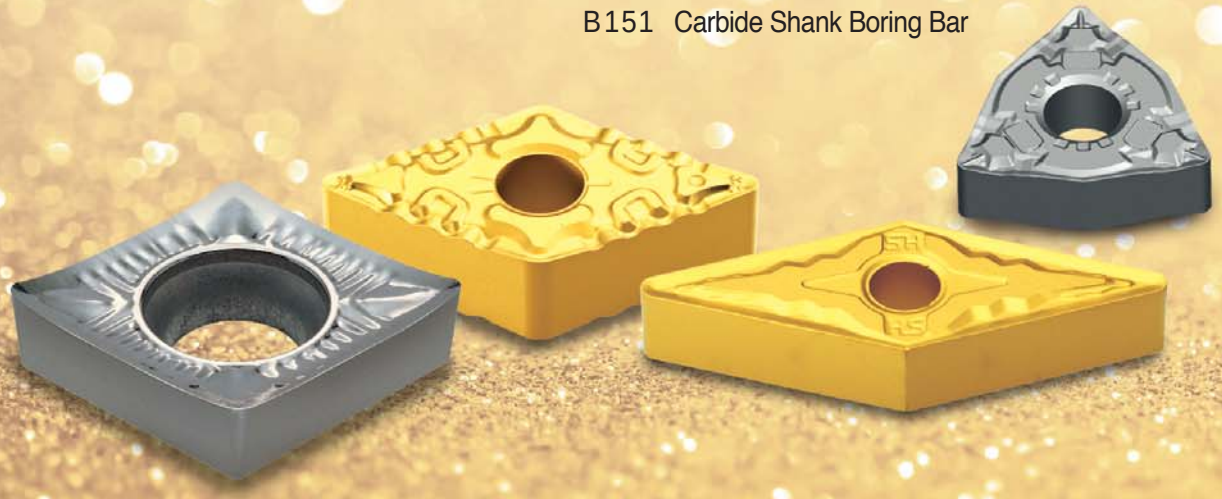
Turning Chip Breakers

Inserts

External Tool Holder

Boring Bar



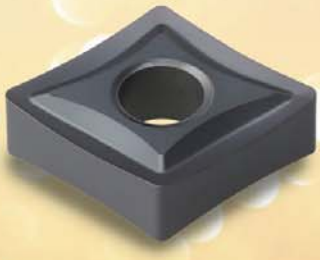
TURNING

HSK/KM Tooling System

Cartridges

SAVE TURN

Auto Tools



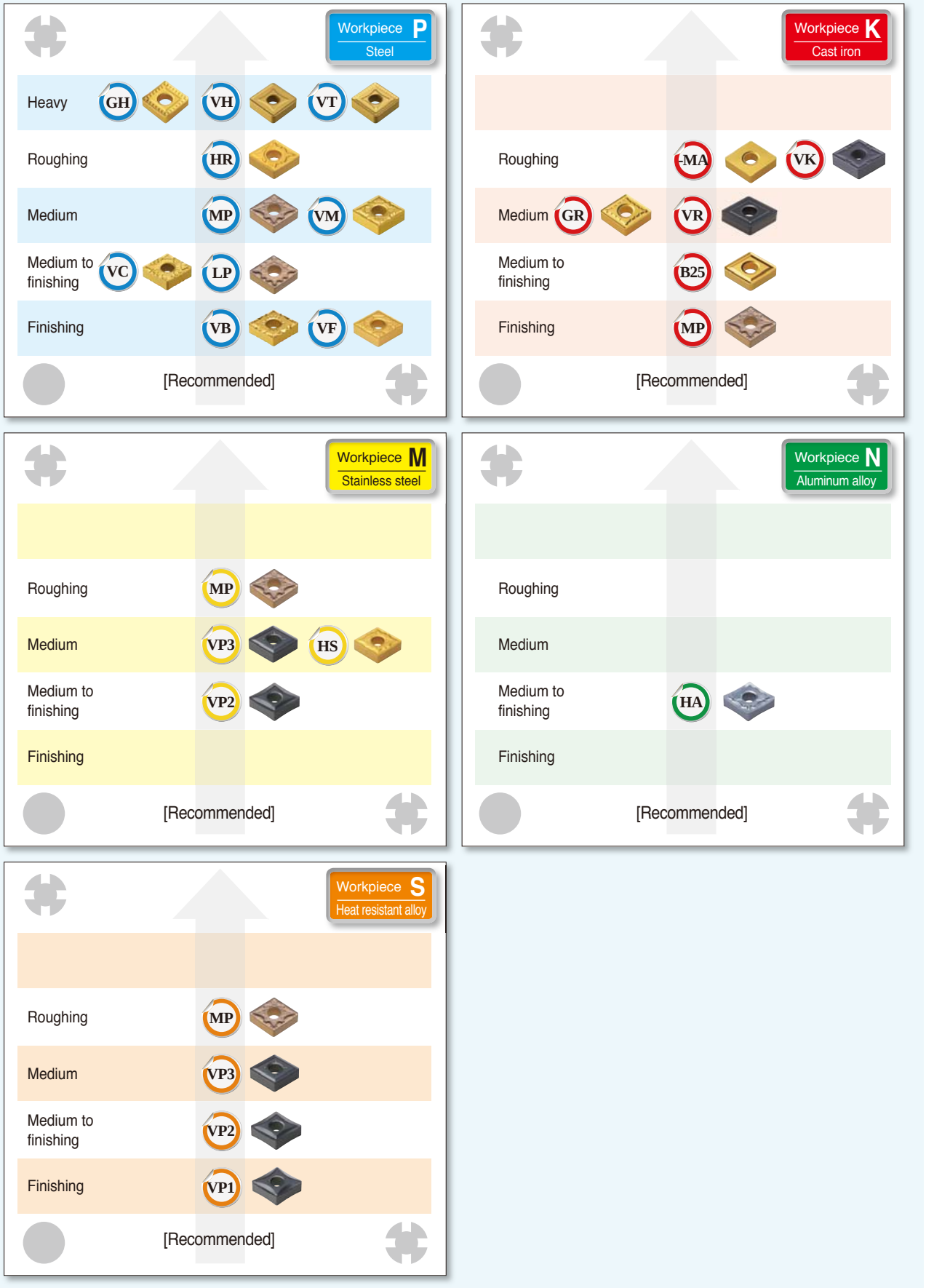
B

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 for all manufacturers' requirements.

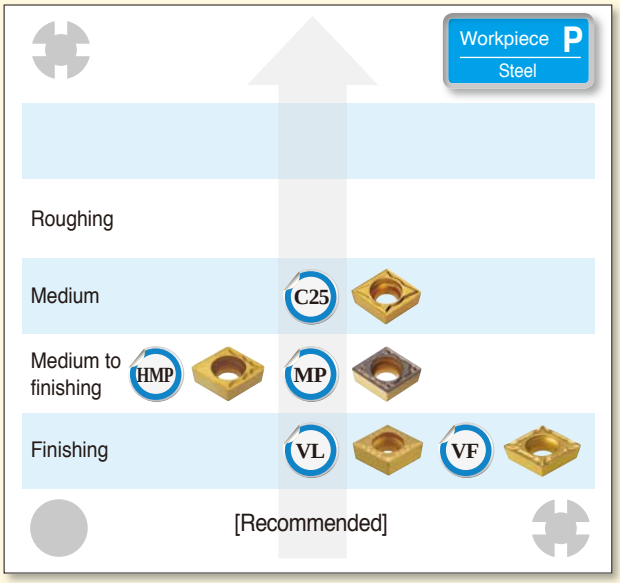
Applications range of chip breakers

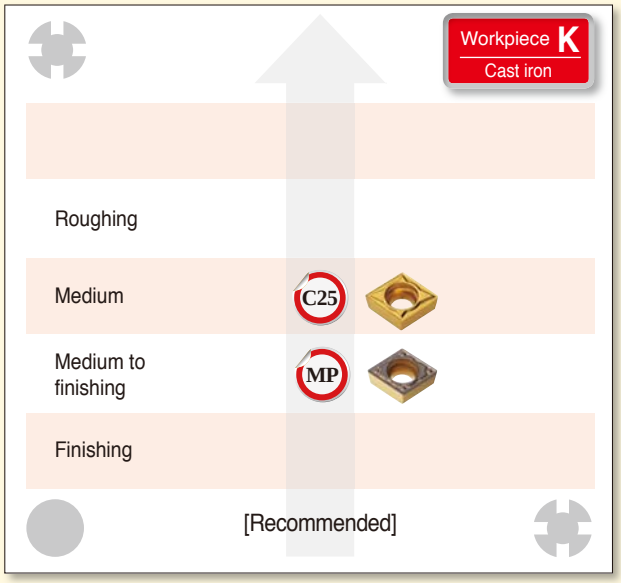
Negative inserts

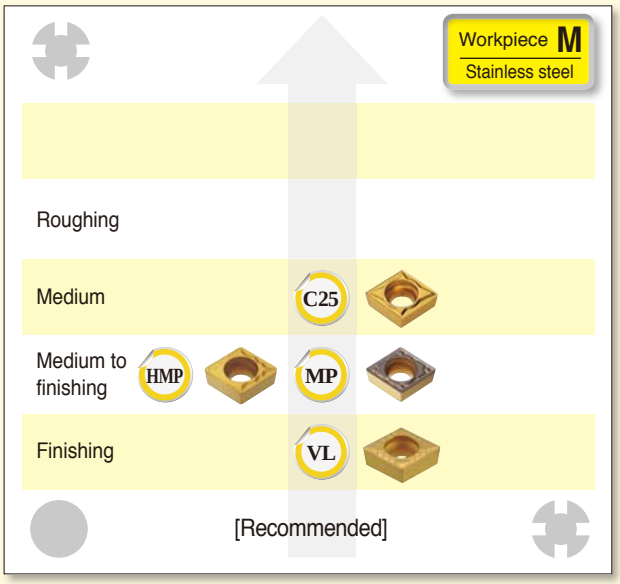


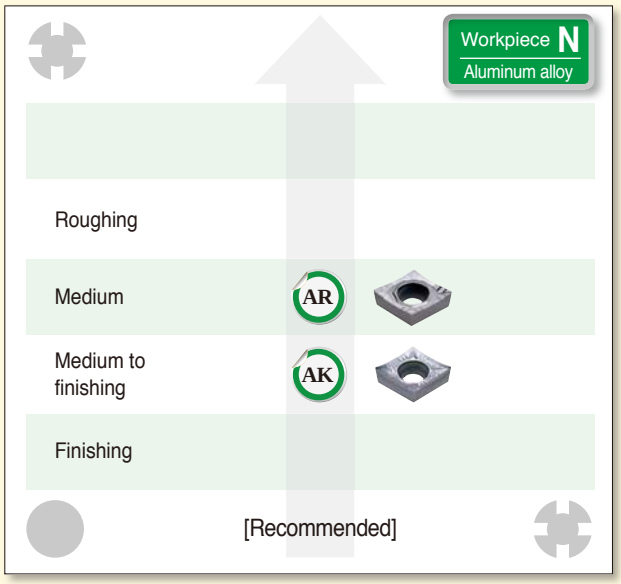
Applications range of chip breakers

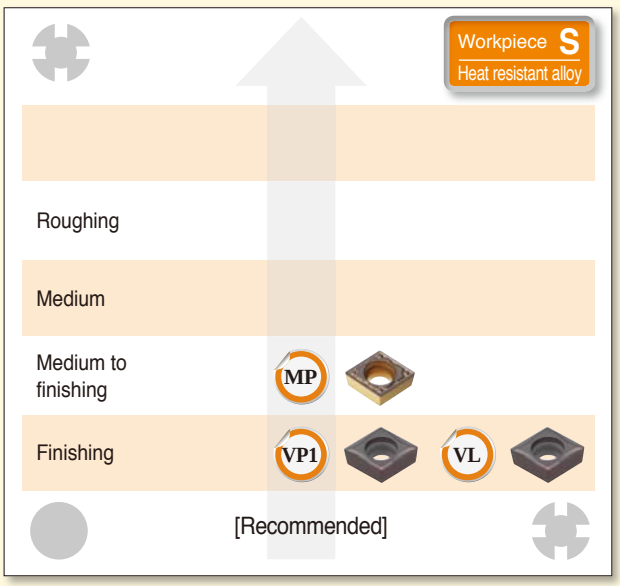
Positive inserts











Recommended chip breaker for workpiece

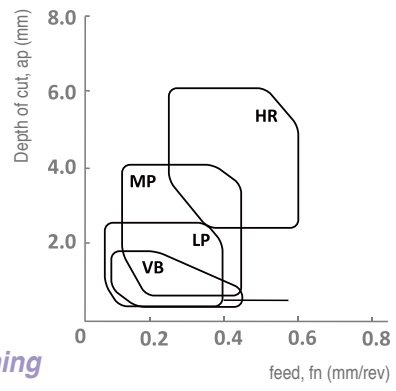
Workpiece **P** Steel

Materials : SM10C, SM15C, SM25C, SS400, SCr415, SCM415, etc. Soft steel
Hardness : under 180HB

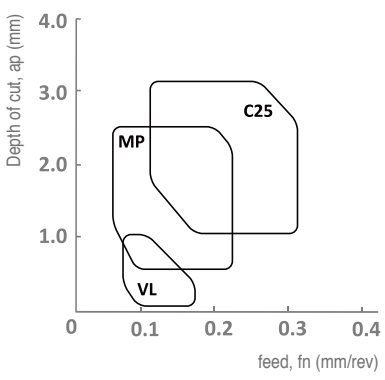
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
Negative	0.2 ~ **0.8** ~ 1.5 finishing	VL		0.1 ~ **0.2** ~ 0.35	NC3215 NC3225 CN1500 CN2500	305 250 260 230	CNMG p. B20	DNMG p. B27	SNMG p. B35	TNMG p. B43	VNMG p. B49	WNMG p. B51
	0.5 ~ **1.0** ~ 1.5 finishing	VF		0.05 ~ **0.15** ~ 0.35	NC3215 NC3220 NC3225 NC5330	305 270 270 210	CNMG p. B20	DNMG p. B26	SNMG p. B35	TNMG p. B43	VNMG p. B49	WNMG p. B51
	0.5 ~ **1.0** ~ 2.0 finishing	VB		0.15 ~ **0.2** ~ 0.4	NC3215 NC3225 CN1500 CN2500	340 250 240 210	CNMG p. B20	DNMG p. B26		TNMG p. B42		WNMG p. B51
	0.5 ~ **1.5** ~ 3.5 medium to finishing	VC		0.12 ~ **0.25** ~ 0.45	NC3215 NC3220 NC3225 NC5330	285 250 255 200	CNMG p. B21	DNMG p. B28	SNMG p. B36	TNMG p. B44	VNMG p. B49	WNMG p. B52
	0.5 ~ **1.0** ~ 2.5 medium to finishing	LP		0.10 ~ **0.25** ~ 0.40	NC3215 NC3225	300 250	CNMG p. B21	DNMG p. B27	SNMG p. B35	TNMG p. B44	VNMG p. B49	WNMG p. B52
	0.5 ~ **1.5** ~ 4.5 medium to finishing	MP		0.15 ~ **0.30** ~ 0.45	NC3215 NC3225	300 265	CNMG p. B22	DNMG p. B28	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	1.0 ~ **2.5** ~ 5.0 medium to finishing	VM		0.10 ~ **0.25** ~ 0.50	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	295 260 260 205 220 200	CNMG p. B22	DNMG p. B29	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	2.5 ~ **4.0** ~ 7.0 roughing	HR		0.25 ~ **0.45** ~ 0.65	NC3215 NC3220 NC3225 NC5330	270 240 240 190	CNMG p. B24	DNMG p. B31	SNMG p. B38	TNMG p. B47		WNMG p. B54
	6.0 ~ **10.0** ~ 15.0 Heavy (General)	VH		0.7 ~ **1.0** ~ 1.4	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B25		SNMM p. B39			
	7.0 ~ **12.0** ~ 17.0 Heavy (High feed cutting)	VT		0.75 ~ **1.2** ~ 1.6	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B25		SNMM p. B39			

●: The first recommended cutting condition

P Negative



P Positive



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	VL		0.05 ~ 0.1 ~ 0.2	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	305 270 270 210 260 240	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B68	VB(C)MT p. B74(B76)	
	0.1 ~ 0.5 ~ 1.5 finishing	VF		0.05 ~ 0.15 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CC1500 CN1500 CN2500	305 270 270 210 260 250 230	CCMT p. B57	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VB(C)MT p. B74(B76)	
	0.5 ~ 1.0 ~ 3.0 medium to finishing	MP		0.1 ~ 0.2 ~ 0.35	NC3215 NC3225 CN1500 CN2500	300 250 240 200	CCMT p. B58	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VB(C)MT p. B73(B76)	
	0.5 ~ 1.5 ~ 3.0 medium to finishing	HMP		0.08 ~ 0.20 ~ 0.40	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 240 220	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B68	VB(C)MT p. B73(B76)	
	1.0 ~ 2.0 ~ 3.0 medium	C25		0.10 ~ 0.25 ~ 0.35	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 230 210	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B69		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

Workpiece **P** Steel

Materials : S45C, S55C, 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	0.5 ~ 1.0 ~ 1.5 finishing	VF		0.05 ~ 0.15 ~ 0.35	NC3215 NC3225 NC5330	305 270 250	CNMG p. B20	DNMG p. B26	SNMG p. B35	TNMG p. B43	VNMG p. B49	WNMG p. B51
	0.5 ~ 1.0 ~ 2.0 finishing	VB		0.15 ~ 0.2 ~ 0.4	NC3215 NC3225 CN1500 CN2500	340 250 230 190	CNMG p. B20	DNMG p. B26		TNMG p. B42		WNMG p. B51
	0.5 ~ 1.0 ~ 2.5 medium	LP		0.10 ~ 0.25 ~ 0.40	NC3215 NC3225	300 250	CNMG p. B21	DNMG p. B27	SNMG p. B35	TNMG p. B44	VNMG p. B47	WNMG p. B52
	0.5 ~ 1.5 ~ 4.5 medium	MP		0.15 ~ 0.30 ~ 0.45	NC3215 NC3225	300 250	CNMG p. B22	DNMG p. B28	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	0.5 ~ 1.5 ~ 3.5 Medium to finishing	VC		0.12 ~ 0.25 ~ 0.45	NC3215 NC3220 NC3225 NC5330	285 255 250 200	CNMG p. B21	DNMG p. B28	SNMG p. B36	TNMG p. B44	VNMG p. B49	WNMG p. B52
	1.0 ~ 2.5 ~ 5.0 medium	VM		0.10 ~ 0.25 ~ 0.50	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	260 245 245 205 210 170	CNMG p. B22	DNMG p. B29	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	2.5 ~ 4.0 ~ 7.0 Roughing	HR		0.25 ~ 0.45 ~ 0.65	NC3215 NC3220 NC3225 NC5330	270 240 240 190	CNMG p. B24	DNMG p. B31	SNMG p. B38	TNMG p. B47		WNMG p. B54
	6.0 ~ 10.0 ~ 15.0 Heavy (General)	VH		0.7 ~ 1.0 ~ 1.4	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B25		SNMM p. B39			
	7.0 ~ 12.0 ~ 17.0 Heavy (High feed cutting)	VT		0.75 ~ 1.2 ~ 1.6	NC3215 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B25		SNMM p. B39			
Positive	0.1 ~ 0.5 ~ 1.0 finishing	VL		0.05 ~ 0.1 ~ 0.2	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	345 310 310 240 250 210	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B61	VB(C)MT p. B74(76)	
	0.1 ~ 0.5 ~ 1.5 finishing	VF		0.05 ~ 0.15 ~ 0.25	NC3215 NC3220 NC3225 NC5330 CC1500 CN1500 CN2500	265 300 300 230 260 240 210	CCMT p. B57	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VCMT p. B74(B76)	
	0.30 ~ 1.5 ~ 3.0 Medium to finishing	MP		0.05 ~ 0.15 ~ 0.35	NC3215 NC3225	300 250	CCMT p. B58	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VB(C)MT p. B73(B76)	
	1.0 ~ 2.0 ~ 3.0 medium	C25		0.1 ~ 0.15 ~ 0.35	NC3215 NC3220 NC3225 NC5330 CN1500 CN2500	320 285 285 225 230 200	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B69		

● : 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	0.5 ~ **1.0** ~ 1.5 finishing	VF		0.08 ~ **0.15** ~ 0.30	NC3215 **NC3220** NC3225	180 **159** 159	CNMG p. B20	DNMG p. B26	SNMG p. B35	TNMG p. B43	VNMG p. B49	WNMG p. B51
	0.5 ~ **1.0** ~ 2.0 finishing	VB		0.15 ~ **0.2** ~ 0.4	NC3215 **NC3225** CN1500 CN2500	200 **148** 220 200	CNMG p. B20	DNMG p. B26		TNMG p. B42		WNMG p. B51
	0.5 ~ **1.5** ~ 3.5 Medium to finishing	VC		0.12 ~ **0.25** ~ 0.45	NC3215 **NC3220** **NC3225** NC5330	168 **148** **150** 200	CNMG p. B21	DNMG p. B28	SNMG p. B36	TNMG p. B44	VNMG p. B49	WNMG p. B52
	0.5 ~ **1.0** ~ 2.5 medium	LP		0.10 ~ **0.25** ~ 0.40	NC3215 **NC3225**	250 **200**	CNMG p. B21	DNMG p. B27	SNMG p. B35	TNMG p. B44	VNMG p. B49	WNMG p. B52
	0.5 ~ **1.5** ~ 4.5 medium	MP		0.15 ~ **0.30** ~ 0.45	NC3215 **NC3225**	250 **200**	CNMG p. B22	DNMG p. B28	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B52
	1.0 ~ **2.5** ~ 5.0 medium	VM		0.15 ~ **0.25** ~ 0.50	NC3215 NC3220 **NC3225** CN1500 CN2500	174 153 **153** 120 100	CNMG p. B22	DNMG p. B29	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	2.5 ~ **4.0** ~ 7.0 Roughing	HR		0.25 ~ **0.35** ~ 0.60	NC3215 NC3220 **NC3225** NC5330	159 142 **142** 112	CNMG p. B24	DNMG p. B31	SNMG p. B38	TNMG p. B47		WNMG p. B54
	6.0 ~ **10.0** ~ 15.0 Heavy (General)	VH		0.7 ~ **1.0** ~ 1.4	**NC3215** NC3030 NC500H NC5330	**50~250** 50~150 50~150 50~150	CNMM p. B25		SNMM p. B39			
	7.0 ~ **12.0** ~ 17.0 Heavy (High feed cutting)	VT		0.75 ~ **1.2** ~ 1.6	**NC3215** NC3030 NC500H NC5330	**50~250** 50~150 50~150 50~150	CNMM p. B25		SNMM p. B39			
Positive	0.1 ~ **0.5** ~ 1.0 finishing	VL		0.05 ~ **0.1** ~ 0.2	NC3215 **NC3220** **NC3225** NC5330 CN1500 CN2500	305 **310** **310** 240 210 190	CCMT p. B58	DCMT p. B62	SCMT p. B63	TCMT p. B68	VB(C)MT p. B74(B76)	
	0.1 ~ **0.5** ~ 1.5 finishing	VF		0.05 ~ **0.15** ~ 0.25	NC3215 NC3220 **NC3225** NC5330 CC1500 CN1500 CN2500	330 300 **300** 230 260 250 240	CCMT p. B57	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VB(C)MT p. B74(B76)	
	0.30 ~ **1.5** ~ 3.0 Medium to finishing	MP		0.05 ~ **0.15** ~ 0.35	NC3215 **NC3225** NC5300 CN1500 CN2500	305 **285** 225 240 220	CCMT p. B58	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VB(C)MT p. B73(B76)	
	1.0 ~ **2.0** ~ 3.0 medium	C25		0.1 ~ **0.15** ~ 0.35	NC3215 NC3220 **NC3225** NC5330 CN1500 CN2500	320 285 **285** 225 100 80	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B69		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

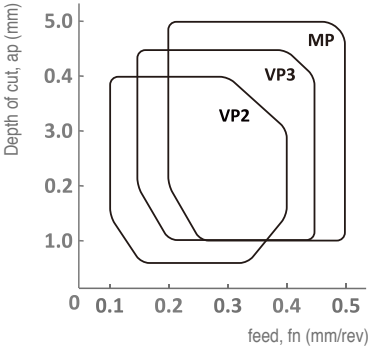
Workpiece **M** Stainless steel

Materials : STS304, STS316, STS430, STS630
Ferrite, austenite, martensite, precipitation hardening stainless steels
Hardness : 135~300HB

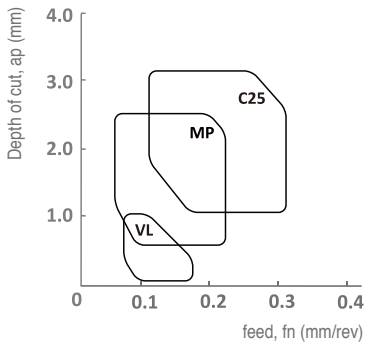
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
Negative	0.5 ~ 1.5 ~ 4.0 Medium to finishing	VP2		0.10 ~ 0.20 ~ 0.40	PC8105 PC8110 PC8115 PC5300 PC5400	185 170 160 135 120	CNMG p. B22	DNMG p. B29	SNMG p. B36	TNMG p. B45		WNMG p. B52
	1.0 ~ 2.0 ~ 4.5 medium	VP3		0.15 ~ 0.23 ~ 0.45	PC8105 PC8110 PC8115 PC5300 PC5400	175 160 150 130 110	CNMG p. B22	DNMG p. B28	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	1.0 ~ 2.5 ~ 4.0 medium	HS		0.10 ~ 0.20 ~ 0.40	PC8110 PC5300 PC9030	160 140 135	CNMG p. B21	DNMG p. B30	SNMG p. B36	TNMG p. B44	VNMG p. B50	WNMG p. B52
	0.5 ~ 1.5 ~ 4.5 Roughing	MP		0.15 ~ 0.30 ~ 0.45	PC8105 PC8110 PC8115 PC5300	195 160 150 130	CNMG p. B22	DNMG p. B29	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
Positive	0.1 ~ 0.5 ~ 1.0 finishing	VL		0.05 ~ 0.1 ~ 0.2	PC8105 PC8110 PC8115 PC5300 PC5400 NC5330 NC9025	215 195 190 165 135 165 165	CCMT p. B57	DCMT p. B62	SCMT p. B64	TCMT p. B68	VB(C)MT p. B73(B76)	
	0.30 ~ 1.5 ~ 3.0 Medium to finishing	MP		0.05 ~ 0.15 ~ 0.35	PC8105 PC8110 PC8115 PC5300 PC5400 NC5330 NC9025	190 175 170 135 120 150 150	CCMT p. B58	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68(B72)	VB(C)MT p. B73(B76)	
	1.0 ~ 1.5 ~ 3.0 medium	C25		0.08 ~ 0.13 ~ 0.25	PC8110 PC5300 PC9030	170 155 155	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B69		

● : The first recommended cutting condition

M Negative



M Positive



Recommended chip breaker for workpiece

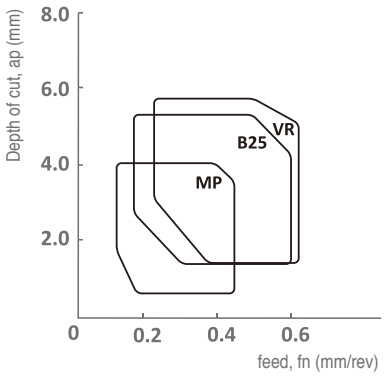
Workpiece **K** Cast iron

Materials : GC250, GC300, GCD400, GCD700, etc : Gray cast iron, Ductile cast iron
Hardness : 135 ~185HB
Tensile strength : 450N/mm²

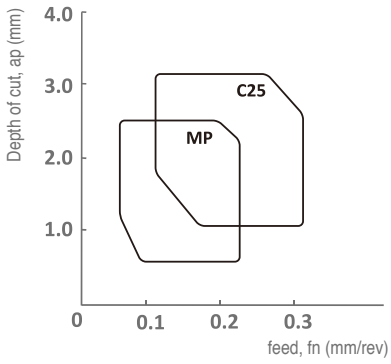
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
Negative	1.0 ~ 2.5 ~ 6.0 Roughing	C/B no		0.15 ~ 0.30 ~ 0.60	KB410 KB350 KB370 NC6205 NC6210 NC6215	150 ~ 200 200 ~ 500 500 ~ 2000 170 ~ 420 140 ~ 350 120 ~ 290	CNMA p. B20	DNMA p. B26	SNMA p. B34	TNMA p. B42		
	1.0 ~ 2.5 ~ 5.0 Roughing	VK		0.15 ~ 0.25 ~ 0.60	NC6205 NC6210 NC6215	450~550 350~450 200~250	CNMG p. B23	DNMG p. B30	SNMG p. B38	TNMG p. B47	VNMG p. B50	WNMG p. B54
	1.0 ~ 3.0 ~ 4.5 Roughing	VR		0.2 ~ 0.35 ~ 0.60	NC6215	200~250	CNMG p. B24	DNMG p. B31	SNMG p. B38	TNMG p. B47		WNMG p. B54
	1.0 ~ 3.0 ~ 4.5 medium to roughing	GR		0.20 ~ 0.35 ~ 0.50	NC6205 NC6210 NC6215	180~370 150~330 130~280	CNMG p. B23	DNMG p. B30	SNMG p. B38	TNMG p. B46		WNMG p. B54
	0.5 ~ 2.0 ~ 3.5 Medium to finishing	B25		0.2 ~ 0.35 ~ 0.60	NC6205 NC6210 NC6215	170~380 140~320 120~290	CNMG p. B23	DNMG p. B30	SNMG p. B37	TNMG p. B46		
	0.5 ~ 1.0 ~ 2.5 finishing	MP		0.10 ~ 0.25 ~ 0.40	NC6215	200~250	CNMG p. B22	DNMG p. B22	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
Positive	0.30 ~ 1.5 ~ 3.0 Medium to finishing	MP		0.1 ~ 0.2 ~ 0.35	NC6215	200~250	CCMT p. B58	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68	VB(C)MT p. B74(B76)	
	1.0 ~ 2.0 ~ 3.5 medium	C25		0.10 ~ 0.25 ~ 0.40	NC6205 NC6210 NC6215	340 285 200	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B69		

● : The first recommended cutting condition

K Negative



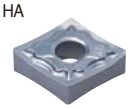
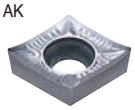
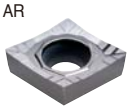
K Positive



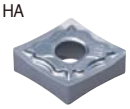
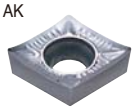
Recommended chip breaker for workpiece

Workpiece **N** Aluminum alloy

Materials : Aluminum alloy
Hardness : 20~110HB

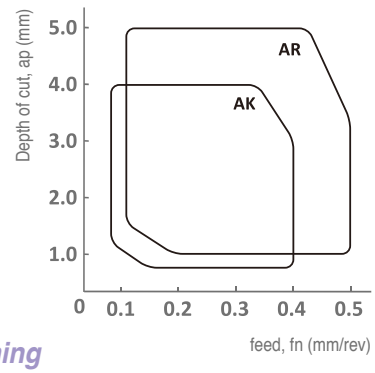
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
Negative	0.5 ~ **2.0** ~ 6.0 medium	HA 		0.1 ~ **0.2** ~ 0.5	H01	500	CNMG p. B21	DNMG p. B27	SNMG p. B35	TNMG p. B43	VNMG p. B49	WNMG p. B51
Positive	0.1 ~ **1.0** ~ 4.0 Medium to finishing	AK 		0.03 ~ **0.2** ~ 0.4	H01 ND1000 PD1000	1000 1000 1000	CCGT p. B80	DCGT p. B81	SCGT p. B83	TCGT p. B84	VB(C)GT p. B85(B86)	RCGT p. B82
	0.5 ~ **1.5** ~ 4.0 medium	AR 		0.05 ~ **0.3** ~ 0.5	H01 ND1000 PD1000	1000 1000 1000	CCGT p. B80	DCGT p. B81	SCGT p. B83	TCGT p. B84	VB(C)GT p. B85(B86)	RCGT p. B82

Materials : Copper Bronze alloy
Hardness : 20~110HB

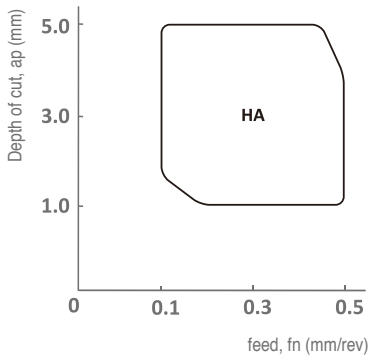
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
Negative	0.5 ~ **2.0** ~ 4.0 Medium to finishing	HA 		0.1 ~ **0.2** ~ 0.5	H01	1000	CNMG p. B21	DNMG p. B27	SNMG p. B35	TNMG p. B43	VNMG p. B49	WNMG p. B51
Positive	0.1 ~ **1.0** ~ 3.0 Medium to finishing	AK 		0.03 ~ **0.2** ~ 0.3	H01	1000	CCGT p. B80	DCGT p. B81	SCGT p. B83	TCGT p. B84	VB(C)GT p. B85(B86)	RCGT p. B82
	0.5 ~ **1.5** ~ 3.0 medium	AR 		0.05 ~ **0.25** ~ 0.4	H01	1000	CCGT p. B80	DCGT p. B81	SCGT p. B83	TCGT p. B84	VB(C)GT p. B85(B87)	RCGT p. B82

● : The first recommended cutting condition

N Negative



N Positive



Recommended chip breaker for workpiece

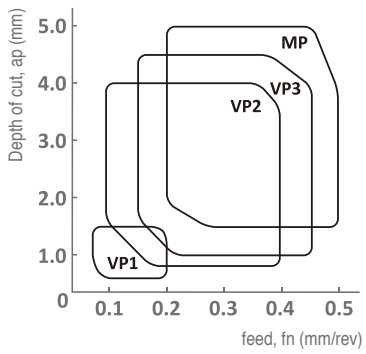
Workpiece **S** Heat resistant alloy

Materials : Inconel, Nimonic, Stellite, Ti alloy
Hardness : 160~350HB

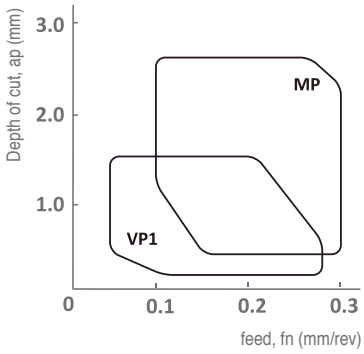
	Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
Negative	0.1 ~ **0.5** ~ 1.5 finishing	VP1		0.05 ~ **0.10** ~ 0.20	PC8110 PC5300 NC5330	60 50 50	CNGG p. B20	DNGG p. B26				
	0.5 ~ **1.5** ~ 4.0 Medium to finishing	VP2		0.10 ~ **0.20** ~ 0.40	PC8110 PC5300	60 45	CNMG p. B21	DNMG p. B28	SNMG p. B36	TNMG p. B44		WNMG p. B52
	0.05~ **2.0** ~ 3.0 medium	VP3		0.05 ~ **0.15** ~ 0.25	PC8110 PC5300	60 40	CNMG p. B22	DNMG p. B29	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	1.5 ~ **2.0** ~ 4.5 Roughing	MP		0.15 ~ **0.3** ~ 0.45	PC8110 PC8115	60 50	CNMG p. B22	DNMG p. B28	SNMG p. B37	TNMG p. B45	VNMG p. B50	WNMG p. B53
	1.5 ~ **3.0** ~ 5.5 Roughing	GS		0.10 ~ **0.25** ~ 0.50	PC8110 PC5300	50 40	CNMG p. B23	DNMG p. B30	SNMG p. B37	TNMG p. B46		WNMG p. B53
Positive	0.1 ~ **0.5** ~ 1.5 finishing	VP1		0.05 ~ **0.10** ~ 0.20	PC8110 PC5300	60 45	CCGT p. B57	DCGT p. B61			VCGT p. B75	
	0.1 ~ **0.5** ~ 1.0 finishing	VL		0.05 ~ **0.1** ~ 0.2	PC8110 PC8115	60 50	CCMT p. B58	DCMT p. B62	SCMT p. B64	TCMT p. B68	VCMT p. B74(B76)	
	0.5 ~ **1.0** ~ 3.0 medium	MP		0.1 ~ **0.2** ~ 0.35	PC8110 PC8115	60 50	CCMT p. B58	DCMT p. B62	SCMT p. B64	TC(P)MT p. B68	VB(C)MT p. B74(B76)	

●: The first recommended cutting condition

S Negative



S Positive



New Chip Breakers

LP Chip Breaker [For medium cutting 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.

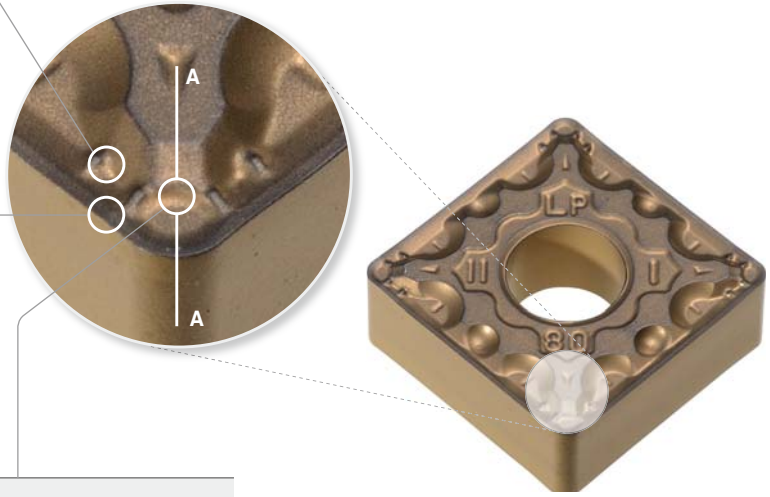
Features of LP chip breaker

▶ Front dot

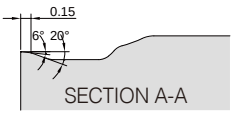
- Higher stability of chip curls at high feed
- Excellent chip control when copying
- Lower cutting force at low depth of cut and high feed

▶ Variable land

- Less crater wear
- Prevents chipping on minor cutting edge



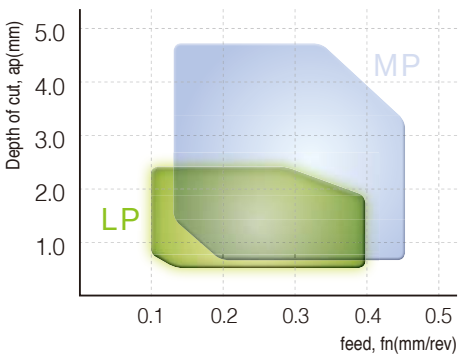
▶ Flat zone



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

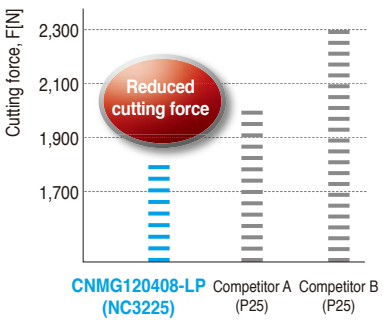
Application Range

(Medium to finish cutting)

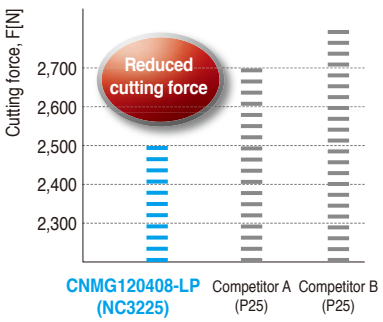


Cutting performance

Medium feed (0.25mm/rev)



High feed (0.40mm/rev)



New Chip Breakers

MP Chip Breaker [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

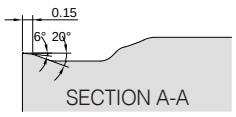
▶ Front two step dot

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

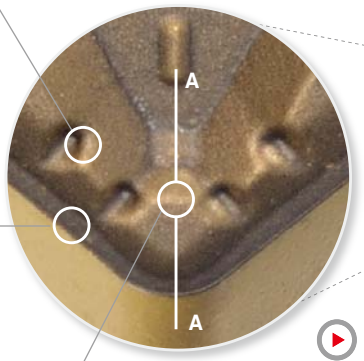
▶ Variable land

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

▶ Flat zone

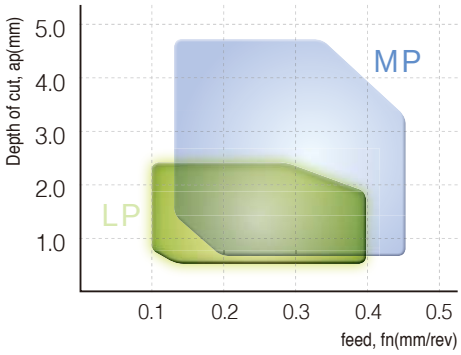


- Larger chip pocket for better chip evacuation at high feed
- Reduced cutting force with larger contact surface of chips



Application Range

(Medium to finish cutting)



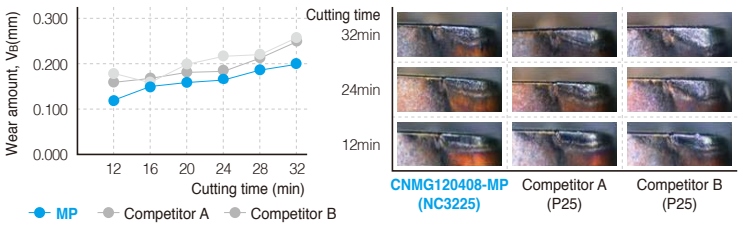
Wear resistance test

■ **Workpiece** SCM440 (Alloy steel)
Ø100
Outer diameter machining

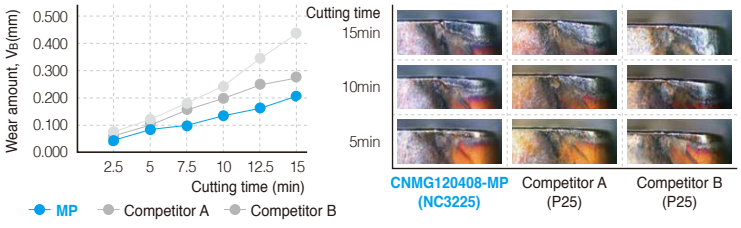
■ **Cutting conditions** vc(m/min) = 280
ap(mm) = 1.5
fn(mm/rev) = 0.25 / 0.40
wet

■ **Tool** CNMG120408-MP

Medium feed (0.25mm/rev)



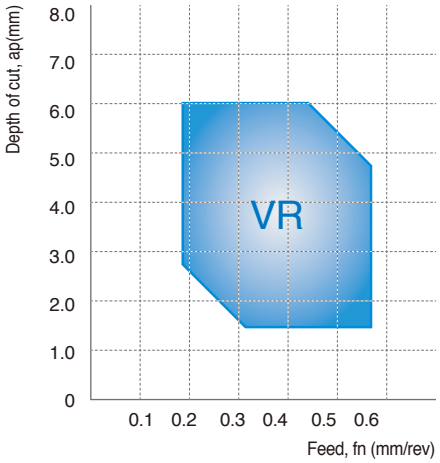
High feed (0.40mm/rev)



New Chip Breakers

VR Chip Breaker [For roughing]

- Increased stability when machining gray cast iron and ductile cast iron
- Increased productivity at high speed and high feed



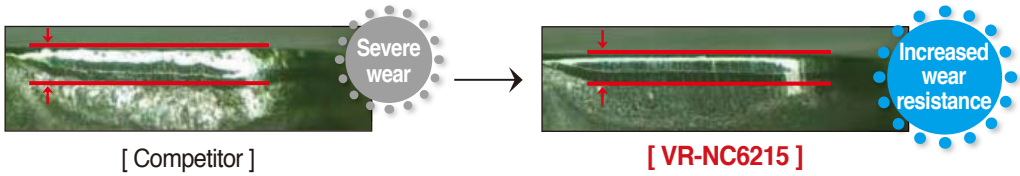
Features of VR chip breaker

- ▸ Wide land and pocket improve cutting performance at high feed
- ▸ Optimal cutting edge design for unstable and interrupted machining

Performance

■ Severe wear in continuous/interrupted machining of cast iron

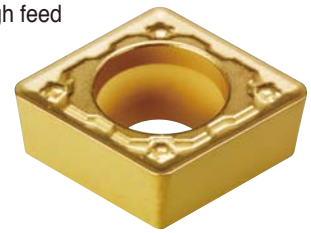
⋯› Longer tool life due to new VR chip breaker which is specially designed for high feed machining

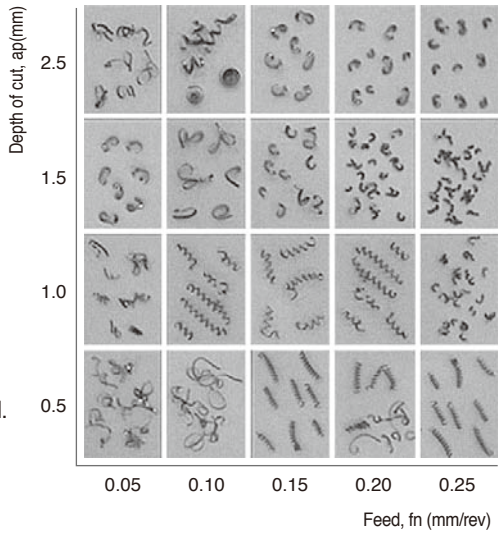


[Competitor] [VR-NC6215]

Single-sided MP Chip Breaker [For medium cutting]

- 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 performance

■ **Workpiece**	SCM440
■ **Cutting conditions**	vc=200m/min, ap=0.5~2.5mm fn=0.05~0.25mm/rev
■ **Tool**	CCMT09T304-MP

New Chip Breakers

VH / VT Chip Breaker [Heavy duty machining]

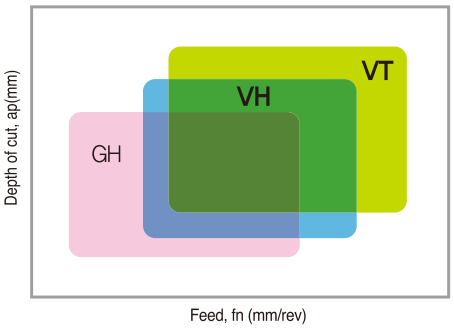
- Heavy duty chip breaker suitable for Heavy machining in the ship building and power plant industries
- Suitable for large vertical machines when machining shafts, rollers, rotors and optimal for the big flange machining

Special features of VH

• 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

Applications range of Chip breakers



GH : ap=5.0~12.0mm / fn=0.55~1.20mm/rev
VH : ap=6.0~15.0mm / fn=0.70~1.40mm/rev
VT : ap=7.0~17.0mm / fn=0.75~1.60mm/rev

Special features of VT

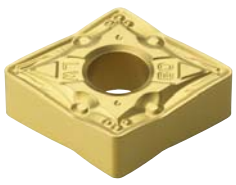
• For long tool life and stable cutting (higher feeds, big depth) in heavy machining

- 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 deflects the machining heat, optimizes inserts wear & absorb shock

LW / VW Chip Breaker [High feed cutting]

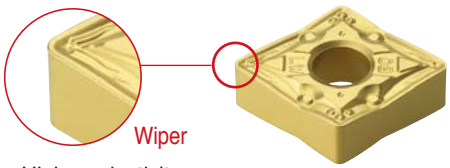
- Improved productivity with higher feed rates and surface finishes
- Improved wear resistance and toughness

Special features of LW



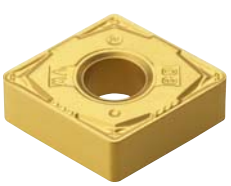
- **Curvilinear cutting edge**
  - Reduces cutting force
- **Cutting edge design able to handle deeper depth of cuts**
  - lower cutting load & reduces heat
- **Greater chip control at shallow depths of cuts**
  - Chip pocket design improves smooth chip flow
- **For shallow depth cutting and low speed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

Wiper Insert

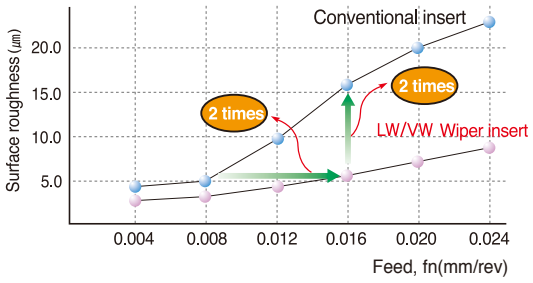


- High productivity
- Improved surface roughness
- High feed-reducing machining time
- Improved tool life due to reduce cutting force

Special features of VW



- **Excellent Finishing applications**
  - Excellent chip control
- **Insert design great for stable clmaping**
  - 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



New Chip Breakers

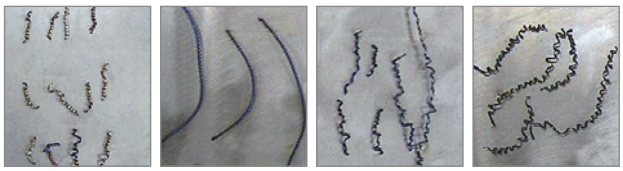
VL Chip Breaker [Mild steel]

- 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

Special features of VL

- ▶ **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



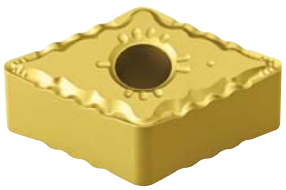
VL Chip Breakers | Competitor A | Competitor B | Competitor C

- ■ **Workpiece** SM20C
- ■ **Cutting conditions** vc=250m/min, ap=0.5mm fn=0.2mm/rev(Side), wet
- ■ **Designation** DNMG150408-VL

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 [Copying]



- Excellent chip evacuation in continuous and high speed machining of various workpieces.
- Longer tool life due to 3 dimensional chip breaker realizing low cutting resistance and high rigidity of the cutting edge.
- Stable chip control in copying and internal machining.

Special features of VB

6 bumps on the insert corner

Superior chip control and chip cutting in copying with various depths of cut

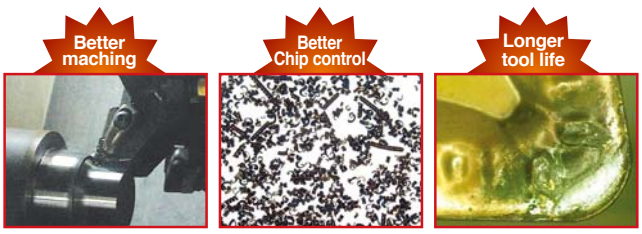
Side rake angle

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



VB Chip Breakers

Conventional chip breaker

New Chip Breakers

VC Chip Breaker [Medium-finishing]

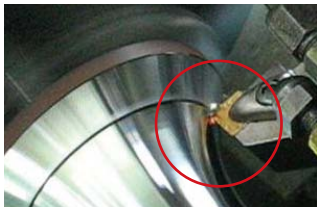
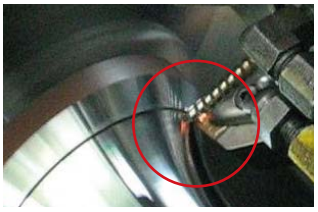
- Superior chip evacuation in high speed and continuous machining of various workpieces (carbon steel, alloy steel etc.)
- Korloy 3 dimensional chip breaker ensures longer tool life due to low cutting load and improved cutting edge strength.
- Stable chip control in copying and internal machining

Features of VC chip breaker

4 bums on the insert corner

Excellent chip control in various depths of cut and superb chip cutting in external, internal, copy machining and facing.

Superior chip control in copy machining

VC Chip Breakers		Conventional chip breaker	
			

VP Chip Breaker

[For hard-to-cut materials machining]

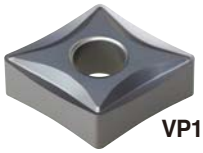
- High positive cutting edge reduces chip contact
- Minimized temperature while machining ensures longer tool life
- Stable machining with superior chip evacuation in high depths of cut

VP1(for finishing)

High positive cutting edge

▶ Longer tool life due to minimizing chip contact and reducing cutting heat while machining.

▶ Recommended cutting condition • fn=0.05~0.20mm/rev • ap=0.1~1.5mm

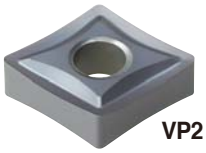


VP2(for medium to finishing)

High positive cutting edge and side rake angle

▶ Improved machining performance with stable chip control in ball machining with various depth of cuts.

▶ Recommended cutting condition • fn=0.05~0.40mm/rev • ap=0.5~4.0mm

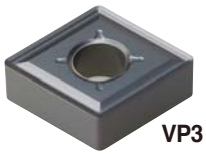


VP3(for medium machining)

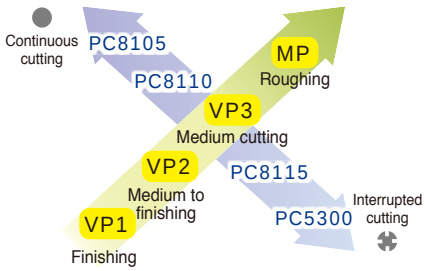
High positive cutting edge and wide land

▶ Stable machinability in interrupted machining toughness.
Stable chip evacuation and machining in machining with high depth of cut.

▶ Recommended cutting condition • fn=0.10~0.45mm/rev • ap=1.0~4.5mm



Negative



Chip breaker line-up for hard-to-cut materials

Machining of Hard-to-cut material

(Difficulty factors of Hard-to-cut material)

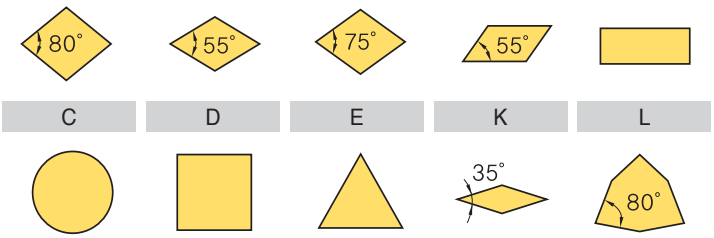
▶ Rapid wear on the cutting edge.
▶ Frequent fracture and chipping on the cutting edge.
▶ High cutting resistance.
▶ Rapidly rising temperature on the cutting edge.
▶ Increased built-up-edge due to bad chip control.

C N M G 12

1	2	3	4	5
Insert Shape	Relief Angle	Tolerance	Cross Section Type	Cutting Edge Length, Diameter of Inscribed Circle

1 Insert Shape

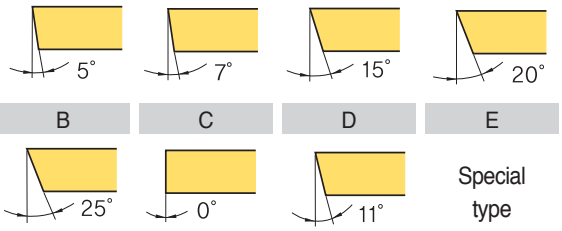
C N M G 12 04 08 - MP



C	D	E	K	L
R	S	T	V	W

2 Relief Angle

C N M G 12 04 08 - MP



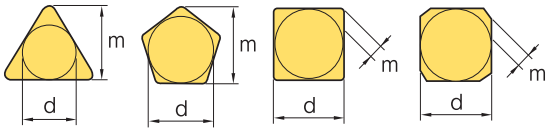
B	C	D	E
F	N	P	O

Special type

3 Tolerance

C N M G 12 04 08 - MP

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



(mm)

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

* Sides are based on unground insert

Tolerance on C,E,H,M,O,P,R,S,T,W Insert Shape (Exceptional case)

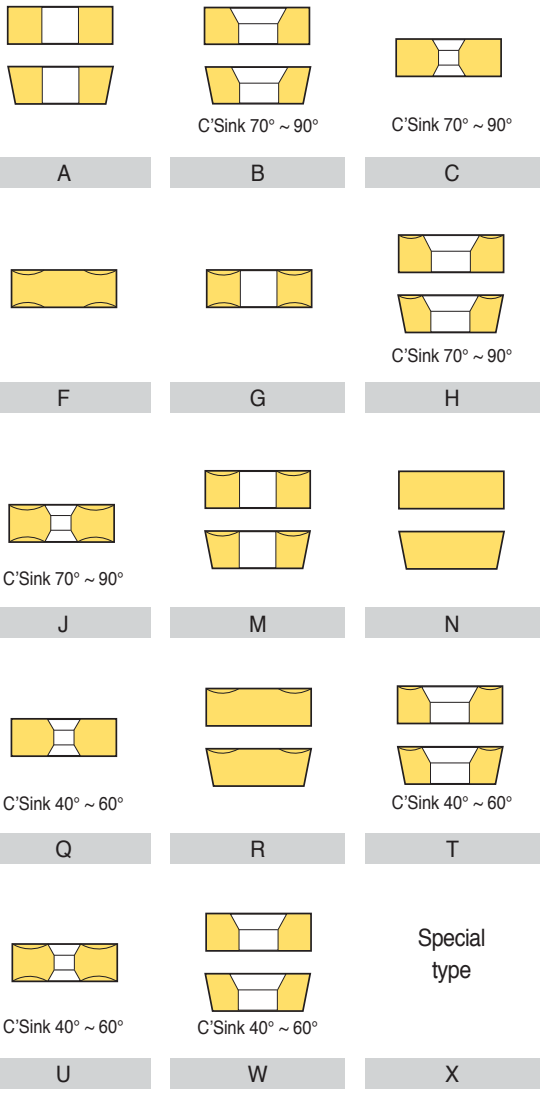
d	Tolerance on d		Tolerance on m	
	J, K, L, M, N	U	M, N	U
6.35	±0.05	±0.08	±0.08	±0.13
9.525	±0.05	±0.08	±0.08	±0.13
12.7	±0.08	±0.13	±0.13	±0.20
15.875	±0.10	±0.18	±0.15	±0.27
19.05	±0.10	±0.18	±0.15	±0.27
25.4	±0.13	±0.25	±0.18	±0.38

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

Special type

04 08 - MP

6 Height of Cutting Edge | 7 Nose Radius (Nose R) | 8 Chip Breaker for Turning

5 Cutting Edge Length, Diameter of Inscribed Circle

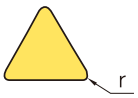
C N M G **12** 04 08 - MP

Symbol							Inch	IC
C	d	S	T	R	V	W		
Metric								d(mm)
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 Radius (Nose R)

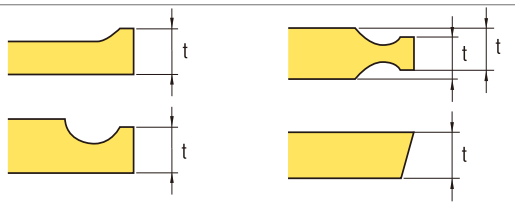
C N M G 12 04 **08** - MP



Symbol		Corner Radius	
Metric	Inch	Metric	Inch
01	0	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

VL VF VB VC VQ VW

VM VR VH VT VK VP1

VP2 VP3 HA HS HR GS

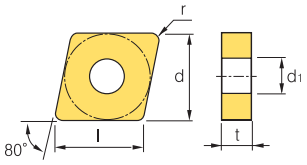
GR GH B25 LP MP

Positive Insert Chip Breaker

VF HMP C25 MP AK AR

CN○○

Rhombic 80° Negative



Dimensions(mm)			
Size	d	t	d1
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

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

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VP1	CNGG	120402-VP1																								0.01~0.10	0.10~1.00
			120404-VP1																								0.05~0.15	0.10~1.50
			120408-VP1																								0.07~0.20	0.10~1.50
Roughing		CNMA	090308																								0.10~0.30	0.50~3.00
			120404																●	●					●		0.15~0.60	1.00~5.00
			120408																●	●					●		0.15~0.60	1.00~6.00
			120412															●	●	●							0.15~0.70	1.50~6.00
			120416																●	●							0.20~0.80	2.00~6.00
			160608																●	●							0.15~0.70	2.00~6.00
			160612																●	●							0.15~0.70	2.00~6.00
			160616																	●							0.15~0.70	2.00~6.00
			190608																●	●							0.15~0.70	2.00~10.00
			190612																●	●							0.15~0.70	2.00~10.00
			190616																●	●							0.20~1.00	3.00~10.00
Finishing	VB	CNMG	120404-VB	●		●	●	●	●	●		●	●		●									●				0.15~0.35	0.30~2.00
			120408-VB	●		●	●	●	●	●		●	●		●									●				0.15~0.45	0.50~2.00
			120412-VB							●			●		●													0.20~0.50	0.50~2.00
Finishing	VF	CNMG	090304-VF						●		●	●	●															0.07~0.30	0.50~1.50
			090308-VF																									0.10~0.30	0.50~1.50
			120404-VF						●		●	●			●													0.07~0.30	0.50~1.50
			120408-VF						●			●			●													0.10~0.40	0.50~1.50
			120412-VF																									0.10~0.50	0.60~1.50
Finishing (Cermet)	VG	CNMG	090304-VG																									0.07~0.30	0.50~1.50
			090308-VG																									0.10~0.30	0.50~1.50
			120404-VG	●	●																							0.07~0.30	0.50~1.50
			120408-VG	●																								0.10~0.40	0.50~1.50
Finishing (Mild steel)	VL	CNMG	120404-VL	●		●			●			●			●													0.05~0.25	0.10~1.00
			120408-VL	●		●			●			●	●		●													0.10~0.35	0.20~1.50
			120412-VL							●																		0.10~0.35	0.20~1.50

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B116	MCRNR/L	B117
MCLNR/L	B116	PCBNR/L	B104
MCMNN	B116	PCLNR/L	B105

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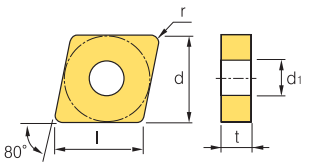
Rhombic 80° Negative



Dimensions(mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
19	19.05	6.35	7.93

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ⌗ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (wiper)	VW	CNMG	120404-VW																								0.10~0.30	0.50~3.00
			120408-VW						●											●							0.15~0.50	0.50~4.00
Medium to finishing	HA	CNMG	120404-HA													●	●			●			●		●			0.05~0.20	0.80~3.50
			120408-HA													●	●			●			●		●	●		0.10~0.40	0.80~3.50
			120412-HA																						●			0.13~0.55	0.80~3.50
Medium to finishing	HC	CNMG	120404-HC						●					●	●													0.05~0.30	0.80~3.50
			120408-HC						●		●			●	●													0.08~0.40	0.80~4.00
			120412-HC																									0.17~0.50	1.00~4.00
Medium to finishing	LP	CNMG	120404-LP							●			●		●													0.10~0.35	0.30~2.00
			120408-LP							●			●		●													0.10~0.40	0.50~2.50
			120412-LP							●			●		●													0.13~0.45	0.80~3.00
Medium to finishing	VC	CNMG	120404-VC						●	●		●	●		●								●					0.10~0.35	0.30~2.00
			120408-VC							●		●	●		●								●					0.15~0.40	0.50~3.00
			120412-VC							●		●	●															0.15~0.45	0.50~3.00
Medium to finishing	VP2	CNMG	120404-VP2									●								●	●	●	●	●		●		0.05~0.30	0.10~3.00
			120408-VP2									●								●	●	●	●	●		●		0.10~0.40	0.50~4.50
Medium to finishing	VQ	CNMG	090304-VQ																									0.05~0.30	0.50~3.50
			090308-VQ																									0.08~0.30	0.80~4.00
			120404-VQ	●	●	●	●	●					●															0.05~0.30	0.80~4.00
			120408-VQ	●	●	●	●	●					●															0.08~0.40	0.80~4.00
			120412-VQ							●			●																
Medium	GM	CNMG	120404-GM			●								●														0.05~0.30	0.90~5.00
			120408-GM	●	●	●			●		●	●		●	●													0.10~0.50	1.00~5.00
			120412-GM																									0.18~0.60	1.30~5.00
			190608-GM								●																	0.10~0.50	1.00~8.00

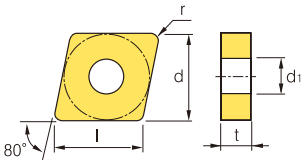
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B116	MCRNR/L	B117
MCLNR/L	B116	PCBNR/L	B104
MCMNN	B116	PCLNR/L	B105

CN○○

Rhombic 80° Negative



Dimensions(mm)			
Size	d	t	d1
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

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

Inserts	Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	HS	CNMG 090304-HS													●	●								●			0.05~0.20	1.00~2.50
		090308-HS																						●			0.10~0.20	1.00~2.50
		120404-HS													●	●			●			●		●			0.05~0.20	1.00~4.50
		120408-HS													●	●			●	●		●		●			0.10~0.40	1.00~4.50
		120412-HS														●			●	●		●		●			0.13~0.55	1.00~4.50
		160612-HS																						●			0.13~0.55	2.00~6.00
		160616-HS																						●			0.15~0.60	2.00~6.00
		190612-HS													●				●	●		●		●			0.13~0.55	2.00~7.30
		190616-HS														●						●		●			0.15~0.60	2.00~7.30
Medium	MP	CNMG 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
Medium	VM	CNMG 090304-VM									●																0.05~0.30	0.90~3.50
		090308-VM								●	●		●														0.10~0.45	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
		120416-VM												●													0.20~0.60	1.50~5.50
		160608-VM									●		●	●													0.10~0.50	1.00~6.70
		160612-VM									●		●														0.13~0.60	1.30~6.70
		190612-VM											●	●													0.15~0.70	1.50~7.00
Medium	VP3	CNMG 120404-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
		120408-VP3																	●	●	●	●	●		●	●	0.10~0.40	0.50~4.50
		120412-VP3																	●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
Medium (wiper)	LW	CNMG 120408-LW												●													0.15~0.60	1.00~5.00
		120412-LW																									0.20~0.70	1.00~6.00

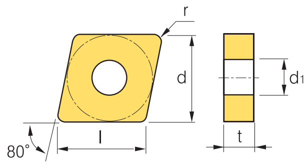
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B116	MCRNR/L	B117
MCLNR/L	B116	PCBNR/L	B104
MCMNN	B116	PCLNR/L	B105

CN○○

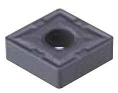
Rhombic 80° Negative



Dimensions(mm)			
Size	d	t	d1
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	7.94~9.52	9.12

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
Steel	P	●	◒	✱	●	◒	●	●	◒	◒	◒	✱	✱												
Stainless steel	M											◒	◒	●	◒				◒	✱		●	◒		
Cast iron	K	●	◒	✱	●	◒							◒			●	◒	◒						●	◒
Non-ferrous metal	N																							●	◒
Heat resistant alloy, Titanium alloy	S												◒						◒	✱	●	●		●	◒
Hardened steel	H																					◒		●	◒

Machining types
- ● Continuous cutting
- ◒ General cutting
- ✱ Interrupted cutting

Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing B25 	CNMG 120404-B25	●	●	●			●	●		●	●	●	●				●	●	●							0.17~0.45	1.00~5.00
	120408-B25	●	●	●			●	●	●	●	●	●	●	●		●	●	●	●	●		●	●			0.23~0.60	1.50~5.00
	120412-B25			●			●	●		●	●	●	●				●	●								0.25~0.60	2.00~5.00
	160608-B25							●			●	●	●													0.25~0.60	2.00~6.50
	160612-B25							●		●	●		●					●								0.27~0.60	2.00~6.50
	160616-B25							●			●		●					●								0.27~0.60	2.00~6.50
	190604-B25											●	●													0.20~0.45	3.00~8.00
	190608-B25							●	●		●	●	●				●	●								0.25~0.60	3.00~8.00
	190612-B25						●	●	●		●	●	●				●	●	●	●		●				0.30~0.60	3.00~8.00
	190616-B25							●			●	●						●								0.23~0.70	3.00~8.00
Medium to roughing GS 	CNMG 120404-GS													●	●				●			●	●			0.05~0.25	0.10~3.00
	120408-GS											●		●	●				●			●	●			0.10~0.50	1.00~5.00
	120412-GS													●	●				●			●	●			0.13~0.65	1.00~5.00
	160608-GS																									0.10~0.50	1.00~6.50
	160612-GS																									0.13~0.65	1.00~6.50
	190612-GS														●							●				0.13~0.65	1.00~7.80
	190616-GS																					●				0.13~0.65	1.00~7.80
Roughing GR 	CNMG 120408-GR						●		●	●		●	●			●	●	●								0.20~0.50	1.00~7.00
	120412-GR						●		●	●		●	●				●	●								0.25~0.50	1.30~7.00
	120416-GR																●									0.25~0.60	1.80~6.00
	160608-GR									●		●					●	●								0.20~0.70	1.00~8.00
	160612-GR						●		●	●		●	●				●	●								0.25~0.70	1.30~8.00
	160616-GR									●		●						●								0.25~0.75	1.80~8.00
	190608-GR								●			●	●				●	●								0.20~0.70	1.70~10.00
	190612-GR						●		●			●	●				●	●								0.30~0.75	1.70~10.00
	190616-GR						●		●			●	●					●								0.30~0.80	1.80~10.00
	190624-GR																									0.35~0.85	2.00~12.00
	250724-GR																									0.40~1.00	2.30~15.00
	250924-GR											●	●													0.40~1.00	2.30~15.00
Roughing VK 	CNMG 120408-VK															●	●									0.20~0.50	1.00~5.00
	120412-VK															●	●									0.25~0.50	1.30~6.00
	120416-VK																●									0.25~0.60	1.80~7.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B116	MCRNR/L	B114
MCLNR/L	B116	PCBNR/L	B107
MCMNN	B116	PCLNR/L	B105

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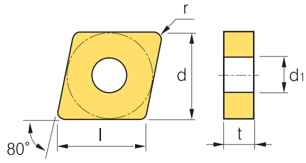
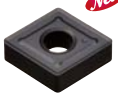
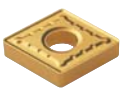


Dimensions(mm)			
Size	d	t	d1
12	12.7	4.76	5.16
16	15.875	6.35	6.35
19	19.05	6.35	7.93
25	25.4	9.52	9.12

Rhombic 80° Negative

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
Stainless steel	M											◐	◐	●	◐				◐	✱		●	◐		
Cast iron	K	●	◐	✱	●	◐							◐			●	◐	◐						●	◐
Non-ferrous metal	N																							●	◐
Heat resistant alloy, Titanium alloy	S												◐						◐	✱	●	●	◐	●	◐
Hardened steel	H																					◐	✱	●	◐

Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

Inserts	Designation	CN1500 (Cermet)	CN2000 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3010 (Coated)	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Roughing HR 	CNMG 120404-HR																									0.15~0.30	0.80~6.00
	120408-HR						●					●	●													0.20~0.50	1.00~7.00
	120412-HR						●					●	●													0.25~0.70	1.30~7.00
	120416-HR																									0.32~0.75	1.80~7.00
	160608-HR																									0.20~0.50	1.00~8.00
	160612-HR						●		●			●														0.25~0.70	1.30~8.00
	160616-HR						●																			0.30~0.80	1.80~8.00
	160624-HR																									0.32~0.90	2.30~10.00
	190608-HR																									0.20~0.50	1.70~10.00
	190612-HR								●			●					●									0.25~0.70	1.30~10.00
	190616-HR								●			●														0.30~0.80	1.80~10.00
	190624-HR																									0.32~0.90	2.30~10.00
	250924-HR								●																	0.40~1.00	2.30~10.00
Roughing VR New 	CNMG 120408-VR																	●								0.25~0.55	1.20~7.00
	120412-VR							●			●							●								0.30~0.60	1.50~7.00
	120416-VR							●			●							●								0.35~0.65	1.70~7.00
	160612-VR																	●								0.35~0.70	2.00~8.00
	190612-VR										●							●								0.35~0.70	2.00~10.0
	190616-VR																	●								0.35~0.75	2.20~10.0
Medium to finishing HA 	CNMM 120408-HA																									0.10~0.40	0.80~3.50
Medium GM 	CNMM 120408-GM																									0.10~0.50	1.00~5.00
Roughing GR 	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

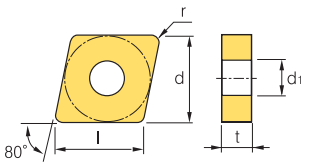
Cutting edge geometry A38 ~ A43 · Recommended chip breaker B04 ~ B11 · Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B116	MCRNR/L	B117
MCLNR/L	B116	PCBNR/L	B104
MCMNN	B116	PCLNR/L	B105

CN○○

Rhombic 80° Negative



Dimensions(mm)			
Size	d	t	d1
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			Machining types
Steel	P	● ⬬ ⌗ ● ⬬ ● ● ⬬ ⬬ ⬬ ⌗ ⌗	● Continuous cutting
Stainless steel	M	⬬ ⌗ ⬬ ⬬ ⌗ ⌗ ● ⬬ ⬬ ⌗	⬬ General cutting
Cast iron	K	● ⬬ ⌗ ● ⬬ ⬬ ● ⬬ ⬬ ●	⌗ Interrupted cutting
Non-ferrous metal	N	⬬ ⬬ ●
Heat resistant alloy, Titanium alloy	S	⬬ ⌗ ● ● ⬬ ⬬
Hardened steel	H	⌗ ● ⬬

Inserts		Designation	Cermet			Coated		Coated														Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Heavy	GH	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
		250950-GH																									0.65~1.30	6.00~12.00
Heavy (General)	VH	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)	VT	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

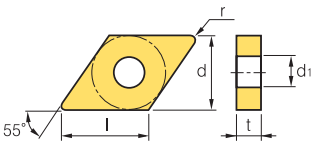
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MCKNR/L	B116	**MCRNR/L**	B117
MCLNR/L	B116	**PCBNR/L**	B104
MCMNN	B116	**PCLNR/L**	B105

DN○○

Rhombic 55° Negative



Dimensions(mm)			
Size	d	t	d1
11	9.525	3.18~4.76	3.81
15	12.7	4.76~6.35	5.16
19	15.875	6.35	7.93

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

Inserts		Designation		Cermet			Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VP1	DNGG	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
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
Finishing	VB	DNMG	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	VF	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 (Cermet)	VG	DNMG	110404-VG																								0.07~0.30	0.50~1.50
			110408-VG																								0.10~0.40	0.50~1.50
			150404-VG																								0.07~0.30	0.50~1.50
			150408-VG																								0.10~0.40	0.50~1.50
			150604-VG	●	●																						0.13~0.30	0.50~1.50
			150608-VG	●																							0.10~0.40	0.50~1.50

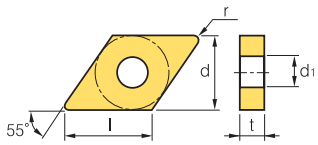
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B117	PDJNR/L	B106, 160
MDNNN	B117	PDNNR/L	B106
MDQNR/L	B118	PDSNR/L	B138
MDUNR/L	B142	PDUNR/L	B139

DN○○

Rhombic 55° Negative



Dimensions(mm)			
Size	d	t	d1
11	9.525	4.76	3.81
15	12.7	4.76~6.35	5.16

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

Machining types
- ● Continuous cutting
- ⬬ General cutting
- ⧓ Interrupted cutting

Inserts	Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (Mild steel)	VL	DNMG 110408-VL																								0.05~0.20	0.10~1.00
		DNMG 150404-VL						●			●	●		●													0.05~0.25	0.10~1.50
		DNMG 150408-VL									●	●		●													0.05~0.30	0.20~1.50
		DNMG 150412-VL																									0.10~0.30	0.25~1.50
		DNMG 150604-VL	●					●			●																0.05~0.25	0.10~1.50
		DNMG 150608-VL	●					●			●			●													0.05~0.30	0.20~1.50
		DNMG 150612-VL																									0.10~0.30	0.25~1.50
Finishing (wiper)	VW	DNMG 150404-VW																									0.10~0.35	0.30~3.00
		DNMG 150408-VW																									0.10~0.40	0.30~3.00
		DNMG 150604-VW																									0.10~0.35	0.30~3.00
		DNMG 150608-VW						●					●														0.10~0.40	0.30~3.00
Medium to finishing	HA	DNMG 150404-HA																					●	●	●		0.05~0.30	0.80~3.50
		DNMG 150408-HA																		●			●	●	●		0.10~0.40	0.80~3.50
		DNMG 150604-HA								●						●							●	●	●		0.05~0.30	0.80~3.50
		DNMG 150608-HA																					●	●	●		0.10~0.40	0.80~3.50
Medium to finishing	HC	DNMG 150404-HC																									0.05~0.30	0.05~3.50
		DNMG 150408-HC						●																			0.08~0.40	0.80~4.00
		DNMG 150412-HC																									0.13~0.50	0.90~4.00
		DNMG 150604-HC																									0.05~0.30	0.80~4.00
		DNMG 150608-HC											●														0.08~0.40	0.80~4.00
		DNMG 150612-HC																									0.13~0.50	0.90~4.00
Medium to finishing	LP (New)	DNMG 150404-LP							●			●		●													0.10~0.35	0.30~2.00
		DNMG 150408-LP							●			●		●													0.10~0.40	0.50~2.50
		DNMG 150412-LP							●			●		●													0.13~0.45	0.80~3.00
		DNMG 150604-LP							●			●		●													0.10~0.35	0.30~2.00
		DNMG 150608-LP							●			●		●													0.10~0.40	0.50~2.50
		DNMG 150612-LP										●															0.13~0.45	0.80~3.00

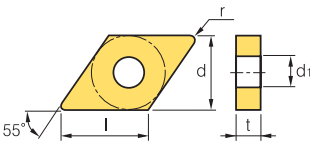
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B117	**PDJNR/L**	B106, 160
MDNNN	B117	**PDNNR/L**	B106
MDQNR/L	B118	**PDSNR/L**	B138
MDUNR/L	B142	**PDUNR/L**	B139

DN○○

Rhombic 55° Negative



Dimensions(mm)			
Size	d	t	d1
11	9.525	3.18~4.76	3.81
15	12.7	4.76~6.35	5.16

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

Inserts		Designation		Cermet			Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VC	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 to finishing	VP2	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 (Cermet)	VQ	DNMG	110404-VQ	●	●																							0.05~0.30	0.50~3.50
			110408-VQ																									0.08~0.40	0.80~4.00
			150404-VQ	●	●	●	●	●																				0.05~0.30	0.80~3.50
			150408-VQ	●	●	●	●	●					●															0.08~0.40	0.80~4.00
			150604-VQ	●	●	●	●	●					●															0.05~0.30	0.80~4.00
			150608-VQ	●	●	●	●	●					●															0.08~0.40	0.80~4.00
Medium	GM	DNMG	150404-GM											●														0.05~0.30	0.90~5.00
			150408-GM	●		●								●														0.10~0.50	1.00~5.00
			150412-GM											●														0.13~0.60	1.30~5.00
			150604-GM		●	●								●														0.05~0.30	0.90~5.00
			150608-GM						●		●			●														0.10~0.50	1.00~5.00
			150612-GM											●														0.13~0.60	1.30~5.00
Medium	MP	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
			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

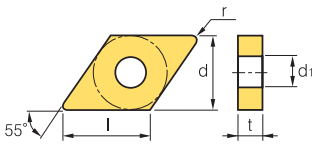
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B117	PDJNR/L	B106, 160
MDNNN	B117	PDNNR/L	B106
MDQNR/L	B118	PDSNR/L	B138
MDUNR/L	B142	PDUNR/L	B139

DN○○

Rhombic 55° Negative



Dimensions(mm)			
Size	d	t	d1
11	9.525	4.76	3.81
15	12.7	4.76~6.35	5.16

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

Inserts	Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	HS 	DNMG 110404-HS														●								●			0.05~0.35	0.80~2.50
		DNMG 110408-HS														●								●			0.10~0.40	1.00~2.50
		DNMG 150404-HS																	●			●		●			0.05~0.35	0.80~4.00
		DNMG 150408-HS																	●	●		●		●			0.10~0.40	1.00~4.00
		DNMG 150412-HS																									0.13~0.55	1.00~4.50
		DNMG 150604-HS													●	●			●			●		●			0.05~0.35	0.80~4.00
		DNMG 150608-HS													●	●			●	●		●		●			0.10~0.40	1.00~4.50
		DNMG 150612-HS														●								●			0.10~0.55	1.00~4.50
Medium	VM 	DNMG 110404-VM		●							●																0.05~0.30	0.90~4.00
		DNMG 110408-VM						●		●	●			●													0.10~0.50	1.00~4.00
		DNMG 110412-VM																									0.13~0.50	1.30~4.00
		DNMG 150404-VM	●								●			●			●		●	●							0.05~0.30	0.90~5.00
		DNMG 150408-VM	●		●			●			●		●	●	●		●		●	●							0.10~0.50	1.00~5.00
		DNMG 150412-VM									●		●	●					●	●							0.13~0.60	1.30~5.00
		DNMG 150604-VM	●	●	●					●	●		●	●			●		●	●							0.05~0.30	0.90~5.00
		DNMG 150608-VM	●					●		●	●		●	●			●		●	●				●			0.10~0.50	1.00~5.00
		DNMG 150612-VM		●							●		●	●					●	●							0.13~0.60	1.30~5.00
Medium	VP3 	DNMG 150404-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
		DNMG 150408-VP3																	●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
		DNMG 150412-VP3																	●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
		DNMG 150604-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
		DNMG 150608-VP3																	●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
		DNMG 150612-VP3																	●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
Medium (wiper)	LW 	DNMG 150408-LW																									0.15~0.50	0.70~4.50
		DNMG 150412-LW																									0.20~0.60	1.00~5.00
		DNMG 150608-LW						●																			0.15~0.50	0.70~4.50
		DNMG 150612-LW																									0.20~0.60	1.00~5.00

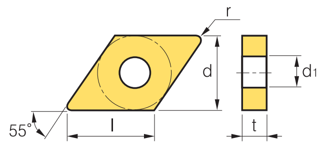
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B117	**PDJNR/L**	B106, 160
MDNNN	B117	**PDNNR/L**	B106
MDQNR/L	B118	**PDSNR/L**	B138
MDUNR/L	B142	**PDUNR/L**	B139

DN○○

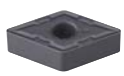
Rhombic 55° Negative



Dimensions(mm)			
Size	d	t	d1
15	12.7	4.76~6.35	5.16

Machining types: ● Continuous cutting, ◒ General cutting, ✱ Interrupted cutting

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
Steel	P	●	◒	✱	●	◒	●	●	◒	◒	◒	✱	✱												
Stainless steel	M											◒	◒	●	◒				◒	✱		●	◒		
Cast iron	K	●	◒	✱	●	◒							◒			●	◒	◒						●	◒
Non-ferrous metal	N																							●	◒
Heat resistant alloy, Titanium alloy	S												◒						◒	✱	●	●	◒	●	◒
Hardened steel	H																					◒	✱	●	◒

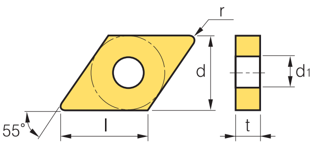
Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing B25 	DNMG 150402-B25																									0.15~0.40	0.50~3.50
	150404-B25			●				●			●	●	●					●								0.17~0.45	1.00~4.00
	150408-B25			●				●		●	●	●	●				●	●								0.17~0.55	1.50~4.00
	150412-B25							●			●		●					●								0.25~0.55	1.50~4.00
	150425-B25																									0.35~0.65	2.50~5.50
	150602-B25																									0.15~0.40	0.50~3.50
	150604-B25	●						●		●	●	●	●				●	●								0.17~0.55	1.50~4.00
	150608-B25	●					●	●		●	●	●	●				●	●				●	●			0.17~0.55	1.50~4.00
	150612-B25							●			●		●				●	●								0.25~0.55	1.50~4.00
	150625-B25																									0.35~0.65	2.50~5.50
Medium to roughing GS 	DNMG 150404-GS																									0.07~0.40	1.00~5.00
	150408-GS																		●							0.10~0.50	1.00~5.00
	150412-GS																									0.13~0.65	1.00~5.00
	150604-GS													●								●	●			0.07~0.40	1.00~5.00
	150608-GS																		●			●	●			0.10~0.50	1.00~5.00
	150612-GS														●											0.10~0.65	1.00~5.00
Roughing GR 	DNMG 150408-GR									●		●					●	●								0.20~0.50	1.00~7.00
	150412-GR																●	●								0.25~0.90	1.30~7.00
	150416-GR																									0.30~0.75	1.80~7.00
	150608-GR									●		●	●				●	●								0.20~0.50	1.00~7.00
	150612-GR									●		●					●	●								0.25~0.70	1.30~7.00
	150616-GR									●			●													0.20~0.75	1.80~7.00
Roughing VK 	DNMG 150404-VK																●									0.15~0.50	0.08~6.00
	150408-VK																●									0.20~0.50	1.00~7.00
	150412-VK															●	●									0.25~0.70	1.30~7.00
	150604-VK																									0.20~0.50	1.00~7.00
	150608-VK																●									0.20~0.50	1.00~7.00
	150612-VK															●	●									0.25~0.70	1.30~7.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B117	**PDJNR/L**	B106, 160
MDNNN	B117	**PDNNR/L**	B106
MDQNR/L	B118	**PDSNR/L**	B138
MDUNR/L	B142	**PDUNR/L**	B139

DN○○



Dimensions(mm)			
Size	d	t	d1
15	12.7	4.76~6.35	5.16
19	15.875	6.35	7.93

Rhombic **55° Negative**

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
Workpiece	Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
	Stainless steel	M											◐	◐	●	◐				◐	✱		●	◐		
	Cast iron	K	●	◐	✱	●	◐							◐			●	◐	◐						●	◐
	Non-ferrous metal	N																							●	◐
	Heat resistant alloy, Titanium alloy	S												◐						◐	✱	●	●	◐	●	◐
	Hardened steel	H																					◐	✱	●	◐

Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

	Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Roughing	HR 	DNMG 150408-HR																									0.20~0.50	1.00~7.00
		150412-HR																									0.25~0.70	1.30~7.00
		150416-HR																									0.30~0.75	1.80~7.00
		150608-HR						●					●														0.20~0.50	1.00~7.00
		150612-HR						●																			0.25~0.70	1.30~7.00
		150616-HR						●																			0.20~0.75	1.80~7.00
		190612-HR																									0.20~0.75	1.80~8.00
Roughing	VR New 	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 (Shaft)	SH 	DNMX 150404R-SH																									0.15~0.30	1.00~4.00
		150408R-SH																									0.15~0.50	1.50~5.00
		150604R-SH																									0.15~0.30	1.00~4.00
		150608R-SH																									0.15~0.50	1.50~5.00
		150404L-SH																									0.15~0.30	1.00~4.00
		150408L-SH																									0.15~0.50	1.50~5.00
		150604L-SH																									0.15~0.30	1.00~4.00
		150608L-SH																									0.15~0.50	1.50~5.00

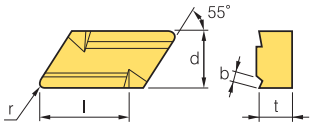
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MDJNR/L	B117	**PDJNR/L**	B106, 160
MDNNN	B117	**PDNNR/L**	B106
MDQNR/L	B118	**PDSNR/L**	B138
MDUNR/L	B142	**PDUNR/L**	B139

KN○○

Parallelogram 55° Negative



Dimensions(mm)		
Size	d	t
16	9.525	4.76

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

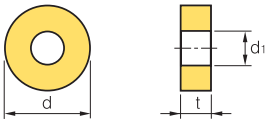
Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium	11	KNUX	160405R11						●	●	●	●	●	●	●	●			●					●			0.20~0.35	1.00~6.00
			160410R11							●		●	●	●	●				●								0.30~0.60	1.50~6.00
			160405L11						●	●	●	●	●	●	●	●											0.20~0.35	1.00~6.00
			160410L11							●		●	●	●	●													0.30~0.60	1.50~6.00
Roughing	12	KNUX	160405R12							●		●	●	●	●													0.25~0.35	1.50~6.00
			160410R12							●		●	●	●	●													0.40~0.70	1.50~6.00
			160405L12									●																0.25~0.35	1.50~6.00
			160410L12									●		●														0.40~0.70	1.50~6.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CKJNR/L	B114	**CKUNR/L**	B141
CKNNR/L	B114		

RN○○

Round Negative



Dimensions(mm)			
Size	d	t	d1
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	6.35~9.52	9.12
31	31.75	9.52	12.7

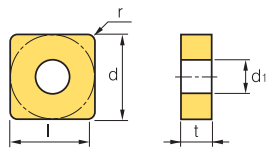
Workpiece			Machining types
Steel	P	● ⧓ ✱ ● ⧓	● Continuous cutting
Stainless steel	M	⧓ ⧓ ● ⧓ ✱ ⧓ ● ⧓	⧓ General cutting
Cast iron	K	● ⧓ ✱ ● ⧓ ⧓ ● ⧓ ⧓	✱ Interrupted cutting
Non-ferrous metal	N	● ⧓
Heat resistant alloy, Titanium alloy	S	⧓ ⧓ ✱ ● ⧓ ⧓ ● ⧓
Hardened steel	H	⧓ ✱ ● ⧓

Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing	B25	RNMG	090300-B25																									0.90~4.50	0.09~0.90
			120400-B25											●														1.20~4.80	0.12~1.20
			150600-B25											●														1.15~1.50	1.50~7.50
			190600-B25											●														1.90~7.60	0.19~1.90
			250600-B25																									2.50~10.0	0.25~2.50
			250900-B25											●														2.50~10.0	0.25~2.50
			310900-B25																									3.50~13.0	0.30~2.50

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

SN○○

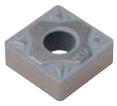
○ Square 90° Negative



Dimensions(mm)			
Size	d	t	d1
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

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

Machining types
- ● Continuous cutting
- ⬬ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (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
Finishing	HU 	SNGG	120408-HU																							0.10~0.30	0.20~1.50
Medium		SNGG	090304R																							0.12~0.35	1.00~3.00
			090308R																							0.15~0.35	1.00~3.00
			120404R		●																					0.15~0.35	1.00~4.00
			120408R																							0.15~0.35	1.00~4.00
			120412R																							0.15~0.35	1.00~4.00
			090304L																							0.12~0.35	1.00~3.00
			090308L																							0.15~0.35	1.00~3.00
			120404L																							0.15~0.35	1.00~4.00
			120408L																							0.15~0.35	1.00~4.00
			120412L																							0.15~0.35	1.00~4.00

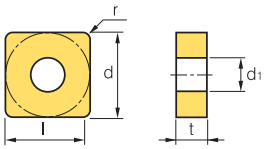
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	**MSRNR/L**	B119	**PSDNN**	B108
MSDNN	B118	**MSSNR/L**	B120	**PSKNR/L**	B109, B139
MSKNR/L	B119	**PSBNR/L**	B108	**PSSNR/L**	B109

SN○○

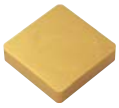
Square 90° Negative



Dimensions(mm)			
Size	d	t	d1
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																								
Steel	P	●	⬌	✱	●	⬌	●	●	⬌	⬌	⬌	✱	✱											
Stainless steel	M										⬌	⬌	●	⬌				⬌	✱		●	⬌		
Cast iron	K	●	⬌	✱	●	⬌						⬌			●	⬌	⬌						●	⬌
Non-ferrous metal	N																						●	⬌
Heat resistant alloy, Titanium alloy	S											⬌						⬌	✱	●	●	⬌	●	⬌
Hardened steel	H																				⬌	✱	●	⬌

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Roughing		SNGN	090302																							0.05~0.30	0.50~4.00
			090304																							0.10~0.35	0.50~4.00
			090308																							0.10~0.40	1.00~4.00
			120304																							0.13~0.50	1.30~5.00
			120308																							0.15~0.60	1.50~6.00
			120312																							0.17~0.60	1.70~6.00
			120402																							0.10~0.45	1.00~5.00
			120404																							0.13~0.50	1.30~5.00
			120408																							0.15~0.60	1.50~6.00
			120412																							0.17~0.60	1.70~6.00
			120424																							0.20~0.65	2.00~6.00
			150402																							0.10~0.50	0.50~6.00
			150408																							0.15~0.60	1.50~8.00
			150412																							0.17~0.60	2.00~8.00
			150416																							0.20~0.65	2.50~8.50
			190402																							0.10~0.60	2.00~8.50
			190412																							0.17~0.70	2.50~10.00
			190416																							0.20~0.75	2.50~10.00
			250604																							0.30~0.80	3.00~12.00
			250616																							0.35~1.00	4.00~12.00
Medium		SNGX	120408R																							0.15~0.35	1.00~4.00
Roughing		SNMA	090304																							0.10~0.45	0.50~4.50
			090308																							0.15~0.50	0.50~4.50
			090312																							0.20~0.50	0.50~4.50
			120402																							0.10~0.50	1.00~4.50
			120404																							0.15~0.60	1.00~5.00
			120408						●										●	●						0.15~0.70	1.00~6.00
			120412																●	●						0.20~0.80	1.50~6.00
			120416																●	●						0.30~1.00	2.00~6.00
			120430																							0.30~0.70	2.50~5.00
			150612																●							0.20~0.80	2.00~8.00
			150616																							0.25~0.85	2.50~10.00
			190608																							0.20~0.80	2.00~10.00
			190612																●	●						0.20~0.80	2.00~10.00
			190616																●	●						0.25~0.85	2.50~10.00
			190624																							0.35~0.90	3.00~10.00
			250724																							0.40~1.00	3.00~13.00
			250924																							0.40~1.00	3.00~13.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	**MSRNR/L**	B119	**PSDNN**	B108
MSDNN	B118	**MSSNR/L**	B120	**PSKNR/L**	B109, B139
MSKNR/L	B119	**PSBNR/L**	B108	**PSSNR/L**	B109

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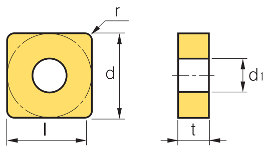
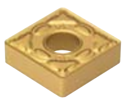
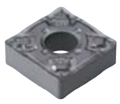
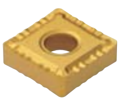


Dimensions(mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16

Square 90° Negative

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
Steel	P	●	◑	✱	●	◑	●	●	◑	◑	◑	✱	✱												
Stainless steel	M											◑	◑	●	◑				◑	✱		●	◑		
Cast iron	K	●	◑	✱	●	◑							◑			●	◑	◑						●	◑
Non-ferrous metal	N																							●	◑
Heat resistant alloy, Titanium alloy	S												◑						◑	✱	●	●		●	◑
Hardened steel	H																					◑		●	◑

Machining types
- ● Continuous cutting
- ◑ General cutting
- ✱ Interrupted cutting

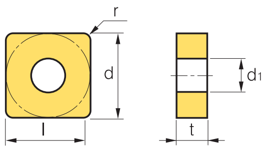
	Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VB 	SNMG 120404-VB	●			●	●																				0.15~0.35	0.30~2.00
		120408-VB	●		●	●	●																				0.15~0.40	0.50~2.00
Finishing	VF 	SNMG 090304-VF																									0.07~0.30	0.50~1.50
		090308-VF																									0.07~0.30	0.50~1.50
		120404-VF						●			●																0.07~0.30	0.50~1.50
		120408-VF						●			●			●													0.10~0.40	0.50~1.50
		120412-VF																									0.20~0.50	0.50~1.50
Finishing (Cermet)	VG 	SNMG 090304-VG		●																							0.07~0.30	0.50~1.50
		090308-VG																									0.10~0.30	0.50~1.50
		120404-VG																									0.07~0.30	0.50~1.50
		120408-VG																									0.10~0.40	0.50~1.50
Finishing (Mild steel)	VL 	SNMG 120408-VL						●			●												●				0.10~0.35	0.20~1.50
Medium to finishing	HA 	SNMG 120404-HA														●								●	●		0.10~0.35	0.80~3.50
		120408-HA													●								●	●	●		0.10~0.40	0.80~3.50
		120412-HA																									0.13~0.55	0.80~3.50
Medium to finishing	HC 	SNMG 120404-HC																									0.05~0.35	0.80~4.00
		120408-HC																									0.08~0.40	0.80~4.00
Medium to finishing	LP  New	SNMG 120404-LP							●			●		●													0.10~0.35	0.30~2.00
		120408-LP							●			●		●													0.10~0.40	0.50~2.50
		120412-LP																									0.13~0.45	0.80~3.00

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	MSRNR/L	B119	PSDNN	B108
MSDNN	B118	MSSNR/L	B120	PSKNR/L	B109, B139
MSKNR/L	B119	PSBNR/L	B108	PSSNR/L	B109

SN○○

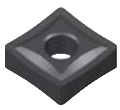


Dimensions(mm)			
Size	d	t	d1
09	9.525	3.18	3.81
12	12.7	4.76	5.16
15	15.875	6.35	6.35
19	19.05	6.35	7.93

○ Square 90° Negative

Machining types: ● Continuous cutting ◐ General cutting ✱ Interrupted cutting

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
Stainless steel	M											◐	◐	●	◐				◐	✱		●	◐		
Cast iron	K	●	◐	✱	●	◐							◐			●	◐	◐						●	◐
Non-ferrous metal	N																							●	◐
Heat resistant alloy, Titanium alloy	S												◐						◐	✱	●	●	◐	●	◐
Hardened steel	H																					◐	✱	●	◐

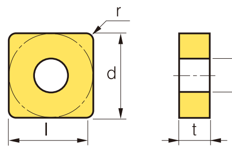
	Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VC 	SNMG 120408-VC									●	●		●													0.15~0.40	0.50~3.50
Medium to finishing	VP2 	SNMG 120404-VP2									●								●	●	●	●	●		●		0.05~0.35	0.10~3.00
		120408-VP2									●								●	●	●	●	●		●		0.10~0.45	0.50~4.50
		120412-VP2																	●	●	●	●	●		●		0.10~0.50	0.50~5.00
Medium	GM 	SNMG 120404-GM																									0.05~0.30	0.90~5.00
		120408-GM	●					●					●														0.10~0.50	1.00~5.00
		120412-GM											●														0.13~0.60	1.30~5.00
Medium	HS 	SNMG 090304-HS														●								●			0.05~0.25	1.00~2.50
		090308-HS																				●					0.10~0.30	1.00~2.50
		120404-HS														●			●					●			0.05~0.30	1.00~4.50
		120408-HS													●	●			●	●		●		●			0.10~0.40	1.00~4.50
		120412-HS													●				●	●		●		●			0.13~0.55	1.00~4.50
		150612-HS																						●			0.13~0.55	1.00~6.10
		150616-HS																									0.15~0.60	1.00~4.50
		190612-HS													●				●	●		●		●			0.13~0.55	1.00~7.60
		190616-HS																	●			●		●			0.15~0.60	1.00~7.60
Medium	MP  New	SNMG 090304-MP																									0.10~0.40	0.40~3.80
		090308-MP																									0.15~0.40	0.50~4.00
		090404-MP																									0.10~0.40	0.40~3.80
		090408-MP																									0.15~0.40	0.50~4.00
		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

Cutting edge geometry **A38 ~ A43**   Recommended chip breaker **B04 ~ B11**   Code system **B18 ~ B19**   ● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	**MSRNR/L**	B119	**PSDNN**	B108
MSDNN	B118	**MSSNR/L**	B120	**PSKNR/L**	B109, B139
MSKNR/L	B119	**PSBNR/L**	B108	**PSSNR/L**	B109

SN○○

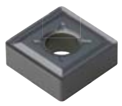
Square 90° Negative



Dimensions(mm)			
Size	d	t	d1
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

Machining types: ● Continuous cutting ◐ General cutting ✱ Interrupted cutting

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
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	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium VM 	SNMG 090304-VM																									0.05~0.30	0.90~3.50
	090308-VM																									0.10~5.00	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
Medium VP3 	SNMG 120404-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
	120408-VP3																	●	●	●	●	●		●	●	0.10~0.45	1.00~5.00
	120412-VP3																	●	●	●	●	●		●	●	0.12~0.50	1.00~5.00
Medium (Cermet) VQ 	SNMG 090304-VQ																									0.05~0.30	0.50~3.50
	090308-VQ																									0.08~0.30	0.80~4.00
	120404-VQ	●		●																						0.05~0.30	0.80~4.00
	120408-VQ	●		●							●															0.08~0.40	0.80~4.00
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							●																			
Medium to roughing GS 	SNMG 120404-GS													●												0.10~0.45	0.80~4.50
	120408-GS											●		●	●			●			●		●			0.10~0.50	1.00~5.00
	120412-GS														●						●					0.13~0.65	1.00~5.00
	120416-GS																									0.15~0.70	1.00~5.00
	190612-GS														●			●								0.30~0.80	1.70~9.00

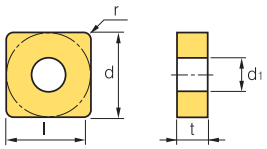
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	**MSRNR/L**	B119	**PSDNN**	B108
MSDNN	B118	**MSSNR/L**	B120	**PSKNR/L**	B109, B139
MSKNR/L	B119	**PSBNR/L**	B108	**PSSNR/L**	B109

SN○○

○ Square 90° Negative



Dimensions(mm)			
Size	d	t	d1
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			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
	Steel	P	●	⬌	✱	●	⬌	●	●	⬌	⬌	⬌	✱	✱												
	Stainless steel	M											⬌	⬌	●	⬌				⬌	✱		●	⬌		
	Cast iron	K	●	⬌	✱	●	⬌							⬌			●	⬌	⬌						●	⬌
	Non-ferrous metal	N																							●	⬌
	Heat resistant alloy, Titanium alloy	S												⬌						⬌	✱	●	⬌	⬌	●	⬌
	Hardened steel	H																					⬌	✱	●	⬌

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
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						●		●	●		●													0.29~0.75	1.40~7.00
			190608-GR								●			●						●							0.30~0.80	1.70~9.00
			190612-GR								●			●	●					●							0.30~0.80	1.70~9.00
			190616-GR								●			●	●												0.31~0.82	1.90~12.30
			250724-GR											●													0.45~1.20	2.60~14.00
			250924-GR								●			●													0.50~1.20	2.60~14.00
Roughing	HR	SNMG	120408-HR																								0.20~0.50	1.00~7.00
			120412-HR						●																		0.25~0.70	1.30~7.00
			120416-HR																								0.32~0.75	1.80~7.00
			150608-HR											●													0.20~0.50	1.80~8.00
			150612-HR											●													0.20~0.70	1.30~8.00
			150616-HR																								0.30~0.80	1.80~8.00
			150624-HR																								0.32~0.90	2.20~8.00
			190608-HR																								0.20~0.50	1.00~10.00
			190612-HR																								0.25~0.70	1.30~10.00
			190616-HR						●		●			●													0.30~0.80	1.80~10.00
			190624-HR																								0.32~0.90	2.30~10.00
			250724-HR																								0.40~1.20	2.30~15.00
			250924-HR								●			●													0.40~1.20	2.30~15.00
Roughing	VK	SNMG	120404-VK																●								0.15~0.50	0.08~8.00
			120408-VK															●	●								0.20~0.50	1.00~7.00
			120412-VK																●								0.20~0.50	1.00~7.00
Roughing	VR	SNMG	120408-VR																	●							0.25~0.55	1.20~7.00
			120412-VR																	●							0.30~0.60	1.50~7.00
			190612-VR										●							●							0.35~0.70	2.00~10.0
			190616-VR										●							●							0.35~0.75	2.20~10.0
Medium	GM	SNMM	120408-GM																								0.10~0.50	1.00~5.00
			120412-GM																								0.13~0.60	1.30~5.00

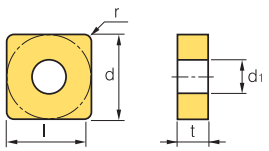
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	MSRNR/L	B119	PSSNR/L	B109
MSDNN	B118	MSSNR/L	B120	PSDNN	B108
MSKNR/L	B119	PSBNR/L	B108	PSKNR/L	B109, B139

SN○○

○ Square 90° Negative



Dimensions(mm)			
Size	d	t	d1
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			Machining types
	Steel	P	● Continuous cutting
	Stainless steel	M	⬌ General cutting
	Cast iron	K	✱ Interrupted cutting
	Non-ferrous metal	N	
	Heat resistant alloy, Titanium alloy	S	
	Hardened steel	H	

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Roughing	GR	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	GH	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
			250932-GH																								0.55~1.20	5.00~12.00
Heavy (General)	VH	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
			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
			250716-VH																								0.70~1.50	6.00~14.00
Heavy (High feed cutting)	VT	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
			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
			250716-VT																								0.75~1.60	7.00~15.00

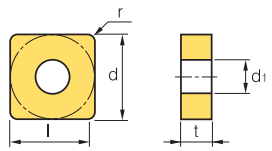
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	**MSRNR/L**	B119	**PSSNR/L**	B109
MSDNN	B118	**MSSNR/L**	B120	**PSDNN**	B108
MSKNR/L	B119	**PSBNR/L**	B108	**PSKNR/L**	B109, B139

SN○○

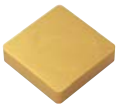
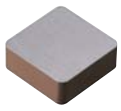
○ Square 90° Negative



Dimensions(mm)			
Size	d	t	d1
12	12.7	3.18~4.76	5.16
15	15.875	4.76	-
19	19.05	4.76	-
25	25.4	7.94	-

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing		SNMN	120304																							0.17~0.45	1.00~3.50
			120308																							0.23~0.60	1.50~6.00
			120312																							0.25~0.60	2.00~5.00
			120404																							0.17~0.45	1.00~3.50
			120408																							0.23~0.60	1.50~5.00
			120412																							0.25~0.60	2.00~5.00
			150404																							0.20~0.50	1.50~6.00
			150408																							0.25~0.60	1.50~6.00
			150412																							0.25~0.60	2.00~6.00
			190416																							0.35~0.70	2.00~6.00
Medium		SNMX	120408R																							0.15~0.35	1.00~4.00
Medium to roughing		SNUN	120408																							0.23~0.60	1.50~5.00
			120412																							0.25~0.60	2.00~5.00
			190412																							0.30~1.00	3.00~10.00
			120412TN																							0.25~0.60	2.00~5.00
			250724TN																							0.30~1.20	3.00~12.00

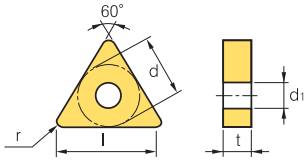
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MSBNR/L	B118	**MSRNR/L**	B119	**PSSNR/L**	B109
MSDNN	B118	**MSSNR/L**	B120	**PSDNN**	B108
MSKNR/L	B119	**PSBNR/L**	B108	**PSKNR/L**	B109, B139

TN○○

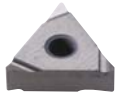
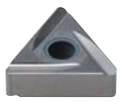
Triangular 60° Negative



Dimensions(mm)			
Size	d	t	d1
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

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

Machining types
- ● Continuous cutting
- ⇄ General cutting
- ⌗ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	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
Finishing	SC 	TNGG	160402R-SC		●																					0.03~0.20	0.10~1.50
			160404R-SC		●																					0.05~0.25	0.30~2.00
			160402L-SC																							0.03~0.20	0.10~1.50
			160404L-SC																							0.05~0.25	0.30~2.00
Medium		TNGG	110304R																							0.05~0.30	0.50~2.50
			160402R		●																					0.08~0.30	0.50~3.50
			160404R	●	●																					0.12~0.30	1.00~3.50
			160408R		●																					0.15~0.35	1.30~3.50
			220404R		●																					0.12~0.30	1.00~5.00
			220408R		●																					0.15~0.35	1.30~5.00
			220412R																							0.17~0.40	1.50~5.00
			110304L																							0.05~0.30	0.50~2.50
			160402L																							0.08~0.30	0.50~3.50
			160404L	●	●																					0.12~0.30	1.00~3.50
			160408L		●																					0.15~0.35	1.30~3.50
			220404L																							0.12~0.30	1.00~5.00
			220408L																							0.15~0.35	1.30~5.00
			220412L																							0.17~0.40	1.50~5.00

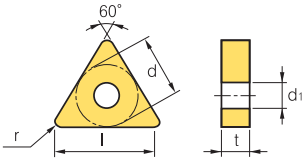
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

TN○○

Triangular 60° Negative



Dimensions(mm)			
Size	d	t	d1
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
33	15.875	9.52	7.93

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

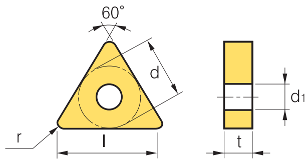
Inserts		Designation		Cermet			Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium		TNGN	110302																								0.05~0.25	0.20~2.50
			110304																								0.10~0.30	0.50~2.50
			110308																								0.10~0.30	0.80~2.50
			160302																								0.05~0.30	0.20~3.00
			160304																								0.10~0.30	0.50~4.00
			160308																								0.10~0.40	0.80~4.00
			160404																								0.10~0.40	0.50~4.00
			160408																								0.10~0.40	1.00~4.00
			160412																								0.10~0.50	1.50~4.50
			220404																								0.10~0.35	1.00~4.00
			220408																								0.15~0.40	1.50~5.00
			220412																								0.20~0.50	1.50~5.00
			220416																								0.25~0.55	1.50~5.00
			220424																								0.30~0.65	2.00~5.00
			270630																								0.35~0.70	2.00~5.00
Roughing		TNMA	110308																								0.05~0.30	0.50~3.00
			160404																●	●							0.10~0.30	1.00~4.00
			160408						●										●	●							0.10~0.40	1.00~4.00
			160412																●	●							0.10~0.50	1.50~4.50
			160416																	●							0.15~0.55	1.50~4.50
			220404																								0.10~0.35	1.00~4.00
			220408																●	●							0.15~0.40	1.50~5.00
			220412						●										●	●							0.20~0.50	1.50~5.00
			220416																	●							0.25~0.55	1.50~5.00
			220420																								0.30~0.65	2.00~5.00
			220432																								0.35~0.70	2.00~5.00
			270608																								0.20~0.45	2.00~7.00
			270612																								0.25~0.55	3.00~7.00
			270616																								0.30~0.65	3.00~7.00
			330924																								0.35~0.75	3.00~9.00
Finishing	VB 	TNMG	160404-VB	●		●	●	●																			0.10~0.35	0.30~1.50
			160408-VB	●		●	●	●		●		●	●		●									●			0.15~0.45	0.50~7.00
			220408-VB									●	●		●												0.15~0.45	0.50~2.50
			220412-VB																								0.20~0.50	0.70~2.50

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

TN○○



Dimensions(mm)			
Size	d	t	d1
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16

Triangular 60° Negative

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
Steel	P	●	◒	✱	●	◒	●	●	◒	◒	◒	✱	✱												
Stainless steel	M											◒	◒	●	◒				◒	✱		●	◒		
Cast iron	K	●	◒	✱	●	◒							◒			●	◒	◒						●	◒
Non-ferrous metal	N																							●	◒
Heat resistant alloy, Titanium alloy	S												◒						◒	✱	●	●	◒	●	◒
Hardened steel	H																					◒	✱	●	◒

Machining types
● Continuous cutting
◒ General cutting
✱ Interrupted cutting

Inserts		Designation		Cermet: CN1500	CN2000	CN2500	Coated: CC1500	CC2500	Coated: NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	Uncoated: H01	H05	Cutting Condition: fn (mm/rev)	ap (mm)
Finishing	VL 	TNMG	160404-VL	●					●			●																0.05~0.25	0.10~1.00
			160408-VL	●					●			●			●													0.10~0.35	0.20~1.50
			160412-VL																									0.15~0.40	0.20~1.50
			220408-VL																									0.10~0.35	0.20~1.50
			220412-VL																									0.10~0.35	0.50~2.00
Finishing	VF 	TNMG	110304-VF	●	●										●													0.05~0.20	0.20~1.00
			160404-VF	●	●				●		●				●									●				0.07~0.30	0.50~1.50
			160408-VF						●	●	●	●			●													0.10~0.40	0.50~1.50
			160412-VF									●																0.15~0.50	0.50~1.50
			220404-VF									●			●										●			0.10~0.40	0.50~1.50
			220408-VF									●																0.10~0.40	0.50~1.50
Finishing (Cermet)	VG 	TNMG	110304-VG																									0.05~0.20	0.20~1.00
			160404-VG	●	●																							0.07~0.30	0.50~1.50
			160408-VG	●																								0.10~0.40	0.50~1.50
			220404-VG																									0.10~0.40	0.50~1.50
Finishing (wiper)	VW 	TNMG	160404-VW																									0.10~0.35	0.30~3.00
			160408-VW																●									0.10~0.40	0.30~3.00
Medium to finishing	HA 	TNMG	160404-HA													●								●	●	●		0.05~0.30	0.80~3.50
			160408-HA													●	●							●	●	●		0.10~0.40	0.80~3.50
			160412-HA																									0.13~0.55	0.80~3.50
			220408-HA																						●			0.10~0.40	0.80~5.30
Medium to finishing	HC 	TNMG	160404-HC						●						●													0.05~ 0.35	0.50~3.50
			160408-HC						●		●			●	●													0.08~0.40	0.80~4.00
			160412-HC																									0.13~0.50	0.90~4.00
			220408-HC																									0.08~0.40	0.80~4.00

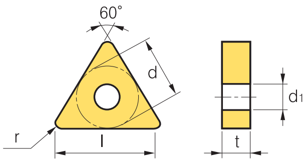
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19 ● : Stock item

Available tool holders

Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

TN○○

Triangular 60° Negative



Dimensions(mm)			
Size	d	t	d1
16	9.525	3.18~4.76	3.81
22	12.7	4.76	5.16

Machining types: ● Continuous cutting, ◑ General cutting, ✱ Interrupted cutting

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◑	✱	●	◑	●	●	◑	◑	◑	✱	✱												
Stainless steel	M											◑	◑	●	◑			◑	✱		●	◑	◑		
Cast iron	K	●	◑	✱	●	◑							◑			◑	◑							●	◑
Non-ferrous metal	N																							●	◑
Heat resistant alloy, Titanium alloy	S												◑					◑	✱	●	●	◑		●	◑
Hardened steel	H																				◑	✱		●	◑

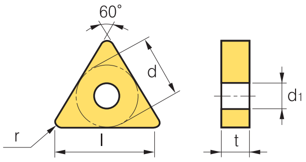
Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing LP 	TNMG 160404-LP							●			●		●													0.10~0.35	0.30~2.00
	160408-LP							●			●		●													0.10~0.40	0.50~2.50
	160412-LP																									0.13~0.45	0.80~3.00
Medium to finishing VC 	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 to finishing VP2 	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 to finishing (Cermet) VQ 	TNMG 110304-VQ																									0.05~0.30	0.50~3.50
	160404-VQ	●	●	●	●	●																				0.05~0.35	0.50~3.50
	160408-VQ	●	●	●	●	●					●															0.08~0.40	0.80~4.00
	220404-VQ																									0.05~0.35	0.50~4.00
Medium GM 	TNMG 160404-GM		●	●			●		●			●														0.05~0.30	0.80~5.00
	160408-GM		●	●			●		●			●														0.10~0.50	1.00~5.00
	160412-GM																									0.13~0.60	1.30~5.00
	220404-GM											●														0.05~0.30	0.90~6.30
	220408-GM						●					●														0.10~0.50	1.00~6.60
	220412-GM											●														0.13~0.60	1.30~6.60

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

TN○○



Dimensions(mm)			
Size	d	t	d1
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16

Triangular 60° Negative

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Workpiece	Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
	Stainless steel	M											◐	◐	●	◐			◐	✱		●	◐	◐		
	Cast iron	K	●	◐	✱	●	◐							◐			◐	◐							●	◐
	Non-ferrous metal	N																							●	◐
	Heat resistant alloy, Titanium alloy	S												◐					◐	✱	●	●	◐		●	◐
	Hardened steel	H																				◐	✱		●	◐

Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

Inserts	Designation	Cermet			Coated		Coated																	Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium HS 	TNMG 160404-HS													●	●			●	●		●		●			0.08~0.35	0.50~4.00
	160408-HS													●	●			●	●		●		●			0.10~0.40	1.00~4.50
	160412-HS																	●	●				●			0.13~0.55	1.00~4.50
	220404-HS																	●	●							0.05~0.30	0.90~6.30
	220408-HS													●	●			●	●		●		●			0.10~0.40	1.00~6.30
	220412-HS																	●	●				●			0.13~0.55	1.00~6.30
Medium MP 	TNMG 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
	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
Medium VM 	TNMG 110308-VM																									0.05~0.30	0.80~4.00
	160404-VM	●	●				●		●	●		●	●	●		●		●	●							0.05~0.30	0.90~5.00
	160408-VM	●	●	●			●	●	●	●	●	●	●			●		●	●				●			0.10~0.50	1.00~5.00
	160412-VM	●	●					●		●		●						●	●							0.13~0.60	1.30~5.00
	220404-VM									●								●	●							0.05~0.30	0.90~6.60
	220408-VM								●	●			●					●	●		●					0.10~0.50	1.00~6.60
	220412-VM									●		●														0.13~0.60	1.30~6.60
Medium VP3 	TNMG 160404-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
	160408-VP3																	●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
Medium (wiper) LW 	TNMG 160408-LW						●																			0.15~0.50	0.70~4.50
	160412-LW																									0.20~0.60	1.00~5.00

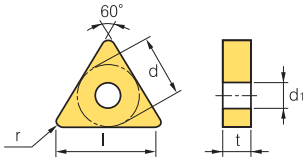
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

TN○○

△ Triangular 60° Negative



Dimensions(mm)			
Size	d	t	d1
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
33	19.05	7.94~9.52	7.93

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

Inserts		Designation		Cermet			Coated			Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to roughing	B25	TNMG	110308-B25																								0.17~0.40	1.50~3.00
			160304-B25																								0.17~0.45	2.00~3.50
			160308-B25											●													0.17~0.55	2.00~3.50
			160312-B25																								0.25~0.55	2.00~3.50
			160316-B25																								0.30~0.60	2.50~3.00
			160404-B25	●		●				●		●	●	●	●				●	●							0.17~0.45	2.00~3.50
			160408-B25	●		●				●		●	●	●	●				●	●				●			0.17~0.55	2.00~3.50
			160412-B25			●				●			●	●	●					●							0.25~0.55	2.00~3.50
			160416-B25																●	●							0.30~0.60	2.50~3.00
			220404-B25							●		●	●	●	●												0.17~0.45	1.50~5.00
			220408-B25							●		●	●	●	●					●							0.17~0.55	2.00~5.00
			220412-B25							●			●	●	●					●							0.25~0.55	2.00~5.00
			220416-B25							●			●	●	●					●							0.30~0.60	2.00~5.00
			220424-B25																								0.35~0.70	3.00~7.00
			220432-B25																								0.40~0.75	3.50~7.00
			270608-B25											●													0.17~0.55	2.00~5.00
			270612-B25						●			●	●	●	●												0.25~0.55	3.00~7.00
			270616-B25																								0.30~0.60	3.00~7.00
			330716-B25							●			●														0.35~0.70	3.00~9.00
			330924-B25																								0.40~0.80	3.00~9.00
Medium to roughing	GS	TNMG	160404-GS													●	●							●	●		0.05~0.35	1.00~4.50
			160408-GS									●				●	●				●			●	●		0.10~0.50	1.00~5.00
			160412-GS																								0.13~0.65	1.00~5.00
			220408-GS																					●			0.10~0.50	1.00~6.80
			220412-GS																								0.15~0.40	1.20~6.00
Roughing	GR	TNMG	160408-GR									●		●					●	●							0.20~0.50	1.00~7.00
			160412-GR									●		●					●								0.23~0.54	1.20~8.00
			220408-GR								●	●		●	●				●	●							0.22~0.61	1.10~7.80
			220412-GR								●	●		●					●	●							0.28~0.78	1.20~7.80
			220416-GR									●		●						●							0.31~0.75	1.50~7.80
			270608-GR											●													0.31~0.75	1.50~7.80
			270612-GR									●		●													0.31~0.75	1.50~7.80
			270616-GR											●													0.36~1.00	1.60~7.80
			330924-GR											●													0.40~1.00	2.00~9.00

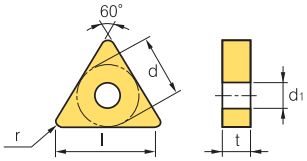
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

TN○○

Triangular 60° Negative



Dimensions(mm)			
Size	d	t	d1
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	7.94~9.52	7.93

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

Machining types
- ● Continuous cutting
- ⧓ General cutting
- ⧔ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Roughing	HR	TNMG	160408-HR						●																		0.20~0.50	1.00~7.00
			160412-HR								●																0.25~0.60	1.30~7.00
			220404-HR																								0.20~0.45	1.00~7.50
			220408-HR																								0.20~0.50	1.00~8.00
			220412-HR																								0.25~0.60	1.30~8.00
			220416-HR																								0.32~0.70	1.80~8.00
			270608-HR																								0.35~0.50	1.80~13.00
			270612-HR																								0.35~0.70	2.30~13.00
			270632-HR																								0.40~0.90	3.00~13.00
			330716-HR																								0.40~0.70	3.00~14.00
			330924-HR																								0.45~0.90	3.30~16.00
Roughing	VK	TNMG	160404-VK																●								0.15~0.50	0.80~5.00
			160408-VK															●	●								0.20~0.50	1.00~5.50
			160416-VK																●								0.15~0.50	1.50~5.50
			220408-VK																●								0.15~0.55	1.00~5.50
			220412-VK																●								0.25~0.60	1.50~6.00
			220416-VK																								0.25~0.60	2.00~6.00
Roughing	VR	TNMG	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	2.00~10.00
			220408-VR																	●							0.35~0.70	2.00~10.00
			220412-VR																	●							0.35~0.70	2.00~10.00
			220416-VR																	●							0.35~0.75	2.20~10.00
Medium	GM	TNMM	160412-GM																								0.13~0.60	1.30~5.00
			220408-GM																								0.10~0.50	1.00~6.60
			220412-GM																								0.13~0.60	1.30~6.60
			220416-GM																								0.15~0.65	1.50~7.00
Roughing	GR	TNMM	220408-GR																								0.22~0.61	1.10~7.80
			220412-GR																								0.28~0.78	1.20~7.80
			220416-GR																								0.31~0.75	1.50~7.80

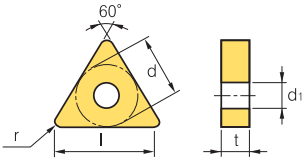
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	**PTGNR/L**	B110
MTFNR/L	B120	**PTTNR/L**	B111
MTGNR/L	B121	**WTENN**	B112
MTJNR/L	B121	**WTJNR/L**	B112
PTFNR/L	B110,140	**WTXNR/L**	B112

TN○○

Triangular 60° Negative



Dimensions(mm)			
Size	d	t	d1
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

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

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Heavy	GH 	TNMM	160408-GH											●														0.20~0.50	1.00~7.00
			220408-GH																									0.25~0.60	1.30~7.00
			220412-GH									●		●														0.20~0.50	1.00~8.00
			220416-GH											●														0.25~0.60	1.30~8.00
			270616-GH																									0.32~0.70	1.80~8.00
			270624-GH																									0.35~0.50	1.80~13.00
			330924-GH																									0.35~0.70	2.30~13.00
Medium to roughing		TNMN	160408																									0.10~0.30	1.00~4.00
			220408		●																							0.15~0.40	1.50~5.00
			220412																									0.20~0.50	1.50~5.00
Medium (Shaft)	SH 	TNMX	160404R-SH																									0.15~0.30	0.50~4.00
			160408R-SH																									0.15~0.45	1.00~4.00
			160404L-SH																									0.15~0.30	0.50~4.00
			160408L-SH																									0.15~0.45	1.00~4.00
Medium to roughing		TNMX	160402R		●	●																						0.10~0.30	0.50~3.00
			160404R		●						●	●		●	●													0.12~0.30	1.00~3.50
			160408R		●							●		●														0.15~0.35	1.30~3.40
			220404R																									0.12~0.30	1.00~5.00
			220408R																									0.15~0.35	1.30~5.00
			160404L		●						●	●		●														0.12~0.30	1.00~3.50
			160408L								●	●		●														0.15~0.35	1.30~3.40

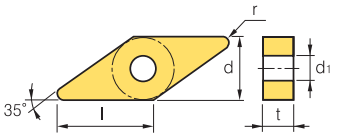
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MTENN	B120	PTGNR/L	B110
MTFNR/L	B120	PTTNR/L	B111
MTGNR/L	B121	WTENN	B112
MTJNR/L	B121	WTJNR/L	B112
PTFNR/L	B110,140	WTXNR/L	B112

VN○○

Rhombic 35° Negative



Dimensions(mm)			
Size	d	t	d1
16	9.525	4.76	3.81

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

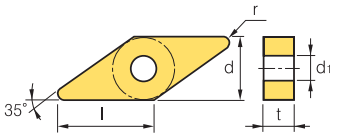
Inserts		Designation	Cermet			Coated		Coated													Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	HA	VNGG 160408-HA																				●			0.10~0.40	0.80~3.50
Finishing	VB	VNMG 160404-VB	●		●	●	●	●	●		●	●		●									●				0.10~0.35	0.30~1.50
		160408-VB	●		●	●	●		●		●	●		●													0.15~0.45	0.50~2.00
Finishing	VF	VNMG 160402-VF		●						●	●																0.06~0.20	0.30~1.00
		160404-VF	●	●				●		●				●				●					●				0.08~0.30	0.50~1.50
		160408-VF	●							●		●		●													0.10~0.40	0.50~1.50
		160412-VF																									0.15~0.50	0.50~1.50
Finishing (Cermet)	VG	VNMG 160404-VG	●																								0.08~0.30	0.50~1.50
		160408-VG	●																								0.10~0.40	0.50~1.50
Finishing (Mild steel)	VL	VNMG 160404-VL	●		●			●			●			●													0.05~0.20	0.10~1.00
		160408-VL	●	●	●			●			●	●		●													0.10~0.25	0.20~1.50
Medium to finishing	HA	VNMG 160404-HA																					●		●		0.08~0.35	0.50~3.00
		160408-HA																					●				0.10~0.40	0.80~3.50
Medium to finishing	LP New	VNMG 160404-LP																									0.10~0.35	0.30~1.50
		160408-LP																									0.10~0.40	0.50~2.00
		160412-LP																									0.10~0.45	0.80~2.50
Medium to finishing	VC	VNMG 160404-VC	●			●						●															0.10~0.35	0.30~2.00
		160408-VC	●									●															0.15~4.00	0.50~3.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MVJNR/L	B121	**MVVNN**	B122
MVQNR/L	B122	**MVUNR/L**	B143

VN○○



Dimensions(mm)			
Size	d	t	d1
16	9.525	4.76	3.81
22	12.7	4.76	5.16

Rhombic 35° Negative

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

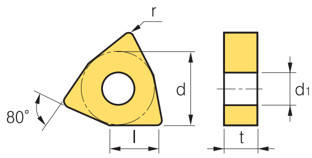
Inserts	Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing (Cermet)	VQ	VNMG 160404-VQ	●	●	●	●	●					●												●			0.10~0.40	0.50~3.50
		160408-VQ	●	●	●	●	●					●												●			0.12~0.45	0.50~3.50
Medium	GM	VNMG 160404-GM	●	●	●								●														0.08~0.45	0.50~3.50
		160408-GM	●		●								●														0.10~0.50	1.00~4.00
Medium	HS	VNMG 160404-HS														●			●	●		●		●			0.08~0.35	0.50~4.00
		160408-HS																	●	●		●		●			0.10~0.40	1.00~4.50
Medium	MP New	VNMG 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
Medium	VP3	VNMG 160404-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
		160408-VP3																	●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
Medium	VM	VNMG 160404-VM	●	●				●			●		●	●			●		●	●							0.08~0.45	0.50~3.50
		160408-VM	●	●				●		●	●	●	●	●			●		●	●		●		●			0.10~0.50	1.00~4.00
		160412-VM									●																0.20~0.50	1.50~4.00
		220404-VM																									0.08~0.45	1.00~5.00
		220408-VM																									0.10~0.50	1.50~5.00
Medium to roughing	HR	VNMG 160408-HR																									0.10~0.50	1.00~4.00
Roughing	VK	VNMG 160412-VK															●										0.15~0.50	0.80~4.00

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MVJNR/L	B121	MVVNN	B122
MVQNR/L	B122	MVUNR/L	B143

WN○○

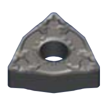


Dimensions(mm)			
Size	d	t	d1
06	9.525	4.76	3.81
08	12.7	4.76	5.16

Trigon 80° Negative

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
	Steel	P	●	◉	✱	●	◉	●	●	◉	◉	◉	✱	✱												
	Stainless steel	M											◉	◉	●	◉				◉	✱		●	◉		
	Cast iron	K	●	◉	✱	●	◉							◉			●	◉	◉						●	◉
	Non-ferrous metal	N																							●	◉
	Heat resistant alloy, Titanium alloy	S												◉						◉	✱	●	●		●	◉
	Hardened steel	H																					◉		●	◉

Machining types
- ● Continuous cutting
- ◉ General cutting
- ✱ Interrupted cutting

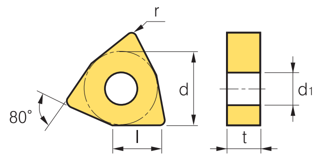
Inserts	Designation	Cermet CN1500	Cermet CN2000	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	Uncoated H01	H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Roughing 	WNMA 060404																									0.10~0.30	0.50~3.00
	060408																●									0.10~0.30	0.50~3.00
	060412																									0.10~0.40	1.00~3.00
	080404																	●								0.15~0.60	1.00~5.00
	080408															●	●	●								0.15~0.60	1.00~6.00
	080412																●	●								0.15~0.70	1.50~6.00
	080416																	●								0.15~0.70	1.50~6.00
Finishing VB 	WNMG 080404-VB						●	●		●	●		●									●				0.10~0.35	0.30~1.50
	080408-VB							●		●	●		●													0.15~0.45	0.50~2.00
Finishing VF 	WNMG 060404-VF		●				●						●													0.07~0.30	0.50~1.50
	060408-VF						●			●																0.10~0.40	0.50~1.50
	080404-VF						●		●				●													0.07~0.30	0.50~1.50
	080408-VF									●			●													0.10~0.40	0.50~1.50
	080412-VF																									0.20~0.50	0.50~1.50
Finishing (Cermet) VG 	WNMG 060404-VG																									0.07~0.30	0.50~1.50
	060408-VG																									0.10~0.40	0.50~1.50
	080404-VG	●	●																							0.07~0.30	0.50~1.50
	080408-VG	●																								0.10~0.40	0.50~1.50
Finishing (Mild steel) VL 	WNMG 060404-VL																									0.05~0.25	0.20~1.50
	080404-VL									●																0.05~0.25	0.10~1.00
	080408-VL						●			●			●													0.10~0.35	0.20~1.50
Finishing (wiper) VW 	WNMG 080404-VW																									0.10~0.30	0.50~3.00
	080408-VW																									0.15~0.50	0.50~4.00
Medium to finishing HA 	WNMG 060404-HA																					●	●	●		0.05~0.30	0.10~3.00
	060408-HA																						●	●		0.10~0.40	0.80~3.50
	080404-HA								●					●								●	●	●		0.05~0.30	0.80~3.50
	080408-HA														●							●	●	●		0.10~0.40	0.80~3.50
	080412-HA																									0.13~0.55	0.80~3.50

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B122	WWLNR/L	B113
PWLNR/L	B140		

WN○○

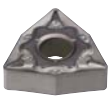


Dimensions(mm)			
Size	d	t	d1
06	9.525	4.76	3.81
08	12.7	4.76	5.16

Trigon 80° Negative

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
Stainless steel	M											◐	◐	●	◐			◐	✱		●	◐	◐		
Cast iron	K	●	◐	✱	●	◐							◐			◐	◐							●	◐
Non-ferrous metal	N																							●	◐
Heat resistant alloy, Titanium alloy	S												◐					◐	✱	●	●	◐		●	◐
Hardened steel	H																				◐	✱		●	◐

Machining types
● Continuous cutting
◐ General cutting
✱ Interrupted cutting

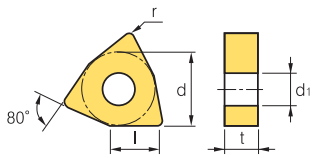
Inserts	Designation	Cermet			Coated		Coated																Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing HC 	WNMG 060404-HC																									0.05~0.30	0.80~4.00
	080404-HC																									0.05~0.30	0.80~4.00
	080408-HC											●	●													0.08~0.40	0.80~4.00
Medium to finishing LP New 	WNMG 080404-LP							●			●		●													0.10~0.35	0.30~2.00
	080408-LP							●			●		●													0.10~0.40	0.50~2.50
	080412-LP							●			●		●													0.13~0.45	0.80~3.00
Medium to finishing VC 	WNMG 080404-VC																									0.15~0.40	0.15~4.00
	080408-VC							●		●	●															0.15~0.45	0.15~4.50
	080412-VC							●			●	●	●													0.15~0.45	0.15~4.50
Medium to finishing VP2 	WNMG 080404-VP2																	●	●							0.10~0.45	0.50~5.00
	080408-VP2																	●	●	●		●		●		0.12~0.50	0.50~5.00
	080412-VP2																	●	●	●	●	●		●		0.05~0.30	0.10~3.00
Medium to finishing (Cermet) VQ 	WNMG 060404-VQ		●																							0.05~0.30	0.50~4.00
	060408-VQ																									0.08~0.30	0.80~4.00
	080404-VQ	●	●	●																						0.05~0.30	0.50~4.00
	080408-VQ	●		●	●						●															0.08~0.40	0.80~4.00
	080412-VQ										●															0.10~0.35	0.80~3.50
Medium GM 	WNMG 080404-GM									●								●	●		●					0.05~0.30	0.90~5.00
	080408-GM									●								●	●		●					0.10~0.50	1.00~5.00
	080412-GM																	●	●							0.18~0.60	0.30~5.00
Medium HS 	WNMG 060404-HS																	●	●				●			0.05~0.20	1.00~2.50
	060408-HS														●			●	●		●		●			0.10~0.20	1.00~2.50
	060412-HS																	●					●			0.10~0.30	1.00~3.50
	080404-HS														●			●	●		●		●			0.05~0.30	1.00~4.50
	080408-HS													●	●			●	●		●		●			0.10~0.40	1.00~4.50
	080412-HS														●			●	●				●			0.13~0.55	1.00~4.50

Cutting edge geometry A38 ~ A43 · Recommended chip breaker B04 ~ B11 · Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B122	WWLNR/L	B113
PWLNR/L	B140		

WN○○



Dimensions(mm)			
Size	d	t	d1
06	9.525	4.76	3.81
08	12.7	4.76	5.16

Trigon 80° Negative

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

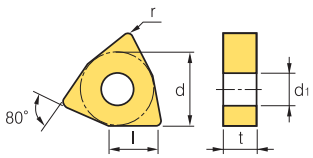
Inserts	Designation	Cermet			Coated		Coated													Uncoated		Cutting Condition	
		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium — MP	WNMG 080404-MP							●			●		●				●			●	●	●			●	0.10~0.40	0.40~4.00
	080408-MP							●			●		●				●			●	●	●			●	0.15~0.45	0.50~4.50
	080412-MP							●			●		●				●			●	●					0.15~0.50	0.80~5.00
	080416-MP																									0.18~0.55	0.10~5.00
Medium — VM	WNMG 060402-VM																									0.05~0.30	0.90~3.50
	060404-VM						●			●		●	●					●	●							0.10~0.45	1.00~3.50
	060408-VM						●		●	●	●	●	●			●		●	●							0.10~0.50	1.00~4.00
	060412-VM																									0.13~0.60	1.30~4.00
	080404-VM								●	●			●			●		●	●							0.05~0.30	0.90~5.00
	080408-VM						●		●	●		●	●			●		●	●		●		●			0.10~0.50	1.00~5.00
	080412-VM								●	●		●	●			●		●	●							0.10~0.50	1.00~5.00
Medium — VP3	WNMG 080404-VP3																	●	●	●	●	●		●	●	0.10~0.45	0.50~5.00
	080408-VP3																	●	●	●	●	●		●	●	0.12~0.50	0.50~5.00
	080412-VP3																	●	●	●	●	●		●	●	0.05~0.30	0.10~3.00
Medium (wiper) — LW	WNMG 060408-LW						●																			0.15~0.60	0.50~3.50
	060412-LW																									0.20~0.70	0.80~3.50
	080408-LW						●						●			●										0.15~0.60	1.00~5.00
	080412-LW						●									●										0.20~0.70	1.00~6.00
Medium to roughing — B25	WNMG 080404-B25							●			●		●				●									0.17~0.45	1.00~5.00
	080408-B25							●		●	●	●	●			●	●									0.23~0.60	1.50~5.00
	080412-B25							●			●		●				●									0.25~0.60	2.00~5.00
Medium to roughing — GS	WNMG 060404-GS																				●					0.05~0.25	0.10~3.00
	060408-GS																	●			●					0.10~0.50	1.00~4.00
	060412-GS																									0.10~0.50	1.00~4.00
	080404-GS													●	●			●			●		●			0.05~0.25	0.10~3.00
	080408-GS									●				●	●			●			●		●			0.10~0.50	1.00~5.00
	080412-GS																									0.13~0.65	1.00~5.00

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B122	WWLNR/L	B113
PWLNR/L	B140		

WN○○



Dimensions(mm)			
Size	d	t	d1
06	9.525	4.76	3.81
08	12.7	4.76	5.16
10	15.875	6.35	6.35
13	19.05	6.35	7.93

Trigon 80° Negative

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

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Roughing	GR	WNMG	080404-GR																	●							0.15~0.50	0.08~6.00
			080408-GR						●		●	●		●	●				●	●							0.20~0.50	1.00~7.00
			080412-GR						●		●	●		●	●				●	●							0.25~0.50	1.30~7.00
			080416-GR						●																			0.25~0.60	1.80~6.00
Roughing	HR	WNMG	060408-HR																									0.20~0.40	1.00~5.50
			060412-HR																									0.25~0.50	1.10~5.50
			080408-HR						●					●														0.20~0.50	1.00~7.00
			080412-HR						●					●														0.25~0.65	1.30~7.00
			080416-HR																									0.32~0.70	1.80~7.00
Roughing	VK	WNMG	080404-VK																●									0.15~5.00	0.08~6.00
			080408-VK															●	●									0.20~5.00	1.00~7.00
			080412-VK															●	●									0.25~5.00	1.30~7.00
			080416-VK																									0.25~6.00	1.89~6.00
Roughing	VR	WNMG	080408-VR																	●								0.25~0.55	1.20~7.00
			080412-VR																	●								0.30~0.60	1.50~7.00
Medium to roughing	B25	WNMM	100608-B25											●														0.30~0.80	3.00~8.00
			130612-B25																									0.40~0.90	4.00~10.00
Medium (Shaft)	SH	WNMX	080404R-SH																									0.15~0.30	1.00~4.00
			080408R-SH																									0.15~0.50	1.50~5.00
			080404L-SH																									0.15~0.30	1.00~4.00
			080408L-SH																									0.15~0.50	1.50~5.00

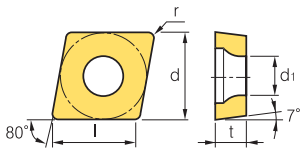
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
MWLNR/L	B122	WWLNR/L	B113
PWLNR/L	B140		

CC○○

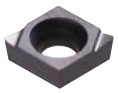
Rhombic 80° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
03	3.5	1.39	1.9
04	4.3	1.79	2.3
06	6.35	2.38	2.8
09	9.525	3.97	4.4

