring	Wrench
CSDPN	1616-H09	16	16	100	8	16	30	SP□R0903□□						
	2525-M12	25	25	150	12.5	25	35	SP□R1203□□						

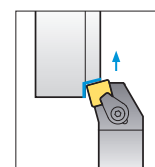
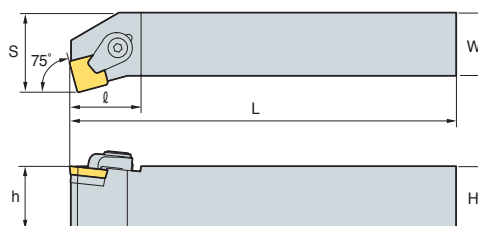
➔ Applicable inserts **B85~B86**

B Clamp on System

CSKPR/L



SP□R



75°

• R type insert (mm)

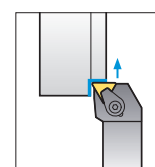
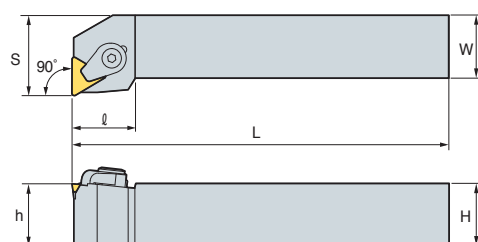
Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-Ring	Wrench
CSKPR/L 2525-M12	25	25	150	32	20	32	SP□R1203□□						

➔ Applicable inserts B85~B86

CTFPR/L



TP□R



90°

• R type insert (mm)

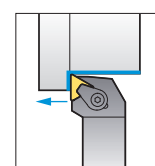
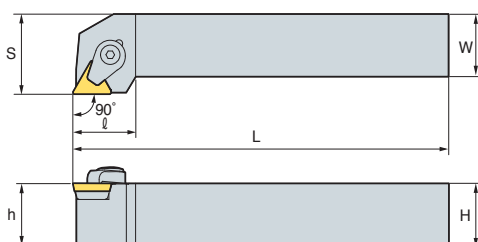
Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-Ring	Wrench
CTFPR/L 2020-K16	25	25	125	25	20	32	TP□R1603□□						
2525-M16	25	25	150	32	25	32							

➔ Applicable inserts B90~B93

CTGPR/L



TP□R



90°

• R type insert (mm)

Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-Ring	Wrench
CTGPR/L 1212-F11	12	12	80	16	12	20	TP□R1103□□						
1616-H11	16	16	100	20	16	20							
2020-K11	20	20	125	25	20	20							
2020-K16	20	20	125	25	20	25	TP□R1603□□						
2525-M16	25	25	150	32	25	25							
2525-M22	25	25	150	32	25	32							
3232-P22	32	32	170	40	32	32	TP□R2204□□						

➔ Applicable inserts B90~B93



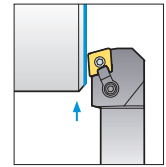
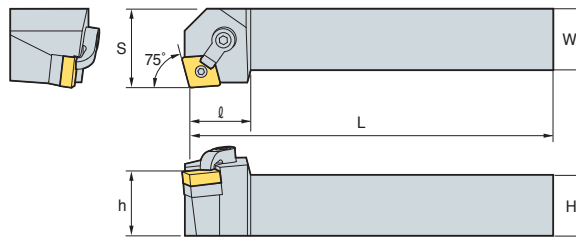
B

Turning

MCKNR/L



CN□□



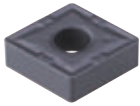
75°

• R type insert
(mm)

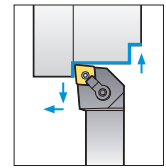
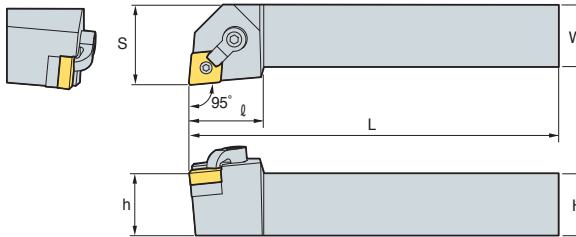
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCKNR/L 2020-K12	20	20	125	25	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
2525-M12	25	25	150	32	25	32						
3232-P12	32	32	170	40	32	32						

Applicable inserts B36~B42

MCLNR/L



CN□□



95°

• R type insert
(mm)

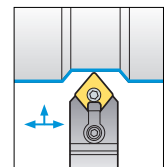
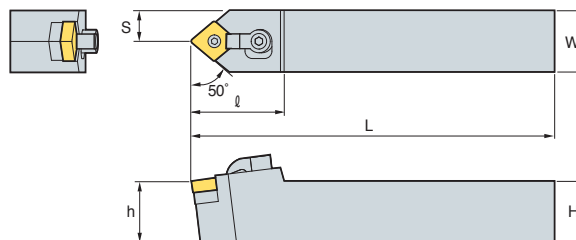
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCLNR/L 1616-H09	16	16	100	20	16	25	CN□□0903□□	CDH7N	DHA10-32-19	SC32D	SP3DS	HW23.8L HW19.8L
2020-K09	20	20	125	25	20	25						
2525-M09	25	25	150	32	25	25						
2020-K12	20	20	125	25	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
2525-M12	25	25	150	32	25	32						
3225-P12	32	25	170	32	32	32						
3232-P12	32	32	170	40	32	32	CN□□1606□□	CDH8N	DHA5/16-32	SC53D	SP5D	HW39.7L HW31.8L
2525-M16	25	25	150	32	25	33						
3232-P16	32	32	170	40	32	33						
4040-S16	40	40	250	50	40	33	CN□□1906□□	CDH8N	DHA5/16-32	SC63D	SP6D	HW39.7L HW35.7L
2525-M19	25	25	150	32	25	38						
3232-P19	32	32	170	40	32	38						
4040-S19	40	40	250	50	40	38	CN□□2507□□	CDH8N3	DHA3/8-35	SC84D	SP8D	HW39.7L HW47.6L
4040-S25	40	40	250	50	40	38						

Applicable inserts B36~B42

MCMNN



CN□□



50°

• R type insert
(mm)

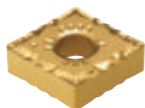
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCMNN 2020-K12	20	20	125	10	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
2525-M12	25	25	150	12.5	25	32						
3232-P12	32	32	170	16	32	32						
2525-M16	25	25	150	12.5	25	40	CN□□1606□□	CDH8N	DHA5/16-32	SC53D	SP5D	HW39.7L HW31.8L
3232-P16	32	32	170	16	32	40						
3232-P19	32	32	170	16	32	40						
4040-S19	40	40	250	20	40	32	CN□□1906□□	CDH8N	DHA5/16-32	SD63D	SP6D	HW39.7L HW35.7L

Applicable inserts B36~B42

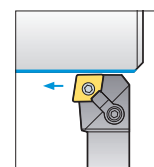
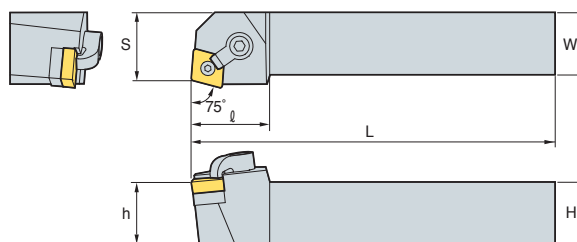
Turning


B

MCRNR/L



CN□□



75°

• R type insert (mm)

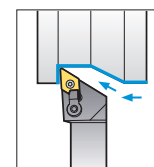
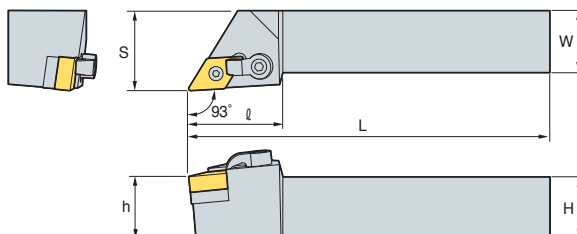
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCRNR/L 2020-K12	20	20	125	22	20	32	CN□□1204□□					
2525-M12	25	25	150	27	25	32						
2525-M16	25	25	150	27	25	33	CN□□1606□□					
3232-P16	32	32	170	35	32	33						
3232-P19	32	32	170	35	32	38	CN□□1906□□					
4040-S19	40	40	250	43	40	38						

➔ Applicable inserts B36~B42

MDJNR/L



DN□□



93°

• R type insert (mm)

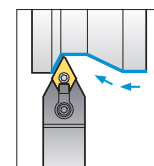
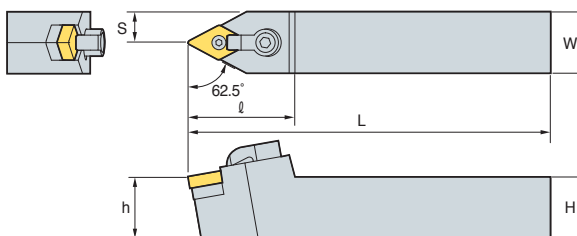
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MDJNR/L 2020-K11	20	20	125	25	20	32	DN□□1104□□					
2525-M11	25	25	150	32	25	32						
2020-K15-3	20	20	125	25	20	36	DN□□1504□□					
2525-M15-3	25	25	150	32	25	36						
3232-P15-3	32	32	170	40	32	36	DN□□1506□□					
2020-K15	20	20	125	25	20	36						
2525-M15	25	25	150	32	25	36						
3232-P15	32	32	170	40	32	36						

➔ Applicable inserts B43~B48

MDNNN



DN□□



62.5°

(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MDNNN 2525-M15-3	25	25	150	12.5	25	41	DN□□1504□□					
2525-M15	25	25	150	12.5	25	41	DN□□1506□□					

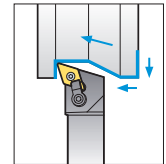
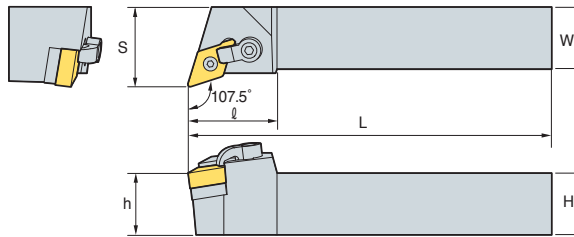
➔ Applicable inserts B43~B48



MDQNR/L



DN□□



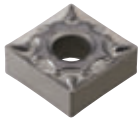
107.5°

• R type insert (mm)

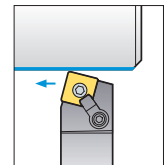
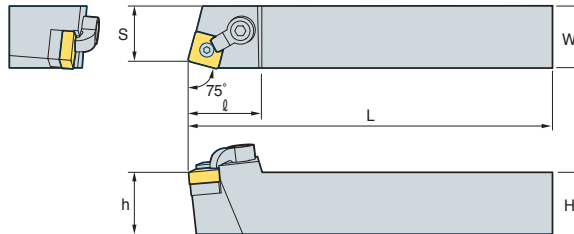
Designation		H	W	L	S	h	ℓ	Insert	 Clamp	 Clamp Screw	 Shim	 Shim Pin	 Wrench
MDQNR/L	2525-M15-3	25	25	150	32	25	36	DN□□1504□□	CDH6N	DHA1/4-25	SD43D	SP4D	HW31.8L HW23.8L
	3232-P15-3	32	32	170	40	32	36						
	2525-M15	25	25	150	32	25	36	DN□□1506□□	CDH6N	DHA1/4-25	SD43D	SP4DL	HW31.8L HW23.8L
	3232-M15	32	32	170	40	32	36						

→ Applicable inserts B43~B48

MSBNR/L



SN□□



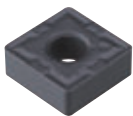
75°

• R type insert (mm)

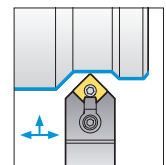
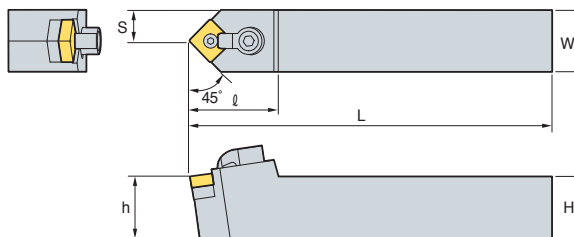
Designation		H	W	L	S	h	ℓ	Insert					
MSBNR/L	2020-K12	20	20	125	17	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	22	25	32						
	2525-M15	25	25	150	22	25	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
	3232-P15	32	32	170	22	32	35						
	3232-P19	32	32	170	27	32	40	SN□□1906□□	CDH8N	DHA5/16-32	SS63D	SP6D	HW39.7L HW35.7L
	4040-S19	40	40	250	35	40	40						

→ Applicable inserts B50~B57

MSDNN



SN□□



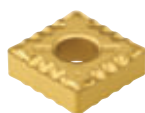
45°

(mm)

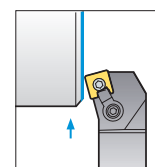
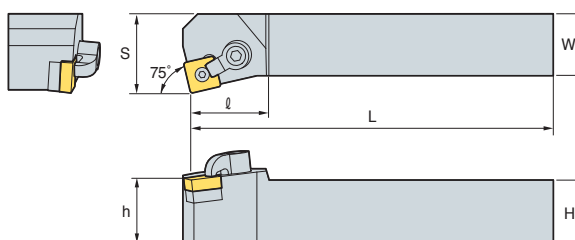
Designation		H	W	L	S	h	ℓ	Insert	 Clamp	 Clamp Screw	 Shim	 Shim Pin	 Wrench
MSDNN	1616-H09	16	16	100	8	16	28	SN□□0903□□	 CDH7N	 DHA10-32-19	 SS32D	 SP3DS	HW19.8L HW23.8L
	2020-K09	20	20	125	10	20	28						
	2020-K12	20	20	125	10	20	32						
	2525-M12	25	25	150	12.5	25	32	SN□□1204□□	 CDH8N1	 DHA5/16-32	 SS43D	 SP4D	HW39.7L HW23.8L
	3225-P12	32	25	170	12.5	32	32						
	2525-M15	25	25	150	12.5	25	35						
	3225-P15	32	25	170	12.5	32	35	SN□□1506□□	 CDH8N	 DHA5/16-32	 SS53D	 SP5D	HW39.7L HW31.8L
	3232-P15	32	32	170	16	32	35						
	4040-S15	40	40	250	20	40	35						
	3232-P19	32	32	170	16	32	42	SN□□1906□□	 CDH8N	 DHA5/16-32	 SS63D	 SP6D	HW39.7L HW35.7L
4040-S19	40	40	250	20	40	42							

→ Applicable inserts B50~B57

MSKNR/L



SN□□



75°

• R type insert
(mm)

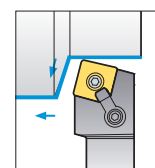
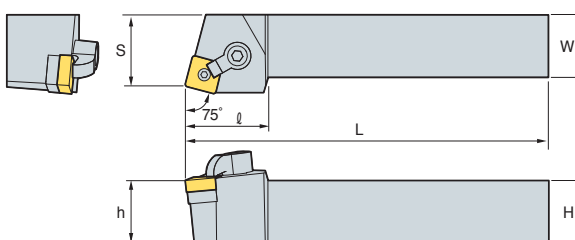
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSKNR/L 1616-H09	16	16	100	20	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
2020-K09	20	20	125	22	20	28						
2020-K12	20	20	125	25	20	32						
2525-M12	25	25	150	32	25	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
3225-P12	32	25	170	32	32	32						
2525-M15	25	25	150	32	25	35						
3232-P15	32	32	170	40	32	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
3232-P19	32	32	170	40	32	40						
4040-S19	40	40	250	50	40	40						
4040-S25	40	40	250	50	40	40	SN□□2507□□	CDH8N3	DHA3/8-35	SS84D	SP8D	HW47.6L HW39.7L

➔ Applicable inserts B50~B57

MSRNR/L



SN□□



75°

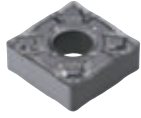
• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSRNR/L 1616-H09	16	16	100	17	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
2020-K09	20	20	125	22	20	28						
2020-K12	20	20	125	22	20	32						
2525-M12	25	25	150	27	25	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
2525-M15	25	25	150	27	25	35						
3225-P15	32	25	170	27	32	40						
3232-P15	32	32	170	35	32	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
3232-P19	32	32	170	35	32	40						
4040-S19	40	40	250	43	40	40						
4040-S25	40	40	250	43	40	40	SN□□2507□□	CDH8N3	DHA3/8-35	SS84D	SP8D	HW47.6L HW39.7L

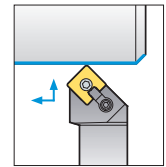
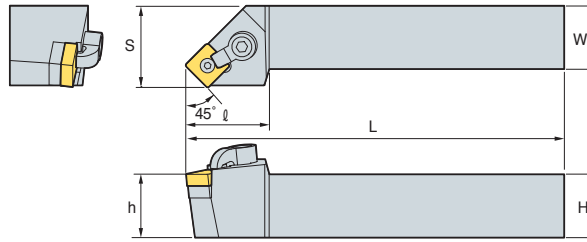
➔ Applicable inserts B50~B57



MSSNR/L



SN□□



45°

• R type insert
(mm)

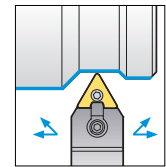
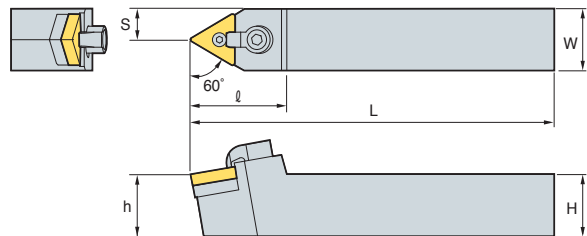
Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSSNR/L 1616-H09	16	16	100	20	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
2020-K09	20	20	125	25	20	28						
2020-K12	20	20	125	25	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
2525-M12	25	25	150	32	25	32						
2525-M15	25	25	150	32	25	35	SN□□1506□□	CDH8N1	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
3232-P15	32	32	170	40	32	35						
3232-P19	32	32	170	40	32	40	SN□□1906□□	CDH8N1	DHA5/16-32	SS63D	SP6D	HW39.7L HW35.7L
4040-S19	40	40	250	50	40	40						

Applicable inserts B50~B57

MTENN



TN□□



60°

(mm)

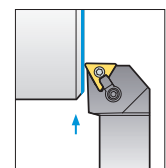
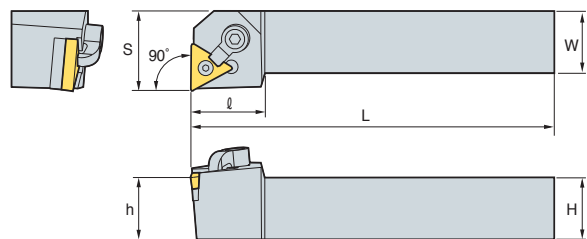
Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTENN 2020-K16	20	20	125	10	20	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
2525-M16	25	25	150	12.5	25	32						
2525-M22	25	25	150	12.5	25	35	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
3232-P27	32	32	170	16	32	35	TN□□2706□□	CDH8N1	DHA5/16-32	ST53D	SP5D	HW39.7L HW31.8L
4040-S33	40	40	250	20	40	40	TN□□3307□□	CDH8N	DHA5/16-32	ST63D	SP6DL	HW39.7L HW35.7L

Applicable inserts B58~B65

MTFNR/L



TN□□



90°

• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTFNR/L 1616-H16	16	16	100	20	16	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
2020-K16	20	20	125	25	20	32						
2525-M16	25	25	150	32	25	32						
2525-M22	25	25	150	32	25	32						
3232-P22	32	32	170	40	32	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
4040-S22	40	40	250	50	40	32						
3232-P27	32	32	170	40	32	35	TN□□2706□□	CDH8N1	DHA5/16-32	ST53D	SP5D	HW39.7L HW31.8L
4040-S27	40	40	250	50	40	35						
4040-S33	40	40	250	50	40	40	TN□□3307□□	CDH8N	DHA5/16-32	ST63D	SP6DL	HW39.7L HW35.7L

Applicable inserts B58~B65

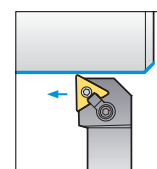
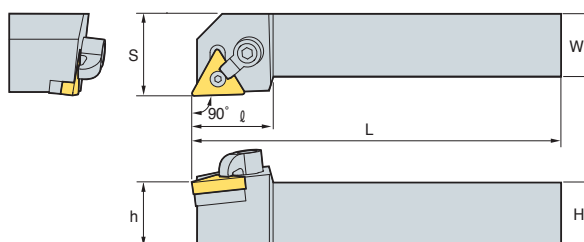
Turning


B

MTGNR/L



TN□□



90°

• R type insert
(mm)

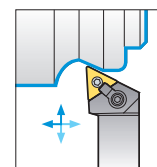
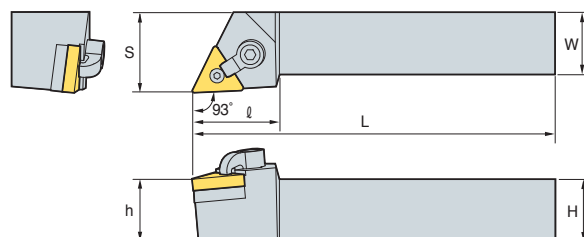
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTGNR/L 1616-H16	16	16	100	20	16	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
2020-K16	20	20	125	25	20	32						
2525-M16	25	25	150	32	25	32						
2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
3232-P22	32	32	170	40	32	32						
3232-P27	32	32	170	40	32	35	TN□□2706□□	CDH8N1	DHA5/16-32	ST53D	SP5D	HW39.7L HW31.8L
4040-S27	40	40	250	50	40	35						
4040-S33	40	40	250	50	40	40	TN□□3307□□	CDH8N	DHA5/16-32	ST63D	SP6DL	HW39.7L HW35.7L

Applicable inserts B58~B65

MTJNR/L



TN□□



93°

• R type insert
(mm)

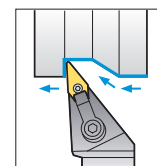
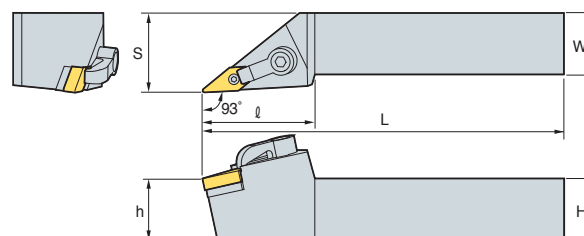
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTJNR/L 2020-K16	20	20	125	25	20	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
2525-M16	25	25	150	32	25	32						
2525-M22	25	25	150	32	25	32						
3232-P22	32	32	170	40	32	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
3232-P27	32	32	170	40	32	35						
4040-S27	40	40	250	50	40	35	TN□□2706□□	CDH8N1	DHA5/16-32	ST53D	SP5D	HW39.7L HW31.8L
4040-S33	40	40	250	50	40	40						
	40	40	250	50	40	40	TN□□3307□□	CDH8N	DHA5/16-32	ST63D	SP6DL	HW39.7L HW35.7L

Applicable inserts B58~B65

MVJNR/L



VN□□



93°

• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MVJNR/L 2020-K16	20	20	125	25	20	44	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
2525-M16	25	25	150	32	25	45.5						
3232-P16	32	32	170	40	32	55.5						
2525-M22	25	25	150	32	25	56	VN□□2204□□	CDH8N2	DHA5/16-32	SV43D	SP4D	HW39.7L HW23.8L
3232-P22	32	32	170	40	32	55						
4040-S22	40	40	250	50	40	65						

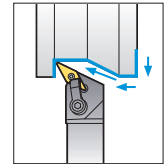
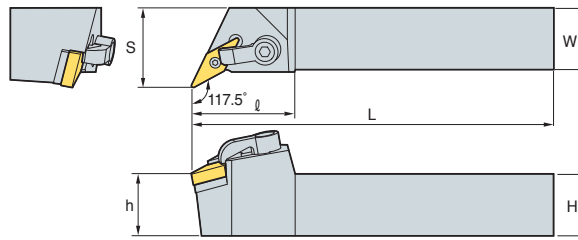
Applicable inserts B66~B67



MVQNR/L



VN□□



117.5°

• R type insert
(mm)

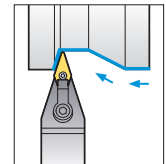
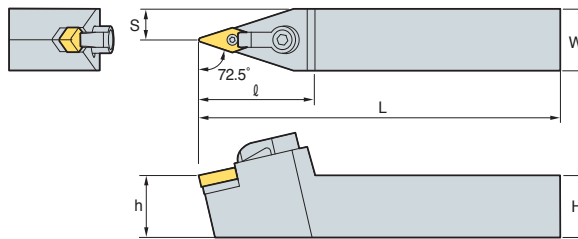
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MVQNR/L 2020-K16	20	20	125	25	20	42	VN□□1604□□					
2525-M16	25	25	150	32	25	42						
3232-P16	32	32	170	40	32	37						
								CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L

Applicable inserts B66~B67

MVVNN



VN□□



72.5°

(mm)

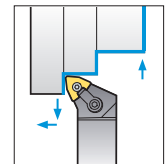
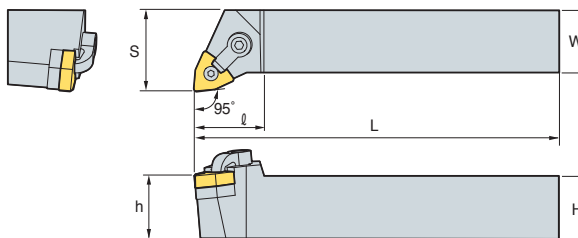
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MVVNN 2020-K16	20	20	125	25	20	42	VN□□1604□□					
2525-M16	25	25	150	32	25	42						
								CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L

Applicable inserts B66~B67

MWLNR/L



WN□□



95°

• R type insert
(mm)

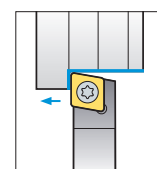
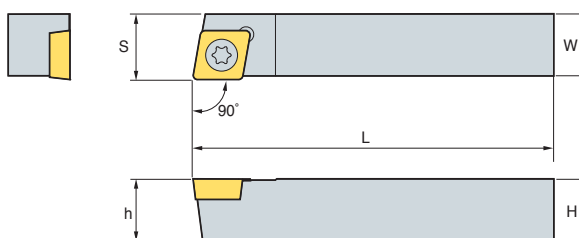
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MWLNR/L 2020-K06	20	20	125	25	20	32	WN□□0604□□					
2525-M06	25	25	150	32	25	32						
3232-P06	32	32	170	40	32	32						
2020-K08	20	20	125	25	20	32	WN□□0804□□					
2525-M08	25	25	150	32	25	32						
3232-P08	32	32	170	40	32	32						
								CDH7N	DHA10-32-19	SW32D	SP3D	HW19.8L HW23.8L
								CDH6N	DHA1/4-21	SW43D	SP4D	HW31.8L HW23.8L

