B

TURNING

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

TU

C O N T E N T S

RNING

Boring Bar

HSK/ KM Tooling system

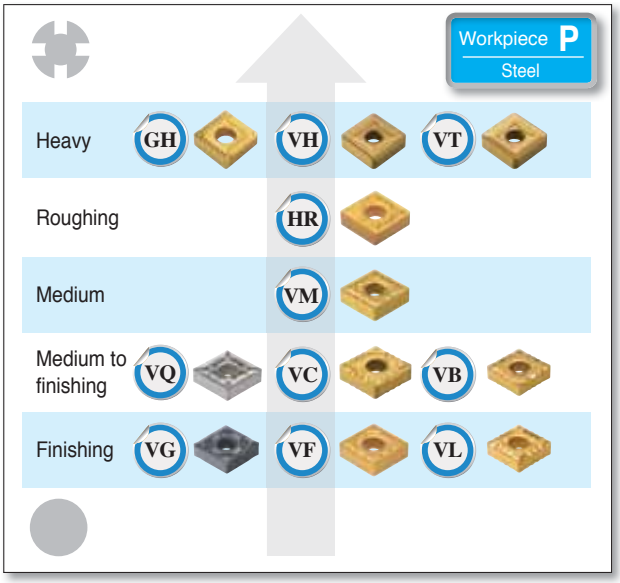
Cartridges

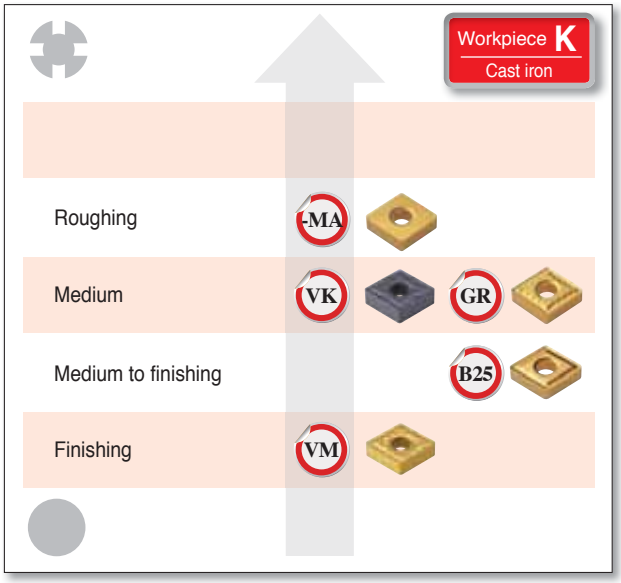
Auto tools

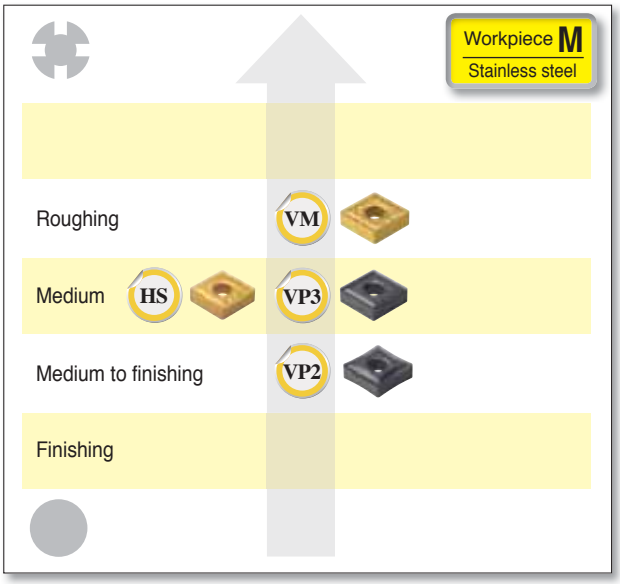
MSB tools

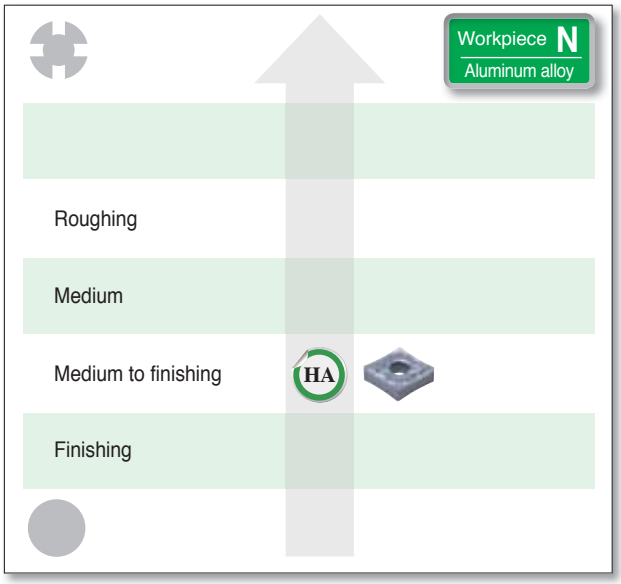
Applications range of chip breakers

Negative inserts



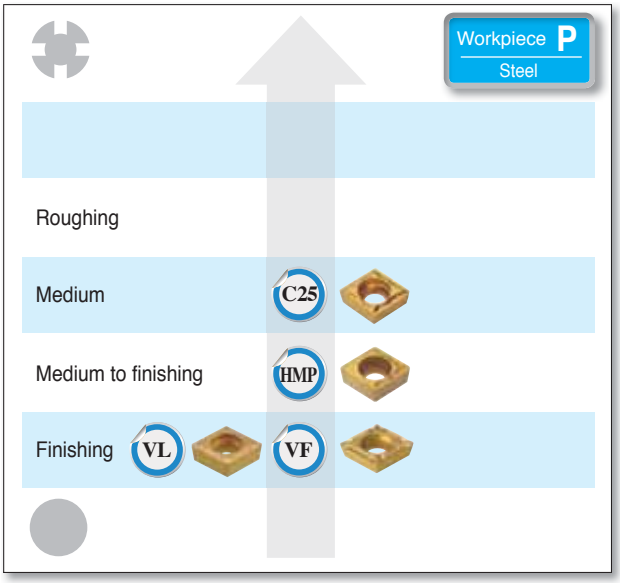


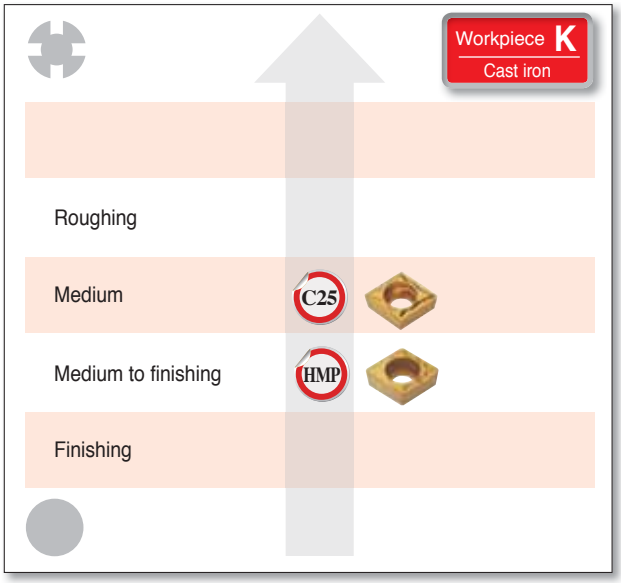


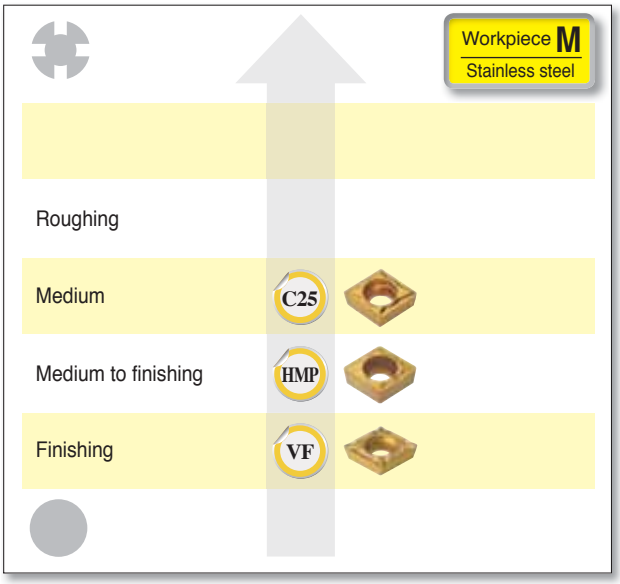


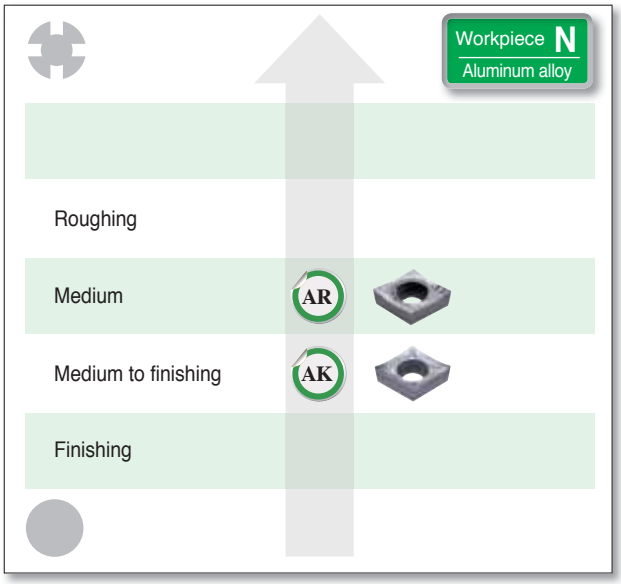
Applications range of chip breakers

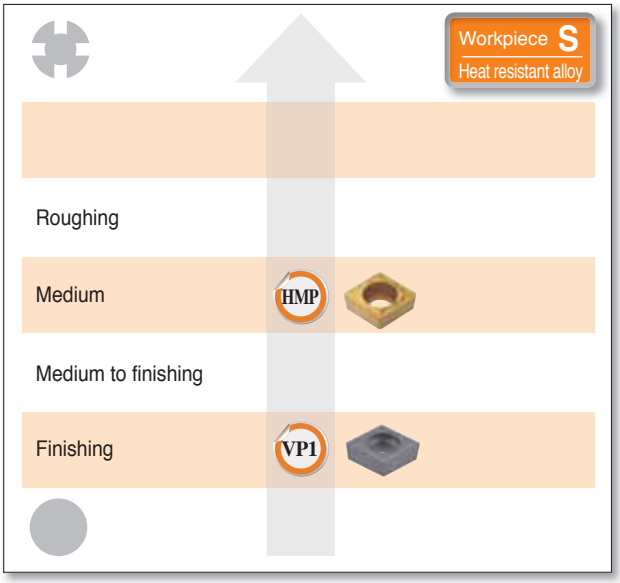
Positive inserts









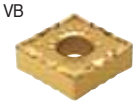
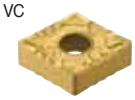
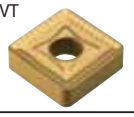


Recommended chip breaker for workpiece

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

Workpiece **P** Steel

Negative

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape: 80°	55°	90°	60°	35°	80°
0.2 ~ **0.8** ~ 1.5 finishing	VL		0.10 ~ **0.20** ~ 0.35	NC3010 **NC3220** CN1000 CN2000	300 **300** 270 260	CNMG p. B20	DNMG p. B25	SNMG p. B31	TNMG p. B38	VNMG p. B43	WNMG p. B46
0.5 ~ **1.0** ~ 1.5 finishing	VF		0.05 ~ **0.15** ~ 0.35	NC3010 NC3120 **NC3220** NC5330	310 270 **310** 230	CNMG p. B20	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B43	WNMG p. B46
0.5 ~ **1.0** ~ 2.0 finishing	VB		0.15 ~ **0.20** ~ 0.4	NC3010 **NC3220** CN1000 CN2000	300 **250** 230 200	CNMG p. B20	DNMG p. B25		TNMG p. B38		WNMG p. B46
0.5 ~ **1.5** ~ 3.5 medium to finishing	VC		0.12 ~ **0.25** ~ 0.45	NC3010 **NC3220** NC3120 NC5330	290 **250** 250 200	CNMG p. B20	DNMG p. B25	SNMG p. B31	TNMG p. B38	VNMG p. B43	WNMG p. B46
0.8 ~ **1.5** ~ 3.5 medium to finishing	HA		0.10 ~ **0.20** ~ 0.40	NC3010 NC3120 **NC3220** NC9025	300 230 **230** 180	CNMG p. B19	DNMG p. B24	SNMG p. B30	TNMG p. B37	VNMG p. B42	WNMG p. B45
1.0 ~ **2.5** ~ 5.0 medium machining	VM		0.10 ~ **0.25** ~ 0.50	NC3010 NC3120 **NC3220** NC3030 NC5330 CN2000	270 230 **230** 210 200 220	CNMG p. B21	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B44	WNMG p. B47
2.5 ~ **4.0** ~ 7.0 roughing	HR		0.25 ~ **0.45** ~ 0.65	NC3010 NC3120 **NC3220** NC3030	150 130 **130** 100	CNMG p. B19	DNMG p. B24	SNMG p. B31	TNMG p. B38		WNMG p. B45
6.0 ~ **10.0** ~ 15.0 Heavy (General)	VH		0.70 ~ **1.00** ~ 1.40	**NC3010** NC3030 NC500H NC5330	**50~250** 50~150 50~150 50~150	CNMM p. B22		SNMM p. B33			
7.0 ~ **12.0** ~ 17.0 Heavy (High feed cutting)	VT		0.75 ~ **1.20** ~ 1.60	**NC3010** NC3030 NC500H NC5330	**50~250** 50~150 50~150 50~150	CNMM p. B33		SNMM p. B33			

●: The first recommended cutting condition

Recommended chip breaker for workpiece

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

Workpiece
P
Steel

Positive

Depth of cut (mm)	C/B	Cutting edge	Feed (mm/rev)	Grades	Cutting Speed (m/min)	Insert shape 80°	55°	90°	60°	35°	80°
0.1 ~ **0.5** ~ 1.0 finishing	VL 		0.05 ~ **0.10** ~ 0.20	NC3010 NC3220 NC3120 NC5330 CN1000 CN2000	290 250 250 200 240 220	CCMT  p. B50	DCMT  p. B53	SCMT  p. B55	TC(P)MT  p. B59	VC(B)MT  p. B65	
0.1 ~ **0.5** ~ 1.5 finishing	VF 		0.05 ~ **0.15** ~ 0.25	NC3010 NC3120 NC3220 NC5330 CC105 CN1000 CN2000	280 250 250 250 260 240 220	CCMT  p. B50	DCMT  p. B53	SCMT  p. B55	TCMT  p. B59	VCMT  p. B45	
0.5 ~ **1.5** ~ 3.5 medium to finishing	HMP 		0.08 ~ **0.20** ~ 0.40	NC3010 NC3120 NC3220 NC5330 CN1000 CN2000	260 230 230 200 240 220	CCMT  p. B50	DCMT  p. B53	SCMT  p. B55	TCMT  p. B59	VCMT  p. B64	
1.0 ~ **2.0** ~ 3.0 medium machining	C25 		0.10 ~ **0.25** ~ 0.35	NC3010 NC3120 NC3220 NC5330 CN1000 CN2000	250 220 220 200 240 220	CCMT  p. B50	DCMT  p. B54	SCMT  p. B55	TCMT  p. B59		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

Materials : S45C, S55C, SCM430, SCM440, etc. General steel
Hardness : under 180~260HB

Workpiece **P** Steel

	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	NC3010 **NC3220** NC3120	220 200 190	CNMG p. B20	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B43	WNMG p. B47
	0.5 ~ **1.0** ~ 2.0 finishing	VB		0.15 ~ **0.20** ~ 0.40	NC3010 **NC3220** CN1000 CN2000	300 250 230 200	CNMG p. B20	DNMG p. B25		TNMG p. B38		WNMG p. B46
	0.5 ~ **1.5** ~ 3.5 Medium to finishing	VC		0.12 ~ **0.25** ~ 0.45	NC3010 **NC3220** NC3120 CN5330	290 250 250 200	CNMG p. B20	DNMG p. B25	SNMG p. B31	TNMG p. B38	VNMG p. B43	WNMG p. B47
	1.0 ~ **2.5** ~ 5.0 medium machining	VM		0.10 ~ **0.25** ~ 0.50	NC3010 NC3120 **NC3220** NC3030 CN2000	200 170 180 150 170	CNMG p. B21	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B44	WNMG p. B47
	2.5 ~ **4.0** ~ 7.0 roughing	HR		0.25 ~ **0.45** ~ 0.65	NC3010 NC3120 **NC3220** NC3030	170 150 150 130	CNMG p. B19	DNMG p. B24	SNMG p. B31	TNMG p. B38		WNMG p. B46
	6.0 ~ **10.0** ~ 15.0 Heavy (General)	VH		0.70~ **1.00** ~ 1.40	**NC3010** NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B22		SNMM p. B33			
	7.0 ~ **12.0** ~ 17.0 Heavy (High feed cutting)	VT		0.75 ~ **1.20** ~ 1.60	**NC3010** NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B22		SNMM p. B33			
Positive	0.1 ~ **0.5** ~ 1.0 finishing	VL		0.05 ~ **0.10** ~ 0.20	NC3010 **NC3220** NC3120 NC5330 CN1000 CN2000	290 250 250 200 240 220	p. B50	p. B53	p. B55	p. B59	p. B65	
	0.1 ~ **0.5** ~ 1.5 finishing	VF		0.05 ~ **0.15** ~ 0.25	NC3010 NC3120 **NC3220** NC5330 CC105 CN1000 CN2000	280 250 250 250 260 270 260	CCMT p. B50	DCMT p. B53	SCMT p. B55	TCMT p. B59	VCMT p. B64	
	0.1 ~ **0.5** ~ 1.5 finishing	HFP		0.05 ~ **0.15** ~ 0.25	NC3010 NC3120 **NC3220** NC5330 CC105 CN1000	220 190 190 180 260 200	CCG(M)T p. B50	DCG(M)T p. B53	SCG(M)T p. B55	TCG(M)T p. B59	VCG(M)T p. B64	
	1.0 ~ **2.0** ~ 3.0 medium machining	C25		0.10 ~ **0.25** ~ 0.35	NC3010 NC3120 **NC3220** NC3030 CN1000 CN2000	200 170 180 150 170 160	CCMT p. B50	DCMT p. B54	SCMT p. B55	TCMT p. B59		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

Materials : SNC415, SNC815, SNCM240, SNCM439, STS12, STS61, etc
SCM440, Hardened steel
Hardness : 260~350HB

Workpiece **P** Steel

	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	NC3010 NC3220 NC3120	130 110 110	CNMG p. B20	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B43	WNMG p. B47
	0.5 ~ 1.0 ~ 2.0 finishing	VB		0.15 ~ 0.20 ~ 0.40	NC3010 NC3220 CN1000 CN2000	300 250 230 200	CNMG p. B20	DNMG p. B25		TNMG p. B38		WNMG p. B46
	0.5 ~ 1.5 ~ 3.5 Medium to finishing	VC		0.12 ~ 0.25 ~ 0.45	NC3010 NC3220 NC3120 CN5330	290 250 250 200	CNMG p. B20	DNMG p. B25	SNMG p. B31	TNMG p. B38	VNMG p. B43	WNMG p. B47
	1.0 ~ 2.5 ~ 5.0 medium to roughing	VM		0.15 ~ 0.25 ~ 0.50	NC3010 NC3120 NC3220 CN2000	130 100 110 90	CNMG p. B21	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B44	WNMG p. B47
	2.5 ~ 4.0 ~ 7.0 roughing	HR		0.25 ~ 0.35 ~ 0.60	NC3010 NC3120 NC3220 NC3030	100 90 90 80	CNMG p. B19	DNMG p. B24	SNMG p. B31	TNMG p. B38		WNMG p. B46
	6.0 ~ 10.0 ~ 15.0 Heavy (General)	VH		0.7 0~ 1.00 ~ 1.40	NC3010 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B22		SNMM p. B33			
	7.0 ~ 12.0 ~ 17.0 Heavy (High feed cutting)	VT		0.75 ~ 1.20 ~ 1.60	NC3010 NC3030 NC500H NC5330	50~250 50~150 50~150 50~150	CNMM p. B22		SNMM p. B33			
Positive	0.1 ~ 0.5 ~ 1.0 finishing	VL		0.05 ~ 0.10 ~ 0.20	NC3010 NC3220 NC3120 NC5330 CN1000 CN2000	290 250 250 200 200 180	CCMT p. B50	DCMT p. B53	SCMT p. B55	TC(P)MT p. B59	VC(B)MT p. B65	
	0.1 ~ 0.5 ~ 1.5 finishing	VF		0.05 ~ 0.15 ~ 0.25	NC3010 NC3120 NC3220 NC5330 CC105 CN1000 CN2000	280 250 250 250 260 250 240	CCMT p. B50	DCMT p. B53	SCMT p. B55	TCMT p. B59	VCMT p. B64	
	0.1 ~ 0.5 ~ 1.5 finishing	HFP		0.05 ~ 0.15 ~ 0.25	NC3010 NC3120 NC3220 CC105	130 110 120 120	CCG(M)T p. B50	DCG(M)T p. B53	SCG(M)T p. B55	TCG(M)T p. B59	VCG(M)T p. B64	
	1.0 ~ 2.0 ~ 3.0 medium machining	C25		0.10 ~ 0.25 ~ 0.35	NC3010 NC3120 NC3220 NC3030 CN1000 CN2000	110 100 100 90 100 90	CCMT p. B50	DCMT p. B54	SCMT p. B55	TCMT p. B59		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

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

Workpiece **M** Stainless steel

	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 ~ 4.0 medium machining	HS		0.10 ~ 0.25 ~ 0.40	PC8110 NC9025 PC5300 PC9030	280 200 160 120	CNMG p. B20	DNMG p. B24	SNMG p. B31	TNMG p. B38	VNMG p. B42	WNMG p. B46
	2.0 ~ 4.5 ~ 6.5 roughing	VM		0.20 ~ 0.40 ~ 0.60	PC8110 NC5330 PC5300 PC9030	250 180 150 120	CNMG p. B21	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B44	WNMG p. B47
	0.5 ~ 1.5 ~ 4.0 Medium to finishing	VP2		0.05 ~ 0.20 ~ 0.40	PC8110 NC9025 PC5300 PC9030	250 180 150 120	CNMG p. B21	DNMG p. B26	SNMG p. B32	TNMG p. B39		WNMG p. B48
	1.0 ~ 2.0 ~ 4.5 Medium	VP3		0.10 ~ 0.25 ~ 0.45	PC8110 NC9025 PC5300 PC9030	280 200 160 120	CNMG p. B21	DNMG p. B26	SNMG p. B32	TNMG p. B39	VNMG p. B43	WNMG p. B48
Positive	0.1 ~ 0.5 ~ 1.5 finishing	VF		0.05 ~ 0.15 ~ 0.25	NC3010 NC3120 NC3220 NC5330 CC105 CN1000 CN2000	280 250 250 250 260 270 260	CCMT p. B50	DCMT p. B53	SCMT p. B55	TCMT p. B59	VCMT p. B65	
	0.5 ~ 1.5 ~ 3.0 medium to finishing	HMP		0.10 ~ 0.20 ~ 0.30	PC8110 NC9025 PC5300 PC9030 CN1000 CN2000	250 200 180 150 260 240	CCMT p. B50	DCMT p. B53	SCMT p. B55	TCMT p. B59	VCMT p. B65	
	1.0 ~ 1.5 ~ 3.0 medium machining	C25		0.15 ~ 0.25 ~ 0.35	PC8110 NC9025 PC5300 PC9030 CN1000 CN2000	250 200 170 140 150 130	CCMT p. B50	DCMT p. B54	SCMT p. B55	TCMT p. B59		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

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

Workpiece
K
Cast iron

	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 None		0.15 ~ 0.30 ~ 0.60	KB410 KB350 KB370 NC6205 NC6210 NC315K	150 ~ 200 200 ~ 500 500 ~ 2000 250 ~ 450 200 ~ 350 150 ~ 300	CNMA p. B18	DNMA p. B23	SNMA p. B29	TNMA p. B36		
	0.5 ~ 2.0 ~ 3.5 medium to finishing	B25		0.20 ~ 0.35 ~ 0.60	NC6205 NC6210 NC315K	400~450 300~400 150~250	CNMG p. B18	DNMG p. B23	SNMG p. B29	TNMG p. B36	VNMG p. B45	
	1.0 ~ 2.5 ~ 4.0 medium machining	VM		0.15 ~ 0.30 ~ 0.50	NC6205 NC6210 NC315K	450~550 350~450 200~250	CNMG p. B21	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B44	WNMG p. B47
	1.0 ~ 3.0 ~ 4.5 medium to roughing	GR		0.20 ~ 0.35 ~ 0.50	NC6205 NC6210 NC315K	450~550 350~450 200~250	CNMG p. B19	DNMG p. B23	SNMG p. B30	TNMG p. B37		WNMG p. B45
	1.0 ~ 2.5 ~ 5.0 medium to roughing	VK		0.15 ~ 0.25 ~ 0.50	NC6205 NC6210 NC315K	450~550 350~450 200~250	CNMG p. B22	DNMG p. B26	SNMG p. B33	TNMG p. B40	VNMG p. B44	WNMG p. B48
	4.3 ~ 6.5 ~ 10.0 heavy roughing	GH		0.30 ~ 0.70 ~ 1.10	NC6210 NC315K	180 150	CNMM p. B22		SNMM p. B33			
Positive	0.5 ~ 1.5 ~ 3.0 medium to finishing	HMP		0.08 ~ 0.20 ~ 0.40	NC6205 NC6210 NC315K	250 230 200	CCMT p. B50	DCMT p. B53	SCMT p. B55	TCMT p. B59	VCMT p. B65	
	1.0 ~ 2.0 ~ 3.5 medium machining	C25		0.10 ~ 0.25 ~ 0.40	NC6205 NC6210 NC315K	250 230 200	CCMT p. B50	DCMT p. B54	SCMT p. B55	TCMT p. B59		

●: The first recommended cutting condition

Recommended chip breaker for workpiece

Materials : Aluminum alloy
Hardness : 20~110HB

Workpiece N Aluminum alloy

	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 machining	HA		0.10 ~ 0.20 ~ 0.50	H01	500	CNMG p. B19	DNMG p. B24	SNMG p. B30	TNMG p. B37	VNMG p. B42	WNMG p. B45
Positive	0.1 ~ 1.0 ~ 4.0 medium to finishing	AK		0.03 ~ 0.20 ~ 0.40	H01 ND1000 PD1000	1000 1000 1000	CCGT p. B68	DCGT p. B69	SCGT p. B71	TCGT p. B72	VCGT p. B73	RCGT p. B70
	0.5 ~ 1.5 ~ 4.0 medium machining	AR		0.05 ~ 0.30 ~ 0.50	H01 ND1000 PD1000	1000 1000 1000	CCGT p. B68	DCGT p. B69	SCGT p. B71	TCGT p. B72	VCGT p. B73	RCGT p. B70

● : The first recommended cutting condition

Recommended chip breaker for workpiece

Materials : Copper Bronze alloy
Hardness : 20~110HB

Workpiece N Aluminum alloy

	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 machinin	HA		0.10 ~ 0.20 ~ 0.50	H01	1000	CNMG p. B19	DNMG p. B24	SNMG p. B30	TNMG p. B37	VNMG p. B42	WNMG p. B45
Positive	0.1 ~ 1.0 ~ 3.0 medium to finishing	AK		0.03 ~ 0.20 ~ 0.30	H01	1000	CCGT p. B68	DCGT p. B69	SCGT p. B71	TCGT p. B72	VCGT p. B73	RCGT p. B70
	0.5 ~ 1.5 ~ 3.0 medium machinin	AR		0.05 ~ 0.25 ~ 0.40	H01	1000	CCGT p. B68	DCGT p. B69	SCGT p. B71	TCGT p. B72	VCGT p. B73	RCGT p. B70

● : The first recommended cutting condition

Recommended chip breaker for workpiece

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

Workpiece
S
Heat resistant alloy

	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	1.5 ~ 3.0 ~ 5.5 medium to roughing	GS		0.15 ~ 0.30 ~ 0.50	PC8110 NC9025 PC5300	80 50 30	CNMG p. B19	DNMG p. B24	SNMG p. B30	TNMG p. B37		WNMG p. B45
	2.0 ~ 4.5 ~ 6.0 medium to roughing	VM		0.20 ~ 0.40 ~ 0.60	PC8110 NC5330 PC5300	80 50 30	CNMG p. B21	DNMG p. B25	SNMG p. B32	TNMG p. B39	VNMG p. B44	WNMG p. B47
	0.1 ~ 0.5 ~ 1.5 Finishing	VP1		0.05 ~ 0.10 ~ 0.20	PC8110 PC5300 NC5330	60 50 50	CNMG p. B21	DNMG p. B26				
	0.5 ~ 1.5 ~ 4.0 Medium to finishing	VP2		0.05 ~ 0.20 ~ 0.40	PC8110 PC5300 NC5330	60 50 50	CNMG p. B21	DNMG p. B26	SNMG p. B32	TNMG p. B39		WNMG p. B48
	1.0 ~ 2.0 ~ 4.5 Medium	VP3		0.10 ~ 0.25 ~ 0.45	PC8110 PC5300 NC5330	60 50 50	CNMG p. B21	DNMG p. B26	SNMG p. B32	TNMG p. B39	VNMG p. B43	WNMG p. B48
Positive	0.1 ~ 0.5 ~ 1.5 finishing	HFP		0.05 ~ 0.15 ~ 0.25	PC8110 NC9025 PC5300	80 50 30	CCG(M)T p. B50	DCG(M)T p. B53	SCG(M)T p. B55	TCG(M)T p. B59	VCG(M)T p. B65	
	0.5 ~ 1.5 ~ 3.0 medium to finishing	HMP		0.10 ~ 0.20 ~ 0.30	PC8110 NC9025 PC5300 PC9030	80 50 60 30	CCMT p. B50	DCMT p. B53	SCMT p. B55	TCMT p. B59	VCMT p. B65	
	1.0 ~ 1.5 ~ 3.0 medium machining	C25		0.15 ~ 0.25 ~ 0.35	PC8110 NC9025 PC5300	80 50 30	CCMT p. B50	DCMT p. B54	SCMT p. B55	TCMT p. B59		

●: The first recommended cutting condition

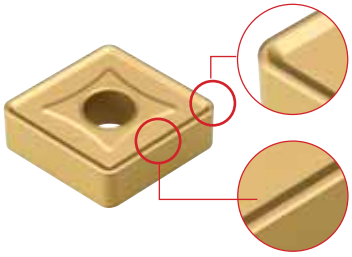
New Chip Breakers

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 horizontal machines when machining shafts, rollers, rotors and optimal for the big flange machining

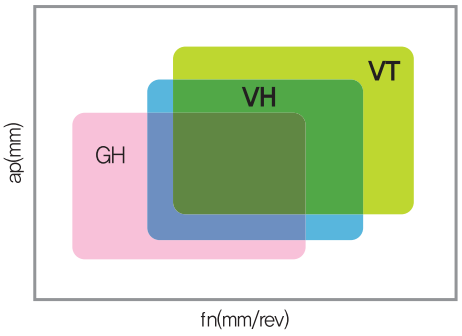
Special features of VH

• 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

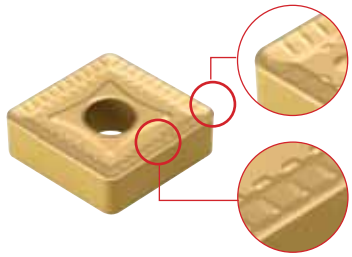
Applications range of Chip breakers



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

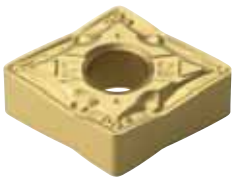


- ▶ Designed from the study of heavy cutting mechanism
- ▶ Strong edge design provides long and stable cutting (2 step rake angle of cutting edge)
- ▶ Varied cutting edge land strengthens the cutting edge
- ▶ The positioning of the chip breaking convex dot deflects the machining heat, optimizes inserts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

LW / VW Chip Breaker (High feed cutting)

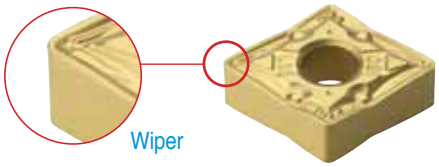
- Improved productivity with higher feed rates and surface finishes
- Improved wear resistance and toughness

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

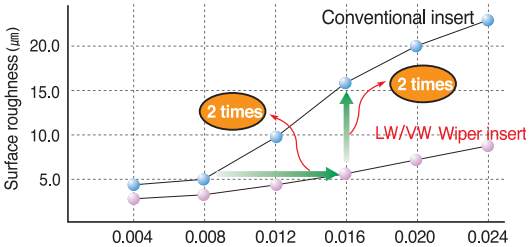
Wiper Insert



- ▶ 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 | Comp. A | Comp. B | Comp. C

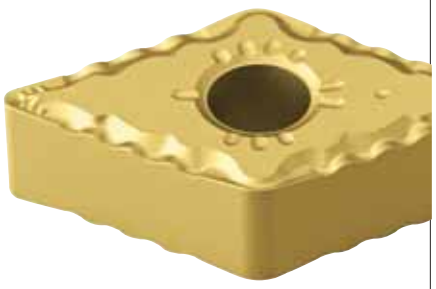
- **Workpiece** : SM20C
- **Cutting Condition** : vc=250m/min
  fn=0.2mm/rev(Side)
  ap=0.5mm
  wet
- **Designation** : DNMG150408-VL

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)

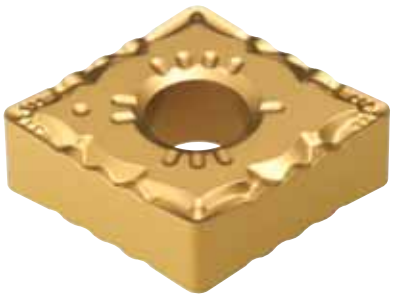


- Excellent chip evacuation in continuous and high speed machining of various workpieces.
- Longer tool life due to 3 dimensional chip breaker realizing low cutting resistance and high rigidity of the cutting edge.
- Stable chip control in copying and internal machining.

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

Special features of VC

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

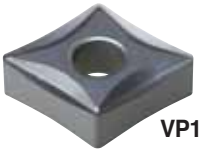
(For hard-to-cut materials machining)

- 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

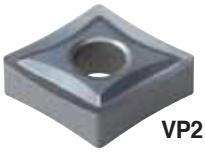
- Longer tool life due to minimizing chip contact and reducing cutting heat while machining.
- Recommended cutting condition • fn=0.05~0.2mm/rev • ap=0.1~1.5mm



VP2(for medium to finishing)

High positive cutting edge and side rake angle

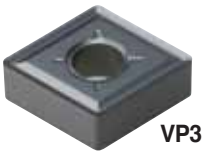
- Improved machining performance with stable chip control in ball machining with various depth of cuts.
- Recommended cutting condition • fn=0.05~0.4mm/rev • ap=0.5~4.0mm



VP3(for medium machining)

High positive cutting edge and wide land

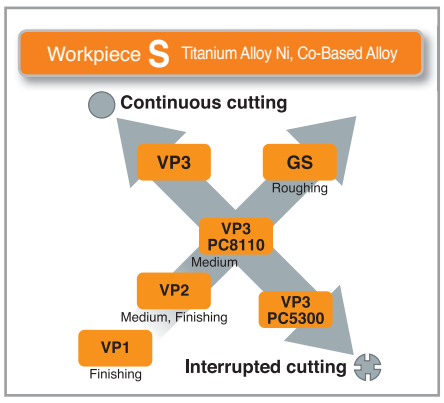
- Stable machinability in interrupted machining toughness.
  Stable chip evacuation and machining in machining with high depth of cut.
- Recommended cutting condition • fn=0.1~0.45mm/rev • ap=1.0~4.5mm



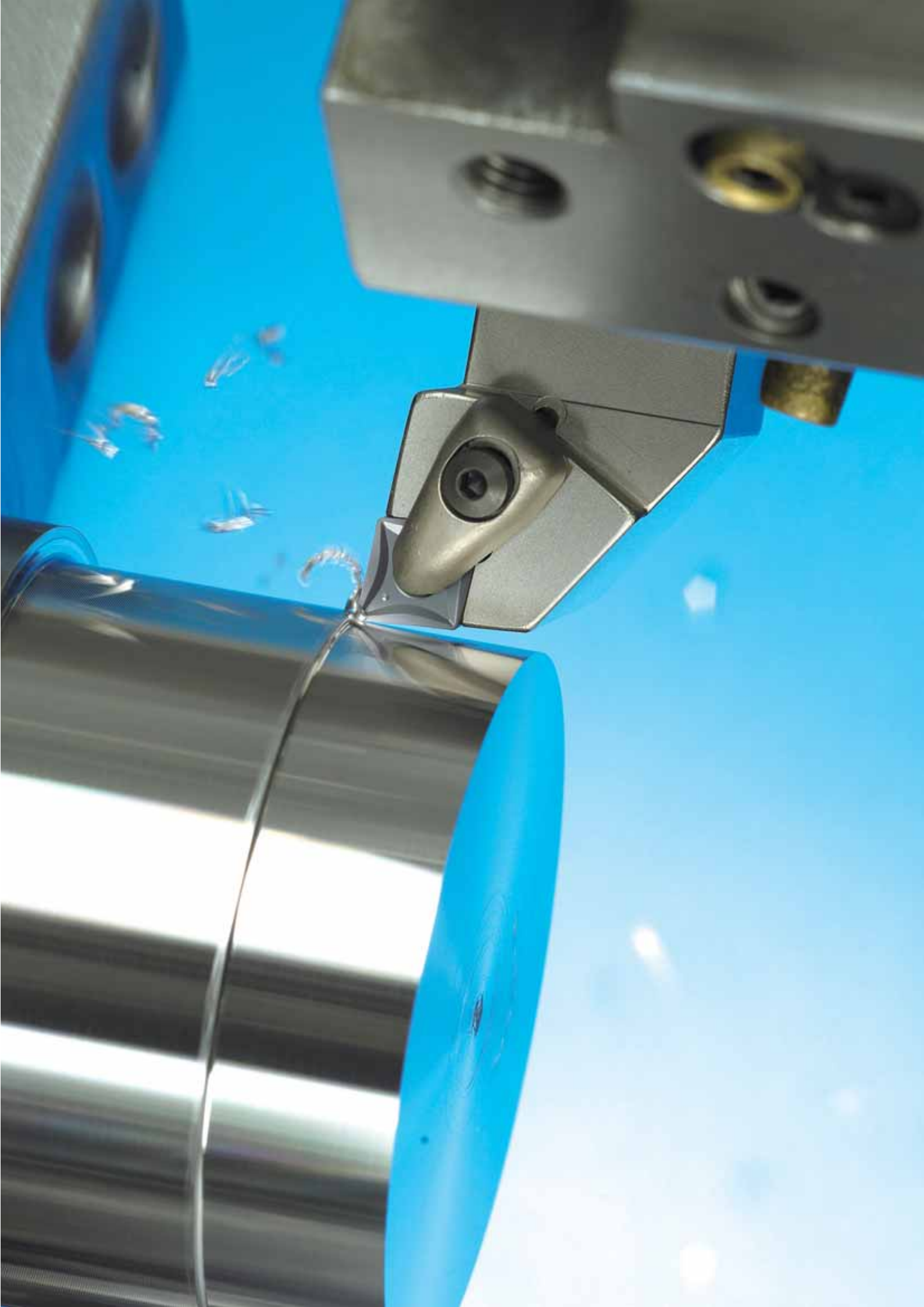
Machining of Hard-to-cut material

(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.



Line-up for chip breakers for hard-to-cut material machining

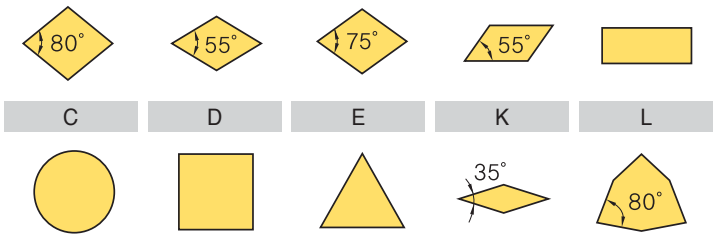


C N M G 12

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

1 Insert Shape

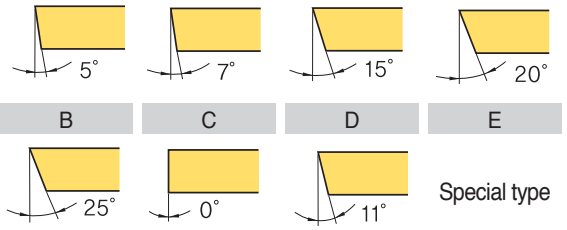
C N M G 12 04 08 - VM



C	D	E	K	L
R	S	T	V	W

2 Relief Angle

C N M G 12 04 08 - VM



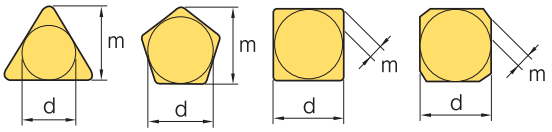
B	C	D	E
F	N	P	O

Special type

3 Tolerance

C N M G 12 04 08 - VM

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)

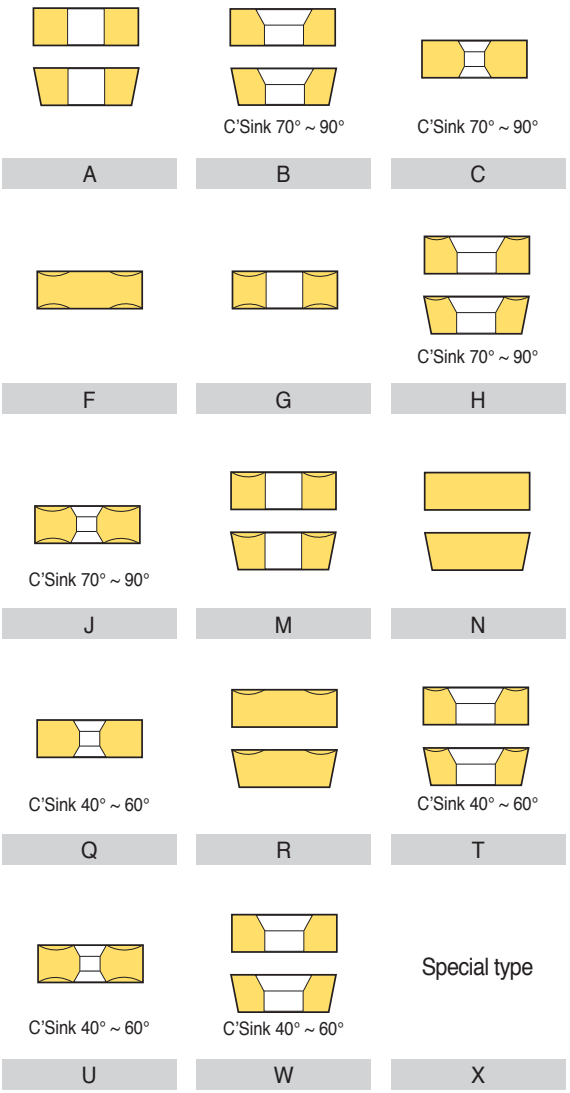
d	Tolerance on d		Tolerance on m	
	J, K, L, M, N	U	M, N	U
6.35	±0.05	±0.08	±0.08	±0.13
9.525	±0.05	±0.08	±0.08	±0.13
12.7	±0.08	±0.13	±0.13	±0.20
15.875	±0.10	±0.18	±0.15	±0.27
19.05	±0.10	±0.18	±0.15	±0.27
25.4	±0.13	±0.25	±0.18	±0.38

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 - VM



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

Special type

04 08 - VM

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

5 Cutting Edge Length, Diameter of Inscribed Circle

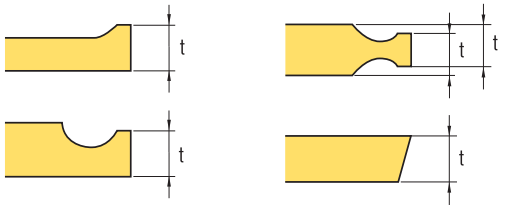
C N M G **12** 04 08 - VM

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

6 Height of Cutting Edge

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



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

7 Nose Radius (Nose R)

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

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)	

8 Chip Breaker for Turning

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


VG VL VF VB VC VQ


VW VM VH VT VK VP1

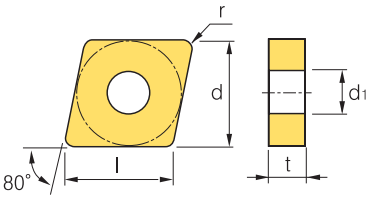

VP2 VP3 HA HS HR GS


GM GR GH B25 VF HMP


C25 AK AR

CN○○

Rhombic 80° Negative



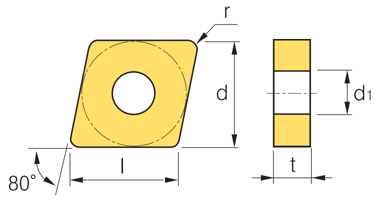
Workpiece		Machining types	
Steel	P	●	Continuous cutting
Stainless steel	M	⬌	General cutting
Cast iron	K	✱	Interrupted cutting
Non-ferrous metal	N		
Heat resistant alloy, Titanium alloy	S		
Hardened steel	H		

Inserts	Designation	Coated												Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
CNGG-VP1 (New) Finishing	120402-VP1																						12.6	12.7	4.76	0.2	5.16	0.01~0.10	0.10~1.00	MCKNR/L	B106
	120404-VP1																						12.4	12.7	4.76	0.4	5.16	0.05~0.15	0.10~1.50	MCLNR/L	B106
	120408-VP1																						12.0	12.7	4.76	0.8	5.16	0.07~0.20	0.10~1.50	MCMNN	B106
																														MCRNR/L	B107
																														PCBNR/L	B94
																														PCLNR/L	B95
CNMA Roughing	090308																						8.8	9.525	3.18	0.8	3.18	0.10~0.30	0.50~3.00	MCKNR/L	B106
	120404													●							●		12.4	12.7	4.76	0.4	5.16	0.15~0.60	1.00~5.00	MCLNR/L	B106
	120408												●	●							●		12.0	12.7	4.76	0.8	5.16	0.15~0.60	1.00~6.00	MCMNN	B106
	120412											●	●	●								●	11.6	12.7	4.76	1.2	5.16	0.15~0.70	1.50~6.00	MCRNR/L	B107
	120416												●										11.2	12.7	4.76	1.6	5.16	0.20~0.80	2.00~6.00	PCBNR/L	B94
	160608																						15.3	15.875	6.35	0.8	6.35	0.15~0.70	2.00~6.00	PCLNR/L	B95
	160612												●										14.8	15.875	6.35	1.2	6.35	0.15~0.70	2.00~6.00		
	160616																						14.4	15.875	6.35	1.6	6.35	0.15~0.70	2.00~6.00		
	190608												●										18.5	19.05	6.35	0.8	7.93	0.15~0.70	2.00~10.00		
	190612												●										18.1	19.05	6.35	1.2	7.93	0.15~0.70	2.00~10.00		
	190616												●										17.7	19.05	6.35	1.6	7.93	0.20~1.00	3.00~10.00		
CNMG-B25 Medium Roughing	120404-B25	●		●	●			●		●			●			●							12.4	12.7	4.76	0.4	5.16	0.17~0.45	1.00~5.00	MCKNR/L	B106
	120408-B25	●		●	●	●	●	●	●	●	●	●	●			●							12.0	12.7	4.76	0.8	5.16	0.23~0.60	1.50~5.00	MCLNR/L	B106
	120412-B25	●		●	●			●					●										11.6	12.7	4.76	1.2	5.16	0.25~0.60	2.00~5.00	MCMNN	B106
	160608-B25				●																		15.3	15.875	6.35	0.8	6.35	0.25~0.60	2.00~6.50	MCRNR/L	B107
	160612-B25			●																			14.8	15.875	6.35	1.2	6.35	0.27~0.60	2.00~6.50	PCBNR/L	B94
	160616-B25																						14.4	15.875	6.35	1.6	6.35	0.27~0.60	2.00~6.50	PCLNR/L	B95
	190604-B25		●		●					●													18.9	19.05	6.35	0.4	7.93	0.20~0.45	3.00~8.00		
	190608-B25		●		●			●					●										18.5	19.05	6.35	0.8	7.93	0.25~0.60	3.00~8.00		
	190612-B25	●			●			●	●				●										18.1	19.05	6.35	1.2	7.93	0.30~0.60	3.00~8.00		
	190616-B25				●																		17.7	19.05	6.35	1.6	7.93	0.23~0.70	3.00~8.00		
CNMG-GM Medium	090304-GM																						9.2	9.525	3.18	0.4	3.81	0.05~0.30	0.90~3.50	MCKNR/L	B106
	090308-GM																						8.8	9.525	3.18	0.8	3.81	0.10~0.45	1.00~3.50	MCLNR/L	B106
	120404-GM				●												●						12.4	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00	MCMNN	B106
	120408-GM	●	●	●	●			●								●							12.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	MCRNR/L	B107
	120412-GM																						11.6	12.7	4.76	1.2	5.16	0.18~0.60	1.30~5.00	PCBNR/L	B94
	190608-GM																						18.5	19.05	6.35	0.8	7.93	0.10~0.50	1.00~8.00	PCLNR/L	B95

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

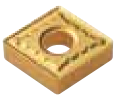
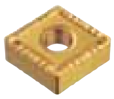
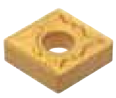
CN○○

Rhombic **80° Negative**



Workpiece			NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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	Coated														Cermet			Coated		Uncoated		
		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
CNMG-GR  Roughing	120408-GR	●	●	●	●				●				●	●	●								
	120412-GR	●	●	●	●				●					●									
	120416-GR													●									
	160608-GR			●	●									●									
	160612-GR	●	●	●	●				●					●									
	160616-GR			●	●																		
	190608-GR		●		●				●					●									
	190612-GR	●	●		●	●			●					●									
	190616-GR	●	●		●	●			●														
	190624-GR																						
	250724-GR																						
	250924-GR				●				●														
CNMG-GS  Medium Roughing	120404-GS						●	●		●	●	●											
	120408-GS				●		●	●		●	●	●											
	120412-GS						●	●		●	●	●											
	160608-GS																						
	160612-GS																						
	190612-GS							●		●													
	190616-GS									●													
CNMG-HA  Medium to finishing	120404-HA						●	●		●	●	●										●	
	120408-HA						●	●		●	●	●										●	
	120412-HA											●											
CNMG-HC  Medium to finishing	120404-HC	●			●				●														
	120408-HC	●	●		●				●														
	120412-HC																						
CNMG-HR  Roughing	120404-HR																						
	120408-HR	●			●				●														
	120412-HR	●			●				●														
	120416-HR																						
	160608-HR																						
	160612-HR	●	●		●																		
	160616-HR	●																					
	160624-HR																						
	190608-HR																						
	190612-HR				●	●								●									
	190616-HR		●		●																		
	190624-HR																						
	250924-HR																						

Inserts	Designation	Dimensions (mm)					Cutting Condition		Available tool holders	
		l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
CNMG-GR	120408-GR	12.0	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MCKNR/L	B106
	120412-GR	11.6	12.7	4.76	1.2	5.16	0.25~0.50	1.30~7.00	MCLNR/L	B106
	120416-GR	11.2	12.7	4.76	1.6	5.16	0.25~0.60	1.80~6.00	MCMNN	B106
	160608-GR	15.3	15.875	6.35	0.8	6.35	0.20~0.70	1.00~8.00	MCRNR/L	B107
	160612-GR	14.8	15.875	6.35	1.2	6.35	0.25~0.70	1.30~8.00	PCBNR/L	B94
	160616-GR	14.4	15.875	6.35	1.6	6.35	0.25~0.75	1.80~8.00	PCLNR/L	B95
	190608-GR	18.5	19.05	6.35	0.8	7.93	0.20~0.70	1.70~10.00		
	190612-GR	18.1	19.05	6.35	1.2	7.93	0.30~0.75	1.70~10.00		
	190616-GR	17.7	19.05	6.35	1.6	7.93	0.30~0.80	1.80~10.00		
	190624-GR	16.8	19.05	6.35	2.4	7.93	0.35~0.85	2.00~12.00		
	250724-GR	23.3	25.4	7.94	2.4	9.12	0.40~1.00	2.30~15.00		
	250924-GR	23.3	25.4	9.52	2.4	9.12	0.40~1.00	2.30~15.00		
CNMG-GS	120404-GS	12.4	12.7	4.76	0.4	5.16	0.05~0.25	0.10~3.00	MCKNR/L	B106
	120408-GS	12.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	MCLNR/L	B106
	120412-GS	11.6	12.7	4.76	1.2	5.16	0.13~0.65	1.00~5.00	MCMNN	B106
	160608-GS	15.3	15.875	6.35	0.8	6.35	0.10~0.50	1.00~6.50	MCRNR/L	B107
	160612-GS	14.8	15.875	6.35	1.2	6.35	0.13~0.65	1.00~6.50	PCBNR/L	B94
	190612-GS	18.1	19.05	6.35	1.2	7.93	0.13~0.65	1.00~7.80	PCLNR/L	B95
	190616-GS	17.7	19.05	6.35	1.6	7.93	0.13~0.65	1.00~7.80		
CNMG-HA	120404-HA	12.4	12.7	4.76	0.4	5.16	0.05~0.20	0.80~3.50	MCKNR/L	B106
	120408-HA	12.0	12.7	4.76	0.8	5.16	0.10~0.40	0.80~3.50	MCLNR/L	B106
	120412-HA	11.6	12.7	4.76	1.2	5.16	0.13~0.55	0.80~3.50	MCMNN	B106
									MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95
CNMG-HC	120404-HC	12.4	12.7	4.76	0.4	5.16	0.05~0.30	0.80~3.50	MCKNR/L	B106
	120408-HC	12.0	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00	MCLNR/L	B106
	120412-HC	11.6	12.7	4.76	1.2	5.16	0.17~0.50	1.00~4.00	MCMNN	B106
									MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95
CNMG-HR	120404-HR	12.4	12.7	4.76	0.4	5.16	0.15~0.30	0.80~6.00	MCKNR/L	B106
	120408-HR	12.0	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MCLNR/L	B106
	120412-HR	11.6	12.7	4.76	1.2	5.16	0.25~0.70	1.30~7.00	MCMNN	B106
	120416-HR	11.2	12.7	4.76	1.6	5.16	0.32~0.75	1.80~7.00	MCRNR/L	B107
	160608-HR	15.3	15.875	6.35	0.8	6.35	0.20~0.50	1.00~8.00	PCBNR/L	B94
	160612-HR	14.8	15.875	6.35	1.2	6.35	0.25~0.70	1.30~8.00	PCLNR/L	B95
	160616-HR	14.4	15.875	6.35	1.6	6.35	0.30~0.80	1.80~8.00		
	160624-HR	13.6	15.875	6.35	2.4	6.35	0.32~0.90	2.30~10.00		
	190608-HR	18.5	19.05	6.35	0.8	7.93	0.20~0.50	1.70~10.00		
	190612-HR	18.1	19.05	6.35	1.2	7.93	0.25~0.70	1.30~10.00		
	190616-HR	17.7	19.05	6.35	1.6	7.93	0.30~0.80	1.80~10.00		
	190624-HR	16.8	19.05	6.35	2.4	7.93	0.32~0.90	2.30~10.00		
	250924-HR	23.3	25.4	9.52	2.4	9.12	0.40~1.00	2.30~10.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

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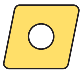
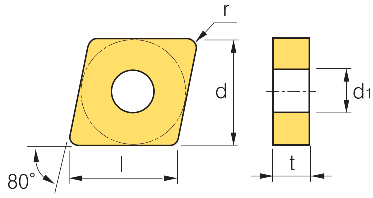
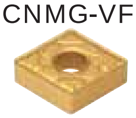


Rhombic **80° Negative**



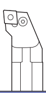
Workpiece		P	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Workpiece	Steel	P	●	◐	◐	✱			◐							●	◐	◐	●	●			
	Stainless steel	M				◐	◐	◐	◐	●	◐	◐									◐		
	Cast iron	K							◐				●	◐	✱	●						●	◐
	Non-ferrous metal	N																					
	Heat resistant alloy, Titanium alloy	S							◐	●	◐												
	Hardened steel	H																					

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

Inserts	Designation	Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
CNMG-HS  Medium cutting	090304-HS					●					●												9.2	9.525	3.18	0.4	3.81	0.05~0.20	1.00~2.50	MCKNR/L	B106
	090308-HS										●												8.8	9.525	3.18	0.8	3.81	0.10~0.20	1.00~2.50	MCLNR/L	B106
	120404-HS					●	●		●	●	●												12.4	12.7	4.76	0.4	5.16	0.05~0.20	1.00~4.50	MCMNN	B106
	120408-HS					●	●		●	●	●												12.0	12.7	4.76	0.8	5.16	0.10~0.40	1.00~4.50	MCRNR/L	B107
	120412-HS						●		●	●	●												11.6	12.7	4.76	1.2	5.16	0.13~0.55	1.00~4.50	PCBNR/L	B94
	160612-HS										●												14.8	15.875	6.35	1.2	6.35	0.13~0.55	2.00~6.00	PCLNR/L	B95
	160616-HS										●												14.4	15.875	6.35	1.6	6.35	0.15~0.60	2.00~6.00		
	190612-HS					●			●	●	●												18.1	19.05	6.35	1.2	7.93	0.13~0.55	2.00~7.30		
	190616-HS						●		●		●												17.7	19.05	6.35	1.6	7.93	0.15~0.60	2.00~7.30		
CNMG-LW  Medium cutting(Wiper)	120408-LW							●															12.0	12.7	4.76	0.8	5.16	0.15~0.60	1.00~5.00	MCKNR/L	B106
	120412-LW																						11.6	12.7	4.76	1.2	5.16	0.20~0.70	1.00~6.00	MCLNR/L	B106
																														MCMNN	B106
																														MCRNR/L	B107
																														PCBNR/L	B94
																														PCLNR/L	B95
CNMG-VB  Finishing	120404-VB	●		●					●														12.4	12.7	4.76	0.4	5.16	0.15~0.35	0.30~2.00	MCKNR/L	B106
	120408-VB	●		●				●	●														12.0	12.7	4.76	0.8	5.16	0.15~0.45	0.50~2.00	MCLNR/L	B106
	120412-VB																						11.6	12.9	4.76	1.2	5.16	0.20~0.50	0.50~2.00	MCMNN	B106
																														MCRNR/L	B107
																														PCBNR/L	B94
																														PCLNR/L	B95
CNMG-VC  Finishing (Mild steel)	120404-VC	●		●				●	●														12.4	12.7	4.76	0.4	5.16	0.10~0.35	0.30~2.00	MCKNR/L	B106
	120408-VC	●		●				●	●														12.0	12.7	4.76	0.8	5.16	0.15~0.40	0.50~3.00	MCLNR/L	B106
	120412-VC			●																			11.6	12.7	4.76	1.2	5.16	0.15~0.45	0.50~3.00	MCMNN	B106
																														MCRNR/L	B107
																														PCBNR/L	B94
																														PCLNR/L	B95
CNMG-VL  Mild steel	120404-VL	●		●				●							●								12.4	12.7	4.76	0.4	5.16	0.05~0.25	0.10~1.00	MCKNR/L	B106
	120408-VL	●		●				●							●								12.0	12.7	4.76	0.8	5.16	0.10~0.35	0.20~1.50	MCLNR/L	B106
	120412-VL																						11.6	12.7	4.76	1.2	5.16	0.10~0.35	0.20~1.50	MCMNN	B106
																														MCRNR/L	B107
																														PCBNR/L	B94
																														PCLNR/L	B95
CNMG-VF  Finishing	090304-VF	●	●	●																			9.2	9.525	3.18	0.4	3.81	0.07~0.30	0.50~1.50	MCKNR/L	B106
	090308-VF																						8.8	9.525	3.18	0.8	3.81	0.10~0.30	0.50~1.50	MCLNR/L	B106
	120404-VF	●	●	●				●															12.4	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50	MCMNN	B106
	120408-VF	●		●				●															12.0	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50	MCRNR/L	B107
	120412-VF																						11.6	12.7	4.76	1.2	5.16	0.10~0.50	0.60~1.50	PCBNR/L	B94
																														PCLNR/L	B95

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item



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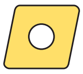
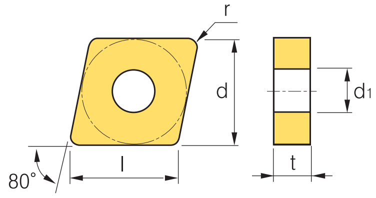


Rhombic **80° Negative**

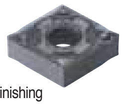


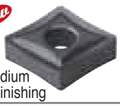
Machining types: ● Continuous cutting ◐ General cutting ✱ Interrupted cutting

Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Steel	P	●	◐	◐	✱			◐							●	◐	◐	●	●			
Stainless steel	M				◐	◐	◐	◐	●	◐	✱	◐								◐		
Cast iron	K							◐					●	◐	●						●	◐
Non-ferrous metal	N																					
Heat resistant alloy, Titanium alloy	S							◐	●	◐	✱											
Hardened steel	H																					

Grades: Coated (NC3010–NC6210), Cermet (CN1000, CN2000, CN20), Coated (CC105, CC115), Uncoated (U20, H01, G10)

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
CNMG-VG (Finishing)	090304-VG																					
	090308-VG																					
	120404-VG															●						
	120408-VG														●							
CNMG-VM (Medium)	090304-VM				●																	
	090308-VM		●	●	●																	
	120404-VM	●	●	●	●			●			●	●		●		●						
	120408-VM	●	●	●	●	●		●	●	●	●	●		●		●						
	120412-VM	●	●	●	●			●	●	●				●								
	120416-VM							●														
	160608-VM			●	●			●														
	160612-VM			●	●			●														
	190612-VM																					
CNMG-VP2 New (Medium to finishing)	120404-VP2			●					●	●	●											
	120408-VP2			●					●	●	●											
CNMG-VP3 New (Medium)	120404-VP3										●											
	120408-VP3								●	●	●											
	120412-VP3								●	●												
CNMG-VQ (Medium to finishing)	090304-VQ																					
	090308-VQ																					
	120404-VQ														●	●			●			
	120408-VQ														●	●			●			
CNMG-VW (Finishing(Wiper))	120404-VW																					
	120408-VW	●																				

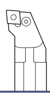





Inserts	Designation	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)	Available tool holders Designation	Page
CNMG-VG	090304-VG	9.2	9.525	3.18	0.4	3.81	0.07~0.30	0.50~1.50	MCKNR/L	B106
	090308-VG	8.8	9.525	3.18	0.8	3.81	0.10~0.30	0.50~1.50	MCLNR/L	B106
	120404-VG	12.4	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50	MCMNN	B106
	120408-VG	12.0	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50	MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95
CNMG-VM	090304-VM	9.2	9.525	3.18	0.4	3.81	0.05~0.30	0.90~3.50	MCKNR/L	B106
	090308-VM	8.8	9.525	3.18	0.8	3.81	0.10~0.45	1.00~3.50	MCLNR/L	B106
	120404-VM	12.4	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00	MCMNN	B106
	120408-VM	12.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	MCRNR/L	B107
	120412-VM	11.6	12.7	4.76	1.2	5.16	0.13~0.60	1.30~5.00	PCBNR/L	B94
	120416-VM	11.2	12.7	4.76	1.6	5.16	0.20~0.60	1.50~5.50	PCLNR/L	B95
	160608-VM	15.3	15.875	6.35	0.8	6.35	0.10~0.50	1.00~6.70		
	160612-VM	14.8	15.875	6.35	1.2	6.35	0.13~0.60	1.30~6.70		
	190612-VM	18.1	19.05	6.35	1.2	7.93	0.15~0.70	1.50~7.00		
CNMG-VP2	120404-VP2	12.4	12.7	4.76	0.4	5.16	0.05~0.30	0.10~3.00	MCKNR/L	B106
	120408-VP2	12.0	12.7	4.76	0.8	5.16	0.10~0.40	0.50~4.50	MCLNR/L	B106
									MCMNN	B106
									MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95
CNMG-VP3	120404-VP3	12.4	12.7	4.76	0.4	5.16	0.05~0.30	0.10~3.00	MCKNR/L	B106
	120408-VP3	12.0	12.7	4.76	0.8	5.16	0.10~0.40	0.50~4.50	MCLNR/L	B106
	120412-VP3	11.6	12.7	4.76	1.2	5.16	0.12~0.50	0.50~5.00	MCMNN	B106
									MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95
CNMG-VQ	090304-VQ	9.2	9.525	3.18	0.4	3.81	0.05~0.30	0.50~3.50	MCKNR/L	B106
	090308-VQ	8.8	9.525	3.18	0.8	3.81	0.08~0.30	0.80~4.00	MCLNR/L	B106
	120404-VQ	12.4	12.7	4.76	0.4	5.16	0.05~0.30	0.80~4.00	MCMNN	B106
	120408-VQ	12.0	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00	MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95
CNMG-VW	120404-VW	12.4	12.7	4.76	0.4	5.16	0.10~0.30	0.50~3.00	MCKNR/L	B106
	120408-VW	12.0	12.7	4.76	0.8	5.16	0.15~0.50	0.50~4.00	MCLNR/L	B106
									MCMNN	B106
									MCRNR/L	B107
									PCBNR/L	B94
									PCLNR/L	B95

Cutting edge geometry A31 ~ A34 Recommended chip breaker B04 ~ B11 Code system B16 ~ B17

● : Stock item



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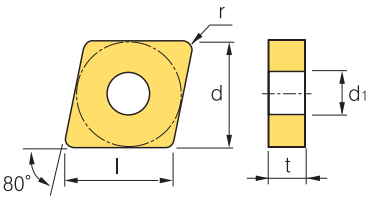
Rhombic 80° Negative



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

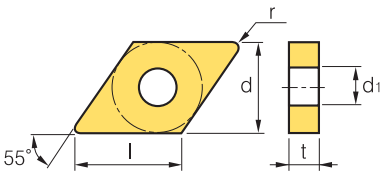
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC500H	NC9025	NC9030	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
CNMG-VK	120408-VK												●	●									12.0	12.7	4.76	0.8	5.16	0.20~0.50	1.00~5.00	MCKNR/L	B106
	120412-VK												●	●									11.6	12.7	4.76	1.2	5.16	0.25~0.50	1.30~6.00	MCLNR/L	B106
	120416-VK													●									11.2	12.7	4.76	1.6	5.16	0.25~0.60	1.80~7.00	MCMNN	B106
Medium Roughing																														MCRNR/L	B107
																														PCBNR/L	B94
																														PCLNR/L	B95
CNMM-GH	120408-GH			●	●				●														12.0	12.7	4.76	0.8	5.16	0.30~0.60	2.50~8.00	MCKNR/L	B106
	120412-GH		●	●	●																		11.6	12.7	4.76	1.2	5.16	0.30~0.70	2.50~8.00	MCLNR/L	B106
	160412-GH																						14.8	15.875	4.76	1.2	6.35	0.30~0.70	2.50~8.00	MCMNN	B106
	160424-GH																						13.6	15.875	4.76	2.4	6.35	0.30~1.20	2.50~8.00	MCRNR/L	B107
	160612-GH				●																		14.8	15.875	6.35	1.2	6.35	0.30~0.90	2.50~8.00	PCBNR/L	B94
	160616-GH																						14.4	15.875	6.35	1.6	6.35	0.30~1.20	2.50~8.00	PCLNR/L	B95
	160624-GH																						13.6	15.875	6.35	2.4	6.35	0.30~1.50	2.50~8.00		
	190608-GH								●														18.5	19.05	6.35	0.8	7.93	0.30~0.60	2.50~8.00		
	190612-GH	●	●		●	●			●														18.1	19.05	6.35	1.2	7.93	0.30~0.70	3.00~8.00		
	190616-GH	●	●		●	●			●														17.7	19.05	6.35	1.6	7.93	0.45~0.90	3.00~8.00		
	190624-GH	●	●						●														16.8	19.05	6.35	2.4	7.93	0.55~1.20	4.00~9.00		
	250716-GH																						24.1	25.4	7.94	1.6	9.12	0.50~1.00	4.50~10.00		
	250724-GH																						23.3	25.4	7.94	2.4	9.12	0.55~1.20	5.00~12.00		
Heavy	250924-GH	●			●	●			●														23.3	25.4	9.52	2.4	9.12	0.55~1.20	5.00~12.00		
	250950-GH																						20.6	25.4	9.52	5.0	9.12	0.65~1.30	6.00~12.00		
CNMM-VH	190612-VH				●																		18.1	19.05	6.35	1.2	7.93	0.50~0.90	5.00~10.00	PCBNR/L	B94
	190616-VH																						17.7	19.05	6.35	1.6	7.93	0.50~1.10	5.00~10.00	PCLNR/L	B95
	190624-VH					●																	16.8	19.05	6.35	2.4	7.93	0.60~1.20	6.00~12.00		
	250724-VH																						23.3	25.4	7.94	2.4	9.12	0.70~1.40	6.00~15.00		
Heavy(General)	250924-VH																						23.3	25.4	9.52	2.4	9.12	0.70~1.40	6.00~15.00		
CNMM-VT	190612-VT								●														18.1	19.05	6.35	1.2	7.93	0.60~1.00	6.00~13.00	PCBNR/L	B94
	190616-VT					●																	17.7	19.05	6.35	1.6	7.93	0.60~1.10	5.00~10.00	PCLNR/L	B95
	190624-VT																						16.8	19.05	6.35	2.4	7.93	0.60~1.60	7.00~13.00		
	250724-VT																						23.3	25.4	7.94	2.4	9.12	0.75~16.0	7.00~17.00		
Heavy(High feed cutting)	250924-VT																						23.3	25.4	9.52	2.4	9.12	0.75~16.0	7.00~17.00		
CNMM-GM	120408-GM																						12.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	PCBNR/L	B94
																														PCLNR/L	B95
Medium																															
CNMM-GR	120408-GR																						12.0	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	PCBNR/L	B94
	120412-GR																						11.6	12.7	4.76	1.2	5.16	0.25~0.50	1.30~7.00	PCLNR/L	B95
	190612-GR				●																		18.1	19.05	6.35	1.2	7.93	0.30~0.75	1.70~10.00		
Roughing	190616-GR																						17.7	19.05	6.35	1.6	7.93	0.30~0.80	1.80~10.00		
CNMM-HA	120408-HA																						12.0	12.7	4.76	0.8	5.16	0.10~0.40	0.80~3.50	PCBNR/L	B94
																														PCLNR/L	B95
Medium to finishing																															

Cutting edge geometry A31 ~ A34 | Recommended chip breaker B04 ~ B11 | Code system B16 ~ B17

● : Stock item

DN○○

Rhombic 55° Negative



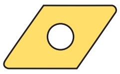
Workpiece			Machining types
Steel	P	●●●✱ ●● ●●●●●	● Continuous cutting
Stainless steel	M	●●●●●●●● ●	●● General cutting
Cast iron	K	●● ●●●✱● ●●	✱ Interrupted cutting
Non-ferrous metal	N	●●	
Heat resistant alloy, Titanium alloy	S	●●●	
Hardened steel	H		