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ⌗ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing		CCET	0301005R																							0.01~0.05	0.10~0.30
			030101R																							0.01~0.05	0.10~0.30
			030102R																							0.01~0.05	0.10~0.30
			030104R																							0.01~0.05	0.10~0.30
			0401005R																							0.01~0.10	0.10~0.50
			040101R																							0.01~0.10	0.10~0.50
			040102R																							0.01~0.10	0.10~0.50
			040104R																							0.01~0.10	0.10~0.50
			0301005L																							0.01~0.05	0.10~0.30
			030101L																							0.01~0.05	0.10~0.30
			030102L		●																			●	●	0.01~0.05	0.10~0.30
			030104L																							0.01~0.05	0.10~0.30
			0401005L																							0.01~0.10	0.10~0.50
			040101L																							0.01~0.10	0.10~0.50
			040102L		●																			●	●	0.01~0.10	0.10~0.50
			040104L																							0.01~0.10	0.10~0.50
Finishing (High precision)	KF New 	CCET	0602005MFR-KF																							0.01~0.06	0.04~1.30
			060201MFR-KF																				●			0.02~0.08	0.05~1.50
			060202MFR-KF																				●			0.03~0.11	0.06~1.70
			09T3005MFR-KF																							0.02~0.08	0.05~1.50
			09T301MFR-KF																				●			0.03~0.11	0.06~1.70
			09T302MFR-KF																				●			0.04~0.15	0.08~2.00
			0602005MFL-KF																							0.01~0.06	0.04~1.30
			060201MFL-KF																							0.02~0.08	0.05~1.50
			060202MFL-KF																							0.03~0.11	0.06~1.70
			09T3005MFL-KF																							0.02~0.08	0.05~1.50
			09T301MFL-KF																							0.03~0.11	0.06~1.70
			09T302MFL-KF																							0.04~0.15	0.08~2.00
Medium to finishing (High precision)	KM New 	CCET	0602005MFR-KM																							0.01~0.06	0.04~1.30
			060201MFR-KM																				●			0.02~0.08	0.05~1.50
			060202MFR-KM																				●			0.03~0.11	0.06~1.70
			09T3005MFR-KM																							0.02~0.08	0.05~1.50
			09T301MFR-KM																				●			0.03~0.11	0.06~1.70
			09T302MFR-KM																				●			0.04~0.15	0.08~2.00
			0602005MFL-KM																							0.01~0.06	0.04~1.30
			060201MFL-KM																							0.02~0.08	0.05~1.50
			060202MFL-KM																							0.03~0.11	0.06~1.70
			09T3005MFL-KM																							0.02~0.08	0.05~1.50
			09T301MFL-KM																							0.03~0.11	0.06~1.70
			09T302MFL-KM																							0.04~0.15	0.08~2.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123,177	**SCLCR/L**	B123,144,150,151,177

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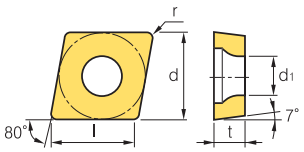
Rhombic 80° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
06	6.35	2.38	2.8
09	9.525	3.97	4.4
12	12.7	4.76	5.5

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	C05	CCGT	060202-C05																								0.06~0.11	0.06~1.70
			060204-C05																								0.08~0.17	0.10~1.70
			09T304-C05																								0.11~0.23	0.10~2.00
			09T308-C05																								0.08~0.30	0.20~2.00
			120404-C05																								0.07~0.27	0.10~2.70
			120408-C05																								0.08~0.30	0.20~2.70
Finishing	HFP	CCGT	060202-HFP																								0.03~0.06	0.06~1.20
			060204-HFP																	●							0.05~0.12	0.10~1.20
			060208-HFP																								0.05~0.12	0.12~1.40
			09T302-HFP																								0.04~0.16	0.08~1.50
			09T304-HFP											●						●					●		0.06~0.18	0.10~1.50
			09T308-HFP																	●							0.08~0.25	0.20~1.50
			120404-HFP																								0.06~0.20	0.10~2.00
			120408-HFP																								0.10~0.25	0.20~2.00
Finishing	KF	CCGT	0602003R-KF																								0.01~0.06	0.04~1.30
			060201R-KF																								0.02~0.08	0.05~1.50
			060202R-KF																						●		0.03~0.11	0.06~1.70
			09T3003R-KF																								0.02~0.08	0.05~1.50
			09T301R-KF																						●		0.03~0.11	0.06~1.70
			09T302R-KF																						●		0.04~0.15	0.08~2.00
			0602003L-KF																								0.01~0.06	0.04~1.30
			060201L-KF																								0.02~0.08	0.05~1.50
			060202L-KF																								0.03~0.11	0.06~1.70
			09T3003L-KF																								0.02~0.08	0.05~1.50
			09T301L-KF																								0.03~0.11	0.06~1.70
			09T302L-KF																								0.04~0.15	0.08~2.00
Finishing	VP1	CCGT	060201-VP1																	●		●	●	●		●	0.05~0.06	0.06~1.00
			060202-VP1																	●		●	●	●		●	0.03~0.10	0.08~1.50
			060204-VP1									●								●		●	●	●		●	0.05~0.12	0.10~1.50
			09T301-VP1																	●		●	●	●		●	0.03~0.13	0.06~1.00
			09T302-VP1																	●		●	●	●		●	0.04~0.15	0.08~1.50
			09T304-VP1									●								●		●	●	●		●	0.06~0.20	0.10~1.50

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123,177	SCLCR/L	B123,144,151,177

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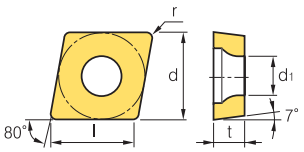
Rhombic 80° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
06	6.35	2.38	2.8
09	9.525	3.97	4.4
12	12.7	4.76	5.5

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

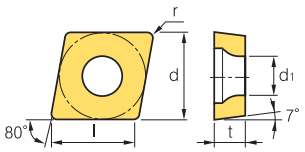
Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	VP1 New	CCGT	060201MFN-VP1																				●			0.03~0.06	0.06~1.00
			060202MFN-VP1																				●			0.03~0.10	0.08~1.50
			060204MFN-VP1																				●			0.05~0.12	0.10~1.50
			09T301MFN-VP1																				●			0.03~0.13	0.06~1.00
			09T302MFN-VP1																				●			0.04~0.15	0.08~1.50
			09T304MFN-VP1																				●			0.06~0.20	0.10~1.50
Medium to finishing	KM	CCGT	0602003R-KM																							0.01~0.06	0.04~1.30
			060201R-KM																							0.02~0.08	0.05~1.50
			060202R-KM																					●		0.03~0.11	0.06~1.70
			09T3003R-KM																							0.02~0.08	0.06~1.50
			09T301R-KM																							0.03~0.11	0.06~1.70
			09T302R-KM																							0.04~0.15	0.08~2.00
			0602003L-KM																							0.01~0.06	0.04~1.30
			060201L-KM																							0.02~0.08	0.05~1.50
			060202L-KM																							0.03~0.11	0.06~1.70
			09T3003L-KM																							0.02~0.08	0.06~1.50
			09T301L-KM																							0.03~0.11	0.06~1.70
			09T302L-KM																							0.04~0.15	0.08~2.00
Finishing	HFP	CCMT	060202-HFP																							0.03~0.06	0.08~1.20
			060204-HFP																							0.05~0.12	0.10~1.20
			060208-HFP																							0.05~0.12	0.10~1.40
			09T302-HFP												●											0.04~0.16	0.08~1.50
			09T304-HFP											●												0.06~0.18	0.10~1.50
			09T308-HFP																							0.08~0.25	0.20~1.50
			120404-HFP																							0.07~0.22	0.10~2.00
			120408-HFP																							0.08~0.30	0.12~2.20
Finishing	VF	CCMT	060202-VF						●			●	●								●		●			0.05~0.20	0.30~1.00
			060204-VF	●	●	●			●			●	●						●		●		●			0.10~0.25	0.30~1.00
			09T302-VF						●			●	●										●			0.04~0.16	0.80~1.50
			09T304-VF	●	●	●			●			●	●						●		●		●			0.05~0.20	0.30~1.50
			09T308-VF			●						●	●		●				●		●					0.10~0.25	0.30~1.50
			120404-VF						●			●	●						●							0.07~0.22	0.10~2.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123,177	**SCLCR/L**	B123,144,151,177

CC○○

Rhombic 80° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
06	6.35	2.38	2.8
08	7.94	3.18	3.4
09	9.525	3.97	4.4
12	12.7	4.76	5.5

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

Machining types
- ● Continuous cutting
- ⧓ General cutting
- ✱ Interrupted cutting

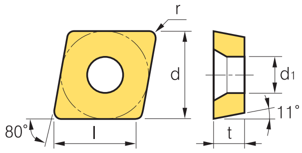
Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VL	CCMT	060204-VL	●		●	●	●		●			●		●					●	●	●	●	●		●	●	0.04~0.10	0.08~0.90
			09T304-VL	●		●	●	●		●			●		●					●	●	●	●	●		●	●	0.05~0.10	0.10~1.00
			09T308-VL	●		●	●	●		●			●		●					●	●	●	●	●				0.08~0.15	0.10~1.00
Medium to finishing	HMP	CCMT	060202-HMP	●					●			●				●							●	●				0.03~0.12	0.10~1.50
			060204-HMP	●	●	●			●		●	●		●	●	●		●		●			●	●				0.06~0.17	0.20~2.40
			060208-HMP						●			●		●	●	●							●	●				0.08~0.23	0.40~2.40
			09T302-HMP		●							●			●								●	●				0.07~0.22	0.10~2.00
			09T304-HMP	●	●	●			●		●	●		●	●	●		●		●			●	●				0.08~0.23	0.30~3.00
			09T308-HMP	●	●	●			●		●	●		●	●	●		●	●	●			●	●				0.10~0.30	0.50~3.00
			120404-HMP		●						●	●		●		●		●		●				●				0.09~0.27	0.30~3.60
			120408-HMP						●		●	●		●	●			●		●				●				0.24~0.36	1.00~3.60
			120412-HMP																									0.14~0.43	0.70~3.60
Medium to finishing	MP	CCMT	060202-MP	●		●	●	●		●			●		●					●	●	●	●	●				0.04~0.12	0.20~1.50
			060204-MP	●		●	●	●		●			●		●					●	●	●	●	●				0.05~0.15	0.30~1.50
			09T302-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●				0.07~0.15	0.30~2.00
			09T304-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●				0.08~0.25	0.50~2.50
			09T308-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●				0.10~0.30	0.50~2.50
Medium	C25	CCMT	060202-C25	●	●	●	●	●		●		●	●	●	●					●	●		●					0.03~0.12	0.40~2.00
			060204-C25	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●		●		●			0.05~0.15	0.60~2.30
			060208-C25	●		●	●	●		●		●	●	●	●			●	●	●	●		●					0.07~0.20	0.80~2.30
			080308-C25									●																0.08~0.25	0.80~2.30
			09T304-C25	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●		●		●			0.08~0.25	0.80~3.00
			09T308-C25	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●		●		●			0.10~0.30	1.00~3.00
			120404-C25							●		●	●	●	●			●	●	●	●		●					0.10~0.32	0.80~3.00
			120408-C25	●		●	●	●	●	●	●	●	●	●	●			●	●	●	●		●					0.12~0.36	1.20~3.50
			120412-C25							●		●	●	●					●									0.15~0.40	1.40~3.50

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123,177	SCLCR/L	B123,144,151,177

CP○○

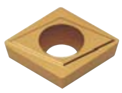
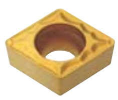
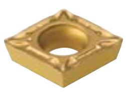


Dimensions(mm)			
Size	d	t	d1
08	7.94	2.38	3.4
09	9.525	3.18	4.4

Rhombic **80° Positive**
Relief Angle : 11°

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
Steel	P	●	◓	✱	●	◓	●	●	◓	◓	◓	✱	✱												
Stainless steel	M											◓	◓	●	◓				◓	✱		●	◓		
Cast iron	K	●	◓	✱	●	◓							◓			●	◓	◓						●	◓
Non-ferrous metal	N																							●	◓
Heat resistant alloy, Titanium alloy	S												◓						◓	✱	●	●	◓	●	◓
Hardened steel	H																					◓	✱	●	◓

Machining types
- ● Continuous cutting
- ◓ General cutting
- ✱ Interrupted cutting

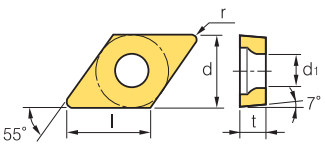
Inserts		Designation		Cermet CN1500	Cermet CN2000	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3010	Coated NC3215	Coated NC3120	Coated NC3220	Coated NC3225	Coated NC3030	Coated NC5330	Coated NC9020	Coated NC9025	Coated NC6205	Coated NC6210	Coated NC6215	Coated PC5300	Coated PC5400	Coated PC8105	Coated PC8110	Coated PC8115	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Finishing		CPGT	080202		●																							0.06~0.20	0.10~2.00
			080204	●	●																							0.08~0.20	0.30~2.00
			080208																									0.10~0.25	0.50~2.00
			090302																									0.04~0.20	0.30~1.50
			090304	●	●																							0.06~0.25	0.50~2.00
			090308																									0.08~0.30	0.70~2.50
Finishing	C05 	CPGT	080204-C05									●																0.02~0.15	0.50~1.70
			080208-C05																									0.04~0.18	0.50~1.70
			090304-C05									●																0.03~0.20	0.70~2.00
			090308-C05																									0.05~0.20	0.70~2.00
Medium to finishing	HMP 	CPGT	090308-HMP																									0.05~0.20	0.70~2.00
Finishing	VF 	CPMT	080204-VF																									0.05~0.20	0.30~1.20
			080208-VF																									0.10~0.25	0.30~1.20
			090304-VF												●													0.05~0.20	0.30~1.50
			090308-VF												●													0.10~0.25	0.30~1.50

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCLPR/L	B144, B152		

DC○○



Dimensions(mm)			
Size	d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Rhombic 55° Positive
Relief Angle : 7°

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	KF	DCET	0702005MFR-KF																							0.01~0.06	0.04~1.30
			070201MFR-KF																				●			0.02~0.08	0.05~1.50
			070202MFR-KF																				●			0.03~0.11	0.06~1.70
			11T3005MFR-KF																							0.02~0.08	0.05~1.50
			11T301MFR-KF																				●			0.03~0.11	0.06~1.70
			11T302MFR-KF																				●			0.04~0.15	0.08~2.00
			0702005MFL-KF																							0.01~0.06	0.04~1.30
			070201MFL-KF																				●			0.02~0.08	0.05~1.50
			070202MFL-KF																							0.03~0.11	0.06~1.70
			11T3005MFL-KF																							0.02~0.08	0.05~1.50
			11T301MFL-KF																							0.03~0.11	0.06~1.70
			11T302MFL-KF																							0.04~0.15	0.08~2.00
Medium to finishing (High precision)	KM	DCET	0702005MFR-KM																							0.01~0.06	0.04~1.30
			070201MFR-KM																				●			0.02~0.08	0.05~1.50
			070202MFR-KM																				●			0.03~0.11	0.06~1.70
			11T3005MFR-KM																							0.02~0.08	0.05~1.50
			11T301MFR-KM																				●			0.03~0.11	0.06~1.70
			11T302MFR-KM																				●			0.04~0.15	0.08~2.00
			0702005MFL-KM																							0.01~0.06	0.04~1.30
			070201MFL-KM																							0.02~0.08	0.05~1.50
			070202MFL-KM																							0.03~0.11	0.06~1.70
			11T3005MFL-KM																							0.02~0.08	0.05~1.50
			11T301MFL-KM																							0.03~0.11	0.06~1.70
			11T302MFL-KM																							0.04~0.15	0.08~2.00
Finishing	C05	DCGT	070202-C05																							0.06~0.11	0.06~1.50
			070204-C05																							0.05~0.17	0.08~1.50
			11T302-C05																							0.04~0.15	0.08~2.00
			11T304-C05																							0.06~0.23	0.10~2.00
			11T308-C05																							0.08~0.30	0.20~2.00
Finishing	HFP	DCGT	070202-HFP																							0.03~0.10	0.06~1.00
			070204-HFP																							0.05~0.12	0.08~1.00
			070208-HFP																							0.06~0.12	0.10~1.00
			11T301-HFP																							0.03~0.13	0.06~1.00
			11T302-HFP																							0.04~0.15	0.08~1.50
			11T304-HFP																		●					0.06~0.20	0.10~1.50
			11T308-HFP						●												●					0.08~0.25	0.20~1.50

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B123	SDQCR/L	B145
SDJCR/L	B124, 177	SDUCR/L	B145
SDNCN	B124, 178	SDZCR/L	B146

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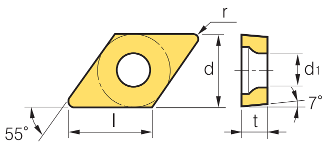
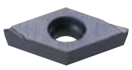
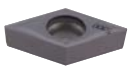
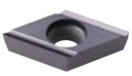


Rhombic 55° Positive
Relief Angle : 7°

Dimensions(mm)			
Size	d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◆	✱	●	◆	●	●	◆	◆	◆	✱	✱												
Stainless steel	M											◆	◆	●	◆			◆	✱		●	◆	◆		
Cast iron	K	●	◆	✱	●	◆							◆			◆	◆							●	◆
Non-ferrous metal	N																							●	◆
Heat resistant alloy, Titanium alloy	S												◆					◆	✱	●	●	◆		●	◆
Hardened steel	H																				◆	✱		●	◆

Machining types
● Continuous cutting
◆ General cutting
✱ Interrupted cutting

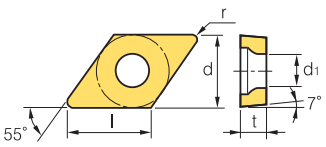
Inserts	Designation		Cermet CN1500	Cermet CN2000	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3010	Coated NC3215	Coated NC3120	Coated NC3220	Coated NC3225	Coated NC3030	Coated NC5330	Coated NC9020	Coated NC9025	Coated NC6210	Coated NC6215	Coated PC5300	Coated PC5400	Coated PC8105	Coated PC8110	Coated PC8115	Coated PC9030	Uncoated H01	Uncoated H05	Cutting Condition fn (mm/rev)	Cutting Condition ap (mm)
Finishing KF 	DCGT	0702003R-KF																									0.01~0.06	0.04~1.30
		070201R-KF																									0.02~0.08	0.05~1.50
		070202R-KF																									0.03~0.11	0.06~1.50
		11T3003R-KF																									0.02~0.08	0.05~1.50
		11T301R-KF																						●			0.03~0.11	0.06~1.70
		11T302R-KF																						●			0.04~0.15	0.08~2.00
		0702003L-KF																									0.01~0.06	0.04~1.30
		070201L-KF																									0.02~0.08	0.05~1.50
		070202L-KF																									0.03~0.11	0.06~1.50
		11T3003L-KF																									0.02~0.08	0.05~1.50
		11T301L-KF																									0.03~0.11	0.06~1.70
		11T302L-KF																									0.04~0.15	0.08~2.00
Finishing VP1 	DCGT	070201-VP1																	●		●	●	●			●	0.03~0.06	0.06~1.00
		070202-VP1																	●		●	●	●			●	0.03~0.10	0.08~1.50
		070204-VP1									●								●		●	●	●			●	0.05~0.12	0.10~1.50
		11T301-VP1																	●			●					0.03~0.13	0.06~1.00
		11T302-VP1																	●		●	●	●			●	0.04~0.15	0.08~1.50
		11T304-VP1																	●		●	●	●			●	0.06~0.20	0.10~1.50
Finishing (High precision) VP1 New 	DCGT	070201MFN-VP1																				●					0.03~0.06	0.06~1.00
		070202MFN-VP1																				●					0.03~0.10	0.08~1.50
		070204MFN-VP1																				●					0.05~0.12	0.10~1.50
		11T301MFN-VP1																				●					0.03~0.13	0.06~1.00
		11T302MFN-VP1																				●					0.04~0.15	0.08~1.50
		11T304MFN-VP1																				●					0.06~0.20	0.10~1.50
Medium to finishing KM 	DCGT	0702003R-KM																									0.01~0.06	0.04~1.30
		070201R-KM																									0.02~0.08	0.05~1.50
		070202R-KM																									0.03~0.11	0.06~1.50
		11T3003R-KM																									0.02~0.08	0.05~1.50
		11T301R-KM																									0.03~0.11	0.06~1.70
		11T302R-KM																									0.04~0.15	0.08~2.00
		0702003L-KM																									0.01~0.06	0.04~1.30
		070201L-KM																									0.02~0.08	0.05~1.50
		070202L-KM																									0.03~0.11	0.06~1.50
		11T3003L-KM																									0.02~0.08	0.05~1.50
		11T301L-KM																									0.03~0.11	0.06~1.70
		11T302L-KM																									0.04~0.15	0.08~2.00

Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B123	SDQCR/L	B145
SDJCR/L	B124, 177	SDUCR/L	B145
SDNCN	B124, 178	SDZCR/L	B146

DC○○



Dimensions(mm)			
Size	d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

Rhombic 55° Positive
Relief Angle : 7°

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

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	HFP	DCMT	070202-HFP												●												0.03~0.10	0.06~1.00
			070204-HFP																								0.05~0.12	0.08~1.00
			070208-HFP																								0.06~0.12	0.10~1.00
			11T301-HFP																								0.03~0.13	0.06~1.00
			11T302-HFP												●												0.04~0.15	0.08~1.50
			11T304-HFP																				●				0.06~0.20	0.10~1.50
			11T308-HFP																								0.08~0.25	0.20~1.50
Finishing	VL	DCMT	070204-VL	●	●		●			●			●		●					●	●	●	●	●			●	●	0.04~0.10	0.08~0.90
			11T304-VL	●	●	●	●	●	●	●		●	●		●					●	●		●				●	0.05~0.10	0.10~1.00
			11T308-VL	●	●	●	●	●		●		●	●		●					●	●	●	●	●			●	0.08~0.15	0.10~1.00
Finishing	VF	DCMT	070202-VF			●			●			●	●										●					0.03~0.10	0.06~1.00
			070204-VF		●	●			●			●	●					●		●			●					0.05~0.20	0.30~1.20
			11T302-VF	●					●			●	●															0.04~0.15	0.08~1.50
			11T304-VF	●	●	●						●	●					●		●			●					0.05~0.20	0.30~1.50
			11T308-VF	●		●						●	●							●			●					0.10~0.25	0.30~1.50
Medium to finishing	HMP	DCMT	070202-HMP	●		●						●		●											●			0.03~0.12	0.10~1.50
			070204-HMP	●	●	●			●		●	●		●	●	●		●		●			●		●			0.06~0.17	0.20~2.30
			070208-HMP								●	●		●	●													0.08~0.23	0.40~2.30
			11T302-HMP									●			●								●		●			0.04~0.22	0.10~2.00
			11T304-HMP	●	●	●			●		●	●	●	●	●	●		●		●			●		●			0.08~0.23	0.30~3.00
			11T308-HMP	●	●	●			●		●	●			●			●		●			●		●			0.10~0.30	0.50~3.00
Medium	MP	DCMT	070202-MP	●		●	●	●		●			●		●					●	●	●	●	●				0.04~0.12	0.12~1.80
			070204-MP	●		●	●	●		●			●		●					●	●	●	●	●				0.05~0.15	0.30~1.80
			070208-MP	●		●	●	●		●			●		●					●	●	●	●	●				0.08~0.22	0.30~1.80
			11T302-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●				0.04~0.15	0.30~2.00
			11T304-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●				0.08~0.20	0.50~2.30
			11T308-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●				0.10~0.30	0.50~2.30
Medium	C25	DCMT	070202-C25	●	●	●	●	●		●			●		●					●	●		●					0.03~0.15	0.30~2.00
			070204-C25	●	●	●	●	●		●		●	●	●	●				●	●	●		●	●				0.05~0.20	0.50~2.50
			070208-C25	●		●	●	●		●		●	●	●	●				●	●	●		●					0.06~0.25	0.80~2.50
			11T302-C25	●	●	●	●	●		●			●		●					●	●		●					0.04~0.25	0.50~2.50
			11T304-C25	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●		●	●				0.08~0.30	0.80~3.00
			11T308-C25	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●		●	●				0.10~0.30	1.00~3.00

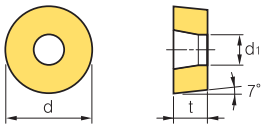
Cutting edge geometry A38 ~ A43 Recommended chip breaker B04 ~ B11 Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B123	SDQCR/L	B145
SDJCR/L	B124, 177	SDUCR/L	B145
SDNCN	B124, 178	SDZCR/L	B146

RC○○

Round R° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
10	10.0	3.18	3.6
12	12.0	4.76	4.2
16	16.0	6.35	5.2
20	20.0	6.35	6.5
25	25.0	7.94	7.25
32	32.0	9.52	9.55

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
	Steel	P	●	⬌	⌗	●	⬌	●	●	⬌	⬌	⬌	⌗	⌗												
	Stainless steel	M											⬌	⬌	●	⬌				⬌	⌗		●	⬌		
	Cast iron	K	●	⬌	⌗	●	⬌							⬌			●	⬌	⬌						●	⬌
	Non-ferrous metal	N																							●	⬌
	Heat resistant alloy, Titanium alloy	S												⬌						⬌	⌗	●	●	⬌	●	⬌
	Hardened steel	H																					⬌	⌗	●	⬌

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ⌗ Interrupted cutting

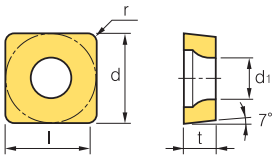
Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium		RCMX	1003M0								●	●		●	●												0.25~0.50	1.50~4.00
			1204M0								●	●		●	●				●								0.30~0.60	2.50~5.00
			1606M0									●		●	●				●								0.40~0.70	3.00~7.00
			2006M0											●					●								0.48~0.90	3.50~9.00
			2507M0											●													0.55~1.20	4.00~12.00
			3209M0											●													0.65~1.50	5.00~15.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
PRDCN	B107	**PRGCR/L**	B107

SC○○

Square 90° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
	Steel	P	●	⬌	⌗	●	⬌	●	●	⬌	⬌	⬌	⌗	⌗												
	Stainless steel	M											⬌	⬌	●	⬌				⬌	⌗		●	⬌		
	Cast iron	K	●	⬌	⌗	●	⬌							⬌			●	⬌	⬌						●	⬌
	Non-ferrous metal	N																							●	⬌
	Heat resistant alloy, Titanium alloy	S												⬌						⬌	⌗	●	●	⬌	●	⬌
	Hardened steel	H																					⬌	⌗	●	⬌

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ⌗ Interrupted cutting

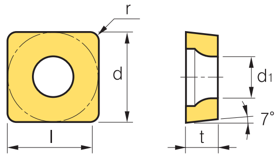
Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	C05 	SCGT	09T304-C05																								0.11~0.23	0.10~2.00
			09T308-C05																								0.08~0.30	0.20~2.00
			120408-C05																								0.08~0.33	0.20~2.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B125	**SSKCR/L**	B126,173
SSDCN	B125	**SSSCR/L**	B126,173

SC○○

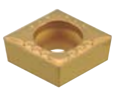
Square 90° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
06	6.35	2.38	2.8
09	9.525	3.97	4.4
12	12.7	4.76	5.5

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◐	✤	●	◐	●	●	◐	◐	◐	✤	✤												
Stainless steel	M											◐	◐	●	◐			◐	✤		●	◐	◐		
Cast iron	K	●	◐	✤	●	◐							◐			◐	◐							●	◐
Non-ferrous metal	N																							●	◐
Heat resistant alloy, Titanium alloy	S												◐					◐	✤	●	●	◐		●	◐
Hardened steel	H																				◐	✤		●	◐

Machining types
- ● Continuous cutting
- ◐ General cutting
- ✤ Interrupted cutting

	Inserts	Designation	CN1500 (Cermet)	CN2000 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3010 (Coated)	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Finishing	HFP 	SCGT 09T304-HFP																									0.05~0.25	0.10~1.50
Finishing	HFP 	SCMT 09T304-HFP																									0.05~0.25	0.10~1.50
Finishing	VF 	SCMT 09T304-VF		●							●	●							●			●					0.05~0.20	0.30~1.50
Finishing	VL 	SCMT 09T304-VL	●	●	●	●	●	●	●		●	●		●					●	●	●	●	●				0.05~0.10	0.10~1.00
		09T308-VL	●		●	●	●		●		●	●		●					●	●	●	●	●				0.08~0.15	0.10~1.00
Medium to finishing	HMP 	SCMT 09T304-HMP	●	●						●	●		●						●					●			0.08~0.23	0.30~3.00
		09T308-HMP	●					●		●	●		●	●					●					●			0.10~0.30	0.50~3.00
		120404-HMP																									0.09~0.27	0.30~3.60
		120408-HMP									●		●				●										0.12~0.36	0.60~3.60
Medium to finishing	MP (New) 	SCMT 09T304-MP							●			●		●							●	●					0.05~0.25	0.30~2.80
		09T308-MP							●			●		●							●	●					0.10~0.30	0.50~2.80
		120408-MP																			●	●					0.15~0.35	0.80~3.50
Medium	C25 	SCMT 060204-C25											●														0.08~0.25	0.40~2.50
		09T304-C25	●	●	●	●	●		●		●	●	●	●			●	●	●	●		●					0.08~0.25	0.60~3.00
		09T308-C25	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●		●					0.10~0.30	1.00~3.00
		120404-C25	●		●	●	●		●		●	●		●				●	●	●		●		●			0.10~0.30	0.80~3.80
		120408-C25	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●		●		●			0.12~0.38	1.20~3.80

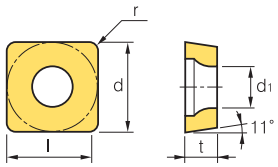
Cutting edge geometry A38 ~ A43 | Recommended chip breaker B04 ~ B11 | Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B125	SSKCR/L	B126, 173
SSDCN	B125	SSSCR/L	B126, 173

SP○○

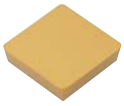
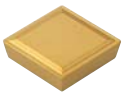
Square 90° Positive
Relief Angle : 11°



Dimensions(mm)			
Size	d	t	d1
06	6.35	2.38	2.8
07	7.94	2.38	-
09	9.525	3.18	3.4
12	12.7	4.76	-
15	15.875	4.76	-
19	19.05	4.76	-

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ⌗ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing		SPGA	060204																							0.50~0.25	0.50~2.00
			090308T	●	●																					0.10~0.25	0.70~3.00
			090308T-Z		●																					0.10~0.25	0.70~3.00
			(Z=Special Nega land)																								
Medium to finishing		SPGN	070202																							0.03~0.10	0.50~2.00
			070208																							0.10~0.25	0.70~3.00
			090302																							0.03~0.10	0.50~3.00
			090304																							0.08~0.20	0.70~3.50
			090308																							0.10~0.25	0.70~3.50
			120302																							0.03~0.20	0.50~3.00
			120304																							0.08~0.20	1.00~5.00
			120308											●												0.10~0.25	1.00~5.00
			120312																							0.15~0.30	1.00~5.00
			120316																							0.18~0.33	1.00~5.00
			120402																							0.03~0.20	0.50~3.00
			120404																							0.08~0.20	1.00~5.00
			120408																							0.10~0.25	1.00~5.00
			120412																							0.15~0.30	1.00~5.00
			120416																							0.18~0.33	1.00~5.00
			120430																							0.20~0.60	2.00~5.00
			120440																							0.25~0.70	3.00~5.00
			150404																							0.08~0.20	1.50~7.00
			150408																							0.10~0.25	1.50~7.00
			150412																							0.15~0.30	1.50~7.00
			150416																							0.18~0.33	1.50~7.00
			150420																							0.20~0.45	1.50~7.00
			190404																							0.08~0.20	1.50~9.00
			190408																							0.10~0.25	1.50~9.00
			190412																							0.15~0.45	1.50~9.00
			190416																							0.18~0.60	1.50~9.00
			190424																							0.25~0.70	2.50~9.00
Finishing	F 	SPGR	090304-F																							0.05~0.20	0.30~2.00
			120304-F																							0.10~0.25	0.50~2.00

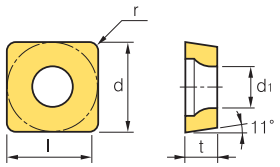
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CSDPN	B114	**SSKCR/L**	B146
CSKPR/L	B115		

SP○○

Square **90° Positive**
Relief Angle : 11°



Dimensions(mm)			
Size	d	t	d1
09	9.525	3.18	3.4~4.4
12	12.7	3.18	-
15	15.875	4.76	-
19	19.05	4.76	-
25	25.4	6.35	-

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated														Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium	M	SPGR	090308-M																							0.10~0.40	1.00~3.50
			120308-M																							0.20~0.40	1.50~4.00
Finishing	C05	SPGT	090304-C05		●																					0.11~0.23	0.10~2.00
			090308-C05																							0.08~0.30	0.20~2.00
Medium to finishing		SPGT	090304R																							0.08~0.23	0.30~3.00
			090308R																							0.10~0.30	0.50~3.00
			090304L		●																					0.08~0.23	0.30~3.00
			090308L		●																					0.10~0.30	0.50~3.00
Finishing	VF	SPMT	090304-VF																							0.05~0.20	0.30~1.50
			090308-VF																							0.10~0.25	0.30~1.50
Finishing	F	SPMR	090304-F																							0.05~0.20	0.30~2.00
			120304-F									●		●												0.10~0.25	0.50~2.00
Medium	M	SPMR	090308-M									●		●												0.10~0.40	1.00~3.50
			120308-M									●		●												0.10~0.40	1.50~4.00
			120312-M											●												0.20~0.40	1.50~4.00
Medium to finishing		SPUN	120304																							0.10~0.30	1.00~5.00
			120308									●														0.15~0.40	1.00~5.00
			150412																							0.20~0.50	1.00~5.00
			190412									●														0.20~0.50	1.50~7.00
			190416																							0.25~0.60	2.00~7.00
			250620																							0.30~0.80	3.00~10.0
			120308SN																							0.15~0.40	1.00~5.00

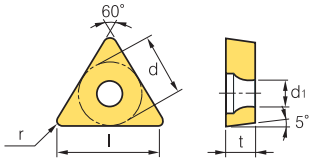
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
CSDPN	B114	**SSKPR/L**	B146
CSKPR/L	B115		

TB○○

Triangular 60° Positive
Relief Angle : 5°



Dimensions(mm)			
Size	d	t	d1
06	3.97	1.59	2.16

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

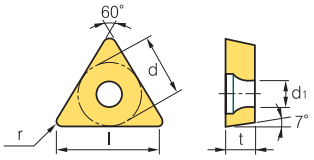
Inserts	Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing		TBGT 060102L		●																			●	●		0.05~0.20	0.10~1.30
		060104L		●																							0.08~0.20	0.10~1.30

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STUBR	B148		

TC○○

Triangular 60° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
09	5.56	2.38	2.5
11	6.35	2.38	2.8

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

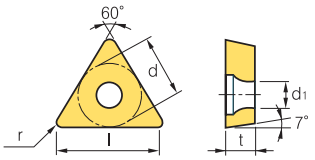
Inserts	Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing	C05	TCGT 090204-C05																									0.05~0.19	0.10~1.70
		110204-C05																									0.08~0.22	0.10~1.70
		110208-C05																									0.28~0.20	0.10~1.70

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B126,178	**STTCR/L**	B127,174
STFCR/L	B126,173	**STWCR/L**	B174
STGCR/L	B127		

TC ○○

Triangular **60° Positive**
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
08	4.76	2.38	2.3
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.523	3.97	4.4

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

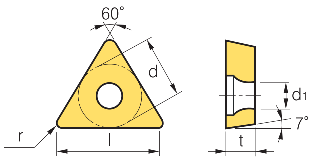
Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	HFP	TCGT	090204-HFP																								0.05~0.19	0.10~1.70
			110202-HFP																								0.03~0.13	0.06~1.70
			110204-HFP																								0.05~0.19	0.10~1.70
			16T304-HFP																								0.07~0.26	0.10~1.70
Finishing	KF	TCGT	0802003R-KF																								0.01~0.06	0.04~1.30
			080201R-KF																								0.02~0.08	0.05~1.50
			080202R-KF																								0.03~0.11	0.06~1.70
			0802003L-KF																								0.01~0.06	0.04~1.30
			080201L-KF																								0.02~0.08	0.05~1.50
			080202L-KF																								0.03~0.11	0.06~1.70
Finishing	HFP	TCMT	090204-HFP																								0.05~0.19	0.10~1.70
			110202-HFP																								0.03~0.13	0.06~1.70
			110204-HFP																								0.05~0.19	0.10~1.70
			16T302-HFP																								0.03~0.13	0.06~1.70
			16T304-HFP																								0.07~0.26	0.10~1.70
Finishing	VF	TCMT	110202-VF																								0.03~0.13	0.06~0.70
			110204-VF		●															●			●				0.05~0.20	0.30~1.20
			110208-VF																	●			●				0.10~0.25	0.30~1.20
			16T302-VF																								0.05~0.15	0.10~1.30
			16T304-VF		●				●			●	●		●			●		●			●				0.05~0.20	0.30~1.50
Finishing (Mild steel)	VL	TCMT	110204-VL																								0.05~0.15	0.10~1.30
			110208-VL																								0.08~0.20	0.10~1.30
			16T304-VL	●	●	●	●	●	●	●		●	●							●	●	●	●	●			0.05~0.20	0.30~1.50
			16T308-VL	●		●	●	●		●		●	●		●					●	●	●	●	●			0.05~0.20	0.30~1.50
Medium to finishing	HMP	TCMT	090204-HMP																	●							0.06~0.17	0.20~2.30
			090208-HMP																	●							0.08~0.23	0.40~2.30
			110202-HMP																	●							0.03~0.15	0.10~1.50
			110204-HMP		●				●			●		●	●	●				●					●		0.06~0.19	0.20~2.50
			110208-HMP									●		●	●					●					●		0.09~0.26	0.40~2.50
			16T304-HMP		●				●		●	●		●	●	●		●		●			●		●		0.08~0.23	0.30~3.00
			16T308-HMP						●		●	●		●	●	●		●		●					●		0.10~0.30	0.50~3.00
Medium	MP	TCMT	110202-MP							●			●		●							●	●				0.03~0.12	0.20~1.50
			110204-MP							●			●		●							●	●				0.05~0.15	0.20~15.0
			110208-MP							●			●		●							●	●				0.10~0.28	0.25~2.00
			16T304-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●			0.08~0.20	0.30~2.50
			16T308-MP	●		●	●	●	●	●		●	●		●					●	●	●	●	●			0.10~0.30	0.50~2.50
			16T312-MP							●		●	●		●							●	●	●			0.20~0.40	0.50~2.50

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B126,178	**STTCR/L**	B127,174
STFCR/L	B126,173	**STWCR/L**	B174
STGCR/L	B127		

TC ○○



Dimensions(mm)			
Size	d	t	d1
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.523	3.97	4.4

Triangular **60° Positive**
Relief Angle : 7°

Machining types: ● Continuous cutting, ◑ General cutting, ✱ Interrupted cutting

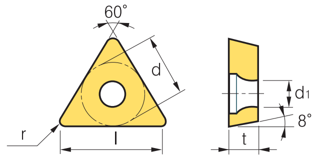
Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
Steel	P	●	◑	✱	●	◑	●	●	◑	◑	◑	✱	✱												
Stainless steel	M											◑	◑	●	◑				◑	✱		●	◑		
Cast iron	K	●	◑	✱	●	◑							◑			●	◑	◑						●	◑
Non-ferrous metal	N																							●	◑
Heat resistant alloy, Titanium alloy	S												◑						◑	✱	●	●		●	◑
Hardened steel	H																					◑		●	◑

Inserts	Designation	CN1500 (Cermet)	CN2000 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3010 (Coated)	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Medium C25 	TCMT 090204-C25	●		●	●	●	●	●		●	●	●	●				●	●	●	●		●				0.06~0.18	0.40~2.50
	090208-C25	●		●	●	●		●		●	●		●				●	●	●	●		●				0.08~0.25	0.80~2.50
	110202-C25	●		●	●	●		●		●	●		●						●	●		●				0.04~0.12	0.40~2.00
	110204-C25	●	●	●	●	●	●	●		●	●	●	●				●	●	●	●		●				0.06~0.20	0.60~2.50
	110208-C25	●		●	●	●		●		●	●	●	●				●	●	●	●		●	●			0.08~0.25	0.80~2.50
	16T304-C25	●		●	●	●	●	●	●	●	●	●	●				●	●	●	●		●	●			0.08~0.28	0.80~3.00
	16T308-C25	●	●	●	●	●	●	●	●	●	●	●	●				●	●	●	●		●	●			0.10~0.30	1.00~3.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B126,178	**STTCR/L**	B127,174
STFCR/L	B126,173	**STWCR/L**	B174
STGCR/L	B127		

TO ○○



Dimensions(mm)			
Size	d	t	d1
06	3.97	1.59	2.15
09	5.56	2.38	2.8
14	8.2	3.0	3.8

Triangular **60° Positive**
Relief Angle : 8°

Machining types

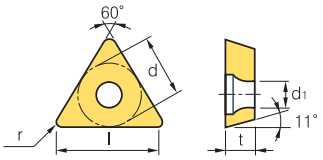
Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
Steel	P	●	◑	✱	●	◑	●	●	◑	◑	◑	✱	✱												
Stainless steel	M											◑	◑	●	◑			◑	✱		●	◑	◑		
Cast iron	K	●	◑	✱	●	◑							◑			◑	◑							●	◑
Non-ferrous metal	N																							●	◑
Heat resistant alloy, Titanium alloy	S												◑					◑	✱	●	●	◑		●	◑
Hardened steel	H																				◑	✱		●	◑

Inserts	Designation	CN1500 (Cermet)	CN2000 (Cermet)	CN2500 (Cermet)	CC1500 (Coated)	CC2500 (Coated)	NC3010 (Coated)	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01 (Uncoated)	H05 (Uncoated)	fn (mm/rev)	ap (mm)
Medium to finishing 	TOEH 060102L																									0.05~0.17	0.10~1.50
	090204L																									0.05~0.20	0.30~2.50
	140304L		●																							0.05~0.25	0.30~2.50

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

TP ○○

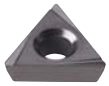
Triangular **60° Positive**
Relief Angle : 11°



Dimensions(mm)			
Size	d	t	d1
08	4.76	2.38	2.3
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	-

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
	Steel	P	●	⬢	✱	●	⬢	●	●	⬢	⬢	⬢	✱	✱												
	Stainless steel	M											⬢	⬢	●	⬢				⬢	✱		●	⬢		
	Cast iron	K	●	⬢	✱	●	⬢							⬢			●	⬢	⬢						●	⬢
	Non-ferrous metal	N																							●	⬢
	Heat resistant alloy, Titanium alloy	S												⬢						⬢	✱	●	●	⬢	●	⬢
	Hardened steel	H																					●	✱	●	⬢

Machining types
- ● Continuous cutting
- ⬢ General cutting
- ✱ Interrupted cutting

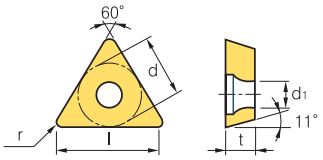
Inserts	Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing		TPGH 080202L		●																							0.01~0.12	0.06~1.70
		080204L	●	●																							0.01~0.15	0.08~1.70
		110202L																									0.01~0.12	0.06~2.00
		110204L																									0.01~0.15	0.08~2.00
Medium to finishing		TPGN 090204																									0.07~0.20	0.70~2.00
		110302																									0.05~0.15	0.50~2.00
		110304											●												●		0.07~0.20	0.70~3.00
		110308											●												●		0.10~0.25	1.00~3.00
		160302																									0.05~0.18	1.00~5.00
		160304									●		●												●		0.07~0.20	1.00~5.00
		160308									●		●												●		0.10~0.25	1.00~5.00
		160310																									0.10~0.25	1.00~5.00
		160312											●														0.15~0.30	1.00~5.00
		160316											●														0.15~0.30	1.00~5.00
		160404																									0.07~0.20	1.00~5.00
		220404											●														0.07~0.20	1.50~7.00
		220408											●														0.10~0.25	1.50~7.00
		220412											●														0.15~0.30	1.50~7.00
		220430																									0.30~0.45	1.50~7.00
		220440																									0.30~0.50	1.50~7.00
		270408																									0.15~0.25	3.00~8.00
		270608																									0.15~0.25	3.00~8.00
Finishing	F 	TPGR 110302-F																									0.05~0.15	0.10~1.50
		110304-F																									0.05~0.20	0.30~1.50
		160304-F																									0.08~0.25	0.50~2.00
Medium	M 	TPGR 110308-M																									0.13~0.30	1.00~3.00
		160308-M																									0.13~0.30	1.00~5.00

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19** ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B147	**STUPR/L**	B150
CTFPR/L	B115	**CTGPR/L**	B115

TP ○○

Triangular 60° Positive
Relief Angle : 11°



Dimensions(mm)			
Size	d	t	d1
08	4.76	2.38	2.3
09	5.56	2.38	3.0
11	6.35	3.18	3.4
16	9.525	3.18~4.76	4.4

Workpiece			Machining types
Steel	P	● ⬌ ⌗ ● ⬌ ● ● ⬌ ⬌ ⬌ ⌗ ⌗	● Continuous 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	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing	C05	TPGT	110304-C05		●																						0.05~0.30	0.50~2.00
			160404-C05																								0.05~0.30	0.80~2.00
Finishing	HFP	TPGT	110304-HFP																								0.05~0.25	0.30~1.50
			160308-HFP																								0.05~0.25	0.30~1.50
Medium to finishing		TPGT	080202R																								0.05~0.20	0.30~1.50
			110302R																								0.05~0.20	0.30~1.50
			110304R		●																						0.05~0.20	0.50~2.00
			110308R																								0.07~0.25	0.50~2.00
			160404R		●																						0.05~0.20	0.70~3.00
			160408R																								0.05~0.20	0.70~3.00
			080202L		●																			●	●		0.05~0.20	0.30~1.50
			110302L																								0.05~0.20	0.30~1.50
			110304L	●	●																						0.05~0.20	0.50~2.00
			110308L																								0.07~0.25	0.50~2.00
			160404L		●																						0.05~0.20	0.70~3.00
			160408L																								0.05~0.20	0.70~3.00
Medium to finishing		TPGX	090202L																								0.10~0.20	0.30~1.00
			090204L			●																					0.10~0.25	0.50~1.00
			090208L																								0.10~0.30	1.00~1.00
			110304L																								0.10~0.25	0.50~1.20
Finishing	F	TPMR	090202-F																								0.05~0.15	0.10~1.00
			090204-F																								0.05~0.15	0.10~1.00
			110302-F																								0.05~0.15	0.10~1.50
			110304-F						●		●	●		●					●					●			0.05~0.20	0.30~1.50
			110308-F																								0.05~0.25	0.30~1.50
			160304-F						●		●	●		●	●									●	●		0.08~0.25	0.50~2.00
			160308-F																								0.08~0.25	0.50~3.00

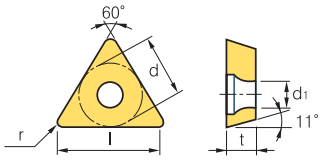
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B147	**STUPR/L**	B150
CTFPR/L	B115	**CTGPR/L**	B115

TP ○○

Triangular **60° Positive**
Relief Angle : 11°



Dimensions(mm)			
Size	d	t	d1
09	5.56	3.18	-
11	6.35	3.18	3.4
16	9.525	3.18~4.76	4.4
22	12.7	4.76	-
33	19.05	6.35	-

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

Inserts		Designation		Cermet			Coated		Coated															Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Medium	M	TPMR	110304-M																								0.10~0.25	0.70~3.00
			110308-M						●			●		●													0.13~0.30	1.00~3.00
			160304-M											●														0.10~0.25	1.00~5.00
			160308-M								●	●		●		●												0.13~0.30	1.00~5.00
			160312-M											●														0.15~0.35	1.00~5.00
			220408-M									●																0.13~0.30	1.50~7.00
Medium to finishing		TPUN	090308																									0.10~0.30	0.50~2.00
			110208																									0.15~0.40	1.00~3.00
			110304																									0.10~0.30	1.00~3.00
			110308																									0.15~0.40	1.00~3.00
			160304									●		●														0.10~0.30	1.00~5.00
			160308									●		●														0.15~0.40	1.00~5.00
			160312											●														0.20~0.50	1.50~5.00
			220404																									0.10~0.30	1.50~7.00
			220408									●		●														0.15~0.40	1.50~7.00
			220412																									0.20~0.50	1.50~7.00
			330620																									0.30~0.70	3.00~10.00
			160308TN																									0.15~0.40	1.00~5.00
			160312TN																									0.20~0.50	1.50~5.00
			220412TN																									0.20~0.50	1.50~7.00
Finishing	VL	TPMT	110304-VL	●		●																						0.05~0.15	0.10~1.30
Finishing	VF	TPMT	110304-VF		●				●		●	●	●		●						●			●				0.05~0.20	0.30~1.50
			110308-VF						●			●	●		●									●				0.10~0.25	0.30~1.50
			160404-VF																									0.05~0.20	0.30~2.00
			160408-VF																									0.10~0.25	0.30~2.00
Medium to finishing	MP	TPMT	110304-MP	●		●	●	●													●	●						0.05~0.20	0.20~1.50

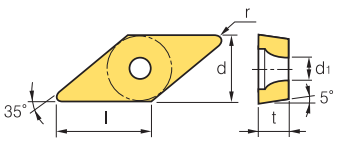
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STFPR/L	B147	**STUPR/L**	B150
CTFPR/L	B115	**CTGPR/L**	B115

VB○○

Rhombic 35° Positive
Relief Angle : 5°



Dimensions(mm)			
Size	d	t	d1
11	6.35	3.18	2.8
16	9.525	4.76	4.4

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

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing	HFP	VBGT	110301-HFP																								0.07~0.20	0.50~1.50
			160408-HFP																								0.15~0.25	0.70~2.00
Finishing	KF	VBGT	1103003R-KF																								0.01~0.06	0.04~1.30
			110301R-KF																								0.02~0.08	0.05~1.50
			110302R-KF																					●			0.03~0.13	0.06~1.70
			1103003L-KF																								0.01~0.06	0.04~1.30
			110301L-KF																								0.02~0.08	0.05~1.50
			110302L-KF																								0.03~0.13	0.06~1.70
Medium to finishing		VBGT	160404																								0.07~0.20	0.50~1.50
			160408																								0.15~0.25	0.70~2.00
Medium to finishing	KM	VBGT	1103003R-KM																								0.01~0.06	0.04~1.30
			110301R-KM																								0.02~0.08	0.05~1.50
			110302R-KM																								0.03~0.13	0.06~1.70
			1103003L-KM																								0.01~0.06	0.04~1.30
			110301L-KM																								0.02~0.08	0.05~1.50
			110302L-KM																								0.03~0.13	0.06~1.70
Finishing	MP New	VBMT	160404-MP	●		●	●	●	●	●		●	●		●						●	●	●	●	●			0.08~0.20	0.30~2.00
			160408-MP	●		●	●	●	●	●		●	●		●						●	●	●	●	●			0.10~0.25	0.50~2.30
			160412-MP	●		●				●		●	●		●						●	●	●	●	●			0.10~0.35	0.50~2.30

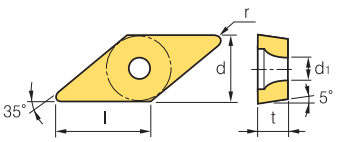
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B127	**SVVBN**	B129
SVHBR/L	B128	**SVQBR/L**	B148
SVJBR/L	B128,178	**SVUBR/L**	B149

VB○○

Rhombic 35° Positive
Relief Angle : 5°



Dimensions(mm)			
Size	d	t	d1
11	6.35	2.38~3.18	2.8~3.4
16	9.525	4.76	4.4

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

Machining types
- ● Continuous cutting
- ⧓ General cutting
- ✱ Interrupted cutting

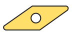
Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	VB (New)	VBMT	160404-VB	●		●				●			●															0.08~0.20	0.20~1.50
			160408-VB	●		●				●			●															0.10~0.23	0.50~1.50
Finishing	VF	VBMT	160404-VF	●	●	●			●			●	●		●					●			●					0.05~0.20	0.30~1.00
			160408-VF	●	●	●														●								0.10~0.25	0.30~1.00
Finishing (Mild steel)	VL	VBMT	160404-VL	●	●	●	●	●	●	●		●	●		●					●	●	●	●	●				0.05~0.20	0.30~1.50
			160408-VL	●		●	●	●		●		●	●		●					●	●	●	●	●				0.10~0.20	0.30~1.50
			160412-VL																			●	●	●				0.10~0.25	0.30~1.50
Medium to finishing		VBMT	160404		●				●		●	●		●		●		●							●			0.07~0.20	0.50~1.50
			160408		●				●		●	●		●				●							●			0.15~0.25	0.70~2.00
Medium to finishing	HMP	VBMT	110204-HMP									●																0.03~0.20	0.15~2.50
			110208-HMP																									0.03~0.25	0.15~2.50
			110304-HMP								●	●																0.03~0.20	0.15~2.70
			110308-HMP								●	●																0.05~0.25	0.40~2.70
			160404-HMP						●		●	●		●	●	●		●	●		●		●					0.07~0.20	0.20~2.70
			160408-HMP						●		●	●		●	●	●		●	●	●	●		●		●			0.09~0.27	0.50~2.70
			160412-HMP																									0.11~0.32	0.50~2.70

Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

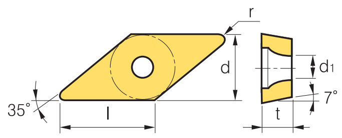
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B127	SVVBN	B129
SVHBR/L	B128	SVQBR/L	B148
SVJBR/L	B128,178	SVUBR/L	B149

VC○○



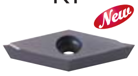
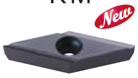
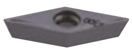
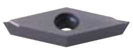
Rhombic 35° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
11	6.35	3.18	2.8~3.4
16	9.525	4.76	4.4

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05
Steel	P	●	◐	✱	●	◐	●	●	◐	◐	◐	✱	✱												
Stainless steel	M											◐	◐	●	◐			◐	✱		●	◐	◐		
Cast iron	K	●	◐	✱	●	◐							◐			◐	◐							●	◐
Non-ferrous metal	N																							●	◐
Heat resistant alloy, Titanium alloy	S												◐					◐	✱	●	●	◐		●	◐
Hardened steel	H																				◐	✱		●	◐

Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

Inserts	Designation		Cermet: CN1500	CN2000	CN2500	Coated: CC1500	CC2500	Coated: NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	Uncoated: H01	H05	Cutting Condition: fn (mm/rev)	ap (mm)
Finishing (High precision) KF New 	VCET	1103005MFR-KF																									0.01~0.06	0.04~1.30
		110301MFR-KF																				●					0.02~0.08	0.05~1.50
		110302MFR-KF																				●					0.03~0.11	0.06~1.70
		1103005MFL-KF																									0.01~0.06	0.04~1.30
		110301MFL-KF																									0.02~0.08	0.05~1.50
		110302MFL-KF																									0.03~0.11	0.06~1.70
Medium to finishing (High precision) KM New 	VCET	1103005MFR-KM																									0.02~0.08	0.05~1.50
		110301MFR-KM																				●					0.03~0.11	0.06~1.70
		110302MFR-KM																				●					0.04~0.15	0.08~2.00
		1103005MFL-KM																									0.02~0.08	0.05~1.50
		110301MFL-KM																									0.03~0.11	0.06~1.70
		110302MFL-KM																									0.04~0.15	0.08~2.00
Finishing HFP 	VCGT	110302-HFP																									0.02~0.18	0.10~1.00
		110304-HFP																									0.03~0.18	0.15~1.20
		110308-HFP																									0.04~0.23	0.20~1.20
		160404-HFP								●	●											●					0.04~0.20	0.15~1.50
		160408-HFP								●	●											●					0.05~0.25	0.20~1.50
Finishing VP1 	VCGT	110301-VP1																	●		●	●	●		●		0.02~0.15	0.05~0.50
		110302-VP1																	●		●	●	●		●		0.02~0.18	0.10~1.00
		110304-VP1									●								●		●	●	●		●		0.03~0.18	0.15~1.20
Finishing (High precision) VP1 New 	VCGT	110301MFN-VP1																				●					0.02~0.15	0.05~0.50
		110302MFN-VP1																				●					0.02~0.18	0.10~1.00
		110304MFN-VP1																				●					0.03~0.18	0.15~1.20
Finishing KF 	VCGT	1103003R-KF																									0.01~0.06	0.04~1.30
		110301R-KF																									0.02~0.08	0.05~1.50
		110302R-KF																						●			0.03~0.13	0.06~1.70
		1103003L-KF																									0.01~0.06	0.04~1.30
		110301L-KF																									0.02~0.08	0.05~1.50
		110302L-KF																									0.03~0.13	0.06~1.70

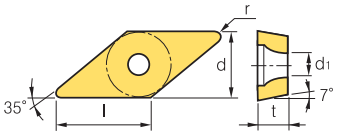
Cutting edge geometry A38 ~ A43 · Recommended chip breaker B04 ~ B11 · Code system B18 ~ B19

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B128,148,178	SVQCR/L	B148
SVVCN	B129	SVUCR/L	B144

VC○○

Rhombic 35° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
08	4.76	2.38	2.3
11	6.35	3.18	2.8~3.4
16	9.525	4.76	4.4

Workpiece			CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
Steel	P		●	⬌	✱	●	⬌	●	●	⬌	⬌	⬌	✱	✱												
Stainless steel	M												⬌	⬌	●	⬌				⬌	✱		●	⬌		
Cast iron	K		●	⬌	✱	●	⬌							⬌			●	⬌	⬌						●	⬌
Non-ferrous metal	N																								●	⬌
Heat resistant alloy, Titanium alloy	S													⬌						⬌	✱	●	●	⬌	●	⬌
Hardened steel	H																						⬌	✱	●	⬌

Machining types
- ● Continuous cutting
- ⬌ General cutting
- ✱ Interrupted cutting

Inserts		Designation		Cermet			Coated		Coated																Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing	KM	VCGT	1103003R-KM																								0.01~0.06	0.04~1.30
			110301R-KM																								0.02~0.08	0.05~1.50
			110302R-KM																					●			0.03~0.13	0.06~1.70
			1103003L-KM																								0.01~0.06	0.04~1.30
			110301L-KM																								0.02~0.08	0.05~1.50
			110302L-KM																								0.03 ~0.13	0.06~1.70
Finishing (High precision)	VP1 New	VCGX	120300MFR-VP1																								0.02~0.10	0.05~0.50
			120301MFR-VP1																								0.02~0.15	0.05~0.50
			120302MFR-VP1																								0.02~0.18	0.10~1.00
Finishing	HFP	VCMT	110302-HFP																								0.02~0.18	0.10~1.00
			110304-HFP																								0.03~0.18	0.15~1.20
			110308-HFP																								0.04~0.23	0.20~1.20
			160404-HFP																								0.04~0.20	0.15~1.50
			160408-HFP																								0.05~0.25	0.20~1.50
Finishing	VF	VCMT	080202-VF						●																		0.05~0.20	0.30~1.00
			080204-VF												●												0.10~0.25	0.30~1.00
			110304-VF						●			●	●														0.03~0.18	0.15~1.20
			160404-VF		●				●			●	●		●									●			0.04~0.20	0.15~1.50
Finishing (Mild steel)	VL	VCMT	160404-VL						●	●			●										●	●			0.05~0.20	0.30~1.50
			160408-VL						●	●		●	●										●	●			0.05~0.20	0.30~1.50
			160412-VL																								0.10~0.25	0.30~1.50
Medium to finishing	HMP	VCMT	160404-HMP						●		●	●		●		●								●	●			0.10~0.25	0.30~2.60
			160408-HMP								●	●		●		●								●	●			0.13~0.33	0.60~2.60
Medium to finishing	MP New	VCMT	160404-MP							●			●										●	●			0.08~0.18	0.30~2.00
			160408-MP							●			●										●	●			0.10~0.23	0.50~2.30
			160412-MP																				●	●			0.10~0.33	0.50~2.30

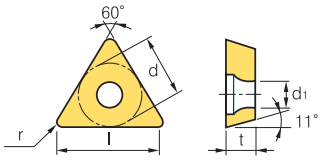
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B128,148,178	SVQCR/L	B148
SVVCN	B129	SVUCR/L	B144

VP○○

Triangular 60° Positive
Relief Angle : 11°



Dimensions(mm)			
Size	d	t	d1
08	6.35	2.38	2.3
11	6.35	3.18	2.8

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

Inserts		Designation		Cermet			Coated		Coated													Uncoated		Cutting Condition	
				CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05	fn (mm/rev)	ap (mm)
Finishing (High precision)	KF (New)	VPET	0802005MFR-KF																								0.01~0.12	0.05~0.50
			080201MFR-KF																					●			0.02~0.15	0.05~0.50
			080202MFR-KF																					●			0.02~0.18	0.10~1.00
			0802005MFL-KF																								0.01~0.12	0.05~0.50
			080201MFL-KF																								0.02~0.15	0.05~0.50
			080202MFL-KF																								0.02~0.18	0.10~1.00
Medium to finishing (High precision)	KM (New)	VPET	0802005MFR-KM																								0.01~0.12	0.05~0.50
			080201MFR-KM																					●			0.02~0.15	0.05~0.50
			080202MFR-KM																					●			0.02~0.18	0.10~1.00
			0802005MFL-KM																								0.01~0.12	0.05~0.50
			080201MFL-KM																								0.02~0.15	0.05~0.50
			080202MFL-KM																								0.02~0.18	0.10~1.00
Finishing	VP1	VPGT	110301-VP1																		●		●	●	●	●	0.02~0.15	0.05~0.50
			110302-VP1																		●		●	●	●	●	0.02~0.18	0.10~1.00
			110304-VP1																		●		●	●	●	●	0.03~0.18	0.15~1.20
Finishing (High precision)	VP1 (New)	VPGT	110301MFN-VP1																					●			0.02~0.15	0.05~0.50
			110302MFN-VP1																					●			0.02~0.18	0.10~1.00
			110304MFN-VP1																					●			0.03~0.18	0.15~1.20

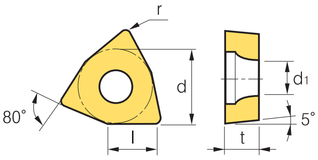
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B127	**SVVBN**	B128
SVJBR/L	B128, 178		

WB○○

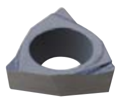
Trigon 80° Positive
Relief Angle : 5°



Dimensions(mm)			
Size	d	t	d1
02	3.97	1.59	2.2
S3	4.76	2.38	2.4

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	H01	H05
Steel	P	●	⬍	✱	●	⬍	●	●	⬍	⬍	⬍	✱	✱												
Stainless steel	M											⬍	⬍	●	⬍				⬍	✱		●	⬍		
Cast iron	K	●	⬍	✱	●	⬍							⬍			●	⬍	⬍						●	⬍
Non-ferrous metal	N																							●	⬍
Heat resistant alloy, Titanium alloy	S												⬍						⬍	✱	●	●		●	⬍
Hardened steel	H																					⬍		●	⬍

Machining types
● Continuous cutting
⬍ General cutting
✱ Interrupted cutting

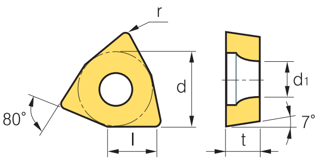
Inserts	Designation		Cermet CN1500	Cermet CN2000	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC9030	Uncoated H01	H05	Cutting Condition fn (mm/rev)	ap (mm)
Medium to finishing 	WBGT	020102R																									0.01~0.05	0.10~0.30
		S30204R																									0.01~0.10	0.10~0.50
		020102L		●																				●	●		0.01~0.08	0.10~0.40
		S30202L		●																							0.01~0.08	0.10~0.40
		S30204L																									0.01~0.10	0.10~0.50

Cutting edge geometry A38 ~ A43 | Recommended chip breaker B04 ~ B11 | Code system B18 ~ B19 ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SWUBR/L	B150		

WC○○

Trigon 80° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
08	12.7	4.76	5.5

Workpiece		CN1500	CN2000	CN2500	CC1500	CC2500	NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	H01	H05
Steel	P	●	⬍	✱	●	⬍	●	●	⬍	⬍	⬍	✱	✱												
Stainless steel	M											⬍	⬍	●	⬍				⬍	✱		●	⬍		
Cast iron	K	●	⬍	✱	●	⬍							⬍			●	⬍	⬍						●	⬍
Non-ferrous metal	N																							●	⬍
Heat resistant alloy, Titanium alloy	S												⬍						⬍	✱	●	●	⬍	●	⬍
Hardened steel	H																					⬍	✱	●	⬍

Machining types
● Continuous cutting
⬍ General cutting
✱ Interrupted cutting

Inserts	Designation		Cermet CN1500	Cermet CN2000	Cermet CN2500	Coated CC1500	Coated CC2500	Coated NC3010	NC3215	NC3120	NC3220	NC3225	NC3030	NC5330	NC9020	NC9025	NC6205	NC6210	NC6215	PC5300	PC5400	PC8105	PC8110	PC8115	Uncoated H01	H05	Cutting Condition fn (mm/rev)	ap (mm)
Medium to finishing C05 	WCGT	080408-C05																									0.08~0.30	0.20~2.70

Cutting edge geometry A38 ~ A43 | Recommended chip breaker B04 ~ B11 | Code system B18 ~ B19 ● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SWACR/L	B129	SWLCR/L	B149

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

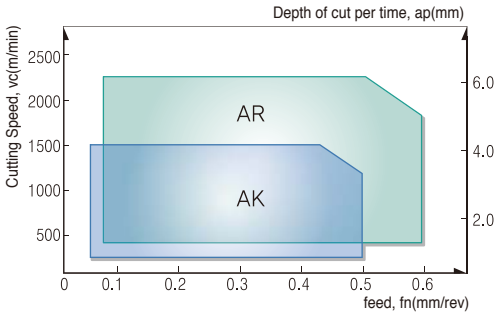
❶ High rake angle & tabby pattern chip pocket - Low cutting load
❷ Unique rake angle design - Effective chip breaking and good chip flow
❸ Unique and 3-dimensional top face - Longer tool life & Excellent surface roughness
❹ Tabby pattern & Sharp cutting edge - Distributing cutting load, long tool life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

AR special chip breaker for aluminum

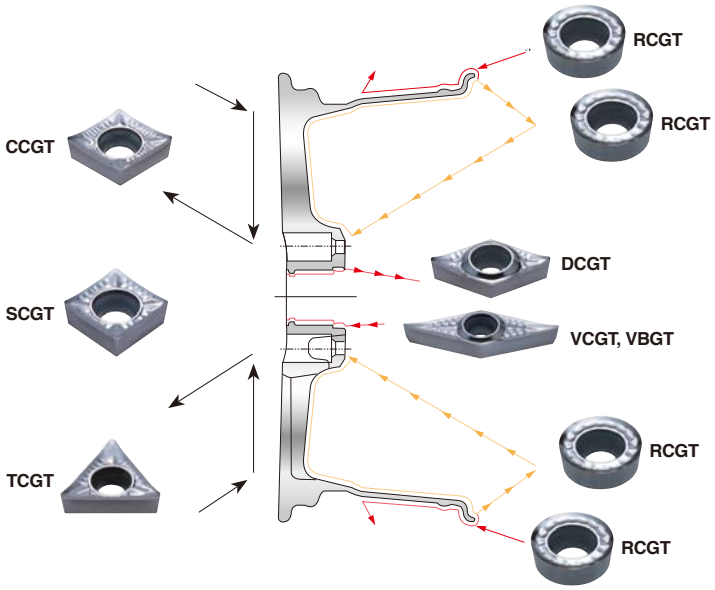
▶ AR chip breaker ensures reliability and good cutting performance at high feed, speed and interrupted machining

❶ Flat corner cutting edge improved productivity at high feed machining and ensures good surface roughness and reliability owing to strong cutting edge
❷ Specially buffed on top face controls chip flow reducing built-up edge
❸ KORLOY's own technology applied for cutting edge and corner shape controlling chip flow ensures longer tool life
❹ 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=0.1~5.0mm fn=0.03~0.5mm/rev	H01(Uncoated cemented carbides K10~K20) ND1000(Diamond coating)
AR	ap=0.5~6.0mm fn =0.05~0.6mm/rev	H01(Uncoated cemented carbides K10~K20) ND1000(Diamond coating) PD1000(DLC coating)



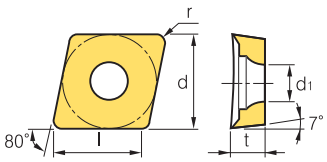
Features of H01 and cutting conditions

• Useful for aluminum and alloyed steel machining • Buffed on top face reduced built-up edge
• 3-dimensional design reduced cutting load and shows good performance at 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

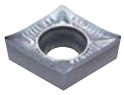
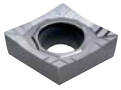
CC ○○

Rhombic 80° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
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						● Continuous cutting
Non-ferrous metal	N	✱	◕	●	◕	✱	◕ General cutting
Heat resistant alloy, Titanium alloy	S						✱ Interrupted cutting
Hardened steel	H						

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PC130	PD1000	H01	H10	fn (mm/rev)	ap (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

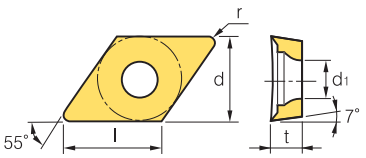
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SCACR/L	B123, 177	**SCLCR/L**	B133, 144, 177

DC ◯◯

Rhombic 55° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
07	6.35	2.38	2.8
11	9.525	3.97	4.4

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PC130	PD1000	H01	H10	fn (mm/rev)	ap (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

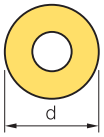
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

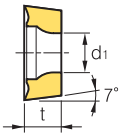
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SDACR/L	B123	**SDQCR/L**	B145
SDJCR/L	B124,177	**SDUCR/L**	B145
SDNCN	B124,178	**SDZCR/L**	B146

RC ○○

Round **Positive**
Relief Angle : 7°





Dimensions(mm)			
Size	d	t	d1
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						● Continuous cutting
Non-ferrous metal	N	✱	◕	●	◕	✱	◕ General cutting
Heat resistant alloy, Titanium alloy	S						✱ Interrupted cutting
Hardened steel	H						

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PC130	PD1000	H01	H10	fn (mm/rev)	ap (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
		10T3M0-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

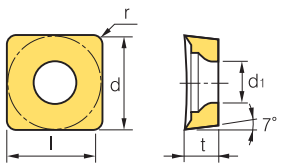
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SRDCN	B124	**SRGCR/L**	B125

SC ○○

Square 90° Positive
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
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						● Continuous cutting
Non-ferrous metal	N	✱	◓	●	◓	✱	◓ General cutting
Heat resistant alloy, Titanium alloy	S						✱ Interrupted cutting
Hardened steel	H						

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PC130	PD1000	H01	H10	fn (mm/rev)	ap (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

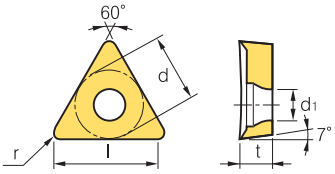
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SSBCR/L	B125	**SSKCR/L**	B126
SSDCN	B125	**SSSCR/L**	B126