Applicable inserts B68~B72

SCACR/L



CC□T



90°

• R type insert
(mm)

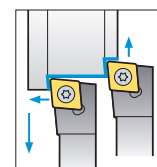
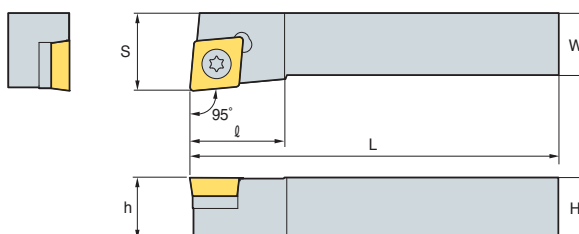
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SCACR/L 1010-E06	10	10	70	10.5	10	CC□T0602□□	FTKA02565	-	-	TW07P
1212-F09	12	12	80	12.5	12	CC□T09T3□□	FTKA03508	-	-	TW15P

➔ Applicable inserts B73~B77, B103

SCLCR/L



CC□T



95°

• R type insert
(mm)

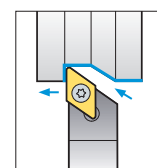
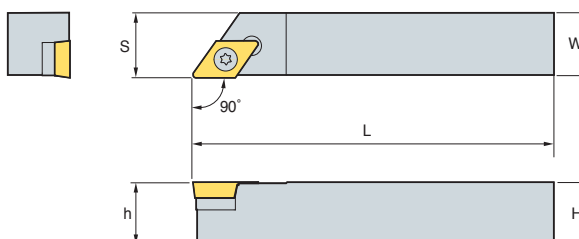
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
SCLCR/L 0808-D06	08	08	60	10	08	10	CC□T0602□□	FTKA02565	-	-	TW07P
1010-E06	10	10	70	16	10	10					
1212-F09	12	12	80	20	12	16					
1616-H09	16	16	100	20	16	16	CC□T09T3□□	FTGA03508	-	-	TW15P
2020-K09	20	20	125	25	20	16					
2525-M09	25	25	150	32	25	26	CC□T09T3□□	FTGA0411F	SC42S	SHXN0610F	TW15P, HW40L
2020-K12	20	20	125	25	20	25	CC□T1204□□	FTGA03508	-	-	TW15P
2525-M12	25	25	150	32	25	26	CC□T1204□□	FTGA0411F	SC42S	SHXN0610F	TW15P, HW40L

➔ Applicable inserts B73~B77, B103

SDACR/L



DC□T



90°

• R type insert
(mm)

Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SDACR/L 1010-E07	10	10	70	10.5	10	DC□T0702□□	FTKA02565	-	-	TW07P
1212-F11	12	12	80	12.5	12	DC□T11T3□□	FTKA03508	-	-	TW15P
1616-H11	16	16	100	16.5	16		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L

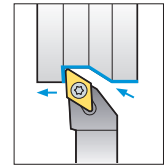
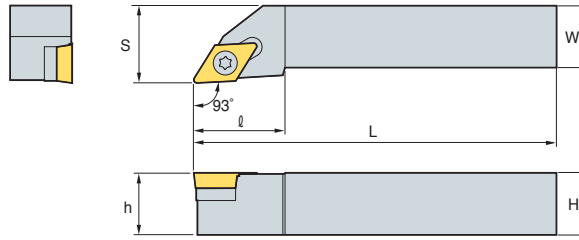
➔ Applicable inserts B79~B82, B104



SDJCR/L



DC□T



93°

• R type insert
(mm)

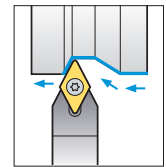
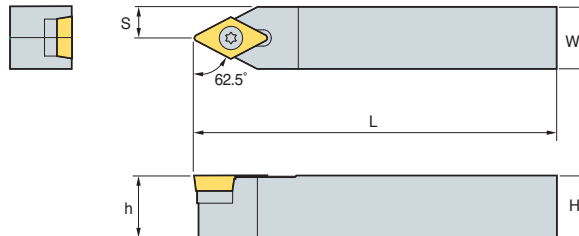
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
SDJCR/L 1010-E07	10	10	70	12	10	15	DC□T0702□□	FTKA02565	-	-	TW07P
1212-F07	12	12	80	16	12	15					
1616-H07	16	16	100	20	16	18					
2020-K07	20	20	125	25	20	15					
1212-F11	12	12	80	16	12	15	DC□T11T3□□	FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
1616-H11	16	16	100	20	16	24					
2020-K11	20	20	125	25	20	24					
2525-M11	25	25	150	32	25	29					

→ Applicable inserts B79~B82, B104

SDNCN



DC□T



62.5°

(mm)

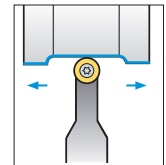
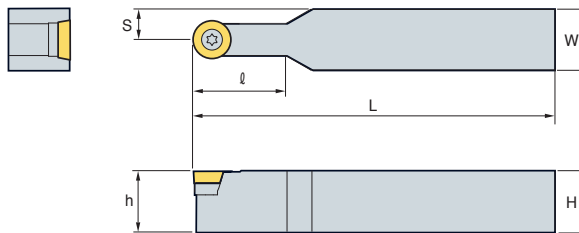
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SDNCN 1010-E07	10	10	70	5	10	DC□T0702□□	FTKA02565	-	-	TW07P
1212-F07	12	12	80	6	12					
1212-H11	12	12	100	6	12	DC□T11T3□□	FTGA03508	-	-	TW15P
1616-H11	16	16	100	8	16	DC□T11T3□□	FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
2020-K11	20	20	125	10	20					
2025-M11	25	25	150	12.5	25	DC□T11T3□□	FTGA03512	SD32S	SHXN0509F	TW25P, HW35L

→ Applicable inserts B79~B82, B104

SRDCN



RC□T



(mm)

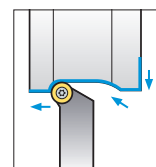
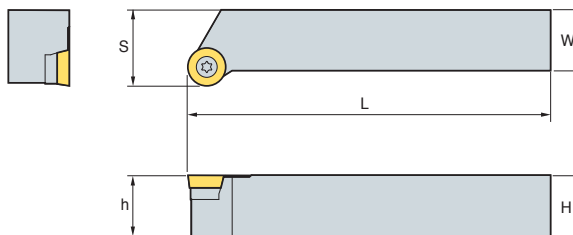
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
SRDCN 1010-E06	10	10	70	5	10	10	RC□T0602M0	FTKA02565	-	-	TW07P
1212-F06	12	12	80	6	12	12					
1616-H06	16	16	100	8	16	12					
2525-M06	25	25	150	12.5	25	20					
1616-H08	16	16	100	8	16	16	RC□T0803M0	FTNA0307	-	-	TW09P
2020-K08	20	20	125	10	20	20					
2525-M08	25	25	150	12.5	25	20					
1616-H10	16	16	100	8	16	25	RC□T1003M0	FTKA03511A	SR10S	SHXN0509F	TW15P HW35L
2020-K10	20	20	125	10	20	25					
2525-M10	25	25	150	12.5	25	25	RC□T1204M0	FTGA03512	SR12S	SHXN0509F	TW15P HW35L
2020-K12	20	20	125	10	20	28					
2525-M12	25	25	150	12.5	25	28					

→ Applicable inserts B83, B105

SRGCR/L



RC□T

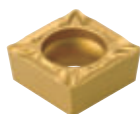


• R type insert
(mm)

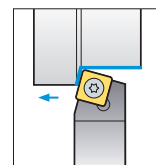
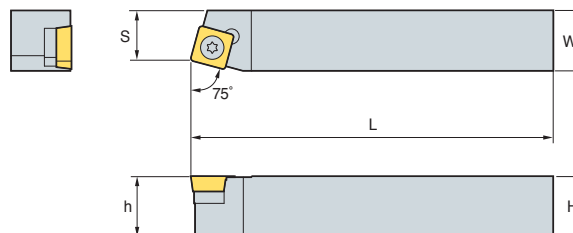
Designation		H	W	L	S	h	Insert	 Screw	 Shim	 Shim Screw	 Wrench
SRGCR/L	1010-E06	10	10	70	12	10	RC□T0602M0	FTKA02565	-	-	TW07P
	1212-F06	12	12	80	16	12					
	1616-H06	16	16	100	20	16					
	1616-H08	16	16	100	20	16	RC□T0803M0	FTNA0307	-	-	TW09P
	2020-K08	20	20	125	25	20					
	2525-M08	25	25	150	32	25					
	1616-H10	16	16	100	20	16	RC□T1003M0	FTKA03511A	SR10S	SHXN0509F	TW15P HW35L
	2020-K10	20	20	125	25	20					
	2525-M10	25	25	150	32	25					
	2020-K12	20	20	125	25	20	RC□T1204M0	FTGA03512	SR12S	SHXN0509F	TW15P HW35L
2525-M12	25	25	150	32	25						

➔ Applicable inserts B83, B105

SSBCR/L



SC□T



75°

• R type insert
(mm)

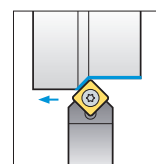
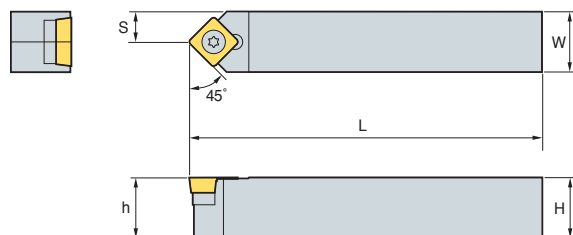
Designation		H	W	L	S	h	Insert	 Screw	 Shim	 Shim Screw	 Wrench
SSBCR/L	1212-F09	12	12	80	11	12	SC□T09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	13	16		FTGA03512	SS32S	SHXN0509F	TW15P, HW35L
	2020-K12	20	20	125	17	20	SC□T1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L

➔ Applicable inserts B84, B106

SSDCN



SC□T



45°

(mm)

Designation		H	W	L	S	h	Insert				
SSDCN	1212-F09	12	12	80	6	12	SC□T09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	8	16		FTGA03512	SS32S	SHXN0509F	TW15P, HW35L

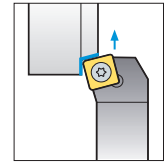
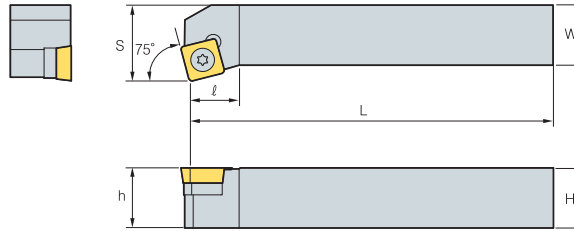
➔ Applicable inserts B84, B106



SSKCR/L



SC□T



75°

• R type insert (mm)

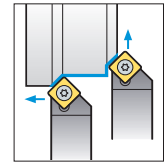
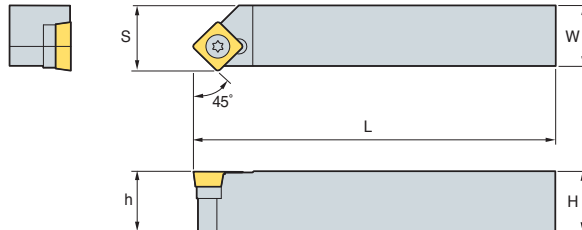
Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Wrench
SSKCR/L 1616-H09	16	16	100	20	16	13	SC□T09T3□□	FTGA03512	SS32S	SHXN0509F	TW15P, HW35L

➔ Applicable inserts B84, B106

SSSCR/L



SC□T



45°

• R type insert (mm)

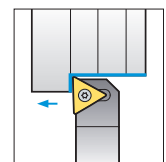
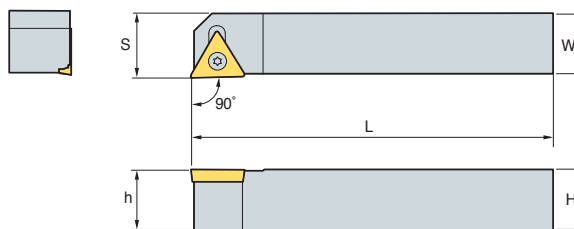
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SSSCR/L 1616-H09	16	16	100	17	16	SC□T09T3□□	FTGA03512	SS32S	SHXN0509F	TW15P, HW35L
2020-K12	20	20	125	21	20	SC□T1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L
2525-M12	25	25	150	26	25	SC□T1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L

➔ Applicable inserts B84, B106

STACR/L



TC□T



90°

• R type insert (mm)

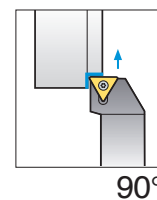
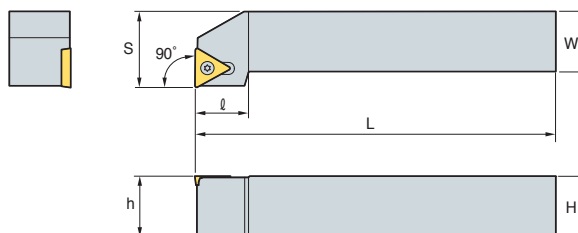
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
STACR/L 1010-E09	10	10	70	10.5	10	TC□T0902□□	FTKA02206	-	-	TW06P
1212-F11	12	12	80	12.5	12	TC□T1102□□	FTKA02565	-	-	TW07P

➔ Applicable inserts B88~B89, B107

STFCR/L



TC□T



90°

• R type insert (mm)

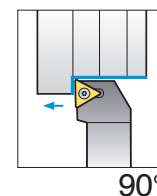
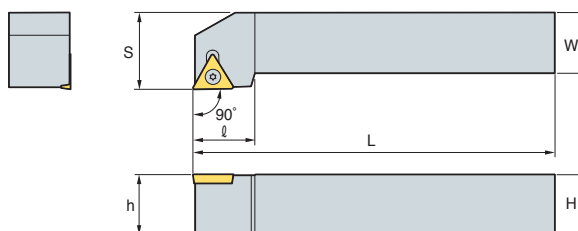
Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Wrench
STFCR/L 1010-E09	10	10	70	12	10	10	TC□T0902□□	FTKA02206	-	-	TW06P
1212-F11	12	12	80	16	12	14	TC□T1102□□	FTKA02565	-	-	TW07P
1616-H11	16	16	100	20	16	14	TC□T16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
1616-H16	16	16	100	20	16	19					
2020-K16	20	20	125	25	20	19					
2525-M16	25	25	150	32	25	25.2	TC□T16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L

➔ Applicable inserts B88~B89, B107

STGCR/L



TC□T



90°

• R type insert (mm)

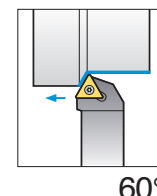
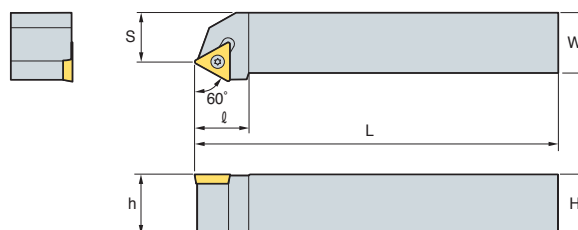
Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Wrench
STGCR/L 0808-D09	08	08	60	10	08	11	TC□T0902□□	FTKA02206	-	-	TW06P
1010-E09	10	10	70	12	10	11	TC□T1102□□	FTKA02565	-	-	TW07P
1212-F11	12	12	80	16	12	14					
1616-H11	16	16	100	20	16	16					
1616-H16	16	16	100	20	16	21	TC□T16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	25	20	21					
2525-M16	25	25	150	32	25	21					

➔ Applicable inserts B88~B89, B107

STTCR/L



TC□T



60°

• R type insert (mm)

Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Wrench
STTCR/L 1616-H11	16	16	100	13	16	14	TC□T1102□□	FTKA02565	-	-	TW07P
1616-H16	16	16	100	13	16	19	TC□T16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	17	20	19					

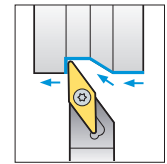
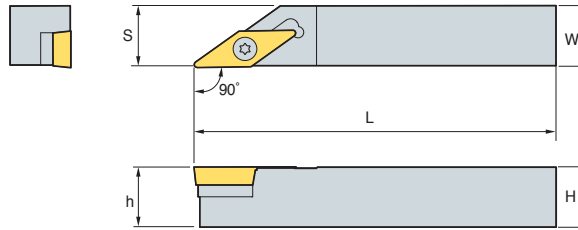
➔ Applicable inserts B88~B89, B107



SVABR/L



VB□T



90°

• R type insert (mm)

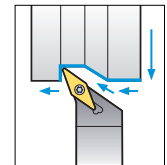
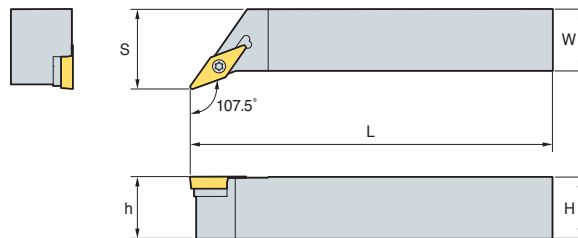
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SVABR/L 1616-H16	16	16	100	16.5	16	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	20.5	20					

→ Applicable inserts B94~B96, B108

SVHBR/L



VB□T



107.5°

• R type insert (mm)

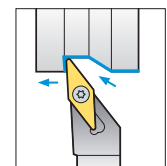
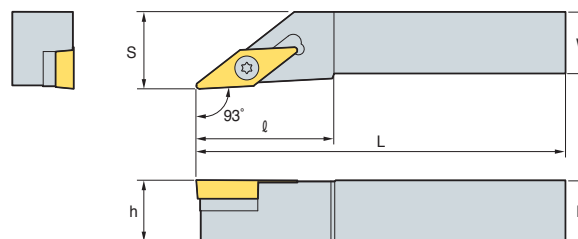
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SVHBR/L 2525-M16	25	25	150	32	25	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
3225-P16	32	25	170	32	32					

→ Applicable inserts B94~B96, B108

SVJBR/L



VB□T



93°

• R type insert (mm)

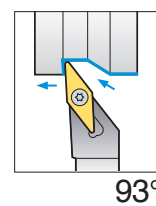
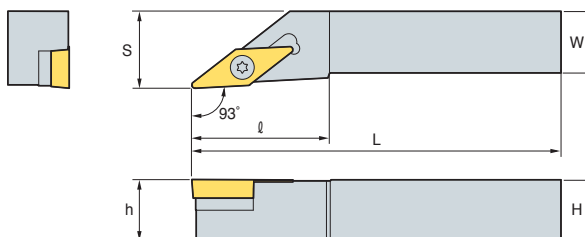
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
SVJBR/L 1212-F11	12	12	80	16	12	27	VB□T1102□□	FTKA02565	-	-	TW07P
1616-H11	16	16	100	20	16	27					
2020-K11	20	20	125	25	20	27					
1616-H16	16	16	100	20	16	36	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	25	20	41					
2525-M16	25	25	150	32	25	41	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
3225-P16	32	25	170	32	32	55					
3232-P16	32	32	170	40	33	55					

→ Applicable inserts B94~B96, B108

SVJCR/L



VC□T



93°

• R type insert (mm)

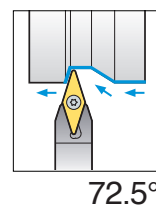
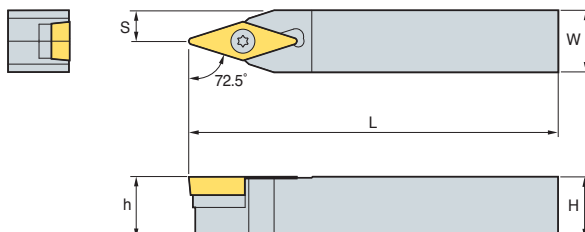
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
SVJCR/L 1212-F11	12	12	80	16	12	25	VC□T1103□□	FTKA02565	-	-	TW07P
1616-H11	16	16	100	20	16	25					
2020-K11	20	20	125	25	20	25					
1212-F13	12	12	80	16	12	32	VC□T1303□□	FTKA0307	-	-	TW09P
1616-H13	16	16	100	20	16	32					
2020-K13	20	20	125	25	20	32					
1616-H16	16	16	100	20	16	40	VC□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	25	20	40					
2525-M16	25	25	150	32	25	40					

➔ Applicable inserts B97~B99, B109

SVVBN



VB□T



72.5°

(mm)

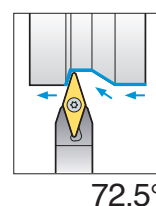
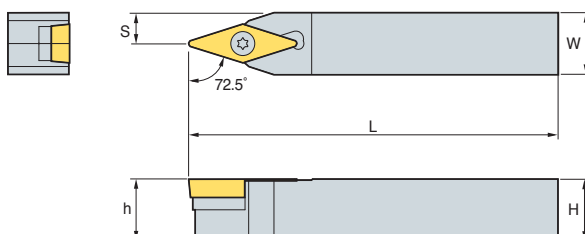
Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SVVBN 1212-F11	12	12	80	6	12	VB□T1102□□	FTKA02565	-	-	TW07P
1616-H11	16	16	100	8	16					
2020-K11	20	20	125	10	20					
1616-H16	16	16	100	8	16	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	10	20					
2525-M16	25	25	150	12.5	25					
3225-P16	32	25	170	12.5	32					

➔ Applicable inserts B94~B96, B108

SVVCN



VC□T



72.5°

(mm)

Designation	H	W	L	S	h	Insert	Screw	Shim	Shim Screw	Wrench
SVVCN 1212-F11	12	12	80	6	12	VC□T1103□□	FTKA02565	-	-	TW07P
1616-H11	16	16	100	8	16					
2020-K11	20	20	125	10	20					
1212-F13	12	12	80	6	12	VC□T1303□□	FTNA0307	-	-	TW09P
1616-H13	16	16	100	8	16					
2020-K13	20	20	125	10	20					
1616-H16	16	16	100	8	16	VC□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
2020-K16	20	20	125	10	20					
2525-M16	25	25	150	12.5	25					

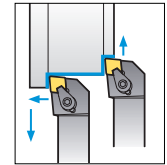
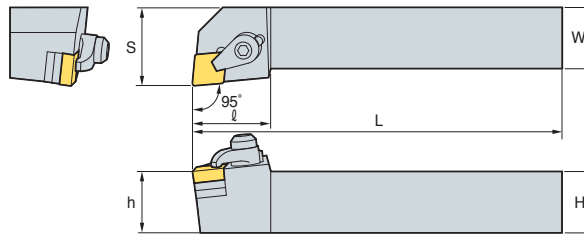
➔ Applicable inserts B97~B99, B109



CCLNR/L



CN□N



95°

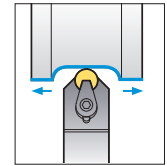
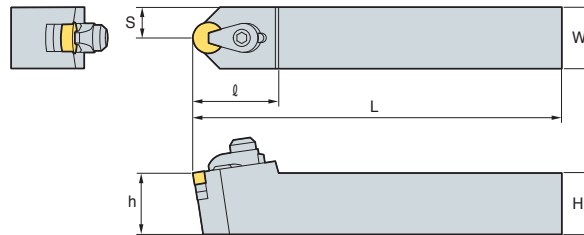
• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CCLNR/L 2525-M12C	25	25	150	32	25	32	CN□N1204□□ CN□N1207□□	CH6R3	MHX0630 SHX0310	SC42CC	SR3	HW40L HW20L

CRDNN



RN□N



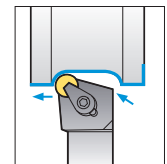
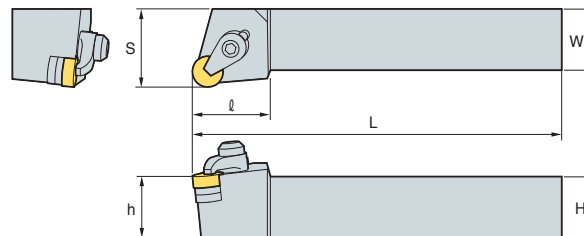
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CRDNN 2525-M12C	25	25	150	12.5	25	35	RN□N1204□□ RN□N1207□□	CH6R3	MHX0630 SHX0310	SC42CC	SR3	HW40L HW20L

CRGNR/L



RN□N

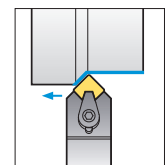
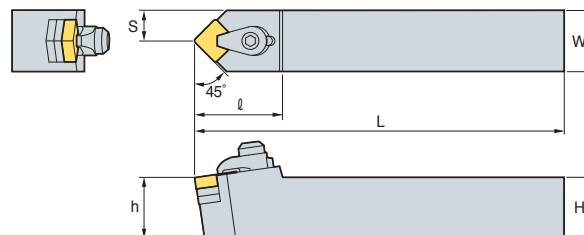

• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CRGNR/L 2525-M12C	25	25	150	32	25	32	RN□N1204□□ RN□N1207□□	CH6R3	MHX0630 SHX0310	SC42CC	SR3	HW40L HW20L

CSDNN



SN□N



45°

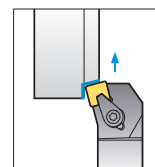
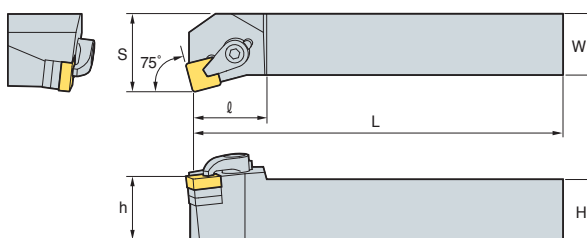
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CSDNN 2525-M12C	25	25	125	12.5	25	35	SN□N1204□□ RN□N1207□□	CH6R3	MHX0630 SHX0310	SS42CC	SR3	HW40L HW20L

CSKNR/L



SN□N



75°

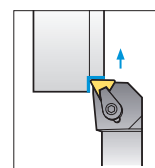
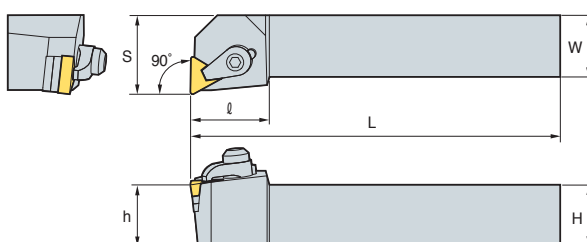
• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CSKNR/L 2525-M12C	25	25	150	32	25	28	SN□N1204□□ SN□N1207□□	CH6R3	MHX0630 SHX0310	SS42CC	SR3	HW40L HW20L

CTFNR/L



TN□N



90°

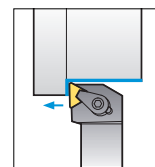
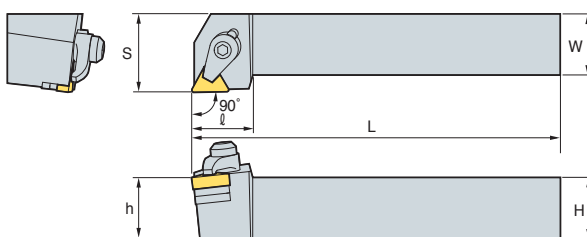
• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CTFNR/L 2525-M16C	25	25	150	32	25	32	TN□N1604□□ TN□N1607□□	CH6R3	MHX0630 SHX0310	ST32CC	SR3	HW40L HW20L

CTGNR/L



TN□N



90°

• R type insert
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CTGNR/L 2525-M16C	25	25	150	32	25	32	TN□N1604□□ TN□N1607□□	CH6R3	MHX0630 SHX0310	ST32CC	SR3	HW40L HW20L



Note) Generally, two shims are clamped to a Ceramic Holder.