Inserts	Designation	Coated											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
DNGG-VP1 New Finishing	150404-VP1																						15.1	12.7	4.76	0.4	5.16	0.05~0.15	0.10~1.50	MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B107 B107 B108 B132 B96, 150 B96 B128 B129
	150408-VP1																						14.7	12.7	4.76	0.8	5.16	0.07~0.20	0.10~1.50		
	150604-VP1																						15.1	12.7	6.35	0.4	5.16	0.05~0.15	0.10~1.50		
	150608-VP1																						14.7	12.7	6.35	0.8	5.16	0.07~0.20	0.10~1.50		
DNMA Roughing	110408																						10.8	9.525	4.76	0.8	3.81	0.17~0.45	0.80~3.00	MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B107 B107 B108 B132 B96, 150 B96 B128 B129
	150404																						15.1	12.7	4.76	0.4	5.16	0.17~0.55	0.40~4.00		
	150408												●										14.7	12.7	4.76	0.8	5.16	0.25~0.55	0.80~4.00		
	150412												●										14.4	12.7	4.76	1.2	5.16	0.25~0.65	1.50~4.00		
	150604												●										15.1	12.7	6.35	0.4	5.16	0.17~0.55	0.40~4.00		
	150608												●										14.7	12.7	6.35	0.8	5.16	0.25~0.55	0.80~4.00		
	150612																						14.4	12.7	6.35	1.2	5.16	0.25~0.65	1.20~4.00		
	190608																						18.5	15.875	6.35	0.8	7.93	0.30~0.80	2.50~13.00		
DNMG-B25 Medium Roughing	150402-B25																						15.3	12.7	4.76	0.2	5.16	0.15~0.40	0.50~3.50	MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B107 B107 B108 B132 B96, 150 B96 B128 B129
	150404-B25				●																		15.1	12.7	4.76	0.4	5.16	0.17~0.45	1.00~4.00		
	150408-B25				●●								●										14.7	12.7	4.76	0.8	5.16	0.17~0.55	1.50~4.00		
	150412-B25																						14.4	12.7	4.76	1.2	5.16	0.25~0.55	1.50~4.00		
	150425-B25																						13.2	12.7	4.76	2.5	5.16	0.35~0.65	2.50~5.50		
	150602-B25																						15.2	12.7	6.35	0.2	5.16	0.15~0.40	0.50~3.50		
	150604-B25				●●			●					●		●								15.1	12.7	6.35	0.4	5.16	0.17~0.55	1.50~4.00		
	150608-B25	●			●●			●●			●		●										14.7	12.7	6.35	0.8	5.16	0.17~0.55	1.50~4.00		
	150612-B25												●										14.4	12.7	6.35	1.2	5.16	0.25~0.55	1.50~4.00		
	150625-B25																						13.2	12.7	6.35	2.5	5.16	0.35~0.65	2.50~5.50		
DNMG-GM Medium	110308-GM																						10.8	9.525	3.18	0.8	3.81	0.10~0.50	1.00~4.00	MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B107 B107 B108 B132 B96, 150 B96 B128 B129
	110404-GM																						11.2	9.525	4.76	0.4	3.81	0.05~0.30	0.90~4.00		
	110408-GM																						10.8	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00		
	150404-GM				●																		15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00		
	150408-GM		●		●																		14.7	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00		
	150412-GM																						14.4	12.7	4.76	1.2	5.16	0.13~0.60	1.30~5.00		
	150604-GM				●										●	●	●						15.1	12.7	6.35	0.4	5.16	0.05~0.30	0.90~5.00		
	150608-GM	●●			●																		14.7	12.7	6.35	0.8	5.16	0.10~0.50	1.00~5.00		
	150612-GM				●																		14.4	12.7	6.35	1.2	5.16	0.13~0.60	1.30~5.00		
DNMG-GR Roughing	150408-GR				●●								●										14.7	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B107 B107 B108 B132 B96, 150 B96 B128 B129
	150412-GR												●										14.4	12.7	4.76	1.2	5.16	0.25~0.90	1.30~7.00		
	150416-GR																						14.0	12.7	4.76	1.6	5.16	0.30~0.75	1.80~7.00		
	150608-GR				●●			●					●										14.7	12.7	6.35	0.8	5.16	0.20~0.50	1.00~7.00		
	150612-GR				●●								●										14.4	12.7	6.35	1.2	5.16	0.25~0.70	1.30~7.00		
	150616-GR				●			●															14.0	12.7	6.35	1.6	5.16	0.20~0.75	1.80~7.00		

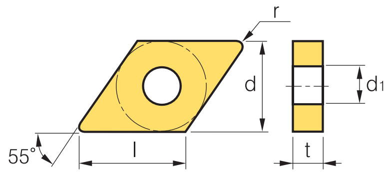
Cutting edge geometry A31 ~ A34 Recommended chip breaker B04 ~ B11 Code system B16 ~ B17

● : Stock item

DN○○



Rhombic 55° Negative



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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

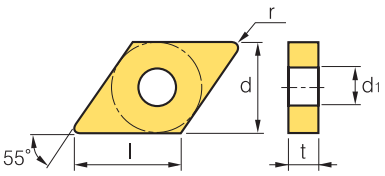
Inserts	Designation	Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
DNMG-GS	150404-GS																						15.1	12.7	4.76	0.4	5.16	0.07~0.40	1.00~5.00	MDJNR/L	B107
	150408-GS									●													14.7	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	MDNNN	B107
Medium Roughing	150412-GS																						14.4	12.7	4.76	1.2	5.16	0.13~0.65	1.00~5.00	MDQNR/L	B108
	150604-GS					●			●		●												15.1	12.7	6.35	0.4	5.16	0.07~0.40	1.00~5.00	MDUNR/L	B132
	150608-GS								●	●	●												14.7	12.7	6.35	0.8	5.16	0.10~0.50	1.00~5.00	PDJNR/L	B96, 150
	150612-GS						●																14.4	12.7	6.35	1.2	5.16	0.10~0.65	1.00~5.00	PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-HA	150404-HA								●		●										●		15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.80~3.50	MDJNR/L	B107
	150408-HA								●	●	●										●		14.7	12.7	4.76	0.8	5.16	0.10~0.40	0.80~3.50	MDNNN	B107
Medium to finishing	150604-HA		●				●		●		●										●		15.1	12.7	6.35	0.4	5.16	0.05~0.30	0.80~3.50	MDQNR/L	B108
	150608-HA								●		●										●		14.7	12.7	6.35	0.8	5.16	0.10~0.40	0.80~3.50	MDUNR/L	B132
																														PDJNR/L	B96, 150
																														PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-HC	150404-HC																						15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.05~3.50	MDJNR/L	B107
	150408-HC	●																					14.7	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00	MDNNN	B107
Medium to finishing	150412-HC																						14.4	12.7	4.76	1.2	5.16	0.13~0.50	0.90~4.00	MDQNR/L	B108
	150604-HC																						15.1	12.7	6.35	0.4	5.16	0.05~0.30	0.80~4.00	MDUNR/L	B132
	150608-HC				●																		14.7	12.7	6.35	0.8	5.16	0.08~0.40	0.80~4.00	PDJNR/L	B96, 150
	150612-HC																						14.4	12.7	6.35	1.2	5.16	0.13~0.50	0.90~4.00	PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-HR	150408-HR																						14.7	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MDJNR/L	B107
	150412-HR																						14.4	12.7	4.76	1.2	5.16	0.25~0.70	1.30~7.00	MDNNN	B107
Roughing	150416-HR																						14.0	12.7	4.76	1.6	5.16	0.30~0.75	1.80~7.00	MDQNR/L	B108
	150608-HR	●			●																		14.7	12.7	6.35	0.8	5.16	0.20~0.50	1.00~7.00	MDUNR/L	B132
	150612-HR	●																					14.4	12.7	6.35	1.2	5.16	0.25~0.70	1.30~7.00	PDJNR/L	B96, 150
	150616-HR	●																					14.0	12.7	6.35	1.6	5.16	0.20~0.75	1.80~7.00	PDNNR/L	B96
	190612-HR																						18.1	15.875	6.35	1.2	7.93	0.20~0.75	1.80~8.00	PDSNR/L	B128
																														PDUNR/L	B129
DNMG-HS	110404-HS						●				●												11.2	9.525	4.76	0.4	3.81	0.05~0.35	0.80~2.50	MDJNR/L	B107
	110408-HS						●				●												10.8	9.525	4.76	0.8	3.81	0.10~0.40	1.00~2.50	MDNNN	B107
Medium	150404-HS								●	●	●												15.1	12.7	4.76	0.4	5.16	0.05~0.35	0.80~4.00	MDQNR/L	B108
	150408-HS								●	●	●												14.7	12.7	4.76	0.8	5.16	0.10~0.40	1.00~4.00	MDUNR/L	B132
	150412-HS																						14.4	12.7	4.76	1.2	5.16	0.13~0.55	1.00~4.50	PDJNR/L	B96, 150
	150604-HS					●	●		●	●	●												15.1	12.7	6.35	0.4	5.16	0.05~0.35	0.80~4.00	PDNNR/L	B96
	150608-HS					●	●		●	●	●												14.7	12.7	6.35	0.8	5.16	0.10~0.40	1.00~4.50	PDSNR/L	B128
	150612-HS						●				●												14.4	12.7	6.35	1.2	5.16	0.10~0.55	1.00~4.50	PDUNR/L	B129
DNMG-LW	150408-LW																						14.7	12.7	4.76	0.8	5.16	0.15~0.50	0.70~4.50	MDJNR/L	B107
	150412-LW																						14.4	12.7	4.76	1.2	5.16	0.20~0.60	1.00~5.00	MDNNN	B107
Medium(Wiper)	150608-LW	●																					14.7	12.7	6.35	0.8	5.16	0.15~0.50	0.70~4.50	MDQNR/L	B108
	150612-LW																						14.4	12.7	6.35	1.2	5.16	0.20~0.60	1.00~5.00	MDUNR/L	B132
																														PDJNR/L	B96, 150
																														PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

DN○○

Rhombic 55° Negative



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

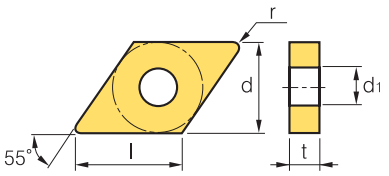
Inserts	Designation	Coated											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
DNMG-VB	150404-VB	●		●					●														15.1	12.7	4.76	0.4	5.16	0.10~0.35	0.30~2.00	MDJNR/L	B107
	150408-VB			●				●	●														14.7	12.7	4.76	0.8	5.16	0.15~0.45	0.50~2.00	MDNNN	B107
	150604-VB	●		●				●															15.1	12.7	6.35	0.4	5.16	0.10~0.35	0.30~2.00	MDQNR/L	B108
	150608-VB			●				●		●													14.7	12.7	6.35	0.8	5.16	0.15~0.45	0.50~2.00	MDUNR/L	B132
	150612-VB			●																			14.4	12.7	6.35	1.2	5.16	0.20~0.50	0.50~2.50	PDJNR/L	B96, 150
																														PDNNR/L	B96
Finishing																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VC	150404-VC	●		●					●	●													15.1	12.7	4.76	0.4	5.16	0.10~0.35	0.30~2.00	MDJNR/L	B107
	150408-VC			●				●															14.7	12.7	4.76	0.8	5.16	0.15~0.40	0.50~3.00	MDNNN	B107
	150412-VC																						14.4	12.7	4.76	1.2	5.16	0.15~0.45	0.50~3.00	MDQNR/L	B108
	150604-VC	●		●					●	●													15.1	12.7	6.35	0.4	5.16	0.10~0.35	0.30~2.00	MDUNR/L	B132
	150608-VC	●		●				●															14.7	12.7	6.35	0.8	5.16	0.15~0.40	0.50~3.00	PDJNR/L	B96, 150
	150612-VC																						14.4	12.7	6.35	1.2	5.16	0.15~0.45	0.50~3.00	PDNNR/L	B96
Medium to finishing																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VL	110408-VL																						10.8	9.525	4.76	0.8	3.81	0.05~0.20	0.10~1.00	MDJNR/L	B107
	150404-VL	●		●				●															15.1	12.7	4.76	0.4	5.16	0.05~0.25	0.10~1.50	MDNNN	B107
	150408-VL			●				●															14.7	12.7	4.76	0.8	5.16	0.05~0.30	0.20~1.50	MDQNR/L	B108
	150412-VL																						14.4	12.7	4.76	1.2	5.16	0.10~0.30	0.25~1.50	MDUNR/L	B132
	150604-VL	●		●																			15.1	12.7	6.35	0.4	5.16	0.05~0.25	0.10~1.50	PDJNR/L	B96, 150
	150608-VL	●		●				●															14.7	12.7	6.35	0.8	5.16	0.05~0.30	0.20~1.50	PDNNR/L	B96
Finishing(Mild steel)	150612-VL																						14.4	12.7	6.35	1.2	5.16	0.10~0.30	0.25~1.50	PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VF	110402-VF																						11.4	9.525	4.76	0.2	3.81	0.05~0.20	0.20~1.00	MDJNR/L	B107
	110404-VF			●				●															11.2	9.525	4.76	0.4	3.81	0.07~0.30	0.50~1.50	MDNNN	B107
	110408-VF																						10.8	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50	MDQNR/L	B108
	150404-VF	●		●					●					●									15.1	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50	MDUNR/L	B132
	150408-VF			●																			14.7	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50	PDJNR/L	B96, 150
	150412-VF																						14.4	12.7	4.76	1.2	5.16	0.15~0.50	0.60~1.50	PDNNR/L	B96
Finishing	150604-VF	●	●	●				●															15.1	12.7	6.35	0.4	5.16	0.13~0.30	0.50~1.50	PDSNR/L	B128
	150608-VF	●	●	●				●															14.7	12.7	6.35	0.8	5.16	0.10~0.40	0.50~1.50	PDUNR/L	B129
	150612-VF			●																			14.4	12.7	6.35	1.2	5.16	0.15~0.50	0.60~1.50		
DNMG-VG	110404-VG																						11.2	9.525	4.76	0.4	3.81	0.07~0.30	0.50~1.50	MDJNR/L	B107
	110408-VG																						10.8	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50	MDNNN	B107
	150404-VG																						15.1	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50	MDQNR/L	B108
	150408-VG																						14.7	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50	MDUNR/L	B132
	150604-VG														●	●							15.1	12.7	6.35	0.4	5.16	0.13~0.30	0.50~1.50	PDJNR/L	B96, 150
Finishing	150608-VG																						14.7	12.7	6.35	0.8	5.16	0.10~0.40	0.50~1.50	PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VM	110404-VM			●											●								11.2	9.525	4.76	0.4	3.81	0.05~0.30	0.90~4.00	MDJNR/L	B107
	110408-VM	●	●	●				●															10.8	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00	MDNNN	B107
	110412-VM																						10.3	9.525	4.76	1.2	3.81	0.13~0.50	1.30~4.00	MDQNR/L	B108
	150404-VM			●	●			●		●				●									15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00	MDUNR/L	B132
	150408-VM	●		●	●	●		●		●	●			●									14.7	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	PDJNR/L	B96, 150
	150412-VM			●	●			●															14.4	12.7	4.76	1.2	5.16	0.13~0.60	1.30~5.00	PDNNR/L	B96
Medium	150604-VM		●	●	●			●			●	●		●	●								15.1	12.7	6.35	0.4	5.16	0.05~0.30	0.90~5.00	PDSNR/L	B128
	150608-VM	●	●	●	●			●		●	●	●		●									14.7	12.7	6.35	0.8	5.16	0.10~0.50	1.00~5.00	PDUNR/L	B129
	150612-VM			●	●			●		●					●								14.4	12.7	6.35	1.2	5.16	0.13~0.60	1.30~5.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

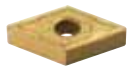
● : Stock item

DN○○

Rhombic 55° 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		

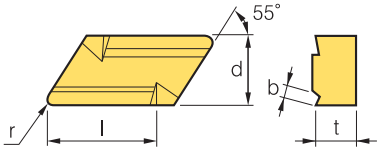
Inserts	Designation	Coated										Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
 DNMG-VP2	150404-VP2								●	●	●												15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.10~3.00	MDJNR/L	B107
	150408-VP2								●	●	●												14.7	12.7	4.76	0.8	5.16	0.10~0.40	0.50~4.50	MDNNN	B107
	150604-VP2			●					●	●	●												15.1	12.7	6.35	0.4	5.16	0.05~0.30	0.10~3.00	MDQNR/L	B108
	150608-VP2			●					●	●	●												14.7	12.7	6.35	0.8	5.16	0.10~0.40	0.50~4.50	MDUNR/L	B132
Medium to finishing																														PDJNR/L	B96, 150
																														PDNNR/L	B96, 150
																														PDSNR/L	B128
																														PDUNR/L	B129
 DNMG-VP3	150404-VP3										●												15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.10~3.00	MDJNR/L	B107
	150408-VP3								●	●	●												14.7	12.7	4.76	0.8	5.16	0.10~0.45	0.50~5.00	MDNNN	B107
	150412-VP3								●	●													14.4	12.7	6.35	0.4	5.16	0.12~0.50	0.50~5.00	MDQNR/L	B108
	150604-VP3										●												15.1	12.7	6.35	0.8	5.16	0.05~0.30	0.10~3.00	MDUNR/L	B132
	150608-VP3								●	●	●												14.7	12.7	4.76	0.4	5.16	0.10~0.45	0.50~5.00	PDJNR/L	B96, 150
	150612-VP3								●	●													14.4	12.7	4.76	0.8	5.16	0.12~0.50	0.50~5.00	PDNNR/L	B96, 150
Medium																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VQ	110404-VQ														●								11.2	9.525	4.76	0.4	3.81	0.05~0.30	0.50~3.50	MDJNR/L	B107
	110408-VQ																						10.8	9.525	4.76	0.8	3.81	0.08~0.40	0.80~4.00	MDNNN	B107
	150404-VQ														●								15.1	12.7	4.76	0.4	5.16	0.05~0.30	0.80~3.50	MDQNR/L	B108
	150408-VQ														●								14.7	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00	MDUNR/L	B132
	150604-VQ														●								15.1	12.7	6.35	0.4	5.16	0.05~0.30	0.80~4.00	PDJNR/L	B96, 150
	150608-VQ														●								14.7	12.7	6.35	0.8	5.16	0.08~0.40	0.80~4.00	PDNNR/L	B96
 Medium to finishing																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VW	150404-VW																						15.1	12.7	4.76	0.4	5.16	0.10~0.35	0.30~3.00	MDJNR/L	B107
	150408-VW																						14.7	12.7	4.76	0.8	5.16	0.10~0.40	0.30~3.00	MDNNN	B107
	150604-VW																						15.1	12.7	6.35	0.4	5.16	0.10~0.35	0.30~3.00	MDQNR/L	B108
	150608-VW	●			●																		14.7	12.7	6.35	0.8	5.16	0.10~0.40	0.30~3.00	MDUNR/L	B132
 Finishing(Wiper)																														PDJNR/L	B96, 150
																														PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129
DNMG-VK	150404-VK													●									15.1	12.7	4.76	0.4	5.16	0.15~0.50	0.08~6.00	MDJNR/L	B107
	150408-VK													●									14.7	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MDNNN	B107
	150412-VK													●									14.4	12.7	6.35	1.2	5.16	0.25~0.70	1.30~7.00	MDQNR/L	B108
	150604-VK													●									15.1	12.7	6.35	0.4	5.16	0.20~0.50	1.00~7.00	MDUNR/L	B132
	150608-VK													●									14.7	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	PDJNR/L	B96, 150
 Medium Roughing	150612-VK													●									14.4	12.7	6.35	1.2	5.16	0.25~0.70	1.30~7.00	PDNNR/L	B96
																														PDSNR/L	B128
																														PDUNR/L	B129
DNMX-SH	150404R-SH																						15.1	12.7	4.76	0.4	5.16	0.15~0.30	1.00~4.00	MDJNR/L	B107
	150408R-SH																						14.7	12.7	4.76	0.8	5.16	0.15~0.50	1.50~5.00	MDNNN	B107
	150604R-SH																						15.1	12.7	6.35	0.4	5.16	0.15~0.30	1.00~4.00	MDQNR/L	B108
	150608R-SH																						14.7	12.7	6.35	0.8	5.16	0.15~0.50	1.50~5.00	MDUNR/L	B132
	150404L-SH																						15.1	12.7	4.76	0.4	5.16	0.15~0.30	1.00~4.00	PDJNR/L	B96, 150
	150408L-SH																						14.7	12.7	4.76	0.8	5.16	0.15~0.50	1.50~5.00	PDNNR/L	B96, 150
	150604L-SH																						15.1	12.7	6.35	0.4	5.16	0.15~0.30	1.00~4.00	PDSNR/L	B128
 Medium	150608L-SH																						14.7	12.7	6.35	0.8	5.16	0.15~0.50	1.50~5.00	PDUNR/L	B129

Cutting edge geometry A31 ~ A34 Recommended chip breaker B04 ~ B11 Code system B16 ~ B17

● : Stock item

KN○○

Parallelogram 55° Negative



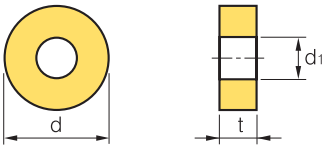
Workpiece			NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	ST10	H01	G10
Steel	P		●	●	●	✱	✱			●						●	●	●	●	●	●		
Stainless steel	M					●		●	●	●	●	●	●										
Cast iron	K									●				●	●	●						●	●
Non-ferrous metal	N																						
Heat resistant alloy, Titanium alloy	S									●		●											
Hardened steel	H																						

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

Inserts	Designation	Coated											Cermet			Coated			Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	ST10	H01	G10	l	d	t	r	b	fn (mm/rev)	ap (mm)	Designation	Page
KNUX-11	160405R11	●	●	●	●		●		●				●		●								19.2	9.525	4.76	0.5	2.2	0.20~0.35	1.00~6.00	CKJNR/L	B104
	160410R11				●	●			●						●								18.8	9.525	4.76	1.0	2.2	0.30~0.60	1.50~6.00	CKNNR/L	B104
	160405L11	●	●	●	●		●		●														19.2	9.525	4.76	0.5	3.2	0.20~0.35	1.00~6.00	CKUNR/L	B131
Medium	160410L11				●	●			●														18.8	9.525	4.76	1.0	3.2	0.30~0.60	1.50~6.00		
KNUX-12	160405R12				●	●			●														19.2	9.525	4.76	0.5	2.2	0.25~0.35	1.50~6.00	CKJNR/L	B104
	160410R12				●	●			●														18.8	9.525	4.76	1.0	2.2	0.40~0.70	1.50~6.00	CKNNR/L	B104
	160405L12				●																		19.2	9.525	4.76	0.5	3.2	0.25~0.35	1.50~6.00	CKUNR/L	B131
Roughing	160410L12				●	●																	18.8	9.525	4.76	1.0	3.2	0.40~0.70	1.50~6.00		

RN○○

Round Negative



Workpiece			NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST10	H01	G10
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

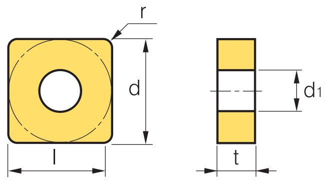
Inserts	Designation	Coated												Cermet			Coated			Uncoated			Dimensions (mm)			Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST10	H01	G10	d	t	d1	fn (mm/rev)	ap (mm)	Designation	Page
RNMG-B25	090300-B25																					9.525	3.18	3.81	0.90~4.50	0.09~0.90		
	120400-B25				●																	12.7	4.76	5.16	1.20~4.80	0.12~1.20		
	150600-B25				●																	15.875	6.35	6.35	1.15~1.50	1.50~7.50		
	190600-B25				●																	19.05	6.35	7.93	1.90~7.60	0.19~1.90	-	-
	250600-B25																					25.4	6.35	9.12	2.50~10.0	0.25~2.50		
	250900-B25				●																	25.4	9.52	9.12	2.50~10.0	0.25~2.50		
	310900-B25																					31.75	9.52	12.7	3.50~13.0	0.30~2.50		
Medium Roughing																												

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

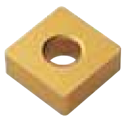
SN○○

Square 90° Negative



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
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

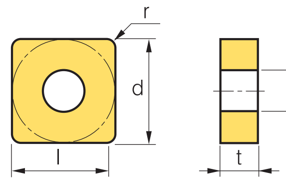
Inserts	Designation	Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
SNGA	090304																						9.1	9.525	3.18	0.4	3.81	0.17~0.50	0.50~4.50	MSBNR/L	B108
	090308																						8.7	9.525	3.18	0.8	3.81	0.17~0.50	0.50~4.50	MSDNN	B108
	120404																						12.3	12.7	4.76	0.4	5.16	0.15~0.60	1.50~8.00	MSKNR/L	B109
	120408																						11.9	12.7	4.76	0.8	5.16	0.15~0.60	1.50~8.00	MSRNR/L	B109
	120412																						11.5	12.7	4.76	1.2	5.16	0.20~0.80	1.50~8.00	MSSNR/L	B110
	150608																						15.0	15.875	6.35	0.8	6.35	0.20~0.80	2.00~10.00	PSBNR/L	B98
Roughing	150616																						14.2	15.875	6.35	1.6	6.35	0.20~0.90	2.00~10.00	PSDNN	B98
	190608																						18.2	19.05	6.35	0.8	7.93	0.15~0.60	3.00~12.00	PSKNR/L	B129
	190612																						17.8	19.05	6.35	1.2	7.93	0.20~0.80	3.00~12.00	PSSNR/L	B99
SNGG	090304R																						9.1	9.525	3.18	0.4	3.81	0.12~0.35	1.00~3.00	MSBNR/L	B108
	090308R																						8.7	9.525	3.18	0.8	3.81	0.15~0.35	1.00~3.00	MSDNN	B108
	120404R															●							12.3	12.7	4.76	0.4	5.16	0.15~0.35	1.00~4.00	MSKNR/L	B109
	120408R																						11.9	12.7	4.76	0.8	5.16	0.15~0.35	1.00~4.00	MSRNR/L	B109
	120412R																						11.5	12.7	4.76	1.2	5.16	0.15~0.35	1.00~4.00	MSSNR/L	B110
	090304L																						9.1	9.525	3.18	0.4	3.81	0.12~0.35	1.00~3.00	PSBNR/L	B98
Medium	090308L																						8.7	9.525	3.18	0.8	3.81	0.15~0.35	1.00~3.00	PSDNN	B98
	120404L																						12.3	12.7	4.76	0.4	5.16	0.15~0.35	1.00~4.00	PSKNR/L	B129
	120408L																						11.9	12.7	4.76	0.8	5.16	0.15~0.35	1.00~4.00	PSSNR/L	B99
	120412L																						11.5	12.7	4.76	1.2	5.16	0.15~0.35	1.00~4.00		
SNGG-HU  Finishing	120408-HU																						11.9	12.7	4.76	0.8	5.16	0.10~0.30	0.20~1.50	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
SNGN	090302																						9.3	9.525	3.18	0.2	-	0.05~0.30	0.50~4.00	CSDNN	B120
	090304																						9.1	9.525	3.18	0.4	-	0.10~0.35	0.50~4.00	CSKNR/L	B121
	090308																●						8.7	9.525	3.18	0.8	-	0.10~0.40	1.00~4.00		
	120304																						12.3	12.7	3.18	0.4	-	0.13~0.50	1.30~5.00		
	120308																						11.9	12.7	3.18	0.8	-	0.15~0.60	1.50~6.00		
	120312																						11.5	12.7	3.18	1.2	-	0.17~0.60	1.70~6.00		
	120402																						12.5	12.7	4.76	0.2	-	0.10~0.45	1.00~5.00		
	120404																						12.3	12.7	4.76	0.4	-	0.13~0.50	1.30~5.00		
	120408																						11.9	12.7	4.76	0.8	-	0.15~0.60	1.50~6.00		
	120412																●						11.5	12.7	4.76	1.2	-	0.17~0.60	1.70~6.00		
	120424																						10.3	12.7	4.76	2.4	-	0.20~0.65	2.00~6.00		
Roughing	150402																						15.7	15.875	4.76	0.2	-	0.10~0.50	0.50~6.00		
	150408																●						15.0	15.875	4.76	0.8	-	0.15~0.60	1.50~8.00		
	150412																						14.6	15.875	4.76	1.2	-	0.17~0.60	2.00~8.00		
	150416																						14.2	15.875	4.76	1.6	-	0.20~0.65	2.50~8.50		
	190402																						18.9	19.05	4.76	0.2	-	0.10~0.60	2.00~8.50		
	190412																						17.4	19.05	4.76	1.2	-	0.17~0.70	2.50~10.00		
	190416																						17.5	19.05	4.76	1.6	-	0.20~0.75	2.50~10.00		
	250604																						25.0	25.4	6.35	0.4	-	0.30~0.80	3.00~12.00		
	250616																						23.8	25.4	6.35	1.6	-	0.35~1.00	4.00~12.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

SN○○

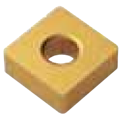
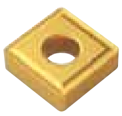
Square 90° Negative



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

Workpiece	NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
P (Steel)	●	◉	◉	✱	✱			◉							●	◉	◉	●	●	◉		
M (Stainless steel)				◉		◉	◉	◉	●	◉	◉											
K (Cast iron)								◉				●	◉	✱	●						●	◉
N (Non-ferrous metal)																						
S (Heat resistant alloy, Titanium alloy)								◉	●	◉												
H (Hardened steel)																						

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

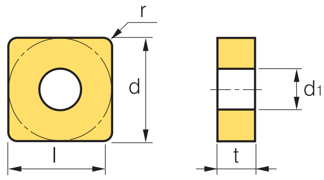
Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
		Coated														Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition			
SNGX  Roughing	120408R																							11.9	12.7	4.76	0.8	5.16	0.15~0.35	1.00~4.00	MSBNR/L	B108
																															MSDNN	B108
																															MSKNR/L	B109
																															MSRNR/L	B109
																															MSSNR/L	B110
																															PSBNR/L	B98
																															PSDNN	B98
																															PSKNR/L	B129
																															PSSNR/L	B99
SNMA  Medium Roughing	090304																							9.1	9.525	3.18	0.4	3.81	0.10~0.45	0.50~4.50	MSBNR/L	B108
	090308																							8.7	9.525	3.18	0.8	3.81	0.15~0.50	0.50~4.50	MSDNN	B108
	090312																							8.3	9.525	3.18	1.2	3.81	0.20~0.50	0.50~4.50	MSKNR/L	B109
	120402																							12.5	12.7	4.76	0.2	5.16	0.10~0.50	1.00~4.50	MSRNR/L	B109
	120404																							12.3	12.7	4.76	0.4	5.16	0.15~0.60	1.00~5.00	MSSNR/L	B110
	120408	●												●	●								●	11.9	12.7	4.76	0.8	5.16	0.15~0.70	1.00~6.00	PSBNR/L	B98
	120412													●										11.5	12.7	4.76	1.2	5.16	0.20~0.80	1.50~6.00	PSDNN	B98
	120416													●										11.1	12.7	4.76	1.6	5.16	0.30~1.00	2.00~6.00	PSKNR/L	B129
	120430																							9.7	12.7	4.76	3.0	5.16	0.30~0.70	2.50~5.00	PSSNR/L	B99
	150612													●										14.6	15.875	6.35	1.2	6.35	0.20~0.80	2.00~8.00		
	150616																							14.2	15.875	6.35	1.6	6.35	0.25~0.85	2.50~10.00		
	190608																							18.2	19.05	6.35	0.8	7.93	0.20~0.80	2.00~10.00		
	190612													●	●									17.8	19.05	6.35	1.2	7.93	0.20~0.80	2.00~10.00		
	190616													●	●									17.4	19.05	6.35	1.6	7.93	0.25~0.85	2.50~10.00		
	190624																							16.6	19.05	6.35	2.4	7.93	0.35~0.90	3.00~10.00		
	250724																							23.0	25.4	7.94	2.4	9.12	0.40~1.00	3.00~13.00		
	250924																							23.0	25.4	9.52	2.4	9.12	0.40~1.00	3.00~13.00		
SNMG-B25  Medium Roughing	090308-B25																							8.7	9.525	3.18	0.8	3.81	0.17~0.45	0.80~3.50	MSBNR/L	B108
	120404-B25			●	●				●					●										12.3	12.7	4.76	0.4	5.16	0.17~0.45	1.00~3.50	MSDNN	B108
	120408-B25			●	●		●		●		●	●		●		●								11.9	12.7	4.76	0.8	5.16	0.23~0.60	1.50~5.00	MSKNR/L	B109
	120412-B25			●	●				●					●										11.5	12.7	4.76	1.2	5.16	0.25~0.60	2.00~5.00	MSRNR/L	B109
	120416-B25				●				●															11.1	12.7	4.76	1.6	5.16	0.35~0.70	2.50~5.00	MSSNR/L	B110
	120420-B25																							10.7	12.7	4.76	2.0	5.16	0.40~0.70	3.00~5.00	PSBNR/L	B98
	150608-B25				●																			15.0	15.875	6.35	0.8	6.35	0.25~0.60	1.50~6.00	PSDNN	B98
	150612-B25			●																				14.6	15.875	6.35	1.2	6.35	0.25~0.60	2.00~6.00	PSKNR/L	B129
	150616-B25		●	●																				14.2	15.875	6.35	1.6	6.35	0.35~0.70	2.00~6.00	PSSNR/L	B99
	190608-B25				●																			18.2	19.05	6.35	0.8	7.93	0.25~0.60	3.00~8.00		
	190612-B25				●	●			●	●				●										17.8	19.05	6.35	1.2	7.93	0.30~0.60	3.00~8.00		
	190616-B25				●					●														17.4	19.05	6.35	1.6	7.93	0.35~0.70	3.00~8.00		
	250716-B25																							23.8	25.4	7.94	1.6	9.12	0.35~0.70	4.00~12.00		
	250724-B25								●															23.0	25.4	7.94	2.4	9.12	0.50 ~1.00	5.00~12.00		

● : Stock item

Cutting edge geometry **A31 ~ A34**   Recommended chip breaker **B04 ~ B11**   Code system **B16 ~ B17**

SN○○

Square 90° Negative

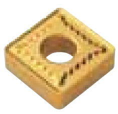


Workpiece		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Steel	P	●	◐	◐	✪	✪			◐							●	◐	◐	●	●			
Stainless steel	M				◐		◐	◐	◐	●	◐	◐									◐		
Cast iron	K								◐				●	◐	✪	●						●	◐
Non-ferrous metal	N																						
Heat resistant alloy, Titanium alloy	S								◐	●	◐												
Hardened steel	H																						

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

Grades: Coated (NC3010 – NC315K), Cermet (CN1000, CN2000), Coated (CN20, CC105), Uncoated (CC115 – G10, as printed: U20, H01, G10)

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
SNMG-GM (Medium)	120404-GM																						
	120408-GM	●			●																		
	120412-GM				●																		
SNMG-GR (Roughing)	120404-GR																						
	120408-GR			●	●				●					●									
	120412-GR			●	●	●								●	●								
	150608-GR			●	●																		
	150612-GR	●	●	●	●																		
	190608-GR				●																		
	190612-GR		●		●	●			●														
	190616-GR		●		●	●			●														
	250724-GR				●																		
	250924-GR				●																		
SNMG-GS (Medium Roughing)	120404-GS						●																
	120408-GS				●		●	●		●	●	●											
	120412-GS							●		●													
	120416-GS																						
	190612-GS							●			●												
SNMG-HA (Medium to finishing)	120404-HA							●				●										●	
	120408-HA						●			●		●										●	
	120412-HA																						
SNMG-HC (Medium to finishing)	120404-HC																						
	120408-HC																						


Inserts	Designation	l	d	t	r	d1	fn (mm/rev)	ap (mm)
SNMG-GM	120404-GM	12.3	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00
	120408-GM	11.9	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00
	120412-GM	11.5	12.7	4.76	1.2	5.16	0.13~0.60	1.30~5.00
SNMG-GR	120404-GR	12.3	12.7	4.76	0.4	5.16	0.15~0.45	0.08~6.00
	120408-GR	11.9	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00
	120412-GR	11.5	12.7	4.76	1.2	5.16	0.20~0.50	1.00~7.00
	150608-GR	15.0	15.875	6.35	0.8	6.35	0.25~0.60	1.00~7.00
	150612-GR	14.6	15.875	6.35	1.2	6.35	0.29~0.75	1.40~7.00
	190608-GR	18.2	19.05	6.35	0.8	7.93	0.30~0.80	1.70~9.00
	190612-GR	17.8	19.05	6.35	1.2	7.93	0.30~0.80	1.70~9.00
	190616-GR	17.4	19.05	6.35	1.6	7.93	0.31~0.82	1.90~12.30
	250724-GR	23.0	25.4	7.94	2.4	9.12	0.45~1.20	2.60~14.00
	250924-GR	23.0	25.4	9.52	2.4	9.12	0.50~1.20	2.60~14.00
SNMG-GS	120404-GS	12.3	12.7	4.76	0.4	5.16	0.10~0.45	0.80~4.50
	120408-GS	11.9	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00
	120412-GS	11.5	12.7	4.76	1.2	5.16	0.13~0.65	1.00~5.00
	120416-GS	11.1	12.7	4.76	1.6	5.16	0.15~0.70	1.00~5.00
	190612-GS	17.8	19.05	6.35	1.2	7.93	0.30~0.80	1.70~9.00
SNMG-HA	120404-HA	12.3	12.7	4.76	0.4	5.16	0.10~0.35	0.80~3.50
	120408-HA	11.9	12.7	4.76	0.8	5.16	0.10~0.40	0.80~3.50
	120412-HA	11.5	12.7	4.76	1.2	5.16	0.13~0.55	0.80~3.50
SNMG-HC	120404-HC	12.3	12.7	4.76	0.4	5.16	0.05~0.35	0.80~4.00
	120408-HC	11.9	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00

Dimensions (mm)

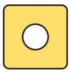
Available tool holders (same for SNMG-GM, SNMG-GR, SNMG-GS, SNMG-HA, SNMG-HC)

Designation	Page
MSBNR/L	B108
MSDNN	B108
MSKNR/L	B109
MSRNR/L	B109
MSSNR/L	B110
PSBNR/L	B98
PSDNN	B98
PSKNR/L	B129
PSSNR/L	B99

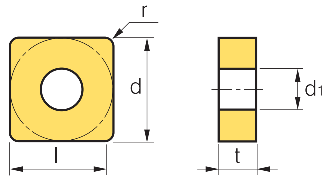
Cutting edge geometry A31 ~ A34 Recommended chip breaker B04 ~ B11 Code system B16 ~ B17

● : Stock item

SN○○



Square 90° Negative



Workpiece		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Steel	P	●	◐	◐	⊕	⊕			◐						●	◐	◐	●	●			
Stainless steel	M				◐		◐	◐	◐	●	◐	◐								◐		
Cast iron	K								◐				●	◐	●						●	◐
Non-ferrous metal	N																					
Heat resistant alloy, Titanium alloy	S								◐	●	◐											
Hardened steel	H																					

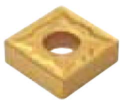
Machining types: ● Continuous cutting · ◐ General cutting · ⊕ Interrupted cutting

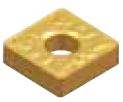
Grade groups: Coated (NC3010–NC6210), Cermet (CN1000, CN2000, CN20), Coated (CC105, CC115), Uncoated (U20, H01, G10)

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)
SNMG-HR (Roughing)	120408-HR																						11.9	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00
	120412-HR	●																					11.5	12.7	4.76	1.2	5.16	0.25~0.70	1.30~7.00
	120416-HR																						11.1	12.7	4.76	1.6	5.16	0.32~0.75	1.80~7.00
	150608-HR				●																		15.0	15.875	6.35	0.8	6.35	0.20~0.50	1.80~8.00
	150612-HR				●																		14.6	15.875	6.35	1.2	6.35	0.20~0.70	1.30~8.00
	150616-HR																						14.2	15.875	6.35	1.6	6.35	0.30~0.80	1.80~8.00
	150624-HR																						13.4	15.875	6.35	2.4	6.35	0.32~0.90	2.20~8.00
	190608-HR																						18.2	19.05	6.35	0.8	7.93	0.20~0.50	1.00~10.00
	190612-HR																						17.8	19.05	6.35	1.2	7.93	0.25~0.70	1.30~10.00
	190616-HR	●			●																		17.4	19.05	6.35	1.6	7.93	0.30~0.80	1.80~10.00
	190624-HR																						16.6	19.05	6.35	2.4	7.93	0.32~0.90	2.30~10.00
	250724-HR																						23.0	25.4	7.94	2.4	9.12	0.40~1.20	2.30~15.00
	250924-HR		●		●																		23.0	25.4	9.52	2.4	9.12	0.40~1.20	2.30~15.00
SNMG-HS (Medium)	090304-HS							●				●											9.1	9.525	3.18	0.4	3.81	0.05~0.25	1.00~2.50
	090308-HS									●													8.7	9.525	3.18	0.8	3.81	0.10~0.30	1.00~2.50
	120404-HS							●				●											12.3	12.7	4.76	0.4	5.16	0.05~0.30	1.00~4.50
	120408-HS						●	●		●	●	●											11.9	12.7	4.76	0.8	5.16	0.10~0.40	1.00~4.50
	120412-HS						●			●	●	●											11.5	12.7	4.76	1.2	5.16	0.13~0.55	1.00~4.50
	150612-HS											●											14.6	15.875	6.35	1.2	6.35	0.13~0.55	1.00~6.10
	150616-HS																						14.2	15.875	6.35	1.6	6.35	0.15~0.60	1.00~4.50
	190612-HS						●			●	●	●											17.8	19.05	6.35	1.2	7.93	0.13~0.55	1.00~7.60
	190616-HS									●	●	●											17.4	19.05	6.35	1.6	7.93	0.15~0.60	1.00~7.60
SNMG-VC (Medium to finishing)	120408-VC	●		●					●	●													11.9	12.7	4.76	0.8	5.16	0.15~0.40	0.50~3.50
SNMG-VL (Finishing(Mild steel))	120408-VL	●																					11.9	12.7	4.76	0.8	5.16	0.10~0.35	0.20~1.50

Dimensions in mm.


SNMG-HR — Roughing


SNMG-HS — Medium


SNMG-VC — Medium to finishing


SNMG-VL — Finishing(Mild steel)

Available tool holders (same for SNMG-HR, SNMG-HS, SNMG-VC, SNMG-VL):

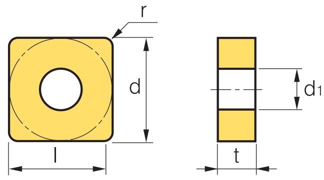
Designation	Page
MSBNR/L	B108
MSDNN	B108
MSKNR/L	B109
MSRNR/L	B109
MSSNR/L	B110
PSBNR/L	B98
PSDNN	B98
PSKNR/L	B129
PSSNR/L	B99

Cutting edge geometry A31 ~ A34 · Recommended chip breaker B04 ~ B11 · Code system B16 ~ B17

● : Stock item

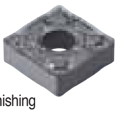
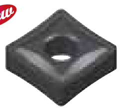
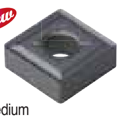
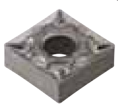
SN○○

Square **90° Negative**



Workpiece			NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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

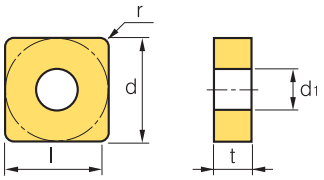
Inserts	Designation	Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
SNMG-VF  Finishing	090304-VF																						9.1	9.525	3.18	0.4	3.81	0.07~0.30	0.50~1.50	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
	090308-VF																						8.7	9.525	3.18	0.8	3.81	0.07~0.30	0.50~1.50		
	120404-VF	●		●																			12.3	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50		
	120408-VF	●		●				●															11.9	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50		
SNMG-VG  Finishing	090304-VG															●							9.1	9.525	3.18	0.4	3.81	0.07~0.30	0.50~1.50	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
	090308-VG																						8.7	9.525	3.18	0.8	3.81	0.10~0.30	0.50~1.50		
	120404-VG														●	●							12.3	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50		
	120408-VG															●							11.9	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50		
SNMG-VM  Medium	090304-VM																						9.1	9.525	3.18	0.4	3.81	0.05~0.30	0.90~3.50	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
	090308-VM																						8.7	9.525	3.18	0.8	3.81	0.10~5.00	1.00~3.50		
	120404-VM	●		●	●			●			●												12.3	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00		
	120408-VM		●	●	●			●	●	●	●			●									11.9	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00		
	120412-VM			●				●		●				●									11.5	12.7	4.76	1.2	5.16	0.13~0.60	1.30~5.00		
	190612-VM																						17.8	19.05	6.35	1.2	7.93	0.25~0.60	2.50~7.50		
SNMG-VP2 New  Medium to finishing	120404-VP2			●					●	●	●												12.3	12.7	4.76	0.4	5.16	0.05~0.35	0.10~3.00	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
	120408-VP2			●					●	●	●												11.9	12.7	4.76	0.8	5.16	0.10~0.45	0.50~4.50		
	120412-VP2																						11.5	12.7	4.76	1.2	5.16	0.10~0.50	0.50~5.00		
SNMG-VP3 New  Medium	120404-VP3										●												12.3	12.7	4.76	0.4	5.16	0.05~0.30	0.10~3.00	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
	120408-VP3								●	●	●												11.9	12.7	4.76	0.8	5.16	0.10~0.45	1.00~5.00		
	120412-VP3								●	●													11.5	12.7	4.76	1.2	5.16	0.12~0.50	1.00~5.00		
SNMG-VQ  Medium to finishing	090304-VQ																						9.1	9.525	3.18	0.4	3.81	0.05~0.30	0.50~3.50	MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L PSSNR/L	B108 B108 B109 B109 B110 B98 B98 B129 B99
	090308-VQ																						8.7	9.525	3.18	0.8	3.81	0.08~0.30	0.80~4.00		
	120404-VQ														●								12.3	12.7	4.76	0.4	5.16	0.05~0.30	0.80~4.00		
	120408-VQ																						11.9	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

SNOO

Square 90° Negative



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

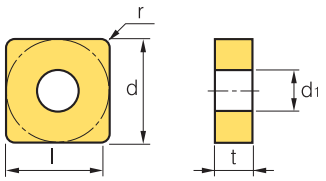
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC500H	CX269	NC9025	NC5330	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
																							Dimensions (mm)								
SNMG-VK	120404-VK												●										12.3	12.7	4.76	0.4	5.16	0.15~0.50	0.08~8.00	MSBNR/L	B108
	120408-VK												●										11.9	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MSDNN	B108
	120412-VK												●										11.5	12.7	4.76	1.2	5.16	0.20~0.50	1.00~7.00	MSKNR/L	B109
																														MSRNR/L	B109
																														MSSNR/L	B110
																														PSBNR/L	B98
																														PSDNN	B98
																														PSKNR/L	B129
Medium Roughing																														PSSNR/L	B99
SNMM-GH	120408-GH				●	●			●														11.9	12.7	4.76	0.8	5.16	0.30~0.60	2.50~8.00	MSBNR/L	B108
	120412-GH				●	●			●														11.5	12.7	4.76	1.2	5.16	0.30~0.70	2.50~8.00	MSDNN	B108
	150612-GH				●	●			●														14.6	15.875	6.35	1.2	6.35	0.30~0.70	2.50~8.00	MSKNR/L	B109
	190612-GH		●		●				●														17.8	19.05	6.35	1.2	7.93	0.30~0.70	3.00~8.00	MSRNR/L	B109
	190616-GH	●	●		●	●			●														17.4	19.05	6.35	1.6	7.93	0.45~1.00	4.00~9.00	MSSNR/L	B110
	190624-GH				●				●														16.6	19.05	6.35	2.4	7.93	0.55~1.20	4.00~9.00	PSBNR/L	B98
	250724-GH		●		●	●	●		●														23.0	25.4	7.94	2.4	9.12	0.55~1.20	5.00~12.00	PSDNN	B98
	250924-GH	●			●	●	●		●														23.0	25.4	9.52	2.4	9.12	0.55~1.20	5.00~12.00	PSKNR/L	B129
Heavy	250932-GH																						22.2	25.4	9.52	3.2	9.12	0.55~1.20	5.00~12.00	PSSNR/L	B99
SNMM-VH	190612-VH						●																17.8	19.05	6.35	1.2	7.93	0.50~0.90	5.00~10.00	PSBNR/L	B98
	190616-VH																						17.4	19.05	6.35	1.6	7.93	0.50~1.10	5.00~10.00	PSDNN	B98
	190624-VH					●	●																16.6	19.05	6.35	2.4	7.93	0.60~1.20	6.00~12.00	PSKNR/L	B129
	250716-VH																						23.8	25.4	7.94	1.6	9.12	0.70~1.50	6.00~14.00	PSSNR/L	B99
	250724-VH				●	●	●																23.0	25.4	7.94	2.4	9.12	0.70~1.40	6.00~15.00		
	250920-VH																						23.4	25.4	9.52	2.0	9.12	0.70~1.40	6.00~15.00		
Heavy(General)	250924-VH	●					●																23.0	25.4	9.52	2.4	9.12	0.70~1.40	6.00~15.00		
SNMM-VT	190612-VT						●		●														17.8	19.05	6.35	1.2	7.93	0.60~1.00	6.00~13.00	PSBNR/L	B98
	190616-VT				●		●																17.4	19.05	6.35	1.6	7.93	0.60~1.10	6.00~13.00	PSDNN	B98
	190624-VT	●					●																16.6	19.05	6.35	2.4	7.93	0.60~1.60	7.00~13.00	PSKNR/L	B129
	250716-VT																						23.8	25.4	7.94	1.6	9.12	0.75~1.60	7.00~15.00	PSSNR/L	B99
	250724-VT				●	●																	23.0	25.4	7.94	2.4	9.12	0.75~1.60	7.00~15.00		
	250920-VT																						23.4	25.4	9.52	2.0	9.12	0.75~1.60	7.00~15.00		
Heavy(High feed cutting)	250924-VT	●			●		●																23.0	25.4	9.52	2.4	9.12	0.75~1.60	7.00~17.00		
SNMM-GM	120408-GM																						11.9	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00	MSBNR/L	B108
	120412-GM																						11.5	12.7	4.76	1.2	5.16	0.13~0.60	1.30~5.00	MSDNN	B108
																														MSKNR/L	B109
																														MSRNR/L	B109
																														MSSNR/L	B110
																														PSBNR/L	B98
																														PSDNN	B98
Medium																														PSKNR/L	B129
																														PSSNR/L	B99

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

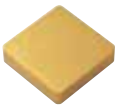
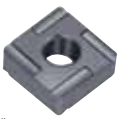
● : Stock item

SN○○

Square **90° 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	

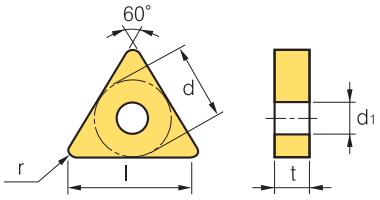
Inserts	Designation	Coated												Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
SNMM-GR  Roughing	120408-GR																						11.9	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	MSBNR/L	B108
	120412-GR				●																		11.5	12.7	4.76	1.2	5.16	0.25~0.65	1.30~7.00	MSDNN	B108
	190612-GR				●																		17.8	19.05	6.35	1.2	7.93	0.25~0.65	1.30~11.50	MSKNR/L	B109
	190616-GR																						17.4	19.05	6.35	1.6	7.93	0.32~0.85	1.80~11.50	MSRNR/L	B109
																														MSSNR/L	B110
																														PSBNR/L	B98
																														PSDNN	B98
																														PSKNR/L	B129
																														PSSNR/L	B99
SNMN  Medium Roughing	120304																						12.3	12.7	3.18	0.4	-	0.17~0.45	1.00~3.50	CSDNN	B120
	120308																						11.9	12.7	3.18	0.8	-	0.23~0.60	1.50~6.00	CSKNR/L	B121
	120312																						11.5	12.7	3.18	1.2	-	0.25~0.60	2.00~5.00		
	120404																						12.3	12.7	4.76	0.4	-	0.17~0.45	1.00~3.50		
	120408																						11.9	12.7	4.76	0.8	-	0.23~0.60	1.50~5.00		
	120412																						11.5	12.7	4.76	1.2	-	0.25~0.60	2.00~5.00		
	150404																						15.5	15.875	4.76	0.4	-	0.20~0.50	1.50~6.00		
	150408																						15.0	15.875	4.76	0.8	-	0.25~0.60	1.50~6.00		
	150412																						11.5	12.7	4.76	1.2	-	0.25~0.60	2.00~6.00		
	190416																						17.4	19.05	4.76	1.6	-	0.35~0.70	2.00~6.00		
SNMX  Medium	120408R																						11.9	12.7	4.76	0.8	5.16	0.15~0.35	1.00~4.00	MSBNR/L	B108
																														MSDNN	B108
																														MSKNR/L	B109
																														MSRNR/L	B109
																														MSSNR/L	B110
																														PSBNR/L	B98
																														PSDNN	B98
																														PSKNR/L	B129
																														PSSNR/L	B99
SNUN  Medium Roughing	120408																			●			11.9	12.7	4.76	0.8	-	0.23~0.60	1.50~5.00	CSDNN	B120
	120412																			●			11.5	12.7	4.76	1.2	-	0.25~0.60	2.00~5.00	CSKNR/L	B121
	190412																						17.4	19.05	4.76	1.2	-	0.30~1.00	3.00~10.00		
	120412TN																						11.5	12.7	4.76	1.2	-	0.25~0.60	2.00~5.00		
	250724TN																						23.0	25.4	7.94	2.4	-	0.30~1.20	3.00~12.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TN○○

Triangular **60° 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		

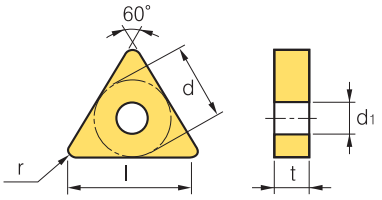
Inserts	Designation	Coated												Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
TNGA Roughing	110302																						10.5	6.35	3.18	0.2	2.40	0.05~0.30	0.20~3.00	MTENN	B110
	110304																						10.0	6.35	3.18	0.4	2.40	0.05~0.30	0.40~3.00	MTFNR/L	B110
	160304																						15.5	9.525	3.18	0.4	3.81	0.10~0.35	0.40~4.00	MTGNR/L	B111
	160402																						16.0	9.525	4.76	0.2	3.81	0.10~0.30	0.20~4.00	MTJNR/L	B111
	160404														●	●						●	15.5	9.525	4.76	0.4	3.81	0.10~0.35	0.40~5.00	PTFNR/L	B100,130
	160408														●								14.5	9.525	4.76	0.8	3.81	0.12~0.40	0.50~5.00	PTGNR/L	B100
	220304																						21.0	12.7	3.18	0.4	5.16	0.10~0.35	0.50~5.00	PTTNR/L	B101
	220402																						21.7	12.7	4.76	0.2	5.16	0.05~0.30	0.20~3.00	WTENN	B102
	220404																					●	21.0	12.7	4.76	0.4	5.16	0.10~0.35	0.40~5.00	WTJNR/L	B102
	220408																●						20.0	12.7	4.76	0.8	5.16	0.10~0.40	0.50~5.00	WTXNR/L	B102
	220412																						19.0	12.7	4.76	1.2	5.16	0.12~0.45	1.00~5.50		
	270612																						24.5	15.875	6.35	1.2	6.35	0.12~0.45	1.00~7.00		
	270624																						21.3	15.875	6.35	2.4	6.35	0.20~0.55	2.00~7.00		
TNGG Medium	110304R																						10.0	6.35	3.18	0.4	2.40	0.05~0.30	0.50~2.50	MTENN	B110
	160402R														●	●							16.0	9.525	4.76	0.2	3.81	0.08~0.30	0.50~3.50	MTFNR/L	B110
	160404R														●	●	●						15.5	9.525	4.76	0.4	3.81	0.12~0.30	1.00~3.50	MTGNR/L	B111
	160408R														●	●							14.5	9.525	4.76	0.8	3.81	0.15~0.35	1.30~3.50	MTJNR/L	B111
	220404R														●	●							21.0	12.7	4.76	0.4	5.16	0.12~0.30	1.00~5.00	PTFNR/L	B100,130
	220408R															●							20.0	12.7	4.76	0.8	5.16	0.15~0.35	1.30~5.00	PTGNR/L	B100
	220412R																						19.0	12.7	4.76	1.2	5.16	0.17~0.40	1.50~5.00	PTTNR/L	B101
	110304L																						10.0	6.35	4.76	0.4	2.40	0.05~0.30	0.50~2.50	WTENN	B102
	160402L																						16.0	9.525	4.76	0.2	3.81	0.08~0.30	0.50~3.50	WTJNR/L	B102
	160404L														●	●	●						15.5	9.525	3.18	0.4	3.81	0.12~0.30	1.00~3.50	WTXNR/L	B102
	160408L															●							14.5	9.525	4.76	0.8	3.81	0.15~0.35	1.30~3.50		
	220404L																						21.0	12.7	4.76	0.4	5.16	0.12~0.30	1.00~5.00		
	220408L																						20.0	12.7	4.76	0.8	5.16	0.15~0.35	1.30~5.00		
	220412L																						19.0	12.7	4.76	1.2	5.16	0.17~0.40	1.50~5.00		
TNGG-SC Finishing	160402R-SC															●							16.0	9.525	4.76	0.2	3.81	0.03~0.20	0.10~1.50	MTENN	B110
	160404R-SC															●							15.5	9.525	4.76	0.4	3.81	0.05~0.25	0.30~2.00	MTFNR/L	B110
	160402L-SC																						16.0	9.525	4.76	0.2	3.81	0.03~0.20	0.10~1.50	MTGNR/L	B111
	160404L-SC																						15.5	9.525	4.76	0.4	3.81	0.05~0.25	0.30~2.00	MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TN○○

Triangular **60° Negative**



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

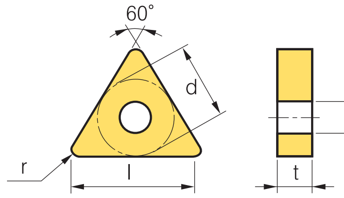
Inserts	Designation	Coated											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC500H	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
TNGN	110302																						10.5	6.35	3.18	0.2	-	0.05~0.25	0.20~2.50	CTFNR/L	B121
	110304																						10.0	6.35	3.18	0.4	-	0.10~0.30	0.50~2.50	CTGNR/L	B121
	110308																						9.0	6.35	3.18	0.8	-	0.10~0.30	0.80~2.50		
	160302																						16.0	9.525	3.18	0.2	-	0.05~0.30	0.20~3.00		
	160304																						15.5	9.525	3.18	0.4	-	0.10~0.30	0.50~4.00		
	160308																						14.5	9.525	3.18	0.8	-	0.10~0.40	0.80~4.00		
	160404																						15.5	9.525	4.76	0.4	-	0.10~0.40	0.50~4.00		
	160408																						14.5	9.525	4.76	0.8	-	0.10~0.40	1.00~4.00		
	160412																						13.5	9.525	4.76	1.2	-	0.10~0.50	1.50~4.50		
	220404																						21.0	12.7	4.76	0.4	-	0.10~0.35	1.00~4.00		
	220408																●						20.0	12.7	4.76	0.8	-	0.15~0.40	1.50~5.00		
	220412																						19.0	12.7	4.76	1.2	-	0.20~0.50	1.50~5.00		
	220416																						18.2	12.7	4.76	1.6	-	0.25~0.55	1.50~5.00		
	220424																						17.4	12.7	4.76	2.4	-	0.30~0.65	2.00~5.00		
Medium	270630																						19.7	15.875	6.35	3.0	-	0.35~0.70	2.00~5.00		
TNMA	110308																						9.0	6.35	3.18	0.8	2.40	0.05~0.30	0.50~3.00	MTENN	B110
	160404												●										15.5	9.525	4.76	0.4	3.81	0.10~0.30	1.00~4.00	MTFNR/L	B110
	160408	●											●	●									14.5	9.525	4.76	0.8	3.81	0.10~0.40	1.00~4.00	MTGNR/L	B111
	160412												●										13.5	9.525	4.76	1.2	3.81	0.10~0.50	1.50~4.50	MTJNR/L	B111
	160416																						12.5	9.525	4.76	1.6	3.81	0.15~0.55	1.50~4.50	PTFNR/L	B100,130
	220404																						21.0	12.7	4.76	0.4	5.16	0.10~0.35	1.00~4.00	PTGNR/L	B100
	220408												●										20.0	12.7	4.76	0.8	5.16	0.15~0.40	1.50~5.00	PTTNR/L	B101
	220412	●											●	●									19.0	12.7	4.76	1.2	5.16	0.20~0.50	1.50~5.00	WTENN	B102
	220416																						18.2	12.7	4.76	1.6	5.16	0.25~0.55	1.50~5.00	WTJNR/L	B102
	220420																						16.8	12.7	4.76	2.0	5.16	0.30~0.65	2.00~5.00	WTXNR/L	B102
	220432																						16.5	12.7	4.76	3.2	5.16	0.35~0.70	2.00~5.00		
Roughing	270608																						25.4	15.875	6.35	0.8	6.35	0.20~0.45	2.00~7.00		
	270612																						24.4	15.875	6.35	1.2	6.35	0.25~0.55	3.00~7.00		
	270616																						23.3	15.875	6.35	1.6	6.35	0.30~0.65	3.00~7.00		
	330924																						27.1	15.875	9.52	2.4	7.93	0.35~0.75	3.00~9.00		
TNMG-B25	110308-B25																						9.0	6.35	3.18	0.8	2.40	0.17~0.40	1.50~3.00	MTENN	B110
	160304-B25																						15.5	9.525	3.18	0.4	3.81	0.17~0.45	2.00~3.50	MTFNR/L	B110
	160308-B25				●																		14.5	9.525	3.18	0.8	3.81	0.17~0.55	2.00~3.50	MTGNR/L	B111
	160312-B25																						13.5	9.525	3.18	1.2	3.81	0.25~0.55	2.00~3.50	MTJNR/L	B111
	160316-B25																						12.5	9.525	3.18	1.6	3.81	0.30~0.60	2.50~3.00	PTFNR/L	B100,130
	160404-B25			●	●								●										15.5	9.525	4.76	0.4	3.81	0.17~0.45	2.00~3.50	PTGNR/L	B100
	160408-B25			●	●						●		●										14.5	9.525	4.76	0.8	3.81	0.17~0.55	2.00~3.50	PTTNR/L	B101
	160412-B25				●																		13.5	9.525	4.76	1.2	3.81	0.25~0.55	2.00~3.50	WTENN	B102
	160416-B25												●										12.5	9.525	4.76	1.6	3.81	0.30~0.60	2.50~3.00	WTJNR/L	B102
	220404-B25			●	●																		21.0	12.7	4.76	0.4	5.16	0.17~0.45	1.50~5.00	WTXNR/L	B102
	220408-B25			●	●			●															20.0	12.7	4.76	0.8	5.16	0.17~0.55	2.00~5.00		
	220412-B25				●																		19.0	12.7	4.76	1.2	5.16	0.25~0.55	2.00~5.00		
	220416-B25				●																		18.2	12.7	4.76	1.6	5.16	0.30~0.60	2.00~5.00		
	220424-B25																						17.2	12.7	4.76	2.4	5.16	0.35~0.70	3.00~7.00		
Medium Roughing	220432-B25																						16.5	12.7	4.76	3.2	5.16	0.40~0.75	3.50~7.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TN○○

Triangular **60° Negative**



Workpiece		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
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

Grades: Coated (NC3010 – NC315K), Cermet (CN1000, CN2000, CN20), Coated (CC105, CC115), Uncoated (ST30A, H01, G10)

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
TNMG-B25 (Medium Roughing)	270608-B25				●																		
	270612-B25	●		●	●																		
	270616-B25																						
	330716-B25	●		●																			
	330924-B25																						
TNMG-GM (Medium)	160304-GM																						
	160404-GM	●	●		●												●	●					
	160408-GM	●	●		●												●						
	160412-GM																						
	220404-GM				●																		
	220408-GM	●			●																		
	220412-GM				●																		
TNMG-GR (Roughing)	160408-GR			●	●									●	●								
	160412-GR			●	●									●									
	220408-GR		●	●	●				●					●									
	220412-GR		●	●	●									●									
	220416-GR			●	●																		
	270608-GR				●																		
	270612-GR			●	●																		
	270616-GR				●																		
	330924-GR				●																		
TNMG-GS (Medium Roughing)	160404-GS						●	●		●		●											
	160408-GS			●			●	●		●	●	●											
	160412-GS																						
	220408-GS									●													
	220412-GS																						
TNMG-HA (Medium to finishing)	160404-HA						●			●		●										●	
	160408-HA						●	●		●		●										●	
	160412-HA																						
	220408-HA											●											
TNMG-HC (Medium to finishing)	160404-HC	●							●														
	160408-HC	●	●		●				●														
	160412-HC																						
	220408-HC																						

Inserts	Designation	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)	Available tool holders (Designation / Page)
TNMG-B25	270608-B25	25.5	15.875	6.35	0.8	6.35	0.17~0.55	2.00~5.00	MTENN B110 MTFNR/L B110 MTGNR/L B111 MTJNR/L B111 PTFNR/L B100,130 PTGNR/L B100 PTTNR/L B101 WTENN B102 WTJNR/L B102 WTXNR/L B102
	270612-B25	24.5	15.875	6.35	1.2	6.35	0.25~0.55	3.00~7.00	
	270616-B25	23.5	15.875	6.35	1.6	6.35	0.30~0.60	3.00~7.00	
	330716-B25	29.0	19.05	7.94	1.6	7.93	0.35~0.70	3.00~9.00	
	330924-B25	27.1	19.05	9.52	2.4	7.93	0.40~0.80	3.00~9.00	
TNMG-GM	160304-GM	15.5	9.525	3.18	0.4	3.81	0.05~0.30	0.80~5.00	MTENN B110 MTFNR/L B110 MTGNR/L B111 MTJNR/L B111 PTFNR/L B100,130 PTGNR/L B100 PTTNR/L B101 WTENN B102 WTJNR/L B102 WTXNR/L B102
	160404-GM	15.5	9.525	4.76	0.4	3.81	0.05~0.30	0.80~5.00	
	160408-GM	14.5	9.525	4.76	0.8	3.81	0.10~0.50	1.00~5.00	
	160412-GM	13.5	9.525	4.76	1.2	3.81	0.13~0.60	1.30~5.00	
	220404-GM	21.0	12.7	4.76	0.4	5.16	0.05~0.30	0.90~6.30	
	220408-GM	20.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~6.60	
	220412-GM	19.0	12.7	4.76	1.2	5.16	0.13~0.60	1.30~6.60	
TNMG-GR	160408-GR	14.5	9.525	4.76	0.8	3.81	0.20~0.50	1.00~7.00	MTENN B110 MTFNR/L B110 MTGNR/L B111 MTJNR/L B111 PTFNR/L B100,130 PTGNR/L B100 PTTNR/L B101 WTENN B102 WTJNR/L B102 WTXNR/L B102
	160412-GR	13.5	9.525	4.76	1.2	3.81	0.23~0.54	1.20~8.00	
	220408-GR	20.0	12.7	4.76	0.8	5.16	0.22~0.61	1.10~7.80	
	220412-GR	19.0	12.7	4.76	1.2	5.16	0.28~0.78	1.20~7.80	
	220416-GR	18.2	12.7	4.76	1.6	5.16	0.31~0.75	1.50~7.80	
	270608-GR	25.5	15.875	6.35	0.8	6.35	0.31~0.75	1.50~7.80	
	270612-GR	24.5	15.875	6.35	1.2	6.35	0.31~0.75	1.50~7.80	
	270616-GR	23.5	15.875	6.35	1.6	6.35	0.36~1.00	1.60~7.80	
	330924-GR	27.1	19.05	9.52	2.4	7.93	0.40~1.00	2.00~9.00	
TNMG-GS	160404-GS	15.5	9.525	4.76	0.4	3.81	0.05~0.35	1.00~4.50	MTENN B110 MTFNR/L B110 MTGNR/L B111 MTJNR/L B111 PTFNR/L B100,130 PTGNR/L B100 PTTNR/L B101 WTENN B102 WTJNR/L B102 WTXNR/L B102
	160408-GS	14.5	9.525	4.76	0.8	3.81	0.10~0.50	1.00~5.00	
	160412-GS	13.5	9.525	4.76	1.2	3.81	0.13~0.65	1.00~5.00	
	220408-GS	20.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~6.80	
	220412-GS	19.0	12.7	4.76	1.2	5.16	0.15~0.40	1.20~6.00	
TNMG-HA	160404-HA	15.5	9.525	4.76	0.4	3.81	0.05~0.30	0.80~3.50	MTENN B110 MTFNR/L B110 MTGNR/L B111 MTJNR/L B111 PTFNR/L B100,130 PTGNR/L B100 PTTNR/L B101 WTENN B102 WTJNR/L B102 WTXNR/L B102
	160408-HA	14.5	9.525	4.76	0.8	3.81	0.10~0.40	0.80~3.50	
	160412-HA	13.5	9.525	4.76	1.2	3.81	0.13~0.55	0.80~3.50	
	220408-HA	20.0	12.7	4.76	0.8	5.16	0.10~0.40	0.80~5.30	
TNMG-HC	160404-HC	15.5	9.525	4.76	0.4	3.81	0.05~ 0.35	0.50~3.50	MTENN B110 MTFNR/L B110 MTGNR/L B111 MTJNR/L B111 PTFNR/L B100,130 PTGNR/L B100 PTTNR/L B101 WTENN B102 WTJNR/L B102 WTXNR/L B102
	160408-HC	14.5	9.525	4.76	0.8	3.81	0.08~0.40	0.80~4.00	
	160412-HC	13.5	9.525	4.76	1.2	3.81	0.13~0.50	0.90~4.00	
	220408-HC	20.0	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00	

TNMG-B25 — Medium Roughing


TNMG-GM — Medium


TNMG-GR — Roughing


TNMG-GS — Medium Roughing


TNMG-HA — Medium to finishing

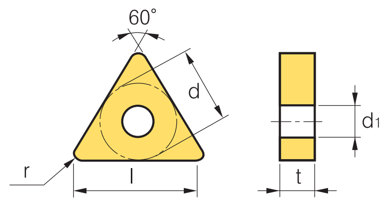

TNMG-HC — Medium to finishing


●: Stock item

Cutting edge geometry **A31 ~ A34**   Recommended chip breaker **B04 ~ B11**   Code system **B16 ~ B17**

TN○○

Triangular 60° Negative



Workpiece (● Continuous cutting, ◒ General cutting, ✱ Interrupted cutting)

Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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

Grades: Coated (NC3010 – NC315K), Cermet (CN1000, CN2000, CN20), Coated (CC105, CC115), Uncoated (U20, H01, G10)

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
TNMG-HR (Roughing)	160408-HR	●																				
	160412-HR		●																			
	220404-HR																					
	220408-HR																					
	220412-HR		●																			
	220416-HR																					
	270608-HR																					
	270612-HR																					
	270632-HR																					
	330716-HR																					
	330924-HR																					
TNMG-HS (Medium)	160404-HS					●	●		●	●	●											
	160408-HS					●	●		●	●	●											
	160412-HS									●	●											
	220408-HS					●	●		●	●	●											
	220412-HS										●											
TNMG-LW (Medium(Wiper))	160408-LW	●																				
	160412-LW																					
TNMG-VB (Finishing)	160404-VB																					
	160408-VB			●				●	●													
	220408-VB			●				●														
	220412-VB																					
TNMG-VC (Medium to finishing)	160404-VC	●		●				●														
	160408-VC			●				●														
	160412-VC			●				●														
	220408-VC			●																		
	220412-VC																					

Designation	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)
160408-HR	14.5	9.525	4.76	0.8	3.81	0.20~0.50	1.00~7.00
160412-HR	13.5	9.525	4.76	1.2	3.81	0.25~0.60	1.30~7.00
220404-HR	21.0	12.7	4.76	0.4	5.16	0.20~0.45	1.00~7.50
220408-HR	20.0	12.7	4.76	0.8	5.16	0.20~0.50	1.00~8.00
220412-HR	19.0	12.7	4.76	1.2	5.16	0.25~0.60	1.30~8.00
220416-HR	18.2	12.7	4.76	1.6	5.16	0.32~0.70	1.80~8.00
270608-HR	25.5	15.875	6.35	0.8	6.35	0.35~0.50	1.80~13.00
270612-HR	24.5	15.875	6.35	1.2	6.35	0.35~0.70	2.30~13.00
270632-HR	19.2	15.875	6.35	3.2	6.35	0.40~0.90	3.00~13.00
330716-HR	29.0	19.05	7.94	1.6	7.93	0.40~0.70	3.00~14.00
330924-HR	27.1	19.05	9.52	2.4	7.93	0.45~0.90	3.30~16.00
160404-HS	15.5	9.525	4.76	0.4	3.81	0.08~0.35	0.50~4.00
160408-HS	14.5	9.525	4.76	0.8	3.81	0.10~0.40	1.00~4.50
160412-HS	13.5	9.525	4.76	1.2	3.81	0.13~0.55	1.00~4.50
220408-HS	20.0	12.7	4.76	0.8	5.16	0.10~0.40	1.00~6.30
220412-HS	19.0	12.7	4.76	1.2	5.16	0.13~0.55	1.00~6.30
160408-LW	14.5	9.525	4.76	0.8	3.81	0.15~0.50	0.70~4.50
160412-LW	13.5	9.525	4.76	1.2	3.81	0.20~0.60	1.00~5.00
160404-VB	15.5	9.525	4.76	0.4	3.81	0.10~0.35	0.30~1.50
160408-VB	14.5	9.525	4.76	0.8	3.81	0.15~0.45	0.50~7.00
220408-VB	20.0	12.7	4.76	0.8	5.16	0.15~0.45	0.50~2.50
220412-VB	19.0	12.7	4.76	1.2	5.16	0.20~0.50	0.70~2.50
160404-VC	15.5	9.525	4.76	0.4	3.81	0.10~0.35	0.30~2.00
160408-VC	14.5	9.525	4.76	0.8	3.81	0.15~4.00	0.50~3.00
160412-VC	13.5	9.525	4.76	1.2	3.81	0.15~4.50	0.50~3.00
220408-VC	19.0	12.7	4.76	1.2	5.16	0.15~0.40	0.50~3.00
220412-VC	19.0	12.7	4.76	1.2	5.16	0.15~0.45	0.50~3.00

Available tool holders (same for TNMG-HR, TNMG-HS, TNMG-LW, TNMG-VB, TNMG-VC):

Designation	Page
MTENN	B110
MTFNR/L	B110
MTGNR/L	B111
MTJNR/L	B111
PTFNR/L	B100,130
PTGNR/L	B100
PTTNR/L	B101
WTENN	B102
WTJNR/L	B102
WTXNR/L	B102

TNMG-HR

Roughing

TNMG-HS

Medium

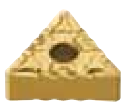
TNMG-LW

Medium(Wiper)

TNMG-VB

Finishing

TNMG-VC



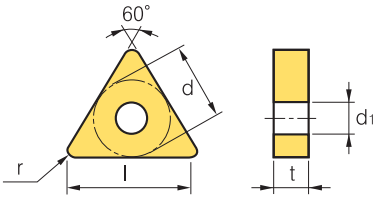
Medium to finishing

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TN○○

Triangular **60° Negative**



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

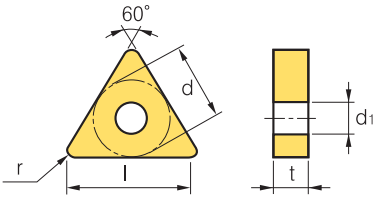
Inserts	Designation	Coated											Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
TNMG-VL	160404-VL	●	●																				15.4	9.525	4.76	0.4	3.81	0.05~0.25	0.10~1.00	MTENN	B110
	160408-VL	●	●					●															14.5	9.525	4.76	0.8	3.81	0.10~0.35	0.20~1.50	MTFNR/L	B110
	220408-VL																						20.0	12.7	4.76	0.8	5.16	0.10~0.35	0.20~1.50	MTGNR/L	B111
	220412-VL																						19.0	12.7	4.76	1.2	5.16	0.10~0.35	0.50~2.00	MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
Finishing																															
TNMG-VF	110304-VF							●							●								10.0	6.35	3.18	0.4	2.40	0.05~0.20	0.20~1.00	MTENN	B110
	160404-VF	●	●					●	●						●								15.5	9.525	4.76	0.4	3.81	0.07~0.30	0.50~1.50	MTFNR/L	B110
	160408-VF	●	●	●				●															14.5	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50	MTGNR/L	B111
	160412-VF			●																			13.5	9.525	4.76	1.2	3.81	0.15~0.50	0.50~1.50	MTJNR/L	B111
	220404-VF			●				●				●											21.0	12.7	4.76	0.4	5.16	0.10~0.40	0.50~1.50	PTFNR/L	B100,130
	220408-VF			●																			20.0	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50	PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
Finishing																															
TNMG-VG	110304-VG																						10.0	6.35	3.18	0.4	2.40	0.05~0.20	0.20~1.00	MTENN	B110
	160404-VG														●	●							15.5	9.525	4.76	0.4	3.81	0.07~0.30	0.50~1.50	MTFNR/L	B110
	160408-VG																						14.5	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50	MTGNR/L	B111
	220404-VG																						21.0	12.7	4.76	0.4	5.16	0.10~0.40	0.50~1.50	MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
Finishing																															
TNMG-VM	110308-VM																						9.0	6.35	3.18	0.8	2.40	0.05~0.30	0.80~4.00	MTENN	B110
	160404-VM	●	●	●	●	●		●		●		●		●		●							15.5	9.525	4.76	0.4	3.81	0.05~0.30	0.90~5.00	MTFNR/L	B110
	160408-VM	●	●	●	●			●		●	●	●		●		●							14.5	9.525	4.76	0.8	3.81	0.10~0.50	1.00~5.00	MTGNR/L	B111
	160412-VM		●	●	●					●						●							13.5	9.525	4.76	1.2	3.81	0.13~0.60	1.30~5.00	MTJNR/L	B111
	220404-VM			●																			21.0	12.7	4.76	0.4	5.16	0.05~0.30	0.90~6.60	PTFNR/L	B100,130
	220408-VM		●	●				●	●	●													20.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~6.60	PTGNR/L	B100
	220412-VM			●	●																		19.0	12.7	4.76	1.2	5.16	0.13~0.60	1.30~6.60	PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
Medium																															
TNMG-VP2 New	160404-VP2			●					●	●	●												15.4	9.525	4.76	0.4	3.81	0.05~0.30	0.10~3.00	MTENN	B110
	160408-VP2			●					●	●	●												14.5	9.525	4.76	0.8	3.81	0.10~0.45	0.50~5.00	MTFNR/L	B110
																														MTGNR/L	B111
																														MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
Medium to finishing																															
TNMG-VP3 New	160404-VP3							●	●		●												15.5	9.525	4.76	0.4	3.81	0.05~0.30	0.10~3.00	MTENN	B110
	160408-VP3							●	●		●												14.5	9.525	4.76	0.8	3.81	0.10~0.45	0.50~5.00	MTFNR/L	B110
																														MTGNR/L	B111
																														MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
Medium																															

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TN○○

Triangular **60° Negative**



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

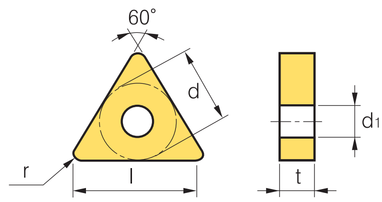
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
TNMG-VQ  Medium to finishing	110304-VQ																						10.0	6.35	3.18	0.4	2.40	0.05~0.30	0.50~3.50	MTENN	B110
	160404-VQ														●	●		●					15.5	9.525	4.76	0.4	3.81	0.05~0.35	0.50~3.50	MTFNR/L	B110
	160408-VQ															●		●					14.5	9.525	4.76	0.8	3.81	0.08~0.40	0.80~4.00	MTGNR/L	B111
	220404-VQ																						21.0	12.7	4.76	0.4	5.16	0.05~0.35	0.50~4.00	MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
TNMG-VW  Finishing(Wiper)	160404-VW																						15.5	9.525	4.76	0.4	3.81	0.10~0.35	0.30~3.00	MTENN	B110
	160408-VW												●										14.5	9.525	4.76	0.8	3.81	0.10~0.40	0.30~3.00	MTFNR/L	B110
																														MTGNR/L	B111
																														MTJNR/L	B111
																														PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
TNMG-VK  Heavy duty machining	160404-VK												●										15.5	9.525	4.76	0.4	3.81	0.15~0.50	0.80~5.00	MTENN	B110
	160408-VK								●				●										14.5	9.525	4.76	0.8	3.81	0.20~0.50	1.00~5.50	MTFNR/L	B110
	160416-VK												●										12.5	9.525	4.76	1.6	3.81	0.15~0.50	1.50~5.50	MTGNR/L	B111
	220412-VK												●										19.0	12.7	4.76	1.2	5.16	0.25~0.60	1.50~6.00	MTJNR/L	B111
	220416-VK																						18.2	12.7	4.76	1.6	5.16	0.25~0.6 0	2.00~6.00	PTFNR/L	B100,130
																														PTGNR/L	B100
																														PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102
TNMM-GH  Heavy	160408-GH				●																		14.5	9.525	4.76	0.8	3.81	0.20~0.50	1.00~7.00	MTENN	B110
	220408-GH																						20.0	12.7	4.76	0.8	5.16	0.25~0.60	1.30~7.00	MTFNR/L	B110
	220412-GH				●																		19.0	12.7	4.76	1.2	5.16	0.20~0.50	1.00~8.00	MTGNR/L	B111
	220416-GH				●																		18.2	12.7	4.76	1.6	5.16	0.25~0.60	1.30~8.00	MTJNR/L	B111
	270616-GH																						23.4	15.875	6.35	1.6	6.35	0.32~0.70	1.80~8.00	PTFNR/L	B100,130
	270624-GH																						21.3	15.875	6.35	2.4	6.35	0.35~0.50	1.80~13.00	PTGNR/L	B100
	330924-GH																						27.1	19.05	9.52	2.4	7.93	0.35~0.70	2.30~13.00	PTTNR/L	B101
																														WTENN	B102
																														WTJNR/L	B102
																														WTXNR/L	B102

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TN○○

Triangular 60° Negative



Symbols: ● Continuous cutting, ◐ General cutting, ✣ Interrupted cutting

Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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

Grades: Coated (NC3010–NC315K), Cermet (CN1000, CN2000, CN20), Coated (CC105, CC115), Uncoated (U20, H01, G10). Dimensions in mm.