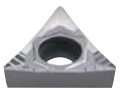
TC ○○

Triangular **60° Positive**
Relief Angle : 7°



Dimensions(mm)			
Size	d	t	d1
09	5.56	2.38	2.5
11	6.35	2.38	2.8
16	9.525	3.97	4.4

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PC130	PD1000	H01	H10	fn (mm/rev)	ap (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

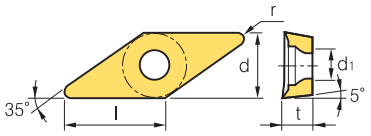
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
STACR/L	B126,178	**STTCR/L**	B127,174
STFCR/L	B126,173	**STWCR/L**	B174
STGCR/L	B127		

VB ○○

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



Dimensions(mm)			
Size	d	t	d1
11	6.35	3.18	2.8
16	9.525	4.76	4.4

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

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC205K	PC8110	PD1000	H01	H10	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

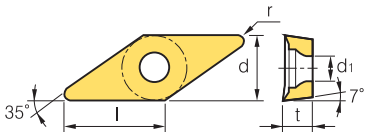
Cutting edge geometry **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVABR/L	B127	**SVVBN**	B129
SVHBR/L	B128	**SVQBR/L**	B148
SVJBR/L	B128,178	**SVUBR/L**	B149

VC ○○

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



Dimensions(mm)			
Size	d	t	d1
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						● Continuous cutting
Non-ferrous metal	N	✱	◕	●	◕	✱	◕ General cutting
Heat resistant alloy, Titanium alloy	S						✱ Interrupted cutting
Hardened steel	H						

Inserts	Designation		Coated			Uncoated		Cutting Condition	
			PC5040	PC130	PD1000	H01	H10	fn (mm/rev)	ap (mm)
AK 	VCGT	**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 	VCGT	**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 **A38 ~ A43** Recommended chip breaker **B04 ~ B11** Code system **B18 ~ B19**

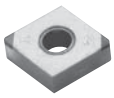
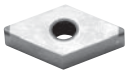
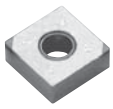
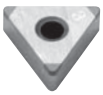
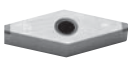
● : Stock item

Available tool holders			
Designation	Page	Designation	Page
SVJCR/L	B128,148,178	**SVQCR/L**	B148
SVVCN	B129	**SVUCR/L**	B144

cBN

Multi-Corner Type (Negative)

Dimensions(mm)			
Size	d	t	d1
12	12.7	4.76	5.16
15	12.7	4.76~6.358	3.4
16	9.525	4.76	3.81

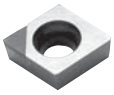
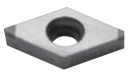
Inserts	Designation		Uncoated										Available tool holders			
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation		Page	
CN○○ 80° Nega 	2NU-CNGA	120404	●	●		●	●				●		DCBNR/L	DCLNR/L	B 99	B 99
		120404F	●				●						MCKNR/	MCLNR/L	B116	B116
		120404T	●			●	●						MCMNN	PCBNR/L	B116	B104
		120404W	●										PCLNR/L		B105	
		120404WF	●													
		120408	●	●		●	●				●					
		120408F	●				●									
		120408T	●			●	●									
		120408W	●	●		●	●				●					
		120408WF	●				●									
		120408WT				●	●									
		120412	●	●												
		120412F	●													
		120412T	●													
		120412W	●			●	●				●					
		120412WF	●				●									
		120412WT				●	●									
	T-2NU-CNGA	120408	●													
	2NU-CNMA	120404							●							
		120408							●							
	2NS-CNGA	120408			●			●								
DN○○ 55° Nega 	2NU-DNGA	150404	●	●		●	●		●		●		DDJNR/L	MDJNR/L	B 100	B117
		150404F	●				●						MDNNN	MDQNR/L	B117	B118
		150404T	●			●	●						MDUNR/L	PDJNR/L	B142	B105
		150408	●	●		●	●		●		●		PDNNR/L	PDSNR/L	B106	B138
		150408F	●				●						PDUNR/L		B139	
		150408T	●			●	●									
		150412	●	●												
		150412F	●													
		150412T	●													
		150608										●				
	T-2NU-DNGA	150412	●													
	2NS-DNGA	150408			●			●								
SN○○ 90° Nega 	4NU-SNGA	120404	●			●	●				●		DSBNR/L	MSBNR/L	B100	B118
		120404F					●						MSDNN	MSKNR/L	B118	B119
		120404T				●	●						MSRNR/L	MSSNR/L	B119	B120
		120408	●			●	●				●		PSBNR/L	PSDNN	B108	B108
		120408F					●						PSKNR/L		B109	
		120408T				●	●									
		120412									●					
	2NS-SNGA	120408			●			●								
TN○○ 60° Nega 	3NU-TNGA	160404	●	●		●	●		●		●		MTENN	MTFNR/L	B120	B120
		160404F	●				●						MTGNR/	MTJNR/L	B121	B121
		160404T	●			●	●						PTFNR/L	PTGNR/L	B110	B110
		160408	●	●		●	●				●		PTTNR/L	WTENN	B111	B112
		160408F	●				●						WTJNR/L	WTXNR/L	B112	B112
		160408T	●			●	●									
		160412		●												
	2NS-TNGA	160408			●			●								
VN○○ 35° Nega 	2NU-VNGA	160404	●	●		●	●		●		●		MVJNR/L		B121	
		160404F	●				●						MVQNR/L		B122	
		160404T	●			●	●						MVUNR/L		B143	
		160408	●	●		●	●		●		●		MVVNN		B122	
		160408F	●				●									
		160408T	●			●	●									
	2NS-VNGA	160408			●			●								

● : Stock item

cBN

Multi-Corner Type (Positive)

Dimensions(mm)			
Size	d	t	d1
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

Inserts	Designation		Uncoated										Available tool holders	
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation	Page
CC○○ 80° Posi 	2NU-CCGW	060202	●										SCACR/L	B123
		060202F	●										SCLCR/L	B123
		060202T	●											
		060204	●			●	●							
		060204F	●				●							
		060204T	●			●	●							
		060208				●	●							
		060208F					●							
		060208T				●	●							
		09T304	●	●		●	●		●		●			
		09T304F	●				●							
		09T304T	●			●	●							
		09T308	●	●		●	●		●		●			
		09T308F	●				●							
		09T308T	●			●	●							
		09T308W	●											
		09T308WF	●											
DC○○ 55° Posi 	2NU-DCGW	070204				●	●						SDACR/L	B123
		070204F					●						SDJCR/L	B124
		070204T				●	●						SDNCN	B145
		070208				●	●						SDQCR/L	B145
		070208F					●						SDUCR/L	B146
		070208T				●	●						SDZCR/L	
		11T304	●	●		●	●		●		●			
		11T304F	●				●							
		11T304T	●			●	●							
		11T308	●	●		●	●		●		●			
		11T308F	●				●							
		11T308T	●			●	●							
	T-2NU-DCGW	11T304	●											
TC○○ 60° Posi 	3NU-TCGW	090204	●										STACR/L	B126
		090204F	●										STFCR/L	B126
		090204T	●										STGCR/L	B127
													STTCR/L	B127

● : Stock item

cBN

Multi-Corner Type (Positive)

Dimensions(mm)			
Size	d	t	d1
11	6.35	3.18	2.4
16	9.525	4.76	3.81

Inserts	Designation		Uncoated									Available tool holders	
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation	Page
TP○○ 60° Posi	3NU-TPGB	110304	●						●				CTFPR/L	B115
		110304F	●										CTGPR/L	B115
		110304T	●											
		110308	●						●					
		110308F	●											
		110308T	●											
	3NU-TPGN	110304				●	●						CTFPR/L	B115 B141
		110304F					●						CTGPR/L	B115
		110304T				●	●							
		110308				●	●							
		110308F					●							
		110308T				●	●							
		160304	●	●										
		160308	●	●										
	3NU-TPGW	110304	●	●		●	●				●			
		110304F	●				●							
		110304T	●			●	●							
		110308	●	●		●	●				●			
		110308F	●				●							
		110308T	●			●	●							
VB○○ 35° Posi	2NU-VBGW	160404	●	●		●	●		●		●		SVABR/L	B127
		160404F	●				●						SVHBR/L	B128
		160404T	●			●	●						SVJBR/L	B128
		160408	●	●		●	●		●		●		SVQBR/L	B148
		160408F	●				●						SVUBR/L	B149
		160408T	●			●	●							
VC○○ 35° Posi	2NU-VCGW	160404	●	●		●	●				●			
		160404F	●				●							
		160404T	●			●	●							
		160408	●	●		●	●				●			
		160408F	●				●							
		160408T	●			●	●							

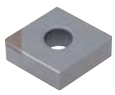
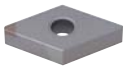
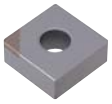
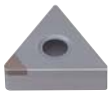
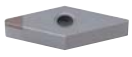
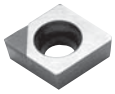
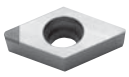
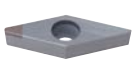
● : Stock item

cBN

Regrinding Type (Negative / Positive)

Dimensions(mm)			
Size	d	t	d1
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	d1
15	12.7	4.76	5.16
16	9.525	4.76	3.81~4.4

Inserts	Designation		Uncoated										Available tool holders			
			DNC250	DNC350	DNC400	KB1000	KB2000	KB400	KB320	KB330	KB370	KB420	Designation		Page	
CN○○ 80° Nega 	CNMA	120404							●				DCBNR/L	MCKNR/L	B99	B116
		120408							●			●	DCLNR/L	MCLNR/L	B100	B116
	T-CNMA	120408							●				PCBNR/L	MCMNN	B104	B116
													PCLNR/L		B105	
DN○○ 55° Nega 	DNMA	150404							●				DDJNR/L	MDJNR/L	B100	B117
		150408							●	●			MDNNN	MDQNR/L	B117	B118
													MDUNR/L	PDJNR/L	B142	B105
													PDNNR/L	PDSNR/L	B106	B137
													PDUNR/L		B139	
SN○○ 90° Nega 	SNMA	120404							●				DSBNR/L	MSBNR/L	B100	B118
		120408							●				MSDNN	MSKNR/L	B118	B119
													MSRNR/L	MSSNR/L	B119	B120
													PSBNR/L	PSDNN	B108	B108
													PSKNR/L		B109	
TN○○ 60° Nega 	TNMA	160404							●				MTENNS	MTFNR/L	B120	B120
		160408							●				MTGNR/L	MTJNR/L	B121	B121
													PTFNR/L	PTGNR/L	B110	B110
													PTTNR/L	WTENN	B111	B112
													WTJNR/L	WTXNR/L	B112	B112
VN○○ 35° Nega 	VNMA	160404							●				MVJNR/L		B121	
		160408							●				MVQNR/L		B122	
	T-VNMA	160404							●				MVUNR/L		B143	
													MVVNN		B122	
CC○○ CP○○ 80° Posi  (CCMW)	CCMW	09T304							●				SCACR/L		B123	
													SCLCR/L		B123	
DC○○ 50° Posi 	DCGW	11T308							●				SDACR/L		B123	
	T-DCGW	11T308							●				SDJCR/L		B124	
													SDNCN/L		B124	
TP○○ 60° Posi 	TPGB	110304							●	●			CTFPR/L		B115	B141
		110308							●				CTGPR/L		B115	
VB○○ 35° Posi 	VBMW	160404							●				SVABR/L		B127	
		160408							●				SVHBR/L		B128	
													SVJBR/L		B128	
													SVQBR/L		B148	
													SVUBR/L		B149	

● : Stock item

PCD

Insert (Negative / Positive)

Dimensions(mm)			
Size	d	t	d1
06	6.35	2.38	2.8
07	6.35	2.38	2.8
08	7.94	2.38	3.4
09	9.525	3.18	4.4

Dimensions(mm)			
Size	d	t	d1
11	9.525	3.97	4.4
12	12.7	4.76	5.16
15	12.7	4.76	5.16
16	9.525	4.76	3.81

Inserts	Designation		Grades			Available tool holders			
			DP90	DP150	DP200	Designation		Page	
CN○○ 80° Nega (CNMX)	CNMM	120404		●		DCBNR/L	DCLNR/L	B 99	B 99
		120408		●		MCKNR/L	MCLNR/L	B116	B116
		120412				MCMNN	PCBNR/L	B116	B104
	CNMX	120404				PCLNR/L		B105	
		120408							
		120412							
DN○○ 55° Nega (DNMX)	DNMM	150404		●		DDJNR/L	MDJNR/L	B100	B117
		150408		●		MDNNN	MDQNR/L	B116	B118
		150412				MDUNR/L	PDJNR/L	B142	B105
	DNMX	150404				PDNNR/L	PDSNR/L	B106	B138
		150408				PDUNR/L		B139	
		150412							
TN○○ 60° Nega	TNMX	160404				MTENNS	MTFNR/L	B120	B120
		160408				MTGNR/L	MTJNR/L	B121	B121
		160412				PTFNR/L	PTGNR/L	B110	B110
						PTTNR/L	WTENN	B111	B112
						WTJNR/L	WTXNR/L	B112	B112
VN○○ 35° Nega	VNMX	160404				MVJNR/L		B121	
		160408				MVQNR/L		B122	
		160412				MVUNR/L		B143	
						MVVNN		B122	
CC○○ CP○○ 80° Posi	CCMT	060202		●		SCACR/L		B123	
		060204		●		SCLCR/L		B123	
		060208							
		09T304		●					
		09T308		●					
		09T312							
	CPMT	080204							
		080208							
		080212							
		090304							
		090308							
		090312							
DC○○ 55° Posi	DCMT	070202		●		SDACR/L		B123	
		070204		●		SDJCR/L		B124	
		070208				SDNCN		B145	
		11T302				SDQCR/L		B145	
		11T304		●		SDUCR/L		B146	
		11T308		●		SDZCR/L			
SC○○ SP○○ 90° Posi (SCMT)	SCMT	09T304				SSBCR/L		B125	
		09T308				SSDCN		B125	
		09T312				SSKCR/L		B126	
	SPGW	090302				SSSCR/L		B126	
		090304							
		090308							

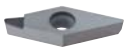
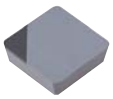
● : Stock item

PCD

Insert (Positive)

Dimensions(mm)			
Size	d	t	d1
06	3.97	1.59	2.8
08	4.76	2.38	2.4
09	5.56~9.525	2.38~3.18	2.55

Dimensions(mm)			
Size	d	t	d1
11	9.525	3.97	4.4
12	6.35	2.38~3.18	2.8~3.4
16	12.7	3.18	4.4

Inserts	Designation		Grades			Available tool holders	
			DP90	DP150	DP200	Designation	Page
TB○○ TC○○ TP○○ 60° Posi  (TBGN)	TBGW	060102				STUBR/L	B150
		060104					
	TCMT	090201				STACR/L	B126
		090202				STFCR/L	B126
		090204				STFPR/L	B154
		110201				STGCR/L	B127
		110202				STTCR/L	B127
		110204					
	TPGB	080204					
		080208					
		090204		●			
		090208		●			
		110304					
		110308					
	TPGW	080202					
		080204					
		090204	●				
		090208	●				
		110302					
		110304		●			
		110308		●			
		160404					
		160408					
	TPGT	110302				STFPR/L	B147
		110304				STUPR/L	B150
VB○○ VC○○ 35° Posi 	VBMT	110302				SVABR/L	B127
		110304		●		SVHBR/L	B128
		110308		●		SVJBR/L	B128
		160402				SVQBR/L	B148
		160404		●		SVUBR/L	B149
		160408		●			
		160412		●			
	VCMT	110302				SVJCR	B128
		110304		●		SVVCN	B129
		110308		●			
		160404		●			
		160408		●			
		160412					
TP○○ 60° Posi 	TPGN	090204				CTFPR/L	B115
		090208				CTGPR/L	B115
		110302					
		110304		●			
		110308		●			
		160302					
		160304					
		160308					
SP○○ 90° Posi 	SPGN	090304		●		CSDPN	B114
		090308				CSKPR/L	B115
		120304					
		120308					

● : Stock item

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

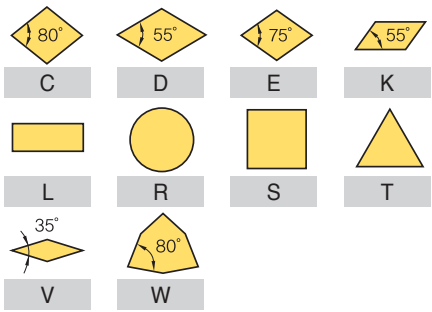
1 Clamping Method of Insert

P S K N R 25 25 - M 12

C	D	M	P	S	W

2 Insert Shape

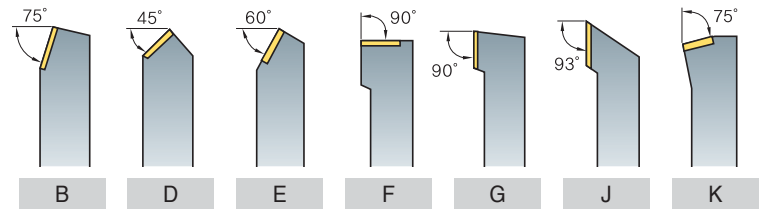
P S K N R 25 25 - M 12



C	D	E	K	L	R	S	T	V	W

3 Holder Style

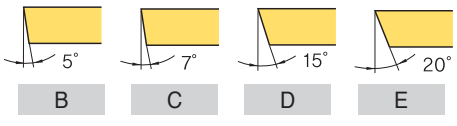
P S K N R 25 25 - M 12



B	D	E	F	G	J	K	L	N	R	S	T	V	Y

4 Clearance Angle of Insert

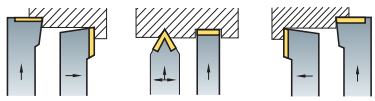
P S K N R 25 25 - M 12



B	C	D	E	F	N	P

5 Hand

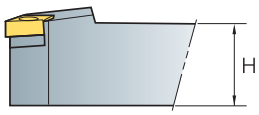
P S K N R 25 25 - M 12



L	N	R

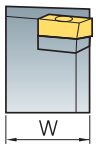
6 Height of Shank

P S K N R 25 25 - M 12



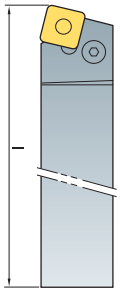
7 Width of Shank

P S K N R 25 25 - M 12



8 Length of Holder

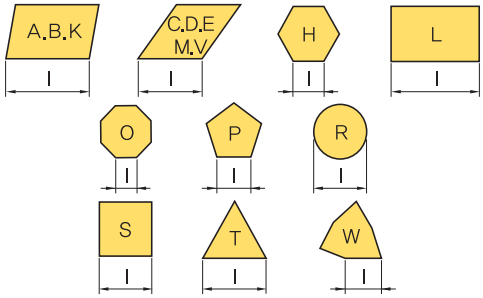
P S K N R 25 25 - M 12



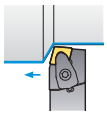
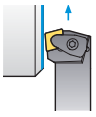
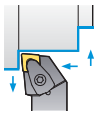
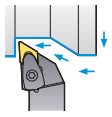
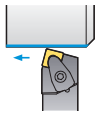
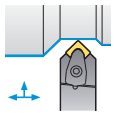
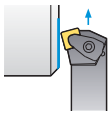
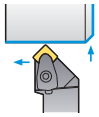
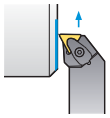
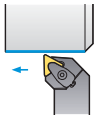
A - 32	H - 100	Q - 180	X-Special Item
B - 40	J - 110	R - 200	
C - 50	K - 125	S - 250	
D - 60	L - 140	T - 300	
E - 70	M - 150	U - 350	
F - 80	N - 160	V - 400	
G - 90	P - 170	W - 450	

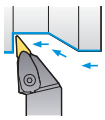
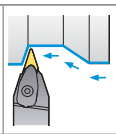
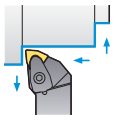
9 Length of Insert Cutting Edge

P S K N R 25 25 - M 12

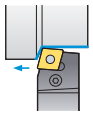
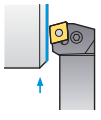
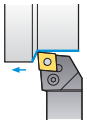
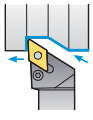
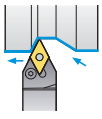
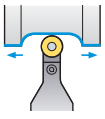
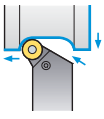
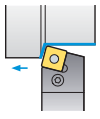
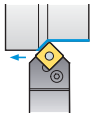
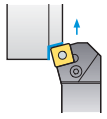


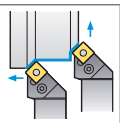
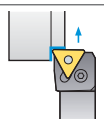
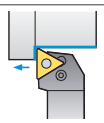
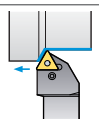
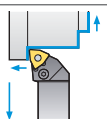
Double Clamp System

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	B99	B99	B99	B100	B100	B101	B101	B101	B102	B102
Turning	●		●	●	●	●		●		●
Copying				●						
Facing		●	●				●	●	●	
Chamfering						●				
Back turning			●	●						

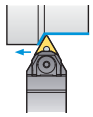
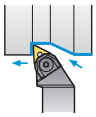
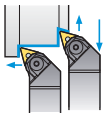
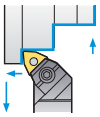
Cutting Shape			
Designation	DVJNR/L	DVVNN	DWLNR
Approach angle	93°	72.5°	95°
Page	B102	B103	B103
Turning	●	●	●
Copying	●	●	
Facing			●
Chamfering			
Back turning	●		●

Lever Lock System

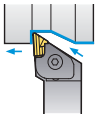
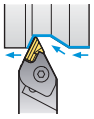
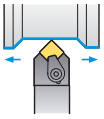
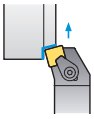
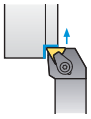
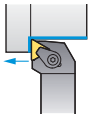
Cutting Shape										
Designation	PCBNR/L	PCKNR/L	PCLNR/L	PDJNR/L	PDNNR/L	PRDCN	PRGCR/L	PSBNR/L	PSDNN	PSKNR/L
Approach angle	75°	75°	95°	93°	62.5°	-	-	75°	45°	75°
Page	B104	B104	B105	B105, B106	B106	B107	B107	B108	B108	B109
Turning	●	●	●	●	●	●	●	●	●	
Copying				●	●	●	●			
Facing			●							●
Chamfering										
Back turning			●	●						

Cutting Shape					
Designation	PSSNR/L	PTFNR/L	PTGNR/L	PTTNR/L	PWLNR/L
Approach angle	45°	90°	90°	60°	95°
Page	B109	B110	B110	B111	B111
Turning	●		●	●	●
Copying					
Facing	●	●			●
Chamfering				●	
Back turning					●

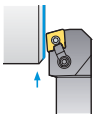
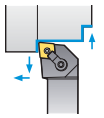
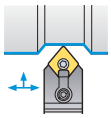
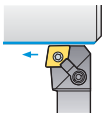
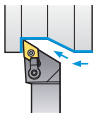
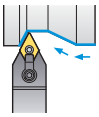
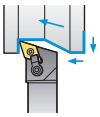
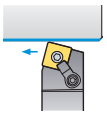
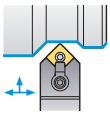
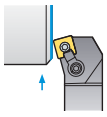
Wedge Clamp System

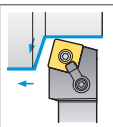
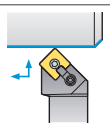
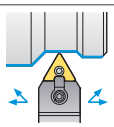
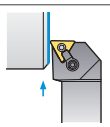
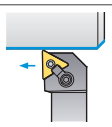
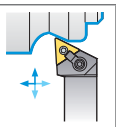
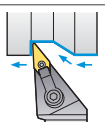
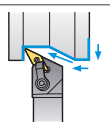
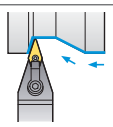
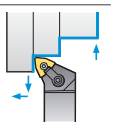
Cutting Shape										
Designation	WTENN	WTJNR/L	WTXNR/L	WWLNR/L						
Approach angle	60°	93°	105°	95°						
Page	B112	B112	B112	B113						
Turning	●	●	●	●						
Copying	●	●	●							
Facing				●						
Chamfering										
Back turning		●	●	●						

Clamp on System

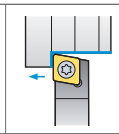
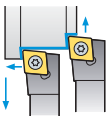
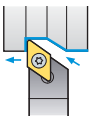
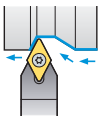
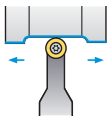
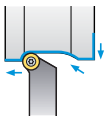
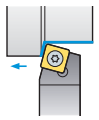
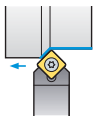
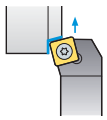
Cutting Shape										
Designation	CKJNR/L	CKNNR/L	CSDPN	CSKPR/L	CTFPR/L	CTGPR/L				
Approach angle	93°	62.5°	45°	75°	90°	90°				
Page	B114	B114	B114	B115	B115	B115				
Turning	●	●	●			●				
Copying	●	●								
Facing				●	●					
Chamfering										
Back turning	●									

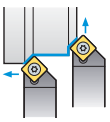
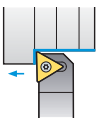
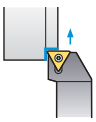
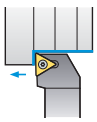
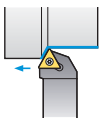
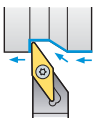
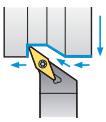
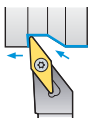
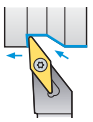
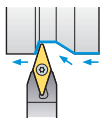
Multi Lock System

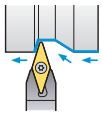
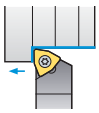
Cutting Shape										
Designation	MCKNR/L	MCLNR/L	MCMNN	MCRNR/L	MDJNR/L	MDNNN	MDQNR/L	MSBNR/L	MSDNN	MSKNR/L
Approach angle	75°	95°	50°	75°	93°	62.5°	107.5°	75°	45°	75°
Page	B116	B116	B116	B117	B117	B117	B118	B118	B118	B119
Turning		●	●	●	●	●	●	●	●	
Copying					●	●	●			
Facing	●	●								●
Chamfering										
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	B119	B120	B120	B120	B121	B121	B121	B122	B122	B122
Turning	●	●	●		●	●	●	●	●	●
Copying			●			●	●	●	●	
Facing		●		●		●				●
Chamfering										
Back turning						●	●	●		●

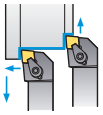
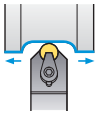
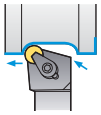
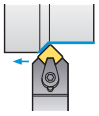
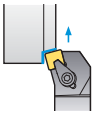
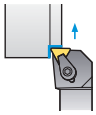
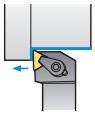
Screw on System

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	B123	B123	B123	B124	B124	B124	B125	B125	B125	B126
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	B126	B126	B126	B127	B127	B127	B128	B128	B128	B129
Turning	●	●		●	●	●	●	●	●	●
Copying						●	●	●	●	●
Facing	●		●							
Chamfering										
Back turning						●	●	●	●	

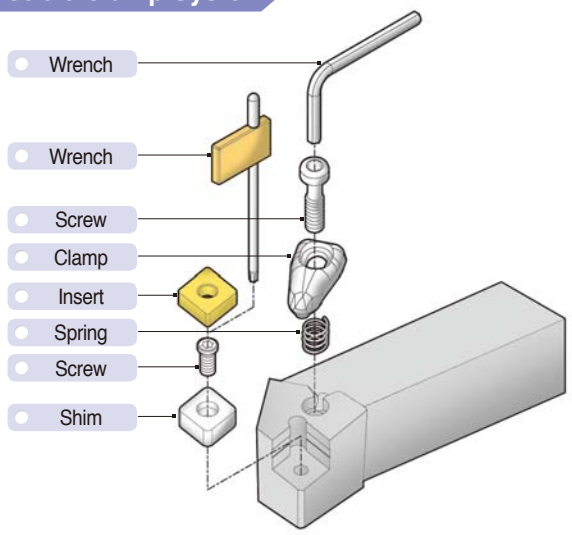
Cutting Shape		
Designation	SVVCN	SWACR/L
Approach angle	72.5°	90°
Page	B129	B129
Turning	●	●
Copying	●	
Facing		
Chamfering		
Back turning		

Ceramic Holder

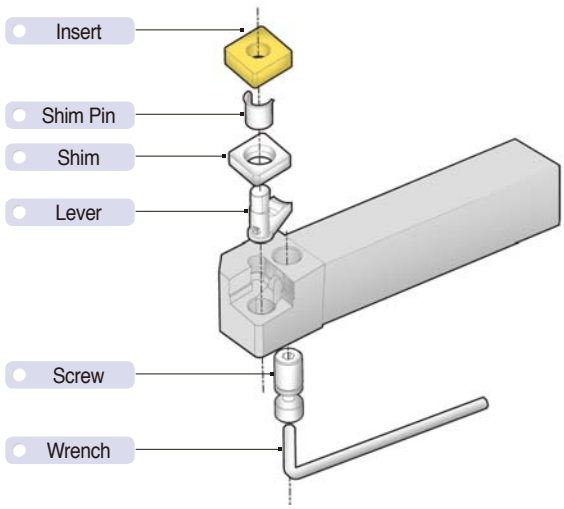
Cutting Shape							
Designation	CCNLR/L	CRDNN	CRGNR/L	CSDNN	CSKNR/L	CTFNR/L	CTGNR/L
Approach angle	95°	-	-	45°	75°	90°	90°
Page	B130	B130	B130	B130	B131	B131	B131
Turning	●	●	●	●			●
Copying			●				
Facing	●				●	●	
Chamfering							
Back turning	●						

Instruction of External Holder

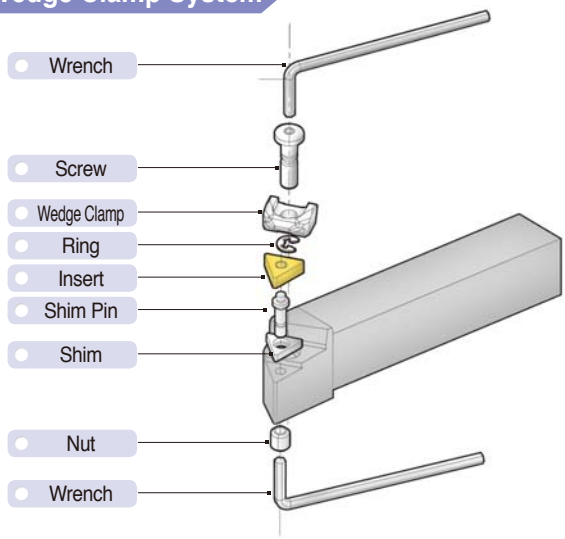
Double Clamp System



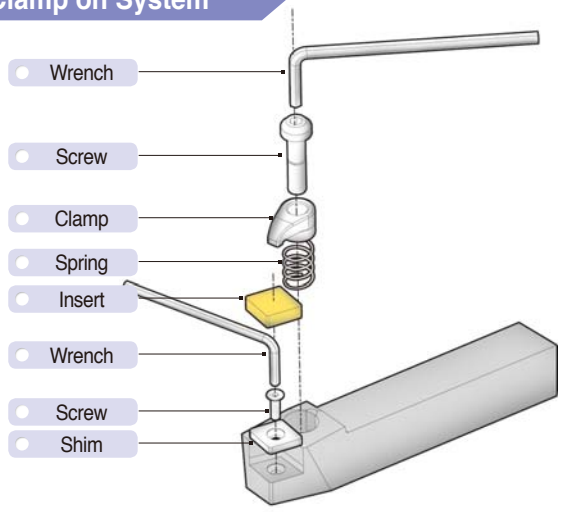
Lever Lock System



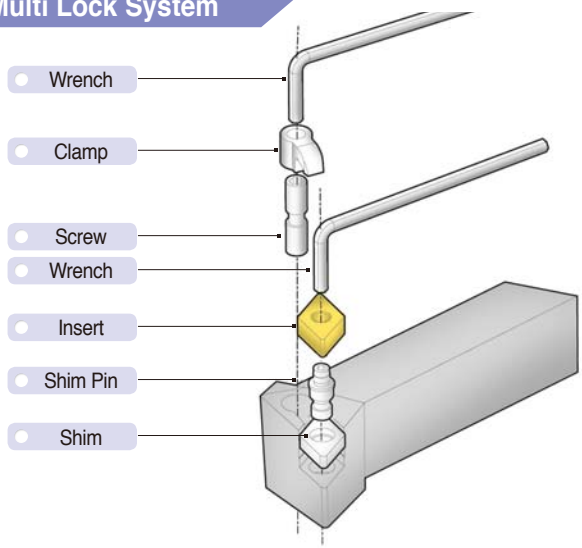
Wedge Clamp System



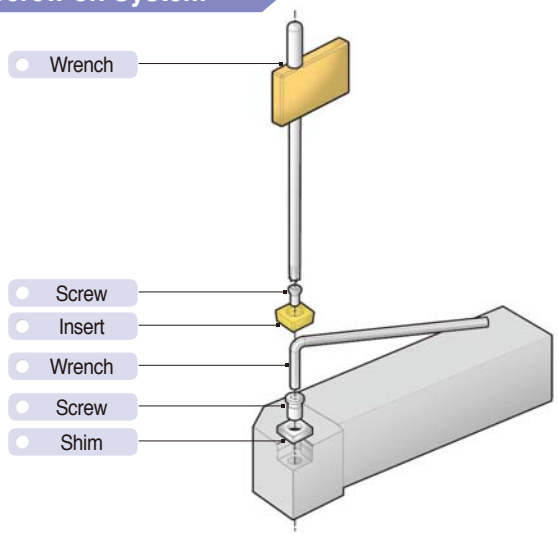
Clamp on System



Multi Lock System



Screw on System

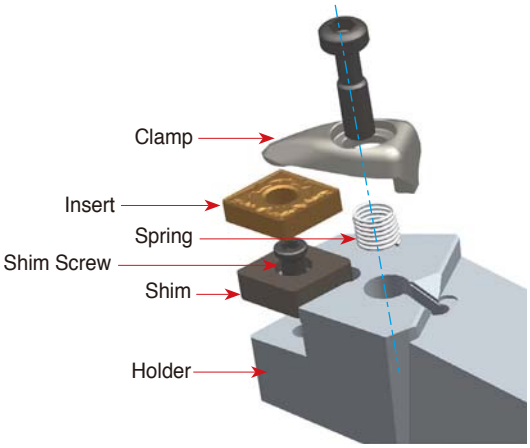


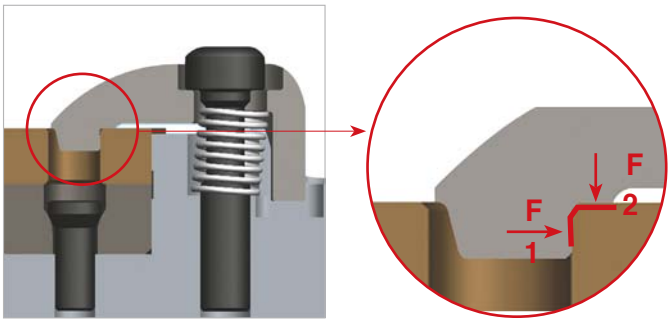
Double Clamp System

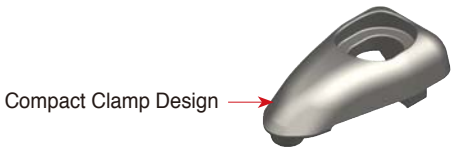
Stable clamping with double clamp system

Features

- Simple and powerful clamping system operated by only a single clamp screw
- The powerful double-clamping system (upper and internal) is suitable for machining in very tough cutting conditions
- The holder offers precision due to the special design in the rear of the clamp
- Compact and optimized design for avoiding chip interference with a powerful clamp





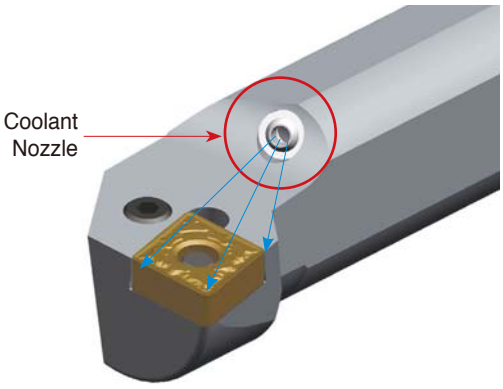


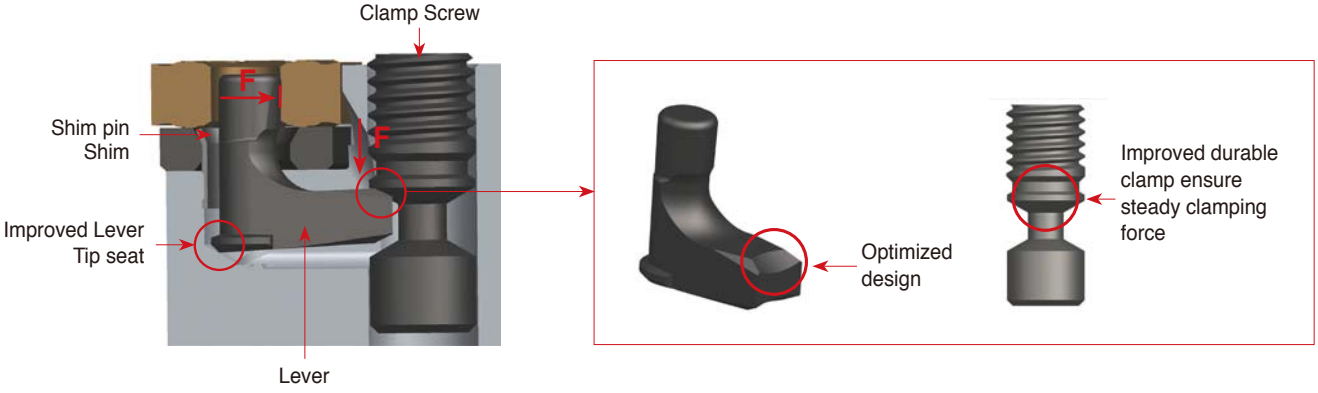
Lever Lock System

Stable clamping with double clamp system

Features

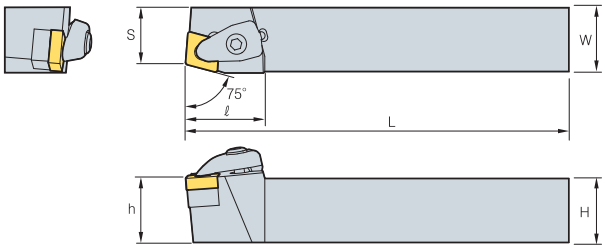
- The holder offers precision due to the special design due to the improved Lever tip seat
- The durability of parts has been improved
- Superior tool life due to powerful clamping system and optimized design of part.
- Part designation on holder body makes it easy to check the right part description for each product
- Adjustable coolant nozzle gives the option to change the direction of the coolant to optimize chip control and improve tool life

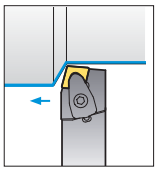




DCBNR/L

CN□□





75°

• R type insert

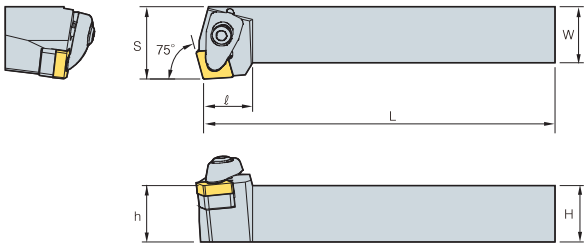
(mm)

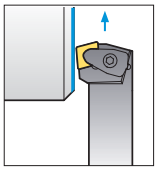
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DCBNR/L	2020-K12	20	20	125	17	20	31	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	22	25	31							
	3225-P12	32	25	170	22	32	31							
	2525-M16	25	25	150	22	25	36	CN□□1606□□	CVH5	CHX0622	SC54V	FTNA0511	SPR0811	HW40L
	3232-P16	32	32	170	27	32	36							
	3232-P19	32	32	170	27	32	40	CN□□1906□□	CVH6	CHX0622	SC63V	FTNA0511	SPR0811	HW40L
	4040-S19	40	40	250	35	40	40							

Applicable inserts B20 ~ B25

DCKNR/L

CN□□





75°

• R type insert

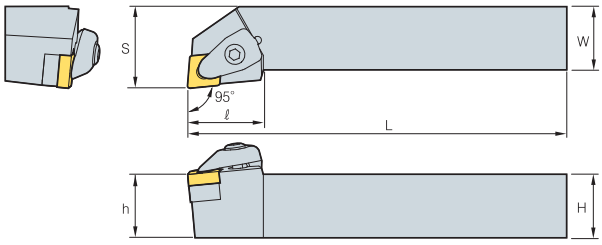
(mm)

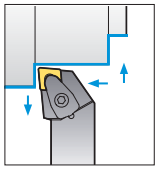
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DCKNR/L	2020-K12	20	20	125	25	20	21	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	32	25	21							
	3225-P12	32	25	170	32	32	21							
	3232-P16	32	32	170	40	32	26	CN□□1606□□	CVH5	CHX0622	SC54V	FTNA0511	SPR0811	HW40L
	4040-S16	40	40	250	50	40	26							

Applicable inserts B20 ~ B25

DCLNR/L

CN□□





95°

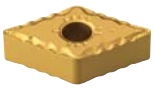
• R type insert

(mm)

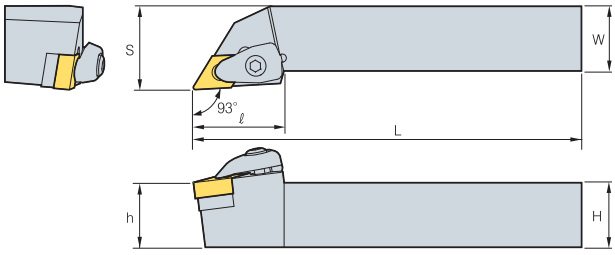
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DCLNR/L	2020-K09	20	20	125	25	20	24.5	CN□□0903□□	CVH3	CHX0415	SC32V	FTKA0307	SPR0510	HW25P
	2525-M09	25	25	150	32	25	24.5							
	2020-K12	20	20	125	25	20	30	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	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□□	CVH5	CHX0622	SC54V	FTNA0511	SPR0811	HW40L
	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□□	CVH6	CHX0622	SC63V	FTNA0511	SPR0811	HW40L
	3225-P19	32	25	170	32	32	40							
	3232-P19	32	32	170	40	32	40							
	4040-S19	40	40	250	50	40	40							

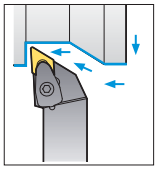
Applicable inserts B20 ~ B25

DDJNR/L



DN□□





93°

• R type insert

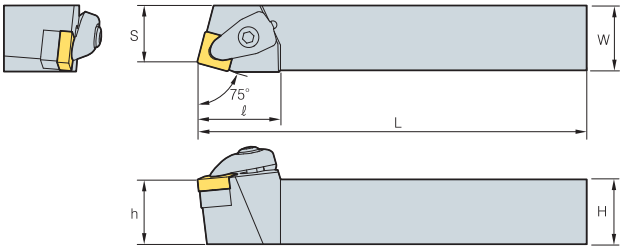
(mm)

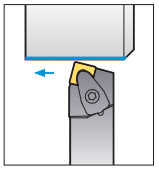
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DDJNR/L	**2020-K11**	20	20	125	25	20	30	DN□□1104□□	CVH3	CHX04	15SD32V	FTKA0307	SPR0510	HW25P
	2525-M11	25	25	150	32	25	30							
	3225-P11	32	25	170	32	32	30							
	3232-P11	32	32	170	40	32	30							
	2020-K15	20	20	125	25	20	35	DN□□1204□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	HW30P
	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□□1506□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	HW30P
	2525-M15-3	25	25	150	32	25	35							
	3232-P15-3	32	32	170	40	32	35							

Applicable inserts **B26 ~ B31**

DSBNR/L

SN□□





75°

• R type insert

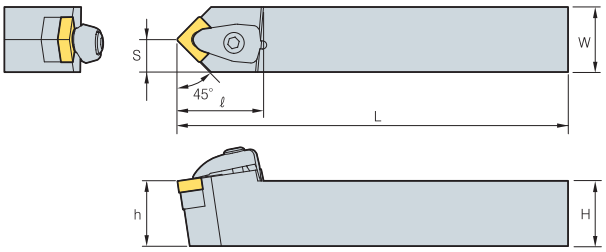
(mm)

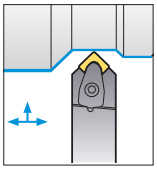
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DSBNR/L	**2020-K09**	20	20	125	17	20	25	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2525-M09	25	25	150	22	25	25							
	2020-K12	20	20	125	17	20	32	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	22	25	32							
	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□□	CVH5	CHX0622	SS54V	FTNA0511	SPR0811	HW40L
	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□□	CVH6	CHX0622	SS64V	FTNA0511	SPR0811	HW40L
	4040-S19	40	40	250	35	40	43							

Applicable inserts **B33 ~ B40**

DSDNN

SN□□





45°

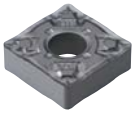
• R type insert

(mm)

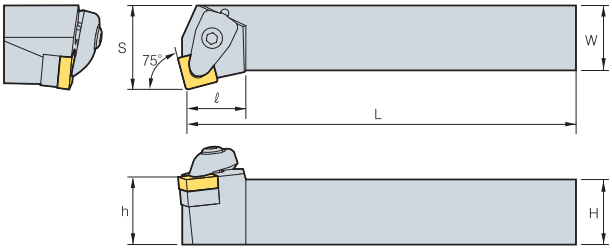
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DSDNN	**2020-K09**	20	20	125	10	20	26.5	SN□□0903□□	CV33	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2020-K12	20	20	125	10	20	33	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	12.5	25	33							
	3225-P12	32	25	170	12.5	32	33							
	3232-P12	32	32	170	16	32	33							
	2525-M15	25	25	150	12.5	25	39.4	SN□□1506□□	CVH5	CHX0622	SS54V	FTNA0511	SPR0811	HW40L
	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							

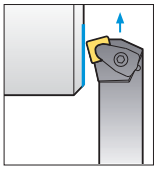
Applicable inserts **B33 ~ B40**

DSKNR/L



SN□□





75°

• R type insert

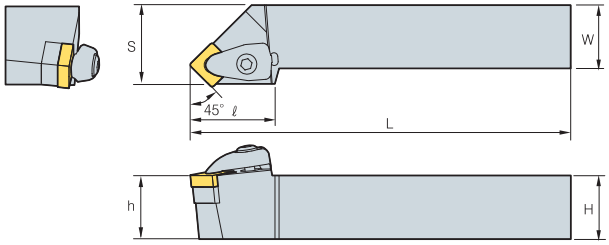
(mm)

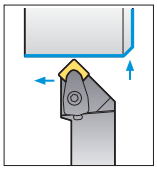
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DSKNR/L	**2020-K09**	20	20	125	25	20	20	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2020-K12	20	20	125	25	20	23	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	32	25	23							
	3232-P12	32	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 **B33 ~ B40**

DSSNR/L

SN□□





45°

• R type insert

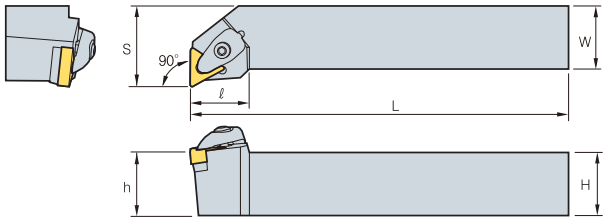
CVH4 CHX0518 SS44V FTKA0410 SPR0714 HW30P (mm)

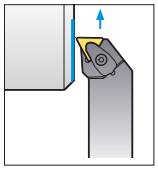
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DSSNR/L	**2020-K09**	20	20	125	25	20	28.5	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2020-K12	20	20	125	25	20	35	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	32	25	35							
	3225-P12	32	25	170	32	32	35							
	3232-P12	32	32	170	40	32	35							
	2525-M15	25	25	150	32	25	38.5	SN□□1506□□	CVH5	CHX0622	SS54V	FTKA0511	SPR0811	HW40L
	3232-P15	32	32	170	40	32	38.5							
	3232-P19	32	32	170	40	32	46	SN□□1906□□	CVH6	CHX0622	SS64V	FTKA0511	SPR0811	HW40L
	4040-S19	40	40	250	50	40	46							

Applicable inserts **B33 ~ B40**

DTFNR/L

TN□□





90°

• R type insert

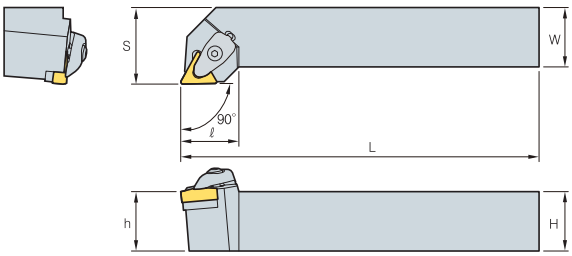
(mm)

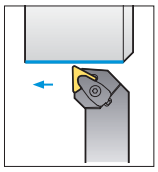
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DTFNR/L	**2020-K16**	20	20	125	25	20	24.5	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	HW25P
	2525-M16	25	25	150	32	25	24.5							
	3232-P16	32	32	170	40	32	23.5							
	2525-M22	25	25	150	32	25	33	TN□□2204□□	CVH4	CHX0518	ST44V	FTKA0410	SPR0714	HW30P
	3225-P22	32	25	170	32	32	33							
	3232-P22	32	32	170	40	32	33							

Applicable inserts **B41 ~ B48**

DTGNR/L

TN□□





90°

• R type insert

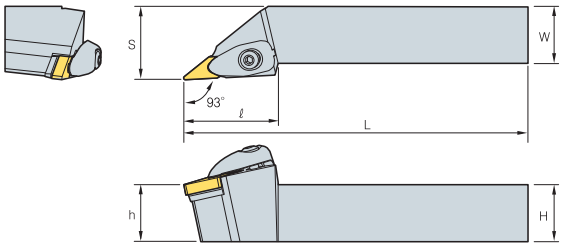
(mm)

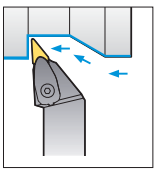
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DTGNR/L	**2020-K16**	20	20	125	25	20	24.5	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	HW25P
	2525-M16	25	25	150	32	25	24.5							
	3232-P16	32	32	170	40	32	24.5							
	2525-M22	25	25	150	32	25	32.6	TN□□2204□□	CVH4	CHX0518	ST44V	FTKA0410	SPR0714	HW30P
	3225-P22	32	25	170	32	32	32.6							
	3232-P22	32	32	170	40	32	32.6							

Applicable inserts **B41 ~ B48**

DVJNR/L

VN□□





93°

• R type insert

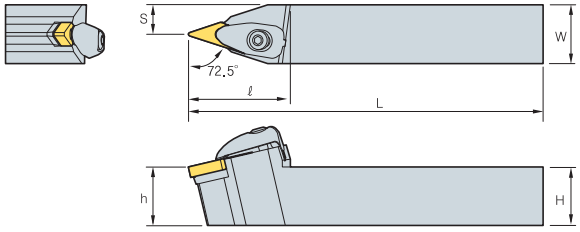
(mm)

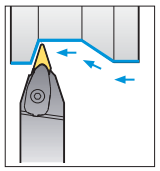
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DVJNR/L	**2020-K16**	20	20	125	25	20	41.5	VN□□1604□□	CVH3V	CHX0518	SV32V	FTNA03508	SPR0714	HW30P
	2525-M16	25	25	150	32	25	41.5							
	3232-P16	32	32	170	40	32	41.5							

Applicable inserts **B49 ~ B50**

DVVNN

VN□□





72.5°

• R type insert

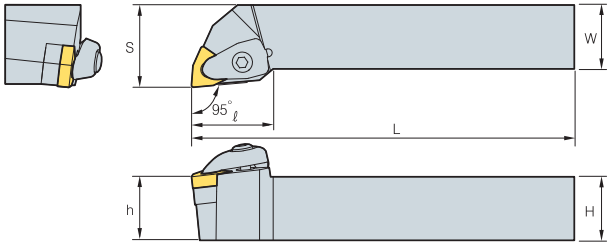
(mm)

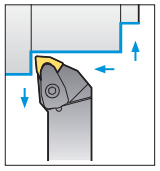
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DVVNN	**2020-K16**	20	20	125	10	20	40	VN□□1604□□	CVH3V	CHX0518	SV32V	FTNA03508	SPR0714	HW30P
	2525-M16	25	25	150	12.5	25	40							
	3232-P16	32	32	170	16	32	40							

Applicable inserts **B49 ~ B50**

DWLNR/L

WN□□





95°

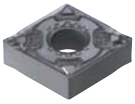
• R type insert

(mm)

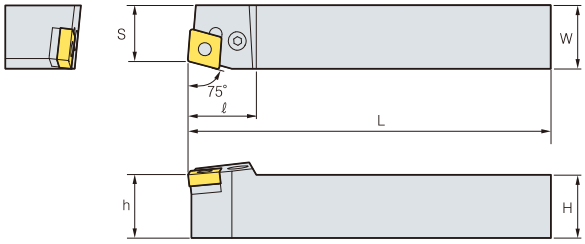
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Wrench
DWLNR/L	**2020-K06**	20	20	125	25	20	26	WN□□0604□□	CVH3	CHX0415	SW32V	FTKA0307	SPR0510	HW25P
	2525-M06	25	25	150	32	25	26							
	2020-K08	20	20	125	25	20	32	WN□□0804□□	CVH4	CHX0518	SW44V	FTKA0410	SPR0714	HW30P
	2525-M08	25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

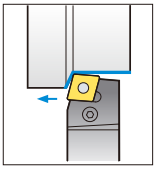
Applicable inserts **B51 ~ B54**

PCBNR/L



CN□□





75°

• R type insert

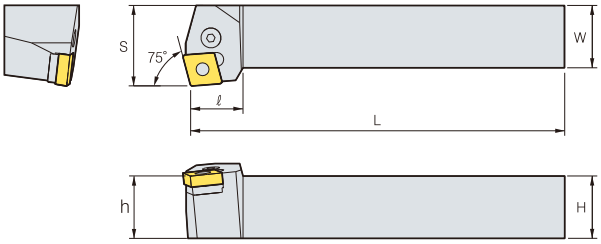
(mm)

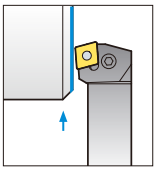
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PCBNR/L	**2020-K12**	20	20	125	17	20	27							
	2525-M12	25	25	150	22	25	27	CN□□1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
	3225-P12	32	25	170	22	32	27							
	2525-M16	25	25	150	22	25	33	CN□□1606□□	LV5	VHX0825	SC53	SP5	HW30L	LSPS6
	3232-P16	32	32	170	27	32	33							
	3232-P19	32	32	170	27	32	36	CN□□1906□□	LV6N	VHX1027N	SC63N	SP6N	HW40L	LSPS6
	4040-S19	40	40	250	35	40	36							
	4040-S25	40	40	250	35	40	47	CN□□2509□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
	4040-S25-5	40	40	250	35	40	47	CN□□2507□□						
	5050-T25	50	50	300	43	50	47	CN□□2509□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
PCBNR/L	**2020-K12N**	20	20	125	17	20	27							
	2525-M12N	25	25	150	22	25	27	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	HW30L	LSPS4
	3225-P12N	32	25	170	22	32	27							
	2525-M16N	25	25	150	22	25	33	CN□□1606□□	LV5N	VHX0820AN	SC53N	SP5N	HW30L	LSPS5
	3232-P16N	32	32	170	27	32	33							

Applicable inserts **B20 ~ B25**

PCKNR/L

CN□□





95°

• R type insert

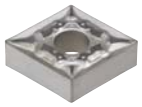
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PCKNR/L	**2020-K12**	20	20	125	25	20	27							
	2525-M12	25	25	150	32	25	27	CN□□1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
	3225-P12	32	25	170	40	32	30							
	3232-P16	32	32	170	40	32	26	CN□□1606□□	LV5	VHX0825	SC53	SP5	HW30L	HW30L
	4040-S16	40	40	250	50	40	25							
PCKNR/L	**2020-K12N**	20	20	125	25	20	27							
	2525-M12N	25	25	150	32	25	27	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	HW30L	LSPS4
	3225-P12N	32	25	170	40	32	30							
	3232-P16N	32	32	170	40	32	26	CN□□1606□□	LV5N	VHX0820AN	SC53N	SP5N	HW30L	LSPS5

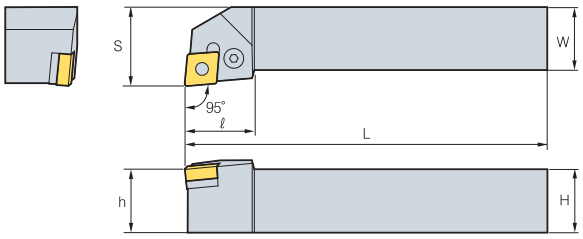
Applicable inserts **B20 ~ B25**

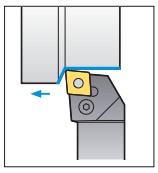
- **Improved holders and parts ensure performance and durability**
- **"N" stand for New type (Holders and parts)**

PCLNR/L



CN□□





95°

• R type insert

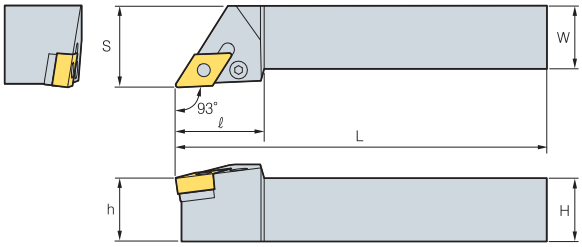
(mm)

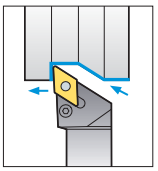
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PCLNR/L	1616-H09	16	16	100	20	16	20	CN□□0903□□	LV3	VHX0617	SC32	SP3	HW25L	LSPS3
	2020-K09	20	20	125	25	20	22							
	2525-M09	25	25	150	32	25	22							
	1616-H12	16	16	100	20	16	28	CN□□1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
	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							
	2525-M16	25	25	150	32	25	33	CN□□1606□□	LV5	VHX0825	SC53	SP5	HW30L	LSPS5
	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							
	4040-S25	40	40	250	50	40	47	CN□□2509□□	LV8N	VHX1236N	SC84N	SP8N	HW50L	LSPS8
	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							
PCLNR/L	1616-H09N	16	16	100	20	16	20	CN□□0903□□	LV3N	VHX0617N	SC32N	SP3	HW25L	LSPS3
	2020-K09N	20	20	125	25	20	22							
	2525-M09N	25	25	150	32	25	22							
	1616-H12N	16	16	100	20	16	28	CN□□1204□□	LV4N	VHX0817N VHX0820N	SC42N	SP4N	HW30L	LSPS4
	2020-K12N	20	20	125	25	20	28							
	2525-M12N	25	25	150	32	25	28							
	3225-P12N	32	25	170	32	32	28							
	3232-P12N	32	32	170	40	32	28							
	2525-M16N	25	25	150	32	25	33	CN□□1606□□	LV5N	VHX0820AN	SC53N	SP5N	HW30L	LSPS5
	3232-P16N	32	32	170	40	32	33							

Applicable inserts **B20 ~ B25**

PDJNR/L

DN□□





93°

• R type insert

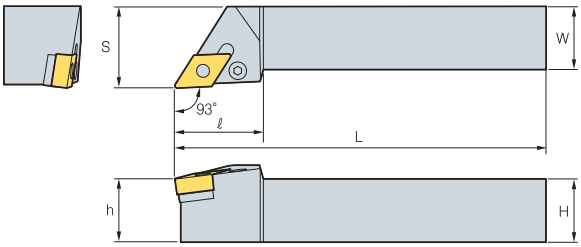
(mm)

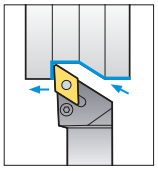
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PDJNR/L	1616-H11	16	16	100	20	16	25	DN□□1104□□	LV3	VHX0617	SD317	SP3	HW25L	LSPS3
	2020-K11	20	20	125	25	20	25							
	2525-M11	25	25	150	32	25	30							
	2020-K15	20	20	125	25	20	35	DN□□1506□□	LV4B	VHX0821	SD42	SP4	HW30L	LSPS4
	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 **B26 ~ B31**

PDJNR/L

DN□□





93°

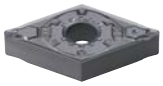
• R type insert

(mm)

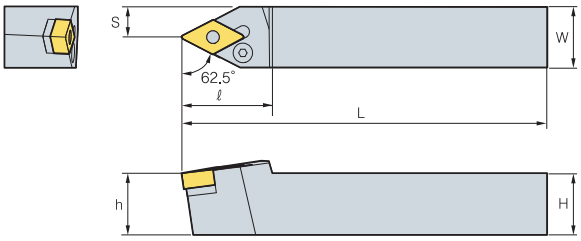
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PDJNR/L	**1616-H11N**	16	16	100	20	16	25	DN□□1104□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	LSPS3
	2020-K11N	20	20	125	25	20	25							
	2525-M11N	25	25	150	32	25	30							
	2020-K15N	20	20	125	25	20	35	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	HW30L	LSPS4
	2525-M15N	25	25	150	32	25	35							
	3225-P15N	32	25	170	32	32	35							
	3232-P15N	32	32	170	40	32	35							
	2020-K15-3N	20	20	125	25	20	35	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	HW30L	LSPS4
	2525-M15-3N	25	25	150	32	25	35							
	3232-P15-3N	32	32	170	40	32	35							

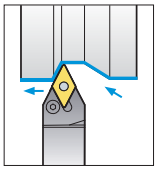
Applicable inserts **B26 ~ B31**

PDNNR/L



DN□□





62.5°

• R type insert

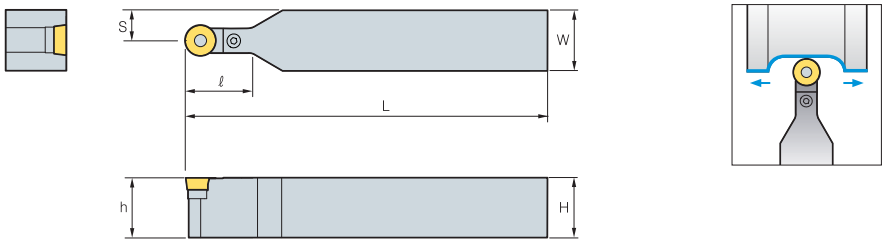
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PDNNR/L	**2020-K15**	20	20	125	8	20	37	DN□□1506□□	LV4B	VHX0821	SD42	SP4	HW30L	LSPS4
	2525-M15	25	25	150	12.5	25	37							
	3232-P15	32	32	170	16	32	37							
	4025-M15	40	25	150	12.5	32	37							
	2525-M15-3	25	25	150	12.5	25	37	DN□□1504□□	LV4	VHX0821	SD42	SP4	HW30L	LSPS4
	4025-M15-3	40	25	150	12.5	25	37							
PDNNR/L	**2020-K15N**	20	20	125	8	20	37	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	HW30L	LSPS4
	2525-M15N	25	25	150	12.5	25	37							
	3232-P15N	32	32	170	16	32	37							
	2525-M15-3N	25	25	150	12.5	25	37	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	HW30L	LSPS4
	3232-P15-3N	32	32	170	16	32	37							

Applicable inserts **B26 ~ B31**

PRDCN

RCMX



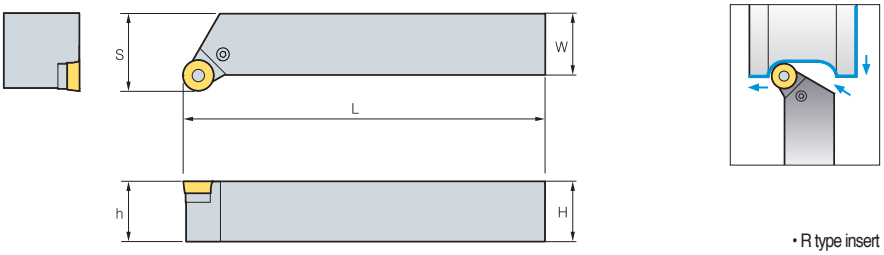
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PRDCN	**2020-M10**	20	20	150	15	20	24	RCMX 1003M0	LR10	VHX0514	SR10	SP3	HW20L	LSPS3
	2525-M10	25	25	150	17.5	25	24							
	2525-M12	25	25	150	18.5	25	24	RCMX 1204M0	LR12	VHX0617	SR12	SP3	HW25L	LSPS3
	2020-K12	20	20	125	16	20	24							
	3225-Q12	32	25	180	18.5	32	24							
	2525-Q16	25	25	180	20.5	25	30	RCMX 1606M0	LR16	VHX0621	SR16	SP4	HW25L	LSPS4
	3225-Q16	32	25	180	20.5	32	30							
	3232-Q16	32	32	180	24	32	35							
	3232-Q20	32	32	180	26	32	40	RCMX 2006M0	LR20	VHX0823	SR20	SP20	HW30L	LSPS5
	4040-S25	40	40	250	32.5	40	42	RCMX 2507M0	LR25	VHX1030	SR25	SP6N	HW40L	LSPS6
	4040-T25	40	40	300	32.5	40	42							
	5050-U32	50	50	350	41	50	52	RCMX 3209M0	LR32	VHX1236	SR32	SP8N	HW50L	LSPS8

Applicable inserts **B63**

PRGCR/L

RCMX



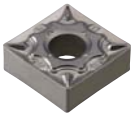
• R type insert

(mm)

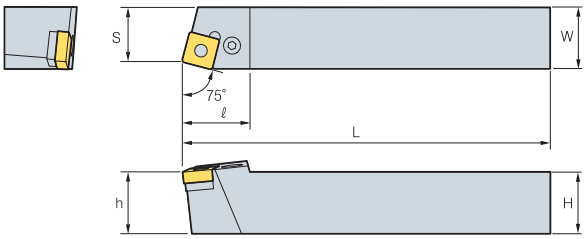
Designation		H	W	L	S	h	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PRGCR/L	**2020-K10**	20	20	125	25	20	RCMX 1003M0	LR10	VHX0514	SR10	SP3	HW20L	LSPS3
	2525-M10	25	25	150	32	25							
	2020-K12	20	20	125	25	20	RCMX 1204M0	LR12	VHX0617	SR12	SP3	HW25L	LSPS3
	2525-M12	25	25	150	32	25							
	3225-P12	32	25	170	32	32							
	2525-M16	25	25	150	32	25	RCMX 1606M0	LR16	VHX0621	SR16	SP4	HW25L	LSPS4
	3225-P16	32	25	170	32	32							
	3232-P20	32	32	170	40	32	RCMX 2006M0	LR20	VHX0823	SR20	SP20	HW30L	LSPS5
	4040-S25	40	40	250	50	40	RCMX 2507M0	LR25	VHX1030	SR25	SP6N	HW40L	LSPS6

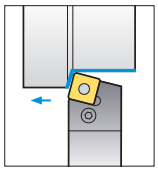
Applicable inserts **B63**

PSBNR/L



SN□□



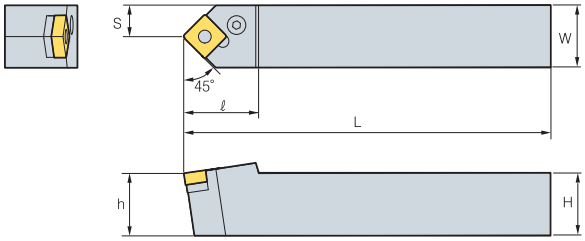


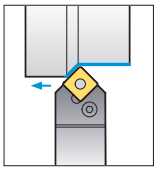
75°
• R type insert
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PSBNR/L	**1616-H09**	16	16	100	13	16	21	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	2020-K09	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							
	3232-P12	32	32	170	27	32	28							
	2525-M15	25	25	150	22	25	35	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
	3232-P15	32	32	170	27	32	35							
	3232-P19	32	32	170	27	32	40	SN□□1906□□	LV6N	VHX1027N	SS63N	SP6N	HW40L	LSPS6
	4040-S19	40	40	250	35	40	40							
	4040-S25	40	40	250	35	40	50	SN□□2507□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
	4040-S25-6	40	40	250	35	40	50	SN□□2509□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
	5050-T25	50	50	300	43	50	50	SN□□2507□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
PSBNR/L	**1616-H09N**	16	16	100	13	16	21	SN□□0903□□	LV3N	VHX0617N	SS32N	SP3	HW25L	LSPS3
	2020-K09N	20	20	125	17	20	23							
	2020-K12N	20	20	125	17	20	28	SN□□1204□□	LV4N	VHX0820N	SS42N	SP4N	HW30L	LSPS4
	2525-M12N	25	25	150	22	25	28							
	3225-P12N	32	25	150	22	25	28							
	3232-P12N	32	32	170	27	32	28							
	2525-M15N	25	25	150	22	25	35	SN□□1506□□	LV5N	VHX0820AN	SS53N	SP5N	HW30L	LSPS5

Applicable inserts **B33 ~ B40**

PSDNN





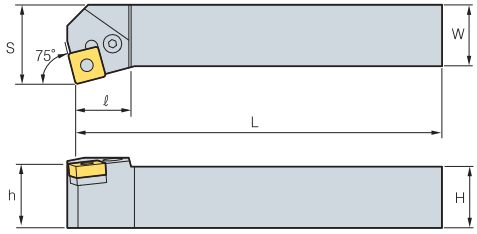
45°
(mm)

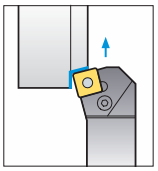
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PSDNN	**1616-H09**	16	16	100	8	16	23	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	2020-K12	20	20	125	10	20	30	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	12.5	25	30							
	3225-P12	32	25	170	12.5	32	30							
	3232-P12	32	32	170	16	32	40							
	2525-M15	25	25	150	12.5	25	40	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
	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	SN□□2509□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
	5050-T25-6	50	50	300	25	50	50							
PSDNN	**1616-H09N**	16	16	100	8	16	23	SN□□0903□□	LV3N	VHX0617N	SS32N	SP3	HW25L	LSPS3
	2020-K12N	20	20	125	10	20	30	SN□□1204□□	LV4N	VHX0820N	SS42N	SP4N	HW30L	LSPS4
	2525-M12N	25	25	150	12.5	20	30							
	3225-P12N	32	25	170	12.5	32	30							
	3232-P12N	32	32	170	16	32	40							
	2525-M15N	25	25	150	12.5	25	40	SN□□1506□□	LV5N	VHX0820AN	SS53N	SP5N	HW30L	LSPS5
	3232-P15N	32	32	170	16	32	40							