However, only one shim is used in clamping 1207□□ and 1607□□ sized inserts.



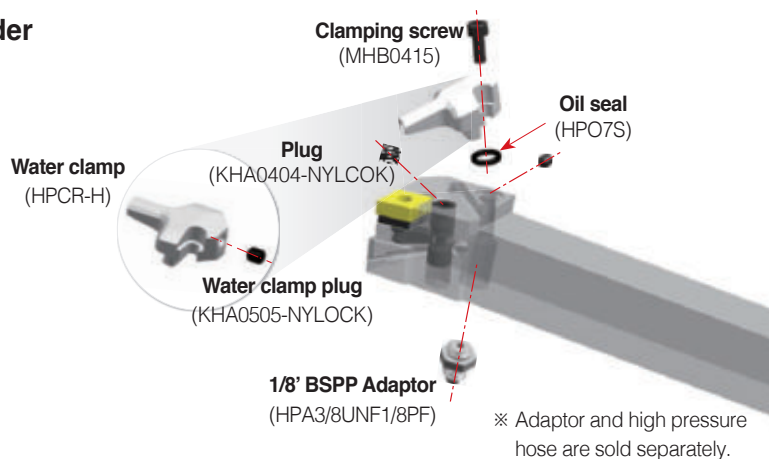
KORLOY High Pressure Coolant

KHP Coolant **new**

ISO turning holder

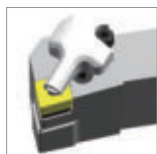
- 300% increased productivity on Inconel machining vs. low pressure coolant system
- Cooling, tool life, and chip control are improved by the high volume coolant multi-directional injection system

Structure of Holder

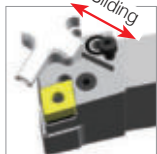


Features

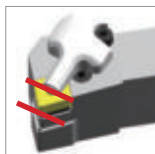
- The optimal distance between the insert and the jet orifice and the ideal place of the jet orifice
- Maximized loss pressure of coolant pressure due to streamlined design of internal path
- Easy to clamp an insert for sliding clamp system



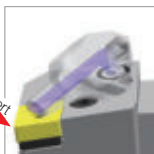
The original position of water clamp



The position of placing insert



Optimal position and distance of spraying

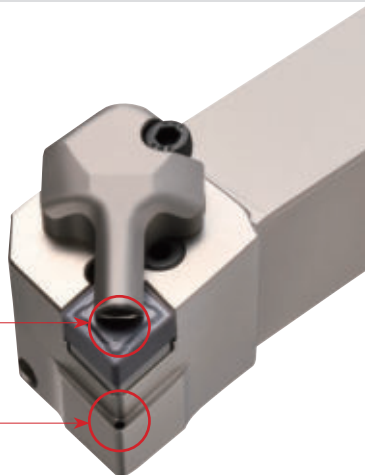


Oval direct spray

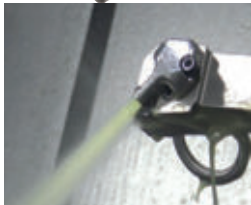
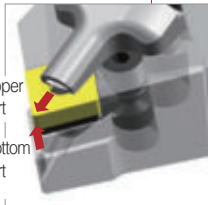
MAX 300 bar

Workpiece	The minimum pressure	The maximum pressure
P	50	300
M	70	
K	60	
N	50	
S	70	

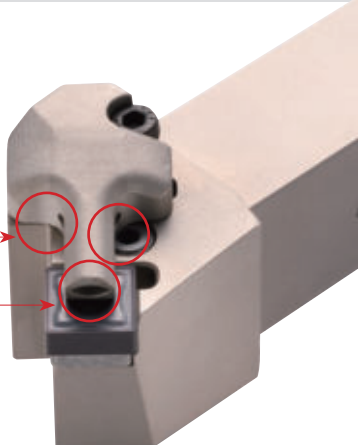
Water clamp with a hole



Spray to the upper surface of insert
Spray to the bottom surface of insert



Water clamp with three holes



Injection through three holes on the rake surface

Injection on the bottom surface



※ Clamp is sold separately

Turning



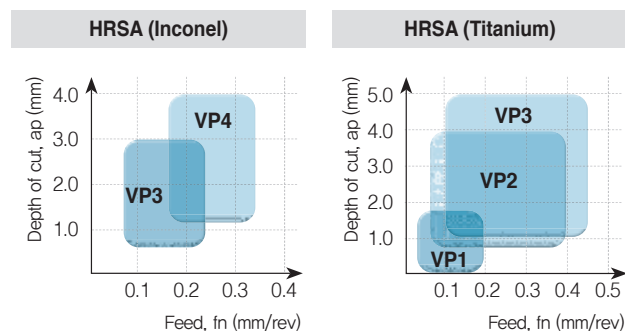
B

B Technical Information for KHP Coolant

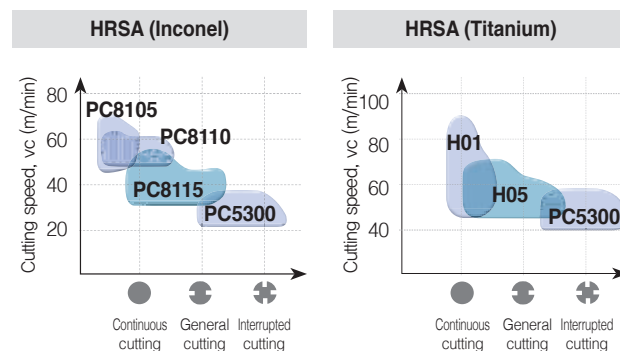
How to use the water clamp



Application range



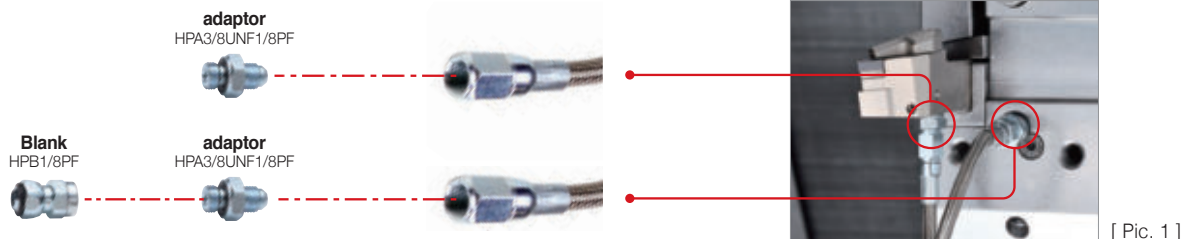
Grade Line-up



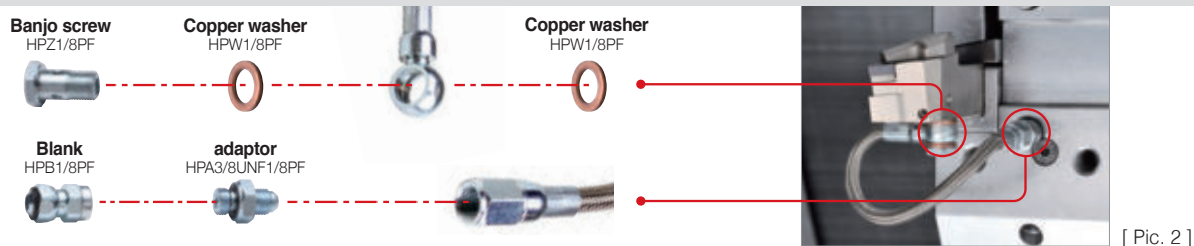
How to clamp the KHP Coolant

- 3 types of installation systems makes clamping easy
- The banjo type hose provides wider area for machining than other types

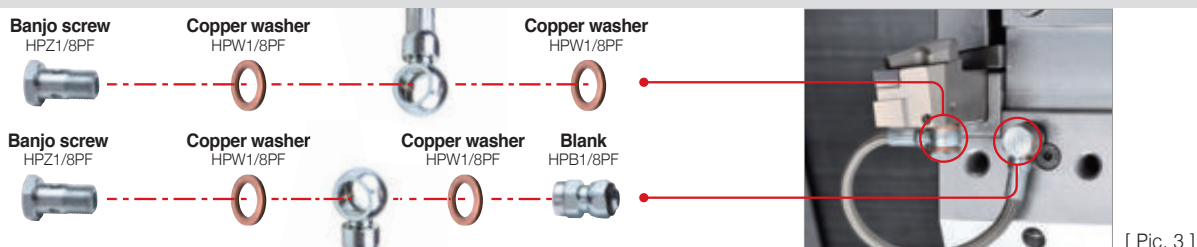
Straight to straight (S-S)



Straight to banjo (S-B)



Banjo to banjo (B-B)



※ Blank including a fixed oil seal provides easy clamping

※ Banjo screws provide easy clamping and clamping a holder to the turning machine with various types of blanks

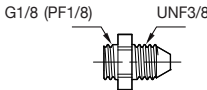
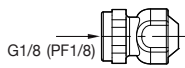
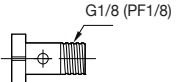


Components of KHP Coolant

- The components of high pressure coolant are sold separately
- Various components are available according to different machining sites and uses machining with high pressure coolant

Designation	Shape	Hose length	High pressure hose	Blank	Adaptor	Banjo screw	Copper washer	Pic.		
HPH3/8UNF-200-SET		200 mm	1 EA	1 EA	2 EA	-	-	1		
HPH3/8UNF-250-SET		250 mm								
HPH3/8UNF1/8PF-200-SET		200 mm			1 EA	1 EA	1 EA	1 EA	3 EA	2
HPH3/8UNF1/8PF-250-SET		250 mm								
HPH1/8PF-200-SET		200 mm			-	2 EA	5 EA	3		
HPH1/8PF-250-SET		250 mm								

KHP Coolant Parts

Division	Designation	Shape	
adaptor	HPA3/8UNF1/8PF		
Blank	HPB1/8PF		
Banjo screw	HPZ1/8PF		
Copper washer	HPW1/8PF		

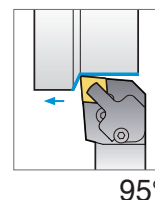
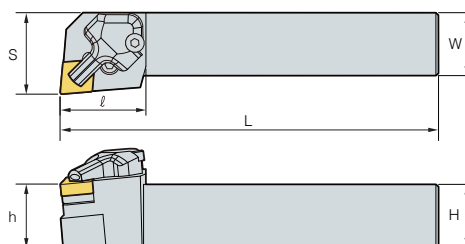
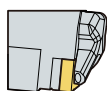
KHP Coolant High pressure hose

High pressure hose shape		Length	S	B
Straight to straight (HPH3/8UNF)		200 mm	UNF3/8	-
		250 mm		
Straight to banjo (HPH3/8UNF1/8PF)		200 mm	UNF3/8	Internal Ø10
		250 mm		
Banjo to banjo (HPH1/8PF)		200 mm	-	Internal Ø10
		250 mm		

PCLNR/L



CN□□



95°

• R type insert
(mm)

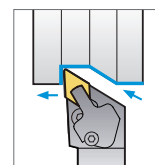
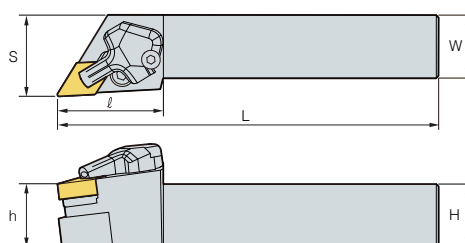
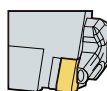
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Ship pin	Shim Pin Punch	Clamp	Clamping screw	Oil seal	Plug	Wrench
PCLNR/L 2525-M12-KHP	25	25	150	32	25	34	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	HPCR/L-H	MHB0415	HPO7S	KHA0404-NYLOCK	HW20L
3232-P12-KHP	32	32	170	40	32	34											

➔ Applicable inserts B36~B42

PDJNR/L



DN□□



93°

• R type insert
(mm)

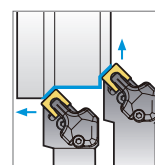
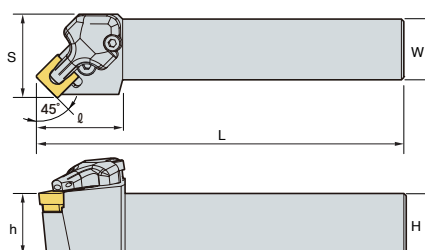
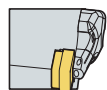
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Ship pin	Shim Pin Punch	Clamp	Clamping screw	Oil seal	Plug	Wrench
PDJNR/L 2525-M11-KHP	25	25	150	32.25	25	42	DN□□1104□□	LV3AN	VHX0617N	SD32N	SP3	LSPS3	HPCR/L-H	MHB0415	HPO7S	KHA0404-NYLOCK	HW20L
2525-M1504-KHP	25	25	150	32.25	25	42	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	HPCR/L-H	MHB0415	HPO7S	KHA0404-NYLOCK	HW25L
2525-M1506-KHP	25	25	150	32.25	25	42	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	HPCR/L-H	MHB0415	HPO7S	KHA0404-NYLOCK	HW30L

➔ Applicable inserts B43~B48

PSSNR/L



SN□□



45°

• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Ship pin	Shim Pin Punch	Clamp	Clamping screw	Oil seal	Plug	Wrench
PSSNR/L 2525-M12-KHP	25	25	150	34.25	25	35.5	SN□□1204□□	LV4N	VHX0821	SS42N	SP4N	LSPS4	HPCR/L-3H	MHB0415	HPO7S	KHA0404-NYLOCK	HW20L

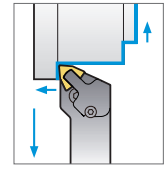
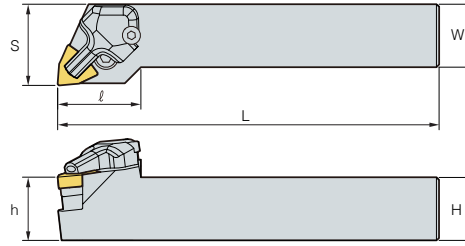
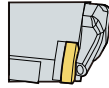
➔ Applicable inserts B50~B57



PWLNRL



WN□□



95°

• R type insert
(mm)

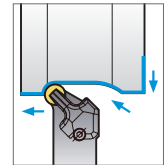
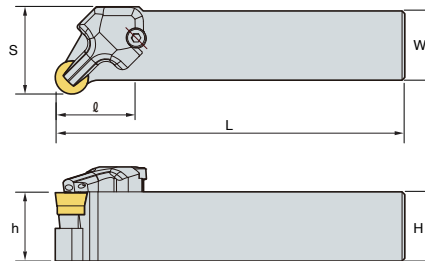
Designation	H	W	L	S	h	l	Insert	Lever	Screw	Shim	Ship pin	Shim Pin Punch	Clamp	Clamping screw	Oil seal	Plug	Wrench
PWLNRL 2525-M08-KHP	25	25	150	32.25	25	33	WN□□0804□□										
3232-P08-KHP	32	32	170	39.25	32	33											

➔ Applicable inserts B68~B72

SRGCR/L



RCGT


• R type insert
(mm)

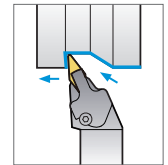
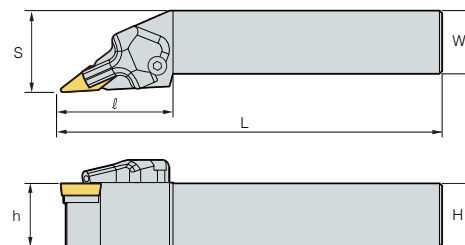
Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Clamp	Clamping screw	Oil seal	Wrench
SRGCR/L 2525-M12-KHP	25	25	150	31.5	25	-	RCGT1204M0							

➔ Applicable inserts B83, B105

SVJBR/L



VB□□



93°

• R type insert
(mm)

Designation	H	W	L	S	h	l	Insert	Screw	Shim	Shim Screw	Clamp	Clamping screw	Oil seal	Wrench
SVJBR/L 2525-M16-KHP	25	25	150	32.5	25	46.5	VB□□1604□□							

➔ Applicable inserts B94~B96, B108

S 12 M - S T F P R - 11

1

2

3

4

5

6

7

8

9

Type of Bar

Bar Diameter

Bar Length

Method of
Mounting Insert

Insert Shape

Lead Angle of
Boring BarRelief Angle of
Insert

Hand of Bar

Length of Cutting
Edge

1 Type of Bar

S 12 M - S T F P R - 11

"A" Steel with coolant hole

"E" Carbide bar with fixed
steel head and coolant hole

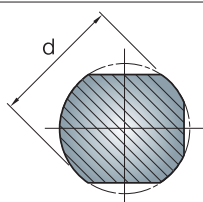
"C" Carbide shank

"S" Steel shank

"X" Special type

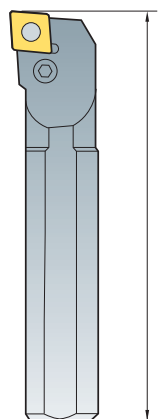
2 Bar Diameter

S 12 M - S T F P R - 11



3 Bar Length

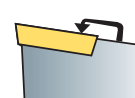
S 12 M S T F P R - 11



Symbol(L)	length(mm)
H	100
J	110
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500

4 Method of Mounting Insert

S 12 M S T F P R - 11



Top clamping

C



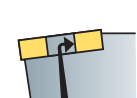
Top and hole clamping

D



Top and hole clamping

M



Hole clamping

P

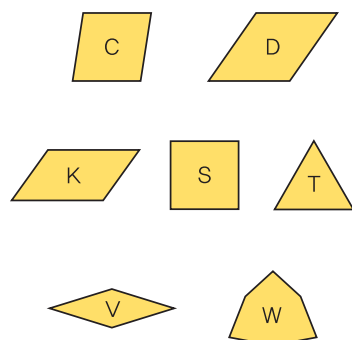


Screw on

S

5 Insert Shape

S 12 M - S T F P R - 11

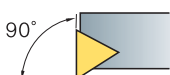


6 Lead Angle of Boring Bar

S 12 M - S T F P R - 11



L



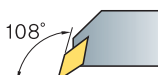
F



U



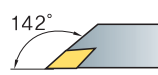
K



Q



Z



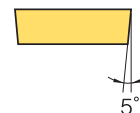
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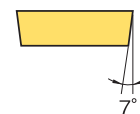
W

7 Relief Angle of Insert

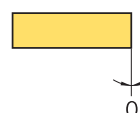
S 12 M - S T F P R - 11



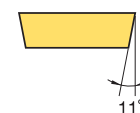
B



C



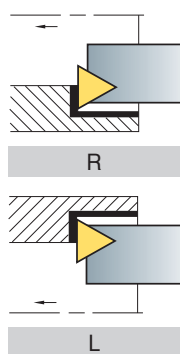
N



P

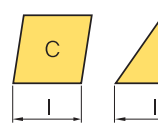
8 Hand of Bar

S 12 M - S T F P R - 11

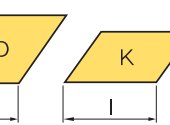


9 Length of Cutting Edge

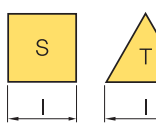
S 12 M - S T F P R - 11



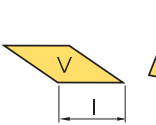
C



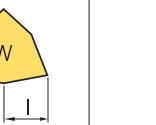
D



K



S



T



V

W



Double Clamp System

Cutting Shape								
Designation	DCLNR/L	DDUNR/L	DSKNR/L	DTFNR/L	DWLNR/L			
Approach angle	95°	93°	75°	90°	95°			
Page	B208	B208	B208	B209	B209			
Copying		●						
Facing	●				●			
Back turning		●						
Turning	●	●	●	●	●			

Lever Lock System

Cutting Shape								
Designation	PCLNR/L	PDSNR/L	PDUNR/L	PSKNR/L	PTFNR/L	PWLNR/L		
Approach angle	95°	62.5°	93°	75°	90°	95°		
Page	B210	B210	B210	B211	B211	B211		
Copying		●	●					
Facing	●					●		
Back turning		●	●			●		
Turning	●	●	●	●	●	●		

Clamp on System

Cutting Shape								
Designation	CKUNR/L	CSKPR/L	CTFPR/L					
Approach angle	93°	75°	90°					
Page	B212	B212	B212					
Copying								
Facing								
Back turning	●							
Turning	●	●	●					

Multi Lock System

Cutting Shape								
Designation	MCLNR/L	MDUNR/L	MSKNR/L	MTFNR/L	MVUNR/L	MWLNR/L		
Approach angle	95°	93°	75°	90°	93°	95°		
Page	B213	B213	B213	B214	B214	B214		
Copying		●			●			
Facing	●					●		
Back turning		●			●			
Turning	●	●	●	●	●	●		

Screw on System

Cutting Shape								
Designation	SCLCR/L	SCLPR/L	SDQCR/L	SDUCR/L	SDZCR/L	SSKCR/L	SSKPR/L	STFCR/L
Approach angle	95°	95°	107.5°	93°	93°	75°	75°	90°
Page	B215	B216	B217	B218	B219	B219	B219	B220
Copying			●	●				
Facing	●	●						
Back turning			●	●	●			
Turning	●	●	●	●	●	●	●	●

Cutting Shape								
Designation	STFPR/L	STWPR/L	SVJCR/L	SVQBR/L	SVQCR/L	SVUBR/L	SVUCR/L	SWLCR/L
Approach angle	90°	60°	142°	108°	108°	93°	93°	95°
Page	B221	B222	B222	B222	B223	B223	B223	B224
Copying			●	●	●	●	●	●
Facing								
Back turning				●	●	●	●	●
Turning	●	●	●	●	●	●	●	●

Compact Mini

Cutting Shape								
Designation	SCLCR/L	STUBR/L	STLBR/L	STUPR/L	SWUBR/L			
Approach angle	95°	93°	95°	93°	93°			
Page	B225	B225	B225	B226	B227			
Copying								
Facing	●	●	●					
Back turning				●				
Turning	●	●	●	●	●			

Carbide Shank Boring Bar

Designation	SCLCR/L	SCLPR/L	SDQCR/L	SDUCR/L	STFCR/L
Approach angle	95°	95°	107.5°	93°	90°
Page	B215	B216	B217	B218	B220

Designation	STFPR/L	STUBR/L	STUPR/L	SWUBR/L	-
Approach angle	90°	93°	93°	93°	-
Page	B221	B225	B226	B227	-

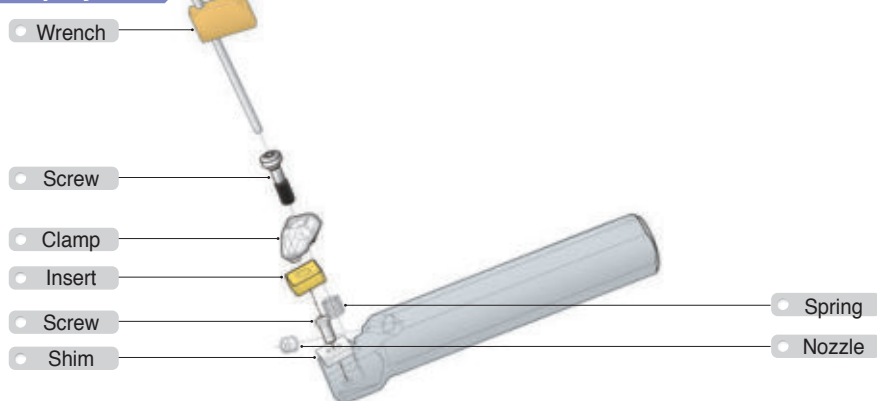
Sleeve

Shape		
Designation	SL	
Page	B151	

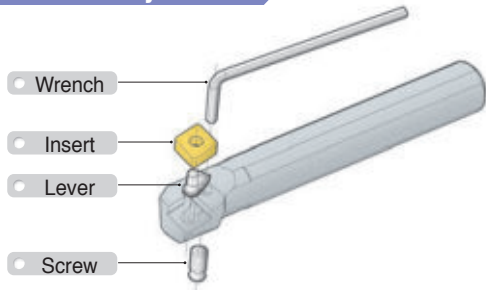


Instructions of Boring Bar assembly

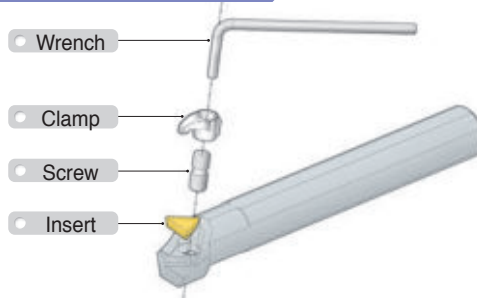
Double Clamp System



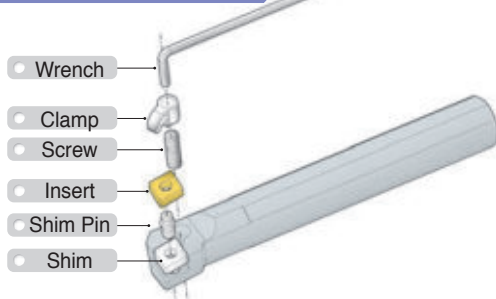
Lever Lock System



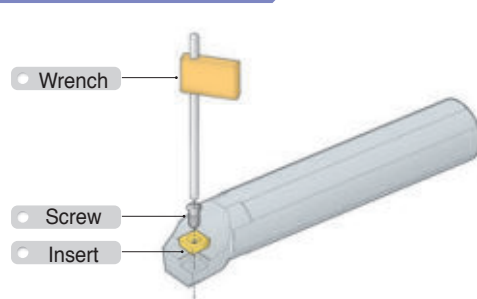
Clamp on System



Multi Lock System



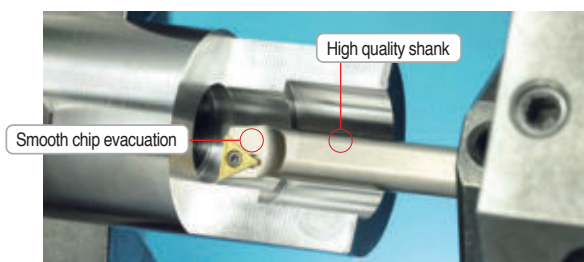
Screw on System



Carbide Shank Boring Bar

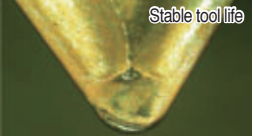
- Excellent cutting performance even in internal machining with chattering
- Available for various workpieces such as steel, stainless steel, cast iron, etc.
- Improved tool life and surface roughness