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)
TNMM-GM (Medium)	160412-GM																						13.5	9.525	4.76	1.2	3.81	0.13~0.60	1.30~5.00
	220408-GM																						20.0	12.7	4.76	0.8	5.16	0.10~0.50	1.00~6.60
	220412-GM																						19.0	12.7	4.76	1.2	5.16	0.13~0.60	1.30~6.60
	220416-GM																						18.2	12.7	4.76	1.6	5.16	0.15~0.65	1.50~7.00
TNMM-GR (Roughing)	220408-GR																						20.0	12.7	4.76	0.8	5.16	0.22~0.61	1.10~7.80
	220412-GR																						19.0	12.7	4.76	1.2	5.16	0.28~0.78	1.20~7.80
	220416-GR																						18.2	12.7	4.76	1.6	5.16	0.31~0.75	1.50~7.80
TNMN (Medium Roughing)	160408																						14.5	9.525	4.76	0.8	-	0.10~0.30	1.00~4.00
	220408															●							20.0	12.7	4.76	0.8	-	0.15~0.40	1.50~5.00
	220412																						19.0	12.7	4.76	1.2	-	0.20~0.50	1.50~5.00
TNMX (Medium Roughing)	160402R															●							16.5	9.525	4.76	0.2	3.81	0.10~0.30	0.50~3.00
	160404R		●	●	●			●								●	●						15.5	9.525	4.76	0.4	3.81	0.12~0.30	1.00~3.50
	160408R			●	●											●	●						14.5	9.525	4.76	0.8	3.81	0.15~0.35	1.30~3.40
	220404R																						21.0	12.7	4.76	0.4	5.16	0.12~0.30	1.00~5.00
	220408R																						20.0	12.7	4.76	0.8	5.16	0.15~0.35	1.30~5.00
	160404L		●	●												●							15.5	9.525	4.76	0.4	3.81	0.12~0.30	1.00~3.50
	160408L		●	●	●																		14.5	9.525	4.76	0.8	3.81	0.15~0.35	1.30~3.40
TNMX-SH (New, Medium)	160404R-SH																						15.5	9.525	4.76	0.4	6.30	0.15~0.30	0.50~4.00
	160408R-SH																						14.5	9.525	4.76	0.8	6.30	0.15~0.45	1.00~4.00
	160404L-SH																						15.5	9.525	4.76	0.4	6.30	0.15~0.30	0.50~4.00
	160408L-SH																						14.5	9.525	4.76	0.8	6.30	0.15~0.45	1.00~4.00

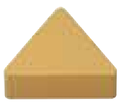
Insert images:

TNMM-GM

Medium

TNMM-GR

Roughing

TNMN

Medium Roughing

TNMX

Medium Roughing

TNMX-SH


Medium

Available tool holders

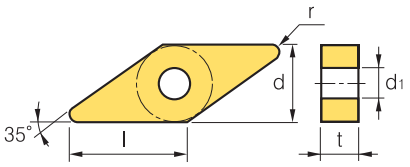
Inserts	Designation	Page
TNMM-GM, TNMM-GR, TNMX, TNMX-SH	MTENN	B110
	MTFNR/L	B110
	MTGNR/L	B111
	MTJNR/L	B111
	PTFNR/L	B100,130
	PTGNR/L	B100
	PTTNR/L	B101
	WTENN	B102
	WTJNR/L	B102
	WTXNR/L	B102
TNMN	CTFNR/L	B121
	CTGNR/L	B121

Cutting edge geometry A31 ~ A34 Recommended chip breaker B04 ~ B11 Code system B16 ~ B17

● : Stock item

VNOO

Rhombic **35° Negative**



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

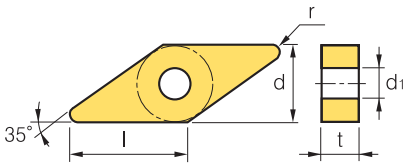
Inserts	Designation	Coated											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
VNGG-HA	160408-HA								●														14.6	9.525	4.76	0.8	3.81	0.10~0.40	0.80~3.50	MVJNR/L	B111
																													MVQNR/L	B112
Medium to finishing																													MVVNN	B112
																													MVUNR/L	B133
VNMG-GM	160404-GM				●										●	●							15.6	9.525	4.76	0.4	3.81	0.08~0.45	0.50~3.50	MVJNR/L	B111
	160408-GM				●										●								14.6	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00	MVQNR/L	B112
Medium																													MVVNN	B112
																													MVUNR/L	B133
VNMG-HA	160404-HA								●												●		15.6	9.525	4.76	0.4	3.81	0.08~0.35	0.50~3.00	MVJNR/L	B111
	160408-HA								●														14.6	9.525	4.76	0.8	3.81	0.10~0.40	0.80~3.50	MVQNR/L	B112
Medium to finishing																													MVVNN	B112
																													MVUNR/L	B133
VNMG-HR	160408-HR																						14.6	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00	MVJNR/L	B111
																													MVQNR/L	B112
Roughing																													MVVNN	B112
																													MVUNR/L	B133
VNMG-HS	160404-HS						●		●●●														15.6	9.525	4.76	0.4	3.81	0.08~0.35	0.50~4.00	MVJNR/L	B111
	160408-HS								●●●														14.6	9.525	4.76	0.8	3.81	0.10~0.40	1.00~4.50	MVQNR/L	B112
Medium																													MVVNN	B112
																													MVUNR/L	B133
VNMG-VB	160404-VB	●	●						●														15.6	9.525	4.76	0.4	3.81	0.10~0.35	0.30~1.50	MVJNR/L	B111
	160408-VB		●						●														14.6	9.525	4.76	0.8	3.81	0.15~0.45	0.50~2.00	MVQNR/L	B112
Finishing																													MVVNN	B112
																													MVUNR/L	B133

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

VNOO

Rhombic **35° Negative**



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

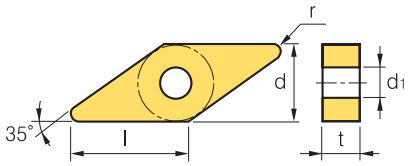
Inserts	Designation	Coated											Cermet		Coated			Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
VNMG-VC Medium to finishing	160404-VC																						15.6	9.525	4.76	0.4	3.81	0.10~0.35	0.30~2.00	MVJNR/L	B111
	160408-VC																						14.6	9.525	4.76	0.8	3.81	0.15~4.00	0.50~3.00	MVQNR/L MVVNN MVUNR/L	B112 B112 B133
VNMG-VP3 New Medium	160404-VP3										●												15.6	9.525	4.76	0.4	3.81	0.05~0.30	0.10~3.00	MVJNR/L	B111
	160408-VP3								●	●	●												14.6	9.525	4.76	0.8	3.81	0.10~0.45	0.50~5.00	MVQNR/L MVVNN MVUNR/L	B112 B112 B133
VNMG-VL Finishing(Mild steel)	160404-VL	●		●				●															15.6	9.525	4.76	0.4	3.81	0.05~0.20	0.10~1.00	MVJNR/L	B111
	160408-VL	●		●				●								●							14.6	9.525	4.76	0.8	3.81	0.10~0.25	0.20~1.50	MVQNR/L MVVNN MVUNR/L	B112 B112 B133
VNMG-VF Finishing	160402-VF		●						●				●			●							16.1	9.525	4.76	0.2	3.81	0.06~0.20	0.30~1.00	MVJNR/L	B111
	160404-VF	●	●	●				●								●							15.6	9.525	4.76	0.4	3.81	0.08~0.30	0.50~1.50	MVQNR/L MVVNN MVUNR/L	B112 B112 B133
	160408-VF		●	●				●															14.6	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

VNOO

Rhombic **35° Negative**

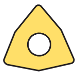


Workpiece		Machining types
Steel	P	● Continuous cutting
Stainless steel	M	⬬ General cutting
Cast iron	K	✱ Interrupted cutting
Non-ferrous metal	N	
Heat resistant alloy, Titanium alloy	S	
Hardened steel	H	

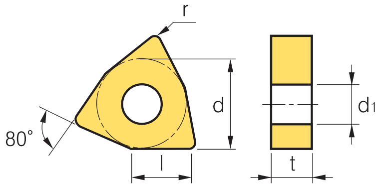
Inserts	Designation	Coated											Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
VNMG-VG Finishing	160404-VG																						15.6	9.525	4.76	0.4	3.81	0.08~0.30	0.50~1.50	MVJNR/L MVQNR/L MVVNN MVUNR/L	**B111** **B112** **B112** **B133**
	160408-VG																						14.6	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50		
VNMG-VM Medium	160404-VM	●		●	●			●		●	●			●		●							15.6	9.525	4.76	0.4	3.81	0.08~0.45	0.50~3.50	MVJNR/L MVQNR/L MVVNN MVUNR/L	**B111** **B112** **B112** **B133**
	160408-VM	●	●	●	●			●	●	●	●	●		●		●							14.6	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00		
	160412-VM			●																			13.6	9.525	4.76	1.2	3.81	0.20~0.50	1.50~4.00		
	220404-VM																						21.1	12.7	4.76	0.4	5.16	0.08~0.45	1.00~5.00		
	220408-VM																						20.0	12.7	4.76	0.8	5.16	0.10~0.50	1.50~5.00		
VNMG-VQ Medium to finishing	160404-VQ														●	●		●					15.6	9.525	4.76	0.4	3.81	0.10~0.40	0.50~3.50	MVJNR/L MVQNR/L MVVNN MVUNR/L	**B111** **B112** **B112** **B133**
	160408-VQ															●		●					14.6	9.525	4.76	0.8	3.81	0.12~0.45	0.50~3.50		
VNMG-VK Medium Roughing	160412-VK													●									13.6	9.525	4.76	1.2	3.81	0.15~0.50	0.80~4.00	MVJNR/L MVQNR/L MVVNN MVUNR/L	**B111** **B112** **B112** **B133**

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

WN○○



Trigon 80° Negative



Workpiece		Grade marks
Steel	P	NC3010 ●, NC3120 ◐, NC3220 ◐, NC3030 ✚, NC5330 ◐, CN1000 ●, CN2000 ◐, CN20 ◐, CC105 ●, CC115 ●
Stainless steel	M	NC3030 ◐, NC9020 ◐, NC9025 ◐, NC5330 ◐, PC8110 ●, PC5300 ◐, PC9030 ◐, U20 ◐
Cast iron	K	NC5330 ◐, NC6205 ●, NC6210 ◐, NC315K ✚, CN1000 ●, H01 ●, G10 ◐
Non-ferrous metal	N	
Heat resistant alloy, Titanium alloy	S	NC5330 ◐, PC8110 ●, PC5300 ◐
Hardened steel	H	

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

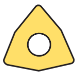
Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
		Coated													Cermet			Coated		Uncoated		
WNMA  Roughing	060404																					
	060408												●									
	060412																					
	080404																					
	080408											●	●	●								
	080412												●									
WNMG-B25  Medium Roughing	080404-B25																					
	080408-B25			●	●								●									
	080412-B25																					
WNMG-GM  Medium	060404-GM																					
	060408-GM	●			●																	
	080404-GM				●																	
	080408-GM	●	●		●																	
	080412-GM	●											●									
WNMG-GR  Roughing	080404-GR																					
	080408-GR	●	●	●	●			●					●	●								
	080412-GR	●	●	●	●			●						●								
	080416-GR	●																				
WNMG-GS  Medium Roughing	060404-GS								●													
	060408-GS								●	●												
	060412-GS																					
	080404-GS					●			●	●	●											
	080408-GS			●		●	●		●	●	●											
	080412-GS																					
WNMG-HA  Medium to finishing	060404-HA								●		●										●	
	060408-HA										●										●	
	080404-HA		●			●			●		●										●	
	080408-HA						●		●		●										●	
	080412-HA																					
WNMG-HC  Medium to finishing	060404-HC																					
	080404-HC																					
	080408-HC				●			●														
WNMG-HR  Roughing	060408-HR																					
	060412-HR																					
	080408-HR	●			●																	
	080412-HR	●			●																	
	080416-HR																					

Inserts	Designation	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)	Available tool holders Designation	Page
WNMA	060404	6.2	9.525	4.76	0.4	3.81	0.10~0.30	0.50~3.00	MWLNR/L	B112
	060408	6.1	9.525	4.76	0.8	3.81	0.10~0.30	0.50~3.00	PWLNR/L	B130
	060412	6.0	9.525	4.76	1.2	3.81	0.10~0.40	1.00~3.00	WWLNR/L	B103
	080404	8.4	12.7	4.76	0.4	5.16	0.15~0.60	1.00~5.00		
	080408	8.3	12.7	4.76	0.8	5.16	0.15~0.60	1.00~6.00		
	080412	8.2	12.7	4.76	1.2	5.16	0.15~0.70	1.50~6.00		
WNMG-B25	080404-B25	8.4	12.7	4.76	0.4	5.16	0.17~0.45	1.00~5.00	MWLNR/L	B112
	080408-B25	8.3	12.7	4.76	0.8	5.16	0.23~0.60	1.50~5.00	PWLNR/L	B130
	080412-B25	8.2	12.7	4.76	1.2	5.16	0.25~0.60	2.00~5.00	WWLNR/L	B103
WNMG-GM	060404-GM	6.2	9.525	4.76	0.4	3.81	0.05~0.30	0.90~3.50	MWLNR/L	B112
	060408-GM	6.1	9.525	4.76	0.8	3.81	0.10~0.45	1.00~3.50	PWLNR/L	B130
	080404-GM	8.4	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00	WWLNR/L	B103
	080408-GM	8.3	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00		
	080412-GM	8.2	12.7	4.76	1.2	5.16	0.18~0.60	0.30~5.00		
WNMG-GR	080404-GR	8.4	12.7	4.76	0.4	5.16	0.15~0.50	0.08~6.00	MWLNR/L	B112
	080408-GR	8.3	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	PWLNR/L	B130
	080412-GR	8.2	12.7	4.76	1.2	5.16	0.25~0.50	1.30~7.00	WWLNR/L	B103
	080416-GR	8.1	12.7	4.76	1.6	5.16	0.25~0.60	1.80~6.00		
WNMG-GS	060404-GS	6.2	9.525	4.76	0.4	3.81	0.05~0.25	0.10~3.00	MWLNR/L	B112
	060408-GS	6.1	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00	PWLNR/L	B130
	060412-GS	6.0	9.525	4.76	1.2	3.81	0.10~0.50	1.00~4.00	WWLNR/L	B103
	080404-GS	8.4	12.7	4.76	0.4	5.16	0.05~0.25	0.10~3.00		
	080408-GS	8.3	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00		
	080412-GS	8.2	12.7	4.76	1.2	5.16	0.13~0.65	1.00~5.00		
WNMG-HA	060404-HA	6.2	9.525	4.76	0.4	3.81	0.05~0.30	0.10~3.00	MWLNR/L	B112
	060408-HA	6.1	9.525	4.76	0.8	3.81	0.10~0.40	0.80~3.50	PWLNR/L	B130
	080404-HA	8.4	12.7	4.76	0.4	5.16	0.05~0.30	0.80~3.50	WWLNR/L	B103
	080408-HA	8.3	12.7	4.76	0.8	5.16	0.10~0.40	0.80~3.50		
	080412-HA	8.2	12.7	4.76	1.2	5.16	0.13~0.55	0.80~3.50		
WNMG-HC	060404-HC	6.2	9.525	4.76	0.4	3.81	0.05~0.30	0.80~4.00	MWLNR/L	B112
	080404-HC	8.4	12.7	4.76	0.4	5.16	0.05~0.30	0.80~4.00	PWLNR/L	B130
	080408-HC	8.3	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00	WWLNR/L	B103
WNMG-HR	060408-HR	6.1	9.525	4.76	0.8	3.81	0.20~0.40	1.00~5.50	MWLNR/L	B112
	060412-HR	6.0	9.525	4.76	1.2	3.81	0.25~0.50	1.10~5.50	PWLNR/L	B130
	080408-HR	8.3	12.7	4.76	0.8	5.16	0.20~0.50	1.00~7.00	WWLNR/L	B103
	080412-HR	8.2	12.7	4.76	1.2	5.16	0.25~0.65	1.30~7.00		
	080416-HR	8.1	12.7	4.76	1.6	5.16	0.32~0.70	1.80~7.00		

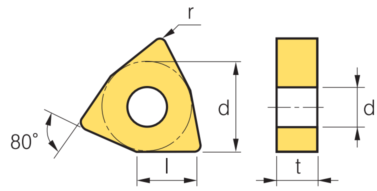
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

WN○○

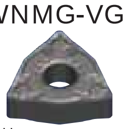


Trigon **80° Negative**



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Steel	P	●	◐	◐	✱			◐							●	◐	◐	●	●			
Stainless steel	M				◐	◐	◐	◐	●	◐	◐									◐		
Cast iron	K							◐				●	◐	✱	●						●	◐
Non-ferrous metal	N																					
Heat resistant alloy, Titanium alloy	S							◐	●	◐												
Hardened steel	H																					

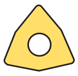
Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
WNMG-HS	060404-HS									●	●												6.2	9.525	4.76	0.4	3.81	0.05~0.20	1.00~2.50	MWLNR/L	B112
	060408-HS						●		●	●	●												6.1	9.525	4.76	0.8	3.81	0.10~0.20	1.00~2.50	PWLNR/L	B130
	060412-HS										●												6.0	9.525	4.76	1.2	3.81	0.10~0.30	1.00~3.50	WWLNR/L	B103
	080404-HS						●		●		●												8.4	12.7	4.76	0.4	5.16	0.05~0.30	1.00~4.50		
	080408-HS					●	●		●	●	●												8.3	12.7	4.76	0.8	5.16	0.10~0.40	1.00~4.50		
Medium	080412-HS						●				●												8.2	12.7	4.76	1.2	5.16	0.13~0.55	1.00~4.50		
WNMG-LW	060408-LW	●																					6.1	9.525	4.76	0.8	3.81	0.15~0.60	0.50~3.50	MWLNR/L	B112
	060412-LW																						6.0	9.525	4.76	1.2	3.81	0.20~0.70	0.80~3.50	PWLNR/L	B130
	080408-LW	●						●															8.3	12.7	4.76	0.8	5.16	0.15~0.60	1.00~5.00	WWLNR/L	B103
Wiper Medium	080412-LW	●											●										8.2	12.7	4.76	1.2	5.16	0.20~0.70	1.00~6.00		
WNMG-VL	060404-VL																						6.2	9.525	4.76	0.4	3.81	0.05~0.25	0.20~1.50	MWLNR/L	B112
	080404-VL			●																			8.4	12.7	4.76	0.4	5.16	0.05~0.25	0.10~1.00	PWLNR/L	B130
Finishing(Mild steel)	080408-VL	●		●				●															8.3	12.7	4.76	0.8	5.16	0.10~0.35	0.20~1.50	WWLNR/L	B103
WNMG-VB	080404-VB	●		●				●	●														8.4	12.7	4.76	0.4	5.16	0.10~0.35	0.30~1.50	MWLNR/L	B112
	080408-VB	●		●				●															8.3	12.7	4.76	0.8	5.16	0.15~0.45	0.50~2.00	PWLNR/L	B130
Finishing																														WWLNR/L	B103
WNMG-VC	080404-VC																						8.4	12.7	4.76	0.4	5.16	0.15~0.40	0.15~4.00	MWLNR/L	B112
	080408-VC			●																			8.3	12.7	4.76	0.8	5.16	0.15~0.45	0.15~4.50	PWLNR/L	B130
Medium to finishing	080412-VC				●			●															8.3	12.7	4.76	1.2	5.16	0.15~0.45	0.15~4.50	WWLNR/L	B103
WNMG-VF	060404-VF	●						●								●							6.1	9.525	4.76	0.4	3.81	0.07~0.30	0.50~1.50	MWLNR/L	B112
	060408-VF	●		●																			6.1	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50	PWLNR/L	B130
	080404-VF	●	●					●															8.4	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50	WWLNR/L	B103
Finishing	080408-VF			●				●															8.3	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50		
WNMG-VG	060404-VG																						6.2	9.525	4.76	0.4	3.81	0.07~0.30	0.50~1.50	MWLNR/L	B112
	060408-VG																						6.1	9.525	4.76	0.8	3.81	0.10~0.40	0.50~1.50	PWLNR/L	B130
	080404-VG															●							8.4	12.7	4.76	0.4	5.16	0.07~0.30	0.50~1.50	WWLNR/L	B103
Finishing	080408-VG																						8.3	12.7	4.76	0.8	5.16	0.10~0.40	0.50~1.50		

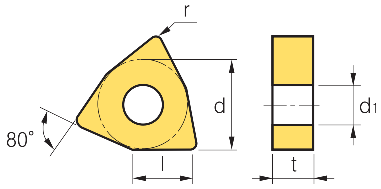
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

WN○○



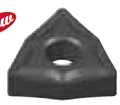
Trigon **80° Negative**



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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

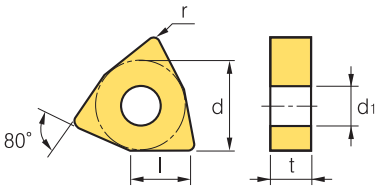
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)	Available tool holders Designation	Page
WNMG-VM  Medium	060402-VM																						6.5	9.525	4.76	0.2	3.81	0.05~0.30	0.90~3.50	MWLNR/L	B112
	060404-VM	●		●	●			●															6.2	9.525	4.76	0.4	3.81	0.10~0.45	1.00~3.50	PWLNR/L	B130
	060408-VM	●	●	●	●			●		●				●									6.1	9.525	4.76	0.8	3.81	0.10~0.50	1.00~4.00	WWLNR/L	B103
	060412-VM																						6.0	9.525	4.76	1.2	3.81	0.13~0.60	1.30~4.00		
	080404-VM		●	●				●			●			●									8.4	12.7	4.76	0.4	5.16	0.05~0.30	0.90~5.00		
	080408-VM	●	●	●	●			●	●	●	●	●		●									8.3	12.7	4.76	0.8	5.16	0.10~0.50	1.00~5.00		
	080412-VM		●	●	●			●		●				●									8.2	12.7	4.76	1.2	5.16	0.10~0.50	1.00~5.00		
WNMG-VQ  Medium to finishing	060404-VQ															●							6.2	9.525	4.76	0.4	3.81	0.05~0.30	0.50~4.00	MWLNR/L	B112
	060408-VQ																						6.1	9.525	4.76	0.8	3.81	0.08~0.30	0.80~4.00	PWLNR/L	B130
	080404-VQ														●	●							8.4	12.7	4.76	0.4	5.16	0.05~0.30	0.50~4.00	WWLNR/L	B103
	080408-VQ																						8.3	12.7	4.76	0.8	5.16	0.08~0.40	0.80~4.00		
WNMG-VW  Finishing(Wiper)	080404-VW																						8.4	12.7	4.76	0.4	5.16	0.10~0.30	0.50~3.00	MWLNR/L	B112
	080408-VW																						8.3	12.7	4.76	0.8	5.16	0.15~0.50	0.50~4.00	PWLNR/L	B130
																														WWLNR/L	B103
WNMG-VK  Medium Roughing	080404-VK													●									8.4	12.7	4.76	0.4	5.16	0.15~5.00	0.08~6.00	MWLNR/L	B112
	080408-VK												●	●									8.3	12.7	4.76	0.8	5.16	0.20~5.00	1.00~7.00	PWLNR/L	B130
	080412-VK												●	●									8.2	12.7	4.76	1.2	5.16	0.25~5.00	1.30~7.00	WWLNR/L	B103
	080416-VK																						8.1	12.7	4.76	1.6	5.16	0.25~6.00	1.89~6.00		
WNMG-VP2 New  Medium to finishing	080404-VP2			●					●	●	●												8.4	12.7	4.76	0.4	5.16	0.10~0.45	0.50~5.00	MWLNR/L	B112
	080408-VP2			●					●	●	●												8.3	12.7	4.76	0.8	5.16	0.12~0.50	0.50~5.00	PWLNR/L	B130
	080412-VP2																						8.2	12.7	4.76	1.2	5.16	0.05~0.30	0.10~3.00	WWLNR/L	B103
WNMG-VP3 New  Medium	080404-VP3										●												8.4	12.7	4.76	0.4	5.16	0.10~0.45	0.50~5.00	MWLNR/L	B112
	080408-VP3								●	●	●												8.3	12.7	4.76	0.8	5.16	0.12~0.50	0.50~5.00	PWLNR/L	B130
	080412-VP3								●	●													8.2	12.7	4.76	1.2	5.16	0.05~0.30	0.10~3.00	WWLNR/L	B103
WNMM-B25  Medium Roughing	100608-B25				●																		10.0	15.875	6.35	0.8	6.35	0.30~0.80	3.00~8.00	MWLNR/L	B112
	130612-B25																						12.0	19.05	6.35	1.2	7.93	0.40~0.90	4.00~10.00	PWLNR/L	B130
																														WWLNR/L	B103

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

WN○○

Trigon 80° Negative



Workpiece			NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
	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	Coated														Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
WNMX-SH (New)	080404R-SH																						8.4	12.7	4.76	0.4	5.16	0.15~0.30	1.00~4.00	MWLNR/L	B112
	080408R-SH																						8.3	12.7	4.76	0.8	5.16	0.15~0.50	1.50~5.00	PWLNR/L	B130
	080404L-SH																						8.4	12.7	4.76	0.4	5.16	0.15~0.30	1.00~4.00	WWLNR/L	B103
	080408L-SH																						8.3	12.7	4.76	0.8	5.16	0.15~0.50	1.50~5.00		

Medium

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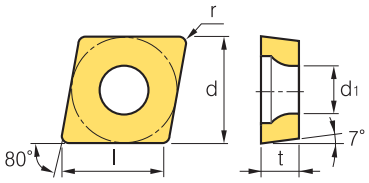
Rhombic 80° Positive

Relief Angle : 7°



Workpiece			NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
	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	Coated														Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
CCET	0301005R																						3.6	3.5	1.39	0.05	1.9	0.01~0.05	0.10~0.30	SCLCR/L	B141
	030101R																						3.5	3.5	1.39	0.1	1.9	0.01~0.05	0.10~0.30		
	030102R																						3.3	3.5	1.39	0.2	1.9	0.01~0.05	0.10~0.30		
	030104R																						3.1	3.5	1.39	0.4	1.9	0.01~0.05	0.10~0.30		
	0401005R																						4.3	4.3	1.79	0.05	2.3	0.01~0.10	0.10~0.50		
	040101R																						4.2	4.3	1.79	0.1	2.3	0.01~0.10	0.10~0.50		
	040102R																						4.1	4.3	1.79	0.2	2.3	0.01~0.10	0.10~0.50		
	040104R																						3.9	4.3	1.79	0.4	2.3	0.01~0.10	0.10~0.50		
	0301005L																						3.6	3.5	1.39	0.05	1.9	0.01~0.05	0.10~0.30		
	030101L																						3.5	3.5	1.39	0.1	1.9	0.01~0.05	0.10~0.30		
	030102L										●				●	●					●		3.3	3.5	1.39	0.2	1.9	0.01~0.05	0.10~0.30		
	030104L																						3.1	3.5	1.39	0.4	1.9	0.01~0.05	0.10~0.30		
	0401005L																						4.3	4.3	1.79	0.05	2.3	0.01~0.10	0.10~0.50		
	040101L																						4.2	4.3	1.79	0.1	2.3	0.01~0.10	0.10~0.50		
	040102L										●				●	●					●		4.1	4.3	1.79	0.2	2.3	0.01~0.10	0.10~0.50		
	040104L																						3.9	4.3	1.79	0.4	2.3	0.01~0.10	0.10~0.50		

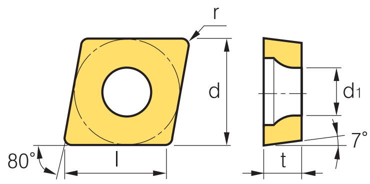
Finishing

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

CC○○

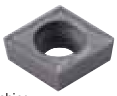
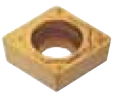
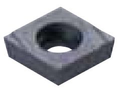
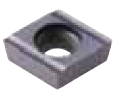
Rhombic 80° Positive

Relief Angle : 7°



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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	NC3010 (Coated)	NC3120 (Coated)	NC3220 (Coated)	NC3030 (Coated)	NC9020 (Coated)	NC9025 (Coated)	NC5330 (Coated)	PC8110 (Coated)	PC5300 (Coated)	PC9030 (Coated)	NC6205 (Coated)	NC6210 (Coated)	NC315K (Coated)	CN1000 (Cermet)	CN2000 (Cermet)	CN20 (Cermet)	CC105 (Coated)	CC115 (Coated)	U20 (Uncoated)	H01 (Uncoated)	G10 (Uncoated)	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)	Available tool holders Designation	Page
CCGT-C05  Finishing	060202-C05																						6.2	6.35	2.38	0.2	2.8	0.06~0.11	0.06~1.70	SCACR/L	B113
	060204-C05																						6.0	6.35	2.38	0.4	2.8	0.08~0.17	0.10~1.70	SCLCR/L	B113
	09T304-C05																						9.2	9.525	3.97	0.4	4.4	0.11~0.23	0.10~2.00		
	09T308-C05																						8.8	9.525	3.97	0.8	4.4	0.08~0.30	0.20~2.00		
	120404-C05																						12.4	12.7	4.76	0.4	5.5	0.07~0.27	0.10~2.70		
	120408-C05																						12.0	12.7	4.76	0.8	5.5	0.08~0.30	0.20~2.70		
CCGT-HFP  Finishing	060202-HFP																						6.2	6.35	2.38	0.2	2.8	0.03~0.06	0.06~1.20	SCACR/L	B113
	060204-HFP									●													6.0	6.35	2.38	0.4	2.8	0.05~0.12	0.10~1.20	SCLCR/L	B113
	060208-HFP																						5.6	6.35	2.38	0.8	2.8	0.05~0.12	0.12~1.40		
	09T302-HFP																						9.4	9.525	3.97	0.2	4.4	0.04~0.16	0.08~1.50		
	09T304-HFP				●					●	●												9.2	9.525	3.97	0.4	4.4	0.06~0.18	0.10~1.50		
	09T308-HFP									●													8.8	9.525	3.97	0.8	4.4	0.08~0.25	0.20~1.50		
	120404-HFP																						12.4	12.7	4.76	0.4	5.5	0.06~0.20	0.10~2.00		
	120408-HFP																						12.0	12.7	4.76	0.8	5.5	0.10~0.25	0.20~2.00		
CCGT-KF  Finishing	0602003R-KF																						6.5	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30	SCACR/L	B113
	060201R-KF																						6.5	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50	SCLCR/L	B113
	060202R-KF																						6.5	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.70		
	09T3003R-KF																						9.7	9.525	3.97	0.03	4.4	0.02~0.08	0.05~1.50		
	09T301R-KF																						9.7	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	09T302R-KF																						9.7	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		
	0602003L-KF																						6.5	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30		
	060201L-KF																						6.5	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50		
	060202L-KF																						6.5	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.70		
	09T3003L-KF																						9.7	9.525	3.97	0.03	4.4	0.02~0.08	0.05~1.50		
	09T301L-KF																						9.7	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	09T302L-KF																						9.7	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		
CCGT-KM  Medium	0602003R-KM																						6.5	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30	SCACR/L	B113
	060201R-KM																						6.5	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50	SCLCR/L	B113
	060202R-KM										●												6.5	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.70		
	09T3003R-KM																						9.7	9.525	3.97	0.03	4.4	0.02~0.08	0.06~1.50		
	09T301R-KM																						9.7	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	09T302R-KM																						9.7	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		
	0602003L-KM																						6.5	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30		
	060201L-KM																						6.5	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50		
	060202L-KM																						6.5	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.70		
	09T3003L-KM																						9.7	9.525	3.97	0.03	4.4	0.02~0.08	0.06~1.50		
	09T301L-KM																						9.7	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	09T302L-KM																						9.7	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		

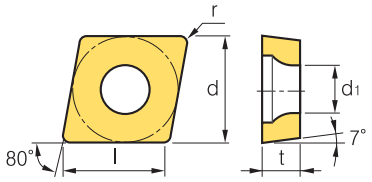
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

CC○○

Rhombic **80° Positive**

Relief Angle : 7°

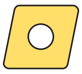


Workpiece			Machining types	
	Steel	P	●	Continuous cutting
	Stainless steel	M	⬣	General cutting
	Cast iron	K	✱	Interrupted cutting
	Non-ferrous metal	N		
	Heat resistant alloy, Titanium alloy	S		
	Hardened steel	H		

Inserts	Designation	Coated												Cermet		Coated		Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	H01	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
CCGT-VP1 New Finishing	060201-VP1								●	●													6.4	6.35	2.38	0.1	2.8	0.05~0.06	0.06~1.00	SCACR/L SCLCR/L	B113 B113
	060202-VP1								●	●													6.2	6.35	2.38	0.2	2.8	0.03~0.10	0.08~1.50		
	060204-VP1			●					●	●													6.0	6.35	2.38	0.4	2.8	0.05~0.12	0.10~1.50		
	09T301-VP1								●	●													9.6	9.525	3.97	0.1	4.4	0.03~0.13	0.06~1.00		
	09T302-VP1								●	●													9.2	9.525	3.97	0.2	4.4	0.04~0.15	0.08~1.50		
	09T304-VP1			●					●	●													8.8	9.525	3.97	0.4	4.4	0.06~0.20	0.10~1.50		
CCMT-C25 Medium	060202-C25			●	●																		6.2	6.35	2.38	0.2	2.8	0.03~0.12	0.40~2.00	SCACR/L SCLCR/L	B113 B113
	060204-C25	●	●	●	●			●			●	●		●				●					6.0	6.35	2.38	0.4	2.8	0.05~0.15	0.60~2.30		
	060208-C25			●	●									●									5.6	6.35	2.38	0.8	2.8	0.07~0.20	0.80~2.30		
	080308-C25			●																			7.2	7.94	3.18	0.8	3.4	0.08~0.25	0.80~2.30		
	09T304-C25	●	●	●	●	●		●	●	●	●	●		●		●		●					9.2	9.525	3.97	0.4	4.4	0.08~0.25	0.80~3.00		
	09T308-C25	●	●	●	●	●		●		●	●	●		●				●					8.8	9.525	3.97	0.8	4.4	0.10~0.30	1.00~3.00		
	120404-C25			●	●			●		●				●									12.4	12.7	4.76	0.4	5.5	0.10~0.32	0.80~3.00		
	120408-C25	●	●	●	●			●		●				●									12.0	12.7	4.76	0.8	5.5	0.12~0.36	1.20~3.50		
	120412-C25																						11.6	12.7	4.76	1.2	5.5	0.15~0.40	1.40~3.50		
CCMT-HFP Finishing	060202-HFP																						6.2	6.35	2.38	0.2	2.8	0.03~0.06	0.08~1.20	SCACR/L SCLCR/L	B113 B113
	060204-HFP																						6.0	6.35	2.38	0.4	2.8	0.05~0.12	0.10~1.20		
	060208-HFP																						5.6	6.35	2.38	0.8	2.8	0.05~0.12	0.10~1.40		
	09T302-HFP								●														9.4	9.525	3.97	0.2	4.4	0.04~0.16	0.08~1.50		
	09T304-HFP				●																		9.2	9.525	3.97	0.4	4.4	0.06~0.18	0.10~1.50		
	09T308-HFP																						0.8	9.525	3.97	0.8	4.4	0.08~0.25	0.20~1.50		
	120404-HFP																						2.4	12.7	4.76	0.4	5.5	0.07~0.22	0.10~2.00		
	120408-HFP																						12.0	12.7	4.76	0.8	5.5	0.08~0.30	0.12~2.20		
CCMT-HMP Medium to finishing	060202-HMP	●		●		●			●			●											6.2	6.35	2.38	0.2	2.8	0.03~0.12	0.10~1.50	SCACR/L SCLCR/L	B113 B113
	060204-HMP	●	●	●	●	●		●	●	●		●		●	●	●							6.0	6.35	2.38	0.4	2.8	0.06~0.17	0.20~2.40		
	060208-HMP	●		●	●			●	●			●											5.6	6.35	2.38	0.8	2.8	0.08~0.23	0.40~2.40		
	09T302-HMP			●		●		●	●			●											9.4	9.525	3.97	0.2	4.4	0.07~0.22	0.10~2.00		
	09T304-HMP	●	●	●	●	●		●	●	●		●		●		●				●			9.2	9.525	3.97	0.4	4.4	0.08~0.23	0.30~3.00		
	09T308-HMP	●	●	●	●	●		●	●	●		●		●	●								8.8	9.525	3.97	0.4	4.4	0.10~0.30	0.50~3.00		
	120404-HMP			●	●	●				●		●		●	●								12.4	12.7	4.76	0.4	5.5	0.09~0.27	0.30~3.60		
	120408-HMP	●	●	●	●			●		●		●		●	●								12.0	12.7	4.76	0.8	5.5	0.24~0.36	1.00~3.60		
	120412-HMP																						11.6	12.7	4.76	1.2	5.5	0.14~0.43	0.70~3.60		
CCMT-VL New Finishing	09T304-VL	●		●				●	●								●						9.4	9.525	3.97	0.4	4.4	0.05~0.10	0.10~1.00	SCACR/L SCLCR/L	B113 B113
	09T308-VL			●				●	●														9.2	9.525	3.97	0.8	4.4	0.08~0.15	0.10~1.00		
CCMT-VF Finishing	060202-VF	●		●					●	●				●		●							6.2	6.35	2.38	0.2	2.8	0.05~0.20	0.30~1.00	SCACR/L SCLCR/L	B113 B113
	060204-VF	●		●					●	●							●						6.0	6.35	2.38	0.4	2.8	0.10~0.25	0.30~1.00		
	09T302-VF	●		●					●														9.4	9.525	3.97	0.2	4.4	0.04~0.16	0.80~1.50		
	09T304-VF	●		●					●	●				●		●	●						9.2	9.525	3.97	0.4	4.4	0.05~0.20	0.30~1.50		
	09T308-VF			●				●		●				●									8.8	9.525	3.97	0.8	4.4	0.10~0.25	0.30~1.50		
	120404-VF	●		●										●									12.4	12.70	4.76	0.4	5.5	0.07~0.22	0.10~2.00		

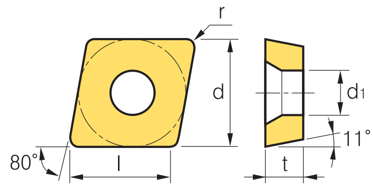
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

CP○○



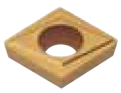
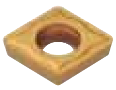
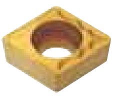
Rhombic **80° Positive**

Relief Angle : 11°



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
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	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: ST30A	H01	G10
CPGT  Finishing	080202															●						
	080204														●	●						
	080208																					
	090302																					
	090304														●	●						
	090308																					
CPGT-C05  Finishing	080204-C05			●																		
	080208-C05																					
	090304-C05			●																		
	090308-C05																					
CPGT-HMP  Medium to finishing	090308-HMP																					
CPMT-VF  Finishing	080204-VF																					
	080208-VF																					
	090304-VF							●														
	090308-VF							●														

Designation	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
080202	7.8	7.94	2.38	0.2	3.4	0.06~0.20	0.10~2.00	SCLPR/L	**B134**
080204	7.6	7.94	2.38	0.4	3.4	0.08~0.20	0.30~2.00		
080208	7.2	7.94	2.38	0.8	3.4	0.10~0.25	0.50~2.00		
090302	9.4	9.525	3.18	0.2	4.4	0.04~0.20	0.30~1.50		
090304	9.2	9.525	3.18	0.4	4.4	0.06~0.25	0.50~2.00		
090308	8.8	9.525	3.18	0.8	4.4	0.08~0.30	0.70~2.50		
080204-C05	7.6	7.94	2.38	0.4	3.4	0.02~0.15	0.50~1.70	SCLPR/L	**B134**
080208-C05	7.2	7.94	2.38	0.8	3.4	0.04~0.18	0.50~1.70		
090304-C05	9.2	9.525	3.18	0.4	4.4	0.03~0.20	0.70~2.00		
090308-C05	8.8	9.525	3.18	0.8	4.4	0.05~0.20	0.70~2.00		
090308-HMP	8.8	9.525	3.18	0.8	4.4	0.05~0.20	0.70~2.00	SCLPR/L	**B134**
080204-VF	7.6	7.94	2.38	0.4	3.4	0.05~0.20	0.30~1.20	SCLPR/L	**B134**
080208-VF	7.6	7.94	2.38	0.8	3.4	0.10~0.25	0.30~1.20		
090304-VF	9.2	9.525	3.18	0.4	4.4	0.05~0.20	0.30~1.50		
090308-VF	8.8	9.525	3.18	0.8	4.4	0.10~0.25	0.30~1.50		

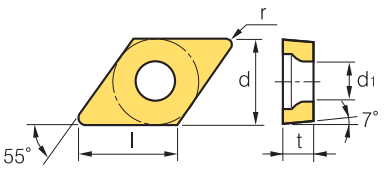
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

DC○○

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	Coated												Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	A30	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
DCGT-C05	070202-C05																						7.5	6.35	2.38	0.2	2.8	0.06~0.11	0.06~1.50	SDACR/L	B113
	070204-C05																						7.3	6.35	2.38	0.4	2.8	0.05~0.17	0.08~1.50	SDJCR/L	B114, 167
	11T302-C05																						11.4	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00	SDNCN	B114, 168
	11T304-C05																●						11.2	9.525	3.97	0.4	4.4	0.06~0.23	0.10~2.00	SDQCR/L	B135
Finishing	11T308-C05																						10.8	9.525	3.97	0.8	4.4	0.08~0.30	0.20~2.00	SDUCR/L	B135
																														SDZCR/L	B136
DCGT-HFP	070202-HFP																						7.5	6.35	2.38	0.2	2.8	0.03~0.10	0.06~1.00	SDACR/L	B113
	070204-HFP																						7.3	6.35	2.38	0.4	2.8	0.05~0.12	0.08~1.00	SDJCR/L	B114, 167
	070208-HFP																						6.8	6.35	2.38	0.8	2.8	0.06~0.12	0.10~1.00	SDNCN	B114, 168
	11T301-HFP																						11.5	9.525	3.97	0.1	4.4	0.03~0.13	0.06~1.00	SDQCR/L	B135
	11T302-HFP																●						11.4	9.525	3.97	0.2	4.4	0.04~0.15	0.08~1.50	SDUCR/L	B135
	11T304-HFP									●													11.2	9.525	3.97	0.4	4.4	0.06~0.20	0.10~1.50	SDZCR/L	B136
Finishing	11T308-HFP	●								●													10.8	9.525	3.97	0.8	4.4	0.08~0.25	0.20~1.50		
DCGT-VP1 New	070201-VP1								●	●													7.7	6.35	2.38	0.1	2.8	0.03~0.06	0.06~1.00	SDACR/L	B113
	070202-VP1								●	●													7.5	6.35	2.38	0.2	2.8	0.03~0.10	0.08~1.50	SDJCR/L	B114
	070204-VP1			●					●	●													7.3	6.35	2.38	0.4	2.8	0.05~0.12	0.10~1.50	SDNCN	B114
	11T301-VP1								●	●													11.6	9.525	3.97	0.1	4.4	0.03~0.13	0.06~1.00		
	11T302-VP1								●	●													11.4	9.525	3.97	0.2	4.4	0.04~0.15	0.08~1.50		
Finishing	11T304-VP1								●	●													11.2	9.525	3.97	0.4	4.4	0.06~0.20	0.10~1.50		
DCGT-KF	0702003R-KF																						7.8	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30	SDJCR/L	B114, 167
	070201R-KF										●												7.8	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50	SDNCN	B114, 168
	070202R-KF																						7.8	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.50		
	11T3003R-KF																						11.6	9.525	3.97	0.03	4.4	0.02~0.08	0.05~1.50		
	11T301R-KF										●												11.6	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	11T302R-KF																						11.6	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		
	0702003L-KF																						7.8	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30		
	070201L-KF																						7.8	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50		
Finishing	070202L-KF																						7.8	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.50		
	11T3003L-KF																						11.6	9.525	3.97	0.03	4.4	0.02~0.08	0.05~1.50		
	11T301L-KF																						11.6	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	11T302L-KF																						11.6	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		
DCGT-KM	0702003R-KM																						7.8	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30	SDJCR/L	B114, 167
	070201R-KM																						7.8	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50	SDNCN	B114, 168
	070202R-KM																						7.8	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.50		
	11T3003R-KM																						11.6	9.525	3.97	0.03	4.4	0.02~0.08	0.05~1.50		
	11T301R-KM																						11.6	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	11T302R-KM																						11.6	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		
	0702003L-KM																						7.8	6.35	2.38	0.03	2.8	0.01~0.06	0.04~1.30		
	070201L-KM																						7.8	6.35	2.38	0.1	2.8	0.02~0.08	0.05~1.50		
Medium to finishing	070202L-KM																						7.8	6.35	2.38	0.2	2.8	0.03~0.11	0.06~1.50		
	11T3003L-KM																						11.6	9.525	3.97	0.03	4.4	0.02~0.08	0.05~1.50		
	11T301L-KM																						11.6	9.525	3.97	0.1	4.4	0.03~0.11	0.06~1.70		
	11T302L-KM																						11.6	9.525	3.97	0.2	4.4	0.04~0.15	0.08~2.00		

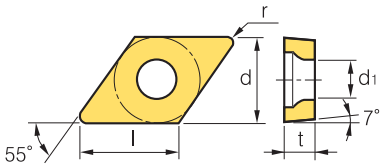
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

DC○○

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		

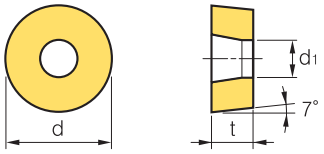
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
DCMT-C25	070202-C25															●	●						7.5	6.35	2.38	0.2	2.8	0.03~0.15	0.30~2.00	SDACR/L	B113
	070204-C25			●	●						●	●					●						7.3	6.35	2.38	0.4	2.8	0.05~0.20	0.50~2.50	SDJCR/L	B114
	070208-C25			●	●						●												6.8	6.35	2.38	0.8	2.8	0.06~0.25	0.80~2.50	SDNCN	B114
	11T302-C25																●						11.3	9.525	3.97	0.2	4.4	0.04~0.25	0.50~2.50	SDQCR/L	B135
	11T304-C25	●	●	●	●	●		●			●	●		●		●	●	●					11.2	9.525	3.97	0.4	4.4	0.08~0.30	0.80~3.00	SDUCR/L	B135
	11T308-C25	●	●	●	●	●		●			●	●		●	●		●	●					10.8	9.525	3.97	0.8	4.4	0.10~0.30	1.00~3.00	SDZCR/L	B136
Medium																														
DCMT-HFP	070202-HFP							●															7.5	6.35	2.38	0.2	2.8	0.03~0.10	0.06~1.00	SDACR/L	B113
	070204-HFP																						7.3	6.35	2.38	0.4	2.8	0.05~0.12	0.08~1.00	SDJCR/L	B114
	070208-HFP																						6.8	6.35	2.38	0.8	2.8	0.06~0.12	0.10~1.00	SDNCN	B114
	11T301-HFP																						11.5	9.525	3.97	0.1	4.4	0.03~0.13	0.06~1.00	SDQCR/L	B135
	11T302-HFP							●															11.4	9.525	3.97	0.2	4.4	0.04~0.15	0.08~1.50	SDUCR/L	B135
	11T304-HFP								●														11.2	9.525	3.97	0.4	4.4	0.06~0.20	0.10~1.50	SDZCR/L	B136
	11T308-HFP																						10.8	9.525	3.97	0.8	4.4	0.08~0.25	0.20~1.50		
Finishing																														
DCMT-HMP	070202-HMP			●	●							●											7.5	6.35	2.38	0.2	2.8	0.03~0.12	0.10~1.50	SDACR/L	B113
	070204-HMP	●	●	●	●	●		●	●	●		●		●			●						7.3	6.35	2.38	0.4	2.8	0.06~0.17	0.20~2.30	SDJCR/L	B114
	070208-HMP		●	●	●			●															6.8	6.35	2.38	0.8	2.8	0.08~0.23	0.40~2.30	SDNCN	B114
	11T302-HMP			●	●			●	●			●											11.4	9.525	3.97	0.2	4.4	0.04~0.22	0.10~2.00	SDQCR/L	B135
	11T304-HMP	●	●	●	●	●		●	●	●		●		●	●	●	●			●			11.2	9.525	3.97	0.4	4.4	0.08~0.23	0.30~3.00	SDUCR/L	B135
	11T308-HMP	●	●	●	●			●	●	●		●		●			●						10.8	9.525	3.97	0.8	4.4	0.10~0.30	0.50~3.00	SDZCR/L	B136
Medium to finishing																														
DCMT-VL New	11T304-VL	●		●				●	●								●						11.2	9.525	3.97	0.4	4.4	0.05~0.10	0.10~1.00	SDACR/L	B113
	11T308-VL	●		●				●	●								●						10.8	9.525	3.97	0.8	4.4	0.08~0.15	0.10~1.00	SDJCR/L	B114
																														SDNCN	B114
																														SDQCR/L	B135
																														SDUCR/L	B135
Finishing																														SDZCR/L	B136
DCMT-VF	070202-VF	●		●					●														7.5	6.35	2.38	0.2	2.8	0.03~0.10	0.06~1.00	SDACR/L	B113
	070204-VF	●		●					●	●				●			●	●					7.3	6.35	2.38	0.4	2.8	0.05~0.20	0.30~1.20	SDJCR/L	B114
	11T302-VF	●		●										●									11.4	9.525	3.97	0.2	4.4	0.04~0.15	0.08~1.50	SDNCN	B114
	11T304-VF			●					●	●							●	●					11.2	9.525	3.97	0.4	4.4	0.05~0.20	0.30~1.50	SDQCR/L	B135
	11T308-VF								●	●													10.8	9.525	3.18	0.8	4.4	0.10~0.25	0.30~1.50	SDUCR/L	B135
Finishing																														SDZCR/L	B136

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

RC○○

Round R° Positive
Relief Angle : 7°

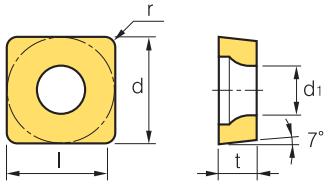


Workpiece			Machining types
Steel	P	●●●✱✱ ●● ●●●●●●	● Continuous cutting
Stainless steel	M	●● ●●●●●●	●● General cutting
Cast iron	K	●● ●●●✱● ●●	✱ Interrupted cutting
Non-ferrous metal	N		
Heat resistant alloy, Titanium alloy	S	●●●	
Hardened steel	H		

Inserts	Designation	Coated												Cermet			Coated		Uncoated			Dimensions (mm)			Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC500H	NC9020	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	d	t	d1	fn (mm/rev)	ap (mm)	Designation	Page
RCMX	1003M0			●	●		●	●															10.0	3.18	3.6	0.25~0.50	1.50~4.00	PRDCN	B97
	1204M0			●	●			●					●										12.0	4.76	4.2	0.30~0.60	2.50~5.00	PRGCR/L	B97
	1606M0			●	●			●					●										16.0	6.35	5.2	0.40~0.70	3.00~7.00		
	2006M0	●		●	●	●							●										20.0	6.35	6.5	0.48~0.90	3.50~9.00		
	2507M0			●	●	●																	25.0	7.94	7.25	0.55~1.20	4.00~12.00		
Medium	3209M0				●																		32.0	9.52	9.55	0.65~1.50	5.00~15.00		

SC○○

Square 90° Positive
Relief Angle : 7°



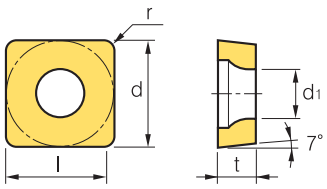
Workpiece			Machining types
Steel	P	●●●✱ ●● ●●●●●●	● Continuous cutting
Stainless steel	M	●●●●●●●●●	●● General cutting
Cast iron	K	●● ●●●✱● ●●	✱ Interrupted cutting
Non-ferrous metal	N		
Heat resistant alloy, Titanium alloy	S	●●●	
Hardened steel	H		

Inserts	Designation	Coated												Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
SCGT-C05	09T304-C05																						9.1	9.525	3.97	0.4	4.4	0.11~0.23	0.10~2.00	SSBCR/L	B115
	09T308-C05																						8.7	9.525	3.97	0.8	4.4	0.08~0.30	0.20~2.00	SSDCN	B115
	120408-C05																						11.9	12.7	4.76	0.8	5.5	0.08~0.33	0.20~2.00	SSKCR/L	B116
																														SSSCR/L	B116
Finishing																															
SCGT-HFP	09T304-HFP	●																					9.1	9.525	3.97	0.4	4.4	0.05~0.25	0.10~1.50	SSBCR/L	B115
																														SSDCN	B115
																														SSKCR/L	B116
																														SSSCR/L	B116
Finishing																															

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

SC○○

Square **90° 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

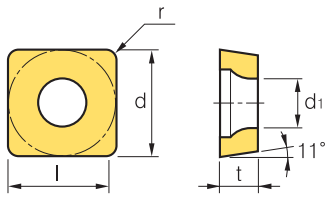
Inserts	Designation	Coated												Cermet		Coated			Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	A30	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
SCMT-C25  Medium	060204-C25			●																			5.9	6.35	2.38	0.4	2.8	0.08~0.25	0.40~2.50	SSBCR/L	B115
	09T304-C25			●	●		●			●			●		●	●							9.1	9.525	3.97	0.4	4.4	0.08~0.25	0.60~3.00	SSDCN	B115
	09T308-C25	●	●	●	●					●			●		●	●							8.7	9.525	3.97	0.8	4.4	0.10~0.30	1.00~3.00	SSKCR/L	B116,163
	120404-C25			●			●			●	●												12.3	12.7	4.76	0.4	5.5	0.10~0.30	0.80~3.80	SSSCR/L	B116
	120408-C25	●	●	●	●					●	●		●			●							11.9	12.7	4.76	0.8	5.5	0.12~0.38	1.20~3.80		
SCMT-HFP  Finishing	09T304-HFP	●																					9.1	9.525	3.97	0.4	4.4	0.05~0.25	0.10~1.50	SSBCR/L	B115
																														SSDCN	B115
																														SSKCR/L	B116,163
																														SSSCR/L	B116
SCMT-HMP  Medium to finishing	09T304-HMP		●	●	●			●		●			●		●	●	●						9.1	9.525	3.97	0.4	4.4	0.08~0.23	0.30~3.00	SSBCR/L	B115
	09T308-HMP	●	●	●	●		●		●		●		●										8.7	9.525	3.97	0.8	4.4	0.10~0.30	0.50~3.00	SSDCN	B115
	120404-HMP																						12.3	12.7	4.76	0.4	5.5	0.09~0.27	0.30~3.60	SSKCR/L	B116,163
	120408-HMP			●	●								●	●									11.9	12.7	4.76	0.8	5.5	0.12~0.36	0.60~3.60	SSSCR/L	B116
SCMT-VL  Finishing	09T304-VL	●		●		●	●									●							9.1	9.525	3.97	0.4	4.4	0.05~0.10	0.10~1.00	SSBCR/L	B115
	09T308-VL			●		●	●																8.7	9.525	3.97	0.8	4.4	0.08~0.15	0.10~1.00	SSDCN	B115
																														SSKCR/L	B116,163
																														SSSCR/L	B116
SCMT-VF  Finishing	09T304-VF			●				●	●							●							9.1	9.525	3.97	0.4	4.4	0.05~0.20	0.30~1.50	SSBCR/L	B115
																														SSDCN	B115
																														SSKCR/L	B116,163
																														SSSCR/L	B116

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

SP○○

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



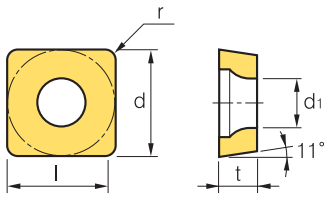
Workpiece			Machining types	
	Steel	P		Continuous cutting
	Stainless steel	M		General cutting
	Cast iron	K		Interrupted cutting
	Non-ferrous metal	N		
	Heat resistant alloy, Titanium alloy	S		
	Hardened steel	H		

Inserts	Designation	Coated											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	PC6510	NC9025	NC5330	PC8110	PC5300	PC9030	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	ST30N	ST20	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
SPGA	060204																						5.9	6.35	2.38	0.4	2.8	0.50~0.25	0.50~2.00	-	-
	090308T													●	●								8.7	9.525	3.18	0.8	4.5	0.10~0.25	0.70~3.00		
	090308T-Z (Z=Special Nega land)													●	●								8.7	9.525	3.18	0.8	3.4	0.10~0.25	0.70~3.00		
Medium to finishing																															
SPGN	070202																						7.7	7.94	2.38	0.2	-	0.03~0.10	0.50~2.00	-	-
	070208																						7.8	7.94	2.38	0.8	-	0.10~0.25	0.70~3.00		
	090302																						9.3	9.525	3.18	0.2	-	0.03~0.10	0.50~3.00		
	090304																						9.1	9.525	3.18	0.4	-	0.08~0.20	0.70~3.50		
	090308					●																	8.7	9.525	3.18	0.8	-	0.10~0.25	0.70~3.50		
	120302																						12.5	12.7	3.18	0.2	-	0.03~0.20	0.50~3.00		
	120304																						12.3	12.7	3.18	0.4	-	0.08~0.20	1.00~5.00		
	120308				●														●				11.9	12.7	3.18	0.8	-	0.10~0.25	1.00~5.00		
	120312																					●	11.5	12.7	3.18	1.2	-	0.15~0.30	1.00~5.00		
	120316																						11.1	12.7	3.18	1.6	-	0.18~0.33	1.00~5.00		
	120402																						12.5	12.7	4.76	0.2	-	0.03~0.20	0.50~3.00		
	120404																						12.3	12.7	4.76	0.4	-	0.08~0.20	1.00~5.00		
	120408																					●	11.9	12.7	4.76	0.8	-	0.10~0.25	1.00~5.00		
	120412																						11.5	12.7	4.76	1.2	-	0.15~0.30	1.00~5.00		
	120416																						11.1	12.7	4.76	1.6	-	0.18~0.33	1.00~5.00		
	120430																						9.7	12.7	4.76	3.0	-	0.20~0.60	2.00~5.00		
	120440																						8.7	12.7	4.76	4.0	-	0.25~0.70	3.00~5.00		
	150404																						15.5	15.875	4.76	0.4	-	0.08~0.20	1.50~7.00		
	150408																						15.0	15.875	4.76	0.8	-	0.10~0.25	1.50~7.00		
	150412																						14.8	15.875	4.76	1.2	-	0.15~0.30	1.50~7.00		
	150416																						14.2	15.875	4.76	1.6	-	0.18~0.33	1.50~7.00		
	150420																						13.9	15.875	4.76	2.0	-	0.20~0.45	1.50~7.00		
	190404																						18.7	19.05	4.76	0.4	-	0.08~0.20	1.50~9.00		
	190408																					●	18.3	19.05	4.76	0.8	-	0.10~0.25	1.50~9.00		
	190412																			●			17.8	19.05	4.76	1.2	-	0.15~0.45	1.50~9.00		
	190416																						17.4	19.05	4.76	1.6	-	0.18~0.60	1.50~9.00		
	190424																						16.7	19.05	4.76	2.4	-	0.25~0.70	2.50~9.00		
Medium to finishing																															
SPGR-F	090304-F																						9.1	9.525	3.18	0.4	-	0.05~0.20	0.30~2.00	CSDPN	**B104**
	120304-F																						12.3	12.7	3.18	0.4	-	0.10~0.25	0.50~2.00	CSKPR/L	**B105**
Finishing																															
SPGR-M	090308-M																						8.7	9.525	3.18	0.8	-	0.10~0.40	1.00~3.50	CSDPN	**B104**
	120308-M																						11.9	12.7	3.18	0.8	-	0.20~0.40	1.50~4.00	CSKPR/L	**B105**
Medium																															

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

SP○○

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



Workpiece

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

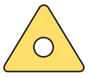
Machining types
- ● Continuous cutting
- Ⓒ General cutting
- ✱ Interrupted cutting

Inserts	Designation	Coated												Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
SPGT Medium to finishing	090304R																						9.1	9.525	3.18	0.4	3.4	0.08~0.23	0.30~3.00	SSKPR/L	B136
	090308R																						8.7	9.525	3.18	0.8	3.4	0.10~0.30	0.50~3.00		
	090304L															●							9.1	9.525	3.18	0.4	3.4	0.08~0.23	0.30~3.00		
	090308L															●							8.7	9.525	3.18	0.8	3.4	0.10~0.30	0.50~3.00		
SPGT-C05 Finishing	090304-C05															●							9.1	9.525	3.18	0.4	4.4	0.11~0.23	0.10~2.00	SSKPR/L	B136
	090308-C05																						8.7	9.525	3.18	0.8	4.4	0.08~0.30	0.20~2.00		
SPMT-VF Finishing	090304-VF																						9.1	9.525	3.18	0.4	3.4	0.05~0.20	0.30~1.50	SSKPR/L	B136
	090308-VF																						8.7	9.525	3.18	0.8	3.4	0.10~0.25	0.30~1.50		
SPMR-F Finishing	090304-F																						9.1	9.525	3.18	0.4	-	0.05~0.20	0.30~2.00	CSDPN	B104
	120304-F		●	●																			12.3	12.7	3.18	0.4	-	0.10~0.25	0.50~2.00	CSKPR/L	B131
SPMR-M Medium	090308-M		●	●																			8.7	9.525	3.18	0.8	-	0.10~0.40	1.00~3.50	CSDPN	B104
	120308-M		●	●																			11.9	12.7	3.18	0.8	-	0.10~0.40	1.50~4.00	CSKPR/L	B131
	120312-M			●																			11.5	12.7	3.18	1.2	-	0.20~0.40	1.50~4.00		
SPUN Medium to finishing	120304																						12.3	12.7	3.18	0.4	-	0.10~0.30	1.00~5.00	-	-
	120308		●																	●		●	11.9	12.7	3.18	0.8	-	0.15~0.40	1.00~5.00		
	150412																			●			14.6	15.875	4.76	1.2	-	0.20~0.50	1.00~5.00		
	190412		●																	●			17.8	19.05	4.76	1.2	-	0.20~0.50	1.50~7.00		
	190416																						17.5	19.05	4.76	1.6	-	0.25~0.60	2.00~7.00		
	250620																						23.4	25.4	6.35	2.0	-	0.30~0.80	3.00~10.0		
	120308SN																						11.9	12.7	3.18	0.8	-	0.15~0.40	1.00~5.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

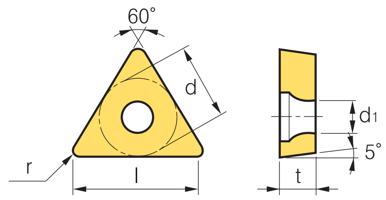
● : Stock item

TB◯◯



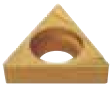
Triangular 60° Positive

Relief Angle : 5°

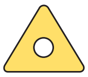


Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Steel	P	●	◓	◓	⊕			◓							●	◓	◓	●	●			
Stainless steel	M				◓	◓	◓	◓	●	◓	◓									◓		
Cast iron	K							◓				●	◓	⊕	●						●	◓
Non-ferrous metal	N																					
Heat resistant alloy, Titanium alloy	S							◓	●	◓												
Hardened steel	H																					

Machining types
● Continuous cutting
◓ General cutting
⊕ Interrupted cutting

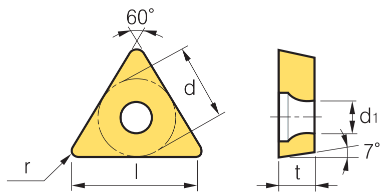
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
TBGT  Finishing	060102L										●				●	●					●		6.4	3.97	1.59	0.2	2.16	0.05~0.20	0.10~1.30	STUBR	B140
	060104L															●							5.8	3.97	1.59	0.4	2.16	0.08~0.20	0.10~1.30		

TC◯◯



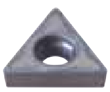
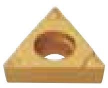
Triangular 60° Positive

Relief Angle : 7°



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
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