Applicable inserts **B36 ~ B40**

PSKNR/L

SN□□





75°

• R type insert

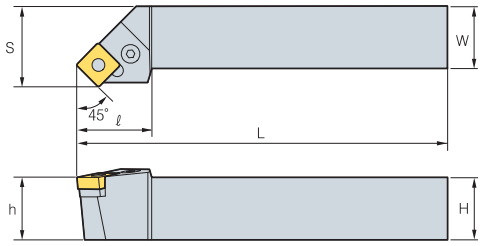
(mm)

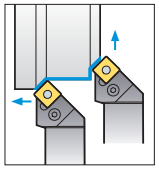
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PSKNR/L	1616-H09	16	16	100	20	16	17	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	2020-K09	20	20	125	25	20	20							
	2020-K12	20	20	125	25	20	23	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	32	25	23							
	3232-P12	32	32	170	40	32	23							
	2525-M15	25	25	150	32	25	28	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
	3232-P15	32	32	170	40	32	28							
	3232-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	SN□□2507□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
	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□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
PSKNR/L	1616-H09N	16	16	100	20	16	17	SN□□0903□□	LV3N	VHX0617N	SS32N	SP3	HW25L	LSPS3
	2020-K09N	20	20	125	25	20	20							
	2020-K12N	20	20	125	25	20	26	SN□□1204□□	LV4N	VHX0820N	SS42N	SP4N	HW30L	LSPS4
	2525-M12N	25	25	150	32	25	26							
	3232-P12N	32	32	170	40	32	26							
	2525-M15N	25	25	150	32	25	32	SN□□1506□□	LV5N	VHX0820AN	SS53N	SP5N	HW30L	LSPS5
	3232-P15N	32	32	170	40	32	32							

Applicable inserts B33 ~ B40

PSSNR/L

SN□□





45°

• R type insert

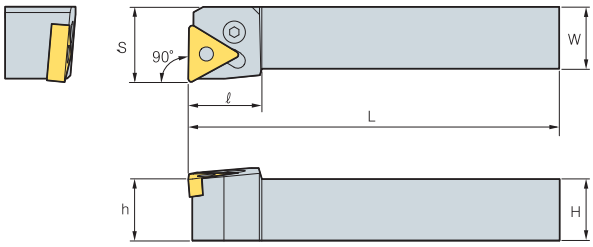
(mm)

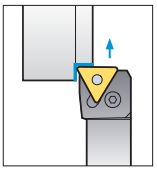
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PSSNR/L	1616-H09	16	16	100	20	16	25	SN□□0903□□	LV3	VHX0617	SS32	SP10	HW25L	LSPS3
	2020-K12	20	20	125	25	20	30	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	32	25	36							
	3232-P12	32	32	170	40	32	40							
	2525-M15	25	25	150	32	25	36	SN□□1506□□	LV5	VHX0825	SS53	SP5	HW30L	LSPS5
	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□□	LV8N	VHX1236N	SS84N	SP8N	HW50L	LSPS8
PSSNR/L	1616-H09N	16	16	100	20	16	25	SN□□0903□□	LV3N	VHX0617N	SS32N	SP3	HW25L	LSPS3
	2020-K12N	20	20	125	25	20	30	SN□□1204□□	LV4N	VHX0821N	SS42N	SP4N	HW30L	LSPS4
	2525-M12N	25	25	150	32	25	36							
	3225-P12N	32	25	170	32	32	45							
	3232-P12N	32	32	170	40	32	40							
	2525-M15N	25	25	150	32	25	36	SN□□1506□□	LV5N	VHX08209N	SS53N	SP5N	HW30L	LSPS5
	3232-P15N	32	32	170	40	32	45							

Applicable inserts B33 ~ B40

PTFNR/L

TN□□



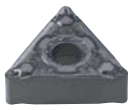


90°
• R type insert
(mm)

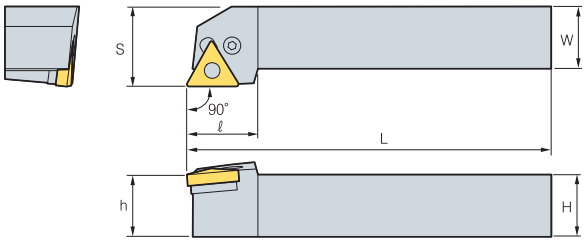
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PTFNR/L	1616-H16	16	16	100	20	16	20	TN□□1604□□	LV3	VHX0617	ST317	SP3	HW25L	LSPS3
	2020-K16	20	20	125	25	20	20							
	2525-M16	25	25	150	32	25	20							
	2525-M22	25	25	150	32	25	25	TN□□2204□□	LV4	VHX0821	ST42	SP4	HW30L	LSPS4
	3232-P22	32	32	170	40	32	25							
	3232-P27	32	32	170	40	32	34	TN□□2706□□	LV5	VHX0825	ST53	SP5	HW30L	LSPS5
	4040-S27	40	40	250	50	40	34							
PTFNR/L	1616-H16N	16	16	100	20	16	20	TN□□1604□□	LV3N	VHX0617N	ST317N	SP3	HW25L	LSPS3
	2020-K16N	20	20	125	25	20	20							
	2525-M16N	25	25	150	32	25	20							
	2525-M22N	25	25	150	32	25	25	TN□□2204□□	LV4N	VHX0820N	ST42N	SP4N	HW30L	LSPS4
	3232-P22N	32	32	170	40	32	25							
	3232-P27N	32	32	170	40	32	34	TN□□2706□□	LV5AN	VHX0823N	ST53N	SP5N	HW30L	LSPS5
	4040-S27N	40	40	250	50	40	34							

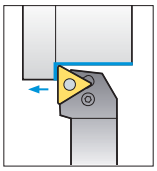
Applicable inserts **B41 ~ B48**

PTGNR/L



TN□□





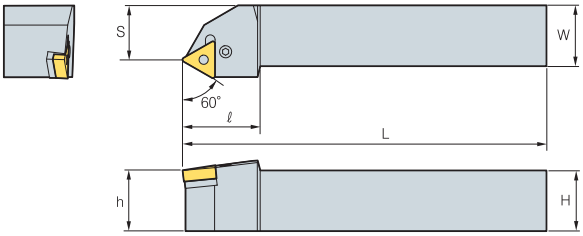
90°
• R type insert
(mm)

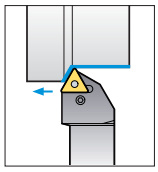
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch
PTGNR/L	1212-F11	12	12	80	16	12	16	TN□□1103□□	LV2	VHX0509B	-	-	HW20L	-
	1616-H11	16	16	100	20	16	18							
	2020-K11	20	20	125	25	20	19							
	2525-M11	25	25	150	32	25	20							
	1616-H16	16	16	100	20	16	20	TN□□1604□□	LV3	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							
PTGNR/L	1616-H16N	16	16	100	20	16	20	TN□□1604□□	LV3N	VHX0617N	ST317N	SP3	HW25L	LSPS3
	2020-K16N	20	20	125	25	20	20							
	2525-M16N	25	25	150	32	25	20							
	3232-P16N	32	32	170	40	32	20							
	2525-M22N	25	25	150	32	25	28	TN□□2204□□	LV4N	VHX0820N	ST42N	SP4N	HW30L	LSPS4
	3232-P22N	32	32	170	40	32	28							
	3232-P27N	32	32	170	40	32	33	TN□□2706□□	LV5AN	VHX0823N	ST53N	SP5N	HW30L	LSPS5
	4040-S27N	40	40	250	50	40	33							

Applicable inserts **B41 ~ B48**

PTTNR/L

TN□□





60°

• R type insert

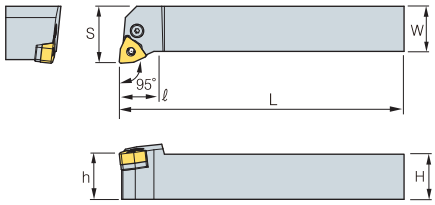
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin 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
PTTNR/L	**1616-H16N**	16	16	100	13	16	25	TN□□1604□□	LV3N	VHX0617N	ST317N	SP3	HW25L	LSPS3
	2020-K16N	20	20	125	17	20	25							
	2525-M16N	25	25	150	22	25	32							
	2525-M22N	25	25	150	22	25	32	TN□□2204□□						

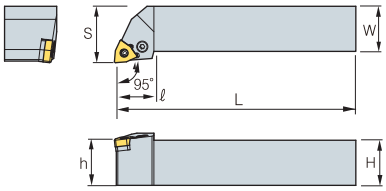
Applicable inserts **B41 ~ B48**

PWLNR/L

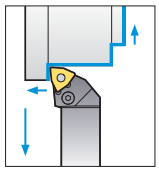
WN□□



[Fig.1]



[Fig.2]



95°

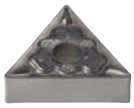
• R type insert

(mm)

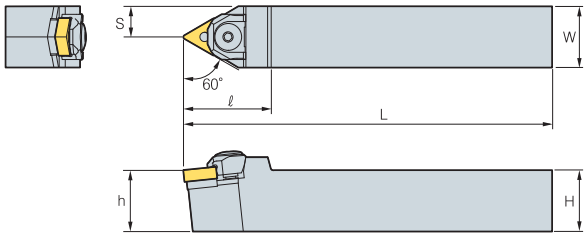
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	ShimPin Punch	Fig
PWLNR/L	**1616-H06**	16	16	100	20	16	20	WN□□0604□□	LV3	VHX0617	SW317	SP3	HW25L	LSPS3	1
	2020-K06	20	20	125	25	20	20								
	2525-M06	25	25	150	32	25	20								
	2020-K08	20	20	125	25	20	26	WN□□0804□□	LV4	VHX0821	SW42	SP4	HW30L	LSPS4	2
	2525-M08	25	25	150	32	25	26								
PWLNR/L	**1616-H06N**	16	16	100	20	16	20	WN□□0604□□	LV3N	VHX0617N	SW317N	SP3	HW25L	LSPS3	1
	2020-K06N	20	20	125	25	20	20								
	2525-M06N	25	25	150	32	25	20								
	2020-K08N	20	20	125	25	20	26	WN□□0804□□	LV4N	VHX0820N	SW42N	SP4N	HW30L	LSPS4	2
	2525-N08N	25	25	150	32	25	26								

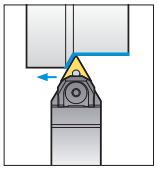
Applicable inserts **B51 ~ B54**

WTENN



TN□□





60°

• R type insert

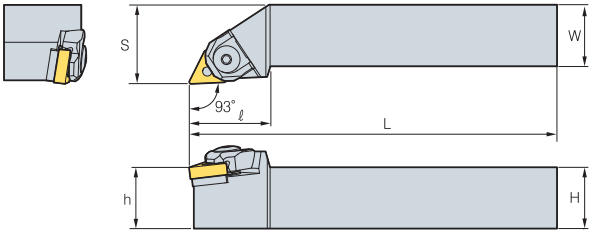
(mm)

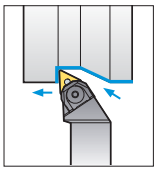
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	StopperRing	Shim	Shim Pin	Nut	Wrench
WTENN	2020-K16	20	20	125	10	20	36	TN□□1604□□	CMH6R6	MHX0626	ER04	ST32M	SP3M-1 / SP3M	N0407	HW30L
	2525-M16	25	25	150	12.5	25	36								
	2525-M22	25	25	150	12.5	25	42	TN□□2204□□	CMH6R1	MHX0626	ER04	ST43M	SP4M	N0508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

Applicable inserts **B41 ~ B48**

WTJNR/L

TN□□





93°

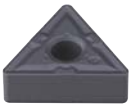
• R type insert

(mm)

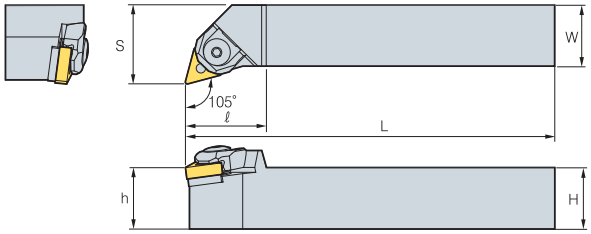
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	StopperRing	Shim	Shim Pin	Nut	Wrench
WTJNR/L	2020-K16	20	20	125	25	20	33	TN□□1604□□	CMH6R6	MHX0626	ER04	ST32M	SP3M-1 / SP3M	N0407	HW30L
	2525-M16	25	25	150	32	25	33								
	3232-P16	32	32	170	40	32	33								
	2525-M22	25	25	150	32	25	35	TN□□2204□□	CMH6R1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

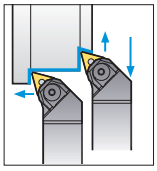
Applicable inserts **B41 ~ B48**

WTXNR/L



TN□□





105°

• R type insert

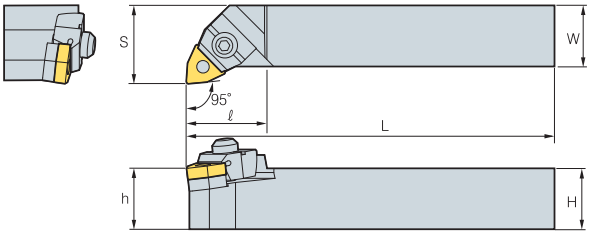
(mm)

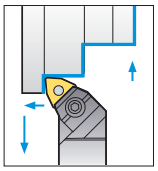
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	StopperRing	Shim	Shim Pin	Nut	Wrench
WTXNR/L	2020-K16	20	20	125	25	20	30	TN□□1604□□	CMH6R6	MHX0626	ER04	ST32M	SP3M-1 / SP3M	N0407	HW25L HW30L
	2525-M16	25	25	150	32	25	33								
	3232-P16	32	32	170	40	32	33								

Applicable inserts **B41 ~ B48**

WWLNR/L

WN□□





95°

• R type insert

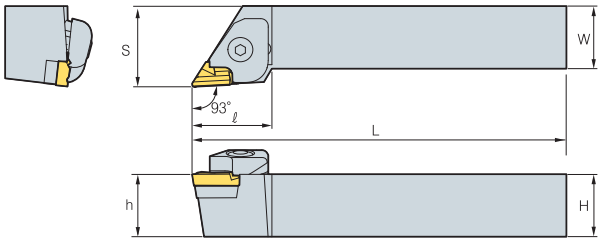
(mm)

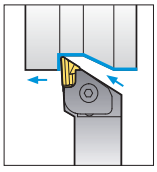
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	C-Ring	Shim	Shim Pin	Nut	Wrench
WWLNR/L	**2020-K08**	20	20	125	25	20	32	WN□□0804□□	CMH6R/L3	MHX0630	CR05	SW43M	SP2M	N0508	HW30L
	2525-M08	25	25	150	32	25	33		CMH6R2				SP4M		HW40L
	3232-P08	32	32	170	40	32	33								

Applicable inserts **B51 ~ B54**

CKJNR/L

KN□□





93°

• R type insert

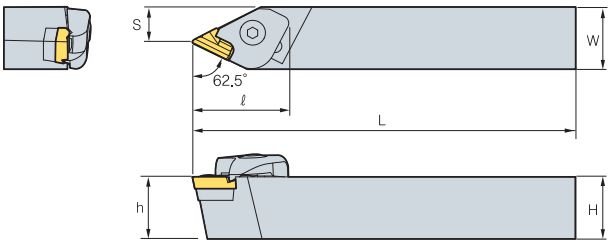
(mm)

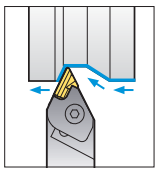
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Spring	Shim	Pin+Spring	Shim Screw	Wrench
CKJNR	**2020-K16**	20	20	125	25	20	32	KN□□1604□□R	CTH6R1	CHX0625	SR3	SK33C	PN0515 / SR4	SHX0310	HW20L HW40L
	2525-M16	25	25	150	32	25	32								
	3225-M16	32	25	150	32	32	32								
	3225-P16	32	25	170	32	32	32								
	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	CTH6L1	CHX0625	SR3	SK33CL	PN0515 / SR4	SHX0310	HW20L HW40L
	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 **B32**

CKNNR/L

KN□□





62.5°

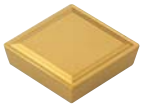
• R type insert

(mm)

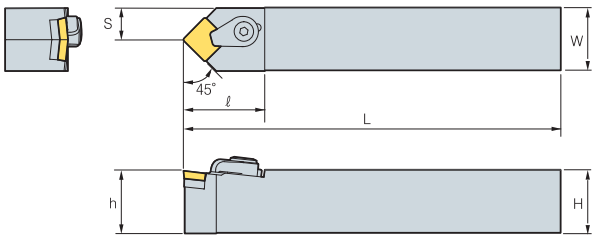
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Spring	Shim	Pin+Spring	Shim Screw	Wrench
CKNNR	**2525-M16**	25	25	150	14.3	25	37	KN□□ 1604□□R	CTH6R1	CHX0625	SR3	SK33C	PN0515 / SR4	SHX0310	HW20L HW40L
	3232-P16	32	32	170	16.8	32	37								
CKNNL	**2525-M16**	25	25	150	14.3	25	37	KN□□ 1604□□L	CTH6L1	CHX0625	SR3	SK33CL	PN0515 / SR4	SHX0310	HW20L HW40L
	3232-P16	32	32	170	16.8	32	37								

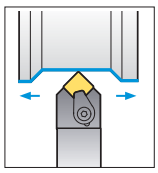
Applicable inserts **B32**

CSDPN



SP□R





45°

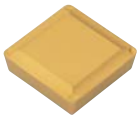
• R type insert

(mm)

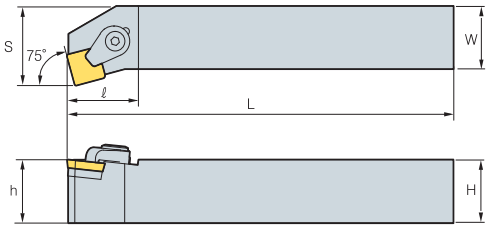
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	C-Ring	Wrench
CSDPN	**1616-H09**	16	16	100	8	16	30	SP□R 0903□□	CH53R1	CH0515C	SS32C	SP3C	CR03C	HW25L
	2525-M12	25	25	150	12.5	25	35	SP□R 1203□□	CH6R5	CHX0622C	SS42C	SP3C	CR04C	HW30L

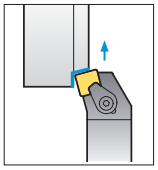
Applicable inserts **B65 ~ B66**

CSKPR/L



SP□R





75°

• R type insert

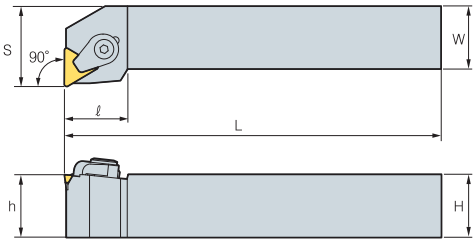
(mm)

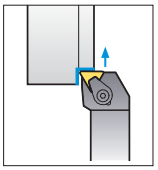
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	C-Ring	Wrench
CSKPR/L	**2525-M12**	25	25	150	32	20	32	SP□R 1203□□	CH6RO	CHX0622C	SS42C	SP3C	CR04C	HW30L

Applicable inserts **B65 ~ B66**

CTFPR/L

TP□R





90°

• R type insert

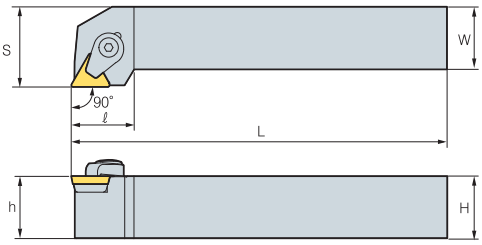
(mm)

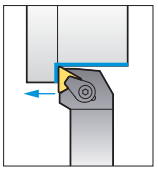
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	C-Ring	Wrench
CTFPR/L	**2020-K16**	25	25	125	25	20	32	TP□R 1603□□	CH6R5	CHX0622C	ST32C	SP3C	CR04C	HW30L
	2525-M16	25	25	150	32	25	32							

Applicable inserts **B70 ~ B72**

CTGPR/L

TP□R





90°

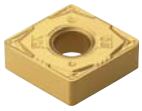
• R type insert

(mm)

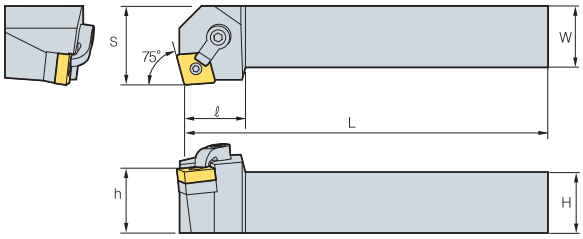
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	C-Ring	Wrench
CTGPR/L	**1212-F11**	12	12	80	16	12	20	TP□R 1103□□	CH53R1	CHX0515C	-	-	CR03C	HW25L
	1616-H11	16	16	100	20	16	20							
	2020-K11	20	20	125	25	20	20							
	2020-K16	20	20	125	25	20	25	TP□R 1603□□	CH6R5	CHX0622C	ST32C	SP3C	CR04C	HW30L
	2525-M16	25	25	150	32	25	25							
	2525-M22	25	25	150	32	25	32	TP□R 2204□□	CH83R1	CHX0823C	ST43C	SP4C	CR05C	HW40L
	3232-P22	32	32	170	40	32	32							

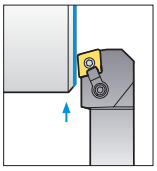
Applicable inserts **B70 ~ B72**

MCKNR/L



CN□□





75°

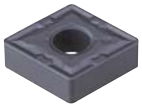
• R type insert

(mm)

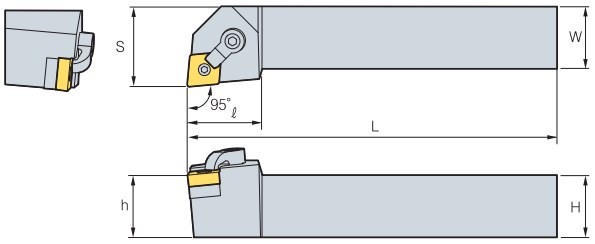
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MCKNR/L	**2020-K12**	20	20	125	25	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
	2525-M12	25	25	150	32	25	32						
	3232-P12	32	32	170	40	32	32						

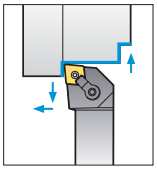
Applicable inserts **B20 ~ B25**

MCLNR/L



CN□□





95°

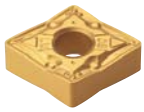
• R type insert

(mm)

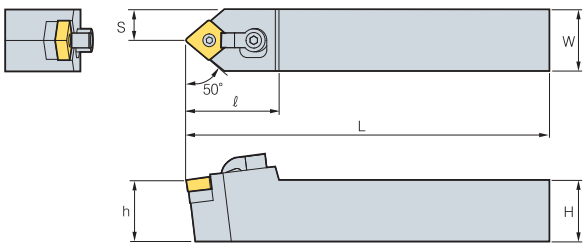
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MCLNR/L	**1616-H09**	16	16	100	20	16	25	CN□□0903□□	CDH7N	DHA10-32-19	SC32D	SP3DS	HW23.8L HW19.8L
	2020-K09	20	20	125	25	20	25						
	2525-M09	25	25	150	32	25	25						
	2020-K12	20	20	125	25	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D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

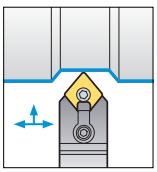
Applicable inserts **B20 ~ B25**

MCMNN



CN□□





50°

• R type insert

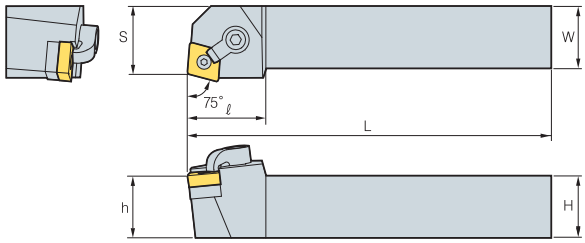
(mm)

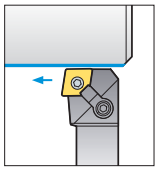
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MCMNN	**2020-K12**	20	20	125	10	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
	2525-M12	25	25	150	12.5	25	32						
	3232-P12	32	32	170	16	32	32						
	2525-M16	25	25	150	12.5	25	40	CN□□1606□□	CDH8N	DHA5/16-32	SC53S	SP5D	HW39.7L HW31.8L
	3232-P16	32	32	170	16	32	40						
	3232-P19	32	32	170	16	32	40	CN□□1906□□	CDH8N	DHA5/16-32	SD63D	SP6D	HW39.7L HW35.7L
	4040-S19	40	40	250	20	40	32						

Applicable inserts **B20 ~ B25**

MCRNR/L

CN□□





75°

• R type insert

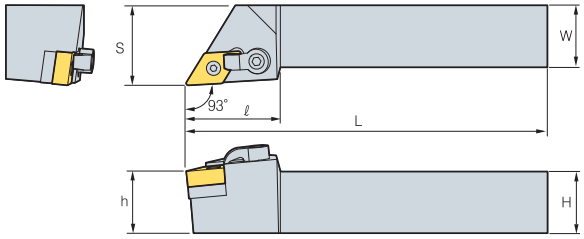
(mm)

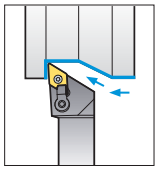
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MCRNR/L	**2020-K12**	20	20	125	22	20	32	CN□□1204□□	CDH8N1	DHA5/16-32	SC43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	27	25	32						
	2525-M16	25	25	150	27	25	33	CN□□1606□□	CDH8N1	DHA5/16-32	SC53D	SP5D	HW39.7L HW31.8L
	3232-P16	32	32	170	35	32	33						
	3232-P19	32	32	170	35	32	38	CN□□1906□□	CDH8N1	DHA5/16-32	SC63D	SP6D	HW39.7L HW35.7L
	4040-S19	40	40	250	43	40	38						

Applicable inserts **B20 ~ B25**

MDJNR/L

DN□□





93°

• R type insert

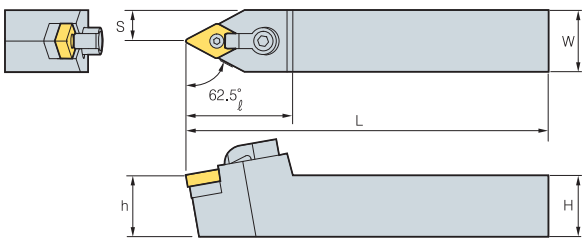
(mm)

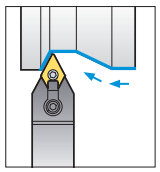
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MDJNR/L	**2020-K11**	20	20	125	25	20	32	DN□□1204□□	CDH6N	DHA1/4-19	SD32D	SP3D	HW31.8L HW19.8L
	2525-M11	25	25	150	32	25	32						
	2020-K15-3	20	20	125	25	20	36	DN□□1504□□	CDH6N	DHA1/4-25	SD43D	SP4D	HW31.8L HW23.8L
	2525-M15-3	25	25	150	32	25	36						
	3232-P15-3	32	32	170	40	32	36						
	2020-K15	20	20	125	25	20	36	DN□□1506□□	CDH6N	DHA1/4-25	SD43D	SP4DL	HW31.8L HW23.8L
	2525-M15	25	25	150	32	25	36						
	3232-P15	32	32	170	40	32	36						

Applicable inserts **B26 ~ B31**

MDNNN

DN□□





62.5°

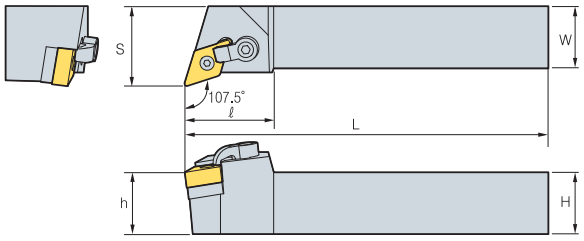
(mm)

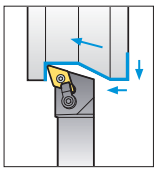
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MDNNN	**2525-M15-3**	25	25	150	12.5	25	41	DN□□1504□□	CDH8N	DHA5/16-32	SD43D	SP4D	HW39.7L HW23.8L
	2525-M15	25	25	150	12.5	25	41	DN□□1506□□	CDH8N	DHA5/16-32	SD43D	SP4DL	HW39.7L HW23.8L

Applicable inserts **B26 ~ B31**

MDQNR/L

DN□□





107.5°

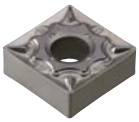
• R type insert

(mm)

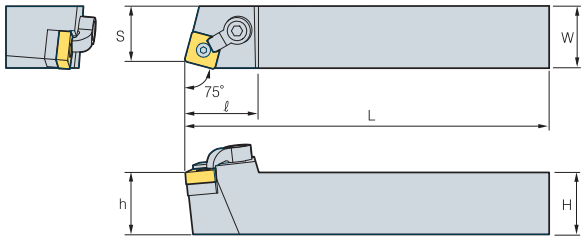
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MDQNR/L	**2525-M15-3**	25	25	150	32	25	36	DN□□1504□□	CDH6N	DHA1/4-25	SD43D	SP4D	HW31.8L HW23.8L
	3232-P15-3	32	32	170	40	32	36						
	2525-M15	25	25	150	32	25	36	DN□□1506□□	CDH6N	DHA1/4-25	SD43D	SP4DL	HW31.8L HW23.8L
	3232-M15	32	32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

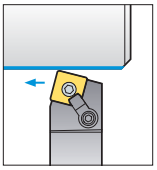
Applicable inserts **B26 ~ B31**

MSBNR/L



SN□□





75°

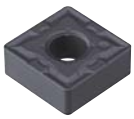
• R type insert

(mm)

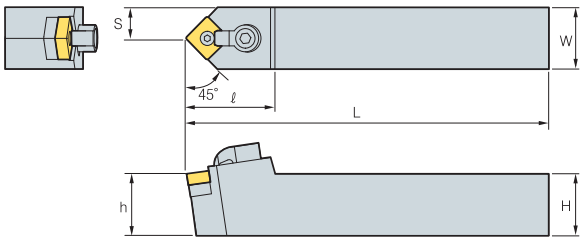
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MSBNR/L	**2020-K12**	20	20	125	17	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	22	25	32						
	2525-M15	25	25	150	22	25	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
	3232-P15	32	32	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						

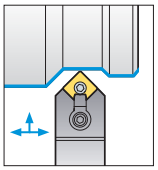
Applicable inserts **B33 ~ B40**

MSDNN



SN□□





45°

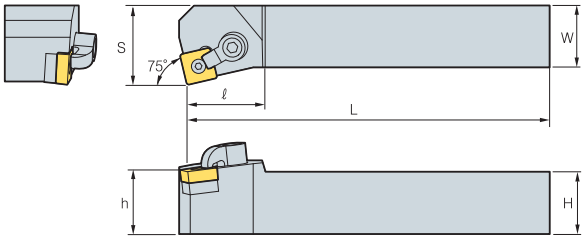
(mm)

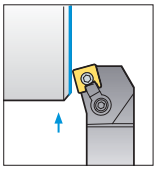
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MSDNN	**1616-H09**	16	16	100	8	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
	2020-K09	20	20	125	10	20	28						
	2020-K12	20	20	125	10	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	12.5	25	32						
	3225-P12	32	25	170	12.5	32	32						
	2525-M15	25	25	150	12.5	25	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
	3225-P15	32	25	170	12.5	32	35						
	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 **B33 ~ B40**

MSKNR/L

SN□□





75°

• R type insert

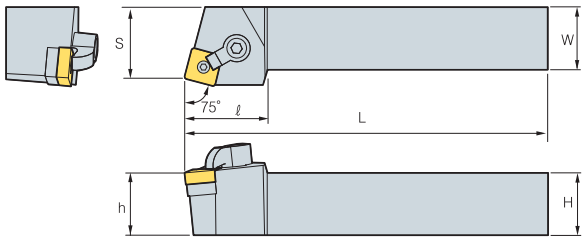
(mm)

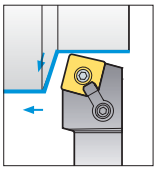
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MSKNR/L	**1616-H09**	16	16	100	20	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L
	2020-K09	20	20	125	22	20	28						HW23.8L
	2020-K12	20	20	125	25	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L
	2525-M12	25	25	150	32	25	32						HW23.8L
	3225-P12	32	25	170	32	32	32						
	2525-M15	25	25	150	32	25	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L
	3232-P15	32	32	170	40	32	35						HW31.8L
	3232-P19	32	32	170	40	32	40	SN□□1906□□	CDH8N	DHA5/16-32	SS63D	SP6D	HW39.7L
	4040-S19	40	40	250	50	40	40						HW35.7L
	4040-S25	40	40	250	50	40	40	SN□□2507□□	CDH8N3	DHA3/8-35	SS84D	SP8D	HW47.6L HW39.7L

Applicable inserts **B33 ~ B40**

MSRNR/L

SN□□





75°

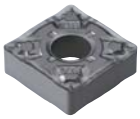
• R type insert

(mm)

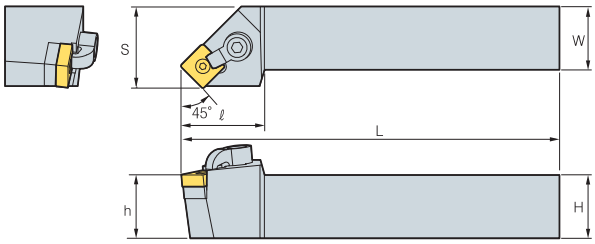
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MSRNR/L	**1616-H09**	16	16	100	17	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L
	2020-K09	20	20	125	22	20	28						HW23.8L
	2020-K12	20	20	125	22	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L
	2525-M12	25	25	150	27	25	32						HW23.8L
	2525-M15	25	25	150	27	25	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L
	3232-P15	32	32	170	35	32	35						HW31.8L
	3225-P19	32	25	170	27	32	40						
	3232-P19	32	32	170	35	32	40	SN□□1906□□	CDH8N	DHA5/16-32	SS63D	SP6D	HW39.7L
	4040-S19	40	40	250	43	40	40						HW35.7L
	4040-S25	40	40	250	43	40	40	SN□□2507□□	CDH8N3	DHA3/8-35	SS84D	SP8D	HW47.6L HW39.7L

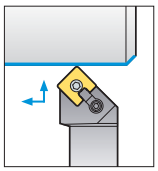
Applicable inserts **B33 ~ B40**

MSSNR/L



SN□□





45°

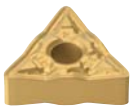
• R type insert

(mm)

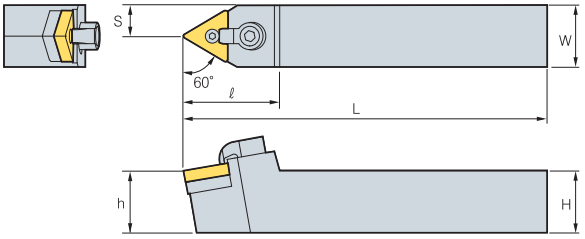
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MSSNR/L	1616-H09	16	16	100	20	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L
	2020-K09	20	20	125	25	20	28						HW23.8L
	2020-K12	20	20	125	25	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L
	2525-M12	25	25	150	32	25	32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

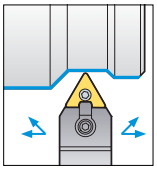
Applicable inserts **B33 ~ B40**

MTENN



TN□□





60°

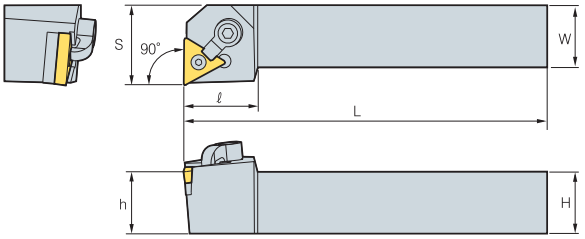
(mm)

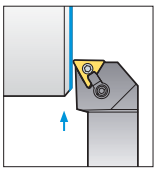
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MTENN	2020-K16	20	20	125	10	20	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L
	2525-M16	25	25	150	12.5	25	32						HW19.8L
	2525-M22	25	25	150	12.5	25	35	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L
													HW23.8L
	3232-P27	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 **B41 ~ B48**

MTFNR/L

TN□□





90°

• R type insert

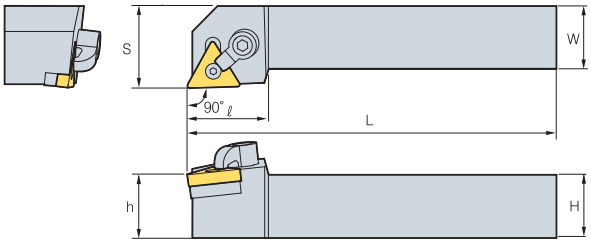
(mm)

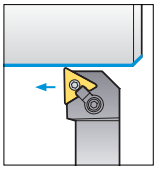
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MTFNR/L	1616-H16	16	16	100	20	16	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L
	2020-K16	20	20	125	25	20	32						HW19.8L
	2525-M16	25	25	150	32	25	32						
	2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L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

Applicable inserts **B41 ~ B48**

MTGNR/L

TN□□





90°

• R type insert

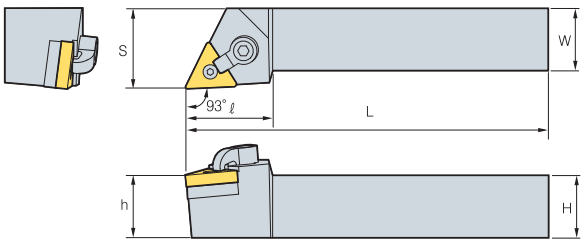
(mm)

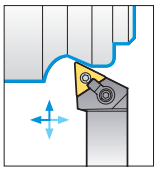
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MTGNR/L	**1616-H16**	16	16	100	20	16	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
	2020-K16	20	20	125	25	20	32						
	2525-M16	25	25	150	32	25	32						
	2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	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 **B41 ~ B48**

MTJNR/L

TN□□





93°

• R type insert

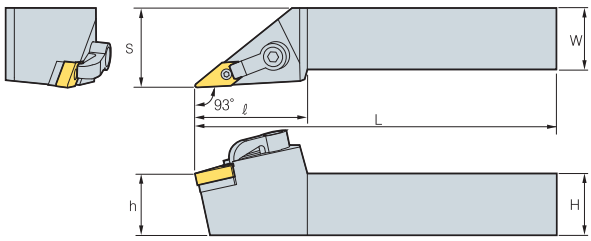
(mm)

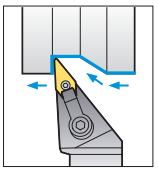
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MTJNR/L	**2020-K16**	20	20	125	25	20	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
	2525-M16	25	25	150	32	25	32						
	2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
	3232-P22	32	32	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 **B41 ~ B48**

MVJNR/L

VN□□





93°

• R type insert

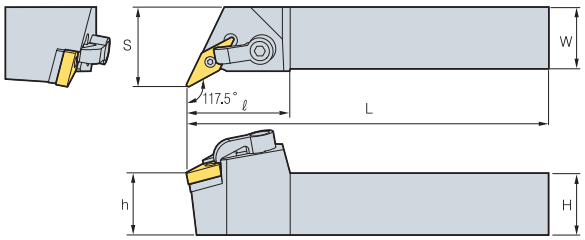
(mm)

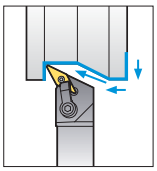
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MVJNR/L	**2020-K16**	20	20	125	25	20	37	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
	2525-M16	25	25	150	32	25	37						
	3232-P16	32	32	170	40	32	37						
	2525-M22	25	25	150	32	25	50	VN□□2204□□	CDH8N2	DHA5/16-32	SV43D	SP4D	HW39.7L HW23.8L
	3232-P22	32	32	170	40	32	50						
	4040-S22	40	40	250	50	40	50						

Applicable inserts **B49 ~ B50**

MVQNR/L

VN□□





117.5°

• R type insert

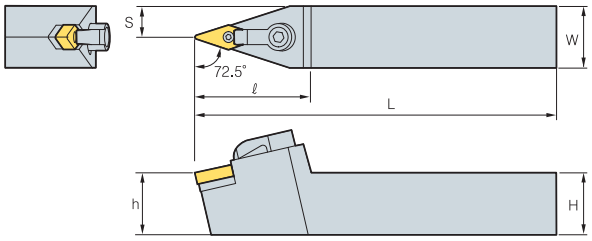
(mm)

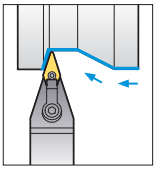
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MVQNR/L	**2020-K16**	20	20	125	25	20	42	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
	2525-M16	25	25	150	32	25	42						
	3232-P16	32	32	170	40	32	37						

Applicable inserts **B49 ~ B50**

MVVNN

VN□□





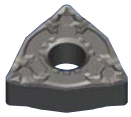
72.5°

(mm)

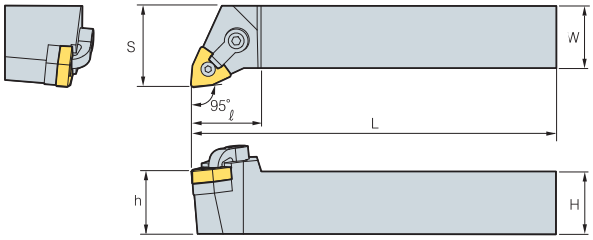
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MVVNN	**2020-K16**	20	20	125	25	20	42	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
	2525-M16	25	25	150	32	25	42						

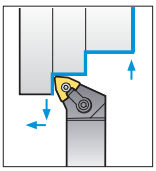
Applicable inserts **B49 ~ B50**

MWLNR/L



WN□□





95°

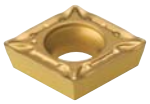
• R type insert

(mm)

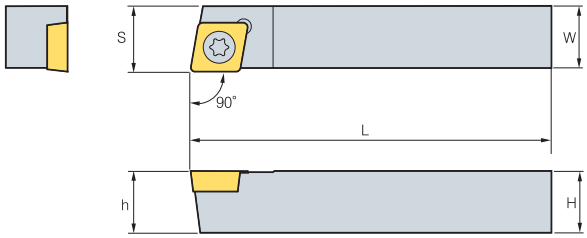
Designation		H	W	L	S	h	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Pin	Wrench
MWLNR/L	**2020-K06**	20	20	125	25	20	32	WN□□0604□□	CDH7N	DHA10-32-19	SW32D	SP3D	HW19.8L HW23.8L
	2525-M06	25	25	150	32	25	32						
	3232-P06	32	32	170	40	32	32						
	2020-K08	20	20	125	25	20	32	WN□□0804□□	CDH6N	DHA1/4-21	SW43D	SP4D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

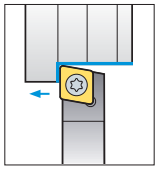
Applicable inserts **B51 ~ B54**

SCACR/L



CC□□





90°

• R type insert

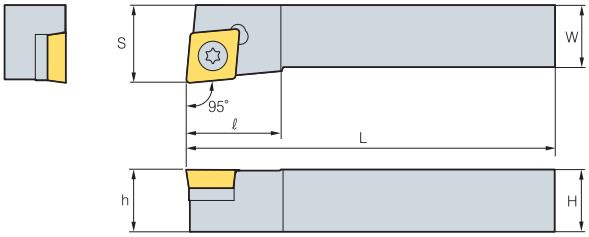
(mm)

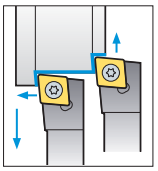
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SCACR/L	**1010-E06**	10	10	70	10.5	10	CC□□0602□□	FTKA02565	-	-	TW07P
	1212-F09	12	12	80	12.5	12	CC□□09T3□□	FTKA03508	-	-	TW15P

Applicable inserts **B55 ~ B58, B80**

SCLCR/L

CC□□





95°

• R type insert

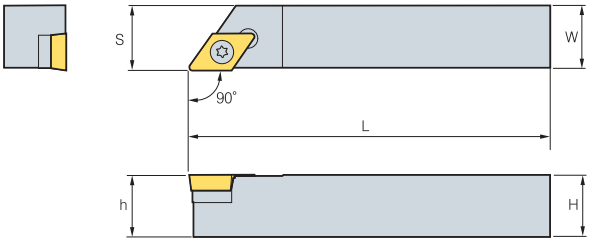
(mm)

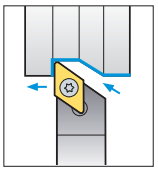
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SCLCR/L	**0808-D06**	08	08	60	10	08	10	CC□□0602□□	FTKA02565	-	-	TW07P
	1010-E06	10	10	70	16	10	10					
	1212-F09	12	12	80	20	12	16	CC□□09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	20	16	16					
	2020-K09	20	20	125	25	20	16					
	2020-K12	20	20	125	25	20	25	CC□□1204□□	FTGA0411F	SC42S	SHXN0610F	TW15P
	2525-M12	25	25	150	32	25	26					HW40L

Applicable inserts **B55 ~ B58, B80**

SDACR/L

DC□□





90°

• R type insert

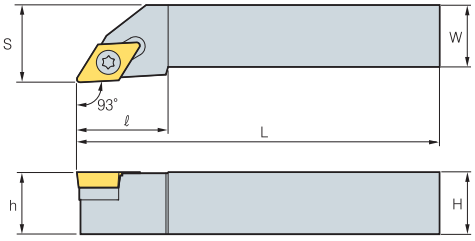
(mm)

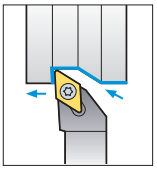
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SDACR/L	**1010-E07**	10	10	70	10.5	10	DC□□0702□□	FTKA02565	-	-	TW07P
	1212-F11	12	12	80	12.5	12	DC□□11T3□□	FTKA03508	-	-	TW15P
	1616-H11	16	16	100	16.5	16		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L

Applicable inserts **B60 ~ B62, B81**

SDJCR/L

DC□□





93°

• R type insert

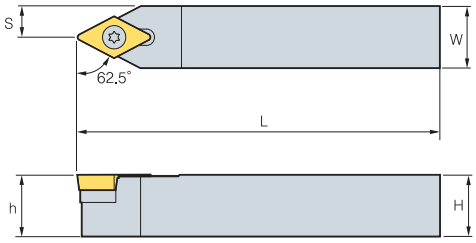
(mm)

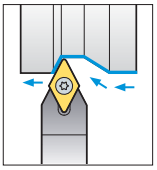
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SDJCR/L	1010-E07	10	10	70	12	10	15	DC□□0702□□	FTKA02565	-	-	TW07P
	1212-F07	12	12	80	16	12	15					
	1616-H07	16	16	100	20	16	18					
	2020-K07	20	20	125	25	20	15					
	1212-F11	12	12	80	16	12	15	DC□□11T3□□	FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
	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 **B60 ~ B62, B81**

SDNCN

DC□□





62.5°

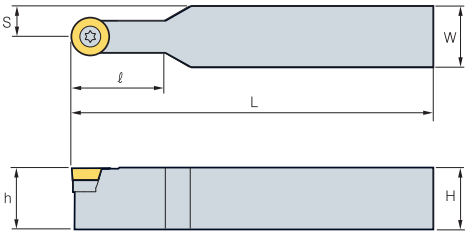
(mm)

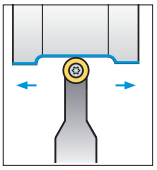
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SDNCN	1010-E07	10	10	70	5	10	DC□□0702□□	FTKA02565	-	-	TW07P
	1212-F07	12	12	80	6	12					
	1212-H11	12	12	100	6	12	DC□□11T3□□	FTGA03508	-	-	TW15P
	1616-H11	16	16	100	8	16	DC□□11T3□□	FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
	2020-K11	20	20	125	10	20					

Applicable inserts **B60 ~ B62, B81**

SRDCN

RCGT





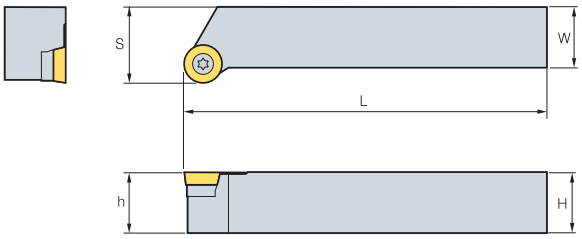
(mm)

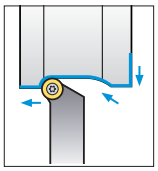
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SRDCN	1010-E06	10	10	70	5	10	10	RCGT 0602M0	FTKA02565	-	-	TW07P
	1212-F06	12	12	80	6	12	12					
	1616-H06	16	16	100	8	16	12					
	2525-M06	25	25	150	12.5	25	20					
	1616-H08	16	16	100	8	16	16	RCGT 0803M0	FTNA0307	-	-	TW09P
	2020-K08	20	20	125	10	20	20					
	2525-M08	25	25	150	12.5	25	20					
	1616-H10	16	16	100	8	16	25	RCGT 1003M0	FTKA03511A	SR10S	SHXN0509F	TW15P HW35L
	2020-K10	20	20	125	10	20	25					
	2525-M10	25	25	150	12.5	25	25					
	2020-K12	20	20	125	10	20	28	RCGT 1204M0	FTGA03512	SR12S	SHXN0509F	TW15P HW35L
	2525-M12	25	25	150	12.5	25	28					

Applicable inserts **B82**

SRGCR/L

RCGT





• R type insert

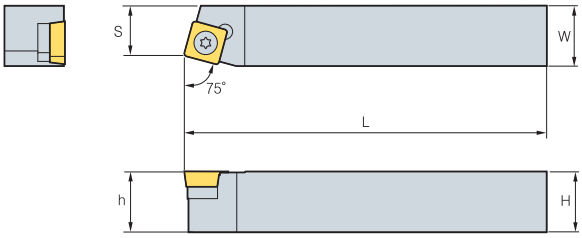
(mm)

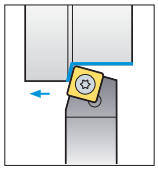
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SRGCR/L	**1010-E06**	10	10	70	12	10	RCGT 0602M0	FTKA02565	-	-	TW07P
	1212-F06	12	12	80	16	12					
	1616-H06	16	16	100	20	16					
	1616-H08	16	16	100	20	16	RCGT 0803M0	FTNA0307	-	-	TW09P
	2020-K08	20	20	125	25	20					
	2525-M08	25	25	150	32	25					
	1616-H10	16	16	100	20	16	RCGT 1003M0	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	RCGT 1204M0	FTGA03512	SR12S	SHXN0509F	TW15P HW35L
	2525-M12	25	25	150	32	25					

Applicable inserts **B82**

SSBCR/L

SC□□





75°

• R type insert

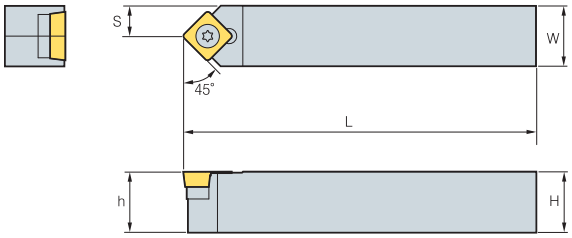
(mm)

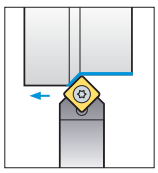
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SSBCR/L	**1212-F09**	12	12	80	11	12	SC□□09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	13	16		FTGA03512	SS32S	SHXN0509F	TW15P, HW35L
	2020-K12	20	20	125	17	20	SC□□1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L

Applicable inserts **B63, B83**

SSDCN

SC□□





45°

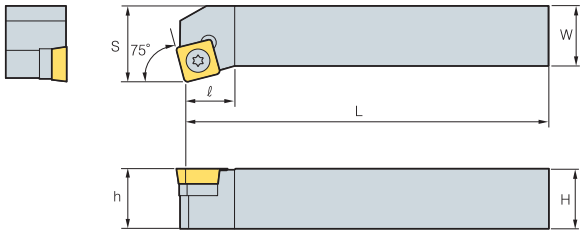
(mm)

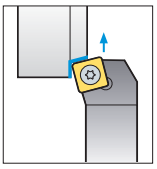
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SSDCN	**1212-F09**	12	12	80	6	12	SC□□09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	8	16		FTGA03512	SS32S	SHXN0509F	TW15P, HW35L

Applicable inserts **B63, B83**

SSKCR/L

SC□□





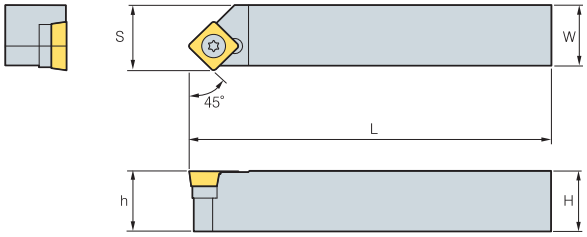
75°
• R type insert
(mm)

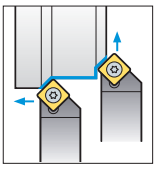
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SSKCR/L	**1616-H09**	16	16	100	20	16	13	SC□□09T3□□	FTGA03512	SS32S	SHXN0509F	TW15P, HW35L

Applicable inserts **B63, B83**

SSSCR/L

SC□□





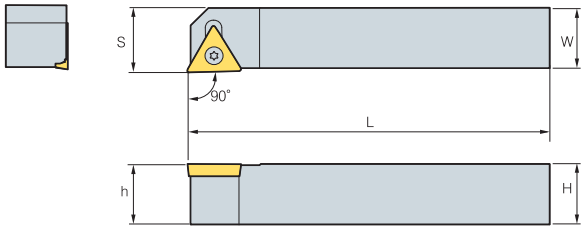
45°
• R type insert
(mm)

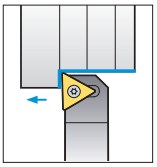
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SSSCR/L	**1616-H09**	16	16	100	17	16	SC□□09T3□□	FTGA03512	SS32S	SHXN0509F	TW15P, HW35L
	2020-K12	20	20	125	21	20	SC□□1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L
	2525-M12	25	25	150	26	25	SC□□1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L

Applicable inserts **B63, B83**

STACR/L

TC□□





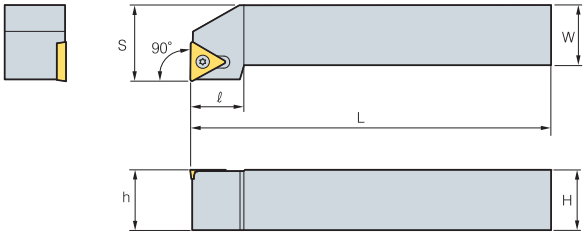
90°
• R type insert
(mm)

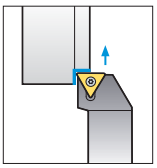
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
STACR/L	**1010-E09**	10	10	70	10.5	10	TC□□0902□□	FTKA02206	-	-	TW06P
	1212-F11	12	12	80	12.5	12	TC□□1102□□	FTKA02565	-	-	TW07P

Applicable inserts **B66, B79**

STFCR/L

TC□□





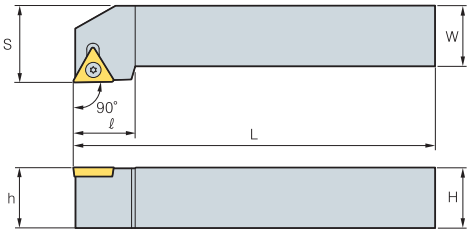
90°
• R type insert
(mm)

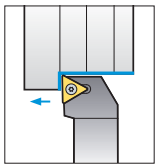
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
STFCR/L	**1010-E09**	10	10	70	12	10	10	TC□□0902□□	FTKA02206	-	-	TW06P
	1212-F11	12	12	80	16	12	14	TC□□1102□□	FTKA02565	-	-	W07P
	1616-H11	16	16	100	20	16	14					
	1616-H16	16	16	100	20	16	19	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	25	20	19					
	2525-M16	25	25	150	32	25	25.2	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L

Applicable inserts **B67 ~ B69, B84**

STGCR/L

TC□□





90°

• R type insert

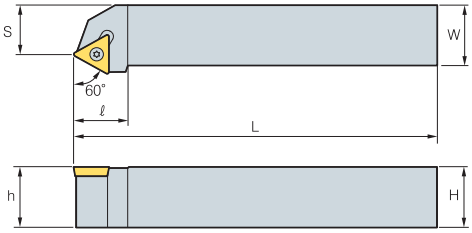
(mm)

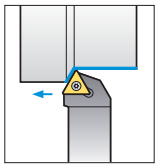
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
STGCR/L	**0808-D09**	08	08	60	10	08	11	TC□□0902□□	FTKA02206	-	-	TW06P
	1010-E09	10	10	70	12	10	11					
	1212-F11	12	12	80	16	12	14	TC□□1102□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	20	16	16					
	1616-H16	16	16	100	20	16	21	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	25	20	21					
	2525-M16	25	25	150	32	25	21					

Applicable inserts **B67 ~ B69, B84**

STTCR/L

TC□□





60°

• R type insert

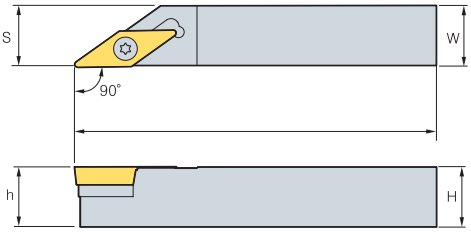
(mm)

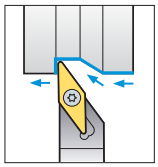
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
STTCR/L	**1616-H11**	16	16	100	13	16	14	TC□□1102□□	FTKA02565	-	-	TW07P
	1616-H16	16	16	100	13	16	19	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	17	20	19					

Applicable inserts **B67 ~ B69, B84**

SVABR/L

VB□□





90°

• R type insert

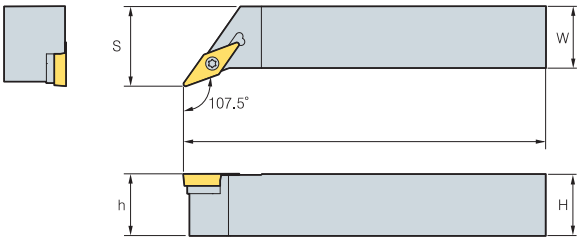
(mm)

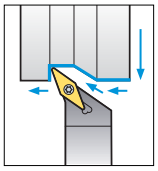
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVABR/L	**1616-H16**	16	16	100	16.5	16	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	20.5	20					

Applicable inserts **B73 ~ B74, B85**

SVHBR/L

VB□□





107.5°

• R type insert

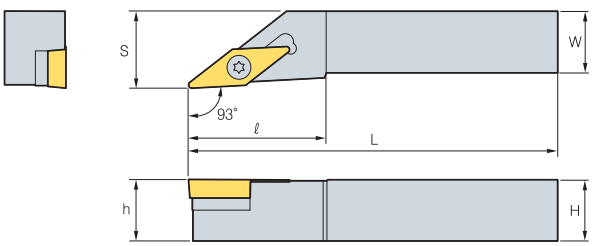
(mm)

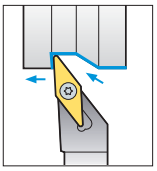
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVHBR/L	2525-M16	25	25	150	32	25	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	3225-P16	32	25	170	32	32					

Applicable inserts B73 ~ B74, B85

SVJBR/L

VB□□





93°

• R type insert

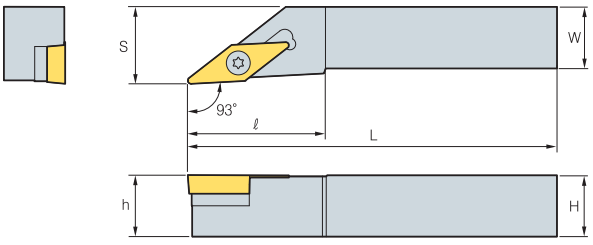
(mm)

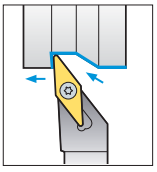
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SVJBR/L	1212-F11	12	12	80	16	12	27	VB□□1102□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	20	16	27					
	2020-K11	20	20	125	25	20	27					
	1616-H16	16	16	100	20	16	36	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	25	20	41					
	2525-M16	25	25	150	32	25	41	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	3225-P16	32	25	170	32	32	55					
	3232-P16	32	32	170	40	33	55					

Applicable inserts B73 ~ B74, B85

SVJCR/L

VC□□





93°

• R type insert

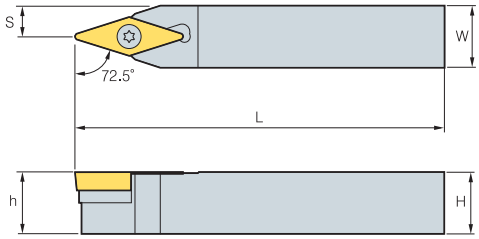
(mm)

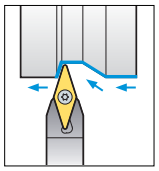
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SVJCR/L	1212-F11	12	12	80	16	12	25	VC□□1103□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	20	16	25					
	2020-K11	20	20	125	25	20	25					
	1212-F13	12	12	80	16	12	32	VC□□1303□□	FTKA0307	-	-	TW09P
	1616-H13	16	16	100	20	16	32					
	2020-K13	20	20	125	25	20	32					
	1616-H16	16	16	100	20	16	40	VC□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L
	2020-K16	20	20	125	25	20	40					
	2525-M16	25	25	150	32	25	40					

Applicable inserts B75 ~ B76, B86

SVVBN

VB□□





72.5°

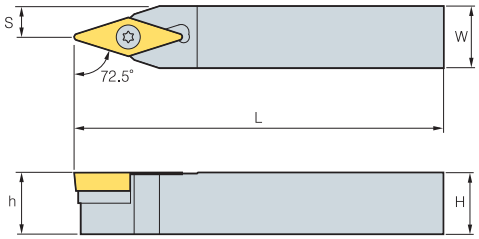
(mm)

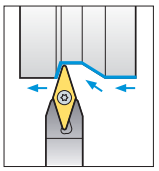
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVVBN	**1212-F11**	12	12	80	6	12	VB□□1102□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	8	16					
	2020-K11	20	20	125	10	20					
	1616-H16	16	16	100	8	16	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	10	20					
	2525-M16	25	25	150	12.5	25					
	3225-P16	32	25	170	12.5	32					

Applicable inserts **B73 ~ B74, B85**

SVVCN

VC□□





72.5°

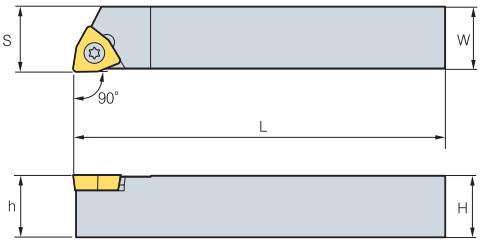
(mm)

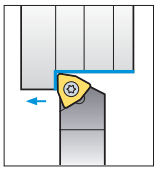
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVVCN	**1212-F11**	12	12	80	6	12	VC□□1103□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	8	16					
	2020-K11	20	20	125	10	20					
	1212-F13	12	12	80	6	12	VC□□1303□□	FTNA0307	-	-	TW09P
	1616-H13	16	16	100	8	16					
	2020-K13	20	20	125	10	20					
	1616-H16	16	16	100	8	16	VC□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L
	2020-K16	20	20	125	10	20					
	2525-M16	25	25	150	12.5	25					

Applicable inserts **B75 ~ B76, B86**

SWACR/L

WC□□





90°

• R type insert

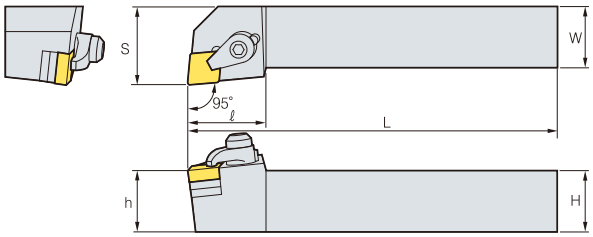
(mm)

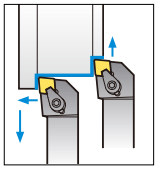
Designation		H	W	L	S	h	Insert	Screw	Wrench
SWACR/L	**1010-E04**	10	10	70	10.1	10	WC□□0402□□	FTKA02565	TW07P
	1212-F04	12	12	80	12.1	12			
	1616-H06	16	16	100	16.1	16	WC□□06T3□□	FTGA03508	TW15P
	2020-K08	20	20	125	20.1	20	WC□□0804□□	FTGA0411F	TW15P

Applicable inserts **B78**

CCLNR/L

CN□N





95°

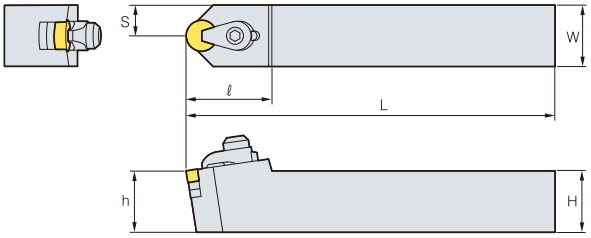
• R type insert

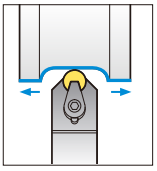
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CCLNR/L **2525-M12C**	25	25	150	32	25	32	CN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SC42CC	SR3	HW40L HW20L

CRDNN

RN□N



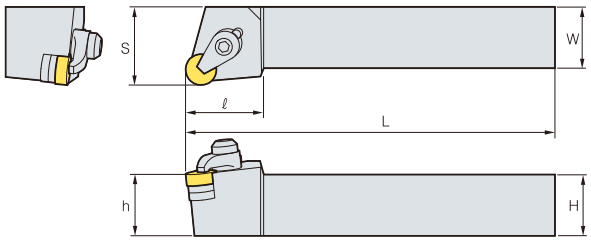


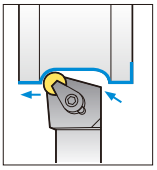
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CRDNN **2525-M12C**	25	25	150	12.5	25	35	RN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SC42CC	SR3	HW40L HW20L

CRGNR/L

RN□N



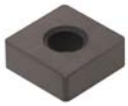


• R type insert

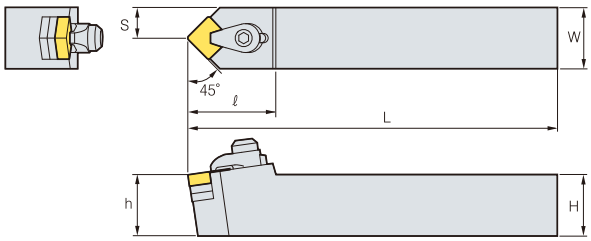
(mm)

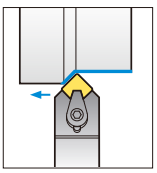
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CRGNR/L **2525-M12C**	25	25	150	32	25	32	RN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SR42CC	SR3	HW40L HW20L

CSDNN



SN□N



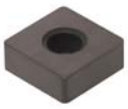


45°

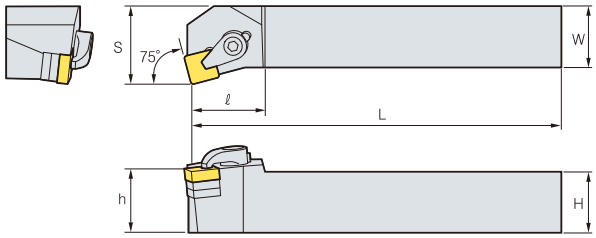
(mm)

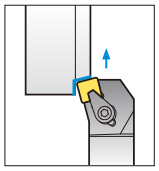
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CSDNN **2525-M12C**	25	25	125	12.5	25	35	SN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SS42CC	SR3	HW40L HW20L

CSKNR/L



SN□N





75°

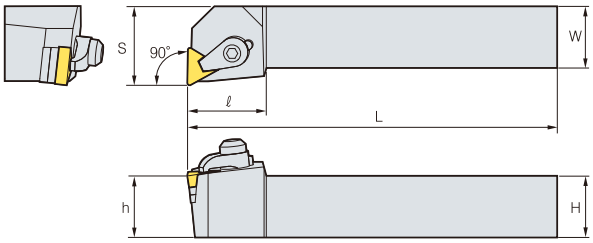
• R type insert

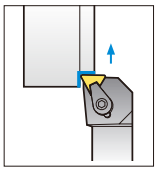
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CSKNR/L **2525-M12C**	25	25	150	32	25	28	SN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SS42CC	SR3	HW40L HW20L

CTFNR/L

TN□N





90°

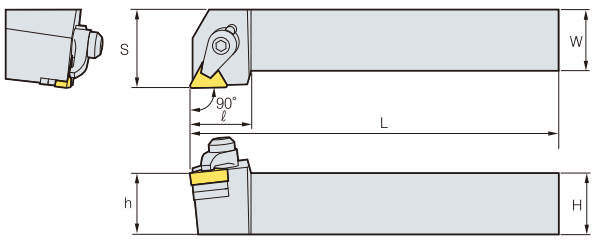
• R type insert

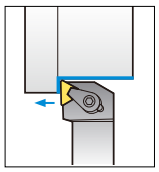
(mm)

Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CTFNR/L **2525-M16C**	25	25	150	32	25	32	TN□N 1604□□ 1607□□	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□N 1604□□ 1607□□	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.