Features



Higher strength and durability than steel shank, special surface treatment applied

Comparison of chipping

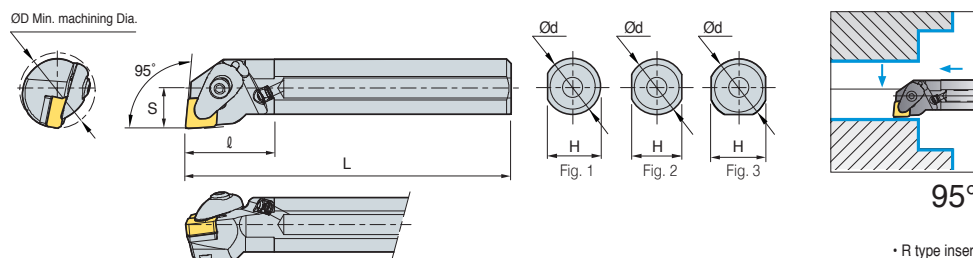
Specifications	Steel boring bar			Carbide boring bar		
						
• SCM440						
• v_c (m/min) = 200						
• a_p (mm) = 0.4						
• f_n (mm/rev) = 0.15						
• Cutting depth: 5D						
	Rmax	Rz	Ra	Rmax	Rz	Ra
	4.67	3.68	0.62	3.07	2.76	0.53

B Double Clamp System

DCLNR/L



CN□□

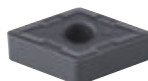


• R type insert (mm)

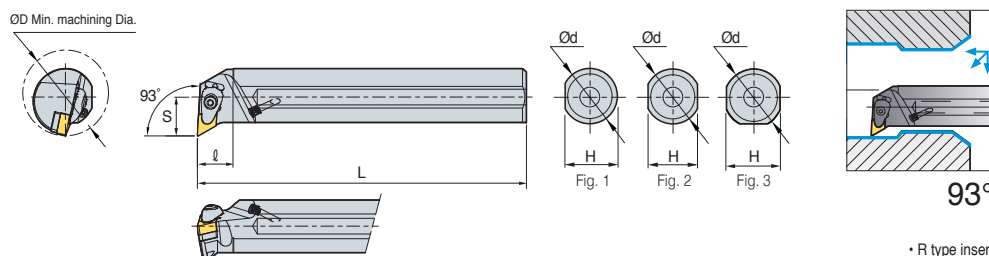
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench	Fig.
A25R-DCLNR/L-09	32	25	24	200	17	40	CN□□0903□□	CVH3	CHX0415	SC32V	FTKA0307	SPR0510	CN0605	HW25P	1
A25R-DCLNR/L-12	32	25	24	200	17	40	CN□□1204□□	CVH4	CHX0518	SC42V	FTKA0410	SPR0714	CN0605	HW30P	1
A32S-DCLNR/L-12	40	32	30	250	22	50									3
A40T-DCLNR/L-12	50	40	38	300	27	60									
A50U-DCLNR/L-16	63	50	48	350	35	70	CN□□1606□□	CVH5	CHX0622	SC54V	FTNA0511	SPR0811	CN0605	HW40L	3

➔ Applicable inserts B36~B42

DDUNR/L



DN□□



• R type insert (mm)

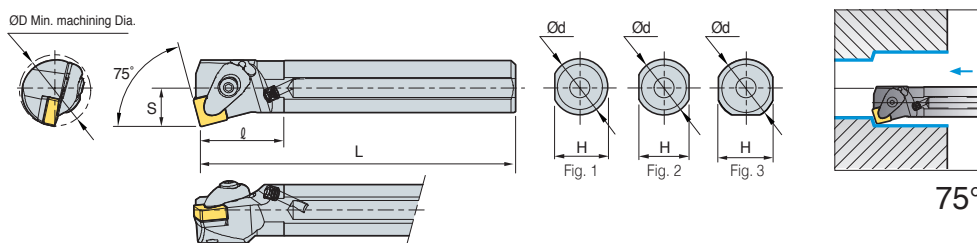
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench	Fig.
A40T-DDUNR/L-15	50	40	38	300	27	60	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	HW30P	3
A50U-DDUNR/L-15	63	50	47	350	35	70									
A40T-DDUNR/L-15 -3	50	40	37	300	25	60	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	HW30P	3
A50U-DDUNR/L-15 -3	63	50	47	350	35	70									

➔ Applicable inserts B43~B48

DSKNR/L



SN□□



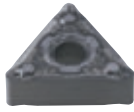
• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench	Fig.
A25R-DSKNR/L-09	32	25	24	200	17	40	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	CN0605	HW25P	1
A25R-DSKNR/L-12	32	25	24	200	17	40	SN□□1204□□	CVH4	CHX0518	SS42V	FTKA0410	SPR0714	CN0605	HW30P	1
A32S-DSKNR/L-12	40	32	30	250	22	50									3
A40T-DSKNR/L-12	50	40	38	300	27	60									

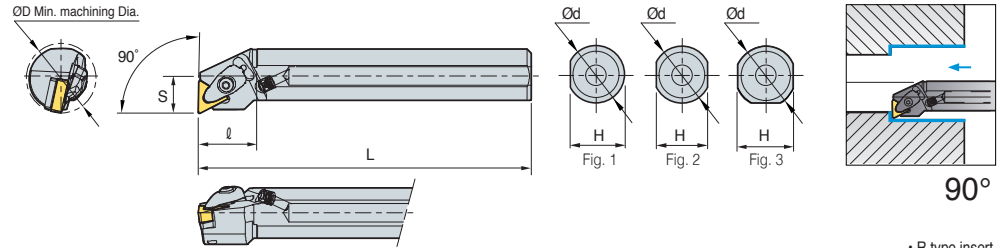
➔ Applicable inserts B50~B57



DTFNR/L



TN□□



• R type insert (mm)

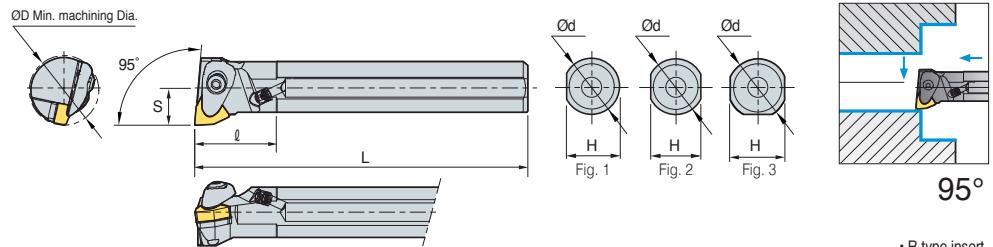
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench	Fig.
A25R-DTFNR/L-16	32	25	24	200	17	40	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	CN0605	HW25P	1
A32S-DTFNR/L-16	40	32	30	250	22	50									3
A40T-DTFNR/L-22	50	40	38	300	27	60									
A50U-DTFNR/L-22	63	50	47	350	35	70	TN□□2204□□	CVH4	CHX0518	ST44V	FTKA0410	SPR0714	CN0605	HW30P	3

➡ Applicable inserts B58~B65

DWLNR/L



WN□□



• R type insert (mm)

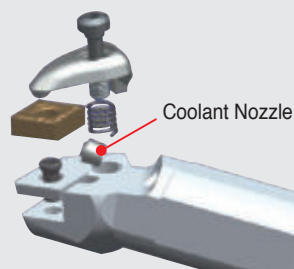
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench	Fig.
A25R-DWLNR/L-06	32	25	24	200	17	40	WN□□0604□□	CVH3	CHX0415	SW32V	FTKA0307	SPR0510	CN0605	HW25P	1
A32S-DWLNR/L-06	40	32	30	250	22	50									3
A40T-DWLNR/L-06	50	40	38	300	27	60									
A25R-DWLNR/L-08	32	25	24	200	17	40	WN□□0804□□								1
A32S-DWLNR/L-08	40	32	30	250	22	50									
A40T-DWLNR/L-08	50	40	38	300	27	60									
A50U-DWLNR/L-08	63	50	47	350	35	70		CVH4	CHX0518	SW42V	FTKA0410	SPR0714	CN0605	HW30P	3

➡ Applicable inserts B68~B72



Features of Double Clamp (Boring bar)

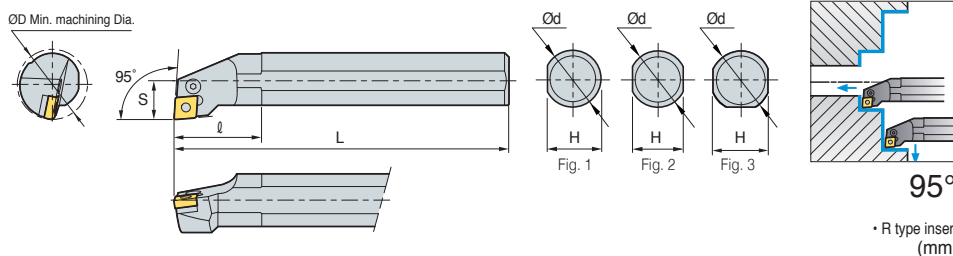
Longer tool life and excellent surface finish can be achieved with the adjustable Coolant Nozzle



PCLNR/L



CN□□

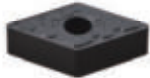


• R type insert (mm)

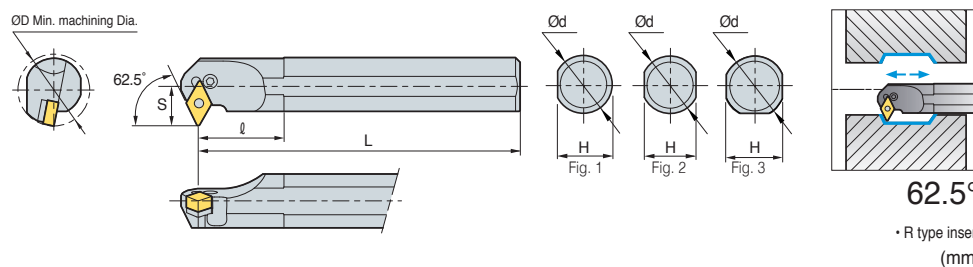
Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench	Fig.
S16R-PCLNR/L-09	20	16	14	200	11	25	CN□□0903□□	LV3C	VHX0509B	-	-	-	HW20L	2
S20S-PCLNR/L-09	25	20	18	250	13	32								3
S25R-PCLNR/L-09	32	25	23	200	17	40								
S25R-PCLNR/L-12	32	25	23	200	17	40	CN□□1204□□	LV4A	VHX0613A	-	-	-	HW25L	3
S25T-PCLNR/L-12	32	25	23	300	17	40		LV4	VHX0821	SC42B	SP4	LSPS4	HW30L	
S32S-PCLNR/L-12	40	32	30	250	22	50		LV4	VHX0821	SC43B	SP4	-	HW30L	
S32U-PCLNR/L-12	40	32	30	350	22	50		LV4	VHX0821	SC42B	SP4	LSPS4	HW30L	
S40T-PCLNR/L-12	50	40	38	300	27	60	CN□□1906□□	LV6	VHX1027	SC63	SP6	LSPS6	HW40L	3
S50U-PCLNR/L-12	63	50	47	350	35	70		LV4A	VHX0613A	-	-	-	HW25L	1
S50U-PCLNR/L-19	63	50	47	350	35	70	CN□□1204□□	LV4	VHX0821	SC42B	SP4	LSPS4	HW30L	3
A25R-PCLNR/L-12	32	25	24	200	17	40								
A32S-PCLNR/L-12	40	32	30	250	22	50								
A40T-PCLNR/L-12	50	40	38	300	27	60								

Applicable inserts B36~B42

PDSNR/L



DN□□

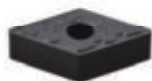


• R type insert (mm)

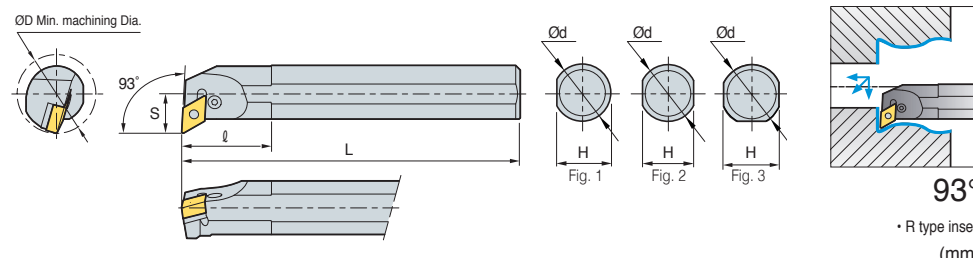
Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench	Fig.
S32S-PDSNR/L-15	40	32	30	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L	3
S40T-PDSNR/L-15	50	40	38	300	27	60								
S32S-PDSNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L	
S40T-PDSNR/L-15-3	50	40	38	300	27	60								
A32S-PDSNR/L-15	40	32	30	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L	
A32S-PDSNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L	

Applicable inserts B43~B48

PDUNR/L



DN□□



• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench	Fig.
S32S-PDUNR/L-11	40	32	30	250	22	50	DN□□1104□□	LV3	VHX0617	SD317	SP3	LSPS3	HW25L	3
S32S-PDUNR/L-15	40	32	30	250	22	50								
S40T-PDUNR/L-15	50	40	38	300	27	60	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L	3
S50U-PDUNR/L-15	63	50	47	350	35	70								
S32S-PDUNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L	3
S40T-PDUNR/L-15-3	50	40	38	300	27	60								
A32S-PDUNR/L-15	40	32	30	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L	3
A32S-PDUNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L	3

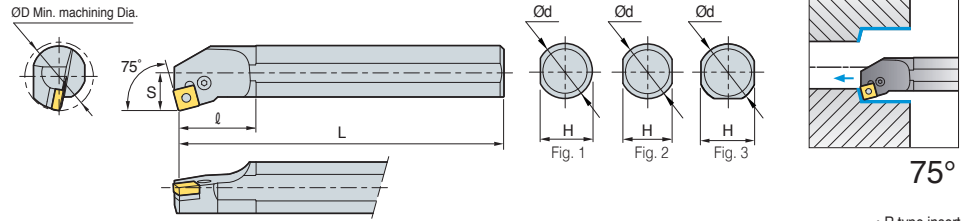
Applicable inserts B43~B48



PSKNR/L



SN□□

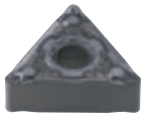


• R type insert (mm)

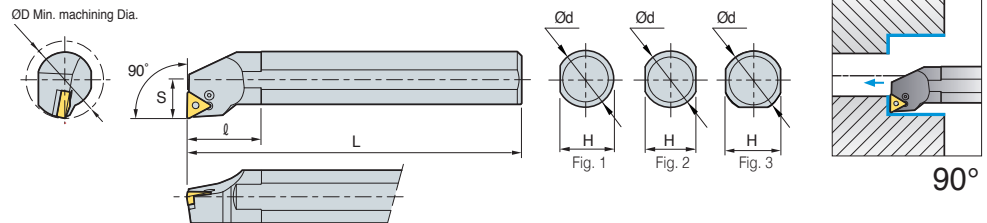
Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench	Fig.
S25R-PSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	LV4A	VHX0613A	-	-	-	HW30L	3
S32S-PSKNR/L-12	40	32	30	250	22	50		LV4	VHX0821	SS42B	SP4	LSPS4	HW30L	
S40T-PSKNR/L-12	50	40	38	300	27	60	SN□□1204□□	LV4A	VHX0613A	-	-	-	HW25L	1
A25R-PSKNR/L-12	32	25	24	200	17	40		LV4	VHX0821	SS42B	SP4	LSPS4	HW30L	3
A32S-PSKNR/L-12	40	32	30	250	22	50								

➔ Applicable inserts B50~B57

PTFNR/L



TN□□



• R type insert (mm)

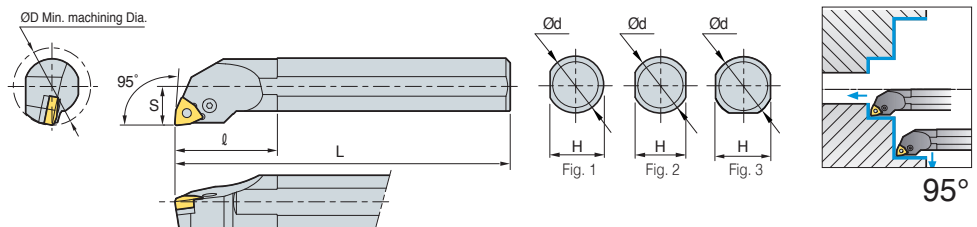
Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench	Fig.
S16R-PTFNR/L-11	20	16	14	200	11	25	TN□□1103□□	LV2	VHX0509B	-	-	-	HW25L	2
S20S-PTFNR/L-11	25	20	18	250	13	32								3
S25R-PTFNR/L-11	32	25	23	200	17	40	TN□□1604□□	LV3B	VHX0512B	-	-	-	HW20L	3
S25R-PTFNR/L-16	32	25	23	200	17	40		LV3	VHX0617	ST317B	SP3	LSPS3	HW25L	
S32S-PTFNR/L-16	40	32	30	250	22	50		LV3	VHX0617	-	-	-	HW25L	1
S40T-PTFNR/L-16	50	40	38	300	27	60		LV3	VHX0617	ST317B	SP3	LSPS3	HW25L	3
A25R-PTFNR/L-16	32	25	24	200	17	40								
A32S-PTFNR/L-16	40	32	30	250	22	50								

➔ Applicable inserts B58~B65

PWLNR/L



WN□□



• R type insert (mm)

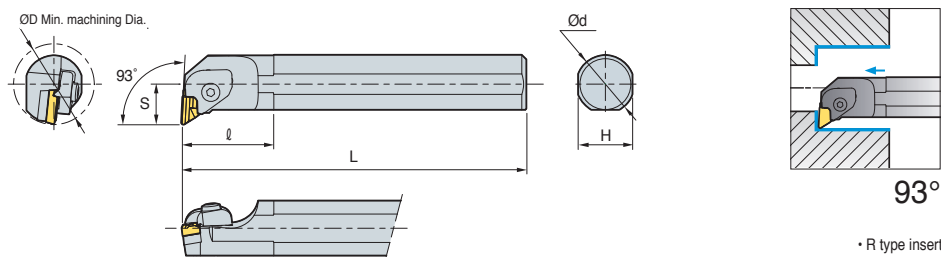
Designation	ØD	Ød	H	L	S	l	Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench	Fig.
S16R-PWLNR/L-06	20	16	14	200	11	25	WNMG060408	LV3B	VHX0512B	-	-	-	HW20L	2
S20S-PWLNR/L-06	25	20	18	250	13	32	WN□□0604□□	LV3B	VHX0512B	-	-	-	HW20L	2
S25R-PWLNR/L-06	32	25	23	200	17	40		LV3	VHX0617	SW317	SP3	LSPS3	HW25L	3
S32S-PWLNR/L-06	40	32	30	250	22	50	WN□□0804□□	LV4A	VHX0613A	-	-	-	HW25L	3
S25R-PWLNR/L-08	32	25	23	200	17	40		LV4	VHX0821	SW42	SP4	LSPS3	HW30L	
S32S-PWLNR/L-08	40	32	30	250	22	50								

➔ Applicable inserts B68~B72

CKUNR/L



KN□□



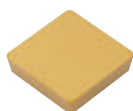
• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Spring	Shim	Pin+Spring	Shim Screw	Wrench
S32S-CKUNR-16	40	32	30	250	22	70	KN□□1604□□L							
S40T-CKUNR-16	50	40	37	300	27	60								
S50U-CKUNR-16	63	50	43	350	35	55								
S32S-CKUNL-16	40	32	30	250	22	70	KN□□1604□□R							
S40T-CKUNL-16	50	40	37	300	27	60								
S50U-CKUNL-16	63	50	43	350	35	55								

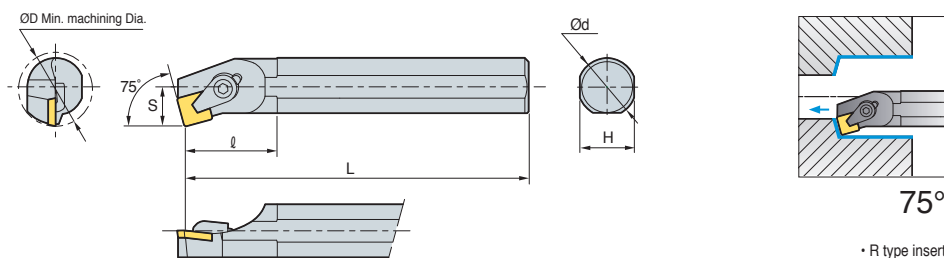
➔ Applicable inserts B49

• Use left handed insert for right handed holder

CSKPR/L



SP□□



• R type insert (mm)

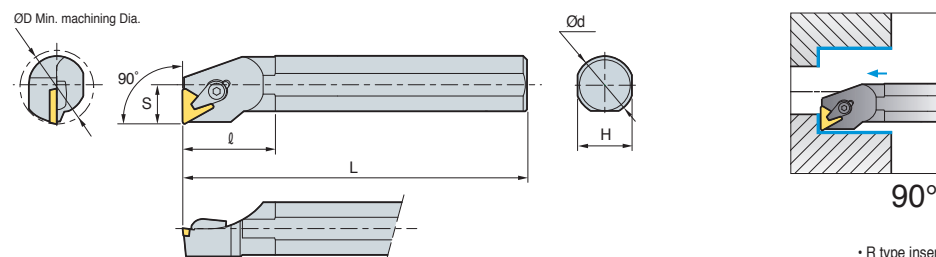
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	C-ring	Wrench
S16R-CSKPR/L-09	20	16	15	200	11	30	SP□□0903□□				
S20S-CSKPR/L-09	25	20	18	250	13	36					
S20S-CSKPR/L-12	25	20	18	250	13	28	SP□□1203□□				
S25R-CSKPR/L-12	32	25	23	300	17	40					

➔ Applicable inserts B85~B86

CTFPR/L



TP□□



• R type insert (mm)

Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	C-ring	Shim	Shim Pin	Wrench
S12M-CTFPR/L-11	16	12	11	150	9	26	TP□□1103□□						
S16R-CTFPR/L-11	20	16	15	200	11	40							
S20S-CTFPR/L-11	25	20	18	250	13	40							
S16R-CTFPR/L-16	20	16	15	200	11	40	TP□□1603□□						
S20S-CTFPR/L-16	25	20	18	250	13	40							
S25R-CTFPR/L-16	32	25	23	200	17	40							
S32S-CTFPR/L-16	40	32	30	250	22	45							
S40T-CTFPR/L-16	50	40	37	300	27	60	TP□□2204□□						
S40T-CTFPR/L-22	50	40	37	300	27	60							

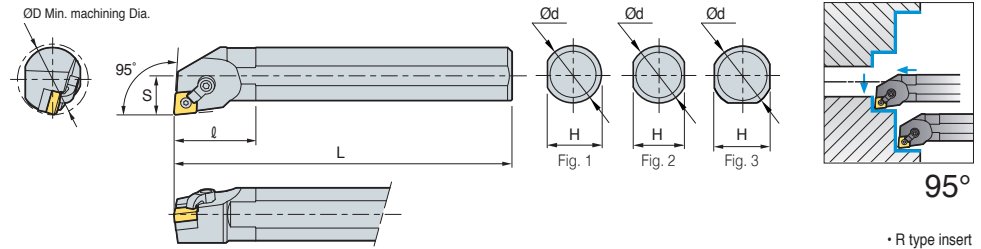
➔ Applicable inserts B90~B93



MCLNR/L



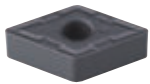
CN□□


• R type insert
(mm)

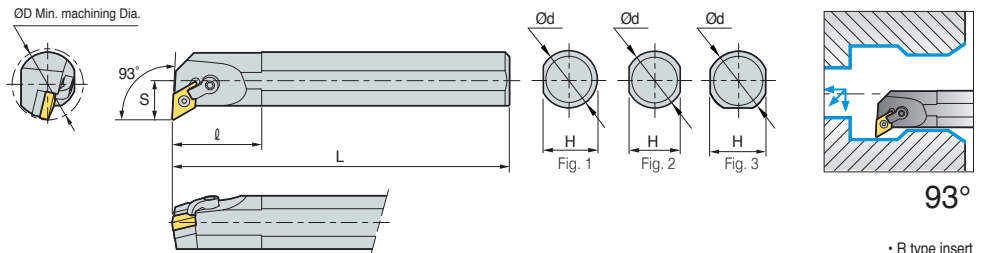
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench	Fig.
S20S-MCLNR/L-09	25	20	18	200	13	32	CN□□0903□	CDH7N	DHA10/32-19	-	SP3D3	HW19.8L HW23.8L	2
S25R-MCLNR/L-09	32	25	23	250	17	40							3
S25R-MCLNR/L-12	32	25	23	200	17	40	CN□□1204□	CDH6N	DHA1/4-21	SC43D	SP4DS	HW31.8L HW23.8L	3
S32S-MCLNR/L-12	40	32	30	250	22	50							
S40T-MCLNR/L-12	50	40	38	300	27	60	CN□□1204□	CDH6N	DHA1/4-21	SC43D	SP4DS	HW31.8L HW23.8L	1
A25R-MCLNR/L-12	32	25	24	200	17	40							3
A32S-MCLNR/L-12	40	32	30	250	22	50							

Applicable inserts B36~B42

MDUNR/L



DN□□


• R type insert
(mm)