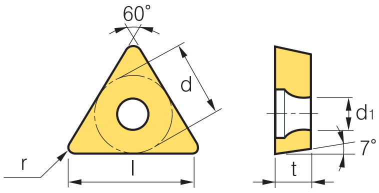
Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: ST30A	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
TCGT-C05  Finishing	090204-C05																						8.6	5.56	2.38	0.4	2.5	0.05~0.19	0.10~1.70	STACR/L	B116
	110204-C05																						10.0	6.35	2.38	0.4	2.8	0.08~0.22	0.10~1.70	STFCR/L	B116
	110208-C05																						9.0	6.35	2.38	0.8	2.8	0.28~0.20	0.10~1.70	STGCR/L	B117
																														STTCR/L	B117
TCGT-HFP  Finishing	090204-HFP																						8.6	5.56	2.38	0.4	2.5	0.05~0.19	0.10~1.70	STACR/L	B116
	110202-HFP																						10.5	6.35	2.38	0.2	2.8	0.03~0.13	0.06~1.70	STFCR/L	B116
	110204-HFP																						10.0	6.35	2.38	0.4	2.8	0.05~0.19	0.10~1.70	STGCR/L	B117
	16T304-HFP																						15.5	9.525	3.97	0.4	4.4	0.07~0.26	0.10~1.70	STTCR/L	B117

Cutting edge geometry **A31 ~ A34**   Recommended chip breaker **B04 ~ B11**   Code system **B16 ~ B17**

● : Stock item

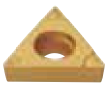
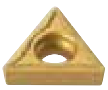
TC○○

Triangular 60° Positive
Relief Angle : 7°



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10
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	Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
TCGT-KF  Finishing	0802003R-KF																						8.2	4.76	2.38	0.03	2.3	0.01~0.06	0.04~1.30	STACR/L	B116, 168
	080201R-KF																						8.0	4.76	2.38	0.1	2.3	0.02~0.08	0.05~1.50		
	080202R-KF																						7.7	4.76	2.38	0.2	2.3	0.03~0.11	0.06~1.70		
	0802003L-KF																						8.2	4.76	2.38	0.03	2.3	0.01~0.06	0.04~1.30		
	080201L-KF																						8.0	4.76	2.38	0.1	2.3	0.02~0.08	0.05~1.50		
	080202L-KF																						7.7	4.76	2.38	0.2	2.3	0.03~0.11	0.06~1.70		
TCMT-C25  Medium	090204-C25	●		●	●			●						●									8.6	5.56	2.38	0.4	2.5	0.06~0.18	0.40~2.50	STACR/L	B116
	090208-C25			●										●									7.6	5.56	2.38	0.8	2.5	0.08~0.25	0.80~2.50	STFCR/L	B116,163
	110202-C25			●																			10.5	6.35	2.38	0.2	2.8	0.04~0.12	0.40~2.00	STGCR/L	B117
	110204-C25	●		●	●						●			●			●	●					10.0	6.35	2.38	0.4	2.8	0.06~0.20	0.60~2.50	STTCR/L	B117,164
	110208-C25			●	●			●			●	●		●									9.0	6.35	2.38	0.8	2.8	0.08~0.25	0.80~2.50	STWCR/L	B164
	16T304-C25	●	●	●	●			●			●	●		●		●		●					15.5	9.525	3.97	0.4	4.4	0.08~0.28	0.80~3.00		
	16T308-C25	●	●	●	●						●	●		●		●	●						14.5	9.525	3.97	0.8	4.4	0.10~0.30	1.00~3.00		
TCMT-HFP  Finishing	090204-HFP																						8.6	5.56	2.38	0.4	2.5	0.05~0.19	0.10~1.70	STACR/L	B116
	110202-HFP																						10.5	6.35	2.38	0.2	2.8	0.03~0.13	0.06~1.70	STFCR/L	B116,163
	110204-HFP							●															10.0	6.35	2.38	0.4	2.8	0.05~0.19	0.10~1.70	STGCR/L	B117
	16T302-HFP																						15.0	9.525	3.97	0.2	4.4	0.03~0.13	0.06~1.70	STTCR/L	B117,164
	16T304-HFP																						15.5	9.525	3.97	0.4	4.4	0.07~0.26	0.10~1.70	STWCR/L	B164
TCMT-HMP  Medium to finishing	090204-HMP																						8.6	5.56	2.38	0.4	2.5	0.06~0.17	0.20~2.30	STACR/L	B116
	090208-HMP																						7.6	5.56	2.38	0.8	2.5	0.08~0.23	0.40~2.30	STFCR/L	B116,163
	110202-HMP																						10.5	6.35	2.38	0.2	2.8	0.03~0.15	0.10~1.50	STGCR/L	B117
	110204-HMP	●		●	●	●		●		●		●				●	●						10.0	6.35	2.38	0.4	2.8	0.06~0.19	0.20~2.50	STTCR/L	B117,164
	110208-HMP	●		●	●			●		●		●											9.0	6.35	2.38	0.8	2.8	0.09~0.26	0.40~2.50	STWCR/L	B164
	16T304-HMP	●	●	●	●	●		●	●	●		●		●			●						15.5	9.525	3.97	0.4	4.4	0.08~0.23	0.30~3.00		
	16T308-HMP	●	●	●	●	●		●		●		●		●	●								14.5	9.525	3.97	0.8	4.4	0.10~0.30	0.50~3.00		
TCMT-VF  Finishing	110202-VF																						10.5	6.35	2.38	0.2	2.8	0.03~0.13	0.06~1.70	STACR/L	B116
	110204-VF								●	●							●						10.0	6.35	2.38	0.4	2.8	0.05~0.20	0.30~1.20	STFCR/L	B116,163
	110208-VF								●	●													9.0	6.35	2.38	0.8	2.8	0.10~0.25	0.30~1.20	STGCR/L	B117
	16T304-VF	●		●				●	●	●				●			●						15.5	9.525	3.97	0.4	4.4	0.05~0.20	0.30~1.50	STTCR/L	B117,164
																														STWCR/L	B164
TCMT-VL New  Finishing(Mild steel)	16T304-VL	●		●					●								●						15.5	9.525	3.97	0.4	4.4	0.05~0.20	0.30~1.50	STACR/L	B116
	16T308-VL			●																			14.5	9.525	3.97	0.8	4.4	0.05~0.20	0.30~1.50	STFCR/L	B116,163
																														STGCR/L	B117
																														STTCR/L	B117,164
																														STWCR/L	B164

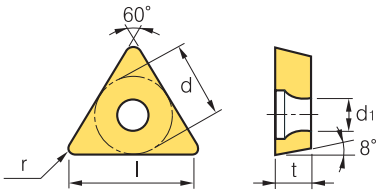
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TO○○

Triangular **60° Positive**

Relief Angle : 8°



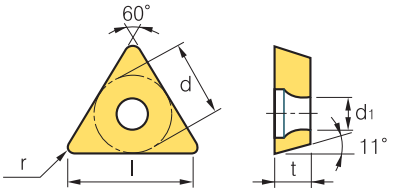
Workpiece		Machining types
Steel	P	● Continuous cutting
Stainless steel	M	◓ General cutting
Cast iron	K	✱ Interrupted cutting
Non-ferrous metal	N	
Heat resistant alloy, Titanium alloy	S	
Hardened steel	H	

Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: ST10	H01	G10	l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
TOEH	060102L																			●		●	6.4	3.97	1.59	0.2	2.15	0.05~0.17	0.10~1.50	FZ unit	-
	090204L																			●		●	8.6	5.56	2.38	0.4	2.8	0.05~0.20	0.30~2.50		
	140304L															●						●	13.1	8.2	3.0	0.4	3.8	0.05~0.25	0.30~2.50		
Medium to finishing																															

TP○○

Triangular **60° Positive**

Relief Angle : 11°



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: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: ST20	ST30A	H01	G10	l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
TPGH	080202L														●	●								7.7	4.76	2.38	0.2	2.3	0.01~0.12	0.06~1.70	-	-
	080204L														●	●								7.2	4.76	2.38	0.4	2.3	0.01~0.15	0.08~1.70		
	110202L																							10.5	6.35	2.38	0.2	3.4	0.01~0.12	0.06~2.00		
	110204L																							10.0	6.35	2.38	0.4	3.4	0.01~0.15	0.08~2.00		
Finishing																															
TPGN	090204																							8.6	5.56	2.38	0.4	-	0.07~0.20	0.70~2.00	-	-
	110302																							10.5	6.35	3.18	0.2	-	0.05~0.15	0.50~2.00		
	110304				●																●	●		10.0	6.35	3.18	0.4	-	0.07~0.20	0.70~3.00		
	110308				●																	●		9.0	6.35	3.18	0.8	-	0.10~0.25	1.00~3.00		
	160302																							16.0	9.525	3.18	0.2	-	0.05~0.18	1.00~5.00		
	160304				●	●																●	●	15.5	9.525	3.18	0.4	-	0.07~0.20	1.00~5.00		
Medium to finishing	160308				●	●											●			●		●	●	14.5	9.525	3.18	0.8	-	0.10~0.25	1.00~5.00		

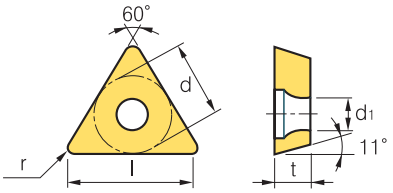
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TP○○

Triangular **60° Positive**

Relief Angle : 11°



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											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST20	ST30A	H01	G10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
TPGN Medium to finishing	160310																							13.4	9.525	3.18	1.0	-	0.10~0.25	1.00~5.00		
	160312				●																●			13.5	9.525	3.18	1.2	-	0.15~0.30	1.00~5.00		
	160316				●																			12.5	9.525	3.18	1.6	-	0.15~0.30	1.00~5.00		
	160404																							15.5	9.525	4.76	0.4	-	0.07~0.20	1.00~5.00		
	220404				●																●		●	21.0	12.7	4.76	0.4	-	0.07~0.20	1.50~7.00		
	220408				●																●			20.0	12.7	4.76	0.8	-	0.10~0.25	1.50~7.00	-	-
	220412				●																			19.0	12.7	4.76	1.2	-	0.15~0.30	1.50~7.00		
	220430																						●	14.2	12.7	4.76	3.0	-	0.30~0.45	1.50~7.00		
	220440																							11.6	12.7	4.76	4.0	-	0.30~0.50	1.50~7.00		
	270408																							25.4	15.875	4.76	0.8	-	0.15~0.25	3.00~8.00		
	270608																							25.4	15.875	6.35	0.8	-	0.15~0.25	3.00~8.00		
TPGR-F Finishing	110302-F																							10.5	6.35	3.18	0.2	-	0.05~0.15	0.10~1.50	CTFPR/L	**B105**
	110304-F																							10.0	6.35	3.18	0.4	-	0.05~0.20	0.30~1.50	CTGPR/L	**B105**
	160304-F																							15.5	9.525	3.18	0.4	-	0.08~0.25	0.50~2.00		
TPGR-M Medium	110308-M																							9.0	6.35	3.18	0.8	-	0.13~0.30	1.00~3.00	CTFPR/L	**B105**
	160308-M																							14.5	9.525	3.18	0.8	-	0.13~0.30	1.00~5.00	CTGPR/L	**B105**
TPGT Medium to finishing	080202R																							7.7	4.76	2.38	0.2	2.3	0.05~0.20	0.30~1.50	STFPR/L	**B137**
	110302R																							10.5	6.35	3.18	0.2	3.4	0.05~0.20	0.30~1.50	STUPR/L	**B140**
	110304R														●	●								10.0	6.35	3.18	0.4	3.4	0.05~0.20	0.50~2.00		
	110308R																							9.0	6.35	3.18	0.8	3.4	0.07~0.25	0.50~2.00		
	160404R															●								15.5	9.525	4.76	0.4	4.4	0.05~0.20	0.70~3.00		
	160408R																							14.5	9.525	4.76	0.8	4.4	0.05~0.20	0.70~3.00		
	080202L										●					●	●					●		7.7	4.76	2.38	0.2	2.3	0.05~0.20	0.30~1.50		
	110302L																							10.5	6.35	3.18	0.2	3.4	0.05~0.20	0.30~1.50		
	110304L														●	●	●							10.0	6.35	3.18	0.4	3.4	0.05~0.20	0.50~2.00		
	110308L																							9.0	6.35	3.18	0.8	3.4	0.07~0.25	0.50~2.00		
	160404L														●	●	●							15.5	9.525	4.76	0.4	4.4	0.05~0.20	0.70~3.00		
	160408L																							14.5	9.525	4.76	0.8	4.4	0.05~0.20	0.70~3.00		
TPGT-C05 Finishing	110304-C05															●								10.0	6.35	3.18	0.4	3.4	0.05~0.30	0.50~2.00	STFPR/L	**B137**
	160404-C05																							15.5	9.525	4.76	0.4	4.4	0.05~0.30	0.80~2.00		
TPGT-HFP Finishing	110304-HFP																							10.0	6.35	3.18	0.4	3.4	0.05~0.25	0.30~1.50	STFPR/L	**B137**
	160308-HFP																							14.5	9.525	3.18	0.8	4.4	0.05~0.25	0.30~1.50		

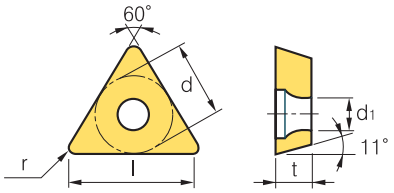
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

TP○○

Triangular **60° Positive**

Relief Angle : 11°



Workpiece			NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST20	ST30A	H01	G10
	Steel	P	●	●	●	✱			●							●	●	●	●	●	●			
	Stainless steel	M				●	●	●	●	●	●	●												
	Cast iron	K							●				●	●	✱	●							●	●
	Non-ferrous metal	N																						
	Heat resistant alloy, Titanium alloy	S							●	●	●													
	Hardened steel	H																						

Machining types

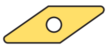
- ● Continuous cutting
- ● General cutting
- ✱ Interrupted cutting

Inserts	Designation	Coated													Cermet			Coated		Uncoated				Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	ST20	ST30A	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
TPGX	090202L																●							9.1	5.56	2.38	0.2	3.0	0.10~0.20	0.30~1.00	-	-
	090204L																●							8.6	5.56	2.38	0.4	3.0	0.10~0.25	0.50~1.00		
	090208L																							7.6	5.56	2.38	0.8	3.0	0.10~0.30	1.00~1.00		
	110304L																●							10.0	6.35	3.18	0.4	3.5	0.10~0.25	0.50~1.20		
Medium to finishing																																
TPMR-F	090202-F																							9.1	5.56	2.38	0.2	-	0.05~0.15	0.10~1.00	CTFPR/L	**B105**
	090204-F																							8.6	5.56	2.38	0.4	-	0.05~0.15	0.10~1.00	CTGPR/L	**B105**
	110302-F																							10.5	6.35	3.18	0.2	-	0.05~0.15	0.10~1.50		
	110304-F	●	●	●	●	●					●		●											10.0	6.35	3.18	0.4	-	0.05~0.20	0.30~1.50		
	110308-F																							9.0	6.35	3.18	0.8	-	0.05~0.25	0.30~1.50		
	160304-F	●	●	●	●	●		●	●		●													15.5	9.525	3.18	0.4	-	0.08~0.25	0.50~2.00		
	160308-F																							14.5	9.525	3.18	0.8	-	0.08~0.25	0.50~3.00		
Finishing																																
TPMR-M	110304-M																							10.0	6.35	3.18	0.4	-	0.10~0.25	0.70~3.00	CTFPR/L	**B105**
	110308-M			●	●																			9.0	6.35	3.18	0.8	-	0.13~0.30	1.00~3.00	CTGPR/L	**B105**
	160304-M				●																			15.5	9.525	3.18	0.4	-	0.10~0.25	1.00~5.00		
	160308-M	●	●	●	●	●																		14.5	9.525	3.18	0.8	-	0.13~0.30	1.00~5.00		
	160312-M				●																			13.5	9.525	3.18	1.2	-	0.15~0.35	1.00~5.00		
Medium	220408-M			●																				20.0	12.7	4.76	0.8	-	0.13~0.30	1.50~7.00		
TPUN	090308																							7.6	5.56	3.18	0.8	-	0.10~0.30	0.50~2.00	-	-
	110208																				●			9.0	6.35	2.38	0.8	-	0.15~0.40	1.00~3.00		
	110304																				●			10.0	6.35	3.18	0.4	-	0.10~0.30	1.00~3.00		
	110308																				●			9.0	6.35	3.18	0.8	-	0.15~0.40	1.00~3.00		
	160304			●	●																●		●	15.5	9.525	3.18	0.4	-	0.10~0.30	1.00~5.00		
	160308			●	●															●	●		●	14.5	9.525	3.18	0.8	-	0.15~0.40	1.00~5.00		
	160312				●																●			13.5	9.525	3.18	1.2	-	0.20~0.50	1.50~5.00		
	220404																				●			21.0	12.7	4.76	0.4	-	0.10~0.30	1.50~7.00		
	220408			●	●																●			20.0	12.7	4.76	0.8	-	0.15~0.40	1.50~7.00		
	220412																				●			19.0	12.7	4.76	1.2	-	0.20~0.50	1.50~7.00		
	330620																							27.8	19.05	6.35	2.0	-	0.30~0.70	3.00~10.00		
	160308TN																							14.5	9.525	3.18	0.8	-	0.15~0.40	1.00~5.00		
	160312TN																							13.5	9.525	3.18	1.2	-	0.20~0.50	1.50~5.00		
	220412TN																							19.0	12.7	4.76	1.2	-	0.20~0.50	1.50~7.00		
Medium to finishing																																
TPMT-VF	110304-VF	●	●	●				●	●	●					●	●								10.0	6.35	3.18	0.4	3.4	0.05~0.20	0.30~1.50	STFPR/L	**B137**
	110308-VF	●		●				●	●															9.0	6.35	3.18	0.8	3.4	0.10~0.25	0.30~1.50		
	160404-VF																							15.5	9.525	4.76	0.4	4.4	0.05~0.20	0.30~2.00		
	160408-VF																							14.5	9.525	4.76	0.8	4.4	0.10~0.25	0.30~2.00		
Finishing																																

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

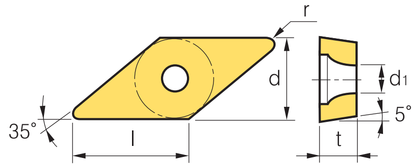
● : Stock item

VB○○



Rhombic **35° Positive**

Relief Angle : 5°



Workpiece

Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC5400	PC9030	NC6205	NC6210	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
		Coated													Cermet			Coated		Uncoated		
VBGT (Medium to finishing)	160404																					
	160408																					
VBGT-HFP (Finishing)	110301-HFP																					
	160408-HFP																					
VBGT-KF (Finishing)	1103003R-KF																					
	110301R-KF																					
	110302R-KF											●										
	1103003L-KF																					
	110301L-KF																					
	110302L-KF																					
VBGT-KM (Medium to finishing)	1103003R-KM																					
	110301R-KM																					
	110302R-KM																					
	1103003L-KM																					
	110301L-KM																					
	110302L-KM																					
VBMT (Medium to finishing)	160404	●	●	●	●	●						●		●		●						
	160408	●	●	●	●							●		●		●						
VBMT-VM (Medium)	160404-VM																					
	160408-VM			●	●				●					●								
VBMT-HMP (Medium to finishing)	110204-HMP			●																		
	110208-HMP																					
	110304-HMP		●	●																		
	110308-HMP		●	●																		
	160404-HMP	●	●	●	●	●		●	●		●			●								
	160408-HMP	●	●	●	●	●		●	●	●	●	●		●								
	160412-HMP																					
VBMT-VF (Finishing)	160404-VF	●		●				●	●	●					●	●						
	160408-VF									●					●	●						
VBMT-VL New (Finishing(Mild steel))	160404-VL	●		●				●	●							●						
	160408-VL			●				●	●													
	160412-VL																					

Inserts	Designation	Dimensions (mm) l	d	t	r	d1	Cutting Condition fn (mm/rev)	ap (mm)	Available tool holders Designation	Page
VBGT (Medium to finishing)	160404	15.6	9.525	4.76	0.4	4.4	0.07~0.20	0.50~1.50	SVABR/L SVHBR/L SVJBR/L SVVBN SVQBR/L SVUBR/L	B117 B118 B118,168 B119 B138 B139
	160408	14.6	9.525	4.76	0.8	4.4	0.15~0.25	0.70~2.00		
VBGT-HFP (Finishing)	110301-HFP	11.0	6.35	3.18	0.1	2.8	0.07~0.20	0.50~1.50	SVABR/L SVHBR/L SVJBR/L SVVBN SVQBR/L SVUBR/L	B117 B118 B118 B119 B138 B139
	160408-HFP	14.6	9.525	4.76	0.8	4.4	0.15~0.25	0.70~2.00		
VBGT-KF (Finishing)	1103003R-KF	11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30	SVJBR/L	B118
	110301R-KF	11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		
	110302R-KF	11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
	1103003L-KF	11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30		
	110301L-KF	11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		
	110302L-KF	11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
VBGT-KM (Medium to finishing)	1103003R-KM	11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30	SVJBR/L	B118
	110301R-KM	11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		
	110302R-KM	11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
	1103003L-KM	11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30		
	110301L-KM	11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		
	110302L-KM	11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
VBMT (Medium to finishing)	160404	15.6	9.525	4.76	0.4	4.4	0.07~0.20	0.50~1.50	SVABR/L SVHBR/L SVJBR/L SVVBN SVQBR/L SVUBR/L	B117 B118 B118 B119 B138 B139
	160408	14.6	9.525	4.76	0.8	4.4	0.15~0.25	0.70~2.00		
VBMT-VM (Medium)	160404-VM	15.6	9.525	4.76	0.4	4.4	0.07~0.20	0.20~2.70	SVABR/L SVHBR/L SVJBR/L SVVBN SVQBR/L SVUBR/L	B117 B118 B118 B119 B138 B139
	160408-VM	14.6	9.525	4.76	0.8	4.4	0.09~0.27	0.50~2.70		
VBMT-HMP (Medium to finishing)	110204-HMP	10.0	6.35	2.38	0.4	2.8	0.03~0.20	0.15~2.50	SVABR/L	B117
	110208-HMP	9.0	6.35	2.38	0.8	2.8	0.03~0.25	0.15~2.50	SVHBR/L	B118
	110304-HMP	10.0	6.35	3.18	0.4	3.4	0.03~0.20	0.15~2.70	SVJBR/L	B118
	110308-HMP	9.0	6.35	3.18	0.8	3.4	0.05~0.25	0.40~2.70	SVVBN	B119
	160404-HMP	15.6	9.525	4.76	0.4	4.4	0.07~0.20	0.20~2.70	SVQBR/L	B138
	160408-HMP	14.6	9.525	4.76	0.8	4.4	0.09~0.27	0.50~2.70	SVUBR/L	B139
	160412-HMP	13.5	9.525	4.76	1.2	4.4	0.11~0.32	0.50~2.70		
VBMT-VF (Finishing)	160404-VF	15.6	9.525	4.76	0.4	4.4	0.05~0.20	0.30~1.00	SVABR/L SVHBR/L SVJBR/L SVVBN SVQBR/L SVUBR/L	B117 B118 B118 B119 B138 B139
	160408-VF	14.6	9.525	4.76	0.8	4.4	0.10~0.25	0.30~1.00		
VBMT-VL New (Finishing(Mild steel))	160404-VL	15.6	9.525	4.76	0.4	4.4	0.05~0.20	0.30~1.50	SVABR/L SVHBR/L SVJBR/L SVVBN SVQBR/L SVUBR/L	B117 B118 B118 B119 B138 B139
	160408-VL	14.6	9.525	4.76	0.8	4.4	0.10~0.20	0.30~1.50		
	160412-VL	13.5	9.525	4.76	1.2	4.4	0.10~0.25	0.30~1.50		

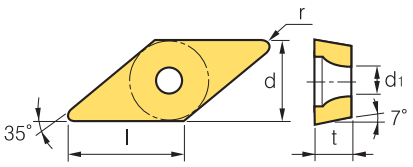
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

VC○○

Rhombic **35° Positive**

Relief Angle : 7°

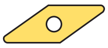


Workpiece			Machining types	
	Steel	P		Continuous cutting
	Stainless steel	M		General cutting
	Cast iron	K		Interrupted cutting
	Non-ferrous metal	N		
	Heat resistant alloy, Titanium alloy	S		
	Hardened steel	H		

Inserts	Designation	Coated											Cermet		Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
VCGT-HFP	110302-HFP																						10.5	6.35	3.18	0.2	3.4	0.02~0.18	0.10~1.00	SVJCR/L	B118,138
	110304-HFP																						10.0	6.35	3.18	0.4	3.4	0.03~0.18	0.15~1.20		B168
	110308-HFP																						9.0	6.35	3.18	0.8	3.4	0.04~0.23	0.20~1.20	SVVCN	B119
	160404-HFP		●	●					●														15.6	9.525	4.76	0.4	4.4	0.04~0.20	0.15~1.50	SVQCR/L	B138
Finishing	160408-HFP		●	●					●														14.6	9.525	4.76	0.8	4.4	0.05~0.25	0.20~1.50	SVUCR/L	B134
VCGT-VP1	110301-VP1								●	●													11.0	6.35	3.18	0.1	2.8	0.02~0.15	0.05~0.50	SVJCR/L	B118,138
New	110302-VP1								●	●													11.0	6.35	3.18	0.2	2.8	0.02~0.18	0.10~1.00		B168
	110304-VP1			●					●	●													11.0	6.35	3.18	0.4	2.8	0.03~0.18	0.15~1.20	SVVCN	B119
Finishing																															
VCGT-KF	1103003R-KF																						11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30	SVJCR/L	B118,138
	110301R-KF																						11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		B168
	110302R-KF										●												11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
	1103003L-KF																						11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30		
Finishing	110301L-KF																						11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		
	110302L-KF																						11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
VCGT-KM	1103003R-KM																						11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30	SVJCR/L	B118,138
	110301R-KM																						11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		B168
	110302R-KM										●												11.0	6.35	3.18	0.2	2.8	0.03~0.13	0.06~1.70		
	1103003L-KM																						11.0	6.35	3.18	0.03	2.8	0.01~0.06	0.04~1.30		
Finishing	110301L-KM																						11.0	6.35	3.18	0.1	2.8	0.02~0.08	0.05~1.50		
	110302L-KM																						11.0	6.35	3.18	0.2	2.8	0.03 ~0.13	0.06~1.70		
VCMT-HFP	110302-HFP																						10.5	6.35	3.18	0.2	3.4	0.02~0.18	0.10~1.00	SVJCR/L	B118,138
	110304-HFP																						10.0	6.35	3.18	0.4	3.4	0.03~0.18	0.15~1.20		B168
	110308-HFP																						9.0	6.35	3.18	0.8	3.4	0.04~0.23	0.20~1.20	SVVCN	B119
	160404-HFP			●																			15.6	9.525	4.76	0.4	4.4	0.04~0.20	0.15~1.50	SVQCR/L	B138
Finishing	160408-HFP																						14.6	9.525	4.76	0.8	4.4	0.05~0.25	0.20~1.50	SVUCR/L	B134
VCMT-VF	080202-VF	●																					8.0	4.76	2.38	0.2	2.3	0.05~0.20	0.30~1.00	SVJCR/L	B118,138
	080204-VF								●														7.5	4.76	2.38	0.4	2.3	0.10~0.25	0.30~1.00		B168
	110304-VF	●		●																			10.0	6.35	3.18	0.4	3.4	0.03~0.18	0.15~1.20	SVVCN	B119
	160404-VF	●		●					●	●							●						15.6	9.525	4.76	0.4	4.4	0.04~0.20	0.15~1.50	SVQCR/L	B138
Finishing																														SVUCR/L	B134
VCMT-HMP	160404-HMP	●	●	●	●	●			●		●												15.6	9.525	4.76	0.4	4.4	0.10~0.25	0.30~2.60	SVJCR/L	B118,138
	160408-HMP		●	●	●	●			●		●												14.3	9.525	4.76	0.8	4.4	0.13~0.33	0.60~2.60		B168
Medium to finishing																														SVVCN	B119
																														SVQCR/L	B138
																														SVUCR/L	B134

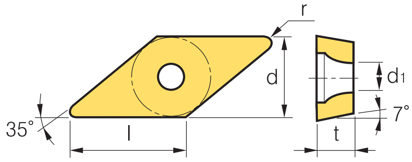
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

VC○○



Rhombic 35° Positive

Relief Angle : 7°

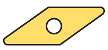


Workpiece			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Steel	P		●	◐	◐	✱			◐							●	◐	◐	●	●				
Stainless steel	M					◐	◐	◐	◐	●	◐	◐									◐			
Cast iron	K								◐				●	◐	✱	●							●	◐
Non-ferrous metal	N																							
Heat resistant alloy, Titanium alloy	S								◐	●	◐													
Hardened steel	H																							

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

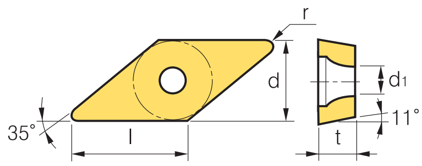
Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
		Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
VCMT-VM  Medium	160404-VM			●																			15.6	9.525	4.76	0.4	4.4	0.10~0.25	0.30~2.60	SVJCR/L	B118
	160408-VM			●					●														14.3	9.525	4.76	0.8	4.4	0.13~0.33	0.60~2.60	SVVCN	B119
																														SVQCR/L	B138
																														SVUCR/L	B139
VCMT-VL New  Finishing(Mild steel)	160404-VL	●																					15.6	9.525	4.76	0.4	4.4	0.05~0.20	0.30~1.50	SVJCR/L	B118
	160408-VL			●					●														14.6	9.525	4.76	0.8	4.4	0.05~0.20	0.30~1.50	SVVCN	B119
	160412-VL																						13.5	9.525	4.76	1.2	4.4	0.10~0.25	0.30~1.50	SVQCR/L	B138
																														SVUCR/L	B139

VP○○



Rhombic 35° Positive

Relief Angle : 11°



Workpiece			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Steel	P		●	◐	◐	✱			◐							●	◐	◐	●	●				
Stainless steel	M					◐	◐	◐	◐	●	◐	◐									◐			
Cast iron	K								◐				●	◐	✱	●							●	◐
Non-ferrous metal	N																							
Heat resistant alloy, Titanium alloy	S								◐	●	◐													
Hardened steel	H																							

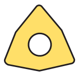
Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

Inserts	Designation	NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10	l	d	t	r	d1	fn (mm/rev)	ap (mm)	Designation	Page
		Coated													Cermet			Coated		Uncoated			Dimensions (mm)					Cutting Condition		Available tool holders	
VPGT-VP1 New  Finishing	110301-VP1								●	●													11.0	6.35	3.18	0.1	2.8	0.02~0.15	0.05~0.50	SVABR/L	B117
	110302-VP1								●	●													11.0	6.35	3.18	0.2	2.8	0.02~0.18	0.10~1.00	SVJBR/L	B118
	110304-VP1								●	●													11.0	6.35	3.18	0.4	2.8	0.03~0.18	0.15~1.20	SVVBN	B119

Cutting edge geometry **A31 ~ A34**   Recommended chip breaker **B04 ~ B11**   Code system **B16 ~ B17**

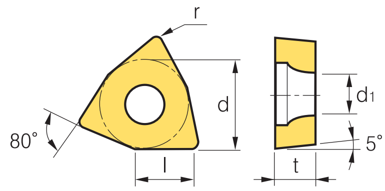
● : Stock item

WB○○



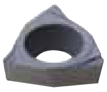
Trigon 80° Positive

Relief Angle : 5°



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
Steel	P	●	◐	◐	✱			◐							●	◐	◐	●	●			
Stainless steel	M				◐	◐	◐	◐	●	◐	◐									◐		
Cast iron	K							◐				●	◐	✱	●						●	◐
Non-ferrous metal	N																					
Heat resistant alloy, Titanium alloy	S							◐	●	◐												
Hardened steel	H																					

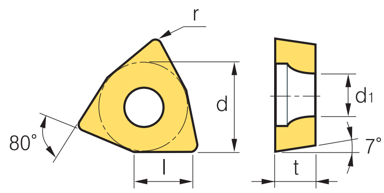
Machining types
- ● Continuous cutting
- ◐ General cutting
- ✱ Interrupted cutting

Inserts	Designation	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
WBGT  Medium to finishing	020102R																						2.6	3.97	1.59	0.2	2.2	0.01~0.05	0.10~0.30	SWUBR/L	**B140**
	S30204R																						3.0	4.76	2.38	0.4	2.4	0.01~0.10	0.10~0.50		
	020102L										●				●	●					●		2.6	3.97	1.59	0.2	2.2	0.01~0.08	0.10~0.40		
	S30202L															●							3.1	4.76	2.38	0.2	2.4	0.01~0.08	0.10~0.40		
	S30204L																						3.0	4.76	2.38	0.4	2.4	0.01~0.10	0.10~0.50		

WC○○

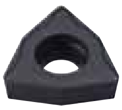
Trigon 80° Positive

Relief Angle : 7°



Workpiece		NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	CN1000	CN2000	CN20	CC105	CC115	U20	H01	G10
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	Coated: NC3010	NC3120	NC3220	NC3030	NC9020	NC9025	NC5330	PC8110	PC5300	PC9030	NC6205	NC6210	NC315K	Cermet: CN1000	CN2000	CN20	Coated: CC105	CC115	Uncoated: U20	H01	G10	Dimensions (mm): l	d	t	r	d1	Cutting Condition: fn (mm/rev)	ap (mm)	Available tool holders: Designation	Page
WCGT-C05  Medium to finishing	080408-C05																						8.3	12.7	4.76	0.8	5.5	0.08~0.30	0.20~2.70	SWACR/L SWLCR/L	**B119** **B139**

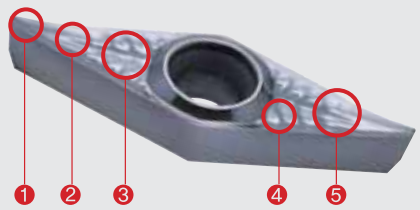
Cutting edge geometry **A31 ~ A34**   Recommended chip breaker **B04 ~ B11**   Code system **B16 ~ B17**

● : Stock item

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



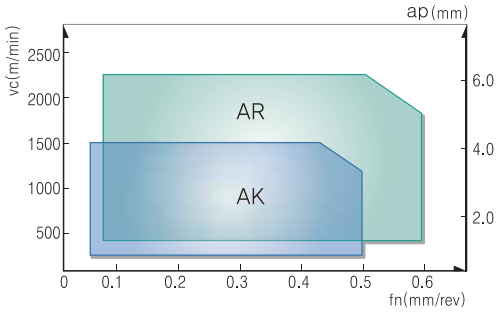
❶ High rake angle & tabby pattern chip pocket - Low cutting load
❷ Unique rake angle design - Effective chip breaking and good chip flow
❸ Unique and 3-dimensional top face - Longer tool life & Excellent surface roughness
❹ Tabby pattern & Sharp cutting edge - Distributing cutting load, long tool life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

AR special chip breaker for aluminum

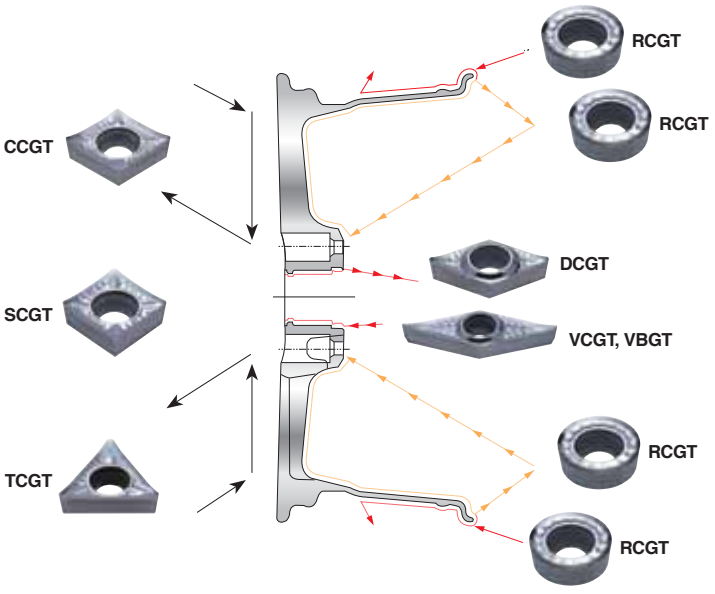
▶ AR chip breaker ensures reliability and good cutting performance at high feed, speed and interrupted machining

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

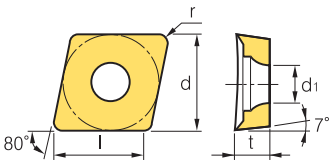
▶ Useful for aluminum and alloyed steel machining
▶ Buffed on top face reduced built-up edge
▶ 3-dimensional design reduced cutting load and shows good performance at high feed and speed machining

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°



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

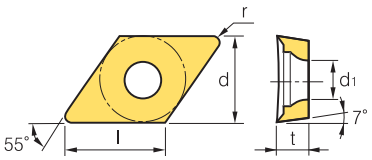
Inserts	Designation	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
CCGT-AK 	060202-AK				●		6.2	6.35	2.38	0.2	2.8	0.01~0.12	0.05~3.00	SCLCR/L	**B134**
	060204-AK				●		6.0	6.35	2.38	0.4	2.8	0.02~0.15	0.10~3.00		
	060208-AK				●		5.6	6.35	2.38	0.8	2.8	0.02~0.20	0.10~4.00		
	09T302-AK				●		9.4	9.525	3.97	0.2	4.4	0.02~0.20	0.05~3.00		
	09T304-AK				●		9.2	9.525	3.97	0.4	4.4	0.02~0.30	0.10~5.00		
	09T308-AK				●		8.8	9.525	3.97	0.8	4.4	0.03~0.50	0.10~5.00		
	120402-AK				●		12.6	12.7	4.76	0.2	5.5	0.02~0.30	0.05~4.00		
	120404-AK				●	●	12.4	12.7	4.76	0.4	5.5	0.03~0.50	0.10~5.00		
	120408-AK				●		12.0	12.7	4.76	0.8	5.5	0.04~0.80	0.10~5.50		
CCGT-AR 	060202-AR				●		6.2	6.35	2.38	0.2	2.8	0.02~0.30	0.30~4.00	SCACR/L	**B134**
	060204-AR						6.0	6.35	2.38	0.4	2.8	0.03~0.35	0.50~4.50		
	060208-AR						5.6	6.35	2.38	0.8	2.8	0.04~0.50	0.50~4.50		
	09T302-AR				●		9.4	9.525	3.97	0.2	4.4	0.03~0.45	0.30~4.00		
	09T304-AR				●		9.2	9.525	3.97	0.4	4.4	0.04~0.50	0.50~4.50		
	09T308-AR				●		8.8	9.525	3.97	0.8	4.4	0.05~0.60	0.50~6.00		
	120402-AR						12.6	12.7	4.76	0.2	5.5	0.04~0.50	0.30~5.00		
	120404-AR				●		12.4	12.7	4.76	0.4	5.5	0.05~0.60	0.50~6.00		
	120408-AR				●		12.0	12.7	4.76	0.8	5.5	0.06~0.65	0.50~6.00		
	120412-AR						11.6	12.7	4.76	1.2	5.5	0.08~0.70	0.50~6.50		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

DC ○○

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	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
DCGT-AK 	070202-AK				●		7.5	6.35	2.38	0.2	2.8	0.01~0.20	0.05~3.00	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B114 B135 B135 B136
	070204-AK				●		7.3	6.35	2.38	0.4	2.8	0.02~0.30	0.10~4.00		
	070208-AK				●		6.8	6.35	2.38	0.8	2.8	0.03~0.40	0.10~4.00		
	11T302-AK				●		11.4	9.525	3.97	0.2	4.4	0.02~0.30	0.05~4.00		
	11T304-AK			●	●		11.2	9.525	3.97	0.4	4.4	0.03~0.50	0.10~5.00		
	11T308-AK				●		10.8	9.525	3.97	0.8	4.4	0.03~0.50	0.10~5.00		
	11T312-AK				●		10.4	9.525	3.97	1.2	4.4	0.04~0.60	0.15~5.00		
DCGT-AR 	070202-AR				●		7.5	6.35	2.38	0.2	2.8	0.02~0.30	0.30~4.00	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B114 B135 B135 B136
	070204-AR				●		7.3	6.35	2.38	0.4	2.8	0.03~0.40	0.50~5.00		
	070208-AR				●		6.8	6.35	2.38	0.8	2.8	0.04~0.50	0.50~5.00		
	11T302-AR						11.4	9.525	3.97	0.2	4.4	0.03~0.45	0.30~6.00		
	11T304-AR				●		11.2	9.525	3.97	0.4	4.4	0.04~0.50	0.50~6.00		
	11T308-AR				●		10.8	9.525	3.97	0.8	4.4	0.05~0.60	0.50~6.00		
	11T312-AR				●		10.4	9.525	3.97	1.2	4.4	0.08~0.65	0.50~6.50		

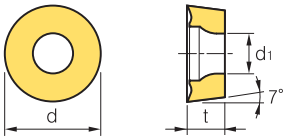
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

RC ○○

Round **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	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
RCGT-AK 	0602M0-AK				●		-	6.0	2.38	-	2.8	0.05~0.20	0.50~2.00	SRDCN SRGCR/L	**B114** **B115**
	0803M0-AK				●		-	8.0	3.18	-	3.35	0.05~0.25	0.50~2.50		
	1003M0-AK				●		-	10.0	3.18	-	4.0	0.10~0.30	1.00~3.00		
	10T3M0-AK						-	10.0	3.97	-	4.4	0.10~0.30	1.00~3.00		
	1204M0-AK				●		-	12.0	4.76	-	4.4	0.10~0.35	1.00~3.50		
RCGT-AR 	0602M0-AR						-	6.0	2.38	-	2.8	0.05~0.20	0.50~2.00	SRDCN SRGCR/L	**B114** **B115**
	0803M0-AR						-	8.0	3.18	-	3.35	0.05~0.25	0.50~2.50		
	1003M0-AR				●		-	10.0	3.18	-	4.0	0.10~0.30	1.00~3.00		
	10T3M0-AR						-	10.0	3.97	-	4.4	0.10~0.30	1.00~3.00		
	1204M0-AR						-	12.0	4.76	-	4.4	0.10~0.35	1.00~3.50		

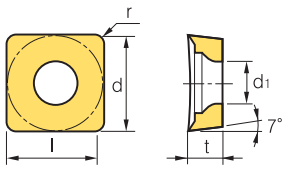
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

SC ○○

Square **90° 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

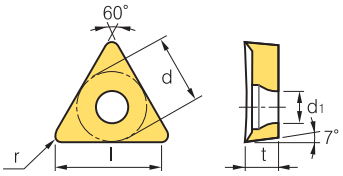
Inserts	Designation	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
SCGT-AK 	09T302-AK						9.3	9.525	3.97	0.2	4.4	0.02~0.30	0.10~4.00	SSBCR/L SSDCN SSKCR/L SSSCR/L	B115 B115 B116 B116
	09T304-AK				●		9.1	9.525	3.97	0.4	4.4	0.04~0.40	0.10~5.00		
	09T308-AK				●		8.7	9.525	3.97	0.8	4.4	0.03~0.40	0.10~5.00		
	120404-AK				●		12.3	12.7	4.76	0.4	5.5	0.03~0.50	0.10~5.00		
	120408-AK				●		11.9	12.7	4.76	0.8	5.5	0.04~0.60	0.15~5.50		
	120416-AK						11.1	12.7	4.76	1.6	5.5	0.04~0.60	0.15~5.50		
SCGT-AR 	09T302-AR						9.3	9.525	3.97	0.2	4.4	0.03~0.40	0.50~5.00	SSBCR/L SSDCN SSKCR/L SSSCR/L	B115 B115 B116 B116
	09T304-AR				●		9.1	9.525	3.97	0.4	4.4	0.04~0.50	0.50~6.00		
	09T308-AR						8.7	9.525	3.97	0.8	4.4	0.04~0.50	0.50~6.50		
	120404-AR				●		12.3	12.7	4.76	0.4	4.4	0.05~0.60	0.50~6.50		
	120408-AR						11.9	12.7	4.76	0.8	5.5	0.05~0.60	0.50~7.00		
	120416-AR						11.1	12.7	4.76	1.6	5.5	0.05~0.60	0.50~7.00		

Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

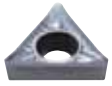
TC ○○

Triangular **60° 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	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
TCGT-AK 	090202-AK				●		9.1	5.56	2.38	0.2	2.5	0.01~0.12	0.05~3.00	STACR/L STFCR/L STFCR/L STGCR/L STTCR/L	**B116** **B116** **B137** **B117** **B117**
	090204-AK				●		8.6	5.56	2.38	0.4	2.5	0.02~0.15	0.10~4.00		
	110202-AK				●		10.5	6.35	2.38	0.2	2.8	0.02~0.20	0.05~4.00		
	110204-AK				●		10.0	6.35	2.38	0.4	2.8	0.03~0.30	0.10~4.00		
	110208-AK				●		9.0	6.35	2.38	0.8	2.8	0.03~0.40	0.10~5.00		
	16T302-AK				●		15.0	9.525	3.97	0.2	4.4	0.02~0.30	0.05~5.00		
	16T304-AK				●		15.5	9.525	3.97	0.4	4.4	0.03~0.40	0.10~5.50		
	16T308-AK				●		14.5	9.525	3.97	0.8	4.4	0.03~0.50	0.10~5.50		
	16T312-AK				●		13.5	9.525	3.97	1.2	4.4	0.04~0.60	0.15~5.50		
	16T316-AK				●		12.5	9.525	3.97	1.6	4.4	0.05~0.80	0.15~5.50		
	16T325-AK						10.0	9.525	3.97	2.5	4.4	0.06~0.90	0.20~7.00		
TCGT-AR 	090202-AR						9.1	5.56	2.38	0.2	2.5	0.02~0.18	0.30~3.00	STACR/L STFCR/L STFCR/L STGCR/L STTCR/L	**B116** **B116** **B137** **B117** **B117**
	090204-AR				●		8.6	5.56	2.38	0.4	2.5	0.02~0.25	0.30~5.00		
	110202-AR						10.5	6.35	2.38	0.2	2.8	0.02~0.30	0.30~4.00		
	110204-AR				●		10.0	6.35	2.38	0.4	2.8	0.03~0.40	0.30~5.00		
	110208-AR						9.0	6.35	2.38	0.8	2.8	0.04~0.45	0.50~6.00		
	16T302-AR				●		15.0	9.525	3.97	0.2	4.4	0.03~0.45	0.30~5.00		
	16T304-AR				●		15.5	9.525	3.97	0.4	4.4	0.04~0.50	0.50~6.00		
	16T308-AR				●		14.5	9.525	3.97	0.8	4.4	0.05~0.60	0.50~6.00		
	16T312-AR						13.5	9.525	3.97	1.2	4.4	0.06~0.65	0.50~6.00		
	16T316-AR						12.5	9.525	3.97	1.6	4.4	0.08~0.70	0.50~6.50		
	16T325-AR						10.0	9.525	3.97	2.5	4.4	0.10~0.10	0.80~7.00		

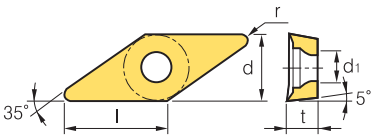
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

VB ○○

Rhombic **35° Positive**

Relief Angle : 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	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
VBGT-AK	110302-AK				●		10.5	6.35	3.18	0.2	2.8	0.02~0.15	0.05~3.00	SVABR/L	B117
	110304-AK				●		10.0	6.35	3.18	0.4	2.8	0.02~0.15	0.10~4.00	SVJBR/L	B118
	110308-AK						9.0	6.35	3.18	0.8	2.8	0.03~0.18	0.10~5.00	SVVBN	B119
	160402-AK						16.1	9.525	4.76	0.2	4.4	0.03~0.30	0.05~4.00	SVQBR/L	B138
	160404-AK				●		15.6	9.525	4.76	0.4	4.4	0.03~0.40	0.10~5.00	SVUBR/L	B139
	160408-AK				●		14.6	9.525	4.76	0.8	4.4	0.03~0.50	0.10~5.00		
	160412-AK						13.6	9.525	4.76	1.2	4.4	0.05~0.60	0.10~5.50		
VBGT-AR	110302-AR						10.5	6.35	3.18	0.2	2.8	0.02~0.35	0.30~3.00	SVABR/L	B117
	110304-AR						10.0	6.35	3.18	0.4	2.8	0.03~0.45	0.30~4.00	SVJBR/L	B118
	110308-AR						9.0	6.35	3.18	0.8	2.8	0.03~0.50	0.50~6.00	SVVBN	B119
	160402-AR						16.1	9.525	4.76	0.2	4.4	0.04~0.45	0.30~5.00	SVQBR/L	B138
	160404-AR				●		15.6	9.525	4.76	0.4	4.4	0.04~0.50	0.50~6.00	SVUBR/L	B139
	160408-AR				●		14.6	9.525	4.76	0.8	4.4	0.05~0.60	0.50~6.00		
	160412-AR						13.6	9.525	4.76	1.2	4.4	0.05~0.70	0.50~6.50		

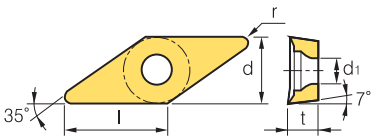
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17**

● : Stock item

VC○○

Rhombic **35° Positive**

Relief Angle : 7°

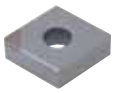
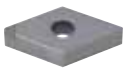
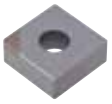
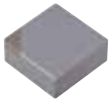
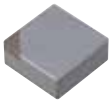
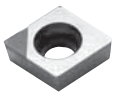
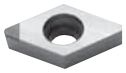


Workpiece			Machining types
Steel	P		● Continuous cutting
Stainless steel	M		⬌ General cutting
Cast iron	K		✱ Interrupted cutting
Non-ferrous metal	N	⬌ ⬌ ● ⬌ ✱	
Heat resistant alloy, Titanium alloy	S		
Hardened steel	H		

Inserts	Designation	Coated			Uncoated		Dimensions (mm)					Cutting Condition		Available tool holders	
		PC205K	PC8110	PD1000	H01	H10	l	d	t	r	d_1	fn (mm/rev)	ap (mm)	Designation	Page
VCGT-AK 	110301-AK						10.2	6.35	3.18	0.1	2.8	0.02~0.15	0.05~3.00	SVJCR/L	B118
	110302-AK				●		10.5	6.35	3.18	0.2	2.8	0.02~0.20	0.05~3.00	SVVCN	B119
	110304-AK				●		10.0	6.35	3.18	0.4	2.8	0.02~0.25	0.10~4.00	SVQCR/L	B138
	110308-AK				●		9.0	6.35	3.18	0.8	2.8	0.03~0.30	0.10~5.00	SVUCR/L	B139
	130302-AK				●		10.5	7.94	3.18	0.2	3.4	0.02~0.35	0.10~5.00		
	130304-AK				●		10.0	7.94	3.18	0.4	3.4	0.03~0.35	0.10~5.00		
	130308-AK						9.0	7.94	3.18	0.8	3.4	0.04~0.40	0.10~5.00		
	160402-AK				●		16.1	9.525	4.76	0.2	4.4	0.02~0.30	0.05~5.00		
	160404-AK			●	●		15.6	9.525	4.76	0.4	4.4	0.03~0.40	0.10~5.00		
	160408-AK				●		14.0	9.525	4.76	0.8	4.4	0.03~0.50	0.10~5.00		
	160412-AK				●		13.6	9.525	4.76	1.2	4.4	0.03~0.50	0.10~5.00		
	220516-AK						18.0	12.7	5.56	1.6	5.6	0.03~0.60	0.10~7.00		
	220525-AK						15.6	12.7	5.56	2.5	5.6	0.05~0.70	0.10~7.00		
	220530-AK				●		14.3	12.7	5.56	3.0	5.6	0.08~1.00	0.10~7.00		
VCGT-AR 	110301-AR						10.2	6.35	3.18	0.1	2.8	0.02~0.20	0.10~3.00	SVJCR/L	B118
	110302-AR						10.5	6.35	3.18	0.2	2.8	0.02~0.25	0.30~3.00	SVVCN	B119
	110304-AR				●		10.0	6.35	3.18	0.4	2.8	0.03~0.35	0.30~4.00	SVQCR/L	B138
	110308-AR						9.0	6.35	3.18	0.8	2.8	0.04~0.45	0.50~6.00	SVUCR/L	B139
	130302-AR						10.5	7.94	3.18	0.2	3.4	0.02~0.40	0.50~3.00		
	130304-AR				●		10.0	7.94	3.18	0.4	3.4	0.03~0.45	0.50~4.00		
	130308-AR						9.0	7.94	3.18	0.8	3.4	0.04~0.50	0.50~5.00		
	160402-AR				●		16.1	9.525	4.76	0.2	4.4	0.03~0.40	0.30~5.00		
	160404-AR				●		15.6	9.525	4.76	0.4	4.4	0.04~0.50	0.50~6.00		
	160408-AR				●		14.6	9.525	4.76	0.8	4.4	0.05~0.60	0.50~6.00		
	160412-AR				●		13.6	9.525	4.76	1.2	4.4	0.06~0.65	0.50~6.50		
	220516-AR						18.0	12.7	5.56	1.6	5.6	0.10~0.65	0.80~6.50		
	220525-AR				●		15.6	12.7	5.56	2.5	5.6	0.10~0.70	0.80~7.00		
	220530-AR						14.3	12.7	5.56	3.0	5.6	0.12~0.75	1.00~7.00		

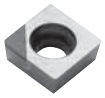
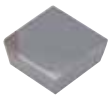
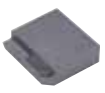
Cutting edge geometry **A31 ~ A34** Recommended chip breaker **B04 ~ B11** Code system **B16 ~ B17** ● : Stock item

cBN Regrinding (Negative / Positive)

Inserts		Designation		Grades								Dimensions (mm)				Available tool holders	
				KB410	KB420	KB425	KB320	KB210	KB335	KB350	KB370	Inscribed circle	Thickness	Nose R	Hole size	Designation	Page
CN○○ 80° Nega		CNMA	120404				●					12.7	4.76	0.4	5.16	DCBNR/L MCKNR/L DCLNR/L MCLNR/L PCBNR/L MCMNN PCLNR/L	B89 B106 B89 B106 B94 B106 B95
			120404W									12.7	4.76	0.4	5.16		
			120408				●					12.7	4.76	0.8	5.16		
			120408W									12.7	4.76	0.8	5.16		
			120412									12.7	4.76	1.2	5.16		
			120412W									12.7	4.76	1.2	5.16		
DN○○ 55° Nega		DNMA	150404				●					12.7	4.76	0.4	5.16	DDJNR/L MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B90 B107 B107 B108 B132 B95 B96 B127 B129
			150408				●					12.7	4.76	0.8	5.16		
			150412									12.7	4.76	1.2	5.16		
SN○○ 90° Nega		SNMA	120404									12.7	4.76	0.4	5.16	DSBNR/L MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L	B90 B108 B108 B109 B109 B110 B98 B98 B99
			120408									12.7	4.76	0.8	5.16		
			120412									12.7	4.76	1.2	5.16		
TN○○ 60° Nega		TNMA	160404									9.525	4.76	0.4	3.81	MTENNS MTFNR/L MTGNR/L MTJNR/L PTFNR/L PTGNR/L PTTNR/L WTENN WTJNR/L WTXNR/L	B110 B110 B111 B111 B100 B100 B101 B102 B102 B102
			160408									9.525	4.76	0.8	3.81		
			160412									9.525	4.76	1.2	3.81		
			220404									12.7	4.76	0.4	5.16		
			220408									12.7	4.76	0.8	5.16		
			220412									12.7	4.76	1.2	5.16		
VN○○ 35° Nega		VNMA	160404									9.525	4.76	0.4	3.81	MVJNR/L MVQNR/L MVUNR/L MVVNN	B111 B112 B133 B112
			160408				●					9.525	4.76	0.8	3.81		
			160412									9.525	4.76	1.2	3.81		
CN○○ 80° Nega		CNGN	090304									9.525	3.18	0.4	-	CCLNR/L	B120
			090308									9.525	3.18	0.8	-		
			090312									9.525	3.18	1.2	-		
			090404									12.7	4.76	0.4	-		
			090408									12.7	4.76	0.8	-		
			090412									12.7	4.76	1.2	-		
SN○○ 90° Nega		SNGN	090304									9.525	3.18	0.4	-	CSDNN CSKNR/L	B120 B121
			090308									9.525	3.18	0.8	-		
			090312									9.525	3.18	1.2	-		
			120404									12.7	4.76	0.4	-		
			120408									12.7	4.76	0.8	-		
			120412									12.7	4.76	1.2	-		
TN○○ 60° Nega		TNGN	160404									9.525	4.76	0.4	-	CTFNR/L CTGNR/L	B121 B121
			160408									9.525	4.76	0.8	-		
			160412									9.525	4.76	1.2	-		
CC○○ CP○○ 80° Posi	 (CCMW)	CCMW	09T304									9.525	3.97	0.4	4.4	SCACR/L SCLCR/L	B113 B113
			09T308									9.525	3.97	0.8	4.4		
		CPGB	080204									7.94	2.38	0.4	3.8		
			080208									7.94	2.38	0.8	3.8		
			090304									9.525	3.18	0.4	2.8		
			090308									9.525	3.18	0.8	2.8		
			090312									9.525	3.18	1.2	2.8		
		CPGW	080204									7.94	2.38	0.4	3.8		
			080208									7.94	2.38	0.8	3.8		
DC○○ 55° Posi		DCMW	070204									6.35	2.38	0.4	2.8	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B114 B135 B135 B136
			070208									6.35	2.38	0.8	2.8		
			070212									6.35	2.38	1.2	2.8		
			11T304									9.525	3.97	0.4	4.4		
			11T308									9.525	3.97	0.8	4.4		
			11T312									9.525	3.97	1.2	4.4		

● : Stock item

cBN Regrinding (Negative / Positive)

Inserts		Designation		Grades								Dimensions (mm)				Available tool holders	
				KB410	KB420	KB425	KB320	KB210	KB335	KB350	KB370	Inscribed circle	Thickness	Nose R	Hole size	Designation	Page
SC○○ 90° Posi		SCMW	09T304									9.525	3.97	0.4	4.4	SSBCR/L SSDCN SSKCR/L SSSCR/L	B115 B115 B116 B116
			09T308									9.525	3.97	0.8	4.4		
			09T312									9.525	3.97	1.2	4.4		
TC○○ 60° Posi		TCGW	110204									6.35	2.38	0.4	2.8	STACR/L STFCR/L STFPR/L STGCR/L STTCR/L	B116 B116 B144 B117 B117
			110208									6.35	2.38	0.8	2.8		
			16T304									9.525	3.97	0.4	2.8		
			16T308									9.525	3.97	0.8	2.8		
			16T312									9.525	3.97	1.2	2.8		
VB○○ VC○○ 35° Posi		VBMW	110204									6.35	2.38	0.4	2.8	SVABR/L SVHBR/L SVJBR/L SVQBR/L SVUBR/L	B117 B118 B118 B138 B139
			110208									6.35	2.38	0.8	2.8		
			110304									6.35	3.18	0.4	3.3		
			110308									6.35	3.18	0.8	3.3		
			160404				●					9.525	3.97	0.4	3.81		
			160408									9.525	3.97	0.8	3.81		
			160412									9.525	3.97	1.2	3.81		
		VCMW	160404									9.525	4.76	0.4	3.81	SVJCR SVVCN	B118 B119
			160408									9.525	4.76	0.8	3.81		
			160412									9.525	4.76	1.2	3.81		
SP○○ 90° Posi		SPGN	090304									9.525	3.18	0.4	-	CSDPN CSKPR/L	B104 B105
			090308									9.525	3.18	0.8	-		
			090312									9.525	3.18	1.2	-		
			120304									12.7	3.18	0.4	-		
			120308									12.7	3.18	0.8	-		
			120312									12.7	3.18	1.2	-		
TB○○ TP○○ 60° Posi	 TBGN	TBGN	060102-B									3.97	1.59	0.2	-	STUBR/L	B140
			060104-B									3.97	1.59	0.4	-		
			060108-B									3.97	1.59	0.8	-		
		TPGN	110304									6.35	3.18	0.4	-	CTFPR/L CTGPR/L	B105 B105
			110308									6.35	3.18	0.8	-		
			110312									6.35	3.18	1.2	-		
			160304									9.525	3.18	0.4	-		
			160308									9.525	3.18	0.8	-		
			160312									9.525	3.18	1.2	-		
RN○○ Nega		RNGN	120400-B									12.7	6.4	-	-	CRDNN CRGNR/L	B120 B120
RB○○ RC○○ RT○○ Posi	  	RBG	08-B									8.00	6.5	-	-		
			10-B									10.0	9.0	-	-		
			12-B									12.0	11.0	-	-		
			16-B									16.0	13.0	-	-		
			20-B									20.0	15.0	-	-		
			26-B									26.0	15.0	-	-		
		RCGA	0906M0									9.0	6.4	-	-		
		RTGN	0508M0									5.0	7.5	-	-		
			0608M0									6.0	7.5	-	-		
			0711MO									7.0	11.0	-	-		
			0811MO									8.0	11.0	-	-		
			0914MO									9.0	11.0	-	-		
			1014MO									10.0	14.0	-	-		
			1214MO									12.0	14.0	-	-		
Milling Insert		SNEN	1504ADTR									-	4.76	-	-		
			1504ADTL									-	4.76	-	-		
			1504DTR-W									-	4.76	-	-		
			1504DTL-W									-	4.76	-	-		

● : Stock item

cBN Grooving and Threading

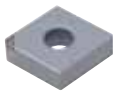
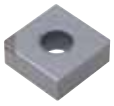
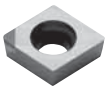
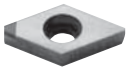
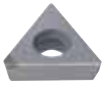
Inserts		Designation	Grades			Dimensions (mm)					Available tool holders	
			KB420	KB320	KB335	Edge Thickness	Edge length	Nose R	Tool length	Tool Thickness	Designation	Page
BN○○		BNGNT 0200L				2.0	4.0	0.2	25	6.0		
		0200R				2.0	4.0	0.2	25	6.0		
		0250L				2.5	4.0	0.2	25	6.0		
		0250R				2.5	4.0	0.2	25	6.0		
		0300L				3.0	5.0	0.4	25	6.0		
		0300R				3.0	5.0	0.4	25	6.0		
		0400L				4.0	6.0	0.4	26	6.0		
		0400R				4.0	6.0	0.4	26	6.0		
		0500L				5.0	6.0	0.4	26	6.0		
		0500R				5.0	6.0	0.4	26	6.0		
		0600L				6.0	7.0	0.4	27	6.0		
		0600R				6.0	7.0	0.4	27	6.0		
		BNTT 1020L				Pitch 1.0~2.0		0.13	25	2.0		
		1020R				Pitch 1.0~2.0		0.13	25	2.0		
		1530L				Pitch 1.5~3.0		0.13	25	2.0		
		1530R				Pitch 1.5~3.0		0.13	25	2.0		

cBN Mini Boring bar

Inserts		Designation	Grades	Min. boring dia.	Dimensions (mm)				Available tool holders	
			KB350		Tool length	Diameter	Width	Nose R	Designation	Page
BN○○R		BNBB 03R		3.5	60	3.5	2.4	0.2		
		035R		4.0	60	3.5	2.9	0.2		
		04R		4.5	60	4.0	3.4	0.2		
		045R		5.0	60	4.5	3.9	0.2		
		05R		5.5	80	5.0	4.4	0.2		
		055R		6.0	80	5.5	4.9	0.2		
		06R		6.5	80	6.0	5.4	0.2		
		065R		7.0	80	6.5	5.9	0.2		
		07R		7.5	100	7.0	6.4	0.2		
		075R		8.0	100	7.5	6.9	0.2		
		08R		8.5	100	8.0	7.4	0.2		

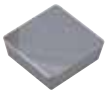
● : Stock item

cBN One-Use Type (Negative / Positive)

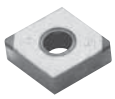
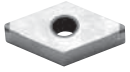
Inserts		Designation	Grades								Dimensions (mm)				Available tool holders	
			KB410	KB420	KB425	KB320	KB210	KB335	KB350	KB370	Inscribed circle	Thickness	Nose R	Hole size	Designation	Page
CN○○ 80° Nega		NU-CNMA 120404				●					12.7	4.76	0.4	5.16	DCBNR/L, DCLNR/L, MCKNR/L, MCLNR/L, MCMNN, PCBNR/L, PCLNR/L	B 89 B 89 B106 B106 B106 B 94 B 95
		120408				●					12.7	4.76	0.8	5.16		
		120412									12.7	4.76	1.2	5.16		
DN○○ 55° Nega		NU-DNMA 150404									12.7	4.76	0.4	5.16	DDJNR/L MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B 90 B107 B107 B108 B132 B 95 B 96 B128 B129
		150408									12.7	4.76	0.8	5.16		
		150412									12.7	4.76	1.2	5.16		
SN○○ 90° Nega		NU-SNMA 120404									12.7	4.76	0.4	5.16	DSBNR/L MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L	B90 B108 B108 B109 B109 B110 B98 B98 B99
		120408									12.7	4.76	0.8	5.16		
		120412									12.7	4.76	1.2	5.16		
TN○○ 60° Nega		NU-TNMA 160404									9.525	4.76	0.4	3.81	MTENN MTFNR/L MTGNR/L MTJNR/L PTFNR/ PTGNR/L PTTNR/L WTENN WTJNR/L WTXNR/L	B110 B110 B111 B111 B100 B100 B101 B102 B102 B102
		160408									9.525	4.76	0.8	3.81		
		160412									9.525	4.76	1.2	3.81		
VN○○ 35° Nega		NU-VNMA 160404									9.525	4.76	0.4	3.81	MVJNR/L MVQNR/L MVUNR/L MVVNN	B111 B112 B133 B112
		160408									9.525	4.76	0.8	3.81		
		160412									9.525	4.76	1.2	3.81		
CC○○ CP○○ 80° Posi		NU-CCMW 060202									6.35	2.38	0.2	2.8	SCACR/L SCLCR/L	B113 B113
		060204									6.35	2.38	0.4	2.8		
		060208									6.35	2.38	0.8	2.8		
		09T302									9.525	3.97	0.2	4.4		
		09T304									9.525	3.97	0.4	4.4		
		09T308									9.525	3.97	0.8	4.4		
		NU-CPMB 080204									7.94	2.38	0.4	3.4	SCLPR/L	B142
		080208									7.94	2.38	0.8	3.4		
		090304									9.525	3.18	0.4	4.4		
		090308									9.525	3.18	0.8	4.4		
DC○○ 55° Posi		NU-DCMW 070202									6.35	2.38	0.2	2.8	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B135 B135 B135 B136
		070204									6.35	2.38	0.4	2.8		
		070208									6.35	2.38	0.8	2.8		
		11T302									9.525	3.97	0.2	4.4		
		11T304									9.525	3.97	0.4	4.4		
		11T308									9.525	3.97	0.8	4.4		
TC○○ TP○○ 60° Posi		NU-TCGW 090204									5.56	2.38	0.4	2.8	STACR/L STFCR/L STFPR/L STGCR/L STTCR/L	B116 B116 B144 B117 B117
		090208									5.56	2.38	0.8	2.8		
		110202									6.35	2.38	0.2	2.3		
		110204									6.35	2.38	0.4	2.3		
		110208									6.35	2.38	0.8	2.3		
		16T304									9.525	3.97	0.4	4.3		
		16T308									9.525	3.97	0.8	4.3		
		NU-TPGW 080202									7.94	2.38	0.2	3.4	STFPR/L STWPR/L STUPR/L	B137 B137 B145
		080204									7.94	2.38	0.4	3.4		
		080208									7.94	2.38	0.8	3.4		
		090204									5.56	2.38	0.4	2.8		
		090208									5.56	2.38	0.8	2.8		
		110302									6.35	3.18	0.2	2.8		
		110304									6.35	3.18	0.4	2.8		
		110308									6.35	3.18	0.8	2.8		
		160404									9.525	4.76	0.4	3.81		
		160408									9.525	4.76	0.8	3.81		

● : Stock item

cBN One-Use Type (Positive)

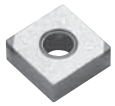
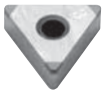
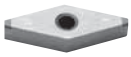
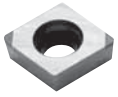
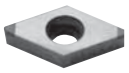
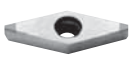
Inserts		Designation	Grades								Dimensions (mm)				Available tool holders	
			KB410	KB420	KB425	KB320	KB210	KB335	KB350	KB370	Inscribed circle	Thickness	Nose R	Hole size	Designation	Page
VB○○ VC○○ 35° Posi		NU-VBMW 110202			●		●		●		6.35	2.38	0.2	2.3	SVABR/L SVHBR/L SVJBR/L SVQBR/L SVUBR/L	B117 B118 B118 B138 B139
		110204			●		●		●		6.35	2.38	0.4	2.3		
		110302			●		●		●		6.35	3.18	0.2	2.8		
		110304			●		●		●		6.35	3.18	0.4	2.8		
		110308			●		●		●		6.35	3.18	0.8	2.8		
		160402			●		●		●		12.7	4.76	0.2	4.4		
		160404			●		●		●		12.7	4.76	0.4	4.4		
		160408			●		●		●		12.7	4.76	0.8	4.4		
		NU-VCMW 110304			●		●		●		6.35	3.18	0.4	2.8	SVJCR SVVCN	B118 B119
		110308			●		●		●		6.35	3.18	0.8	2.8		
		160404			●		●		●		12.7	4.76	0.4	4.4		
		160408			●		●		●		12.7	4.76	0.8	4.4		
		160412			●		●		●		12.7	4.76	1.2	4.4		
SP○○ 90° Posi		NU-SPGN 090304			●		●		●		9.525	3.18	0.4	-	CSDPN CSKPR/L	B104 B105
		090308			●		●		●		9.525	3.18	0.8	-		
		120304			●		●		●		12.7	3.18	0.4	-		
		120308			●		●		●		12.7	3.18	0.8	-		
		120404			●		●		●		12.7	4.76	0.4	-		
		120408			●		●		●		12.7	4.76	0.8	-		
TP○○ 60° Posi		NU-TPGN 110304			●		●		●		6.35	3.18	0.4	-	CTFPR/L CTGPR/L	B105 B105
		110308			●		●		●		6.35	3.18	0.8	-		
		160304			●		●		●		9.525	3.18	0.4	-		
		160308			●		●		●		9.525	3.18	0.8	-		

cBN Multi-Corner Type (Negative / Positive)

Inserts		Designation	Uncoated								Coated		Dimensions (mm)				Available tool holders	
			KB410	KB420	KB425	KB320	KB210	KB335	KB350	KB370	DNC250	DNC280	Inscribed circle	Thickness	Nose R	Hole size	Designation	Page
CN○○ 80° Nega		2NU-CNGA 120404			●		●		●		●		12.7	4.76	0.4	5.16	DCBNR/L DCLNR/L MCKNR/ MCLNR/L MCMNN PCBNR/L PCLNR/L	B 89 B 89 B106 B106 B106 B 94 B 95
		120404W			●		●		●		●		12.7	4.76	0.4	5.16		
		120408			●		●		●		●		12.7	4.76	0.8	5.16		
		120408W			●		●		●		●		12.7	4.76	0.8	5.16		
		120412			●		●		●		●		12.7	4.76	1.2	5.16		
		120412W			●		●		●		●		12.7	4.76	1.2	5.16		
		4NU-CNGA 120404			●		●		●		●		12.7	4.76	0.4	5.16		
		120404W			●		●		●		●		12.7	4.76	0.4	5.16		
		120408			●		●		●		●		12.7	4.76	0.8	5.16		
		120408W			●		●		●		●		12.7	4.76	0.8	5.16		
		120412			●		●		●		●		12.7	4.76	1.2	5.16		
		120412W			●		●		●		●		12.7	4.76	1.2	5.16		
DN○○ 55° Nega		2NU-DNGA 150404			●		●		●		●		12.7	4.76	0.4	5.16	DDJNR/ MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B 90 B107 B107 B108 B132 B 95 B 96 B128 B129
		150408			●		●		●		●		12.7	4.76	0.8	5.16		
		150412			●		●		●		●		12.7	4.76	1.2	5.16		
		4NU-DNGA 150404			●		●		●		●		12.7	4.76	0.4	5.16		
		150408			●		●		●		●		12.7	4.76	0.8	5.16		
		150412			●		●		●		●		12.7	4.76	1.2	5.16		