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 Bar	Relief Angle of Insert	Hand of Bar	Length of Cutting Edge

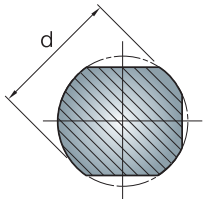
1 Type of Bar

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

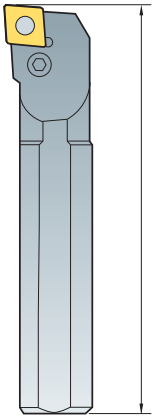
2 Bar Diameter

S 12 M - S T F P R - 11



3 Bar Length

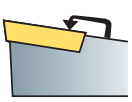
S 12 M - S T F P R - 11

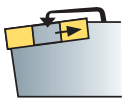


length(L)	(mm)
H	100
J	110
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500

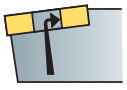
4 Method of Mounting Insert

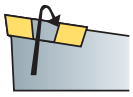
S 12 M - S T F P R - 11


Top clamping
C


Top and hole clamping
D

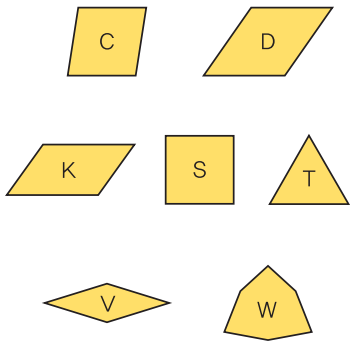

Top and hole clamping
M


Hole clamping
P


Screw on
S

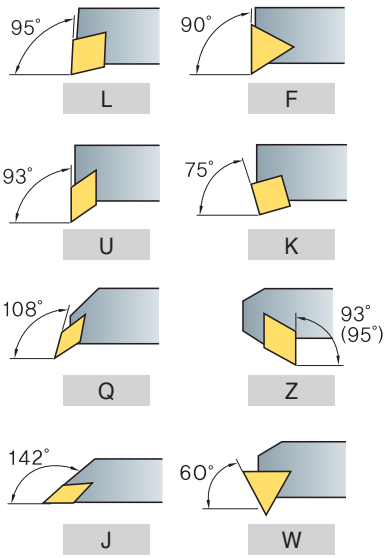
5 Insert Shape

S 12 M - S T F P R - 11



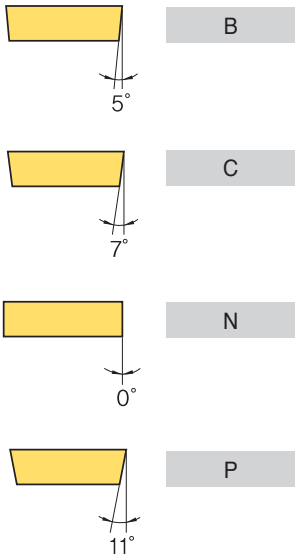
6 Lead Angle of Boring Bar

S 12 M - S T F P R - 11



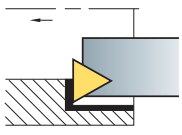
7 Relief Angle of Insert

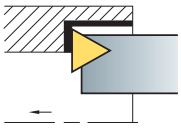
S 12 M - S T F P R - 11



8 Hand of Bar

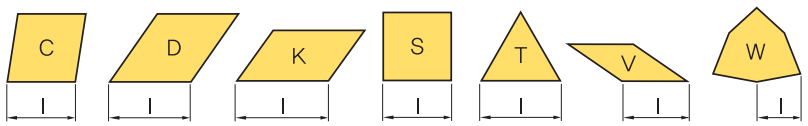
S 12 M - S T F P R - 11


R

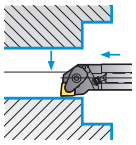
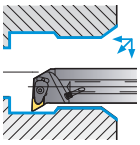
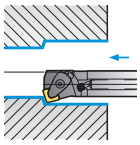
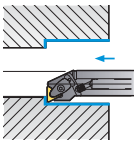
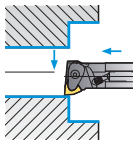

L

9 Length of Cutting Edge

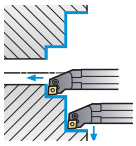
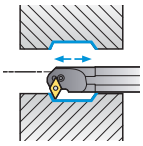
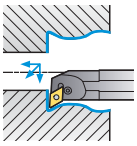
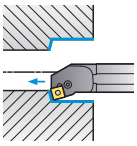
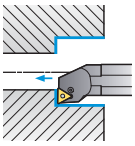
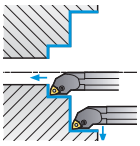
S 12 M - S T F P R - 11



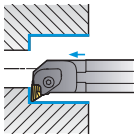
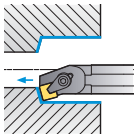
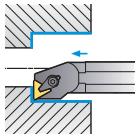
Double Clamp System

Cutting Shape								
Designation	**DCLNR/L**	**DDUNR/L**	**DSKNR/L**	**DTFNR/L**	**DWLNR/L**			
Approach angle	95°	93°	75°	90°	95°			
Page	B136	B136	B136	B137	B137			
Copying		●						
Facing	●				●			
Back turning		●						
Turning	●	●	●	●	●			

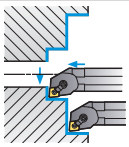
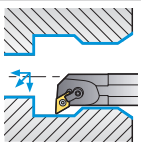
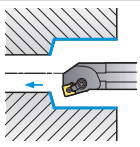
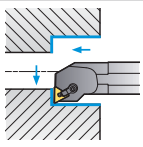
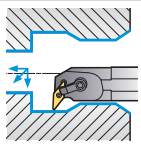
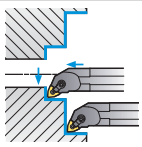
Lever Lock System

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	B138	B138	B139	B139	B140	B140		
Copying		●	●					
Facing	●					●		
Back turning		●	●			●		
Turning	●	●	●	●	●	●		

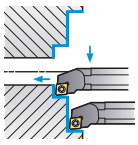
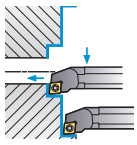
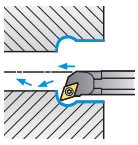
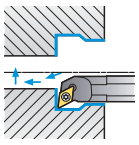
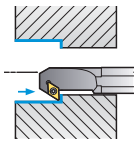
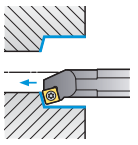
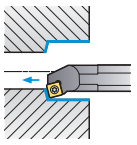
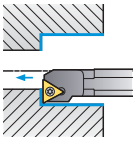
Clamp on System

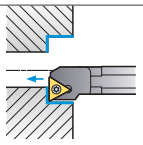
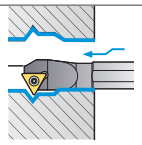
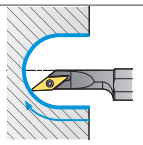
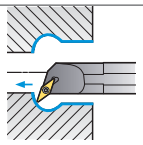
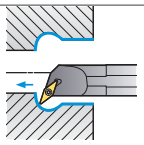
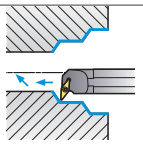
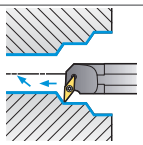
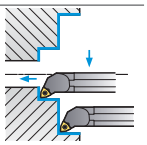
Cutting Shape								
Designation	**CKUNR/L**	**CSKPR/L**	**CTFPR/L**					
Approach angle	93°	75°	90°					
Page	B141	B141	B141					
Copying								
Facing								
Back turning	●							
Turning	●	●	●					

Multi Lock System

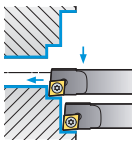
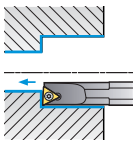
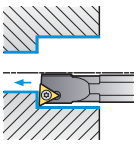
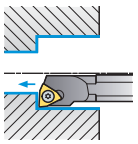
Cutting Shape								
Designation	**MCLNR/L**	**MDUNR/L**	**MSKNR/L**	**MTFNR/L**	**MVUNR/L**	**MWLNR/L**		
Approach angle	95°	93°	75°	90°	93°	95°		
Page	B142	B142	B142	B143	B143	B143		
Copying		●			●			
Facing	●					●		
Back turning		●			●			
Turning	●	●	●	●	●	●		

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°	3°	75°	75°	90°
Page	B142	B142	B145	B145	B146	B146	B146	B147
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	B147	B147	B148	B148	B148	B149	B149	B149
Copying			●	●	●	●	●	●
Facing								
Back turning				●	●	●	●	●
Turning	●	●	●	●	●	●	●	●

Compact Mini

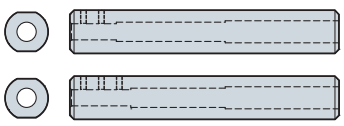
Cutting Shape								
Designation	**SCLCR/L**	**STUBR/L**	**STUPR/L**	**SWUBR/L**				
Approach angle	95°	93°	93°	93°				
Page	B150	B150	B150	B150				
Copying								
Facing	●	●						
Back turning			●					
Turning	●	●	●	●				

Carbide Shank Boring Bar

Designation	SCLCR/L	SCLPR/L	SDQCR/L	SDUCR/L	STFCR/L
Approach angle	95°	95°	107.5°	93°	91°
Page	B151	B152	B152	B153	B153

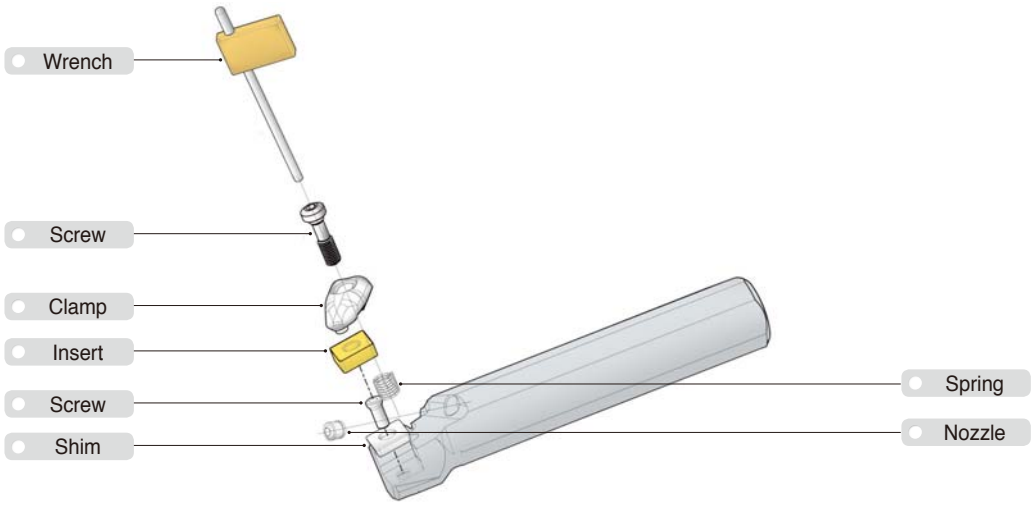
Designation	STFPR/L	STUBR/L	STUPR/L	SWUBR/L	-
Approach angle	91°	93°	93°	93°	-
Page	B154	B154	B155	B155	-

Sleeve

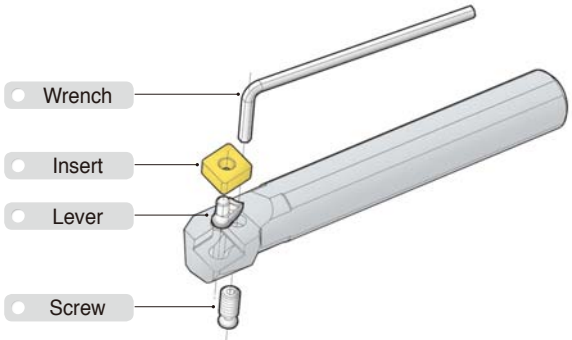
Shape	
Designation	**SL**
Page	B196

Instructions of Boring Bar assembly

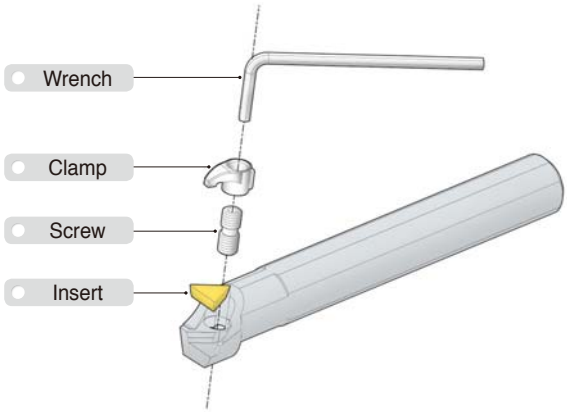
Double Clamp System



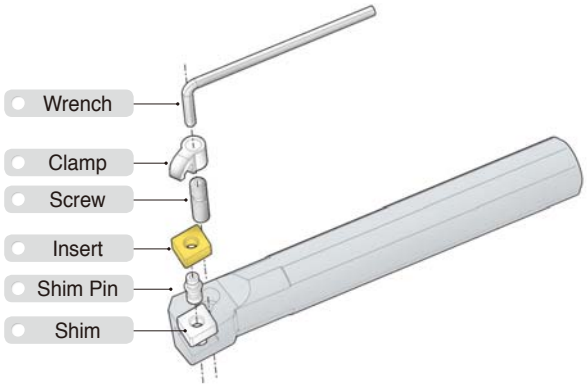
Lever Lock System



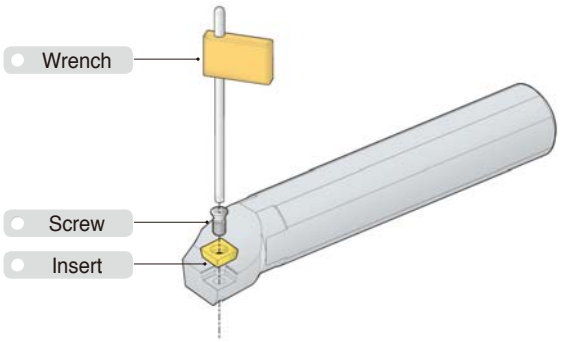
Clamp on System



Multi Lock System

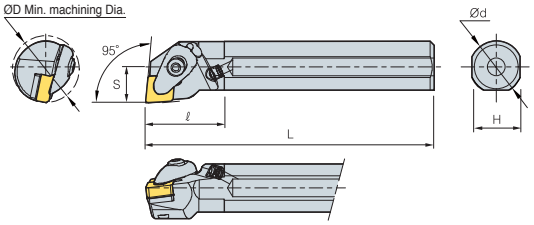


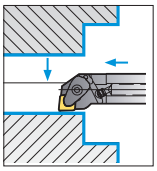
Screw on System



DCLNR/L

CN□□





95°

• R type insert

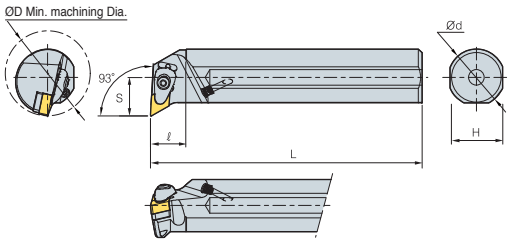
(mm)

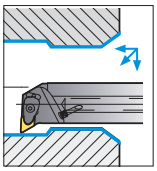
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DCLNR/L-09	32	25	23	200	17	40	CN□□0903□□	CVH3	CHX0415	SC32V	FTKA0307	SPR0510	CN0605	HW25P
A25R-DCLNR/L-12	32	25	23	200	17	40	CN□□1204□□	CVH4	CHX0518	SC42V	FTKA0410	SPR0714	CN0605	HW30P
A32S-DCLNR/L-12	40	32	30	250	22	50								
A40T-DCLNR/L-12	50	40	37	300	27	60								
A50U-DCLNR/L-16	63	50	47	350	35	70	CN□□1604□□	CVH5	CHX0622	SC54V	FTNA0511	SPR0811	CN0605	HW40L

Applicable inserts, see pages **B20~B25**

DDUNR/L

DN□□





93°

• R type insert

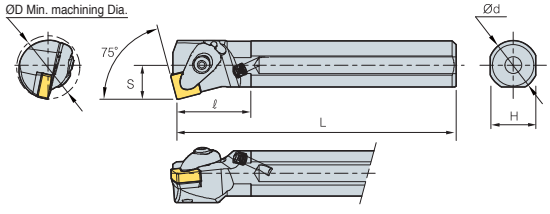
(mm)

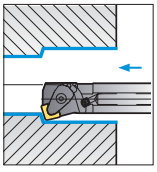
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Nozzle	Wrench
A40T-DDUNR/L-15	50	40	37	300	27	60	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	HW30P
A50U-DDUNR/L-15	63	50	47	350	35	70								
A40T-DDUNR/L-15 -3	50	40	37	300	27	60	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410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

Applicable inserts, see pages **B26~B31**

DSKNR/L

SN□□





75°

• R type insert

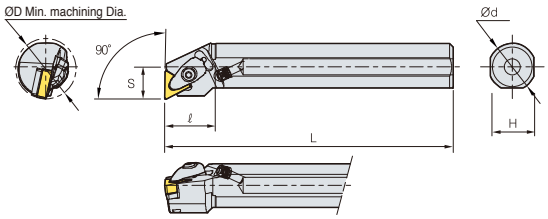
(mm)

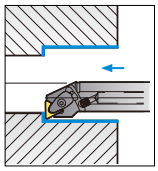
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DSKNR/L-09	32	25	23	200	17	40	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	CN0605	HW25P
A25R-DSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	CVH4	CHX0518	SS42V	FTKA0410	SPR0714	CN0605	HW30P
A32S-DSKNR/L-12	40	32	30	250	22	50								
A40T-DSKNR/L-12	50	40	37	300	27	60								

Applicable inserts, see pages **B33~B40**

DTFNR/L

TN□□





90°

• R type insert

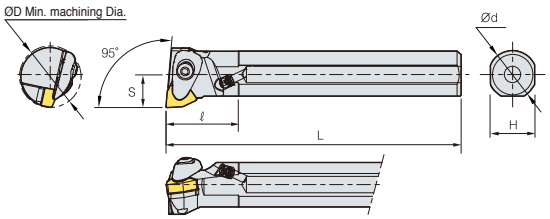
(mm)

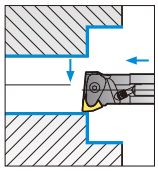
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DTFNR/L-16	32	25	23	200	17	40	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	CN0605	HW25P
A32S-DTFNR/L-16	40	32	30	250	22	50								
A40T-DTFNR/L-22	50	40	37	300	27	60	TN□□2204□□	CVH4	CHX0518	ST44V	FTKA0410	SPR0714	CN0605	HW30P
A50U-DTFNR/L-22	63	50	47	350	35	70								

Applicable inserts, see pages **B41~B48**

DWLNR/L

WN□□





95°

• R type insert

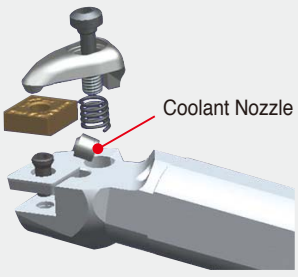
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DWLNR/L-06	32	25	23	200	17	40	WN□□0604□□	CVH3	CHX0415	SW32V	FTKA0307	SPR0510	CN0605	HW25P
A32S-DWLNR/L-06	40	32	30	250	22	50								
A40T-DWLNR/L-06	50	40	37	300	27	60								
A25R-DWLNR/L-08	33	25	23	200	17	40	WN□□0804□□	CVH4	CHX0518	SW42V	FTKA0410	SPR0714	CN0605	HW30P
A32S-DWLNR/L-08	40	32	30	250	22	50								
A40T-DWLNR/L-08	50	40	37	300	27	60								
A50U-DWLNR/L-08	63	50	47	350	35	70								

Applicable inserts, see pages **B51~B54**

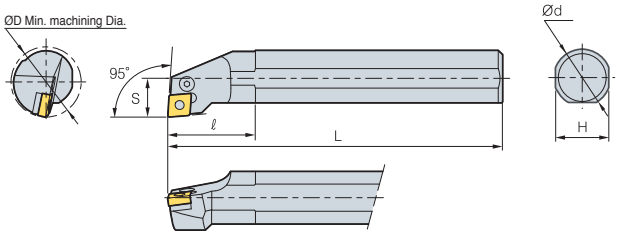
Features of Double Clamp (Boring bar)

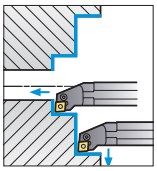
Longer tool life and excellent surface finish can be achieved with the adjustable Coolant Nozzle



PCLNR/L

CN□□





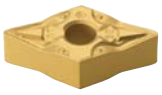
• R type insert 95°

(mm)

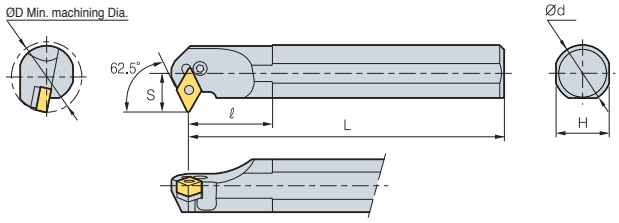
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shim pin Punch	Wrench
S16R-PCLNR/L-09	20	16	15	200	11	25							
S20S-PCLNR/L-09	25	20	18	250	13	32	CN□□0903□□	LV3C	VHX0509B	-	-	-	HW20L
S25R-PCLNR/L-09	32	25	23	200	17	40							
S25R-PCLNR/L-12	32	25	23	200	17	40		LV4A	VHX0613A	-	-	-	HW25L
S32S-PCLNR/L-12	40	32	30	250	22	50	CN□□1204□□						
S40T-PCLNR/L-12	50	40	37	300	27	60		LV4	VHX1027	SC63	SP6	LSPS6	HW30L
S50U-PCLNR/L-12	63	50	47	350	35	70							
S50U-PCLNR/L-19	70	50	47	350	35	70	CN□□1906□□	LV6	VHX1027	SC63	SP6	LSPS6	HW40L
A25R-PCLNR/L-12	32	25	24	200	17	40		LV4A	VHX0613A	-	-	-	HW25L
A32S-PCLNR/L-12	44	32	31	250	22	50	CN□□1204□□						
A40T-PCLNR/L-12	50	40	47	300	27	60		LV4	VHX0821	SC42B	SP4	LSPS4	HW30L
S16R-PCLNR/L-09N	20	16	15	200	11	25							
S20S-PCLNR/L-09N	25	20	18	250	13	32	CN□□0903□□	LV3CN	VHX0509BN	-	-	-	HW20L
S25R-PCLNR/L-09N	32	25	23	200	17	40							
S25R-PCLNR/L-12N	32	25	23	200	17	40		LV4AN	VHX0613N	-	-	-	HW25L
S25T-PCLNR/L-12N	32	25	23	300	17	40							
S32S-PCLNR/L-12N	40	32	30	250	22	50	CN□□1204□□						
S32U-PCLNR/L-12N	40	32	30	350	22	50		LV4N	VHX0820N	SC42N	SP4N	LSPS4	HW30L
S40T-PCLNR/L-12N	50	40	37	300	27	60							
S50U-PCLNR/L-12N	63	50	47	350	35	70							
S50U-PCLNR/L-19N	63	50	47	350	35	70	CN□□1906□□	LV6N	VHX1027N	SC63N	SP6N	LSPS6	HW40L
A16R-PCLNR/L-09N	20	16	15	200	11	25							
A20S-PCLNR/L-09N	25	20	18	250	13	32	CN□□0903□□	LV3CN	VHX0509BN	-	-	-	HW20L
A25R-PCLNR/L-09N	32	25	23	200	17	40							
A25R-PCLNR/L-12N	32	25	23	200	17	40		LV4AN	VHX0613N	-	-	-	HW25L
A32R-PCLNR/L-12N	40	32	30	250	22	50	CN□□1204□□						
A40T-PCLNR/L-12N	50	40	37	300	27	60		LV4N	VHX0820N	SC42N	SP4N	LSPS4	HW30L
A50U-PCLNR/L-12N	63	50	47	350	35	70							
A50U-PCLNR/L-19N	63	50	47	350	35	70	CN□□1906□□	LV6N	VHX1027N	SC63N	SP6N	LSPS6	HW40L

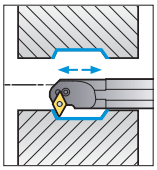
Applicable inserts, see pages **B20~B25**

PDSNR/L



DN□□





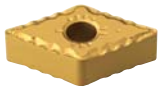
• R type insert 62.5°

(mm)

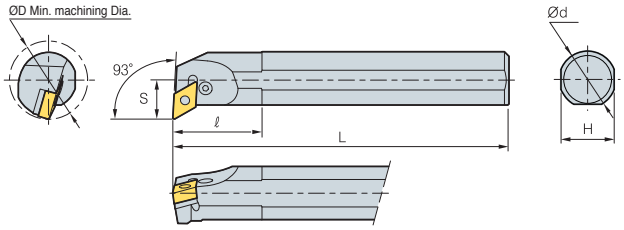
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shim pin Punch	Wrench
S32S-PDSNR/L-15	40	32	30	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDSNR/L-15	50	40	37	300	27	60							
S32S-PDSNR/L-15-3	40	32	30	450	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDSNR/L-15-3	50	40	37	300	27	60							
A32S-PDSNR/L-15	40	32	31	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
A32S-PDSNR/L-15-3	40	32	31	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L
S32S-PDSNR/L-15N	40	32	30	250	22	50	DN□□1506□□	LV4BN	VHX0821	SD42N	SP4N	LSPS4	HW30L
S40T-PDSNR/L-15N	50	40	37	300	27	60							
S32S-PDSNR/L-15-3N	40	32	30	250	22	50	DN□□1504□□	LV4BN	VHX0821	SD42N	SP4N	LSPS4	HW30L
S40T-PDSNR/L-15-3N	50	40	37	300	27	60							
A32S-PDSNR/L-15N	40	32	30	250	22	50	DN□□1506□□	LV4BN	VHX0821	SD42N	SP4N	LSPS4	HW30L
A40T-PDSNR/L-15N	50	40	37	300	27	60							
A32S-PDSNR/L-15-3N	40	32	30	450	22	50	DN□□1504□□	LV4BN	VHX0821	SD42N	SP4N	LSPS4	HW30L
A40T-PDSNR/L-15-3N	50	40	37	300	27	60							

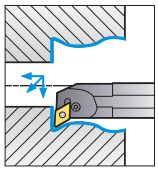
Applicable inserts, see pages **B26~B31**

PDUNR/L



DN□□





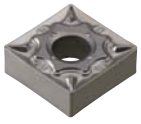
• R type insert 93°

(mm)

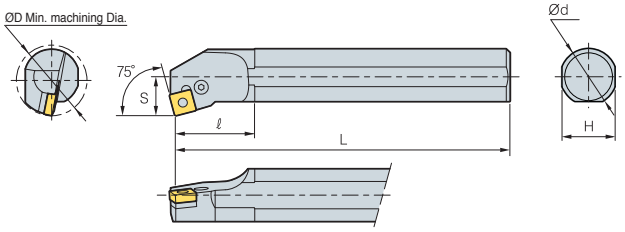
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shim pin Punch	Wrench
S32S-PDUNR/L-11	40	32	30	250	22	50	DN□□1104□□	LV3	VHX0617	SD317	SP3	LSPS3	HW25L
S32S-PDUNR/L-15	40	32	30	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDUNR/L-15	50	40	37	300	27	60							
S50U-PDUNR/L-15	63	50	47	350	35	70							
S32S-PDUNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDUNR/L-15-3	50	40	37	300	27	60							
A32S-PDUNR/L-15	40	32	31	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
A32S-PDUNR/L-15-3	40	32	31	250	22	50	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L
S20S-PDUNR/L-11N	25	20	18	250	13	32	DN□□1104□□	LV3DN	VHX0512BN	-	-	-	HW20L
S25R-PDUNR/L-11N	32	25	23	200	17	40							
S32S-PDUNR/L-11N	40	32	30	250	22	50		LV3AN	VHX0617N	SD32N	SP3	LSPS3	HW30L
S32S-PDUNR/L-15N	40	32	30	250	22	50	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	HW30L
S32U-PDUNR/L-15N	40	32	30	350	22	50							
S40T-PDUNR/L-15N	50	40	37	300	27	60							
S50U-PDUNR/L-15N	63	50	47	350	35	70							
S32S-PDUNR/L-15-3N	40	32	30	250	22	50	DN□□1506□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	HW30L
S40T-PDUNR/L-15-3N	50	40	37	300	27	60							
A20S-PDUNR/L-11N	25	20	18	250	13	32	DN□□1104□□	LV3DN	VHX0512BN	-	-	-	HW20L
A25R-PDUNR/L-11N	32	25	23	200	17	40							
A32S-PDUNR/L-11N	40	32	30	250	22	50		LV3AN	VHX0617N	SD32N	SP3	LSPS3	HW30L
A32S-PDUNR/L-15N	40	32	30	250	22	50	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	HW30L
A40T-PDUNR/L-15N	50	40	37	300	27	60							
A50U-PDUNR/L-15N	63	50	47	350	35	70							
A32S-PDUNR/L-15-3N	40	32	30	250	22	50	DN□□1506□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	HW30L
A40T-PDUNR/L-15-3N	50	40	37	300	27	60							

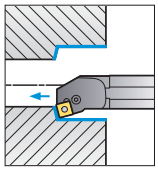
Applicable inserts, see pages **B26~B31**

PSKNR/L



SN□□





• R type insert 75°

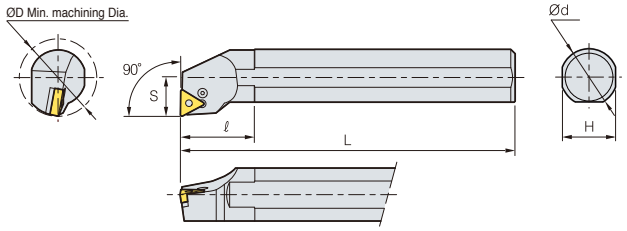
(mm)

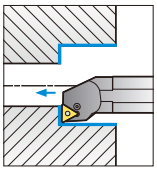
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shim pin Punch	Wrench
S25R-PSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	LV4A	VHX0613A	-	-	-	HW30L
S32S-PSKNR/L-12	40	32	30	250	22	50		LV4	VHX0821	SS42B	SP4	LSPS4	HW30L
S40T-PSKNR/L-12	50	40	37	300	27	60							
A25R-PSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	LV4A	VHX0613A	-	SP4	-	HW25L
A32S-PSKNR/L-12	40	32	30	250	22	50		LV4	VHX0821	SS42B	SP4	LSPS4	HW30L
S25R-PSKNR/L-12N	32	25	23	200	17	40	SN□□1204□□	LV4AN	VHX0613N	-	-	-	HW25L
S32S-PSKNR/L-12N	40	32	30	250	22	50		LV4N	VHX0821N	SS42N	SP4N	LSPS4	HW30L
S40T-PSKNR/L-12N	50	40	37	300	27	60							
A25R-PSKNR/L-12N	32	25	23	200	17	40	SN□□1204□□	LV4AN	VHX0613N	-	-	-	HW25L
A32S-PSKNR/L-12N	40	32	30	250	22	50		LV4N	VHX0821N	SS42N	SP4N	LSPS4	HW30L
A40T-PSKNR/L-12N	50	40	37	300	27	60							

Applicable inserts, see pages **B33~B40**

PTFNR/L

TN□□





• R type insert 90°

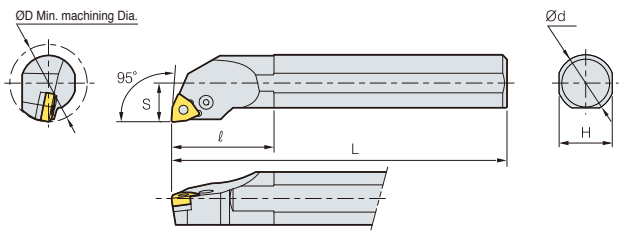
(mm)

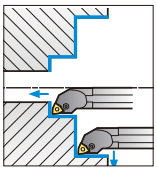
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shim pin Punch	Wrench
S16R-PTFNR/L-11	20	16	15	200	11	25	TN□□1103□□	LV2	VHX0509B	-	-	-	HW25L
S20S-PTFNR/L-11	25	20	18	250	13	32							
S25R-PTFNR/L-11	32	25	23	200	17	40							
S25R-PTFNR/L-16	32	25	23	200	17	40	TN□□1604□□	LV3B	VHX0512B	-	-	-	HW20L
S32S-PTFNR/L-16	44	32	30	250	22	50		LV3	VHX0617	ST317B	SP3	LSPS3	HW25L
S40T-PTFNR/L-16	54	40	37	300	27	60							
A25R-PTFNR/L-16	32	25	24	200	17	40		LV3	VHX0617	ST317B	SP3	LSPS3	HW25L
A32S-PTFNR/L-16	40	32	31	250	22	50		LV3	VHX0617	ST317B	SP3	LSPS3	HW25L

Applicable inserts, see pages **B41~B48**

PWLNR/L

WN□□





• R type insert 95°

(mm)

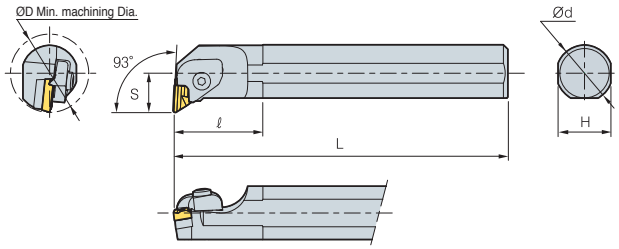
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shim pin Punch	Wrench
S20S-PWLNR/L-06	25	20	18	250	13	32	WN□□0604□□	LV3B	VHX0512B	-	-	-	HW20L
S25R-PWLNR/L-06	32	25	23	200	17	40							
S32S-PWLNR/L-06	44	32	30	250	22	50		LV3B	VHX0613B	SW317	SP3	LSPS3	HW25L
S25R-PWLNR/L-08	32	25	23	200	17	40	WN□□0804□□	LV4A	VHX0613A	-	-	-	HW25L
S32S-PWLNR/L-08	44	32	30	250	22	50		LV4	VHX0821	SW42	SP4	LSPS3	HW30L
S32S-PWLNR/L-06N	44	32	30	250	22	50	WN□□0604□□	LV3N	VHX0617N	SW317N	SP3	LSPS3	HW25L
S25R-PWLNR/L-08N	32	25	23	200	17	40	WN□□0804□□	LV4AN	VHX0613N	-	-	-	HW25L
S32S-PWLNR/L-08N	44	32	30	250	22	50		LV4N	VHX0820N	SW42N	SP4N	LSPS4	HW30L

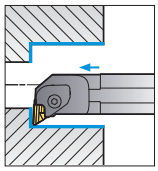
Applicable inserts, see pages **B51~B54**

- **Improved holders and parts ensure performance and durability**
- **"N" stand for New type (parts)**

CKUNR/L

KN□□





• R type insert 93°

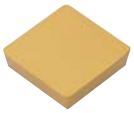
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Spring	Shim	Pin+Spring	Shim Screw	Wrench
S32S-CKUNR-16	40	32	30	250	22	70	KN□□1604□□L	CTH6LI	CHX0625	SR3	SK33CL	PN0515 / SR4	SHX0310	HW40L HW20L
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	CTH6RI	CHX0625	SR3	SK33C	PN0515 / SR4	SHX0310	HW40L HW20L
S40T-CKUNL-16	50	40	37	300	27	60								
S50U-CKUNL-16	63	50	43	350	35	55								

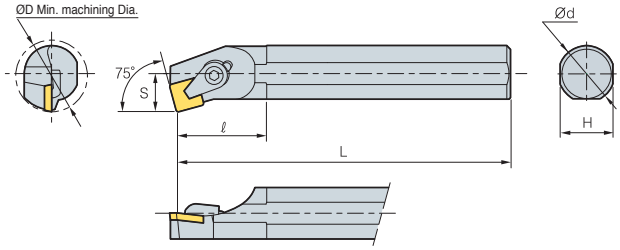
Applicable inserts, see pages **B32**

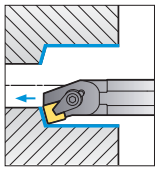
• Use left handed insert for right handed holder

CSKPR/L



SP□□





• R type insert 75°

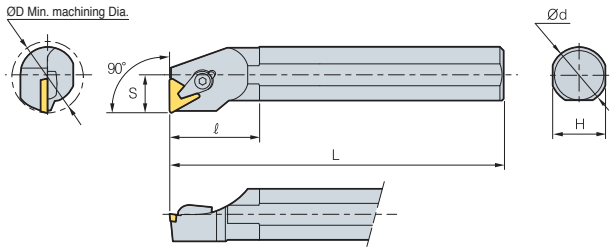
(mm)

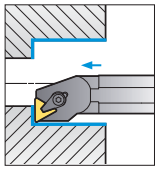
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	C-ring	Wrench
S16R-CSKPR/L-09	20	16	15	200	11	30	SP□□0903□□	CH4R1C	CHX0414	CR02C	HW25L
S20S-CSKPR/L-09	25	20	18	250	13	36		CH5R5C	CHX0519C	CR03C	HW30L
S20S-CSKPR/L-12	25	20	18	250	13	28	SP□□1203□□	CH6R5	CH0616	CR04C	HW30L
S25R-CSKPR/L-12	32	25	23	300	17	40					

Applicable inserts, see pages **B65~B66**

CTFPR/L

TP□□





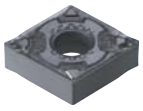
• R type insert 90°

(mm)

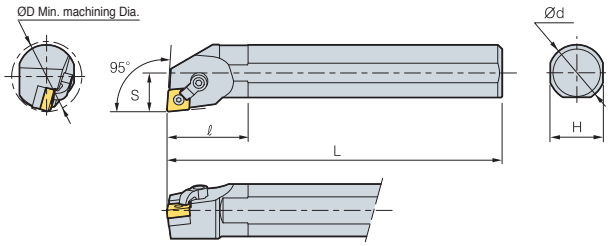
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	C-ring	Shim	Shim pin	Wrench
S12M-CTFPR/L-11	16	12	11	150	9	26	TP□□1103□□L	CH4R1C	CHX0414C	CR02C	-	-	HW25L
S16R-CTFPR/L-11	20	16	15	200	11	40							
S20S-CTFPR/L-11	25	20	18	250	13	40							
S16R-CTFPR/L-16	20	16	15	200	11	40	TP□□1603□□L	CH5R5C	CHX0519C	CR03C	-	-	HW30L
S20S-CTFPR/L-16	25	20	18	250	13	40							
S25R-CTFPR/L-16	32	25	23	200	17	40		CH6R5	CHX0622C	CR04C	ST32C	SP3C	
S32S-CTFPR/L-16	40	32	30	250	22	45							
S40T-CTFPR/L-16	50	40	37	300	27	60							
S40T-CTFPR/L-22	50	40	37	300	27	60	TP□□2204□□L	CH83R1	CH0823C	CR05C	ST43C	SP4C	HW40L

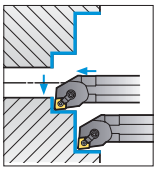
Applicable inserts, see pages **B70~B72**

MCLNR/L



CN□□





• R type insert 95°

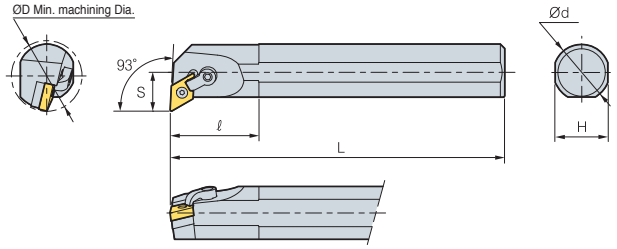
(mm)

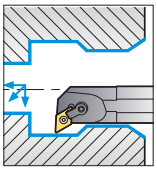
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim pin	Wrench
S20S-MCLNR/L-09	25	20	18	250	13	32	CN□□0903□□	CDH7N	DHA10-32-19	-	SP3D3	HW19.8L HW23.8L
S25R-MCLNR/L-09	32	25	23	200	17	40						
S25R-MCLNR/L-12	32	25	23	200	17	40	CN□□1204□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L HW23.8L
S32S-MCLNR/L-12	40	32	30	250	22	50				SC43D	SP4D	
S40T-MCLNR/L-12	50	40	37	300	27	60						
A25R-MCLNR/L-12	32	25	23	200	17	40	CN□□1204□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L HW23.8L
A32S-MCLNR/L-12	40	32	30	250	22	50				SC43D	SP4D	

Applicable inserts, see pages **B20~B25**

MDUNR/L

DN□□





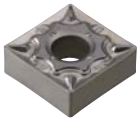
• R type insert 93°

(mm)

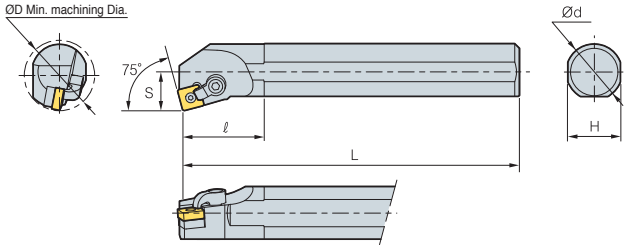
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim pin	Wrench
S32S-MDUNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	CDH6N	DHA1/4-21	SD43D	SP4D	HW31.8L HW23.8L
S40T-MDUNR/L-15-3	50	40	37	300	27	60						
A32S-MDUNR/L-15-3	40	32	30	250	22	50						

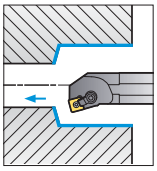
Applicable inserts, see pages **B26~B31**

MSKNR/L



SN□□





• R type insert 75°

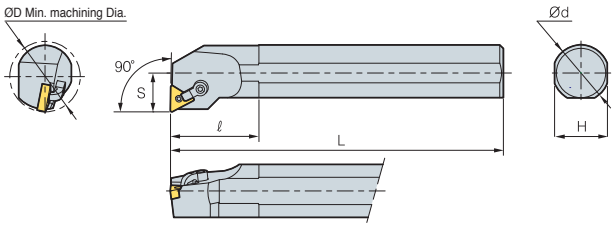
(mm)

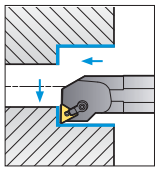
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim pin	Wrench
S25R-MSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	CDH8N1	DHA5/16-28	-	SP4DS	HW39.7L HW23.8L
S32S-MSKNR/L-12	40	32	30	250	22	50				SS43D	SP4D	
S40T-MSKNR/L-12	50	40	37	300	27	60						
A25R-MSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	CDH8N1	DHA5/16-28	-	SP4DS	HW39.7L HW23.8L
A32S-MSKNR/L-12	40	32	30	250	22	50				SS43D	SP4D	
A40T-MSKNR/L-12	50	40	37	300	27	60						

Applicable inserts, see pages **B33~B40**

MTFNR/L

TN□□





• R type insert 90°

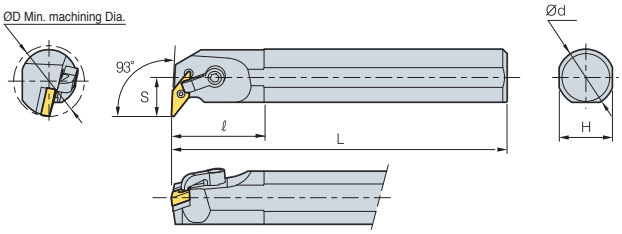
(mm)

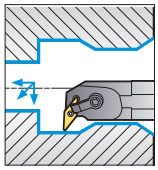
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim pin	Wrench
S25R-MTFNR/L-16	32	25	23	200	17	40	TN□□1604□□	CDH7N1	DHA10-32-19	-	SP3D3	HW23.8L
S32S-MTFNR/L-16	40	32	30	250	22	50		CDH7N1	DHA10-32-19	ST32D	SP3D	HW19.8L
S40T-MTFNR/L-16	50	40	37	300	27	60						
A25R-MTFNR/L-16	32	25	23	200	17	40	TN□□1604□□	CDH7N1	DHA10-32-19	-	SP3D3	HW23.8L
A32S-MTFNR/L-16	40	32	30	250	22	50		CDH7N1	DHA10-32-19	ST32D	SP3D	HW19.8L

Applicable inserts, see pages **B41~B48**

MVUNR/L

VN□□





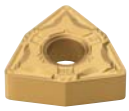
• R type insert 93°

(mm)

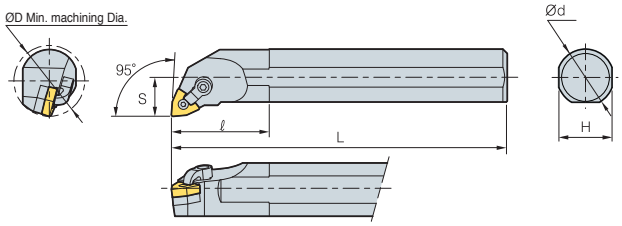
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim pin	Wrench
S32S-MVUNR/L-16	40	32	30	250	22	50	VN□□1604□□	CDH8N2	DHA5/16-28	SV32D	SP3D	HW39.7L HW19.8L
S40T-MVUNR/L-16	50	40	37	300	27	60						
A32S-MVUNR/L-16	40	32	30	250	22	50	VN□□1604□□	CDH8N2	DHA5/16-28	SV32D	SP3D	HW39.7L HW19.8L
A40T-MVUNR/L-16	50	40	37	300	27	60						

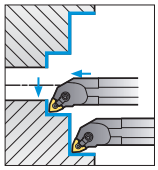
Applicable inserts, see pages **B49~B50**

MWLNR/L



WN□□





• R type insert 95°

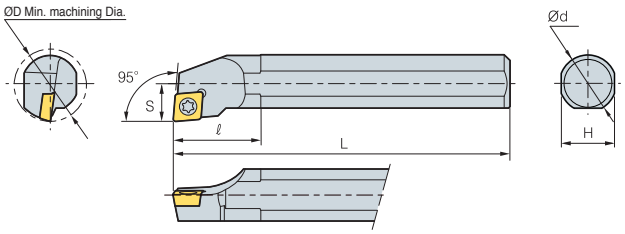
(mm)

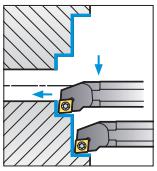
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	ClampScrew	Shim	Shim pin	Wrench
S25R-MWLNR/L-06	32	25	23	200	17	40	WN□□0604□□	CDH7N	DHA10/32-19	-	SP3D3	HW23.8L HW19.8L
S32S-MWLNR/L-06	40	32	30	250	22	50				SW32D	SP3D	
S40T-MWLNR/L-06	50	40	37	300	27	60						
S25R-MWLNR/L-08	32	25	23	200	17	40	WN□□0804□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L HW23.8L
S32S-MWLNR/L-08	40	32	30	250	22	50				SW43D	SP4D	
S40T-MWLNR/L-08	50	40	37	300	27	60						
A25R-MWLNR/L-06	32	25	23	200	17	40	WN□□0604□□	CDH7N	DHA10/32-19	-	SP3D3	HW31.8L HW19.8L
A32S-MWLNR/L-06	40	32	30	250	22	50				SW32D	SP3D	
A25R-MWLNR/L-08	32	25	23	200	17	40	WN□□0804□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L HW23.8L
A32S-MWLNR/L-08	40	32	30	250	22	50				SW43D	SP4D	

Applicable inserts, see pages **B51~B54**

SCLCR/L

CC□□





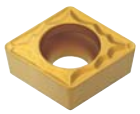
• R type insert 95°

(mm)

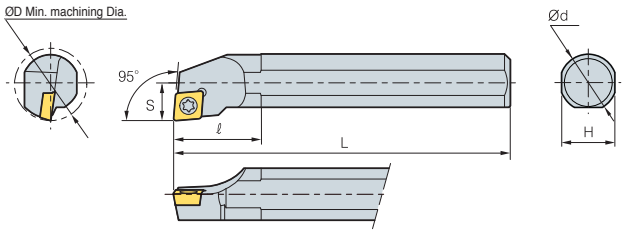
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S08K-SCLCR/L-06	10	8	7	125	5	12	CC□□0602□□	FTKA02555			TWO7
S10K-SCLCR/L-06	12	10	9	125	6	16					
S10M-SCLCR/L-06	12	10	9	150	6	16		FTKA02565	-	-	TWO7P
S12M-SCLCR/L-06	16	12	11	150	9	20					
S16R-SCLCR/L-06	20	16	15	200	11	25					
S12M-SCLCR/L-09	16	12	11	150	9	20	CC□□09T3□□	FTGA03508	-	-	TW15P
S16R-SCLCR/L-09	20	16	15	200	11	25					
S20S-SCLCR/L-09	25	20	18	250	13	32					
S25R-SCLCR/L-09	32	25	23	200	17	40		FTGA03510			TW15P
S25R-SCLCR/L-12	32	25	23	200	17	40	CC□□1204□□	FTGA0411F	-	-	TW15P
S32S-SCLCR/L-12	40	32	30	250	22	50		FTGA0411F	SC42S	SHXN0610F	HW40L TW15P
S40T-SCLCR/L-12	50	40	37	300	27	60					
A08F-SCLCR/L-06	10	8	7.5	80	5	12	CC□□0602□□	FTKA02555	-	-	TW07P
A10H-SCLCR/L-06	12	10	9.5	100	6	16		FTKA02565	-	-	TW07P
A12K-SCLCR/L-06	16	12	11	125	9	20					
A12K-SCLCR/L-09	16	12	11	125	9	20	CC□□09T3□□	FTGA03508	-	-	TW15P
A16M-SCLCR/L-09	20	16	15	150	11	25					
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	CC□□1204□□	FTGA0411F	-	-	TW15P
A32S-SCLCR/L-12	40	32	31	250	32	50		FTGA0411F	SC42S	SHXN0610F	HW40L,TW15P

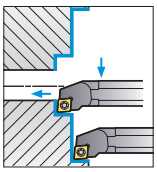
Applicable inserts, see pages **B55~B58, B80**

SCLPR/L



CP□□





• R type insert 95°

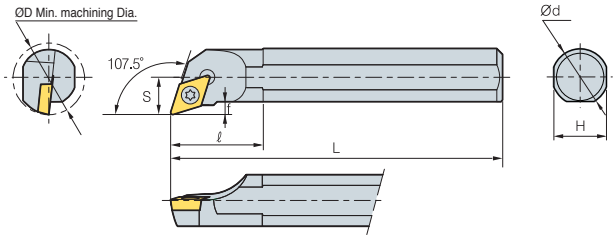
(mm)

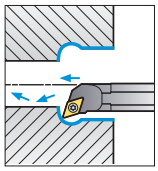
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10M-SCLPR/L-08	12	10	9	150	6	16	CP□□0802□□	FTNA0305	TW09P
S12M-SCLPR/L-08	16	12	11	150	8	20		FTNA0307	TW09P
S16N-SCLPR/L-09	20	16	15	160	10	25	CP□□0903□□	FTNA0408	TW15P
S16R-SCLPR/L-09	20	16	15	200	11	25			
S20N-SCLPR/L-09	25	20	18	160	12.5	32			
S20S-SCLPR/L-09	25	20	15	250	12.5	32			
A10H-SCLPR/L-08	12	10	9.5	100	9	16	CP□□0802□□	FTNA0305	TW09P
A12K-SCLPR/L-08	16	12	11	125	8	20		FTNA0307	TW09P
A16M-SCLPR/L-09	20	16	15	150	10	25	CP□□0903□□	FTNA0408	TW15P
A20Q-SCLPR/L-09	25	20	19	180	12.5	32			

Applicable inserts, see pages **B59**

SDQCR/L

DC□□





• R type insert 107.5°

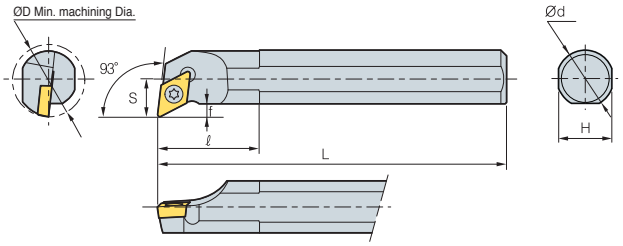
(mm)

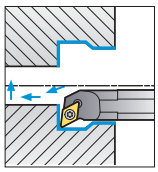
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	Screw	Wrench
S10M-SDQCR/L-07	13	10	9	150	7	16	2.5	DC□□0702□□	FTKA02555	TW07P
S12M-SDQCR/L-07	16	12	11	150	9	20	3.5		FTGA03510	TW07P
S16R-SDQCR/L-07	20	16	15	200	11	25	4		FTKA02565	TW07P
S16R-SDQCR/L-11	20	16	15	200	11	25	4	DC□□11T3□□	FTGA03508	TW15P
S20S-SDQCR/L-11	25	20	18	250	13	32	4.5			
S25R-SDQCR/L-11	32	25	23	200	17	40	7		FTGA03510	TW15P
A10H-SDQCR/L-07	13	10	9.5	100	7	16	2	DC□□0702□□	FTKA02555	TW07P
A12K-SDQCR/L-07	16	12	11	125	9	20	3		FTKA02565	TW07P
A16M-SDQCR/L-11	20	16	15	150	11	25	3	DC□□11T3□□	FTGA03508	TW15P
A20Q-SDQCR/L-11	25	20	19	180	13	32	3			
A25R-SDQCR/L-11	32	25	24	200	17	40	4		FTGA03510	TW15P

Applicable inserts, see pages **B60~B62, B81**

SDUCR/L

DC□□





• R type insert 93°

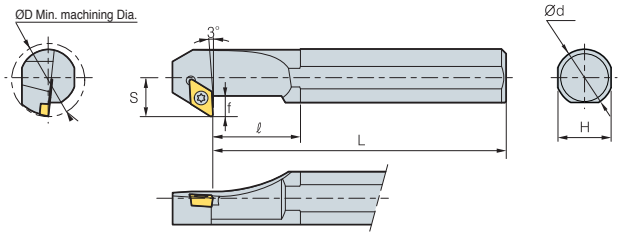
(mm)

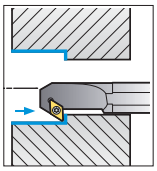
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	Screw	Wrench
S10M-SDUCR/L-07	13	10	9	150	7	16	2.5	DC□□0702□□	FTKA02555	TW07P
S12M-SDUCR/L-07	16	12	11	150	9	20	3.5		FTKA02565	TW07P
S16R-SDUCR/L-07	20	16	15	200	11	25	4			
S16R-SDUCR/L-11	20	16	15	200	11	25	4	DC□□11T3□□	FTGA03508	TW15P
S20S-SDUCR/L-11	25	20	18	250	13	32	4.3			
S25R-SDUCR/L-11	32	25	23	200	17	40	6.8		FTGA03510	TW15P
S32S-SDUCR/L-11	40	32	30	250	22	50	8.4			
A10H-SDUCR/L-07	13	10	9.5	100	7	16	2	DC□□0702□□	FTKA02555	TW07P
A12K-SDUCR/L-07	16	12	11	125	9	20	3		FTKA02565	TW07P
A16M-SDUCR/L-07	20	16	15	150	11	25	3			
A20Q-SDUCR/L-11	25	20	19	180	13	32	3	DC□□11T3□□	FTGA03508	TW15P
A25R-SDUCR/L-11	32	25	24	200	17	40	4.5		FTGA03510	TW15P

Applicable inserts, see pages **B60~B62, B81**

SDZCR/L

DC□□





• R type insert 3°

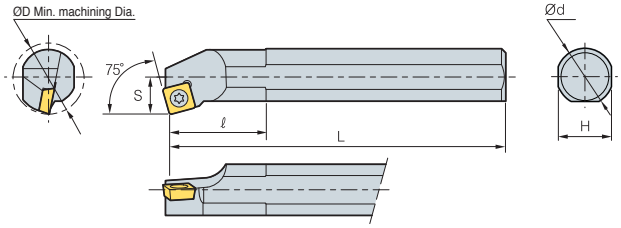
(mm)

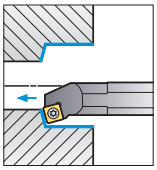
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	Screw	Shim	ShimScrew	Wrench
S16R-SDZCR/L-07	20	16	15	200	11	29	4	DC□□0702□□	FTKA02565	-	-	TW07P
S20S-SDZCR/L-07	25	20	18	250	13	36.5	4.5					
S25R-SDZCR/L-11	32	25	23	200	17	30	6.9	DC□□11T3□□	FTGA03510	-	-	TW15P
S32S-SDZCR/L-11	40	32	30	250	22	39	8.4		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
S40T-SDZCR/L-11	50	40	37	300	27	47	9.4					
A25R-SDZCR/L-11	32	25	24	200	17	30	4.5		FTGA03510	-	-	TW15P
A32S-SDZCR/L-11	40	32	31	250	22	39	6		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L

Applicable inserts, see pages **B60~B62, B81**

SSKCR/L

SC□□





• R type insert 75°

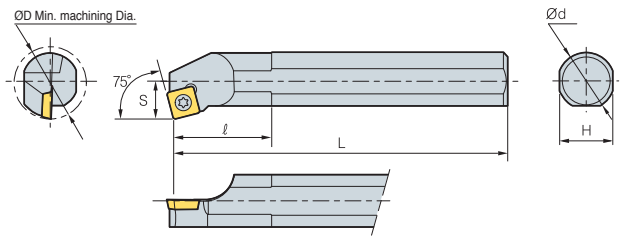
(mm)

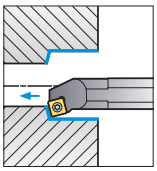
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S12M-SSKCR/L-09	16	20	11	150	9	20	SC□□09T3□□	FTGA03507	-	-	TW15P
S16R-SSKCR/L-09	20	16	15	200	11	25		FTGA03508	-	-	TW15P
S20S-SSKCR/L-09	25	20	18	250	13	32					
S25R-SSKCR/L-12	32	25	23	200	17	40	SC□□1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P
S32S-SSKCR/L-12	40	32	30	250	22	50			SS42S	SHXN0610F	TW15P, HW40L
A12K-SSKCR/L-09	16	12	11	125	9	20	SC□□09T3□□	FTGA03507			TW15P
A16M-SSKCR/L-09	20	16	15	150	11	25		FTGA03508	-	-	TW15P
A20Q-SSKCR/L-09	25	20	19	180	13	32					
A25R-SSKCR/L-12	32	25	24	200	17	40	SC□□1204□□	FTGA0411F	SS42S	SFXN0610F	TW15P
A32S-SSKCR/L-12	40	32	31	250	22	50		FTGA0411F	SS42S	SFXN0610F	TW15P, HW40L

Applicable inserts, see pages **B63, B83**

SSKPR/L

SP□□





• R type insert 75°

(mm)

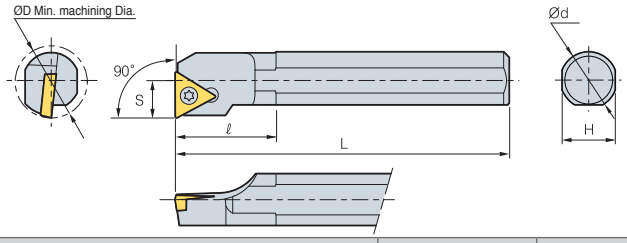
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S12M-SSKPR/L-09	16	12	11	150	8	20	SP□□0903□□	FTNA0307	TW09P
S16N-SSKPR/L-09	20	16	15	160	10	25			
S16R-SSKPR/L-09	20	16	15	200	10	25			
S20N-SSKPR/L-09	25	20	18	160	12.5	32			
S20S-SSKPR/L-09	25	20	18	250	12.5	32			
A12K-SSKPR/L-09	16	12	11	125	8	20	SP□□0903□□	FTNA0305	TW09P
A16M-SSKPR/L-09	20	16	15	150	10	25		FTNA0307	TW09P
A20Q-SSKPR/L-09	25	20	19	180	12.5	32			

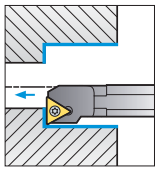
Applicable inserts, see pages **B65~B66**

• Use left handed insert for right handed holder

STFCR/L

TC□□





• R type insert 90°

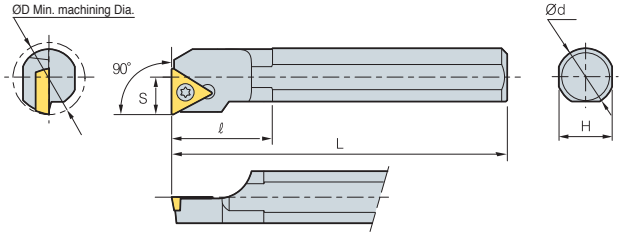
(mm)

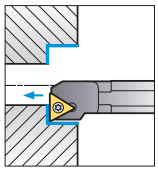
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S10M-STFCR/L-09	13	10	9	150	7	16	TC□□0902□□	FTKA02206	-	-	TW06P
S12M-STFCR/L-09	16	12	11	150	9	20					
S12M-STFCR/L-11	16	12	11	150	9	20	TC□□1102□□	FTKA02565	-	-	TW07P
S16R-STFCR/L-11	20	16	15	200	11	25					
S20S-STFCR/L-11	25	20	18	250	13	32					
S20S-STFCR/L-16	25	20	18	250	13	32	TC□□16T3□□	FTGA03510	-	-	TW15P
S25R-STFCR/L-16	32	25	23	200	17	40					
S32S-STFCR/L-16	40	32	30	250	22	50	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
S40T-STFCR/L-16	50	40	37	300	27	60					
A10H-STFCR/L-09	13	10	9.5	100	7	16	TC□□0902□□	FTKA02206	-	-	TW06P
A12K-STFCR/L-09	16	12	11	125	9	20					
A12K-STFCR/L-11	16	12	11	125	9	20					
A16M-STFCR/L-11	20	16	15	150	11	25	TC□□1102□□	FTKA02565	-	-	TW07P
A20Q-STFCR/L-11	25	20	19	180	13	32					
A25R-STFCR/L-16	32	25	24	200	17	40	TC□□16T3□□	FTKA03510	-	-	TW15P
A32S-STFCR/L-16	40	32	31	250	22	50		FTGA03512	ST32S	SHXN0509F	TW15P, HW35L

Applicable inserts, see pages **B67~B69, B84**

STFPR/L

TP□□





• R type insert 90°

(mm)

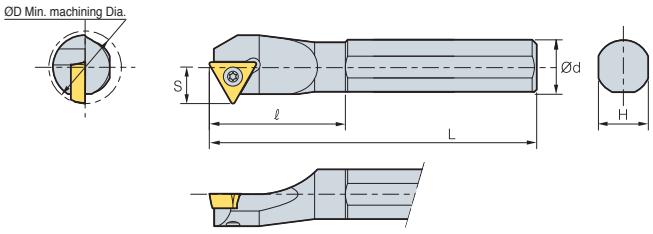
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10M-STFPR/L-11	12	10	9	150	6	16	TP□□1103□□	FTNA0305	TW09P
S12M-STFPR/L-11	16	12	11	150	8	20		FTNA0307	TW09P
S16N-STFPR/L-11	20	16	15	160	10	25			
S16R-STFPR/L-11	20	16	15	200	10	25			
S20N-STFPR/L-16	25	20	18	160	12.5	32	TP□□1604□□	FTNA0408	TW15P
S20S-STFPR/L-16	25	20	18	250	12.5	32			
A10H-STFPR/L-11	12	10	9.5	100	6	16	TP□□1103□□	FTNA0305	TW09P
A12K-STFPR/L-11	16	12	11	125	8	20		FTNA0307	TW09P
A16M-STFPR/L-11	20	16	15	150	10	25			
A20Q-STFPR/L-16	25	20	19	180	12.5	32	TP□□1604□□	FTNA0408	TW15P

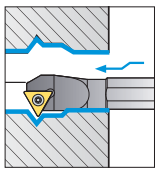
Applicable inserts, see pages **B70~B72**

• Use left handed insert for right handed holder

STWPR/L

TP□□





• R type insert 60°

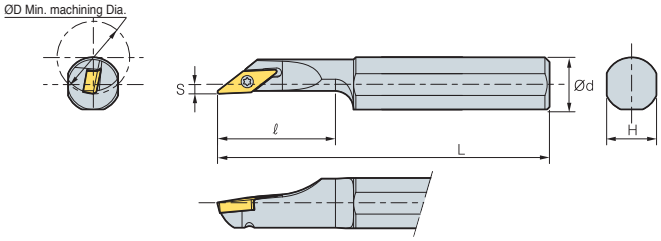
(mm)

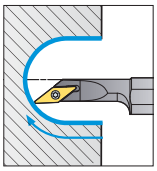
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10M-STWPR/L-11	12	10	9	150	6	16	TPGH1102□□	FTNA0305	TW09P
S12M-STWPR/L-11	16	12	11	150	8	20	TPGH1103□□ TPMT1103□□	FTNA0306	TW09P
S16R-STWPR/L-11	20	16	15	180	10	25			
S20R-STWPR/L-11	25	20	19	200	12.5	32			

Applicable inserts, see pages **B70~B72**

SVJCR/L

VC□□





• R type insert 142°

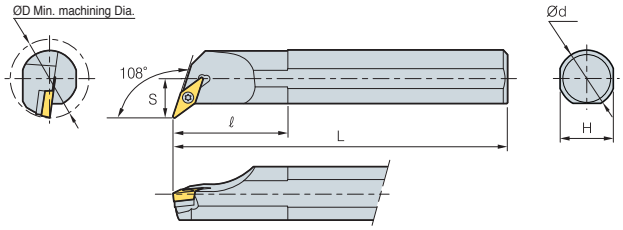
(mm)

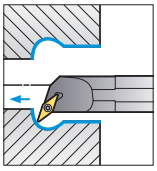
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S12M-SVJCR/L-08	16	12	11	150	2	26	VCMT0802□□	FTNA0204	TW06P
S16Q-SVJCR/L-08	20	16	15	180	2	36			

Applicable inserts, see pages **B75~B76**

SVQBR/L

VB□□





• R type insert 108°

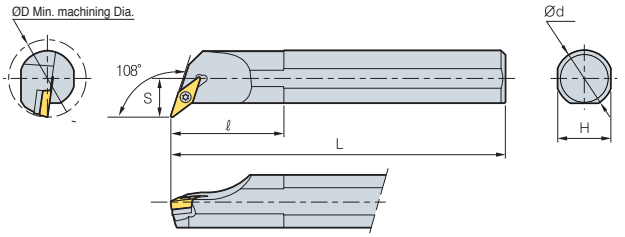
(mm)

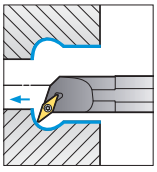
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S32S-SVQBR/L-16	40	32	30	250	22	50	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L
S40T-SVQBR/L-16	50	40	37	300	27	60					
A32S-SVQBR/L-16	40	32	31	250	22	50					

Applicable inserts, see pages **B73~B74, B85**

SVQCR/L

VC□□





• R type insert 108°

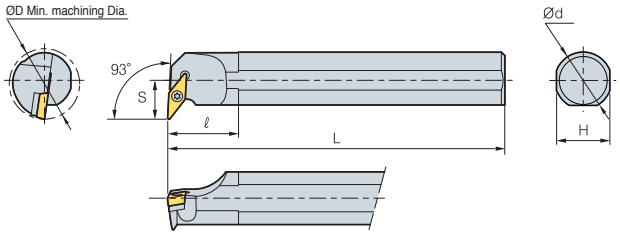
(mm)

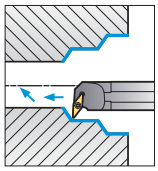
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S16R-SVQCR/L-11	20	16	15	200	11	25	VC□□1103□□	FTKA02565	-	-	TW07P
S20S-SVQCR/L-11	25	20	18	250	13	32					
S25R-SVQCR/L-11	32	25	23	200	17	40					
S20S-SVQCR/L-13	25	20	18	250	13	32	VC□□1303□□	FTKA0307	-	-	TW09P
S25R-SVQCR/L-13	32	25	23	200	17	40					
S25R-SVQCR/L-16	32	25	23	200	17	40	VC□□1604□□	FTGA03510	-	-	TW15P
S32S-SVQCR/L-16	40	32	30	250	22	50		FTGA03512	SV32S	SHXN0509F	TW15P HW35L
S40T-SVQCR/L-16	50	40	37	300	27	60					

Applicable inserts, see pages **B75~B76, B86**

SVUBR/L

VB□□





• R type insert 93°

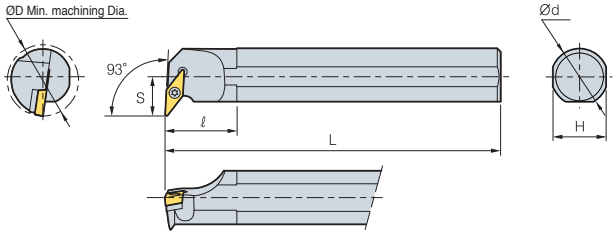
(mm)

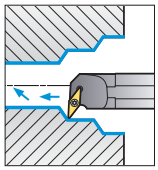
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S32S-SVUBR/L-16	40	32	30	250	22	50	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L
S40T-SVUBR/L-16	50	40	37	300	27	60					
A32S-SVUBR/L-16	40	32	31	250	22	50					

Applicable inserts, see pages **B73~B74, B85**

SVUCR/L

VC□□





• R type insert 93°

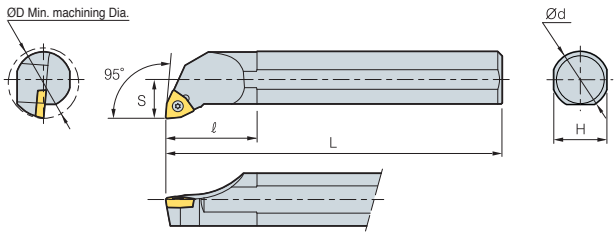
(mm)

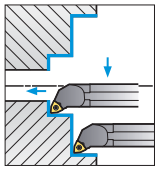
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S16R-SVUCR/L-11	22	16	15	200	13	25	VC□□1103□□	FTKA02565	-	-	TW07P
S20S-SVUCR/L-11	25	20	18	250	14	32					
S25T-SVUCR/L-11	32	25	23	300	17	40					
S20S-SVUCR/L-13	28	20	18	250	16	32	VC□□1303□□	FTKA0307	-	-	TW09P
S25R-SVUCR/L-13	32	25	23	200	17	40					
S25R-SVUCR/L-16	32	25	23	200	19	40	VC□□1604□□	FTGA03510	-	-	TW15P
S32S-SVUCR/L-16	40	32	30	250	22	50		FTGA03512	SV32S	SHXN0509F	TW15P HW35L
S40T-SVUCR/L-16	50	40	37	300	27	60					

Applicable inserts, see pages **B75~B76, B86**

SWLCR/L

WC□□





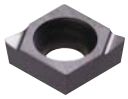
• R type insert 95°

(mm)