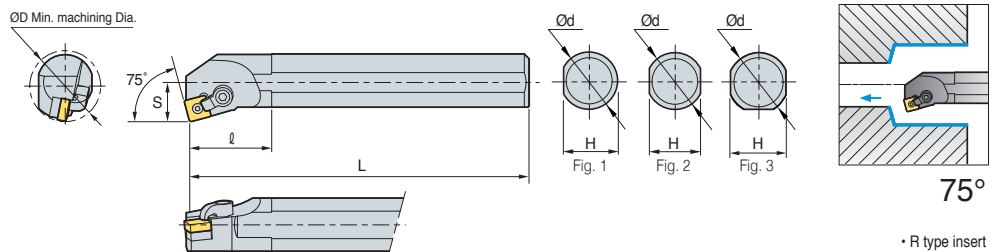
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench	Fig.
S32S-MDUNR/L-15-3	40	32	30	250	22	50	DN□□1504□	CDH6N	DHA1/4-21	SD43D	SP4D	HW31.8L HW23.8L	3
S40T-MDUNR/L-15-3	50	40	38	300	27	60							
A32S-MDUNR/L-15-3	40	32	30	250	22	50							

Applicable inserts B43~B48

MSKNR/L



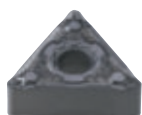
SN□□


• R type insert
(mm)

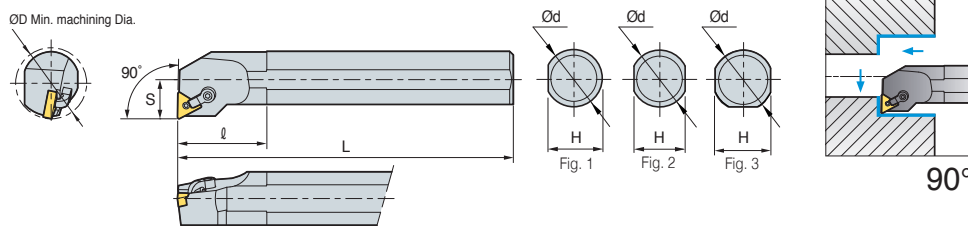
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench	Fig.
S25R-MSKNR/L-12	32	25	23	200	17	40	SN□□1204□	CDH8N1	DHA5/16-28	SS43D	SP4DS	HW39.7L HW23.8L	3
S32S-MSKNR/L-12	40	32	30	250	22	50							
S40T-MSKNR/L-12	50	40	38	300	27	60							
A25R-MSKNR/L-12	32	25	23	200	17	40	SN□□1204□	CDH8N1	DHA5/16-28	SS43D	SP4DS	HW39.7L HW23.8L	1
A32S-MSKNR/L-12	40	32	30	250	22	50							3
A40T-MSKNR/L-12	50	40	38	300	27	60							

Applicable inserts B50~B57

MTFNR/L



TN□□



• R type insert (mm)

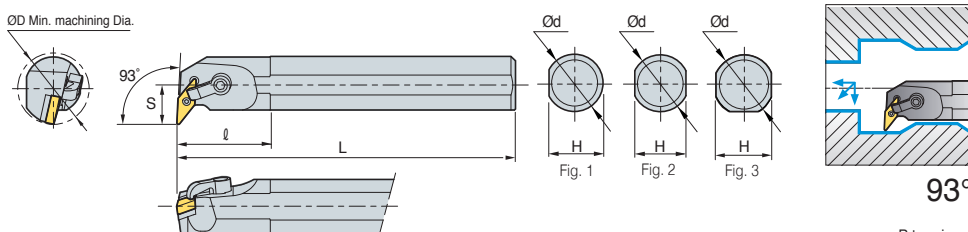
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench	Fig.
S25R-MTFNR/L-16	32	25	23	200	17	40	TN□□1604□	CDH7N1	DHA10-32-19	-	SP3D3	HW23.8L	3
S32S-MTFNR/L-16	40	32	30	250	22	50		CDH7N1	DHA10-32-19	ST32D	SP3D	HW19.8L	
S40T-MTFNR/L-16	50	40	38	300	27	60	TN□□1604□	CDH7N1	DHA10-32-19	-	SP3D3	HW23.8L	1
A25R-MTFNR/L-16	32	25	24	200	17	40		CDH7N1	DHA10-32-19	ST32D	SP3D	HW19.8L	3

➔ Applicable inserts B58~B65

MVUNR/L



VN□□



• R type insert (mm)

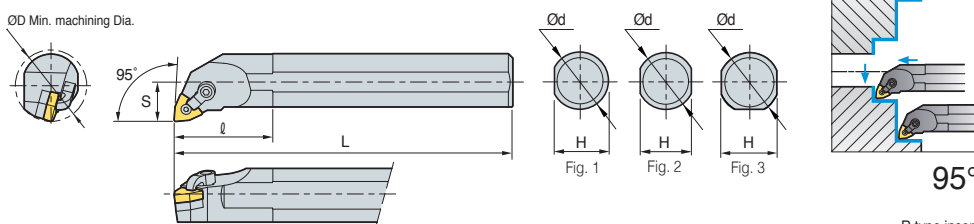
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench	Fig.
S32S-MVUNR/L-16	40	32	30	250	22	50	VN□□1604□	CDH8N2	DHA5/16-28	SV32D	SP3D	HW39.7L	3
S40T-MVUNR/L-16	50	40	38	300	27	60		CDH8N2	DHA5/16-28	SV32D	SP3D	HW19.8L	
A32S-MVUNR/L-16	40	32	30	250	22	50	VN□□1604□	CDH8N2	DHA5/16-28	SV32D	SP3D	HW39.7L	3
A40T-MVUNR/L-16	50	40	38	300	27	60		CDH8N2	DHA5/16-28	SV32D	SP3D	HW19.8L	

➔ Applicable inserts B66~B67

MWLNR/L



WN□□

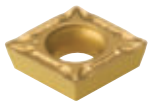


• R type insert (mm)

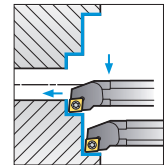
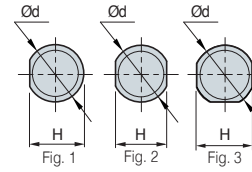
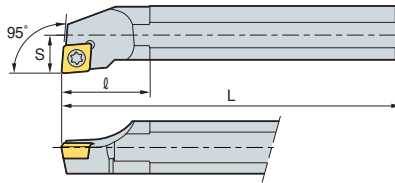
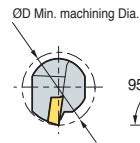
Designation	ØD	Ød	H	L	S	l	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench	Fig.
S25R-MWLNR/L-06	32	25	23	200	17	40	WN□□0604□	CDH7N	DHA10/32-19	-	SP3D3	HW23.8L	3
S32S-MWLNR/L-06	40	32	30	250	22	50		CDH7N	DHA10/32-19	SW32D	SP3D	HW19.8L	
S40T-MWLNR/L-06	50	40	38	300	27	60		CDH7N	DHA10/32-19	SW32D	SP3D	HW19.8L	
S25R-MWLNR/L-08	32	25	23	200	17	40	WN□□0804□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L	3
S32S-MWLNR/L-08	40	32	30	250	22	50		CDH6N	DHA1/4-21	SW43D	SP4D	HW23.8L	
S40T-MWLNR/L-08	50	40	38	300	27	60		CDH6N	DHA1/4-21	SW43D	SP4D	HW23.8L	
A25R-MWLNR/L-06	32	25	24	200	17	40	WN□□0604□	CDH7N	DHA10/32-19	-	SP3D3	HW31.8L	1
A32S-MWLNR/L-06	40	32	31	250	22	50		CDH7N	DHA10/32-19	SW32D	SP3D	HW19.8L	3
A25R-MWLNR/L-08	32	25	24	200	17	40	WN□□0804□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L	1
A32S-MWLNR/L-08	40	32	31	250	22	50		CDH6N	DHA1/4-21	SW43D	SP4D	HW23.8L	3

➔ Applicable inserts B68~B72



SCLCR/L

CC□T

• R type insert
(mm)**Steel shank type**

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S08K-SCLCR/L-06	11	8	7.2	125	6	12	CC□T0602□□	FTKA02555			TW07	2
S10K-SCLCR/L-06	13	10	9	125	6	16		FTKA02565	-	-	TW07P	
S10M-SCLCR/L-06	13	10	9	150	6	16						
S12M-SCLCR/L-06	16	12	11	150	9	20						
S16R-SCLCR/L-06	20	16	14	200	11	25	CC□T09T3□□	FTGA03508	-	-	TW15P	2
S12M-SCLCR/L-09	16	12	11	150	9	20						
S16R-SCLCR/L-09	20	16	14	200	11	25						
S20S-SCLCR/L-09	25	20	18	250	13	32						
S25R-SCLCR/L-09	32	25	23	200	17	40	CC□T1204□□	FTGA03510			TW15P	3
S25R-SCLCR/L-12	32	25	23	200	17	40		FTGA0411F	-	-	TW15P	
S32S-SCLCR/L-12	40	32	30	250	22	50		FTGA0411F	SC42S	SHXN0610F	HW40L TW15P	
S40T-SCLCR/L-12	50	40	38	300	27	60						
A08F-SCLCR/L-06	11	8	7.6	80	6	12	CC□T0602□□	FTKA02555	-	-	TW07P	1
A10H-SCLCR/L-06	13	10	9.5	100	7	16		FTKA02565	-	-	TW07P	
A12K-SCLCR/L-06	16	12	11.5	125	9	20						
A12K-SCLCR/L-09	16	12	11.5	125	9	20						
A16M-SCLCR/L-09	20	16	15	150	11	25	CC□T09T3□□	FTGA03508	-	-	TW15P	1
A20Q-SCLCR/L-09	25	20	19	180	13	32						
A25R-SCLCR/L-09	32	25	24	200	17	40		FTGA03510	-	-	TW15P	
A25R-SCLCR/L-12	32	25	24	200	17	40		FTGA0411F	-	-	TW15P	
A32S-SCLCR/L-12	40	32	31	250	22	50	CC□T1204□□	FTGA0411F	SC42S	SHXN0610F	HW40L, TW15P	3

Carbide shank type

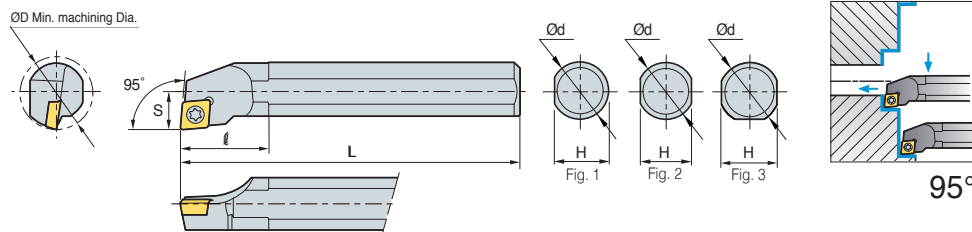
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C04G-SCLCR/L-03	5	4	3.8	90	2.5	CC□T0301□□	FTNA01633	TW06P	1
C05H-SCLCR/L-03	6	5	4.4	100	3	CC□T0401□□	FTNA0238	TW06P	
C06H-SCLCR/L-04	7	6	5.4	100	3.5		FTKA02555	TW07P	
C07K-SCLCR/L-04	8	7	6.4	125	4	CC□T0602□□	FTKA02565	TW07P	
C08K-SCLCR/L-06	10	8	7	125	5				2
C10K-SCLCR/L-06	12	10	9	125	6				
C10M-SCLCR/L-06	12	10	9	150	6				
C12M-SCLCR/L-06	14	12	11	150	9	CC□T09T3□□	FTGA03508	TW15P	
C12Q-SCLCR/L-06	14	12	11	180	9				1
C12M-SCLCR/L-09	15	12	11	150	8				
C12Q-SCLCR/L-09	15	12	11	180	8				
C16R-SCLCR/L-09	20	16	15	200	11	CC□T0401□□	FTNA0238	TW06P	2
C16S-SCLCR/L-09	20	16	15	250	11		FTKA02555	TW07P	
C20R-SCLCR/L-09	25	20	18	200	13		FTKA02565	TW07P	
C20S-SCLCR/L-09	25	20	18	250	13				
C25T-SCLCR/L-12	32	25	23	300	17	CC□T1204□□	FTGA0411F	TW15P	1
E06H-SCLCR/L-04	7	6	5.4	100	3.5	CC□T0602□□	FTNA0238	TW06P	
E07K-SCLCR/L-04	8	7	6.4	125	4		FTKA02555	TW07P	
E08K-SCLCR/L-06	10	8	7	125	5		FTKA02565	TW07P	
E10K-SCLCR/L-06	12	10	9	125	6				2
E10M-SCLCR/L-06	12	10	9	150	6	CC□T09T3□□	FTGA03508	TW15P	
E12M-SCLCR/L-06	14	12	11	150	9				
E12Q-SCLCR/L-06	14	12	11	180	9				
E12M-SCLCR/L-09	15	12	11	150	8				
E12Q-SCLCR/L-09	15	12	11	180	8	CC□T1204□□	FTGA0411F	TW15P	1
E16R-SCLCR/L-09	20	16	15	200	11				
E16S-SCLCR/L-09	20	16	15	250	11				
E20R-SCLCR/L-09	25	20	18	200	13				
E20S-SCLCR/L-09	25	20	19	250	13	CC□T1204□□	FTGA0411F	TW15P	2
E25T-SCLCR/L-12	32	25	23	300	17				

Applicable inserts B73~B77, B103

SCLPR/L



CP□T



Steel shank type

• R type insert (mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
S10M-SCLPR/L-08	13	10	9	150	7	16	CP□T0802□□	FTNA0305	TW09P	2
S12M-SCLPR/L-08	16	12	11	150	9	20		FTNA0307	TW09P	
S16N-SCLPR/L-09	20	16	14	160	11	25	CP□T0903□□	FTNA0408	TW15P	2
S16R-SCLPR/L-09	20	16	14	200	11	25				
S20N-SCLPR/L-09	25	20	18	160	13	32				
S20S-SCLPR/L-09	25	20	18	250	13	32	CP□T0802□□	FTNA0305	TW09P	1
A10H-SCLPR/L-08	12	10	9.65	100	6	-				
A12K-SCLPR/L-08	16	12	11.5	125	9	20				
A16M-SCLPR/L-09	20	16	15.5	150	10	25	CP□T0903□□	FTNA0408	TW15P	1
A20Q-SCLPR/L-09	25	20	19	180	13	32				

Carbide shank type

(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
C10K-SCLPR/L-08	12	10	9	125	6	14.5	CP□T0802□□	FTNA0305	TW09P	2
C10M-SCLPR/L-08	12	10	9	150	6	14.5		FTNA0306	TW09P	
C12M-SCLPR/L-08	15	12	11	150	7.5	14.7	CP□T0903□□	FTNA0408	TW15P	2
C12Q-SCLPR/L-08	15	12	11	180	7.5	14.7				
C12M-SCLPR/L-09	15	12	11	150	8	14.4				
C12Q-SCLPR/L-09	15	12	11	180	8	14.4	CP□T0802□□	FTNA0305	TW09P	2
C16R-SCLPR/L-09	20	16	15	200	10	22.4				
C16S-SCLPR/L-09	20	16	15	250	10	22.4				
C20R-SCLPR/L-09	25	20	18	200	13	22.5	CP□T0903□□	FTNA0407	TW09P	2
C20S-SCLPR/L-09	25	20	18	250	13	22.5				
E10K-SCLPR/L-08	12	10	9	125	6	14.5				
E10M-SCLPR/L-08	12	10	9	150	6	14.5	CP□T0802□□	FTNA0305	TW09P	2
E12M-SCLPR/L-08	15	12	11	150	7.5	14.7				
E12Q-SCLPR/L-08	15	12	11	180	7.5	14.7	CP□T0903□□	FTNA0408	TW15P	2
E12M-SCLPR/L-09	15	12	11	150	8	14.4				
E12Q-SCLPR/L-09	15	12	11	180	8	14.4				
E16R-SCLPR/L-09	20	16	15	200	10	22.4	CP□T0802□□	FTNA0305	TW09P	2
E16S-SCLPR/L-09	20	16	15	250	10	22.4				
E20R-SCLPR/L-09	25	20	18	200	13	22.5				
E20S-SCLPR/L-09	25	20	18	250	13	22.5	CP□T0903□□	FTNA0408	TW15P	2
E20S-SCLPR/L-09	25	20	18	250	13	22.5				

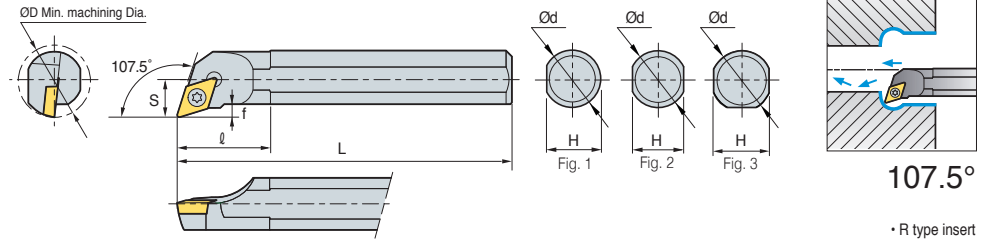
Applicable inserts B78



SDQCR/L



DC□T



Steel shank type

• R type insert
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
S10M-SDQCR/L-07	13	10	9	150	7	16	DC□T0702□□	FTKA02555	TW07P	2
S12M-SDQCR/L-07	16	12	11	150	9	20		FTKA02565	TW07P	
S16R-SDQCR/L-07	20	16	14	200	11	25	DC□T11T3□□	FTGA03508	TW15P	2
S16R-SDQCR/L-11	20	16	14	200	11	25		FTGA03510	TW15P	
S20S-SDQCR/L-11	25	20	18	250	13	32	DC□T0702□□	FTKA02555	TW07P	1
S25R-SDQCR/L-11	32	25	23	200	17	40		FTKA02565	TW07P	
A10H-SDQCR/L-07	13	10	9.5	100	7	16	DC□T11T3□□	FTGA03508	TW15P	1
A12K-SDQCR/L-07	16	12	11.5	125	9	20		FTGA03510	TW15P	
A16M-SDQCR/L-11	20	16	15	150	11	25	DC□T0702□□	FTKA02555	TW07P	1
A20Q-SDQCR/L-11	25	20	19	180	13	32		FTKA02565	TW07P	
A25R-SDQCR/L-11	32	25	24	200	17	40	DC□T11T3□□	FTGA03508	TW15P	1
								FTGA03510	TW15P	

Carbide shank type

(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
C08K-SDQCR/L-07	10	8	7	125	6	-	DC□T0702□□	FTKA02555	TW07P	2
C10K-SDQCR/L-07	13	10	9	125	7	14.0		FTKA02565	TW07P	
C12M-SDQCR/L-07	16	12	11	150	9	14.0	DC□T11T3□□	FTGA03508	TW15P	2
C16R-SDQCR/L-07	20	16	15	200	11	-		FTGA03510	TW15P	
C16R-SDQCR/L-11	20	16	15	200	11	21.3	DC□T0702□□	FTKA02555	TW07P	2
C20R-SDQCR/L-11	25	20	18	200	13	24.0		FTKA02565	TW07P	
C20S-SDQCR/L-11	25	20	18	250	13	24.0	DC□T11T3□□	FTGA03508	TW15P	2
E08K-SDQCR/L-07	10	8	7	125	6	-		FTGA03510	TW15P	
E10K-SDQCR/L-07	13	10	9	125	7	14.0	DC□T0702□□	FTKA02555	TW07P	2
E12M-SDQCR/L-07	16	12	11	150	9	14.0		FTKA02565	TW07P	
E16R-SDQCR/L-07	20	16	15	200	11	-	DC□T11T3□□	FTGA03508	TW15P	2
E16R-SDQCR/L-11	20	16	15	200	11	21.3		FTGA03510	TW15P	
E20R-SDQCR/L-11	25	20	18	200	13	24.0	DC□T0702□□	FTKA02555	TW07P	2
E20S-SDQCR/L-11	25	20	19	250	13	24.0		FTKA02565	TW07P	

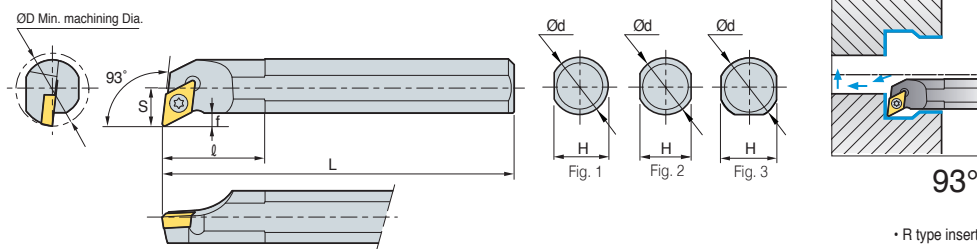
Applicable inserts B79~B82, B103



SDUCR/L



DC□T



• R type insert
(mm)

Steel shank type

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
S10M-SDUCR/L-07	13	10	9	150	7	16	DC□T0702□□	FTKA02555	TW07P	2
S12M-SDUCR/L-07	16	12	11	150	9	20		FTKA02565	TW07P	2
S16R-SDUCR/L-07	20	16	14	200	11	25				
S16R-SDUCR/L-11	20	16	14	200	11	25	DC□T11T3□□	FTGA03508	TW15P	2
S20S-SDUCR/L-11	25	20	18	250	13	32		FTGA03510	TW15P	3
S25R-SDUCR/L-11	32	25	23	200	17	40				
S32S-SDUCR/L-11	40	32	30	250	22	50				
A10H-SDUCR/L-07	13	10	9.5	100	7	16	DC□T0702□□	FTKA02555	TW07P	1
A12K-SDUCR/L-07	16	12	11.5	125	9	20		FTKA02565	TW07P	1
A16M-SDUCR/L-07	20	16	15	150	11	25				
A20Q-SDUCR/L-11	25	20	19	180	13	32	DC□T11T3□□	FTGA03508	TW15P	1
A25R-SDUCR/L-11	32	25	24	200	17	40		FTGA03510	TW15P	

Carbide shank type

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
C10K-SDUCR/L-07	13	10	9	125	7	9.8	DC□T0702□□	FTKA02555	TW07P	2
C10M-SDUCR/L-07	13	10	9	150	7	9.8				
C12M-SDUCR/L-07	16	12	11	150	9	11.0		FTKA02565	TW07P	
C12Q-SDUCR/L-07	16	12	11	180	9	11.0				
C16R-SDUCR/L-07	20	16	15	200	11	-				
C16S-SDUCR/L-07	20	16	15	250	11	-	DC□T11T3□□	FTGA03508	TW15P	2
C16R-SDUCR/L-11	20	16	15	200	11	-				
C16S-SDUCR/L-11	20	16	15	250	11	-		FTGA03510	TW15P	
C20R-SDUCR/L-11	25	20	18	200	13	-				
C20S-SDUCR/L-11	25	20	18	250	13	-				
C25T-SDUCR/L-11	32	25	23	300	17	-	DC□T0702□□	FTKA02555	TW07P	2
E10K-SDUCR/L-07	13	10	9	125	7	9.8				
E10M-SDUCR/L-07	13	10	9	150	7	9.8		FTKA02565	TW07P	
E12M-SDUCR/L-07	16	12	11	150	9	11.0				
E12Q-SDUCR/L-07	16	12	11	180	9	11.0				
E16R-SDUCR/L-07	20	16	15	200	11	-	DC□T11T3□□	FTGA03508	TW15P	2
E16S-SDUCR/L-07	20	16	15	250	11	-				
E16R-SDUCR/L-11	20	16	15	200	11	-				
E16S-SDUCR/L-11	20	16	15	250	11	-		FTGA03510	TW15P	
E20R-SDUCR/L-11	25	20	18	200	13	-				
E20S-SDUCR/L-11	25	20	18	250	13	-	DC□T11T3□□			
E25T-SDUCR/L-11	32	25	23	300	17	-		FTGA03510	TW15P	

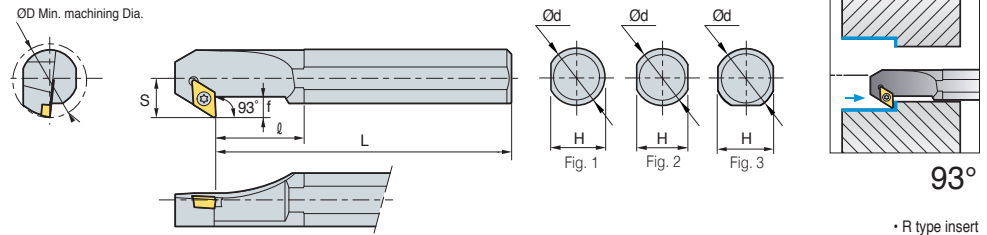
Applicable inserts B79~B82, B104



SDZCR/L



DC□T



• R type insert (mm)

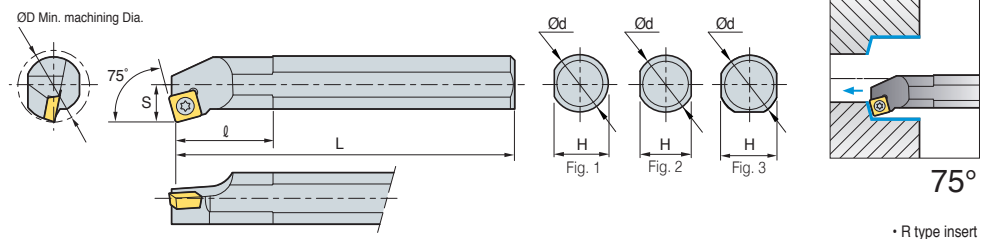
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	 Screw	 Shim	 Shim Screw	 Wrench	Fig.
S16R-SDZCR/L-07	20	16	14	200	11	25	6.5	DC□T0702□□	FTKA02565	-	-	TW07P	2
S20S-SDZCR/L-07	25	20	18	250	13	32	7.5						
S25R-SDZCR/L-11	32	25	23	200	17	40	9	DC□T11T3□□	FTGA03510	-	-	TW15P	3
S32S-SDZCR/L-11	40	32	30	250	22	50	11		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L	
S40T-SDZCR/L-11	50	40	38	300	27	60	11		FTGA03510	-	-	TW15P	1
A25R-SDZCR/L-11	32	25	24	200	17	40	9		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L	3

➔ Applicable inserts B79~B82, B104

SSKCR/L



SC□T



• R type insert (mm)