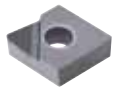
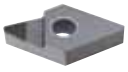
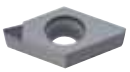
● : Stock item

cBN Multi-Corner Type (Negative / Positive)

Inserts		Designation	Uncoated							Coated		Dimensions (mm)				Available tool holders	
			KB410	KB420	KB425	KB320	KB210	KB335	KB350	KB370	DNC250	DNC280	Inscribed circle	Thickness	Nose R	Hole size	Designation	Page
SN○○ 90° Nega		2NU-SNGA 120404			●								12.7	4.76	0.4	5.16	DSBNR/L MSBNR/L MSDNN MSKNR/L MSRNR/L MSSNR/L PSBNR/L PSDNN PSKNR/L	B90 B108 B108 B109 B109 B110 B98 B98 B99
		120408			●								12.7	4.76	0.8	5.16		
		120412			●								12.7	4.76	1.2	5.16		
		4NU-SNGA 120404			●								12.7	4.76	0.4	5.16		
		120408			●								12.7	4.76	0.8	5.16		
		120412			●								12.7	4.76	1.2	5.16		
		8NU-SNGA 120404			●								12.7	4.76	0.4	5.16		
		120408			●								12.7	4.76	0.8	5.16		
		120412			●								12.7	4.76	1.2	5.16		
TN○○ 60° Nega		3NU-TNGA 160404			●								9.525	4.76	0.4	3.81	MTENN MTFNR/L MTGNR/ MTJNR/L PTFNR/L PTGNR/L PTTNR/L WTENN WTJNR/L WTXNR/L	B110 B110 B111 B111 B100 B100 B101 B102 B102 B102
		160408			●								9.525	4.76	0.8	3.81		
		160412			●								9.525	4.76	1.2	3.81		
		6NU-TNGA 160404			●								9.525	4.76	0.4	3.81		
		160408			●								9.525	4.76	0.8	3.81		
		160412			●								9.525	4.76	1.2	3.81		
VN○○ 35° Nega		2NU-VNGA 160404			●								9.525	4.76	0.4	3.81	MVJNR/L MVQNR/L MVUNR/L MVVNN	B111 B112 B133 B112
		160408			●								9.525	4.76	0.8	3.81		
		160412			●								9.525	4.76	1.2	3.81		
		4NU-VNGA 160404			●								9.525	4.76	0.4	3.81		
		160408			●								9.525	4.76	0.8	3.81		
		160412			●								9.525	4.76	1.2	3.81		
CC○○ 80° Posi		2NU-CCMW 060204			●								6.35	2.38	0.4	2.8	SCACR/L SCLCR/L	B113 B113
		2NU-CCGW 060204W			●								6.35	2.38	0.4	2.8		
		2NU-CCMW 060208			●								6.35	2.38	0.8	2.8		
		2NU-CCGW 060208W			●								6.35	2.38	0.8	2.8		
		09T304			●								9.525	3.97	0.4	4.4		
		09T304W			●								9.525	3.97	0.4	4.4		
		09T308			●								9.525	3.97	0.8	4.4		
		09T308W			●								9.525	3.97	0.8	4.4		
		09T312			●								9.525	3.97	1.2	4.4		
		09T312W			●								9.525	3.97	1.2	4.4		
DC○○ 55° Posi		2NU-DCGW 11T302			●								9.525	3.97	0.2	4.4	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B135 B135 B136
		11T304			●								9.525	3.97	0.4	4.4		
		11T308			●								9.525	3.97	0.8	4.4		
SC○○ 90° Posi		4NU-SCGW 09T304			●								9.525	3.97	0.4	4.4	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B135 B135 B136
		09T308			●								9.525	3.97	0.8	4.4		
		09T312			●								9.525	3.97	1.2	4.4		
TP○○ 60° Posi		3NU-TPGN 110304			●								6.35	3.18	0.4	-	CTFPR/L CTGPR/L	B105 B105
		110308			●								6.35	3.18	0.8	-		
		160404			●								9.525	3.18	0.4	-		
		160408			●								9.35	3.18	0.8	-		
		3NU-TPGB 110304			●								6.35	3.18	0.4	2.4		
		110308			●								6.35	3.18	0.8	2.4		
		3NU-TPGW 160404			●								9.525	4.76	0.4	3.81		
		160408			●								9.525	4.76	0.8	3.81		
VB○○ 35° Posi		2NU-VBGW 110304			●								6.35	3.18	0.4	2.8	SVABR/L SVHBR/L SVJBR/L SVQBR/L SVUBR/L	B117 B118 B118 B138 B139
		110308			●								6.35	3.18	0.8	2.8		
		160404			●								12.7	4.76	0.4	4.4		
		160408			●								12.7	4.76	0.8	4.4		

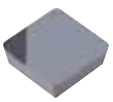
● : Stock item

PCD Insert (Negative / Positive)

Inserts		Designation		Grades DP90	Grades DP150	Grades DP200	Dimensions (mm) Inscribed circle	Thickness	Nose R	Hole size	Available tool holders Designation	Page
CN○○ 80° Nega	 (CNMX)	CNMM	120404		●		12.7	4.76	0.4	5.16	DCBNR/L DCLNR/L MCKNR/L MCLNR/L MCMNN PCBNR/L PCLNR/L	B 89 B 89 B106 B106 B106 B 94 B 95
			120408				12.7	4.76	0.8	5.16		
			120412				12.7	4.76	1.2	5.16		
		CNMX	120404				12.7	4.76	0.4	5.16		
			120408				12.7	4.76	0.8	5.16		
			120412				12.7	4.76	1.2	5.16		
DN○○ 55° Nega	 (CNMX)	DNMM	150404				12.7	4.76	0.4	5.16	DDJNR/L MDJNR/L MDNNN MDQNR/L MDUNR/L PDJNR/L PDNNR/L PDSNR/L PDUNR/L	B90 B107 B107 B108 B132 B95 B96 B128 B129
			150408				12.7	4.76	0.8	5.16		
			150412				12.7	4.76	1.2	5.16		
		DNMX	150404				12.7	4.76	0.4	5.16		
			150408				12.7	4.76	0.8	5.16		
			150412				12.7	4.76	1.2	5.16		
TN○○ 60° Nega		TNMX	160404				9.525	4.76	0.4	3.81	MTENNS MTFNR/L MTGNR/L MTJNR/L PTFNR/L PTGNR/L PTTNR/L WTENN WTJNR/L WTXNR/L	B110 B110 B111 B111 B100 B100 B101 B102 B102 B102
			160408				9.525	4.76	0.8	3.81		
			160412				9.525	4.76	1.2	3.81		
VN○○ 35° Nega		VNMX	160404				9.525	4.76	0.4	3.81	MVJNR/L MVQNR/L MVUNR/L MVVNN	B111 B112 B133 B112
			160408				9.525	4.76	0.8	3.81		
			160412				9.525	4.76	1.2	3.81		
CC○○ CP○○ 80° Posi		CCMT	060202		●		6.35	2.38	0.2	2.8	SCACR/L SCLCR/L	B113 B113
			060204		●		6.35	2.38	0.4	2.8		
			060208				6.35	2.38	0.8	2.8		
			09T304		●		9.525	3.97	0.4	4.4		
			09T308		●		9.525	3.97	0.8	4.4		
			09T312				9.525	3.97	1.2	4.4		
		CPMT	080204				7.94	2.38	0.4	3.4		
			080208				7.94	2.38	0.8	3.4		
			080212				7.94	2.38	1.2	3.4		
			090304				9.525	3.18	0.4	4.4		
			090308				9.525	3.18	0.8	4.4		
			090312				9.525	3.18	1.2	4.4		
DC○○ 55° Posi		DCMT	070202		●		6.35	2.38	0.2	2.8	SDACR/L SDJCR/L SDNCN SDQCR/L SDUCR/L SDZCR/L	B113 B114 B135 B135 B136
			070204				6.35	2.38	0.4	2.8		
			070208				6.35	2.38	0.8	2.8		
			11T302				9.525	3.97	0.2	4.4		
			11T304				9.525	3.97	0.4	4.4		
			11T308		●		9.525	3.97	0.8	4.4		
SC○○ SP○○ 90° Posi	 (SCMT)	SCMT	09T304				9.525	3.97	0.4	4.4	SSBCR/L SSDCN SSKCR/L SSSCR/L	B115 B115 B116 B116
			09T308				9.525	3.97	0.8	4.4		
			09T312				9.525	3.97	1.2	4.4		
		SPGW	090302				9.525	3.18	0.2	4.4		
			090304				9.525	3.18	0.4	4.4		
			090308				9.525	3.18	0.8	4.4		

● : Stock item

PCD Insert (Negative / Positive)

Inserts		Designation		Grades DP90	Grades DP150	Grades DP200	Dimensions (mm) Inscribed circle	Thickness	Nose R	Hole size	Available tool holders Designation	Page
TB ○○ TC ○○ TP ○○ 60° Posi	 (TBGN)	TBGW	060102				3.97	1.59	0.2	2.8	STUBR/L	B140
			060104				3.97	1.59	0.4	2.8		
		TCMT	090201				5.56	2.38	0.1	2.5	STACR/L STFCR/L STFPR/L STGCR/L STTCR/L	B116 B116 B144 B117 B117
			090202				5.56	2.38	0.2	2.5		
			090204				5.56	2.38	0.4	2.5		
			110201				6.35	2.38	0.1	2.8		
			110202				6.35	2.38	0.2	2.8		
			110204				6.35	2.38	0.4	2.8		
		TPGB	080204				4.76	2.38	0.4	2.4		
			080208				4.76	2.38	0.8	2.4		
			090204				5.56	2.38	0.4	2.5		
			090208				5.56	2.38	0.8	2.5		
			110304				6.35	3.18	0.4	3.3		
			110308				6.35	3.18	0.8	3.3		
		TPGW	080202				4.76	2.38	0.2	2.4		
			080204				4.76	2.38	0.4	2.4		
			110302				6.35	3.18	0.2	3.4		
			110304				6.35	3.18	0.4	3.4		
			110308				6.35	3.18	0.8	3.4		
			160404				9.525	4.76	0.4	3.81		
			160408				9.525	4.76	0.8	3.81		
		TPGT	110302				6.35	3.18	0.2	3.4		
			110304				6.35	3.18	0.4	3.4		
VB ○○ VC ○○ 35° Posi	 (VCMT)	VBMT	110302				6.35	3.18	0.2	3.4	SVABR/L SVHBR/L SVJBR/L SVQBR/L SVUBR/L	B117 B118 B92 B138 B139
			110304				6.35	3.18	0.4	3.4		
			110308				6.35	3.18	0.8	3.4		
			160402				9.525	4.76	0.2	4.4		
			160404				9.525	4.76	0.4	4.4		
			160408				9.525	4.76	0.8	4.4		
			160412				9.525	4.76	1.2	4.4		
		VCMT	110302				6.35	3.18	0.2	3.4	SVJCR SVVCN	B118 B119
			110304				6.35	3.18	0.4	3.4		
			110308				6.35	3.18	0.8	3.4		
			160404				9.525	4.76	0.4	4.4		
			160408				9.525	4.76	0.8	4.4		
			160412				9.525	4.76	1.2	4.4		
TP ○○ 60° Posi		TPGN	090204				5.56	2.38	0.4	-	CTFPR/L CTGPR/L	B105 B105
			090208				5.56	2.38	0.8	-		
			110302				6.35	3.18	0.2	-		
			110304				6.35	3.18	0.4	-		
			110308				6.35	3.18	0.8	-		
			160302				9.525	3.18	0.2	-		
			160304				9.525	3.18	0.4	-		
			160308				9.525	3.18	0.8	-		
SP ○○ 90° Posi		SPGN	090304				9.525	3.18	0.4	-	CSDPN CSKPR/L	B104 B105
			090308				9.525	3.18	0.8	-		
			120304				12.7	3.18	0.4	-		
			120308				12.7	3.18	0.8	-		

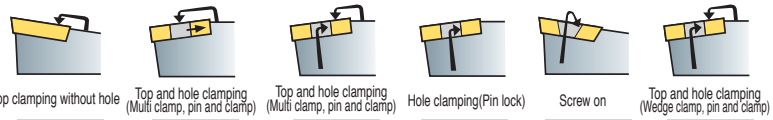
● : Stock item

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

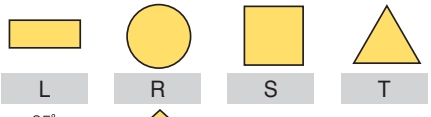


C | D | M | P | S | W

2 Insert Shape

P S K N R 25 25 - M 12

C | D | E | K

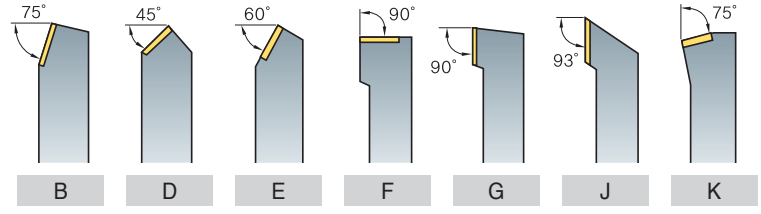


L | R | S | T

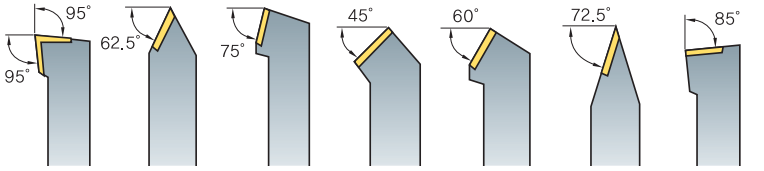
V | W

3 Holder Style

P S K N R 25 25 - M 12



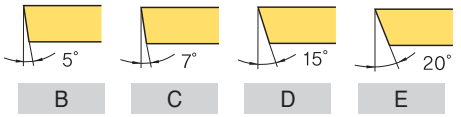
B | D | E | F | G | J | K



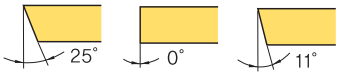
L | N | R | S | T | V | Y

4 Clearance Angle of Insert

P S K N R 25 25 - M 12



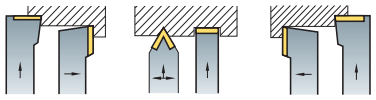
B | C | D | E



F | N | P

5 Hand

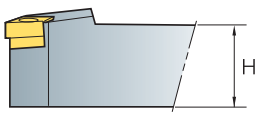
P S K N R 25 25 - M 12



L | N | R

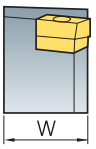
6 Height of Shank

P S K N R 25 25 - M 12



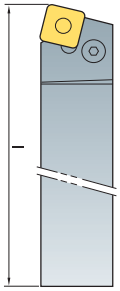
7 Width of Shank

P S K N R 25 25 - M 12



8 Length of Holder

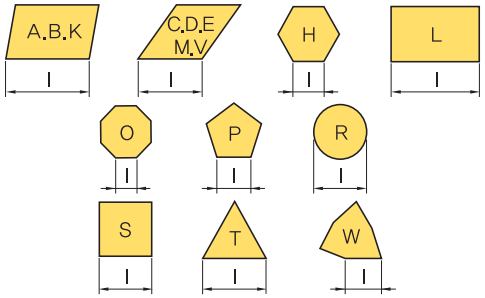
P S K N R 25 25 - M 12



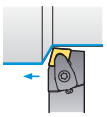
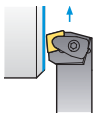
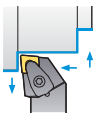
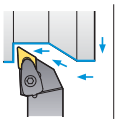
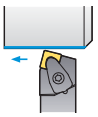
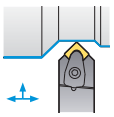
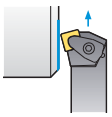
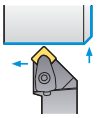
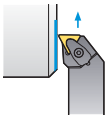
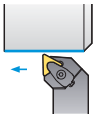
A - 32	H - 100	Q - 180	X-Special Item
B - 40	J - 110	R - 200	
C - 50	K - 125	S - 250	
D - 60	L - 140	T - 300	
E - 70	M - 150	U - 350	
F - 80	N - 160	V - 400	
G - 90	P - 170	W - 450	

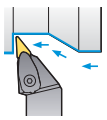
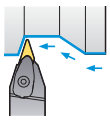
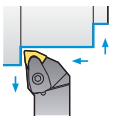
9 Length of Insert Cutting Edge

P S K N R 25 25 - M 12

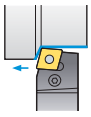
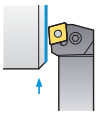
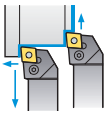
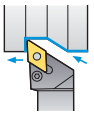
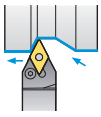
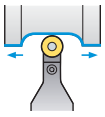
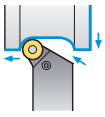
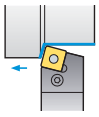
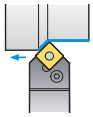
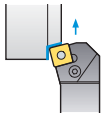


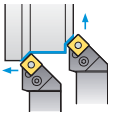
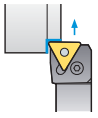
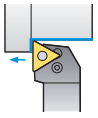
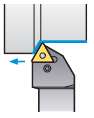
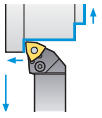
Double Clamp System

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	B89	B89	B89	B90	B90	B91	B91	B91	B92	B92
Turning	●		●	●	●	●		●		●
Copying				●						
Facing		●	●				●	●	●	
Chamfering						●				
Back turning			●	●						

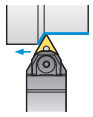
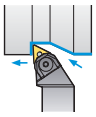
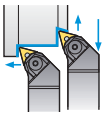
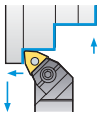
Cutting Shape			
Designation	DVJNR/L	DVVNN	DWLNR
Approach angle	93°	72.5°	95°
Page	B92	B93	B93
Turning	●	●	●
Copying	●	●	
Facing			●
Chamfering			
Back turning	●		●

Lever Lock System

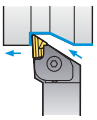
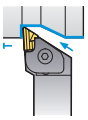
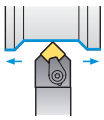
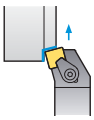
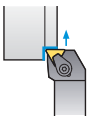
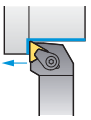
Cutting Shape										
Designation	PCBNR/L	PCKNR/L	PCLNR/L	PDJNR/L	PDNNR/L	PRDCN	PRGCR/L	PSBNR/L	PSDNN	PSKNR/L
Approach angle	75°	75°	95°	93°	63°	-	-	75°	45°	75°
Page	B94	B94	B95	B95, B96	B96	B97	B97	B98	B98	B99
Turning	●	●	●	●	●	●	●	●	●	
Copying				●	●	●	●			
Facing			●							●
Chamfering										
Back turning			●	●						

Cutting Shape					
Designation	PSSNR/L	PTFNR/L	PTGNR/L	PTTNR/L	PWLNR/L
Approach angle	45°	90°	90°	60°	95°
Page	B99	B100	B100	B101	B101
Turning	●		●	●	●
Copying					
Facing	●	●			●
Chamfering				●	
Back turning					●

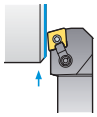
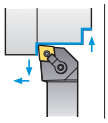
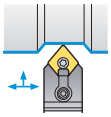
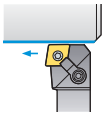
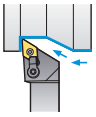
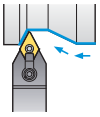
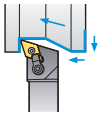
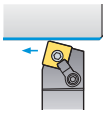
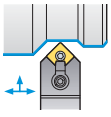
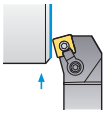
Wedge Clamp System

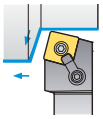
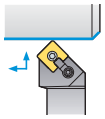
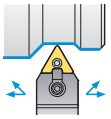
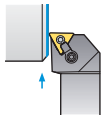
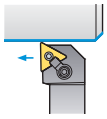
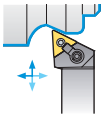
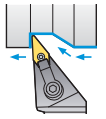
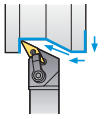
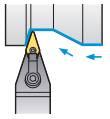
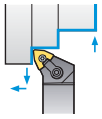
Cutting Shape										
Designation	WTENN	WTJNR/L	WTXNR/L	WWLNR/L						
Approach angle	60°	93°	105°	95°						
Page	B102	B102	B102	B103						
Turning	●	●	●	●						
Copying	●	●	●							
Facing				●						
Chamfering										
Back turning		●	●	●						

Clamp on System

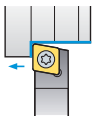
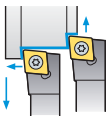
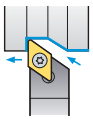
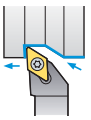
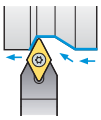
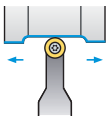
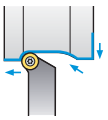
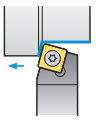
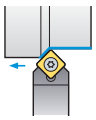
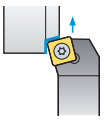
Cutting Shape										
Designation	CKJNR/L	CKNNR/L	CSDPN	CSKPR/L	CTFPR/L	CTGPR/L				
Approach angle	93°	62.5°	45°	75°	90°	90°				
Page	B104	B104	B104	B105	B105	B105				
Turning	●	●	●			●				
Copying	●	●								
Facing				●	●					
Chamfering										
Back turning	●									

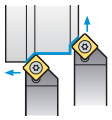
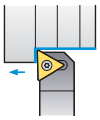
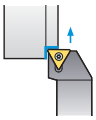
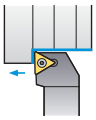
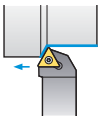
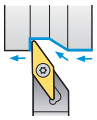
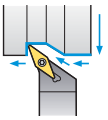
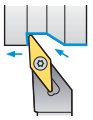
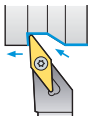
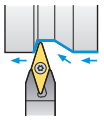
Multi Lock System

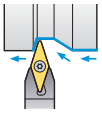
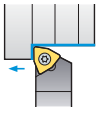
Cutting Shape										
Designation	MCKNR/L	MCLNR/L	MCMNN	MCRNR/L	MDJNR/L	MDNNN	MDQNR/L	MSBNR/L	MSDNN	MSKNR/L
Approach angle	75°	95°	50°	75°	93°	62.5°	107.5°	75°	45°	75°
Page	B106	B106	B106	B107	B107	B107	B108	B108	B108	B109
Turning		●	●	●	●	●	●	●	●	
Copying					●	●	●			
Facing	●	●								●
Chamfering										
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	B109	B110	B110	B110	B111	B111	B111	B112	B112	B112
Turning	●	●	●		●	●	●	●	●	●
Copying			●			●	●	●	●	
Facing		●		●		●				●
Chamfering										
Back turning						●	●	●		●

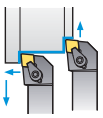
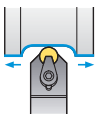
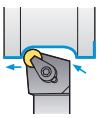
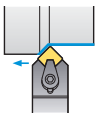
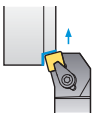
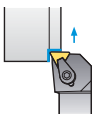
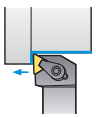
Screw on System

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	B113	B113	B113	B114	B114	B114	B115	B115	B115	B116
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	B116	B116	B116	B117	B117	B117	B118	B118	B118	B119
Turning	●	●		●	●	●	●	●	●	●
Copying						●	●	●	●	●
Facing	●		●							
Chamfering										
Back turning						●	●	●	●	

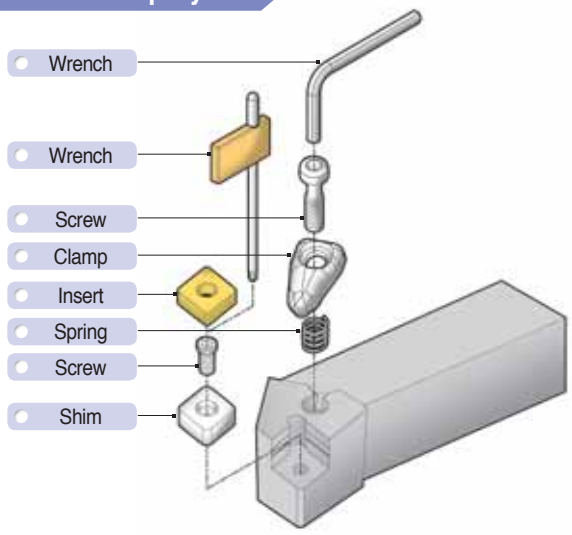
Cutting Shape		
Designation	SVVCN	SWACR/L
Approach angle	72.5°	90°
Page	B119	B119
Turning	●	●
Copying	●	
Facing		
Chamfering		
Back turning		

Ceramic Holder

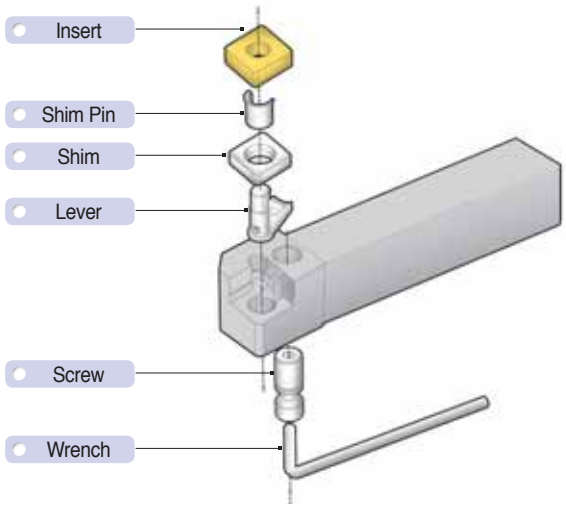
Cutting Shape							
Designation	CCNLR/L	CRDNN	CRGNR/L	CSDNN	CSKNR/L	CTFNR/L	CTGNR/L
Approach angle	95°	-	-	45°	75°	90°	90°
Page	B120	B120	B120	B120	B121	B121	B121
Turning	●	●	●	●			●
Copying			●				
Facing	●				●	●	
Chamfering							
Back turning	●						

Instruction of External Holder

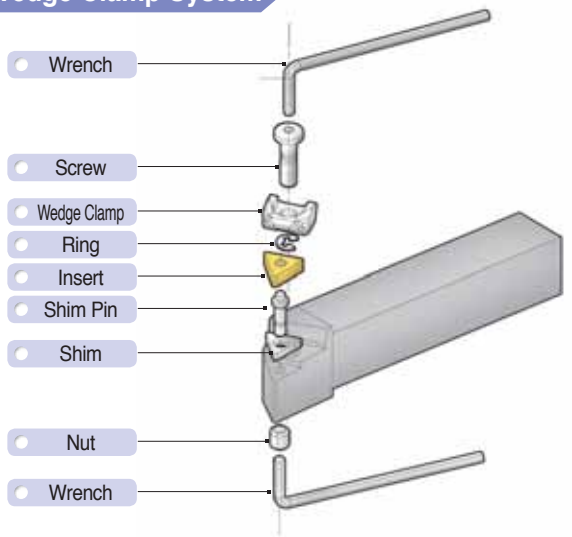
Double Clamp System



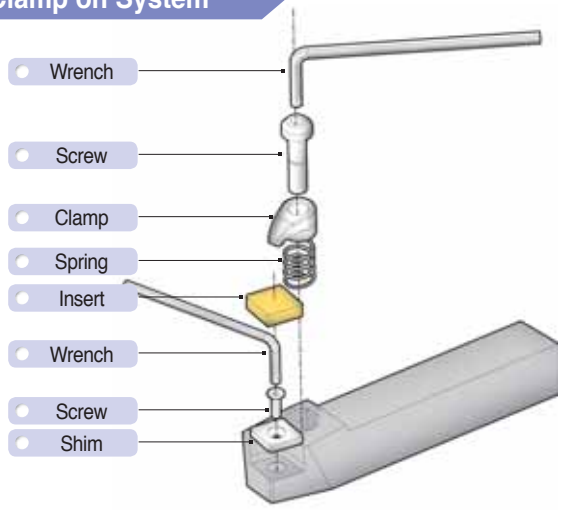
Lever Lock System



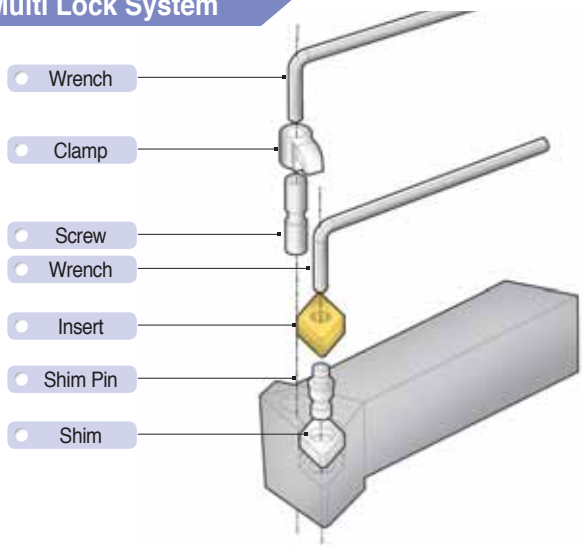
Wedge Clamp System



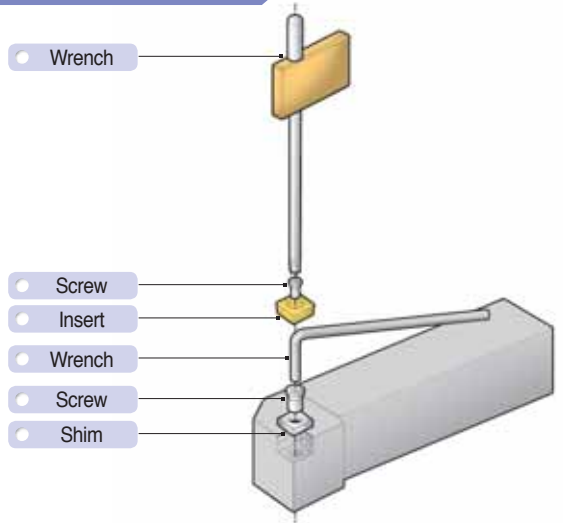
Clamp on System



Multi Lock System



Screw on System

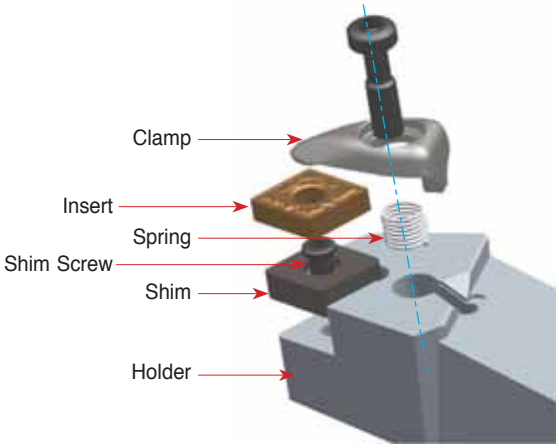


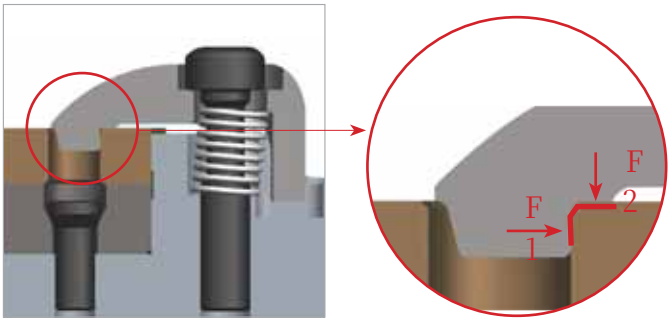
Double Clamp System

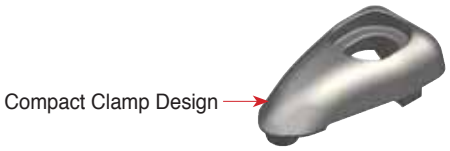
Stable clamping with double clamp system

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





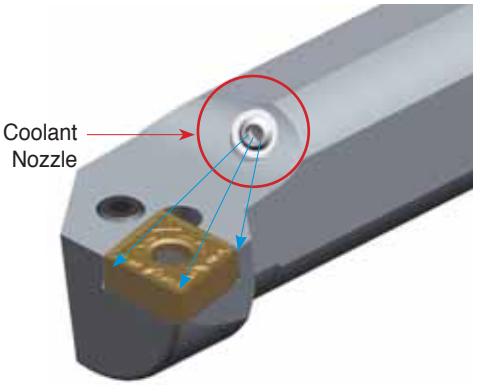


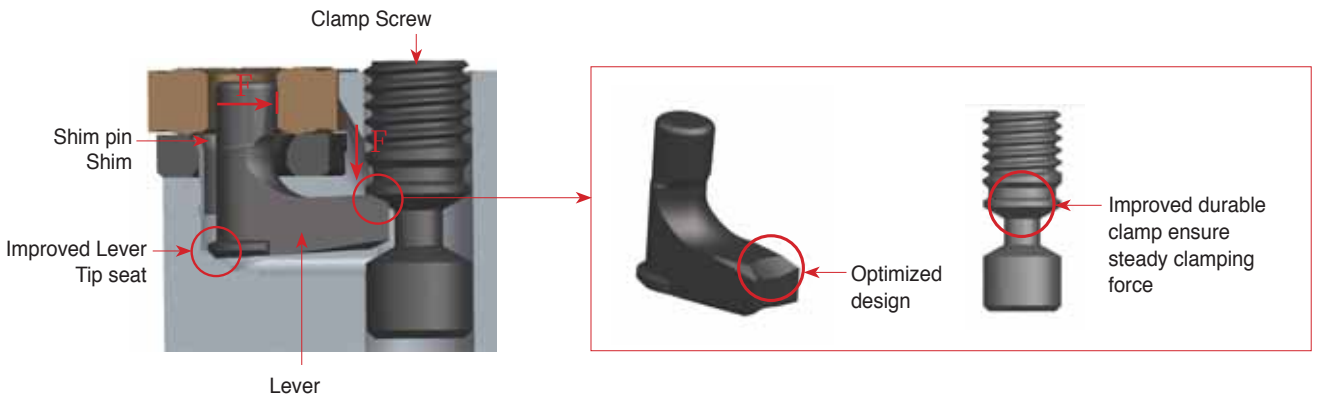
Lever Lock System

Stable clamping with double clamp system

Features

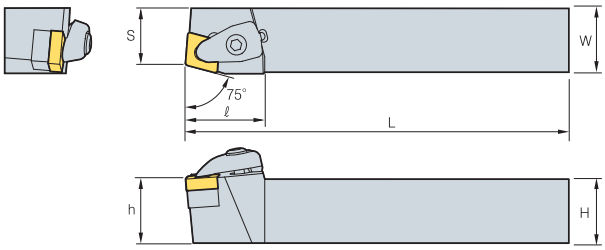
- The holder offers precision due to the special design due to the improved Lever tip seat
- The durability of parts has been improved
- Superior tool life due to powerful clamping system and optimized design of part.
- Part designation on holder body makes it easy to check the right part description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

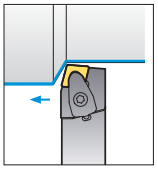




DCBNR/L

CN□□





75°

• R type insert

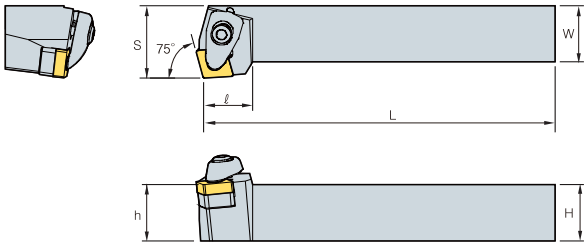
(mm)

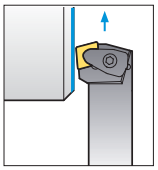
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DCBNR/L	2020-K12	20	20	125	17	20	31	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	22	25	31							
	3225-P12	32	25	170	22	32	31							
	2525-M16	25	25	150	22	25	36	CN□□1606□□	CVH5	CHX0622	SC54V	FTNA0511	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, see pages B18~B22

DCKNR/L

CN□□





75°

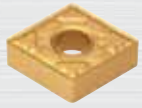
• R type insert

(mm)

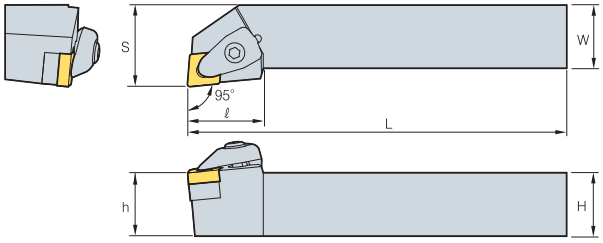
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DCKNR/L	2020-K12	20	20	125	25	20	21	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	32	25	21							
	3225-P12	32	25	170	32	32	21							
	3232-P16	32	32	170	40	32	26	CN□□1606□□	CVH5	CHX0622	SC54V	FTNA0511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

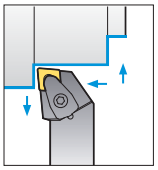
Applicable inserts, see pages B18~B22

DCLNR/L



CN□□





95°

• R type insert

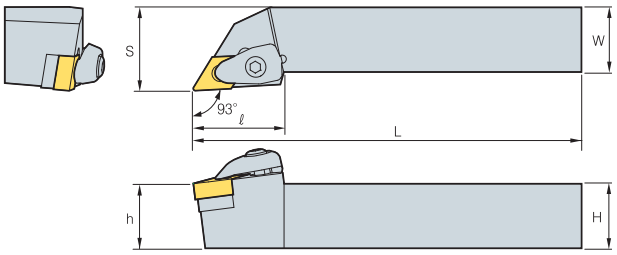
(mm)

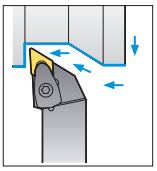
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DCLNR/L	2020-K09	20	20	125	25	20	24.5	CN□□0903□□	CVH3	CHX0415	SC32V	FTKA0307	SPR0510	HW25P
	2525-M09	25	25	150	32	25	24.5							
	2020-K12	20	20	125	25	20	30	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	HW30P
	2525-M12	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, see pages B18~B22

DDJNR/L

DN□□





93°

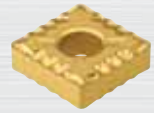
• R type insert

(mm)

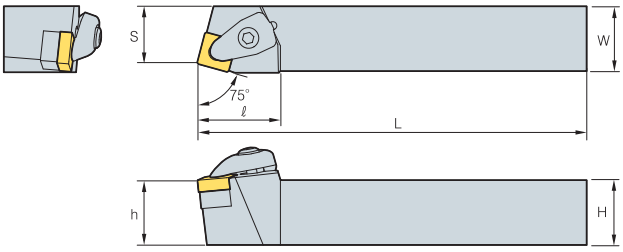
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DDJNR/L	2020-K11	20	20	125	25	20	30	DN □□1104□□	CVH3	CHX0415	SD32V	FTKA0307	SPR0510	HW25P
	2525-M11	25	25	150	32	25	30							
	3225-P11	32	25	170	32	32	30							
	3232-P11	32	32	170	40	32	30							
	2020-K15	20	20	125	25	20	35	DN□□1506□□	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□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	HW30P
	2525-M15-3	25	25	150	32	25	35							
	3232-P15-3	32	32	170	40	32	35							

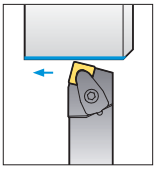
Applicable inserts, see pages B23~B26

DSBNR/L



SN□□





75°

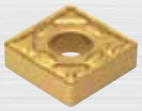
• R type insert

(mm)

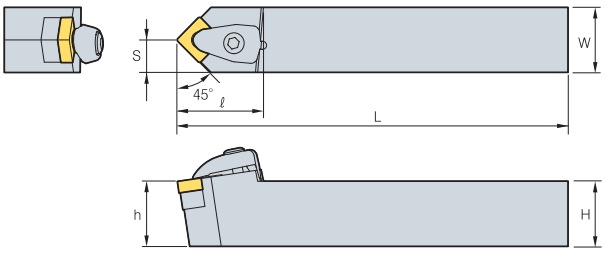
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSBNR/L	2020-K09	20	20	125	17	20	25	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2525-M09	25	25	150	22	25	25							
	2020-K12	20	20	125	17	20	32	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	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	FTKA0511	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							

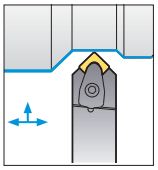
Applicable inserts, see pages B28~B34

DSDNN



SN□□





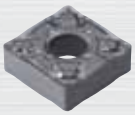
45°

(mm)

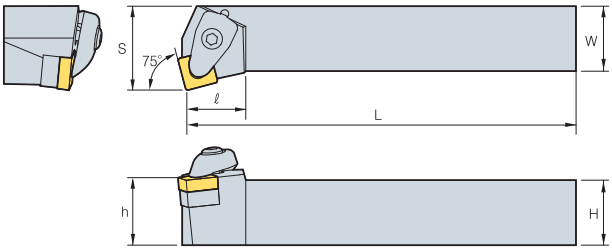
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSDNN	2020-K09	20	20	125	10	20	26.5	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2020-K12	20	20	125	10	20	33	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	12.5	25	33							
	3225-P12	32	25	170	12.5	32	33							
	3232-P12	32	32	170	16	32	33							
	2525-M15	25	25	150	12.5	25	39.4	SN□□1506□□	CVH5	CHX0622	SS54V	FTKA0511	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							

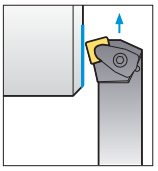
Applicable inserts, see pages B28~B34

DSKNR/L



SN□□





75°

• R type insert

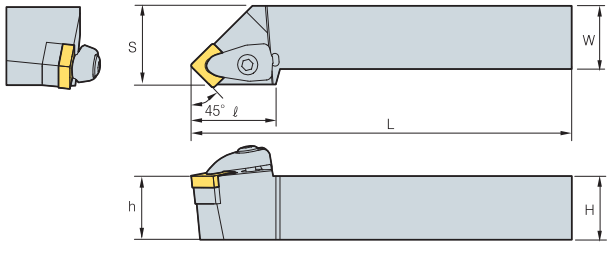
(mm)

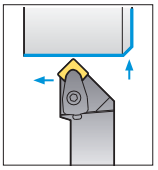
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSKNR/L	2020-K09	20	20	125	25	20	20	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2020-K12	20	20	125	25	20	23	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	32	25	23							
	3232-P12	32	32	170	40	32	23							
	3232-P15	32	32	170	40	32	28	SN□□1506□□	CVH5	CHX0622	SS54V	FTKA0511	SPR0811	HW40L
	3232-P19	32	32	170	40	32	35							
	4040-S19	40	40	250	50	40	43	SN□□1906□□	CVH6	CHX0622	SS64V	FTNA0511	SPR0811	HW40L

Applicable inserts, see pages B28~B34

DSSNR/L

SN□□





45°

• R type insert

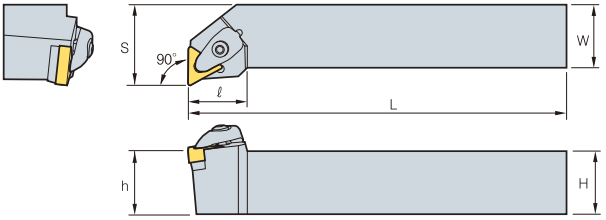
(mm)

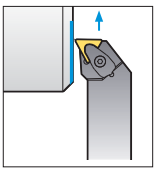
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DSSNR/L	2020-K09	20	20	125	25	20	28.5	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	HW25P
	2020-K12	20	20	125	25	20	35	SN□□1204□□	CVH4	CHX0518	SS44V	FTKA0410	SPR0714	HW30P
	2525-M12	25	25	150	32	25	35							
	3225-P12	32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

Applicable inserts, see pages B28~B34

DTFNR/L

TN□□





90°

• R type insert

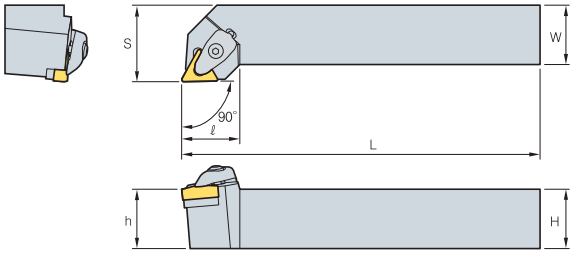
(mm)

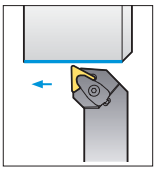
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DTFNR/L	2020-K16	20	20	125	25	20	24.5	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	HW25P
	2525-M16	25	25	150	32	25	24.5							
	3232-P16	32	32	170	40	32	23.5							
	2525-M22	25	25	150	32	25	33	TN□□2204□□	CVH4	CHX0518	ST44V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

Applicable inserts, see pages B35~B41

DTGNR/L

TN□□





90°

• R type insert

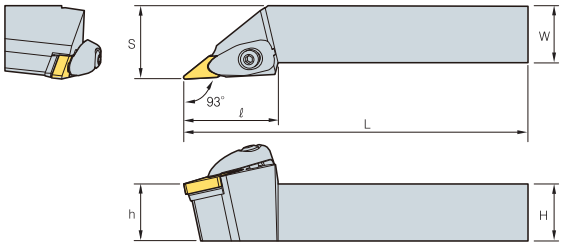
(mm)

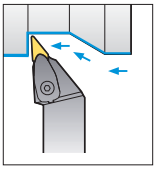
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DTGNR/L	2020-K16	20	20	125	25	20	24.5	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	HW25P
	2525-M16	25	25	150	32	25	24.5							
	3232-P16	32	32	170	40	32	24.5							
	2525-M22	25	25	150	32	25	32.6	TN□□2204□□	CVH4	CHX0518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

Applicable inserts, see pages B35~B41

DVJNR/L

VN□□





93°

• R type insert

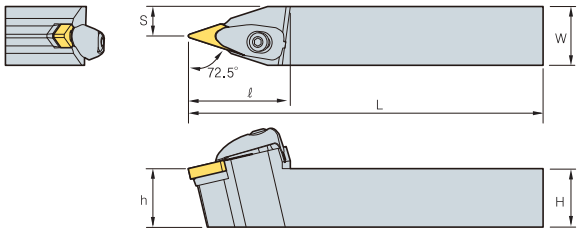
(mm)

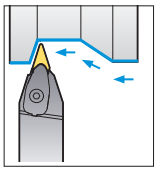
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DVJNR/L	2020-K16	20	20	125	25	20	41.5	VN□□1604□□	CVH3V	CHX0518	SV32V	FTNA03508	SPR0714	HW30P
	2525-M16	25	25	150	32	25	41.5							
	3232-P16	32	32	170	40	32	41.5							

Applicable inserts, see pages B42~B44

DVVNN

VN□□





72.5°

• R type insert

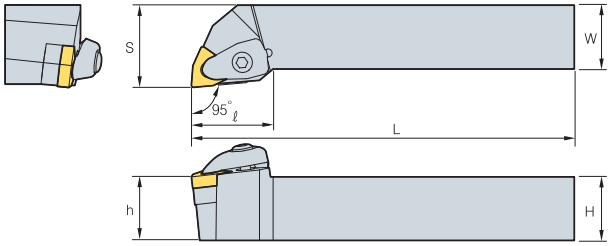
(mm)

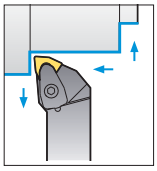
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DVVNN	2020-K16	20	20	125	10	20	40	VN□□1604□□	CVH3V	CHX0518	SV32V	FTNA03508	SPR0714	HW30P
	2525-M16	25	25	150	12.5	25	40							
	3232-P16	32	32	170	16	32	40							

Applicable inserts, see pages B42~B44

DWLNR/L

WN□□





95°

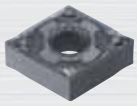
• R type insert

(mm)

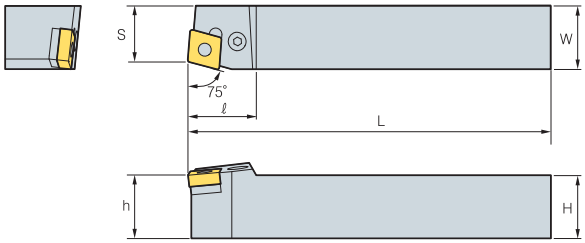
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Wrench
DWLNR/L	2020-K06	20	20	125	25	20	26	WN□□0604□□	CVH3	CHX0415	SW32V	FTKA0307	SPR0510	HW25P
	2525-M06	25	25	150	32	25	26							
	2020-K08	20	20	125	25	20	32	WN□□0804□□	CVH4	CHX0518	SW44V	FTKA0410	SPR0714	HW30P
	2525-M08	25	25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

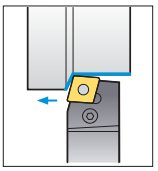
Applicable inserts, see pages B45~B48

PCBNR/L



CN□□





75°

• R type insert

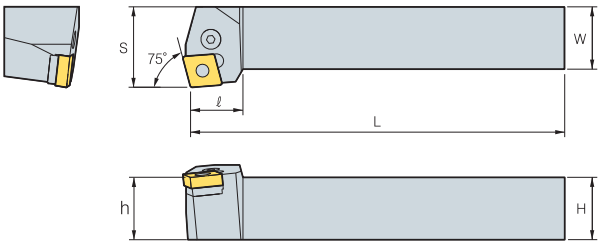
(mm)

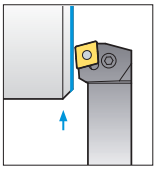
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PCBNR/L	2020-K12	20	20	125	17	20	27	CN□□1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS8
	2525-M12	25	25	150	22	25	27							
	3225-P12	32	25	170	22	32	27							
	2525-M16	25	25	150	22	25	33	CN□□1606□□	LV5	VHX0825	SC53	SP5	HW30L	LSPS6
	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□□						
PCBNR/L	2020-K12N	20	20	125	17	20	27	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	HW30L	LSPS4
	2525-M12N	25	25	150	22	25	27							
	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, see pages B18~B22

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	CN□□1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	32	25	27							
	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	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	HW30L	LSPS4
	2525-M12N	25	25	150	32	25	27							
	3225-P12N	32	25	170	40	32	30							
	3232-P16N	32	32	170	40	32	26	CN□□1606□□	LV5N	VHX0820AN	SC53N	SP5N	HW30L	LSPS5
	4040-S16N	40	40	250	50	40	25							

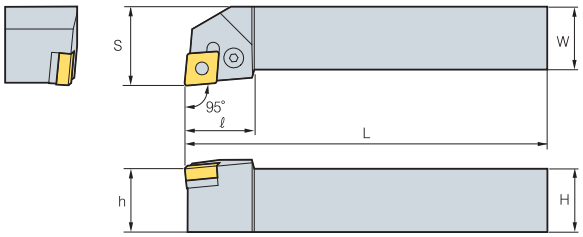
Applicable inserts, see pages B18~B22

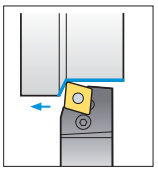
■Improved holders and parts ensure performance and durability

■"N" stand for New type (Holders and parts)

PCLNR/L

CN□□





95°

• R type insert

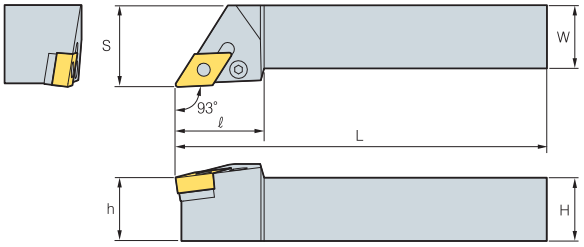
(mm)

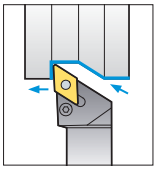
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PCLNR/L	1616-H09	16	16	100	20	16	20	CN□□0903□□	LV3	VHX0617	SC32	SP3	HW25L	LSPS3
	2020-K09	20	20	125	25	20	22							
	2525-M09	25	25	150	32	25	22							
	1616-H12	16	16	100	20	16	28	CN□□1204□□	LV4	VHX0821	SC42	SP4	HW30L	LSPS4
	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	SP3N	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, see pages B18~B22

PDJNR/L

DN□□





93°

• R type insert

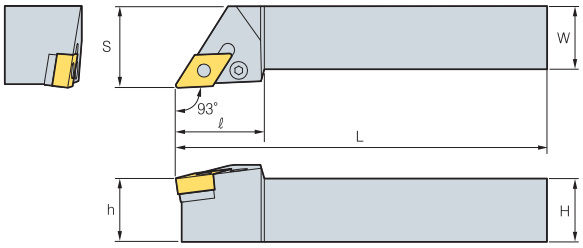
(mm)

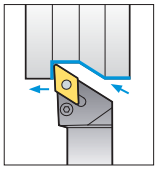
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PDJNR/L	1616-H11	16	16	100	20	16	25	DN□□1104□□	LV3	VHX0617	SD317	SP3	HW25L	LSPS3
	2020-K11	20	20	125	25	20	25							
	2525-M11	25	25	150	32	25	30							
	2020-K15	20	20	125	25	20	35	DN□□1506□□	LV4B	VHX0821	SD42	SP4	HW30L	LSPS4
	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, see pages B23~B26

PDJNR/L

DN□□





93°

• R type insert

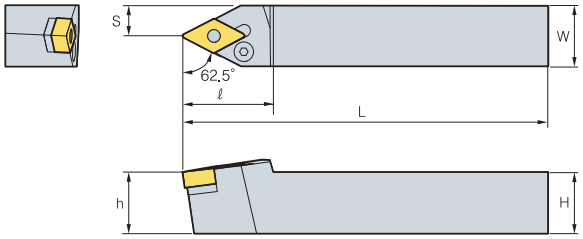
(mm)

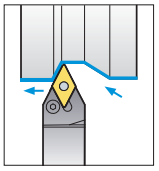
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PDJNR/L	1616-H11N	16	16	100	20	16	25	DN□□1104□□	LV3AN	VHX0617N	SD32N	SP3N-1	HW25L	LSPS3
	2020-K11N	20	20	125	25	20	25							
	2525-M11N	25	25	150	32	25	30							
	2020-K15N	20	20	125	25	20	35	DN□□1506□□	LV4BN	VHX0821N	SD42N	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, see pages B23~B26

PDNNR/L

DN□□





62.5°

• R type insert

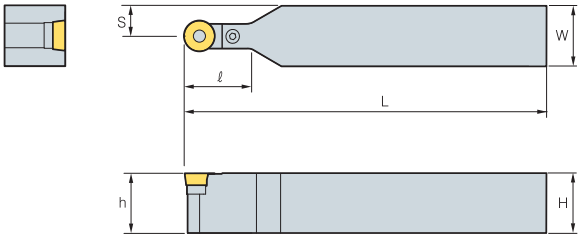
(mm)

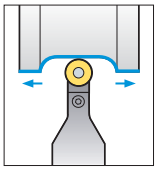
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PDNNR/L	2020-K15	20	20	125	8	20	37	DN□□1506□□	LV4B	VHX0821	SD42	SP4	HW30L	LSPS4
	2525-M15	25	25	150	12.5	25	37							
	3232-P15	32	32	150	16	32	37							
	4025-M15	40	25	170	12.5	32	37							
	2525-M15-3	25	25	150	12.5	25	37	DN□□1504□□	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, see pages B23~B26

PRDCN

RCMX





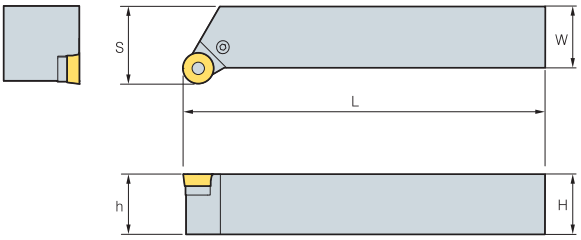
(mm)

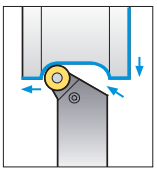
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PRDCN	2020-M10	20	20	150	15	20	24	RCMX 1003M0	LR10	VHX0514	SR10	SP3	HW20L	LSPS3
	2525-M10	25	25	150	17.5	25	24							
	2525-M12	25	25	150	18.5	25	24	RCMX 1204M0	LR12	VHX0617	SR12	SP3	HW25L	LSPS3
	2020-K12	20	20	125	16	20	24							
	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	SP5-1	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, see pages B54

PRGCR/L

RCMX





• R type insert

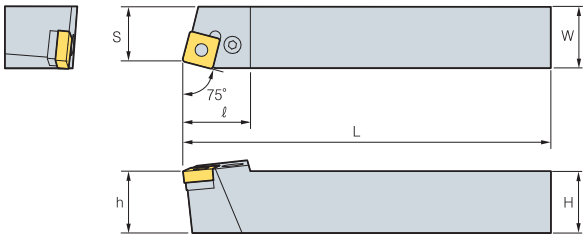
(mm)

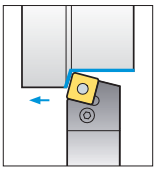
Designation		H	W	L	S	h	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PRGCR/L	2020-K10	20	20	125	25	20	RCMX 1003M0	LR10	VHX0514	SR10	SP3	HW20L	LSPS3
	2525-M10	25	25	150	32	25							
	2020-K12	20	20	125	25	20	RCMX 1204M0	LR12	VHX0617	SR12	SP3	HW25L	LSPS3
	2525-M12	25	25	150	32	25							
	3225-P12	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	SP5-1	HW30L	LSPS5
	4040-S25	40	40	250	50	40	RCMX 2507M0	LR25	VHX1030	SR25	SP6N	HW40L	LSPS6

Applicable inserts, see pages B54

PSBNR/L

SN□□





75°

• R type insert

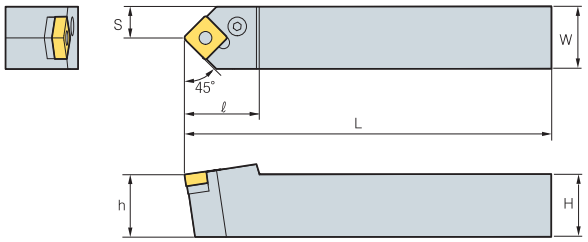
(mm)

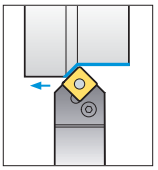
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PSBNR/L	1616-H09	16	16	100	13	16	21	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	2020-K09	20	20	125	17	20	23							
	2020-K12	20	20	125	17	20	28	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	22	25	28							
	3225-P12	32	32	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	SP3N	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
	3232-P15N	32	32	170	27	32	35							

Applicable inserts, see pages B28~B34

PSDNN

SN□□





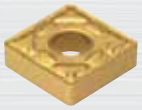
45°

(mm)

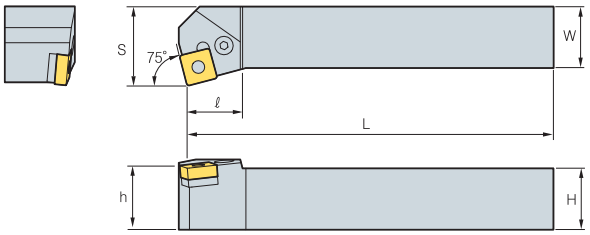
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PSDNN	1616-H09	16	16	100	8	16	23	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	2020-K12	20	20	125	10	20	30	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	12.5	25	30							
	3232-P12	32	32	170	16	32	40							
	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	SP3N	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							

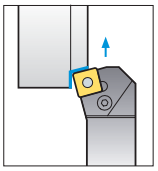
Applicable inserts, see pages B28~B34

PSKNR/L



SN□□





75°

• R type insert

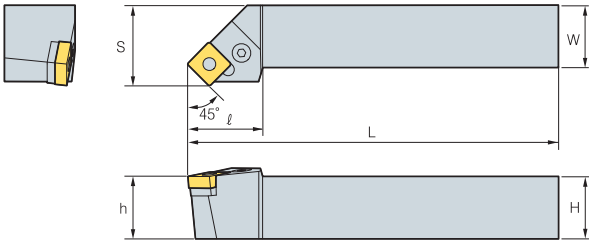
(mm)

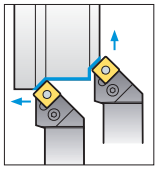
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PSKNR/L	1616-H09	16	16	100	20	16	17	SN□□0903□□	LV3	VHX0617	SS32	SP3	HW25L	LSPS3
	2020-K09	20	20	125	25	20	20							
	2020-K12	20	20	125	25	20	23	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	32	25	23							
	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	SP3N	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, see pages B28~B34

PSSNR/L

SN□□





45°

• R type insert

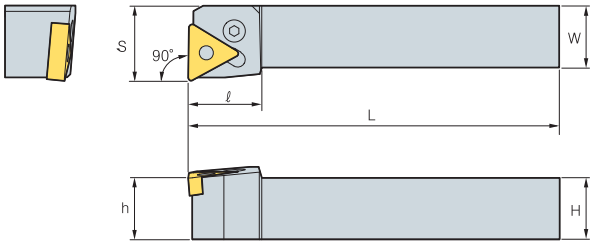
(mm)

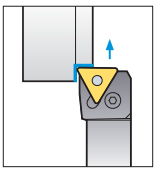
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PSSNR/L	1616-H09	16	16	100	20	16	25	SN□□0903□□	LV3	VHX0617	SS32	SP10	HW25L	LSPS3
	2020-K12	20	20	125	25	20	30	SN□□1204□□	LV4	VHX0821	SS42	SP4	HW30L	LSPS4
	2525-M12	25	25	150	32	25	36							
	3232-P12	32	32	170	40	32	40							
	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	SP10	HW25L	LSPS3
	2020-K12N	20	20	125	25	20	30	SN□□1204□□	LV4N	VHX0821N	SS42N	SP4	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	SP5	HW30L	LSPS5
	3232-P15N	32	32	170	40	32	45							

Applicable inserts, see pages B28~B34

PTFNR/L

TN□□





90°

• R type insert

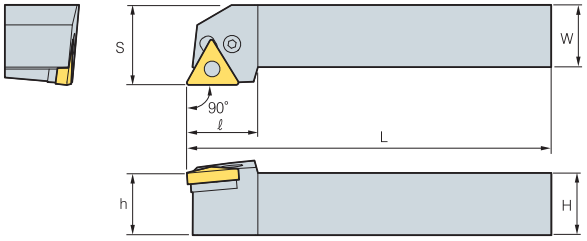
(mm)

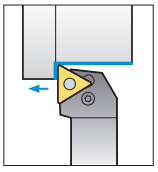
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PTFNR/L	1616-H16	16	16	100	20	16	20	TN□□1604□□	LV3	VHX0617	ST317	SP3	HW25L	LSPS3
	2020-K16	20	20	125	25	20	20							
	2525-M16	25	25	150	32	25	20							
	2525-M22	25	25	150	32	25	25	TN□□2204□□	LV4	VHX0821	ST42	SP4	HW30L	LSPS4
	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	SP3N	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, see pages B35~B41

PTGNR/L

TN□□





90°

• R type insert

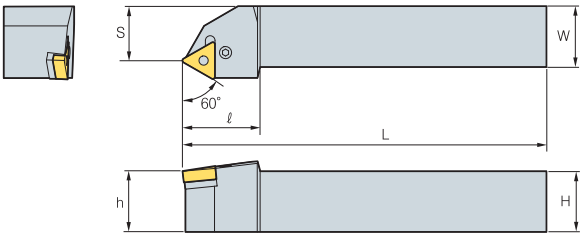
(mm)

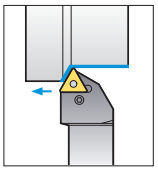
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PTGNR/L	1212-F11	12	12	80	16	12	16	TN□□1103□□	LV2	VHX0509B	-	-	HW20L	-
	1616-H11	16	16	100	20	16	18							
	2020-K11	20	20	125	25	20	19							
	2525-M11	25	25	150	32	25	20							
	1616-H16	16	16	100	20	16	20	TN□□1604□□	LV3	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	T53	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	SP3N	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, see pages B35~B41

PTTNR/L

TN□□





60°

• R type insert

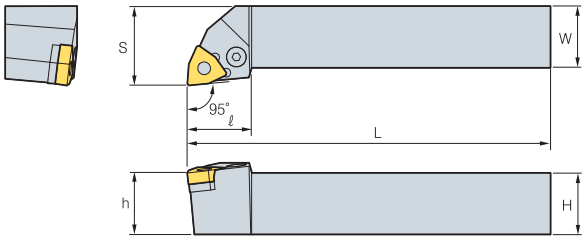
(mm)

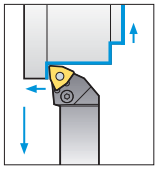
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PTTNR/L	1616-H16	16	16	100	13	16	25	TN□□1604□□	LV3	VHX0617	ST317	SP3	HW25L	LSPS3
	2020-K16	20	20	125	17	20	25							
	2525-M16	25	25	150	22	25	32							
	2525-M22	25	25	150	22	25	32	TN□□2204□□	LV4	VHX0821	ST42	SP4	HW30L	LSPS4
PTTNR/L	1616-H16N	16	16	100	13	16	25	TN□□1604□□	LV3N	VHX0617N	ST317N	SP3N	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□□	LV4N	VHX0820N	ST42N	SP4N	HW30L	LSPS4

Applicable inserts, see pages B35~B41

PWLNR/L

WN□□





95°

• R type insert

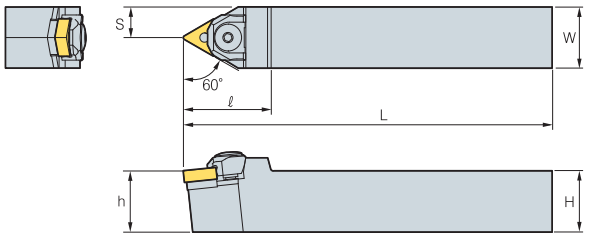
(mm)

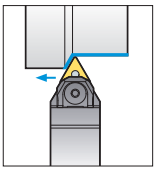
Designation		H	W	L	S	h	ℓ	Insert	Lever	Screw	Shim	Shim Pin	Wrench	Shimpin Punch
PWLNR/L	1616-H06	16	16	100	20	16	20	WN□□0604□□	LV3	VHX0617	SW317	SP3	HW25L	LSPS3
	2020-K06	20	20	125	25	20	20							
	2525-M06	25	25	150	32	25	20							
	2020-K08	20	20	125	25	20	26	WN□□0804□□	LV4	VHX0821	SW42	SP4	HW30L	LSPS4
	2525-M08	25	25	150	32	25	26							
PWLNR/L	1616-H06N	16	16	100	20	16	20	WN□□0604□□	LV3N	VHX0617N	ST317N	SP3N	HW25L	LSPS3
	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	ST42N	SP4N	HW30L	LSPS4
	2525-N08N	25	25	150	32	25	26							

Applicable inserts, see pages B45~B48

WTENN

TN□□





60°

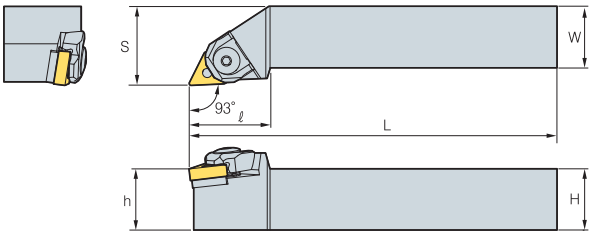
(mm)

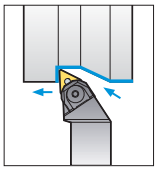
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WTENN	2020-K16	20	20	125	10	20	36	TN□□1604□□	CMH6R6	MHX0626	ER04	ST32M	SP3M-1 / SP3M	N0407	HW30L
	2525-M16	25	25	150	12.5	25	36								
	2525-M22	25	25	150	12.5	25	42	TN□□2204□□	CMH6R1	MHX0626	ER04	ST43M	SP4M	N0508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

Applicable inserts, see pages B35~B41

WTJNR/L

TN□□





93°

• R type insert

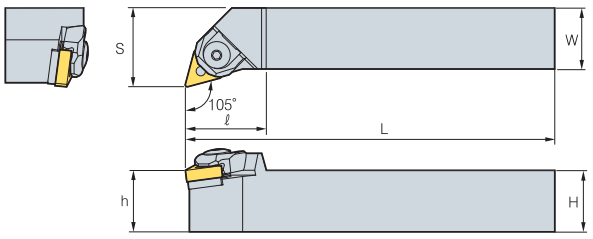
(mm)

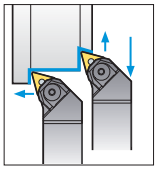
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WTJNR/L	2020-K16	20	20	125	25	20	33	TN□□1604□□	CMH6R6	MHX0626	ER04	ST32M	SP3M-1 / SP3M	N0407	HW30L
	2525-M16	25	25	150	32	25	33								
	3232-P16	32	32	170	40	32	33								
	2525-M22	25	25	150	32	25	35	TN□□2204□□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

Applicable inserts, see pages B35~B41

WTXNR/L

TN□□





105°

• R type insert

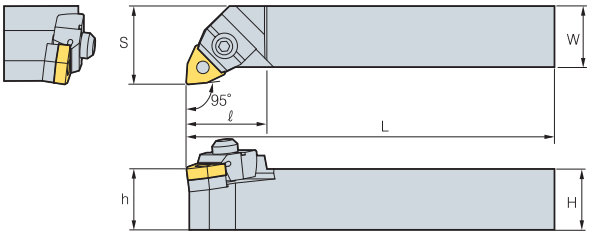
(mm)

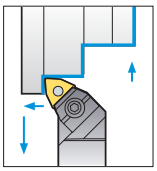
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	Stopper Ring	Shim	Shim Pin	Nut	Wrench
WTXNR/L	2020-K16	20	20	125	25	20	30	TN□□1604□□	CMH6R6	MHX0626	ER04	ST32M	SP3M-1 / SP3M	N0407	HW25L / HW30L
	2525-M16	25	25	150	32	25	33								
	3232-P16	32	32	170	40	32	33								

Applicable inserts, see pages B35~B41

WWLNR/L

WN□□





95°

• R type insert

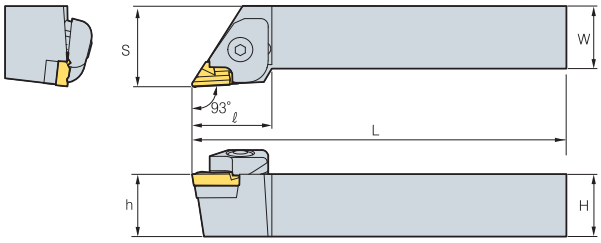
(mm)

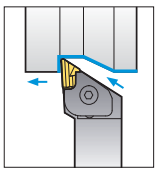
Designation		H	W	L	S	h	ℓ	Insert	Wedge Clamp	Screw	C-Ring	Shim	Shim Pin	Nut	Wrench
WWLNR/L	2020-K08	20	20	125	25	20	32	WN□□0804□□	CMH6R/L3	MHX0630	CR05	SW43M	SP2M	N0508	HW30L
	2525-M08	25	25	150	32	25	33		CMH6R2				SP4M		HW40L
	3232-P08	32	32	170	40	32	33		CMH6R2						

Applicable inserts, see pages B45~B48

CKJNR/L

KN□□





93°

• R type insert

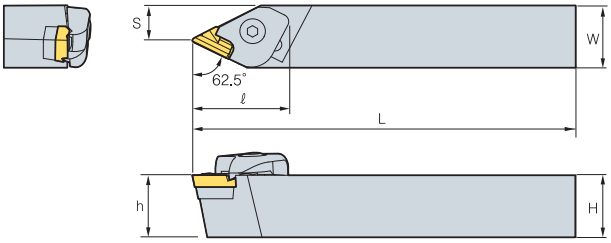
(mm)

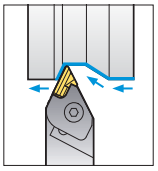
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Spring	Shim	pin+Spring	Shim Screw	Wrench
CKJNR	2020-K16	20	20	125	25	20	32	KN□□1604□□R	CTH6R1	CHX0625	SR3	SK33C	PN0515 SR4	SHX0310	HW20L HW40L
	2525-M16	25	25	150	32	25	32								
	3225-M16	32	25	150	32	32	32								
	3225-P16	32	25	170	32	32	32								
	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, see pages B27

CKNNR/L

KN□□





62.5°

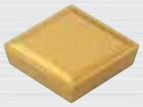
• R type insert

(mm)