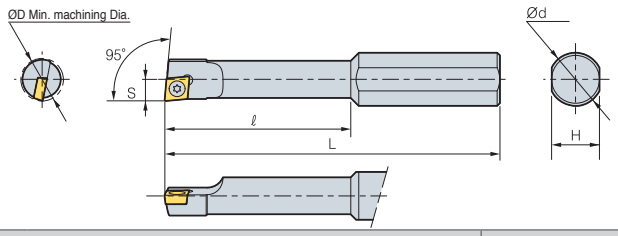
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S25R-SWLCR/L-08	32	25	23	200	17	40	WC□□0804□□	FTGA0411F	TW15P
S32S-SWLCR/L-08	40	32	30	250	22	50			
A25R-SWLCR/L-08	32	25	24	200	17	40	WC□□0804□□	FTGA0411F	TW15P
A32S-SWLCR/L-08	40	32	31	250	22	50			

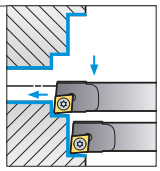
Applicable inserts, see pages **B78**

SCLCR/L



CCET





• R type insert 95°

(mm)

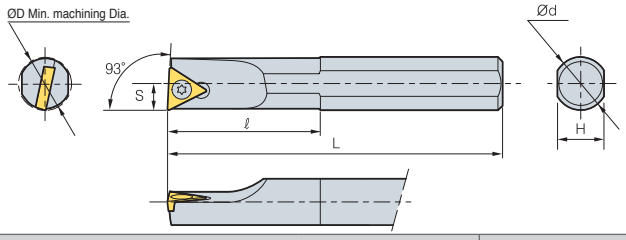
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10H-SCLCR/L-0305	5	10	9	100	2.5	25	CCET 0301□□	FTNA01633	TW06P
S10H-SCLCR/L-0306	6	10	9	100	3.0	25			
S10J-SCLCR/L-0407	7	10	9	110	3.5	30	CCET 0401□□	FTNA0238	TW06P
S10J-SCLCR/L-0408	8	10	9	110	4.0	30			

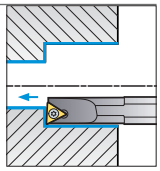
Applicable inserts, see pages **B55**

• Use left handed insert for right handed holder

STUBR/L

TB□□





• R type insert 93°

(mm)

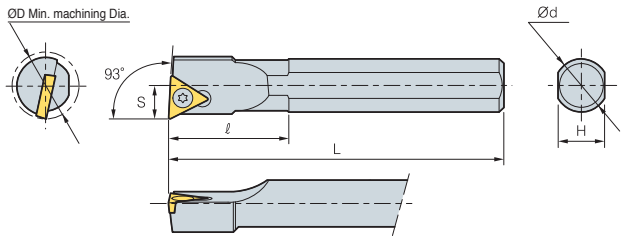
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S08K-STUBR/L-06	8	8	7	125	4	30	TB□□0601□□R/L	FTNA0204	TW06P
A08F-STUBR/L-06	8	8	7.5	80	4	30			

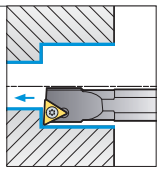
Applicable inserts, see pages **B67**

• Use left handed insert for right handed holder

STUPR/L

TP□□





• R type insert 93°

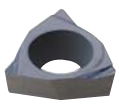
(mm)

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

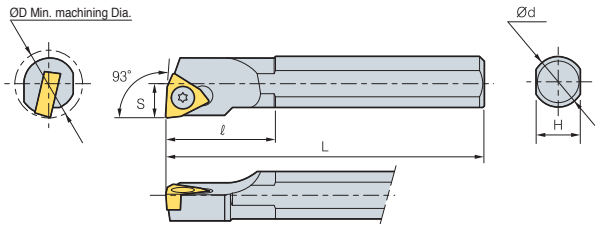
Applicable inserts, see pages **B70~B72**

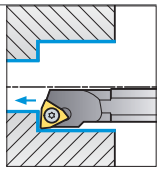
• Use left handed insert for right handed holder

SWUBR/L



WBGT





• R type insert 93°

(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S05H-SWUBR/L-02	5.5	5	4.5	100	2.75	-	WBGT 0201□□R/L	FTNA0203	TW06P
S08K-SWUBR/L-02	8	8	7	125	4	30		FTNA02033	
S08K-SWUBR/L-S3	10	8	7	125	5	18	WBGT S302□□R/L	FTNA02205	TW06P
A08F-SWUBR/L-02	8	8	7.5	80	4	30	WBGT 0201□□R/L	FTNA0203	TW06P
A08F-SWUBR/L-S3	10	8	7.5	80	5	16	WBGT S302□□R/L	FTNA02205	TW06P

Applicable inserts, see pages **B55**

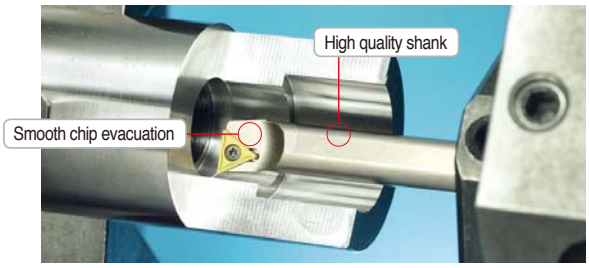
• Use left handed insert for right handed holder

Carbide Shank Boring Bar

KORLOY Carbide Shank Boring Bar

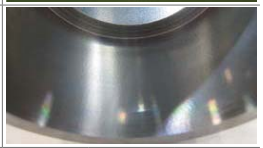
- Excellent cutting performance even in internal machining with chattering
- Available for various workpieces such as steel, stainless steel, cast iron, etc.
- Improved tool life and surface roughness

Features

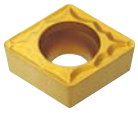


Higher strength and durability than steel shank, special surface treatment applied

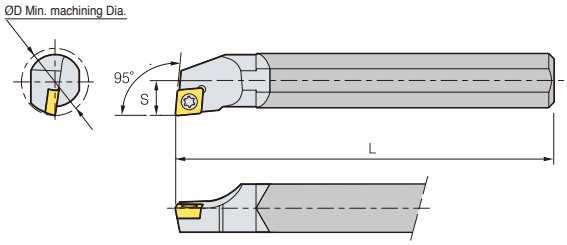
Comparison of chipping

Specifications	Steel boring bar			Carbide boring bar		
SCM440 vc:200 m/min ap:0.4 mm fn:0.15 mm/rev Cutting depth:5D						
						
	Rmax	Rz	Ra	Rmax	Rz	Ra
	4.67	3.68	0.62	3.07	2.76	0.53

SCLCR/L



CC□□



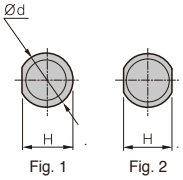
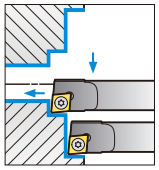


Fig. 1 Fig. 2



• R type insert 95°

(mm)

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				
C06H-SCLCR/L-04	7	6	5.4	100	3.5	CC□□T0401□□	FTNA0238	TW06P	
C07K-SCLCR/L-04	8	7	6.4	125	4				
C08K-SCLCR/L-06	10	8	7	125	5	CC□□T0602□□	FTKA02555	TW07P	2
C10K-SCLCR/L-06	12	10	9	125	6		FTKA02565	TW07P	
C10M-SCLCR/L-06	12	10	9	150	6				
C12M-SCLCR/L-06	14	12	11	150	7				
C12Q-SCLCR/L-06	14	12	11	180	7				
C12M-SCLCR/L-09	15	12	11	150	8	CC□□T09T3□□	FTGA03508	TW15P	
C12Q-SCLCR/L-09	15	12	11	180	8				
C16R-SCLCR/L-09	20	16	15	200	10				
C16S-SCLCR/L-09	20	16	15	250	10				
C20R-SCLCR/L-09	25	20	18	200	13				
C20S-SCLCR/L-09	25	20	18	250	13				
C25T-SCLCR/L-12	32	25	23	300	17	CC□□T1204□□	FTGA0411F	TW15P	
E06H-SCLCR/L-04	7	6	5.4	100	3.5	CC□□T0401□□	FTNA0238	TW06P	1
E07K-SCLCR/L-04	8	7	6.4	125	4				
E08K-SCLCR/L-06	10	8	7	125	5	CC□□T0602□□	FTKA02555	TW07P	2
E10K-SCLCR/L-06	12	10	9	125	6		FTKA02565	TW07P	
E10M-SCLCR/L-06	12	10	9	150	6				
E12M-SCLCR/L-06	14	12	11	150	7				
E12Q-SCLCR/L-06	14	12	11	180	7				
E12M-SCLCR/L-09	15	12	11	150	8	CC□□T09T3□□	FTGA03508	TW15P	
E12Q-SCLCR/L-09	15	12	11	180	8				
E16R-SCLCR/L-09	20	16	15	200	11				
E16S-SCLCR/L-09	20	16	15	250	10				
E20R-SCLCR/L-09	25	20	18	200	13				
E20S-SCLCR/L-09	25	20	19	250	13				
E25T-SCLCR/L-12	32	25	23	300	17	CC□□T1204□□	FTGA0411F	TW15P	

Applicable inserts, see pages **B55~B58**

SCLPR/L

CP□□

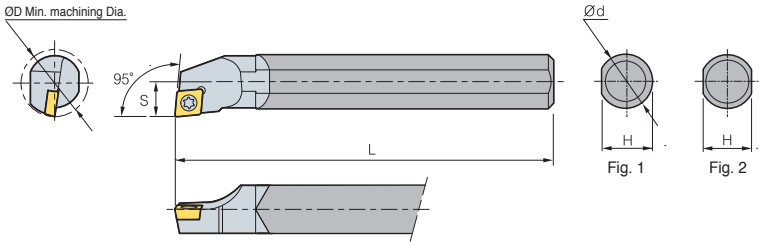
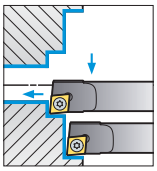


Fig. 1 Fig. 2



• R type insert 95°

(mm)

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

Applicable inserts, see pages **B59**

SDQCR/L

DC□□

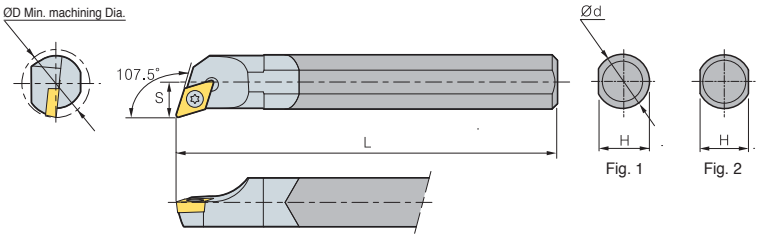
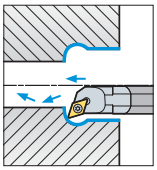


Fig. 1 Fig. 2



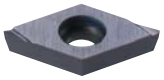
• R type insert 107.5°

(mm)

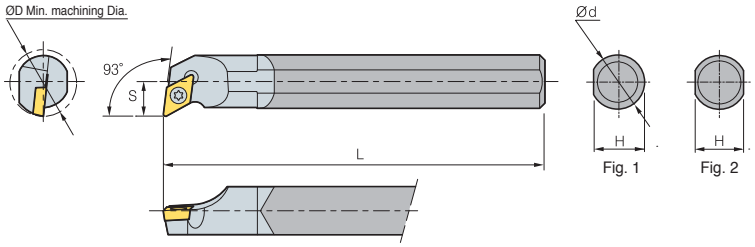
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C08K-SDQCR/L-07	10	8	7	125	6	DC□□T0702□□	FTKA02555	TW07P	2
C10K-SDQCR/L-07	13	10	9	125	7				
C12M-SDQCR/L-07	16	12	11	150	9		FTKA02565	TW07P	
C16R-SDQCR/L-07	20	16	15	200	11				
C16R-SDQCR/L-11	20	16	15	200	11	DC□□T11T3□□	FTGA03508	TW15P	
C20R-SDQCR/L-11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

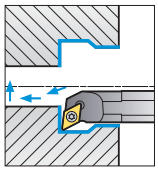
Applicable inserts, see pages **B60~B62, B81**

SDUCR/L



DC□□





• R type insert 93°

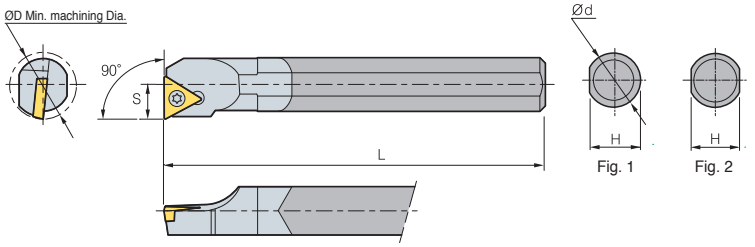
(mm)

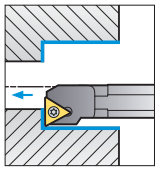
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C10K-SDUCR/L-07	13	10	9	125	7	DC□□T0702□□	FTKA02555	TW07P	2
C10M-SDUCR/L-07	13	10	9	150	7				
C12M-SDUCR/L-07	16	12	11	150	9		FTKA02565	TW07P	
C12Q-SDUCR/L-07	16	12	11	180	9				
C16R-SDUCR/L-07	20	16	15	200	11				
C16S-SDUCR/L-07	20	16	15	250	11				
C16R-SDUCR/L-11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

Applicable inserts, see pages **B60~B62, B81**

STFCR/L

TC□□





• R type insert 90°

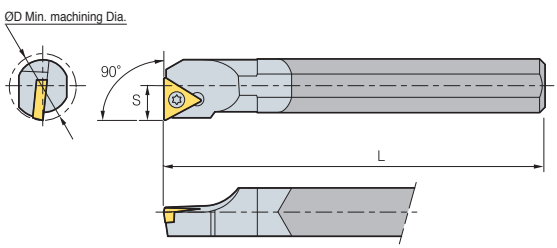
(mm)

Designation	ØD	Ød	H	L	S	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				
C10K-STFCR/L-11	12	10	9	125	6	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				
C20S-STFCR/L-11	25	20	18	250	13				
C20R-STFCR/L-16	25	20	18	200	13	TC□□T16T3□□	FTGA03510	TW15P	
C20S-STFCR/L-16	25	20	18	250	13				
E08K-STFCR/L-09	10	8	7	125	5	TC□□T0902□□	FTKA02206	TW06P	
E10K-STFCR/L-09	12	10	9	125	6				
E10K-STFCR/L-11	12	10	9	125	6	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				
E20S-STFCR/L-11	25	20	18	250	13				
E20R-STFCR/L-16	25	20	18	200	13	TC□□T16T3□□	FTGA03510	TW15P	
E20S-STFCR/L-16	25	20	19	250	13				

Applicable inserts, see pages **B67~B69**

STFPR/L

TP□□



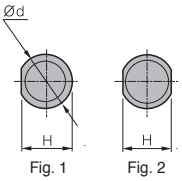
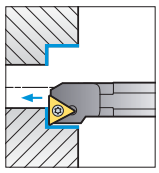


Fig. 1 Fig. 2



• R type insert 90°

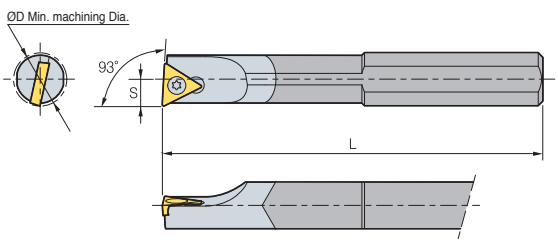
(mm)

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

Applicable inserts, see pages **B70~B72**

STUBR/L

TB□□



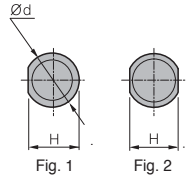
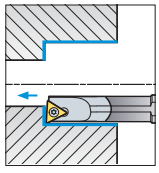


Fig. 1 Fig. 2



• R type insert 93°

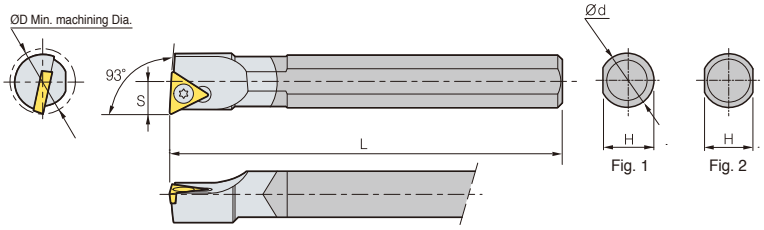
(mm)

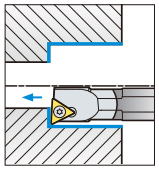
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C08K-STUBR/L-06	10	8	7	125	5	TB□□T0601□□	FTNA0204	TW06P	2
C10K-STUBR/L-06	12	10	9	125	6				
E08K-STUBR/L-06	10	8	7	125	5	TB□□T0601□□	FTNA0204	TW06P	2
E10K-STUBR/L-06	12	10	9	125	6				

Applicable inserts, see pages **B67**

STUPR/L

TP□□





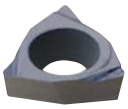
• R type insert 93°

(mm)

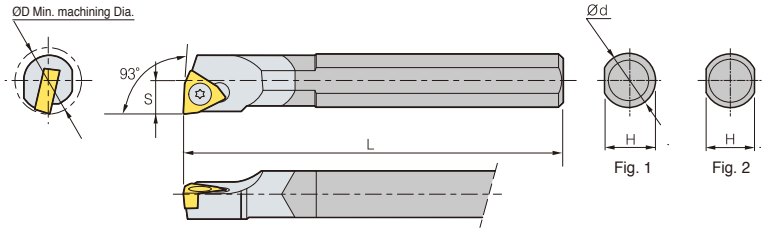
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C08K-STUPR/L-08	10	8	7	125	5	TP□□T0802□□	FTNA02205	TW06P	2
C10K-STUPR/L-11	12	10	9	125	6	TP□□T1103□□	FTNA0305	TW09P	
C10M-STUPR/L-11	12	10	9	150	6				
C12M-STUPR/L-11	15	12	11	150	8		FTNA0307	TW09P	
C12Q-STUPR/L-11	15	12	11	180	8				
C16R-STUPR/L-11	20	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				
E08K-STUPR/L-08	10	8	7	125	5	TP□□T0802□□	FTNA02205	TW06P	2
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				

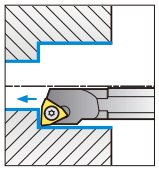
Applicable inserts, see pages **B70~B72**

SWUBR/L



WB□T





• R type insert 93°

(mm)

Designation	ØD	Ød	H	L	S	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				
C08K-SWUBR/L-02	9	8	7	125	4.5		FTNA02033	TW06P	2
C08K-SWUBR/L-S3	10	8	7	125	4.5	WB□TS301□□	FTNA02205	TW06P	
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	TW06P	2
E08K-SWUBR/L-S3	10	8	7	125	5	WB□TS301□□	FTNA02205	TW06P	

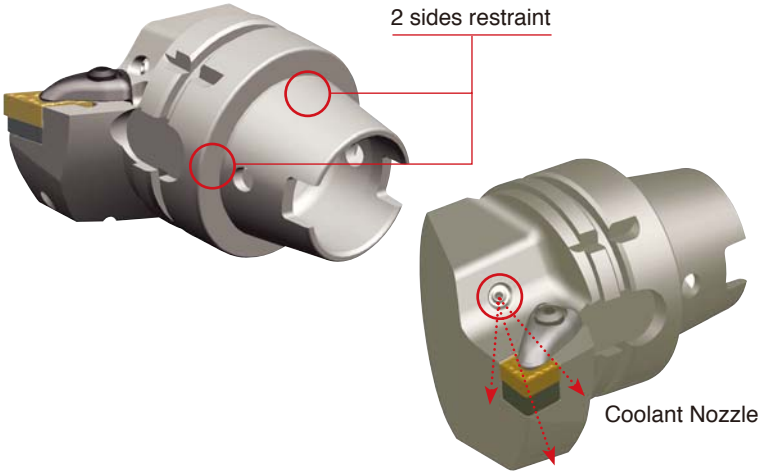
Applicable inserts, see pages **B78**

※ **See page B203 for applicable sleeves**

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



HSK Tooling code system

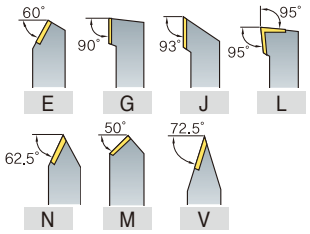
Insert Shape	Clearance angle of insert	Length of tool holder
C : 80° Diamond	N = 0°	DX : 65
D : 55° Diamond	B = 5°	H : 100
S : 90° Square		L : 140
T : 60° Triangle		
V : 35° Diamond		
W : 80° Hexagon		

H63T D C L N R DX – 12

Taper design & size
ICTM=HSK standard

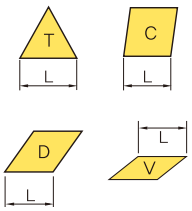
Clamping Type
D : Double Clamp
M : Multi Clamp
P : Lever Lock
S : Screw On
W : Wedge Clamp

Holder Style



Hand
R : Right
L : Left
N : No Hand

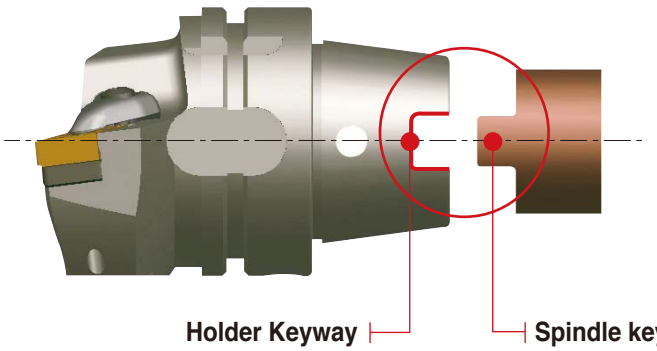
Cutting edge Length



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



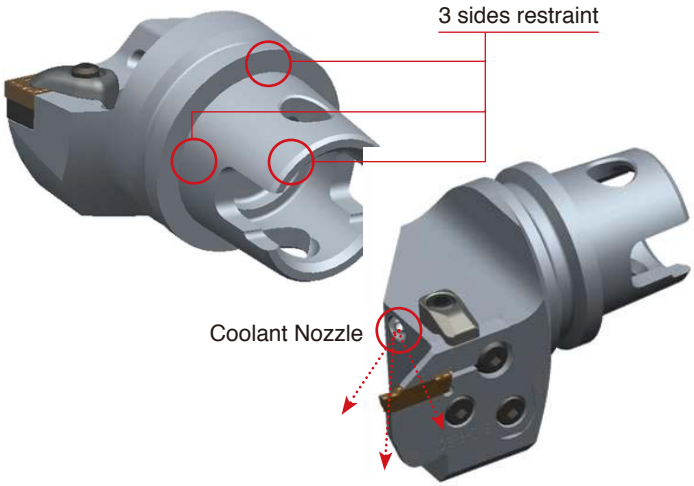
Tolerance comparison(Example) (mm)

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



KM Tooling code system

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

Clearance angle of insert
N = 0°
B = 5°

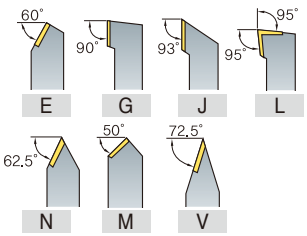
Length of tool holder
DX : 65
H : 100
L : 140

KM50 D C L N R DX – 12

Taper design & size
50, 63UT
80ATC, 100

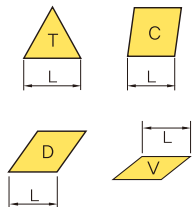
Clamping Type
D : Double Clamp
M : Multi Clamp
P : Lever Lock
S : Screw On
W : Wedge Clamp

Holder Style

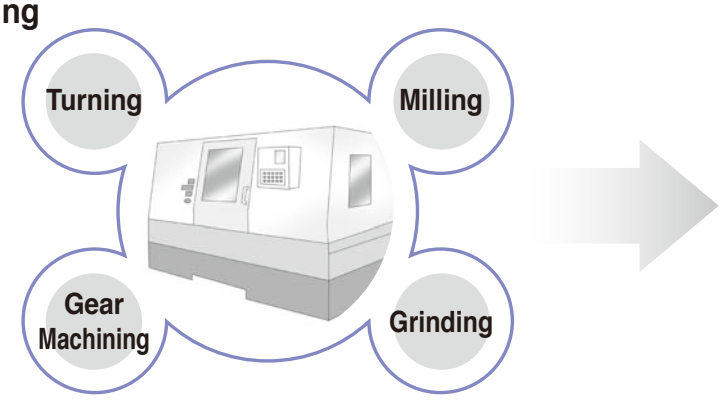


Hand
R : Right
L : Left
N : No Hand

Cutting edge Length



Multi-Tasking Machine



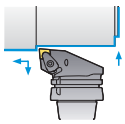
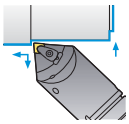
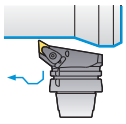
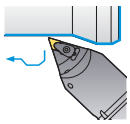
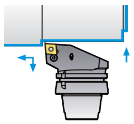
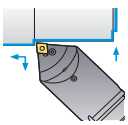
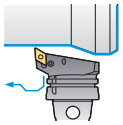
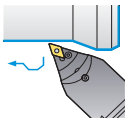
4 Machines
↓
1 Machine

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								
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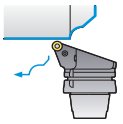
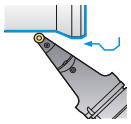
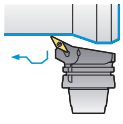
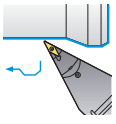
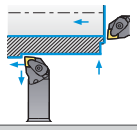
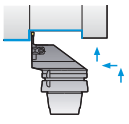
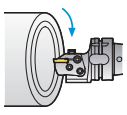
Approach angle	95°	95°	93°	107.5°	95°	95°	93°	107.5°
Page	B159	B159	B159	B159	B160	B160	B160	B160
Turning	●	●	●	●	●	●	●	●
Copying			●	●			●	●
Facing	●	●	●	●	●	●	●	●
Back turning	●	●	●	●	●	●	●	●
Internal turning								

Cutting Shape								
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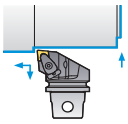
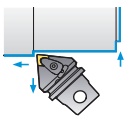
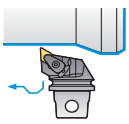
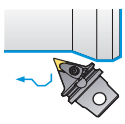
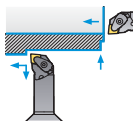
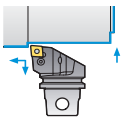
Approach angle	-	-	117.5°	117.5°	95°	-	-	
Page	B161	B161	B161	B161	B163	B162	B162	
Turning	●	●	●	●	●	●		
Copying	●	●	●	●		●		
Facing	●	●	●	●	●	●	●	
Back turning	●	●	●	●	●			
Internal turning					●			

Index for KM Tooling System

Cutting Shape						
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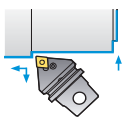
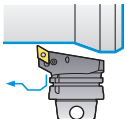
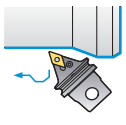
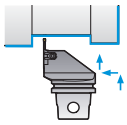
Approach angle	95°	95°	93°	107.5°	95°	95°
Page	B165	B165	B165	B166	B168	B166
Turning	●	●	●	●	●	●
Copying			●	●		
Facing	●	●	●	●	●	●
Back turning	●	●	●	●	●	●
Internal turning					●	

Cutting Shape						
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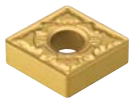
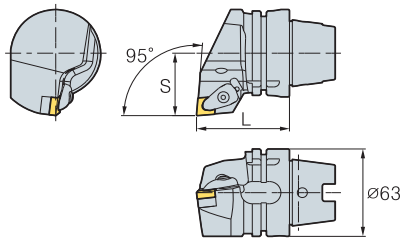
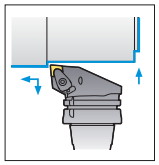
Approach angle	95°	93°	107.5°	-		
Page	B166	B167	B167	B167		
Turning	●	●	●	●		
Copying		●	●	●		
Facing	●	●	●			
Back turning	●	●	●	●		
Internal turning						

DCLNR/L



CN□□





95°

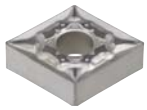
• R type insert

(mm)

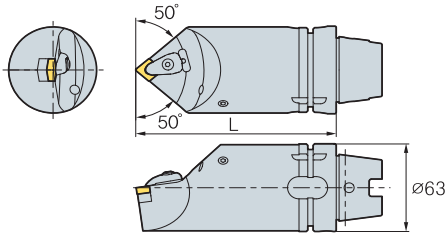
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DCLNR/L-DX12	65	45	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T

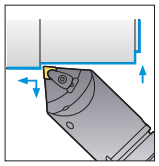
Applicable inserts, see pages **B20 ~ B25**

DCMNN



CN□□





95°

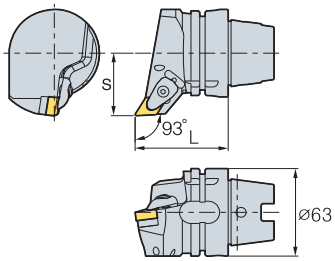
(mm)

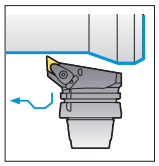
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DCMNN-H12	100	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DCMNN-L12	140										

Applicable inserts, see pages **B20 ~ B25**

DDJNR/L

DN□□





93°

• R type insert

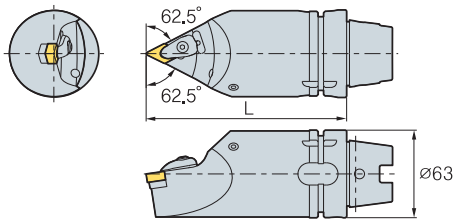
(mm)

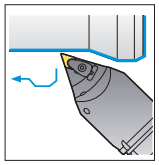
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DDJNR/L-DX15	65	45	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T
H63T-DDJNR/L-DX15-3	65	45	DN□□1504□□			SD44V						

Applicable inserts, see pages **B26 ~ B31**

DDNNN

DN□□





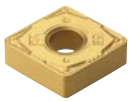
107.5°

(mm)

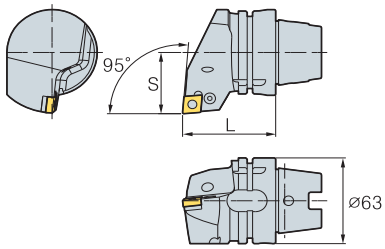
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DDNNN-H15	100	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DDNNN-L15	140										
H63T-DDNNN-H15-3	100	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T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

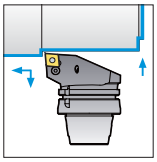
Applicable inserts, see pages **B26 ~ B31**

PCLNR/L



CN□□





95°

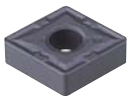
• R type insert

(mm)

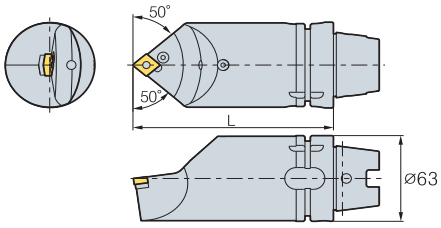
Designation	L	S	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PCLNR/L-DX12	65	45	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	-	HW30L	CP63T

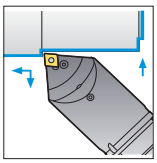
Applicable inserts, see pages **B20 ~ B25**

PCMNN



CN□□





95°

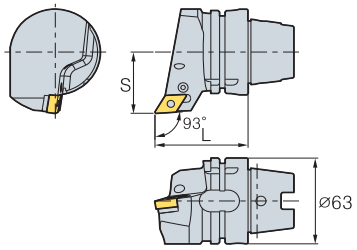
(mm)

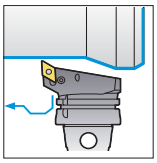
Designation	L	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PCMNN-H12	100	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N		CN0605	KHA0808	HW30L	CP63T
H63T-PCMNN-L12	140										

Applicable inserts, see pages **B20 ~ B25**

PDJNR/L

DN□□





95°

• R type insert

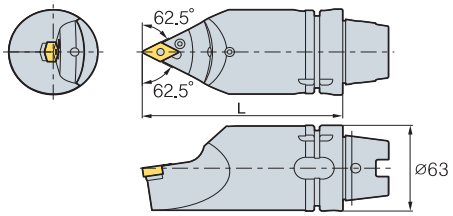
(mm)

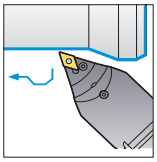
Designation	L	S	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PDJNR/L-DX15	65	45	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L	CP63T
H63T-PDJNR/L-DX15-3	65	45	DN□□1504□□			SD43N						

Applicable inserts, see pages **B30 ~ B33**

PDNNN

DN□□





107.5°

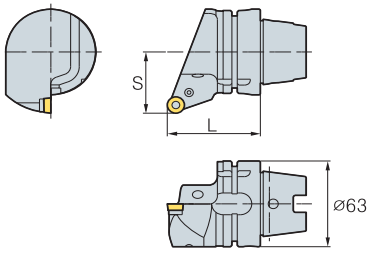
(mm)

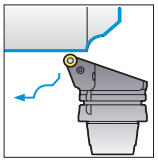
Designation	L	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PDNNN-H15	100	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PDNNN-L15	140										
H63T-PDNNN-H15-3	100	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PDNNN-L15-3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

Applicable inserts, see pages **B26 ~ B31**

PRGCR/L

RCMX1204M0





• R type insert

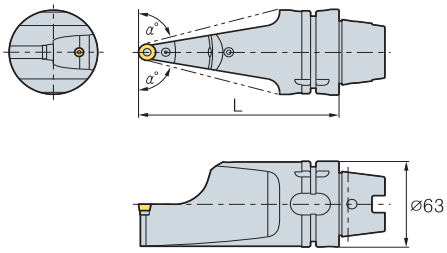
(mm)

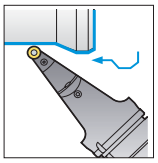
Designation	L	S	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PRGCR/L-DX12	65	45	RCMX1204M0	LR12	VHX0617	SR12	SP3	LSPS3	CN0605	-	HW25L	CP63T

Applicable inserts, see pages **B63**

PRDCN

RCMX1204M0





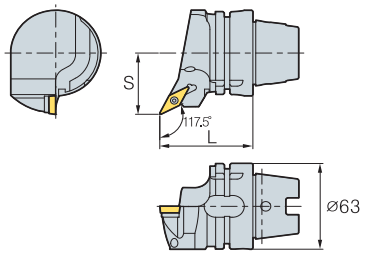
(mm)

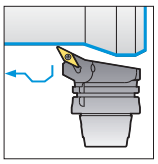
Designation	L	α°	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PRDCN-H12	100	69	RCMX1204M0	LR12	VHX0617	SR12	SP3	LSPS3	CN0605	-	HW25L	CP63T
H63T-PRDCN-L12	140	75										

Applicable inserts, see pages **B63**

SVPBR/L

VB□T





117.5°

• R type insert

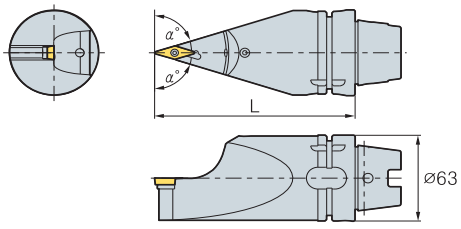
(mm)

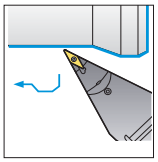
Designation	L	S	Insert	Screw	Shim Screw	Shim	Nozzle	Plug	Wrench	Wrench	Coolant Pipe
H63T-SVPBR/L-DX16	65	45	VB□T1604□□	FTGA03512	SHXN0509F	SV32S	CN0605	-	TW15P	HW32L	CP63T

Applicable inserts, see pages **B73 ~ B74, B85**

SVVBN

VB□T





117.5°

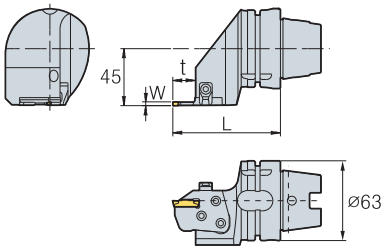
(mm)

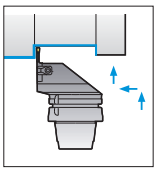
Designation	L	α°	Insert	Screw	Shim Screw	Shim	Nozzle	Plug	Wrench	Wrench	Coolant Pipe
H63T-SVVBN-H16	100	66.5	VB□T1604□□	FTGA03512	SHXN0509F	SV32S	CN0605	KHA0808	TW15P	HW32L	CP63T
H63T-SVVBN-L16	140	72.5									

Applicable inserts, see pages **B73 ~ B74, B85**

MCHR/L

MGMN / MGMR/L
MGGN / MRMN





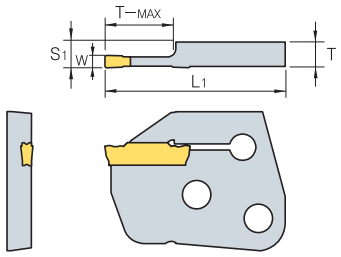
• R type insert

(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

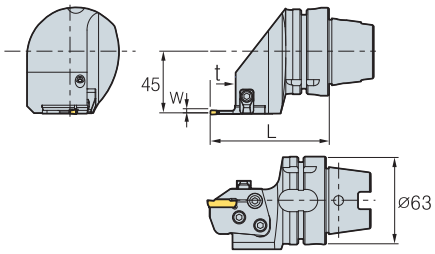
(mm)

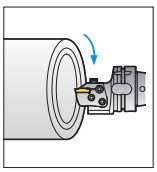
Designation		L	L1	S1	T-MAX	Insert		Available tool holders
						W	Designation	
MCER/L	**3-T16**	6.00	44.5	6.35	16	3	MGMN	H63T-MCHR/L
	4-T16	5.97	44.5	6.35	16	4	MGMR/L	
	5-T20	5.87	48.5	6.35	20	5	MGGN	
	6-T20	5.82	48.5	6.35	20	6	MGMN	

Applicable inserts, see pages **C24 ~ C25**

MCHR/L

MFMN300
MGMN400





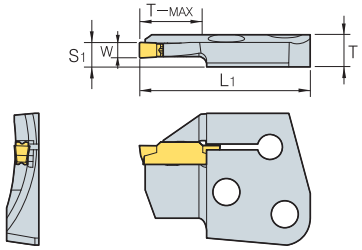
• R type insert

(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



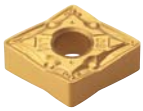
• R type insert

(mm)

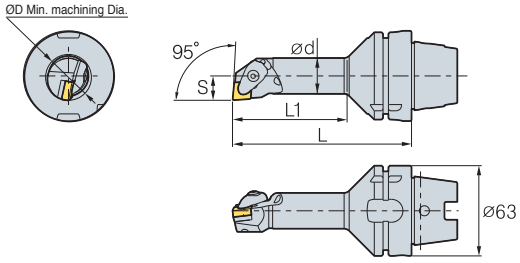
Designation		T	L_1	S_1	T-MAX	Insert		Available tool holders
						W	Designation	
MCFR/L3-	**24/35-T16**	8.00	44.5	6.35	16	3	MFMN300	H63T-MCHR/L
	29/40-T16	8.00	44.5	6.35	16	3		
	34/50-T16	8.00	44.5	6.35	16	3		
	44/70-T16	8.00	44.5	6.35	16	3		
	64/99-T16	8.00	44.5	6.35	16	3		
MCFR/L4-	**44/60-T16**	7.97	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		

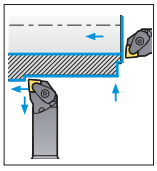
Applicable inserts, see pages **C24 ~ C25**

DCLNR/L



CN□□





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, see pages **B20 ~ B25**

Blank Tool

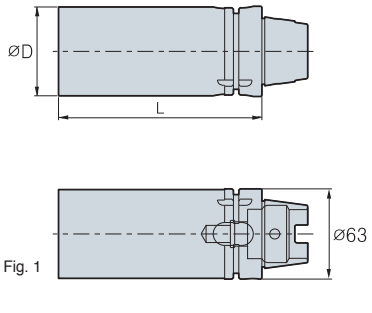


Fig. 1

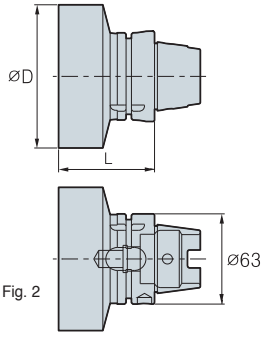
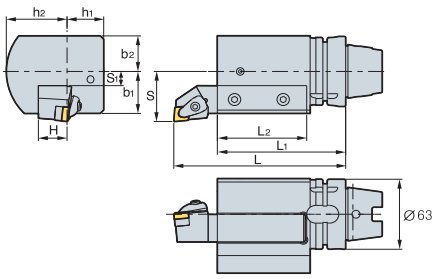


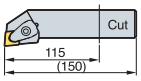
Fig. 2

(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





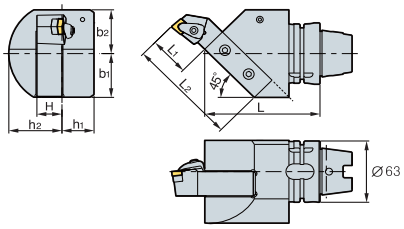
• **Holder information**
- Holder size: 25 × 25
- Before setting the holder, please cut the holder length to 115mm.

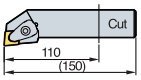
• R type insert

(mm)

Designation	L	L1	L2	H	h1	h2	S	S1	b1	b2	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





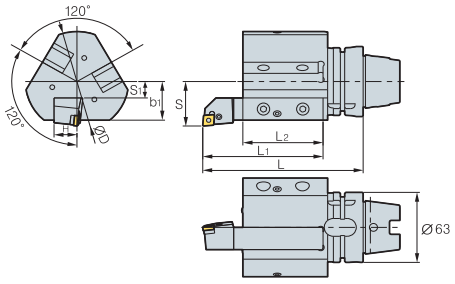
• **Holder information**
- Holder size: 25 × 25
- Before setting the holder, please cut the holder length to 110mm.

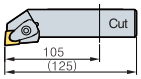
• R type insert

(mm)

Designation	L	L1	L2	H	h1	h2	b1	b2	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





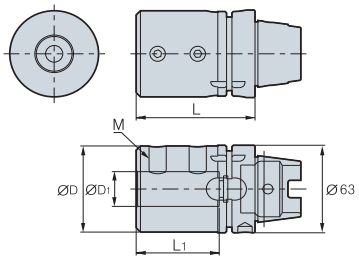
• **Holder information**
- Holder size: 25 × 25
- Before setting the holder, please cut the holder length to 105mm.

• R type insert

(mm)

Designation	L	L1	L2	H	ØD	S	S1	B1	Screw	Plug	Nozzle	Wrench	Coolant Pipe
EV2020R/L-105-3	140	105	70	20	90	40	15	35	KHA1231	KHA0808	CN0605	HW50L	CP63T

B◯◯-◯◯



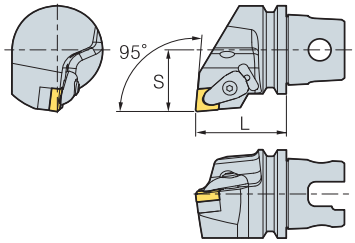
• R type insert

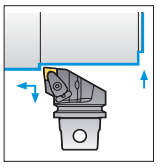
(mm)

Designation	ØD	D1	L	L1	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

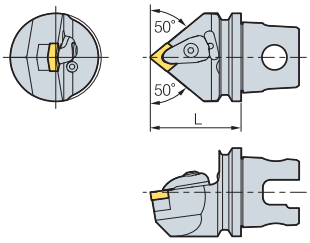
(mm)

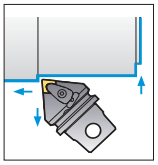
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DCLNR/L-C12	50	35	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DCLNR/L-D12	60	43									

Applicable inserts, see pages **B20 ~ B25**

DCMNN

CN□□





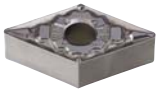
95°

(mm)

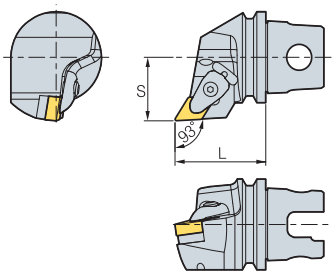
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DCMNN-C12	50	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DCMNN-D12	60									

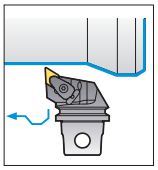
Applicable inserts, see pages **B20 ~ B25**

DDJNR/L



DN□□





93°

• R type insert

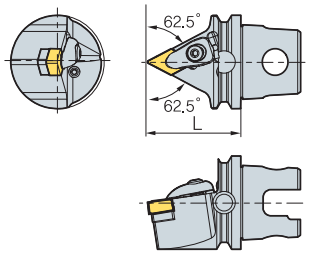
(mm)

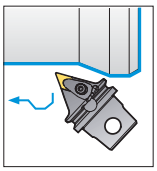
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DDJNR/L-C15	50	35	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P
KM50-DDJNR/L-C15-3	50	35	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DDJNR/L-D15	60	43	DN□□1506□□	CVH4	CHX0518	SD43V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

Applicable inserts, see pages **B26 ~ B31**

DDNNN

DN□□





117.5°

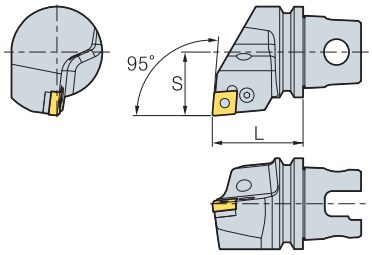
(mm)

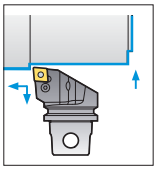
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DDNNN-C15	50	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM50-DDNNN-C15-3	50	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DDNNN-D15	60	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410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

Applicable inserts, see pages **B26 ~ B31**

PCLNR/L

CN□□





95°

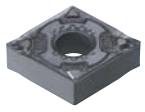
• R type insert

(mm)

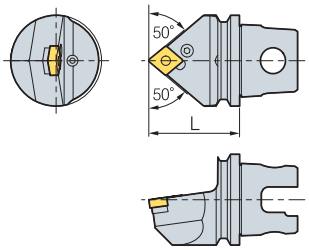
Designation	L	S	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench
KM50-PCLNR/L-C12	50	35	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PCLNR/L-D12	60	43									

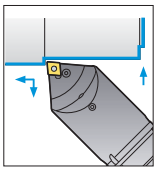
Applicable inserts, see pages **B20 ~ B25**

PCMNN



CN□□





95°

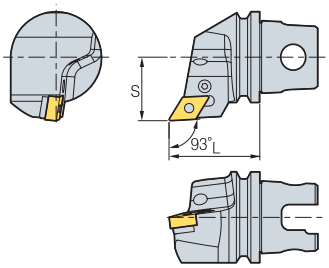
(mm)

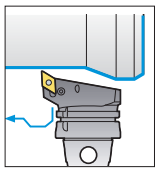
Designation	L	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench
KM50-PCLNR/L-C12	50	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PCLNR/L-D12	60									

Applicable inserts, see pages **B20 ~ B25**

PDJNR/L

DN□□





93°

• R type insert

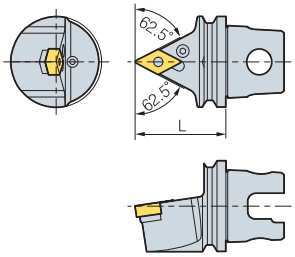
(mm)

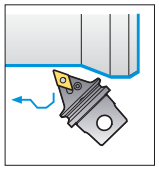
Designation	L	S	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench
KM50-PDJNR/L-C15	50	35	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L
KM50-PDJNR/L-C15-3	50	35	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PDJNR/L-D15	60	43	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N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

Applicable inserts, see pages **B26 ~ B31**

PDNNN

DN□□





107.5°

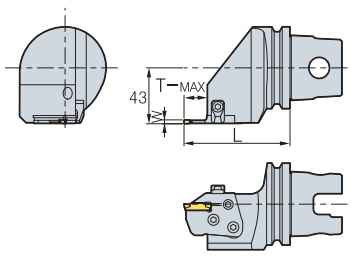
(mm)

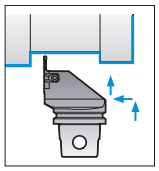
Designation	L	Insert	Lever	Screw	Shim	Shim pin	Punching	Nozzle	Plug	Wrench
KM50-PDNNN-C15	50	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM50-PDNNN-C15-3	50	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PDNNN-D15	60	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4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

Applicable inserts, see pages **B26 ~ B31**

MCHR/L

MGMN / MGMR/L
MGGN / MRMN





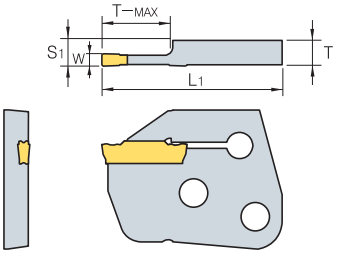
• R type insert

(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							

MCER/L
(Cartridge)

MGMN / MGMR/L
MGGN / MRMN



• R type insert

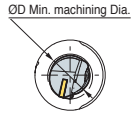
(mm)

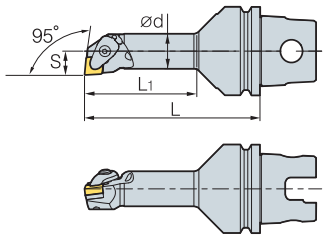
Designation		T	L_1	S_1	T-MAX	Insert		Available tool holders
						W	Designation	
MCER/L	**3-T16**	6.00	44.5	6.35	16	3	MGMN	H-63T-MCHR/L
	4-T16	5.97	44.5	6.35	16	4	MGMR/L	
	5-T20	5.87	48.5	6.35	20	5	MGGN	
	6-T20	5.82	48.5	6.35	20	6	MRMN	

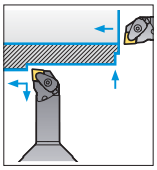
Applicable inserts, see pages **C24 ~ C25**

KM○○-DCLNR/L

CN□□







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, see pages **B20 ~ B25**

Blank Tool

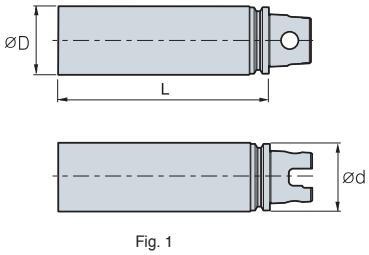


Fig. 1

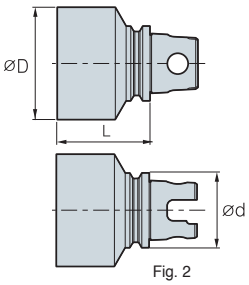


Fig. 2

(mm)

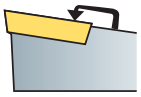
Designation	ØD	L	Ød	Fig.
KM50-BL7562	45	62	50	1
KM50-BL10562	105	62	50	2
KM63UT-BL65200	65	200	50	1
KM63UT-BL115150	115	150	50	2

S T F C R 12 C A - 16

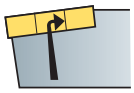
1	2	3	4	5	6	7	8	9
Method of Mounting Insert	Insert Shape	Holder Style	Relief Angle of Insert	Hand	Height of Cutting Edge	Cartridge Code	Type of Cartridge	Length of Cutting Edge

1 Method of Mounting Insert

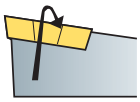
S T F C R 12 C A - 16



Top Clamping — C



Hole clamping — P



Screw on — S

2 Insert Shape

S T F C R 12 C A - 16

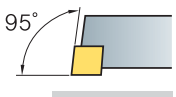
C

S

T

3 Holder Style

S T F C R 12 C A - 16



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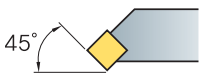

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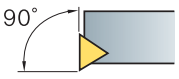
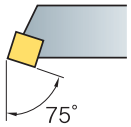
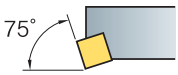


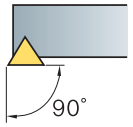
F



R



K



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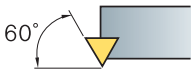
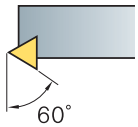


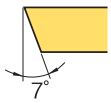
W



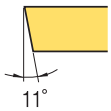
T

4 Relief Angle of Insert

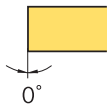
S T F C R 12 C A - 16



C



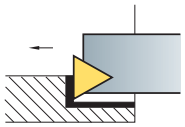
P

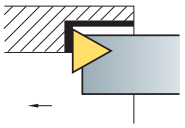


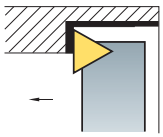
N

5 Hand

S T F C R 12 C A - 16







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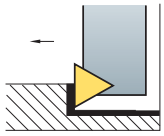
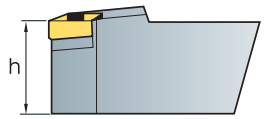


L

6 Height of Cutting Edge

S T F C R 12 C A - 16



7 Cartrige Code

S T F C R 12 C A - 16

C (Cartridge)

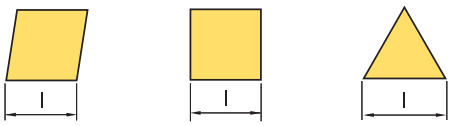
8 Type of Cartridge

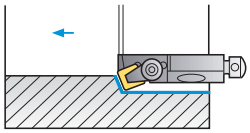
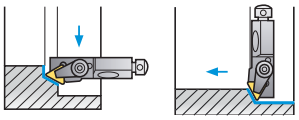
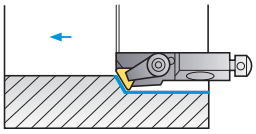
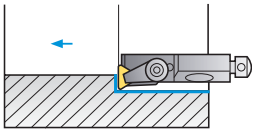
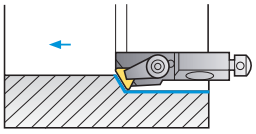
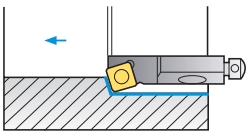
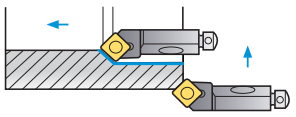
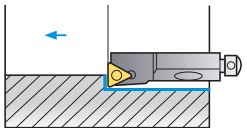
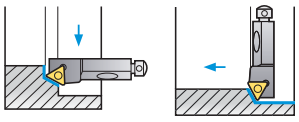
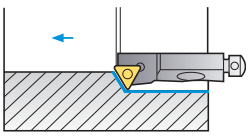
S T F C R 12 C A - 16

A (ISO5611)

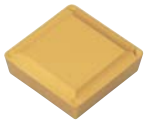
9 Length of Cutting Edge

S T F C R 12 C A - 16

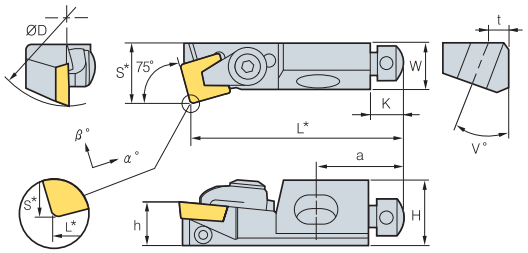


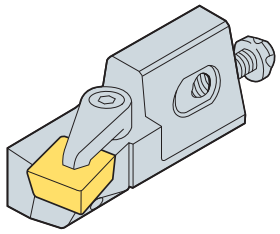
	Cutting Shape		Turning	Copying	Facing	Chamfering	Applicable inserts	Page
Clamp on System	**CSKPR/L**	 10CA-09 12CA-12	●				SP□R 0903□□ 1203□□	B171
	CTTPR/L	 10CA-11 12CA-16	●				TP□R 1103□□ 1603□□	B172
	CTWPR/L	 10CA-11 12CA-16	●				TP□R 1103□□ 1603□□	B172
	CTFPR/L	 10CA-11 12CA-16	●		●		TP□R 1103□□ 1603□□	B171
	CTSPR/L	 10CA-11 12CA-16	●				TP□R 1103□□ 1603□□	B171
Screw on System	**SSKCR/L**	 10CA-09 12CA-12	●				SC□T 09T3□□ 1204□□	B173
	SSSCR/L	 10CA-09 12CA-12	●			●	SC□T 09T3□□ 1204□□	B173
	STFCR/L	 10CA-11 12CA-16	●		●		TC□T 1102□□ 16T3□□	B173
	STTCR/L	 10CA-11 12CA-16	●		●		TC□T 1102□□ 16T3□□	B174
	STWCR/L	 10CA-11 12CA-16	●				TC□T 1102□□ 16T3□□	B174

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□R 0903 □□
	12CA-12	50	20	15	55	20	12	8	6	0	20	6	20	1203 □□

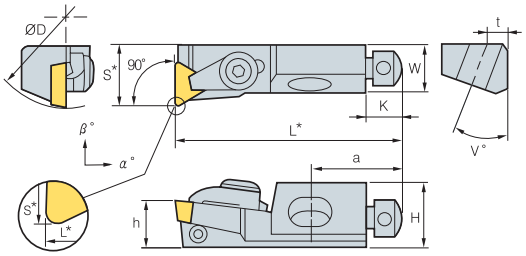
Applicable inserts, see pages **B64 ~ B66**

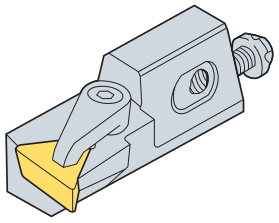
· a base Insert : r = 0.8 D = ØD Min. machining Dia.

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□R 1103 □□
	12CA-16	50	20	15	55	20	12	8	6	0	20	6	20	1603 □□

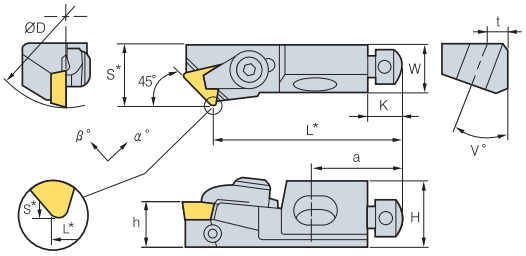
Applicable inserts, see pages **B70 ~ B72**

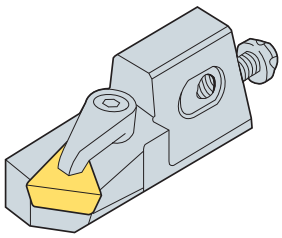
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = ØD Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial AdjustScrew	MountingScrew	Washer	Wrench	Wrench
CTFPR/L	**10CA-09**	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW25L	HW20L
	12CA-12	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW30L	HW20L

CTSPR/L

TP□R





• 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□R 1103 □□
	12CA-16	50	20	15	47	20	12	8	5	0	20	6	20	1603 □□

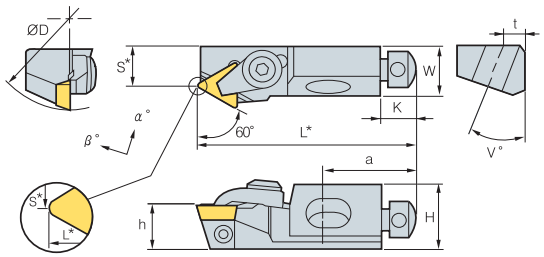
Applicable inserts, see pages **B70 ~ B72**

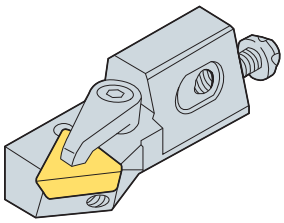
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial AdjustScrew	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

TP□R





• 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□R 1103 □□
	12CA-16	50	20	15	55	20	12	8	5	0	20	6	20	1603 □□

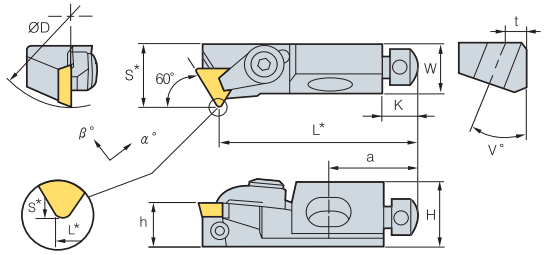
Applicable inserts, see pages **B70 ~ B72**

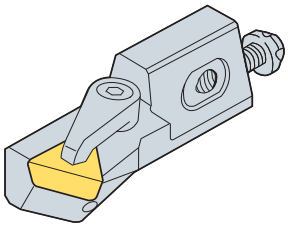
· a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial AdjustScrew	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□R 1103 □□
	12CA-16	50	20	15	47	20	12	8	5	0	20	6	20	1603 □□

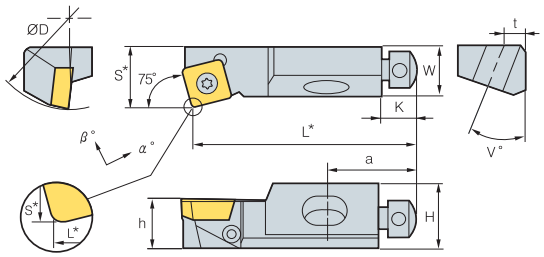
Applicable inserts, see pages **B70 ~ B72**

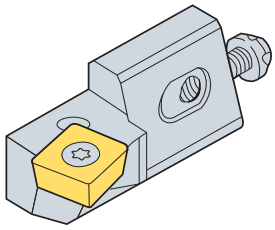
· a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial AdjustScrew	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)

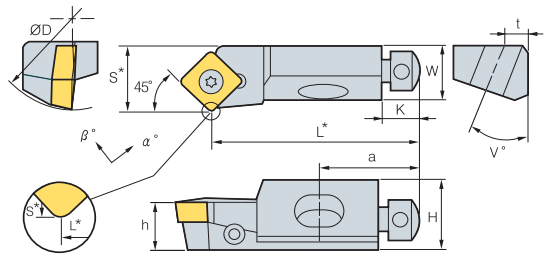
Designation		ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
SSKCR/L	**10CA-09**	40	15	11	50	14	10	8	0	-4	20	5	20	SC □□ 09T3 □□
	12CA-12	50	20	15	55	20	12	8	0	-4	20	6	20	SC □□ 1204 □□

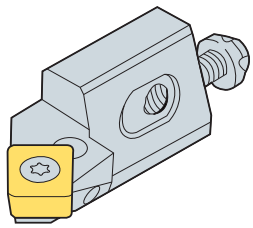
Applicable inserts, see pages **B63, B83** · a base Insert : r = 0.8 D = ØD Min. machining Dia.

Parts		Screw	Axial Adjust Screw	Radial AdjustScrew	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

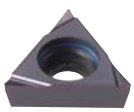
(mm)

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 □□

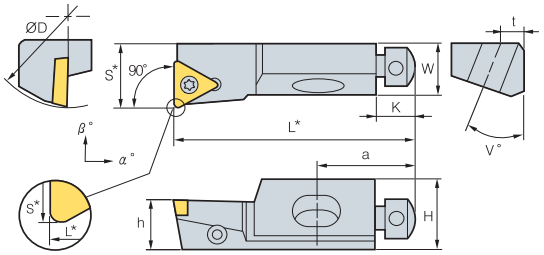
Applicable inserts, see pages **B63, B83** · a base Insert : r = 0.8 D = ØD Min. machining Dia.