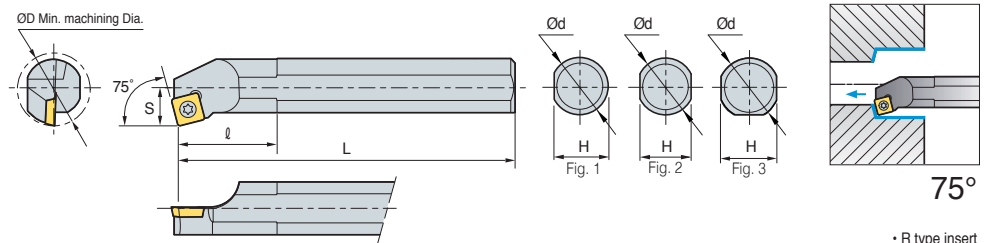
Designation	ØD	Ød	H	L	S	f	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S12M-SSKCR/L-09	16	12	11	150	9	20	SC□T09T3□□	FTGA03507	-	-	TW15P	2
S16R-SSKCR/L-09	20	16	14	200	11	25		FTGA03508	-	-	TW15P	
S20S-SSKCR/L-09	25	20	18	250	13	32	SC□T1204□□	FTGA0411F	-	-	TW15P	3
S25R-SSKCR/L-12	32	25	23	200	17	40		FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L	
A12K-SSKCR/L-09	16	12	11.5	125	9	20	SC□T09T3□□	FTGA03507	-	-	TW15P	1
A16M-SSKCR/L-09	20	16	15	150	11	25		FTGA03508	-	-	TW15P	
A20Q-SSKCR/L-09	25	20	19	180	13	32	SC□T1204□□	FTGA0411F	-	-	TW15P	3
A25R-SSKCR/L-12	32	25	24	200	17	40		FTGA0411F	SS42S	SFXN0610F	TW15P, HW40L	

➔ Applicable inserts B84, B106

SSKPR/L



SP□T



• R type insert (mm)

Designation	ØD	Ød	H	L	S	f	Insert	Screw	Wrench	Fig.
S12M-SSKPR/L-09	16	12	11	150	9	20	SP□T09T3□□	FTNA0307	TW09P	2
S16N-SSKPR/L-09	20	16	14	160	11	25				
S16R-SSKPR/L-09	20	16	14	200	11	25				
S20N-SSKPR/L-09	25	20	18	160	13	32				
S20S-SSKPR/L-09	25	20	18	250	13	32	SP□T09T3□□	FTNA0307	TW09P	1
A12K-SSKPR/L-09	16	12	11.5	125	9	20				
A16M-SSKPR/L-09	20	16	15	150	11	25				
A20Q-SSKPR/L-09	25	20	19	180	13	32				

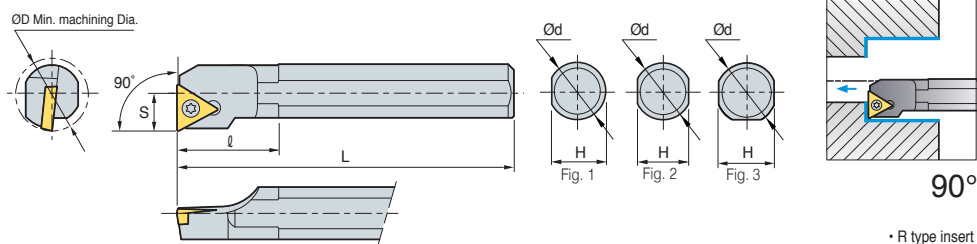
➔ Applicable inserts B85~B86

• Use left handed insert for right handed holder

STFCR/L



TC□T



• R type insert
(mm)

Steel shank type

Designation	ØD	Ød	H	L	S	l	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S10M-STFCR/L-09	13	10	9	150	7	16	TC□T0902□□	FTKA02206	-	-	TW06P	2
S12M-STFCR/L-09	16	12	11	150	9	20	TC□T1102□□	FTKA02565	-	-	TW07P	2
S12M-STFCR/L-11	16	12	11	150	9	20						
S16R-STFCR/L-11	20	16	14	200	11	25						
S20S-STFCR/L-11	25	20	18	250	13	32	TC□T16T3□□	FTGA03510	-	-	TW15P	2
S20S-STFCR/L-16	25	20	18	250	13	32						3
S25R-STFCR/L-16	32	25	23	200	17	40	TC□T16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L	3
S32S-STFCR/L-16	40	32	30	250	22	50						
S40T-STFCR/L-16	50	40	38	300	27	60						
A10H-STFCR/L-09	13	10	9.5	100	7	16	TC□T0902□□	FTKA02206	-	-	TW06P	1
A12K-STFCR/L-09	16	12	11.5	125	9	20	TC□T1102□□	FTKA02565	-	-	TW07P	1
A12K-STFCR/L-11	16	12	11.5	125	9	20						
A16M-STFCR/L-11	20	16	15	150	11	25						
A20Q-STFCR/L-11	25	20	19	180	13	32	TC□T16T3□□	FTKA03510	-	-	TW15P	1
A25R-STFCR/L-16	32	25	24	200	17	40		FTGA03512	ST32S	SHXN0509F	TW15P, HW35L	3
A32S-STFCR/L-16	40	32	30	250	22	50						

Carbide shank type

											(mm)
Designation	ØD	Ød	H	L	S	ℓ	Insert	 Screw	 Wrench	Fig.	
C08K-STFCR/L-09	10	8	7	125	5	-	TC□T0902□□	FTKA02206	TW06P	2	
C10K-STFCR/L-09	12	10	9	125	6	14.0					
C10K-STFCR/L-11	12	10	9	125	6	12.5	TC□T1102□□	FTKA02565	TW07P		
C12M-STFCR/L-11	15	12	11	150	8	-					
C16R-STFCR/L-11	20	16	15	200	10	-					
C20R-STFCR/L-11	25	20	18	200	13	23.0					
C20S-STFCR/L-11	25	20	18	250	13	23.0	TC□T16T3□□	FTGA03510	TW15P		
C20R-STFCR/L-16	25	20	18	200	13	-					
C20S-STFCR/L-16	25	20	18	250	13	-	TC□T0902□□	FTKA02206	TW06P		
E08K-STFCR/L-09	10	8	7	125	5	-					
E10K-STFCR/L-09	12	10	9	125	6	14.0					
E10K-STFCR/L-11	12	10	9	125	6	12.5	TC□T1102□□	FTKA02565	TW07P	2	
E12M-STFCR/L-11	15	12	11	150	8	-					
E16R-STFCR/L-11	20	16	15	200	11	-					
E20R-STFCR/L-11	25	20	18	200	13	23.0					
E20S-STFCR/L-11	25	20	18	250	13	23.0					
E20R-STFCR/L-16	25	20	18	200	13	-	TC□T16T3□□	FTGA03510	TW15P		
E20S-STFCR/L-16	25	20	19	250	13	-					

Applicable inserts B88~B89, B107

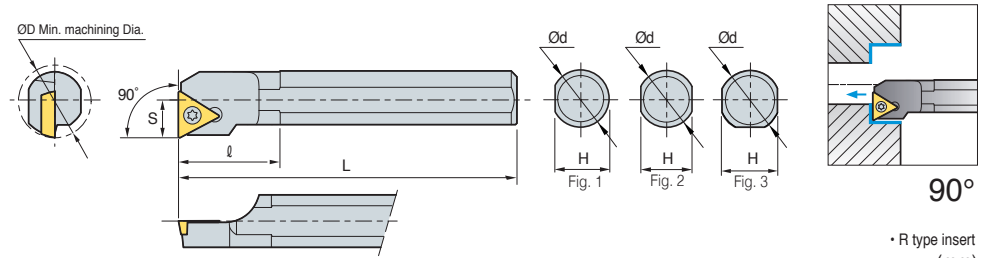


STFPR/L



TP□T

Steel shank type



• R type insert (mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
S10M-STFPR/L-11	13	10	9	150	7	16	TP□T1103□□	FTNA0306	TW09P	2
S12M-STFPR/L-11	16	12	11	150	9	20		FTNA0307	TW09P	2
S16N-STFPR/L-11	20	16	14	160	11	25				
S16R-STFPR/L-11	20	16	14	200	11	25				
S20N-STFPR/L-16	25	20	18	160	13	32	TP□T1604□□	FTNA0408	TW15P	2
S20S-STFPR/L-16	25	20	18	250	13	32				
A10H-STFPR/L-11	13	10	9.5	100	7	16	TP□T1103□□	FTNA0306	TW09P	1
A12K-STFPR/L-11	16	12	11	125	9	20		FTNA0307	TW09P	1
A16M-STFPR/L-11	20	16	15	150	11	25				
A20Q-STFPR/L-16	25	20	19	180	13	32	TP□T1604□□	FTNA0408	TW15P	1

Carbide shank type

Designation	ØD	Ød	H	L	S	ℓ	Insert	 Screw	 Wrench	Fig.
C08K-STFPR/L-08	10	8	7	125	5	13.7	TP□T0802□□	FTNA02205	TW06P	2
C10K-STFPR/L-11	12	10	9	125	6	14.0	TP□T1103□□	FTNA0305	TW09P	
C10M-STFPR/L-11	12	10	9	150	6	14.0		FTNA0307	TW09P	
C12M-STFPR/L-11	15	12	11	150	8	-				
C12Q-STFPR/L-11	15	12	11	180	8	-				
C16R-STFPR/L-11	20	16	15	200	10	-				
C16S-STFPR/L-11	20	16	15	250	10	-				
C20R-STFPR/L-11	25	20	18	200	13	-				
C20S-STFPR/L-11	25	20	18	250	13	-	TP□T1604□□	FTNA0408	TW15P	
C20R-STFPR/L-16	25	20	18	200	13	-				
C20S-STFPR/L-16	25	20	18	250	13	-				
C25T-STFPR/L-16	32	25	23	300	17	23.5				
E08K-STFPR/L-08	10	8	7	125	5	13.7	TP□T0802□□	FTNA02205	TW06P	2
E10K-STFPR/L-11	12	10	9	125	6	14.0	TP□T1103□□	FTNA0305	TW09P	
E10M-STFPR/L-11	12	10	9	150	6	14.0				
E12M-STFPR/L-11	15	12	11	150	8	-		FTNA0307	TW09P	
E12Q-STFPR/L-11	15	12	11	180	8	-				
E16R-STFPR/L-11	20	16	15	200	10	-				
E16S-STFPR/L-11	20	16	15	250	10	-				
E20R-STFPR/L-11	25	20	18	200	13	-				
E20S-STFPR/L-11	25	20	18	250	13	-	TP□T1604□□	FTNA0408	TW15P	
E20R-STFPR/L-16	25	20	18	200	13	-				
E20S-STFPR/L-16	25	20	18	250	13	-				
E25T-STFPR/L-16	32	25	23	300	17	23.5				

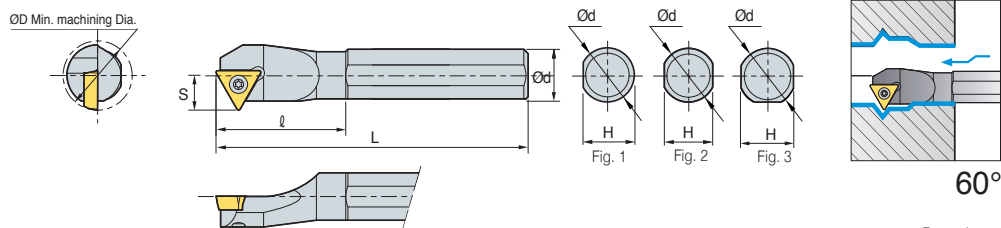
Applicable inserts **B90~B93**

• Use left handed insert for right handed holder

STWPR/L



TP□□



• R type insert
(mm)

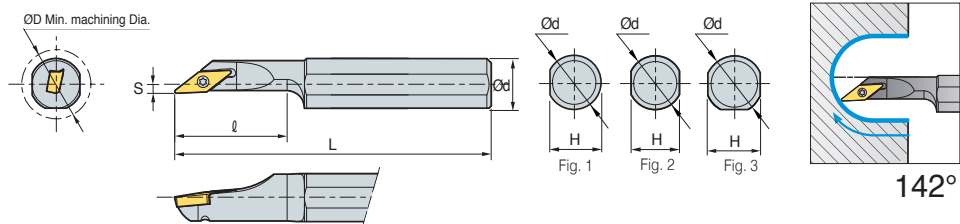
Designation	ØD	Ød	H	L	S	ℓ	Insert	 Screw	 Wrench	Fig.
S10M-STWPR/L-11	13	10	7	150	7	16	TPGH1102□□	FTNA0305	TW09P	2
S12M-STWPR/L-11	16	12	9	150	9	20	TPGH1103□□ TPMT1103□□	FTNA0306	TW09P	
S16Q-STWPR/L-11	20	16	14	180	11	25				
S20R-STWPR/L-11	25	20	18	200	13	32				

➔ Applicable inserts B90~B93

SVJCR/L



VC□□



• R type insert
(mm)

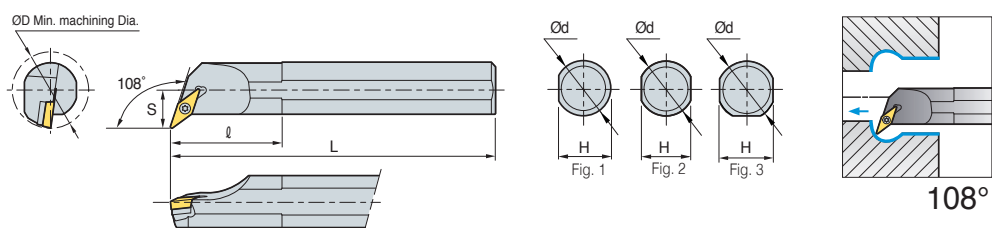
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
S12M-SVJCR/L-08	16	12	11	150	2	26	VCMT0802□□	FTNA0204	TW06P	2
S16Q-SVJCR/L-08	20	16	15	180	2	36				

➔ Applicable inserts B97~B99, B109

SVQBR/L



VB□T



• R type insert
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S32S-SVQBR/L-16	40	32	30	250	22	50	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L	3
S40T-SVQBR/L-16	50	40	38	300	27	60						
A32S-SVQBR/L-16	40	32	30	250	22	50						

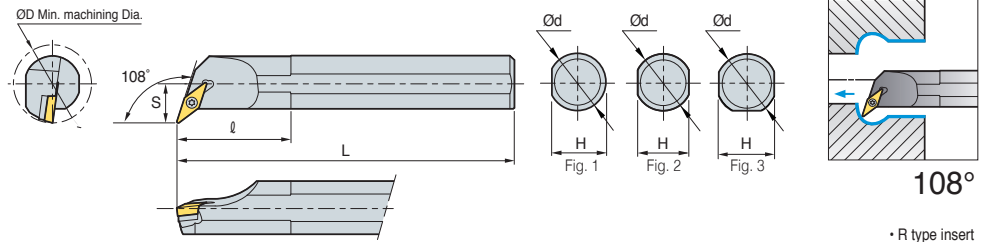
➔ Applicable inserts B94~B96, B108



SVQCR/L



VC□T



• R type insert (mm)

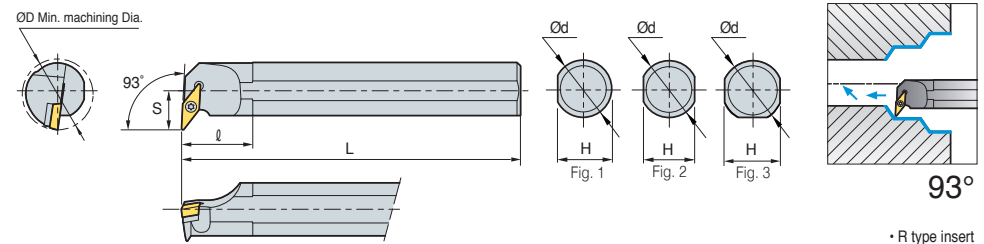
Designation	ØD	Ød	H	L	S	l	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S16R-SVQCR/L-11	20	16	14	200	11	25	VC□T1103□□	FTKA02565	-	-	TW07P	2
S20S-SVQCR/L-11	25	20	18	250	13	32						3
S25R-SVQCR/L-11	32	25	23	200	17	40	VC□T1303□□	FTKA0307	-	-	TW07P	2
S20S-SVQCR/L-13	25	20	18	250	13	32						3
S25R-SVQCR/L-13	32	25	23	200	17	40	VC□T1604□□	FTGA03510	-	-	TW15P	3
S25R-SVQCR/L-16	32	25	23	200	17	40		FTGA03512	SV32S	SHXN0509F	TW15P HW35L	
S32S-SVQCR/L-16	40	32	30	250	22	50						
S40T-SVQCR/L-16	50	40	38	300	27	60						

➔ Applicable inserts B97~B99, B109

SVUBR/L



VB□T



• R type insert (mm)

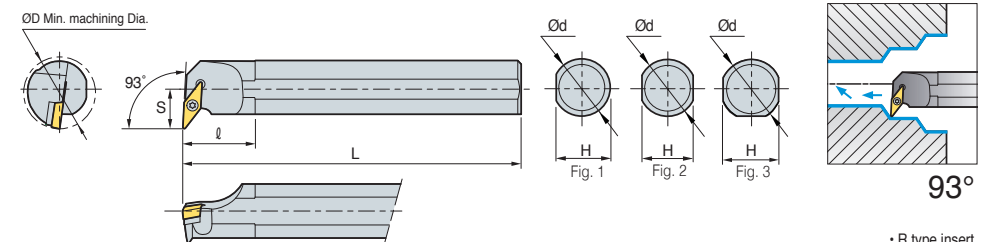
Designation	ØD	Ød	H	L	S	l	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S32S-SVUBR/L-16	40	32	30	250	22	50	VB□T1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L	3
S40T-SVUBR/L-16	50	40	38	300	27	60						
A32S-SVUBR/L-16	40	32	30	250	22	50						

➔ Applicable inserts B94~B96, B108

SVUCR/L



VC□T



• R type insert (mm)

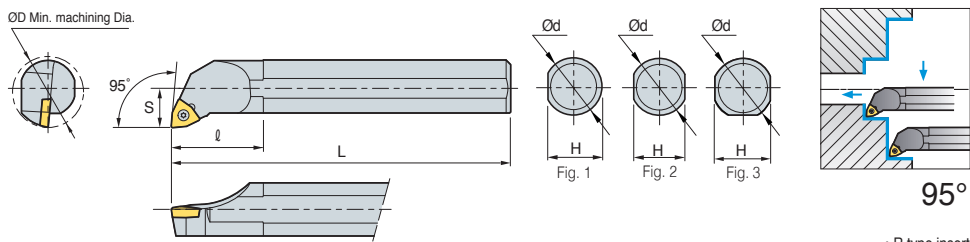
Designation	ØD	Ød	H	L	S	l	Insert	Screw	Shim	Shim Screw	Wrench	Fig.
S16R-SVUCR/L-11	22	16	14	200	13	25	VC□T1103□□	FTKA02565	-	-	TW07P	2
S20S-SVUCR/L-11	25	20	18	250	13	32						3
S25T-SVUCR/L-11	32	25	23	300	17	40	VC□T1303□□	FTKA0307	-	-	TW09P	2
S20S-SVUCR/L-13	25	20	18	250	13	32						3
S25R-SVUCR/L-13	32	25	23	200	17	40	VC□T1604□□	FTGA03510	-	-	TW15P	3
S25R-SVUCR/L-16	32	25	23	200	17	40		FTGA03512	SV32S	SHXN0509F	TW15P HW35L	
S32S-SVUCR/L-16	40	32	30	250	22	50						
S40T-SVUCR/L-16	50	40	38	300	27	60						

➔ Applicable inserts B97~B99, B109

SWLCR/L



WC□T

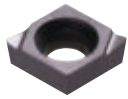


• R type insert (mm)

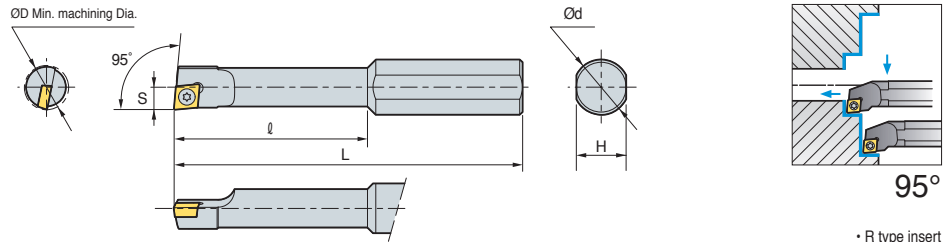
Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench	Fig.
S25R-SWLCR/L-08	32	25	23	200	17	40	WC□T0804□□	FTGA0411F	TW15P	3
S32S-SWLCR/L-08	40	32	30	250	22	50				
A25R-SWLCR/L-08	32	25	24	200	17	40	WC□T0804□□	FTGA0411F	TW15P	1
A32S-SWLCR/L-08	40	32	30	250	22	50				3



SCLCR/L



CCET



Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench
S10H-SCLCR/L-0305	5	10	9	100	2.5	25	CCET0301□□	FTNA01633	TW06P
S10H-SCLCR/L-0306	6	10	9	100	3.0	25			
S10J-SCLCR/L-0407	7	10	9	110	3.5	30	CCET0401□□	FTNA0238	TW06P
S10J-SCLCR/L-0408	8	10	9	110	4.0	30			

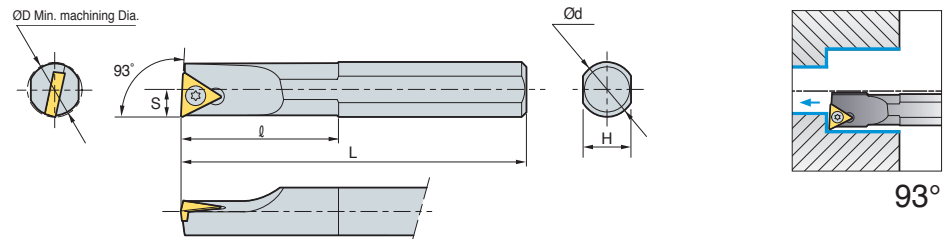
➔ Applicable inserts B73 ~B77, B103

• Use left handed insert for right handed holder

STUBR/L



TB□□



➔ Steel shank type

Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench
S08K-STUBR/L-06	8	8	7	125	4	30	TB□□0601□□R/L	FTNA0204	TW06P
A08F-STUBR/L-06	8	8	7.5	80	4	30			

➔ Carbide shank type

Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench
C08K-STUBR/L-06	10	8	7	125	5	TB□T0601□□	FTNA0204	TW06P	
C10K-STUBR/L-06	12	10	9	125	6				
E08K-STUBR/L-06	10	8	7	125	5	TB□T0601□□	FTNA0204	TW06P	
E10K-STUBR/L-06	12	10	9	125	6				

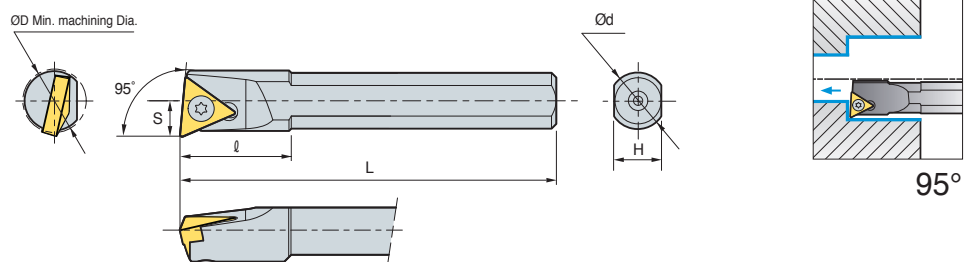
➔ Applicable inserts B87

• Use left handed insert for right handed holder

STLBR/L



TB□□



➔ Steel shank type

Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench
S06H-STLBR/L-06-SP	8	6	5	100	3.8	12	TB□□0601□□R/L	FTNA0204	TW06P

➔ Applicable inserts B87

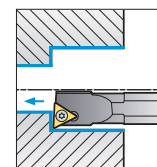
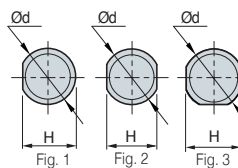
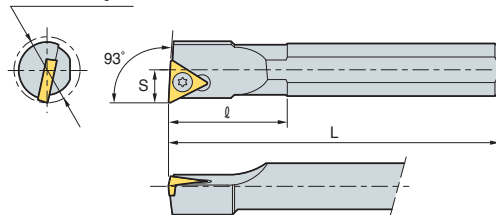
• Use left handed insert for right handed holder

STUPR/L



TP□□

OD Min. machining Dia.



93°

Steel shank type

• R type insert
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench	Fig.
S08K-STUPR/L-08	10	8	7	125	4	18	TP□□0802□□R/L	FTNA02205	TW06P	2
A08F-STUPR/L-08	10	8	7.5	80	5	18				

Carbide shank type

(mm)

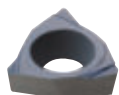
Designation	ØD	Ød	H	L	S	ℓ	Insert	 Screw	 Wrench	Fig.
C08K-STUPR/L-08	10	8	7	125	5		TP□T0802□□	FTNA02205	TW06P	2
C10K-STUPR/L-11	12	10	9	125	6		TP□T1103□□	FTNA0305	TW09P	
C10M-STUPR/L-11	12	10	9	150	6			FTNA0307	TW09P	
C12M-STUPR/L-11	15	12	11	150	8					
C12Q-STUPR/L-11	15	12	11	180	8					
C16R-STUPR/L-11	20	16	15	200	10					
C16S-STUPR/L-11	20	16	15	250	10					
C20R-STUPR/L-11	25	20	18	200	13					
C20S-STUPR/L-11	25	20	18	250	13					
C20R-STUPR/L-16	25	20	18	200	13		TP□T1604□□	FTNA0408	TW15P	
C20S-STUPR/L-16	25	20	18	250	13					
C25T-STUPR/L-16	32	25	23	300	17					2
E08K-STUPR/L-08	10	8	7	125	5		TP□T0802□□	FTNA02205	TW06P	
E10K-STUPR/L-11	12	10	9	125	6		TP□T1103□□	FTNA0305	TW09P	
E10M-STUPR/L-11	12	10	9	150	6					
E12M-STUPR/L-11	15	12	11	150	8			FTNA0307	TW09P	
E12Q-STUPR/L-11	15	12	11	180	8					
E16R-STUPR/L-11	20	16	15	200	10					
E16S-STUPR/L-11	20	16	15	250	10					
E20R-STUPR/L-11	25	20	18	200	13					
E20S-STUPR/L-11	25	20	18	250	13					
E20R-STUPR/L-16	25	20	18	200	13		TP□T1604□□	FTNA0408	TW15P	
E20S-STUPR/L-16	25	20	18	250	13					
E25T-STUPR/L-16	32	25	23	300	17					

Applicable inserts B90~B93

• Use left handed insert for right handed holder



SWUBR/L

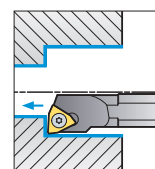
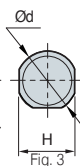
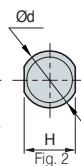
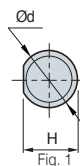
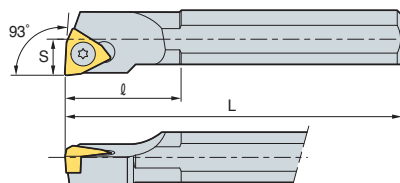


WB□T

ØD Min. machining Dia.