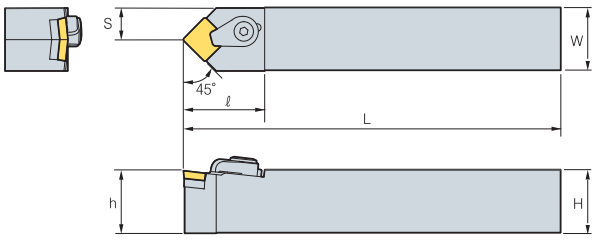
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Spring	Shim	pin+Spring	Shim Screw	Wrench
CKNNR	2525-M16	25	25	150	14.3	25	37	KN□□ 1604□□R	CTH6R1	CHX0625	SR3	SK33C	PN0515 SR4	SHX0310	HW20L HW40L
	3232-P16	32	32	170	16.8	32	37								
CKNNL	2525-M16	25	25	150	14.3	25	37	KN□□ 1604□□L	CTH6L1	CHX0625	SR3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

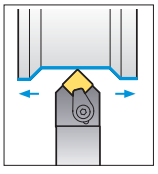
Applicable inserts, see pages B27

CSDPN



SP□R





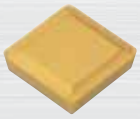
45°

(mm)

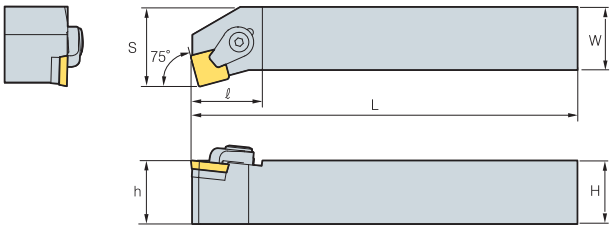
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-ring	Wrench
CSDPN	1616-H09	16	16	100	8	16	30	SP□R 0903□□	CH53R1	CH0515C	SS32C	SP3C	CR03C	HW25L
	2525-M12	25	25	150	12.5	25	35	SP□R 1203□□	CH6R5	CHX0622C	SS42C	SP3C	CR04C	HW30L

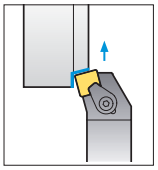
Applicable inserts, see pages B56~B57

CSKPR/L



SP□R





75°

• R type insert

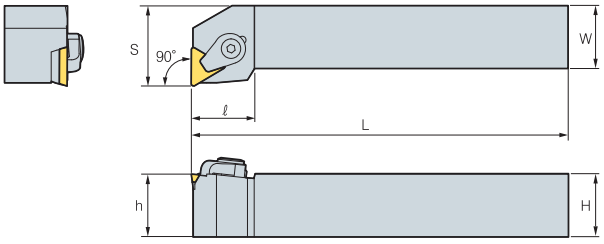
(mm)

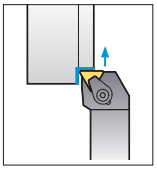
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-ring	Wrench
CSKPR/L 2525-M12	25	25	150	32	20	32	SP□R 1203□□	CH6R5	CHX0622C	SS42C	SP3C	CR04C	HW30L

Applicable inserts, see pages B56~B57

CTFPR/L

TP□R





90°

• R type insert

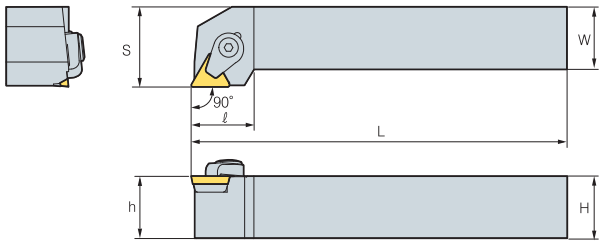
(mm)

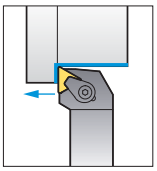
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-ring	Wrench
CTFPR/L	2020-K16	20	20	125	25	20	32	TP□R 1603□□	CH6R5	CHX0622C	ST32C	SP3C	CR04C	HW30L
	2525-M16	25	25	150	32	25	32							

Applicable inserts, see pages B61~B62

CTGPR/L

TP□R





90°

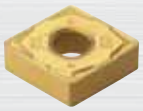
• R type insert

(mm)

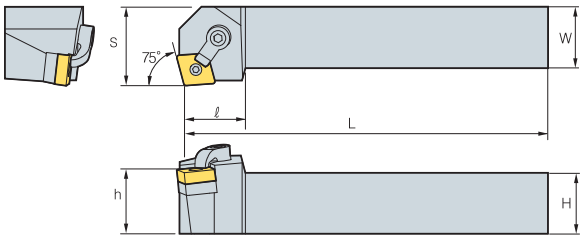
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	C-ring	Wrench
CTGPR/L	1212-F11	12	12	80	16	12	20	TP□R 1103□□	CH53R1	CHX0515C	-	-	CR03C	HW25L
	1616-H11	16	16	100	20	16	20							
	2020-K11	20	20	125	25	20	20							
	2020-K16	20	20	125	25	20	25	TP□R 1603□□	CH6R5	CHX0622C	ST32C	SP3C	CR04C	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							

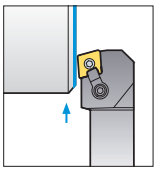
Applicable inserts, see pages B61~B62

MCKNR/L



CN□□





75°

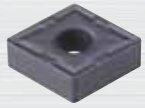
• R type insert

(mm)

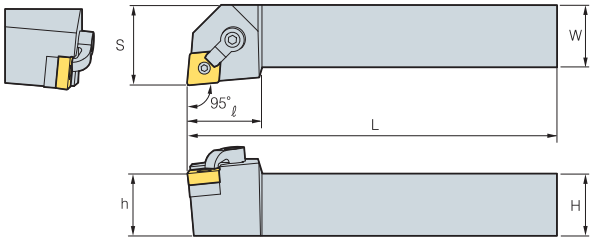
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCKNR/L	2020-K12	20	20	125	25	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
	2525-M12	25	25	150	32	25	32						
	3232-P12	32	32	170	40	32	32						

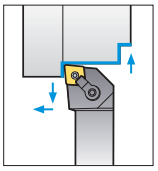
Applicable inserts, see pages B18~B22

MCLNR/L



CN□□





95°

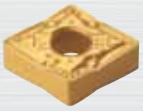
• R type insert

(mm)

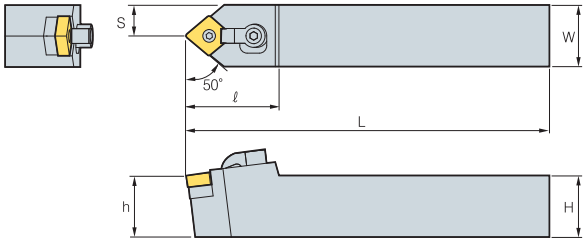
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCLNR/L	1616-H09	16	16	100	20	16	25	CN□□0903□□	CDH7N	DHA10-32-19	SC32D	SP3DS	HW23.8L HW19.8L
	2020-K09	20	20	125	25	20	25						
	2525-M09	25	25	150	32	25	25						
	2020-K12	20	20	125	25	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
	2525-M12	25	25	150	32	25	32						
	3225-P12	32	25	170	32	32	32						
	3232-P12	32	32	170	40	32	32						
	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

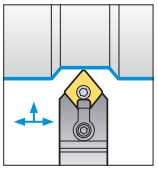
Applicable inserts, see pages B18~B22

MCMNN



CN□□





50°

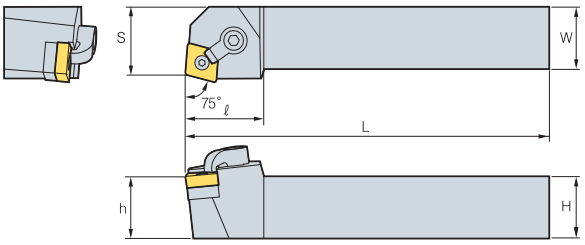
(mm)

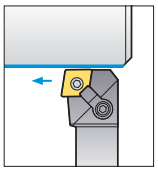
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCMNN	2020-K12	20	20	125	10	20	32	CN□□1204□□	CDH6N	DHA1/4-25	SC43D	SP4D	HW31.8L HW23.8L
	2525-M12	25	25	150	12.5	25	32						
	3232-P12	32	32	170	16	32	32						
	2525-M16	25	25	150	12.5	25	40	CN□□1606□□	CDH8N	DHA5/16-32	SC53S	SP5D	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, see pages B18~B22

MCRNR/L

CN□□





75°

• R type insert

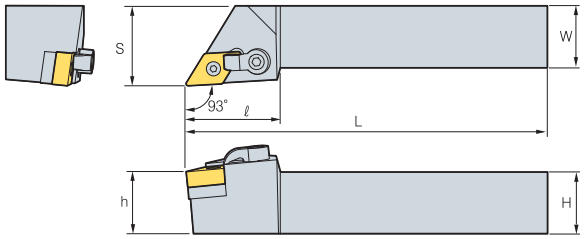
(mm)

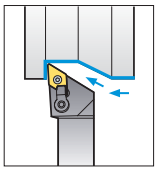
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MCRNR/L	2020-K12	20	20	125	22	20	32	CN□□1204□□	CDH8N1	DHA5/16-32	SC43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	27	25	32						
	2525-M16	25	25	150	27	25	33	CN□□1606□□	CDH8N1	DHA5/16-32	SC53D	SP5D	HW39.7L HW31.8L
	3232-P16	32	32	170	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, see pages B18~B22

MDJNR/L

DN□□





93°

• R type insert

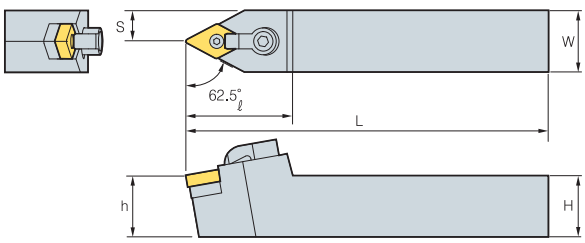
(mm)

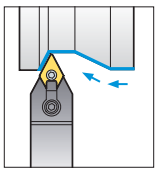
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MDJNR/L	2020-K11	20	20	125	25	20	32	DN□□1104□□	CDH6N	DHA1/4-19	SD32D	SP3D	HW31.8L HW19.8L
	2525-M11	25	25	150	32	25	32						
	2020-K15-3	20	20	125	25	20	36	DN□□1504□□	CDH6N	DHA1/4-25	SD43D	SP4D	HW31.8L HW23.8L
	2525-M15-3	25	25	150	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, see pages B18~B22

MDNNN

DN□□





62.5°

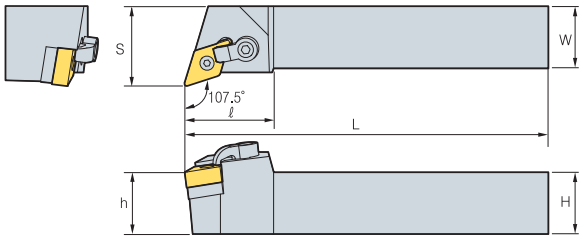
(mm)

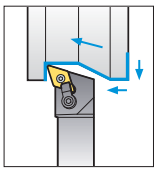
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MDNNN	2525-M15-3	25	25	150	12.5	25	41	DN□□1504□□	CDH8N	DHA5/16-32	SD43D	SP4D	HW39.7L HW23.8L
	2525-M15	25	25	150	12.5	25	41	DN□□1506□□	CDH8N	DHA5/16-32	SD43D	SP4DL	HW39.7L HW23.8L

Applicable inserts, see pages B18~B22

MDQNR/L

DN□□





107.5°

• R type insert

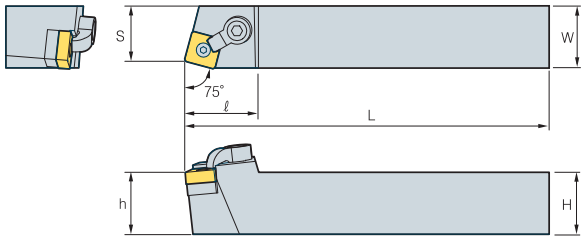
(mm)

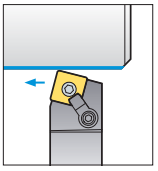
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MDQNR/L	2525-M15-3	25	25	150	32	25	36	DN□□1504□□	CDH6N	DHA1/4-25	SD43D	SP4D	HW31.8L HW23.8L
	3232-P15-3	32	32	170	40	32	36						
	2525-M15	25	25	150	32	25	36	DN□□1506□□	CDH6N	DHA1/4-25	SD43D	SP4DL	HW31.8L HW23.8L
	3232-M15	32	32	170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

Applicable inserts, see pages B23~B26

MSBNR/L

SN□□





75°

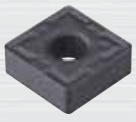
• R type insert

(mm)

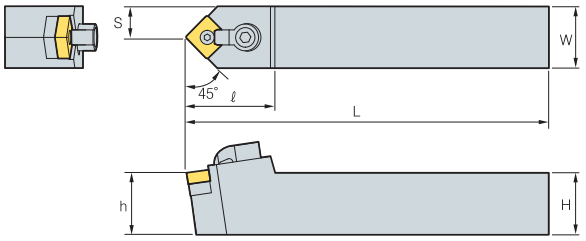
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSBNR/L	2020-K12	20	20	125	17	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	22	25	32						
	2525-M15	25	25	150	22	25	35	SN□□1506□□	CDH8N	DHA5/16-32	SS53D	SP5D	HW39.7L HW31.8L
	3232-P15	32	32	170	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						

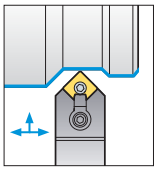
Applicable inserts, see pages B28~B34

MSDNN



SN□□





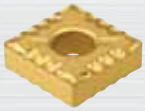
45°

(mm)

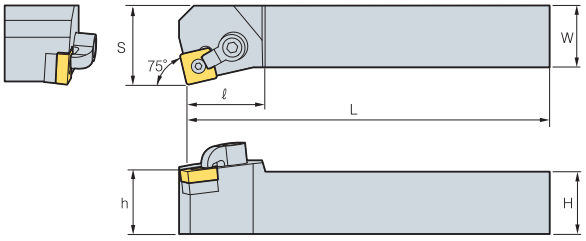
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSDNN	1616-H09	16	16	100	8	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
	2020-K09	20	20	125	10	20	28						
	2020-K12	20	20	125	10	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150	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						

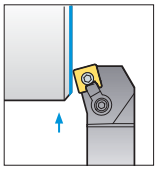
Applicable inserts, see pages B28~B34

MSKNR/L



SN□□





75°

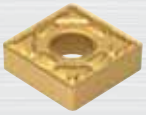
• R type insert

(mm)

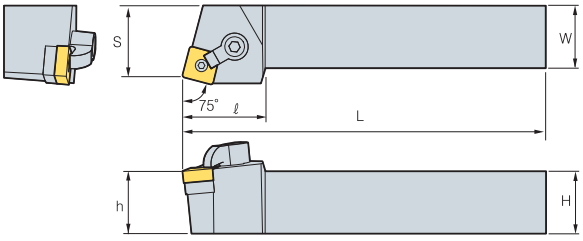
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSKNR/L	1616-H09	16	16	100	20	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
	2020-K09	20	20	125	22	20	28						
	2020-K12	20	20	125	25	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150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

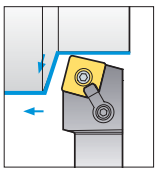
Applicable inserts, see pages B28~B34

MSRNR/L



SN□□





75°

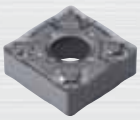
• R type insert

(mm)

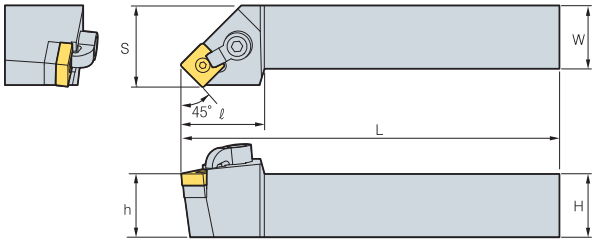
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSRNR/L	1616-H09	16	16	100	17	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
	2020-K09	20	20	125	22	20	28						
	2020-K12	20	20	125	22	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150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

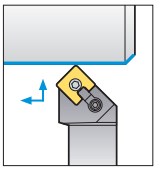
Applicable inserts, see pages B28~B34

MSSNR/L



SN□□





45°

• R type insert

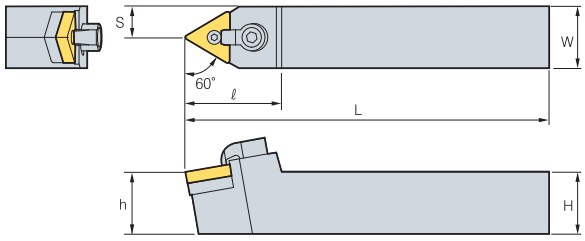
(mm)

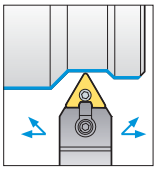
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MSSNR/L	1616-H09	16	16	100	20	16	28	SN□□0903□□	CDH7N	DHA10-32-19	SS32D	SP3DS	HW19.8L HW23.8L
	2020-K09	20	20	125	25	20	28						
	2020-K12	20	20	125	25	20	32	SN□□1204□□	CDH8N1	DHA5/16-32	SS43D	SP4D	HW39.7L HW23.8L
	2525-M12	25	25	150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

Applicable inserts, see pages B28~B34

MTENN

TN□□





60°

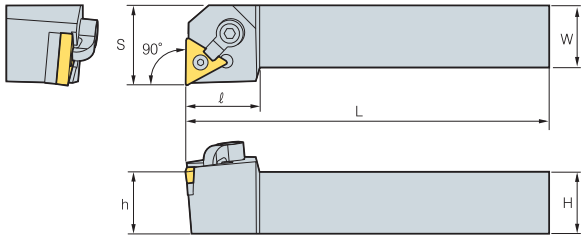
(mm)

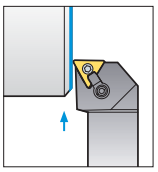
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTENN	2020-K16	20	20	125	10	20	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
	2525-M16	25	25	150	12.5	25	32						
	2525-M22	25	25	150	12.5	25	35	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
	3232-P27	32	32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

Applicable inserts, see pages B35~B41

MTFNR/L

TN□□





90°

• R type insert

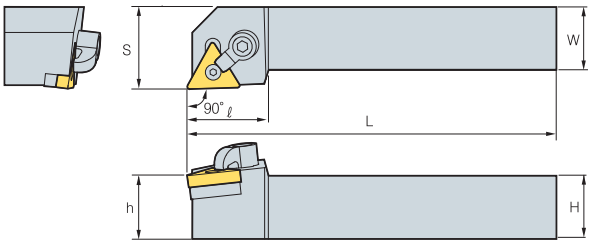
(mm)

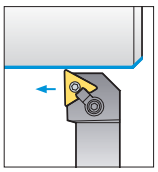
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTFNR/L	1616-H16	16	16	100	20	16	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
	2020-K16	20	20	125	25	20	32						
	2525-M16	25	25	150	32	25	32						
	2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D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

Applicable inserts, see pages B35~B41

MTGNR/L

TN□□





90°

• R type insert

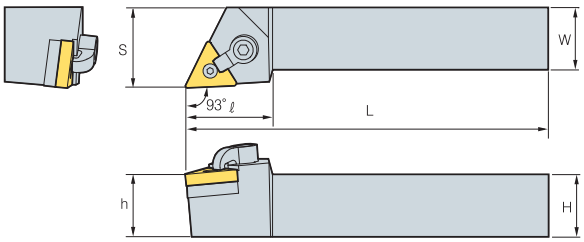
(mm)

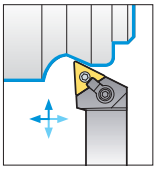
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTGNR/L	1616-H16	16	16	100	20	16	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
	2020-K16	20	20	125	25	20	32						
	2525-M16	25	25	150	32	25	32						
	2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D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

Applicable inserts, see pages B35~B41

MTJNR/L

TN□□





93°

• R type insert

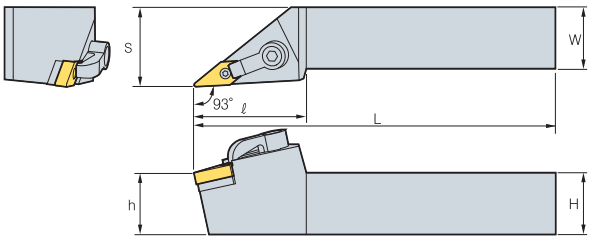
(mm)

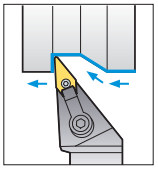
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MTJNR/L	2020-K16	20	20	125	25	20	32	TN□□1604□□	CDH7N	DHA10-32-19	ST32D	SP3D	HW23.8L HW19.8L
	2525-M16	25	25	150	32	25	32						
	2525-M22	25	25	150	32	25	32	TN□□2204□□	CDH8N1	DHA5/16-32	ST43D	SP4D	HW39.7L HW23.8L
	3232-P22	32	32	170	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, see pages B35~B41

MVJNR/L

VN□□





93°

• R type insert

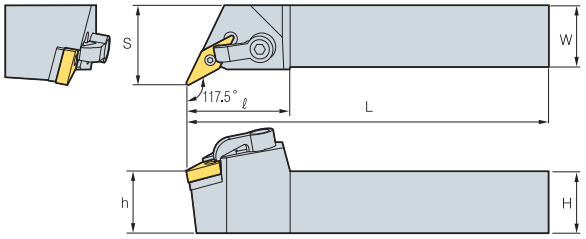
(mm)

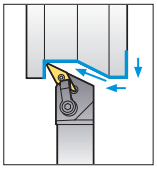
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MVJNR/L	2020-K16	20	20	125	25	20	37	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
	2525-M16	25	25	150	32	25	37						
	3232-P16	32	32	170	40	32	37						
	2525-M22	25	25	150	32	25	50	VN□□2204□□	CDH8N2	DHA5/16-32	SV43D	SP4D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

Applicable inserts, see pages B42~B44

MVQNR/L

VN□□





117.5°

• R type insert

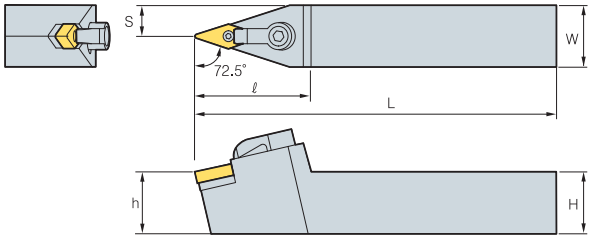
(mm)

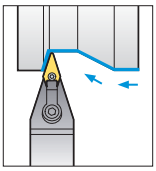
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MVQNR/L	2020-K16	20	20	125	25	20	42	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
	2525-M16	25	25	150	32	25	42						
	3232-P16	32	32	170	40	32	37						

Applicable inserts, see pages B42~B44

MVVNN

VN□□





72.5°

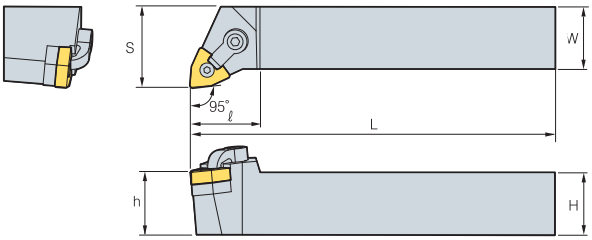
(mm)

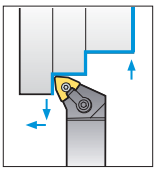
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MVVNN	2020-K16	20	20	125	25	20	42	VN□□1604□□	CDH8N2	DHA5/16-32	SV32D	SP3D	HW39.7L HW19.8L
	2525-M16	25	25	150	32	25	42						

Applicable inserts, see pages B42~B44

MWLNR/L

WN□□





95°

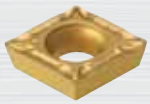
• R type insert

(mm)

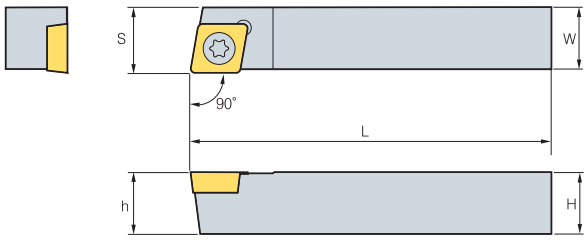
Designation		H	W	L	S	h	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Pin	Wrench
MWLNR/L	2020-K06	20	20	125	25	20	32	WN□□0604□□	CDH7N	DHA10-32-19	SW32D	SP3D	HW19.8L HW23.8L
	2525-M06	25	25	150	32	25	32						
	3232-P06	32	32	170	40	32	32						
	2020-K08	20	20	125	25	20	32	WN□□0804□□	CDH6N	DHA1/4-21	SW43D	SP4D	HW31.8L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

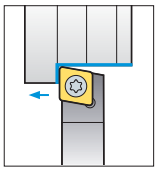
Applicable inserts, see pages B45~B48

SCACR/L



CC□□





90°

• R type insert

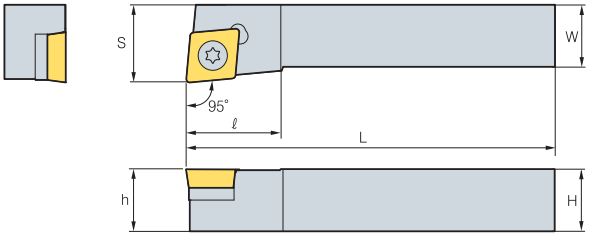
(mm)

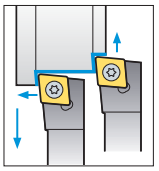
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SCACR/L	1010-E06	10	10	70	10.5	10	CC□□0602□□	FTKA02565	-	-	TW07P
	1212-F09	12	12	80	12.5	12	CC□□09T3□□	FTKA03508	-	-	TW15P

Applicable inserts, see pages B49~B50, B68

SCLCR/L

CC□□





95°

• R type insert

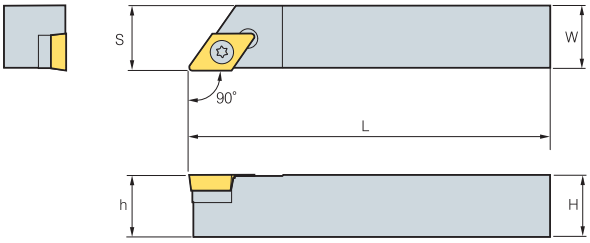
(mm)

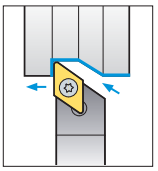
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SCLCR/L	0808-D06	08	08	60	10	08	10	CC□□0602□□	FTKA02565	-	-	TW07P
	1010-E06	10	10	70	16	10	10					
	1212-F09	12	12	80	20	12	16	CC□□09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	20	16	16					
	2020-K09	20	20	125	25	20	16					
	2020-K12	20	20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

Applicable inserts, see pages B49~B50, B68

SDACR/L

DC□□





90°

• R type insert

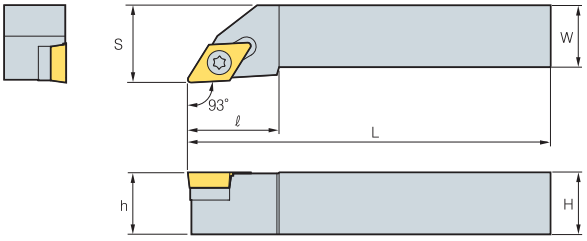
(mm)

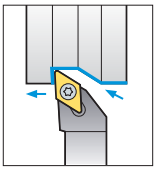
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SDACR/L	1010-E07	10	10	70	10.5	10	DC□□0702□□	FTKA02565	-	-	TW07P
	1212-F11	12	12	80	12.5	12	DC□□11T3□□	FTKA03508	-	-	TW15P
	1616-H11	16	16	100	16.5	16		FTGA03512	SD32S	SHXN0509F	TW15P, HW35L

Applicable inserts, see pages B52~B53, B69

SDJCR/L

DC□□





93°

• R type insert

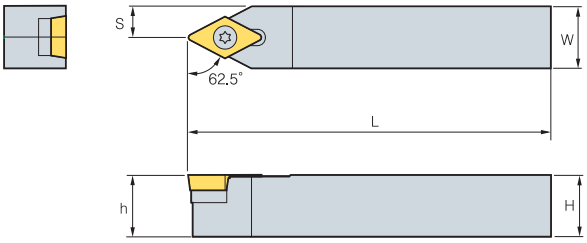
(mm)

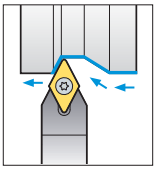
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SDJCR/L	1010-E07	10	10	70	12	10	15	DC□□0702□□	FTKA02565	-	-	TW07P
	1212-F07	12	12	80	16	12	15					
	1616-H07	16	16	100	20	16	18					
	2020-K07	20	20	125	25	20	15					
	1212-F11	12	12	80	16	12	15	DC□□11T3□□	FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
	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, see pages B52~B53, B69

SDNCN

DC□□





62.5°

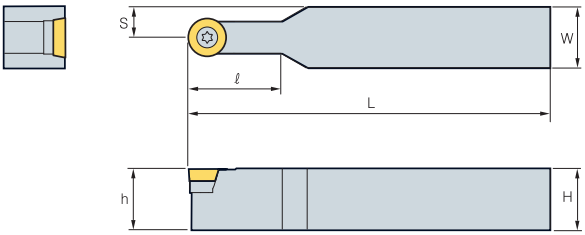
(mm)

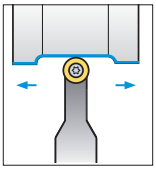
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SDNCN	1010-E07	10	10	70	5	10	DC□□0702□□	FTKA02565	-	-	TW07P
	1212-F07	12	12	80	6	12					
	1212-H11	12	12	100	6	12	DC□□11T3□□	FTGA03508	-	-	TW15P
	1616-H11	16	16	100	8	16	DC□□11T3□□	FTGA03512	SD32S	SHXN0509F	TW15P, HW35L
	2020-K11	20	20	125	10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

Applicable inserts, see pages B52~B53, B69

SRDCN

RCGT





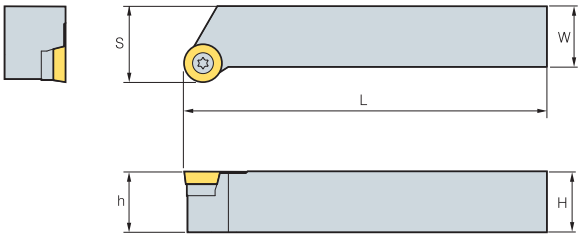
(mm)

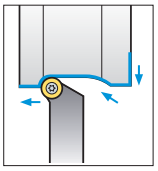
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SRDCN	1010-E06	10	10	70	5	10	10	RCGT 0602M0	FTKA02565			TW07P
	1212-F06	12	12	80	6	12	12					
	1616-H06	16	16	100	8	16	12					
	2525-M06	25	25	150	12.5	25	20					
	1616-H08	16	16	100	8	16	16	RCGT 0803M0	FTNA0307	-	-	TW09P
	2020-K08	20	20	125	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, see pages B54~B70

SRGCR/L

RCGT





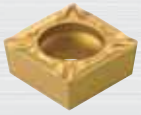
• R type insert

(mm)

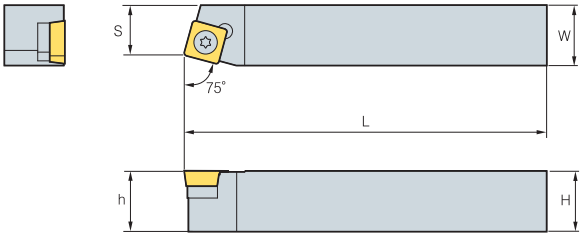
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SRGCR/L	1010-E06	10	10	70	12	10	-	RCGT 0602M0	FTKA02565			TW07P
	1212-F06	12	12	80	16	12	-					
	1616-H06	16	16	100	20	16	-					
	1616-H08	16	16	100	20	16	-	RCGT 0803M0	FTNA0307	-	-	TW09P
	2020-K08	20	20	125	25	20	-					
	2525-M08	25	25	150	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	-					

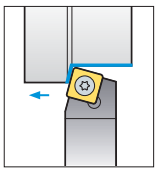
Applicable inserts, see pages B54~B70

SSBCR/L



SC□□





75°

• R type insert

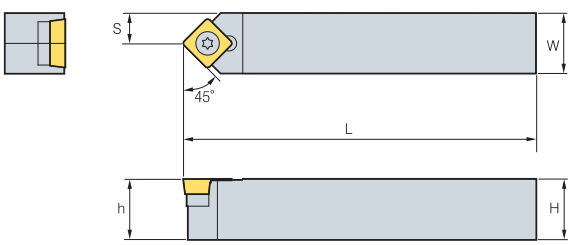
(mm)

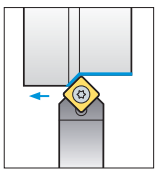
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SSBCR/L	1212-F09	12	12	80	11	12	SC□□09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	13	16		FTGA03512	SS32S	SHXN0509F	TW15P, HW35L
	2020-K12	20	20	125	17	20	SC□□1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L

Applicable inserts, see pages B54, B71

SSDCN

SC□□





45°

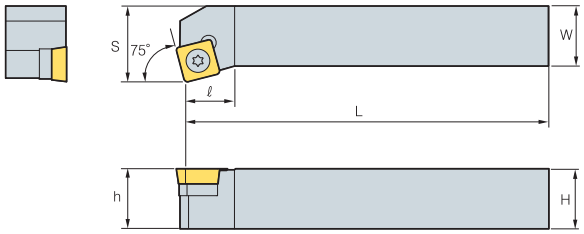
(mm)

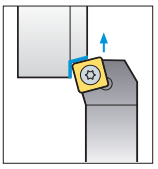
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SSDCN	1212-F09	12	12	80	6	12	SC□□09T3□□	FTGA03508	-	-	TW15P
	1616-H09	16	16	100	8	16		FTGA03512	SS32S	SHXN0509F	TW15P, HW35L

Applicable inserts, see pages B54, B71

SSKCR/L

SC□□





75°

• R type insert

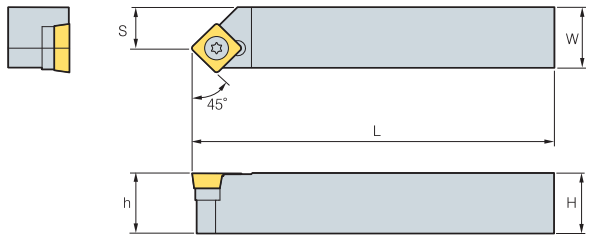
(mm)

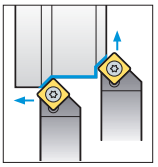
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SSKCR/L 1616-H09	16	16	100	20	16	13	SC□□09T3□□	FTGA03512	SS32S	SHXN0509F	TW15P, HW35L

Applicable inserts, see pages B54, B71

SSSCR/L

SC□□





45°

• R type insert

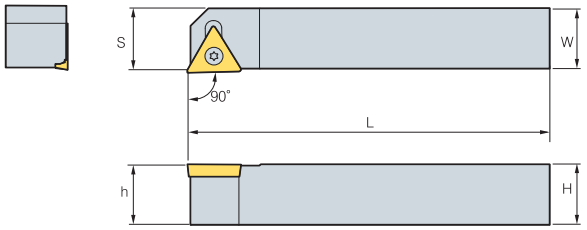
(mm)

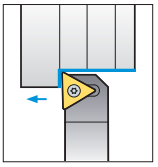
Designation	H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SSSCR/L 1616-H09	16	16	100	17	16	SC□□09T3□□	FTGA03512	SS32S	SHXN0509F	TW15P, HW35L
2020-K12	20	20	125	21	20	SC□□1204□□	FTGA0411F	SS42S	SHXN0610F	TW15P, HW40L

Applicable inserts, see pages B54, B71

STACR/L

TC□□





90°

• R type insert

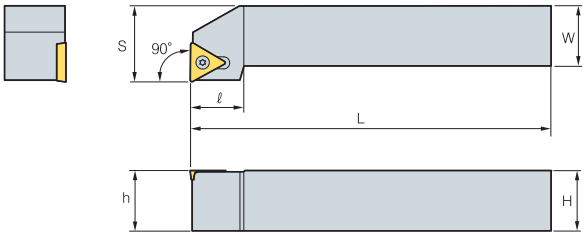
(mm)

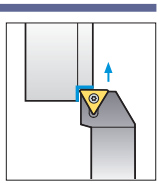
Designation	H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
STACR/L 1010-E09	10	10	70	10.5	10	TC□□0902□□	FTKA02206	-	-	TW06P
1212-F11	12	12	80	12.5	12	TC□□1102□□	FTKA02565	-	-	TW07P

Applicable inserts, see pages B59, B72

STFCR/L

TC□□





90°

• R type insert

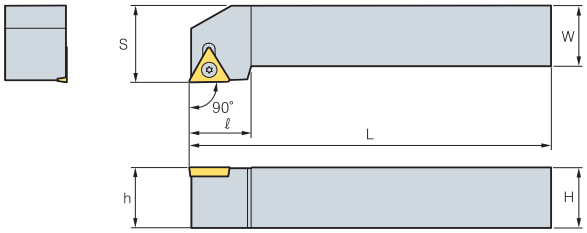
(mm)

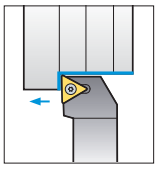
Designation	H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
STFCR/L 1010-E09	10	10	70	12	10	10	TC□□0902□□	FTKA02206	-	-	TW06P
1212-F11	12	12	80	16	12	14	TC□□1102□□	FTKA02565	-	-	W07P
1616-H11	16	16	100	20	16	14					
1616-H16	16	16	100	20	16	19	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
2020-K16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

Applicable inserts, see pages B59, B72

STGCR/L

TC□□





90°

• R type insert

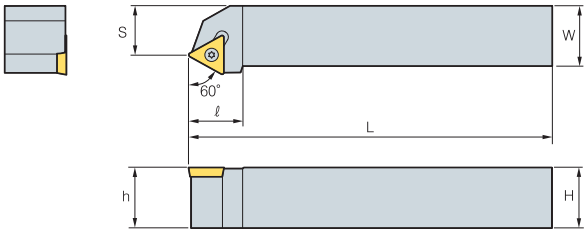
(mm)

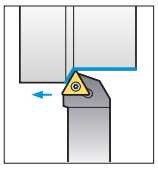
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
STGCR/L	0808-D09	08	08	60	10	08	11	TC□□0902□□	FTKA02206	-	-	TW06P
	1010-E09	10	10	70	12	10	11					
	1212-F11	12	12	80	16	12	14	TC□□1102□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	20	16	16					
	2020-K16	20	20	125	25	20	21	TC□□16T3□□	FTGA03512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

Applicable inserts, see pages B59, B72

STTCR/L

TC□□





60°

• R type insert

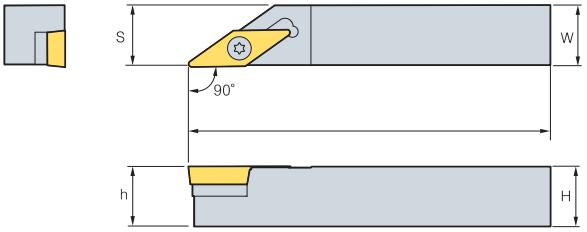
(mm)

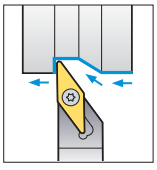
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
STTCR/L	1616-H11	16	16	100	13	16	14	TC□□1102□□	FTKA02565	-	-	TW07P
	1616-H16	16	16	100	13	16	19	TC□□16T3□□	FTGA03512	ST32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	17	20	19					

Applicable inserts, see pages B59, B72

SVABR/L

VB□□





90°

• R type insert

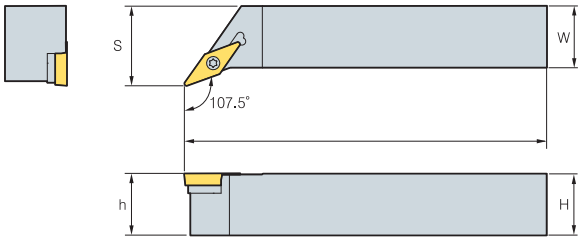
(mm)

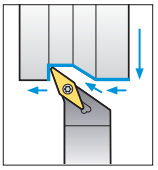
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVABR/L	1616-H16	16	16	100	16.5	16	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	20.5	20					

Applicable inserts, see pages B63, B64, B73

SVHBR/L

VB□□





107.5°

• R type insert

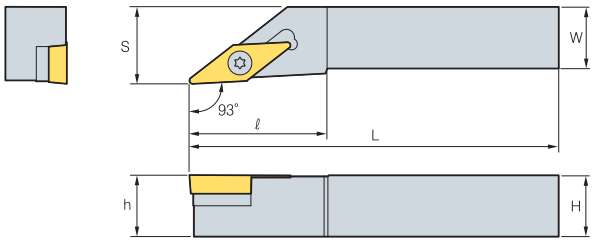
(mm)

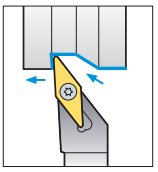
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVHBR/L	2525-M16	25	25	150	32	25	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P HW35L
	3225-P16	32	25	170	32	32					

Applicable inserts, see pages B63, B64, B73

SVJBR/L

VB□□





93°

• R type insert

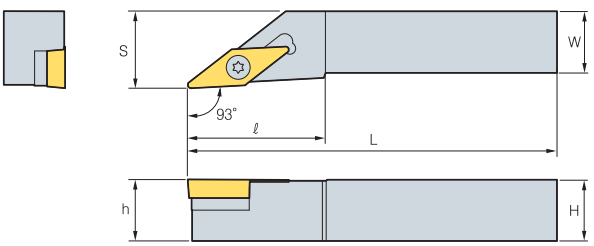
(mm)

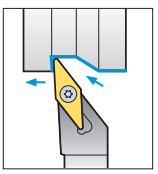
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SVJBR/L	1212-F11	12	12	80	16	12	27	VB□□1102□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	20	16	27					
	2020-K11	20	20	125	25	20	27					
	1616-H16	16	16	100	20	16	36	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	25	20	41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

Applicable inserts, see pages B63, B64, B73

SVJCR/L

VC□□





93°

• R type insert

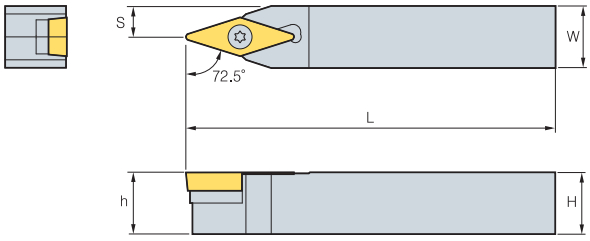
(mm)

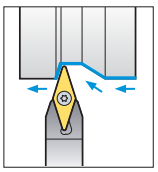
Designation		H	W	L	S	h	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
SVJCR/L	1212-F11	12	12	80	16	12	25	VC□□1103□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	20	16	25					
	2020-K11	20	20	125	25	20	25					
	1212-F13	12	12	80	16	12	32	VC□□1303□□	FTKA0307	-	-	TW09P
	1616-H13	16	16	100	20	16	32					
	2020-K13	20	20	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, see pages B65, B74

SVVBN

VB□□





72.5°

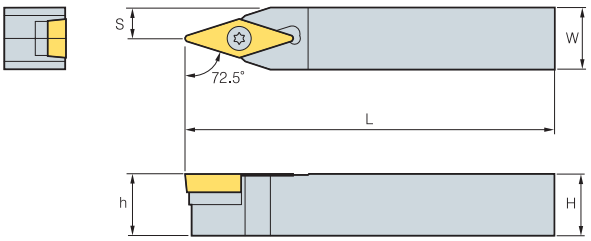
(mm)

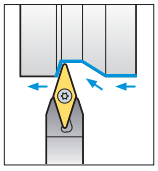
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVVBN	1212-F11	12	12	80	6	12	VB□□1102□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	8	16					
	2020-K11	20	20	125	10	20					
	1616-H16	16	16	100	8	16	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
	2020-K16	20	20	125	10	20					
	2525-M16	25	25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

Applicable inserts, see pages B63, B64, B73

SVVCN

VC□□





72.5°

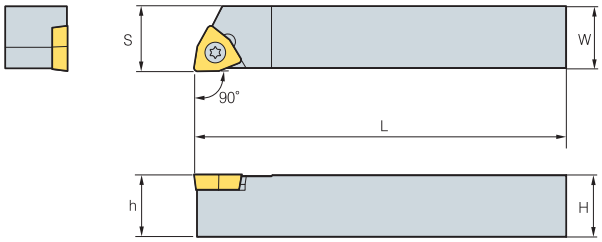
(mm)

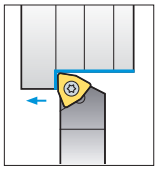
Designation		H	W	L	S	h	Insert	Screw	Shim	ShimScrew	Wrench
SVVCN	1212-F11	12	12	80	6	12	VC□□1103□□	FTKA02565	-	-	TW07P
	1616-H11	16	16	100	8	16					
	2020-K11	20	20	125	10	20					
	1212-F13	12	12	80	6	12	VC□□1303□□	FTNA0307	-	-	TW09P
	1616-H13	16	16	100	8	16					
	2020-K13	20	20	125	10	20					
	1616-H16	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, see pages B65, B74

SWACR/L

WC□□





90°

• R type insert

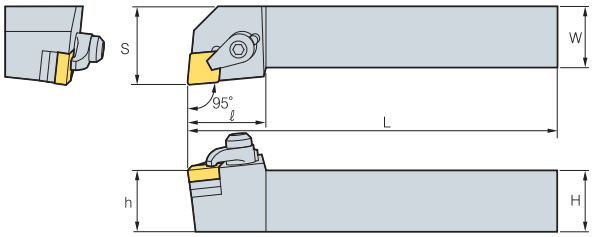
(mm)

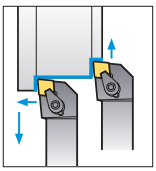
Designation		H	W	L	S	h	Insert	Screw	Wrench
SWACR/L	1010-E04	10	10	70	10.1	10	WC□□0402□□	FTKA02565	TW07P
	1212-F04	12	12	80	12.1	12			
	1616-H06	16	16	100	16.1	16	WC□□06T3□□	FTGA03508	TW15P
	2020-K08	20	20	125	20.1	20	WC□□0804□□	FTGA0411F	TW15P

Applicable inserts, see pages B66

CCLNR/L

CN□N





95°

• R type insert

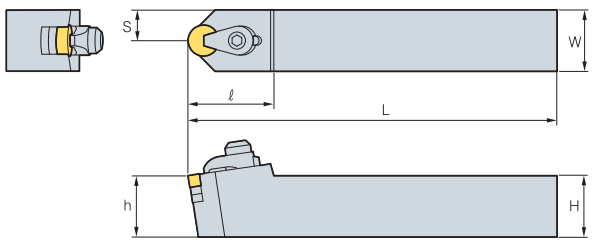
(mm)

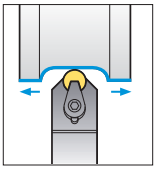
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CCLNR/L 2525-M12C	25	25	150	32	25	32	CN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SC42CC	SR3	HW40L HW20L

Applicable inserts, see pages B75

CRDNN

RN□N





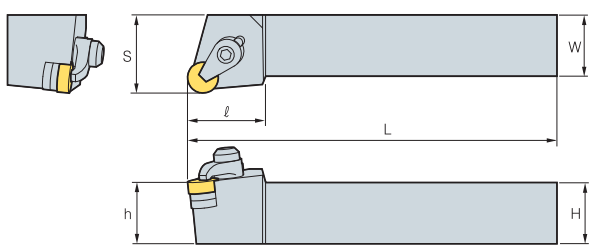
(mm)

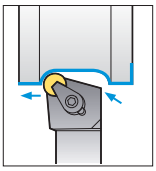
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CRDNN 2525-M12C	25	25	150	12.5	25	35	RN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SR42CC	SR3	HW40L HW20L

Applicable inserts, see pages B76

CRGNR/L

RN□N





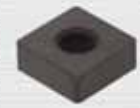
• R type insert

(mm)

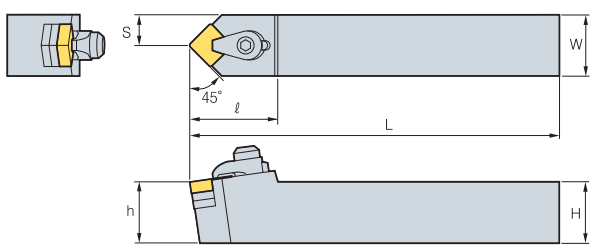
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CRGNR/L 2525-M12C	25	25	150	32	25	32	RN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SR42CC	SR3	HW40L HW20L

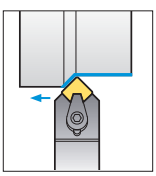
Applicable inserts, see pages B76

CSDNN



SN□N





45°

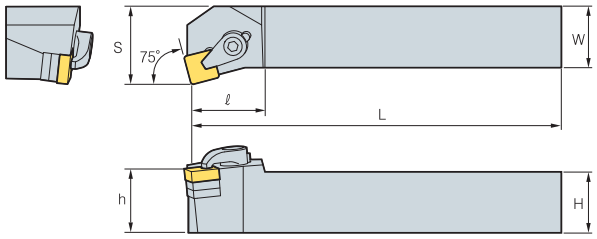
(mm)

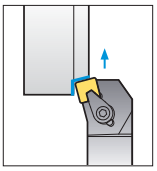
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CSDNN 2525-M12C	25	25	125	12.5	25	35	SN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SS42CC	SR3	HW40L HW20L

Applicable inserts, see pages B75

CSKNR/L

SN□N





75°

• R type insert

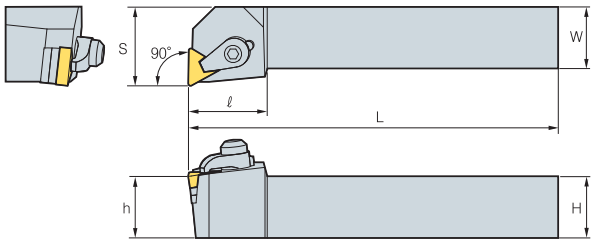
(mm)

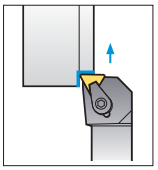
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CSKNR/L 2525-M12C	25	25	150	32	25	28	SN□N 1204□□ 1207□□	CH6R3	MHX0630 SHX0310	SR42CC	SR3	HW40L HW20L

Applicable inserts, see pages B75

CTFNR/L

TN□N





90°

• R type insert

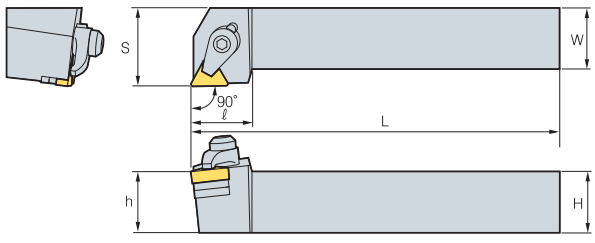
(mm)

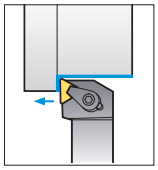
Designation	H	W	L	S	h	ℓ	Insert	Clamp	Screw	Shim	Spring	Wrench
CTFNR/L 2525-M16C	25	25	150	32	25	32	TN□N 1604□□ 1607□□	CH6R3	MHX0630 SHX0310	ST32CC	SR3	HW40L HW20L

Applicable inserts, see pages B75

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

Applicable inserts, see pages B75

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

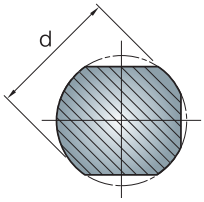
1 Type of Bar

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

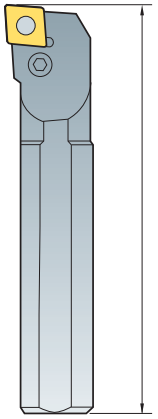
2 Bar Diameter

S 12 M - S T F P R - 11



3 Bar Length

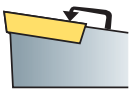
S 12 M - S T F P R - 11

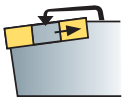


length(L)	(mm)
H	100
J	110
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500

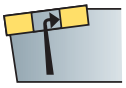
4 Method of Mounting Insert

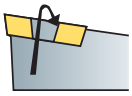
S 12 M - S T F P R - 11


Top clamping
C


Top and hole clamping
D

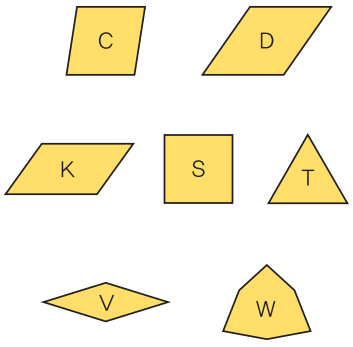

Top and hole clamping
M


Hole clamping
P


Screw on
S

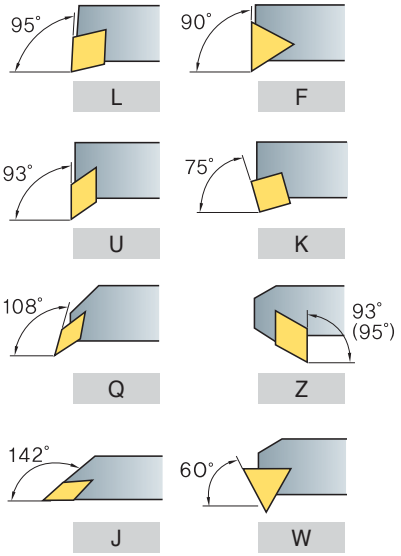
5 Insert Shape

S 12 M - S T F P R - 11



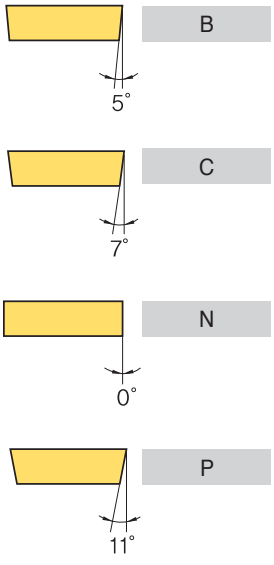
6 Lead Angle of Boring Bar

S 12 M - S T F P R - 11



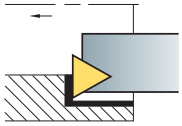
7 Relief Angle of Insert

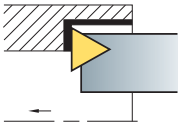
S 12 M - S T F P R - 11



8 Hand of Bar

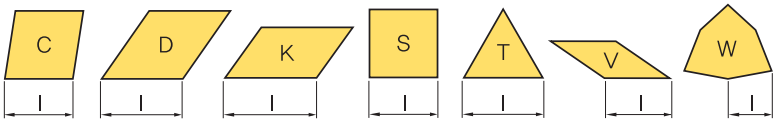
S 12 M - S T F P R - 11


R

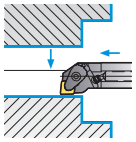
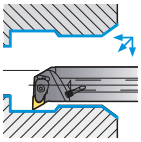
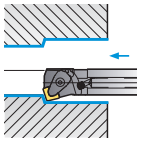
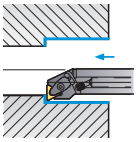
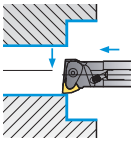

L

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			
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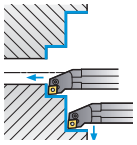
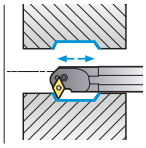
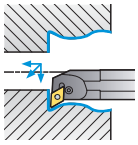
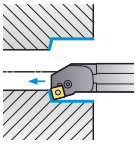
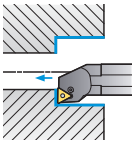
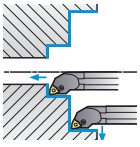
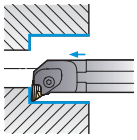
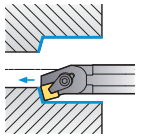
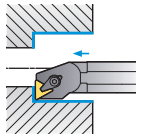
Page	B126	B126	B126	B127	B127			
Copying		●						
Facing	●				●			
Back turning		●						
Turning	●	●	●	●	●			

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	B128	B128	B129	B129	B130	B130		
Copying		●	●					
Facing	●					●		
Back turning		●	●			●		
Turning	●	●	●	●	●	●		

Clamp on System

Cutting Shape								
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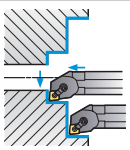
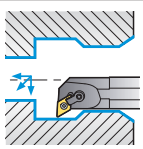
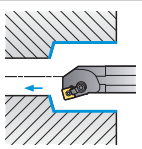
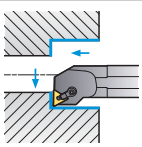
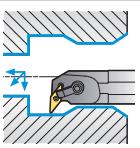
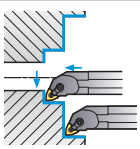
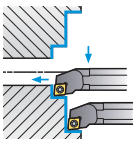
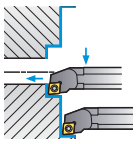
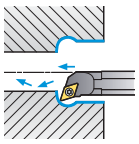
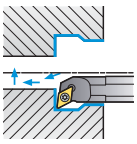
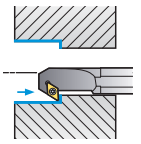
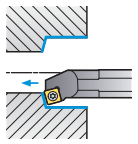
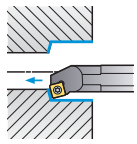
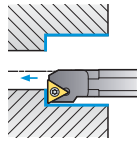
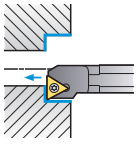
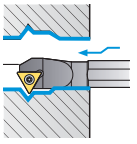
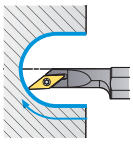
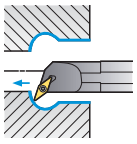
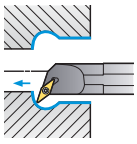
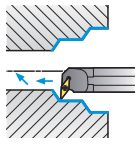
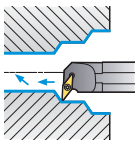
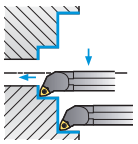
Approach angle	93°	75°	90°					
Page	B131	B131	B131					
Copying								
Facing								
Back turning	●							
Turning	●	●	●					

Multi Lock System

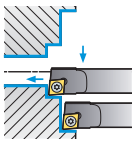
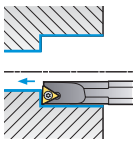
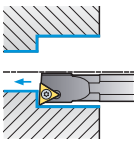
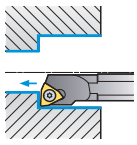
Cutting Shape								
Designation	MCLNR/L	MDUNR/L	MSKNR/L	MTFNR/L	MVUNR/L	MWLNR/L		
Approach angle	95°	93°	75°	90°	93°	95°		
Page	B132	B132	B132	B133	B133	B133		
Copying		●			●			
Facing	●					●		
Back turning		●			●			
Turning	●	●	●	●	●	●		

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	B134	B134	B135	B135	B136	B136	B136	B137
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	B137	B137	B138	B138	B138	B139	B139	B139
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	B140	B140	B140	B140				
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	B141	B142	B142	B143	B143

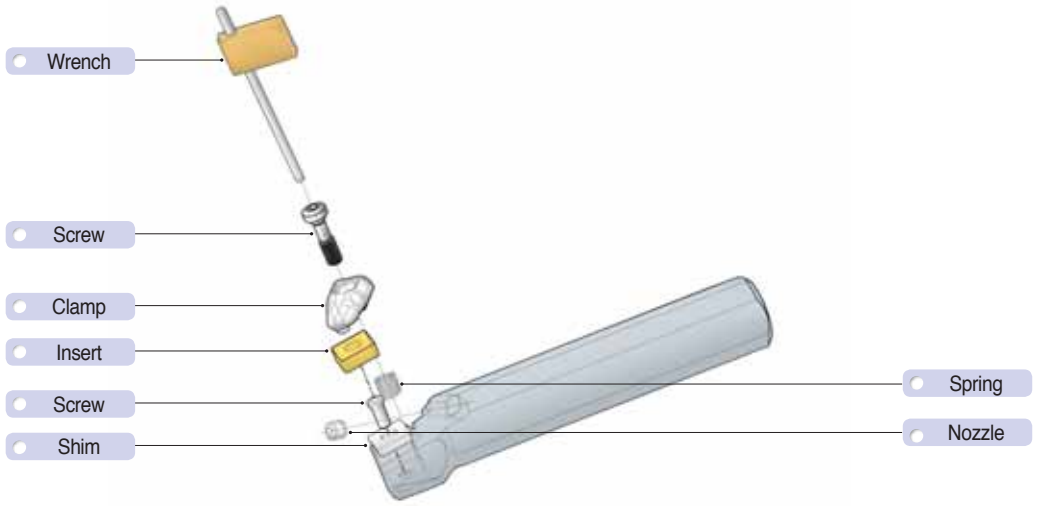
Designation	STFPR/L	STUBR/L	STUPR/L	SWUBR/L	-
Approach angle	91°	93°	93°	93°	-
Page	B144	B144	B145	B145	-

Sleeve

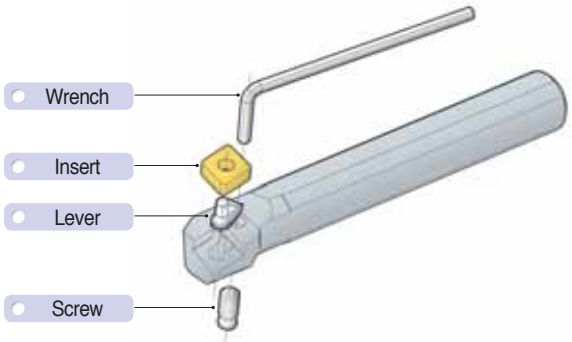
Shape	
Designation	SL
Page	B178

Instructions of Boring Bar assembly

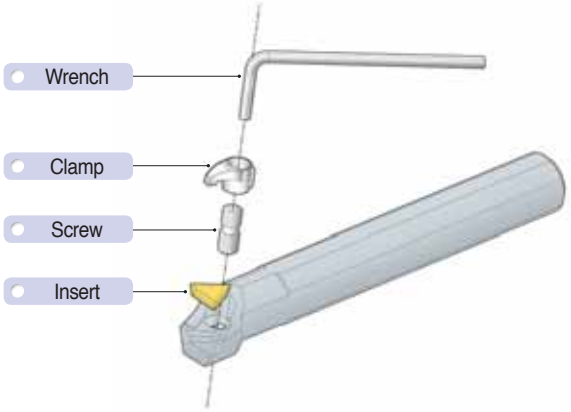
Double Clamp System



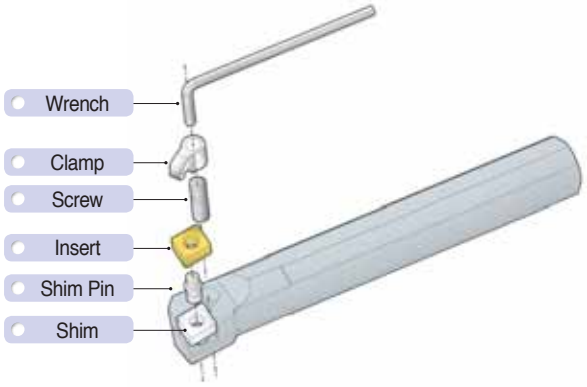
Lever Lock System



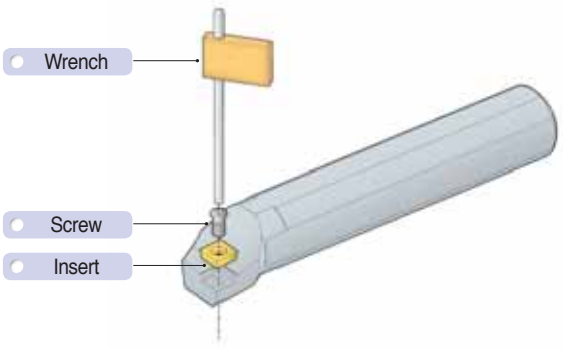
Clamp on System



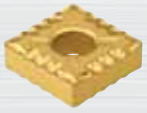
Multi Lock System



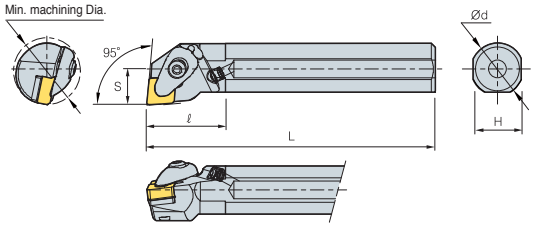
Screw on System

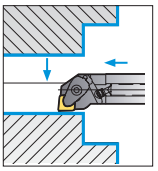


DCLNR/L



CN□□





95°

• R type insert

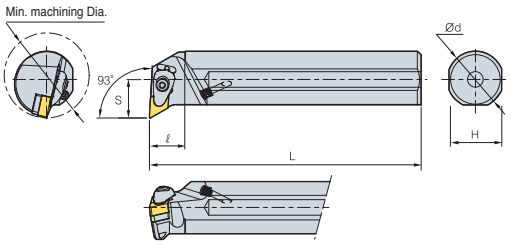
(mm)

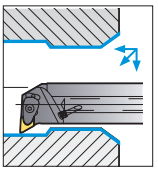
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DCLNR/L-09	32	25	23	200	17	27	CN□□0903□□	CVH3	CHX0415	SC32V	FTKA0307	SPR0510	CN0605	HW25P
A25R-DCLNR/L-12	32	25	23	200	17	28	CN□□1204□□	CVH4	CHX0518	SC42V	FTKA0410	SPR0714	CN0605	HW30P
A32S-DCLNR/L-12	40	32	30	250	22	27								
A40T-DCLNR/L-12	50	40	37	300	27	30								
A50U-DCLNR/L-16	63	50	47	350	35	40	CN□□1604□□	CVH5	CHX0622	SC54V	FTNA0511	SPR0811	CN0605	HW40L

Applicable inserts, see pages B18~B22

DDUNR/L

DN□□





93°

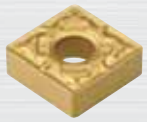
• R type insert

(mm)

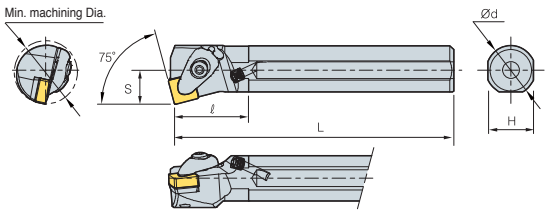
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench
A40T-DDUNR/L-15	50	40	37	300	27	25	DN□□1506□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	HW30P
A50U-DDUNR/L-15	63	50	47	350	35	30								
A40T-DDUNR/L-15-3	50	40	37	300	27	25	DN□□1504□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	HW30P
A50U-DDUNR/L-15-3	63	50	47	350	35	30								

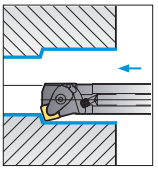
Applicable inserts, see pages B23~B26

DSKNR/L



SN□□





75°

• R type insert

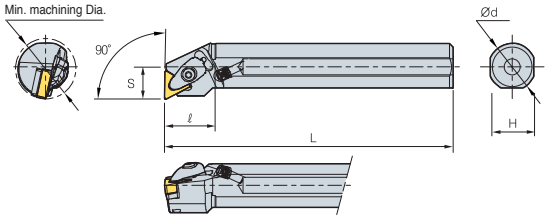
(mm)

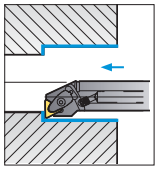
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DSKNR/L-09	32	25	23	200	17	27	SN□□0903□□	CVH3	CHX0415	SS32V	FTKA0307	SPR0510	CN0605	HW25P
A25R-DSKNR/L-12	32	25	23	200	17	28	SN□□1204□□	CVH4	CHX0518	SS42V	FTKA0410	SPR0714	CN0605	HW30P
A32S-DSKNR/L-12	40	32	30	250	22	28								
A40T-DSKNR/L-12	50	40	37	300	27	28								

Applicable inserts, see pages B28~B34

DTFNR/L

TN□□





90°

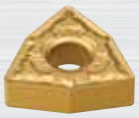
• R type insert

(mm)

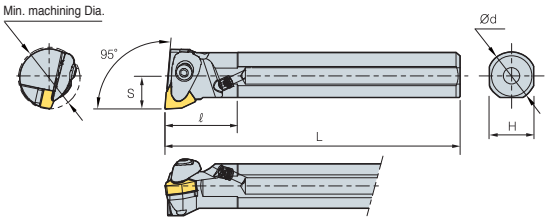
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DTFNR/L-16	32	25	23	200	17	27	TN□□1604□□	CVH3	CHX0415	ST32V	FTKA0307	SPR0510	CN0605	HW25P
A32S-DTFNR/L-16	40	32	30	250	22	27								
A40T-DTFNR/L-22	50	40	37	300	27	33	TN□□2204□□	CVH4	CHX0518	ST44V	FTKA0410	SPR0714	CN0605	HW30P
A50U-DTFNR/L-22	63	50	47	350	35	33								

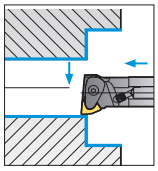
Applicable inserts, see pages B35~B41

DWLNR/L



WN□□





95°

• R type insert

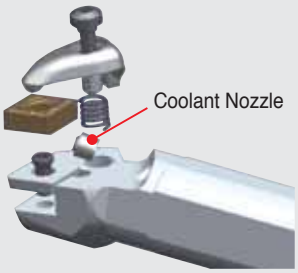
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim Screw	Spring	Nozzle	Wrench
A25R-DWLNR/L-06	32	25	23	200	17	19	WN□□0604□□	CVH3	CHX0415	SW32V	FTKA0307	SPR0510	CN0605	HW25P
A32S-DWLNR/L-06	40	32	30	250	22	20								
A40T-DWLNR/L-06	50	40	37	300	27	25								
A25R-DWLNR/L-08	33	25	23	200	17	20	WN□□0804□□	CVH4	CHX0518	SW42V	FTKA0410	SPR0714	CN0605	HW30P
A32S-DWLNR/L-08	40	32	30	250	22	24								
A40T-DWLNR/L-08	50	40	37	300	27	25								
A50U-DWLNR/L-08	63	50	47	350	35	32								

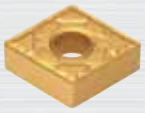
Applicable inserts, see pages B45~B48

Features of Double Clamp (Boring bar)

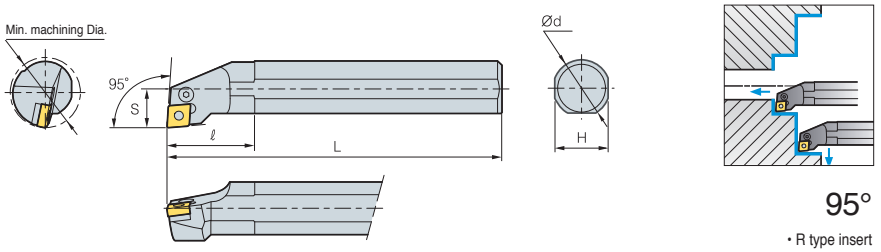
Longer tool life and excellent surface finish can be achieved with the adjustable Coolant Nozzle