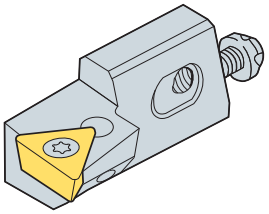
Parts		Screw	Axial Adjust Screw	Radial AdjustScrew	MountingScrew	Washer	Wrench	Wrench
SSSCR/L	**10CA-09**	FTGA03508	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
	12CA-12	FTGA0411F	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

STFCR/L



TC□□





• R type insert

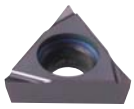
(mm)

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 □□

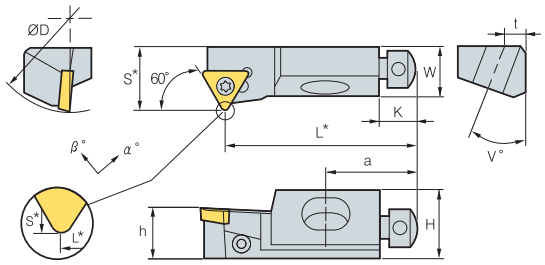
Applicable inserts, see pages **B67 ~ B69, B84** · a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

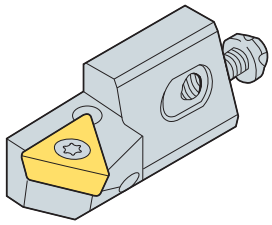
Parts		Screw	Axial Adjust Screw	Radial AdjustScrew	MountingScrew	Washer	Wrench	Wrench
STFCR/L	**10CA-11**	FTKA02565	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
	12CA-16	FTKA03508	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

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 □□

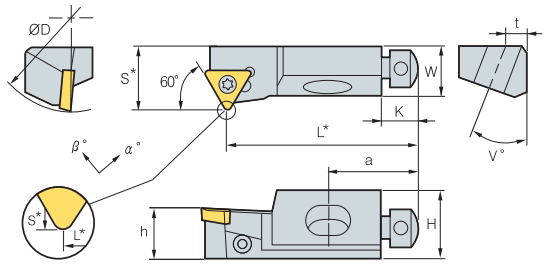
Applicable inserts, see pages **B67 ~ B69, B84**

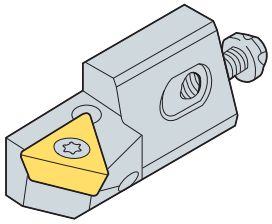
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

Parts		Screw	Axial Adjust Screw	Radial AdjustScrew	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, see pages **B67 ~ B69, B84**

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

Parts		Screw	Axial Adjust Screw	Radial AdjustScrew	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

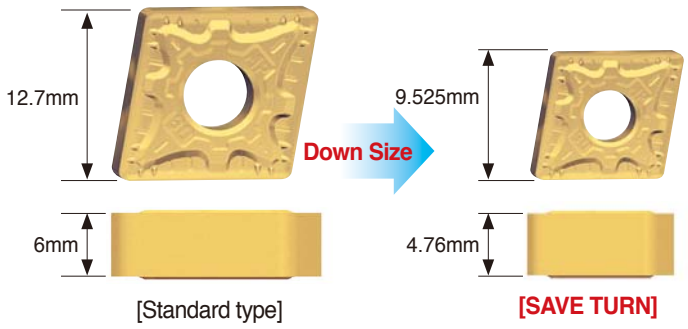
Economical small insert with powerful cutting performance

SAVE TURN

- Strongly recommended turning insert for machining smaller diameter than Ø100
- Small but powerful and economical insert which performs the same like standard-sized inserts under the depth of cut of 3.0mm

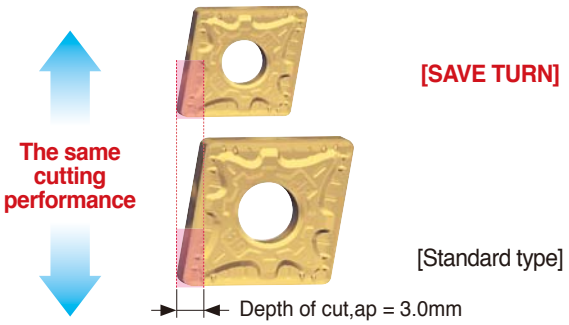
Features

Comparison of insert sizes



▸ Optimized size of the same performance like the standard type

Comparison of cutting performance

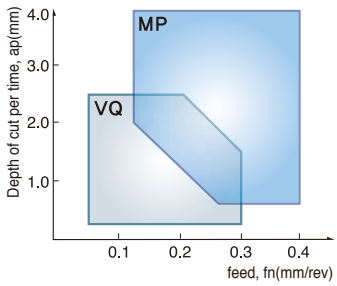


▸ Performs the same like standard type inserts under the depth of cut of 3.0mm

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 : 0.5~2.5mm
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 : 0.5~1.0mm

Application area of chip breaker



VQ : Depth of cut, ap=0.5~2.5mm
feed, fn=0.05~0.30mm/rev
MP : Depth of cut, ap=0.5~4.0mm
feed, fn=0.15~0.40mm/rev

Application example (NC3220)

Alloy steel (SCM440)

■ **Cutting conditions** vc(m/min) = 250, fn(mm/rev) = 0.25
ap(mm) = 2.0~3.0, continuous cutting, wet

■ **Cutting Result**

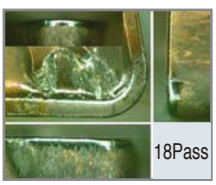
CNMG090408-HM
SAVE TURN

CNMG120408-HM
Standard type

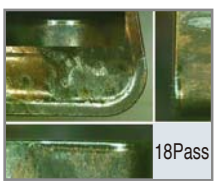
Alloy steel (SCM440)

■ **Cutting conditions** vc(m/min) = 250, fn(mm/rev) = 0.25
ap(mm) = 2.0~3.0, interrupted cutting, wet

■ **Cutting Result**

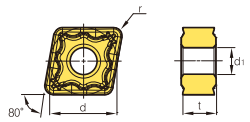
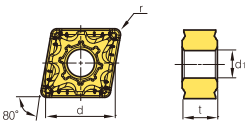
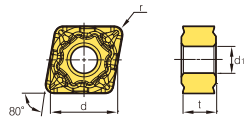
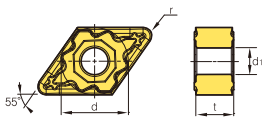
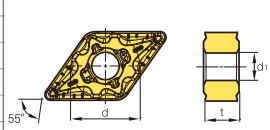
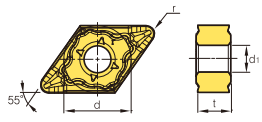
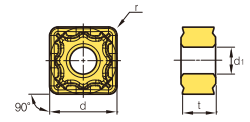
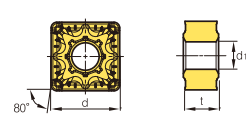
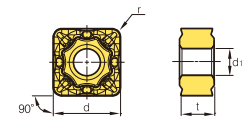


CNMG090408-HM
SAVE TURN

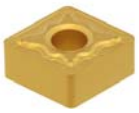


CNMG120408-HM
Standard type

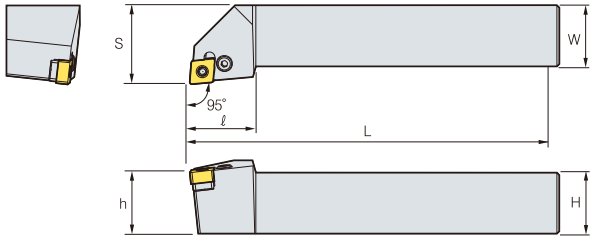
Insert

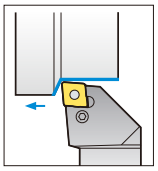
Type	Picture	Designation	Coated			Dimensions (mm)				cutting conditions		Configuration	Available tool holders page
			NC3010	NC3220	NC5330	d	t	r	d1	ap (mm)	fn (mm/rev)		
C Type	CNMG-HM	CNMG 090408-HM	●	●	●	9.525	4.76	0.8	3.81	0.60~3.50	0.12~0.40		B18 B21
		090412-HM	●	●	●	9.525	4.76	1.2	3.81	0.70~3.50	0.15~0.45		
	CNMG-MP	CNMG 090404-MP				9.525	4.76	0.4	3.81	0.40~3.80	0.10~0.40		B18 B21
		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	0.80~4.20	0.15~0.50		
	CNMG-VQ	CNMG 090408-VQ	●	●	●	9.525	4.76	0.8	3.81	0.30~2.00	0.10~0.35		B18 B21
		090412-VQ	●	●	●	9.525	4.76	1.2	3.81	0.35~2.00	0.15~0.40		
D Type	DNMG-HM	DNMG 110508-HM	●	●	●	9.525	5.56	0.8	3.81	0.60~3.50	0.12~0.40		B18 B19 B21
		110512-HM	●	●	●	9.525	5.56	1.2	3.81	0.70~3.50	0.15~0.45		
	DNMG-MP	DNMG 110504-MP				9.525	5.56	0.4	3.81	0.40~3.80	0.10~0.40		B18 B19 B21
		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	0.80~4.20	0.15~0.50		
	DNMG-VQ	DNMG 110508-VQ	●	●	●	9.525	5.56	0.8	3.81	0.30~2.00	0.10~0.35		B18 B19 B21
		110512-VQ	●	●	●	9.525	5.56	1.2	3.81	0.35~2.00	0.15~0.40		
S Type	SNMG-HM	SNMG 090408-HM	●	●	●	9.525	4.76	0.8	3.81	0.60~3.50	0.12~0.40		B19 B20 B22
		090412-HM	●	●	●	9.525	4.76	1.2	3.81	0.70~3.50	0.15~0.45		
	SNMG-MP	SNMG 090404-MP				9.525	4.76	0.4	3.81	0.40~3.80	0.10~0.40		B19 B20 B22
		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	0.80~4.20	0.15~0.50		
	SNMG-VQ	SNMG 090408-VQ	●	●	●	9.525	4.76	0.8	3.81	0.30~2.00	0.10~0.35		B19 B20 B22
		090412-VQ	●	●	●	9.525	4.76	1.2	3.81	0.35~2.00	0.15~0.40		

PCLNR/L



CN□□





95°

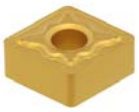
• R type insert

(mm)

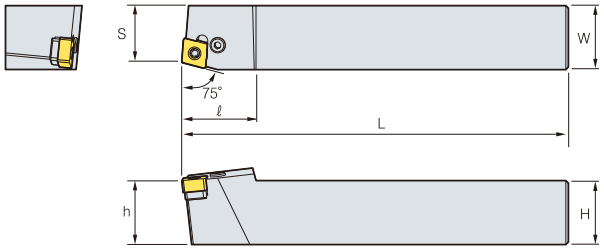
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PCLNR/L	**1616-H09-4N**	16	16	100	20	16	20	CN□□0904□□	LV3N	VHX0617N	SC32N	SP3	HW25L	LSP3
	2020-K09-4N	20	20	125	25	20	25							
	2525-M09-4N	25	25	150	32	25	27							

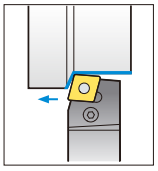
Applicable inserts, see pages **B22**

PCBNR/L



CN□□





75°

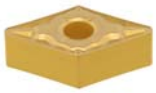
• R type insert

(mm)

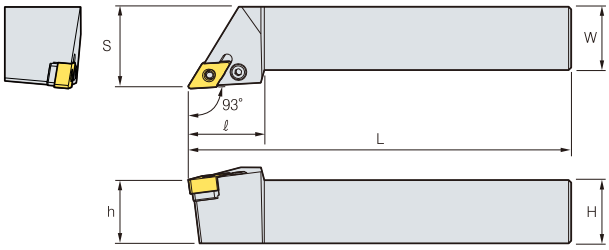
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PCBNR/L	**2020-K09-4N**	20	20	125	17	20	27	CN□□0904□□	LV3N	VHX0617N	SC32N	SP3	HW25L	LSP3
	2525-M09-4N	25	25	150	22	25	29							

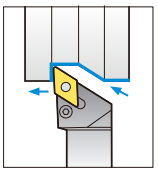
Applicable inserts, see pages **B22**

PDJNR/L



DN□□





93°

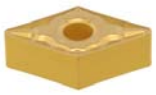
• R type insert

(mm)

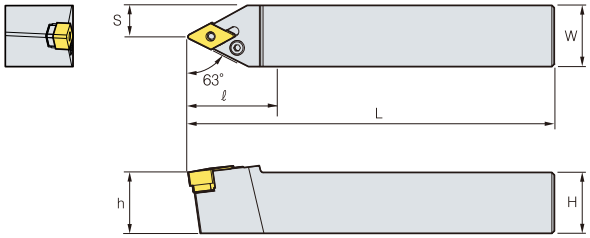
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PDJNR/L	**2020-K11-5N**	20	20	125	25	20	25	DN□□1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	LSPS3
	2525-M11-5N	25	25	150	32	25	30							

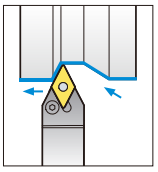
Applicable inserts, see pages **B28**

PDNNR/L



DN□□





63°

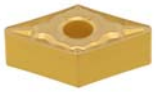
• R type insert

(mm)

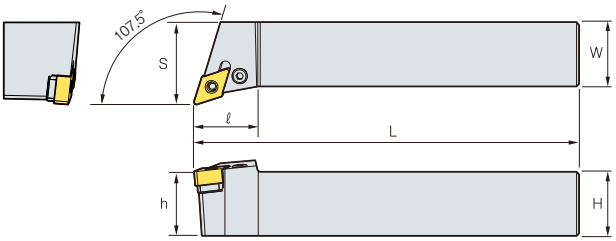
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PDNNR/L	**2020-K11-5N**	20	20	125	25	20	30	DN□□1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	LSPS3
	2525-M11-5N	25	25	150	32	25	30							

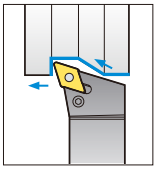
Applicable inserts, see pages **B28**

PDQNR/L



DN□□





107.5°

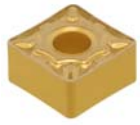
• R type insert

(mm)

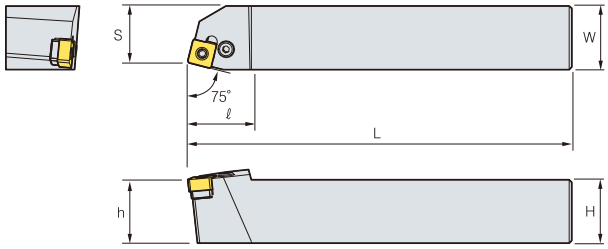
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PDQNR/L	**2020-K11-5N**	20	20	125	25	20	30	DN□□1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	LSPS3
	2525-M11-5N	25	25	150	32	25	30							

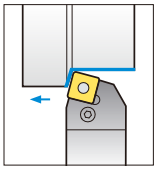
Applicable inserts, see pages **B28**

PSBNR/L



SN□□





75°

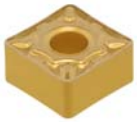
• R type insert

(mm)

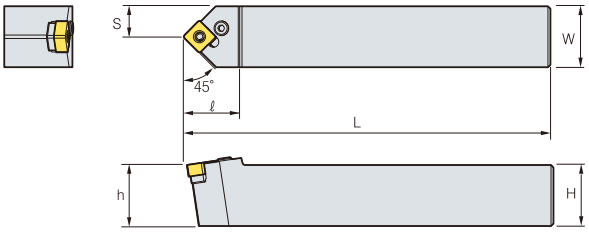
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PSBNR/L	**2020-K09-4N**	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
	2525-M09-4N	25	25	150	22	25	25							

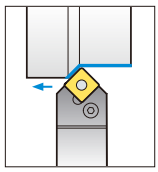
Applicable inserts, see pages **B37**

PSDNN



SN□□





45°

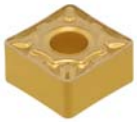
• R type insert

(mm)

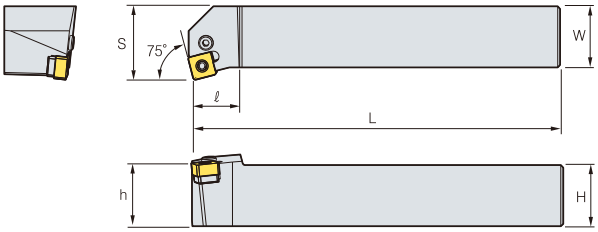
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PSDNN	**2020-K09-4N**	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
	2525-M09-4N	25	25	150	22	25	25							

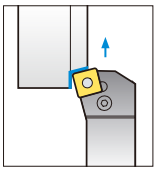
Applicable inserts, see pages **B37**

PSKNR/L



SN□□





75°

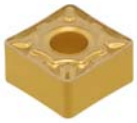
• R type insert

(mm)

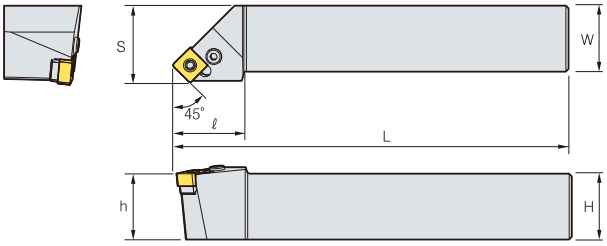
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PSKNR/L	**2020-K09-4N**	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
	2525-M09-4N	25	25	150	22	25	25							

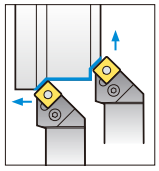
Applicable inserts, see pages **B37**

PSSNR/L



SN□□





45°

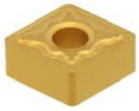
• R type insert

(mm)

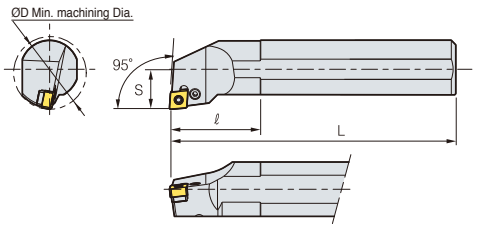
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
PSSNR/L	**2020-K09-4N**	20	20	125	17	20	25	SN□□0904□□	LV3AN	VHX0617N	SS32N	SP3	HW25L	LSP3
	2525-M09-4N	25	25	150	22	25	25							

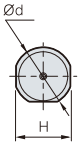
Applicable inserts, see pages **B37**

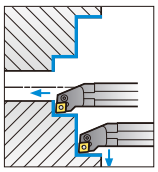
PCLNR/L



CN□□







95°

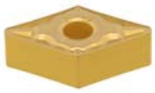
• R type insert

(mm)

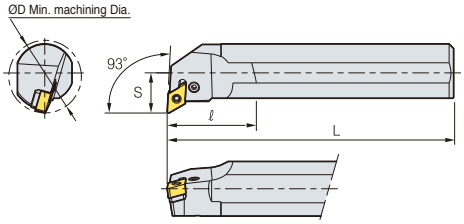
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
S20Q-PCLNR/L-09-4N	25	20	18	180	13	50	CN□□0904□□	LV3B	VHX0512B	–	–	HW20L	–
S25R-PCLNR/L-09-4N	32	25	23	200	17	50		LV3B	VHX0512B	SC32N	SP3	HW20L	–
S32S-PCLNR/L-09-4N	40	32	30	250	22	50		LV3N	VHX0617N	SC32N	SP3	HW25L	–

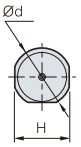
Applicable inserts, see pages **B22**

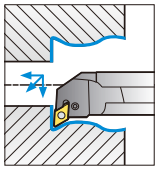
PDUNR/L



DN□□







93°

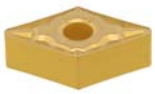
• R type insert

(mm)

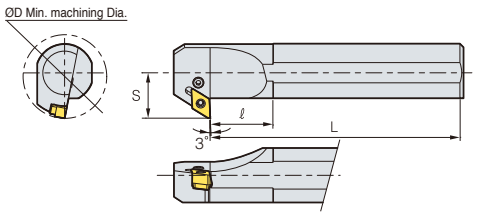
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
S32S-PDUNR/L-11-5N	40	32	30	250	22	30	DN□□1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	–
S40T-PDUNR/L-11-5N	50	40	38	300	27	50							

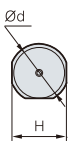
Applicable inserts, see pages **B28**

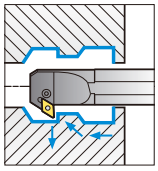
PDZNR/L



DN□□







31.5°

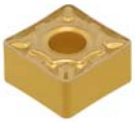
• R type insert

(mm)

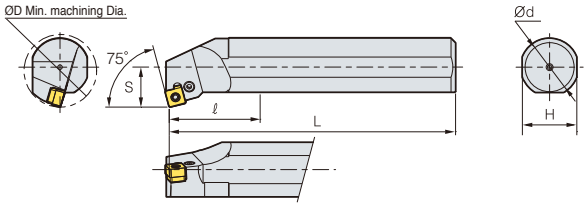
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
S32S-PDZNR/L-11-5N	40	32	30	250	22	30	DN□□1105□□	LV3AN	VHX0617N	SD32N	SP3	HW25L	–
S40T-PDZNR/L-11-5N	50	40	38	300	27	50							

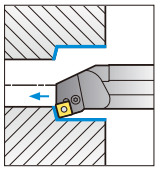
Applicable inserts, see pages **B28**

PSKNR/L



SN□□





75°

• R type insert

(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Wrench	Shimpin punch
S25R-PSKNR/L-09-4N	32	25	23	200	17	32	SN□□0904□□	LV3B	VHX0512B	–	–	HW20L	–
S32S-PSKNR/L-09-4N	40	32	30	250	22	32		LV3N	VHX0617N	SS32N	SP3	HW25L	–

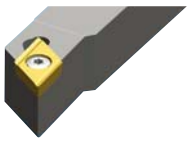
Applicable inserts, see pages **B37**

Excellent for precision machining

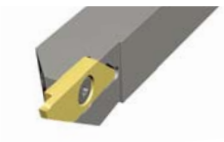
Auto Tools

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

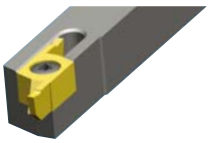
Type



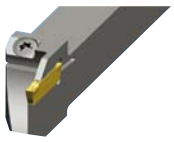
ISO



Blade



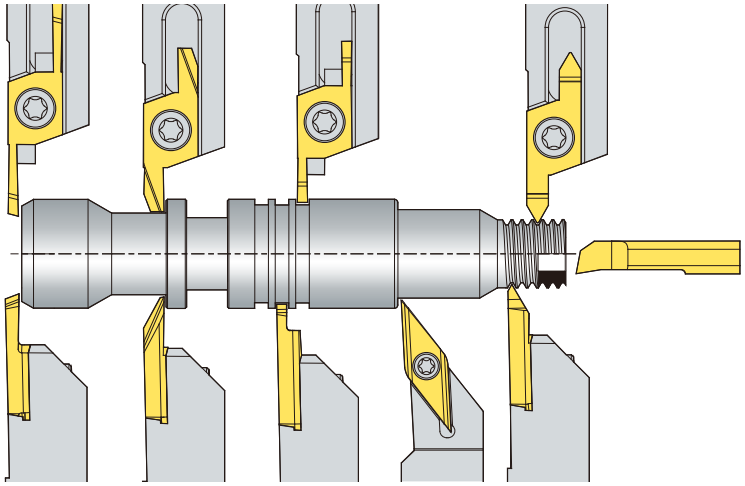
Multi utility



MGT

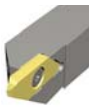
MSB tools

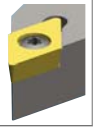
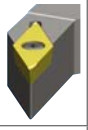
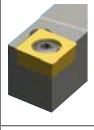
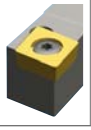
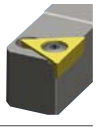
Application example

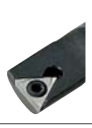


Index

Specification	① Parting and Grooving						② Back turning		
Holder	SXGNR/L	SXGNR/L	KGEHR/L	SBHR/L	SBHR/L	MGEHR/L	SXGNR/L	SXGNR/L	SBHR/L
Insert	SG	SC	KGMN	SBG	SBC	MGMN	SB	SGB	SBB
Holder size	10~20mm	10~20mm	10~16mm	10~16mm	10~16mm	10~16mm	10~20mm	10~20mm	10~16mm
Insert shape									
Cutting width	1~3mm	1~3mm	1.5~2.5mm	0.7~2.0mm	0.7~2.0mm	1.5~2.5mm	2~4mm	2~3mm	3.18mm
ØDmax	Ø18	Ø18	Ø32	Ø16	Ø16	Ø32	Tmax 8	Tmax 8.5	Tmax 8.0
Page	B192	B192	B195	B189	B189	B196	B192	B192	B189

Specification	③ Threading	
Holder	SXGNR/L	SBHR/L
Insert	ST	SBT
Holder size	10~20mm	10~16mm
Insert shape		
Screw ranges	Pitch ranges 0.5~1.5 / 1.5~3.0	Pitch ranges 0.2~1.5 / 1.0~2.0
Insert	B192	B189

Specification	④ External turning and Copy machining				⑤ External turning and Facing		
Holder	SDJCR/L	SDNCN	SVJBR/L	SVJCR/L	SCACR/L	SCLCR/L	STACR/L
Insert	DC□T	DC□T	VB□T	VC□T	CC□T	CC□T	TC□T
Holder size	8~16mm	8~16mm	10~16mm	10~16mm	8~16mm	8~16mm	8~10mm
Insert shape							
Feature	Offset "0"				Offset "0"		
Page	B184	B184	B185	B185	B184	B184	B185

Specification	⑥ Internal turning(Boring)				
Holder	SCLCR/L	STUBR/L	STUPR/L	SWUBR/L	MSB
Insert	CC□T	TB□T	TP□T	WB□T	-
Shank diameter	Ø4~Ø10	Ø8	Ø8	Ø5~Ø8	Ø4~Ø6
Insert shape					
ØDmin	Ø5	Ø8	Ø10	Ø5.5	Ø3.2
Page	B150	B150	B150	B150	B199~B203

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)

R : Right
L : Left
N : Neutral

M : Minus

Relief angle	Cross section type	Height of cutting edge	Tolerance of nose R	Hand

V C E T 11 03 01 M F R – KM

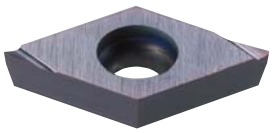
Insert shape	Tolerance	Cutting edge length, diameter of inscribed circle	Nose radius	Condition of cutting edge	Chip breaker

F : Sharpe
E : Honed
T : Land
S : Honed land

KF/KM chip breaker, gound type for grooving

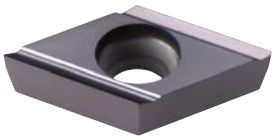
- Ground chip breaker with sharp cutting edge
- High precision insert of E-class tolerance with accurate nose radius

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



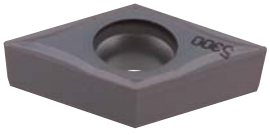
- For medium cutting to finishing
- Better chip flow due to wide chip pockets
- Longer tool life and better cutting action due to improved chip evacuation
- Excellent surface roughness

VP1 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

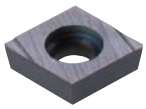
VP1

• Sharp cutting edge
- Excellent chip control
- Low cutting resistance
- High precision machining

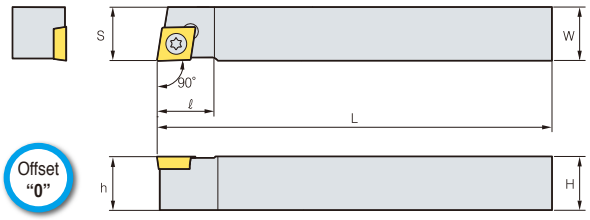


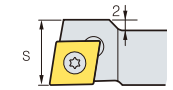
• High positive angle of rake surface
- Chip breaking at low depth of cut
- Stable chip control at high depth of cut
- Wide cutting area available with the use of optimized chip breaker width according to depth of cuts

SCACR/L

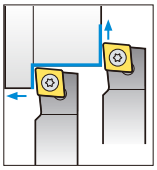


CC□T





※ Only SCACR/L1010-X09A is designed as above picture.



90°

• R type insert

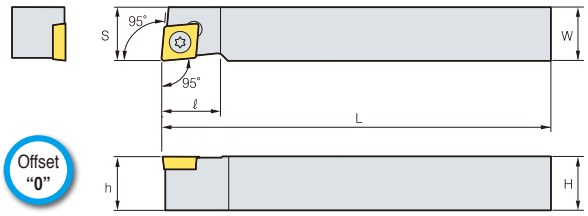
(mm)

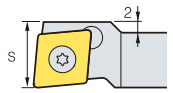
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SCACR/L	**0808-X06A**	8	8	120	8	8	10	CC□T 0602 □□	FTKA02565	TW 07P
	1010-X06A	10	10	120	10	10	10			
	1010-X09A	10	10	120	12	10	13	CC□T 09T3 □□	FTKA0410	TW 15P
	1212-X09A	12	12	120	12	12	16			
	1616-X09A	16	16	120	16	16	16			

Applicable inserts, see pages **B55 ~ 58, B80**

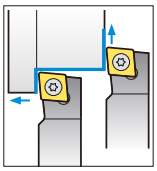
SCLCR/L

CC□T





※ Only SCLCR/L1010-X09A is designed as above picture.



95°

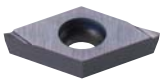
• R type insert

(mm)

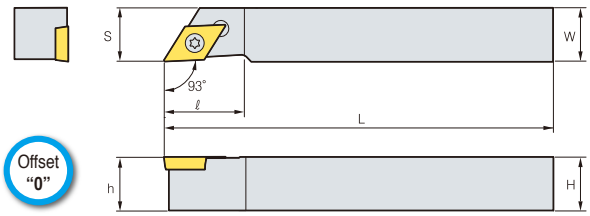
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SCLCR/L	**0808-X06A**	8	8	120	8	8	10	CC□T 0602 □□	FTKA02565	TW 07P
	1010-X06A	10	10	120	10	10	10			
	1010-X09A	10	10	120	12	10	13	CC□T 09T3 □□	FTKA0410	TW 15P
	1212-X09A	12	12	120	12	12	16			
	1616-X09A	16	16	120	16	16	16			

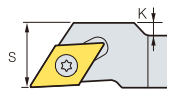
Applicable inserts, see pages **B55 ~ 58, B80**

SDJCR/L

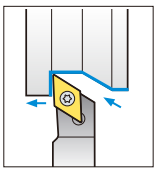


DC□T





※ Only SDJCR/L0808-X07A, 1010-X11A, 1212-X11A is designed as above picture.



93°

• R type insert

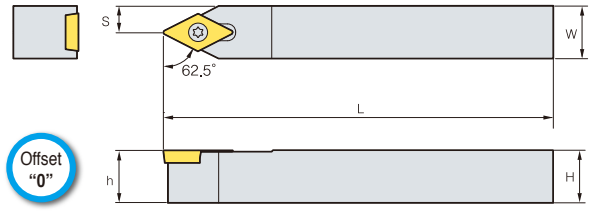
(mm)

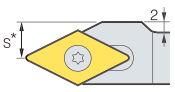
Designation		H	W	L	S	h	K	ℓ	Insert	Screw	Wrench
SDJCR/L	**0808-X07A**	8	8	120	10	8	2	18	DC□T 0702 □□	FTKA02565	TW 07P
	1010-X07A	10	10	120	10	10	-	15			
	1010-X11A	10	10	120	14	10	4	18	DC□T 11T3 □□	FTKA0410	TW 15P
	1212-X11A	12	12	120	14	12	2	18			
	1616-X11A	16	16	120	16	16	-	22			

Applicable inserts, see pages **B61 ~ 62, B81**

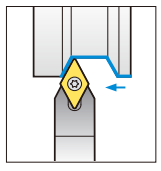
SDNCN

DC□T





※ Only SDNCN1010-X11A is designed as above picture.



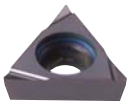
62.5°

(mm)

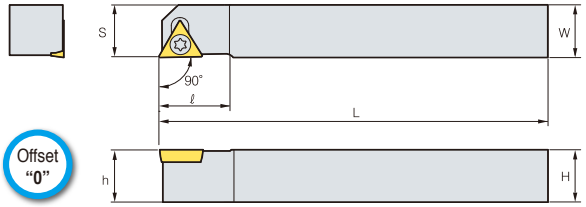
Designation		H	W	L	S	h	Insert	Screw	Wrench
SDNCN	**0808-X07A**	8	8	120	4	8	DC□T 0702 □□	FTKA02565	TW 07P
	1010-X07A	10	10	120	5	10			
	1010-X11A	10	10	120	7	10	DC□T 11T3 □□	FTKA0410	TW 15P
	1212-X11A	12	12	120	6	12			
	1616-X11A	16	16	120	8	16			

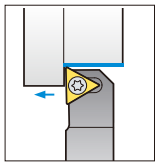
Applicable inserts, see pages **B61 ~ 62, B81**

STACR/L



TC□T



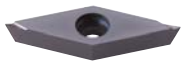


90°
• R type insert
(mm)

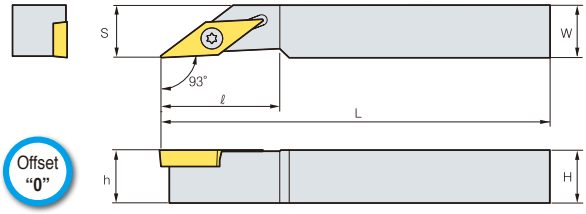
Designation		H	W	L	S	h	K	ℓ	Insert	Screw	Wrench
STACR/L	**0808-X08A**	8	8	120	8	8	1	12	TC□T 0802 □□	FTNA 0206	TW 06P
	1010-X08A	10	10	120	10	10	3	12			

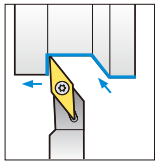
Applicable inserts, see pages **B68**

SVJBR/L



VB□T





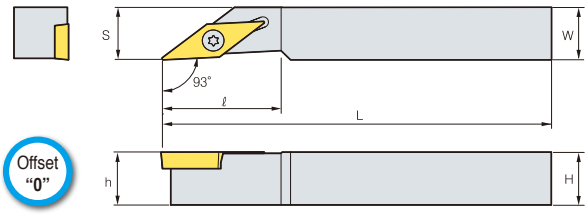
93°
• R type insert
(mm)

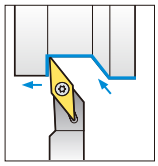
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJBR/L	**1010-X11A**	10	10	120	10	10	22	VB□T 1103 □□	FTKA 02565	TW 07P
	1212-X11A	12	12	120	12	12	22			
	1616-X11A	16	16	120	16	16	24			

Applicable inserts, see pages **B73 ~ B74, B85**

SVJCR/L

VC□T





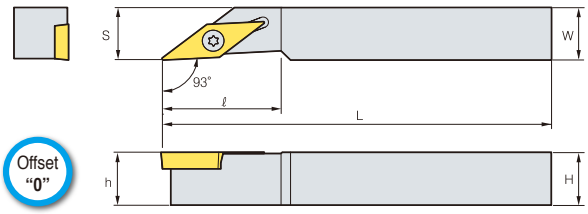
93°
• R type insert
(mm)

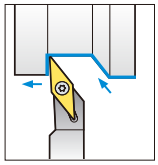
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJCR/L	**1010-X11A**	10	10	120	10	10	22	VC□T 1103 □□	FTKA 02565	TW 07P
	1212-X11A	12	12	120	12	12	22			
	1616-X11A	16	16	120	16	16	24			

Applicable inserts, see pages **B75 ~ 76, B86**

SVJPR/L

VP□T



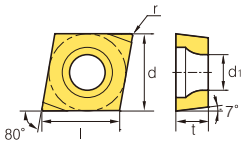
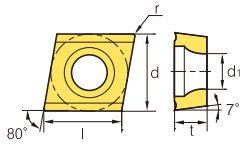
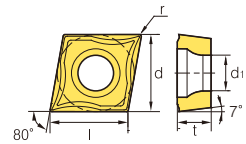
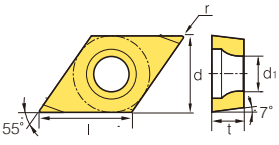
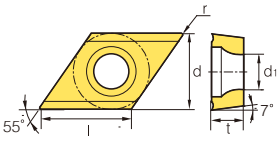
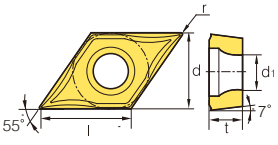


93°
• R type insert
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJPR/L	**1010-X11A**	10	10	120	10	10	22	VP□T 1103 □□	FTKA 02565	TW 07P
	1212-X11A	12	12	120	12	12	22			
	1616-X11A	16	16	120	16	16	24			

Applicable inserts, see pages **B75 ~ 76, B86**

Insert

Picture	Designation	Cermet			Coated		Coated												Uncoated			Dimensions (mm)					Configuration
		NC3220	NC3220	NC3220	NC3220	NC3220	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	U20	H01	G10	l	d	t	r	d_1	
CCET-KF	0602005MFR-KF																						6.6	6.35	2.38	0.05	2.8	
	060201MFR-KF													●									6.4	6.35	2.38	0.1	2.8	
	060202MFR-KF													●									6.2	6.35	2.38	0.2	2.8	
	09T3005MFR-KF																						9.8	9.525	3.97	0.05	4.4	
	09T301MFR-KF													●									9.6	9.525	3.97	0.1	4.4	
	09T302MFR-KF													●									9.2	9.525	3.97	0.2	4.4	
	0602005MFL-KF																						6.6	6.35	2.38	0.05	2.8	
	060201MFL-KF																						6.4	6.35	2.38	0.1	2.8	
	060202MFL-KF																						6.2	6.35	2.38	0.2	2.8	
	09T3005MFL-KF																						9.8	9.525	3.97	0.05	4.4	
	09T301MFL-KF																						9.6	9.525	3.97	0.1	4.4	
	09T302MFL-KF																						9.2	9.525	3.97	0.2	4.4	
CCET-KM	0602005MFR-KM																						6.6	6.35	2.38	0.05	2.8	
	060201MFR-KM													●									6.4	6.35	2.38	0.1	2.8	
	060202MFR-KM													●									6.2	6.35	2.38	0.2	2.8	
	09T3005MFR-KM																						9.8	9.525	3.97	0.05	4.4	
	09T301MFR-KM													●									9.6	9.525	3.97	0.1	4.4	
	09T302MFR-KM													●									9.2	9.525	3.97	0.2	4.4	
	0602005MFL-KM																						6.6	6.35	2.38	0.05	2.8	
	060201MFL-KM																						6.4	6.35	2.38	0.1	2.8	
	060202MFL-KM																						6.2	6.35	2.38	0.2	2.8	
	09T3005MFL-KM																						9.8	9.525	3.97	0.05	4.4	
	09T301MFL-KM																						9.6	9.525	3.97	0.1	4.4	
	09T302MFL-KM																						9.2	9.525	3.97	0.2	4.4	
CCGT-VP1	060201MFN-VP1													●									6.6	6.35	2.38	2.8	0.1	
	060202MFN-VP1													●									6.4	6.35	2.38	2.8	0.2	
	060204MFN-VP1													●									6.2	6.35	2.38	2.8	0.4	
	09T301MFN-VP1													●									9.8	9.525	3.97	4.4	0.1	
	09T302MFN-VP1													●									9.6	9.525	3.97	4.4	0.2	
	09T304MFN-VP1													●									9.2	9.525	3.97	4.4	0.4	
DCET-KF	0702005MFR-KF																						7.8	6.35	2.38	0.05	2.8	
	070201MFR-KF													●									7.8	6.35	2.38	0.1	2.8	
	070202MFR-KF													●									7.8	6.35	2.38	0.2	2.8	
	11T3005MFR-KF																						11.6	9.525	3.97	0.05	4.4	
	11T301MFR-KF													●									11.6	9.525	3.97	0.1	4.4	
	11T302MFR-KF													●									11.6	9.525	3.97	0.2	4.4	
	0702005MFL-KF																						7.8	6.35	2.38	0.05	2.8	
	070201MFL-KF													●									7.8	6.35	2.38	0.1	2.8	
	070202MFL-KF																						7.8	6.35	2.38	0.2	2.8	
	11T3005MFL-KF																						11.6	9.525	3.97	0.05	4.4	
	11T301MFL-KF																						11.6	9.525	3.97	0.1	4.4	
	11T302MFL-KF																						11.6	9.525	3.97	0.2	4.4	
DCET-KM	0702005MFR-KM																						7.8	6.35	2.38	0.05	2.8	
	070201MFR-KM													●									7.8	6.35	2.38	0.1	2.8	
	070202MFR-KM													●									7.8	6.35	2.38	0.2	2.8	
	11T3005MFR-KM																						11.6	9.525	3.97	0.05	4.4	
	11T301MFR-KM													●									11.6	9.525	3.97	0.1	4.4	
	11T302MFR-KM													●									11.6	9.525	3.97	0.2	4.4	
	0702005MFL-KM																						7.8	6.35	2.38	0.05	2.8	
	070201MFL-KM																						7.8	6.35	2.38	0.1	2.8	
	070202MFL-KM																						7.8	6.35	2.38	0.2	2.8	
	11T3005MFL-KM																						11.6	9.525	3.97	0.05	4.4	
	11T301MFL-KM																						11.6	9.525	3.97	0.1	4.4	
	11T302MFL-KM																						11.6	9.525	3.97	0.2	4.4	
DCGT-VP1	070201MFN-VP1													●									7.8	6.35	0.1	2.38	2.8	
	070202MFN-VP1													●									7.8	6.35	0.2	2.38	2.8	
	070204MFN-VP1													●									7.8	6.35	0.4	2.38	2.8	
	11T301MFN-VP1													●									11.6	9.525	0.1	3.97	4.4	
	11T302MFN-VP1													●									11.6	9.525	0.2	3.97	4.4	
	11T304MFN-VP1													●									11.6	9.525	0.4	3.97	4.4	

Finishing (High precision)

Medium to finishing (High precision)

Finishing (High precision)

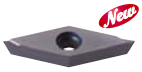
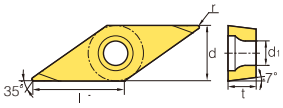
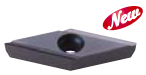
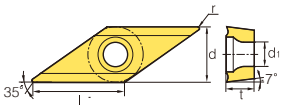
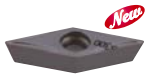
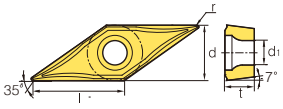
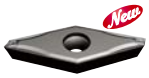
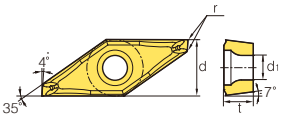
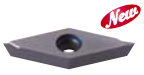
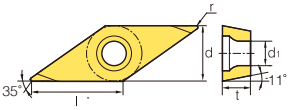
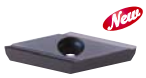
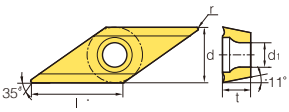
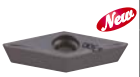
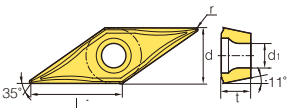
Finishing (High precision)

Medium to finishing (High precision)

Finishing (High precision)

● : Stock item

Insert

Picture	Designation	Cermet	Coated	Coated												Uncoated			Dimensions (mm)					Configuration
		NC3220	NC3220	NC3220	NC3220	NC3220	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	U20	H01	G10	l	d	t	r	d_1	
VCET-KF  Finishing (High precision)	**1103005MFR-KF**																						11.0	6.35	3.18	0.05	2.8	
	110301MFR-KF													●									11.0	6.35	3.18	0.1	2.8	
	110302MFR-KF													●									11.0	6.35	3.18	0.2	2.8	
	1103005MFL-KF																						11.0	6.35	3.18	0.05	2.8	
	110301MFL-KF																						11.0	6.35	3.18	0.1	2.8	
	110302MFL-KF																						11.0	6.35	3.18	0.2	2.8	
VCET-KM  Medium to finishing (High precision)	**1103005MFR-KM**													●									11.0	6.35	3.18	0.05	2.8	
	110301MFR-KM													●									11.0	6.35	3.18	0.1	2.8	
	110302MFR-KM																						11.0	6.35	3.18	0.2	2.8	
	1103005MFL-KM																						11.0	6.35	3.18	0.05	2.8	
	110301MFL-KM																						11.0	6.35	3.18	0.1	2.8	
	110302MFL-KM																						11.0	6.35	3.18	0.2	2.8	
VCGT-VP1  Finishing (High precision)	**110301MFN-VP1**													●									11.0	6.35	3.18	0.1	2.8	
	110302MFN-VP1													●									11.0	6.35	3.18	0.2	2.8	
	110304MFN-VP1													●									11.0	6.35	3.18	0.4	2.8	
VCGX-VP1 (chamfer type)  Finishing (High precision)	**120300MFR-VP1**																						11.0	7.50	3.18	0.0	2.8	
	120301MFR-VP1																						11.0	7.50	3.18	0.1	2.8	
	120302MFR-VP1																						11.0	7.50	3.18	0.2	2.8	
	120300MFL-VP1																						11.0	7.50	3.18	0.0	2.8	
	120301MFL-VP1																						11.0	7.50	3.18	0.1	2.8	
	120302MFL-VP1																						11.0	7.50	3.18	0.2	2.8	
VPET-KF  Finishing (High precision)	**0802005MFR-KF**																						8.0	6.35	2.38	0.05	2.3	
	080201MFR-KF													●									8.0	6.35	2.38	0.1	2.3	
	080202MFR-KF													●									8.0	6.35	2.38	0.2	2.3	
	0802005MFL-KF																						8.0	6.35	2.38	0.05	2.3	
	080201MFL-KF																						8.0	6.35	2.38	0.1	2.3	
	080202MFL-KF																						8.0	6.35	2.38	0.2	2.3	
VPET-KM  Medium to finishing (High precision)	**0802005MFR-KM**																						8.0	6.35	2.38	0.05	2.3	
	080201MFR-KM													●									8.0	6.35	2.38	0.1	2.3	
	080202MFR-KM													●									8.0	6.35	2.38	0.2	2.3	
	0802005MFL-KM																						8.0	6.35	2.38	0.05	2.3	
	080201MFL-KM																						8.0	6.35	2.38	0.1	2.3	
	080202MFL-KM																						8.0	6.35	2.38	0.2	2.3	
VPGT-VP1  Finishing (High precision)	**110301MFN-VP1**													●									11.0	6.35	3.18	0.1	2.8	
	110302MFN-VP1													●									11.0	6.35	3.18	0.2	2.8	
	110304MFN-VP1													●									11.0	6.35	3.18	0.4	2.8	

● : Stock item

Auto tools (Blade type) New

- ▶ 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 of Auto tools insert (Blade type)

Turning (Back turning)

SB	B	R	25	10
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 T : C/B none

Code system of Auto tools holder (Blade type)

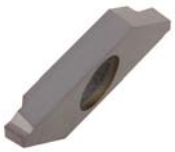
SB	H	R	10	10	K25	X
Small blade	Holder	Hand	Height of shank	Width of shank	Length of insert	Sub spindle
		R : Right L : Left				

Types of blade insert

Possible to apply various types of blade inserts to one holder

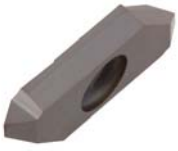
SBB : For back turning

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



SBG : For grooving

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



SBT : For threading

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

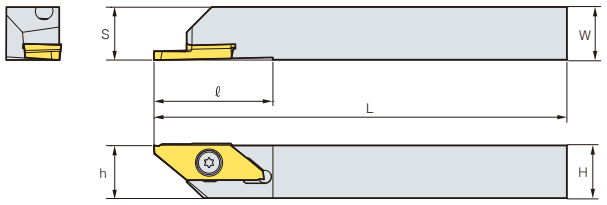
SBC : For cut off / Parting

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

SBHR/L

SBBR SBGR
SBTR SBCR

Offset "0"



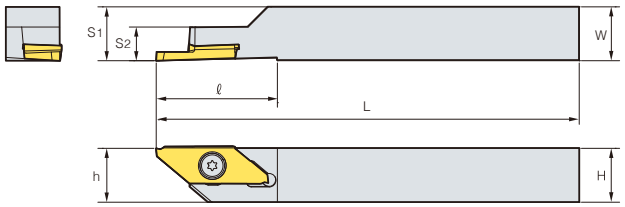
(mm)

Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SBHR/L	**1010-K25**	10	10	125	10	10	27	SB□R/L25	FTKA0409S	T9
	1212-K25	12	12	125	12	12	27			
	1616-K25	16	16	125	16	16	27			

SBHR/L-X (sub spindle)

SBBR SBGR
SBTR SBCR

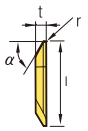
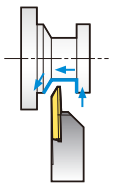
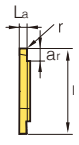
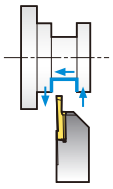
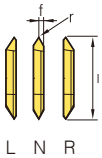
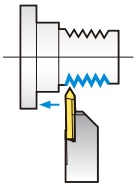
Offset "0"



(mm)

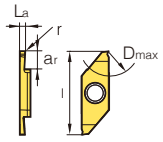
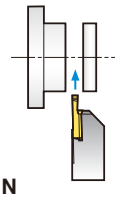
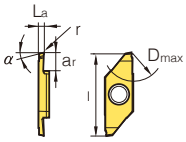
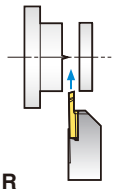
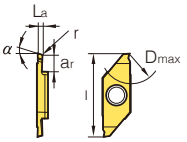
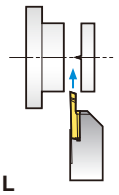
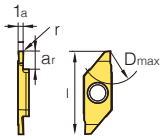
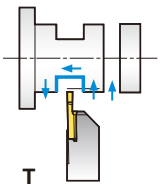
Designation		H	W	L	S_1	S_2	h	ℓ	Insert	Screw	Wrench
SBHR/L	**1010-K25-X**	10	10	125	10	7.5	10	27	SB□R/L25	FTKA0407S	T9
	1212-K25-X	12	12	125	12	7.5	12	27			

Insert

Application	Picture	Designation		Coated PC8110 R	Coated PC8110 L	l	α	t	r	La	a_r	f	D-MAX	Pitch range Min.	Pitch range Max.	Configuration	Feed direction
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

KGT Insert

Application	Picture	Designation	Coated PC8110 R	Coated PC8110 L	Dimensions (mm) l	α	t	r	La	ar	f	D-MAX	Pitch range Min.	Pitch range Max.	Configuration	Feed direction
Parting off	 SBCR/L	SBCR/L **250708-N**	●		25	0	-	0.05	0.70	4.3	-	8	-	-		 N
		251012-N	●		25	0	-	0.05	1.00	6.3	-	12	-	-		
		251512-N	●		25	0	-	0.05	1.50	6.3	-	12	-	-		
		252016-N	●		25	0	-	0.05	2.00	8.3	-	16	-	-		
		250708-R	●		25	15	-	0.05	0.70	4.3	-	8	-	-		 R
		251012-R	●		25	15	-	0.05	1.00	6.3	-	12	-	-		
		251512-R	●		25	15	-	0.05	1.50	6.3	-	12	-	-		
		252016-R	●		25	15	-	0.05	2.00	8.3	-	16	-	-		
		250708-L	●		25	15	-	0.05	0.70	4.3	-	8	-	-		 L
		251012-L	●		25	15	-	0.05	1.00	6.3	-	12	-	-		
		251512-L	●		25	15	-	0.05	1.50	6.3	-	12	-	-		
		252016-L	●		25	15	-	0.05	2.00	8.3	-	16	-	-		
		251012-T	●		25	0	-	0.05	1.00	6.3	-	12	-	-		 T
		251512-T	●		25	0	-	0.05	1.50	6.3	-	12	-	-		
		252016-T	●		25	0	-	0.05	2.00	8.3	-	16	-	-		

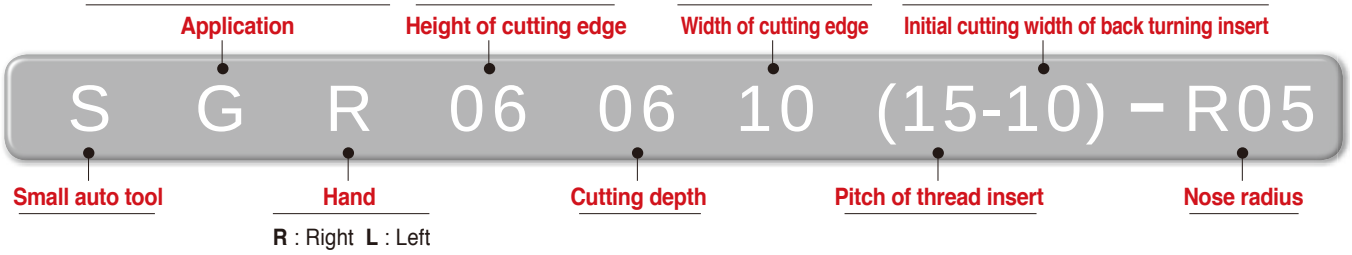
● : Stock item

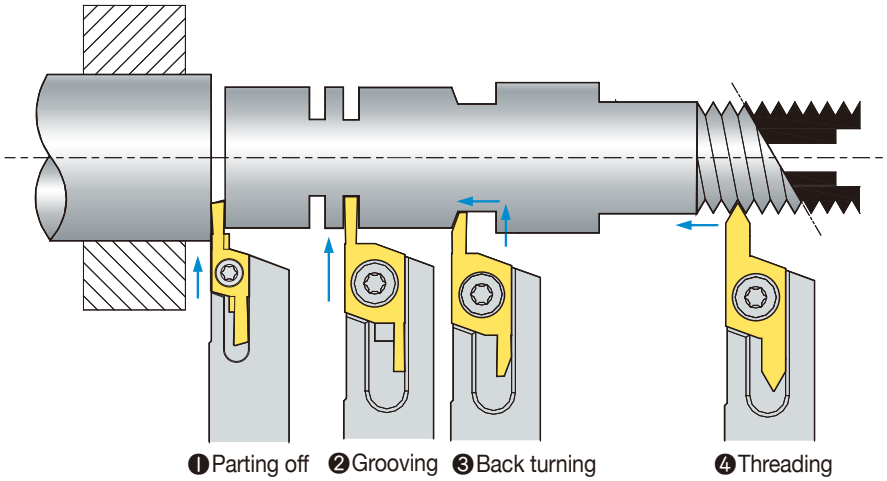
Auto tools (For multi utility)

- ▶ 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

Insert code system (Multi utility type)

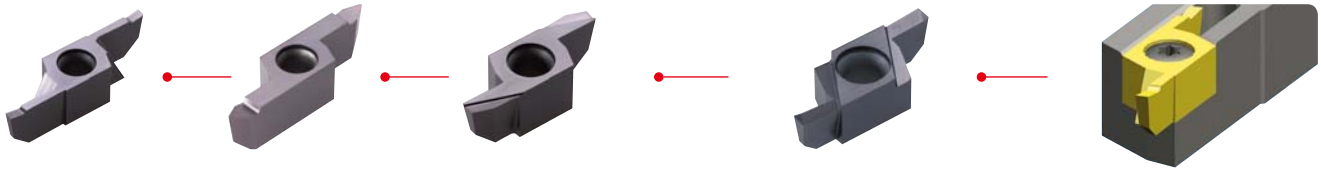
B : Back turning **G** : Grooving
C : Parting off **T** : Threading
GB : Grooving and back turning





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.)

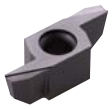


SG : Grooving | **ST : Threading** | **SB : Back turning** | **SGB : Grooving and back turning** | **SC : Parting off**

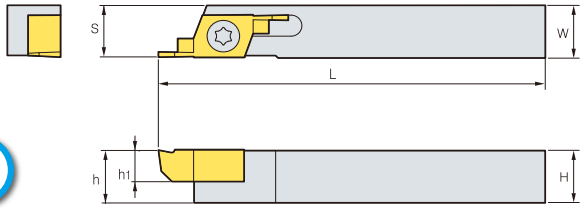
Recommended cutting conditions

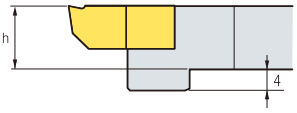
Workpiece	Turning		Grooving		Parting off		Back turning	
	Cutting speed, vc(m/min)	Feed, fn(mm/rev)	Cutting speed, vc(m/min)	Feed, fn(mm/rev)	Cutting speed, vc(m/min)	Feed, fn(mm/rev)	Cutting speed, vc(m/min)	Feed, fn(mm/rev)
Stainless steel	50 ~ 120	0.02 ~ 0.20	30 ~ 120	0.02 ~ 0.05	30 ~ 120	0.02 ~ 0.05	30 ~ 120	0.02 ~ 0.20
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
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





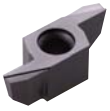
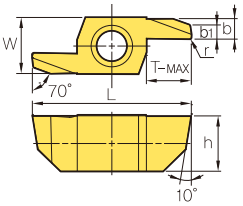
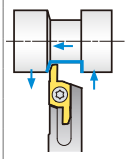
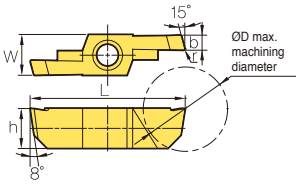
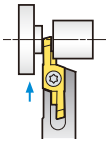
· SXGNR/L1212-X08A follows the configuration above.

• R type insert

(mm)

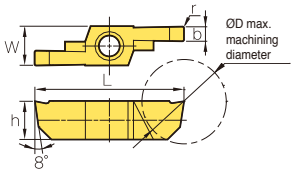
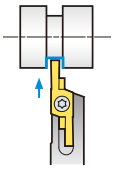
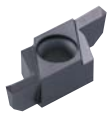
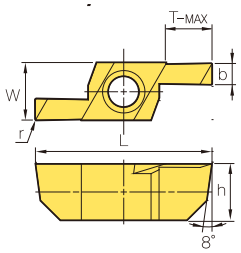
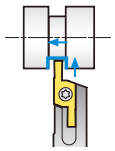
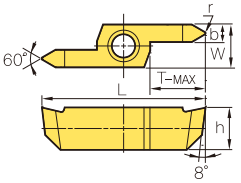
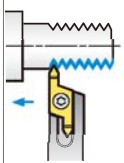
Designation		H	W	L	S	h	h1	Insert	Screw	Wrench
SXGNR/L	**1010-X06A**	10	10	125	10	10	6	S□R/L 06	FTNA 0408	TW 15P
	1212-X06A	12	12	125	12	12	6			
	1616-X06A	16	16	125	16	16	6			
	2020-X06A	20	20	125	20	20	6			
	1212-X08A	12	12	130	12	12	8	S□R/L 08	FTNA 0411	TW 15P
	1616-X08A	16	16	130	16	16	8			
	2020-X08A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

Insert

Application	Picture	Designation		Coated PC9030 R	Coated PC9030 L	Dimensions (mm) b1	b	W	L	r	h	T-MAX	ØD	Configuration	Feed direction
Back turning	SBR/L 	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 	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 PC9030 R	Coated PC9030 L	b	W	L	r	h	T-MAX	ØD	Pitch	Configuration	Feed direction
Grooving	SGR/L 	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 	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 	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

Auto tools (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.

Insert code system (KGT/MGT type)

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** : Light **I** : Internal	2.0~8.0mm	0.2mm 0.3mm 0.4mm	L / R / T / C LP / RP / B

Holder code system (KGT/MGT type)

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** : Light	Height 12mm, width 12mm (For internal machining : Min. machining diameter)	2.0~3.0mm	Ø15~Ø32mm

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
- Low carbon steel

KGMR/L - RP

- Strong cutting edge
- For high feed machining
- For iInterrupted cutting
- Right / Left handed

KRMN-C

- Improved chip control
- Copying
- Relief

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

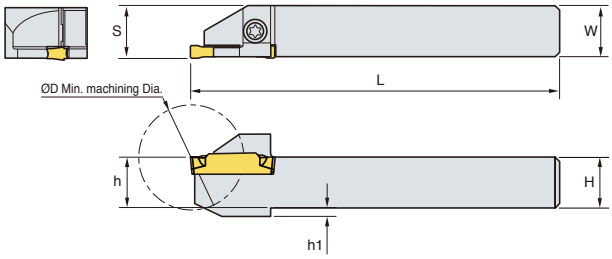
MGMN-G

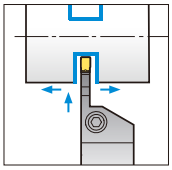
- Specially designed chip breaker allows narrower chips to promote better chip flow with the use of center dots
- Exclusive chip breaker for grooving

KGEHR/L-D00A

Grooving, turning, parting off

KGGN KGMN
KGMR/L KRMN





• R type insert

(mm)

Designation		H=(h)	W	L	S	h_1	ØD Max	Insert	Screw	Wrench
KGEHR/L	**1010-2-D20A**	10	10	125	10.2	2	20	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C	ETNA0412	TW15L
	1212-2-D25A	12	12	125	12.2	2	25			
	1414-2-D25A	14	14	125	14.2	-	25			
	1616-2-D32A	16	16	125	16.2	-	32			
	1212-3-D25A	12	12	125	12.4	2	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN□-□-□		
	1616-3-D32A	16	16	125	16.4	-	32			

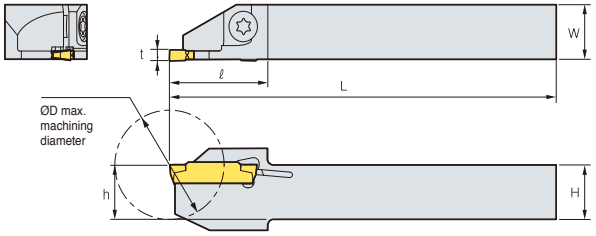
KGT Insert

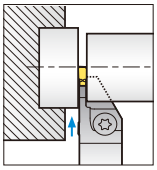
	Picture	Designation		Coated NC3220	NC3225	NC5330	PC5300	PC9030	Dimensions (mm) b	r	l	d	α°	Configuration
Grooving	KGMN-L	KGMN	**200-02-L**	●	●	●	●	●	2.0	0.2	20	1.7	-	
			300-02-L	●	●	●	●	●	3.0	0.2	20	2.3	-	
Grooving · Parting off	KGMN-R	KGMN	**200-02-R**	●	●	●	●	●	2.0	0.2	20	1.7	-	
			300-02-R	●	●	●	●	●	3.0	0.2	20	2.3	-	
Grooving · turning	KGMN-T	KGMN	**200-02-T**	●	●	●	●	●	2.0	0.2	20	1.7	-	
			300-02-T	●	●	●	●	●	3.0	0.2	20	2.3	-	
			300-04-T	●	●	●	●	●	3.0	0.4	20	2.3	-	
Parting off (Right handed)	KGMR-LP	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-RP	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-LP	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-RP	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	
Grooving · Turning	KRMN-C	KRMN	**200-C**		●	●	●		2.0	1.0	20	1.7	-	
			300-C		●	●	●		3.0	1.5	20	2.2	-	

● : Stock item

MGEHR/L

MGMN



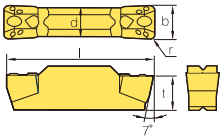


• R type insert

(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	ETNA 0412	TW 15L
	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			
	1010-X25A	20	10	10	125	20	2.5	MGMN250-M MGMN250-G	ETNA 0412	TW 15L
	1212-X25A	25	12	12	125	20	2.5			
	1616-X25A	32	16	16	125	25	2.5			

MGT Insert

Application	Picture	Designation		Cermet		Coated						Uncoated			Dimensions (mm)					Configuration
				CN2000	CN20	NC3120	NC3220	NC5330	NC3030	PC5300	PC9030	H01	G10	ST30A	b	r	l	d	t	
Grooving / Parting off	MGMN	MGMN	**150-G**				●		●	●	●	●			1.5	0.15	16	1.2	3.5	
			**200-G**			●	●		●		●	●			2	0.2	16	1.6	3.5	
			250-G				●		●	●	●				2.5	0.2	18.5	2	3.85	
			200-M			●	●	●	●	●	●	●			2	0.2	16	1.6	3.5	
			250-M			●	●		●	●	●				2.5	0.2	18.5	2	3.85	

● : Stock item

Auto tool (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

Application

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

Shank Dia.

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

Machining size

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

Type

M : Micro

Hand

R : Right
L : Left

Max. aspect ratio

10 : 10.0
15 : 15.0
20 : 20.0
25 : 25.0
35 : 35.0

Cutting edge

1 : Single ended
None : Double ended

MSB tool code system

Types		Application		Designation
01	Boring	Boring		MBR/L○○☆☆
02		Copying		MBCR/L○○☆☆
03		Back Boring		MBBR/L○○☆☆
04		Chamfering		MBFR/L○○☆☆
05	Grooving	Square Grooving		MGR/L○○☆☆-□□
06		Round Grooving		MGRR/L○○☆☆-□□
07		Face Grooving		MGFR/L○○00-□□
08	Threading	Partial	60°	MTR/L○○☆☆-◇60
			55°	MTR/L○○☆☆-◇55

Details

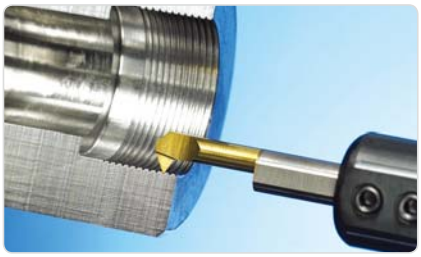
Marks	○○	Shank Dia.			
	☆☆	Max. depth of boring			
	□□	Width of groove			
	◇	Pitch / tpi	F	0.25~1.0	72~24
			A	0.5~1.5	48~16
			AG	0.5~3.0	48~8

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

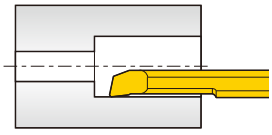
Machining Types



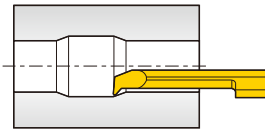


Types

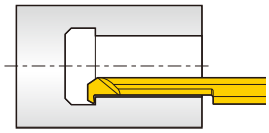
Boring



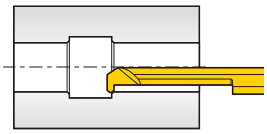
Boring
Min. dia. of machining : Ø3.2



Copying
Min. dia. of machining : Ø4.2

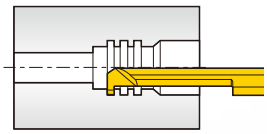


Back Boring
Min. dia. of machining : Ø3.2

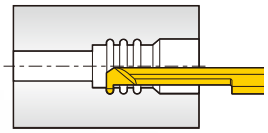


Chamfering
Min. dia. of machining : Ø4.2

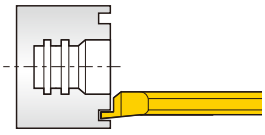
Grooving



Square Grooving
Min. dia. of machining : Ø3.2

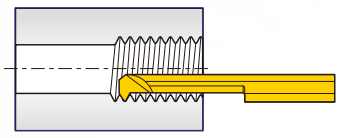


Round Grooving
Min. dia. of machining : Ø3.2



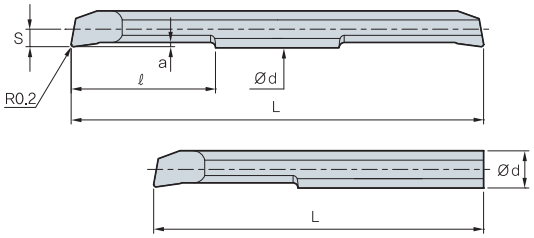
Face Grooving
Min. dia. of machining : Ø6.0

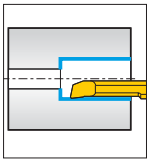
Threading



Threading
Min. dia. of machining : Ø3.3

Boring

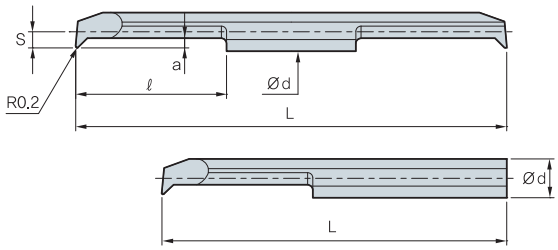


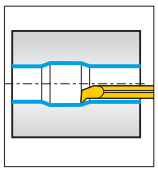


Twin Edge				Single Edge				Ød	Min.dia. of machining	ℓ	Overall length L		Detailed cutting edge	
Designation		Coated PC30M	Uncoated Z12M	Designation		Coated PC30M	Uncoated Z12M				Double ended	Single ended	a	S
MBR	0310	●		MBR	0310-1			3.0	3.2	10	40	35	0.5	1.4
	0315	●			0315-1					15	50	45		
	0410	●			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		

● : Stock item

Copying

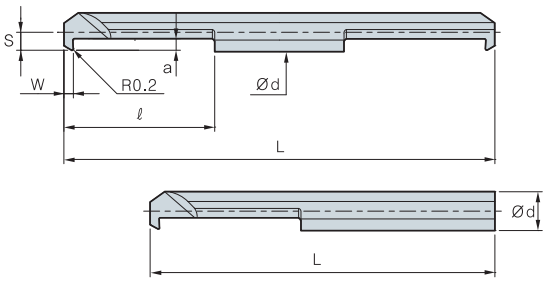


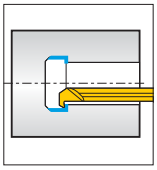


Twin Edge				Single Edge				Ød	Min.dia. of machining	ℓ	Overall length L		Detailed cutting edge	
Designation		Coated PC30M	Uncoated Z12M	Designation		Coated PC30M	Uncoated Z12M				Double ended	Single ended	a	S
MBCR	0410			MBCR	0410-1			4.0	4.2	10	40	35	1.0	1.9
	0415	●			0415-1					15	50	45		
	0420	●			0420-1					20	60	50		
	0610				0610-1			6.0	6.2	10	45	40	1.3	2.9
	0615	●			0615-1					15	55	45		
	0620	●			0620-1					20	60	50		

● : Stock item

Back Boring

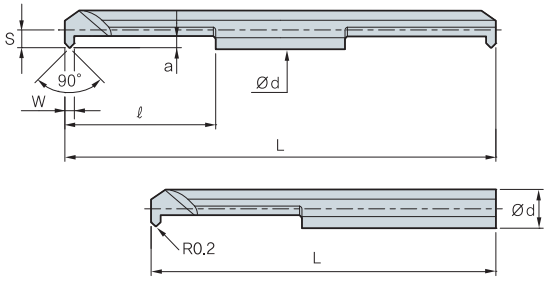


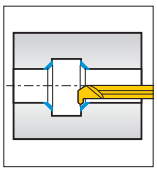


Double ended			Single Edge			Ød	Min.dia. of machining	ℓ	Overall length		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				L		W	a	S
									Double ended	Single ended			
MBBR 0310			MBBR 0310-1			3.0	3.2	10	40	35	1.5	0.8	1.4
0315			0315-1					15	50	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

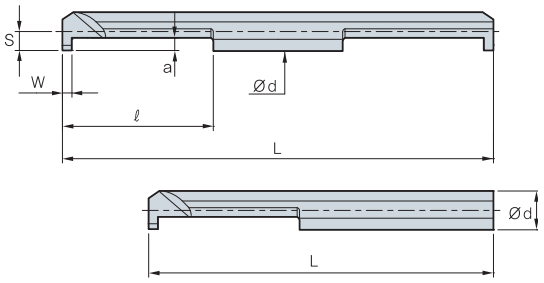


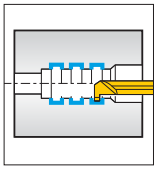


Twin Edge			Single Edge			Ød	Min.dia. of machining	ℓ	Overall length		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				L		W	a	S
									Double ended	Single ended			
MBFR 0410			MBFR 0410-1			4.0	4.2	10	40	35	0.8	1.0	1.9
0415			0415-1					15	50	45			
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

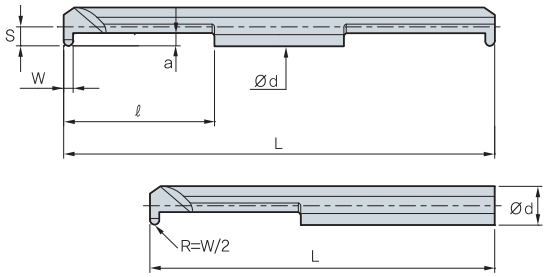


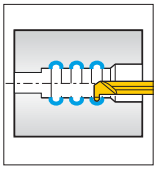


Twin Edge				Single Edge				Ød	Min.dia. of machining	ℓ	Overall length		Detailed cutting edge		
Designation		Coated PC30M	Uncoated Z12M	Designation		Coated PC30M	Uncoated Z12M				L		W	a	S
											Double ended	Single ended			
MGR	0310-1.0			MGR	0310-1.0-1			3.0	3.2	10	40	35	1.0	0.8	1.4
	0315-1.0				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	2.0	
	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	3.5	
	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	3.5	
	1025-3.0				1025-3.0-1								3.0		

● : Stock item

Round Grooving

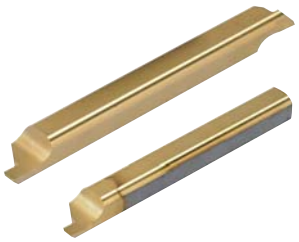


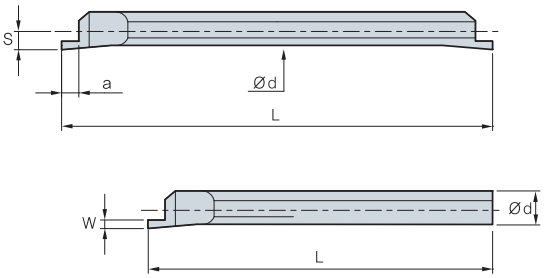


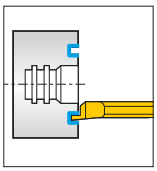
Twin Edge			Single Edge			Ød	Min.dia. of machining	ℓ	Overall length		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				L Double ended	L Single ended	W	a	S
MGRR 0310-0.8			MGRR 0310-0.8-1			3.0	3.2	10	40	35	0.8	0.8	1.4
0315-0.8			0315-0.8-1					15	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



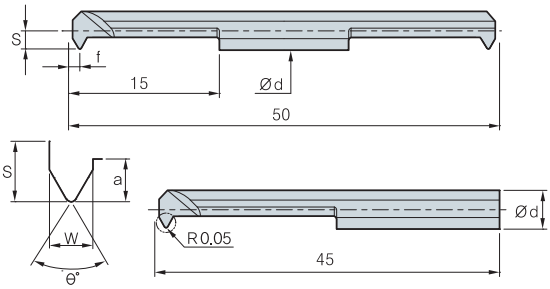


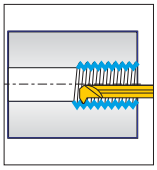


Twin Edge			Single Edge			Ød	Min.dia. of machining	Overall length		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M			L Double ended	L Single ended	W	a	S
MGFR 0400-1.0			MGFR 0400-1.0-1			4.0	6.0	50	45	1.0	1.5	1.8
0400-1.5			0400-1.5-1							1.5	2.0	
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							2.0	2.5	
0800-1.0			0800-1.0-1			8.0	10.4	70	60	1.0	1.5	3.9
0800-1.5			0800-1.5-1							1.5	2.0	
0800-2.0			0800-2.0-1							2.0	2.5	
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





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
	0415-F60				0415-F60-1			4.0	4.3				1.95		
	0615-A60				0615-A60-1			6.0	6.2	2.0	0.5~1.5		2.90	2.2	1.0
	0315-F55				0315-F55-1			3.0	3.3	1.2	48~24	55°	1.45	1.2	0.6
	0415-F55				0415-F55-1			4.0	4.3				1.95		
	0615-A55				0615-A55-1			6.0	6.2	2.0	28~16		2.9	2.2	1.0

● : Stock item

SLEEVE

SL(SLEEVE)

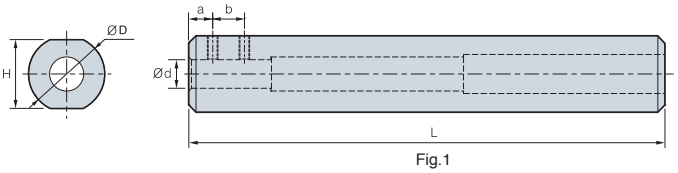


Fig.1

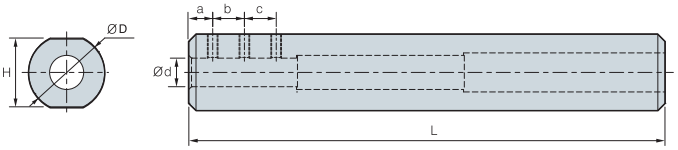


Fig.2

(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	2
SL2010	10	5	10	10	20	18	100	M5	HW20L	

※ Fine tolerance and surface roughness