93°



93°

Steel shank type

• R type insert
(mm)

Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench	Fig.
S05H-SWUBR/L-02	5.5	5	4.5	100	2.75	-	WBGTS0201□□R/L	FTNA0203	TW06P	2
S08K-SWUBR/L-02	8	8	7	125	4	30		FTNA02033		
S08K-SWUBR/L-S3	10	8	7	125	5	18	WBGTS302□□R/L	FTNA02205	TW06P	
A08F-SWUBR/L-02	8	8	7.5	80	4	30	WBGTS0201□□R/L	FTNA0203	TW06P	
A08F-SWUBR/L-S3	10	8	7.5	80	5	16	WBGTS302□□R/L	FTNA02205	TW06P	

Carbide shank type

(mm)

Designation	ØD	Ød	H	L	S	l	Insert	Screw	Wrench	Fig.
C05H-SWUBR/L-02	6	5	4.4	100	3	-	WB□T0201□□	FTNA0203	TW06P	1
C06H-SWUBR/L-02	7	6	5.4	100	3.5	-		FTNA02033		
C08K-SWUBR/L-02	9	8	7	125	4.5	-	WB□TS301□□	FTNA02205	TW06P	2
C08K-SWUBR/L-S3	10	8	7	125	4.5	-		FTNA02205		
E06H-SWUBR/L-02	7	6	5.4	100	3.5	-	WB□T0201□□	FTNA0203	TW06P	1
E08K-SWUBR/L-02	9	8	7	125	4.5	-		FTNA02033		
E08K-SWUBR/L-S3	10	8	7	125	5	-	WB□TS301□□	FTNA02205	TW06P	2

Applicable inserts B101

• Use left handed insert for right handed holder



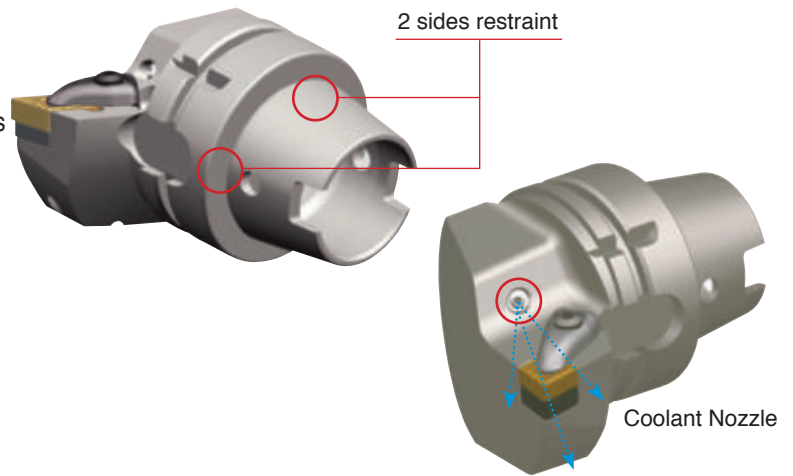
※ See page B151 for applicable sleeves

B Technical Information for HSK Tooling System

2 sides restraint - side and taper part

HSK Tooling System [For Multi-task Machines]

- 2 sides restraint - side and taper part
- Toughness guaranteed for static and dynamic movements
- Precision guaranteed on shaft and repeat directions
- Suitable at high speeds
- Suitable for small work pieces
- Coolant Nozzle is easily adjustable



Code system

C: 80° Diamond D: 55° Diamond
S: 90° Square T: 60° Triangle
V: 35° Diamond W: 80° Hexagon

N = 0°
B = 5°

DX: 65
H: 100
L: 140

Insert Shape

Clearance angle of insert

Length of tool holder



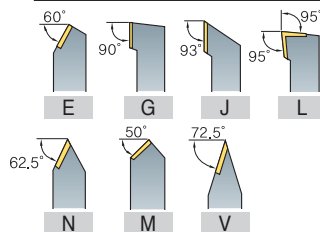
Taper design & size

ICTM = HSK standard

Clamping Type

D: Double Clamp
M: Multi Clamp
P: Lever Lock
S: Screw On
W: Wedge Clamp

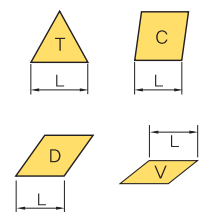
Holder Style



Hand

R: Right
L: Left
N: No Hand

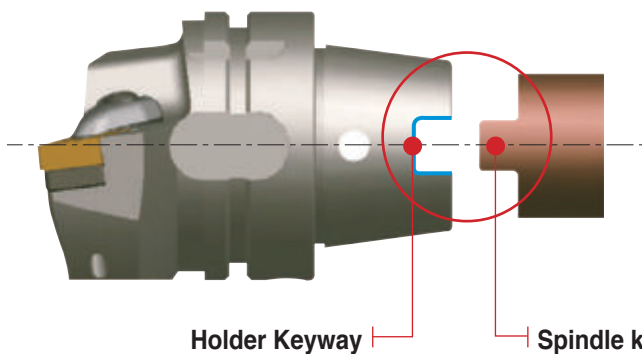
Cutting edge Length



ICTM (Interface committee for turning mill)

- Interface for Multi-task machines turning tool, which is tooling system based on ICTM standard from 17 major Japanese companies cooperation and is compatible with conventional HSK-A type and common to Multi-task machines and machining centers

Tolerance of keyway has been improved: HSK-T63



Tolerance comparison (Example)

(mm)

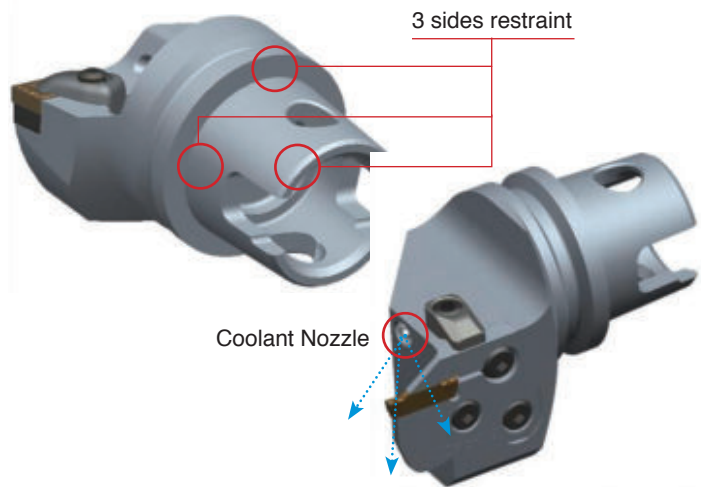
Remarks	Maximum Tolerance	Minimum Tolerance
ICTM STANDARD HSK-T63	0.075	0.035
ISO STANDARD HSK-A63	0.33	0.08



3 Face Binding - Superior precision

KM Tooling System [For Multi-task Machines]

- 3 Face binding/Superior precision
- Flexible clamping system/Superior rigidity
- Various size & style
- Appropriate for turning & milling
- Adjustable coolant direction with coolant nozzle



Code system

C: 80° Diamond D: 55° Diamond
S: 90° Square T: 60° Triangle
V: 35° Diamond W: 80° Hexagon

N = 0°
B = 5°

DX: 65
H: 100
L: 140

Insert Shape

Clearance angle of insert

Length of tool holder



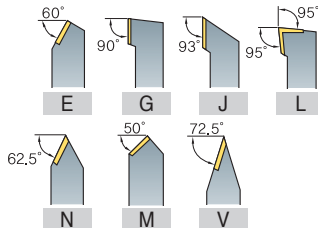
Taper design & size

50, 63UT
80ATC, 100

Clamping Type

D: Double Clamp
M: Multi Clamp
P: Lever Lock
S: Screw On
W: Wedge Clamp

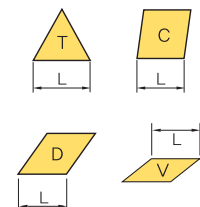
Holder Style



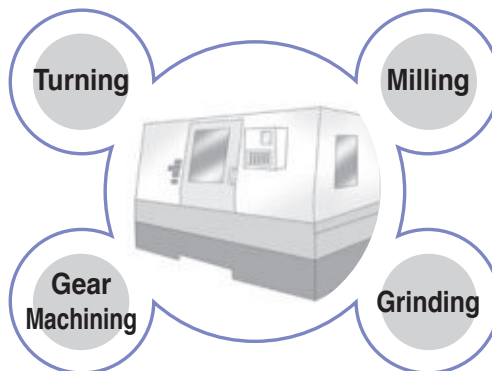
Hand

R: Right
L: Left
N: No Hand

Cutting edge Length



Multi-tasking machine



4 Machines
↓
1 Machine

KM Tooling system is superior for wide application.

External Process

Internal Process

Grooving Process

Drill Process

Parting-off Process

KM50, KM63UT, KM80, KM100 Standard and Special type can be produced.

Index for HSK Tooling System

Cutting Shape								
Designation	H63T-DCLNR/L-DX12	H63T-DCMNN-H/L12	H63T-DDJNR/L-DX15	H63T-DDNNN-H/L15	H63T-PCLNR/L-DX12	H63T-PCMNN-H/L12	H63T-PDJNR/L-DX15	H63T-PDNNN-H/L15
Approach angle	95°	95°	93°	107.5°	95°	95°	93°	107.5°
Page	B231	B231	B231	B231	B232	B232	B232	B232
Turning	●	●	●	●	●	●	●	●
Copying			●	●			●	●
Facing	●	●	●	●	●	●	●	●
Back turning	●	●	●	●	●	●	●	●
Internal turning								

Cutting Shape								
Designation	H63T-PRGCR-DX12	H63T-PRDCN-H/L12	H63T-SVPBR/L-DX16	H63T-SVVBH-H/L16	H63T-A25K/A32L-DCLNR/L-12	H63T-MCFR/L	H63T-MCHR/L	
Approach angle	-	-	117.5°	117.5°	95°	-	-	
Page	B233	B233	B233	B233	B235	B235	B234	
Turning	●	●	●	●	●	●		
Copying	●	●	●	●		●		
Facing	●	●	●	●	●	●	●	
Back turning	●	●	●	●	●			
Internal turning					●			

Index for KM Tooling System

Cutting Shape						
Designation	KM50-DCLNR/L-C12 KM63UT-DCLNR/L-D12	KM50-DCMNN-C12 KM63UT-DCMNN-D12	KM50-DDJNR/L-C15(-3) KM63UT-DCJNR/L-D15(-3)	KM50-DDNNN-C15(-3) KM63UT-DDNNN-D15(-3)	KM50-A25K-DCLNR/L-12 KM63UT-A25K-DCLNR/L-12 KM63UT-A32L-DCLNR/L-12	KM50-PCLNR/L-C12 KM63UT-PCLNR/L-D12
Approach angle	95°	95°	93°	107.5°	95°	95°
Page	B237	B237	B237	B238	B240	B238
Turning	●	●	●	●	●	●
Copying			●	●		
Facing	●	●	●	●	●	●
Back turning	●	●	●	●	●	●
Internal turning					●	

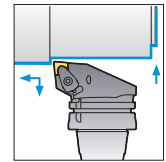
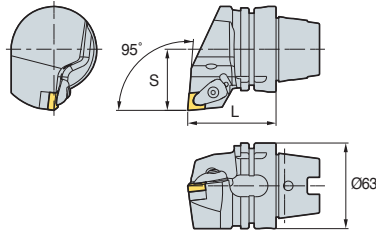
Cutting Shape						
Designation	KM50-PCMNN-C12 KM63UT-PCMNN-D12	KM50-PDJNR/L-C15(-3) KM63UT-PDJNR/L-D15(-3)	KM50-PDNNN-C15(-3) KM63UT-PDNNN-D15(-3)	KM50-MCHR/L KM63UT-MCHR/L		
Approach angle	95°	93°	107.5°	-		
Page	B238	B239	B239	B239		
Turning	●	●	●	●		
Copying		●	●	●		
Facing	●	●	●			
Back turning	●	●	●	●		
Internal turning						



DCLNR/L



CN□□



95°

• R type insert
(mm)

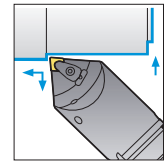
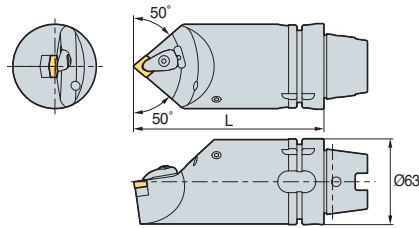
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DCLNR/L-DX12	65	45	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T

↻ Applicable inserts **B36~B42**

DCMNN



CN□□



95°

(mm)

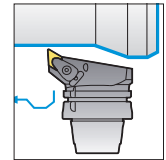
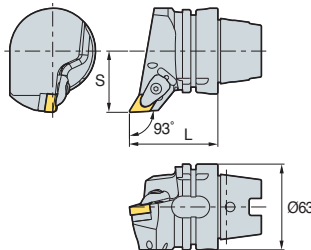
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DCMNN-H12	100	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DCMNN-L12	140										

↻ Applicable inserts **B36~B42**

DDJNR/L



DN□□



93°

• R type insert
(mm)

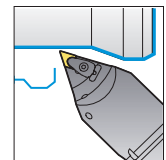
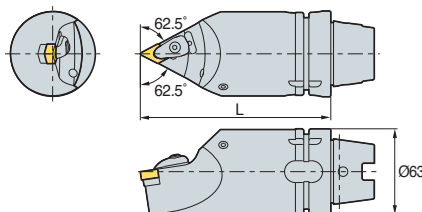
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DDJNR/L-DX15	65	45	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T
H63T-DDJNR/L-DX15-3	65	45	DN□□1504□□			SD44V						

↻ Applicable inserts **B43~B48**

DDNNN



DN□□



107.5°

(mm)

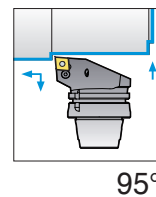
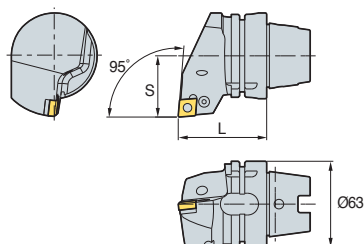
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DDNNN-H15	100	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DDNNN-L15	140										
H63T-DDNNN-H15-3	100	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DDNNN-L15-3	140										

↻ Applicable inserts **B43~B48**

PCLNR/L



CN□□



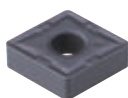
95°

• R type insert
(mm)

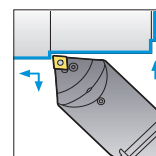
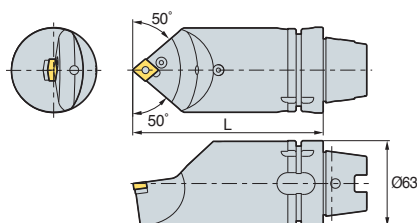
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PCLNR/L-DX12	65	45	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	-	HW30L	CP63T

➔ Applicable inserts B36~B42

PCMNN



CN□□



95°

(mm)

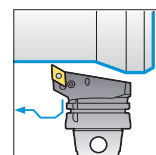
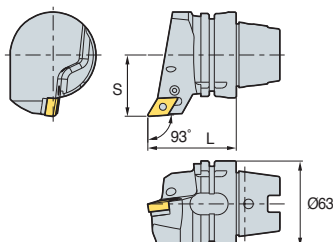
Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PCMNN-H12	100	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PCMNN-L12	140										

➔ Applicable inserts B36~B42

PDJNR/L



DN□□



95°

• R type insert
(mm)

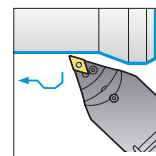
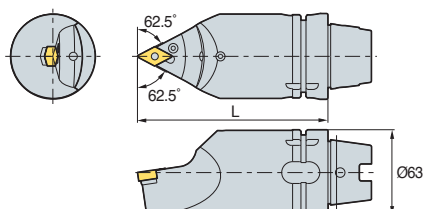
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PDJNR/L-DX15	65	45	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L	CP63T
H63T-PDJNR/L-DX15-3	65	45	DN□□1504□□			SD43N						

➔ Applicable inserts B43~B48

PDNNN



DN□□



107.5°

(mm)

Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PDNNN-H15	100	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PDNNN-L15	140										
H63T-PDNNN-H15-3	100	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PDNNN-L15-3	140										

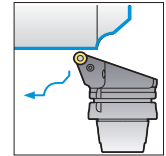
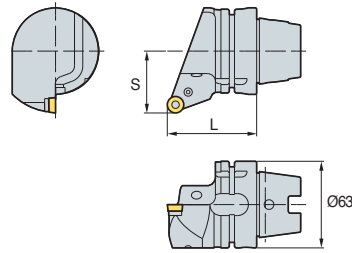
➔ Applicable inserts B43~B48



PRGCR/L



RCMX1204M0



• R type insert
(mm)

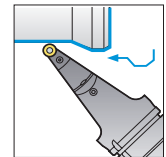
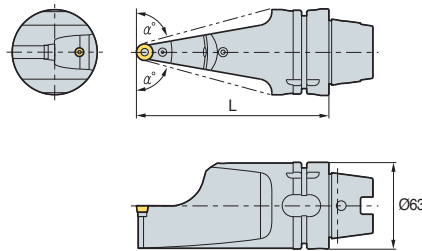
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PRGCR/L-DX12	65	45	RCMX1204M0	LR12	VHX0617	SR12	SP3	LSPS3	CN0605	-	HW25L	CP63T

↻ Applicable inserts **B83, B105**

PRDCN



RCMX1204M0

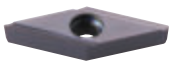


(mm)

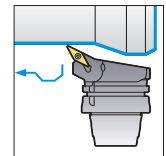
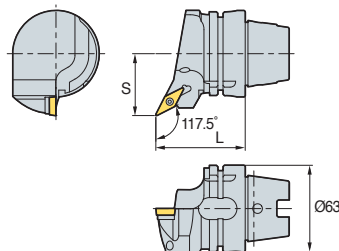
Designation	L	α°	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PRDCN-H12	100	69	RCMX1204M0	LR12	VHX0617	SR12	SP3	LSPS3	CN0605	-	HW25L	CP63T
H63T-PRDCN-L12	140	75										

↻ Applicable inserts **B83, B105**

SVPBR/L



VB□T



117.5°

• R type insert
(mm)

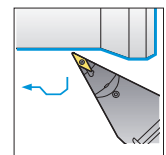
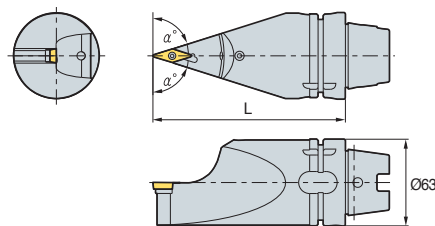
Designation	L	S	Insert	Screw	Shim Screw	Shim	Nozzle	Plug	Wrench	Wrench	Coolant Pipe
H63T-SVPBR/L-DX16	65	45	VB□T1604□□	FTGA03512	SHXN0509F	SV32S	CN0605	-	TW15P	HW32L	CP63T

↻ Applicable inserts **B94~B96, B108**

SVVBN



VB□T



117.5°

(mm)

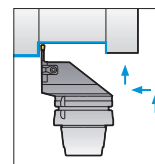
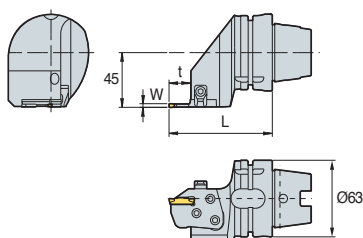
Designation	L	α°	Insert	Screw	Shim Screw	Shim	Nozzle	Plug	Wrench	Wrench	Coolant Pipe
H63T-SVVBN-H16	100	66.5	VB□T1604□□	FTGA03512	SHXN0509F	SV32S	CN0605	KHA0808	TW15P	HW32L	CP63T
H63T-SVVBN-L16	140	72.5									

↻ Applicable inserts **B94~B96, B108**

MCHR/L



MGMN / MGMR/L
MGGN / MRMN



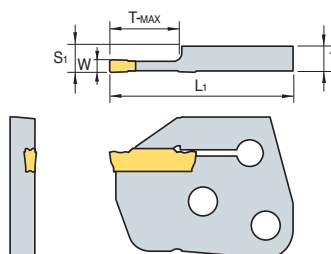
• R type insert
(mm)

Designation	L	t	W	T-MAX	Insert	Cartridge	Clamp	Clamp Screw	Hinge Screw	Screw	Nozzle	Plug	Wrench	Coolant Pipe
H63T-MCHR/L	85	18	3	16	MGMN	MCER/L3-T16	CHX8N	DHA0818F	RHA0613	FHGA0618	CN0605	-	HW40L	CP63T
	85	18	4	16	MGMR/L	MCER/L4-T16								
	89	22	5	20	MGGN	MCER/L5-T20								
	89	22	6	20	MRMN	MCER/L6-T20								

MCER/L (Cartridge)



MGMN / MGMR/L
MGGN / MRMN



• R type insert
(mm)

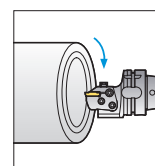
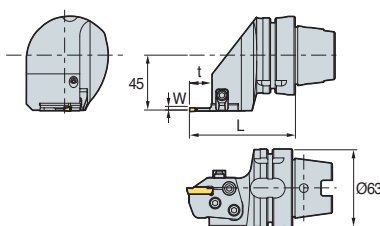
Designation		L	L ₁	S ₁	T-MAX	Insert		Tool holders
						W	Designation	
MCER/L	3-T16	6.00	44.5	6.35	16	3	MGMN	H63T-MCHR/L
	4-T16	5.97	44.5	6.35	16	4	MGMR/L	
	5-T20	5.87	48.5	6.35	20	5	MGGN	
	6-T20	5.82	48.5	6.35	20	6	MGMN	

Applicable inserts C28~C30

MCHR/L



MFMN300
MGMN400



• R type insert
(mm)

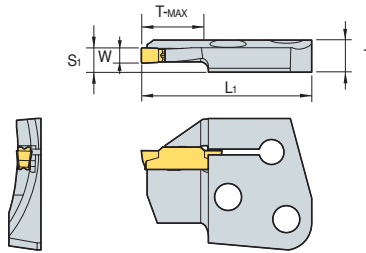
Designation	L	t	W	T-MAX	Insert	Cartridge	Clamp	Clamp Screw	Hinge Screw	Screw	Nozzle	Plug	Wrench	Coolant Pipe
H63T-MCHR/L	85	18	3	16	MFMN300	MCFR/L3-24/35-T16	CHX8N	DHA0818F	RHA0613	FHGA0618	CN0605	-	HW40L	
	85	18	3	16		MCFR/L3-29/40-T16								
	85	18	3	16		MCFR/L3-34/50-T16								
	85	18	3	16		MCFR/L3-44/70-T16								
	85	18	3	16		MCFR/L3-64/99-T16								
	85	18	3	16	MGMN400	MCFR/L4-44/60-T16								
	85	18	3	16		MCFR/L4-60/120-T16								
	85	18	3	16		MCFR/L4-112/200-T16								



MCFR/L (Cartridge)



MFMN300
MGMN400



• R type insert
(mm)

Designation		T	L ₁	S ₁	T-MAX	Insert		Tool holders
						W	Designation	
MCFR/L3-	24/35-T16	8.00	44.5	6.35	16	3	MFMN300	H63T-MCHR/L
	29/40-T16	8.00	44.5	6.35	16	3		
	34/50-T16	8.00	44.5	6.35	16	3		
	44/70-T16	8.00	44.5	6.35	16	3		
	64/99-T16	8.00	44.5	6.35	16	3		
MCFR/L4-	44/60-T16	7.97	44.5	6.35	16	4	MGMN400	
	60/120-T16	7.97	44.5	6.35	16	4		
	112/200-T16	7.97	44.5	6.35	16	4		

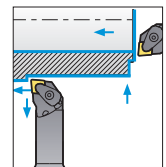
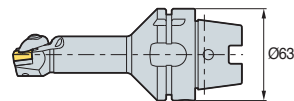
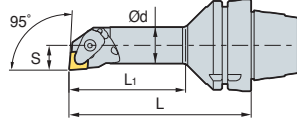
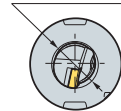
➔ Applicable inserts C28~C30

DCLNR/L



CN□□

ØD Min. machining Dia.



95°

• R type insert
(mm)

Designation	ØD	Ød	L	L ₁	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-A25K-DCLNR/L-12	32	25	125	80	17	CN□□1204□□	CVH4	CHX0518	SC42V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T
H63T-A32L-DCLNR/L-12	40	32	140	98	22										

➔ Applicable inserts B36~B42

Blank Tool

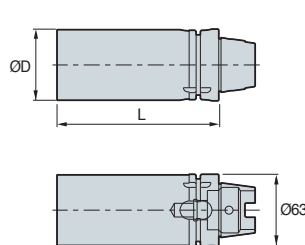


Fig. 1

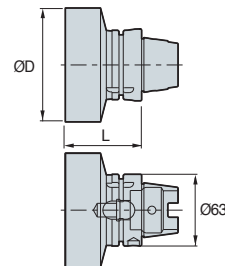


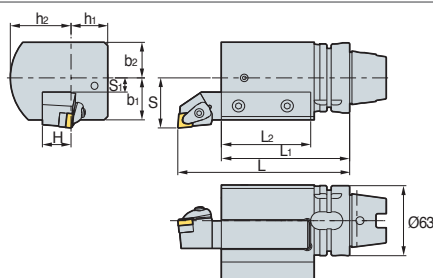
Fig. 2

(mm)

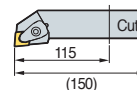
Designation	ØD	L	Fig.	Coolant Pipe
HSK-T63-BL62-102	62	102	1	CP63T
HSK-T63-BL62-142	62	142	2	
HSK-T63-BL100-67	100	67	1	
HSK-T63-BL120-70	120	70	2	



EV2525R/L-112



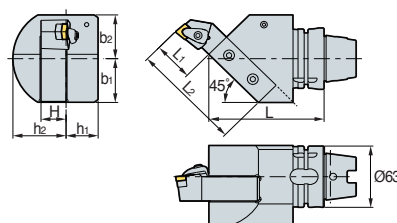
- **Holder information**
- Holder size: 25 x 25
- Before setting the holder, please cut the holder length to 115 mm.