PCLNR/L



CN□□



95°

• R type insert

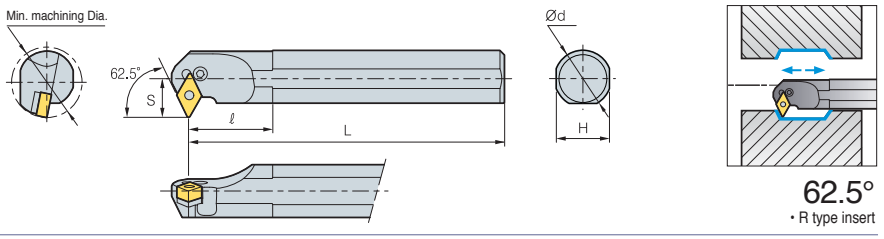
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shimpin Punch	Wrench
S16R-PCLNR/L-09	20	16	15	200	11	28	CN□□0903□□	LV3C	VHX0509B	–	–	–	HW20L
S20S-PCLNR/L-09	25	20	18	250	13	32							
S25R-PCLNR/L-09	32	25	23	200	17	36							
S25R-PCLNR/L-12	32	25	23	200	17	40	CN□□1204□□	LV4A	VHX0613A	–	–	–	HW25L
S32S-PCLNR/L-12	40	32	30	250	22	50		LV4	VHX0821	SC42B	SP4	LSPS4	HW30L
S40T-PCLNR/L-12	50	40	37	300	27	55							
S50U-PCLNR/L-12	63	50	47	350	35	55							
S50U-PCLNR/L-19	70	50	47	350	35	63	CN□□1906□□	LV6	VHX1027	SC63	SP6	LSPS6	HW40L
A25R-PCLNR/L-12	32	25	24	200	17	40	CN□□1204□□	LV4A	VHX0613A	–	–	–	HW25L
A32S-PCLNR/L-12	44	32	31	250	22	50		LV4	VHX0821	SC42B	SP4	LSPS4	HW30L
A40T-PCLNR/L-12	50	40	47	300	27	60							
S16R-PCLNR/L-09N	20	16	15	200	11	25	CN□□0903□□	LV3CN	VHX0509BN	–	–	–	HW20L
S20S-PCLNR/L-09N	25	20	18	250	13	25							
S25R-PCLNR/L-09N	32	25	23	200	17	25							
S25R-PCLNR/L-12N	32	25	23	200	17	25	CN□□1204□□	LV4AN	VHX0613N	–	–	–	HW25L
S25T-PCLNR/L-12N	32	25	23	300	17	25		LV4AN	VHX0613N	–	–	–	HW25L
S32S-PCLNR/L-12N	40	32	30	250	22	30		LV4N	VHX0817N	SC42N	SP4N	LSPS4	HW30L
S32U-PCLNR/L-12N	40	32	30	350	22	30		LV4AN	VHX0820N	SC42N	SP4N	LSPS4	HW30L
S40T-PCLNR/L-12N	50	40	37	300	27	30		LV4N	VHX0820N	SC42N	SP4N	LSPS4	HW30L
S50U-PCLNR/L-12N	63	50	47	350	35	30							
S50U-PCLNR/L-19N	63	50	47	350	35	30	CN□□1906□□	LV6N	VHX1027N	SC63N	SP6N	LSPS6	HW40L
A16R-PCLNR/L-09N	20	16	15	200	11	28	CN□□0903□□	LV3CN	VHX0509BN	–	–	–	HW20L
A20S-PCLNR/L-09N	25	20	18	250	13	25							
A25R-PCLNR/L-09N	32	25	23	200	17	25							
A25R-PCLNR/L-12N	32	25	23	200	17	25	CN□□1204□□	LV4AN	VHX0613N	–	–	–	HW25L
A32R-PCLNR/L-12N	40	32	30	250	22	30		LV4N	VHX0817N	SC42N	SP4N	LSPS4	HW30L
A40T-PCLNR/L-12N	50	40	37	300	27	30		LV4N	VHX0820N	SC42N	SP4N	LSPS4	HW30L
A50U-PCLNR/L-12N	63	50	47	350	35	30							
A50U-PCLNR/L-19N	63	50	47	350	35	30	CN□□1906□□	LV6N	VHX1027N	SC63N	SP6N	LSPS6	HW40L

Applicable inserts, see pages B18~B22

PDSNR/L

DN□□



62.5°

• R type insert

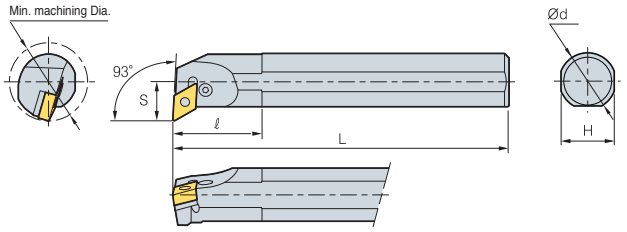
(mm)

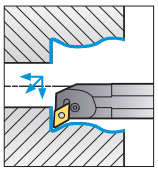
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shimpin Punch	Wrench
S32S-PDSNR/L-15	40	32	30	250	22	45	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDSNR/L-15	50	40	37	300	27	43							
S32S-PDSNR/L-15-3	40	32	30	450	22	45	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDSNR/L-15-3	50	40	37	300	27	43							
A32S-PDSNR/L-15	40	32	31	250	22	45	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
A32S-PDSNR/L-15-3	40	32	31	250	22	45	DN□□1504□□	LV4	VHX0821	SD42	SP4	LSPS4	HW30L
S32S-PDSNR/L-15N	40	32	30	250	22	15	DN□□1506□□	LV4BN	VHX0821	SD42N	SP4N	LSPS4	HW30L
S40T-PDSNR/L-15N	50	40	37	300	27	15							
S32S-PDSNR/L-15-3N	40	32	30	250	22	15	DN□□1504□□	LV4BN	VHX0821	SD43N	SP4N	LSPS4	HW30L
S40T-PDSNR/L-15-3N	50	40	37	300	27	15							
A32S-PDSNR/L-15N	40	32	30	250	22	15	DN□□1506□□	LV4BN	VHX0821	SD42N	SP4N	LSPS4	HW30L
A40T-PDSNR/L-15N	50	40	37	300	27	15							
A32S-PDSNR/L-15-3N	40	32	30	450	22	15	DN□□1504□□	LV4BN	VHX0821	SD43N	SP4N	LSPS4	HW30L
A40T-PDSNR/L-15-3N	50	40	37	300	27	15							

Applicable inserts, see pages B23~B26

PDUNR/L

DN□□





93°

• R type insert

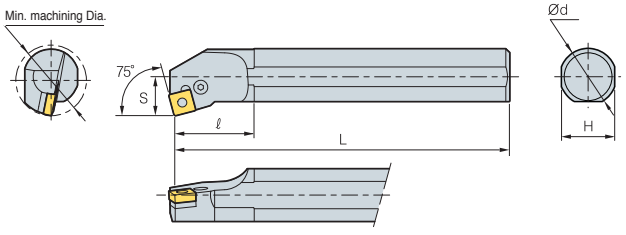
(mm)

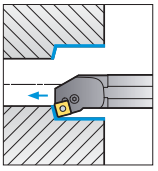
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shimpin Punch	Wrench
S20S-PDUNR/L-11	25	20	18	250	13	30	DN□□1104□□	LV3D	VHX0512B	–	–	–	HW20L
S25R-PDUNR/L-11	32	25	23	200	17	35							
S32S-PDUNR/L-11	40	32	30	250	22	40		LV3	VHX0617	SD317	SP3	LSPS3	HW25L
S32S-PDUNR/L-15	40	32	30	250	22	50	DN□□1506□□	LV4B	VHX0821	SD42	SP4	LSPS4	HW30L
S40T-PDUNR/L-15	50	40	37	300	27	50							
S50U-PDUNR/L-15	63	50	47	350	35	63							
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	50							
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	25	DN□□1104□□	LV3DN	VHX0512BN	–	–	–	HW20L
S25R-PDUNR/L-11N	32	25	23	200	17	35							
S32S-PDUNR/L-11N	40	32	30	250	22	40		LV3AN	VHX0617N	SD317N	SP3N-1	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	50							
S50U-PDUNR/L-15N	63	50	47	350	35	50							
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	50							
A20S-PDUNR/L-11N	25	20	18	250	13	25	DN□□1104□□	LV3DN	VHX0512BN	–	–	–	HW20L
A25R-PDUNR/L-11N	32	25	23	200	17	35							
A32S-PDUNR/L-11N	40	32	30	250	22	40		LV3AN	VHX0617N	SD317N	SP3N-1	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	50							
A50U-PDUNR/L-15N	63	50	47	350	35	50							
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	50							

Applicable inserts, see pages B23~B26

PSKNR/L

SN□□





75°

• R type insert

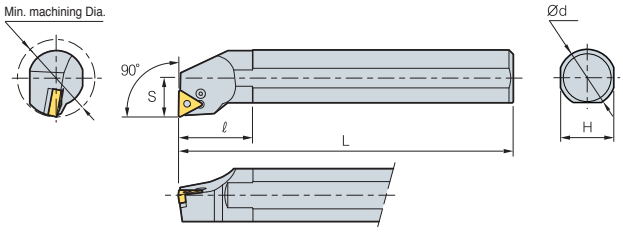
(mm)

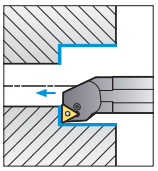
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shimpin Punch	Wrench
S25R-PSKNR/L-12	32	25	23	200	17	42	SN□□1204□□	LV4A	VHX0613A	–	–	–	HW25L
S32S-PSKNR/L-12	40	32	30	250	22	45		LV4	VHX0821	SS42B	SP4	LSPS4	HW30L
S40T-PSKNR/L-12	50	40	37	300	27	50							
A25R-PSKNR/L-12	32	25	23	200	17	42	SN□□1204□□	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	25	SN□□1204□□	LV4AN	VHX0613N	–	–	–	HW25L
S32S-PSKNR/L-12N	40	32	30	250	22	30		LV4N	VHX0821N	SS42N	SP4N	LSPS4	HW30L
S40T-PSKNR/L-12N	50	40	37	300	27	30							
A25R-PSKNR/L-12N	32	25	23	200	17	25	SN□□1204□□	LV4AN	VHX0613N	–	–	–	HW25L
A32S-PSKNR/L-12N	40	32	30	250	22	30		LV4N	VHX0821N	SS42N	SP4N	LSPS4	HW30L
A40T-PSKNR/L-12N	50	40	37	300	27	30							

Applicable inserts, see pages B28~B34

PTFNR/L

TN□□





90°

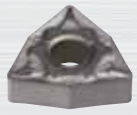
• R type insert

(mm)

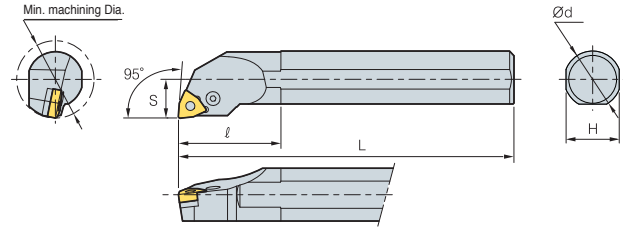
Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shimpin Punch	Wrench
S16R-PTFNR/L-11	20	16	15	200	11	28	TN□□1103□□	LV2	VHX0509B	–	–	–	HW25L
S20S-PTFNR/L-11	25	20	18	250	13	33							
S25R-PTFNR/L-11	32	25	23	200	17	36							
S25R-PTFNR/L-16	32	25	23	200	17	42	TN□□1604□□	LV3B	VHX0512B	–	–	–	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	55							
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
S25R-PTFNR/L-16N	32	25	23	200	17	42	TN□□1604□□	LV3BN	VHX0512B	–	–	–	HW20L
S25T-PTFNR/L-16N	32	25	23	300	17	40		LV3B	VHX0512B	–	–	–	HW20L
S32S-PTFNR/L-16N	44	32	30	250	22	50		LV3N	VHX0617N	ST317N	SP3N	LSPS3	HW25L
S40T-PTFNR/L-16N	54	40	37	300	27	55							
A25R-PTFNR/L-16N	32	25	23	200	17	42	TN□□1604□□	LV3BN	VHX0512B	–	–	–	HW20L
A32S-PTFNR/L-16N	44	32	30	250	22	50		LV3N	VHX0617N	ST317N	SP3N	LSPS3	HW25L
A40T-PTFNR/L-16N	54	40	37	300	27	55							

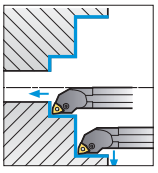
Applicable inserts, see pages B35~B41

PWLNR/L



WN□□





95°

• R type insert

(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Lever	Screw	Shim	Shim pin	Shimpin Punch	Wrench
S20S-PWLNR/L-06	25	20	18	250	13	40	WN□□0604□□	LV3B	VHX0512B	–	–	–	HW20L
S25R-PWLNR/L-06	32	25	23	200	17	40							
S32S-PWLNR/L-06	44	32	30	250	22	45		LV3B	VHX0613B	SW317	SP3	LSPS3	HW25L
S25R-PWLNR/L-08	32	25	23	200	17	45	WN□□0804□□	LV4A	VHX0613A	–	–	–	HW25L
S32S-PWLNR/L-08	44	32	30	250	22	50		LV4	VHX0821	SW42	SP4	LSPS3	HW30L
S20S-PWLNR/L-06N	25	20	18	250	13	40	WN□□0604□□	LV3BN	VHX0512BN	–	–	–	HW20L
S25R-PWLNR/L-06N	32	25	23	200	17	40		LV3BN	VHX0512BN	–	–	–	HW20L
S32S-PWLNR/L-06N	44	32	30	250	22	45		LV3N	VHX0617N	SW317N	SP3N	LSPS3	HW25L
S25R-PWLNR/L-08N	32	25	23	200	17	25	WN□□0804□□	LV4AN	VHX0613N	–	–	–	HW25L
S32S-PWLNR/L-08N	44	32	30	S	22	25		LV4N	VHX0820N	SW42N	SP4N	LSPS4	HW30L

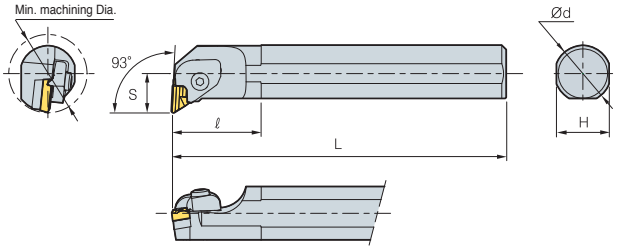
Applicable inserts, see pages B45~B48

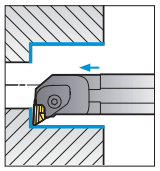
■Improved holders and parts ensure performance and durability

■"N" stand for New type (Holders and parts)

CKUNR/L

KN□□





93°

• R type insert

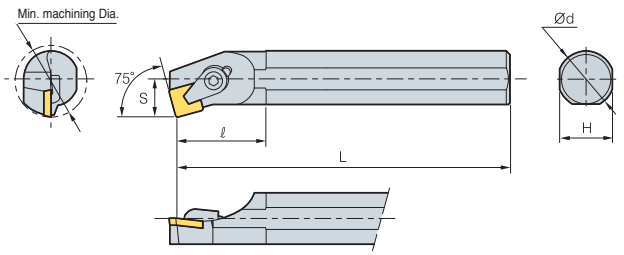
(mm)

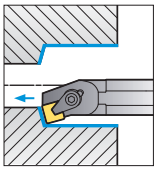
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Spring	Shim	pin+Spring	Shim Screw	Wrench
S32S-CKUNR-16	40	32	30	250	22	70	KN□□1604□□L	CTH6LI	CHX0625	SR3 SR4	SK33CL	PN0515	SHX0310	HW40L HW20L
S40T-CKUNR-16	50	40	37	300	27	60								
S50U-CKUNR-16	63	50	43	350	35	55								
S32S-CKUNL-16	40	32	30	250	22	70	KN□□1604□□R	CTH6RI	CHX0625	SR3 SR4	SK33C	PN0515	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 B27

CSKPR/L

SP□□





75°

• R type insert

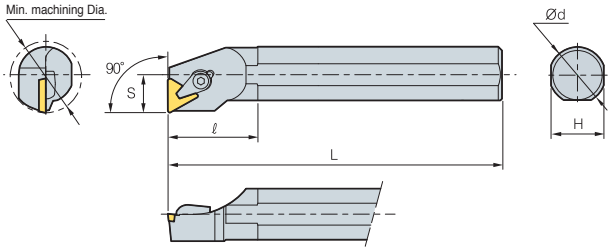
(mm)

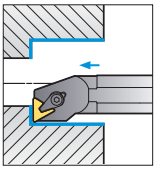
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	C-ring	Wrench
S16R-CSKPR/L-09	20	16	15	200	11	30	SP□□0903□□	CH4R1C	CHX0414	CR02C	HW25L
S20S-CSKPR/L-09	25	20	18	250	13	36					
S20S-CSKPR/L-12	25	20	18	250	13	28	SP□□1203□□	CH5R5C	CHX0519C	CR03C	HW30L
S25R-CSKPR/L-12	32	25	23	300	17	40		CH6R5	CH0616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

Applicable inserts, see pages B55~B57

CTFPR/L

TP□□





90°

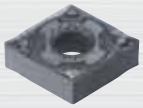
• R type insert

(mm)

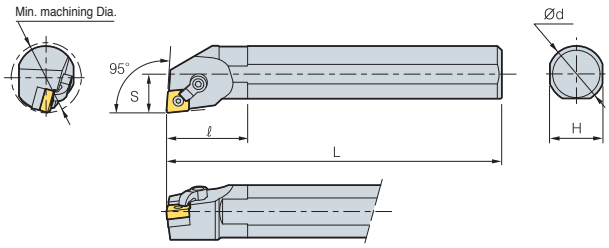
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	C-ring	Shim	Shim pin	Wrench
S12M-CTFPR/L-11	16	12	11	150	9	26	TP□□1103□□	CH4R1C	CHX0414C	CR02C	-	-	HW25L
S16R-CTFPR/L-11	20	16	15	200	11	40							
S20S-CTFPR/L-11	25	20	18	250	13	40							
S16R-CTFPR/L-16	20	16	15	200	11	40	TP□□1603□□	CH5R5C	CHX0519C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

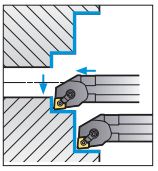
Applicable inserts, see pages B61~B62

MCLNR/L



CN□□





95°

• R type insert

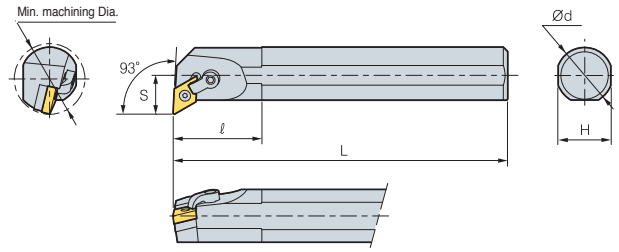
(mm)

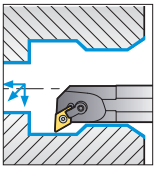
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim pin	Wrench
S20S-MCLNR/L-09	25	20	18	250	13	30	CN□□0903□□	CDH7N	DHA10-32-19	-	SP3D3	HW19.8L
S25R-MCLNR/L-09	32	25	23	200	17	36						HW23.8L
S25R-MCLNR/L-12	32	25	23	200	17	36	CN□□1204□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L
S32S-MCLNR/L-12	40	32	30	250	22	50				SC43D	SP4D	HW23.8L
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
A32S-MCLNR/L-12	40	32	30	250	22	50				SC43D	SP4D	HW23.8L

Applicable inserts, see pages B18~B22

MDUNR/L

DN□□





93°

• R type insert

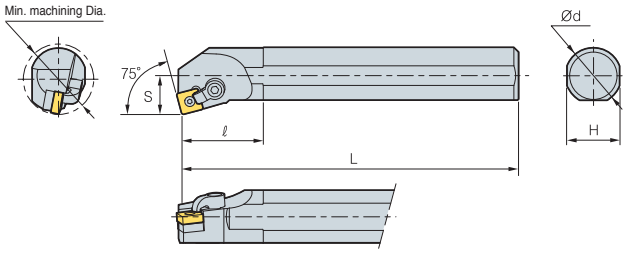
(mm)

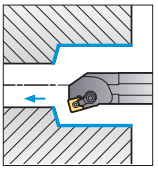
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim pin	Wrench
S32S-MDUNR/L-15-3	40	32	30	250	22	50	DN□□1504□□	CDH6N	DHA1/4-21	SD43D	SP4D	HW31.8L
S40T-MDUNR/L-15-3	50	40	37	300	27	60						HW23.8L
A32S-MDUNR/L-15-3	40	32	30	250	22	50						

Applicable inserts, see pages B23~B26

MSKNR/L

SN□□





75°

• R type insert

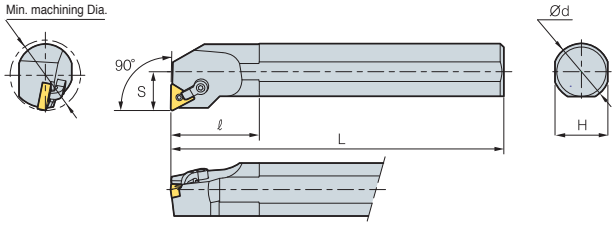
(mm)

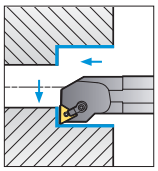
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim pin	Wrench
S25R-MSKNR/L-12	32	25	23	200	17	36	SN□□1204□□	CDH8N1	DHA5/16-28	-	SP4DS	HW39.7L
S32S-MSKNR/L-12	40	32	30	250	22	50				SS43D	SP4D	HW23.8L
S40T-MSKNR/L-12	50	40	37	300	27	60						
A25R-MSKNR/L-12	32	25	23	200	17	40	SN□□1204□□	CDH8N1	DHA5/16-28	-	SP4DS	HW39.7L
A32S-MSKNR/L-12	40	32	30	250	22	50				SS43D	SP4D	HW23.8L
A40T-MSKNR/L-12	50	40	37	300	27	60						

Applicable inserts, see pages B28~B34

MTFNR/L

TN□□





90°

• R type insert

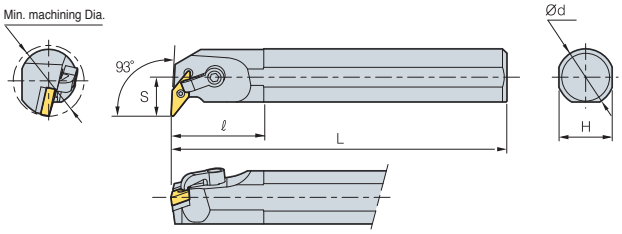
(mm)

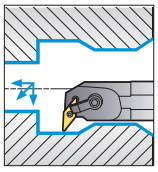
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim pin	Wrench
S25R-MTFNR/L-16	32	25	23	200	17	36	TN□□1604□□	CDH7N1	DHA10-32-19	-	SP3D3	HW23.8L
S32S-MTFNR/L-16	40	32	30	250	22	50				ST32D	SP3D	HW19.8L
S40T-MTFNR/L-16	50	40	37	300	27	60						
A25R-MTFNR/L-16	32	25	23	200	17	40	TN□□1604□□	CDH7N1	DHA10-32-19	-	SP3D3	HW23.8L
A32S-MTFNR/L-16	40	32	30	250	22	50				ST32D	SP3D	HW19.8L

Applicable inserts, see pages B35~B41

MVUNR/L

VN□□





93°

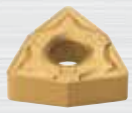
• R type insert

(mm)

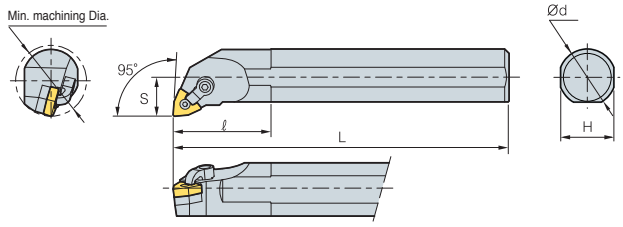
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim pin	Wrench
S32S-MVUNR/L-16	40	32	30	250	22	50	VN□□1604□□	CDH8N2	DHA5/16-28	SV32D	SP3D	HW39.7L
S40T-MVUNR/L-16	50	40	37	300	27	60						HW19.8L
A32S-MVUNR/L-16	40	32	30	250	22	50	VN□□1604□□	CDH8N2	DHA5/16-28	SV32D	SP3D	HW39.7L
A40T-MVUNR/L-16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

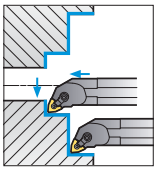
Applicable inserts, see pages B42~B44

MWLNR/L



WN□□





95°

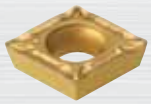
• R type insert

(mm)

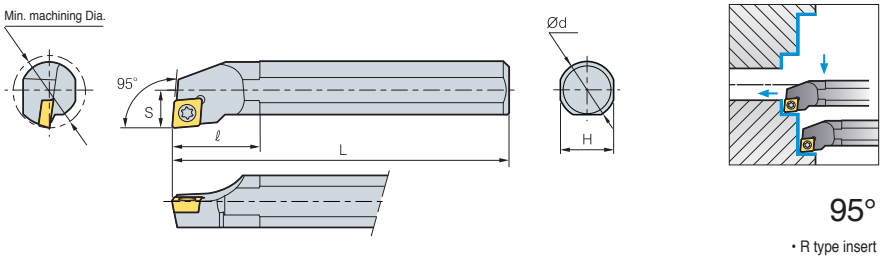
Designation	ØD	Ød	H	L	S	ℓ	Insert	Clamp	Clamp Screw	Shim	Shim pin	Wrench
S25R-MWLNR/L-06	32	25	23	200	17	36	WN□□0604□□	CDH7N	DHA10/32-19	-	SP3D3	HW23.8L
S32S-MWLNR/L-06	40	32	30	250	22	50				SW32D	SP3D	HW19.8L
S40T-MWLNR/L-06	50	40	37	300	27	60						
S25R-MWLNR/L-08	32	25	23	200	17	36	WN□□0804□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L
S32S-MWLNR/L-08	40	32	30	250	22	50				SW43D	SP4D	HW23.8L
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
A32S-MWLNR/L-06	40	32	30	250	22	50				SW32D	SP3D	HW19.8L
A25R-MWLNR/L-08	32	25	23	200	17	40	WN□□0804□□	CDH6N	DHA1/4-21	-	SP4DS	HW31.8L
A32S-MWLNR/L-08	40	32	30	250	22	50				SW43D	SP4D	HW23.8L

Applicable inserts, see pages B45~B48

SCLCR/L



CC□□



95°

• R type insert

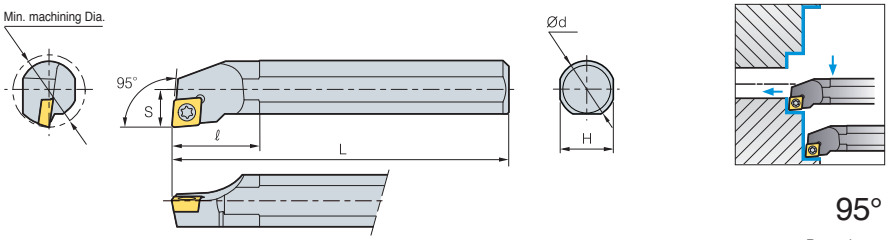
(mm)

Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
S08K-SCLCR/L-06	10	8	7	125	5	14	CC□□0602□□	FTKA02555	-	-	TW07P
S10K-SCLCR/L-06	12	10	9	125	6	14		FTKA02565			
S10M-SCLCR/L-06	12	10	9	150	6	14					
S12M-SCLCR/L-06	16	12	11	150	9	25					
S16R-SCLCR/L-06	20	16	15	200	11	32					
S12M-SCLCR/L-09	16	12	11	150	9	25	CC□□09T3□□	FTGA03508	-	-	TW15P
S16R-SCLCR/L-09	20	16	15	200	11	32.5					
S20S-SCLCR/L-09	25	20	18	250	13	38					
S25R-SCLCR/L-09	32	25	23	200	17	45		FTGA03510			
S25R-SCLCR/L-12	32	25	23	200	17	45	CC□□1204□□	FTGA0411F	-	-	TW15P
S32S-SCLCR/L-12	40	32	30	250	22	50			SC42S	SHXN0610F	HW40L, TW15P
S40T-SCLCR/L-12	50	40	37	300	27	60					
A08F-SCLCR/L-06	10	8	7.5	80	5	14	CC□□0602□□	FTKA02555	-	-	TW07P
A10H-SCLCR/L-06	12	10	9.5	100	6	14		FTKA02565			
A12K-SCLCR/L-06	16	12	11	125	9	25					
A12K-SCLCR/L-09	16	12	11	125	9	25	CC□□09T3□□	FTGA03508	-	-	TW15P
A16M-SCLCR/L-09	20	16	15	150	11	32.5					
A20Q-SCLCR/L-09	25	20	19	180	13	-					
A25R-SCLCR/L-09	32	25	24	200	17	45		FTGA03510			
A25R-SCLCR/L-12	32	25	24	200	17	45	CC□□1204□□	FTGA0411F	-	-	TW15P
A32S-SCLCR/L-12	40	32	31	250	32	50			SC42S	SHXN0610F	HW40L, TW15P

Applicable inserts, see pages B49~B50, B68

SCLPR/L

CP□□



95°

• R type insert

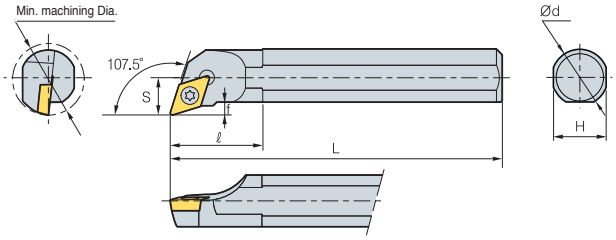
(mm)

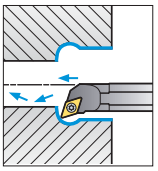
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10M-SCLPR/L-08	12	10	9	150	6	-	CP□□0802□□	FTNA0305	TW09P
S12M-SCLPR/L-08	16	12	11	150	8	15		FTNA0307	
S16N-SCLPR/L-09	20	16	15	160	10	15	CP□□0903□□	FTNA0408	TW15P
S16R-SCLPR/L-09	20	16	15	200	11	35			
S20N-SCLPR/L-09	25	20	18	160	12.5	20			
S20S-SCLPR/L-09	25	20	15	250	12.5	20			
A10H-SCLPR/L-08	12	10	9.5	100	9	-	CP□□0802□□	FTNA0305	TW09P
A12K-SCLPR/L-08	16	12	11	125	8	20		FTNA0307	
A16M-SCLPR/L-09	20	16	15	150	10	25	CP□□0903□□	FTNA0408	TW15P
A20Q-SCLPR/L-09	25	20	19	180	12.5	28			

Applicable inserts, see pages B51

SDQCR/L

DC□□





107.5°

• R type insert

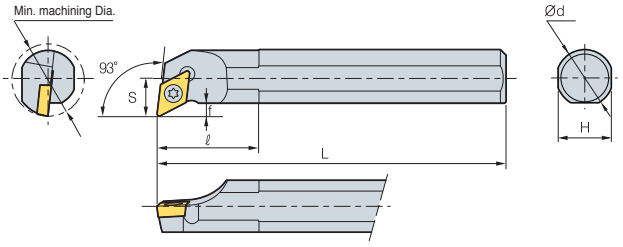
(mm)

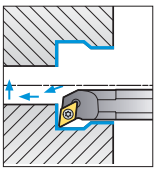
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	Screw	Wrench
S10M-SDQCR/L-07	13	10	9	150	7	20	2.5	DC□□0702□□	FTKA02555	TW07P
S12M-SDQCR/L-07	16	12	11	150	9	22	3.5		FTKA02565	
S16R-SDQCR/L-07	20	16	15	200	11	27	4			
S16R-SDQCR/L-11	20	16	15	200	11	32	4	DC□□11T3□□	FTGA03508	TW15P
S20S-SDQCR/L-11	25	20	18	250	13	32	4.5			
S25R-SDQCR/L-11	32	25	23	200	17	32	7		FTGA03510	
A10H-SDQCR/L-07	13	10	9.5	100	7	20	2	DC□□0702□□	FTKA02555	TW07P
A12K-SDQCR/L-07	16	12	11	125	9	22	3		FTKA02565	
A16M-SDQCR/L-11	20	16	15	150	11	27	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	32	4		FTGA03510	

Applicable inserts, see pages B52, B53, B69

SDUCR/L

DC□□





93°

• R type insert

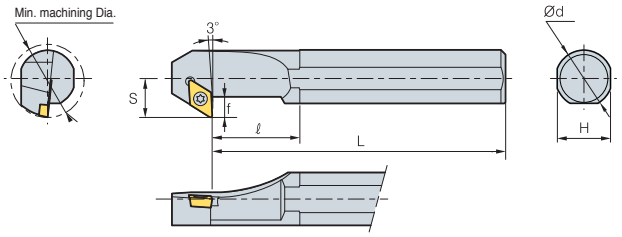
(mm)

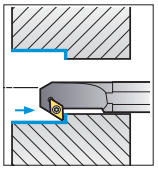
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	Screw	Wrench
S10M-SDUCR/L-07	13	10	9	150	7	0	2.5	DC□□0702□□	FTKA02555	TW07P
S12M-SDUCR/L-07	16	12	11	150	9	22	3.5		FTKA02565	
S16R-SDUCR/L-07	20	16	15	200	11	27	4			
S16R-SDUCR/L-11	20	16	15	200	11	27	4	DC□□11T3□□	FTGA03508	TW15P
S20S-SDUCR/L-11	25	20	18	250	13	40	4.3			
S25R-SDUCR/L-11	32	25	23	200	17	46	6.8		FTGA03510	
S32S-SDUCR/L-11	40	32	30	250	22	50	8.4			
A10H-SDUCR/L-07	13	10	9.5	100	7	0	2	DC□□0702□□	FTKA02555	TW07P
A12K-SDUCR/L-07	16	12	11	125	9	22	3		FTKA02565	
A16M-SDUCR/L-07	20	16	15	150	11	27	3			
A20Q-SDUCR/L-11	25	20	19	180	13	35	3	DC□□11T3□□	FTGA03508	TW15P
A25R-SDUCR/L-11	32	25	24	200	17	46	4.5		FTGA03510	

Applicable inserts, see pages B52, B53, B69

SDZCR/L

DC□□





3°

• R type insert

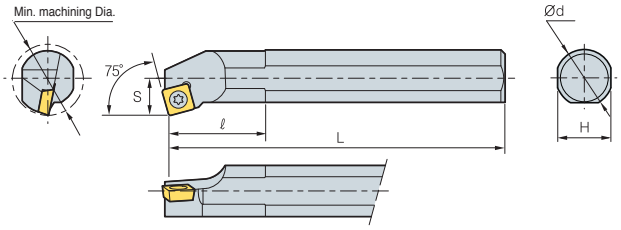
(mm)

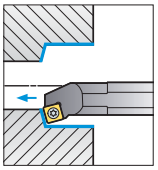
Designation	ØD	Ød	H	L	S	ℓ	f	Insert	Screw	Shim	ShimScrew	Wrench
S16R-SDZCR/L-07	20	16	15	200	11	29	4	DC□□0702□□	FTKA02565	-	-	TW07P
S20S-SDZCR/L-07	25	20	18	250	13	36.5	4.5					
S25R-SDZCR/L-11	32	25	23	200	17	30	6.9	DC□□11T3□□	FTGA03510	-	-	TW15P
S32S-SDZCR/L-11	40	32	30	250	22	39	8.4		FTGA03512	SD32S	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 B52, B53, B69

SSKCR/L

SC□□





75°

• R type insert

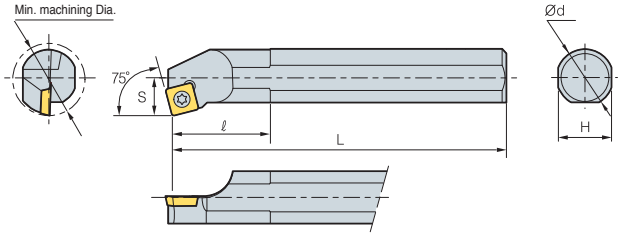
(mm)

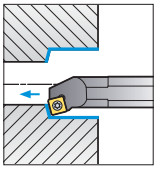
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	ShimScrew	Wrench
S12M-SSKCR/L-09	16	20	11	150	9	26	SC□□09T3□□	FTGA03507	-	-	TW15P
S16R-SSKCR/L-09	20	16	15	200	11	40		FTGA03508			
S20S-SSKCR/L-09	25	20	18	250	13	46			-	-	
S25R-SSKCR/L-12	32	25	23	200	17	36	SC□□1204□□	FTGA0411F			TW15P
S32S-SSKCR/L-12	40	32	30	250	22	43			SS42S	SHXN0610F	TW15P, HW40L
A12K-SSKCR/L-09	16	12	11	125	9	26	SC□□09T3□□	FTGA03507	-	-	TW15P
A16M-SSKCR/L-09	20	16	15	150	11	32		FTGA03508			
A20Q-SSKCR/L-09	25	20	19	180	13	34					
A25R-SSKCR/L-12	32	25	24	200	17	36	SC□□1204□□	FTGA0411F	SS42S	SFXN0610F	TW15P
A32S-SSKCR/L-12	40	32	31	250	22	43					TW15P, HW40L

Applicable inserts, see pages B55, B71

SSKPR/L

SP□□





75°

• R type insert

(mm)

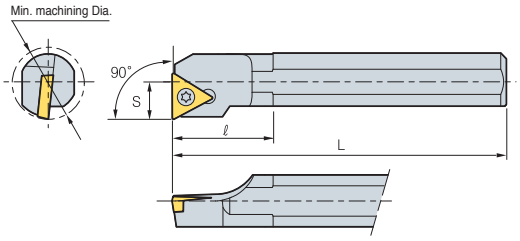
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S12M-SSKPR/L-09	16	12	11	150	8	18	SP□□0903□□	FTNA0307	TW09P
S16N-SSKPR/L-09	20	16	15	160	10	30			
S16R-SSKPR/L-09	20	16	15	200	10	32			
S20N-SSKPR/L-09	25	20	18	160	12.5	32			
S20S-SSKPR/L-09	25	20	18	250	12.5	35			
A12K-SSKPR/L-09	16	12	11	125	8	21	SP□□0903□□	FTNA0305	TW09P
A16M-SSKPR/L-09	20	16	15	150	10	30		FTNA0307	
A20Q-SSKPR/L-09	25	20	19	180	12.5	32			

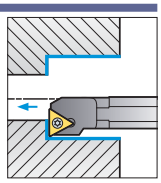
Applicable inserts, see pages B56~B57

• Holder is opposed to hand of insert

STFCR/L

TC□□





90°

• R type insert

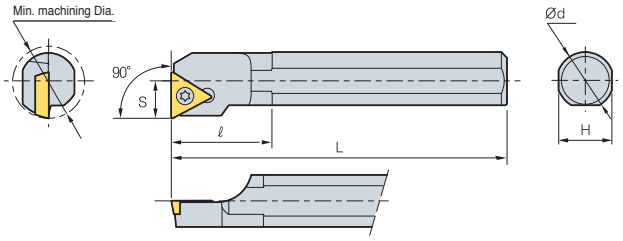
(mm)

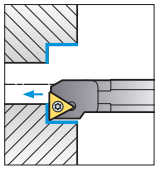
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
S10M-STFCR/L-09	13	10	9	150	7	23	TC□□0902□□	FTKA02206	-	-	TW06P
S12M-STFCR/L-09	16	12	11	150	9	28					
S12M-STFCR/L-11	16	12	11	150	9	30	TC□□1102□□	FTKA02565	-	-	TW07P
S16R-STFCR/L-11	20	16	15	200	11	35					
S20S-STFCR/L-11	25	20	18	250	13	36					
S20S-STFCR/L-16	25	20	18	250	13	36	TC□□16T3□□	FTGA03510	-	-	TW15P
S25R-STFCR/L-16	32	25	23	200	17	49					
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	23	TC□□0902□□	FTKA02206	-	-	TW06P
A12K-STFCR/L-09	16	12	11	125	9	23					
A12K-STFCR/L-11	16	12	11	125	9	30					
A16M-STFCR/L-11	20	16	15	150	11	30	TC□□1102□□	FTKA02565	-	-	TW07P
A20Q-STFCR/L-11	25	20	19	180	13	36					
A25R-STFCR/L-16	32	25	24	200	17	49	TC□□16T3□□	FTKA03510	-	-	TW15P
A32S-STFCR/L-16	40	32	31	250	22	50		FTGA03512	ST32S	SHXN0509F	TW15P, HW35L

Applicable inserts, see pages B59, B72

STFPR/L

TP□□





90°

• R type insert

(mm)

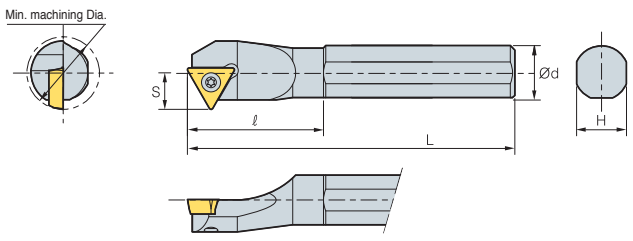
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10M-STFPR/L-11	12	10	9	150	6	–	TP□□1103□□	FTNA0305	TW09P
S12M-STFPR/L-11	16	12	11	150	8	10		FTNA0307	TW09P
S16N-STFPR/L-11	20	16	15	160	10	12			
S16R-STFPR/L-11	20	16	15	200	10	12			
S20N-STFPR/L-16	25	20	18	160	12.5	32	TP□□1604□□	FTNA0408	TW15P
S20S-STFPR/L-16	25	20	18	250	12.5	14			
A10H-STFPR/L-11	12	10	9.5	100	6	–	TP□□1103□□	FTNA0305	TW09P
A12K-STFPR/L-11	16	12	11	125	8	10		FTNA0307	TW09P
A16M-STFPR/L-11	20	16	15	150	10	23			
A20Q-STFPR/L-16	25	20	19	180	12.5	41	TP□□1604□□	FTNA0408	TW15P

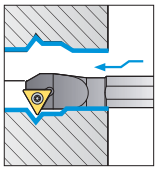
Applicable inserts, see pages B61~B62

• Holder is opposed to hand of insert

STWPR/L

TP□□





60°

• R type insert

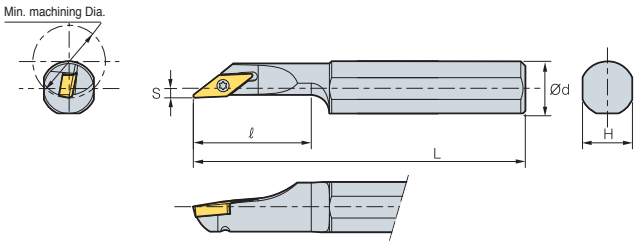
(mm)

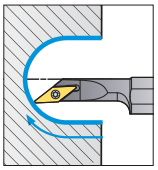
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10M-STWPR/L-11	12	10	9	150	6	23	TPGH1102□□	FTNA0305	TW09P
S12M-STWPR/L-11	16	12	11	150	8	30	TPGH1103□□ TPMT1103□□	FTNA0306	TW09P
S16R-STWPR/L-11	20	16	15	180	10	35			
S20R-STWPR/L-11	25	20	19	200	12.5	40			

Applicable inserts, see pages B61~B62

SVJCR/L

VC□□





142°

• R type insert

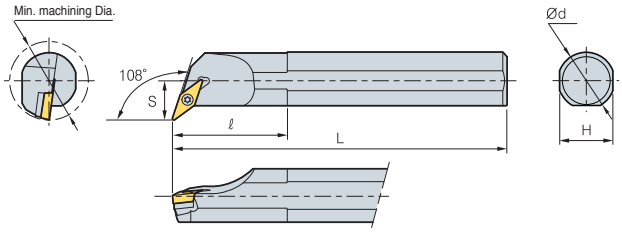
(mm)

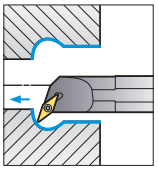
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S12M-SVJCR/L-08	16	12	11	150	2	26	VCMT0802□□	FTNA0204	TW06P
S16Q-SVJCR/L-08	20	16	15	180	2	36			

Applicable inserts, see pages B65, B74

SVQBR/L

VB□□





108°

• R type insert

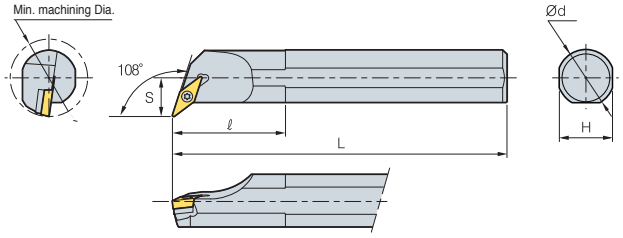
(mm)

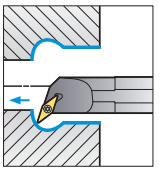
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
S32S-SVQBR/L-16	40	32	30	250	22	56	VB□□1604□□	FTGA03512	SV32S	SHXN0509F	TW15P, HW35L
S40T-SVQBR/L-16	50	40	37	300	27	64					
A32S-SVQBR/L-16	40	32	31	250	22	56					

Applicable inserts, see pages B63, B73

SVQCR/L

VC□□





108°

• R type insert

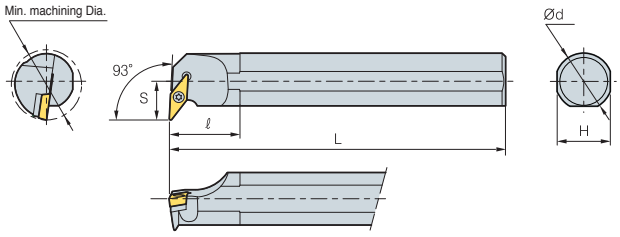
(mm)

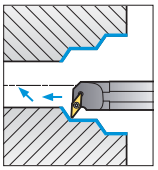
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
S16R-SVQCR/L-11	20	16	15	200	11	35	VC□□1103□□	FTKA02565	-	-	TW07P
S20S-SVQCR/L-11	25	20	18	250	13	38					
S25R-SVQCR/L-11	32	25	23	200	17	42					
S20S-SVQCR/L-13	25	20	18	250	13	42	VC□□1303□□	FTKA0307	-	-	TW07P
S25R-SVQCR/L-13	32	25	23	200	17	45					
S25R-SVQCR/L-16	32	25	23	200	17	50	VC□□1604□□	FTGA03510	-	-	TW15P
S32S-SVQCR/L-16	40	32	30	250	22	56		FTGA03512	SV32S	SHXN0509F	TW15P HW35L
S40T-SVQCR/L-16	50	40	37	300	27	64					

Applicable inserts, see pages B65, B74

SVUBR/L

VB□□





93°

• R type insert

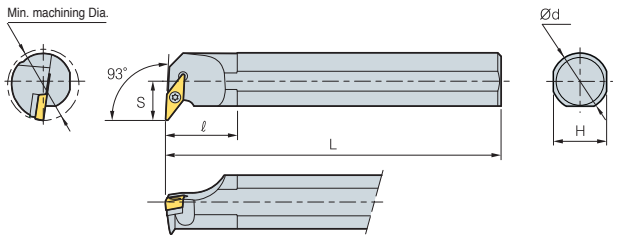
(mm)

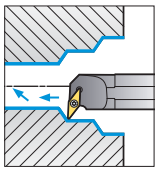
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
S32S-SVUBR/L-16	40	32	30	250	22	56	VB□□1604□□	FTGA03510	SV32S	SHXN0509F	TW15P, HW35L
S40T-SVUBR/L-16	50	40	37	300	27	64					
A32S-SVUBR/L-16	40	32	31	250	22	56					

Applicable inserts, see pages B63, B73

SVUCR/L

VC□□





93°

• R type insert

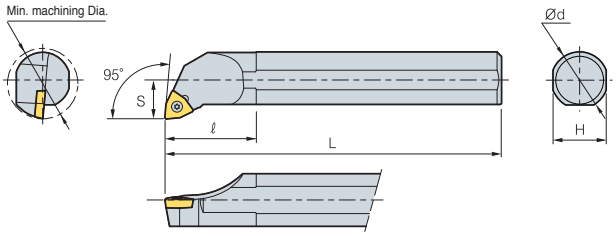
(mm)

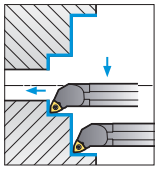
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Shim	Shim Screw	Wrench
S16R-SVUCR/L-11	22	16	15	200	13	30	VC□□1103□□	FTKA02565	-	-	TW07P
S20S-SVUCR/L-11	25	20	18	250	14	33					
S25T-SVUCR/L-11	32	25	23	300	17	38					
S20S-SVUCR/L-13	28	20	18	250	16	35	VC□□1303□□	FTKA0307	-	-	TW09P
S25R-SVUCR/L-13	32	25	23	200	17	40					
S25R-SVUCR/L-16	32	25	23	200	19	50	VC□□1604□□	FTGA03510	-	-	TW15P
S32S-SVUCR/L-16	40	32	30	250	22	56		FTGA03512	SV32S	SHXN0509F	TW15P HW35L
S40T-SVUCR/L-16	50	40	37	300	27	64					

Applicable inserts, see pages B65, B74

SWLCR/L

WC□□





95°

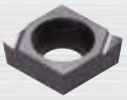
• R type insert

(mm)

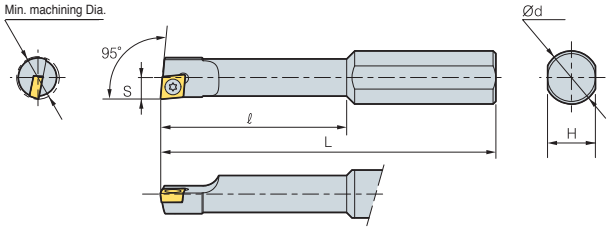
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S25R-SWLCR/L-08	32	25	23	200	17	46	WC□□0804□□	FTGA0411F	TW15P
S32S-SWLCR/L-08	40	32	30	250	22	51			
A25R-SWLCR/L-08	32	25	24	200	17	46	WC□□0804□□	FTGA0411F	TW15P
A32S-SWLCR/L-08	40	32	31	250	22	51			

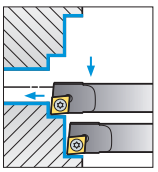
Applicable inserts, see pages B66

SCLCR/L



CCET





95°

• R type insert

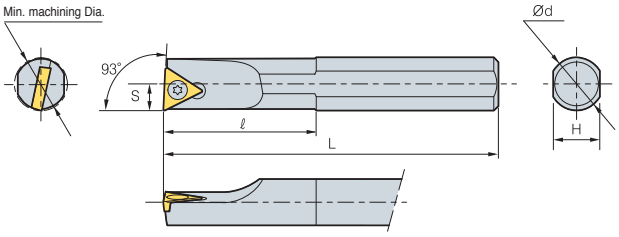
(mm)

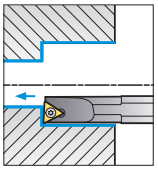
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S10H-SCLCR/L-0305	5	10	9	100	2.5	25	CCET 0301□□	FTNA01633	TW06P
S10H-SCLCR/L-0306	6	10	9	100	3.0	25			
S10J-SCLCR/L-0407	7	10	9	110	3.5	30	CCET 0401□□	FTNA0238	TW06P
S10J-SCLCR/L-0408	8	10	9	110	4.0	30			

Applicable inserts, see pages B49~B50

STUBR/L

TB□□





93°

• R type insert

(mm)

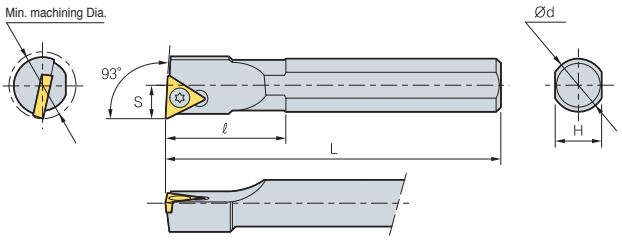
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S08K-STUBR/L-06	8	8	7	125	4	30	TB□□0601□□R/L	FTNA0204	TW06P
A08F-STUBR/L-06	8	8	7.5	80	4	30			

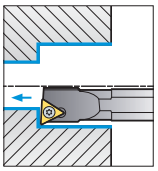
Applicable inserts, see pages B58

• Holder is opposed to hand of insert

STUPR/L

TP□□





93°

• R type insert

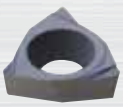
(mm)

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			

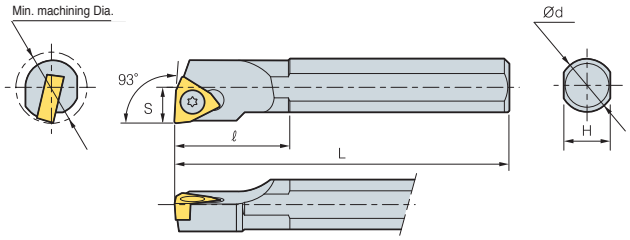
Applicable inserts, see pages B60~B62

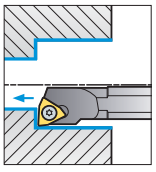
• Holder is opposed to hand of insert

SWUBR/L



WBGT





93°

• R type insert

(mm)

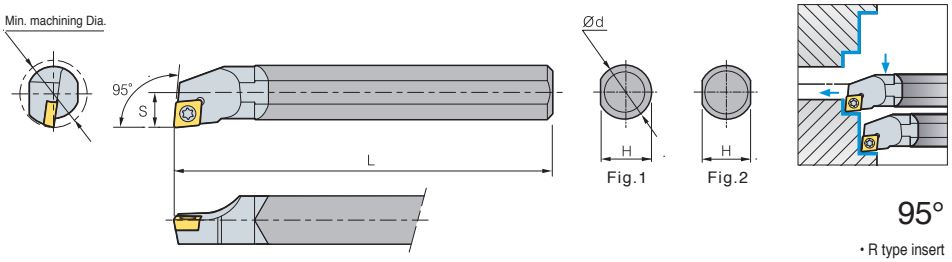
Designation	ØD	Ød	H	L	S	ℓ	Insert	Screw	Wrench
S05H-SWUBR/L-02	5.5	5	4.5	100	2.75	-	WBGT 0201□□R/L	FTNA0203	TW06P
S08K-SWUBR/L-02	8	8	7	125	4	30		FTNA02033	
S08K-SWUBR/L-S3	10	8	7	125	5	18	WBGT S302□□R/L	FTNA02205	TW06P
A08F-SWUBR/L-02	8	8	7.5	80	4	30	WBGT 0201□□R/L	FTNA0203	TW06P
A08F-SWUBR/L-S3	10	8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

Applicable inserts, see pages B66

• Holder is opposed to hand of insert

SCLCR/L

CC□□



95°

• R type insert

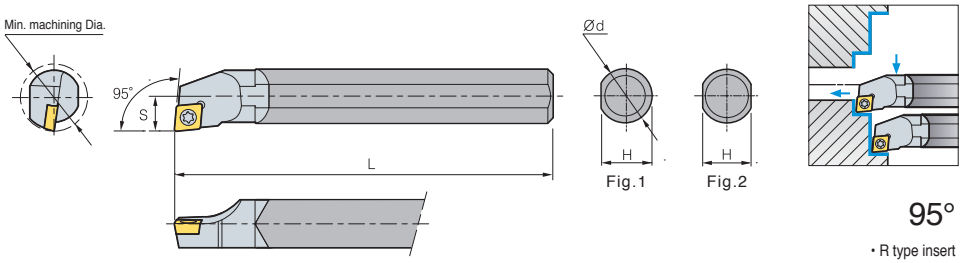
(mm)

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		
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		
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		
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		
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		

Applicable inserts, see pages B49~B50

SCLPR/L

CP□□



95°

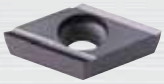
• R type insert

(mm)

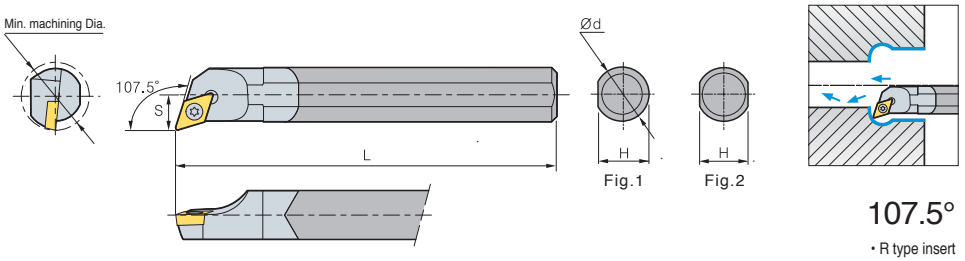
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C10K-SCLPR/L-08	12	10	9	125	6	CP □T0802 □□	FTNA0305	TW09P	2
C10M-SCLPR/L-08	12	10	9	150	6				
C12M-SCLPR/L-08	15	12	11	150	7.5		FTNA0306		
C12Q-SCLPR/L-08	15	12	11	180	7.5				
C12M-SCLPR/L-09	15	12	11	150	8	CP □T0903 □□	FTNA0408	TW15P	
C12Q-SCLPR/L-09	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		
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 B51

SDQCR/L



DC□□



107.5°

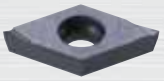
• R type insert

(mm)

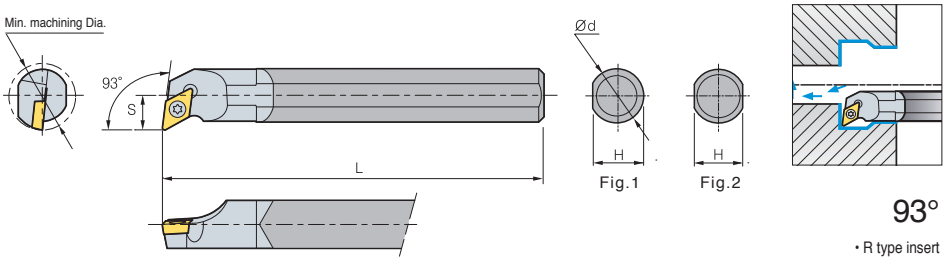
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C08K-SDQCR/L-07	10	8	7	125	6	DC □T0702 □□	FTKA02555	TW07P	2
C10K-SDQCR/L-07	13	10	9	125	7				
C12M-SDQCR/L-07	16	12	11	150	9		FTKA02565		
C16R-SDQCR/L-07	20	16	15	200	11				
C16R-SDQCR/L-11	20	16	15	200	11	DC □T11T3 □□	FTGA03508	TW15P	
C20R-SDQCR/L-11	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		
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 B52~B53, B69

SDUCR/L



DC□□



93°

• R type insert

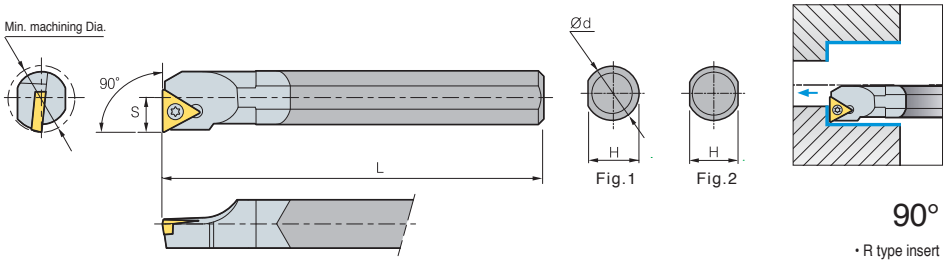
(mm)

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		
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		
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		
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		

Applicable inserts, see pages B52~B53, B69

STFCR/L

TC□□



90°

• R type insert

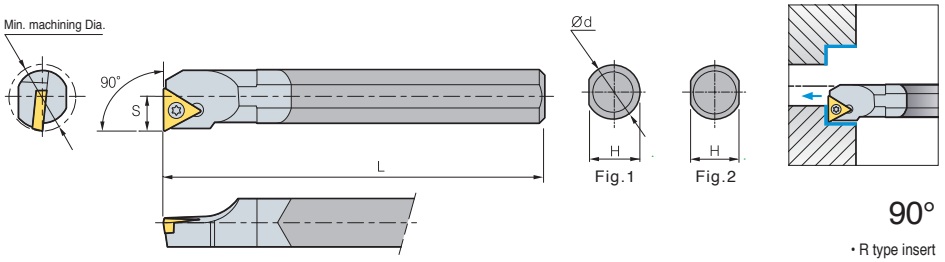
(mm)

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 B59, B72

STFPR/L

TP□□



90°

• R type insert

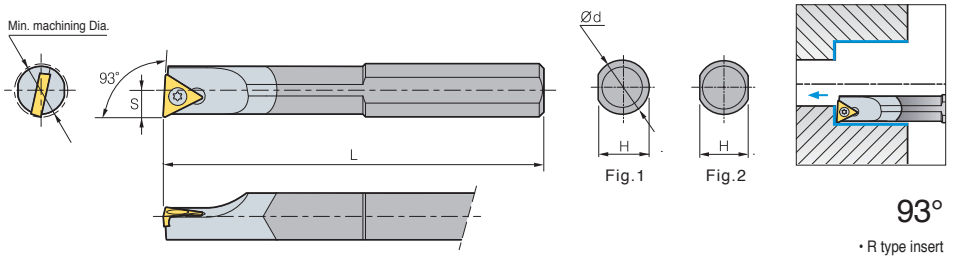
(mm)

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		
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		
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 B60~B62

STUBR/L

TB□□



93°

• R type insert

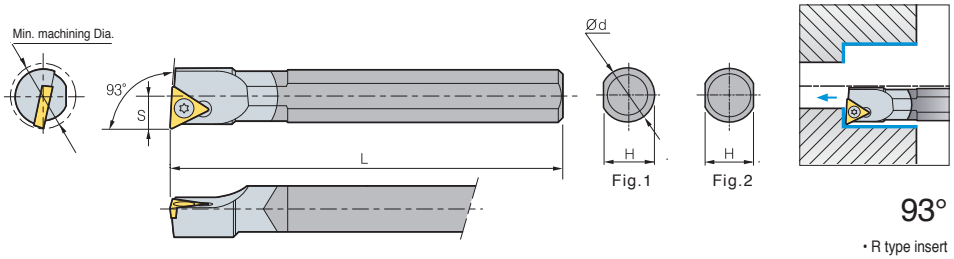
(mm)

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 B58

STUPR/L

TP□□



93°

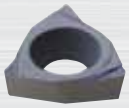
• R type insert

(mm)

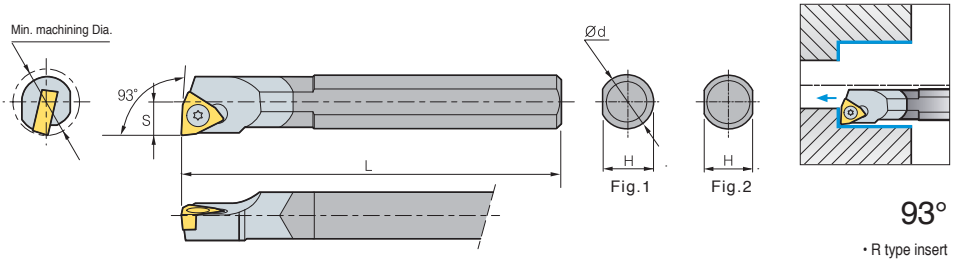
Designation	ØD	Ød	H	L	S	Insert	Screw	Wrench	Fig.
C08K-STUPR/L-08	10	8	7	125	5	TP □T0802 □□	FTNA02205	TW06P	2
C10K-STUPR/L-11	12	10	9	125	6	TP □T1103 □□	FTNA0305	TW09P	
C10M-STUPR/L-11	12	10	9	150	6				
C12M-STUPR/L-11	15	12	11	150	8		FTNA0307		
C12Q-STUPR/L-11	15	12	11	180	8				
C16R-STUPR/L-11	20	16	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		
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 B60~B62

SWUBR/L



WB□T



93°

• R type insert

(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		2
C08K-SWUBR/L-S3	10	8	7	125	4.5	WB □TS301 □□	FTNA02205		
E06H-SWUBR/L-02	7	6	5.4	100	3.5	WB □T0201 □□	FTNA0203	TW06P	1
E08K-SWUBR/L-02	9	8	7	125	4.5		FTNA02033		2
E08K-SWUBR/L-S3	10	8	7	125	5	WB □TS301 □□	FTNA02205		

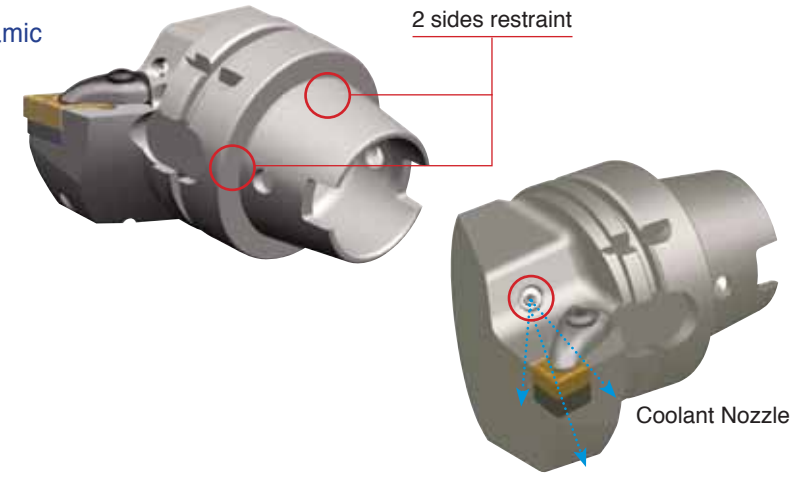
Applicable inserts, see pages B66

※ See page B178 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



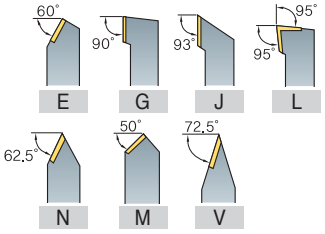
HSK Tooling code system

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

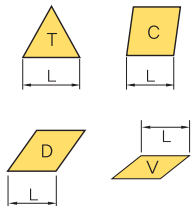
H63T D C L N R DX – 12

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


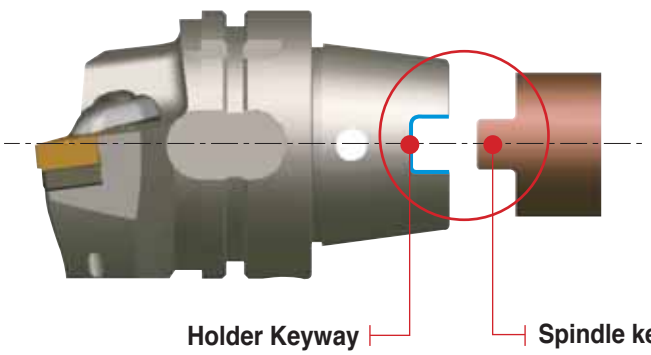
Hand
R : Right
L : Left
N : No Hand

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



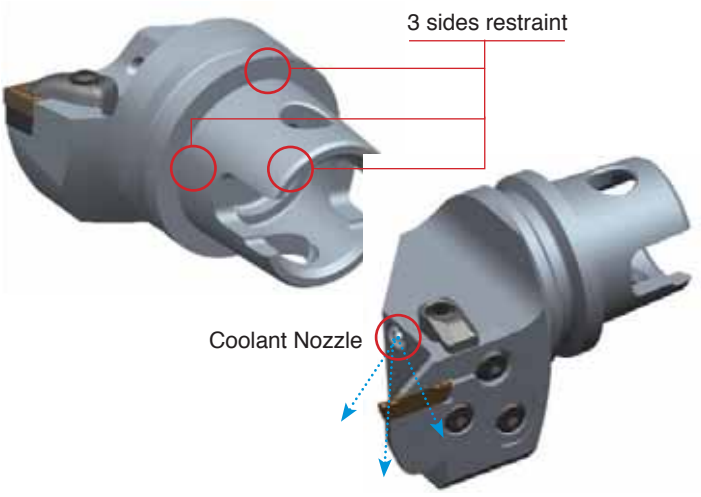
Tolerance comparison(Example) (mm)

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

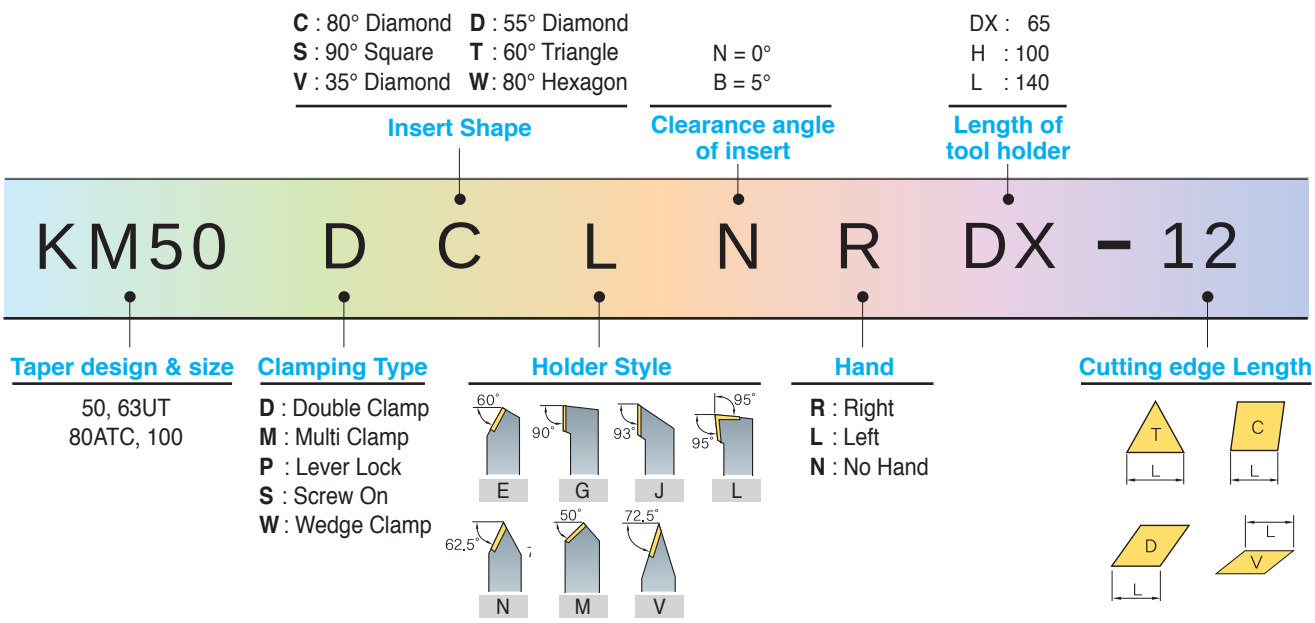
3 Face Binding - Superior precision

KM Tooling System (For Multi-task Machines)

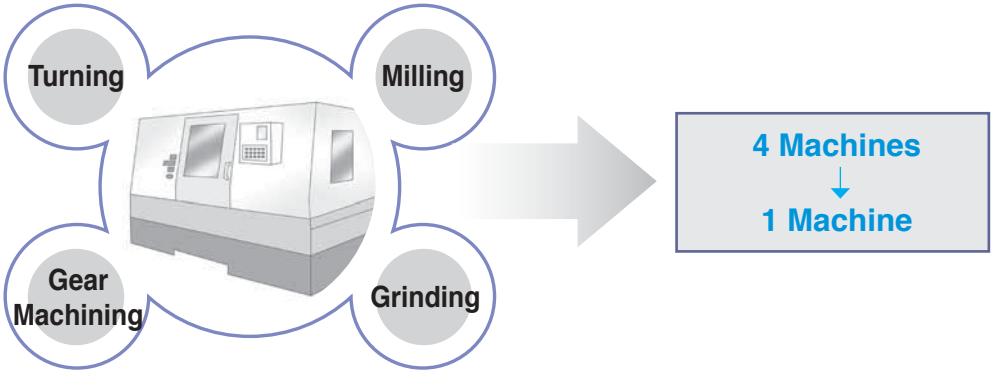
- 3 Face Binding / Superior precision
- Flexible Clamping System / Superior Rigidity
- Various Size & Style
- Appropriate for Turning & Milling
- Adjustable coolant direction with Coolant Nozzle



KM Tooling code system



Multi-Tasking Machine

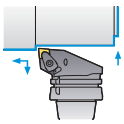
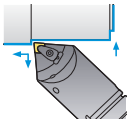
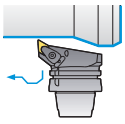
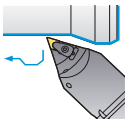
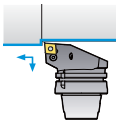
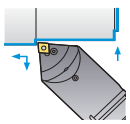
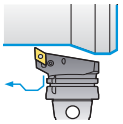
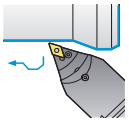


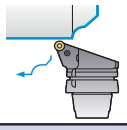
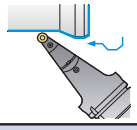
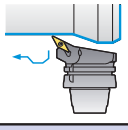
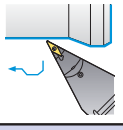
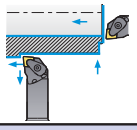
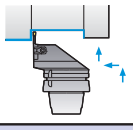
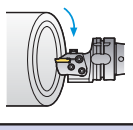
KM Tooling system is superior for wide application.

External Process | Internal Process | Grooving Process | Drill Process | Parting-off Process

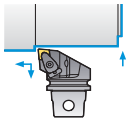
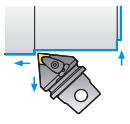
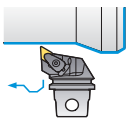
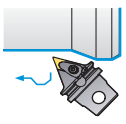
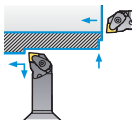
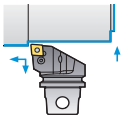
KM50, KM63UT, KM80, KM100 Standard and Special type can be produced.