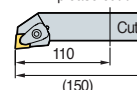
• R type insert (mm)

Designation	L	L ₁	L ₂	H	h ₁	h ₂	S	S ₁	b ₁	b ₂	Screw	Plug	Nozzle	Wrench	Coolant Pipe
EV2525R/L-112	150	112	77	25	32	53	45	12.75	37.75	32	KHA1231	KHA0808	CN0605	HW50L	CP63T

EV2525R/L-115



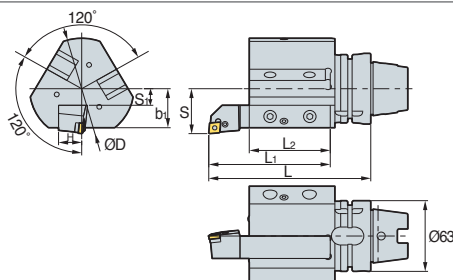
- **Holder information**
- Holder size: 25 x 25
- Before setting the holder, please cut the holder length to 110 mm.



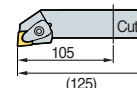
• R type insert (mm)

Designation	L	L ₁	L ₂	H	h ₁	h ₂	b ₁	b ₂	Screw	Plug	Nozzle	Wrench	Coolant Pipe
EV2525R/L-115	115	40	110	25	32	53	45	45	KHA1231	KHA0808	CN0605	HW50L	CP63T

EV2020R/L-105-3



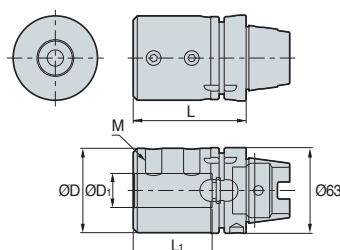
- **Holder information**
- Holder size: 20 x 20
- Before setting the holder, please cut the holder length to 105 mm.



• R type insert (mm)

Designation	L	L ₁	L ₂	H	ØD	S	S ₁	B ₁	Screw	Plug	Nozzle	Wrench	Coolant Pipe
EV2020R/L-105-3	140	105	70	20	90	40	15	35	KHA1231	KHA0808	CN0605	HW50L	CP63T

B○○-○○



• R type insert (mm)

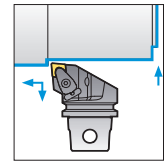
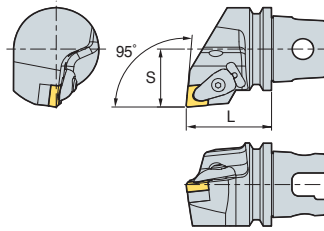
Designation	ØD	D ₁	L	L ₁	M	Screw	Wrench	Coolant Pipe
B08-65	28	8	65	40	M8	KHA1218	HW50L	CP63T
B10-70	35	10	70	45	M8			
B12-70	42	12	70	45	M8			
B16-75	48	16	75	50	M10			
B20-75	52	20	75	50	M10			
B25-83	62	25	83	58	M12			
B32-87	62	32	87	62	M12			
B40-97	65	40	97	72	M16			



DCLNR/L



CN□□



95°

• R type insert
(mm)

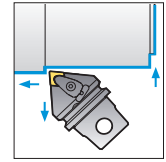
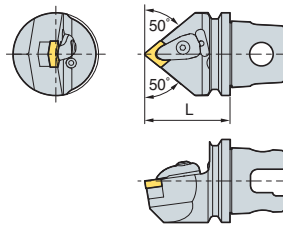
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DCLNR/L-C12	50	35	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DCLNR/L-D12	60	43									

➔ Applicable inserts B36~B42

DCMNN



CN□□



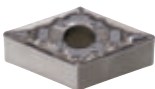
95°

(mm)

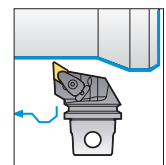
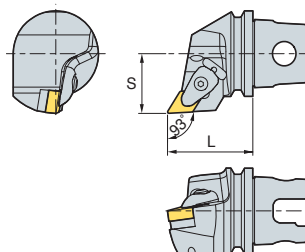
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DCMNN-C12	50	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DCMNN-D12	60									

➔ Applicable inserts B36~B42

DDJNR/L



DN□□



93°

• R type insert
(mm)

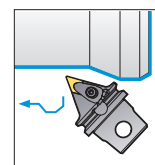
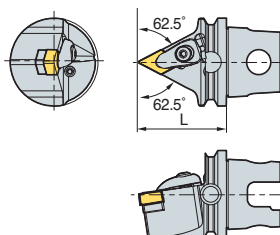
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DDJNR/L-C15	50	35	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P
KM50-DDJNR/L-C15-3	50	35	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DDJNR/L-D15	60	43	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DDJNR/L-D15-3	60	43	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	-	HW30P

➔ Applicable inserts B43~B48

DDNNN



DN□□



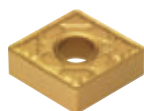
117.5°

(mm)

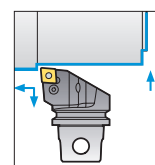
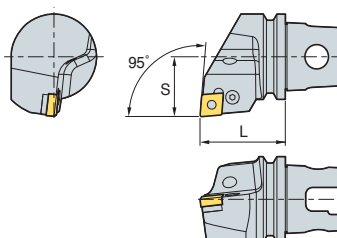
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DDNNN-C15	50	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM50-DDNNN-C15-3	50	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DDNNN-D15	60	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DDNNN-D15-3	60	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P

➔ Applicable inserts B43~B48

PCLNR/L



CN□□



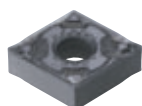
95°

• R type insert
(mm)

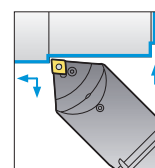
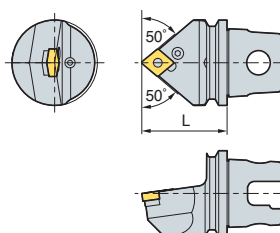
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PCLNR/L-C12	50	35	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PCLNR/L-D12	60	43									

➔ Applicable inserts B36~B42

PCMNN



CN□□



95°

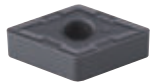
(mm)

Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PCMNN-C12	50	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PCMNN-D12	60									

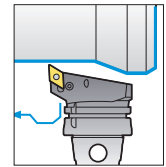
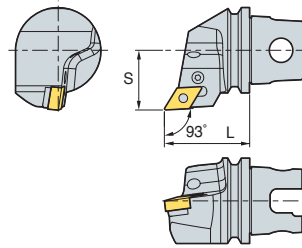
➔ Applicable inserts B36~B42



PDJNR/L



DN□□



93°

• R type insert
(mm)

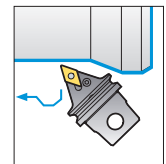
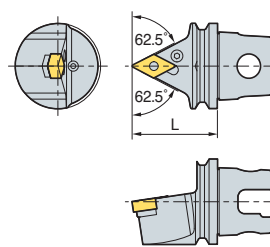
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PDJNR/L-C15	50	35	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L
KM50-PDJNR/L-C15-3	50	35	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PDJNR/L-D15	60	43	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PDJNR/L-D15-3	60	43	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	-	HW30L

↻ Applicable inserts **B43~B48**

PDNNN



DN□□



107.5°

(mm)

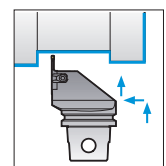
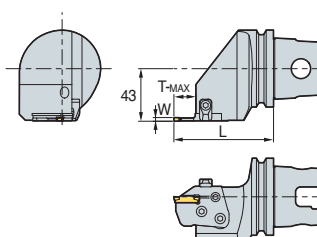
Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PDNNN-C15	50	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM50-PDNNN-C15-3	50	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PDNNN-D15	60	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PDNNN-D15-3	60	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L

↻ Applicable inserts **B43~B48**

MCHR/L



MGMN / MGMR/L
MGGN / MRMN



• R type insert
(mm)

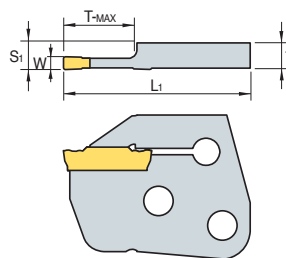
Designation	S	L	t	W	T-MAX	Insert	Cartridge	Clamp	Clamp Screw	Hinge Screw	Screw	Nozzle	Plug	Wrench
KM50-MCHR/L	35	72.5	18	3	16	MGMN MGMR/L MGGN MRMN	MCER/L3-T16	CHX8N	DHA0818F	RHA0613	FHGA0618	CN0605	-	HW40L
	35	72.5	18	4	16		MCER/L4-T16							
	35	76.5	22	5	20		MCER/L5-T20							
	35	76.5	22	6	20		MCER/L6-T20							
KM63UT-MCHR/L	43	81.5	18	3	16		MCER/L3-T16	CHX8N	DHA0818F	RHA0613	FHGA0618	CN0605	-	HW40L
	43	81.5	18	4	16		MCER/L4-T16							
	43	85.5	22	5	20		MCER/L5-T20							
	43	85.5	22	6	20		MCER/L6-T20							

↻ Applicable inserts **C28~C30**

MCER/L (Cartridge)



MGMN / MGMR/L
MGGN / MRMN

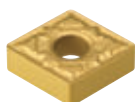


• R type insert
(mm)

Designation		T	L ₁	S ₁	T-MAX	Insert		Tool holders
						W	Designation	
MCER/L	3-T16	6.00	44.5	6.35	16	3	MGMN	H-63T-MCHR/L
	4-T16	5.97	44.5	6.35	16	4	MGMR/L	
	5-T20	5.87	48.5	6.35	20	5	MGGN	
	6-T20	5.82	48.5	6.35	20	6	MRMN	

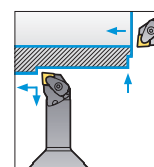
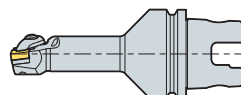
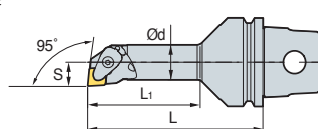
➔ Applicable inserts C28~ C30

KM○○-DCLNR/L



CN□□

ØD Min. machining Dia.



95°

• R type insert
(mm)

Designation	ØD	Ød	L	L ₁	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-A25K-DCLNR/L-12	32	25	125	80	17	CN□□1204□□	CVH4	CHX0518	SC42V	FTKA0410	SPR0714	CN0605	-	HW30P
KM50-A32L-DCLNR/L-12	40	32	140	98	22									
KM63UT-A25K-DCLNR/L-12	32	25	125	80	17									
KM63UT-A32L-DCLNR/L-12	40	32	140	98	22									

➔ Applicable inserts B36~B42

Blank Tool

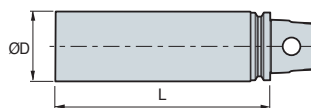


Fig. 1

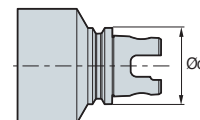
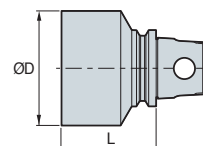


Fig. 2

(mm)

Designation	ØD	L	Ød	Fig.
KM50-BL7562	45	62	50	1
KM50-BL10562	105	62	50	2
KM63UT-BL65200	65	200	50	1
KM63UT-BL115150	115	150	50	2



S T F C R 12 C A - 16

1

Method of Mounting Insert

2

Insert Shape

3

Holder Style

4

Relief Angle of Insert

5

Hand

6

Height of Cutting Edge

7

Cartridge Code

8

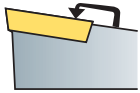
Type of Cartridge

9

Length of Cutting Edge

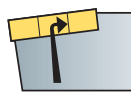
1 Method of Mounting Insert

S T F C R 12 C A - 16



Top Clamping

C



Hole Clamping

P



Screw on

S

2 Insert Shape

S T F C R 12 C A - 16



C



S



T

3 Holder Style

S T F C R 12 C A - 16



L



S



F



R



K



G



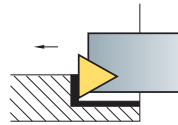
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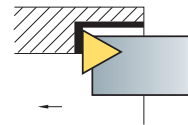
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5 Hand

S T F C R 12 C A - 16



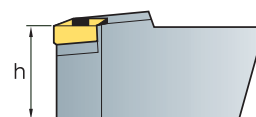
R



L

6 Height of Cutting Edge

S T F C R 12 C A - 16



7 Cartridge Code

S T F C R 12 C A - 16

C (Cartridge)

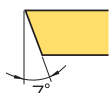
8 Type of Cartridge

S T F C R 12 C A - 16

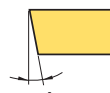
A (ISO5611)

4 Relief Angle of Insert

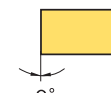
S T F C R 12 C A - 16



C



P



N

9 Length of Cutting Edge

S T F C R 12 C A - 16



I

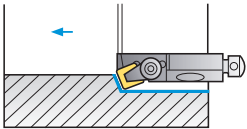
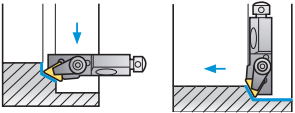
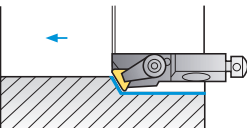
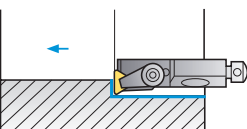
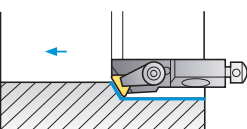
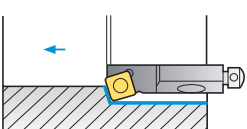
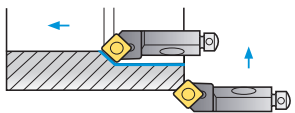
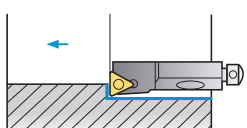
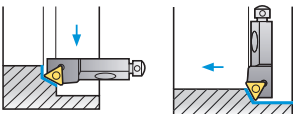
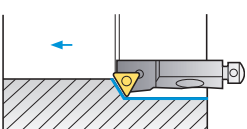


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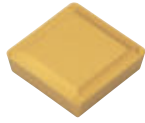
I

B Index for Cartridge

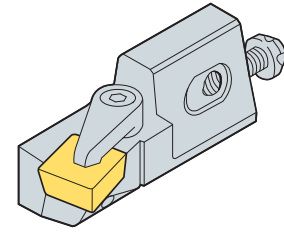
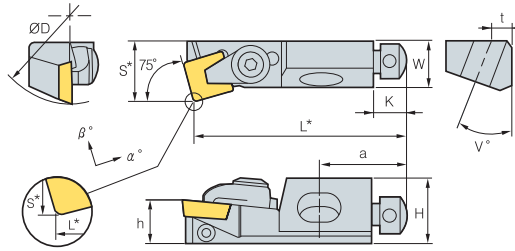
	Cutting Shape	Turning	Copying	Facing	Chamfering	Applicable inserts	Page
Clamp on System	CSKPR/L  10CA-09 12CA-12	●				SP□R0903□□ SP□R1203□□	B243
	CTTPR/L  10CA-11 12CA-16	●				TP□R1103□□ TP□R1603□□	B244
	CTWPR/L  10CA-11 12CA-16	●				TP□R1103□□ TP□R1603□□	B245
	CTFPR/L  10CA-11 12CA-16	●		●		TP□R1103□□ TP□R1603□□	B243
	CTSPR/L  10CA-11 12CA-16	●				TP□R1103□□ TP□R1603□□	B244
Screw on System	SSKCR/L  10CA-09 12CA-12	●				SC□T09T3□□ SC□T1204□□	B245
	SSSCR/L  10CA-09 12CA-12	●			●	SC□T09T3□□ SC□T1204□□	B246
	STFCR/L  10CA-11 12CA-16	●		●		TC□T1102□□ TC□T16T3□□	B246
	STTCR/L  10CA-11 12CA-16	●		●		TC□T1102□□ TC□T16T3□□	B247
	STWCR/L  10CA-11 12CA-16	●				TC□T1102□□ TC□T16T3□□	B247



CSKPR/L



SP□R


• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
CSKPR/L 10CA-09	40	15	11	50	14	10	8	6	0	20	5	20	SP□R0903□□
12CA-12	50	20	15	55	20	12	8	6	0	20	6	20	SP□R1203□□

→ Applicable inserts B76~B77

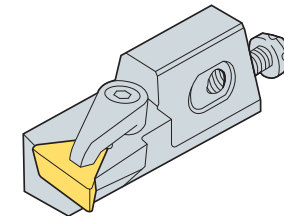
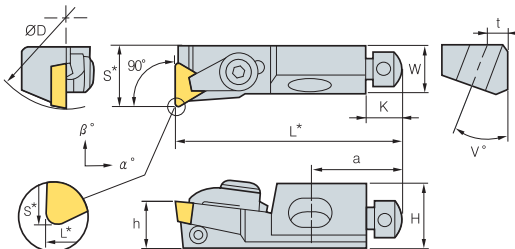
• a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts	Clamp	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
CSKPR/L 10CA-09	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
12CA-12	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

CTFPR/L



TP□R


• R type insert
(mm)

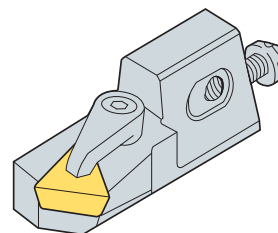
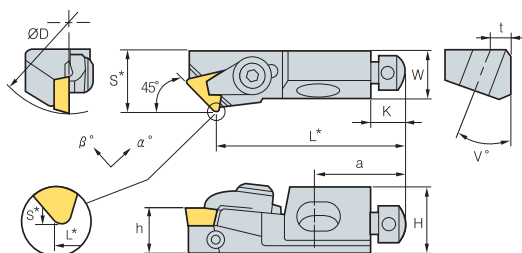
Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
CTFPR/L 10CA-11	40	15	11	50	14	10	8	6	0	20	5	20	TP□R1103□□
12CA-16	50	20	15	55	20	12	8	6	0	20	6	20	TP□R1603□□

→ Applicable inserts B81~B83

• a base Insert : r = 0.4 (l = 11) r = 0.8 (l = 16) D = ØD Min. machining Dia.

Parts	Clamp	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
CTFPR/L 10CA-11	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW25L	HW20L
12CA-16	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW30L	HW20L

CTSPR/L



• R type insert
(mm)

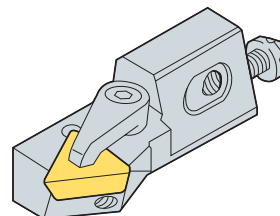
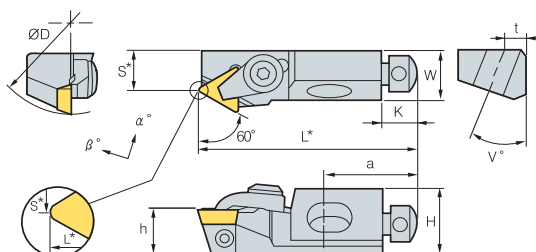
Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
CTSPR/L 10CA-11	40	15	11	44	14	10	8	4	0	20	5	20	TP□R1103□□
12CA-16	50	20	15	47	20	12	8	5	0	20	6	20	TP□R1603□□

➔ Applicable inserts B81~B83

• a base Insert : r = 0.4 (l = 11) r = 0.8 (l = 16) D = ØD Min. machining Dia.

Parts	Clamp	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
CTSPR/L 10CA-11	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW25L	HW20L
12CA-16	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW30L	HW20L

CTTPR/L



• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
CTTPR/L 10CA-11	40	15	11	50	9	10	8	5	0	20	5	20	TP□R1103□□
12CA-16	50	20	15	55	20	12	8	5	0	20	6	20	TP□R1603□□

➔ Applicable inserts B81~B83

• a base Insert : r = 0.8 D = ØD Min. machining Dia.

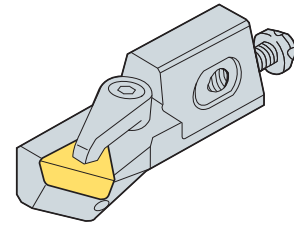
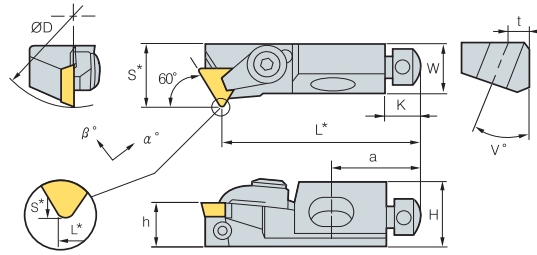
Parts	Clamp	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
CTTPR/L 10CA-11	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW25L	HW20L
12CA-16	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW30L	HW20L



CTWPR/L



TP□R



• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
CTWPR/L 10CA-11	40	15	11	44	14	10	8	5	0	20	5	20	TP□R1103□□
12CA-16	50	20	15	47	20	12	8	5	0	20	6	20	TP□R1603□□

➔ Applicable inserts B81~B83

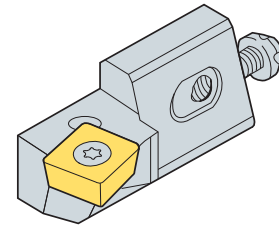
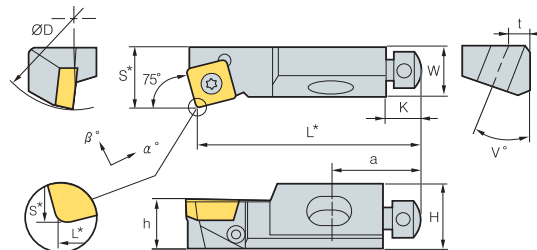
• a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts	Clamp	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
CTWPR/L 10CA-11	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW25L	HW20L
12CA-16	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW30L	HW20L

SSKCR/L



SC□□



• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
SSKCR/L 10CA-09	40	15	11	50	14	10	8	0	-4	20	5	20	SC□□09T3□□
12CA-12	50	20	15	55	20	12	8	0	-4	20	6	20	SC□□1204□□

➔ Applicable inserts B74~B75, B94

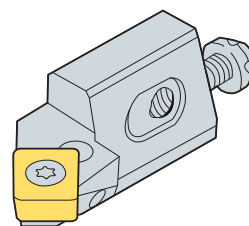
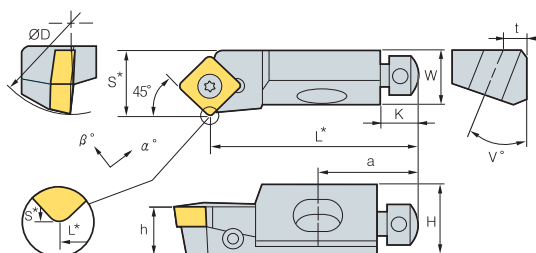
• a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts	Screw	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
SSKCR/L 10CA-09	FTGA03508	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
12CA-12	FTGA0411F	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

SSSCR/L



SC□□



• R type insert
(mm)

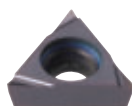
Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
SSSCR/L 10CA-09	40	15	11	44	14	10	8	-5	0	20	5	20	SC□□09T3□□
12CA-12	50	20	15	47	20	12	8	-5	0	20	6	20	SC□□1204□□

➔ Applicable inserts B74~B75, B94

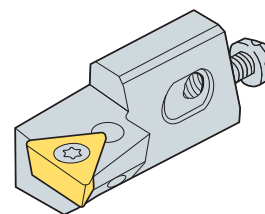
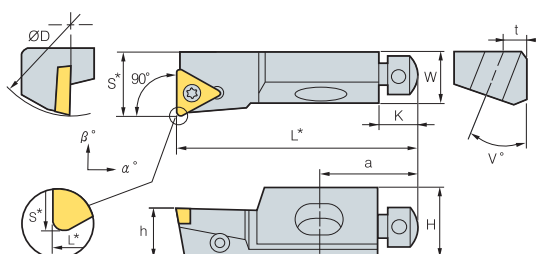
• a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts	Screw	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
SSSCR/L 10CA-09	FTGA03508	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
12CA-12	FTGA0411F	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

STFCR/L



TC□□



• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
STFCR/L 10CA-11	40	15	11	50	14	10	8	0	-3	20	5	20	TC□□1102□□
12CA-16	50	20	15	55	20	12	8	0	-3	20	6	20	TC□□16T3□□

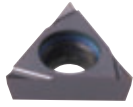
➔ Applicable inserts B79~B80, B95

• a base Insert : r = 0.4 (l=11) r = 0.8 (l=16) D = Min. machining Dia.

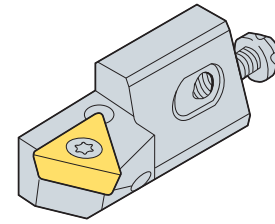
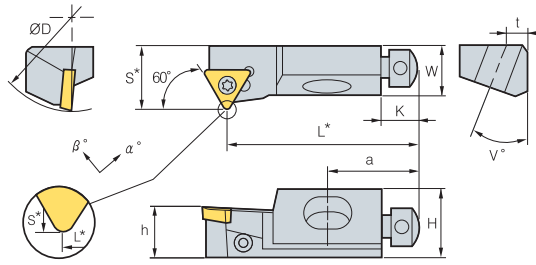
Parts	Screw	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
STFCR/L 10CA-11	FTKA02565	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
12CA-16	FTKA03508	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L



STTCR/L



TC□□



• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
STTCR/L 10CA-11	40	15	11	50	9	10	8	-5	0	20	5	20	TC□□1102□□
12CA-16	50	20	15	47	20	12	8	-3	0	20	6	20	TC□□16T3□□

➔ Applicable inserts B79~B80, B95

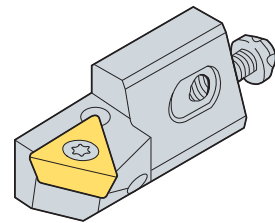
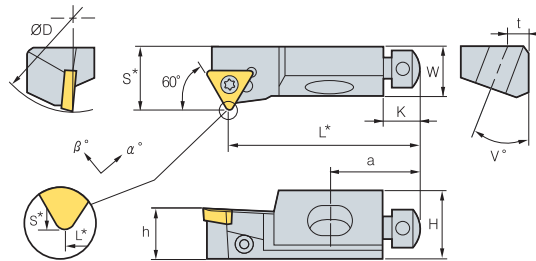
• a base Insert : $r = 0.4$ ($l = 11$) $r = 0.8$ ($l = 16$) D = Min. machining Dia.

Parts	Screw	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
STTCR/L 10CA-11	FTKA02565	AZ0508F	KHA0408	RHA0620	WA0602	TW 07P	HW20L
12CA-16	FTKA03508	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

STWCR/L



TC□□



• R type insert
(mm)

Designation	ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
STWCR/L 10CA-11	40	15	11	44	14	10	8	0	-4	20	5	20	TC□□1102□□
12CA-16	50	20	15	47	20	12	8	-5	0	20	6	20	TC□□16T3□□

➔ Applicable inserts B79~B80, B95

• a base Insert : $r = 0.4$ ($l = 11$) $r = 0.8$ ($l = 16$) D = Min. machining Dia.

Parts	Screw	Axial Adjust Screw	Radial Adjust Screw	MountingScrew	Washer	Wrench	Wrench
STWCR/L 10CA-11	FTKA02565	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
12CA-16	FTKA03508	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L