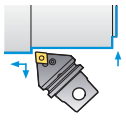
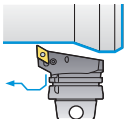
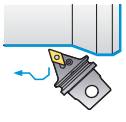
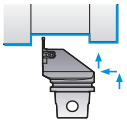
Index for HSK Tooling System

Cutting Shape								
Designation	H63T-DCLNR/L-DX12	H63T-DCMNN-H/L12	H63T-DDJNR/L-DX15	H63T-DDNNN-H/L15	H63T-PCLNR/L-DX12	H63T-PCMNN-H/L12	H63T-PDJNR/L-DX15	H63T-PDNNN-H/L15
Approach angle	95°	95°	93°	107.5°	95°	95°	93°	107.5°
Page	B149	B149	B149	B149	B150	B150	B150	B150
Turning	●	●	●	●	●	●	●	●
Copying			●	●			●	●
Facing	●	●	●	●	●	●	●	●
Back turning	●	●	●	●	●	●	●	●
Internal turning								

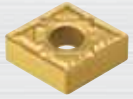
Cutting Shape								
Designation	H63T-PRDCR-DX12	H63T-PRDCN-H/L12	H63T-SVPBR/L-DX16	H63T-SVVBN-H/L16	H63T-A25K/A32L-DCLNR/L-12	H63T-MCHR/L	H63T-MCHR/L	
Approach angle	-	-	117.5°	117.5°	95°	-	-	
Page	B151	B151	B151	B151	B153	B152	B152	
Turning	●	●	●	●	●	●		
Copying	●	●	●	●		●		
Facing	●	●	●	●	●	●	●	
Back turning	●	●	●	●	●			
Internal turning					●			

Index for KM Tooling System

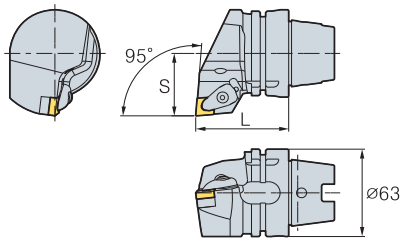
Cutting Shape						
Designation	KM50-DCLNR/L-C12 KM63UT-DCLNR/L-D12	KM50-DCMNN-C12 KM63UT-DCMNN-D12	KM50-DDJNR/L-C15(-3) KM63UT-DCLNR/L-D15(-3)	KM50-DDNNN-C15(-3) KM63UT-DDNNN-D15(-3)	KM50-A25K-DCLNR/L-12 KM50-A32K-DCLNR/L-12 KM63UT-A25K-DCLNR/L-12 KM63UT-A32L-DCLNR/L-12	KM50-PCLNR/L-C12 KM63UT-PCLNR/L-D12
Approach angle	95°	95°	93°	107.5°	95°	95°
Page	B155	B155	B155	B156	B158	B156
Turning	●	●	●	●	●	●
Copying			●	●		
Facing	●	●	●	●	●	●
Back turning	●	●	●	●	●	●
Internal turning					●	

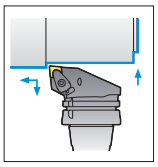
Cutting Shape						
Designation	KM50-PCMNN-C12 KM63UT-PCMNN-D12	KM50-PDJNR/L-C15(-3) KM63UT-PCLNR/L-D15(-3)	KM50-PDNNN-C15(-3) KM63UT-PDNNN-D15(-3)	KM50-MCHR/L KM63UT-MCHR/L		
Approach angle	95°	93°	107.5°	-		
Page	B156	B157	B157	B157		
Turning	●	●	●	●		
Copying		●	●	●		
Facing	●	●	●			
Back turning	●	●	●	●		
Internal turning						

DCLNR/L



CN□□





95°

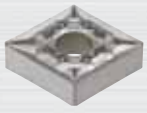
• R type insert

(mm)

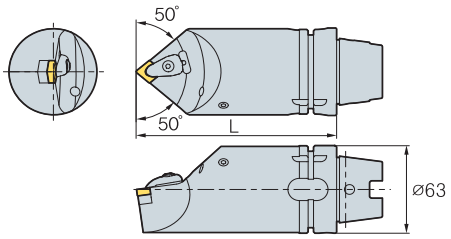
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DCLNR/L-DX12	65	45	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T

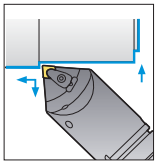
Applicable inserts, see pages B18~B22

DCMNN



CN□□





95°

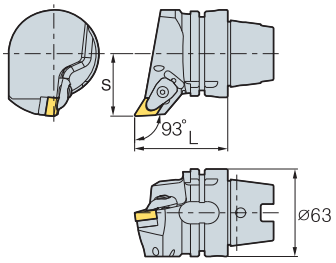
(mm)

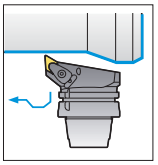
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DCMNN-H12	100	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DCMNN-L12	140										

Applicable inserts, see pages B18~B22

DDJNR/L

DN□□





93°

• R type insert

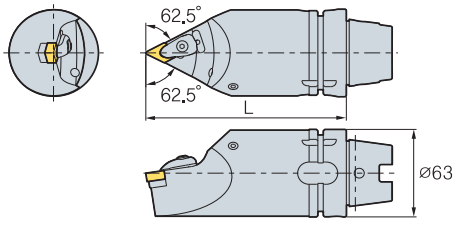
(mm)

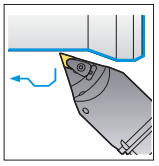
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DDJNR/L-DX15	65	45	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P	CP63T
H63T-DDJNR/L-DX15-3	65	45	DN□□1504□□			SD44V						

Applicable inserts, see pages B23~B26

DDNNN

DN□□





107.5°

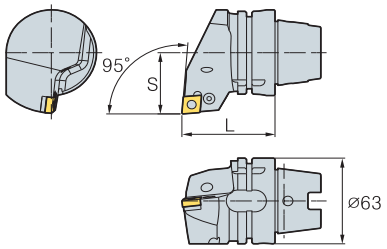
(mm)

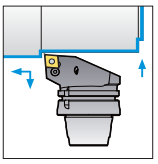
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench	Coolant Pipe
H63T-DDNNN-H15	100	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T
H63T-DDNNN-L15	140										
H63T-DDNNN-H15-3	100	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P	CP63T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

Applicable inserts, see pages B23~B26

PCLNR/L

CN□□





95°

• R type insert

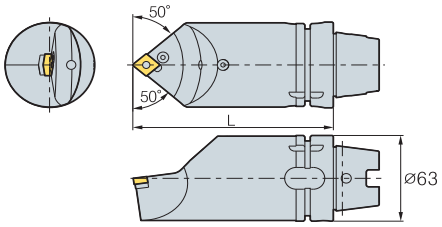
(mm)

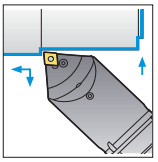
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PCLNR/L-DX12	65	45	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	-	HW30L	CP63T

Applicable inserts, see pages B18~B22

PCMNN

CN□□





95°

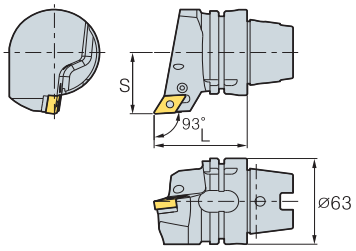
(mm)

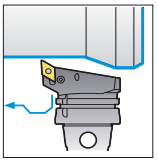
Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PCMNN-H12	100	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PCMNN-L12	140										

Applicable inserts, see pages B18~B22

PDJNR/L

DN□□





95°

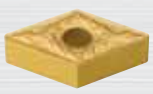
• R type insert

(mm)

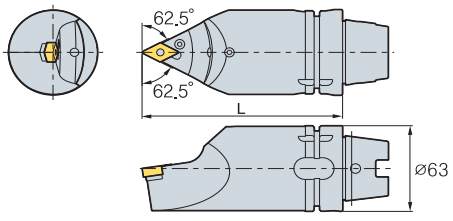
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PDJNR/L-DX15	65	45	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L	CP63T
H63T-PDJNR/L-DX15-3	65	45	DN□□1504□□			SD43N						

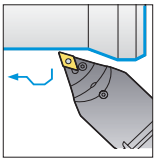
Applicable inserts, see pages B23~B26

PDNNN



DN□□





107.5°

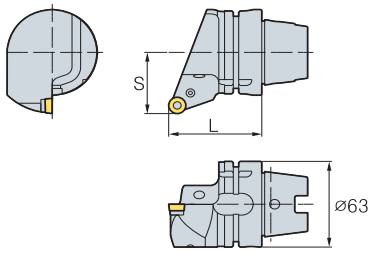
(mm)

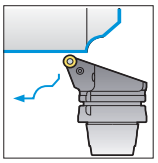
Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PDNNN-H15	100	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PDNNN-L15	140										
H63T-PDNNN-H15-3	100	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L	CP63T
H63T-PDNNN-L15-3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

Applicable inserts, see pages B23~B26

PRGCR/L

RCMX1204M0





• R type insert

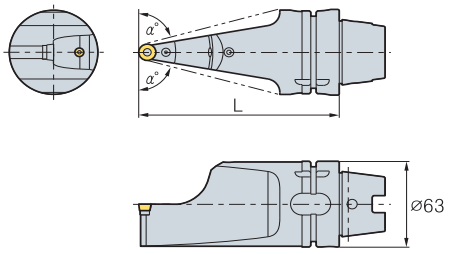
(mm)

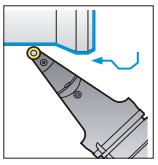
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PRGCR/L-DX12	65	45	RCMX1204M0	LR12	VHX0617	SR12	SP3	LSPS3	CN0605	-	HW25L	CP63T

Applicable inserts, see pages B54

PRDCN

RCMX1204M0





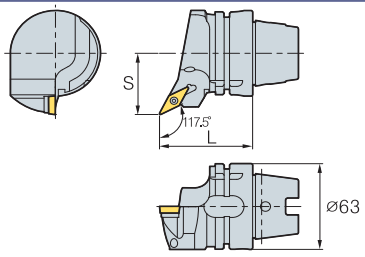
(mm)

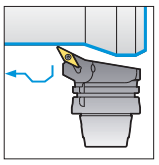
Designation	L	α°	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench	Coolant Pipe
H63T-PRDCN-H12	100	69	RCMX1204M0	LR12	VHX0617	SR12	SP3	LSPS3	CN0605	-	HW25L	CP63T
H63T-PRDCN-L12	140	75										

Applicable inserts, see pages B54

SVPBR/L

VB□





117.5°

• R type insert

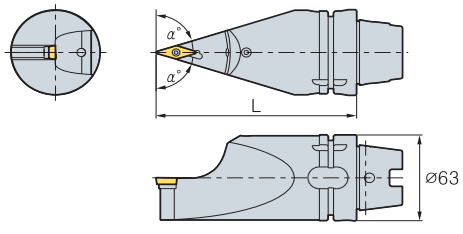
(mm)

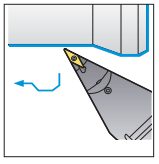
Designation	L	S	Insert	Screw	Shim Screw	Shim	Nozzle	Plug	Wrench	Wrench	Coolant Pipe
H63T-SVPBR/L-DX16	65	45	VB□T1604□□	FTGA03512	SHXN0509F	SV32S	CN0605	-	TW15P	HW32L	CP63T

Applicable inserts, see pages B63~B64, B73

SVVBN

VB□





117.5°

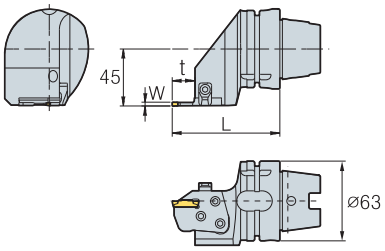
(mm)

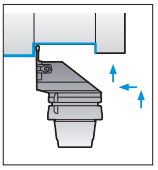
Designation	L	α°	Insert	Screw	ShimScrew	Shim	Nozzle	Plug	Wrench	Wrench	Coolant Pipe
H63T-SVVBN-H16	100	66.5	VB□T1604□□	FTGA03512	SHXN0509F	SV32S	CN0605	KHA0808	TW15P	HW32L	CP63T
H63T-SVVBN-L16	140	72.5									

Applicable inserts, see pages B63~B64, B73

MCHR/L

MGMN / MGMR/L
MGGN / MRMN





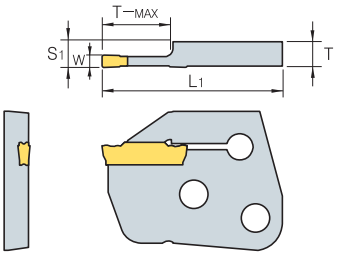
• R type insert

(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	CXH8N	DHA0818F	RHA0613	FHGA0618	CN0605	-	HW40L	CP63T
	85	18	4	16	MGMR/L	MCER/L4-T16								
	89	22	5	20	MGGN	MCER/L5-T20								
	89	22	6	20	MRMN	MCER/L6-T20								

MCER/L (Cartridge)

MGMN / MGMR/L
MGGN / MRMN



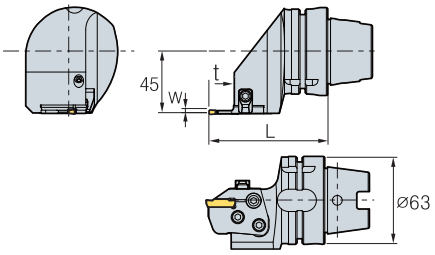
• R type insert

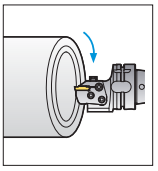
(mm)

Designation		L	L_1	S_1	T-max	Insert		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	MGMN	

MCHR/L

MFMN300
MGMN400





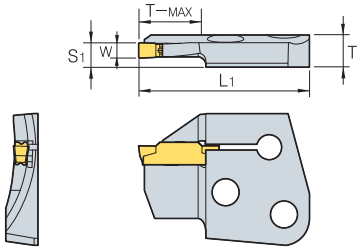
• R type insert

(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	CXH8N	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



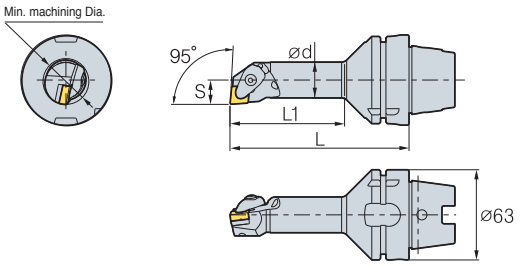
• R type insert

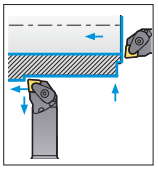
(mm)

Designation	T	L1	S1	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		

DCLNR/L

CN□□





95°

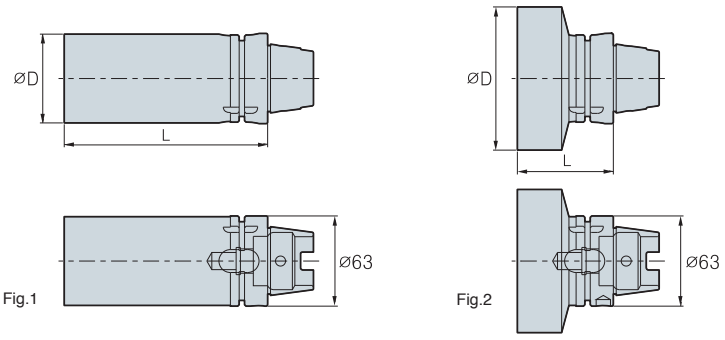
• R type insert

(mm)

Designation	ØD	Ød	L	L1	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-A32K-DCLNR/L-12	40	32	140	98	22										

Applicable inserts, see pages B18~B22

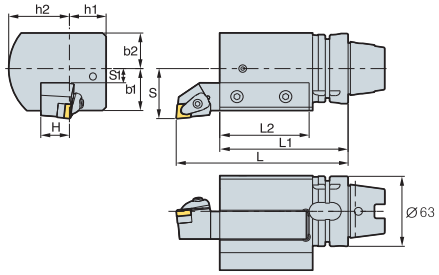
Blank Tool



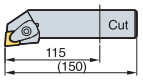
(mm)

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

EV2525R/L-112



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

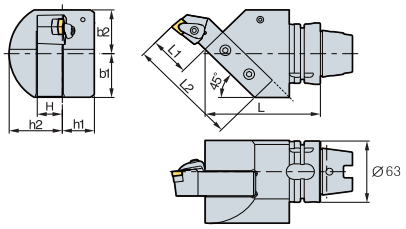


• R type insert

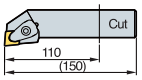
(mm)

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.

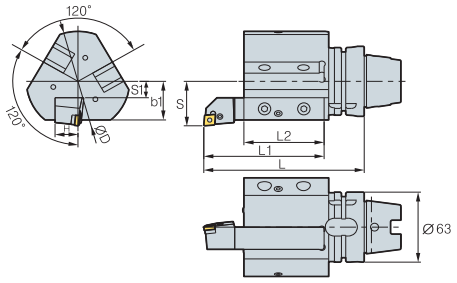


• R type insert

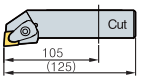
(mm)

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

EV2525R/L-105-3



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

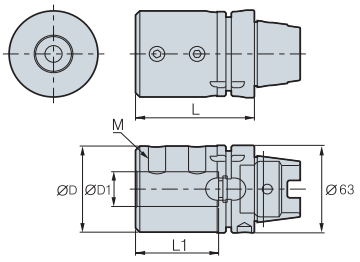


• R type insert

(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○○-○○



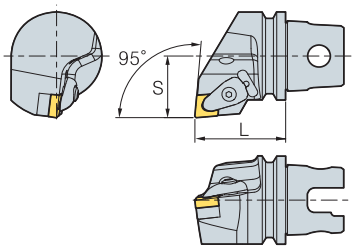
• R type insert

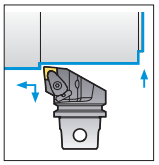
(mm)

Designation	ØD	ØD1	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

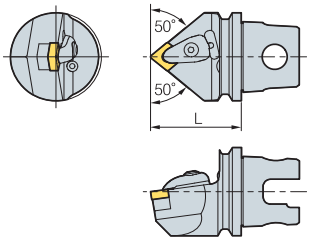
(mm)

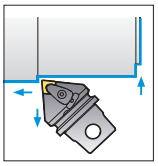
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DCLNR/L-C12	50	35	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DCLNR/L-D12	60	43									

Applicable inserts, see pages B18~B22

DCMNN

CN□□





95°

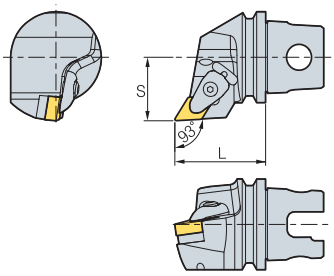
(mm)

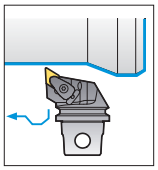
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DCMNN-C12	50	CN□□1204□□	CVH4	CHX0518	SC44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DCMNN-D12	60									

Applicable inserts, see pages B18~B22

DDJNR/L

DN□□





93°

• R type insert

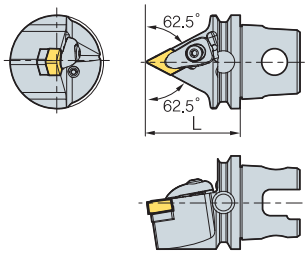
(mm)

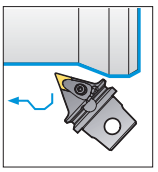
Designation	L	S	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DDJNR/L-C15	50	35	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	-	HW30P
KM50-DDJNR/L-C15-3	50	35	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	-	HW30P
KM63UT-DDJNR/L-D15	60	43	DN□□1506□□	CVH4	CHX0518	SD43V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

Applicable inserts, see pages B23~B26

DDNNN

DN□□





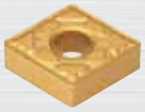
117.5°

(mm)

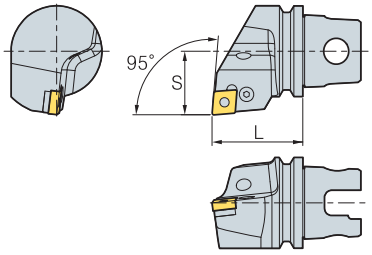
Designation	L	Insert	Clamp	Screw	Shim	Shim Screw	Spring	Nozzle	Plug	Wrench
KM50-DDNNN-C15	50	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM50-DDNNN-C15-3	50	DN□□1504□□	CVH4	CHX0518	SD44V	FTKA0410	SPR0714	CN0605	KHA0808	HW30P
KM63UT-DDNNN-D15	60	DN□□1506□□	CVH4	CHX0518	SD43V	FTKA0410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

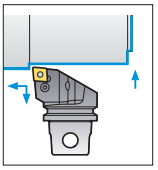
Applicable inserts, see pages B23~B26

PCLNR/L



CN□□





95°

• R type insert

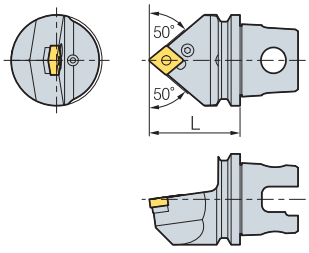
(mm)

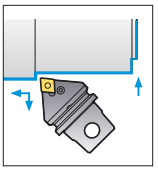
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PCLNR/L-C12	50	35	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PCLNR/L-D12	60	43									

Applicable inserts, see pages B18~B22

PCMNN

CN□□





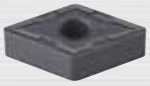
95°

(mm)

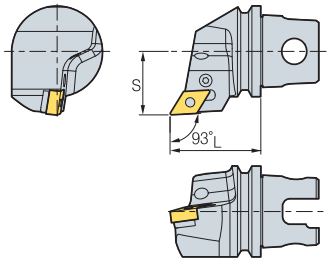
Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PCMNN-C12	50	CN□□1204□□	LV4N	VHX0820N	SC42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PCMNN-D12	60									

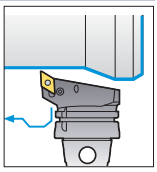
Applicable inserts, see pages B18~B22

PDJNR/L



DN□□





93°

• R type insert

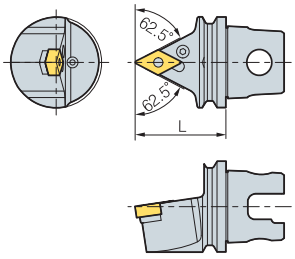
(mm)

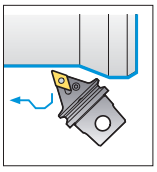
Designation	L	S	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PDJNR/L-C15	50	35	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	-	HW30L
KM50-PDJNR/L-C15-3	50	35	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	-	HW30L
KM63UT-PDJNR/L-D15	60	43	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N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

Applicable inserts, see pages B23~B26

PDNNN

DN□□





107.5°

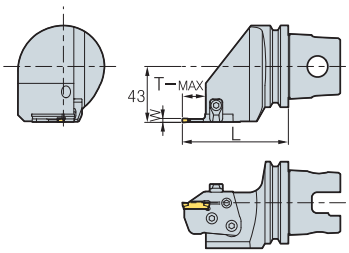
(mm)

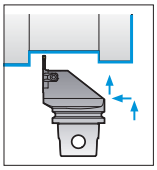
Designation	L	Insert	Lever	Screw	Shim	Shim Pin	Punching	Nozzle	Plug	Wrench
KM50-PDNNN-C15	50	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM50-PDNNN-C15-3	50	DN□□1504□□	LV4BN	VHX0821N	SD43N	SP4N	LSPS4	CN0605	KHA0808	HW30L
KM63UT-PDNNN-D15	60	DN□□1506□□	LV4BN	VHX0821N	SD42N	SP4N	LSPS4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

Applicable inserts, see pages B23~B26

MCHR/L

MGMN / MGMR/L
MGGN / MRMN





• R type insert

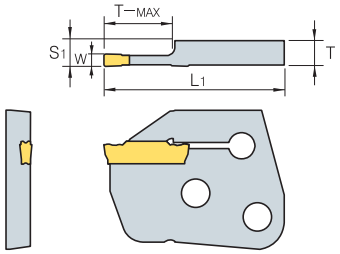
(mm)

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

Applicable inserts, see pages D22

MCER/L (Cartridge)

MGMN / MGMR/L
MGGN / MRMN



• R type insert

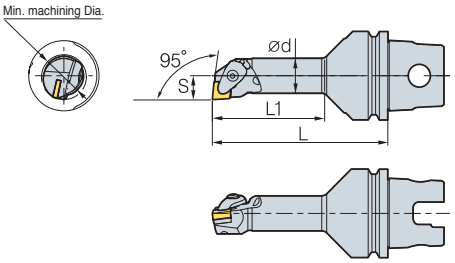
(mm)

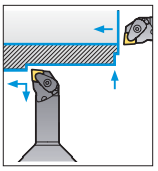
Designation		T	L_1	S_1	T-max	Insert		Available tool holders
						W	Designation	
MCER/L	3-T16	6.00	44.5	6.35	16	3	MGMN	H-63T-MCHR/L
	4-T16	5.97	44.5	6.35	16	4	MGMR/L	
	5-T20	5.87	48.5	6.35	20	5	MGGN	
	6-T20	5.82	48.5	6.35	20	6	MRMN	

Applicable inserts, see pages D22

KM○○-DCLNR/L

CN□□





95°

• R type insert

(mm)

Designation	ØD	Ød	L	L1	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 B18~B22

Blank Tool

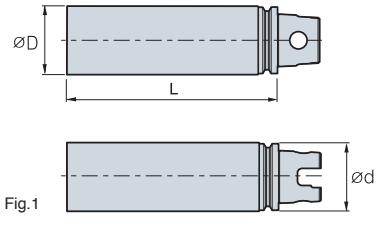


Fig.1

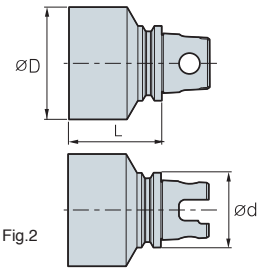


Fig.2

(mm)

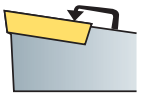
Designation	ØD	L	Ød	Fig.
KM50-BL7562	45	62	50	Fig. 1
KM50-BL10562	105	62	50	Fig. 2
KM63UT-BL65200	65	200	50	Fig. 1
KM63UT-BL115150	115	150	50	Fig. 2

S T F C R 12 C A - 16

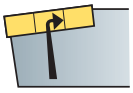
1	2	3	4	5	6	7	8	9
Method of Mounting Insert	Insert Shape	Holder Style	Relief Angle of Insert	Hand	Height of Cutting Edge	Cartridge Code	Type of Cartridge	Length of Cutting Edge

1 Method of Mounting Insert

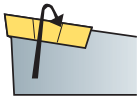
S T F C R 12 C A - 16



Top Clamping — C



Hole clamping — P



Screw on — S

2 Insert Shape

S T F C R 12 C A - 16

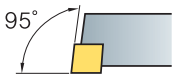
C

S

T

3 Holder Style

S T F C R 12 C A - 16



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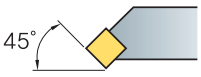
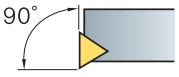


S



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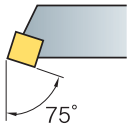

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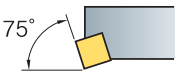
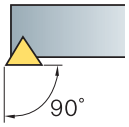
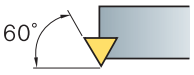


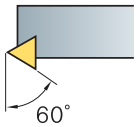
K



G



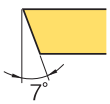
W



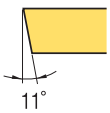
T

4 Relief Angle of Insert

S T F C R 12 C A - 16



C



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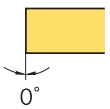
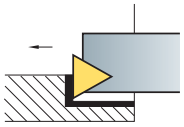
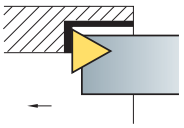


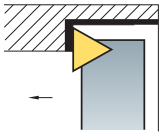
N

5 Hand

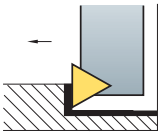
S T F C R 12 C A - 16







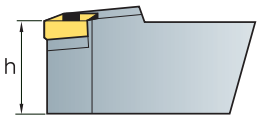
R



L

6 Height of Cutting Edge

S T F C R 12 C A - 16



7 Cartrige Code

S T F C R 12 C A - 16

C (Cartridge)

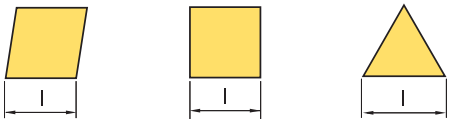
8 Type of Cartridge

S T F C R 12 C A - 16

A (ISO5611)

9 Length of Cutting Edge

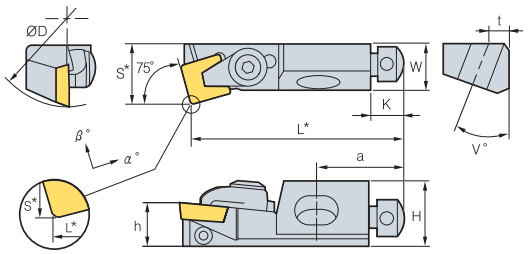
S T F C R 12 C A - 16

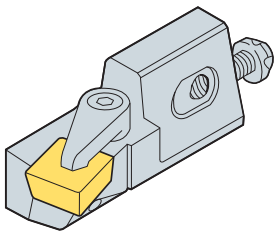


	Cutting Shape		Turning	Copying	Facing	Chamfering	Applicable inserts	Page
Clamp on System	**CSKPR/L**	10CA-09 12CA-12	●				SP□R 0903□□ 1203□□	**B**161
	CTTPR/L	10CA-11 12CA-16	●				TP□R 1103□□ 1603□□	**B**162
	CTWPR/L	10CA-11 12CA-16	●				TP□R 1103□□ 1603□□	**B**162
	CTFPR/L	10CA-11 12CA-16	●		●		TP□R 1103□□ 1603□□	**B**161
	CTSPR/L	10CA-11 12CA-16	●				TP□R 1103□□ 1603□□	**B**161
Screw on System	**SSKCR/L**	10CA-09 12CA-12	●				SC□T 09T3□□ 1204□□	**B**163
	SSSCR/L	10CA-09 12CA-12	●			●	SC□T 09T3□□ 1204□□	**B**163
	STFCR/L	10CA-11 12CA-16	●		●		TC□T 1102□□ 16T3□□	**B**163
	STTCR/L	10CA-11 12CA-16	●		●		TC□T 1102□□ 16T3□□	**B**164
	STWCR/L	10CA-11 12CA-16	●				TC□T 1102□□ 16T3□□	**B**164

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□□

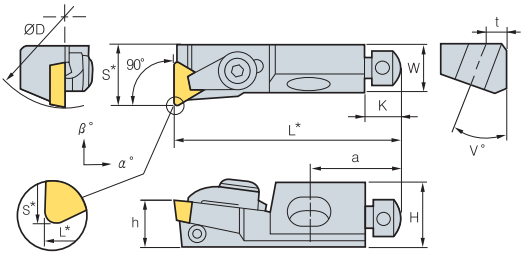
Applicable inserts, see pages B56~B57

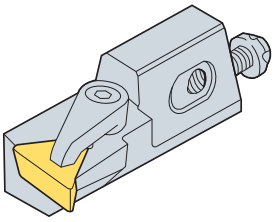
· a base Insert : r = 0.8 D = Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	Washer	Wrench	Wrench
CSKPR/L	10CA-09	CA05R	AZ0508F	KHA0408	RHA0620	WA0602	TW15L	HW20L
	12CA-12	CA06R	AZ0508F	KHA0412	RHA0625	WA0602	TW15L	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□□

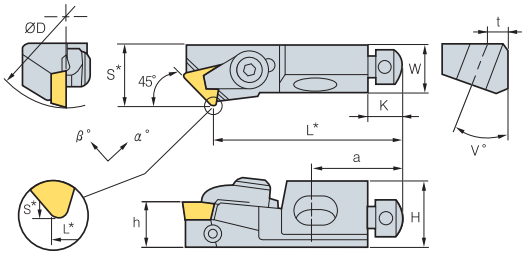
Applicable inserts, see pages B61~B62

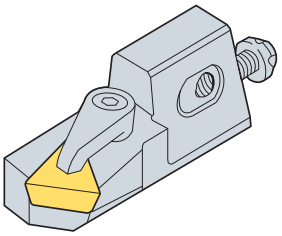
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

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

CTSPR/L

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□□

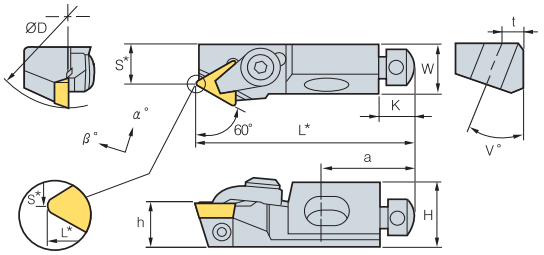
Applicable inserts, see pages B61~B62

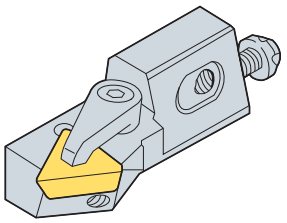
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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 □□

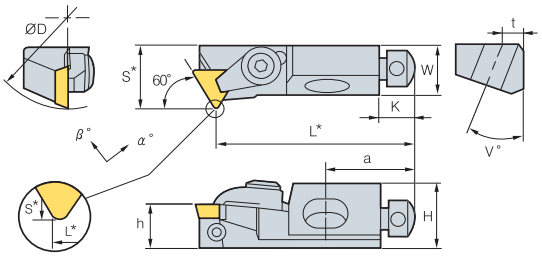
Applicable inserts, see pages B61~B62

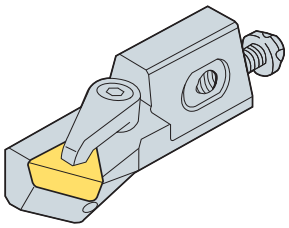
· a base Insert : r = 0.8 D = Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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 □□

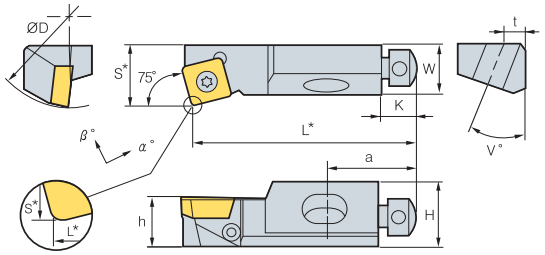
Applicable inserts, see pages B61~B62

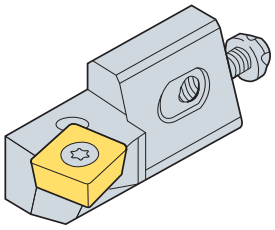
· a base Insert : r = 0.8 D = Min. machining Dia.

Parts		Clamp	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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 □□

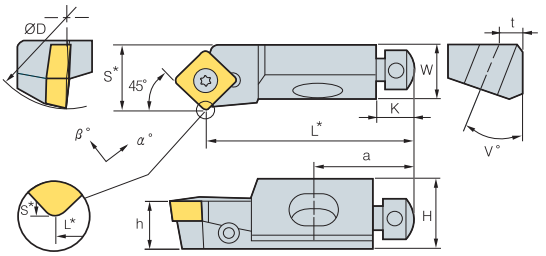
Applicable inserts, see pages B54, B71

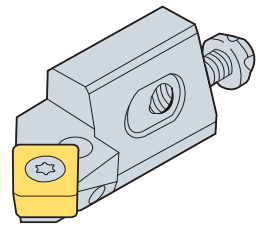
· a base Insert : r = 0.8 D = Min. machining Dia.

Parts		Screw	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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)

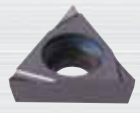
Designation		ØD	H	W	L*	S*	h	K	α°	β°	a	t	v°	Insert
SSSCR/L	10CA-09	40	15	11	44	14	10	8	-5	0	20	5	20	SC □□ 09T3 □□
	12CA-12	50	20	15	47	20	12	8	-5	0	20	6	20	SC □□ 1204 □□

Applicable inserts, see pages B54, B71

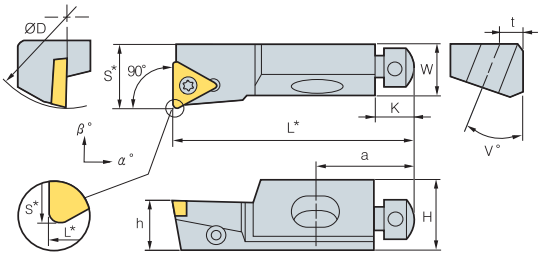
· a base Insert : r = 0.8 D = Min. machining Dia.

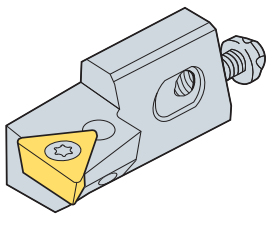
Parts		Screw	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	Washer	Wrench	Wrench
SSSCR/L	10CA-09	FTGA03508	AZ0508F	KHA0408	RHA0620	WA0602	TW 15P	HW20L
	12CA-12	FTGA0411F	AZ0508F	KHA0412	RHA0625	WA0602	TW 15P	HW20L

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 □□

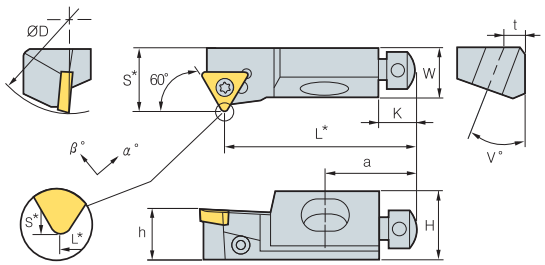
Applicable inserts, see pages B59, B72

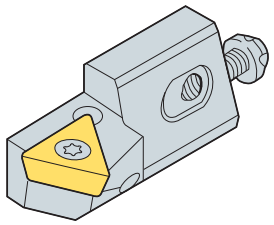
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

Parts		Screw	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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 □□

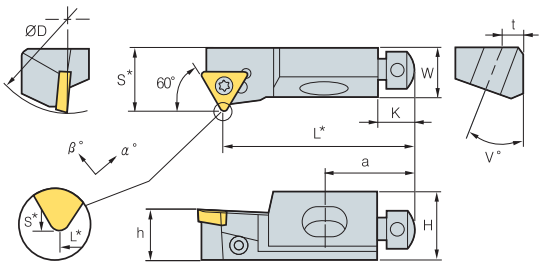
Applicable inserts, see pages B59, B72

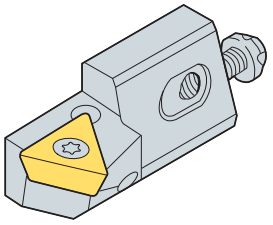
· a base Insert : r = 0.4 (l =11) r = 0.8 (l = 16) D = Min. machining Dia.

Parts		Screw	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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 B59, B72

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

Parts		Screw	Axial Adjust Screw	Radial Adjust Screw	Mounting Screw	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

Excellent for precision machining

Auto Tools

- Excellent for precision machining
- Excellent for complicated machining
- Excellent for small part machining
- Available for various types of machining
- Whole inserts can be clamped on only one FGT holders
- ISO whole holders Offset “0”

Auto Tools code system

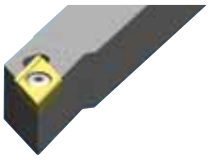
B : Back-turning **G** : Grooving
C : Parting-off **T** : Threading
GB : Grooving & Back-turning

Application | Height of cutting edge | Width of cutting edge | Back turning insert initial width of cutting

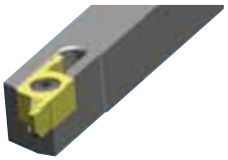
S G R 06 06 10 (15-10) – R05

Small Auto Tool | Hand (**R** : Right Hand **L** : Left Hand) | Depth of cut | Pitch | Nose R

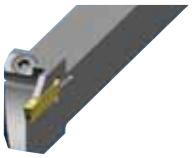
Type



ISO



FGT



MGT

BEM

Multi functional auto tool(FGT)

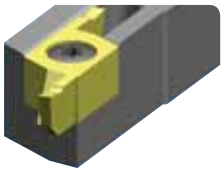
Possible to clamp on only one holder (Ex : 06 size whole inserts - Clamping on the 06 size holder)

SG : Grooving

ST : Threading

SB : Back-turning

SGB : Grooving & Back-turning

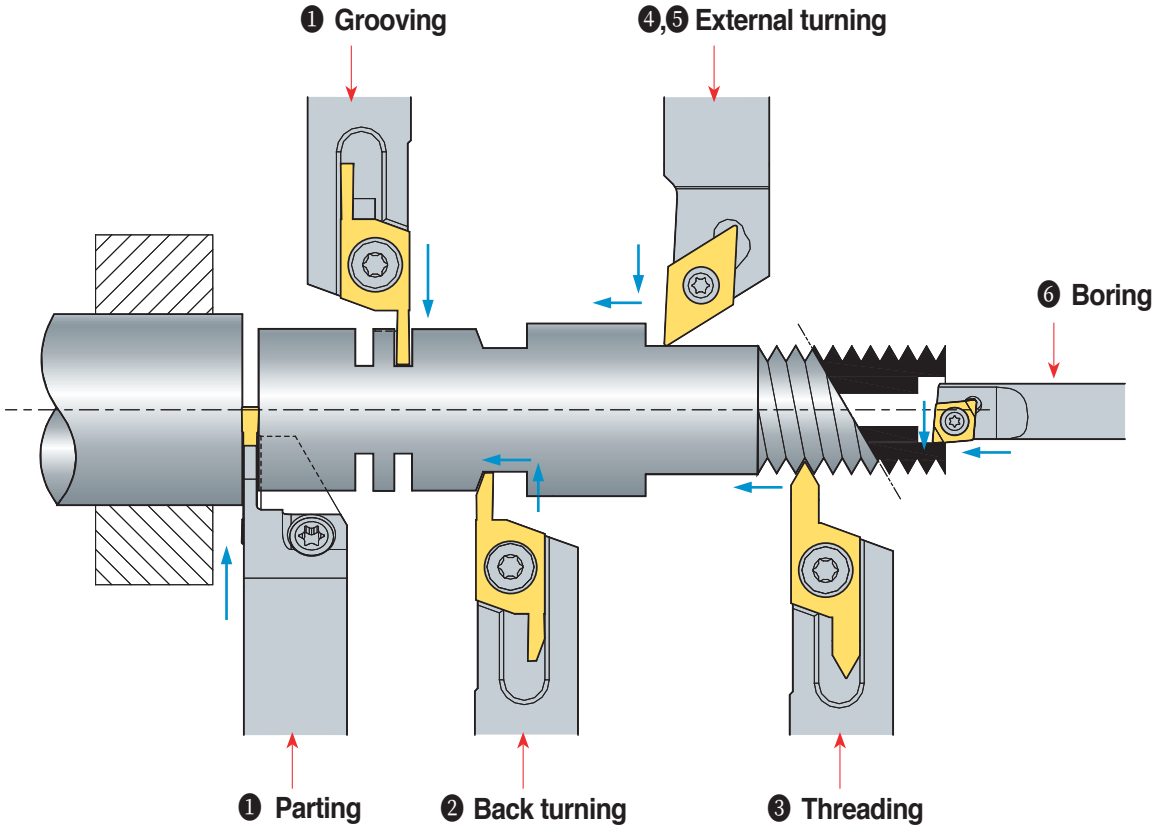


SC : Parting off

Recommended cutting condition

Workpiece	Turning		Grooving		Parting off		Back-turning	
	Cutting Speed(m/min)	Feed(mm/rev)	Cutting Speed(m/min)	Feed(mm/rev)	Cutting Speed(m/min)	Feed(mm/rev)	Cutting Speed(m/min)	Feed(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

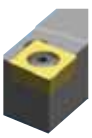
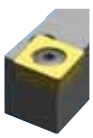
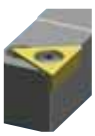
Application Example

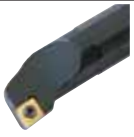


Index

	① Parting and Grooving			② Back turning		③ Threading
Holder	SXGNR/L	SXGNR/L	MGEHR/L	SXGNR/L	SXGNR/L	SXGNR/L
Insert	SG	SC	MGMN	SB	SGB	ST
Holder size	10 ~ 20mm	10 ~ 20mm	10 ~ 16mm	10 ~ 20mm	10 ~ 20mm	10 ~ 20mm
Insert shape						
Cutting width	1 ~ 3mm	1 ~ 3mm	1.5~2.5mm	2 ~ 4mm	2 ~ 3mm	Pitch ranges
ØDmax	Ø18	Ø18	Ø32	Tmax8	Tmax8.5	0.5~1.5/1.5~3.0
Page	B169	B169	B171	B169	B169	B169

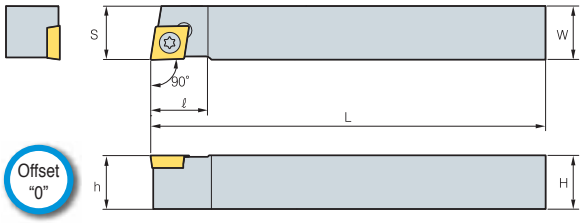
	④ External turning and Copy machining			
Holder	SDJCR/L	SDNCN	SVJBR/L	SVJCR/L
Insert	DC□T	DC□T	VB□T	VC□T
Holder size	8 ~ 16mm	8 ~ 16mm	10 ~ 16mm	10 ~ 16mm
Insert shape				
Feature	Offset "0"			
Page	B167	B168	B168	B168

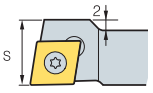
	⑤ External turning and Facing		
Holder	SCACR/L	SCLCR/L	STACR/L
Insert	CC□T	CC□T	TC□T
Holder size	8 ~ 16mm	8 ~ 16mm	8 ~ 10mm
Insert shape			
Feature	Offset "0"		
Page	B167	B167	B168

	⑥ Boring				
Holder	SCLCR/L	STUBR/L	STUPR/L	SWUBR/L	MSB
Insert	CC□T	TB□T	TP□T	WB□T	-
Shank diameter	Ø4 ~ 10	Ø8	Ø8	Ø5 ~ Ø8	Ø4 ~ Ø6
Insert shape					
ØDmin	Ø5	Ø8	Ø10	Ø5.5	Ø3.2
Page	B140	B140	B140	B140	B172~B178

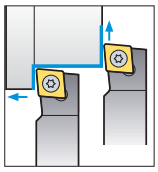
SCACR/L

CCGT





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



90°

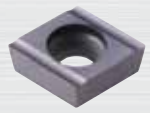
• R type insert

(mm)

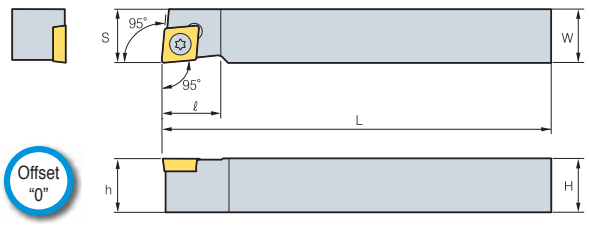
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SCACR/L	0808-X06A	8	8	120	8	8	10	CCGT 0602 □□	FTKA02565	TW 07P
	1010-X06A	10	10	120	10	10	10			
	1010-X09A	10	10	120	12	10	13	CCGT 09T3 □□	FTKA0410	TW 15P
	1212-X09A	12	12	120	12	12	16			
	1616-X09A	16	16	120	16	16	16			

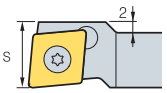
Applicable inserts, see pages B50, B68

SCLCR/L

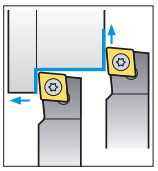


CCGT





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



95°

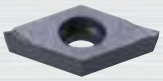
• R type insert

(mm)

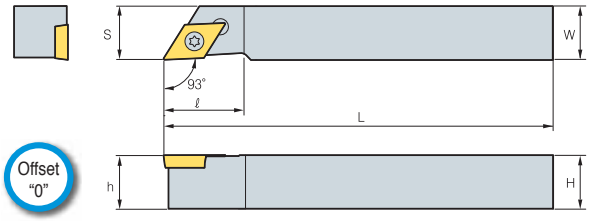
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SCLCR/L	0808-X06A	8	8	120	8	8	10	CCGT 0602 □□	FTKA02565	TW 07P
	1010-X06A	10	10	120	10	10	10			
	1010-X09A	10	10	120	12	10	13	CCGT 09T3 □□	FTKA0410	TW 15P
	1212-X09A	12	12	120	12	12	16			
	1616-X09A	16	16	120	16	16	16			

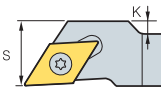
Applicable inserts, see pages B50, B68

SDJCR/L

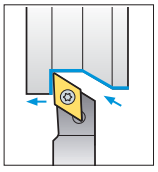


DCGT





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



93°

• R type insert

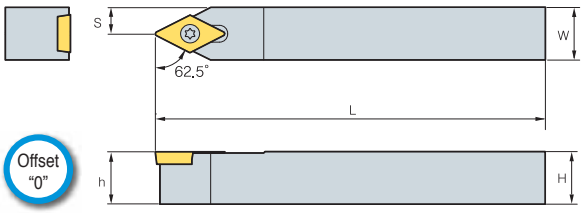
(mm)

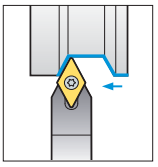
Designation		H	W	L	S	h	K	ℓ	Insert	Screw	Wrench
SDJCR/L	0808-X07A	8	8	120	10	8	2	18	DCGT 0702 □□	FTKA02565	TW 07P
	1010-X07A	10	10	120	10	10	-	15			
	1010-X11A	10	10	120	14	10	4	18	DCGT 11T3 □□	FTKA0410	TW 15P
	1212-X11A	12	12	120	14	12	2	18			
	1616-X11A	16	16	120	16	16	-	22			

Applicable inserts, see pages B52, B69

SDNCN

DCGT





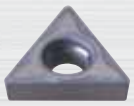
62.5°

(mm)

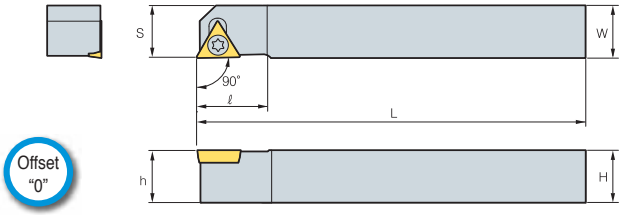
Designation		H	W	L	S	h	Insert	Screw	Wrench
SDNCN	0808-X07A	8	8	120	4	8	DCGT 0702 □□	FTKA02565	TW 07P
	1010-X07A	10	10	120	5	10			
	1010-X11A	10	10	120	7	10	DCGT 11T3 □□	FTKA0410	TW 15P
	1212-X11A	12	12	120	6	12			
	1616-X11A	16	16	120	8	16			

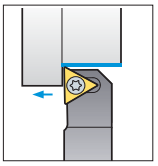
Applicable inserts, see pages B52~B53, B69

STACR/L



TCGT





90°

• R type insert

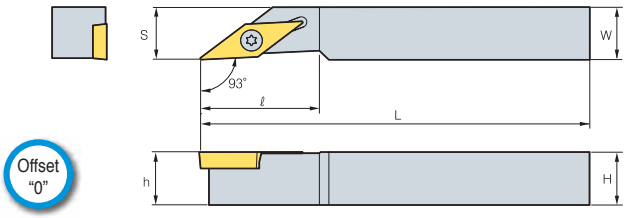
(mm)

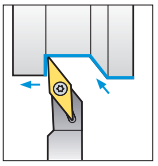
Designation		H	W	L	S	h	K	ℓ	Insert	Screw	Wrench
STACR/L	0808-X08A	8	8	120	8	8	1	12	TCGT 0802 □□	FTNA 0206	TW 06P
	1010-X08A	10	10	120	10	10	3	12			

Applicable inserts, see pages B59, B72

SVJBR/L

VBGT





93°

• R type insert

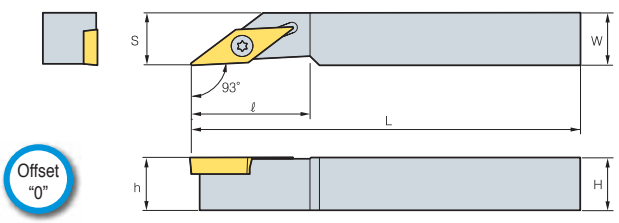
(mm)

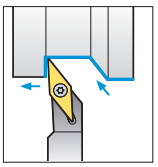
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJBR/L	1010-X11A	10	10	120	10	10	22	VBGT 1103 □□	FTKA 02565	TW 07P
	1212-X11A	12	12	120	12	12	22			
	1616-X11A	16	16	120	16	16	24			

Applicable inserts, see pages B63~B64, B73

SVJCR/L

VCGT





93°

• R type insert

(mm)

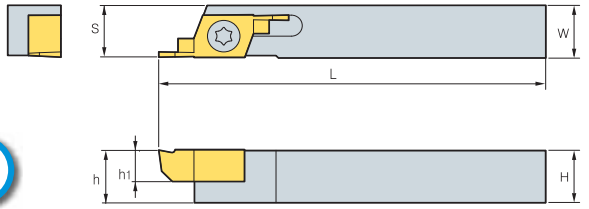
Designation		H	W	L	S	h	ℓ	Insert	Screw	Wrench
SVJCR/L	1010-X11A	10	10	120	10	10	22	VCGT 1103 □□	FTKA 02565	TW 07P
	1212-X11A	12	12	120	12	12	22			
	1616-X11A	16	16	120	16	16	24			

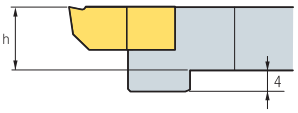
Applicable inserts, see pages B65, B74

SXGNR/L

SBR, SGBR
SCR, STR, SGR

Offset "0"





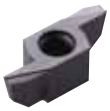
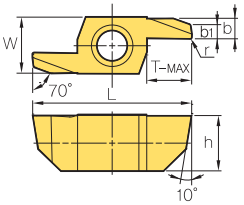
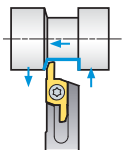
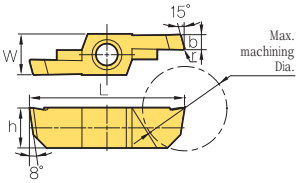
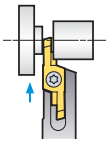
※ Only SXGNR/L1212-X08A is designed as above picture.

• R type insert

(mm)

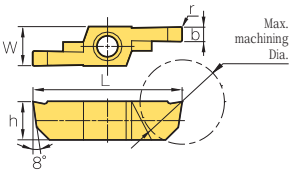
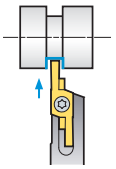
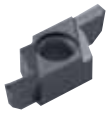
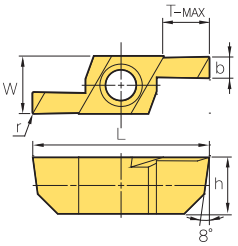
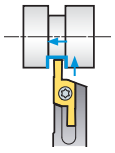
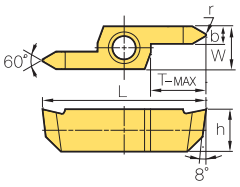
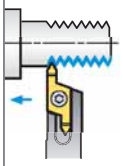
Designation		H	W	L	S	h	h1	Insert	Screw	Wrench
SXGNR/L	1010-X06A	10	10	125	10	10	6	S□R/L 06	FTNA 0408	TW 15P
	1212-X06A	12	12	125	12	12	6			
	1616-X06A	16	16	125	16	16	6			
	2020-X06A	20	20	125	20	20	6			
	1212-X08A	12	12	130	12	12	8	S□R/L 08	FTNA 0411	TW 15P
	1616-X08A	16	16	130	16	16	8			
	2020-X08A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

Insert

Application	Picture	Designation	Coated PC5300 R	Dimensions (mm) b1	b	W	L	r	h	TMAX	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

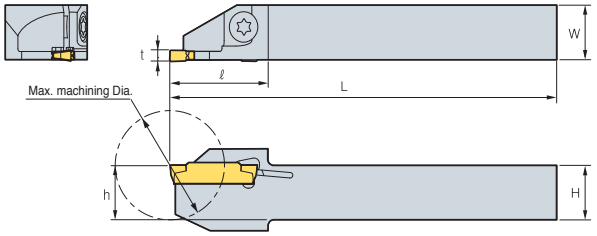
Insert

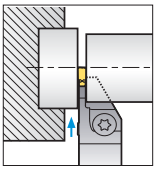
Application	Picture	Designation		Coated PC5300 R	Dimensions (mm) b	W	L	r	h	T_{MAX}	øD	Pitch	Configuration	Feed Direction
Grooving	SGR/L 	SGR/L	060610-R00		1	8	24	0	6	-	11	-		
			060610-R05		1	8	24	0.05	6	-	11	-		
			060610-R10		1	8	24	0.1	6	-	11	-		
			060615-R00		1.5	8	24	0	6	-	11	-		
			060615-R05		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 & Back Turning	SGBR/L 	SGBR/L	0604520-R00		2	8	22	0	6	5	-	-		
			0604520-R05		2	8	22	0.05	6	5	-	-		
			0604520-R10		2	8	22	0.1	6	5	-	-		
			0604525-R00		2.5	8	22	0	6	5	-	-		
			0604525-R05		2.5	8	22	0.05	6	5	-	-		
			0604525-R10		2.5	8	22	0.1	6	5	-	-		
			0605530-R00		3	8	24	0	6	6	-	-		
			0605530-R05		3	8	24	0.05	6	6	-	-		
			0605530-R10		3	8	24	0.1	6	6	-	-		
			0805525-R00		2.5	8	24	0	8	6	-	-		
			0805525-R05		2.5	8	24	0.05	8	6	-	-		
			0805525-R10		2.5	8	24	0.1	8	6	-	-		
			0806530-R00		3	8	26	0	8	7	-	-		
			0806530-R05		3	8	26	0.05	8	7	-	-		
			0806530-R10		3	8	26	0.1	8	7	-	-		
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

MGEHR/L

MGMN



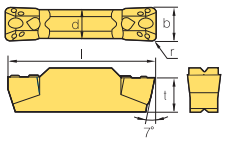


• R type insert

(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			

Insert

Application	Picture	Designation	Coated						Cermet		Uncoated			Dimensions (mm)					Configuration
			NC3120	NC3220	NC5330	NC3030	PC5300	PC9030	CN2000	CN20	H01	G10	U20	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	
		200-M	●	●	●	●	●	●			●			2	0.2	16	1.6	3.5	
		250-G				●	●	●						2.5	0.2	18.5	2	3.85	
		250-M	●	●		●	●	●						2.5	0.2	18.5	2	3.85	

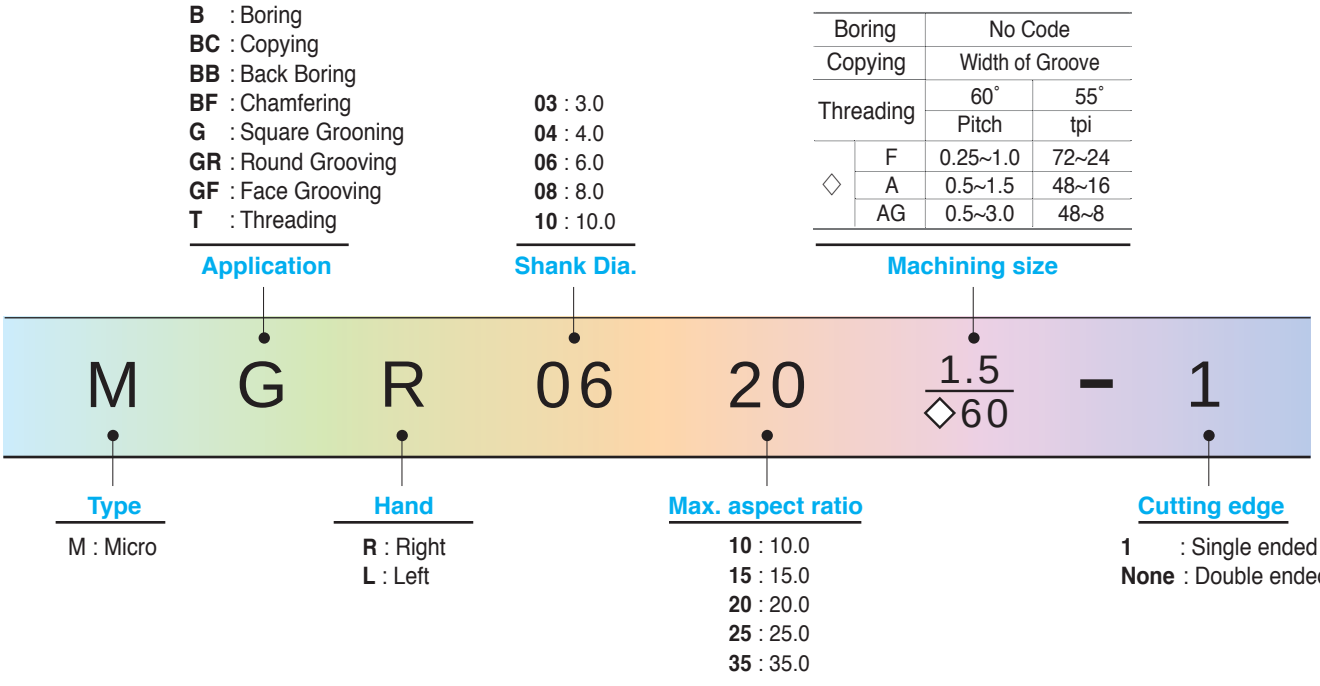
● : Stock item

Korloy specialized grade ensures long tool life

MSB Tools

- 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



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 Grooning		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.	Shank Dia.		
	☆☆	Depth of cut	Max. depth of boring		
	□□	Width of groove	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

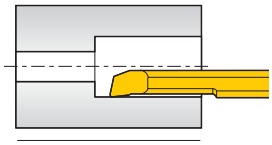
Grades	Coating	Application and features
Z12M	Carbide	Ultra fine grain substrate ensures superior wear resistance and toughness. Application: Cast iron, Aluminum alloy and Non-ferrous metals machining
PC30M	TiN coating	TiN coated ultra fine grain substrate ensures long tool life. Application: Stainless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

Machining Types

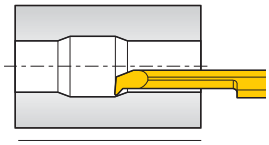


Types

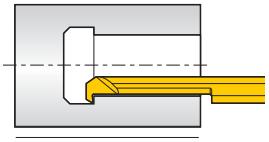
Boring



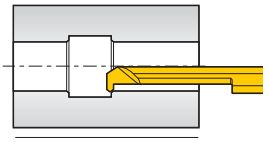
Boring
Min. dia. of machining : Ø3.2



Copying
Min. dia. of machining : Ø4.2

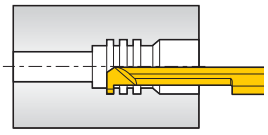


Back Boring
Min. dia. of machining : Ø3.2

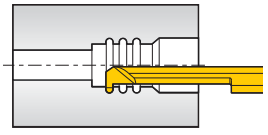


Chamfering
Min. dia. of machining : Ø4.2

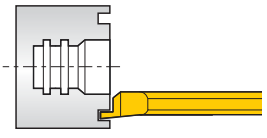
Grooving



Square Grooving
Min. dia. of machining : Ø3.2

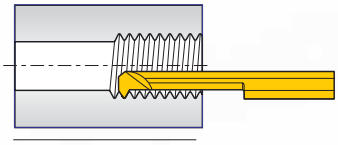


Round Grooving
Min. dia. of machining : Ø3.2



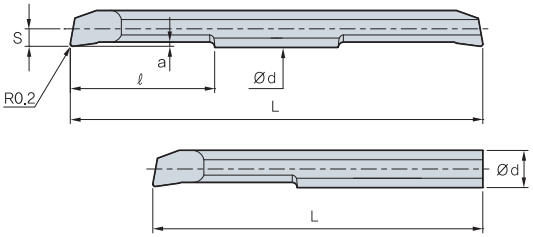
Face Grooving
Min. dia. of machining : Ø6.0

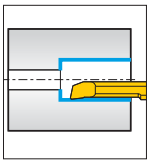
Threading



Threading
Min. dia. of machining : Ø3.3

Boring

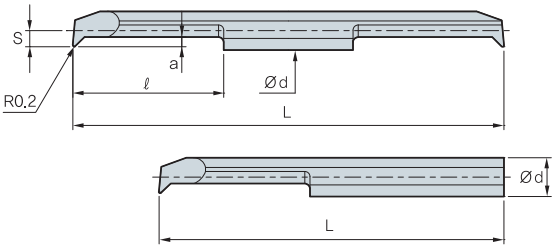


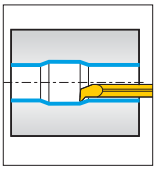


Double ended			Single ended			ød	Min.dia. of machining	ℓ	Overall length L		Detailed cutting edge	
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				Double ended	Single ended	a	S
MBR 0310			MBR 0310-1			3.0	3.2	10	40	35	0.5	1.4
0315	●		0315-1					15	50	45		
0410			0410-1			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

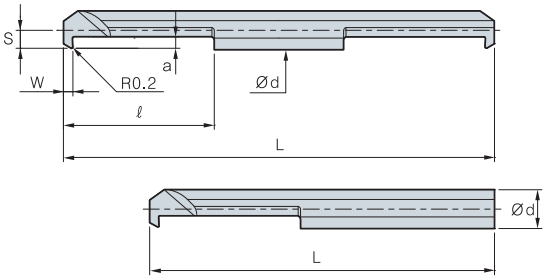


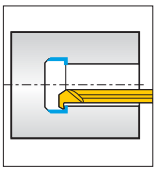


Double ended			Single ended			ød	Min.dia. of machining	ℓ	Overall length L		Detailed cutting edge	
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				Double ended	Single ended	a	S
MBCR 0410			MBCR 0410-1			4.0	4.2	10	40	35	1.0	1.9
0415			0415-1					15	50	45		
0420			0420-1					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

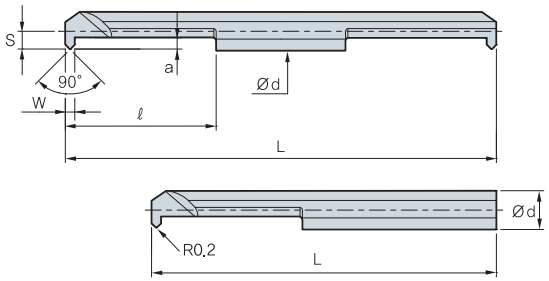


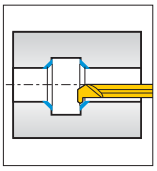


Double ended			Single ended			ød	Min.dia. of machining	ℓ	Overall length L		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				Double ended	Single ended	W	a	S
MBBR 0310			MBBR 0310-1			3.0	3.2	10	40	35	1.5	0.8	1.4
0315			0315-1					15	50	45			
0410			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

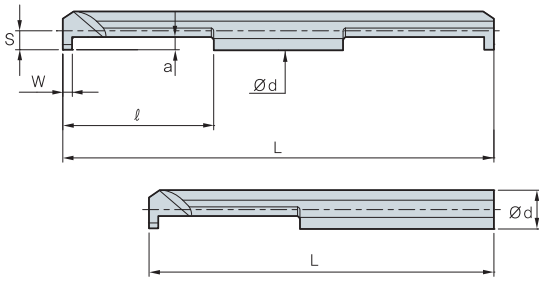


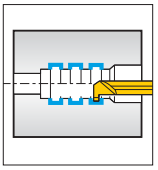


Double ended			Single ended			ød	Min.dia. of machining	ℓ	Overall length L		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				Double ended	Single ended	W	a	S
MBFR 0410			MBFR 0410-1			4.0	4.2	10	40	35	0.8	1.0	1.9
0415			0415-1					15	50	45			
0420			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

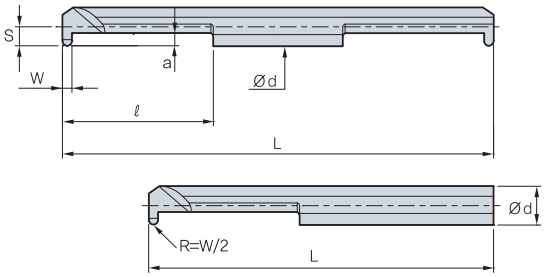


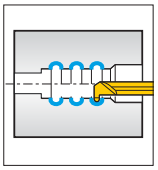


Double ended			Single ended			ød	Min.dia. of machining	ℓ	Overall length		Detailed cutting edge		
Designation	Coated PC30M	Uncoated Z12M	Designation	Coated PC30M	Uncoated Z12M				L		W	a	S
									Double ended	Single ended			
MGR 0310-1.0			MGR 0310-1.0-1			3.0	3.2	10	40	35	1.0	0.8	1.4
0315-1.0			0315-1.0-1					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

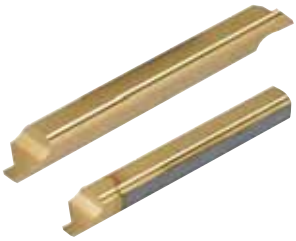


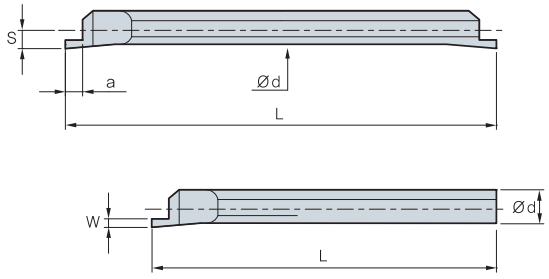


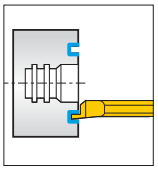
Double ended Designation	Coated PC30M	Uncoated Z12M	Single ended Designation	Coated PC30M	Uncoated Z12M	ød	Min.dia. of machining	ℓ	Overall length L Double ended	Overall length L Single ended	Detailed cutting edge W	a	S
MGRR 0310-0.8			MGRR 0310-0.8-1			3.0	3.2	10	40	35	0.8	0.8	1.4
0315-0.8			0315-0.8-1					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		1.0	2.3	3.9
0820-1.5			0820-1.5-1							60	1.5		
0820-2.0			0820-2.0-1								2.0		
1025-1.0			1025-1.0-1			10.0	10.2	25	80		1.0	2.8	4.9
1025-1.5			1025-1.5-1							70	1.5		
1025-2.0			1025-2.0-1								2.0		

● : Stock item

Face Grooving



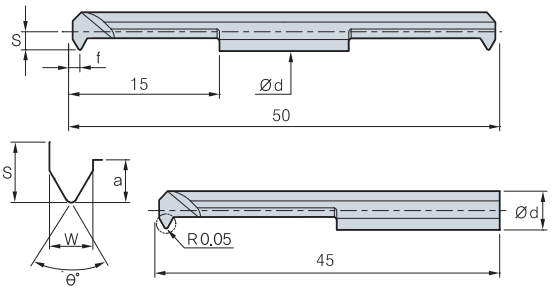


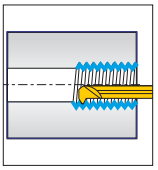


Double ended Designation	Coated PC30M	Uncoated Z12M	Single ended Designation	Coated PC30M	Uncoated Z12M	ød	Min.dia. of machining	Overall length L Double ended	Overall length L Single ended	Detailed cutting edge W	a	S
MGFR 0400-1.0			MGFR 0400-1.0-1			4.0	6.0	50	45	1.0	1.5	1.8
0400-1.5			0400-1.5-1							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





Double ended				Single ended			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)

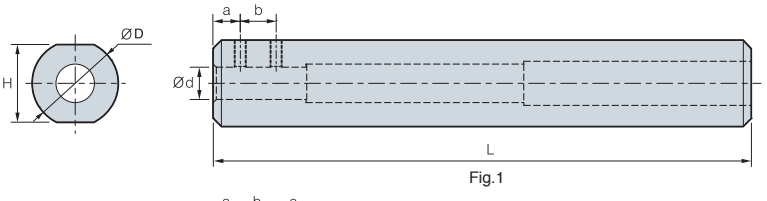


Fig.1

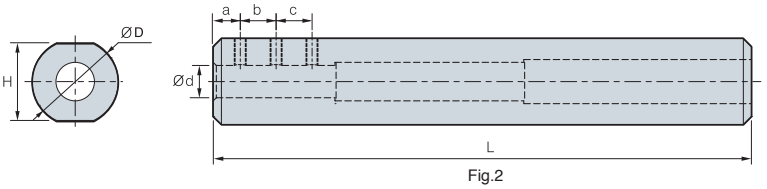


Fig.2

(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